

# COSTS OF WILDFIRE SUPPRESSION

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HEARING  
BEFORE THE  
COMMITTEE ON  
ENERGY AND NATURAL RESOURCES  
UNITED STATES SENATE  
ONE HUNDRED TENTH CONGRESS  
FIRST SESSION

ON

THE STATUS OF THE FEDERAL LAND MANAGEMENT AGENCIES EFFORTS TO CONTAIN THE COSTS OF THEIR WILDFIRE SUPPRESSION ACTIVITIES AND TO CONSIDER RECENT INDEPENDENT REVIEWS OF AND RECOMMENDATIONS FOR THOSE EFFORTS

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JANUARY 30, 2007



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## **COSTS OF WILDFIRE SUPPRESSION**

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**TUESDAY, JANUARY 30, 2007**

U.S. SENATE,  
COMMITTEE ON ENERGY AND NATURAL RESOURCES,  
*Washington, DC.*

The committee met, pursuant to notice, at 10 a.m., in room SD-366, Dirksen Senate Office Building, Hon. Jeff Bingaman, chairman, presiding.

### **OPENING STATEMENT OF HON. JEFF BINGAMAN, U.S. SENATOR FROM NEW MEXICO**

The CHAIRMAN. Why do we not go ahead and start the hearing. Thank you all for coming.

This hearing is focused on the issue of the escalating costs of wildfire management. Escalating wildfire management costs have been a concern for decades. Despite a great deal of discussion in this committee and elsewhere, I think it is fair to say that we have not made great progress in containing costs. In fact, wildfire spending is growing at an alarming rate. The Federal land management agencies' fire management costs have tripled since 1999. They spent a record \$2 billion last year on wildfire suppression alone.

Short and long-term climate change promises to only make the problem worse, and possibly substantially worse.

As you can see from these pie charts that are over here, wildfire management costs are taking up a larger and larger part of the Forest Service budget. All the other programs, from recreation to research and from grazing to grant programs, suffer as a result of this increasing portion of the budget that is having to go for wildfire suppression costs. Last year about half of the Forest Service's discretionary budget was for wildfire preparedness and suppression.

Senator DOMENICI. Which one is that?

The CHAIRMAN. That is the last one here on the right. Yes, 2006.

Senator DOMENICI. Is the green what you are talking about?

The CHAIRMAN. No, I am talking about the—green is what is left, discretionary appropriations. The suppression expenditures are red and the preparedness expenditures are the yellow.

So the main point that the graphs try to make is that particularly the cost of suppression of wildfires has been growing very dramatically in recent years. The record-setting expenditures last year and the failure of Congress to pass the Interior appropriation bill leave us facing a very dire wildfire suppression funding shortfall. If the Forest Service is to go into the next fire season at the financial preparedness level that we have come to expect in recent

years, the Congress needs to find about \$900 million in supplemental appropriations.

Without significant changes in policy and practice, the current budgetary crisis will be commonplace. The rate at which wildfire suppression costs are escalating and the wildfire management policies that permit those costs to escalate clearly are not sustainable, either financially, administratively, or ecologically.

Their persistence can be explained only by failure at the political and the bureaucratic level to deal with these issues. We need a collaborative bipartisan approach to overcome the inertia that seems to exist. To successfully contain these costs, Congress and the agencies and State and local government and individuals all need to take more responsibility.

We have two panels comprised of many of the best thinkers that we have on this subject. They have put enormous effort into identifying many of the key problems and coming up with thoughtful recommendations to address them, and we want to welcome all those who are going to testify.

Let me now turn to Senator Domenici for any opening statement he would like to make, and then Nina Rose Hatfield is going to be the first witness on the first panel. If any members want to submit an opening statement, of course we will make that part of the record. But let me defer to you, Senator Domenici.

**STATEMENT OF HON. PETE V. DOMENICI, U.S. SENATOR  
FROM NEW MEXICO**

Senator DOMENICI. Thank you very much, Senator Bingaman.

It is good that we have this hearing in spite of the fact that we are crammed full of things to do. We have a very big part to play in this responsibility, that is to find a better way to take care of the firefighting and the costs, which seem to go up and down, and with that we are getting some very, very bad results in terms of what we have left in dollars and what we are doing with our other operating budgets. There is no question about it.

First, I want to thank you, Senator, for scheduling the hearing. It seems like sometimes scheduling the hearing and coming over for an hour and a half has more to do with pushing things along than we used to think. This hearing has to have an impact. We have to do something because of what we are going to find out here.

I believe the situation must be addressed. We are moving in the direction where nearly half of the discretionary funding of this Forest Service budget is now expended on firefighting and fire preparedness. This cannot be sustained. It is not the same, but it is much like looking at the Social Security budget and saying it is just right there in front of you, it cannot go on. Pretty soon there will not be any money for the major purpose for which you exist, and that is going to happen to this Department. The Department is not going to have money for all the other things and somebody is going to turn around and say, where is it? While the forests have burned, we are spending the money there.

There are a number of issues related to firefighting that are out of control of the Federal agencies and we know that. The weather is one. But unless somebody has some proof that it is completely

different than it has been heretofore, weather is something that we face and we have in front of us all the time.

The explosive growth of homes within the wildland-urban interface, and that is clearly one that is affecting us in a major way, Senator Bingaman, the building of homes in this area. I do not know what we can do about it, but nobody is doing much about it. It is just growing like wildfire. You got it.

The failure of local and State governments to address the challenges of increased development in these areas is another thing we must be aware of. There are some issues that can and should be addressed by the Federal Government. I stand ready to work with all involved to find ways to reduce these costs.

Senator Bingaman, clearly this is one where we want to work together if we can find a way. I am speaking about a law we passed in the 107th Congress requiring the Office of the Inspector General of Agriculture to investigate wildfire deaths which sometimes results in subsequent criminal charges. What I am talking about here is that at the same time we have to be careful about unintended consequences. One of them has to do with what happens when an inspector general of Agriculture investigates a wildfire death, and sometimes that results in criminal charges.

This atmosphere could result in premature retirement of a lot of firefighters. If this happens our margins of safety will be reduced and quite likely it will increase the danger to the remaining firefighters. As a result, the costs of firefighting could go up as well.

I look forward to working with you, Senator Bingaman, and others to find ways to reduce the costs of Federal wildland firefighting. I hope that we will find ways to do that. I am not sure which of the many suggestions are best, but we got to do something.

Thank you, Senator, and thank you, witnesses. You are a very good panel to take time to be with us today.

The CHAIRMAN. Okay, thank you very much.

Let us briefly introduce this first panel and then call on Nina Rose Hatfield. She is the Deputy Assistant Secretary for Business Management and Wildland Fire in the Department of the Interior.

Also on our panel is: the Honorable Mark Rey, Under Secretary for Natural Resources and the Environment in the Department of Agriculture; Robin Nazzaro, who is the Director of Natural Resources and Environment for the Government Accountability Office; and finally the Honorable Phyllis K. Fong, who is the Inspector General, Department of Agriculture.

We appreciate all of you being here, and we will start with Nina.

**STATEMENT OF NINA ROSE HATFIELD, DEPUTY ASSISTANT SECRETARY, BUSINESS MANAGEMENT AND WILDLAND FIRE, DEPARTMENT OF THE INTERIOR**

Ms. HATFIELD. Thank you very much, Mr. Chairman, members of the committee. We welcome this opportunity to appear before you and provide the administration's view concerning wildland fire suppression cost containment. As the Department of the Interior and the Department of Agriculture work closely together in fire management, we are providing you a joint statement.

We recognize that large fire events are costly and both Congress and the administration have repeatedly expressed their concerns

about rising fire suppression costs. Our Departments share these concerns and are committed to reducing costs. Over the last several years, various studies and assessments dedicated to fire suppression costs have been conducted and we offer some testimony today to describe what we see as being the current situation, the progress that we have already made, and we believe we have made progress, and the measures that we are taking to tackle this important issue.

When one reviews the 2006 season that we dealt with, what we found was that the 2006 fire season went directly after the 2005 fire season. We did not have the typical slowdown that we have during a winter season. So all of this contributed to an unprecedented quantity of acres being burned, with 14 fires topping 100,000 acres in size, 5 on national forests, 7 in Bureau of Land Management districts, and 2 in State jurisdictions.

So in 2006 the acres that were burned were 131 percent greater than the acres burned in 2000, almost a million acres larger than in 2005 and 65 percent greater than the 10-year average. So it is true that last year the Forest Service and DOI spent \$1.9 billion on all fire suppression. These wildland fires were across all jurisdictions, totaling over 96,000 incidents that resulted in the burning of 9.9 million acres.

But we're pleased to note that, even in the face of what was the largest fire season on record, we continued to achieve nearly 98 percent success rate of attacking fires on the initial attack, and that is a rate that is comparable to how we have been able to fight fires in less severe years. Of these fires, approximately 26 percent of them exceeded the average cost as determined by a stratified cost index for the large Forest Service fires.

Now, in an effort to decrease the severity of fire, the Departments have reduced hazardous fuels for nearly 20 million acres, 16 million acres through hazardous fuel reduction programs over the last several years since 2001 and about 4 million acres of landscape restoration accomplished through other management activities that we are involved in. So while we have a very focused effort to remove the accumulation of hazardous fuel on our Federal lands, we believe that that is having a positive effect on the land and is lowering the risk of property damage.

At the same time that we have been doing that, we certainly have been paying attention to cost controls and finding ways in which we can operate more efficiently. Based on a historical analysis of cost per fire an acre, the Forest Service large suppression costs over the past 3 years are essentially flat or below the 10-year average, and while the 2006 numbers are above the average based on a stratified cost index, we are encouraged that overall progress is shown in terms of the way that we have been providing and applying cost saving measures.

So while the costs of many of our firefighting resources like aviation and other equipment have continued to increase faster than the rate of inflation, what we see is really an increase in productivity and cost control that has been associated with our suppression activities.

Now, as you have mentioned, as we try to contain the cost of firefighting we recognize that there are multiple factors that contribute to the expense of fighting fires. These factors include the

weather, fuel type, terrain, location with respect to the wildland-urban interface and other highly valued landscapes, as well as the managerial decisions that are made before and during fire incidents. In combination, these trends present a continuing challenge for our efforts to decrease the number of fires and the cost of incidents.

We do know that over 8 million new homes were added to the WUI in the 1990's, representing about 60 percent of the new homes constructed in the United States, and this is triple the rate of growth and the rate of construction outside of the WUI, which obviously presents for us a challenge of addressing wildland fire costs in land areas such as locations as the WUI where the fire suppression is inherently more expensive for us.

Another challenge has just been addressing the accumulation of biomass in our forests and that is the reason that we have worked so aggressively to reduce the amount of hazardous fuels on Federal lands and restore the health of our public forests and range lands. In 2006 more than half of the total acres that we treated were inside the WUI and we continue to maintain this as an emphasis, with the goal to treat approximately 2 million acres in the WUI throughout our hazardous fuel reduction program in this coming fiscal year.

The reports from GAO and the USDA OIG certainly focused on managing fire suppression in the WUI and cost sharing for those activities between the Federal and non-Federal entities. I think that these reports certainly indicate the kinds of complexities that we have as we fight large, multijurisdictional fires, especially those located in the WUI.

So over the past 20 years we have certainly developed a strong relationship, we think, with the States and our local cooperators. Over time the need to maximize efficiency and effectiveness has required a sharing of resources among all of us to fight these multi-jurisdictional fires. We recognize the need to review existing master cooperative agreements with our State partners and ensure consistency with the 2001 update to the Federal Wildland Fire Management Policy.

Toward this end, we are working with the States on an inter-agency master cooperative agreement template that will improve our cost-sharing methods and provide greater consistency across the country.

The CHAIRMAN. Could you summarize the rest of your statement, if you could?

Ms. HATFIELD. I was just going to say, and now Secretary Rey will address some of the specifics about what we have been doing.

The CHAIRMAN. Terrific.

Secretary Rey, we are glad to hear from you and glad to have you before the committee.

**STATEMENT OF MARK REY, UNDER SECRETARY FOR NATURAL RESOURCES AND ENVIRONMENT, DEPARTMENT OF AGRICULTURE**

Mr. REY. Thank you.

The balance of our joint statement reviews some of the recent cost containment assessments, as well as summarizes the agency's

response to the recommendations by the various parties. I will summarize those quickly and then announce some additional cost containment initiatives that we are putting in place today.

The National Academy of Public Administration produced six reports on wildfire cost containment between 2001 and 2004. Our Departments have taken seven actions to address their recommendations, including the formation of an inter-agency coordinating body, the Wildland Fire Leadership Council. Another of their recommendations resulted in a 10-year strategy and implementation plan released in 2002 which was developed collaboratively by our Departments and the Western Governors' Association. That plan was updated last December and I want to thank the Western Governors in particular for their cooperation in updating and improving that plan as we have learned from the experience since its first implementation 4 years previously.

Among the things that the Wildland Fire Leadership Council did was to provide an August 2004 report entitled "Large Fire Suppression Costs and Strategies for Containment." The Departments are taking an aggressive approach to responding to the recommendations, including 11 separate actions, among them, as are summarized in our testimony, the creation of a comptroller position within the Forest Service to focus on cost containment and large fire strategic and tactical decisions, the appointment of an independent review panel, coordinated by the Brookings Institution, to conduct cost assessments on fires with suppression expenses exceeding \$10 million.

The Government Accountability Office has issued two reports of note: one in May 2006 involving wildland fire suppression and the need for additional guidance on cost sharing between Federal and non-Federal entities. To respond to this recommendation, the Departments are working with States through the Wildland Fire Leadership Council on a master cooperative agreement template to be used nationwide and a consistent approach for determining when a particular cost share method is most appropriate.

A second GAO report in January 2005 entitled "Wildland Fire Management: Important Progress Has Been Made, but Challenges Remain," resulted in a GAO recommendation for USDA and DOI to develop a cohesive fuel strategy that identifies the options and funding needed to address wildland fire problems. The Departments issued a cohesive fuel strategy late this past year to set forth priorities for fuel reduction projects to guide investments in reducing the risk of catastrophic wildland fire.

Finally, as part of USDA's ongoing effort to contain wildland fire suppression costs and increase program accountability, the Forest Service requested that the USDA Office of Inspector General evaluate agency controls over these costs. The OIG report, which you will hear about shortly from the Inspector General, outlines 18 recommendations. The Forest Service has concurred with all of the findings and recommendations and stated that the recommendations will assist the agency as it continues to improve management efficiencies.

In the wake of these challenges and the critical need to improve cost effectiveness, a group of Forest Service line officers and regional fire directors met in November 2006 and developed a set of

significant wildfire cost containment measures working off of both the Inspector General's report and earlier reports. The most important actions involved in these recommendations include the following five:

First, the adoption of appropriate management response as a tactical strategy. The appropriate management response was first articulated in the 2001 update of the Federal wildland fire management policy. This approach provides risk-informed fire protection by introducing the concept of managing wildland fire in relationship to the risks that the incident poses. If a wildland fire has potential benefits to natural resources and poses a relatively low risk to impact other valued assets, the fire would receive a lower intensity suppression effort. The Forest Service has developed a draft guidebook that presents a strategy to implement this approach.

Second, the Forest Service Chief will designate an individual with access to a support team to provide oversight on fires of national significance and assist local units to collaborate with DOI on DOI lands.

Third, national resources such as smoke jumpers, hot shot crews, and helicopters will be treated as national assets and moved to areas and incidents based on predicted services and on planning levels. This will create a more centralized and flexible management of these response resources and more efficient use of them in the conduct of a fire season.

Fourth, aviation resources will be managed more effectively to reduce their high cost. A full-time national helicopter coordinator will be selected to provide oversight for the assignment and positioning of helicopters. Helicopter management will be centralized. It is a national resource. And the Forest Service will attempt to shift more to exclusive use versus more expensive "call when needed" contracts for helicopters.

Fifth and finally, efforts will be made to maintain our initial success—initial attack success, while reducing the dependence on severity funding. The Forest Service will require lower thresholds for the approval of severity funding to be elevated for approval by the Chief. National shared resources will be prepositioned whenever possible in geographic areas where fire risk is the greatest during the fire season.

So those will be five new cost containment initiatives that will begin during the 2007 fire season.

In conclusion, much progress has been made and much, much more remains to be made. As Ms. Hatfield indicated, over the last 3 years the cost of suppression per acre and the cost per large fire has been flat, that is lower, given the increases caused by inflation. But given the fact that we are in an extended drought cycle and given the fact that upwards of two-thirds of the houses built in the United States annually are being built in the wildland-urban interface, the real question is whether we can slow the rate of increase, not see these costs decreasing overall for the foreseeable future until we get a greater amount of fuels treatment done on the ground.

That itself is being done. As Ms. Hatfield indicated, over the past 4 years we have treated upwards of over 20 million acres. By the end of this year we will be closer to 25 million acres, an area the

geographic size of the State of Ohio. But there are still many more acres that need to be treated before we get to the point where because of those treatments we would see a significant decrease in the cost of fire suppression.

With that, we would be happy to defer the balance of the statement.

[The joint prepared statement of Ms. Hatfield and Mr. Rey follows:]

PREPARED JOINT STATEMENT OF MARK REY, UNDER SECRETARY FOR NATURAL RESOURCES AND ENVIRONMENT, DEPARTMENT OF AGRICULTURE AND NINA ROSE HATFIELD, DEPUTY ASSISTANT SECRETARY, BUSINESS MANAGEMENT AND WILDLAND FIRE, DEPARTMENT OF THE INTERIOR

#### INTRODUCTION

Mr. Chairman and Members of the Committee, thank you for the opportunity to appear before you to provide the Administration's view concerning wildland fire suppression cost containment. As the Department of the Interior (DOI) and the U.S. Department of Agriculture (USDA) work closely together in fire management, the two Departments are providing a joint statement.

Large fire events are costly, and both Congress and the Administration have repeatedly expressed their concerns about rising fire suppression costs. Our Departments share these concerns and are committed to reducing these costs. Over the last several years, various studies and assessments dedicated to fire suppression costs have been conducted by the National Academy of Public Administration, the Wildland Fire Leadership Council, the Government Accountability Office (GAO), and most recently, by the USDA Office of Inspector General (OIG) in its "Audit Report—Forest Service Large Fire Suppression Costs." We welcome these assessments, and offer this testimony today to describe the current situation, the progress already made, and the measures we are taking to tackle this important issue.

#### THE 2006 FIRE SEASON

The end of the 2005 fire season led directly into the 2006 fire season without the slowdown that typically occurs during the winter season. From November 2005 through April 2006, extremely low humidity, persistent drought conditions, and winds contributed to the ignition of fires through Texas and Oklahoma as well as Colorado, Missouri and New Mexico. This contributed to an unprecedented quantity of acreage burned, with 14 fires topping 100,000 acres in size, five located on National Forests, seven in Bureau of Land Management Districts, and two in State jurisdictions. In 2006, the acres burned were 131 percent greater than the acres burned in 2000, almost 1 million acres greater than 2005; and 65 percent greater than the ten-year average.

Last year, the U.S. Forest Service spent over \$1.5 billion on all fire suppression and nearly \$400 million on 20 of the largest fires, while DOI spent approximately \$424 million on all fire suppression. In the 2006 calendar year, the wildland fires across all jurisdictions totaled over 96,000 incidents, burning almost 9.9 million acres. Of those 9.9 million acres burned, approximately 5 million acres were on Federal lands and approximately 4.9 million acres were on non-Federal lands. We are pleased, that even in the face of the largest fire season on record, we achieved nearly 98% initial attack success, a rate comparable to less severe years. Of those fires not contained by initial attack, approximately 26 percent exceeded the average cost as determined by a stratified cost index for large Forest Service fires. Although the 2006 fire season had one of the highest number of fire starts in a single day (548), an extraordinary number of lightning caused fires (over 16,000), and one of the highest number of large fires at one time in nearly every region of the country, it also resulted in significantly fewer dwellings and other structures destroyed—750 homes lost in 2006 (240 homes during the March fires in Texas and Oklahoma) compared to 835 home lost in 2002 and over 4500 homes lost in 2003.

Since 2001, the Departments have reduced hazardous fuels on nearly 20 million acres, 16 million acres through hazardous fuels reduction programs and approximately 4 million acres of landscape restoration accomplished through other land management activities.

Our focused effort to remove accumulation of hazardous fuels on our Federal lands is having a positive effect on the land and is lowering the risk of property damage. In addition, the Departments have paid attention to cost controls and are

finding ways to operate more efficiently. Based on a historical analysis of cost per fire and acre (FY 1995-2004), Forest Service large fire suppression costs over the past 3 years are essentially flat or below the 10-year average and, while the 2006 numbers are above the average based on the stratified cost index, we are encouraged by the progress of our efforts to apply cost-saving measures. With the cost of many firefighting resources such as aviation and other equipment increasing faster than the rate of inflation, this represents an increase in productivity and cost control associated with suppression operations. We face challenges ahead to control total suppression costs, but we are fully committed to the implementation of additional management efficiencies and improved performance accountability. We fully expect to see our future cost/productivity trends for individual large fires continue to improve.

#### WEATHER, WILDLAND URBAN INTERFACE AND WOOD

Multiple factors contribute to the expense of fighting fires. These factors include weather, fuel type, terrain, location with respect to the wildland urban interface (WUI) and other highly valued landscapes, and managerial decisions made before and during fire incidents. In addition, changing temperatures and prolonged drought across many portions of the West, an expansion of the WUI and an increase in the number of people living in the WUI, and continued accumulation of wood fiber, or biomass, on our public forests requiring treatment are converging to increase the risk of catastrophic loss from wildland fires. In combination, these trends present continuing challenges in our efforts to decrease the number and cost of fire incidents.

Over the last few years, we have reported regularly to Congress on these challenges. The 2005 Quadrennial Fire and Fuels Review by DOI and USDA examined the growth of the WUI, the area where structures and other human developments meet or intermingle with undeveloped wildland. The review found that 8.4 million new homes were added to the WUI in the 1990s, representing 60 percent of the new homes constructed in the United States. The rate of growth is triple the rate of construction outside of the WUI. The review illustrates the challenge of addressing wildland fire costs in land areas, such as locations in the WUI where fire suppression is inherently more expensive.

Another challenge is addressing the accumulation of flammable biomass in our forests, a major cause of fire risk. The Departments have worked aggressively to reduce the amount of hazardous fuels on Federal lands and restore the health of our public forests and rangelands, utilizing the authorities provided under the President's Healthy Forests Initiative and the Healthy Forests Restoration Act to expedite action. In 2006, more than half of the total acres were treated inside the WUI. We will maintain this emphasis with a goal to treat approximately 2 million acres in the WUI through the hazardous fuels reduction program in 2007.

Reports from GAO and USDA OIG focus on managing fire suppression in the WUI and on cost sharing for those activities between Federal and non-Federal entities. These reports accurately highlight the complexities associated with large, multi-jurisdictional fires, especially those that threaten the WUI. Protecting human life and safety is our top priority; hence, fires in or adjacent to areas populated by homes and citizens generate a larger, more aggressive response that includes the use of structural and wildland engines, aircraft, and additional crews and equipment. Also, these lands tend to fall under a mix of ownership and jurisdictions that typically involve a response from Federal, State, county, and local entities. These factors add up to increased complexity and costs associated with incident response in the WUI.

Over the past 20 years, the Agencies have developed strong relationships with State and local cooperators in wildland fire suppression. The assistance by cooperators on Federal fires has grown, as well as cooperative efforts to suppress fires that cross ownership boundaries. Over time, the need to maximize efficiency and effectiveness has required the sharing of resources to fight these multi-jurisdictional fires across the landscape. The sharing of responsibilities, resources, and costs is often determined through cooperative agreements among the affected entities. Local units develop individual cost-sharing agreements for each large fire under the umbrella of a master cooperative agreement, with the State. We recognize the need to review existing master cooperative agreements with our State partners and ensure consistency with the 2001 update to the Federal Wildland Fire Management Policy. Toward this end, the Departments are working with the States on an interagency master cooperative agreement template to improve cost-share methods and provide greater consistency across the country.

Costs are typically shared based on the number of acres burned in each jurisdiction, or a combination of acres burned and the first 24 hours of support. Today, the complexity of responding to fires that cross jurisdictions, as well as the growth of those located in the WUI, has prompted interest in developing a different basis for cost sharing. Both the GAO and OIG reports state that more guidance on cost-share methods is needed so each entity's financial responsibility is clear. The Departments also recognize the need for clarity and consistency of cost sharing methods that will better account for the multitude of factors that affect each incident. We look forward to continuing to work with the States and other interested and affected entities in this effort.

#### RECENT COST CONTAINMENT ASSESSMENTS

##### *The National Academy of Public Administration*

The National Academy of Public Administration (NAPA) produced six reports on wildfire cost containment between 2001 and 2004. The issues covered in these reports include: (1) improving the management practices concerning wildfires by the National Park Service; (2) enhancing capacity to implement Federal interagency policy; (3) strategies for containing costs; (4) improving equipment and services acquisition; (5) utilizing local firefighting forces; (6) and enhancing hazard mitigation capacity. Our Departments have taken the following actions to address the recommendations in these reports:

- The National Park Service improved its risk assessment and coordination practices.
- An interagency coordinating body, the Wildland Fire Leadership Council (WFLC), was formed and a strong intergovernmental partnership has resulted. The Wildland Fire Leadership Council's report on cost containment is discussed later in this statement.
- A 10-year Strategy and Implementation Plan, released in 2002, was developed collaboratively by the DOI, USDA, the Western Governors Association as well as southern Governors, counties and tribes. An updated Implementation Plan was released in December 2006.
- Incident business advisors have been trained and assigned to help implement cost containment measures.
- Procurement analysts have been assigned to systematically assess alternative sources of supply for firefighting equipment and services, as recommended in the report.
- The Agencies have aggressively promoted the creation and training of Type-3 Incident Management Teams, with the support of the National Association of State Foresters and the International Association of Fire Chiefs.
- The Agencies aggressively promoted and provided financial assistance toward creating fire-resistant communities and defensible spaces through collaboration with communities and local entities. The Agencies have worked with States to expand community protection through Community Wildfire Protection Plans, authorized under the Healthy Forests Restoration Act, and the FIREWISE program.
- The Agencies have established fire suppression cost levels that require additional oversight at the regional or national level for review, identifying and approving a strategy in the Wildland Fire Situation Analysis.

##### *Wildland Fire Leadership Council*

In August 2004, the WFLC Strategic Issues Panel issued a report entitled, "Large Fire Suppression Costs: Strategies for Cost Management." The report, developed by senior level managers and administrators from Federal, State and local governments, examined 12 reports that spanned five years and included more than 300 recommendations. The report identified factors that will affect wildfire costs for the coming decades, including forest fuels, demographic trends, and climatic conditions, and provided recommendations aimed at slowing the rate of such costs.

The Departments are taking an aggressive approach to the WFLC report, emphasizing land management decisions that affect fuel loading and resource protection, increasing the skills and numbers of local firefighters, advancing integrated data management, and developing metrics and accountability measures to evaluate managerial cost effectiveness. Seven multi-agency, multi-disciplinary Cost Action Teams (CATs) were formed by the WFLC and have completed their work. The following provides examples of the Departments' efforts to date:

- The Agencies are strengthening and improving the availability of local resources through coordinated Federal and State financial support. Federal and State

partners are assessing existing fire service funding programs to: (1) determine how existing funding can be more effectively leveraged; (2) improve coordination between the programs; (3) improve program information flow to customers; and (4) provide grant preparation assistance and other technical services to rural fire departments.

- The Agencies have issued guidance to incorporate consideration of wildfire suppression costs and fuel management efforts in land and resource management planning.
- The Agencies will continue to implement initiatives that assist in large-scale planning such as: (1) the WFLC-sponsored burn severity mapping project; (2) LANDFIRE; (3) Fire Program Analysis; (4) FIREWISE; (5) Community Wildfire Protection Planning; and (6) Wildland Fire Decision Support Modeling.
- The Departments are working to integrate numerous data collection/analysis systems in order to reduce the cost of data collection, ensure data quality, and eliminate redundancy. The Fire Occurrence Reporting Study, which analyzed existing information collected in Federal and State fire-reporting systems, is scheduled for final delivery in February 2007. Under the National Wildland Fire Enterprise Architecture project, we are integrating resource mobilization analysis and support systems to serve as the vehicle for a cohesive business transformation process.
- The Departments have adopted a Stratified Cost Index performance measure that uses cost data from around the nation to set a benchmark of average cost for a fire incident that incorporates sensitivity to location and conditions. The Forest Service is implementing this performance measure this year. DOI is still compiling the necessary background data and research, and the measure will be implemented as soon as this is completed.
- The Forest Service has created a Comptroller position to focus on cost containment and large fire strategic and tactical decisions.
- As required by Congress, the Secretary of Agriculture has appointed an independent review panel, coordinated by the Brookings Institution, to conduct cost assessments on fires with suppression expenditures exceeding \$10 million.
- Cost Review Teams review fires in which costs exceed \$5 million in order to evaluate strategic, tactical and overall business management decisions on the incident.
- Scientific studies by the Southern and Rocky Mountain Research Stations and the Scripps Research Institute were conducted to determine the predictability of emergency suppression expenditures.
- The Agencies conduct "After Action" Reviews each Fall that assess the effectiveness of allocation of Forest Service and DOI fire suppression resources during high levels of fire activity at National Multi-Agency Coordinating Group/Geographic Area Multi-Coordinating Group postseason meetings.
- Standards were developed for Local Response Organizations (Type 3 Incident Management Teams) to enhance a community's ability to independently manage fires.

*The Government Accountability Office*

*Wildland Fire Suppression: Lack of Clear Guidance Raises Concerns about Cost Sharing between Federal and Nonfederal Entities*

In May 2006, the Government Accountability Office (GAO) issued a report entitled, "Wildland Fire Suppression: Lack of Clear Guidance Raises Concerns about Cost Sharing between Federal and Nonfederal Entities." The report found that there was a lack of clear guidance in determining appropriate cost-share methods between Federal and non-federal entities. The report's primary recommendation is that USDA and DOI work with relevant State entities to provide more specific guidance on when to use particular cost-sharing methods and clarify the financial responsibilities for fires that burn or threaten to burn across multiple jurisdictions. To respond to this recommendation, the Departments are working with the States on a master cooperative agreement template to use nationwide and a consistent approach for determining when a particular cost-share method is most appropriate.

*Wildland Fire Management: Important Progress Has Been Made, but Challenges Remain to Completing a Cohesive Strategy*

In January 2005, the GAO issued a report entitled, "Wildland Fire Management: Important Progress Has Been Made, but Challenges Remain to Completing a Cohesive Strategy" (GAO-05-147). The report recommended that USDA and DOI provide Congress with a plan outlining critical steps and time frames for completing a cohesive strategy that identifies the options and funding needed to address wildland fire

problems. In response, USDA and DOI have collaborated with our partners on the following:

- **Cohesive Fuels Strategy:** The Departments issued a Cohesive Fuels Strategy to set forth priorities for fuels reduction projects to guide investments in reducing risks of catastrophic wildland fires and enhance strategically placed 'defensible space' in areas at risk.
- **LANDFIRE:** LANDFIRE is a geospatial tool for identifying areas across the nation at increased risk of fire due to accumulation of fuels. The use of LANDFIRE data will improve collaboration among Federal, State and local interests with regard to fire and other natural resource management efforts. Currently, the LANDFIRE project has completed mapping the Western portion of the contiguous U.S.; the Eastern portion of the contiguous U.S. is scheduled to be completed by 2008. Alaska and Hawaii will be completed by 2009.
- **Fire Program Analysis (FPA):** The Fire Program Analysis (FPA) System is a tool to provide managers with a common interagency approach to fire management planning and budgeting. FPA will enable managers to better evaluate the effectiveness of alternative fire management strategies in order to meet land management goals and objectives. FPA will reflect fire objectives and performance measures for the full scope of fire management activities. The prototype is scheduled to be delivered in the summer of 2007 with system delivery expected in 2008.

*The USDA Office of the Inspector General*

As part of USDA's ongoing effort to contain wildfire suppression costs and increase the program's accountability, Forest Service senior management requested that the USDA Office of the Inspector General, Western Region (OIG) evaluate agency controls over these costs. In November 2006, the OIG released their "Audit Report—Forest Service Large Fire Suppression Costs." The OIG found that the Forest Service could strengthen the cost-effectiveness of its fire fighting without sacrificing safety by: (1) improving equitable cost-share of wildfire suppression costs with nonfederal entities; (2) increasing wildland fire use to reduce forest vegetation and underbrush that may fuel future fires; and (3) establishing controls to assess performance of line officers and incident commanders in controlling costs.

OIG outlines 18 recommendations in its Audit Report. On November 16, 2006, the Forest Service provided an official response, to the report. The Forest Service concurred with all of the findings and recommendations and stated that the recommendations will assist the agency as it continues to improve its management efficiencies to save taxpayers' dollars while providing safe and effective suppression of wildfires. The Forest Service response includes a specific commitment and an estimated completion date for each of the recommendations in the report. The Audit report and Forest Service response is attached to this testimony.

MANAGEMENT EFFICIENCY PROPOSALS FOR LARGE FIRE COST CONTAINMENT

Large fire costs have been a persistent challenge for the Departments and threaten to compromise the achievement of other key areas of our missions. Multiple internal and external reviews have been conducted, including those mentioned above, and have generated over 300 recommendations to curb increasing suppression costs.

In the wake of these challenges and the critical need to constantly improve cost-effectiveness, a group of Forest Service Line Officers, regional Fire Directors and Regional Foresters met in November, 2006 and developed a set of significant wildfire cost-containment measures to further enhance our ability to efficiently manage suppression costs. This effort resulted in a list of management efficiencies which focus on leadership, operations, aviation and general management practices. The Forest Service is moving forward to implement the list of management efficiencies; DOI is reviewing them with the intent to address them on an interagency basis, as appropriate. We anticipate that some of these measures will be implemented in 2007, while others will be implemented over the long-term. The most significant actions include:

*1. Appropriate Management Response*

The Appropriate Management Response (AMR) was articulated in the 2001 update of the Federal Wildland Fire Management Policy. This approach provides risk informed fire protection by introducing the concept of managing wildland fire in relationship to the risk that the incident poses. If a wildland fire has potential benefits to natural resources and poses a relatively low risk to impact other valued assets, the fire would receive a lower intensity suppression effort. Conversely, if a fire incident is determined to pose high risk to property or community high suppression

efforts would be applied. The approach utilizes risk management and tools such as probability data and analyses to inform rigorous and systematic ways to reach decisions that allocate resources on the basis of risk posed by the wildfire and the strategy used by managers to address it. The Forest Service has developed a draft guidebook that presents a coherent strategy to implement this approach. DOI is reviewing this guidebook and will work with Forest Service on interagency implementation.

#### *2. Forest Service Chief's Principal Representative*

The Forest Service Chief will designate an individual with access to a support team to provide oversight on fires of national significance and assistance to local units and will collaborate with the DOI on DOI lands. The individual will be highly experienced in wildfire management, and the team will have knowledge and capability with decision-support tools. These changes will immediately provide for experienced decision-making that should reduce costs on large fires.

#### *3. National Shared Resources*

National resources such as smoke jumpers, hot shot crews and helicopters will be treated as national assets and moved to areas and incidents based on Predictive Services and on Planning Levels. This will create a more centralized and flexible management of these response resources. Funding and decision-making from the national level will ensure consistency across regions, flexibility in the assignment of resources and eliminate concentration of resources in a geographic area that costs time and money.

#### *4. Aviation Resource Cost Management*

Aviation resources will be managed more effectively to reduce their high cost. A full-time National helicopter coordinator will be selected to provide oversight for the assignment and positioning of helicopters. Helicopter management will be centralized as a national resource. The Forest Service will attempt to shift more to "exclusive use" versus "call when needed" contracts for helicopters. This will increase preparedness costs initially, but is expected to greatly reduce large fire suppression cost with potential saving of tens of millions of dollars per year. We will pursue longer term aviation contracts for all aviation resources with increased performance-based contracting. DOI also is pursuing strategies to reduce its costs.

#### *5. Initial Attack and Severity Funding*

Efforts will be made to maintain our initial attack success while reducing the dependence on severity funding. The Forest Service will require lower thresholds for the approval of severity funding to be elevated for approval by the Chief. National Shared Resources will be pre-positioned whenever possible in geographic areas where fire risk is the greatest during the fire season. The Forest Service and DOI agencies will continue to submit a coordinated severity request so as to not duplicate effort or expense.

The Departments take the issue of large fire cost containment very seriously and are actively moving forward to implement these important changes. A comprehensive list of management efficiencies has been developed to guide action over the short, intermediate and long-term and to produce results. The Forest Service and DOI are working together in collaboration and our staff is committed to action. The Forest Service Chief has conducted an all-day meeting and shared his intent to execute action with Regional Foresters, and, this week, Incident and Area Commanders of the Incident Management Team have met to discuss the implementation of the measures.

### CONCLUSION

We appreciate the recommendations provided in these recent cost-containment assessments. We expect that the management improvements implemented and underway will enable managers to be better prepared for wildfires; help managers to make better decisions during firefighting operations, and provide managers with the tools necessary to analyze, understand and manage fire suppression costs. While the factors of drought, fuels build-up in our forests and increasing development in fire prone areas have the potential to keep the number of incidents and total cost of wildfire suppression high of some time to come, we are positive about our direction to address wildland fire suppression costs and are committed to action. We believe that the measures discussed today promise to expand efficiency and reduce suppression costs. We look forward to continued collaboration with our Federal, State, local, Tribal, and other non-Federal partners to address our shared goal of effectively managing wildfire suppression costs.

Thank you for the opportunity to discuss these issues. We would be happy to answer any questions that you might have.

The CHAIRMAN. Thank you very much.

Next is Robin Nazzaro, who is the Director of Natural Resources and Environment for the Government Accountability Office. Thank you for being here.

Senator DOMENICI. Mr. Chairman.

The CHAIRMAN. Yes, Senator Domenici?

Senator DOMENICI. I am sorry to bother. But I wanted to ask, Secretary, could you get back to the live mike for just a moment? You tell us about all these kind of problems that we have about the growing number of houses that are in the way, so as to speak, that were not there. And then you end up saying we are doing a pretty good job.

But are we really doing something significant to change this growth that is obviously going to cause fires that we did not plan on, that are going to be hard to put out, and they are going to ravish the public use domain just because they are tender, they burn and they are big burners. Can you address that for us? What are we going to do about it?

Mr. REY. As to the growth of houses in the wildland-urban interface, that has not been a Federal responsibility.

Senator DOMENICI. But I am asking. You are a professional. Who is doing what about it?

Mr. REY. I think that there has been very little done in restricting the construction in fire-dependent ecosystems. We are today in that regard where we were in flood plain development 15 or 20 years ago. That is something that State and local governments are going to need to do. If we were to work with them more intensively on anything, that would bring us the best financial benefit, I think, in reducing firefighting costs.

But the ideal today in the fastest growing region of the country, which is the Intermountain West, is to have a nice house out in the woods. That is why people are moving to Colorado, to Arizona, to all of the fastest growing States in the country. And all of that growth is occurring, or much of it, most of it, is occurring in the wildland-urban interface. We can reduce fire risk by cooperative programs like Fire Wise, but every new subdivision presents a new challenge and inherently more expensive fire suppression costs if we are going to defend that subdivision.

The CHAIRMAN. All right.

Senator DOMENICI. Thank you, Mr. Chairman.

The CHAIRMAN. Ms. Nazzaro.

**STATEMENT OF ROBIN M. NAZZARO, DIRECTOR, NATURAL RESOURCES AND ENVIRONMENT, GOVERNMENT ACCOUNTABILITY OFFICE**

Ms. NAZZARO. Thank you, Mr. Chairman and members of the committee.

The CHAIRMAN. Let me just urge, folks, if you can give us the summary of your comments, we will include the full statement in the record. That will be best. Thanks.

Ms. NAZZARO. Good. I am happy to be here today to discuss the key actions we believe Federal wildland fire management agencies

need to complete to help contain the rising costs of preparing for and responding to fires. I will skip all the background section because I think you certainly understand the magnitude of the problems here. I will go right to the findings from our recent reports plus the preliminary findings from work under way for this committee, which together summarize the key wildland fire management weaknesses and critical actions that we believe the agencies need to complete if they are to effectively contain the rising costs of responding to wildland fires.

Specifically, we believe the agencies need to: First, develop a cohesive strategy that identifies the options and associated funding to reduce fuels and address wildland fire problems. In 1999, to address the problem of excess fuels and their potential to increase the severity of wildland fires and the cost of suppression efforts, we recommended that such a cohesive strategy be developed. In 2005 and 2006, because the agencies had not yet developed such a strategy, we reiterated the need for a cohesive strategy and broadened our recommendations' focus to better address the interrelated nature of fuel reduction efforts and wildland fire response.

As an interim step, we also recommended that the agencies develop a tactical plan outlining the steps and time frames needed for completing a cohesive strategy. Such a strategy and plan would be helpful to the Congress and to the agencies in making informed decisions about effective and affordable long-term approaches to addressing the Nation's wildland fire problem. Although the agencies concurred with our recommendations, neither a cohesive strategy nor a tactical plan has been developed.

Second, the agencies need to clarify their guidance for sharing wildland fire suppression costs with non-Federal entities. In 2006, to help address the rising costs of responding to fires that threaten both Federal and non-Federal lands and resources, we recommended that the Federal agencies, working with relevant State agencies, clarify the financial responsibility for these fires and provide more specific guidance as to when particular cost-sharing methods should be used. The method used to share the costs of suppressing a wildland fire among responsible entities can have significant financial consequences for the entities involved, potentially amounting to millions of dollars. The need for clarity about how to share the rising costs of wildland fire protection is becoming more acute as increasing numbers of homes are built in areas at risk from wildland fires. Federal agencies are updating their guidance on possible methods for sharing costs between Federal and non-Federal entities and on the circumstances when each method typically would be used. It is unclear, however, how the agencies will ensure that such guidance is followed.

Third, the agencies need to establish clear goals, strategies, and performance measures to help contain wildland fire costs. Although the agencies have taken certain steps to help contain wildland fire costs, the effectiveness of these steps may be limited because agencies have not established clear cost containment goals for the wildland fire program, including how containing costs should be considered in relation to other wildland fire program goals such as protecting lives, resources, and property; strategies to achieve these goals; or effective performance measures to track their progress.

Each of these efforts plays an important role in addressing the issue of containing wildland fire costs, but none of them alone can solve the problem. The Federal Government is expending substantial effort and billions of dollars in attempting to address the problem. The agencies, however, despite promising to do so, still cannot articulate how the steps being taken fit together to form a comprehensive and cohesive strategy to contain costs or to address the many wildland fire management problems we and others have reported over the past 7 years.

For cost containment efforts to be effective, the agencies need to integrate cost containment goals with the other goals of the wildland fire program, recognizing the trade-offs that will be needed to meet desired goals within the context of fiscal constraints. Further, because the agencies' efforts to reduce fuels and prepare for and suppress wildland fires are interrelated, a cohesive strategy is fundamental if the agencies are to contain costs.

Mr. Chairman, that concludes my prepared statement. I would be pleased to answer any questions you or other members of the committee may have.

[The prepared statement of Ms. Nazzaro follows:]

PREPARED STATEMENT OF ROBIN M. NAZZARO, DIRECTOR, NATURAL RESOURCES AND ENVIRONMENT, GOVERNMENT ACCOUNTABILITY OFFICE

WHY GAO DID THIS STUDY

Over the past two decades, the number of acres burned by wildland fires has increased, often threatening human lives, property, and ecosystems. The cost of responding to wildland fires has also grown, especially as more homes are built in or near wildlands, an area called the wildland-urban interface. Past management practices, including a concerted federal policy in the 20th century of suppressing fires to protect communities and ecosystems, unintentionally resulted in steady accumulation of dense vegetation that can fuel large, intense, and often costly wildland fires.

GAO was asked to identify actions that federal wildland fire agencies need to take to help contain federal wildland fire expenditures. GAO has identified these actions in three of its reports addressing fuel reduction and cost-sharing efforts and as part of an ongoing review of federal agencies' efforts to contain wildland fire preparedness and suppression costs for this committee. Specifically, GAO focused on examining agencies' efforts to (1) reduce accumulated fuels and address wildland fire problems, (2) share with nonfederal entities the costs of responding to multijurisdictional fires, and (3) contain the costs of preparing for and responding to wildland fires.

WILDLAND FIRE MANAGEMENT

Lack of a Cohesive Strategy Hinders Agencies' Cost-Containment Efforts

WHAT GAO FOUND

Over the past 7 years, GAO has recommended a number of actions federal wildland fire agencies should take to improve their management of wildland fire activities, actions that could also help contain the rising federal expenditures for responding to wildland fires. These agencies—the Forest Service within the Department of Agriculture and land management agencies within the Department of the Interior—concurred with GAO's recommendations but have not completed, or in some cases have not yet begun, needed actions. GAO's ongoing review of federal agencies' efforts to contain wildland fire preparedness and suppression costs has also identified other actions that may be needed. Specifically, the agencies need to:

- *Develop a cohesive strategy that identifies the options and associated funding to reduce fuels and address wildland fire problems.* In 1999, to address the problem of excess fuels and their potential to increase the severity of wildland fires and the cost of suppression efforts, GAO recommended that a cohesive strategy be developed that identified the available long-term options and associated

funding for reducing these fuels. In 2005 and 2006, because the agencies had not yet developed one, GAO reiterated the need for such a strategy but broadened its focus to better address the interrelated nature of fuel reduction efforts and wildland fire response. GAO also recommended that, as an interim step, the agencies develop a tactical plan outlining the steps and time frames needed for completing a cohesive strategy. As of January 2007, the agencies had not developed either a cohesive strategy or a tactical plan.

- *Clarify their guidance for sharing wildland fire suppression costs with non-federal entities.* In 2006, to address the rising costs of responding to fires that threaten both federal and nonfederal lands and resources, GAO recommended that the federal agencies provide more specific guidance as to when particular cost-sharing methods should be used. The cost-sharing method used can have significant financial consequences for the entities involved—potentially amounting to millions of dollars. As of January 2007, the agencies were updating their guidance on possible cost-sharing methods and when each typically would be used, but it is unclear how the agencies will ensure that the guidance is followed.
- *Establish clear goals, strategies, and performance measures to help contain wildland fire costs.* Preliminary findings from GAO's ongoing work indicate that the effectiveness of agencies' efforts to contain costs may be limited because the agencies have not clearly defined their cost-containment goals, developed a strategy for achieving those goals, or developed related performance measures. For these efforts to be effective, the agencies need to integrate cost-containment goals with the other goals of the wildland fire program—such as protecting life and property—and to recognize that trade-offs will be needed to meet desired goals within the context of fiscal constraints.

Mr. Chairman and Members of the Committee:

I am pleased to be here today to discuss the key actions that we believe federal wildland fire management agencies—the Forest Service within the Department of Agriculture and four agencies within the Department of the Interior—need to complete to help contain the rising costs of preparing for and responding to wildland fires. Increasing wildland fire threats to communities and ecosystems, combined with rising costs of addressing those threats—trends that we and others have reported on for many years—have not abated. On average, the acreage burned annually by wildland fires from 2000 to 2005 was 70 percent greater than the acreage burned annually during the 1990s. Appropriations for wildland fire management activities tripled from about \$1 billion in fiscal year 1999 to nearly \$3 billion in fiscal year 2005. Although the agencies are still refining their data, 2006 was an especially severe year, with almost 10 million acres burned and what are likely to be the highest federal fire suppression expenditures ever. A number of factors have contributed to more-severe fires and corresponding increases in expenditures for wildland fire management activities. These factors include an accumulation of fuels due to past fire suppression policies; severe weather and drought in some areas of the country; and growing numbers of homes built in or near wildlands, an area often called the wildland-urban interface. In light of the federal deficit and the long-term fiscal challenges facing the nation, attention has increasingly focused on ways to contain these growing expenditures and to ensure that the agencies' wildland fire activities are appropriate and carried out in a cost-effective and efficient manner.

My testimony today includes findings from three of our recent reports, plus preliminary findings from work under way, which together summarize key wildland fire management weaknesses we have identified over the last 7 years, as well as critical actions the agencies need to complete if they are to effectively contain the rising costs of responding to wildland fires. Specifically, my testimony focuses on three issues: the agencies' efforts to (1) reduce fuels and address wildland fire problems,<sup>1</sup> (2) share with nonfederal entities the costs of responding to fires that burn or threaten to burn multiple jurisdictions,<sup>2</sup> and (3) contain federal expenditures of preparing for and responding to wildland fires. To evaluate these issues, we reviewed selected reports that we have issued since 2000, as well as those by other federal agencies or outside organizations, that assessed federal wildland fire management. We reviewed pertinent agency plans, policies, procedures, reports, and fi-

<sup>1</sup> GAO, *Wildland Fire Management: Update on Federal Agency Efforts to Develop a Cohesive Strategy to Address Wildland Fire Threats*, GAO-06-671R (Washington, D.C.: May 1, 2006); *Wildland Fire Management: Important Progress Has Been Made, but Challenges Remain to Completing a Cohesive Strategy*, GAO-05-147 (Washington, D.C.: Jan. 14, 2005).

<sup>2</sup> GAO, *Wildland Fire Suppression: Lack of Clear Guidance Raises Concerns about Cost Sharing between Federal and Nonfederal Entities*, GAO-06-570 (Washington, D.C.: May 30, 2006).

nancial documents, and we interviewed federal and nonfederal officials to identify steps federal agencies have taken to address these areas and the challenges remaining. We performed our work in accordance with generally accepted government auditing standards from May 2006 through January 2007.

#### SUMMARY

In summary, federal wildland fire management agencies need to take a number of actions to strengthen their overall management of the wildland fire program, actions that could lead to more effective and efficient use of scarce resources and help the agencies to better contain costs. While we have made a number of recommendations over the last 7 years to improve wildland fire management—and agencies have largely concurred with these recommendations—the agencies have made limited progress in implementing the needed changes. Further, our preliminary work on federal agencies' efforts to contain wildland fire preparedness and suppression costs has also identified other actions that may be needed. Specifically, we believe that the agencies need to:

- *Develop a cohesive strategy that identifies the options and associated funding to reduce fuels and address wildland fire problems.* 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 that identified the available long-term options and associated funding for reducing fuels. By 2005, the agencies had yet to develop such a strategy, and 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. We also recommended that the agencies develop a tactical plan outlining the steps and time frames needed for completing a cohesive strategy. Such a strategy and plan would be helpful to the Congress and the agencies in making informed decisions about effective and affordable long-term approaches to addressing the nation's wildland fire problems. Although the agencies concurred with our recommendations, as of January 2007, neither a cohesive strategy nor a tactical plan had been developed.
- *Clarify their guidance for sharing wildland fire suppression costs with non-federal entities.* In 2006, to help address the rising costs of responding to fires that threaten both federal and nonfederal lands and resources, we recommended that the federal agencies, working with relevant state entities, clarify the financial responsibility for these fires and provide more specific guidance as to when particular cost-sharing methods should be used. The method used to share the costs of suppressing a wildland fire among responsible entities can have significant financial consequences for the entities involved—potentially amounting to millions of dollars. The need for clarity about how to share the rising costs of wildland fire protection is becoming more acute as increasing numbers of homes are built in areas at risk from wildland fires. As of January 2007, the agencies were updating guidance on possible methods for sharing costs between federal and nonfederal entities and the circumstances when each method typically would be used. It is unclear, however, how the agencies will ensure that such guidance is followed.
- *Establish clear goals, strategies, and performance measures to help contain wildland fire costs.* Preliminary findings from our work under way for this committee indicate that, although the agencies have taken certain steps to help contain wildland fire costs, the effectiveness of these steps may be limited because agencies have not established clear cost-containment goals, strategies to achieve those goals, or effective performance measures to track their progress.

Each of these efforts plays an important role in addressing the issue of containing wildland fire costs, but none of them alone can solve the problem. For cost-containment efforts to be effective, the agencies need to integrate cost-containment goals with the other goals of the wildland fire program—such as protecting life, resources, and property—and to recognize that trade-offs will be needed to meet desired goals within the context of fiscal constraints. Further, because the agencies' efforts to reduce fuels and to prepare for and suppress wildland fires are interrelated, the cohesive strategy we previously recommended for responding to wildland fires is fundamental if agencies are to contain costs.

#### BACKGROUND

Wildland fires ignited by lightning are both natural and inevitable and play an important ecological role on the nation's landscape. In addition to maintaining habitat diversity, releasing soil nutrients, and causing the seeds of fire-dependent spe-

cies to germinate, fire periodically removes undergrowth, small trees, and vegetation that can otherwise build up and intensify subsequent fires. However, various human land use and management practices, including decades of suppressing wildland fires, have altered the normal frequency of fires in many forest and rangeland ecosystems, leading to uncharacteristically dense vegetation and atypical fire patterns in some places. At the same time, more homes and communities are being built in areas where fires can occur, increasing risks to human life, property, and infrastructure. Experts estimate that between 1990 and 2000, 60 percent of all new housing units in the United States were built in the wildland-urban interface, and by 2000, about 38 percent of housing units overall were located in the wildland-urban interface.<sup>3</sup> Recent media reports indicate that this trend of growth in the wildland-urban interface continues. Finally, agency analyses indicate that climate change and related drought may also be responsible for significant increases in the occurrence of, and costs of responding to, wildland fire.

Increases in the size and severity of wildland fires, and in the cost of fighting 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 decreasing the number of acres burned. In some areas of the country, however, rather than eliminating severe wildland fires, decades of suppression disrupted ecological cycles and began to change the structure and makeup of forests and rangelands, increasing the land's susceptibility to fire. Increasingly, the agencies have recognized the key role that fire plays in many ecosystems and the utility of fire itself as a tool in managing forests and watersheds. The agencies worked together to develop the Federal Wildland Fire Management Policy in 1995, which for the first time formally recognized the essential role that fire plays in maintaining natural systems. This policy was subsequently reaffirmed and updated in 2001. In addition to noting the negative effects of past wildland fire suppression, the policy also recognized that continued development in the wildland-urban interface has placed more values at risk from wildland fire while increasing the complexity and cost of wildland fire suppression operations.

To help address these trends, the policy directed agencies to consider management objectives and the values at risk when determining how or whether to suppress a wildland fire. Under this approach, termed "appropriate management response," the agencies may fight fires that threaten communities or other highly valued areas more aggressively than they fight fires in remote areas or in areas where natural fuel reduction would be beneficial. In some cases, the agencies may simply monitor the fire, or take only limited suppression actions, to ensure that it continues to pose little threat to valued resources. Under current interagency policy, local federal units must develop land management and fire management plans that document approved fire management strategies for each acre of burnable land and other important information about how the land will be managed, including local values at risk, needed local fuel reduction, and rehabilitation actions. Once a fire starts, land management and fire management specialists are to identify and implement the appropriate management response, in accordance with the unit's approved land and fire management plans.

Responding to wildland fires—which can bum across federal and nonfederal jurisdictions—often requires coordination and collaboration among federal, tribal, state, and local firefighting entities to effectively protect lives, homes, and resources. 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—fight wildland fires. These federal agencies work together with nonfederal firefighting entities to share personnel, equipment, and supplies and to fight fires, regardless of which entities have jurisdiction over the burning lands. Agreements developed and agreed to by cooperating entities, commonly referred to as master agreements, govern cooperative fire protection efforts and include general provisions for sharing firefighting costs among responsible entities.

#### AGENCIES NEED A COHESIVE STRATEGY TO ADDRESS WILDLAND FIRE PROBLEMS

Agencies need a cohesive strategy that identifies the available long-term options and associated funding for reducing excess vegetation and responding to wildland fires if the agencies and the Congress are to make informed decisions about an effective and affordable long-term approach for addressing problems that have been dec-

<sup>3</sup>The wildland-urban interface is defined as the area where structures and other human developments meet or intermingle with undeveloped wildland.

ades in the making. We first recommended that the agencies develop such a strategy for addressing fuels in 1999. After we evaluated a number of related wildland fire management issues, we reiterated our recommendation in 2005 and 2006 but also recognized that a comprehensive solution needs to address not only reducing fuels but also an overall response to wildland fire. To develop an effective overall strategy, agencies need to complete several key tasks, which address weaknesses we previously identified.

Our 2005 report summarized several weaknesses in the federal government's management of fuel reduction and related wildland fire programs and identified a number of actions to address these weaknesses.<sup>4</sup> Specifically, these weaknesses included the following: the agencies lacked basic data, such as the extent and location of lands needing fuel reduction; the agencies needed to identify and prioritize fuel reduction projects; many federal land management units did not have fire management plans that met agency requirements designed to restore fire's natural role in ecosystems consistent with human health and safety; and the agencies were unable to assess the extent to which they were reducing wildland fire risks, to establish meaningful fuel reduction performance measures, or to determine the cost-effectiveness of these efforts because they lacked needed data. We also identified a number of tasks the agencies needed to complete to develop a cohesive strategy. These tasks included finishing data systems that are needed to identify the extent, severity, and location of wildland fire threats in our national forests and rangelands; updating local fire management plans to better specify the actions needed to effectively address these threats; and assessing the cost-effectiveness and affordability of options for reducing fuels and responding to wildland fire problems.

The agencies have made some progress on the three primary tasks we identified as important to developing a wildland fire management strategy, although concerns have been raised about when or whether the agencies will successfully complete them. More specifically,

- LANDFIRE, a geospatial data and modeling system, is being designed to assist the agencies in identifying the extent, severity, and location of wildland fire threats to the nation's communities and ecosystems. LANDFIRE data are nearly complete for most of the western United States, with data for the remainder of the country scheduled to be completed in 2009. The agencies will need to ensure, however, that LANDFIRE data are kept current in order to reflect landscape-altering events, such as large fires and hurricanes, and they do not yet have a plan to do so.
- In 2006, we reported that 95 percent of the agencies' individual land management units had completed fire management plans in accordance with agency requirements promulgated in 2001. However, the agencies do not require regular plan updates to ensure that new data (from LANDFIRE, for example) are incorporated into the plans. Moreover, in the wake of two court decisions—each holding that the Forest Service was required to prepare an environmental assessment or environmental impact statement under the National Environmental Policy Act (NEPA)<sup>5</sup> to accompany the relevant fire management plan—the Forest Service decided to withdraw the two plans instead of completing them. It is unclear whether the agency would withdraw other fire management plans successfully challenged under NEPA; nor is it clear whether or to what extent such agency decisions could undermine the interagency policy directing that every burnable acre have a fire management plan. Without such plans, however, current agency policy does not allow use of the entire range of wildland fire response strategies, including less aggressive, and potentially less costly, strategies.
- The Fire Program Analysis (FPA) system is a computer-based model designed to assist the agencies in cost-effectively allocating the resources necessary to address wildland fires. FPA is being designed in two phases. Phase I was intended to provide information for use in allocating resources for the initial responses to fires and in developing estimates for agencies' fiscal year 2008 budgets. Phase II was to be focused on additional activities, including fuel reduction and large-fire suppression. A "midcourse review" of FPA, completed in 2006, however, has resulted in recent endorsement by the Wildland Fire Leadership Council<sup>6</sup> of what may be significant design modifications to FPA—ones that

<sup>4</sup> GAO-05-147.

<sup>5</sup> For major federal actions that significantly affect the quality of the human environment, the National Environmental Policy Act requires all federal agencies to analyze the environmental impact of the proposed action. 42 U.S.C. § 4332(2)(C).

<sup>6</sup> The Wildland Fire Leadership Council was established in April 2002 to support the implementation and coordination of federal wildland fire management activities. The council includes

may not fulfill key project goals of (1) optimizing how resources are allocated, (2) linking fuel reduction to future preparedness and suppression costs, (3) ensuring comparability among different agencies' analyses and resulting decisions, and (4) enabling aggregation of local costs to identify national options and related budgets. Agencies plan to have a prototype of phase II, reflecting this design modification, completed by June 2007. According to a program official, the prototype will enable project managers to assess and report to the leadership council on the planned scope, schedule, and cost of FPA, including whether or not they will meet the scheduled completion date of June 2008. Further, gaps in the data collected for FPA may also reduce its usefulness in allocating resources.

Although the agencies had made progress on these three primary tasks at the time of our 2006 update, they had not developed either a cohesive strategy identifying options for reducing fuels or a joint tactical plan outlining the critical steps, together with related time frames, the agencies would take to complete a cohesive strategy, as we recommended in our 2005 report. In February 2006, the agencies issued an interagency document titled *Protecting People and Natural Resources: A Cohesive Fuels Treatment Strategy*, but we found that the document did not identify long-term options or associated funding for reducing fuels and responding to wildland fires. During our update, officials from the Office of Management and Budget stated that it would not allow the agencies to publish long-term funding estimates until the agencies had sufficiently reliable data on which to base the estimates. The agencies commented that having such data would not be possible until LANDFIRE and FPA were more fully operational. We continue to believe that until a cohesive strategy can be developed, it is essential that the agencies create a tactical plan for developing this strategy, so the Congress understands the steps and time frames involved in completing the strategy.

BETTER GUIDANCE NEEDED TO CLARIFY SHARING OF SUPPRESSION COSTS BETWEEN  
FEDERAL AND NONFEDERAL ENTITIES

Federal agencies need to take steps to improve the framework for sharing wildland fire suppression costs between federal and nonfederal entities. Effective sharing of suppression costs among responsible entities can play a role in helping to contain federal expenditures, especially with the growing number of homes in areas at risk from wildland fire that may require protection. We recommended in our 2006 report that federal agencies work with relevant state entities to clarify the financial responsibilities for suppressing fires that burn, or threaten to burn, across multiple jurisdictions and provide more specific guidance as to when particular cost-sharing methods should be used.<sup>7</sup> As of January 2007, the agencies were updating guidance on options for sharing costs and under what circumstances each would typically be used, but it is unclear how the agencies will ensure that such guidance is followed.

We found that federal and nonfederal entities used a variety of methods to share the costs of fighting wildland fires affecting both federal and nonfederal lands and resources. Agreements between federal and nonfederal entities—known as master agreements—provide the framework for those entities to share suppression costs for wildland fires that burn or threaten both federal and nonfederal lands and resources. These agreements typically list several available cost-sharing methods. The agreements we reviewed, however, often lacked clear guidance for officials to use in deciding which method to apply for a specific fire. Clear guidance is important because local representatives of federal and nonfederal firefighting entities responsible for protecting lands and resources affected by the fire use this guidance in deciding which costs will be shared and for what period. We found, however, that cost-sharing methods were applied inconsistently within and among states, even for fires with similar characteristics. For example, in one state we reviewed, the costs for suppressing a large fire that threatened homes were shared solely according to the proportion of acres burned within each entity's area of fire protection responsibility, a method that has traditionally been used. Yet costs for a similar fire within the same state were shared differently. For this fire, the state agreed to pay for certain aircraft and fire engines used to protect the wildland-urban interface, while the remaining costs were shared on the basis of acres burned. In contrast to the two methods applied in this state, officials in another state used yet a different cost-sharing method for two similar large fires that threatened homes, apportioning costs

membership from Agriculture and Interior, as well as the agencies with wildland fire management responsibilities.

<sup>7</sup>GAO-06-570.

each day for personnel, aircraft, and equipment deployed on particular lands, such as the wildland-urban interface. The type of cost-sharing method ultimately used can have significant financial consequences for the entities involved, potentially amounting to millions of dollars. Moreover, as we reported, federal officials expressed concern that the existing cost-sharing framework insulated state and local governments from the cost of providing wildland fire protection in the wildland-urban interface, thus reducing the incentive for state and local governments to adopt laws—such as building codes that require fire-resistant materials in areas at high risk of wildland fires—that in the long run could help reduce the cost of suppressing wildland fires.

We recommended in our 2006 report that the federal agencies work with relevant state entities to clarify the financial responsibility for fires that burn, or threaten to burn, across multiple jurisdictions and develop more specific guidance as to when particular cost-sharing methods should be used. The federal agencies generally agreed with our findings and recommendations and agreed to improve the guidance on sharing suppression costs. As of January 2007, the agencies were updating guidance that can be used when developing master agreements between cooperating federal and nonfederal entities, as well as agreements on how to share costs for a specific fire. Agency officials said that this guidance provides additional information about potential methods for sharing costs and about the circumstances under which each cost-sharing method would typically be used. It is unclear, however, how the agencies will ensure that the guidance is followed. Further, because master agreements are updated only every 5 years, it may take a number of years before the new guidance is fully incorporated into master agreements between cooperating entities.

#### LACK OF CLEAR GOALS AND COHESIVE STRATEGY HINDERS AGENCIES' EFFORTS TO CONTAIN WILDLAND FIRE COSTS

Preliminary findings from our ongoing work for the committee show that, despite dozens of federal and nonfederal studies issued since 2000 that consistently identified similar areas needing improvement to help contain wildland fire costs, the agencies have made little progress in addressing these areas. Areas identified as needing improvement to help contain costs—in addition to reducing fuels and cost sharing discussed previously—include acquiring and using firefighting personnel and equipment, selecting appropriate strategies for responding to wildland fires, and effectively managing cost-containment efforts. Although the agencies have begun taking steps to address some of the areas previous studies have identified as needing improvement, much work remains to be done. For example:

- *Acquiring and using personnel and equipment.* The agencies have taken steps to improve their ability to track and deploy personnel and equipment, but they have made little progress in completing the more fundamental step of determining the quantity and type of firefighting assets needed based on an analysis of values at risk and appropriate suppression strategies. Further, although the Forest Service has identified a series of improvements it plans to make in the acquisition process, it has so far made little progress.
- *Selecting appropriate suppression strategies.* The agencies have also begun to improve analytic tools that assist land and fire managers identify the appropriate suppression strategy for a given fire, but shortcomings remain. Federal policies encourage the use of less intensive suppression strategies when possible, strategies that may also be less costly. Land and fire managers, however, may be reluctant to employ anything less than full suppression because of concerns that a fire will escape control. Currently, much of the information managers use to estimate potential fire size, risks, and costs are based on their individual experiences, which can vary widely. Researchers are developing a new suite of tools that will analyze fuel conditions and predicted weather conditions to model expected fire growth and behavior and provide better information for managers making fire response decisions, but as of January 2007, these new tools were still being developed and tested.
- *Managing cost-containment efforts.* The steps the agencies have taken to date to contain wildland fire costs lack several key elements fundamental to sound program management, such as clearly defining cost-containment goals, developing a strategy for achieving those goals, and measuring progress toward achieving them. First, the agencies have not clearly articulated the goals of their cost-containment efforts. For cost-containment efforts to be effective, the agencies need to integrate cost-containment goals with the other goals of the wildland fire program—such as protecting life, property, and resources. For example, the agencies have established the goal of suppressing wildland fires at

minimum cost, considering firefighter and public safety and values being protected, but they have not defined criteria by which these often-competing objectives are to be weighed. Second, although the agencies are undertaking a variety of steps designed to help contain wildland fire costs, the agencies have not developed, and agency officials to this point have been unable to articulate, a clear plan for how these efforts fit together or the extent to which they will assist in containing costs. Finally, the agencies are developing a statistical model of fire suppression costs that they plan to use to identify when the cost for an individual fire may have been excessive. The model compares a fire's cost to the costs of suppressing previous fires with similar characteristics. However, such comparisons with previous fires' costs may not fully consider the potential for managers to select less aggressive—and potentially less costly—suppression strategies. In addition, the model is still under development and may take a number of years to fully refine. Without clear program goals and objectives, and corresponding performance measures to evaluate progress, the agencies lack the tools to be able to determine the effectiveness of their cost-containment efforts.

#### CONCLUSIONS

The federal government is expending substantial effort and billions of dollars in attempting to address our nation's wildland fire problems. Yet despite promises to do so, the agencies still cannot articulate how the steps they are taking fit together to form a comprehensive and cohesive strategy to contain costs or to address the many wildland fire management problems we and others have reported over the last 7 years. Given the interrelated nature of wildland fire issues, they cannot be addressed in isolation but must be viewed from and addressed within a broader perspective. Agencies need to understand how each issue affects the others and determine the trade-offs required to effectively meet program goals while containing program costs. Therefore, if the agencies and the Congress are to make informed decisions about an effective and affordable long-term approach to responding to these issues, agencies need to first develop clearly defined program goals and objectives and a strategy to achieve them, including identifying associated funding. Because it will likely be at least 2009 before the agencies develop a strategy for fuel reduction efforts that would meet standards required by the Office of Management and Budget, we continue to believe that in the interim, it is essential that the agencies create a tactical plan for developing this strategy, so that the Congress understands the steps and time frames involved with its completion. In doing so, the agencies need to make very clear how the final design of FPA will meet the key program goals enumerated here, how and when the agencies will complete all fire management plans, and what schedule they envision for periodically updating LANDFIRE data. At the same time, to help address the rising cost of protecting the growing number of homes built in the wildland urban interface—a cost that may be disproportionately borne by the federal government—federal agencies also need to work with relevant state entities to ensure that appropriate methods are used for sharing the costs of suppressing fires that burn, or threaten to burn, across multiple jurisdictions.

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

The CHAIRMAN. Thank you very much.

Our final witness on this panel is the Honorable Phyllis Fong, who is the Inspector General for the Department of Agriculture. Please go right ahead.

#### **STATEMENT OF PHYLLIS K. FONG, INSPECTOR GENERAL, DEPARTMENT OF AGRICULTURE**

Ms. FONG. Thank you, Mr. Chairman and ranking member Domenici and members of the committee. We really very much appreciate your inviting us here today to testify about our work.

I want to just briefly summarize for you the situation as we see it. Basically, there are, as the witnesses have mentioned, a number of factors contributing to rising costs in fire suppression, and failure to deal with any one of these factors will not break the cycle of rising costs. On the one hand, we have increased fuel buildup

in the forests due to drought, due to weather, due to insects, what have you, and due to failure to take advantage of the wildland fire programs. On the other hand, we have a situation in the WUI, as other witnesses have testified to, where we have increased development and communities who are not engaging in fire wise practices. So as a result, what we have is a situation where fire costs are increasing every year and creating great trouble for all of us.

Now, our sense of this is that there is a Federal policy that says that we need to address both of these factors. We need to address both sides of the equation. The Federal Wildland Fire Management Policy provides a framework for this. It recognizes that we have to allow fire to play its natural role in the forest to reduce the accumulation of hazardous fuel. It also recognizes that after giving due protection to human life and safety, which is the top priority, Federal agencies have to give equal consideration to protection of property and protection of natural resources.

Finally, the policy states that State and local governments are primarily responsible for protecting structures in the WUI.

What we have found in our audit work is that in fact these policies are not being carried out. We need to restore some balance to this. What is actually happening is that because of the increase growth in the WUI, fire suppression costs are being directed more and more to this factor, to the detriment of reducing fuels in the national forest.

So we issued a number of reports which have a range of recommendations that go to these issues. The other witnesses summarized them very effectively. What we really want to iterate here is that the key point is that Federal fire suppression costs will not go down, they will continue to rise, unless something is done to regulate development in the WUI. We have to somehow incentivize State and local governments to regulate development in the WUI so that suppression costs for large fires can fall, thereby allowing a more balanced approach to reducing fuels in the forest and creating a more balanced approach to healthy forests. That is our primary—the gist of our audit work in this area.

My prepared statement goes into the details of our recommendations and I will submit that for the record. Thank you for inviting us and I will be happy to address any questions.

[The prepared statement of Ms. Fong follows:]

PREPARED STATEMENT OF PHYLLIS K. FONG, INSPECTOR GENERAL,  
DEPARTMENT OF AGRICULTURE

Good morning, Chairman Bingaman, Ranking Member Domenici, and Members of the Committee. Thank you for inviting me to testify before you today to discuss our recent audits pertaining to the U.S. Forest Service's (FS) Healthy Forest Initiative (HFI) and Large Fire Suppression Costs. The Office of Inspector General (OIG) devotes extensive audit and investigative resources to evaluate and improve the Department of Agriculture's (USDA) management of its public assets and resources, including FS and its National Forest System (NFS) lands. We are committed to conducting reviews of FS programs and activities to assist agency officials and Members of this Committee in their respective administrative and legislative oversight responsibilities.

USDA, through FS, is responsible for the management of our Nation's national forests and grasslands. FS oversees these lands through 155 national forests and 20 grasslands. Wildfires on FS lands are becoming larger and more expensive to extinguish. From fiscal year (FY) 2000 to 2006, FS suppression costs averaged \$900 million annually and exceeded \$1 billion in 4 of those 7 years. In some years, FS

has had to borrow funds from other programs to pay for its wildfire suppression activities, and this has adversely affected FS' ability to accomplish work in other areas.

We recently completed two audits that evaluated FS efforts to reduce the threat of wildfires. Our first audit evaluated FS implementation of the HFI. One of the primary goals of this initiative is to reduce the threat of wildfire by removing hazardous fuels from areas in national forests that constitute the greatest threats of catastrophic fire. Our second audit evaluated the controls FS had in place to contain wildfire suppression costs.

In both audits, FS agreed to take action on all our recommendations. Summarized below are the results of each audit.

#### I. IMPLEMENTATION OF THE HEALTHY FORESTS INITIATIVE

FS manages more than 192 million acres in the NFS. The agency has estimated that 73 million acres of this land and 59 million acres of privately owned forest land are at high risk of ecologically destructive wildland fire. One of the most extensive and serious problems related to the health of national forests is the over-accumulation of dead vegetation that can fuel fires. The increase in the amount of hazardous fuels is the result of several major factors. First, extended drought conditions have significantly increased the amount of unhealthy or dead forests and vegetation. Second, widespread disease and insect infestations have killed or affected the health of large areas of national and private forestland. Third, past fire suppression practices of the Federal, State, and local governments, companies, and individuals have prevented the natural use of wildland fire (wildland Fire Use—WFU) to reduce accumulated forest vegetation. It has been estimated by some FS managers that hazardous fuels are accumulating three times as fast as they can be treated. The accumulation of hazardous fuels has contributed to an increasing number of large, intense, and catastrophically destructive wildfires. Reducing the buildup of hazardous fuels is crucial to reducing the extent, severity, and costs of wildfires.

We focused our audit work on the agency's hazardous fuels reduction program because more than half of FS' funding under the HFI is allocated for this purpose. For FY 2005 and 2006, the FS budget for hazardous fuels reduction was approximately \$262 million and \$281 million, respectively. Specifically, our audit evaluated FS management controls related to (1) determining if projects were cost beneficial, (2) identifying and prioritizing projects, (3) allocating funds among projects, and (4) reporting accomplishments. The following are the major issues identified in our audit.

##### *Assessment of Risk*

At the time of our audit, we found that FS lacked a consistent analytical process for assessing the level of risk that communities faced from wildland fire and determining if a hazardous fuels project would be cost beneficial. FS had not developed specific national guidance for weighing the risks against the benefits of fuels treatment and restoration projects.

In order to allocate resources most effectively, it is important for FS to be able to identify which communities and what NFS resources are at risk. FS needs to be able to determine the level of risk for significant and destructive wildland fires throughout the NFS and what the potential benefit or payback would be from conducting a specific fuels reduction project. While we agreed with FS that a traditional cost benefit analysis would be impractical, we concluded that FS could develop a set of criteria to compare the relative degrees of exposure and risk to wildland fire that each community faces. The assessment should include a measure of the benefits and/or consequences of selecting one project over another for treatment. Currently, FS' nine regions each have different ways of identifying priorities. At the time of our audit, FS could not adequately compare hazardous fuels reduction projects among regions. This affects the ability to identify, on a national basis, those projects that should be funded and completed first. While some areas or communities may be at high risk from wildfires, it may not be effective for FS to spend large sums of money on hazardous fuels reduction projects if the communities have not enacted and enforced rigorous building and zoning regulations, otherwise known as "Firewise" regulations. A community's lack of "Firewise" regulations could significantly reduce the effectiveness of any effort by FS to reduce hazardous fuels around the community. FS officials believe that the new LANDFIRE system being developed will provide more accurate nationwide data so that they can better define and identify areas where fuels treatment would be most cost beneficial.

### *Prioritizing and Funding Projects*

FS also did not have the ability to ensure that the highest priority fuels reduction projects were funded first. Because projects were not prioritized under uniform, national criteria, there was no systematic way to allocate funds to the most critical projects. Funds were allocated based upon a region's historical funding levels and targets for number of acres to be treated that are set by the FS Headquarters office in Washington, D.C. There were no controls in place to prevent funds from being allocated to projects in order to achieve targets of acres treated instead of reducing the most risk. This could lead to less important projects being funded.

We recommended that FS develop and implement specific national guidance for assessing the risks wildland fires present to residents and communities and determining the comparative value and benefit of fuels treatment/restoration projects. We also recommended that FS establish controls to ensure that the process and methodology to identify and prioritize the most effective fuels reduction projects can be utilized at all levels to ensure funds are distributed according to the priority of the projects. This process should have uniformity (and comparability) from the local level (districts) through to the Headquarters office and across geographic boundaries (i.e. among regions).

### *Performance Measures and Reporting Standards*

We found that FS performance measures and reporting standards did not provide adequate information to evaluate the effectiveness of a fuel treatment practice. They did not communicate to either FS managers or other stakeholders whether the treatment of an acre of forest had resulted in changing its condition class<sup>1</sup> or if the project reduced the risk from catastrophic wildland fire. The agency's focus has been on achieving firm annual targets (output) that are measured in the number of acres treated. However, these acres are not homogenous, meaning that some acres of hazardous fuels create much more risk to communities and resources than others. Reporting the number of acres treated did not communicate the amount of risk that has been reduced. Focusing only on acres treated does not communicate key information on the effectiveness of the treatment practice. In addition, hazardous fuels accomplishment reports did not provide detailed information to evaluate the overall progress of the program; details such as the location of treatments, changes in condition class, and initial or maintenance treatments are not reported.

We recommended that FS develop and implement a more meaningful and outcome-oriented performance measure for reporting metrics, such as acres with "risk reduced" or "area protected." Also, FS should direct that implementing effective integrated treatments are more important than solely meeting acreage targets. We also recommended that FS improve accomplishment reporting by including more detailed information, such as breaking down accomplishments by region, noting changes in condition class, and differentiating between initial and maintenance treatments and multiple treatments on the same acres.

FS agreed with our audit findings and recommendations and has committed to take action on them.

## II. LARGE FIRE SUPPRESSION COSTS

As part of the agency's ongoing effort to contain wildfire suppression costs and increase the Wildland Fire Management Program's accountability, FS senior management requested that OIG evaluate FS' controls over its wildfire suppression costs. FS wanted OIG to take an objective and unbiased look at FS' current large fire management practices. Our primary objective was to evaluate the controls FS had in place to contain wild fire suppression costs. Specifically, we sought to (1) determine whether FS ensured non-Federal entities paid an equitable share of wildfire suppression costs, (2) evaluate whether wildland fire use (i.e. the management of naturally ignited wildland fires to accomplish specific management objectives like fuels reduction) was optimized, and (3) assess the cost effectiveness of FS wildfire suppression activities.

### *Suppression Costs Driven by Efforts to Protect Private Property*

The Federal Wildland Fire Management Policy of 1995 and its 2001 update direct Federal fire management agencies, including FS, to safely suppress wildfires on Federal lands at minimum cost considering the relative values of property and nat-

<sup>1</sup>The fire-regime condition class is an expression of the departure of the current condition from the historical fire regime resulting in alterations to the ecosystem. A condition class is measured as a 1, 2, or 3, with 3 being the most significant departure from the historical fire regime. Activities that cause the departure include fire exclusion, timber harvesting, grazing, growth of exotic plant species, insects, and disease.

ural resources at risk.<sup>2</sup> The Federal Wildland Fire Management Policy also makes State and local governments responsible for protecting structures within the Wildland Urban Interface (WUI)<sup>3</sup> from fire.

We found that the majority of FS' large fire suppression costs are directly linked to protecting private property in the WUI. The number of private homes being built in the WUI is increasing each year. The Federal Government has little or no control over this property development that has a major impact on FS fire suppression costs. Much of this development is basically unregulated from a fire protection standpoint. Many communities have few or no regulations mandating the use of fire resistant building materials or establishing/maintaining fire safe areas around structures. FS suppression costs are likely to continue to rise because current public expectations and uncertainties among Federal, State, and local fire management agencies about fire protection roles and responsibilities compel FS to suppress fires when private property is at risk, even when fires pose little threat to NFS lands. Giving natural resource protection an equal priority to private property protection in the WUI (or conducting any sort of cost/benefit analysis) is considered by FS managers to be politically infeasible.

Although the Federal Wildland Fire Management Policy makes State and local governments primarily responsible for protecting structures in the WUI, FS managers have not renegotiated their agreements with State and local governments to apportion responsibilities and costs as required. State and local governments control building and zoning in the WUI. However, protection areas have not been redefined to reflect State and local governments' responsibilities accompanying this growth. FS managers continue to make it a priority to protect private property over natural resources. Consequently, FS WUI protection expenditures have increased rather than decreased. In FY 2003 and 2004, about 87 percent of the large wildfires we reviewed identified protecting private property as a major strategy objective for the suppression effort.<sup>4</sup> Some FS managers estimate that between 50 to 95 percent of large wildfire costs borne by the agency are directly related to protecting private property in the WUI. Based on these estimates, FS spent as much as \$1 billion during those 2 years protecting private properties in the WUI.<sup>5</sup>

To ensure that the burden of protecting property in the WUI is shared equitably among the Federal, State, and local entities involved, we recommended that FS seek clarification from Congress as to the responsibilities of both FS and its non-Federal partners to protect private properties threatened by wildfires. FS should renegotiate wildfire protection agreements as appropriate. The Federal Government should also find ways to encourage State and local governments to enact and vigorously enforce "Firewise" building and zoning codes.

#### *Use of Wildland Fire Should Be Expanded To Control Costs of Future Fires*

Wildland fire use (WFU)<sup>6</sup> lets naturally occurring fires burn accumulated hazardous fuels that increase the likelihood of large expensive wildfires. Naturally occurring forest fires can also be beneficial for forest and plant health by returning the forests back to their natural state. To control the risk of costly, catastrophic wildfires, the Federal Wildland Fire Management Policy specifies that FS give WFU and fire suppression equal consideration. However, existing FS firefighting policies and the lack of qualified WFU personnel restrict FS managers from doing so.

Under current FS fire policies, FS can manage a fire for either WFU or suppression. Once a fire has been fought for suppression, it may not again be managed for WFU. Concerns that a natural fire could potentially escape FS control if not suppressed and the protection expectations of private landowners in nearby communities result in most NFS fires being treated initially as suppression. Many potentially beneficial fires may be suppressed because of the restriction on switching firefighting management objectives. Of the almost 80,000 natural ignitions that occurred on FS land from 1998 through 2005, approximately 1,500—only 2 percent—

<sup>2</sup>The Federal Wildland Fire Management Policy, chartered in 1994 by the Secretaries of the Interior and Agriculture, provides the foundation for Federal interagency fire management activities.

<sup>3</sup>The WUI is the area where structures and other human development meet or intermingle with undeveloped wildland. Wildland urban interface is any area containing human developments, such as a rural subdivision, that may be threatened by wildland fires.

<sup>4</sup>Based on an analysis of 37 wildfires occurring in 2003 and 2004 with suppression costs exceeding \$5 million each.

<sup>5</sup>This calculation is based on our characterization of "large wildfires" as those exceeding \$1 million as recorded in FS' financial information system.

<sup>6</sup>WFU is the management of naturally ignited wildland fires to accomplish specific resource management objectives such as fuels reduction in pre-defined geographic areas outlined in fire management plans.

were allowed to burn as WFU. In addition, FS managers have access to far fewer teams for WFU (7) than teams for suppression (55). FS estimates it needs to have 300 fire use managers to be able to select WFU as a strategy for all eligible fires.<sup>7</sup> At the time of our audit, the agency had only 83 fire use managers.

The restrictive policies and lack of qualified personnel contribute to the overwhelming predisposition for FS to suppress fires rather than let them burn as WFU. Consequently, FS may have missed opportunities to reduce the hazardous fuels that contribute to large, expensive fires and may have unnecessarily spent millions of dollars suppressing wildland fires.

To address the need to optimize wildland fire use, we recommended that FS modify current policies to allow (1) concurrent management of wildland fires for both WFU and suppression, (2) transition between WFU and suppression, and (3) management of wildfire suppressions to accomplish fuel reductions. We also recommended that FS prioritize funding to accomplish the staffing and training changes needed to implement an expanded WFU program.

#### *FS Cost-Containment Controls Need To Be Strengthened*

FS has developed internal controls to strengthen financial accountability for line officers and incident commanders. However, we found that the cost-effectiveness of managers' and incident commanders' decisions and oversight were neither tracked during the fire nor evaluated afterwards. In addition, the agency's performance measures and reporting mechanisms did not adequately allow FS management to assess the effectiveness of its wildfire suppression cost-containment efforts, because the information FS summarized at the end of each fire season lacked essential data (such as the kinds of critical infrastructure or natural resources lost or saved) that policymakers need to evaluate FS suppression activities in relation to the monies spent.

We also determined that FS national and regional wildfire cost-containment reviews have limited effectiveness in identifying and correcting suppression cost inefficiencies because they (1) did not sufficiently address large cost factors such as the selection of suppression alternatives and the effectiveness of tactics, (2) did not help to improve performance because identified problems were not communicated to affected parties and corrected, and (3) did not occur with sufficient frequency.

We recommended that FS (1) develop a reporting mechanism to gather and summarize more meaningful wildfire suppression information, (2) increase the accountability of line officers and incident commanders by incorporating into their evaluations an assessment of strategic and tactical cost-effectiveness, and (3) formalize newly developed wildfire cost assessment review procedures in FS directives and provide training to FS staff that perform the reviews.

In summary, we concluded that FS' escalating cost to fight fires is largely due to its efforts to protect private property in the WUI bordering FS lands. Homeowner reliance on the Federal Government and the lack of "Firewise" building and zoning regulations results in an enormous financial burden on FS as it suppresses wildland fires. Efforts to reduce these costs need to include more equitably sharing the burden with State and local governments who have the authority to regulate growth in the WUI. In order to help reduce future costs, FS needs to revise policies that limit or restrict WFU. FS also needs to improve the accountability of its line officers and incident commanders and improve the effectiveness of its large fire reviews.

FS has agreed with our findings and recommendations and has already begun discussions regarding appropriate incentives to encourage States to enter into equitable protection agreements. The agency has advised OIG that it will expand these discussions to include its Federal wildland fire management partners and the Office of Management and Budget. Any agreed upon incentives will be included in national directives so that they will be considered as each region renegotiates agreements with States. FS has already taken steps to accomplish the needed staffing and training recommended so that more people can be qualified and available for critical positions to manage WFU events on incident command teams.

I want to express my sincere thanks to FS officials and employees for the assistance and considerable cooperation they extended to OIG during these two audits. FS faces many difficult programmatic issues and natural resource challenges as it strives to provide good stewardship of America's national forests. OIG's management and staff greatly appreciate the admirable but frequently uncredited work that FS employees perform on a daily basis to preserve and enhance our precious national forests.

<sup>7</sup> Eligible fires are those that meet the specific WFU criteria established by each national forest.

This concludes my testimony. Thank you again for inviting me to testify before the Committee. I would be pleased to address any questions you may have.

The CHAIRMAN. Thank you very much.

Why do we not do 5-minute rounds here because we do have a panel that we want to bring on if we can.

Let me ask a couple of questions first, maybe directed to Secretary Rey or Ms. Hatfield, either one. One of the issues that came up before—I think we spoke about this a year or so ago, Secretary Rey—is the problem of the way we are doing budgeting for this wildfire suppression activity. At that time we were doing it on the basis of a 10-year average. The recent years would indicate, I think you said in your statement, that we are in an extended drought cycle today. Obviously the costs have been substantially greater than we have expected each year based on our prediction.

I guess Mr. Caswell will be testifying on the second panel about recommending that agencies use predictive-based budgeting instead of this 10-year average. What progress is being made to adopt that recommendation or is there a reason why that does not make sense?

Ms. HATFIELD. Well, Mr. Chairman, we looked at the specifics of that recommendation and we had some concerns about the particulars about how they had recommended it in the context of putting us in a situation of taking appropriated dollars and moving them essentially into the fire account when they were appropriated for other reasons. But what we have done is look at a couple of tools that we could use to help us in terms of better discerning how we could best use the dollars that we have available.

One of those is looking at a stratified cost index which the Forest Service has modeled and DOI now is looking at our data about how we can put that in there, and we think that will give us a better understanding of fires that do not fall—or fall high or low in that range, so we can look at those and look at specifics about how that we might manage costs better there.

We also have—

The CHAIRMAN. Let me just interrupt because I think maybe we are talking past each other. My concern is that the number of fires, the number of acres burning each year from wildfire, is growing. The cost of dealing with that is growing, and we are using a method for budgeting that does not take that into account.

I am just wondering why we do not use a method of budgeting that does take that into account and recognize that this is, as Secretary Rey says, an extended drought cycle, and the 10-year average is not what we are going to wind up with this next fire season or the fire season after that, just as it has not been adequate this last fire season or the fire season before that.

Ms. HATFIELD. Well, we are using a rolling average, so that it does take into account where we have had larger fire expenditures. But if you also look at the averages, in every year, for example, in the past 5 years it has not been as high as it was, for example, last year. So the rolling average does give us a way of looking at potential expenditures that may be necessary for us in terms of any 1 year.

Obviously, we budget for what we think is the capacity we are going to need to be successful in putting out fires, and we have

been successful on initial attack using the budget and the methodology that we are now using, although we are continuing to look at it.

The CHAIRMAN. But you do have these enormous shortfalls each year.

Ms. HATFIELD. In some years.

The CHAIRMAN. So you are not budgeting enough money to fight fires or else, I mean, I am missing something in this equation.

Mr. REY. I think if I could add, we have not overspent in each of the last 10 years.

Ms. HATFIELD. Exactly.

Mr. REY. We have had a couple of years where we did not expend all of the suppression dollars. But I think——

The CHAIRMAN. The last 3 years are the ones I am concerned about.

Mr. REY. I do not think we did in 2004. I think we ended up with money left over.

But I think maybe more to your point, the rolling 10-year average now includes a significant number of high-cost years. So using a broader climatological predictive model may not give us a much different result.

Also, just as a matter of record, the Appropriations Committee report language, at least for the present, indicates that we should use a rolling 10-year average. We do have some congressional direction that we are trying to respond to.

But I think basically we are now at the point where a predictive model is not going to give us a much different budgetary result, and as long as we stay in this drought cycle we will eventually have a rolling average that includes 10 bad years.

Ms. HATFIELD. And as a result of looking at some of the strategic panel's recommendation, that one specifically, we did look at some other models to see if we could come up with a model that would be a better predictor. And while there may be some marginal improvements in terms of our prediction, not a lot better than the rolling 10-year average.

The CHAIRMAN. All right. My time is up.

Senator Domenici.

Senator DOMENICI. Senator, I am hoping that after this hearing you will permit me to join with you in an effort to put together some suggestions and see if they would agree with them. Something has to be done. Your questions are right on point and they seem to be saying they are doing it. But they are not. I mean, it does not come out on point. It comes out short every year.

Let me ask a peripheral question. Foresters and others who are getting involved now are finding themselves potentially liable in lawsuits, criminal and otherwise. It is causing a serious ripple. We had recently 3 years after an event one of the foresters was held liable, not only in a civil suit, but held liable by a grand jury. He has not been tried yet, but the grand jury did indict him.

What is going on and what do we do about protecting these people so that they do not start quitting on us based upon the fear that they are going to get stuck with the criminal liability that is not present in the private sector?

Mr. REY. The problem that we are experiencing has three parts. As a consequence of exposing Federal firefighting supervisors to criminal liability, we are now seeing some who are indicating that because that is only a portion of their job—the type 3 incident commanders, for instance—they are declining to keep their training current because they do not see the point of exposing themselves and their families to criminal liability.

The second problem that we are experiencing is that our after-accident investigations, which are investigations that are designed to find causal factors and learn from them, are now being impeded because many of our firefighters do not want to speak freely. In the last fatality, a few of them sought legal representation and, not surprisingly, their attorneys told them not to say anything to the accident investigators.

The third problem we have is what will occur when a joint command incident results in a fatality and the incident commander is not a Federal employee, but a State employee. There is a disparity and an inequity between how the criminal statutes are applied where Federal employee fatalities are concerned and where State and local employee fatalities are involved. The expansive definition of what constitutes criminal negligence does not carry in the case of a death of a State or a local employee, only a Federal employee. That is under the U.S. Code as it exists today.

So in a case like the Esperanza fire last fall, where the California Department of Forestry was in charge of the incident and Federal employees suffered fatalities, should that thereafter result in indictment or investigation and indictment for criminal negligence we are going to find our inter-agency and inter-governmental firefighting effort impinged because a lot of State and local employees or supervisors are not going to want to get involved in a joint command fire because it exposes them to a liability that they are not presently exposed to if they are fighting fires completely within their jurisdiction.

Those are the problems.

Senator DOMENICI. You told us the problems. What do we do about it, if anything?

Mr. REY. The solutions I think are threefold. The first is to amend Pub. L. 104-208 to allow fire supervisors who do not qualify for liability insurance to qualify. That would assist. We could then recommend to our Federal firefighting supervisors to purchase and be reimbursed for liability insurance. That only you can do.

A second is something—

Senator DOMENICI. Do you support that?

Mr. REY. The administration would support that.

Senator DOMENICI. Okay.

Mr. REY. The second is something that we can do and that is to modify our investigative protocols to more closely resemble those that are used by the military and NASA, to provide a measure of privilege to people who provide testimony in accident investigations that we conduct, so that that information will not thereafter be used by someone else in a criminal proceeding.

The third would be to look at—

Senator DOMENICI. Who would carry that one out?

Mr. REY. We can do that and are doing it.

Senator DOMENICI. You are?

Mr. REY. A third would be to look at Pub. L. 107-203, which was enacted from this committee to authorize an independent investigation in the case of Federal fatalities by our Office of Inspector General, and to clarify that that investigation is separate and for a separate purpose than the Forest Service accident inquiry. As I understand it, once our Inspector General conducts an investigation that suggests criminal activity, they have a nondiscretionary obligation to refer that to the appropriate U.S. Attorney for subsequent action. In this case the criminal act is criminal negligence involving the death of a Federal official, as the Code presently defines that.

Senator DOMENICI. Thank you, Mr. Chairman. Thank you very much.

The CHAIRMAN. Yes, thank you very much.

Senator Salazar.

Senator SALAZAR. Mr. Chairman, Senator Tester has to go preside on the floor, so he has one question. I will defer to him, and then I think Senator Wyden preceded me here.

The CHAIRMAN. Oh, is that right? Okay, we will do it in that order then.

Senator Tester.

**STATEMENT OF HON. JOHN TESTER, U.S. SENATOR  
FROM MONTANA**

Senator TESTER. Thank you, Mr. Chairman.

I have heard several folks since I have gotten here talk about the reasons for the increased costs. Drought being one, building in the urban interface would be another. Since Ms. Nazzaro has not spoken yet—and the other folks can nod and if you want to add to it you can—what do you see as the major reason for the increase in costs for fighting fires?

Ms. NAZZARO. Well, certainly one reason is the accumulation of vegetation that is going to fuel these fires; another is the fact that increased building in the wildland-urban interface is causing the Federal Government to do firefighting activities in State and local jurisdictions as well. So that certainly is probably the bottom line.

Senator TESTER. A couple follow-ups if I might. Has the Healthy Forests Initiative done anything to remove some of the energy load that is in the forests?

Ms. NAZZARO. Well, based on Forest Service data we estimate that the number of acres needing treatment are growing three times greater than the acres treated.

Senator TESTER. Okay. Finally, is there any recommendations that have been given or could be given to local entities as far as the building in these interface areas? Because it is my understanding that if there was not houses there it could burn much more freely, and cost far less money to fight. So are there any recommendations for local governments, because it is probably a local government issue more than anything? And what would they be, and what department would give them?

Ms. NAZZARO. I would defer probably to the agencies since they have more experience fighting fires.

Senator TESTER. That would be fine.

Ms. HATFIELD. Well, I think, as Mr. Rey referred to earlier, one of the issues that we continue to work with local governments is to create fire wise communities, where to the extent that there is wildland-urban interface that the citizens are creating a protective space around their home, that they are using building materials that are less flammable.

The other thing that we as a Federal agency have been doing in partnership with the State and local governments and the tribes is to try to place our hazardous fuel reduction projects concentrating those in the areas that is the wildland-urban interface, so if there is a fire it will tend to burn over instead of destroying.

Senator TESTER. How much of a priority is being put on exactly that?

Ms. HATFIELD. About half of our funding that is being spent for hazardous fuel reduction is being spent in the urban-wildland interface area. That is a very high priority. We have been working with the communities to develop community wildfire protection plans. We have been using those as a way of prioritizing projects.

Senator TESTER. With those kind of dollars being spent, are you seeing any appreciable success?

Ms. HATFIELD. Well, one example was the Esperanza fire last year, where there had been some fuels reduction in that area and actually the fire went around a community area. So we have multiple examples of that.

Mr. REY. One other area of profitable inquiry might be with regard to insurers. The insurance industry is beginning to respond to this situation, albeit fairly slowly. The reason it is slowly is because they do not suffer large numbers of losses in any one incident, like they do in a major hurricane. So it has not moved as quickly through the insurance industry as some of the restrictions on flood plain development did previously. But to the extent that there is an opportunity to incentivize insurers to in turn incentivize homeowners to build with less flammable materials or to build in less flammable areas, that may be a profitable way to slow the growth of the wildland-urban interface.

Ms. NAZZARO. I would also encourage the agencies to continue with three projects that we have reported on in the past. First, LANDFIRE, which is a key data and modeling system. We are concerned that obsolete data is not being updated. The Fire Program Analysis, FPA, was going to be a budget allocation tool. We do not see that any longer as being such a tool. We are concerned that with recent design modifications, the agencies are not going to be able to identify the most cost effective alternatives.

Last, is the need for fire management plans. These plans are developed at the local unit level and what we are seeing now is that the Forest Service is changing its position on the need for these, and the implications of that certainly is murky.

Mr. REY. We are not changing our position on the need for community-based wildfire protection plans. That has been one of the key developments resulting from the Healthy Forests Restoration Act and has driven a lot of our fuels treatment priorities since that was enacted. On the other two points, we are still working on LANDFIRE and we are still working on the Fire Plan Analysis.

Another area where we disagree is on the cohesive fuels strategy. We have issued, effective April 2006, a cohesive fuel strategy and as I understand it GAO is not satisfied with that strategy because it does not provide multi-year funding assessments for fuels treatment priorities. We respectfully disagree with the utility of those kinds of multi-year funding estimates because conditions on the ground are going to change priorities as years play out. So that is one area, and there are many in this fire arena, where sometimes the analysis does not necessarily result in answering questions that in a relative sense are as valuable as other questions that you need answered.

Senator TESTER. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much.

Let me ask, Senator Craig, did you want to go right now or should I take one of the others?

Senator CRAIG. Go ahead. Thank you.

The CHAIRMAN. Which of you would like to ask your questions? Senator Salazar, you were here a little before Senator Wyden, I am informed.

**STATEMENT OF HON. KEN SALAZAR, U.S. SENATOR  
FROM COLORADO**

Senator SALAZAR. Thank you very much, Chairman Bingaman. Thank you for paying attention to the order in which we come into the hearings, more so than I apparently did.

Let me just first say I very much appreciate you holding this hearing at this point in time before we go into the fire season, because I think it allows us to put the spotlight on what inevitably is a problem year after year in our States in the West. So I very much appreciate you holding the hearing.

Second, I have a statement for the record, Mr. Chairman, that I will just submit for the record.

[The prepared statement of Senator Salazar follows:]

PREPARED STATEMENT OF HON. KEN. SALAZAR, U.S. SENATOR FROM COLORADO

Thank you Chairman Bingaman and Senator Domenici for holding this important hearing.

I represent the great State of Colorado with approximately 14.5 million acres of National Forests. As I travel around the state I continually hear about the myriad of challenges our public lands face. In Colorado alone we face the challenges of managing both developed and undeveloped recreation, protecting our communities and watersheds from fire, as well as mitigating the dangerous buildup of hazardous fuels and a widespread bark beetle infestation.

The bottom line is that it takes proper funding to address these issues and the growing cost of fire suppression is forcing these priorities to compete for smaller pieces of the budget pie.

As we discuss the costs associated with protecting our local communities from wildfire, I must comment on the needs in Colorado when it comes to hazardous fuels treatment.

Colorado is suffering a prolonged drought that is adversely impacting our forests. Along with the drought, Colorado is also seeing an extraordinary insect infestation moving through our forests.

It is estimated that in 2006 around 5 million lodgepole pines on 645,000 acres were killed by mountain pine beetles. The widespread extent of this drought and infestation has many communities in Colorado worried, and I am worried too.

I am worried because there is a tremendous amount of hazardous fuel work to be done in Colorado. The Forest Service reports that 113 projects covering 280,000 acres of hazardous fuels treatments in Colorado have been approved through NEPA and are available for implementation pending funding. In fact, 65% of these treat-

ments are located in the wildland-urban interface, and another 235,000 acres are being analyzed for approval.

Unfortunately, the Forest Service reports that it implemented just 73,662 acres of treatments in Fiscal Year 2006 due to funding limitations. I don't want to make the mistake of assessing progress based solely on acres treated, but it is clear to me that Colorado's hazardous fuel conditions are deteriorating faster than current funding is able to address.

I would like to call attention to the cooperative efforts taking place in Colorado to address this situation. In particular, there are two specific efforts, the Colorado Bark Beetle Cooperative and the Front Range Fuels Treatment Partnership feature collaboration between the Forest Service, local communities, and state agencies.

By working together, these efforts are seeking to prioritize areas for treatment, lower the costs of those treatments and to address the associated impacts of this beetle epidemic. The hope of these cooperatives is to lower future suppression costs by investing in forest health today. I whole heartedly support their work and I was encouraged to see the Forest Service commit an additional \$1,000,000 to the region to support this effort.

In 2006, the Forest Service spent approximately \$2 billion fighting fires. When compared to the \$5 billion the Forest Service received in 2006 appropriations, it becomes evident that the rising cost of fighting fires is an important issue that must be addressed.

As I stated in a hearing on this issue last year: it is common-sense that as we address fire fighting costs, federal land managers and local governments should never be in a position where they are reluctant to order needed resources to fight a wildfire because of costs. So, there must be some balance as to how we approach this issue and I am anxious to hear from our witnesses this morning.

Thank you again.

The CHAIRMAN. We will include that.

Senator SALAZAR. Third, let me ask a couple of questions. Undersecretary Rey, you have heard me speak about what I have said is the Katrina of the West with respect to the millions upon millions of acres that have been infested by beetles in my State of Colorado as well as other States across the West. What I want you to do is speak to me about the budgetary sufficiency of meeting the hazardous fuels treatment that has already been approved in the States in general, but particularly in Colorado.

In my State I believe we have 113 projects that have already been approved for hazardous fuel treatment. That is 280,000 acres. Yet, of that we have only a very small amount where we have the money to go ahead and do 73,000 acres. So essentially less than one third of the acreage that has already gone through the entire NEPA process and has been approved through that process is undergoing any kind of fuels treatment.

What is the plan of the Department—and Nina, if you also would respond to that. What is the plan in terms of getting to a point where we catch up? And I have another question, so I would appreciate if you would give me a short answer.

Mr. REY. The short answer is, based on the discussions that we had previously, we had planned to allocate some additional resources during the fiscal year 2007 cycle to Colorado specifically. Some of that has been done. Some of it has been held in abeyance until we see where the continuing resolution ends up.

We also will likely allocate some additional resources to Colorado in the 2008 budget, although we will be able to speak more about that next Monday when the budget is rolled out.

In general terms, one of the things that the continuing resolution, the year-long continuing resolution, may do is set us back on fuels treatment work. Our 2007 request was higher than the 2006 enacted level. So if the continuing resolution keeps us at 2006 lev-

els this will be one area where we will, unfortunately, take a slight step backwards.

Senator SALAZAR. So the essence of it, is that we do have a significant underfunding, if you will, to deal with the fuel hazards treatment that has already been approved?

Mr. REY. We have a backlog of projects that are ready to go in Colorado. There are a few other places where we have that as well. But we are going to try to catch up as much as we can.

Senator SALAZAR. Thank you for that response, and also thank you for your assistance as we try to deal with this epidemic in Colorado and other States across the country.

Second, let me ask just a very quick question—I have to choose my questions here—on biomass. A big deal, the renewable energy, and we are talking about it all over the West. In every one of the committees that I sit on, biomass is a big deal.

Can you give me a very short answer on what the initiative is, either Nina or Mark, within your agency to try to deal with the biomass opportunity within our forests and our BLM lands?

Ms. HATFIELD. Well, we are continuing to increase the number of projects that we are doing. As an example, WFLC went to Warm Springs in Oregon to visit with the Warm Springs Tribes that have—

Senator SALAZAR. Let me ask you this question. So I have a bunch of communities that are interested in biomass projects in my State. They want help to figure out how they can move forward. Where do they go to get help, what is that help, and can you respond in about 30 seconds?

Ms. HATFIELD. Yes. We have a group that works with wildland fire in the Department and we would be glad to provide some information and some help. So just have them contact us.

Mr. REY. We also have grants programs for small scale biomass conversion activities or projects through our Rural Development Agency and through the Forest Service. So the best thing would be for those communities to contact us directly.

Senator SALAZAR. Mark, would that be through you or through whom?

Mr. REY. For the Forest Service part of it, it would be through me. For the rural development part of it, it would be through Undersecretary Tom Doehr.

Senator SALAZAR. I appreciate the quick response.

One final question. It seems to me that in the responses and testimony we have heard a lot about the WUI and the building up of the WUI. Senator Wyden said, stay out of the WUI. So I told him, why do we not do a Wyden WUI bill? So, Under Secretary Rey, you were saying something about the flood, about the flood control and flood plains have really been managed much better than they were 20 years ago. How about the prospects of doing something prospectively? What could the Federal Government do in terms of encouraging not building out in this urban-wildland interface or to do it in the kinds of conditions that are not going to make the problem, if you look at the problem in a prospective way. Again, because my time is up could you do it in a few seconds.

Mr. REY. I think the answer is it is probably most effective to work through the insurance industry and provide incentives to how

they write policies governing where people buy, because very little of this development is Federally funded, in fact virtually none of it is. So the nexus for some sort of Federal control is not very good.

Senator SALAZAR. It is not Federally funded, but the consequence ends up being funded then by the government in terms of fighting fire.

Mr. REY. Right.

Senator SALAZAR. Thank you very much, and thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

I am informed that Senator Wyden needs to leave and Senator Craig is willing to let him go ahead. So please go ahead.

Senator WYDEN. Thank you very much.

Senator CRAIG. I am building chits with my new chairman.

The CHAIRMAN. Yes. Well, you are really building chits with Senator Wyden.

Senator WYDEN. Thank you both and thanks to all my colleagues.

Secretary Rey, let me begin with you. I found it very troubling to see the gap between what the independent experts are saying needs to be done in terms of fighting fires and what the Bush administration is actually doing. But I will tell you what I find even more troubling is what we are starting to pick up. Chairman Bingaman's very able staff has come up with an internal document that comes from the Forest Service, so we are talking about your own people, and these are the professional fire folks and they are blowing the whistle on all the inefficiency in the way you all run the program.

I just want to read you a couple of comments from some of their internal documents. One that came in response to questions posed by the OMB says, and I quote here: "There are no effective incentives in place." This is a professional fire person who works for the Forest Service. At another point he goes on to say: "I have not observed improved accountability at the forest supervisor level."

So my question is, when we have got your own people saying this kind of thing and the press is bringing out all kinds of examples of costs being out of control—and I am looking at an article about last year in fighting fires there was a catering company used that furnishes I guess luncheons to the Hollywood stars. Why can we not take some practical steps, for example like using contractors locally?

My understanding is sometimes people will voluntarily help out. We are paying—according to this article—last year the Government paid \$10.25 a gallon for ice tea. Now, staff has been told that people are saying, well, get ice tea out to these courageous firefighters, for free.

So can we bring common sense to this that will pick up on the suggestions of your own people, your own internal people, and some of the things like using local folks to deliver ice tea and local contractors, rather than catering outfits that are set up to serve the stars?

Mr. REY. Well, let us start with the last one because I think that is an exaggeration, if not a misrepresentation.

Senator WYDEN. I am just reading from the article.

Mr. REY. Well, do you believe everything you read in the newspapers?

Senator WYDEN. So they are wrong?

Mr. REY. They offered you, offered their readers, a very skewed appraisal of what is happening. We use commercial caterers that are in business doing catering. They cater at movie sets, too, and at movie sets they feed, yes, the people who are starring in the movies, as well as all the other workers on the set. That is what they do. They are commercial caterers. We pay them a commercial rate for their service.

Now, are we going to replace a system of commercial contract caterers with local volunteers? I do not think so.

Senator WYDEN. How about what your own Forest Service people are saying? I mean, I read you from an internal Forest Service document.

Mr. REY. I think that is a good thing. I think it means that our people are pursuing cost containment options. I am familiar with that document and we have put him, the person who wrote it, on some of the cost containment teams. Cost containment in the cause of fire suppression is a process that continues with every incident.

It is wonderful that you are holding this hearing in January before the fire season begins, because cost containment is not nearly as popular once the fire season is in progress.

Senator WYDEN. Tell me, if you would, what was done after this Forest Service employee said "There are no effective incentives in place"? He made that comment. What was done after he said that?

Mr. REY. We added him to some of the cost containment teams to use the value of his expertise to see if he could create some of these incentives.

Senator WYDEN. So he was added to the teams. Were any changes made?

Mr. REY. Some of the changes incorporated, or described, rather, in our testimony.

Senator WYDEN. What was done with respect to his comment that there needs to be improved accountability at the forest supervisor level?

Mr. REY. That is included as well in some of the recommendations that we have adopted.

Senator WYDEN. So you have basically done all the things that this internal document says? They talk about how there is not a fully integrated system for working within the wildland fire agencies. It says "This is not new information." That was done?

Mr. REY. Yes.

Senator WYDEN. Okay. I guess we will get a very different picture from your independent reviewers the next time, folks, because Secretary Rey says everything has been taken care of. I will tell you, Mr. Secretary, we have heard again and again—

Mr. REY. I do not think I said everything has been taken care of.

Senator WYDEN. You said we are going to have the changes. What the Forest Service person blew the whistle on you said the agency had moved to change. So we will watch that—

Mr. REY. That is not quite the same, though. What I said is he made a number of recommendations which we are adopting. Now,

some of those recommendations we may succeed in adopting, we may not. But I did not say, nor would I say, that everything is taken care of. Cost containment is an ongoing process. It will continue to be an ongoing process. We will through learning, create new opportunities for cost containment that we do not fully appreciate today. Through some of the information that we are acquiring through LANDFIRE, through other mechanisms that are under way, we will find new ways to control costs.

Senator WYDEN. Mr. Chairman, my time is up. I will just say that again and again we have been told that there are going to be changes so that independent experts come in and give us a different picture, and it does not happen. It is kind of like the marquee at the old movie house says "Coming Soon," and it does not get there. I hope that we will not see—

Mr. REY. I respectfully disagree and I cannot let that stand un rebutted. If you look at the national witness panel that you will have in the next, the witnesses that you will have in the next panel, you will see that they have been commending us for adopting some of their recommendations.

Senator WYDEN. The independent reviewers have told us otherwise, Mr. Secretary.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much.

Senator Craig.

**STATEMENT OF HON. LARRY E. CRAIG, U.S. SENATOR  
FROM IDAHO**

Senator CRAIG. Before Senator Wyden leaves, I am finding this an interesting dialogue and I say that because I have just come from a climate change hearing in Environment and Public Works. Mr. Chairman, the thing that is frustrating me today, last year was the worst fire season on record ever in our country's history. 30 percent of the CO<sub>2</sub> put in the atmosphere was from large biomass burning. 30 percent of climate change gases were in part, a large part of unhealthy forests. That is a reality.

I will never forget the time when we had a very severe fire complex in Payette National Forest and President Clinton flew out to see it, and I rode with him on a helicopter to the fire. We flew over it. On the way back we were visiting because there were these big green squares out in the middle of this forest and it was burned all the way around it. He said: Why did it not burn? I said: Well, those are private lands; they are managed. They are thinned, they are cleaned and they are logged appropriately.

I said: And it is also true, Mr. President—this was the tail end of his term—you have reduced logging on our national forests by nearly 90 percent.

Whether you disagree or agree with that, also the irony. That is, until the Forest Service because of our public policy started saying, well, we are not going to put out fires any more. That used to be an absolute and if you have an absolute you can get results, much more so than an arbitrary and capricious manner in which that fire burns and this fire does not, let us see if this one goes where we think it is going to go, if it does not get too big we will leave it

alone, and then it blows up on you under the conditions of today and you have to build a city to fight a fire.

Tremendous inefficiencies out there. As we reduced logging on our public lands by 85, 90 percent, we did something else that none of us want to remember. We took away the men and women that were out there on a daily basis. I grew up in an environment, when a fire started the logger out in the woods and the D8 Cat that was out there building roads stopped, went over and put the fire out, and came back and started logging again. Those people do not exist any more per se, and they were a very inexpensive source of firefighting that I doubt the Forest Service ever calculated. In some instances they paid them.

So we have totally changed the character of firefighting by our own public actions at a time when our forests get progressively less healthy. Last year we reaped the whirlwind, and now we are debating climate change, but nobody wants to put into it the 30 percent contributive factor of CO<sub>2</sub> into the atmosphere by biomass burning.

All I can say is the hypocrisy of what we are doing is a fascination in itself. So now we are sitting here condemning these large communities—have you been out on a fire recently, Ron, or Mr. Chairman? If it is a big one, it is a fascination. There are tents, there are 18-wheelers, there is the health tent, there is the food tent, there is the administrative tent. It is a city within itself, and frankly for our rural communities it is a great chunk of economy.

A fire has the negative of burning things down, but it has the positive of goods and services being bought by the Federal Government in huge quantities. I do not know about ice tea being \$10 a gallon, but at the same time—I mean, those are the realities of where we were and where we are today, and I am every bit as frustrated as all of you, because my guess is in the near future it is not going to get any better. It could even get worse if we do not get at the business of creating a healthier environment for our forests.

My question to you then, Mark, is if the agency had invested \$1.5 billion last year in hazardous fuels reduction work in the wildland-urban interface—what do we call that now?

The CHAIRMAN. WUI.

Senator CRAIG. WUI, how many acres could it have accomplished and would that have significantly reduced the cost of fighting fire in that year or future years?

Mr. REY. Well, we spent over half of that amount between our two Departments last year and treated about 4 billion acres. So I guess you could probably postulate that—with that amount we could probably treat somewhere between 6 and 8 million acres in the wildland-urban interface.

I do not know whether that would have reduced the incidence of fire, but it has reduced the loss of property as a consequence of those treatments. So for instance, last year, even though we had the worst fire season on record, we lost only about 750 homes, whereas in 2003 we lost something like 3,000 homes, which is a lot less.

Senator CRAIG. Your supervisors tell me they are frustrated; they spend more time saving dwellings than they do resource in many of these fires.

Mr. REY. That is pretty much a given now if the fire ignites in or near the wildland-urban interface.

Senator CRAIG. Nina, are firefighting agencies from the Department of the Interior going to adopt some of these recommendations that obviously Mark and the committee have been talking about, and if so what are they?

Ms. HATFIELD. Well, we are doing them jointly. We have adopted the—we have been working collectively with the Forest Service and other partners, for example, to provide more resources to rural fire departments so that we can have local resources available on initial attack, which hopefully will mean that we do not have to devote a lot of Federal resources to bringing people in at a higher cost to do a larger fire.

We have been working collectively together on all of these things and are moving forward to take these efforts jointly.

Senator CRAIG. In looking out into the future with those kinds of recommendations and therefore those kinds of changing, how much cost savings headway do you think you can expect as, let us say, as a percentage?

Ms. HATFIELD. I think that really what we are trying to do is to look at cost containment. Again, if you look—I am sure your panel members in your next panel—our strategic issues panel told us that it is not—we have inflation in doing the business of fighting fire. It costs more for aviation resources, other resources. But what we are trying to do is control some of the cost drivers, and reductions of the fuels, having more initial attack capability at a local level, in terms of trying to get better data to our firefighters through LANDFIRE, other tools like that. So we are trying to contain costs and I think if we can manage to keep it relatively flat we will have done a good job.

Senator CRAIG. You will. If you can keep them relatively flat, that will be a great accomplishment.

Ms. HATFIELD. The real driver here are the number of acres that are burning.

Senator CRAIG. Yes.

Mr. REY. Mr. Chairman, in our statement we summarized five recently adopted management efficiencies. What I would like to submit to the record is a document that lists a total of seven that are under way, as well as estimated cost savings associated with that. So if hopefully your staff gets the opportunity to read this, it will dispel the proposition that we are not doing anything.

The CHAIRMAN. We appreciate that.

Senator CRAIG. Mr. Chairman, you have been very generous with your time.

Just a housekeeping matter for you, Mark. I have been a strong advocate of fuels for schools, biomass heating for our schools. We have got several stood up in Idaho today. Most of these schools are within or adjacent to national forests. Now we are being told by the forests they cannot supply the biomass. It is the ultimate Catch-22 in bureaucracy and paperwork, and so they are having to lean on private instead of public.

We did it all to clean the forests and now we cannot supply the material because we just cannot get through the bureaucracy. Would you look into it?

Mr. REY. Sure. If you can give me the specific forests and schools, I would be happy to look into it.

Senator CRAIG. Council, Idaho, Payette National Forest, Council District. Thank you.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much and thank this panel of witnesses. I think it has been useful.

Why do we not bring the second panel forward and hear their testimony.

[Pause.]

The CHAIRMAN. On this second panel the witnesses are: Dr. Bruce McDowell, who is a fellow with the National Academy of Public Administration here in Washington; James Caswell, who is co-chair of the Strategic Issues Panel on Fire Suppression dealing with the costs of the Wildland Fire Leadership Council, and from Boise, Idaho; and our third witness on this panel is Kirk Rowdabaugh, who is the State Forester from Arizona. He is speaking on behalf of the Western Governors Association.

Thank you all for being here and why do we not start with you, Mr. McDowell. If you could summarize your comments and give us the main points that would be much appreciated.

**STATEMENT OF BRUCE McDOWELL, Ph.D., FELLOW, NATIONAL ACADEMY OF PUBLIC ADMINISTRATION**

Dr. McDOWELL. Thank you very much, Mr. Chairman and members of the committee.

It is a real pleasure to be here. I have testified in the House a couple times and I have been in touch with your staff and the staff in the House. As you have already been told, we did about 3½ years of study on wildfire that we finished up in 2004. So each time I testify I have to do a little cram course on what is going on.

I read the materials sent out ahead of time. I have submitted some prepared testimony, which I will not read. Let me just quickly summarize what is in that testimony. There are two basic things that does. It summarizes the recommendations we made in our six reports over the period of 2000 to 2004 and the response to those recommendations, which has generally been pretty positive, as you already heard from the administration testimony. We are pretty pleased with what they have done on that.

It stresses the cost containment potentials of eight best buys. I must say, looking back, a lot of those best buys are already off the shelf. Not that they have been totally implemented, but the agencies are working on them. So I think they are moving in the right direction in most respects.

There are three categories of best buys that we have urged. One is getting a bigger bang for the buck on suppression, and most of the testimony and most of the agency attention, the attention by the OIG, is on that subject. I might just say that I would not expect great savings in that category. These are marginal savings. Once the fire begins you are kind of locked in by an awful lot of pre-condition and you have got to follow through on it or you have a disaster on your hands.

The second is break the cycle of suppression costs driving out the hazard mitigation efforts. I think that is the most problematic of the areas and I will address that in a minute.

The third area is to expand the pot for mitigation. Mitigation costs are huge and when you begin to think about putting those into the Federal budget you begin to immediately realize that that is not going to work. So the key is to get some partnerships going, to get everybody involved, to get those WUI communities doing things in their own interest, not relying completely on the Federal Government or the States to step in.

I think that is one of the places where I see the greatest improvement since I last looked at this whole area. The creation of these community wildfire protection plans has really increased since the last time I looked. There are some 650 of them in existence now. When we began our studies there were not more than one or two or three. We had to seek out by asking everybody all across the country, are there any things like this, and fortunately there were a couple that demonstrated that it could be done.

Now we have 650, another 600 or so in preparation. I think you should not underestimate the potential for these to be effective, because what they do is they get all of these parties together in their own interests in communities. We recommended about 350 regional approaches to this so that would be reasonable to fund those. So the ones that are in effect must be somewhat smaller than we had envisioned. Nevertheless, they are going in the right direction.

If you do not have a fire protection plan like this, you do not have anything going for you other than suppression, and that is a dead end. The only place you are going to get cost containment over the long time is hazard mitigation. What concerns me most about what I see today is the charts that you showed at the very opening, the extent to which suppression is eating up the budgets of the agencies. This is a dead end. I think it is penny-pound—it is not the right way to go.

So what can we do? Let me just point to two things that I think you should pay real attention to on this breaking the cycle business. One is, under no circumstances let the suppression money run into and drive out the production of these community fire protection plans. I think that would be a disaster. It would go completely the wrong way.

The other thing I think is something that has already been mentioned here: Look for opportunities to commercialize the hazard mitigation efforts. You are not going to pay for all of that out of the Federal budget. You need to pay for it somehow and these biomass and other kinds of new small forest industries I think are the way to go. Prescribed burning. Almost all of the hazard mitigation efforts are pure 100 percent governmental costs. They are very expensive that way.

If you can take the biomass and the small diameter lumber, even some large lumbering which might be done to establish fire-dampening patterns within broad expanses of national forests and other Federal lands, so some larger lumber perhaps, and work that out on a planned basis so that you have a sustained, predictable yield of these materials that can be used, that is the only way you are going to get industry to come in.

If industry comes into an industry where there is no reasonable expectation that you are going to have a constant supply of materials, why should they go into business like that? So you simply cannot afford to overlook these opportunities to reduce hazards.  
[The prepared statement of Dr. McDowell follows:]

PREPARED STATEMENT OF BRUCE D. MCDOWELL, PH.D., FELLOW, NATIONAL  
ACADEMY OF PUBLIC ADMINISTRATION

Mr. Chairman and members of the subcommittee, my name is Bruce McDowell. I am a Fellow of the National Academy of Public Administration, and for three and a half years it was my pleasure to direct the Academy's studies of wildland fire issues for the Department of the Interior and the USDA Forest Service. As you know, the Academy is an independent, non-partisan organization chartered by the Congress to give trusted advice to the federal government and others.

The views I am presenting today represent those of the expert Academy Panel convened for the purpose of guiding our work on six wildfire reports issued between August 2000 and January 2004 and not necessarily those of the Academy as a whole. We enjoyed working with Congressional and agency staff throughout that period, and appreciate the opportunity to appear before your Committee today to highlight the key findings and recommendations from our work. Although we have had a limited opportunity to formally assess progress in implementing the National Fire Plan since January 2004, we believe that the overall thrust of the Panel's reports remains relevant today.

GENERAL THRUST OF THE ACADEMY'S WILDFIRE REPORTS

Our first report—on the Cerro Grande Fire (August 2000)—found a need to significantly improve risk assessments and coordination practices in the wildfire program of the National Park Service, and those improvements have been made to improve the safety of prescribed burning.

Our second report—*Managing Wildland Fire: Enhancing Capacity to Implement the Federal Interagency Policy* (December 2001)—called for a number of improvements for coordinating the various federal wildfire programs. Chief among the Panel's recommendations was the establishment of an interagency coordination body, and the Wildland Fire Leadership Council (WFLC) was established shortly thereafter. We believe that was a major step forward. That report also recommended a non-federal advisory committee to work closely with the interagency council to establish a strong intergovernmental partnership, and the 10-Year Strategy Group that works through the Western Governors' Association resulted. Another recommendation of our second report was to regularly assess the large fires each year to identify lessons for improving practices in subsequent years. Those assessments now seem to be firmly established.

Our third report—*Wildfire Suppression: Strategies for Containing Costs* (September 2002)—made 19 recommendations mostly designed to help reduce costs while fighting fires. The one most directly implemented is a requirement to have an Incident Business Advisor (IBA) representing the Agency administrator on costly fires. This advocate for cost-consciousness is independent of the Incident Management Team and had been used before on some fires. But they had not been used on a consistent basis because there were not enough qualified individuals to go around at the time we studied six of the largest wildfires that burned during 2001. Subsequently, more IBAs have been trained and assigned, and it may be time to assess their effectiveness if such an assessment has not already been made. I note that the USDA Inspector General has recently addressed the cost containment effectiveness of Forest Service line offices and incident commanders, and has recommended further improvements.

Our fourth report—*Containing Wildland Fire Costs: Improving Equipment and Services Acquisition* (September 2003)—emphasized the need for better analysis of alternative sources of supply for firefighting equipment and services. Based on experience in other federal agencies, we estimated that systematic use of such analysis would be likely to save at least ten percent of the annual spending on these items—or about \$80 million per year. We understand that several new procurement analysts have been assigned to further this goal.

Our fifth report—*Containing Wildland Fire Costs: Utilizing Local Firefighting Forces* (December 2003)—recommended training and qualifying more local firefighters to work on large wildfires, establishing locally dedicated Type-3 Incident Management Teams in wildfire-prone areas, and facilitating access to the federal grants designed to enhance the capabilities of local firefighters that are available

from multiple sources. Local firefighters are usually the least costly to use if they are properly trained and equipped. Too often they are automatically dismissed from the fire scene as soon as a national Incident Management Team arrives (and replaced with higher cost resources), because there is no way to know whether they are qualified. If the local firefighters are led by a qualified local Type-3 team from the beginning of the fire (at which they usually arrive first because they are closest), there is a much better chance that they will keep the fire small and less costly. If the fire grows large enough to need a more highly qualified team, the transition is likely to be smoother and quicker. And the local Type-3 team will be able to take back command of the fire earlier as it comes under control. All of these practices will reduce the cost of the fire. We understand that the federal agencies are now aggressively promoting creation of many more Type-3 teams, with full support by the National Association of State Foresters and the International Association of Fire Chiefs.

Our sixth and probably most important report—*Containing Wildland Fire Costs: Enhancing Hazard Mitigation Capacity* (January 2004)—recommended significantly enhancing statewide and community-wide Wildfire Mitigation Partnerships. The more our Panel looked at the potential to save money while suppressing wildfires that were already burning, the more it became convinced that is the wrong place to look for major savings. Our Panel recognized that wildfire hazard reduction (1) is a huge undertaking, and (2) requires spending money now to reduce suppression costs later. We are well aware that neither of these realities makes this initiative easy to sell to federal appropriators who are working under increasingly tight caps on what they can spend each year. However, our Panel saw no alternative to the conclusion that hazard mitigation provides the only real answer to controlling suppression costs.

- Once a fire begins, its course is largely predetermined by drought, weather, and ignitions—plus the fuel that is in its path.
- If development or other high value assets—such as watersheds, power lines, pipelines, communications relay sites, or an ecological system that would be badly damaged by a severe fire—are in the fire’s path, the pressure is to use whatever means are available to put it out, regardless of the cost.
- The factors that can be controlled to reduce suppression costs are mostly available to work on before the fire ignites. They include creating fire-resistant communities and defensible spaces, strategic fuel break systems that dampen fire progression patterns and make fires more manageable, and reduced fuel loadings in wild areas where a policy favoring wildland fire use where when lightning strikes could play their natural role without harm.

Taking action on these controllable factors at a scale that matches the current need will require collaboration among all the responsible and affected parties—both public and private. The current federal policy of dealing with this daunting challenge at a “landscape scale” is correct. However, few collaborative mechanisms for this purpose existed at this scale when we prepared our study. Ruidoso, NM and Central Oregon provided examples where such work had begun. So, our Panel recommended creating and supporting such mechanisms in all wildfire-prone areas. It is one of eight “best buys” that our Panel recommended for consideration.

I was pleased to note in reviewing the December 2006 *10-Year Comprehensive Strategy Implementation Plan* that major progress has been made in establishing these community-based collaborations and producing over 600 Community Wildfire Protection Plans. This is a major advance that deserves your attention and encouragement, because these plans are designed to:

- reduce risks to firefighters, communities, and the environment
- improve the cost-effectiveness of firefighting
- achieve more ecologically natural and safer wildland fire regimes

Even in the tightest budget year, support for this intergovernmental collaboration should be provided, because it can leverage funding from many sources. This becomes increasingly important the tighter the federal budget becomes. Collaboratives like this could provide an excellent opportunity for federal wildfire agencies, for example, to negotiate equitable suppression cost-sharing agreements based on local hazard mitigation actions such as those recommended by Firewise.

Altogether, a substantial amount of progress has been made on implementing the National Fire Plan since 2000. But, of course, much more remains to be done.

I have attached an outline of the eight best buys\* emerging from our latest three reports, and would be happy to answer questions about any or all of them. For now, I will highlight just one.

Something needs to be done to break the too-frequent cycle of borrowing from hazard mitigation funds (and other land management programs) to fund suppression activities that run over-budget. This practice has been very disruptive, unpredictable, and counterproductive. FEMA disasters are not funded this way, and neither should wildfire disasters.

As I was preparing this testimony, I found that recent Congressional actions have given suppression funding such a high priority that it now consumes over 40 percent of the entire Forest Service budget. This puts enormous pressure on non-suppression programs—and tends to drive out essential hazard mitigation activities, among others. In the long-run this is counterproductive.

I would like to close by drawing your attention to a very important pilot project in Central Oregon. The Central Oregon Intergovernmental Council (COIC)—an example of the kind of collaborative organization our Panel has recommended—is developing bioenergy options for turning the thinning of forests into a new economically productive “forest industry.” COIC has federal demonstration funds to explore the potentials for new uses of forest biomass. The project is co-sponsored by the USDA Forest Service, the Oregon departments of Energy and Economic & Community Development, and the Business Alliance for Sustainable Energy. If some coordination money like this can leverage economic development from what is otherwise only a fire-safety necessity, and a 100 percent governmental expense it will create another best buy. Innovations like this are well worth watching and encouraging.

Shifting the costs of wildfire hazard mitigation into the private sector as a profit-making opportunity would be a perfect solution to what is now perceived to be an unaffordable public obligation. The federal role would include technology research (which is being pursued), technical assistance, and perhaps some market aggregation to help reduce the risks to early adopter companies willing to venture into this new activity.

Mr. Chairman, this concludes my remarks. I would be delighted to answer questions.

The CHAIRMAN. Thank you very much.

Why don't we hear from Mr. Rowdabaugh next. We will just go across the table. Thank you.

**STATEMENT OF KIRK ROWDABAUGH, STATE FORESTER, ARIZONA, ON BEHALF OF THE WESTERN GOVERNORS' ASSOCIATION**

Mr. ROWDABAUGH. Thank you, Mr. Chairman, members of the committee. This testimony is presented on behalf of the Western Governors' Association with the support and concurrence of the National Association of State Foresters, the National Association of Counties, and the International Association of Fire Chiefs.

Recently the Inspector General's Office released an audit of the Forest Service and the costs incurred controlling large fires. We believe the audit contains some useful recommendations that are consistent with WGA policy and we believe they should be implemented as quickly as possible. The Forest Service should take greater advantage of wildland fires to reduce the hazardous fuel on Federal lands and it should establish controls to assess the performance of its line officers and its incident commanders in controlling large fire costs.

The Congress should encourage action by all Federal land management agencies on these recommendations. However, in response to the audit report the Forest Service expressed a need to determine if congressional intent exists in current law regarding its responsibilities for protection of the wildland-urban interface. The

\*The outline has been retained in committee files.

Forest Service stated that if it cannot determine its existing authorities and responsibilities that it intends to seek clarification from Congress regarding the Federal responsibilities in the wildland-urban interface and other private properties that are threatened by wildfires.

We are disturbed by this apparent uncertainty of Federal authorities and responsibilities for managing wildfires. Should the Forest Service seek clarification from Congress regarding its responsibilities for fires burning on the national forests, Western Governors and others want to ensure that Congress solicits State and local governments on this important matter.

In many Western States the primary reason rural communities are at risk from wildfires is the unhealthy condition of neighboring Federal forests, and Western Governors urge the Congress to provide prompt and unambiguous direction to the Federal agencies regarding their responsibilities for the management of the national forests, including the need to control wildfires.

In 2004 a Strategic Issues Panel on Fire Suppression Costs was formed by the Wildland Fire Leadership Council and was co-chaired by WGA. Many of the foremost Federal and non-Federal experts on wildland fire management produced a report entitled "Large Fire Suppression Costs, Strategies for Cost Management." The panel recommended seven primary actions to contain Federal fire suppression costs.

Unfortunately, the Inspector General's report fails to make these recommendations a priority for the Forest Service and instead infers that cost-shifting to States and local governments and others is a solution to controlling suppression costs. It is clearly not a solution. We again urge Congress to take whatever steps are necessary to assist the Federal agencies in making the panel's recommendations a reality.

The Western Governors also recently agreed to an updated implementation plan for the 10-year comprehensive strategy entitled "A Collaborative Approach for Reducing Wildfire Risk to Communities and the Environment." Since 2001 the 10-year strategy has formed the basis for improving forest health and protecting at-risk communities. The four goals of the 10-year strategy and the new implementation plan are: to improve the prevention and suppression of wildfires; reduce hazardous fuels; restore fire-adapted ecosystems; and promote community assistance.

The new implementation plan establishes a number of items to enhance public safety and reduce costs by engaging local governments and private landowners in the wildland-urban interface, and we believe a relatively small investment of Federal resources to support State foresters, county commissioners, and rural fire departments with the implementation of the 10-year strategy will return huge savings in the future, and that by fully implementing the strategy we can take proactive measures to improve the health of our forests, prevent catastrophic fires, and protect rural communities and their economies.

The Congress and the administration should recognize the consensus that has been constructed in developing the 10-year strategy and the new implementation plan. Stakeholders in all levels of government are in agreement and we believe the Congress and the

administration should take advantage of this widely supported strategy. We ask the Congress to reaffirm the importance of this collaborative, proactive, and forward-thinking strategy and instruct the administration to fully implement it.

Unfortunately, the administration's budget proposals have repeatedly fallen short of implementing this strategy, especially its forest restoration and community assistance goals. The Congress has and needs to continue to maintain these program budgets as well as carefully consider ways to increase the resources provided to local, State, tribal, and Federal land management agencies.

We believe there are substantial steps the Forest Service and the Department of the Interior can take to control suppression costs and we will continue to work with the Congress, our Federal partners, and especially the new Chief of the Forest Service to protect our rural communities, to improve the health of our forests, and to control suppression costs.

Mr. Chairman, again I thank you and look forward to responding to any questions.

[The prepared statement of Mr. Rowdabaugh follows:]

PREPARED STATEMENT OF KIRK ROWDABAUGH, STATE FORESTER OF ARIZONA, ON BEHALF OF THE WESTERN GOVERNORS' ASSOCIATION; THE NATIONAL ASSOCIATION OF COUNTIES; THE NATIONAL ASSOCIATION OF STATE FORESTERS; AND THE INTERNATIONAL ASSOCIATION OF FIRE CHIEFS

Thank you Chairman Bingaman for the opportunity to appear and present testimony at today's hearing on wildfire cost issues. This testimony is presented on behalf of the Western Governors' Association. WGA is an independent, non-partisan organization of Governors from 19 Western states and three U.S.-Flag Islands in the Pacific. WGA is very pleased to present this testimony on behalf of the National Association of Counties, the National Association of State Foresters and the International Association of Fire Chiefs.

Governor Mike Rounds of South Dakota is currently WGA's Chairman and Governor Janet Napolitano of Arizona is WGA's Lead Governor for Forest Health. WGA has long-standing policy that it has pursued with the Administration, the Congress and other partners to prevent fire suppression costs from overwhelming proactive forest health and cost-control efforts.<sup>1</sup>

#### USDA'S INSPECTOR GENERAL'S COST RECOMMENDATIONS

I will discuss proactive forest health and cost control efforts more fully below but want to begin my testimony by addressing the United States Department of Agriculture Inspector General's Audit that was released in November 2006.<sup>2</sup> The audit provides a critical examination of the costs to the Forest Service for suppressing large wildfires.

The audit contains certain useful and overdue recommendations that are consistent with WGA policy and which we urge the federal agencies to implement. The Forest Service and the Department of the Interior should make wildland fire use a large part of their arsenal of tools to reduce hazardous fuels. If appropriately man-

<sup>1</sup>WGA Policy Resolution 06-9, *Improving Forest and Rangeland Health in the West*. "The active management and restoration treatments called for in the 10-Year Strategy will require substantial investment by all levels of government and private citizens if the agreed-to goals are to be achieved. The Administration should request and the Congress should provide funding to fully implement the 10-Year Strategy while ensuring that proactive fuels reduction funds are not sacrificed in years of high suppression costs. By using proactive approaches to reduce hazardous fuel, to restore ecosystems and to increase the capacity of our communities to assist, this nation can eventually reduce loss of life and property from wildfire catastrophes while lowering the tremendous suppression costs that are incurred. In addition, complete funding for the Forest Service's S&PF budget is a vital part of allowing State Foresters to work across landscape boundaries to maximize forest health treatments efforts. Finally, Western Governors fully support implementation of the recommendations of the WGA-Chaired Strategic Panel for Fire Suppression Costs and believe they can eventually lead to additional control over wildfire suppression costs." See <http://www.westgov.org/wga/policy/06/ForestHealth.pdf>

<sup>2</sup><http://www.usda.gov/oig/webdocs/08601-44-SF.pdf>

aged, wildland fire use can safely improve forest health at low-cost while preventing future hazardous fuel driven wildfires that greatly increase costs. Furthermore, the federal agencies should establish controls to assess the performance of line officers and incident commanders in controlling costs. The Congress should encourage action by the federal agencies on these recommendations.

However, there are certain items in the audit that are of great concern to Western Governors, county commissioners, state foresters and fire chiefs and we want to make the Congress aware of these concerns. The Inspector General recommends that the Forest Service seek clarification from Congress on

- 1) the responsibilities of both the Forest Service and States in protecting wildland urban interface (WUI) developments and other private properties threatened by wildfires, and
- 2) the need to renegotiate WUI protection responsibilities in master protection agreements to ensure the fire fighting costs for WUI protection are equitably and appropriately allocated between federal and non-federal entities.

The Forest Service has indicated it will attempt to determine if Congressional intent already exists in current laws regarding WUI protection responsibilities. If it does not, the Forest Service has previously stated its intention to seek clarification from the Congress regarding protection responsibilities in the WUI and on other private properties that are threatened by wildfires.

We are disturbed by the apparent uncertainty of federal authorities for their responsibility in managing wildfires on the national forests. We fail to understand federal confusion on this point as the Forest Service Manual clearly directs the agency to protect valuable natural resources, recreational facilities and WUI infrastructure of the National Forests. Indeed, the federal responsibility to prevent fires that burned on federal lands from burning adjacent non-federal lands is clear.

Should the Forest Service seek clarification from Congress of its responsibility for wildfires burning on the national forests, we encourage Congress to solicit state and local government and other perspectives on this important matter. If necessary, Congress should conduct a fully informed and complete assessment of the cost issues that relate to wildland fires that: (1) originate and burn solely on federal land, and, (2) those that originate on federal land and then escape from federal lands onto neighboring state and private lands.

We strongly believe that state and local governments should not be expected to share the costs of suppressing wildfires that burn entirely on federal lands. However, if a federal agency takes aggressive suppression action on a wildfire that originates on federal land and later spreads onto non-federal land, a cost-share agreement with state or local governments is appropriate.

We also urge the Congress to provide prompt and unambiguous direction to the federal agencies regarding their responsibilities for the management of the national forests, including the need to control wildland fires before they are allowed to imperil the lives or properties on neighboring private lands, or valuable natural resources on neighboring state lands. The demands of the upcoming fire season require that both state and federal responsibilities are exceedingly clear to ensure our rural communities receive the protection they deserve from fires burning on federal lands.

#### THE STRATEGIC ISSUES PANEL ON FIRE SUPPRESSION COSTS

The Department of Agriculture Inspector General's report makes clear its belief that increased suppression expenses in recent years are linked to growth of the WUI and the increased fire protection responsibilities that come with that growth. Effective fire suppression actions are certainly made more complex and difficult when wildland fires threaten private developments. Fires in the WUI can cost more than average fires.

The Inspector General, however, appears to have failed to evaluate or consider some of the most current research and recommendations on the causes of fire suppression cost increases, and more importantly, the means to address them. In 2004, on behalf of WGA, I co-chaired the Strategic Issues Panel on Fire Suppression Costs that was formed by the Wildland Fire Leadership Council (WFLC). WFLC is a co-chaired by the Department of Agriculture and the Department of the Interior. Many of the foremost federal and nonfederal experts on the topic produced a report entitled "Large Fire Suppression Costs—Strategies for Cost Management" which was endorsed by Western Governors and the WFLC. Western Governors provided testi-

mony on this cost control review to the Public Lands and Forests Subcommittee of this Committee in 2005.<sup>3</sup>

The Strategic Issues Panel found that fire suppression expenditures are overwhelmingly centered on larger fires, whether in the WUI or not. Rigorous statistical analysis of Forest Service data showed that from 1980 through 2002 small fires (less than 300 acres) managed by the Forest Service were 98.6 % of all the fires but represented only 6.2% of all suppression expenditures. Larger fires (greater than 300 acres) represented only 1.4% of the fires but a whopping 93.8% of all suppression expenditures.

Total suppression expenditures are strongly correlated ( $R^2=0.76$ ) with total acreage burned, i.e., large total expenditures are associated with large acres burned. In fact, two of the most expensive fires to control in the history of the Forest Service, the 175,000-acre Tripod Fire (2006) and the 500,000-acre Biscuit Fire (2003) both burned in very remote locations. The \$82 million and \$150 million, respectively, it cost to control these fires was insignificantly related to WUI protection.<sup>4</sup>

The Strategic Issues Panel recommended seven primary actions to contain federal fire suppression costs. The first recommended action, to increase the level of accountability for large fire costs and their impacts by allocating suppression funds on a regional or equivalent basis was intended to provide incentives to federal agency administrators for controlling costs. It was this single recommendation that the Panel believed would provide the greatest cost savings to the federal government because wildfire costs are driven by management decisions on the ground.

It is our understanding that the federal agencies have not sought to implement this recommendation because they believe Congressional authority is required. We believe very strongly that cost controls can be achieved, in part, by full implementation of all the recommendations of the Strategic Issues Panel.

The Inspector General's audit fails to make these recommendations a priority for the Forest Service and instead infers that cost shifting to states, local governments and others is a solution to spiraling suppression costs. Cost shifting is not a solution but rather a misguided effort to pass the buck on costs when the agencies themselves have not taken all the practical steps necessary to control them. We again urge the Congress to take whatever steps are necessary to ensure the federal agencies make the Panel's recommendations a reality.

#### THE 10-YEAR COMPREHENSIVE STRATEGY AND COST CONTROL

The Western Governors' Association recently agreed to an updated Implementation Plan to the 10-Year Comprehensive Strategy "A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment."<sup>5</sup> The Strategy was requested by the Congress in 2000. Since then, the Strategy and its Implementation Plan have formed the basis for forest health efforts across the nation and significant progress has been made on the ground in using locally driven collaboration and in undertaking landscape level planning and treatments. The Congress adopted the collaborative approach developed in the Strategy in its Healthy Forests Restoration Act of 2003.

The need to develop a revised implementation plan was anticipated in the text of the first plan. Moreover, the actions items agreed to in the first plan that the Governors signed with the Secretaries of the Interior and Agriculture in May 2002 have, for the most part, been completed. At the urging of WGA's Forest Health Advisory Committee, which conducted a review of the original plan in 2004, the Governors updated the plan with the federal agencies, counties, state foresters, fire chiefs and stakeholders. The goals of the plan remain the same as in the 10-Year Strategy. A collaborative approach needs to be used to:

- Improve Prevention and Suppression of Wildfires
- Reduce Hazardous Fuels
- Restore Fire-Adapted Ecosystems
- Promote Community Assistance

The new Implementation Plan puts additional emphasis in the following areas:

<sup>3</sup>See Testimony of James Caswell, Office of Species Conservation, State of Idaho and Kirk Rowdabaugh, State Forester of Arizona (Co-Chairmen, Strategic Issues Panel on Fire Suppression Costs) on behalf of the Western Governors' Association before the Subcommittee on Public Lands and Forests of the United States Senate Committee on Energy and Natural Resources, April 26, 2005. <http://www.westgov.org/wga/testim/costpaneltest4-26-05.pdf>

<sup>4</sup>"Large Fire Suppression Costs, Strategies for Cost Management," A Report to the Wildland Fire Leadership Council from the Strategic Issues Panel on Fire Suppression Costs at 9 (August 26, 2004). <http://www.fireplan.gov/reports/2004/costmanagement.pdf>

<sup>5</sup><http://www.westgov.org/wga/publicat/TYIP.pdf>

- information sharing and monitoring of accomplishments and forest conditions to improve transparency;
- a long-term commitment to maintaining the essential resources for the plan;
- a landscape-level vision for restoration of fire adapted ecosystems;
- the importance of using fire as a management tool; and
- continuing improvements in collaboration.

The new Implementation Plan was endorsed and sent to the Congress by WGA, the Secretaries of the Interior and Agriculture, the National Association of Counties and the National Association of State Foresters in December 2006.<sup>6</sup> What continues to be highly notable about the 10-Year Strategy is the contribution of expertise and endorsements from WGA's 60-person Forest Health Advisory Committee. These individuals are listed in Appendix C of the plan and they are some of the preeminent national experts on fire fighting, forest health treatments before and after fires and on how small communities need to play a role in this effort. They range from fire chiefs to timber industry professionals, from environmentalists to university professors.

When fully implemented, the 10-Year Strategy and the new Implementation Plan will use proactive measures to improve the health of our forests to prevent catastrophic wildfires. These efforts require cross-boundary work, full involvement of states and stakeholders, and, most importantly, a long-term commitment of time, resources and manpower. It is large fires that at great speed eat up the resources appropriated for suppression. So full implementation, with adequate funding, of all four goals of the 10-year Strategy is a wise and economical cost-containment strategy. It is substantially cheaper to thin forests and protect communities in advance than to put out fires and repair the damage from them after the fact.

Some specifics from the new Implementation Plan under each of its goals demonstrate the path forward that will help the nation get ahead of the tremendous escalation in fire suppression costs.

#### *Goal 1—Improve Fire Prevention and Suppression*

Performance under this goal will be measured by the federal agencies based on the percent of wildfires controlled during initial attack and the number of unwanted human-caused wildfires. Using a stratified cost index, the agencies will also examine what percent of fires not contained in initial attack exceed the index. The key action item under this goal is full implementation of the cost control recommendations of the Strategic Issues Panel discussed above.

#### *Goal 2—Reduce Hazardous Fuels*

Proactive management of the hazardous fuels in our forests is key to reducing the severity and number of uncontrolled and costly wildfires. Fuel treatments can be most economically and effectively carried out if a collaborative approach to plan and implement large-scale treatments across the landscape (federal, state, tribal, and private land ownerships) is utilized. By using collaboration, those acres most in need of treatment because of their condition or location will be accurately identified. Community Wildfire Protection Plans (CWPPs) as called for by Congress in the Healthy Forests Restoration Act are the instrument for expressing the collaborative public will. The performance measures and tasks in Goal 2 of the new Implementation Plan push federal and state land managers toward treatment of the acres most in need of treatment as identified in CWPPs. The new plan will also provide necessary information on the effectiveness and cost of fuel treatments.

Performance under Goal 2 of the new plan will be measured as follows:

- Number and percent of WUI acres treated that are identified in CWPPs and the number and percent of non-WUI acres treated that are identified through collaboration consistent with the Implementation Plan.
- Number of acres treated per million dollars gross investment in WUI and non-WUI areas.
- Percent of collaboratively identified high priority acres treated where fire management objectives are achieved as identified in applicable management plans or strategies.

The action items under Goal 2 of the plan are designed to educate land managers, the public and the Congress on the value and effectiveness of fuel treatments. There are a number of questions in this regard that collaborative teams will answer. Some examples include: What information from federal land management databases such as LANDFIRE can be made public so we all can understand if a fuel treatment

<sup>6</sup><http://www.westgov.org/wga/press/tyip12-6-06.htm>.

made a significant difference or if it was conducted over multiple land ownerships? Can we develop measures that help us determine the degree and longevity of fire hazard reduction achieved by fuel treatments? How do we determine when a fuels treatment meets the objectives of its plan and what data sources are available to inform the determination? Once these and other efforts are completed, we should all understand how to make the hazardous fuel treatments tool more precise, more effective and more valuable. Most importantly, collaboratively targeting this tool at the strategic acres most in need of attention will positively impact the nation's suppression expenses.

*Goal 3—Restoration and Post-Fire Recovery of Fire-Adapted Ecosystems*

The most significant objective of this goal is that it will lead to an increase in wildland fire use; an extremely economical method of undertaking hazardous fuels treatments and reducing suppression costs if appropriate planning and monitoring are undertaken. For example, the federal agencies will now be measuring and reporting how many acres each year are being identified using the collaborative model and treated using wildland fire use or other fuel treatment methods. Action items include:

- Analyze and recommend improvements to policies, incentive structures and personnel capacity issues that are barriers to wildland fire use, mechanical treatments and prescribed fire.
- Develop and implement a substantial public education campaign that emphasizes fire's role in ecosystems and the benefits of fire management to ecosystems and public health and safety. This initiative will complement Smokey the Bear's message of fire safety.
- Add information to a revision of the Community Wildfire Protection Plan Handbook<sup>7</sup> so that communities can consider restoration and wildland fire use when developing CWPPs.
- During amendments, revisions or updates of federal land and resource management plans and fire management plans, ensure those plans consider and incorporate wildland fire use objectives consistent with the 10-Year Strategy and other federal policies.

These action items will set the stage for an increase in wildland fire use. If planned for and carefully monitored, wildland fire use is a safe and effective means of reducing hazardous fuels and reducing fire suppression costs.

*Goal 4—Promote Community Assistance*

A significant part of controlling fire suppression costs is promoting and reinforcing individual landowner responsibility for wildfire protection as well as improving local fire department capacity and training. The new Implementation Plan sets up a number of measures and action items to enhance safety by engaging WUI communities. For example, the new plan will measure the following:

- Number and percent of communities-at-risk covered by a CWPP that are reducing their risk from wildland fire. A community is at reduced risk if it has satisfied at least one of the following requirements:
  1. Recognized as a FIREWISE community or equivalent, or
  2. Enacted a mitigation/fire prevention ordinance, or
  3. High priority hazardous fuels identified in a CWPP or equivalent are reduced or appropriate fuel levels on such lands are maintained in accordance with a plan.
- Percentage of at risk communities who report increased local suppression capacity as evidenced by:
  1. The increasing number of trained and/or certified fire fighters and crews, or
  2. Upgraded or new fire suppression equipment obtained, or
  3. Formation of a new fire department or expansion of an existing department involved in wildland fire fighting.

Two action items in Goal 4 are intended specifically to aid WUI communities in planning and protecting themselves in advance of fire. One calls for developing a publicly accessible database of local zoning ordinances and state planning efforts that have successfully reduced land owner risks associated with wildland fire. This information would, among other things, be used to develop model CWPPs and wild-

<sup>7</sup> <http://www.safnetorg/policyandpressicwpp.cfm>

fire ordinances. The other action item would provide improved technical assistance for at-risk communities to develop or update their CWPPs. Should resources be obtained, the National Association of Counties, the National Association of State Foresters and the International Association of Fire Chiefs would be well positioned to provide expert leadership for these respective initiatives.

*Overall 10-Year Strategy Goal—Collaboration*

The specific measures and action items in the new Implementation Plan for the 10-Year Strategy will contribute substantially to wildfire cost control. Yet, it is the collaborative nature of the entire Strategy that is essential to success on the ground and in the budget. The Strategy brings together all the essential partners to help the nation proactively get ahead of the wildfire threat and reduce the costs of suppression we face each season. All levels of government from local fire fighters, to county commissioners to Governors to Secretaries are engaged. The breadth of support for the Strategy and the new Implementation Plan from non-governmental stakeholders is extremely broad and diverse. All of these parties have a role to play in implementing the plan and ensuring its objectives are met.

The Congress and the Administration need to recognize the consensus that has been constructed, the cost control aid these measures and action items can provide, and move with all deliberate speed to fund and fully implement the recommendations. Western Governors ask the Congress to reaffirm the importance of this collaborative, proactive and forward thinking 10-Year Strategy that Congress called for in 2000.

The Congress should direct the federal agencies to make implementation of the new plan among its highest priorities. Due diligence to comprehensively and collaboratively accomplish all four goals of the Strategy should be required. Restoration and Community Assistance are no less valuable in contributing to forest health and cost control than are Reducing Hazardous Fuels and Improving Prevention and Suppression. These are interrelated objectives and should be treated as equal priority items if the Congress and the Administration are of a mind set that they desire to seriously address fire suppression cost control at this time.

RE-CAP OF WGA, NACO, NASF AND IAFC VIEWS ON CONGRESSIONAL  
COST-CONTROL ACTIONS

USDA Inspector General Audit Report—

- 1) Encourage federal agency action that increases their ability to safely use wildland fire for hazardous fuel reduction and restoration purposes.
- 2) Encourage federal agencies to establish controls to assess the performance of line officers and incident commanders in controlling costs.
- 3) Solicit state and local government and other views should the Forest Service seek clarification of its wildfire suppression responsibilities.
- 4) If necessary, conduct a fully informed and complete assessment of cost issues related to wildland fire on public lands.
- 5) Promptly provide unambiguous direction to federal agencies regarding their responsibility to manage public lands and prevent wildfires that originate therein from imperiling the safety, land and property of other landowners.

Strategic Issues Panel on Fire Suppression Costs—

- 1) Take whatever steps are necessary to provide authority and assist the federal agencies to ensure they fully implement the cost control recommendations of the Panel.

10-Year Comprehensive Strategy—

- 1) Reaffirm the importance of this collaborative, proactive and cost-controlling Strategy that Congress initiated in 2000.
- 2) Direct the federal agencies to make the new Implementation Plan of the 10-Year Strategy one of their highest priorities.
- 3) Direct the federal agencies to make collaboration and each of the other four goals of the Strategy—Improve Prevention and Suppression, Reduce Hazardous Fuels, Restore Fire-Adapted Ecosystems and Promote Community Assistance—of equal priority for accomplishment.

Western Governors appreciate this Committee's consideration of our views on this vitally important topic. We will continue to work with you and the federal agencies to improve the health of our forests and control fire suppression costs.

## THE FOREST SERVICE BUDGET AND LEADERSHIP TRANSITION

Preliminary information indicates the 2007 wildfire season will be a challenging one for the federal agencies responsible for wildfire protection. This challenge will present itself not only in terms of fire intensity, but also in terms of cost. Predictions already point to a suppression cost crunch mid-season.

This is not a new phenomena or trend. Continuing droughts, climate change and overly dense stands of trees and wildfire fuels point to continued suppression cost increases. At the same time, the Forest Service is trying to address other critical national issues such as invasive species, energy development and recreation pressures on our National Forests. In the face of these immense challenges, the Forest Service has faced an essentially flat budget since 2001.

As we have detailed in this testimony, we believe there are substantial steps the Forest Service and Department of the Interior can take to control suppression costs. At the same time, the Congress needs to carefully consider and find a way to increase the budget resources dedicated to fire and forest management activities provided to the federal wildland fire agencies given the growing responsibilities that the Congress and the nation entrust to them.

Before closing, we would also like to take a moment to acknowledge the leadership change at the Forest Service. Chief Dale Bosworth will be officially retiring from the USFS in just a few days after forty-plus years of service to the agency and the country. We thank him for his service and his six years as Chief during a period that has proven to be quite momentous for the agency. Chief Bosworth has been a strong partner with us in establishing the 10-Year Strategy, implementing stewardship contracts and developing Community Wildfire Protection Plans, among other initiatives.

We are also pleased with the selection of the new Chief, Gail Kimbell, the first woman to lead the Forest Service. Ms. Kimbell's track record shows an understanding of collaboration and community involvement. We believe these will serve the agency well as it re-commits itself to the 10-Year Strategy and a strong partnership with state and local government.

Mr. Chairman, thank you again for this opportunity to present the views of the Western Governors, county commissioners, state foresters, and fire chiefs.

The CHAIRMAN. Thank you very much.

Our cleanup hitter today is James Caswell and, since he is from Idaho, Senator Craig would like to make a few comments by way of introduction of this witness.

Senator CRAIG. Well, thank you very much, Mr. Chairman.

Certainly Jim is well qualified in the role that he is playing here as co-chair of the Strategic Issues Panel on Fire Suppression. I first met Jim and worked with him when he was supervisor of the Clearwater, I think, before he went to the dark side of State government. I think then-Governor Kempthorne asked him to come down and create, what is it, Office of Species Management or something in that category.

But anyway, certainly Jim has got the kind of experience in fire management and looking at the broad perspective versus the individual incident situation that I think gives him the expertise to be a valuable witness. We are pleased to have you with us today, Jim. Thank you.

**STATEMENT OF JAMES CASWELL, CO-CHAIR, STRATEGIC ISSUES PANEL ON FIRE SUPPRESSION COSTS**

Mr. CASWELL. Thank you, Mr. Chairman and members of the committee, and thank you for the opportunity to appear and present testimony on the findings of the Strategic Issues Panel on Fire Suppression Costs. The full text of my testimony has been provided to the committee for the record.

The panel's work was chartered by WFLC in early 2004 and we completed our report in August 2004. I appear before the committee today in my role as co-chair of that panel. I testified before

the Public Lands and Forests Subcommittee of the committee on the same topic in April 2005.

The barriers and obstacles to cost containment remain as pertinent today as they were 3 years ago, and likewise the panel's findings and recommendations are also still pertinent, maybe even more so given last year's statistics. The panel concluded that the most—that most of what is knowable about fire costs, particularly large fire costs and their management, is really already known. We came to that conclusion because we reviewed some 12 reports over the last decade. We interviewed a multitude of witnesses from all kinds of various interests and we analyzed more than 300 past recommendations that have been made on how to control costs, and they spanned the gauntlet from tactical, operational, to strategic.

At the end of the day, we decided to be very strategic and go on the side of the vital few recommendation as opposed to the trivial many. So we developed seven recommendations. I just want to summarize those very quickly for the committee. The first recommendation and, by the way, the one that we really feel is the most important—and I might add that all of these recommendations in our view need to be implemented together. Now, you can implement them separately, but at the end of the day we felt if you are going to stem the rise—and we are never going to turn it around—but if you can stem the rise of the increasing costs, that these seven recommendations, if implemented holistically, would have the best opportunity to really do that.

The first one was to increase the level of accountability and interest for large fire costs and their impacts by allocating suppression funds in a different way. We suggested regionally or in some type of—on some type of equivalent basis, when you look at all five of the wildland fire Federal agencies.

No. 2, is to set policy and direction on agency land and resource management planning and to incorporate cost management on large wildfires.

No. 3, dealt with plan, budget, and manage resources effectively for large fire suppression such that initial response and extended attack are not compromised. This is a drawdown issue.

No. 4, was to ensure that the initial responses are always aggressive and driven by the principle of utilizing the closest appropriate resources, including local and Federal—local and tribal resources, I am sorry.

The fifth was to incorporate fuels management and future fire management cost considerations when planning all resource management projects on both public and private lands.

Sixth was to commit to improving the fire cost data infrastructure. Data is one of the areas that is boring, but it is terribly important, and right now it is difficult to add up the numbers. In fact, you cannot do it across the Department, between the two Federal Departments.

Seven was to develop and use a benefit-cost means—measure as the core measure of suppression, as opposed to this cost per acre.

The panel's recommendations, with caveats and amendment, were adopted by WFLC in December 2004. Since that time the agencies have and continue to make progress in implementation kind of across the board. In fact, you heard Secretary Rey allude

to some of those today. However, recommendation one, leadership commitment and accountability, has not moved forward in full and the panel believes this recommendation has the greatest opportunity for suppression cost savings.

Some progress has clearly been made and I urge the committee to seek a status report from the agency on all recommendations, and in particular recommendation A.

Thank you, Mr. Chairman. I will stand for questions.

[The prepared statement of Mr. Caswell follows:]

PREPARED STATEMENT OF JAMES CASWELL, CO-CHAIR, STRATEGIC ISSUES PANEL ON FIRE SUPPRESSION COSTS AND DIRECTOR, OFFICE OF SPECIES CONSERVATION, STATE OF IDAHO

Thank you Chairman Bingaman and other distinguished members of this Committee for the opportunity to appear and present testimony for today's hearing on wildfire suppression costs. My name is Jim Caswell, I served with the U.S. Forest Service for 28 years and I am currently the Director of the Governor of Idaho's Office of Species Conservation. In addition to my duties for the State of Idaho, in 2004, I was asked by then-Governor Kempthorne to represent the Western Governors' Association as a co-chair of the Strategic Issues Panel on Fire Suppression Costs. The Wildland Fire Leadership Council or WFLC, led by the Departments of the Interior and Agriculture, chartered the Panel in early 2004 to "explore specific strategic issues associated with large fire costs, including the relationship of fire to vegetation management and land and resource management plans."<sup>1</sup>

I appear before the Committee today in my role as Co-Chair of the Panel. In April 2005, I testified before the Public Lands and Forests Subcommittee of this Committee on the same topic. I am pleased to reiterate that testimony today and provide some perspective on cost control developments since that time. However, on the issue of to what extent the federal agencies have implemented the Panel's 2004 recommendations, this Committee should seek full information from the federal agencies on the exact extent of their actions since that time.

#### THE STRATEGIC ISSUES PANEL ON FIRE SUPPRESSION COSTS

The need for focusing on the costs of large fire is clear. Fire suppression expenditures are overwhelmingly centered on larger fires. "From 1980 through 2002 small fires (less than 300 acres) managed by the Forest Service totaled 98.6 % of the fires reported but represented only 6.2% of the total suppression expenditures. Larger fires (greater than 300 acres) represented 1.4% of the fires reported and a whopping 93.8% of the suppression expenditures."<sup>2</sup> Those basic percentages remain the same today.

"Unwillingness to take greater risks [in operational fire suppression decision-making], unwillingness to recognize that suppression techniques are sometimes futile, the 'free' nature of wildland fire suppression funding, and public and political expectations are all potential contributors to the underlying causes for the high cost of large fires."<sup>3</sup>

The WFLC charter for the Panel explicitly identified five areas for examination:

1. Barriers and obstacles to cost containment;
2. Strategies for cost containment success;
3. Impediments to equitable sharing of suppression and cost apportionment among jurisdictions;
4. Criteria to measure cost containment success; and,
5. Relationships of fire management plans and resource management plans to suppression costs.

Fourteen individuals representing a broad spectrum of fire fighting interests, including the federal government, worked collaboratively over a four-month period and met multiple times face-to-face to develop the Panel's final report. The Panel

- examined the last five years' reports related to suppression costs;

<sup>1</sup> Large Fire Suppression Costs: Strategies for Cost Management, A Report to the Wildland Fire Leadership Council From the Strategic Issues Panel on Fire Suppression Costs (August 2004).

<sup>2</sup> Id. at 6.

<sup>3</sup> Id.

- interviewed a wide variety of people and groups, including researchers, special interests, fire managers, and other government officials; and
- analyzed more than 300 past recommendations

to better understand the issues and to develop strategic actions that met the intent of the Panel's charter. The Panel's report was presented to the WFLC in July 2004.

While there have been many reports on this topic in the past that have led to efficiencies in managing the costs of large fires, those efforts have, at best, provided marginal cost reductions. The Panel's report, unlike these earlier efforts, seeks to substantively address the underlying causes of large fire suppression costs. It is this important distinction that WGA believes makes the Panel's report extremely valuable. Recognizing this, Western Governors commended the report to the Secretaries of the Interior and Agriculture soon after its completion.<sup>4</sup>

The strategic and interdependent recommendations set forth in the Panel's report are as follows:

A. Increase the level of accountability and interest for large fire costs and their impacts by allocating suppression funds on a regional or equivalent basis.

B. Set policy and direction on agency land/resource management planning to incorporate cost management on large wildfires.

C. Plan, budget, and manage resources effectively for large fire suppression, such that resources for effective initial response and extended attack are not compromised.

D. Ensure initial responses are always aggressive and driven by the principle of utilizing the closest appropriate resources, including those of local and tribal governments.

E. Incorporate fuels management and future fire management cost considerations when planning all resource management projects for public and private lands.

F. Commit to improving the fire cost data infrastructure as a prerequisite step toward improving accountability and strengthening fire management performance.

G. Develop and use a benefit cost measure as the core measure of suppression cost effectiveness.

The following are the recommendations as taken from the Panel's report including the necessary components of each recommendation as well as the goals each recommendation seeks to achieve.

#### *A. Leadership, Commitment and Accountability*

Increase the level of accountability for and interest in large fire costs and their impacts by allocating suppression funds on a regional or equivalent basis and by providing direct incentives that will help change suppression management behavior. Create a dedicated group of agency administrators representing local and regional levels, and at least one member of the Panel, to develop operational rules and oversight procedures. Components of this recommendation include:

- Allocate suppression funds to regions or logical geographical divisions.
- Use predictive-based budgeting, as opposed to the current system of 10-year moving averages, as the basis for allocation. The 10-year average will not provide sufficient funds to implement this recommendation.
- Establish special relief provisions for "mega" or "extreme" large wildfires, i.e., establish reasoned estimates for reasonably anticipated levels of funding.
- Create and manage a national suppression reserve from allocated suppression funds. Eliminate "severity funding," as it is known today.
- Provide incentives for staying within allocated amounts by allowing up to 51% of "savings" to be used for other fire-related projects. Set provisions for the remaining 49% of savings to be returned to the national suppression reserve.
- Require each region or logical geographic division to contribute a co-payment to the wildland fire suppression expenditure before granting access to the national suppression reserve.
- Improve adjacent agency partnerships to co-manage the funds. Combine allocations where practical and feasible.
- Increase regional tracking and reporting of suppression expenditures. Establish a Headquarters' comptroller, who reports directly to the agency administrator

<sup>4</sup>Western Governors' Association letter of November 8, 2004 to Secretary of the Interior Gale Norton and Secretary of Agriculture Ann M. Veneman. <http://www.westgov.org/wga/initiatives/fire/cost-ltr11-8-04.pdf>

(not the fire organization), explicitly for suppression cost allocations, monitoring, and suppression reserve management.

Generally, cost considerations take a back seat to firefighter and public safety and environmental concerns. While this hierarchy of concern is appropriate, cost considerations are never brought to the forefront. Costs and cost effectiveness have rarely been regarded as a priority for the federal wildland fire suppression organizations. As a result, most agency administrators have operated under the current system with a sense of having essentially a blank check. The lack of accountability for costs creates the climate that leads to increasing costs of wildland fire suppression. The goal of this recommendation, therefore, is to create the accountability that is missing and the incentives for land managers to consider costs.

The Panel strongly believed that Recommendation A will provide the greatest amount of cost savings, if fully implemented.

*B. Resource/Land Management Planning (R/LMPs) and their Relationships to Fire Management Planning (FMPs)*

Set policy and direction on agency land/resource management planning to incorporate cost management on large wildfires. Components of this recommendation include:

- Display the anticipated wildland fire suppression costs in R/LMPs for each alternative proposed, including the no-action alternative.
- Establish the expectations in R/LMPs and FMPs for costs of implementing the plans by recognizing the probability of large fire occurrence and specifying acceptable losses, given the land management direction established.
- Where state, local, and tribal governments have established effective cost management guidance, consider it in the agency planning process.

Without the consideration of cost in the planning process, costs are simply a result of the incident and nothing else should be expected since nothing else was planned. The goal is the establishment of a “line of sight” from land management planning through FMP preparation and on into the Wildland Fire Situation Analyses that incorporates cost management as a priority. R/LMPs must recognize the wildland fire behavior conditions its decisions create.

*C. Sustaining Initial and Extended Attack Capability*

Plan, budget and manage resources effectively for large fire suppression such that resources for effective initial response and extended attack are not compromised. Components of this recommendation include:

- Develop standard procedures to determine minimum resource levels that need to be maintained for effective initial and extended attack in each geographic area using predictive services capabilities based on Energy Release Component, or other applicable fire danger index.
- For those resources not needed to meet the requirements noted above, develop and establish protocols for national control and positioning of those resources.

Creating a sustained program means emphasizing both a strong initial attack and extended attack capability. It must also provide for increasing state and local capability for efficient support of federal programs. This entails optimizing funds provided to field units by ensuring support costs are appropriate for services received. With maximum financial flexibility to pre-position resources, it is possible to increase initial attack success with the benefit of containing or possibly lowering costs.<sup>5</sup> It is also critical to sustain initial and extended attack resource capability at the local level by ensuring consistent budgeting for preparedness resources. This element would involve a cohesive, long-term budget strategy that includes prepared-

<sup>5</sup>Title II of the National Drought Preparedness Act of 2005 (S. 802) seeks to address an inherent flaw in wildfire suppression funding administered by the Federal Emergency Management Agency (FEMA) regarding pre-positioning. Currently, FEMA has authority to reimburse states for pre-positioning equipment to combat wildfires. This reimbursement is available only for a two-week period following a FEMA declaration. However, this current authority actually acts as a disincentive to states to provide pre-positioned resources. When states proactively and effectively extinguish a fire before it becomes an emergency, they do not qualify for reimbursement. In such a case, FEMA does not make an emergency declaration because there is no emergency. Conversely, when state efforts fail at initial containment and a large fire ensues, they are reimbursed by FEMA. Title II of the National Drought Preparedness Act contains language that would ameliorate this disincentive by amending existing FEMA authority under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5131 et seq.).

ness, emergency suppression, fuels management, and state and local fire assistance in order to implement an effective, cost-efficient fire management program.

#### *D. Initial Attack and Extended Attack Response*

Ensure initial responses are always aggressive and driven by the principle of utilizing the closest appropriate resources, including those of local and tribal governments. Components of this recommendation include:

- Use all available local resources in wildfire suppression strategy to create an integrated and coordinated response to wildland fire.
- Form local Type 3 Incident Management Teams to manage initial and extended attack operations locally rather than rely on mobilization of Type 1 and Type 2 teams. Develop agreements with local, state and federal agencies that establish local Type 3 teams.
- Focus meaningful federal and state agencies' financial support and provide appropriate technical assistance to strengthen local resources and assure their availability on a wildfire incident.

Enhanced firefighting preparedness and increased interagency coordination at the local level will improve the cost effectiveness of federal and local wildland firefighting efforts. An effective local department that is prepared to act immediately or in cooperation with other agencies to suppress wildfires can attack and contain wildfires on adjacent state and federal land, often before state and federal forces arrive. They can also provide much-needed assistance to large state and federal wildfires, reducing national mobilization costs for federal agencies and lowering overall suppression expenditures.

Increasing the skills and availability of locally based Type 3 teams will lead to effective extended attack. When successful, the need for mobilization of higher cost Type 1 or 2 teams is negated. Additionally, the development of Type 3 teams that use local firefighters and support (regardless of agency) extensively will reduce costs in a variety of ways: the teams could take command, coordinate an effective extended attack, order necessary resources, and provide for safety through increased supervision, command and control. Most importantly, these teams will have knowledge of the local conditions and landscapes that will help them make good informed decisions. Within the first few hours of a fire-start, they can be very effective in controlling the fire quickly by establishing a competent management organization.<sup>6</sup>

#### *E. Landscape Fuels Management for Public, Tribal and Private Lands*

Incorporate fuels management and future fire management cost considerations when planning all resource management projects for public and private lands. Components of this recommendation include:

For Public and Tribal Lands

- Develop interagency protocols that identify and report acres of hazardous fuels reduction from wildland fire.
- Require analysis of burned-over areas and adopt active management strategies to ensure that excessive fuels do not accumulate again.
- After large wildfires, re-evaluate the impacts and feasibility of adopting strategies that use the recently burned areas as boundaries for less costly wildland fire use. Incorporate the opportunity presented by the wildfire into the unit fuels strategy.

For Private Lands

- Engage communities and property owners in creating defensible space around structures, and appropriate land use, zoning and construction methods/standards for structures situated in fire hazard areas.
- Strive to make R/LMPs and FMPs into national, comprehensive interagency and intergovernmental wildland vegetation defensive management plans.

I want to put particular emphasis on the fact that the Panel also found that a paradigm shift in thinking about hazardous fuels reduction effectiveness is required and can be started by ceasing to use acres treated as a "results" measurement for program accomplishments.

Despite some recent increases in funding for fuel treatments, it is apparent that current fuels reduction strategies are not able to address the full magnitude and

<sup>6</sup>See, *The Changing Role and Needs of Local, Rural, and Volunteer Fire Departments in the Wildland-Urban Interface: Recommended Actions for Implementing the 10-Year Comprehensive Strategy*, An Assessment and Report to Congress (June 2003). <http://www.stateforesters.org/pubs/Final%20Rural%20Fire%20Report.pdf>

scope of the fuels problem. Collectively, the integration of wildland fire risk mitigation measures into all resource management activities, a shift in suppression tactics and greater emphasis on post-fire fuel characteristics may reduce the overall costs of suppression, while ensuring the protection of high values-at-risk.

Solutions must address how to create a politically viable, collaborative effort to manage the landscape and mitigate fire risks within and around the wildland/urban interface.

#### *F. Fire Cost Management Data Needs*

Commit to improving the fire cost data infrastructure as a prerequisite step toward improving accountability and strengthening fire management performance. Necessary components of this recommendation include:

- Wildland fire management agencies should begin developing a more complete fire database and management information system.
- Forest Service Research and Development, in partnership with the fire agencies, should develop and maintain this database and develop a regular series of peer-reviewed reports and analyses that track cost patterns and influences over time.
- Establish an effective national fire-related information technology/information management framework under the guidance of the WFLC.
- Develop an integrated database for all federal, state, and local agencies involved in the collection of wildland fire data that allows for sharing information across agencies and provides for a consolidation report on wildland fire response.

The absence of information inhibits the ability to improve program management and contain costs. Not knowing fully what wildfires cost—and why—cripples credibility and accountability at all levels throughout the organization and with external stakeholders. Before cost management can become an integral part of the fire culture, similar to safety and stewardship, data and meaningful information on costs and cost management performance will have to be made readily available.

Data problems are not confined to suppression expenditures. Data on actual fuels treatment expenditures and treatment characteristics are also absent. Information maintained in the National Fire Plan Operations and Reporting System (NFPORS) contains planned—not actual—costs, and data are collected to report progress rather than evaluate and analyze actual results. Without better data on actual costs and their drivers, the agencies cannot assess their firefighting effectiveness or the efficiency with which they are managing costs.

#### *G. Cost Management Metrics*

Develop and use a benefit cost measure as the core measure of suppression cost effectiveness. Necessary components of this recommendation include:

- Measure should be supported by a comprehensive analysis of wildland fire suppression expenditures and losses averted.
- Analysis should be supported with a comprehensive knowledge base of fire management costs, suppression cost drivers, and values-at-risk.
- Losses averted and suppression costs should be estimated and compared on every fire greater than 300 acres, using defensible methodology for estimation of values-at-risk and scientific fire behavior predictions for estimating the extent of fire involvement in the absence of control.
- Benefit/cost ratios should be tracked over time and across regions and forests to assess trends.

Performance measures need to encourage managers to balance costs and protection objectives and to inform the public and government officials with a more complete picture for public debate. Without reliable and clear performance measures and cost information, land and fire managers may be compelled to select suppression alternatives to reduce potential negative impacts regardless of the cost.

Needed is a measure that helps evaluate the benefits and costs of suppression alternatives. Cost management involves not only minimizing the cost of suppression inputs and assuring their productive deployment, but also making sure that the total value of the cost and losses averted is in line with the direct and indirect costs of protecting those values. To bring the costs and benefits of an activity into an acceptable balance, managers of the activity can either increase the benefits or decrease the costs.

NEXT STEPS: IMPLEMENTATION OF THE RECOMMENDATIONS AND  
CONGRESSIONAL ACTIONS

The WFLC discussed implementation of the Panel's recommendations at their December 2004 meeting. An overall review of the recommendations by WFLC staff concluded that most of the report would be feasible to implement, if agency leadership is committed to making implementation of the Panel's recommendations a priority. However, resources at the agencies are stretched thin. Staff noted at the time that most of the people who should be assigned to implementation are also involved in other high priority interagency assignments.

WFLC went forward, and with some caveats and amendments, adopted the bulk of the recommendations of the Panel, and I commended them for doing so.<sup>7</sup> However, on Recommendation A: "Leadership, Commitment and Accountability," where the Panel believes there is the greatest opportunity for suppression cost saving, WFLC was not able to move forward in full. In part, WFLC had concerns that certain components of the recommendations would require Congressional action to implement. The following were noted:

- To create a national suppression reserve and thereby eliminate severity funds, Congressional approval might be required to allow reprogramming from suppression to preparedness and to create the national-level fund.
- Congressional approval was also noted as necessary to allow a co-payment from a federal land manager to the wildland fire suppression expenditure before granting access to the national suppression reserve. Appropriations law prohibits augmentation of one account with funds appropriated for a different purpose.
- To provide incentives to regional managers to stay within allocated suppression costs by allowing them to use part of any savings on other fire-related projects, Congressional approval was also noted as necessary, given the prohibition against moving appropriated funds from one budget line-item to another (e.g., from suppression to forest restoration) without prior approval.<sup>8</sup>

As I did in the April 2005 testimony, I urge appropriate Congressional leadership to sit down with the Administration and determine how the impediments to full implementation of Recommendation A may be overcome. If Congress and the Administration want to make a serious and concerted effort to contain large-fire costs, I urge you to strongly consider making the legal changes necessary for suppression cost savings to become a reality. Moreover, given the interrelated nature of all the recommendations, I again urge the Congress to closely track and review progress made by the Administration in implementing each of the Panel's recommendations.

The Panel itself reconvened twice in the first half of 2006 to review agency progress on implementing our recommendations. Other panels I am familiar with are usually not inclined to reconvene of their own volition after completing their charge. The Panel on Fire Suppression Costs is and I believe it speaks to the commitment of all the Panel members that our work would help address this problem if the agencies were committed to implementing all of the recommendations we developed.

Some progress has clearly been made and I urge this Committee to seek a status report from the agencies in that regard. Unfortunately, it was clear to me at the Panel's most recent meetings that the agencies had not yet sought Congressional assistance in fully implementing Recommendation A "Leadership, Commitment and Accountability," where, I reiterate, the Panel believed there was the greatest opportunity for suppression cost savings.

CONCLUSION

Wildland fire suppression expenditures have been increasing over the past two decades and have exceeded the \$1 billion mark in three of the last six years. The states' share of spending on suppression has increased commensurately. These increasing costs for wildland fire suppression threaten to topple all the efforts of the National Fire Plan, 10-Year Strategy, Healthy Forests Initiative and Healthy For-

<sup>7</sup> See Wildland Fire Leadership Council, Summary Decisions and Action Items, Emmitsburg, Maryland, December 2004 at <http://www.fireplan.gov/leadership/120704.html>

<sup>8</sup> I want to especially note that the federal agencies have resisted this important and very valuable notion of "incentives" since the Panel made its recommendations. I understand that some of the components of Recommendation A were evaluated by the federal agencies. Providing incentives was not included in these efforts. Providing incentives for staying within allocated amounts by allowing up to 51% of "savings" to be used for other fire-related projects is something the Panel and I feel would have a significant impact on fire management behavior.

ests Restoration Act. Pervasive droughts, over-stocked forests, and an expanding population base will only exacerbate the societal, economic and natural impacts and costs of wildfire suppression.

High suppression costs drain funding for other proactive forest health management efforts called for by the forest health policies and programs mentioned above. Austere federal budget estimates make it more important than ever to pursue strategic containment of suppression costs. With forests, as with people, preventive medicine is the most cost efficient approach. For example, a Colorado State University study put direct and indirect losses to people and the environment from Colorado's 2003 Hayman Fire at \$230 million, or alternatively nearly \$ 1,700/acre. In contrast, fuel reduction costs range from \$200-\$1,500/acre, depending on proximity to homes in the wildland-urban interface.<sup>9</sup>

By using the proactive approaches called for in the 10-Year Strategy and its new Implementation Plan to reduce hazardous fuel, restore ecosystems and increase the capacity of our communities to assist,<sup>10</sup> this nation can eventually reduce loss of life and property from wildfire catastrophes while lowering the tremendous suppression costs that are incurred.

Real savings in the suppression budget will not happen overnight. Only with strong and sustained leadership from the Congress and the Secretaries of Agriculture and the Interior can significant reductions in the costs of suppression of large fires be achieved. The Panel believes those savings are achievable if the recommendations put forward are fully implemented. As the Panel states, true suppression expenditure savings will only be achieved by focusing on strategic cost considerations as set forth in their recommendations, not on tactical cost considerations, such as the apportionment of suppression costs between all involved governmental jurisdictions. The recommendations may require certain legal changes and they most definitely require a change in the status quo of the agencies fire-fighting operations and mind set. The Panel believes the time for these changes has come. We hope the Congress and the Administration agree.

The CHAIRMAN. Thank you very much.

I will have some questions, but I will have to submit them in writing. I am not able to stay for a longer period. Let me just ask Senator Craig if he wanted to ask questions now or if he wants to submit his in writing as well.

Senator CRAIG. I think my time is going to have to be treated like yours, Mr. Chairman. I will submit a couple of questions in writing.

Gentlemen, thank you very much.

The CHAIRMAN. Well, I thank these three witnesses very much. I think this has been a useful hearing and we have a lot of good recommendations to try to respond to and follow up on. So thank you very much and that will conclude our hearing.

[Whereupon, at 11:38 a.m., the hearing was adjourned.]

<sup>9</sup> See, *Journal of Forestry*, September 2004, vol. 102, no. 6, pp. 42-49.

<sup>10</sup> See, <http://www.westgov.org/wga/publicat/TYIP.pdf>

## APPENDIXES

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### APPENDIX I

#### Responses to Additional Questions

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[Responses to the following questions were not received at the time this hearing went to press:]

##### QUESTIONS FOR PHYLLIS FONG FROM SENATOR BINGAMAN

*Question 1.* Your cost-containment report recommends that the agencies seek clarification of their WUI-protection responsibilities from Congress. But your report seems to suggest that the Federal policy is in fact clearit just hasn't been followed. Can you clarify whether the Federal Wildland Fire Policy is unclear with regard to who has primary responsibility to protect structures in the WUI?

*Question 2.* Your cost-containment report recommends, among other things, that State and local governments shoulder a greater share of costs of suppressing fires, even when they burn entirely on Federal lands. Can you explain why non-Federal entities should bear costs for fire suppression activities on Federal land?

*Question 3.* You recommended that the Committee find ways to encourage State and local governments to establish and enforce "Firewise" protections to reduce wildfire damages and costs. Please comment on any steps OIG feels the Committee and Federal Government might consider.

*Question 4.* The Western Governors' Association testimony states that your report failed to evaluate or consider certain reports that presented conclusions on fire suppression costs contrary to those of the OIG. Please comment on this statement; if the studies referenced in the WGA testimony were not considered by OIG, please provide a brief response to the key findings therein about why fire suppression costs are increasing.

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##### QUESTIONS FOR ROBIN NAZARRO FROM SENATOR BINGAMAN

*Question 1.* A number of GAO and other reports have pointed to the Fire Program Analysis system as an important tool for cost-containment. It is my understanding that the agencies are reevaluating their plans to complete FPA, and that has caused many observers significant concern. Your testimony indicates that the agencies may no longer be planning to complete all of FPA's key goals. Can you explain what those goals are and why they are important?

*Question 2.* You stated that the agencies have made little progress in determining the quantity and type of firefighting resources they need. In your opinion, why is this important and what steps could the agencies take to improve their ability to make this determination?

*Question 3.* In your statement, you reiterated your previous recommendation that the agencies develop a cohesive strategy to reduce fuels and respond to wildland fires. You further said that completing such a strategy is an essential step if the agencies are to contain costs. How would completing a cohesive strategy help the agencies contain costs?

*Question 4.* In your statement, you said that the agencies were updating their cost-sharing guidance, but that it is unclear how agencies will ensure that guidance is followed. What are your concerns?

## QUESTIONS FOR MARK REY FROM SENATOR BINGAMAN

*Question 1.* Do you agree with GAO's preliminary observation that the effectiveness of the actions you have taken to control wildland fire costs may be limited because you have not defined your goals and strategies for achieving them? If so, what are your plans for taking these steps?

*Question 2.* You agreed with GAO's recommendations that a cohesive strategy was needed for reducing fuels and responding to wildland fires, but you stated that you could not develop such a strategy until you first developed better data. It is my understanding that the Fire Program Analysis tool (FPA) is a key effort in obtaining this data and was intended to allow the agencies to "optimize," or identify the most cost-effective mix of firefighting personnel and equipment that best utilize any given budget allocation. GAO testified that the agencies recently completed a "midcourse review" of FPA that resulted in the Wildland Fire Leadership Council endorsing design modifications to FPA.

a. Under this modified version of FPA, will the agencies be able to determine the optimum mix of firefighting resources for a given budget level, or will it instead identify alternatives that may not include the best solution?

b. What effect will this midcourse review have on time frames and funding needed to complete FPA?

*Question 3.* Do you believe that significant improvements in local capacity and utilization for initial attack are necessary to achieve maximum cost-effectiveness in wildfire management operations?

*Question 4.* What steps has the Federal government taken to encourage "firewise" practices? Do you believe that the Federal government should take additional steps to encourage "firewise" practices? If so, what?

*Question 5.* Dr. Jack Cohen and others have concluded that a home's risk of burning in a wildfire can be most effectively and efficiently reduced by controlling the characteristics of the home itself and the landscape within a couple of hundred feet of the home. Does the Administration agree with Dr. Cohen's conclusions?

*Question 6.* The Inspector General's Office recently recommended that the Forest Service, in conjunction with other Federal wildland fire management agencies, modify the current policies to allow wildland fire managers to move between suppression and Wildland Fire Use tactics as conditions change on an incident (see p. 18 of the Audit Report). The agency responded that it would modify its AMR policies to allow managers to employ multiple strategies concurrently and to move between various tactics as conditions change by April 30, 2007. It is unclear from the agency's response, however, whether the modifications the agency intends to make will include the specific change recommended by the Inspector General's Office. Can you clarify whether the agency agrees with the Inspector General's recommendation that the current policies should be modified to allow wildland fire managers to move between suppression and Wildland Fire Use tactics as conditions change on an incident? If so, does the agency intend to complete that modification by April 30, 2007?

*Question 7.* Secretary Rey: virtually all of the reports we are discussing here today state that shortcomings in the Forest Service's data collection and management is a significant barrier to implementing cost-containment strategies. These assessments are consistent with dozens of reports on other matters that also point to the Forest Service's performance and financial management as one of the most serious problems facing the agency. What are you doing to address this problem?

*Question 8.* Please provide a detailed status report on the implementation of each of the key recommendations in the Large Fire Suppression Costs Report to WFLC.

## QUESTIONS FOR NINA ROSE HATFIELD FROM SENATOR BINGAMAN

*Question 1.* Many of the reports discussed at the hearing emphasize the importance of developing and utilizing local resources for initial attack as a cost-containment strategy. Do you agree that local capacity and utilization is an important element of a comprehensive cost-containment strategy?

*Question 2.* Your testimony indicated that two-thirds of development is occurring in the wildland-urban interface. How do you define the wildland-urban interface for purposes of that statistic? Is there a single definition of the wildland-urban interface that the agencies use for all of their programs?

*Question 3.* Can you describe what positive incentives are in place to encourage wildland fire managers to contain wildfire costs?

*Question 4.* LANDFIRE is partially implemented and is scheduled for completion in 2009. Given the frequency with which landscape-altering events have been occurring, such as wildland fires and hurricanes, what plans do you have for keeping the LANDFIRE data current and how much do you anticipate that will cost?

*Question 5.* The Large Fire Suppression Costs report that Mr. Caswell testified about states that the agencies need to “set policy and direction” on agency land and resource management plans and “display the anticipated wildland fire suppression costs . . . for each alternative proposed, including the no-action alternative.” Do you agree with that recommendation? Please explain why you agree or disagree, and explain whether and how the Department’s agencies are implementing the recommendation.



## APPENDIX II

### Additional Material Submitted for the Record

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STATEMENT OF CASEY JUDD, BUSINESS MANAGER, ON BEHALF OF THE FEDERAL  
WILDLAND FIRE SERVICE ASSOCIATION

#### INTRODUCTION

The Federal Wildland Fire Service Association (FWFSA) is a nation-wide employee association whose membership is primarily comprised of federal wildland firefighters employed by all five land-management agencies. Our diverse membership includes firefighters occupying all positions within each Agency's fire program from entry-level firefighters to Fire Management Officers (FMOs). This diverse membership provides the Association with experience and expertise within the wildland firefighting community unparalleled in the country. It is because of this experience & expertise that the FWFSA believes it imperative for Congress to hear the voice of our Nation's federal wildland firefighters as it relates to the ever-increasing costs of wildfire suppression.

#### CAUSATION OF SKYROCKETING FIRE SUPPRESSION COSTS

With the utmost respect for those providing oral testimony before the Committee on January 30, 2007, the federal wildland firefighters in the field; those risking their lives, cutting the lines, ordering resources, commanding the incidents and protecting our Nation's natural resources as well as its citizens' lives & property believe the root causes of ever-increasing suppression costs have far more to do with Agency fire program policy than elements presented to the Committee by others such as weather, WUI, fuels, the number of fire starts etc.

While the FWFSA agrees that the aforementioned elements are just that, elements that affect such costs, their role is over-stated by the Agencies with respect to the common sense causes of increasing costs. The elements and solutions thereto offered by the Agency and others are complex. Their recommendations, having been suggested year after year are also complex and would necessitate an extraordinary level of commitment, communication and cooperation with a multitude of local, state & federal agencies. The fact that such elements and their solutions are offered year after year bears this opinion out. Such solutions/recommendations, if plausible, would take years to exhibit any effect on lowering costs. Rather, firefighters believe there are a number of far less complex solutions to the costs of wildfire suppression. The simple solutions offered in this testimony to the increasing fire suppression costs not only benefit our firefighters but our Nation's taxpayers and could lead to annual savings of tens, if not hundreds of millions of dollars in wildfire suppression costs.

#### CAUSES & EFFECTS

Although we expect the Agencies and other bureaucratic "experts" to suggest our observations and solutions are too simplistic, we believe Congress is looking to find solutions that can be achieved promptly providing both short & long-term corrections to the wildfire suppression cost problem.

The causes & solutions offered by the firefighters doing the work; those that are in the field and who thus have a significantly better vantage point in identifying costs than those in Washington, are in fact simple, yet provide prompt, long-lasting relief to the problem(s) being addressed. However, the ideas presented in this testimony cannot work without the express intent & expectation of Congress for the Agencies to commit to a more cost-effective and cost-efficient way of doing business.

## AGENCY POLICIES INCREASE COSTS NEEDLESSLY

Our testimony focuses on the policies of the Forest Service as it is the largest employer of federal wildland firefighters in the country. The following points illustrate some of the policies/actions of the Agency that adversely impact the cost of fire suppression and in fact, the overall management of the fire program.

- Historically, the Forest Service leadership fails to seek sufficient funding from the Administration & Congress to fund all of its projects leading to budget transfers.
- Maintaining archaic pay & personnel policies creating severe recruitment & retention problems
- Over-reliance on non-federal resources
- Diversion of fire preparedness funds to pay for non-fire projects
- Those making fire policy have little, if any, fire experience
- Failure to staff at 100% Most Efficient Level (MEL)
- Regional Offices taking the responsibility of hiring firefighters away from Forest Fire Management Officers causing significant & needless delays in recruitment & promotions.

*Budget Transfers*

For years, Congress has chided the Chief of the Forest Service for borrowing from non-fire projects to pay for fire and now, borrowing from fire to pay for non-fire projects. The Agency has consistently accepted budget proposals from the Administration and suggested to Congress that it (the Agency) can accomplish its goals with such funds.

The fact of the matter is the Agency leadership has simply failed to submit realistic funding requests to meet all of its needs. Most importantly however, the FWFSAs firmly believes that the funding levels currently appropriated & provided by Congress to the Agency for fire suppression & preparedness are adequate and would not need to be supplemented if fiscal management was a priority.

*Archaic Pay & Personnel Policies*

The land management agencies, in concert with The Office of Personnel Management (OPM) continue to encumber our Nation's federal wildland firefighters with archaic pay & personnel policies. A number of reports from a variety of sources illustrate the severe retention & recruitment problems resulting from antiquated pay and benefit policies. Recruitment & Retention (R&R) problems have led to the weakening of our Nation's federal wildland firefighting force infrastructure and has resulted in the over-reliance by the land-management agencies on significantly higher-priced non-federal firefighting resources.

*Diversion of Fire Preparedness Funds*

Perhaps the most egregious action on the part of the Forest Service as it relates to the increasing costs of suppression has been the systematic diversion of fire preparedness funds to non-fire projects. Over the last several years, amounts in excess of several hundred million dollars have been siphoned off by the Forest Service Headquarters (WO), Regional Offices, Forest Supervisors, District Rangers and other "line officers" from funds appropriated by Congress for fire preparedness. Whether such funds have been used to help finance the creation of the "white elephant" centralized human resources center in New Mexico, or gone to pay administrative costs, cost pools etc., the fact of the matter is, preparedness funds that we believe Congress has intended to be used for fire preparedness are not getting to those responsible for ensuring preparedness resources are in place...our forest fire management officers.

Funds from the fire preparedness budget are designed to provide for the resources necessary to be properly prepared for any given fire season. Such resources include temporary firefighters which often amount to approximately 46% of fire season staffing; dozers, dispatchers etc.

When Congress approved the National Fire Plan (NFP) several years ago, part of its spirit & intent was to focus on preparedness so as to reduce suppression costs. It is sound reasoning. Having sufficient fire preparedness resources in place during the fire season naturally promotes the ability of firefighters to keep fires small and subsequently, less costly. Having proper preparedness resources in place also reduces the risks to the health & safety of our firefighters and those they protect. Those attending the hearings on January 30 viewed "pie charts" clearly showing that suppression expenditures far exceeded preparedness expenditures. This is simply upside down.

Mr. Mark Rey, USDA Undersecretary for Natural Resources and the Environment has testified to Congress that “while preparedness allocations have been reduced, suppression funding is up.” This is a direct contradiction to the intent of the National Fire Plan and is tantamount to spending considerable sums to search for the proverbial horse after it has left the barn, rather than spending less to ensure the barn door was closed and locked in the first place.

In fact, the Agency continues to tout its “98% initial attack rate” in its congressional testimony. Despite this testimony, no data can be found to support their claim. Quite candidly, a 98% IA rate is likely unattainable if proper preparedness resources are not in place. The best our firefighters can conclude from the data available is that the IA rate is closer to 88% or lower.

The result of the diversion of fire preparedness funding was felt all over the West during the '06 season and had an enormous impact on the Agency's expenditure of \$1.5 billion on suppression this past season.

On many forests, engine companies were available for response only 5 out of 7 days and with 3 instead of 5 personnel because preparedness resources were not funded and thus unavailable. In fact, early in the season, some engines were completely unmanned and several Hotshot crews were unavailable due to staffing. Fuels funding was also diverted resulting in less fuel reduction capability. As the season progressed, small fires that would have been kept small had preparedness resources been available needlessly grew in size, intensity and obviously cost.

Another victim of the diversion of funds is the failure of the Agency to staff at 100% of the Most Efficient Level (MEL) developed as a result of the National Fire Plan. Given the inherent cost-effectiveness of our federal wildland firefighters, it makes no fiscal sense not to be properly prepared by staffing at the Most Efficient Level. The failure of the Agency to fund preparedness resources because of the diversion of such funds has forests now staffing at “a percentage of MEL.” Obviously, anything less than 100% is not the most efficient level of staffing and thus provides less preparedness protection and increases the risk to the health & safety of firefighters and others.

Often throughout the season, orders for federal resources went unfilled. In fact, traditional “unable to fill” lists received from various Geographic Coordination Centers (GACCs) which usually are several lines long, were now several pages long. Individual forests, recognizing the fact that federal resources were not available as they should have been, remained in their home forest knowing that if they left to help out in other areas, there would be no resources to cover their forest.

Two options existed. Either wait out the arrival of federal resources from considerable distances away, (again allowing the fire to grow in size, intensity & cost) or implement what has come to be a far too familiar practice of calling in non-fire resources (municipal & State fire agencies along with contractors) which obviously significantly increased the cost of any given fire.

It is our opinion that if preparedness funds had not been diverted and such funds had gotten to the FMOs who needed them as we believe Congress intended, then the number of acres burned as well as suppression costs would have been significantly reduced as fires would have been kept small and federal resources would have been available so as not to have to “over” rely on significantly higher-priced non-federal resources.

#### *Policy Makers With Little to no Fire Experience*

Congress should be keenly aware that those in the hierarchy of the Agency such as Undersecretary Rey, the Forest Service Chief, Regional Foresters, District Rangers and Forest Supervisors, and who have the power of developing and implementing fire program policies that affect our firefighters are woefully inexperienced in fire and possess few fire qualifications which would allow them to develop and implement fire program policies with firefighting and firefighters in mind. We firmly believe that Congress needs to look at the make up of those in the bureaucracy making such policy and seek to ensure those in policy-making positions have sufficient fire background.

#### *Recommendations & Solutions*

The recommendations & solutions the federal wildland firefighting community offers will help correct the out-of-control suppression costs of wildfires by amending Agency policy, strengthening our Nation's wildland firefighting infrastructure and ultimately saving our Nation's taxpayers considerable sums each year. They are simple, fundamental solutions to complex problems requiring a change in mind-set by the Agencies with regards to how they manage their fire programs.

*1. Ensure Fire Preparedness funds get to the field and are not diverted or used for any other purpose*

Common sense dictates that providing our Nation's inherently less costly federal wildland firefighters with the resources necessary to be proactive rather than reactive will provide them the best opportunity to keep fires small, more manageable and less costly. Given that Congress adopted the National Fire Plan that comes to the same conclusions should provide Congress with the incentive to ensure that such preparedness funding be spent on preparedness resources, not vague and nebulous peripheral sources that preclude our firefighters from being properly prepared.

*2. Ensure the Agency's budget request outlines all financial needs to fund all of its various projects*

To avoid future pitfalls of fund transfers, the Chief of the Forest Service should be compelled to provide the Administration and Congress with the full cost of funding all projects required by Congress. Should such funds not be authorized and appropriated by Congress, it should be Congress itself who decides which programs are "underfunded."

*3. Replace archaic pay & personnel policies with "21st Century" policies that will significantly reduce if not entirely eliminate recruitment & retention problems & ultimately save taxpayers significant sums*

A number of legislative proposals have been introduced recently in Congress to help strengthen the ever-weakening infrastructure of our Nation's federal wildland fire fighting forces. These federal firefighters are inherently less expensive than their municipal & state counterparts as well as most contract firefighting resources.

Each year, significant taxpayer dollars are spent hiring & training federal wildland firefighters only to see them leave for better pay & benefits. If retention replaced recruitment as a priority, millions could be saved in training & hundreds of thousands of dollars in staff hours for recruitment & hiring. Additionally, making such employment attractive in the first place would allow recruitment to take care of itself.

As an example, if the Forest Service continues to hire & train 496 apprentices in Region 5 @ \$14,000 per student just to retain 198 employees, the Forest Service would continue to lose \$4,200,000 each year. We believe it more cost efficient and effective to invest those sums in salary and other retention tools rather than to continue to train 3-4 people to permanently fill one vacancy.

Such tools include but are not limited to:

- Provide portal to portal compensation for firefighters while on emergency incidents exceeding 24 hours (refer to H.R. 408, The Federal Wildland Firefighter Emergency Response Compensation Act from the 109th Congress), the cost of which would likely be less than \$10 million annually . . . less if preparedness resources are fully funded.
- Proper wildland firefighter classification (refer to H.R. 5697, The Federal Wildland Firefighter Classification Act, also from the 109th Congress and passed by the House of Representatives.
- Provide for hazard duty pay for prescribed wildfire burns.
- Provide eligibility to the Federal Employee Group Life Insurance (FEGLI) for our Nation's temporary wildland firefighters.
- Provide basic health coverage to Temporary wildland firefighters.
- Permit time served as a temporary firefighter to be creditable towards retirement.
- Return the hiring process of firefighters back to the Forests.

Although these recommendations may sound expensive, they are far less costly than maintaining the ineffective and inefficient "status quo" and actually represent a fraction of the average annual fire suppression budget. Adopting these recommendations strengthens the infrastructure of our land-management agency fire forces and thereby reduces the need to continue to be reliant on higher-priced non-federal resources. Such recommendations will stem the tide of losses and ensure the investment our taxpayers make in hiring and training these firefighters is not wasted.

These recommendations can be paid for with existing fire program funding at current levels without compromising the program itself. It simply will literally take an act of Congress to get the land-management agencies to change the way they do business in.

## CONCLUSION

We understand that our opinions and recommendations are a departure from what Congress normally hears from the bureaucracy. It should be clear to Congress however that our federal wildland firefighters have a vested interest in proper management, fiscal and otherwise, of the fire programs of our land management agencies. Clearly, we believe our Nation's federal wildland firefighters to be the true experts in this field and ask Congress for its consideration.

## COMMENTS ON PL 107-203

We were pleased and honored to have Senator Domenici raise the issue of firefighter liability as it relates to PL 107-203. With current criminal prosecution of a fire crew boss continuing in Washington State and genuine concerns among federal wildland and other firefighters in taking such assignments or retaining certain qualifications, it is imperative that the law be revisited to better understand Congress' intent in passing the legislation and to clearly define the parameters of any USDA OIG investigation and ultimately, to remove this cloud of potential criminal liability that has become an unfair advantage to our federal wildland firefighters.

Additionally, if the Federal Government insists on carrying such a law on the books that places an unfair burden and disadvantage upon federal wildland firefighters as compared to other federal, state & local firefighters, it, the federal Government, should pay for the entire cost of Personal Liability Insurance (PLI).

Furthermore, we believe the use of laws passed subsequently to 9/11 with respect to charges & prosecution of those responsible for the death of "federal officials" is, in the context of their use by the U.S. Attorney in Spokane Washington against a fire crew boss, to be a gross abuse of the intent and application of such law(s). In the interest of judicial fairness, we believe it should be incumbent upon the U.S. Attorney General to instruct U.S. Attorney James McDevitt that the application of this law in the matter being played out in Washington State is at the very least, a stretch within the meaning and intent of the law and more likely an abuse of the use of said law.

The seriousness of this issue and its national repercussions deserve a separate and distinct hearing on this matter. It should also be noted that while we are pleased by the concerns raised by Mr. Rey and the recommendations he suggested the Administration would support on the issue, the FWFSAs offered those same concerns and recommendations to the Agency over 2½ years ago which, at the time, fell on deaf ears. The Agency's new position on this issue is clearly in response to the overwhelming voice of its firefighters on this issue.

On behalf of our Nation's federal wildland firefighters, thank you for the opportunity to submit this statement for the record. We would be happy to assist the Committee and the agencies with any efforts to rectify the current problems facing our firefighters and the fire programs of the land management agencies.

STATEMENT OF GERALD "JERRY" WINKLE, CHAIRMAN, VALLEY COUNTY BOARD OF COUNTY COMMISSIONERS, VALLEY COUNTY, ID

Dear Senate Committee on Energy and Natural Resources:

The Valley County Board of County Commissioner's (Board) submits for consideration the following statement regarding wildfires on National Forest Lands, efforts to contain the initial costs of wildfire suppression activities and the costs that go beyond the initial suppression, and the impacts of wildfire use fires (WFU).

As you consider the costs of wildfire suppression, please, analyze the negative economic impacts to forest counties, and the negative influence of other federal actions and their cumulative effects on local governments. Forest counties deserve a system that works for them, not against them: a system that protects and improves their health, safety, environment, and well-being and improves the performance of the economy without imposing unacceptable or unreasonable costs on forest county taxpayers.

The Board recognizes that there are direct and indirect costs associated with wildfire. The Board also recognizes that historic use of fire to maintain forests was acceptable. We are now out of our historic range of variability. The forestland have unhealthy buildup of fuels in the national forests and the County must look to the cumulative effects of wild fire use, prescribed burns, and excessive slash burning on the overall environment. This buildup of biomass in the County's national forests has several consequences, including an increased risk of catastrophic wildfires, diminished wildlife habitat, decreased water production from forested watersheds, degraded water quality, and certainly hampers biodiversity.

By making modest changes in federal forestry practices the forestlands can be used much more efficiently to remove carbon dioxide from the atmosphere. This not only cleans the atmosphere but also increases organic matter in the soil where it is beneficial. The Board recognizes that the problems and effects of air pollution cross-political boundaries and they are frequently inter and intra jurisdictional in nature. The Board encourages coordination and cooperation between the federal, states, regional, tribal, local units of government, public and private organizations, and concerned individuals.

It is the responsibility of the Board to protect the public welfare, to protect scenic, aesthetic, historic, and cultural values, and to prevent air pollution problems that interfere with the enjoyment of life, health, property, or natural attractions within Valley County.

It is the intention of the Board to prevent any areas of Valley County from reaching air contaminant levels that are not protective of human health and the environment, even if the cause is smoke from wildfires. The Board realizes that given the gross imbalance in private ownership and federally administered lands within Valley County that some federal policies and events have a higher contribution level to air pollution and may affect other environmental media.

#### RATIONAL

The 2006 fierce wildfires will lead to even fiercer political battles over who is responsible for the fires, and rightfully so. Is it the hazardous fuel? Is it the drought? Is it a National policy that does not support quick response? Or is it the National Wild Fire Use Policy?

The answer turns out to be “all of the above.” It is not our local Forest Service and it certainly isn’t the brave men and women who stand on the fire line. The hazardous fuel crisis is not a myth; drought and fuel, is the chief culprit behind big fires in Idaho and elsewhere in the West.

It is estimated that over 900,000 acres burned in Idaho this fire season, contributing on a national level, to this year’s record setting wildfires of nearly 9 million acres. In some cases, quick response would have helped minimize the size, the negative ecological and economic effects of the wildland fires.

Fire is a natural and vital component of most forest ecosystems. Wildland fires become a problem when they burn hotter than normally occurring wildland fires and/or on areas larger than normal. These hotter and bigger fires are now more prevalent following a century of human activities that have changed the ecological character of forest ecosystems around the country. These large-scale, high-intensity fires can have negative effects on forest ecosystems and local communities.

The State of Idaho and Valley County are committed to helping communities deal with catastrophic wildland fires through education programs and funding that supports forest health restoration and post fire recovery for communities. Wildland fires cause several problems, including: soil erosion, landslides, water pollution, decreased (and sometimes dangerous) air quality, threats to human safety and structures, and loss of resources or access to resources, such as timber for logging and trails and waterways for recreation.

The number of firefighters killed each year more than doubled from about 8 per year in the 1950s to nearly 17 per year in the 1990s. Where fatalities increased was in aircraft and vehicle accidents growing from 1 to 6 per year and heart attacks growing from one-half to 5 per year. An aging workforce and greater use of aircraft and vehicles, and the lack of clean air, are responsible for increased firefighter deaths. This year in Valley County four (4) young souls were lost in a WFU helicopter crash.

#### AIR AND WATER QUALITY

September 8, 2006 The Idaho Statesman’s headlines read “ Air quality was 2nd worst in U.S. Thursday”.

“DEQ says Boise’s dubious distinction is temporary. Expert says healthy adults face little long-term risk. Another day of stagnant weather and raging wildfires Thursday kept the Treasure Valley gripped in dingy pollutant-laden air, forcing the Department of Environmental Quality to issue its second consecutive red alert—its third in less than one month. Boise was second only to Sacramento, Calif., for having the worst air quality in the country”.

The culprit, forest fires. The EPA has warned that it’s important to limit your exposure to smoke—especially if you may be susceptible. Wildfire is one of the most destructive natural forces known to mankind.

Ecological problems continue once fires have stopped burning. Soil that was held in place by trees and other vegetation is likely to wash away into waterways during rainstorms or with next year's runoff. This surge of soil and ash into waterways can harm fish and other aquatic species of plants and animals as well as drinking water supplies.

Scientists are also studying the link between forest fires and mercury in fish as part of a U.S. Forest Service fisheries research team tasks. The mercury locked up in the forest can build up for years in trees and plants and then suddenly be flushed into nearby waterways when it's released by forest fires that turn the vegetation to ash.

Scientists with the Forest Service and other agencies are trying now to determine how much mercury is released by those fires. They're also finding interesting relationships between mercury on the land and mercury in the fish.

While the data is preliminary, scientists already have made some observations from their two summers in the field. As expected, they found that mercury in fish is related to mercury levels in nearby soils. They also found that the more organic matter is in the soil, the more mercury it holds. Scientists also have used soil samples to prove that the mercury in the forest is coming from the sky, not from the bedrock below.

Past experience has shown us that a quick response can help minimize the negative ecological and economic effects of wildland fires, including loss of jobs, soil erosion and water pollution. Techniques such as soil stabilization and replanting can dramatically reduce soil erosion and water pollution, and also can provide jobs lost during the fires.

A coalition of the Forest Service, University of Minnesota and the U.S. Geological Survey are studying fish from 10 Superior National Forest lakes before and after fires. While the data is preliminary, scientists already have made some observations from their two summers in the field. As expected, they found that mercury in fish is related to mercury levels in nearby soils. They also found that the more organic matter is in the soil, the more mercury it holds. Scientists also have used soil samples to prove that the mercury in the forest is coming from the sky, not from the bedrock below.

Trent Wickman, air resources specialist for the Superior National Forest has stated that there's no doubt this is airborne deposition. It's not coming from the rock. Scientists also have found a surprising relationship between lake size and mercury. The smaller the lake, the higher the mercury level in the fish. They are not exactly sure why but it's a pretty dramatic correlation so far.

At the very least, the experiments could change the way scientists think about mercury pollution. Hans Friedli, an atmospheric research center chemist has estimated that as much as 800 tons of mercury may enter the atmosphere annually from burning vegetation worldwide—ranging from wildfires to farmers clearing underbrush.

When atmospheric mercury falls to the ground in liquid form, it is absorbed by leaves and needles, where it stays, at least until fires send it wafting into the air again. Adding thousands of fires worldwide to the mix of mercury sources potentially complicates scientific models for tracking the pollutant. Peter Hobbs, a professor of atmospheric science at the University of Washington noted that if you've got multiple sources from fires, you've obviously got a lot more complicated situation.

Burning vegetation and trees contribute to the release of carbon dioxide into the atmosphere directly through emissions of gases and aerosols from the fires and indirectly through the impact that fire activity has on the forest ecosystem and its ability to store carbon. Simply put, fires contribute to greenhouse gas emissions and there are impacts from fires, when they destroy trees, which soak up carbon dioxide. Federal Land Managers should be involved in long-term timber production and horticulture and utilizing incentives that are being introduced globally through the implementation of carbon credit commerce.

#### INVASIVE WEEDS

Burned areas can contain high nutrient levels, exposed ground surfaces and reduced shade. These favor weed colonization and exponential weed growth, which can prevent reestablishment of desired vegetation and displace already established native plants. If permitted to reach large infestation levels, the resulting weed population will be very difficult and expensive to manage. Weeds are destroying the very habitat that many endangered species rely on. Preventing weeds from spreading through seed dispersal is the most effective and least costly method of weed management. Monies are needed to help fund forest counties weed program. Surveying

burned areas to eradicate new weeds is essential after wildfires to prevent weed establishment. Monitoring should occur at least three times (spring, summer, fall) and concentrate where weed infestations often begin: along fire lines, roadways, railways and waterways. This is all expensive and the Forest Service must carry the burden of the cost of weed eradication that is expanded because of wildfire whether it's a suppression fires or WFU fires. Currently, there is no federal funding for restoration and weed eradication for WFU fires. Somehow, WFU is defined as a beneficial use and does not take into consideration either short-term or long-term negative affect of WFU.

The weed problem has grabbed the attention of elk and deer hunting organizations, ranchers who graze their livestock on public land, foresters, equestrian groups, homeowners, scientists (there are even scientists who specialize in weed research), as well as the highest levels of the land management agencies entrusted with the care of public lands.

#### FEDERAL COMMITMENTS

It is impossible for local governments to cover the cost of wildfire suppression, especially in forest counties with gross imbalance in private ownership and federally administered lands.

Generally, state or local governments may not tax federally administered lands unless they are authorized to do so by Congress. Since local governments are often financed by property or sales taxes, this inability to tax the property values or products derived from the federally administered lands may affect local tax bases significantly. Instead of authorizing taxation, historically, Congress has chosen to create various payment programs designed to make up for lost tax revenue. For forest counties the most wide-ranging payment program is called "Payments in Lieu of Taxes" or PILT, which has not been fully funded in decades.

Recently, federal land managers are faced with an ever-present funding shortage; and forest counties across the nation are faced with higher property taxes if the Secure Rural Schools and Community Self Determination Act, Public Law 106-393, is not re-authorized and appropriated. The National Forest System was formed in 1905 from the Forest Reserves, which were established between 1891 and in 1905 by presidential proclamation. Many counties found 65 to 90 percent of the lands were sequestered into the new forest reserves, leaving little land for economic development and diminishing the potential tax base to support essential community infrastructure such as roads and schools. If Public Law 106-393 is reauthorized as requested this will almost certainly be the last time and we need a long-term solution. This demonstrates a much larger problem, which is funding and the impact of National Forest System Lands on local communities and local government.

#### ECONOMICS

Simply put, the county's tax base, or more specifically the lack thereof, is inadequate to support the services required for such an expansive county. I think it's important to note, the county's citizens and taxpayers are supporting those who recreate in the area by maintaining roads, law enforcement, search and rescue, medical aid and other services, infrastructure and facilities.

If the state and local governments are being considered as financial partners in fire suppression then we need to speak to the real need. Valley County is overwhelmingly made up of public land, while carefully constructing language regarding fire suppression in the wildland urban interface there could be language that would provide significant new wilderness protection for the most sensitive areas and a new management regime that provides for economic growth for non-special designated National Forest System Lands, while settling a decades old debate on management of the public land. Like Valley County there is a grossly disproportionate public ownership, which causes a severe strain on resources.

Forest counties need a long-term solution that would stabilize the federally committed payments, which help support roads and schools, and to provide projects that enhance forest ecosystem health and provide employment opportunities, and to improve cooperative relationships among those who use and care about the lands that the agencies manage.

A long-term solution like this might prove to be appropriate for the Twenty-five Percent Fund pursuant to 16 U.S.C. Section 500 and stabilize payments to Idaho's forest counties, which help support roads and schools. This is a discussion that must take place prior to the discussion on wildfire suppression and who is going pay.

The Board can appreciate the Government Accountability Office (GAO) examination of the issues surrounding cost sharing among Federal, State, and local entities. The Board recognizes the need to negotiate cost-sharing methods that will take into

account the multitude of factors that occur in each incident. Last year the Board worked closely with all jurisdictions during an unparalleled fire season. Valley County declared a disaster because of wildfires, which strained county and state budgets. This would be the same for most forest counties and they need help funding the wildfire induced, additional local law enforcement patrols, and sentries to man road closures, evacuations, and road & bridge maintenance and restoration.

The Board understands that the Secretaries have already begun crafting an inter-agency template to assist in addressing a number of cost sharing issues. As the departments continue to develop guidance to be used in negotiating cost share agreements among the Federal government and their various non-Federal partners. Any such template should not be construed to interfere with treaties and any other obligations to the Tribes financial and nonfinancial commitments to county governments (i.e. PILT and 25% Fund), and this language should clearly be part of any template.

In conclusion, Wildfire is one of the most destructive natural forces known to mankind. There is no way that a local government can sustain the negative effects of wildfire on our NOW recreation-oriented communities. Air quality is destroyed; there is physical danger and services are limited.

To mitigate the cumulative effects of wildfire Congress should firmly encourage timely action to repair damaged forests and to reduce recovery costs. In line with that encouragement the Board also believes that now is the time to consider the effective control of forest fires, and the policy of WFU in the fight against global warming.

Congress should appropriate full funding for existing commitments (PILT, & 25% Funds, either by reauthorization of Public Law 106-393, such as Senate Bill 380 or through traditional methods) to forest counties and fund forest county sheriff patrols, sentries to man road closures, evacuations, road & bridge maintenance and restoration, along with weed monitoring and eradication, which resulted from WFU fires and suppression fires. More atmospheric studies need to be funded such a global warming influence from worldwide wildfires and burning, some statistics and projects on carbon and mercury affects on the human environment, and air and water quality in general. Then we can discuss the cost of wildfire suppression.

The Committee's kind consideration of the Board's concerns will be greatly appreciated.

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NATIONAL ASSOCIATION OF FOREST SERVICE RETIREES,  
*January 25, 2007, Lincoln, CA.*

Hon. JEFF BINGAMAN,  
*Chairman, Committee on Energy and Natural Resources, U.S. Senate, Dirkson Office Building, Washington, DC.*

Re: Hearing on Costs of Wildfire Suppression, January 30, 2007

DEAR MR. CHAIRMAN: The National Association of Forest Service Retirees is an organization of people who devoted their careers to protecting and caring for the Nation's forest resources, particularly the resources of the National Forest System. We continue our interest and support for the statutory missions of the Forest Service. This letter is to let you know of our concern about the impact that the present system of funding wildfire suppression is having on other Forest Service programs.

Background on the funding of wildfire suppression on the National Forests is set forth in the enclosed issue paper entitled, Funding Midland Firefighting. As noted in this issue paper, the budget for wildland fire suppression increased from 25 percent of the agency's budget in FY2000 to 44 percent of the budget in FY2006. As the ten-year average of fire suppression costs continue to rise the proportion of the Forest Service budget devoted to fire suppression will continue to increase. This shift of the available Forest Service budget to fire suppression is coming at the expense of other Forest Service programs, not only for management of the National Forest System, but also for Research and State and Private Forestry as well. The costs of suppressing major fires must be taken out of the Forest Service budget if other programs essential to the protection and care of our Nation's forest resources are to remain viable. Perhaps, funding for catastrophic wildfires should be through disaster funds such as those administered by FEMA.

Please include the issue paper in the hearing record. We ask that your committee take action to revise the method of funding wildland fire suppression on the National Forests so that responsible management of the natural resources of these pre-

cious lands can be maintained. We would be pleased to answer any questions or to provide any further information the committee may desire.

Sincerely:

GEORGE LEONARD,  
Chair, Board of Directors.

[Enclosure.]

FUNDING WILDLAND FIREFIGHTING \*

Throughout the fire season in recent years, the evening TV news regularly features stories of wildland fires. The stories tell of threatened homes and communities, evacuations, and feature pictures of homes and blackened forests that have been destroyed. It is not surprising then to learn that wildland firefighting costs are rising. What people do not recognize is that these rising costs are eroding other Forest Service programs—such as maintenance and operation of public campgrounds, keeping hiking and ski trails open, improving habitat for fish and wildlife, completing high priority community forest health projects, completing high priority research, and providing urgently needed assistance to States. It is vital that the Administration and the Congress address the issue of fire funding to avoid jeopardizing these essential Forest Service activities.

SOME HISTORY

For most of the post WWII period, the Congress authorized the Forest Service to borrow from any available funds to cover the cost of fighting wildfires. The money borrowed would be reimbursed through supplemental appropriations. The Forest Service had substantial funds deposited by timber purchasers to cover the cost of reforestation, timber stand improvement, and slash disposal on cutover areas. These funds were large enough to permit the borrowing for fire suppression without disrupting on-going activities. When the timber sale program was significantly reduced in the 1990's, the deposited funds became inadequate to cover rising costs of fire fighting. The agency was forced to borrow program funds from current year's appropriations resulting in serious disruption of on-going activities.

In order to minimize the disruption of current programs and the need for supplemental appropriations, the Congress began adding funds for fire suppression to the Forest Service budget. The amount budgeted for suppression each year is equal to the rolling 10-year average cost of fire suppression. (See chart below.)

F.S. SUPPRESSION

Year	Obligations \$000	10-yr. avg.
1997 .....	180,183	301,475
1998 .....	245,964	327,036
1999 .....	411,546	369,206
2000 .....	1,097,862	478,993
2001 .....	689,550	526,184
2002 .....	1,267,429	607,787
2003 .....	1,023,000	680,493
2004 .....	726,000	649,956
2005 .....	660,987	683,878
2006 <sup>1</sup> .....	1,300,000	768,595
2007 .....	.....	836,874
2008 .....	.....	907,157

<sup>1</sup> FY2006 obligations are estimate.

THE PROBLEM!

This budget decision has had serious consequences for the Forest Service budget. In FY 2000 total funds appropriated for fire amounted to 25 percent of the agency budget. In FY 2006 total funding for fire has increased to 41 percent of the budget. It is projected to take 44 percent of the budget in 2008. An overall budget increase in 2001, following the high cost of fire suppression in 2000, did minimize the impact of rising fire costs on other programs. Since then however constrained budget levels

\*Note: The source of data included in this paper is the U.S. Forest Service.

have resulted in an erosion of agency programs as the 10-year average cost of fire suppression has continued to rise.

From FY2001 (the first year of the National Fire Plan) to 2006, funding for non-fire Forest Service programs has declined by nine percent, when adjusted for inflation. As noted in the table above, the projected 10-year average fire suppression costs are raising more than \$50 million per year. The costs will increase even faster as the easy fire seasons of the late 90's are dropped and the recent high cost years are added to the calculation of the 10-year average. Assuming continued constraints on discretionary domestic spending, the current method of funding fire fighting costs will cannibalize all other Forest Service programs essential to the well-being of our Nation's forests.

#### FIRE FIGHTING COSTS MUST BE OFF-BUDGET

It is essential that the Administration and the Congress take the costs of fire suppression out of the Forest Service's constrained budget for Research, State and Private Forestry, and the stewardship of our National Forests and Grasslands.

#### STATEMENT OF MICHAEL E. DUBRASICH, LEBANON, OR

##### SUMMARY

My name is Michael E. Dubrasich. I reside in Lebanon, Oregon. I am a professional consulting forester with 26 years experience in private practice, and am knowledgeable about and have professional expertise in fire cost accounting.

Last fire season was the worst in over fifty years. Nearly 10,000,000 acres burned in wildfires with suppression costs approaching \$1.85 billion. The 2006 fire season was the third record-setter in six years. Seven of the worst ten fire seasons since the 1950's have occurred in the last 11 years.

In light of our growing crisis of mega forest fires, it is appropriate for the U.S. Senate to examine the associated costs. Your efforts to uncover root causes and effective solutions are consistent with your responsibilities, and are deeply appreciated by this citizen. As an American forester, I wish to aid you in your efforts to save our American forests from catastrophic incineration and to reduce burgeoning Federal fire suppression expenditures.

Therefore it is incumbent on me to point out to you that the USDA OIG Audit Report: Forest Service Large Fire Suppression Costs (Report No. 08601-44-SF) is seriously flawed and fiducially incompetent. The methodology and conclusions of the Audit are inconsistent with the accepted standards and fundamentals of fire cost accounting. As a result, the recommendations in the Audit are horrifically bad, and implementation will increase (catastrophically) fire acreage and fire suppression costs.

The Audit fails in three important ways:

- 1) The Audit fails to consider total costs per fire, and instead focuses analysis on fire suppression costs per acre.
- 2) The Audit fails to consider economic cost-plus-loss.
- 3) The Audit fails to consider the economic utility of fire suppression.

The errors and omissions of the Audit extend to its recommendations, which are tremendously counter-productive. If applied, the recommendations in the Audit will increase fire acreage and costs exponentially, and could initiate a region-wide firestorm that will be an unprecedented national disaster.

Proper analysis of fire suppression costs, using the standards and fundamentals developed over many decades of econometric study and practice world-wide, would lead to much different conclusions and recommendations. Qualified and fiducially competent analysis would lead to rational recommendations that could save billions of dollars, millions of acres, thousands of homes, and dozens of lives every year.

Therefore it is necessary that you revisit this issue. You can save America from expanding fire seasons, exploding suppression costs, and the horrors of forest holocausts, but only if you examine the issue with the appropriate analytical tools. To continue on the present course, based on the improper Audit, will result in major national disasters that are otherwise completely preventable.

##### THE THREE FLAWS IN THE AUDIT

The three fundamental fire cost accounting flaws in the Audit are technical, and require further explanation.

*Total costs per fire*—The Audit focuses analysis on fire suppression costs per acre, not total costs per fire. This is illogical and incompetent in the accounting sense..

Total costs, not costs per acre, are the problem. A small fire may be expensive to suppress per acre, and megafire suppression costs may be much less per acre, but overall megafires cost magnitudes more money from taxpayers and the Federal Treasury.

For example, the Warm Fire of 2006 (North Kaibab District, Kaibab National Forest), could have been suppressed when it was one acre in size at a cost of approximately \$5,000. If that had happened, suppression costs would have been \$5,000 per acre. Instead, the Warm Fire was allowed to burn as a Wildland Fire Use fire (WFU). It eventually reached nearly 60,000 acres in size and cost over \$7 million to suppress. This works out to a little over \$100 per acre.

According to the defective logic of the Audit, the \$7 million dollar price tag was preferable to the \$5,000 price tag because of much reduced costs per acre. Yet the preferred option proved to cost an additional \$6,995,000 total!

You don't need to be a CPA to see the irrationality in the Audit's approach.

*Cost-plus-loss*—Almost since the founding of the U.S. Forest Service in 1905, analysts have evaluated fire costs as suppression expenses plus the capital value of the resources destroyed. The cost of firefighting plus the lost value of whatever burned down is known as cost-plus-loss and is the standard parameter of forest fire cost accounting.

During the last two decades, the U.S. Forest Service and other federal fire management agencies have focused on planning approaches that combined variants of the 90-year-old paradigm of cost-plus-loss minimization on simple deterministic models of initial attack on wildland fires (Donovan et al. 1999, Lungren 1999).—From Fried, Gilles, and Spero. 2006. Analyzing initial attack on wildland fires using stochastic simulation. *International Journal of Wildland Fire*, 2006, 15, 137-146.

Federal fire suppression expenses were nearly \$2 billion in 2006, but I estimate losses at 48 billion board feet of merchantable timber with an economic value of \$24 billion. Therefore total federal forest fire cost-plus-loss was approximately \$26 billion in 2006 alone. (Sidenote: For comparative purposes, the entire 2006 timber harvest in Oregon, the largest timber-producing state, was 4 billion board feet, or one-twelfth of the timber destroyed by fire nationally in the same year.)

That valuation does not account for the loss of habitat, wildlife, watershed, and esthetic values. In many locations the U.S. Congress has deemed that those non-commodity values exceed the timber values. Therefore the 2006 losses in non-commodities exceeded \$24 billion, because those forests that were catastrophically incinerated also suffered huge degradation of habitat, wildlife populations, water quality and quantity, and attractiveness for recreation.

Nor does that valuation include the losses incurred on private property in the form of tree farms, ranches, rural homes, and other rural private property destroyed by federal fires emanating from federal lands.

Nor does that valuation include the lives of 20 forest firefighters lost in the line of duty last year.

Thus the \$26 billion cost-plus-loss figure underestimates the true losses, which were priceless and irreplaceable.

Using the Warm Fire example, approximately 17,300 acres experienced the loss, on average, of \$2,400 per acre in timber value. That represents a total loss of \$41.5 million. Added to the \$7 million in fire suppression expenses, the total cost-plus-loss of the Warm Fire was close to \$50 million. That does not include the irreplaceable loss of a heritage old-growth ponderosa pine forest and the habitat it provided to rare and protected species such as the Kaibab squirrel.

The Audit totally ignores cost-plus-loss and thus fails to provide the critical information that Congress and federal forest agencies need to evaluate true fire costs.

*Utility*—For the last fifty years, or more, fire cost analysis has focused on calculations of the economic utility of fire suppression.

Particularly significant are the contributions of: Bratten (1970) on the use of nonlinear mathematical programming utility maximization models under constrained resource availability; . . . (Ibid).

We fight fire to prevent fire from destroying valuable resources. The prevention of destruction is what is useful about firefighting. In every fire there is some potential destruction that could happen, so we seek to prevent it by controlling and extinguishing the fire.

The potential destruction can be accounted for as probable cost-plus-loss should firefighting fail to stop the fire. That is, should the fire not be contained within a given perimeter, how much bigger could it get and how much additional firefighting expenses and resource destruction would likely occur?

The mathematical calculation of probable cost-plus-loss (if suppression had failed) minus the actual cost-plus-loss (assuming suppression was successful) represents the economic utility of firefighting.

In short, the dollar usefulness of firefighting is the value of what was saved (plus probable expenses) minus the total sum value of what was lost plus actual expenses. The result of that computation is called the economic utility of firefighting. The general goal of firefighting expenditures is to maximize the utility.

No rational discussion of fire suppression costs can happen without reference to the economic utility of firefighting. Maximizing utility is the only rational reason we spend any money on firefighting at all.

Using the Warm Fire example, the fire could have been extinguished at one acre for a cost-plus-loss of  $\$5,000 + \$2,400 = \$7,400$ . Instead the agency chose to let it burn for an eventual cost-plus-loss of \$48.5 million. The difference between these two figures is \$48,492,600. In other words, the decision to Let It Burn had a negative utility of \$48,492,600!

The Audit completely ignores utility. It is a very dangerous omission. The logic of the Audit is fiducially incompetent and wrong, and following it will lead to steadily increasing catastrophic forest fire acreage and exponentially greater cost-plus-losses in the future.

#### THE HORRENDOUSLY BAD RECOMMENDATIONS IN THE AUDIT

The Audit methodology and logic is flawed. So too are the recommendations, which will increase, not decrease, fire acreage and fire costs.

1. The Audit calls for sanctions and penalties against fire managers who “overspend” on a cost per acre basis. The Audit goes so far as to call for a national investigation of a USFS Forest Supervisor who, the Audit alleges, ran up costs of a fire to \$3,000 per acre. Yet there is no analysis of the value of the resources, homes, communities, and lives saved by the actions of that Forest Supervisor.

In another case, a regional cost-containment review was conducted on a wildfire with total suppression costs of about \$9 million. The fire’s wildland fire situation analysis (WFSA) estimated suppression costs of \$200 per acre. According to the regional review, the fire brought a significant amount of political pressure on the forest supervisor and the incident commander to suppress the fire as quickly as possible due to the presence of State timber, giant sequoias, and the perceived threat to a number of small communities. In response to this pressure, the regional forester issued a letter emphasizing the need to throw “everything but the kitchen sink” at the fire. Accordingly, the fire was fought with much more intense tactics that involved larger and more aggressive use of suppression resources. As a result, FS spent about \$3,000 per acre to contain it, or about 15 times the per acre cost estimated in the WFSA.

The regional team reviewed the IMT’s decisions and concluded that the high costs “were justified.” The team did not, however, explain how or why the costs were justified, or address the effectiveness of the team’s tactics. Further, since the regional forester’s involvement in this incident impacted the team’s objectivity, a national review should have been conducted. However, we found no evidence that it was.—From USDA/OIG-A108601-44-SF, page 31.

The positive economic utility of the Forest Supervisor’s decision-making was in the billions of dollars. The authors of the Audit wish to see him investigated and sanctioned for that, and to send that message to all fire managers in the future. Fire managers are being told that their efforts to reduce total fire cost, cost-plus-loss, and potential cost-plus-loss will not be tolerated and punishments will ensue. Instead, fire managers are to let fires grow as large as possible to minimize costs per acre of fire suppression.

That policy will lead directly to larger fires, increased total fire suppression expenses, and increased resource losses. That is the opposite of what Congress and the Nation desire. At the root of that irrational policy are the fiducially incompetent methods of the Audit.

2. The Audit calls for an increase in Wildland Fire Use fires (WFU’s), yet WFU’s have large negative utility. A WFU is a wildfire started by lightning, in an accidental spot, on an accidental day, usually in the middle of fire season. In every single case, the choice made to let a WFU burn has resulted in inflated fire suppression costs and extensive resource losses.

The Audit claims that WFU’s have resource benefits, but they do not. WFU’s do not reduce the fire hazard; they actualize it, which often results in more dead fuels

than were on the site before the fire. WFU's do not select which trees to kill, but kill old-growth and young-growth trees indiscriminately. Beetle-caused mortality often follows WFU's, killing the few trees that survive the fires. Wildlife habitat for forest dwelling animals is often destroyed or severely damaged beyond recovery by WFU's.

WFU is a new name for an old practice formerly called prescribed natural fire. It was a prescribed natural fire that burned over a million acres in Yellowstone, our flagship national park, in 1988. Let It Burn policies led to the Biscuit Fire of 2003 and the Tripod Fire of 2006, among many others. Both were de facto WFU's that blew up. Both megafires destroyed vast tracts of forests containing T&E species populations and habitat.

The Warm Fire of 2006 started out as a declared WFU, and resulted in \$48.5 million in cost-plus-loss. The attendant loss of a heritage forest that had stood for millennia is incalculable. That our American forests are heritage cultural artifacts is well understood.

[Of the sampled trees] . . . about 16 percent of all ponderosa pine had died within a year after the fires, many from secondary effects—possibly bark beetle attacks. Another 18 percent are dying and will probably be dead within a year or two. Thus we estimate that at least 34 percent of the mature ponderosa pine trees will be dead within a few years of the 2003 fires.

About 42 percent of all scarred trees were dead and dying as a result of the 2003 fires compared to 31 percent of the unscarred trees. The fire commonly burned into old scars inflicting heat damage to the cambium or consuming wood needed for structural support, causing the tree to eventually fall. We estimate that about half of living trees with historic bark-peeling scars will die within two years of the 2003 fires.

. . . [The] bark-peeling scars [were] made when Native Americans harvested the cambium for food. In the South Fork valley, bark-peeling scars on living trees date back as far as 1665, and *any accelerated mortality of these trees would represent an unprecedented loss of living artifacts of a former culture.* [emphasis added]—From Keane, Arno, and Dickinson, “The complexity of managing fire-dependent ecosystems in wilderness: relic ponderosa pine in the Bob Marshall Wilderness,” *Ecological Restoration*, Vol. 24, No. 2, 2006.

Congress has never authorized WFU's, nor investigated them. The time for that is long overdue. The WFU Program should be suspended immediately and investigated by Congress to eliminate huge and unnecessary fire suppression costs and resource losses next summer!

3. The Audit calls for a three-fold increase in WFU teams (modules). These are 7-person teams that hike out into forests in front of WFU's and attempt to predict fire behavior. However, the Audit makes no mention of the fact that a WFU team was involved in a burn-over event last summer where fire shelters were deployed.

Shelter deployment is a last gasp life-saving technique used when all others have failed. Fire shelters do not guarantee safety, and often fail to save the lives of the firefighters within them. Shelter deployments are of critical concern to the firefighting community. Yet Congress may be unaware of the Little Venus Fire incident:

Tuesday, the leader of the Unawep Fire Use Module, Lathan Johnson, made a presentation to fire managers and forest administrators at the Middle Fork ICP. The presentation detailed the fire shelter deployment they were involved in July 17 on the Little Venus Fire, Shoshone National Forest. While hiking into their assignment, they were overrun by fire causing the emergency deployment. They were in their protective shelters over an hour until the fire passed. “It's not easy talking about this incident, but I'm hoping firefighters will gain something from our experience and maybe it will help others if they ever find themselves in a similar situation. This is a stark reminder to all of us about the dangers we face in our jobs and the importance of working together to make it through difficult situations.” (From InciWeb, National Interagency Fire Center, July 24, 2006.)

*You may rest assured that if those WFU team members had died in their fire shelters, that would have been the end of the WFU Program right then and there.*

Now that Congress, via this testimony, has been informed of this incident, and you realize that the information regarding this incident has previously been withheld from you by the USDA and the USFS, Congress must undertake a full inves-

tigation of the Little Venus Fire WFU team fire shelter deployment. Congress and the public have a right to know what happened, and we must learn from the incident.

The expansion of the WFU program called for by the Audit will result in firefighter fatalities some day. When that happens, those responsible may find themselves on trial for premeditated manslaughter. As you should know, this is not idle speculation. Last year Federal prosecutors filed manslaughter and other criminal charges against a former fire commander, Ellreese Daniels, the fire boss in the 2001 Thirtymile Fire in north-central Washington that claimed the lives of four firefighters.

4. The Audit recommends that the Federal Government reduce expenditures by forcing state agencies to bear the cost of fighting fires that originate on Federal property and spread to private property. Their excuse includes reference to the imaginary "wildland-urban interface" or WUI:

Federal agencies do not have the power to regulate WUI development. Zoning and planning authority rests with State and local government. Unregulated WUI development increases FS wildfire suppression costs. Under the terms of current protection agreements, FS and Federal taxpayers bear the wildfire cost implications of development decisions made by local governments about where and how structures will be built in the WUI.

The inequity of this situation is further exacerbated by the fact that only a small portion of the WUI is in FS or Federal ownership. (From USDA/OIG-A/08601-44-SF, page 8.)

The diminution of rights in private property is not an equity or fairness owed to the Federal government by private landowners or the states! That statement is absurd and exactly backwards. The fires that start on unkempt Federal land and spread to private property are irresponsible spillovers perpetrated upon American citizens by their own government!

The Audit seeks to blame the victims of horrendously bad Federal land management policies, and to harm rural residents by withholding firefighting funds to fight escaped fires from Federal lands. This is more than inequity; it is tantamount to a wholesale attack waged by the government upon the citizenry. No one in America, Federal Government included, has the right to burn down their neighbor's property, regardless of who owns it.

In many western counties the Federal Government owns two-thirds or more of the land base. In those counties no private property is safe from Federal holocausts, regardless of arbitrary mapping by government regulators of undefined zones. Zoning is not the problem; catastrophic holocausts razing down on rural homes and communities from Federal land are.

Please don't blame the victims. Instead, protect us from misguided and hazardous Federal policies and the wildfires those policies encourage.

Last summer the Black Crater Fire (Sisters District, Deschutes National Forest) caused home evacuations 12 miles away from the ignition point and six miles from the U.S. Forest Service boundary. The USFS delayed in suppression efforts on Federal land because the fire was near a Wilderness Area. Then the fire blew up. Forty percent of the acreage that eventually burned was on private land miles away from the ignition point.

During the Black Crater Fire, Leslie Weldon, Supervisor of the DNF, made a stunning public statement to the effect that if lightning ignites a fire again this coming summer, she will declare the fire a WFU and Let It Burn. When and if she does, the WFU will likely explode and require tens of millions of dollars to suppress. A Type I WIT (Incident Management Team) will have to be called to the Deschutes NF for the third time in five years!

That level of irresponsibility coupled with in-your-face threats made by public servants is simply not tolerable to Oregon citizens, or to the citizens of any state, and Congress needs to correct this situation, preferably before next summer!

5. Flirting with WFU's may lead to a regional firestorm destructive beyond any disaster in U.S. History. If dozens of WFU's are burning uncontrolled across the West during an upcoming fire season, and concurrently a large windstorm arises, the wind-driven embers from those WFU's could set the entire western United States on fire in a matter of hours.

Such an event occurred in 1910 when 3 million acres burned in 36 hours. The Great Fires of 1910 burned mainly in sparsely populated Idaho and Montana but still destroyed six towns and killed 78 firefighters in a matter of hours.

Windstorms are damaging enough to forests. When they carry fire they can devastate whole regions: forests, towns and all.

The Audit recommends larger fires and more WFU's that burn for extended periods. That policy is an invitation to regional holocaust.

Unless Federal fire policies are altered now, next summer could be the most disastrous in American history.

#### CONCLUSIONS

The methods and conclusions of the Audit Report: Forest Service Large Fire Suppression Costs do not follow standard and accepted fire cost accounting fundamentals. As a result, the Audit recommendations are misguided and incredibly destructive and dangerous.

Congress needs to reexamine fire suppression issues using qualified experts in the fields of forest fire economics, forest fire suppression, and forest management.

A reexamination using proper methods applied by qualified experts will yield much improved recommendations, which if implemented could cut forest fire cost-plus-losses in half. That is, the economic utility of proper analysis could be \$12 billion per year or more, not to mention the protection of habitat, homes, and humanity.

The issues I raise in this testimony have magnitude and urgency. I beg you to give them their due consideration.

Thank you for your service to America.

Sincerely,

MIKE DUBRASICH,  
*SOS Forests.*

P.S. I can and wish to help you to save America \$12 billion, millions of acres of forest, thousands of homes, and dozens of lives, every year, now and into the future, plus avert a potential regional holocaust.

Please contact me for more information. [mike@sosforests.com](mailto:mike@sosforests.com)

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