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PREPAREDNESS FOR THE 2007 WILDFIRE SEASON

HEARING

BEFORE THE

COMMITTEE ON ENERGY AND NATURAL RESOURCES UNITED STATES SENATE

ONE HUNDRED TENTH CONGRESS

FIRST SESSION

TO

CONSIDER THE PREPAREDNESS OF FEDERAL LAND MANAGEMENT AGENCIES FOR THE 2007 WILDFIRE SEASON AND TO CONSIDER RECENT REPORTS ON THE AGENCIES' EFFORTS TO CONTAIN THE COSTS OF WILDFIRE MANAGEMENT ACTIVITIES

JUNE 26, 2007

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*Senator Thomas passed away on June 4, 2007.

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PREPAREDNESS FOR THE 2007 WILDFIRE SEASON

TUESDAY, JUNE 26, 2007

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

The committee met, pursuant to notice, at 10:04 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. All right, why don't we go ahead with the hearing.

This is the second hearing of the year on the subject of wildfire management. In January, we had a hearing, I believe it was the committee's first hearing ever, dedicated to the issue of wildfire cost containment. Today's hearing is focused on the preparedness of Federal agencies for the current wildfire season, but also, again, we want to focus on the issue of cost containment, specifically in the context of two new reports, and a recently released administrative document on the subject.

Wildfire potential is forecast to be higher than normal in a number of regions. Of course, we see on the news, and the front page of the newspapers, the devastation that's being caused in some parts of the country, as we speak.

To date, we've had 116 percent of the average number of fires. They've burned 136 percent of the average number of acres. That's the average over the last 10 years, as I understand it. The Forest Service's expenditures have already approached $400 million. The administration's budgets indicate that it believes that containing wildfire costs must come at the expense of preparedness. That's been an issue of contention for a very long time.

In fact, we heard repeatedly from an array of experts that spending more money on preparedness and local first response capacity would reduce the overall cost of fighting fires in the long term. They've also pointed to the gross inefficiencies and disruptions that result in borrowing funds from other agency accounts to cover under-funded emergency wildfire suppression operations.

It appears to me the Forest Service and Interior have done more in the last year to begin to address the escalating costs of wildfire management than has been done in a long time, and they deserve

credit for undertaking some significant cost containment initiatives.

However, as both of the reports that we are considering today will confirm, there's much more that agencies could be doing, and should be doing, the two reports reiterate large deficiencies in the agency efforts, the failure to institutionalize cost containment is a major issue that's cited.

I also want to briefly mention the issue of our fire fighters. Obviously we're extremely appreciative of the dedicated service that many individuals commit to fighting fires. Senator Cantwell, Senator Domenici and I have introduced a bill, S. 1635 to help cover their liability insurance costs.

This is a project we worked closely with the administration on, and through Senator Craig and Senator Feinstein's leadership, we have inserted that into the Interior bill. Through this authority, agencies will be better positioned to manage their wild land fire programs for safety, effectiveness and efficiency, and firefighters will be better positioned to protect their personal interests while serving the public interests.

Let me turn to Senator Domenici for any opening comments he has.

[The prepared statements of Senators Bingaman and Salazar follow:]

PREPARED STATEMENT OF HON. JEFF BINGAMAN, U.S. SENATOR FROM NEW MEXICO

This is the committee's second hearing of the year on the subject of wildfire management. At the end of January, this committee held what I believe was the first-ever hearing dedicated to wildfire cost-containment.

This hearing is focused on the preparedness of the Federal agencies for the current wildfire season, but we also will again focus on the issue of cost-containment, specifically in the context of two new reports and a recently released administrative document on the subject.

The Federal agencies have forecasted wildfire potential to be higher than normal across much of the country. The forecasts have thus far proven pretty accurate: to date, we have had 112 percent of the average number of fires and they have burned about 142 percent of the average number of acres.

The administration seems to believe that containing wildfire costs must come at the expense of preparedness. But I don't believe that starving the preparedness, wildfire suppression, and other Forest Service programs is an effective or efficient strategy to contain those costs.

In fact, we have heard repeatedly from an array of experts that spending more money on preparedness and local first-response capacity would reduce overall costs in the long term. They also have pointed to the gross inefficiencies and disruptions that often result from borrowing funds from other agency accounts to cover underfunded emergency wildfire suppression operations.

We have had to dig a long-way-out of the deep financial hole in which the agencies' wildfire accounts were left by the last Congress.

The continuing resolution for this fiscal year provided an extra $70 million in wildland fire management funding for the Forest Service. The Iraq Supplemental provided another $465 million for emergency suppression, despite the administration's opposition; and the recently-passed budget provides for an additional $500 million in funding for next year, if necessary.

As a result, I think we are much better prepared than we would have been without that change in course, and better preparation should make for a more efficient and effective wildfire management program.

So while starving the agencies' budgets is not the answer, there are many things the agencies can and should be doing to contain costs.

It appears to me that the Forest Service and Interior Department have done more in the last year to begin to address the escalating costs of wildfire management than they have done in a long time.

They deserve credit for undertaking a number of significant cost-containment initiatives.

However, as both of the reports we will consider today confirm, there still remains much that agencies ought to be doing. That includes many specific initiatives that have been recommended by these and many other reports.

The two reports also reiterate larger deficiencies in the agencies' efforts. As the Independent Panel that Dr. Hyde will testify about reports, "despite the numerous studies and reviews conducted of large wildfire costs since the National Fire Plan, cost-containment has not been institutionalized in the Forest Service."

And the failure to institutionalize cost-containment is in large part the result of enormous shortcomings in planning, providing effective incentives, and—as the titles of both reports indicate—strategizing.

I am afraid that I will have to step away from the hearing, and Senator Wyden, who chairs our Public Lands and Forests Subcommittee, will chair in my absence. First I'd like to turn to Senator Domenici for any opening remarks he'd like to make. Other members' statements will be made a part of the record.

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

Mr. Chairman, thank you for holding this hearing. As Colorado can attest, fire season is upon us and I look forward to hearing from the administration on the steps they have taken to prepare for it.

While fire danger ratings vary across the country from below average to above average it is important that we not let our guard down anywhere. This is especially true for a state like Colorado where fire danger is rated "normal" this season. Colorado's bark beetle infestation is increasing hazardous fuel loads in the forests. At the same time the increasing number of recreational users in our forests and Colorado's extensive wildland-urban interface demand that we remain vigilant in our preparation to appropriately respond to, contain, and suppress wildfires.

In light of this, I am concerned about reports that fire positions in Colorado are being cut and will have some questions regarding resource levels as well as reports that certain assets are slated to be permanently re-located.

I am concerned about increased fire fighting costs adversely affecting the Forest Service's ability to address other important funding needs such as preparedness, hazardous fuels mitigation, recreation management, and of course bark beetles.

These are important issues and I believe it is a wise use of this Committee's time to continue to conduct vigorous oversight of the Federal land agencies and their actions to address them and to assure this committee that life, property, and other important resources are protected from wildfire to the maximum extent possible.

Thank you again, Mr. Chairman. I look forward to hearing from the administration witnesses on these items.

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

Senator DOMENICI. Thanks very much, Mr. Chairman. First, I want to thank you for holding the hearing. This last fire season we burned 9 million acres, and expended slightly more than $2 billion in that effort. Much of the expense was consumed in a couple of dozen fires.

It seems like every year we ask the same questions—do we have enough firefighters? Do we have enough equipment? Will there be an aerial support when we need it? How can we reduce the cost of this activity?

I think the committee and the Congress should be asking more important questions. First should be, "how are we going to help change the on-the-ground dynamics in order to avoid these intense catastrophic fires?" Second, we should be asking, "what can be done to reduce the millions of tons of carbon dioxide and pollutants that get released into our air from these fires?"

When the Haymon Fire burned in Colorado in 2002, the NASA scientists estimated that the fire was emitting more carbon dioxide

in 1 day than all of the vehicles in the United States emitted in a week.

Researchers in Canada recently found mercury levels in trout to be 5 times higher than the previous year in an area that they were studying after it was burned.

Here is a picture of the Derby Fire near Big Timber, Montana that burned last summer. I was in Montana when the fire was going on, and it was one of the many that occurred in the State that summer. This lightning-caused fire consumed 207,000 acres between August 22 and October 3 in 2006. Much of that area was heavily forested lands that burned with great intensity—millions of tons of timber, grass and brush were consumed in the fire.

Science tells us that half of the carbon in these trees captured from the air is sequestered in the wood, and half is sequestered in the soil. When we get very intense fires, like the one that occurred in the Derby Fire, much of the carbon, both in the trees and in the soil, is released into the atmosphere. That's another real big source of carbon dioxide that we're not preventing by letting that much heat hit that much stored carbon that has been saved up.

The smoke column in that picture was estimated to be 20,000 to 30,000 feet tall. Other than a major volcanic eruption or the detonation of a thermo-nuclear bomb, there is no other event that pushes carbon dioxide as high into the upper atmosphere, as quickly as this does. Take a look at the picture. It's from Colorado and was taken at Frazier Experimental Forest last year. It is another Derby Fire waiting to happen. What happened here? Why did some of these trees survive the onslaught of insects? Those green areas were clear-cut in an experiment designed to model water yields done 40 years ago, and they are now young, vigorous forests that have the potential to fight off insects.

Mr. Chairman, this Congress should be very concerned about the carbon dioxide released by our dead and dying trees, especially when they burn. Like many others here today, I'm worried about the Forest Service becoming an agency with no funds to manage anything other than fires. That would be a shame. We're moving in that direction.

I really believe that an ounce of prevention would be worth more than a pound of cure when it comes to the forest. In closing, I would be remiss if I did not mention an insect problem that is ongoing near Cloudcroft, New Mexico, Senator Bingaman. I want to avoid, if possible, seeing the smoke plume like the one I showed today over our home State.

Mr. Rey, my first question will be about this situation, so if you don't have it ready, you might as well ask somebody now.

Thank you very much, Mr. Chairman.

The CHAIRMAN. All right, thank you very much. We have three distinguished witnesses. The Honorable Mark Rey, who is the Under Secretary for Natural Resources and the Environment in the Department of Agriculture. The Honorable Steven Allred, who is the Assistant Secretary for Land and Minerals Management at the Department of Interior, and Robin Nazzaro, who is Director of Natural Resources and the Environment at the Government Accountability Office.

I'm informed that Secretary Allred is prepared to be the first witness, and why don't we hear from you, and then from Mark Rey, and then from Ms. Nazzaro.

STATEMENT OF C. STEPHEN ALLRED, ASSISTANT SECRETARY FOR LAND AND MINERALS MANAGEMENT, DEPARTMENT OF THE INTERIOR

Mr. ALLRED. Thank you, Mr. Chairman, Senator Domenici, and members of the committee, it's a pleasure to be here to visit with you, as always.

It's my pleasure to appear here with Mark Rey as we discuss fire preparedness, fuels reduction, the upcoming fire season we need to be prepared for, and other important information about the close relationship the Department of the Interior and Department of Agriculture have with regard to fire operations.

As you know, multiple factors contribute to wildland fire, including weather and fuel-type terrain, location proximity to the Wildlands Urban Interface, or WUI, as we refer to it, and obviously the management decisions that are made before and during fire incidents.

Changing temperature, the prolonged drought, accumulation of fuels and substantial increase in highly flammable invasive species—what I'm particularly concerned about—are converging to increase the risk that we have for catastrophic fire.

In combination, these trends can present continuing challenges in our effort to control wildland fires, and to manage the cost of fighting those fires.

One challenge we face in addressing wildland fire is in the Wildland Urban Interface where suppression efforts are inherently more expensive. The rate of growth of new homes in the WUI is triple that outside of that area, with approximately 8.4 million new homes constructed in the 1990s.

The Departments have worked aggressively to reduce the amount of hazardous fuels on Federal lands, and to restore the heath by public ranges and forests.

In carrying out this work, we have used both administrative tools and statutory authorities, such as the President's Healthy Forest Initiative, and the Healthy Forest Restoration Act, to expedite those actions.

In 2006, more than half of the total acres treated were inside the WUI area. We'll maintain this emphasis, and our goal is to treat approximately 2 million acres in 2007. As you've said, 2006 was an above-normal year by almost any standard. In 2006, we had 14 fires that topped 100,000 acres in size.

Across all jurisdictions in 2006, wildland fires totaled more than 96,000 incidents, and burned almost 10 million acres of land. Despite the severity of the fire index, we were able to achieve a 97 percent initial attack success on all of the fires, which is comparable to less severe years that we've faced.

Also significantly, fewer dwellings and other structures were destroyed in 2006, 750 homes lost, and compare that in 2002 at 835, and in 2003, 4,500 homes.

Looking at the 2007 season, we expect to be at higher than normal incidents across the Southwest, in California, across the Great

Basin, and the Northern Rockies, and small portions of Northwest Alaska and the Southeast.

Critical conditions continue because of drought, low snow pack, warmer temperatures and earlier melt of that snow pack. These conditions have already resulted in more than 1.3 million acres in the Southern area being burned, and about 160,000 in the Southeastern area. As of this morning, as you've read and seen in the news media—there are two large fires that are attracting a lot of attention, the fire in Caribou Hills, Alaska on the Kenai Peninsula, has consumed about 55,000 acres, and destroyed 88 cabins and about 109 outbuildings.

In addition to that, the Angola Fire at South Lake Tahoe has consumed almost 2,500 acres as of last night, destroyed 200 primary residences, and 75 outbuildings.

Our resources are comparable to those in 2006. We have permanent and seasonal firefighters, hot shot fighting crews, some 18,000 total firefighters, smoke jumpers, incident management teams, ready to respond.

Our aviation assets also include type 1 and type 2 helicopters, single-engine air tankers, both on exclusive-use contracts, and on an as-needed basis, and two water scoopers for fires.

As we have already demonstrated as we fought the fires early this season, we leverage our firefighting ability by shifting our firefighters' equipment as the fire season progresses.

Assignments are made based upon anticipated fire starts, actual fire currents, the rate of fire spread and severity that we face with the help of our predicting services. Initial attack of the fires is handled by the closest available assets. In the event of multiple, simultaneous fires, we prioritize those efforts by using the National Multi-agency Coordinate Group that's part of NIFC.

Prioritization of our efforts ensures firefighting resources are positioned where they are needed most, and are most efficient from a cost standpoint.

Mr. Chairman, members of the committee, thank you for the opportunity to testify, and I'll be most willing to answer any questions at the appropriate time.

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

JOINT PREPARED STATEMENT OF C. STEPHEN ALLRED, ASSISTANT SECRETARY FOR LAND AND MINERALS MANAGEMENT, DEPARTMENT OF THE INTERIOR, AND MARK REY, UNDER SECRETARY FOR NATURAL RESOURCES AND THE ENVIRONMENT, DEPARTMENT OF AGRICULTURE

INTRODUCTION

Mr. Chairman and Members of the Committee, thank you for the opportunity to testify on wildland fire preparedness for the 2007 fire season. Since the Department of the Interior and the Department of Agriculture work closely together in fire management, the two Departments are providing a joint statement.

WEATHER, WILDLAND URBAN INTERFACE, AND WOOD

Multiple factors contribute to wildland fire. 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 and Southeast, an expansion of the WUI and an increase in the number of people living in the WUI, continued accumulation of wood fiber, and substantial increases in highly flammable invasive species, such as cheatgrass, 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. Also, the recent Audit Report by the Office of Inspector General "Forest Service Large Fire Suppression Costs" found that the majority of Forest Service large fire suppression costs are directly linked to protecting property in the WUI. These reviews illustrate the challenge of addressing wildland fire 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 on our public lands, 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 treated were inside the WUI. We will maintain this emphasis with a goal to treat approximately 2 million acres in high-risk wildland urban interface areas through the hazardous fuels reduction program in 2007.

2006 FIRE SEASON

Fire activity in 2006 was above normal by nearly every standard. The transition from the end of the 2005 fire season to the beginning of the 2006 fire season was uncharacteristic in that it lacked the typical slowdown during the winter months. Extremely low humidity, persistent drought conditions and winds contributed to fire ignitions and rapid spreads from November 2005 through April 2006 in Texas and Oklahoma as well as Colorado, Missouri and New Mexico.

2006 included the second warmest summer on record nationally and the hottest on record from January through August. The summer saw an unprecedented quantity of acreage burned, with 14 fires topping 100,000 acres in size, in Washington, Nevada, California, Montana, Oregon, Texas, Idaho and Alaska with five located on National Forests, seven in Bureau of Land Management Districts, and two in State jurisdictions. Across all jurisdictions, wildland fires totaled more than 96,000 incidents burning nearly 10 million acres.

Last year, the U.S. Forest Service spent over $1.5 billion on all fire suppression and over $400 million on 20 of the largest fires while DOI spent approximately $424 million on all fire suppression. We are pleased, that even in the face of such a long and severe fire year; we achieved nearly 97 percent initial attack success on all fires, a rate comparable to less severe years. We will strive to maintain that level. Although the 2006 fire season had an unprecedented number of fire starts in a single day (548), an extraordinary number of lightning caused fires (over 14,000), and the most number of large fires at one time (59 fires over 500 acres being managed in 9 geographic areas), 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 with 835 homes lost in 2002 and over 4500 homes lost in 2003.

2007 WILDLAND FIRE SEASON OUTLOOK

Most of the eastern, central and northwestern U.S. has a normal outlook for significant wildland fire in potential 2007. A portion of the Southwest is predicted to have a below-normal wildland fire season. This area includes northeastern New Mexico, and small parts of southeastern Colorado, western Oklahoma, and northern Texas, where it borders New Mexico. Wildland fire potential is expected to be higher than normal across much of the Southwest, California, portions of the Great Basin, the Northern Rockies, a small portion of the Northwest, Alaska, and the Southeast. The amount of precipitation many areas receive in the early summer periods is an important factor in the severity of the fire season.

The critical conditions influencing the 2007 wildland fire outlook are:

- Drought conditions are expanding and intensifying across large portions of the West and Southeast, and drought relief is not expected in these areas through the season.

- Low snow pack, warmer-than-normal forecast temperatures, and early snow melt over most of the West will likely dry out timber fuels and could cause an early onset of fire season in some areas.
- Abundant new and carry over fine fuels are expected to green-up and cure early, leading to an active and prolonged grassland fire season.
- Another hotter than normal summer is projected for the West. Depending on heat levels and timing of higher temperatures, higher elevation fuels could dry quickly and be susceptible to ignitions.

The fire season is already producing incidents that are evidence of our concern about the 2007 fire season. Drought and high temperatures have resulted in the burning of over 1.1 million acres in the Southern Area, including the Big Turnaround, Sweat Farm Road, Bugaboo Scrub and Florida Bugaboo fire complex in Northern Florida and Southeastern Georgia. More than 161,000 acres have burned in the Eastern Area, including the Ham Lake fire in Northern Minnesota and in Canada which burned for over eighteen days, due to drought conditions and high winds.

WILDLAND FIRE PREPAREDNESS

To prepare for these natural conditions anticipated in the 2007 Fire Season, USDA and DOI are working to improve the efficiency and effectiveness of our firefighting resources. New management efforts are allowing for increased mobility of firefighting forces and aviation assets.

Firefighting Forces

For the 2007 fire season, we have secured firefighting forces—firefighters, equipment, and aircraft—comparable to those available in 2006. As has already been demonstrated during the fires in the Southeast, we leverage our firefighting ability by shifting our firefighters and equipment as the fire season progresses. Fire managers assign local, regional, and national firefighting personnel and equipment based on anticipated fire starts, actual fire occurrence, fire spread, and severity with the help of information from Predictive Services.

More than 18,000 firefighters will be available, including permanent and seasonal Federal and State employees, crews from Tribal and local governments, contract crews, and emergency/temporary hires. This figure includes 92 highly-trained Hotshot firefighting crews and about 400 smokejumpers nationwide. There are 17 Type 1 national interagency incident management teams (the most experienced and skilled teams) available for complex fires or incidents. Thirty-eight Type 2 incident management teams are available for geographical or national incidents.

Initial attack of a fire is handled by the closest available local resource regardless of agency jurisdiction. Generally this means that the agency with management jurisdiction and protection responsibility for the location of the fire, such as a national forest, Tribal lands, Bureau of Land Management unit, wildlife refuge, or national park, will handle initial attack. Often, our partners at the local community or county level are the first to respond.

Two interagency National Incident Management Organization (NIMO) teams were staffed in 2006, and are operational with two seven-member full-time Type I Incident Management Teams that are ready to respond to wildland fire incidents. The teams are headquartered in Atlanta, Georgia and Boise, Idaho and will help wildland fire agencies improve future fire management programs. Currently, the Atlanta NIMO team is assisting the Florida State incident management team on the Florida Bugaboo fire. The Boise NIMO team recently concluded nearly 40 days of assisting FEMA in its tornado disaster response operation in Greensburg, Kansas. Both teams will be called to assist in wildland fire incidents this season, and when they are not on assignments, they will implement the NIMO Implementation Plan, which calls for improvements in wildland fire program management in the areas of training, fuels management, cost containment, and leadership development, among others.

The National Interagency Coordination Center, located at the National Interagency Fire Center in Boise, coordinates critical firefighting needs throughout the nation. In the event of multiple, simultaneous fires, firefighting resources are prioritized and allocated by the National Multi-Agency Coordinating group, composed of national fire directors headquartered at NIFC. Prioritization ensures firefighting forces are positioned where they are needed most. Fire managers dispatch and track personnel, equipment, aircraft, vehicles, and supplies through an integrated national system. If conditions become extreme, assistance from the Department of Defense is available under our standing agreements, as well as firefighting

forces from Canada, Mexico, Australia, and New Zealand using established agreements and protocols.

Aviation

The wildland firefighting agencies continue to employ a mix of fixed and rotor wing aircraft. Key components of our 2007 aviation assets include 16 civilian large air tankers on federal contracts, along with 41 Type 1 and Type 2, or heavy and medium, helicopters on national use exclusive-use contracts; and 84 Type 2 and 3 helicopters on local or regional contracts. Additionally, there are nearly 300 call-when-needed Type 1, 2 and 3 helicopters available for fire management support as conditions and activity dictate.

Although both the large and single-engine air tanker programs have evolved in recent years, we are confident that we have appropriate and cost-effective assets in place or available to respond to the air support needs in the field. Twenty three Single Engine Air Tankers (SEATs) will be on exclusive-use contracts for the 2007 fire season and about 80 available on a call-when-needed basis. Some states and local areas also contract their own SEATs. In addition, there will be two water-scooper airtankers on exclusive-use contracts and an additional one available on a call-when-needed basis for the 2007 fire season. Additional water-scooper aircraft will be available through agreements with state and county firefighting agencies. As in the past, military C-130 aircraft equipped with Modular Airborne Fire Fighting Systems (MAFFS) will be available to supplement our large air tanker fleet as needed. Six MAFFS are available this year.

WILDLAND FIRE SAFETY

The complexity of the wildland fire management environment places many expectations upon our wildland firefighters. Above all else, human safety is our first priority. The Forest Service has adopted a foundational doctrine—principles guiding operations of fire suppression activities and actions. Currently, the Forest Service and the DOI are reviewing guidance for dealing with the parts of fire suppression that rely on interpretation, judgment, and agility.

DOI agencies and the Forest Service continue to require annual fire line safety refresher courses for all firefighting personnel. Additionally, the "6 Minutes for Safety," an interagency safety initiative, is issued daily during fire season and alerts firefighters to high-risk situations. It is distributed throughout the fire community.

Within the Incident Command System, the agency is reevaluating training and soliciting support from other wildland fire agencies to streamline training through a competency based system. This will provide the knowledge and skills necessary to continue to build capacity quickly while upholding a strong standard of accountability. Over the past few years the wildland fire agencies have redirected the focus of training to provide a series of fire leadership courses which has been incorporated in the standard training curriculum, as well as long-range development and planning for fire personnel within the agency.

MITIGATING WILDLAND FIRE RISK TO COMMUNITIES AND THE IMPACTS OF FIRE ON THE ENVIRONMENT

We have dangerous fire and fuels conditions in areas in the United States and the situation is becoming increasingly complex. However, we now treat more fuels than ever, and we collaborate with our local, state and tribal partners more than ever before. Our focused effort to remove accumulation of hazardous fuels in our forests and grasslands is having a positive effect on the land and is helping to reduce wildland fire risk to communities.

Some of our specific accomplishments in reducing hazardous fuels include:

- Despite an unprecedented wildfire suppression workload, the Forest Service and DOI improved fuel conditions and ecosystem health on more than 4 million acres of land in 2006, of which 2.6 million acres were treated through hazardous fuels reduction programs and 1.4 million acres of land restoration accomplished through other land management activities.
- The Federal land management agencies project that they will have treated nearly 25 million acres from FY 2000 through 2007, including approximately 20 million acres treated through the hazardous fuels reduction programs and about 5 million acres of landscape restoration accomplished through other land management activities.
- In 2006, the Administration treated many overstocked Federal forests. Hazardous fuels treatments resulted in qualitative improvements of at least 994,000 acres in fire regimes classes 1, 2, or 3 that moved to a better condition class. In addition, the Administration has begun measuring the percentage of

total National Forest System land for which fire risk is reduced through movement to a better condition. The Administration is continuing to work on metrics for forest health changes that will help demonstrate the outcomes of projects that remove fuels.

- USDA and DOI, in collaboration with our non-federal partners, continue to increase the community protection emphasis of the hazardous fuels program. Community Wildfire Protection Plans are essential for localities to reduce risk and set priorities. Over 1,100 CWPPs covering 3,000 communities have been completed nationally and an additional 450 plans are progressing toward completion.
- The LANDFIRE project has now been completed for the western third of the mainland United States. The data are being used in setting hazardous fuel treatment priorities by local field units and regionally, and are used in managing large, long duration wildfires burning across landscapes. USDA and DOI are also testing methods of modeling fire risk with LANDFIRE data to help better inform hazardous fuel treatment prioritization.
- USDA and DOI are developing methods for effectively allocating fuels reduction funds and measuring the effectiveness of those treatments in terms of community risk reduction. The agencies will identify national priorities within the fuels program and focus funding on those priorities, develop more effective measures of risk reduction through the introduction of systematic risk analysis tools for fire hazard analysis and fuels treatment implementation, and strengthen the project criteria for WUI fuels treatments.
- The "Implementation Plan" of the "10 Year Comprehensive Strategy" was updated and released in December of 2006. The goals and guiding principles from the 2001 document are constant, but performance measures and implementation tasks have been updated to reflect the progress made toward National Fire Plan goals in the past five years and build upon our success.

Collaboration among communities and local Forest Service and DOI agencies' offices has resulted in highly effective and successful hazardous fuels reduction projects. One example is the New Harmony (Utah) Community Fire Plan that called for coordinated treatments on forested lands managed by the State of Utah, the Bureau of Land Management, Dixie National Forest and individual property owners. Between 2002 and 2004 the agencies and landowners completed fuel treatments that reduced fire intensity in the treated areas helping fire fighters to more safely protect the community during the 2005 Blue Spring Fire. In another example, the use of Healthy Forests Restoration Act (HFRA) authorities enabled federal agencies and local communities to quickly begin clean-up and fuels reduction in the wake of hurricanes that devastated Gulf Coast communities and surrounding forests in 2005. The Forest Service and DOI worked closely, using HFRA authorities, to facilitate the National Forests of Mississippi to successfully remove over 1.3 million tons of hazardous fuel from over 100,000 acres, salvaging over 240 million board feet of timber. Nearly 1000 miles of fuel breaks were constructed and another 500 miles will be completed this year to protect homes in the WUI.

In this challenging fire season, citizens who live or vacation in fire-prone areas must take personal responsibility to protect their individual homes. Valuable information about how to increase their safety and protect their homes and property is available through the FIREWISE program. Homeowners can learn how to protect their homes with a survivable, cleared space and how to build their houses and landscape their yard with fire resistant materials. Information about the FIREWISE program can be found at www.firewise.org, sponsored by a consortium of wildland fire agencies that includes the Forest Service, the Department of the Interior, the National Fire Protection Association, and the National Association of State Foresters.

The agencies are working to improve procedures for allocating hazardous fuels reduction funds by assessing the risks from wildland fires and determining the benefits of fuels treatment and restoration projects by priority. By using tools such as the Landfire Rapid Assessment, the Forest Service will address recommendations contained in relevant Government Accountability Office and Office of Inspector General to ensure that the most important and highest priority projects are funded first. The Forest Service will also undertake other such actions as necessary to implement the desired outcomes of this plan.

MANAGING THE COST OF FIGHTING WILDLAND FIRE

Suppression costs have escalated in recent years, as wildfire seasons have generally lasted longer and the acreage figures have grown. The external factors noted earlier in this testimony influence the number and severity of incidents. While safe-

ty is our primary concern, our Departments do share concerns about the cost of fires and are committed to doing all we can to contain 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 Brookings Institution, and the Government Accountability Office (GAO), including the report they are releasing today. As a result of the reviews, more than 300 recommendations have been documented to suggest approaches to trim the costs of wildland fire suppression. The agencies have taken these reviews seriously, and the overall awareness and personal responsibility for cost-containment among the federal fire agencies has never been more acute.

In 2006, TriData, a Division of System Planning Corporation, under contract with the Forest Service, completed a review and analysis of 22 past cost containment reports and made recommendations regarding those which would yield the greatest savings. The Tridata report determined there were 203 unique recommendations directed at improving wildfire suppression cost containment. Of those, the report identified 71 recommendations that represented potentially high to extremely high cost savings if implemented. As of August 2006, we have taken or are in the process of taking action on 57 of these recommendations. We have not implemented corrective actions on the remaining recommendations for various reasons, including that the recommendation involves actions beyond agency authority, the action must be deferred due to pending court decisions, or that recommendations were directed at isolated events. Both the Forest Service and DOI are working on a comprehensive report on recommendations for large fire cost reviews. We expect that report to be available later this year.

Management Efficiencies

On January 30, 2007 we testified before this Committee on a set of "management efficiencies."* These cost control measures focus on leadership, operations, aviation and general management practices. Both agencies are moving forward to implement management efficiencies. As we stated then, some of these measures will be implemented in 2007, while others will be implemented over the long-term. An update on the key items reported in January includes:

1. Policy Transition to Risk-Informed Management

Appropriate Management Response (AMR) is an important approach for agencies to use to manage wildland fire. This approach provides a risk informed, performance-based system for fire protection by 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 use of this approach has grown over the last several years and we expect to continue expansion of this approach in the 2007 fire season. The Forest Service developed a draft guidebook that presents a coherent strategy to implement this approach. DOI has reviewed this guidebook, and will work with the Forest Service to ensure that the final product recognizes there are multiple strategies for wildland fire fighting, ranging from monitoring to full suppression, that can be used on a single fire depending on factors such as fire management and land-use plans in place, values at risk, cost-containment efforts, and resources available.

2. Forest Service Chief's Principal Representative (CPR)

The Chief's Principal Representative will provide risk sharing and decision support for Regional Foresters on large fires expected to exceed $10 million in cost. The Chief's Principal Representative will bring a national perspective when conferring with regional line officers. Regional Foresters will notify the chair of an inter-deputy group, a decision-making group that includes the Deputy Chief for State & Private Forestry (chair), Deputy Chief for National Forest System, the Chief Financial Officer, the Director of Budget, and the Director of Fire and Aviation Management, when the cost for an individual large fire is expected to exceed $10 million. The inter-deputy fire group will coordinate the appointment and preparation of the Chief's Principal Representative and support group. The Chief's Principal Representative will report to the chair of the inter-deputy group.

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* Document has been retained in committee files.

3. Line Officer Certification

All line officers will meet enhanced qualifications prior to being designated as the responsible official for an incident. The certification process has been developed and is designed to improve decision-making and risk management on large fires. Certification will be at three levels—Working; Journeyman; and Expert. In addition, a mentoring network has been established of experienced line officers to provide training and share experience to enhance performance and skills.

4. National Shared Resources

National resources such as smoke jumpers, hot shot crews, helicopters and heavy airtankers are now all being treated as national agency assets, are managed in a centralized fashion and are moved to areas and incidents based on Predictive Services and Planning Levels. The goals are to enhance responsiveness of the assignment of resources and to eliminate concentration of resources in a geographic area.

5. Aviation Resource Cost Management

A full-time National helicopter coordinator is in place to provide, in an interagency capacity during fire season, national oversight for the assignment and positioning of helicopters. Helicopter management is now centralized as a national resource. The Forest Service has shifted to more "exclusive use" versus "call when needed" contracts for helicopters. This will increase preparedness costs initially, but is expected to greatly reduce large fire suppression costs with potential savings of tens of millions of dollars per year. The agencies are pursuing longer term aviation contracts for all aviation resources with increased performance-based contracting. DOI also is pursuing strategies to reduce its aviation costs.

6. Severity Authorization Limitations

Efforts will be made to maintain our initial attack success while reducing the dependence on severity funding. The Forest Service has placed a cap ($35 million) and an individual limit on each Region for severity, and Interior has capped severity funding at $32 million. However, funding fire fighters is the first priority. The Forest Service and DOI agencies will continue to submit a coordinated severity request so as to not duplicate effort or expense.

7. Fire Suppression Decision Support

We are committed to continue the investment and expansion of system technologies such as Wildland Fire Decision Support System (WFDSS) and use of the Stratified Cost Index (SCI) to improve strategy selection in wildfire suppression. The SCI determines average suppression costs based on fire characteristics, such as fuel types, fire intensity, topography, region, and values at risk. In a given year, actual expenditures on each large fire (more than 300 acres) are compared to their anticipated costs as calculated by the SCI based on factors such as size, fuel type, or proximity to towns. Fires with high or low expenditures compared to the average suppression cost for fires with similar characteristics are then identified for review. Historical data were analyzed to determine the average cost/acre and cost/fire for categories of similar fires and an acceptable range of costs around the average. The actual expenditures are compared to their "expected" costs as calculated by the SCI. This metric is being applied this season and will be used in fire reviews, evaluations, planning and reporting.

The Departments are taking the issue of large fire cost containment very seriously and are actively moving forward to implement these important changes. The 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.

Collaborative Efforts to Meet Community Expectations

Both the Forest Service and the Department of the Interior realize the importance of collaboration with State and local fire managers. One recent example of such a successful collaboration is the approach used at the wildfire on the Okefenokee National Wildlife Refuge, which has burned over much of this 400,000-acre swamp. These fires are being driven by an unprecedented regional drought.

Fire is a natural component of the Okefenokee ecosystem which for thousands of years has shaped the vegetation communities here. Over 300 fires have been recorded since 1937, burning thousands of acres.

The Refuge and the Greater Okefenokee Landowners Association (GOAL) have worked closely in recent years to improve coordination of wildfire response. These ongoing efforts include sharing of firefighting resources and prescribed burning to reduce hazardous fuels.

Fire managers are coordinating suppression efforts with the Georgia Forestry Commission, Florida Division of Forestry, U.S. Forest Service and Greater Okefenokee Association of Landowners (GOAL) representing industry and private landowners. These partners support the chosen containment strategy of confining the fire to the swamp as the appropriate management response.

RECENT STUDIES

Government Accountability Office Draft Report: Wildland Fire Management: Lack of Clear Goals and Strategy Hinders Federal Agencies' Efforts to Contain the Costs of Fighting Fires

In May 2007, the Government Accountability Office (GAO) issued a draft report entitled, "Wildland Fire Management: Lack of Clear Goals and Strategy Hinders Federal Agencies' Efforts to Contain the Costs of Fighting Fires." The findings indicated the agencies had not clearly defined objectives and policies as a means for reducing the costs of fighting wildland fires. In general, the agencies disagree with the characterization of many of the findings in the report and believe that GAO has not accurately portrayed some of the significant actions the agencies have taken to address large fire suppression costs and management efficiencies.

In that response, we articulate our views to the opinions expressed by GAO and provide facts to clarify some areas where the report could be improved (our response is attached). As we continue to strive aggressively to contain the costs of wildland fire suppression, our primary goal will continue to be the protection of life, property and resources.

We share the GAO's interest in increasing accountability for cost containment and have taken many steps forward. We are hopeful that GAO and this Committee are able to ascertain from the actions that have been taken and planned, that the agencies indeed have established strategies, goals and objectives for reducing costs of large wildfire suppression and improving hazardous fuels reduction. We believe that the 10-Year Strategy Implementation Plan, Office of Management and Budget PART Improvement Plan, Forest Service Strategic Plan, and new DOI Strategic Plan, along with the Management Efficiencies initiatives underway, demonstrate a commitment to constantly improve performance, efficiency and accountability.

Secretary of Agriculture's Independent Panel—Brookings Institution

On May 22, 2007 the Brookings Institution released a report "Towards a Collaborative Cost Management Strategy—2006 U.S. Forest Service Large Wildfire Cost Review Recommendations." This report is by an independent panel that assessed agency performance on 20 large fires that burned 1.1 million acres across 17 national forests, five regions and six states that exceeded $10 million in cost. The Brookings Institution's Project Director acted as facilitator of the process and author of the report. The purpose was to determine if the agency exercised fiscal due diligence in managing specific incident suppression activities. The panel found that the Forest Service exercised appropriate and adequate fiscal diligence in suppressing wildfires in the record breaking 2006 season. The panel report also makes a series of recommendations for improvement that the agency will begin to act on immediately. The report is available at the USDA website http://www.usda.gov/wps/portal.*

CONCLUSION

In conclusion, Mr. Chairman and members of the Committee, we are prepared for the 2007 fire season. Where local areas experience severe fire risk, firefighters, equipment and teams will be assigned. We have a long-term and complex fuels and fire situation that will continue to need to be addressed by communities, tribes, states, and federal agencies. We appreciate your continued support and work as we move forward on these challenges. We are happy to answer any questions you might have.

* Document has also been retained in committee files.

ATTACHMENT

DEPARTMENT OF AGRICULTURE,
DEPARTMENT OF THE INTERIOR,
Washington, DC, May 24, 2007.

ROBIN M. NAZZARO,
Director, Natural Resources and Environment, Government Accountability Office, 441 G Street, N.W., Washington, DC.

DEAR MS. NAZZARO: We appreciate the opportunity to review and comment on the draft Government Accountability Office (GAO) report, GAO–07–655, "Wildland Fire Management: Lack of Clear Goals and Strategy Hinders Federal Agencies' Efforts to Contain the Costs of Fighting Fires." As we discussed with you recently, the fire community has found GAO reports and recommendations to be constructive in addressing issues related to the fire program. However, the agencies generally disagree with the characterization of many of the findings in this report and believe that GAO has not accurately portrayed some of the significant actions the agencies have taken to address large fire suppression costs and management efficiencies.

Our goal continues to be the protection of life; property and resources. While accomplishing our goal of protection, we continue to strive aggressively to contain the costs of fire suppression.

GAO concludes the steps the Forest Service and Interior agencies have taken to contain costs are unknown because these steps are not complete, and recommends we establish clearly defined goals and objectives, a strategy to achieve them, and corresponding performance measures. We do have objectives and clearly defined goals that make up our strategy for better managing large fire suppression costs. The Federal Wildland Fire Policy, the Healthy Forests Initiative, Healthy Forests Restoration Act, and the 10-Year Strategy Implementation Plan provide overarching interagency goals and objectives.

When we discussed our concerns with GAO regarding this report, we provided numerous, important clarifying comments on the draft. We did not see significant acknowledgment of these clarifications in the subsequent draft, and are concerned that important miscommunications remain. GAO presents an incomplete view on four key areas we discuss below that we believe will help us better manage and contain costs: Appropriate Management Response (AMR), Fire Program Analysis (WA), LANDFIRE and the stratified cost index (SCI).

GAO failed to recognize, and include in their report, a major component of our cost containment management strategy which we believe to be a significant improvement over past suppression strategies. AMR moves the agencies from aggressively attacking wildfires of all sizes to a more risk-informed, performance-based strategy that will reduce costs by increasing flexibility in wildland firefighting decisions. The transition to AMR has been underway for some time, and improvements have been made in using Wildland Fire Use as a tool for achieving desirable environmental outcomes with reasonable cost expenditures. Further use of AMR is expected in 2007 and 2008 as the agencies aggressively apply AMR more widely.

GAO takes exception to recent FPA design modifications that they say may compromise the agencies' ability to fully achieve key goals. GAO goes on to say it is unclear whether this method will identify the most cost-effective allocation of resources, and that it is also unclear how budgets for local units will be meaningfully aggregated on a national basis. We strongly disagree. Additional information was supplied by the FPA project manager, although-it was not incorporated or acknowledged. To restate:

> In December 2006, the Wildland Fire Leadership Council called for development of a revised analytical system for FPA. The revised system will be used to systematically evaluate alternative investment strategies and identify options that best reduce wildland fire losses, improve ecological conditions, and minimize cost. The system is designed to explicitly address uncertainty and risk in predicting future wildland fires. A combination of simulation models, GIS analyses, and sophisticated decision analysis tools array alternatives using quantitative performance measures that readily display inherent risks and trade-offs at both FPU and national levels. This approach provides a more robust basis for modeling real-world complexities than the linear optimization approach used in Phase 1, while maintaining the ability to compare the performance and effectiveness of alternative funding decisions.

GAO views LANDFIRE as an unproven work in progress and they question our ability to complete and maintain LANDFIRE but offer no explanation. We strongly disagree with this characterization. LANDFIRE is an important tool, to prioritize

our fuels work through geospatial data and modeling that will help identify fuel accumulations and fire hazards across the nation, set nationwide priorities for fuel reduction projects, and assist in identifying the appropriate response when wildland fires do occur. Two of the four milestones are complete, the third milestone is 1/3 complete and work has begun on the fourth milestone. In addition, it was utilized during FY 2006 on more than 60 wildland fire incidents to assist in maximizing firefighting safety, pre-position resources and evaluate wildland fire behavior under a variety of fire weather conditions. GAO also questions our ability to maintain the system but then acknowledges that the agencies are submitting a maintenance plan to the Wildland Fire Leadership Council in June 2007. Development of this plan has been underway for some time now and clearly indicates that we have planned for the necessity of routinely updating the data to reflect changing landscape conditions.

Regarding the stratified cost index performance measure, GAO expresses concerns about cost data for fire complexes, the ability to precisely estimate suppression costs and that, to date, the data are based solely on Forest Service managed fires. The report also says that the agencies have not identified the goals we are trying to achieve with this measure. The agencies have openly, freely and frequently acknowledged that the SCI will continue to be refined and improved in the coming years as data is added to the model. However, in its current form; the SCI still provides very useful information that was not previously available and assists field managers in better managing their large fire suppression costs. Furthermore, the SCI is not meant, nor was it ever intended to, "precisely" estimate suppression expenditures. Instead, it was developed to provide managers with an acceptable expenditure range based on historic data. With the multitude of unknowns that occur daily on every large fire suppression incident, it is naive to believe that anything has the ability to "precisely" estimate expenditures.

We disagree with GAO's conclusion that the agencies have not identified goals for this measure. SCI was adopted under Goal 1 of the 10-Year Strategy Implementation Plan which is to improve fire prevention and suppression. In addition, specific targets have already been set for the Forest Service. We first stated our goals for future years for this measure in the OMB PART reassessment in July 2006. We established the baseline in 2005 and subsequently established future year targets. These targets are also in the revised Forest Service Strategic Plan. GAO also says Interior has not adopted any performance measures related to containing wildland fire costs in its strategic plan and that it will be several years at the earliest before enough data have been collected for DOI for the SCI model to be useful. This is inaccurate. DOI adopted the stratified cost index measure in its new Strategic Plan (2008-2012) and expects to have the research results this summer. We expect 2006 data to be reported as baseline data and plan to report on the SCI in FY 2007.

Finally, GAO says that the agencies need to establish a framework to ensure that officials are held accountable for achieving cost containment goals and objectives. We have established a framework to hold officials accountable for achieving cost containment goals. The Forest Service has already adopted significant elements this year, and Interior is also addressing these on an interagency basis as appropriate. These include a line officer certification process, a competency in their annual performance appraisals, and oversight on significant incidents by a "Chiefs Principle Representative". Both agencies continue interagency large fire cost reviews that require regions to respond to and implement recommendations made by the review teams.

If you have any additional questions or concerns, please contact Sandy T. Coleman, Forest Service Assistant Director for GAO/DIG Audit Liaison staff or Deborah Williams, DOI/GAO Liaison.

ABIGAIL R. KIMBEL,
Chief, Forest Service, Department of Agriculture.

JAMES E. CASON,
Associate Deputy Secretary, Department of the Interior.

The CHAIRMAN. Thank you very much.

Under Secretary Rey, go right ahead.

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

Mr. REY. Thank you.

While Mr. Allred has talked about the 2006 season, the outlook for the 2007 season and our preparedness assets, I'm going to talk a little bit about our efforts in the fuels treatment area, and in cost containment of fire expenses.

Today, we treat more fuels than ever, and we collaborate with our local, State and tribal partners now more than ever. Our focused efforts to remove accumulation of hazardous fuels in our forests and grasslands is having a positive effect on the land, and is helping to reduce wildland fire risk to communities.

The Federal Land Management Agencies project that they will have treated nearly 25 million acres of land, from the period of fiscal year 2001 through the end of this fiscal year, including approximately 20 million acres treated through the hazardous fuels reductions programs, and about 5 million acres of landscape restoration, accomplished through other land management activities.

The Federal land managing agencies, in cooperation with our non-Federal partners, continue to increase the community protection emphasis of the hazardous fuels program. Community wildfire protection plans are essential for localities to reduce risk and set priorities. Over 1,100 plans, covering 3,000 communities have been completed nationally. An additional 450 plans are progressing toward completion today.

Also, the implementation plan of the 10-year comprehensive strategy, developed with the Western Governor's Association was updated and released in December 2006. The goals and guiding principles from the 2001 document are constant, but performance measures and implementation tasks have been updated to reflect the progress made toward National Fire Plan goals over the past 5 years, and to build on those successes.

Now, with regard to cost containment, suppression costs have escalated in recent years, as wildfire seasons have generally lasted longer, and the acreage figures have grown. Mr. Allred's spoken to some of the causes of that.

Over the last several years, various studies and assessments dedicated to fire suppression costs have been conducted by a variety of institutions, including the National Academy of Public Administration, the Wildland Fire Leadership Council, the Brookings Institution, and the Government Accountability Office, including the report that they are releasing today.

As a result of these reviews, more than 300 recommendations have been documented to suggest approaches to trim costs of wildland fire suppression. The agencies have taken these reviews seriously, and the overall awareness and personal responsibility for cost containment among Federal firefighting agencies has never been more acute.

On January 30 of this year, in the aforementioned hearing, we testified before this committee on a set of management efficiencies. These cost control measures focus on leadership, operations, aviation, and general management practices. An update of our progress on the key items reported in January is included in my statement for the record.

In May 2007, the Government Accountability Office issued a draft report entitled, Wildland Fire Management, a Lack of Clear Goals and Strategy Hinders Federal Agencies' Efforts to Contain

the Costs of Fighting Fires. This will be the report we'll be discussing at length today.

The findings in this report indicated that agencies had not clearly defined objectives and policies as a means for reducing costs of wildland firefighting. In general, the agencies disagree with the characterization of many of the findings in the report, and believe that further discussion with GAO is necessary to more accurately portray some of the significant actions the agencies have taken to address large fire suppression costs, and management efficiencies.

I want to assure the committee that we share GAO's interest in increasing accountability for cost containment, and have taken many step forwards. Indeed, since January 2003, GAO has issued 10 separate reports on fuels treatment, firefighting, or cost containment. Those 10 reports have spawned 18 groups of recommendations. Of those 18 groups of recommendations, the Federal Land Managing Agencies have completed actions in response to them on 16 of the groups. One of the groups still has actions underway, and one remains unaddressed because of a fundamental disagreement about the recommendation.

I'll submit a summary of those recommendations for the record of this hearing.

Additionally, on May 22, 2007, the Brookings Institution released a report entitled, Toward a Collaborative Cost Management Strategy, 2006 U.S. Forest Service Large Wildfire Cost Review Recommendations. This report was developed by an independent panel that assessed agency performance on 20 large fires during 2006 that burned 1.1 million acres across 17 National Forests.

That report was required by Appropriations Committee language enacted 3 years ago, which established a responsibility on the part of the Forest Service to have an independent review of every large fire that exceeded $10 million in costs, to assess whether appropriate cost containment measures were undertaken. This would be the third such report.

The Brookings Panel of independent experts—including one GAO analyst—concluded that the Forest Service exercised appropriate and adequate fiscal diligence in suppressing wildfires during the record-breaking 2006 wildfire season on each of the 20 large fires studied in the report.

With that, Mr. Chairman, we would be happy to respond to your questions, and when it's Senator Domenici's round, I'd be happy to talk about Cloudcroft.

The CHAIRMAN. Thank you very much.

Ms. Nazzaro, go right ahead.

STATEMENT OF ROBIN NAZZARO, NATIONAL RESOURCES AND THE ENVIRONMENT, GOVERNMENT ACCOUNTABILITY OFFICE

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

I'm pleased to be here today to discuss Federal agencies' efforts to contain the rising costs of preparing for, and responding to, wildland fires. Over the past two decades, the number of acres burned by wildland fires has surged, often threatening human lives, property, and ecosystems. The cost of responding to the

wildland fires has also grown. Mr. Allred mentioned a number of reasons for these increased costs and increased fires.

In light of the Federal deficit, and the long-term fiscal challenges facing the Nation, attention has increasingly focused on ways to contain the growing expenditures, and to ensure that the Agency's wildland fire actions are appropriate and carried out in a cost-effective and efficient manner.

My testimony today is based on our report, released today, that discusses key steps the Forest Service and Interior agencies have taken to address key operational areas that could help to contain the costs of preparing for and responding to wildland fires and improve the management of their cost containment efforts.

In summary, the agencies have initiated a number of steps to address key operational areas that past studies identified as needing improvement to help them contain wildland fire costs, but the effects on containing costs are unknown, in part because many of these steps are not yet complete.

For example, Federal firefighting agencies are developing a system to help them better identify and set priorities for lands needing treatment to reduce fuels, but they have yet to decide how they will keep the data in the system current.

Second, Federal agencies have taken some steps to improve how they acquire and use personnel, equipment and other firefighting assets, such as implementing a computerized system to more efficiently dispatch and track available firefighting assets, but they have not yet completed the more fundamental step of determining the appropriate type and quantity of firefighting assets needed for the fire season.

Third, the agencies have clarified certain policies and are improving analytical tools that assist officials in identifying and implementing an appropriate response to a given fire, but several other policies limit their use of less aggressive firefighting strategies which typically cost less.

Fourth, the agencies are working with non-Federal entities and have recently taken steps to clarify their guidance to better ensure that firefighting costs are shared consistently for fires that threaten both Federal and non-Federal lands and resources, but it is unclear how the agencies will ensure that this guidance is followed in the field.

The agencies have also taken steps to address previously identified weaknesses in their management of cost containment efforts, but they have not clearly defined their cost-containment goals and objectives, nor developed a strategy for achieving them, performance measures to track their progress, or a framework for holding the appropriate agency officials accountable—all steps that we believe are fundamental to sound program management.

Although the agencies have established a broad goal of suppressing wildland fires at minimum cost, considering firefighter and public safety and resources and structures to be protected, they have no defined criteria by which to weigh the relative importance of these often-competing priorities. As a result, officials in the field lack a clear understanding of the relative importance the agency's leadership places on containing costs, and are likely to se-

lect firefighting strategies without due consideration of the costs of suppression.

The agencies have also yet to develop a vision of how the various cost containment steps they are taking relative to one another or to determine the extent to which these steps will be effective. They are working to develop a better cost-containment performance measure, but it may take a number of years to fully refine.

Finally, the agencies have taken, or are beginning to take, steps to improve their oversight, and increase accountability, such as requiring agency officials to evaluate firefighting teams on how well they contained costs, although the extent to which these steps will assist the agencies in containing costs is unknown.

We recommend in our report that the Secretaries of Agriculture and the Interior take several steps to improve the management of their cost containment efforts. Because of the importance of these actions and the continuing concern about the agencies' response to the increasing cost to wildland fires, and so that the agencies can use the results of these actions to prepare for the 2008 fire season, the agencies should provide the Congress with this information, no later than November 2007.

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 prepared statement of Ms. Nazzaro follows:]

STATEMENT OF ROBIN M. NAZZARO, DIRECTOR, NATURAL RESOURCES AND ENVIRONMENT

WILDLAND FIRE: MANAGEMENT IMPROVEMENTS COULD ENHANCE FEDERAL AGENCIES' EFFORTS TO CONTAIN THE COSTS OF FIGHTING FIRES

WHY GAO DID THIS STUDY

Annual appropriations to prepare for and respond to wildland fires have increased substantially over the past decade, in recent years totaling about $3 billion. The Forest Service within the Department of Agriculture and four agencies within the Department of the Interior (Interior) are responsible for responding to wildland fires on federal lands. GAO determined what steps federal agencies have taken to (1) address key operational areas that could help contain the costs of preparing for and responding to wildland fires and (2) improve their management of their cost-containment efforts. This testimony is based on GAO's June 2007 report, Wildland Fire Management: Lack of Clear Goals or a Strategy Hinders Federal Agencies' Efforts to Contain the Costs of Fighting Fires (GAO-07-655).

WHAT GAO RECOMMENDS

In its report, GAO recommended that the Secretaries of Agriculture and the Interior take several steps to improve their management of cost-containment efforts in preparation for the 2008 fire season. The Forest Service and Interior generally disagreed with the report's findings, stating that GAO did not accurately portray some of the agencies' actions to contain wildland fire costs; they neither agreed nor disagreed with the report's recommendations.

WHAT GAO FOUND

The Forest Service and Interior agencies have initiated a number of steps to address key operational areas previously identified as needing improvement to help federal agencies contain wildland fire costs, but the effects on containing costs are unknown, in part because many of these steps are not yet complete. First, federal firefighting agencies are developing a system to help them better identify and set priorities for lands needing treatment to reduce fuels, but they have yet to decide how they will keep data in the system current. Second, federal agencies have taken some steps to improve how they acquire and use personnel, equipment, and other firefighting assets—such as implementing a computerized system to more efficiently

dispatch and track available firefighting assets—but have not yet completed the more fundamental step of determining the appropriate type and quantity of firefighting assets needed for the fire season. Third, the agencies have clarified certain policies and are improving analytical tools that assist officials in identifying and implementing an appropriate response to a given fire, but several other policies limit the agencies' use of less aggressive firefighting strategies, which typically cost less. Fourth, federal agencies, working with nonfederal entities, have recently taken steps to clarify guidance to better ensure that firefighting costs are shared consistently for fires that threaten both federal and nonfederal lands and resources, but it is unclear how the agencies will ensure that this guidance is followed.

The agencies have also taken steps to address previously identified weaknesses in their management of cost-containment efforts, but they have neither clearly defined their cost-containment goals and objectives nor developed a strategy for achieving them—steps that are fundamental to sound program management. Although the agencies have established a broad goal of suppressing wildland fires at minimum cost—considering firefighter and public safety and resources and structures to be protected—they have no defined criteria by which to weigh the relative importance of these often-competing priorities. As a result, according to agency officials and reports, officials in the field lack a clear understanding of the relative importance the agencies' leadership places on containing costs and, therefore, are likely to select firefighting strategies without due consideration of the costs of suppression. The agencies have also yet to develop a vision of how the various cost-containment steps they are taking relate to one another or to determine the extent to which these steps will be effective. The agencies are working to develop a better cost-containment performance measure, but the measure may take a number of years to fully refine. Finally, the agencies have taken, or are beginning to take, steps to improve their oversight and increase accountability—such as requiring agency officials to evaluate firefighting teams according to how well they contained costs—although the extent to which these steps will assist the agencies in containing costs is unknown.

Mr. Chairman and Members of the Committee:

I am pleased to be here today to discuss federal firefighting agencies' efforts to contain the costs of preparing for and responding to wildland fires—costs that have increased substantially over the past decade. Wildland fire appropriations to prepare for and respond to wildland fires, including appropriations for reducing fuels, have increased from an average of $1.1 billion annually from fiscal years 1996 through 2000 to an average of more than $2.9 billion annually from fiscal years 2001 through 2005; adjusted for inflation, these appropriations increased from $1.3 billion to $3.1 billion.[1] Accumulations of fuels, due in part to past suppression policies; severe drought and weather in some areas of the country; and continued development in or near wildlands—an area commonly known as the wildland-urban interface—have contributed to increased costs. Five federal land management agencies—the Forest Service within the Department of Agriculture (Agriculture) and the Bureau of Land Management, Bureau of Indian Affairs, National Park Service, and Fish and Wildlife Service within the Department of the Interior (Interior)—are responsible for managing wildland fires on federal lands. Congress, the Office of Management and Budget, federal agency officials, and others have expressed concerns about the mounting federal wildland fire expenditures. These concerns have led federal agencies (including the Forest Service, Interior, the Agriculture Office of Inspector General, and GAO) and others to conduct numerous reviews of the federal wildland fire program.

My testimony is based on our report, released today*, that discusses steps the Forest Service and Interior agencies have taken to (1) address key operational areas that could help contain the costs of preparing for and responding to wildland fires and (2) improve their management of their cost-containment efforts.[2] I presented the preliminary results of our work before this Committee in January 2007.[3]

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[1] Federal expenditures are a more direct measure of the federal government's investment in wildland fire activities, but the Forest Service and Interior agencies were unable to provide us with consistent data on these expenditures for the years we reviewed. As a result, we are instead reporting appropriations data. We adjusted the appropriations dollars for inflation, using the chain-weighted gross domestic product price index with fiscal year 2005 as the base year.

* Documents have been retained in committee files.

[2] GAO, Wildland Fire Management: Lack of Clear Goals and a Strategy Hinders Federal Agencies' Efforts to Contain the Costs of Fighting Fires, GAO-07-655 (Washington, D.C.: June 1, 2007).

[3] GAO, Wildland Fire Management: Lack of a Cohesive Strategy Hinders Agencies' Cost-Containment Efforts, GAO-07-427T (Washington, D.C.: Jan. 30, 2007).

SUMMARY

In summary, the Forest Service and Interior agencies have initiated a number of steps to address key operational areas that past studies identified as needing improvement to help federal agencies contain wildland fire costs, but the effects on containing costs are unknown, in part because many of these steps are not yet complete. For example,

- Federal firefighting agencies are developing a system to help them better identify and set priorities for lands needing treatment to reduce fuels. The agencies are developing, but have not yet finalized, a plan for keeping data in the system current.
- Federal agencies have also taken some steps to improve how they acquire and use personnel, equipment, and other firefighting assets, such as implementing a computerized system to more efficiently dispatch and track available firefighting assets. The agencies, however, have not completed the more fundamental step of determining the appropriate type and quantity of firefighting assets needed for the fire season. Over the past several years, the agencies have been developing a system for doing so, although we have concerns that recent modifications to the system may not allow the agencies to fully meet certain key goals.
- The agencies have clarified certain policies and are improving analytical tools that assist officials in identifying and implementing an appropriate response to a given fire. Other policies, however, limit the agencies' use of less aggressive firefighting strategies, which typically cost less.
- Federal agencies, working with nonfederal entities, have recently taken steps to clarify guidance to better ensure that firefighting costs are shared consistently for fires that threaten both federal and nonfederal lands and resources, although it is unclear how the agencies will provide oversight to ensure that this guidance is followed in the field.

Despite steps taken to strengthen the management of their cost-containment efforts, the agencies have neither clearly defined their cost-containment goals and objectives nor developed a strategy for achieving them—steps that are fundamental to sound program management. Although the agencies have established a broad goal of suppressing wildland fires at minimum cost—considering firefighter and public safety, and resources and structures to be protected—they have no defined criteria by which to weigh the relative importance of these often-competing priorities. As a result, according to agency officials and reports, officials in the field lack a clear understanding of the relative importance the agencies' leadership places on containing costs and, therefore, are likely to select firefighting strategies without due consideration of the costs of suppression. The agencies have also yet to develop a vision of how the various cost-containment steps they are taking relate to one another or to determine the extent to which these steps will be effective. The agencies are working to develop a better cost-containment performance measure, but the measure may take a number of years to fully refine. Finally, the agencies have taken, or are beginning to take, steps to improve their oversight and increase accountability—such as requiring agency officials to evaluate firefighting teams on how well they contain costs—although the extent to which these steps will assist the agencies in containing costs is unknown.

We recommended in our report that the Secretaries of Agriculture and the Interior take several steps to improve their management of their cost-containment efforts. The Forest Service and Interior generally disagreed with our findings, stating that we had not accurately portrayed some of the agencies' actions to contain costs; they neither agreed nor disagreed with our recommendations. We continue to believe that our recommendations, if effectively implemented, would help the agencies better manage their cost-containment efforts and improve their ability to contain wildland fire costs.

BACKGROUND

Over the past decade, the number of acres burned annually by wildland fires in the United States has substantially increased. Federal appropriations to prepare for and respond to wildland fires, including appropriations for fuel treatments, have almost tripled. Increases in the size and severity of wildland fires, and in the cost of preparing for and responding to them, have led federal agencies to fundamentally reexamine their approach to wildland fire management. For decades, federal agencies aggressively suppressed wildland fires and were generally successful in decreasing the number of acres burned. In some parts of the country, however, rather than eliminating severe wildland fires, decades of suppression contributed to the disrup-

tion of ecological cycles and began to change the structure and composition of forests and rangelands, thereby making lands more susceptible to fire.

Increasingly, the agencies have recognized the role that fire plays in many ecosystems and the role that it could play in the agencies' management of forests and watersheds. The agencies worked together to develop a federal wildland fire management policy in 1995, which for the first time formally recognized the essential role of fire in sustaining natural systems; this policy was subsequently reaffirmed and updated in 2001. The agencies, in conjunction with Congress, also began developing the National Fire Plan in 2000.[4] To align their policies and to ensure a consistent and coordinated effort to implement the federal wildland fire policy and National Fire Plan, Agriculture and Interior established the Wildland Fire Leadership Council in 2002.[5] In addition to noting the negative effects of past successes in suppressing wildland fires, the policy and plan also recognized that continued development in the wildland-urban interface has placed more structures at risk from wildland fire at the same time that it has increased the complexity and cost of wildland fire suppression. Forest Service and university researchers estimated in 2005 that about 44 million homes in the lower 48 states are located in the wildland-urban interface.

To help address these trends, current federal policy directs agencies to consider land management objectives—identified in land and fire management plans developed by each local unit, such as a national forest or a Bureau of Land Management district—and the structures and resources at risk when determining whether or how to suppress a wildland fire. When a fire starts, the land manager at the affected local unit is responsible for determining the strategy that will be used to respond to the fire. A wide spectrum of strategies is available to choose from, some of which can be significantly more costly than others. For example, the agencies may fight fires ignited close to communities or other high-value areas more aggressively than fires on remote lands or at sites where fire may provide ecological or fuel-reduction benefits. In some cases, the agencies may simply monitor a fire, or take only limited suppression actions, to ensure that the fire continues to pose little threat to important resources, a practice known as "wildland fire use."

FEDERAL AGENCIES ARE TAKING SOME STEPS TO CONTAIN WILDLAND FIRE COSTS, BUT RESULTS ARE UNKNOWN

The Forest Service and Interior agencies have initiated a number of steps to address issues that we and others have identified as needing improvement to help federal agencies contain wildland fire costs, but the effects of these steps on containing costs are unknown, in part because many of the steps are not yet complete. Dozens of studies by federal agencies and other organizations examining federal agencies' management of wildland fire have repeatedly identified a number of similar issues needing improvement to help contain wildland fire costs. These issues generally fall into one of three operational areas—reducing accumulated fuels, acquiring and using firefighting assets, and selecting firefighting strategies. Recent studies have also raised concerns about the framework used to share the cost of fighting fires between federal and nonfederal entities.

First, federal firefighting agencies have made progress in developing a system to help them better identify and set priorities for lands needing treatment to reduce accumulated fuels. Many past studies have identified fuel reduction as important for containing wildland fire costs because accumulated fuels can contribute to more-severe and more costly fires. The agencies are developing a geospatial data and modeling system, called LANDFIRE, intended to produce consistent and comprehensive maps and data describing vegetation, wildland fuels, and fire regimes across the United States.[6] The agencies will be able to use this information to help identify fuel accumulations and fire hazards across the nation, help set nationwide priorities

[4] The National Fire Plan is a joint interagency effort to respond to wildland fires. Its core comprises several strategic documents, including (1) a September 2000 report from the Secretaries of Agriculture and the Interior to the President in response to the wildland fires of 2000, (2) congressional direction accompanying substantial new appropriations in fiscal year 2001, and (3) several approved and draft strategies to implement all or parts of the plan.

[5] The Wildland Fire Leadership Council is composed of senior Agriculture and Interior officials, including the Agriculture Undersecretary for Natural Resources and Environment; the Interior Assistant Secretary for Policy, Management, and Budget; the Interior Deputy Assistant Secretary for Business Management and Wildland Fire; and the heads of the five federal firefighting agencies. Other members include representatives of the Intertribal Timber Council, the National Association of State Foresters, and the Western Governors' Association.

[6] A fire regime generally classifies the role that wildland fire plays in a particular ecosystem on the basis of certain characteristics, such as the average number of years between fires and the typical severity of fire under historic conditions.

for fuel-reduction projects, and assist in determining an appropriate response when wildland fires do occur. According to Forest Service and Interior officials, the agencies completed mapping the western United States in April 2007; mapping of the eastern states is scheduled to be completed by 2008 and of Alaska and Hawaii by 2009. The agencies, however, have not yet finalized their plan for ensuring that collected data are routinely updated to reflect changes to fuels, including those from landscape-altering events, such as hurricanes, disease, or wildland fires themselves. Forest Service and Interior officials told us that they recognize the importance of ensuring that data are periodically updated and are developing a plan to operate and maintain the system, including determining how often data will be updated. The agencies expect to submit this plan to the Wildland Fire Leadership Council for approval in June 2007.

Second, the agencies have also taken some steps to improve how they acquire and use firefighting personnel, aviation resources, and equipment—assets that constitute a major cost of responding to wildland fires—but much remains to be done. The agencies have improved their systems for dispatching and monitoring firefighting assets and for gathering and analyzing cost data. However, they have yet to complete the more fundamental step of determining the appropriate type and quantity of firefighting assets needed for the fire season. Over the past several years, the agencies have been developing a Fire Program Analysis (FPA) system, which was proposed and funded to help the agencies:

- determine national budget needs by analyzing budget alternatives at the local level—using a common, interagency process for fire management planning and budgeting—and aggregating the results;
- determine the relative costs and benefits for the full scope of fire management activities, including potential trade-offs among investments in fuel reduction, fire preparedness, and fire suppression activities; and:
- identify, for a given budget level, the most cost-effective mix of personnel and equipment to carry out these activities.

We have said for several years—and the agencies have concurred—that FPA is critical to helping the agencies contain wildland fire costs and plan and budget effectively. Recent design modifications to the system, however, raise questions about the agencies' ability to fully achieve these key goals. A midcourse review of the developing system resulted in the Wildland Fire Leadership Council's approving in December 2006 modifications to the system's design. FPA and senior Forest Service and Interior officials told us in April 2007 they believed the modifications will allow the agencies to meet the key goals. The officials said they expected to have a prototype developed for the council's review in June 2007 and to substantially complete the system by June 2008. We have yet to systematically review the modifications, but after reviewing agency reports on the modifications and interviewing knowledgeable officials, we have concerns that the modifications may not allow the agencies to meet FPA's key goals. For example, under the redesigned system, local land managers will use a different method to analyze and select various budget alternatives, and it is unclear whether this method will identify the most cost-effective allocation of resources. In addition, it is unclear how the budget alternatives for local units will be meaningfully aggregated on a nationwide basis, a key FPA goal.

Third, the agencies have clarified certain policies and are improving analytical tools to assist agency officials in identifying and implementing an appropriate response to a given fire. Officials have a wide spectrum of strategies available to them when responding to wildland fires, some of which can be significantly more costly than others. For individual fires, past studies have found that officials may not always consider the full range of available strategies and may not select the most appropriate one, which would consider the cost of suppression; value of structures and other resources threatened by the fire; and, where appropriate, any benefits the fire may provide to natural resources. The agencies call a strategy that considers these factors the "appropriate management response." The agencies updated their policies in 2004 to require officials to consider the full spectrum of available strategies when selecting one to use. Nevertheless, other policies limit the agencies' use of less aggressive strategies, which typically cost less. The Forest Service and Interior agencies are working together to revise these policies—revisions that could, for example, allow different areas of the same fire to be managed for suppression and wildland fire use concurrently or allow a fire that was previously being suppressed to be managed instead for wildland fire use. The agencies are also continuing to refine existing tools, and to develop new ones, for analyzing both fuel and predicted weather conditions to model expected fire behavior, information that officials can use to identify appropriate suppression strategies; these tools are still being designed and test-

ed. It is still too early to tell, however, to what extent the policy changes being considered or the new tools being developed will help to contain costs.

Finally, we and others have also reported that the existing framework for sharing firefighting costs between federal and nonfederal entities insulates state and local governments from the cost of protecting homes and communities in or near wildlands, which may reduce those governments' incentive to adopt building codes and land use requirements that could help reduce the cost of suppressing wildland fires.[7] Federal agencies, working with nonfederal entities, have recently taken steps to clarify guidance and better ensure that firefighting costs are shared consistently for fires that threaten both federal and nonfederal lands and resources. In early 2007, the Forest Service and Interior agencies approved an updated template that land managers can use when developing master agreements—which establish the framework for sharing costs between federal and nonfederal entities—as well as agreements on how to share costs for a specific fire. Because master agreements are normally updated every 5 years, however, it may take several years to fully incorporate this new guidance. Although the new guidance states that managers must document their rationale for selecting a particular cost-sharing method, officials told us that the agencies have no clear plan for how they will provide oversight to ensure that appropriate cost-sharing methods are used.

LACK OF CLEAR GOALS OR A STRATEGY HINDERS FEDERAL AGENCIES' MANAGEMENT OF WILDLAND FIRE COST-CONTAINMENT EFFORTS

Despite steps taken to strengthen their management of cost-containment efforts, the agencies have neither clearly defined their cost-containment goals and objectives nor developed a strategy for achieving them—steps that are fundamental to sound program management. To manage their cost-containment efforts effectively, the Forest Service and Interior agencies should, at a minimum, have (1) clearly defined goals and measurable objectives, (2) a strategy to achieve the goals and objectives, (3) performance measures to track their progress, and (4) a framework for holding appropriate agency officials accountable for achieving the goals.[8]

First, although the agencies have established a broad goal of suppressing wildland fires at minimum cost considering firefighter and public safety and the resources and structures to be protected, they have established neither clear criteria by which to weigh the relative importance of these often-competing priorities nor measurable objectives by which to determine if they are meeting their goal. Without such criteria and objectives, according to agency officials we interviewed and reports we reviewed, officials in the field lack a clear understanding of the relative importance that the agencies' leadership places on containing costs and, therefore, are likely to select firefighting strategies without due consideration of costs.

Second, the agencies have yet to establish an overall cost-containment strategy. Without a strategy designed to achieve clear cost-containment goals, the agencies (1) have no assurance that the variety of steps they are taking to help contain wildland fire costs are prioritized so that the most important steps are undertaken first and (2) are unable to determine to what extent these steps will help contain costs and if a different approach may therefore be needed.

Third, the agencies recently adopted a new performance measure—known as the stratified cost index—that may improve the agencies' ability to evaluate their progress in containing costs, but the measure may take a number of years to fully refine. Also, although the agencies have in recent years improved their data on suppression costs and fire characteristics, additional improvement is needed. In particular, cost data for "fire complexes"—that is, two or more fires burning in proximity that are managed as a single incident—are particularly difficult to identify. Thus, the costs of many of the largest fires are not included in the index, limiting its effectiveness. Further, to date, the index is based solely on fires managed by the Forest Service. Forest Service researchers are currently developing, at Interior's request, a similar index for fires managed by the Interior agencies, but it will be several years, at the earliest, before enough data have been collected for the index to be useful. In addition, because the stratified cost index is based on costs from previous fires—and because the agencies have only recently begun to emphasize the importance of using less aggressive suppression strategies—we are concerned that the index does not include data from many fires where less costly firefighting strate-

[7] 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).

[8] Principles of sound program management for federal agencies are established in, among other sources, the Government Performance and Results Act of 1993 and GAO, Standards for Internal Control in the Federal Government, GAO/AIMD-00-21.3.1 (Washington, D.C.: November 1999).

gies were used. As a result, the index may not accurately identify fires where more, or more-expensive, resources were used than needed. According to Forest Service officials, data from recent fires will be added annually; over time, the index should therefore include more fires where less aggressive firefighting strategies were used.

Finally, the agencies have also taken, or are beginning to take, steps to improve their oversight and accountability framework, although the extent to which these steps will assist the agencies in containing costs is unknown. For example, the agencies have issued guidance clarifying that land managers, not fire managers, have primary responsibility for containing wildland fire costs, but they have not yet determined how the land managers are to be held accountable for doing so. Rather, the agencies have taken several incremental steps intended to assist land managers in carrying out this responsibility—such as assigning "incident business advisors" to observe firefighting operations and work with fire managers to identify ways those operations could be more cost-effective, and requiring land managers to evaluate fire managers for how well they achieve cost-containment goals. The utility of these steps, however, may be limited because the agencies have yet to establish a clear measure to evaluate the benefits and costs of alternative firefighting strategies. Some past studies have concluded that the absence of such a measure fundamentally weakens the agencies' ability to provide effective oversight.

CONCLUSIONS

Continuing concerns about the cost of preparing for and responding to wildland fires have spurred numerous studies and actions by federal wildland fire agencies, but little in the way of a coordinated and focused effort to rein in these costs. Although the agencies have taken—and continue to take—steps intended to contain wildland fire costs, the effect of these steps on containing costs is unknown, in part because the agencies lack a clear vision for what they want to achieve. Without clearly defined cost-containment goals and objectives, federal land and fire managers in the field are more likely to select strategies and tactics that favor suppressing fires quickly over those that seek to balance the benefits of protecting the resources at risk and the costs of protecting them. Further, without clear goals, the agencies will be unable to develop consistent standards by which to measure their performance. Perhaps most important, without a clear vision of what they are trying to achieve and a systematic approach for achieving it, the agencies—and Congress and the American people—have little assurance that cost-containment efforts will lead to substantial improvement.

Thus, to help the agencies manage their ongoing efforts to contain wildland fire costs effectively and efficiently, and to assist Congress in its oversight role, we recommended in our report that the Secretaries of Agriculture and the Interior work together to direct their respective agencies to (1) establish clearly defined goals and measurable objectives for containing wildland fire costs, (2) develop a strategy to achieve these goals and objectives, (3) establish performance measures that are aligned with these goals and objectives, and (4) establish a framework to ensure that officials are held accountable for achieving the goals and objectives. Because of the importance of these actions and continuing concerns about the agencies' response to the increasing cost of wildland fires—and so that the agencies can use the results of these actions to prepare for the 2008 fire season—the agencies should provide Congress with this information no later than November 2007.

In commenting on a draft of our report, the Forest Service and Interior generally disagreed with the characterization of many of our findings; they neither agreed nor disagreed with our recommendations. In particular, the Forest Service and Interior stated that they did not believe we had accurately portrayed some of the significant actions they had taken to contain wildland fire costs, and they identified several agency documents that they believe provide clearly defined goals and objectives that make up their strategy to contain costs. Although documents cited by the agencies provide overarching goals and objectives, we believe that they lack the clarity and specificity needed by their land management and firefighting officials in the field to help manage and contain wildland fire costs. Therefore, we believe that our recommendations, if effectively implemented, would help the agencies better manage their cost-containment efforts and improve their ability to contain wildland fire costs.

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

The CHAIRMAN. Thank you very much.

I believe Senator Domenici has another hearing he's going to have to go to, so let me defer to him for his questions first.

Senator DOMENICI. Thank you very much. I'll try to be brief.

I want to go over first with you, Under Secretary Rey—2 years ago, I worried that the Lincoln National Forest was ripe for an insect and disease outbreak that would put a number of communities, and also the Mescalaro Apache Land at risk. Now we are seeing 15,000 to 20,000 acres of de-foliated forest around the community of Cloudcroft, which I think you're familiar with. Which, if nature takes its normal course, will lead to outbreaks of spruce bud worm, and mountain pine needle, followed by—what we're talking about here today—catastrophic fires.

What has the Forest Service done, or what are they doing to salvage dead and dying forests to provide that this community some chance of surviving a firestorm, if one should occur in this season?

Mr. REY. What's happening in that forest is an outbreak of a complex of insects, including spruce bud worm, hemlock looper, and probably mountain pine beetle, as well. Over the course of 2006, we tried to evaluate whether what we were seeing was a cyclical phenomenon, because all three of these insects are endemic to the mountains around Cloudcroft. But whether we're seeing a true epidemic—and that became clear last fall.

The two questions we've been asked are, what are you doing about the trees that have experienced mortality—and some haven't—the defoliators have just worked them over, and they're going to sprout new growth as it cycles into the next season, but some have died. So, the first question is "what are you doing about the trees that have died?". The second question is, "are you going to spray for any of the defoliators?". You can't spray for mountain pine beetle, because it exists under the bark.

As for the first question, we have two exercises underway. One, an analysis under a series of categorical exclusions to remove trees close in to the communities, that analysis will be complete this summer, and trees will start to be removed this fall.

Then the larger term effort, further away from the communities, is being analyzed under an environmental assessment which will be completed next spring in time for harvesting to begin during the next operating season.

As far as the use of insecticides, we're evaluating that. The two defoliators are defoliators that are not effectively contained through insecticides until the early fall, particularly the looper, is a fall defoliator. So, if we're going to use pesticides, they're ineffective, until we get to about the September timeframe, and we're still evaluating whether we're going to use some limited insecticides this fall. As I said earlier, you don't really get much benefit out of trying to use insecticides with mountain pine beetle.

Senator DOMENICI. Well, it seems like—with no aspersion on you, but you know, your answer sounds just about right. It's full of words about the future, like "we're studying," "we're evaluating," "we don't know what to do yet." I've come to the conclusion that you can't do what is logical and reasonable, and I wish you'd tell me why. Is it——

Mr. REY. Well, I—you know, I—maybe I wasn't clear enough. We're done evaluating, we're going to start cutting this summer.

Senator DOMENICI [continuing]. Wait a minute, let me just talk to you a minute.

All of us here know that if we took time enough to go out and tour the National Forests, we would find areas that embarrassed us, because they have been full of insects for a long time, they're full of rotten trees, you'll find them all over, and nothing—it seems like nothing's done, or it takes so long that by the time you get around to it, the trees are really no good.

Now, we're entering a little change era, with reference to the value of these kind of forests, because this whole idea of cellulosic energy, seems to be directed at using forest products, as part of the feeding of the cellulosic exercise.

In some private moment when you weren't burdened by all of the legal, legalese, and people biting you all over, have you ever thought of what would be a common sense approach to this? That you might ask us for? Or have you assumed we would just conclude there's nothing we could do?

I have other questions, but I'm not going to ask them, Mr. Chairman. Thank you.

Go ahead, would you just talk a little?

Mr. REY. I think we're on the right path, but the rate of progress is less than ideal. You know, in the decade of the 1990s, we were treating about a million acres of Federal lands a year, we're now treating over 4 million acres of Federal lands a year, so we've quadrupled the amount of treatment work that's being done.

We've been devoting record amounts of funding to this effort. We have developed some expedited procedures, and we're using those procedures——

Senator DOMENICI. What is one of the procedures?

Mr. REY [continuing]. Greater reliance on the use of categorical exclusions, the accelerated use of environmental assessments under the Healthy Forest Restoration Act, some of the other experimental procedures under the HFRA—all of those are contributing. We are increasing our rate of treatment.

At the same time, a couple of other things are increasing, and one other thing has probably not changed as much as we'd like. The two other things that are increasing are the spread of the Wildland Urban Interface and the growth of the new homes constructed in those areas, which complicate both cost containment and firefighting strategy.

The second thing that's increasing is the size of some of these epidemics—they've moved from smaller epidemics to near-system wide epidemics, and you know, I would say that historically, some of these are comparable to the similar epidemics that we saw at the turn of the last century in some of these systems, like the Kenai Peninsula in Alaska, like the Colorado Front Range, and these stands of trees are susceptible, because they were set up after that first set of epidemics over 100 years ago. So, we're probably going to be hard-pressed to keep up with that.

What's changing more slowly, but still changing in a positive direction is public attitudes toward the need to get this work done. You know, the fire that's burning in Tahoe today is a perfect illustration of that. The fire that's burning in Tahoe today is the largest fire that's ever occurred in Lake Tahoe's history in the Tahoe

Basin, at 2,500 acres, which is not really a very big fire by intermountain State standards.

But, it's indicative of the fact that in the Tahoe Basin, with a much lower fire frequency, there's a lot more resistance to doing the fuels treatment work that needs to be done to make these homes safe. That's changing, I think, it's probably a fair bet that it's going to change pretty quickly now that people have seen the implications of not doing that work.

But, heretofore, our fuel treatment costs in the Tahoe Basin were the highest in the system, spiking at as much as $10,000 an acre. The reason for that was public resistance to having the work done, an insistence that if it got done, it got done in the most expensive way possible—with hand treatments rather than any kind of mechanical treatments—and a very strong reticence to removing enough material to actually create a fire-resistant forest. Some days in the Tahoe Basin, I used to think that we were going to have to name and hug every tree before we cut it, in order to make people accept the fact that some of these trees needed to be removed.

So, that's the lay of the land as I see it. I see a lot of progress being made, but I also see that we've got a problem that we've spent 100 years getting into, and it's probably going to take us about 8 to 10 years of the kind of work we've been doing to get out of it.

Senator DOMENICI. Thank you, Mr. Secretary.

Thank you, Mr. Chairman.

The CHAIRMAN. Senator Salazar.

Senator SALAZAR. Thank you very much, Senator Bingaman, for holding this hearing on this very important subject.

Under Secretary Rey, I have a couple of questions for you related to our favorite subject, and that's the insect infestation in the West, and in Colorado, which I think is creating a powder keg, certainly in Colorado, where we currently have close to 2 million acres of our forestlands that have been infested by the bark beetle problem.

So, my first question to you is what is it that we are doing, from your perspective, to try to address the bark beetle infestation problem that will deal with this fire danger in the West?

Mr. REY. In the Front Range, we're soon going to be enjoying the results of some community partnerships that I believe will accelerate our rate of treatments, particularly close in around the communities. We are starting to write some longer-term stewardship contracts, we have run into a couple of technical impediments in terms of securing capital for those contracts, and I'd be happy to work with the committee to look at a few small-dimension fixes to our contracting arrangements to facilitate the acceleration of the stewardship contracts.

But I think the——

Senator SALAZAR. Can you in just a paragraph tell us what those technical problems are?

Mr. REY [continuing]. The biggest technical problem is that we've got to allocate a substantial amount of money and hold it, if we're going to offer a large—or a long-term—10-year contract. If we could have a little bit more opportunity for liquidity there, I think we could probably do more work, because we wouldn't be putting a lot

of money down in anticipation of out-year contract work. That's as simple as I can explain it, because it's a fairly complicated contract issue. But it's one we have a solution for, that we'd be happy to work with you on.

Senator SALAZAR. Let me ask you this question, in terms of the broad issue—you know, obviously for me, I focus on it in Colorado, because if I drive I–70 or up to Keystone, I see the large areas of forest lands which are now dying, and I do think they are creating this tinder box that, in the past, I've called the Katrina of the West.

But, it's not limited to Colorado. You know, obviously, Senator Domenici was talking about a beetle problem in the State of New Mexico. I know in Idaho, and Wyoming and a whole host of other States, it's becoming a huge problem in the West.

So, is there a comprehensive approach from the Department of Agriculture, at least with respect to the Forest Service lands, in terms of how you deal with the bark beetle problem, which is upon us. Not your fault, not our fault, it's happened—how are we dealing with it in a comprehensive manner?

Mr. REY. I think the simplest way I can explain what we're doing, is we're trying to focus on the near-in areas first, to build defensible space, and eliminate the mortality around communities, and then working our way back into the back country, where we have important ecological values at risk.

Now, admittedly, what that means is that there's going to be some of the area that's infested that we're not going to treat. It's (a), too remote, and (b), has no particular ecological values at risk. That's going to be more high elevation—now I'm speaking about Colorado, rather than other places in the West—those places are going to be more high elevation and remote areas, typified by lodge pole pine, rather than the lower elevations which, parenthetically, tend to be the ones where we've got more homes and communities, which are ponderosa pine systems.

Ponderosa pines are responding better to thinning——

Senator SALAZAR. Let me just say, I want to ask is that we get something from your Department that gives us a description overall——

Mr. REY [continuing]. Sure, panoramic.

Senator SALAZAR [continuing]. On what it is that you're doing there.

Let me, just quickly ask another question. That's with respect to the fuel treatment capacity. I know in my State, I think the number of acres that have been NEPA-approved for fuels treatment is 283,000 acres. Yet in 2006, we treated, I think, 74,000 acres under the U.S. Forest Service. So, a big gap between what's been approved, and what we actually are doing to deal with the treatment. How can we close the gap?

Mr. REY. That's an area where, I think, we have a common goal that we can pursue. We did allocate additional funding into Region Two, to begin to use some of that NEPA-cleared acreage during 2007, and that's also something that our 2008 budget, as it was proposed, and also as it was reported by the Appropriations Committee last week, provides some additional assistance. That's actually good news. The fact that we've got NEPA-cleared projects that

are ready to go means that every dollar that we now allocate into Colorado, we can put directly onto the ground.

Senator SALAZAR. I appreciate your answers, and I look forward to working with you on these issues. Thank you very much.

The CHAIRMAN. Senator Craig.

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

Senator Salazar, this picture over here is an interesting one in a couple of respects. First of all——

Senator SALAZAR. I note Senator Craig, the title of the picture, The Red Hand of Death.

Senator CRAIG. How about that? What's more important, is the difference between the red and the green. Now, while the green was a clear-cut 40 years ago, it is a young, vibrant stand of trees today. Youthful trees, versus older trees, handle stressed environments better. Older trees that are stressed, or heavily populated areas, when stressed, become vulnerable to bug kill.

We've left the forests, we've left them heavily populated, and they are now dead and dying. The public won't let us back in to do reasonable things. I won't argue that clear-cutting was a reasonable thing, but it is now a vibrant, youthful stand of trees, some 40 years old, or younger.

Isn't it interesting that that is a living demonstration of the argument against the very thing that's happening?

You know, Mr. Chairman, and all on the committee, when I see a picture like this I have two emotions. I had two emotions this morning when FOX News said that now these 270–plus homeowners are angry and want to do something, because they lost their homes, and they are now blaming environmentalists.

Mark, you served with us on this committee, on the staff, at a time when we looked at the Tahoe watershed, a good number of years ago. We pronounced it dead and dying. And, as a result of that, we put money in the budget to thin and clean, to save the watershed, to save the quality of Lake Tahoe, and to save the homes. Interests in that area, both local and national, said "No."

Homeowners out there—hear us. We tried, we were not allowed to, and you lost your homes. So, I don't know whether I want to laugh, or I want to cry because I have both emotions at the moment of this great tragedy that is largely human caused.

What do we do about it? Well, we try to get the healthy forests and we have a judge in Alaska that says, "No, you can't have categorical exclusions to go in and thin and clean the urban watersheds," dominantly. We've got a situation in North Idaho where we think we'll probably be blocked again. It's an urban watershed that needs to be thinned and cleaned to save the watershed. Yet, the attitudes out there are what they are. Of course, we in the West know in drought environment, or stressed environment what happens to a heavily stand forest, if you will. That's the reality we're dealing with today.

I must also say to you, Robin. I don't care how much cost containment we do—when you move from 5 to 6 to 7 to 8 to 10 million acres last year of fire land, of burned acres—the reality is you can contain all the costs you want, if you don't fight the fires the costs are going to go up, astronomically. Because we're not doing—or

being allowed to do—the other right things to bring those costs down.

Now Mark, I hope you're right. I hope we are on the right course. But in the 8 or 10 years that we will be denied access to those lands, we will burn tens of millions of acres of phenomenal watershed and wildlife habitat. We will lose thousands and thousands of homes all in the name of what? A very narrow attitude about the environment expressed by some.

There are many ironies, and I'm going to ask that this be put in the record. The Washington Post, In the Loop the other day, I don't know if you saw this Mark—fascinating about Jake, I believe it's Gurlick, Earth First environmental activist. He went to jail in Idaho a few years ago. He went to jail in Malaysia for chaining himself to old growth. He was one of those that you said you ought to hug it and name it before you cut it. He has lawsuits filed blocking, now, Forest Service policies in Idaho for fuel reduction, the clearing of brush and smaller trees. His group the Wild West Institute has filed those suits.

Now, while he has done that, on his 25 acres that he owns in Montana he's got a chainsaw out and he's thinning it and cleaning it. Why? To reduce the number of trees within in the area to reduce the fire danger around his home, so quoted by the Missoula newspaper. How fascinating. Well, he admits, as you are reflecting Secretary Rey, that the world is changing. We went from a policy of "no cut" on Federal lands, to acknowledging the need for some cut, especially near communities. We need to get our past polarity, we need to reach out to land owners and the Forest Service for common ground, so he says.

Then he was asked if he would drop the lawsuits in Idaho. He said, "No." Probably that's his business, that's where he makes his money so he can't do that. He'll keep filing his lawsuits, but he'll keep thinning the trees around his home to save his home. I hope what I've just said gets back to him because that's the reality we're into.

We will struggle here mightily. We'll put a lot of money into the budget. I just stuck $107 million in the Interior Budget to help you all out. We will spend hundreds of millions of dollars, if not billions, on firefighting. Yet, the publics will not allow us to make the forests healthier to bring these costs down. Of course, on the bottom of this article is a marvelous graph of the number of homes that are in or near the Wildland Urban Interface that has changed the dynamics.

Mr. Chairman, as I said when you were out, I don't know whether to smile or to cry. No matter what the policy we push here that creates any greater flexibility on the land itself to allow the right things to be done, it will probably be blocked or contested in the courts. That's the reality we're into today. So my guess is, we're going to have to do a lot more burning before smoke gets enough in somebody's eyes to clear up their vision as to the reality that's going on out there.

Former Congressman from New York, no longer serving, when we passed the Healthy Forest Act I asked him why he was at the signing at the White House. He supported it. He said, "Smoke got in my eyes and it improved my vision." It appears there's going to

be a lot of smoke out West in the next decade or so. We are a very dry and hot place at the moment.

So, let me ask one question after that rant. I guess I had to get it off my chest.

The CHAIRMAN. Why don't you do that in a hurry, here.

Senator CRAIG. I'll ask one question, thank you.

The CHAIRMAN. Senator Tester has to preside and I was going to give him a chance to ask one question.

Senator CRAIG. Well, I was just whacking at one of his constituents. He may not want to respond to that.

But, one question, under current authority, taking into account current litigation hurdles and evolving legal interpretations, has it been difficult for the agencies to employ proper management objectives, such as thinning? And would this likely reduce the size and intensity of fires and assist in reducing overall fire cost as well as to reduce the danger of fires within the current areas? Mark and Steve, if you would wish to respond to those comments, or that particular question.

Mr. REY. I think I would characterize, you know, what is happening now as an exercise in two steps forward and one step back. I mean, we are making forward progress using the tools that Congress has given us and the funds that you've given us to use those tools to work with. But, at the same time, you know, we still have a democratic dialog going on in a third branch of Government. As new legal opinions come down it changes what we can do. It causes us in cases to have to stop and reassess and reevaluate.

So, progress is being made, but I think I'd characterize the whole area as an exercise in two steps forward and one step back. That's still progress, but it's not as rapid of progress as many would like.

Senator CRAIG. Steve.

Mr. ALLRED. It frustrates me when we see so many projects that are challenged, primarily on procedural grounds, not on the aspects of it that would have to do with treatment. Part of that is the agency's problem, but part of it is the innovative approach that our opponents take with regard to the courts.

Another huge problem for our range lands, as you are aware, are invasive species. It is much more difficult to treat those, the large expanses that we have and yet, they are very hot burning, very fast burning areas, particularly the cheet grass. Those are expanding at a tremendous rate. That's probably the biggest threat, I believe, we have to our range lands. There is no real alternative many times as to how we attack those stands.

Senator CRAIG. Well, thank you all.

Mr. Chairman, you've been very generous with the time and thank you for holding this hearing. It's going to be a long hot summer in the West, maybe by fall we'll be able to reassess. I hope we can move something before then. Thank you.

The CHAIRMAN. Thank you.

Senator Tester.

Senator TESTER. I will make this very, very quick. Senator Murkowski, thank you.

That is, just if you answer quick, we can get done with these real fast. Do you have a local liaison on the ground for each fire that works with the local firefighting units and their resources?

Mr. REY. Yes.

Senator TESTER. The other one was, has the Healthy Forest Initiative done anything to help reduce the energy load out there?

Mr. REY. Yes.

Senator TESTER. Thank you very much.

The CHAIRMAN. Senator Murkowski.

Senator MURKOWSKI. Well Senator Tester, that has to be the quickest question and answer that we've had in this committee.

Senator TESTER. I have more and they'll be submitted in writing. Thank you.

Senator MURKOWSKI. Well, I thank you Mr. Chairman, for this hearing. I don't know that there's ever been a time when we've come to hear the status on the fire when we haven't had a fire raging in the State of Alaska. We've got a couple going now.

Secretary Allred, you mentioned the Caribou, the Caribou Hills fire, 55,000 acres, 88 cabins gone, over 100 outposts, over $1 million, 500 people on the ground. So, we are into the fire season. That's in the part of the State where, according to your map, we're not even in and above normal fire range. This is down on the Kenai Peninsula.

But, as we have had testimony in this hearing, the peninsula is one of those areas that, due to the spruce bark beetle infestation over the years, it is, it's just dry tinder on the floor. As Senator Craig and others have mentioned, the fuels that are sitting on the floor of the forest at present, are a huge concern for us. Then we see them manifested in these very fast-moving fires, such as we're seeing right now with the Caribou Hills fire.

A very quick question for you, Mr. Rey. In view of what we're trying to do with regards to the reduction of the hazardous fuels there on the peninsula, are we doing enough? What more can we be doing there in the Chugiak to have a positive affect on our goals to reduce the cost of fire suppression?

Mr. REY. I think we're doing about as much as we can to reduce the fire risk close into the communities. We have not probably done as much as we could to look at utilization of much of the beetle killed material that's further away and in more remote areas. One of the, sort of, the problems in that area is that there's no usable market for that material. It's relatively small diameter and very low quality material.

We had a, for a while a pretty good chip market in the Far East. That's rebounded again and we've got a new processing facility, which USDA Rural Development helped commercialize. Just a near point, I'm drawing a blank on the location, it's near Anchorage.

Senator MURKOWSKI. It was down in Homer, but that one has moved.

Mr. REY. Yes, it's moved up now to Anchorage. So, that will help some. If we can start building cellulosic ethanol plants, that's another possibility. But, what we're going to have to have if we're going to do any sort of major modifications there, moving off of the areas near into the communities, is some local markets for that material to reduce the cost of removing it.

Senator MURKOWSKI. We believe that there's some opportunities there with the biomass and would look to explore those.

Secretary Allred, I want to ask you about the assets that are currently stationed in Alaska or available in Alaska as we go into this fire season. Are we, have we lost any of the assets that we have relied on previously? Recognizing the interagency effort that goes on up there, do we have what we need as we go into this fire season?

Mr. ALLRED. Senator, I think we have about the same asset picture as we had last year. That changes, obviously, as we go through the season. We are relying more upon assets that we can move strategically this year. For purposes of cost containment, probably, we'll do more of that next year. But, I think we have the, we have at least the equal assets that we have. We have the availability on an as-needed basis to bring more in. Whether or not with what's happening so far this year, those will be sufficient. We'll have to see as we progress, but we believe we are prepared.

Senator MURKOWSKI. Of course that makes us a little anxious, not knowing. We've been pretty responsive in terms of getting us the hot shot crews when we need them, but whether it's the Scoopers or the fire retardant tankers. Those are issues that, of course, are a great concern.

Secretary Rey, we have also had multiple conversations about the ability to utilize the Canadian tankers that are currently allowed to provide for the suppression over State lands, but not over Federal lands. We've had the discussion, you know, when you're fighting a fire who knows what is State, who knows what is Federal. Of course, the issue about the safety of the Canadian tankers was one that we had discussed at some length in past years, but given the safety record of the State's federally contracted Canadian air tankers, isn't it time that the Agency and the Interior Department let the State of Alaska utilize these more fully? Are we at that point that you are comfortable with the safety aspects? Because that was what was keeping, us from being able to utilize it on Federal property, as I understood.

Mr. REY. Well, not exactly. There are two models of aircraft that the Canadian Government uses and that we contract to use in Alaska. The first model is the C, I think a C–130 Scoopers. We have data that indicate that those are aircraft that are, that can be flown safely in the firefighting missions. So there's no issue with those.

There are also some Canadian DC–6s, which we are not comfortable can be flown safely in the firefighting mission. As long as it's a State-controlled fire, they can contract with whomever they want. But, I will tell you that we spent years after the air tanker crashes of the early part of this decade going through all of the existing aircraft models in all of the, in all of the governmental and private fleets to establish those models for which we could develop damage tolerance limits, and therefore have some confidence that they could be flown safely, and those that we couldn't. As far as the DC series airplanes, DC's fours, sixes, and sevens, the Boeing Corporation, which now having bought McDonald-Douglas, is sort of responsible for the history of those aircraft, has informed us in very direct terms; No. 1: they were not designed for this purpose and No. 2: they want no part of any kind of remedial assessment of whether they can flied, flown safely for this purpose.

Senator MURKOWSKI. Well, I want to make sure that I understand though. If they're the C–130's and it is a federally controlled fire, are you still okay?

Mr. REY. We're OK with the Scoopers, whoever is in control of the fire, because we have the data on the Scoopers to show they can be flown safely.

Senator MURKOWSKI. All right. So jurisdictionally it's not an issue.

Mr. REY. Not, an issue.

Senator MURKOWSKI. It's not a problem.

Mr. REY. Right. The DC–6s, on the other hand, we would not contract with for a federally controlled fire. If it's a State fire, then, you know, that's up to the State to decide whether they want to fly them or not.

Senator MURKOWSKI. Have we had any incidents or crashes with the DC–6s in the, you know, past 5 years?

Mr. REY. We haven't, but that doesn't mean that we might not. What you have on these aircraft are stresses that are not stresses that were anticipated when the aircraft were originally designed, nor were they stresses that are associated with the original mission profile. The DC–6 was a regular transport plane that was thereafter modified for firefighting use. Flying a load of material from one airport to another airport is a lot less stressful mission than flying a load of water or retardant at low altitude in high turbulence conditions, dropping that all suddenly, and then powering your plane out.

So, what we have to be able to establish for these airframes flying for this modified mission is that at what point in the life of these aircraft is there a high likelihood of catastrophic metal failure and therefore, a prudent requirement that we set them down after so many hours.

So, after the crashes in the early part of this decade, we went through as many aircraft models as we could to figure out what that point should be. With the help of Lockheed, we were able to calculate that for the P2V's and the P3 O'Ryans. With the military data, we were able to calculate that for the C–130 series planes, and that left us in the, sort of the standard fleet with just the DC-series planes and there we ran into a complete lack of information, one, and a fairly strong unwillingness on the part of the manufacturer to even engage in speculation, even informed speculation based on available engineering data about what the service life limit of a DC–6 or a DC–4 being flown in this mission should be.

On, their view is that these are all high-hour aircraft, for the most part, and the probability is that they've already flown more hours than they should for this mission. At least that's Boeing's view of it. We were happy to continue to forge on, but we, essentially, ran up against a lack of any further mechanism to try to establish that limit. So, that's why we don't fly DC's fours, sixes, and sevens. If the Canadian Government wants to do that or the State of Alaska or the State of Oregon, you know, that's really their decision to make, but I can't tell you today that if we put one of those in the air it won't crash tomorrow or next week or next year because I don't have any basis for knowing whether that aircraft is

still safe to use as an air tanker in the kinds of conditions that they fly.

Senator MURKOWSKI. I appreciate the response and certainly don't want to compromise safety. I guess we're looking at it and saying we want to make sure that we've got the assets there. The Canadians have been using them successfully and safely and we've been using them on the State-controlled fires safely and successfully. So, you can certainly see why the confusion exists. When we need another aircraft it's there, but because it's a Federal-controlled fire, all of a sudden we can't use it.

Mr. Chairman, my time's expired. I thank you.

The CHAIRMAN. Thank you very much.

Ms. Nazzaro, one of the points you make in your report is that, you say third, the agencies have clarified certain policies, and are improving analytical tools that assist officials in identifying and implementing an appropriate response to a given fire, but several other policies limit the agencies' use of less aggressive firefighting, which typically cost less. Could you elaborate on that a little bit?

Ms. NAZZARO. We believe that there's not a transparent decision-making process. They do have broad goals that tell them to fight fires at a minimum cost, considering firefighter and public safety and protecting the resources, but what we don't see is how do you then weigh these competing demands. What we heard on the ground was that the local firefighters don't know how to weigh these competing demands and what strategies they should select to ensure that cost considerations are given their due consideration.

The CHAIRMAN. But, what are these policies that limit the agencies' use of less aggressive firefighting strategies? Are there some specific policies?

Ms. NAZZARO. For example, if they make a decision that they're going to suppress the fire, they can't change their mind and say, "OK, now, maybe we decided to fire suppression in this area, but this area we can let it burn." They can't make those changes mid-course. So, we believe that does limit their capability to effectively contain costs.

The CHAIRMAN. OK.

Let me, let me just ask Mark Rey a question about, I think this issue has come up before, but I'm still very troubled by it. We have this letter or statement really by various former chiefs of the Forest Service and it's a very distinguished group of former chiefs, Max Peterson, Dale Robertson, Jack Ward Thomas, Michael Dombeck, Dale Bosworth. As I understand the gist of their concern, they talk about, essentially, flat budgets for the Forest Service. The fact that while we have flat budgets for the Forest Service, each year the amount that is going to wildfire suppression is growing. It has been for several years and I think they mentioned that even using this 10-year average cost of fire suppression, it is increasing about $80 million per year and with more increases likely in the future.

I think in your statement, you say that wildfire seasons have lasted longer, they've been more severe, we've got more of this Wildland Urban Interface problem, which is documented in that article in the New York Times this morning. So, their plea, as I understand it, is that we need to provide flexibility to finance emer-

gency firefighting outside the Forest Service Discretionary Budget so that you don't continue to have more and more cuts in the rest of the Forest Service Budget in order to get this done. Is there any serious effort going on within the executive branch with OMB to try to do that, to try to have separate requests for the other Forest Service activities separated from what is needed for wildfire suppression?

Mr. REY. There is ongoing discussion and we have tendered proposals to Congress for alternative ways to fund firefighting. In the 2003 budget request we proposed a Government-wide emergency account that would be separate from the discretionary budget and cover, not only firefighting costs, but some FEMA disaster response costs as well. Unfortunately, that wasn't well received. Perhaps in part because we proposed to offset some of the costs of that, the creation of that account and maybe nobody was interested in doing that. But that's a discussion we're willing to continue to have with the appropriators.

The CHAIRMAN. It would seem to me that trying to say, let's set up an emergency account for all potential, you know, whether it's a fire, a tornado, a hurricane, whatever, that's defining the problem bigger than we have to define it for purposes of this problem. Couldn't we just propose something related to fire suppression because that seems to be an issue we can almost predict, that the amount we're going to have to spend on fire suppression is going to be greater 3 years from now, 5 years from now than it is today, given the history of the last decade or so?

Mr. REY. I think we're open to reengaging on the question of an emergency account. I don't know that, you know, fire is any different than hurricane response. In some respects, it's a predictable situation that's going to generate emergency response needs during the course of the season.

In the firefighting area, we actually have a little more predictability in the sense that, you know, we suppress on the initial attack somewhere on the average of 98 percent of ignitions. That work costs us about 15 percent of our firefighting budget and then the balance, the remaining 85 percent of the firefighting expenditures are consumed by the 2 percent of the fires that escape initial attack.

The CHAIRMAN. But am I wrong, I mean, my strong impression is that we've got a pretty clear trend and you alluded to it in your statement as I understood it. The fire season is getting longer, has been getting longer, trending longer. The severity of the fires is greater. The amount of construction in these areas that we call the Wildland Urban Interface is growing. So, all of the trends in those areas would indicate we're going to have to spend more on fire suppression in the future. As long as we just say the Forest Service's job is to take it out of their hide, we're going to keep the Forest Service budget pretty flat and it's up to them to figure out what to cut in order to pay for these growing costs. That's just not a very enlightened approach. Am I missing something there?

Mr. REY. I think trends are pretty much as you describe them for the foreseeable future. As we get more and more fuels treatment worked on we'll probably start to round on, at least a couple of the trends in fire severity. But, at the same time, the Wildland

Urban Interface is going to continue to grow and that's a creative, I mean, it's not going to wax and wane. It's always going to go in one direction. So as I said, I think, you know, we're open to talking about alternatives, including those which we proposed as well as others that make sense.

One of the things, you know, that we've been doing is emphasizing cost containment to see if we can mitigate some of the affects of those trends. We expect this year that as a result of the cost containment measures that I described in previous hearings before the committee that we'll probably shave about $130 to $150 million off of what we would have otherwise spent. So, at least that's helping, but it's probably not reversing the trend, it's just moderating it.

The CHAIRMAN. Let me see if Senator Craig had more questions.

Senator CRAIG. Well, Mr. Chairman, thank you for pursuing the questioning that you just did because clearly the old model that we're operating out of is an old model that had a revenue that largely has gone away.

Especially during the decade of the eighties and now into the, or the nineties and now into 2000 and that was, we cut trees. We had a very large cash-flow coming off of timber sales. That's 90 percent down, 85 percent down. We're struggling to bring it up in the right way, in the publicly acceptable way. But the reality is, we're operating off of an old model. The Forest Service is broke. I think those are terms we ought to put it in.

Now, we either change the model to fit the situation, and that's what you're suggesting. I'm very much in favor of that, that we ought to look at it differently. Fires, fire has changed. The intensity of it has changed dramatically. The relationship of fire to dwellings has changed, you've mentioned that. We ought to change with it. If we don't and we continue the current model, we will stress the Forest Service out and they will do damage to the other things they're doing.

We've got a great debate going on in Idaho and the rest of the country now about transportation plans. Well, one of the reasons the Forest Service wants to close a bunch of roads, while they may argue some environmental reason, the other reason, they have no money to maintain them, period, end of statement. Why do they not have money to maintain? Because they're stressed out in all other accounts. Then, when we play the shift game and, we've done that Mr. Chairman, we beg and borrow from all the accounts to fight fire, then we don't replenish it at the end of the year. That then pushes the whole envelope further out.

Let me approach this from a slightly different area because what Secretary Rey just talked about, what Robin has talked about as we look at how we're fighting fire today and the cost containment of it. Many of us who visited fire scenes have seen large urban areas built, temporary urban areas, trailers, trucks, tents, supplies, thousands of pieces can come into a fire camp in a way that historically never, never existed before. But, here is another area that fascinates me and it is a problem as it relates to the contemporariness of what we're doing.

In this last year a fire officer was indicted on criminal charges. Mark, I want you to hear this because I need both you and Steve's response. I think this will send a negative signal to many of the

fire personnel that are on the ground everyday making life and death decisions. Recently in Interior Appropriations Subcommittee we added language that would allow more firefighters to access liability insurance. Can you explain to this committee how this may help alleviate some of the concerns from many of our firefighters? That's one question.

Further, post-incident investigations are designed to find the truth, however, if a firefighter is to be indicted on criminal charges he or she may not be as forthcoming as possible, even though a great deal can be learned from the truth. Is there any congressional action that needs to be taken to, needs to take place to provide firefighters with the security to speak out about tragic events without the fear of being charged with a crime? So, both you Mark and Steve, do you feel as though our firefighters may avoid positions of responsibility due to the perception set by this indictment. Has that had a chilling affect across the community?

Mr. REY. I think that we're, we, we're seeing some uneasiness among a specific category of firefighting managers, the Type-3 Incident Commanders because they are part of the firefighting militia. This isn't, is necessarily a full-time job and the question is, do I want to accept the liability associated with being in a line decision-making position in this area. I think what you've proposed in the Interior Appropriations Bill, to extend liability insurance to them as it's available to other first responders will help significantly in that area and give them a mechanism for some assurance that if they, you know, do run into a problem here that they've got somebody on their side, as it were.

The other issue you raised goes to internal versus external investigations. It's an issue that we face, that the military faces, that NASA faces. Both the military and NASA, when they do their after-accident investigations, do it for one reason and reason only and that's to learn what happened to see if there are lessons for the future, to avoid those circumstances happening again. If you're going to try to accomplish that, it's imperative that the people involved in the incident feel free to speak without wondering whether they're putting themselves in legal jeopardy.

So, both the military and NASA have adopted a concept of privilege for their investigative reports, sort of insulating them from use in any subsequent investigation to determine negligence or any form of criminal liability. What we're looking at is doing that ourselves. We're not certain yet whether we have the authority to do it administratively, if we don't we'll probably be coming and asking Congress for assistance.

Senator CRAIG. OK, thank you.

Steve.

Mr. ALLRED. I think what Mark described is similar to the situation within Interior. One thing that is frustrating that we need to take care of ourselves is that we have, within the agencies, identified guidelines that our firefighters are supposed to look at when they're involved in a fire. Not all of those guidelines apply in any particular fire. However, some prosecutors have tended to look at those as a duty rather than as a guideline. One of the things that we need to make very clear is that those are not duties and that they are not a standard of conduct to be assumed in every situa-

tion, but rather a set of guidelines to be applied in a specific situation. So, we can do some of that ourselves, as well.

Senator CRAIG. Well, this is one member of the Senate that stands willing to help, if you find it necessary to provide that. Because clearly to know what goes on and we know the fire scenarios out there are changing, the hotness, the intensity, the need to think well ahead of yourself is a reality today that may not have been a decade ago and we want to make sure that our professionals have that flexibility and have a reasonable degree of protection against the liability issues.

Mr. Chairman, thank you very much.

The CHAIRMAN. Senator Murkowski, do you have other questions?

Senator MURKOWSKI. No, I'm fine.

The CHAIRMAN. Well, thank you all very much. I think it's been a useful hearing and we appreciate your testimony.

The hearing is adjourned.

[Whereupon, at 11:26 a.m., the hearing was adjourned.]

APPENDIXES

APPENDIX I

Responses to Additional Questions

RESPONSE OF ROBIN NAZZARO TO QUESTION FROM CHAIRMAN BINGAMAN

Question 1. The agencies and GAO apparently both agree that the Fire Program Analysis system (FPA) is critical to improving the agencies' budgeting and planning processes. Yet the GAO and others have raised serious questions about recent design modifications that the agencies have made to the FPA system. Do you think that an independent technical analysis of FPA and the recent design changes would be helpful in illuminating the concerns GAO and others have raised?

Answer. Yes. Given the agencies' planned use of the FPA system in allocating tens of billion of dollars in future wildland fire management funding, we believe it is very important that the Congress and the public have (1) a comprehensive, clear, and detailed understanding of the capabilities and uses of the FPA system and (2) confidence that these capabilities and uses have been objectively assessed.

RESPONSES OF ROBIN NAZZARO TO QUESTIONS FROM SENATOR DOMENICI

Question 2. Ms. Nazzaro, this is the third or fourth time that GAO has suggested the Forest Service doesn't have a cohesive strategy to reduce its cost of fire fighting.

It is obvious that the GAO doesn't believe it is seeing a cohesive plan, so what in your estimation would such a plan encompass?

Answer. Unlike any other document issued by the agencies to date, a cohesive strategy would delineate alternative long-term investment paths for fuel reductions and identify their varying likely consequent effects on long-term suppression and related costs. The purpose of this would be to provide the Congress and the public with a better understanding of what alternative schedules are feasible for accomplishing the long-term objectives of reducing wildland fire risks to communities and ecosystems, and the tradeoffs involved with these different levels of funding. Pivotal to such a strategy is identifying more precisely the relationship between fuel reductions expenditures occurring now and reduced future suppression costs.

Question 3. In GAO's estimation, would shifting funding to hazardous fuels treatments, even it if meant providing sufficiency from some environmental laws, help reduce the cost of federal wildland fire fighting?

Answer. The extent to which increased fuel reductions would reduce future fire fighting costs is a technical question that we have not analyzed. Any judgments on this would have to be based on substantial, highly context-specific empirical analysis. The cohesive strategy that we recommended the agencies develop could shed some light on the potential tradeoffs. The decision concerning the proper balance between fuels treatment activities and environmental protection is a policy decision for the Congress to make.

Question 4. If GAO had it in its power, what one step would you have the Forest Service take to significantly reduce its cost of fire suppression?

Answer. Given the cost savings in both suppression and fuel management that can occur as a result of increased wildland fire use, one action that the agencies should consider is accelerating the completion and supplementation of their fire management plans to ensure that they are aggressively focused on identifying opportunities and circumstances under which wildland fire use is permitted and encouraged.

RESPONSE OF C. STEPHEN ALLRED TO QUESTION FROM CHAIRMAN BINGAMAN

Question 1. In the agencies' comments on the GAO's report, Mr. Cason and Chief Kimball asserted that "we do have objectives and clearly defined goals that make up our strategy for better managing large fire suppression costs." Can you tell me, specifically, what the agencies' "clearly defined goals" are for containing costs?

Answer. The principal wildland fire management doctrine provides interagency goals and objectives. The doctrine includes "The Federal Wildland Fire Policy," the "Healthy Forests Initiative," "Healthy Forests Restoration Act," "Protecting People and Natural Resources—A Cohesive Fuels Treatment Strategy," and the "10-Year Strategy Implementation Plan." We have adjusted major components of the program to allow for better management of large fire suppression costs. For example, we have changed our policies on land use plans to require the consideration of cost. We have changed our training plans to provide greater training opportunities for volunteer and local fire units. Increasing the number of first responders who are available to suppress unwanted fires decrease the potential that the fire will become a large and costly fire.

We are also broadening implementation of the Appropriate Management Response (AMR) strategy. This approach provides risk-informed fire protection by introducing the concept of managing wildland fire in relationship to the risk that the incident poses. A risk-informed, performance-based strategy increases flexibility in wildland fire decisions, and in some cases may reduce costs relative to a full-suppression strategy and secures desirable environmental outcomes without compromising cost containment objectives. Combined with using new rapid-assessment tools, this will enable a more efficient and cost-effective use of available firefighter numbers and capacity.

The mission of the Cohesive Fuels Treatment Strategy "is to lessen risks from catastrophic wildfires by reducing fuels build-up in the forests and woodlands and by reducing threats from flammable invasive species on rangelands in the most efficient and cost effective manner possible." The strategy embraces cost containment through its four guiding principals:

- Prioritization
- Coordination
- Collaboration
- Accountability

The 10-Year Strategy Implementation Plan specifically details four implementation goals, implementation outcomes, performance measures, and priority tasks. The performance measures enable all parties to assess and track progress toward the desired implementation outcomes envisioned by each goal. The implementation tasks identify specific actions needed to realize measurable progress.

- Goal 1—Improve Fire Prevention and Suppression
- Goal 2—Reduce Hazardous Fuels
- Goal 3—Restoration and Post-Fire Recovery of Fire-Adapted Ecosystems
- Goal 4—Promote Community Assistance

This strategy seeks to create landscape conditions that improve our effectiveness in suppressing unwanted fires and reducing risks to firefighters, communities, and the environment, and to use desirable fires to help achieve natural resource management objectives—acting in the most economical and effectual means possible.

Both the Department and USFS also continue to report on the five common performance measures outlined in the National Fire Plan related to reducing fire risk, such as the performance measure that captures the number of acres in fire regimes 1, 2, or 3 that moved to a better condition class. Additionally, the Administration is measuring the percentage of total National Forest System land for which fire risk is reduced through movement to a better condition. Fuels reduction and restoration treatments are designed to reduce the risks of catastrophic wildland fire to people, communities and natural resources.

In addition, responsible Federal and state agencies are working to share costs and determine up front how costs will be distributed. Sharing responsibility enhances financial accountability and decreases costly duplicative efforts.

RESPONSES OF C. STEPHEN ALLRED TO QUESTIONS FROM SENATOR SALAZAR

Question 2. I am concerned about reports of fire positions being abolished in Colorado. Specifically, my office is aware of position cuts out of the San Juan Public Lands Center in Southwest Colorado. Will you provide me with documentation of the Federal fire preparedness resources currently located/available in Colorado by

district, forest, or other administrative region and how those levels compare to past years?

Answer. BLM is part of an interagency firefighting organization in Colorado that combines federal and state resources to most effectively manage a response to wildland fires. In addition, at any given time, Colorado has access to resources located throughout the country that are capable of responding within 48 hours. Current firefighting resources in Colorado, by management unit, include the following:

NW Colorado Fire Management Unit—Within this unit, BLM, National Park Service (NPS), and U.S. Fish and Wildlife Service resources are administratively combined under "Service First" authority, which is designed to achieve the most effective organization. Fire Management Officers are located at Craig, Meeker, Dinosaur National Park, and Browns Park Wildlife Refuge. These managers supervise a total of seven fire engines and host the Craig Hotshot crew, a national resource.

Upper Colorado River Fire Management Unit—Within this unit, BLM, U.S. Forest Service (USFS), and NPS units are administratively combined under "Service First" authority. Fire Management Officers and Assistants are located at Grand Junction, Rifle, and Eagle. They manage a total of nine engines; two 3-person Initial Attack squads; a helicopter and 6-person helitack crew at Rifle. They also manage the Grand Junction Air Tanker Base, which also hosts national resources that include 10-15 smokejumpers and the 6-person Unaweep Fire Use Module.

Montrose Interagency Fire Management Unit—Within this unit BLM, USFS, and NPS units are administratively combined under "Service First" authority. Fire Management Officers and Assistants are located at Montrose and Gunnison. Eight engines are located throughout the area in Montrose, Gunnison, Norwood, and Paonia.

San Juan Public Lands Center—USFS and BLM units are administratively combined under "Service First" authority. Fire Management Officers are located at Durango, Dolores, and Pagosa Springs. They manage seven engines and the Durango Air Tanker Base, which also hosts a helicopter and helitack crew. Both the helicopter and crew are national resources.

San Luis Valley Public Lands Center—USFS, BLM, and NPS units are administratively combined under "Service First" authority. Fire Management Officers are located at Monte Vista, Del Norte, Saguache, La Jara, and Great Sand Dunes National Park. Three engines are managed within this unit.

Front Range Fire Management Unit—This is a BLM and USFS unit managed at Canon City. They currently have three engines. The BLM Fire Management officer coordinates his activities as a part of the larger Pike and San Isabel National Forest management.

Dispatch Centers—In Colorado, there are six federally operated zone dispatch centers, one each in Craig, Grand Junction, Montrose, Durango, Pueblo, and Fort Collins. The Rocky Mountain Area Coordination Center (RMACC) located in Lakewood is one of 11 regional centers across the country that coordinates the mobilization of firefighting resources. RMACC is responsible for wildfire activity in the five-state region of Colorado, Wyoming, South Dakota, Nebraska, and Kansas.

Aviation—There are three Air Tanker bases in Colorado available to support heavy air tankers in Grand Junction, Durango, and at the Jefferson County Airport. BLM has also created six secondary Single Engine Air Tanker (SEATs) bases at Craig, Rifle, Montrose, Cortez, Kremmling, and Canon City. The Colorado State Office also has a shared BLM/NPS Aviation position.

The numbers and locations of these resources have not significantly changed in recent years, although management practices have changed slightly to improve efficiency and cost-effectiveness.

Question 3. Are you able, at this time, to tell me what that documentation will show?

Answer. The documentation is outlined above.

Question 4. Will you also provide a justification for these resource levels?

Answer. Currently, the numbers and locations of firefighting resources in Colorado, as in other states, are based on fire history and historic organizational needs. In Colorado, the BLM firefighting resources are blended with other agencies to minimize resource duplication and to achieve the most efficient and cost-effective fire organization possible.

Question 5. In the eyes of the Forest Service and BLM have cuts to other National Fire Plan programs such as Volunteer and State Fire Assistance negatively impacted local and state resources available to respond to fires in Colorado?

Answer. Local fire departments are an integral and important component of the nation's wildland fire community. Their first-response capabilities are crucial to the success of land management agencies in protecting lives and values at risk.

Funding through the National Fire Plan has provided significant assistance to support and enhance the capabilities of these partners. Although the Department's

Rural Fire Assistance program was highly successful, it achieved the primary goal of updating equipment and prevention programs in rural fire departments across the country. This program was also duplicative of other Federal fire assistance grant programs. DOI is now focusing efforts and funding on the Ready Reserve program.

The Ready Reserve program, which is focused on the same rural and local departments as RFA, is designed to provide wildland fire training to enhance the safety, effectiveness, and capability of local firefighters who respond to wildland fires near their communities. The program includes providing the training in a format and on a schedule that meets the needs of the local departments; as well as providing some training on-line for greater accessibility. This training includes traditional wildland firefighting courses, simulation exercises, local engine academies, and more.

Through the Ready Reserve fire training and assistance with grants from other sources, the Department continues to support the safety, effectiveness and the role of these units in the nation's wildfire response community.

Question 6. Last week in Garfield County, Colorado a small fire that threatened over 100 homes was quickly suppressed sparing all but 3 homes which were lost. Local first responders benefited from the quick response by the BLM helicopter crew stationed in the county. It is reported that this resource is slated to be transferred from its current base of operations in the future. Can you tell me how your agencies make these decisions?

Answer. BLM is part of a national interagency firefighting team that combines federal, state, and local resources to mobilize resources to effectively manage wildland fires. The Type 3 helicopter currently stationed at Rifle is considered a national resource, similar to the Single Engine Air Tanker stationed in Grand Junction. National resources may be relocated temporarily or permanently based on national fire activity and resource needs.

For now, the home base for this helicopter will remain in Rifle. The helicopter's location may be re-visited at sometime in the future, depending on several factors including the level of fire activity, both regionally and nationally; fire potential; and risks to communities. The Department focuses its firefighting resources in areas with the greatest fire activity and resource needs. The Interstate-70 corridor has valuable natural resources, urban development, and complex topography, all of which are considered in the location of the helicopter and other fire resources.

Question 7. It is reported that this resource is slated to be transferred from its current base of operations in the future. Can you tell me how your agencies make these decisions?

Answer. National resources can be transferred to any location in the country where they are most needed. The Type 3 helicopter in Rifle is regarded as a national resource. The transfer of it would be based upon the factors mentioned above: level of fire activity on both a regional and national basis; potential for new fire activity; and risks to communities and important natural resources. It's important to note that the system works both ways. If Colorado experiences a difficult season, then national assets from other parts of the country would be sent there. The decision to move national resources is made by the National Multi-Agency Coordinating Group (NMAC) in Boise, Idaho, which is composed of senior fire managers representing federal and state fire agencies.

Question 8. Will you also provide my office with notices and justification for any resource transfers that affect Colorado in the future?

Answer. Yes, BLM Colorado can brief your staff on fire resource status, locations, and fire activity on public land in the state.

Question 9. Have your agencies done everything in their power to insure that the resources needed to protect life, property, and other important resources are in place for this fire season?

Answer. Yes. BLM, along with our interagency partners, is part of a national interagency firefighting team that combines federal, state, and local resources in order to mobilize necessary resources to effectively manage wildland fires based upon fire activity, fuel conditions, and fire activity potential.

Question 10. Are there unfunded needs to be addressed in terms of preparedness?

Answer. The Department supports the funding levels proposed in the President's Budget. The Department is continually working to adapt to the challenges we face and plans to implement a number of strategies to maintain the most efficient on-the-ground firefighting force possible.

Question 11. Are there other legislative authorities that federal agencies require to respond to fire incidents effectively and efficiently?

Answer. Title IV, Section 428 of S. 1696, the Department of the Interior, Environment, and Related Agencies Appropriations Act, 2008, authorizes the Departments to pay for up to one-half of the cost of personal liability insurance for an expanded number of agency wildland firefighters. This provision would allow the agencies to

provide assistance to many of the firefighters who risk their lives to protect public resources.

Question 12. What action will the Forest Service and Department of Interior take in response to the GAO report unveiled today?

Answer. We are currently reviewing the report and will present a formal response to GAO in the future.

RESPONSES OF C. STEPHEN ALLRED TO QUESTIONS FROM SENATOR DOMENICI

Question 13. What did the BLM do with the emergency fire funding that it got in September of 2006? Was it utilized to pay back the fire borrowing it did in FY 2006?

Answer. Of the $100 million emergency funding received in September 2006, $96 million was used to repay all Section 102 emergency transfers from the fire bureaus' construction and land acquisition accounts. One million of the carry-over was used to partially repay the Burned Area Rehabilitation account. The remaining three million helps allow the program to fund suppression at the ten-year average.

Question 14. Are the BLM and Park Service fully prepared for this fire season?

Answer. For the 2007 fire season, we have secured firefighting forces—firefighters, equipment, and aircraft—comparable to those available in 2006. Our fire managers assign local, regional and national firefighting personnel and equipment based on anticipated fire starts, actual fire occurrence, fire spread, and severity with the help of information from Predictive Services.

Question 15. If there were one thing you would have this Congress do to reduce your agencies' cost of fire fighting, what would that be?

Answer. We believe it would be helpful to provide more information to the public about wildland firefighting roles and responsibilities. Managing the expectations of our partners, continuing a national education strategy, maintaining community assistance, and relying on a risk-based approach to suppression operations will help reduce the cost of firefighting in the long-term.

Our educational outreach includes, but is not limited to:

- Community Wildfire Protection Plans (CWPPs)—an essential element for reducing the risk to communities from wildland fire.
  - —A CWPP Handbook was developed and sponsored by the Society of American Foresters, the National Association of Counties, the National Association of State Foresters, and the Western Governor's Association.
  - —Communities with CWPPs in place are given priority for funding of hazardous fuels reduction projects carried out under the auspices of the Healthy Forest Restoration Act.
- The Forest Service's Volunteer Fire Assistance (VFA) program provides Federal financial, technical, and other assistance through State Foresters or similar officials to organize, train, and equip fire departments in rural areas and rural communities of 10,000 or less, to prevent and suppress fires. The VFA program is sponsored and funded by the Forest Service and administered by the State Foresters through the state and private forestry system.
- The Department's agencies and their state partners initiated the Ready Reserve program in 2006. This program focuses on training rural and volunteer firefighters. Training for rural fire departments through Ready Reserve focuses on enhancement of firefighter safety, building wildland suppression skills, and improving overall cooperator effectiveness, particularly in WUI firefighting operations.
- The Forest Service State Fire Assistance program supports critical preparedness needs for firefighter safety, increased initial attack capability and training. Base levels of funding are distributed to the State Foresters based on recognition of the need for states to maintain and enhance coordination and communication with federal agencies.

RESPONSES OF MARK REY TO QUESTIONS FROM CHAIRMAN BINGAMAN

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

Question 1. In the agencies' comments on the GAO's report, Mr. Cason and Chief Kimball asserted that "we do have objectives and clearly defined goals that make up our strategy for better managing large fire suppression costs." Can you tell me, specifically, what the agencies' "clearly defined goals" are for containing costs?

Question 2. The Management Efficiencies document you submitted in January indicates that 25-75% of large fire costs could potentially be saved by changing agency policy to "allow movement between suppression and wildland fire use as needed." Has the agency changed policy accordingly, and, if not, when will that policy be revised?

Question 3a. At a hearing before the House Natural Resources Committee last week, you testified that there are about 80 million acres of high-priority acres in need of fuel treatments.

How did you arrive at that number?

Question 3b. Can the agency identify where exactly those acres are?

Question 3c. Does the agency have an estimate of the cost of treating those acres?

Question 3d. How long do you think it will take for the agencies to treat those acres?

Question 4. The Independent Panel's review of the quality of some of the Forest Service's Fire Management Plans indicated that none of them even approached an adequate discussion of all of the key issues for wildfire management. As a result, the study recommends that Fire Management Plans should be dynamic, integrative, and collaborative strategic assessments of fire management planning and policies that:

a. assess in-depth and continually-update fire history since 2000 in terms of expected fire behavior, intensity, and risk (p.17);

b. organize the forest into zones or areas that clearly identify both forest resource management and fire protection goals (p.13);

c. monitor the growth of the WUI and compare fire management priorities and protection policies with state, local, tribal neighbors—and private and public interests in a highly collaborative process that includes enough detail to define protection roles (p.17);

d. provide guidance on the appropriate response to wildfires (p.13);

e. refine and explain cost-management expectations for fire management programs (Prevention, Fuels Reduction, Suppression, and Restoration) (p.17);

f. include up-to-date information on size, location, and maintenance of fuels reduction projects (p.14);

g. create a strong linkage from the FMP to the WFSA process (p.17); and

h. include information on all other forest activities that affect fire planning (p.14).

In an agency press release in May, you stated that "the recommendations of the panel will be acted upon immediately." Can you tell me how you have acted on the specific recommendations listed above to-date and when we can expect the Fire Management Plans to comply with these criteria?

RESPONSES OF MARK REY TO QUESTIONS FROM SENATOR SALAZAR

Question 5. I am concerned about reports of fire positions being abolished in Colorado. Specifically, my office is aware of position cuts out of the San Juan Public Lands Center in Southwest Colorado.

Will you provide me with documentation of the Federal fire preparedness resources currently located/available in Colorado by district, forest, or other administrative region and how those levels compare to past years?

Question 6. Are you able, at this time, to tell me what that documentation will show?

Question 7. Will you also provide a justification for these resource levels?

Question 8. In the eyes of the Forest Service and BLM have cuts to other National Fire Plan programs such as Volunteer and State Fire Assistance negatively impacted local and state resources available to respond to fires in Colorado?

Question 9. Last week in Garfield County, Colorado a small fire that threatened over 100 homes was quickly suppressed sparing all but 3 homes which were lost. Local first responders benefited from the quick response by the BLM helicopter crew stationed in the county.

It is reported that this resource is slated to be transferred from its current base of operations in the future. Can you tell me how your agencies make these decisions?

Question 10. Will you also provide my office with notices and justification for any resource transfers that affect Colorado in the future?

Question 11. Have your agencies done everything in their power to insure that the resources needed to protect life, property, and other important resources are in place for this fire season?

Question 12. Are there unfunded needs to be addressed in terms of preparedness?

Question 13. Are there other legislative authorities that federal agencies require to respond to fire incidents effectively and efficiently?

Question 14. What action will the Forest Service and Department of Interior take in response to the GAO report unveiled today?

RESPONSES OF MARK REY TO QUESTIONS FROM SENATOR CANTWELL

Question 15a. Secretary Rey, we are observing serious wildland fire conditions such as an increasing number of large and severe wildfires, lengthened wildfire seasons, increased areas burned, and increasing numbers of large wildfires in fire-sensitive ecosystems. The annual number of acres burned on public lands has been increasing over the last couple of decades. Recent research suggests that these trends are, in part, related to shifts in climate. For example, a warming climate is contributing to longer wildland fire seasons with more extreme wildland fire events, which greatly increase the risk to human lives and infrastructures, particularly within the wildland urban interface. The Forest Service is still managing forests mainly for commodity outputs, but managing forests for carbon sequestration may be the most valuable role for our nation's future generations. Without taking action to manage fire-dependant ecosystems today and in the absence of thoughtful preparation and planning for the future, wildland fires are likely to become increasingly difficult to manage. Last November, the Association for Fire Ecology in the "San Diego Declaration on Climate Change and Fire Management" issued specific actions that federal land managers can take to better prepare for and mitigate future impacts of climate change on wildland fire management.

Secretary Rey, are you familiar with the "San Diego Declaration on Climate Change and Fire Management"? Does the Administration endorse the policy principles laid out in the Declaration?

Question 15b. What is the Forest Service doing to implement the recommendations in the Declaration to ensure that the federal government is prepared to address the impacts of climate change on wildland fire management?

Question 15c. How, if at all, are you integrating climate change scenarios into long-range forest and fire management planning?

Question 15d. How are you integrating impacts of climate change, like changes in temperature, precipitation, and storm frequency, into post-fire management proposals?

Question 15e. What kinds of monitoring programs have been established to track changes in vegetation, fuels, and fire regime over time, especially in areas undergoing rapid change due to global warming?

Question 15f. What kinds of information and education systems has the agency established to inform the public about the potential impacts of climate change on natural resources and fire disturbance regimes?

WILDLAND FIREFIGHTER SAFETY

Question 16. Earlier this year, I introduced and this committee unanimously recommended the Wildland Firefighter Safety and Transparency Act of 2007, S. 1152. This bill directs the Secretary of the Interior to submit annual reports to Congress on the wildland firefighter safety practices of the Secretaries of wildland firefighting agencies, including training programs and activities for wildland fire suppression, prescribed burning, and wildland fire use. A report by the Department of Agriculture's Office of Inspector General (Report No. 08601-42-SF, March 2006) identified significant problems with oversight and administration of the Forest Service contracts and agreements for private wildland fire crews. These and other reports highlight the need for Congress and the Federal agencies to improve oversight in the area of wildfire safety. The agencies indicated at the January 30, 2007 Committee oversight hearing on wildfire that they are working on making some major changes to their training and other safety programs, which further highlights the need for Congress to keep abreast of the agencies' wildfire safety program. The annual report to Congress required by S. 1152 will help Congress do so.

Will the Administration commit to supporting this common sense and necessary legislation that will allow Congress and the Federal agencies to improve oversight in the area of wildfire safety?

Question 17. Because of the inherent risks and growing complexity of managing wildland fire, I understand some wildland fire managers in the Forest Service and Department of the Interior purchase personal liability insurance. The interest in personal liability insurance by these managers has increased since the Department of Justice recently decided to pursue criminal charges against a Federal wildland firefighter relating to a number of fatalities during a 2001 wildfire. Along with Chairman Bingaman and Ranking Member Domenici, I recently introduced legisla-

tion that would expand access to professional liability insurance for our brave wildland fire managers. Provisions of this legislation were included in the Senate Appropriations Committee Fiscal Year 2008 Interior, Environment, and Related Agencies Appropriations Act.

Secretary Rey, in your testimony you indicated that, as a result of the criminal charges stemming from the 2001 wildfire, there is some uneasiness among some wildland firefighters. You also indicated that the legislation I introduced along with Chairman Bingaman and Ranking Member Domenici would help significantly in that area and improve morale among federal wildland firefighters. Can you elaborate on your support this legislation, and how it can help ensure thorough investigations in the aftermath of wildland fire fighter fatalities?

RECREATION AND ENVIRONMENT

Question 18. Earlier this year, Senator John Warner and I, along with 17 other Senate Colleagues, introduced bipartisan legislation that would codify the 2001 Roadless Rule. The Forest Service's failure to address the more than $8.4 billion road maintenance backlog, while advancing an agenda that promotes new road construction and increased commercial logging compounds the Forest Service's fiscal problems. Moreover, Americans have expressed their strong desire to see the last 30 percent of pristine land on National Forests protected. In drafting the Roadless Rule, the Forest Service held more than 600 meetings and hearings in 37 states, the majority in communities near National Forests. More than 25,000 people participated. Of the more than 1.6 million comments submitted on the then proposed Roadless Rule, an overwhelming 95 percent favored the strongest possible protection for roadless areas. As well, in 18 separate opinion polls, conducted by both Republicans and Democrats, Americans demonstrated robust support for roadless area protection. Clearly the American people understand the need for strong roadless forest protection. Representing less than two percent of our country's landscape, these pristine lands are sources of clean drinking water for millions of Americans and wonderful backcountry recreation, including hiking, hunting and fishing. They offer safe harbor for vanishing and imperiled wildlife and fish species. They also provide a wide range of economic values and improve the overall quality of life in communities adjacent to National Forests.

Secretary Rey, the Bush Administration has spent six years trying to overturn the 2001 Clinton Administration Roadless Rule. As you know, the most recent ruling in this costly legal saga reinstated the 2001 Rule. Will the Bush Administration finally end its divisive efforts to overturn this broadly popular Rule?

Question 19a. Mount St. Helens in southwest Washington is currently a National Volcanic Monument managed by the Forest Service. Thousands of Americans each year visit the Mt. St. Helens National Volcanic Monument to see the stunning effects of the 1980 eruption. This unique destination showcases the eruption's dramatic aftermath, and lets visitors see returning plants and animals firsthand. Unfortunately, in the face of maintenance backlogs and budget constraints, the Forest Service has recently announced plans to scale back visitor center operations at the monument, including plans to close the Coldwater Ridge Visitor Center during 2008. Yet, Administration budget requests for Region 6 programs that support the Monument have seen steady decreases since FY 2001. Recreation, Wilderness and Heritage in Region 6 has decreased from $28.5 million for FY 2003 to under $19 million for FY 2008, a 35% decrease. Capital Improvements for Trails in Region 6 has decreased from $10 million in FY 2004 to $7 million in FY 2008, a 30% decrease. More than $13 million in deferred maintenance has been identified for the Monument, which apparently precipitated the Forest Service's plans to scale back visitor center operations at the monument. Yet, the Administration's Forest Service FY 2008 budget request for Deferred Maintenance is a 25% decrease from FY 2006 funding levels, and the Administration requested no money for Deferred Maintenance in FY 2004.

In light of the Administration's steady trend of reduced budget requests for programs that support the Mt. St. Helens National Volcanic Monument, what is the Forest Service's plan to protect natural resources while also expanding recreational and visitor opportunities at Mt. St. Helens?

Question 19b. Please provide the Administration's budget requests, and final appropriation, for all Region 6 accounts for FY 2001—FY 2008 that support programs at the Monument, including the Capital Improvement and Maintenance accounts for Deferred Maintenance, Facilities, and Trails, and also the Region 6 Recreation, Wilderness and Heritage account.

Question 20a. The Forest Service estimates that it needs several billion dollars nationwide to maintain existing roads, replace culverts, and decommission old

roads, including over $300 million in Washington. However, the Forest Service is spending just $3 million annually on road maintenance in Washington's national forests, while the backlog of deferred maintenance grows by $8 million each year. Unfortunately, the Administration's budget request for FY 2008 will significantly worsen the problem of Forest Service roads. Nationally, the budget proposes a 31 percent cut in Forest Service road maintenance, while road decommissioning will decline from 682 miles in 2006 to 375 miles in 2008—a 55 percent reduction.

What are the current estimated costs of deferred road maintenance, culvert replacement and repairs, and road decommissioning?

Question 20b. How have those estimated costs changed since 2000, when the Forest Service FY 2000 Proposed Budget estimated $8.4 billion in road needs?

Question 20c. To what extent are those changes due to better road information versus reduced maintenance standards?

Question 20d. How much money has the Forest Service spent in each of the last five fiscal years to address the road maintenance backlog?

Question 21a. The Forest Service was sued by Forest Service Employees for Environmental Ethics (FSEEE) for its use of toxic fire retardant chemicals. In response to a court order, the Forest Service conducted an Environmental Assessment and was supposed to have issued a decision in March 2007. According to the agency's official website for the Environmental Assessment process, it has yet to announce any decision or provide an update. Aviation costs to apply fire retardants are one of the highest cost centers in suppression operations. Taxpayers are paying twice: first, the economic costs of using aircraft, and second, the ecological costs of polluted water and killed fish, including endangered species.

What is the status of the Environmental Assessment for the aerial application of fire retardants?

Question 21b. When will a Decision Notice or Environmental Impact Statement be issued?

Question 21c. How does the agency intend to monitor and track the effects of fire retardants to be used this season?

FIRE MANAGEMENT STRATEGY AND COST CONTAINMENT

Question 22a. Fire costs threaten to consume the majority of the Forest Service's discretionary budget, leaving them very little money to do anything else. The Forest Service's wildland fire costs increased from 13% of their budget in Fiscal Year 1991 to a staggering 45% projected in Fiscal Year 2008, and experts are predicting that global climate change will only lengthen the fire season. Funding for non-fire Forest Service programs decreased 14% between Fiscal Year 2002 and Fiscal Year 2006 (adjusted for inflation). It's clear that something needs to change. In a recent report the USDA IG recommended that the Forest Service expand its Wildland Fire Use (WFU) program to help reduce suppression costs. Moreover, from the outset, one of the primary goals of the federal Wildland Fire Policy, Ten-Year Comprehensive Strategy, and National Fire Plan was to restore fire-adapted ecosystems, including using wildland fires to help make landscapes more fire-resilient and help protect communities. However, in 2006 only 165,000 acres were managed as Wildland Fire Use out of the almost 10 million acres that burned.

Would you agree that the Department of Interior and Forest Service should allocate more funding for WFU training and implement policy changes that better incentivize WFU?

Question 22b. What policy incentives do you believe would be the most effective in achieving an expanded WFU program?

Question 22c. What current policies, as noted by the USDA-OIG and GAO, that constrain the implementation of wildland fire use are you revising in order to expand WFU?

Question 22d. What assurance can you provide the committee that these policies changes will be pursued?

Question 23a. The Forest Service is proposing a new fire suppression approach ("risk-based" or "risk-informed" suppression) that recognizes that not all wildland fires need to be managed in the same way that they will be implementing during this fire season. Under this approach, WFU should be a more readily available alternative for managing wildland fire. This is an important step in the right direction, because the agency has acknowledged that full suppression attack is not always the right tactic in every situation.

Do you think that this change in suppression response, i.e. not actively suppressing all fires or all portions fires but instead determining the appropriate management response based on a set of risk factors, will help contain suppression costs?

Question 23b. What results do you expect to see in the 2007 fire season? Within the next five years?

Question 23c. How is the agency working to ensure that this approach is adopted throughout the agency—district, forest, regional levels?

Question 23d. The new suppression performance measures proposed in the budget do not seem to be designed to capture accomplishments that would result from using this new approach. How will the Forest Service measure success in this new fire management approach?

Question 24a. The GAO has recommended numerous times that the land management agencies need a cohesive strategy for managing wildland fire that explicitly identifies the long-term options and related funding needed to reduce fuels in national forests and rangelands and to respond to wildland fire to allow the agencies and Congress to determine the most effective and affordable long-term approach for addressing wildland fire problems.

What actions have the Forest Service and DOI taken to incorporate GAO's Wildland Fire Management recommendations?

Question 24b. Please describe in detail what elements the agencies' cohesive strategy should contain and how the agencies will use this type of strategy to better implement wildland fire management.

Question 24c. GAO has stated that the agencies' fuels strategy does not address their recommendation. Why is this the case?

Question 25a. The 1995 and 2001 Federal Fire Policy clearly states that, "Every area with burnable vegetation must have an approved Fire Management Plan (FMP)." FMPs are one of the foundational elements of Fire Preparedness, and they help make fire management safer, more economically efficient, and more effective. Failure to have a current approved FMP means land managers have only one option in response to wildland fires: total aggressive suppression. The Forest Service has been successfully sued twice for failure to develop FMPs in compliance with NEPA. In response, the agency has withdrawn the FMPs from the Six Rivers and Sequoia National Forests in California, and has threatened to withdraw them from the National Forests in Region 3 if additional lawsuits are filed there.

What is the status of FMPs in our National Forests?

Question 25b. Given that it has been twelve years since the Federal Wildland Fire Policy mandated FMPs, what number and percentage of all National Forests have current, approved FMPs?

Question 25c. What role, if any, will the public have in developing FMPs?

Question 25d. How will the Forest Service ensure that FMPs utilize the best available science, include public input, and fully comply with NEPA?

Question 26a. According to the Federal Wildland Fire Policy, a current, approved FMP is required in order to implement WFU. The Forest Service is currently revising its Manual in order to remove any requirement for completing FMPs. If FMPs are abolished, this may prevent the option of WFU which is a safer and cheaper method for managing wildland fires than full suppression.

Why is the Forest Service removing requirements for FMPs from its Manual?

Question 26b. If FMPs are no longer required on National Forests, how can land managers implement WFU?

Question 26c. How will the Forest Service be in compliance with the Federal Wildland Fire Policy if it implements WFU without FMPs?

Question 26d. What effect will withdrawing FMPs have on the planning efforts of interagency partners?

Question 27a. here are approximately 40 million acres of Fire Regime I and III (short-interval or high fire frequency with low severity) that have been identified in Condition Class II or III (moderate to high fire danger due to missed fire cycles). These ecosystems benefit from prescribed burning or WFU, and rapidly degrade to a high wildfire danger without regular, repeated burning.

How many acres of forests and grasslands in Fire Regimes I and III have been prescribed burned in the last year? In the last five years?

Question 27b. What percentage of the total acreage of land in Fire Regimes I and III is this amount?

Question 27c. What is the reason for failing to increase amount of prescribed burning or WFU on these lands?

Question 28a. Of the 1.1 million acre Colville National Forest, approximately 300,000 acres are in immediate need of thinning and fuels reduction activities—in the short-term 20,000 acres could be treated there annually. At least one-third of this 300,000 acres is inside the wildland urban interface and consists of dense timberlands that must be mechanically thinned. Local counties have prepared community wildfire protection plans that support this need and a collaborative group of stakeholders, including the conservation community, have been in support of

large-scale thinning projects for nearly two years. Unfortunately, the Forest Service has been unable to move anywhere near fast enough to prepare these large-scale projects and the local mills are struggling to survive. We will lose the ability to do this work economically if we lose more mills.

Can you explain the reasons for the delays on the Colville?

Question 28b. Can you please provide me a list of the planned future projects on the Colville and the number of acres to be treated, as well as funding available to that forest in FY 2005 to FY 2007?

Question 29a. The Administration's 2008 budget request continues a downward trend in funding for community fire protection programs. Programs such as State and Volunteer Fire Assistance are critical in helping communities prepare for wildland fire—through firefighter training, hazardous fuels reduction on non-federal lands and Community Wildfire Protection Planning. These proactive steps are also key in reducing federal suppression costs. However, under the President's Budget these programs continue to struggle to simply keep up with inflation. This budget proposes, for example, that the State Fire Assistance program be reduced to $68.1 million, a 14 percent cut from the FY2007 level of $78.7 million.

How will the Forest Service help ensure that at-risk communities are adequately prepared for the inevitable wildland fire when community assistance programs are under-funded and funding for them continues to decline?

Question 29b. How do State Fire Assistance funds help meet Congress' goals as stated in the 10-year Strategy Plan and the Healthy Forests Restoration Act?

Question 29c. Are State Fire Assistance funds matched or leveraged at the state and local level? If so, what sort of leverage do State Fire Assistance funds provide and to what benefit?

RESPONSES OF MARK REY TO QUESTIONS FROM SENATOR DOMENICI

Question 30. If the Forest Service did not have to fulfill the requirements of NEPA and if it were insulated from legal challenges, how many acres of mechanical treatment could it accomplish a year with $1.5 billion dedicated to treating the forest stands that are considered to be at high risk in Stand Condition Class II and III areas?

Question 31. In September of 2006, Congress provided the Forest Service $100 million to repay the fire borrowing that occurred during that fiscal year.

Have those funds been used to repay the fire borrowing that occurred that fiscal year? If not, why have they not been repaid?

Question 32. Just a couple of weeks ago, Congress provided the Forest Service another $400 million in emergency fire fighting funding.

Can you tell me how much of that $400 million will be withheld from the field in the form of National and Regional Office overhead and other national assessments? Please give me your answer as a percent of the total $400 million.

Question 33. Are the Forest Service's fire fighters fully prepared for this fire season?

Question 34. I saw a letter from five former chiefs of the Forest Service about the cost of fire. I am wondering what each of the five Chiefs did to control the cost of fire.

Question 35. Chief R. Max Peterson served between about 1978 and 1987. In terms of percent of the discretionary budget, how much did the fire programs cost annually on average during his tenure? Please include fire preparedness, fire suppression, and hazardous fuels in your cost estimate.

Question 36. Chief Dale Robertson served between 1987 and 1994.

In terms of percent of the discretionary budget, how much did the fire programs cost annually on average during his tenure? Please include fire preparedness, fire suppression, and hazardous fuels in your cost estimate.

Question 37. Jack Ward Thomas served between 1994 and 1997 and he convinced Congress to provide the agency an additional $2 billion for the national fire plan. Most of that funding went into the fire fighting accounts.

What steps did he take during is tenure to control the cost of fire fighting?

Question 38. Michael Dombeck served from 1997 to 2001 and costs continued to escalate.

What steps did Chief Dombeck take to decrease the cost of fire fighting?

Question 39. Dale Bosworth served from 2001 to 2007.

What steps did he take to reduce the cost of fire fighting in the agency?

Question 40. Have you taken the time to look back at how the program was run during the Max Peterson and Dale Robertson era to see if perhaps some of the practices and policies adopted during those eras might need to be reconsidered?

Question 41. I saw a February 21st Yakima Herald-Republic news article that said 23 percent of 3,300 fire fighters who participated in a survey would decline to serve as an incident commander, and 36 percent of those surveyed indicated they would decline fire fighting assignments this next summer as a result of the recent involuntary manslaughter charges resulting from the Thirtymile Fire case.

Are you familiar with this survey which was done by the International Association of Wildland Fire Fighters?

Question 42. How much credence do you put into this survey?

Question 43. What percent of your Level I and Level II Incident Commanders and key members of those teams have opted to forego working on those teams this fire season?

Question 44a. Could you provide the Committee with the following:

An estimate of how much of the discretionary budget is consumed by salaries, benefits, and travel for each of the following work areas: Research, State and Private, National Forest Systems; and the national fire plan.

Question 44b. An estimate of how much of the discretionary budget is expended at the following line levels: the Washington Office; the Regional Offices; the Forest Supervisors Offices; the District Offices; and the Research Stations.

APPENDIX II

Additional Material Submitted for the Record

STATEMENT OF THE FEDERAL WILDLAND FIRE SERVICE ASSOCIATION

PREFACE

The FWFSA recognizes the significant time constraints placed on the Committee members. Much of our commentary pertaining to preparedness levels is based upon information submitted to this Committee in our January 30, 2007 written testimony concerning Wildland Fire Suppression Cost Containment.

That being said, we will attempt to keep the instances of redundancy to a minimum in this testimony and ask the Committee members and all other interested parties to refer to our January 30, 2007 testimony as entered into the record.

THE AGENCY SPIN ON FIRE PREPAREDNESS

Year after year representatives from the USDA and the Forest Service appear before this and other committees of jurisdiction and recite the same refrain: ". . . we are fully prepared for the fire season." In March of 2006 as a fire season that will live in the minds of many firefighters who lost too many colleagues; to others who saw record-breaking acreage burned as well as record-breaking expenditures in suppression, USDA Undersecretary for Natural Resources and the Environment Mark Rey once again repeated the all too often heard phrase ". . . the Agency is fully prepared for this season." He went on to report that "We think what we've allocated (for fires) is going to be appropriate and adequate for the task." How wrong he was!

These rhetorical claims of preparedness echo those of previous testimony from the ONLY voice Congress has heard from on such matters, Agency representatives. Additionally, despite stunning expenditures in suppression, losses of firefighter lives and all that is a wildfire season, the Agency continues to suggest each year that it has achieved a 98-99% initial attack (IA) capability without providing any hard data to validate such claims.

The FWFSA, whose members fill every conceivable fire position in each land-management agency from entry-level firefighter to Fire Chief simply must refute such statements as misleading and inaccurate.

THE NATIONAL FIRE PLAN

A key component of the National Fire Plan is fire preparedness. The concept is fundamental in that being properly prepared will lead to reduced suppression costs. The text of the NFP states, pertaining to preparedness "Assuring that necessary firefighting resources & personnel are available to respond to wildland fires that threaten lives & property."

Despite this component, the Administration continues to reduce preparedness funding & increase suppression funding. Furthermore, the Agency has refused to educate the Administration via OMB that the priority should in fact be preparedness & not suppression. Undersecretary Rey stated categorically before the record-breaking 2006 season that "while money for fire preparation has been cut, the Agency has increased funding for fighting fires once they have started." Thus the Administration and the Agency have embarked on wildland fire preparedness policies that contradict the National Fire Plan. These policies needlessly lead to significantly inflated suppression costs.

THE 2006 PREPAREDNESS TRUTH

At the same time Mr. Rey was providing the aforementioned testimony to Congress & the Press, federal wildland firefighters across the country employed by the Forest Service were being informed by their Regional Forest Service offices of sig-

nificant cuts to preparedness resources. Although Mr. Rey was candid about the reductions in preparedness allocations, no one in Congress bothers to ask why.

Although our previous testimony refers to this issue it bears repeating. Hundreds of millions of dollars in fire preparedness & fuels funding appropriated by Congress continued to be systematically diverted by the Washington Office (WO) and a host of line officers from Regional Foresters to Forest Supervisors & District Rangers to fund a variety of non-fire projects. The most visible illustration of this is the HR Service Center in New Mexico, part of the Forest Service' Business Operations Transformation Program. Despite the Forest Service patting itself on the back and testifying that the service center became operational in 2005, it most certainly is not. At one point, Mr. Hank Kashdan, Deputy Chief of Business Operations explained why the move to Albuquerque had been so costly. The WO had no idea that "T-1 data lines" were not available to most field stations and that the entire internal field level dependent customers were left to travel in excess of 25 miles to perform basic transactions. In just one Forest Service region, unfunded preparedness resources included: 48 engines, 7-Type 1 Hand crews, 1 Type 2 Hand Crew, 12 water tenders and misc. resources such as prevention personnel, dozers, dispatchers and approximately 515 firefighter positions not being staffed.

In fact, a Forest Supervisor in California sent a memo to Forest employees dated 3-30-06 which stated in part:

- We are having great difficulties financing our current organization as structured with our current funding level & possibility of facing a RIF.
- Unable to fill critical positions currently vacant due to funding limits.
- Centralization of many administration functions (HR move to New Mexico) has left us unable to meet the additional residual workload in these areas.
- Further analysis shows that the number of employees we need on this Forest exceeds the amount of money we receive (from the Washington Office).
- Anytime an effort such as this is announced, there will be stressed. Employees become concerned about whether or not they will have a job in the end.

Until the 2006 fire season, such unfunded preparedness resources were not an issue because the Forest Service allowed Forests to operate with a deficit budget. For the 2006 season, former Forest Service Chief Dale Bosworth indicated that deficit spending would no longer be allowed.

Suddenly as the 2006 Season commenced, Fire Management Officers were dealing with unfunded preparedness resources; a staggering retention problem and having to figure out how to best prepare for the season. Many engines were staffed with only 3 personnel instead of five. Many engines operated only five days a week instead of 7.

Still, before the season truly took off, the FWFSA implored Congress to recognize the consequences of a fire season disaster of unfunded preparedness resources and uncontrolled retention problems.

EVIDENCE OF LACK OF PREPAREDNESS IN 2006

There is no question in our mind that the lack of federal preparedness resources in 2006, caused primarily by the systematic diversion of such funds to non-fire projects, cost pools, admin costs etc., needlessly increased suppression costs and increased the risk to our firefighter's safety.

There are many incidents that occurred during the 2006 season, (one in which Mr. Rey claimed to be adequately prepared for) that illustrated the lack of preparedness. As we have previously testified to, lists referred to as "Unable to fill lists" compiled by The National Interagency Fire Center (NIFC) in Boise, Idaho which traditionally were sentences long, were now pages long. These lists note the resources requested and the incident requesting it. Simply put, requested federal resources were unavailable.

Federal fire preparedness resources that Congress appropriated money for simply were not in place during the 2006 season. As a result, fires that should have been handled on initial attack instead grew in size, intensity, danger and of course cost while either awaiting federal resources from much greater distances or because significantly higher-priced non-federal resources were summoned.

We informed Congress as early as February 2006 that without these preparedness resources being funded, the Agency would exhaust its suppression budget, exhaust the reserve $500 million and by the fall, seek an emergency supplemental appropriation for suppression. All came true.

BUDGET TRANSFERS

As long ago as March 2004 before this very same committee, Mr. Rey stated that the Agency would "support a solution to the fire transfer issue." This was in response to a comment from Senator Bingaman that he "was concerned about the chronic failure to address the chaos of fire transfers to meet fire suppression needs."

Yet as recently as August of 2006, former Forest Service Chief Dale Bosworth was notifying his Regional Foresters of his "concern about the seriousness of this year's fire season and the mounting costs and threat of fire funding transfers." As the FWFSA predicted to Congress, the suppression funds were wiped out within weeks of this memo from Chief Bosworth and additional funding sought. Apparently as of August 2006, there is no solution to the budget transfer problem.

HISTORY REPEATS ITSELF

In the fall of 1995, nearly 12 years ago, a Fire Management Officer from the Angeles National Forest in California was interviewed and quoted in the Los Angeles Times about temporary firefighters being laid off at the height of the season as the Forest was facing a budget cut of $2 million. The FMO indicated that on the ANF, 130 temporary firefighters (those paid for through preparedness funding) were being laid off. Additionally, the San Bernardino National Forest (location of last year's Esperanza Fire tragedy) was laying off 120 temporary firefighters and similar layoffs were reported on the other two Southern California Forests, the Cleveland & Los Padres. The FMO went on to say that engine companies "will respond with three person crews instead of five" and that fire stations would no longer operate seven days a week. He went on to say that Forest Service firefighters would need to rely more heavily on municipal & county firefighters (already costing 4-5 times that of their federal counterparts).

The FMO went on to say that the staffing reductions carry "an inherent increase in risk." He was quoted further as saying:

> The key in wildland forest management is 'Hit them hard & keep them small.' If you hit a fire hard at the beginning, it won't become a danger to anyone but the firefighters. Its when a fire escapes that it causes problems . . . And as far as what's going to happen with fires escaping, well, that's going to be a crapshoot now.*

In response, to the cuts, Harry Croft, Asst. Director for Planning in the Fire & Aviation Dept. of the WO blamed "a lack of planning at the national forest level."

How prophetic the comments of the ANF FMO would be in 2006. These same comments were echoed throughout last year and have already been spoken this year.

2007 PREPAREDNESS: ARE WE READY?

Despite the annual assurances from the Agency that it is adequately prepared for the 2007 fire season, our firefighters, the true experts on the matter, say otherwise and the facts support their concerns.

On the San Juan National Forest in Colorado, the Forest's Workforce Planning Group incredulously chose to cut 17 fire positions. The losses of the highly trained and experienced firefighters are set to commence this year. We have implored the offices of Senators Allard & Salazar to take action to stop these cuts.

In California (Forest Service Region 5), the scenarios prove even more dire. On just one ranger district on the very same Angeles National Forest that Mr. Harbour served on, there is a 46% vacancy rate in fire positions. In fact, the former fire chief of the ANF recently abruptly retired. Shortly before he did, he confided in the FWFSA's Business Manager Casey Judd that the Forest Service' fire program was "falling apart at the wheels." Subsequent to his loss, the Deputy Fire Chief will be forced into retirement within the next month leaving no fire leadership on the forest as the season starts.

To compound California's problems, a significant number of firefighters, engineers (fire apparatus operators) & captains have left the federal system for CAL-FIRE (formerly California Dept. of Forestry & Fire Protection) for better pay & benefits. This, coupled with a seriously dysfunctional hiring process and unfunded preparedness resources has created serious staffing shortages. In a recent memo to ANF employees, Forest Supervisor Jody Noiron pointed out the obvious: "As with other forests in the region, the ANF currently has a significant number of vacancies." Fire

*The FMO on the Angeles National Forest in 1995: Tom Harbour, now Fire & Aviation Management Director for the Forest Service.

Management Officers are having to treat employees as chess pieces in an effort to maximize staffing. Despite heroic efforts, engines remain completely un-staffed as do other support apparatus such as water tenders. This had led to letters from the public being sent to Forest Supervisors urging them to re-open stations and staff engines.

To further compound this problem, as a result of the "exodus" to CAL-FIRE, the number of very limited to no experienced firefighters being asked to hit the front lines is enormous. Stunningly, in many locations, Forest Supervisors (most with little to no fire experience or expertise themselves) are making it clear to the FMOs in charge of ensuring these new firefighters are ready & trained for the season, that the priority is for these new firefighters to complete their AgLearn courses, leaving little time to prepare for the fire season.

The situation could only get worse as the season wears on. In July, it is expected that CAL-FIRE, since getting approval from the Governor, will be able to go to outside hiring for chief officer positions and has already targeted a number of Forest Service FMOs. Additional losses in those ranks will create absolute chaos in the fire program in California and there are questions as to whether it will remain viable.

WHERE'S THE FOREST SERVICE AIR TANKER PLAN?

Last summer, USDA's Mark Rey promised that a new Agency air tanker plan would be submitted this Spring. As of the hearing date set for June 5, 2007, that will leave approximately 2+ weeks before summer officially starts. As of May 28, 2007, no member of Congress has seen the promised air tanker plan which obviously plays a key role in preparedness for the season.

It had been hoped that Mr. Rey would have delivered on his promise by now or at the very least mention the plan at the recent Senate Subcommittee on Interior Appropriations hearing. No comments were forthcoming and no questions as to the plan were offered by committee members.

CONCLUSION

The commentary provided in this testimony, coupled with that of our January 30, 2007 testimony on suppression costs paints a dire picture of preparedness & cost containment for this season and suggests that unless Congress makes some serious changes, the status quo will continue from season to season.

It stands to reason and common sense would dictate that being properly prepared would 1) improve firefighter safety and better ensure the safety of citizens 2) significantly reduce the costs of suppression. We cannot understand why this basic fundamental principle is being ignored by the Administration and the Forest Service.

As offered in previous testimony, we firmly believe that policy, more than climate, urban interface etc., is driving suppression costs skyward. Being properly prepared significantly mitigates the impact of climate (drought, lightning strikes) and urban interface.

Preparedness funds appropriated by Congress must not be diverted or siphoned off for non-fire projects, cost pools etc. Given that temporary firefighters make up nearly 46% of staffing each season, these funds are essential and must not be abused.

Congress must also address the archaic pay & personnel policies which are forcing so many of our federal firefighters to waste the investment our American taxpayers have made in them and transfer to state & municipal fire agencies.

We categorically disagree with Mr. Rey's position on such losses in which he has stated, "it doesn't matter, we'll see them again on the fire line." We may in fact see them on the fire line again at 4-5+ times the cost to the American taxpayer. That is neither cost-effective nor cost-efficient fiscal management

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STATEMENT OF ALBERT C. HYDE, SENIOR CONSULTANT, CENTER FOR EXECUTIVE EDUCATION, THE BROOKINGS INSTITUTION

Thank you Chairman Bingaman and other distinguished members of this committee for the opportunity to appear and present testimony for this hearing on the preparedness of the federal land management agencies for the 2007 Wildfire season and to review recent reports on agency cost containment efforts. This testimony is presented on behalf of the panel members of the large wildfire cost review panel which delivered its report in May 2007.

These six panel members (Mr. Richard Clevette, Ms. Lauren Cragg, Mr. Gary Morgan, Lieu. Jeffrey Rubini, Mr. Frank Shelley, and Dr. John Shelley-along with Dr. Sharon Caudle with GAO who served as a senior advisor) were specifically cho-

sen as external reviewers. Two were former senior fire management executives from Canada and Australia, two Coast Guard experts in incident and risk management, one a private sector risk management executive and consultant, and a forest science researcher in academia.

While the Panel's work was managed under a contract with the Brookings Institution, the Panel was an independent undertaking and the findings and perspectives expressed in the report are solely those of panel members.[1]

I appreciate this opportunity to summarize the findings from the panel's work and to present their recommendations on the complex issues of large-fire suppression costs management.

PANEL'S REVIEW OF FISCAL DILIGENCE

Before delving into the panel's findings, it should be noted that this was not the first such fiscal and strategic review report of large fire costs on an incident basis. Both in 2004 and 2005, another independent panel. chaired by a former deputy regional forest supervisor, Mr. Richard Ferraro, assessed five fires in three regions, two of which exceeded 100,000 acres in size. This 2006 large fire review covered a much larger group of fires: 20 fires in five regions, covering 17 National forests in six states. These 20 fires had suppression cost approaching $500 million in total, exclusive of burned area emergency rehabilitation costs and accounted for over 1.1 million burned acres. One fire (Sawtooth) was excluded as a state managed fire.

Reports by an independent review panel to examine fire suppression costs for wildfire incidents are required by appropriation language that states for all fires that exceed $10,000,000 in cost, an independent review is required to: "Determine if the Forest Service exercised fiscal diligence in managing specific incident suppressing activities." This was the first task for the Panel and it formally voted "No" in terms of the forests having exercised inappropriate or inadequate fiscal diligence for each of the 19 fires assessed, just as the 2004 & 2005 panel reports found.

This review of fiscal diligence was not taken lightly. A final vote was taken at the end of each site visit on the 16 forests where the fires occurred (four forests had two fires each exceeding the $10 million mark). These site visits featured strategic discussions of pre-fire conditions, extensive discussions of the fire chronology and suppression actions and results, and assessments of cost management and fire outcomes. The forests were asked to provide extensive documentation on all aspects of the wildfire incident—land management and fire management plans, fire progression maps and situation reports, the wildland fire situational analysis (WFSA) and delegation of authority letters, incident management team reviews, cost reports, and post fire documents—burned area emergency restoration and fire severity reports, among others.

COST MANAGEMENT ISSUES AT THE FOREST LEVEL

A second objective of the Panel was to focus on strategic decisions and actions, compliance with policy and law, and risk analysis and management. The Panel was to address cross-cutting cost management issues and potential strategies that could impact fire suppression costs at strategic levels. Cost management begins at the Forest level but is increasingly a regional and national issue.

However the dilemma facing national forests over containing suppression costs and protecting resource values inside the forest and communities at risk outside the forest is both real and difficult. Agency administrators, certainly the ones interviewed in this review, understand the critical importance of balancing those risks, knowing that large wildfires are commanding a greater share of the agency's budget. At the same time, their span of control over suppression costs is small. The use of incident business advisors (IBAs), daily cost reporting, assertive monitoring of requisitions for equipment and supplies, and releasing crews and assets at the earliest possible moment can and does save money. The Panel recognized and commended the efforts made to ensure proper "fiscal vigilance" is in place on large wildfires. It is essential that national forests and IMTs work constantly at eliminating even the appearance of waste, abuse, and potential conflict of interest. But such savings, when they happen, are marginal at best and not a key to significant cost management.

The Panel noted that while the ultimate management control and fiduciary responsibility rests with these agency administrators, their real decision space, especially to affect costs, is very limited. Once a wildfire escapes initial attack control

[1] As with any study or publicized work, it is important to note that the analysis and views expressed in the report are soley those of its authors and members, and do not reflect the views of the Brookings Institution, its Trustees or its research staff.

efforts, it quickly escalates through extended attack to much more than the simple management of an incident. Factor in the difficulties of managing multiple fires under one management (complexes), long duration fires (campaigns) or cross jurisdictional concerns, and fire incidents develop into complex situations. And most of the 19 fires reviewed for this report were characteristically multiple fires, lasting multiple days, and crossing multiple boundaries.

Adding to the forest supervisors' dilemma is the perception of values at risk. In some cases, most notably Southern California, every large wildfire is viewed as a high-risk wildland urban interface (WUI) fire potentially threatening thousands of homes and millions of dollars of commercial and property interests. In remote locations, forests would consider watersheds, species habitat, recreational and grazing interests, and the recognition that there are few wilderness areas left that are big and isolated enough to simply let a large wildfire "run around uncontrolled".

The business case of the values being protected from large wildfires may sometimes be overstated, but every forest's assessment of values has its own merits. Additionally critical species habitat and watersheds, while often identified, were difficult to place a tangible value on. This can in part be attributed to the lack of a decision strategy model that can factor in non-monetary values at risk. But in terms of socio-economic factors (commercial interests, large employers, elected officials' priorities, historical landmarks, etc.) there are always values around which a compelling case for suppression action can be made. The real problem is that while every forest has a rationale for assessing the values at risk that is useful in defining a fire specific suppression strategy; when viewed from the cost management perspective it is difficult to see how this approach helps the forest to convey forward the information needed to assign suppression priorities on a regional or national level in an era of limited suppression resources.

Agency administrators hoping to confine and possibly fight fire less aggressively to contain cost, increasingly confront situations where the best place to fight and contain large wildfires that start inside the forest is outside the forest boundaries and often in conflict with neighboring priorities. Considering the apparent increase in large, complicated fires and the competing demands of protecting natural resources, protecting the desires of the forest's neighbors, and containing costs, agency administrators will increasingly need to develop strategies that do not stop at the forest boundary.

STRATEGIC COST MANAGEMENT ISSUES

The Panel chose to focus much of its inquiry into cost management strategies that could potentially impact fire suppression costs at larger levels. The panel adapted as its analogy A business sector example that for fire cost management, forest and IMT strategic decisions should be focused on understanding why and where fire costs tended to increase, rather than why administrators and incident commanders were unable to reduce costs. Such an analogy may be even more apt if future predictions about the probability of average fire years in the range of 8 to 12 million acres a year prove true.

Four issue areas were addressed that could, in the view of the Panel, potentially help impact suppression costs and future increases in wildfire costs at much higher levels. Recommendations were developed (they are included at the end of this statement) for the following:

1. LAND MANAGEMENT AND RESOURCE PLANS AND FIRE MANAGEMENT PLANS AS STRATEGIC FRAMEWORKS FOR MANAGING FIRE SUPPRESSION INVESTMENT

The Land Management (and Resource) Plans (hereafter referred to as simply LMP) and the Fire Management Plans (FMP) are the two main documents that provide direction and guidance for all the activities undertaken by a national forest in managing all the resources of the forest. The FMP is in a sense an extension of the LMP that specifically addresses all management issues related to fire, whether they are wildfires, wildland fire use fires, or prescribed fires. If these two documents are not aligned and linked and the FMP does not directly reference the guidance of the LMP, conflicts or confusion may arise. Previous reviews of large fires have mentioned this potential confusion as a source of concern. The Panel examined the two documents relevant to each fire and evaluated how well the documents work together as tools for guiding wildfire suppression strategy.

The Panel concluded that much could be done to improve these two critical documents. While the current legal situation of the LMPs is problematic, there is perhaps now a "strategic opportunity" for future revisions of the plans to address the impacts of climate change and forest health, including recent fire history as a core element. Fire management plans are largely static documents that are used as in-

ternal program reference sources by design. The panel strongly recommended refocusing Fire management plans to:

- assess in depth and continually update fire history since 2000 in terms of expected fire behavior, intensity, and risk;
- monitor growth of the WUI and compare fire management priorities and protection policies with state, local, tribal neighbors—and private and public interests in a highly collaborative process;
- refine and explain cost management expectations for fire management programs (Prevention, Fuels Reduction, Suppression, and Restoration);
- create a strong linkage from the FMP to the WFSA process.

2. THE WILDLAND FIRE SITUATIONAL ANALYSIS AND DELEGATION OF AUTHORITY AS FIRE SUPPRESSION MANAGEMENT AND COST FACTORS

At the outset of a potential large escaped fire, forests are required to complete a situational assessment and complexity analysis to both determine what type of incident management team to request and to scope the proposed fire effort. These assessments are completed by the forest fire staff, resource planners and district rangers for review by the forest supervisor. Once the agency administrator has approved and signed the WFSA, it along with a delegation of authority letter, is passed to the incoming IMT commander. Both documents are included in the briefing package for the newly arriving IMT.

As might be expected, the WFSA is most problematic on large wildfires. The Panel heard mixed messages about WFSAs. It seems many administrators agree with the premise that the process can help focus thinking, encourage collaboration, and assist in formulating suppression strategies. But, as it is currently implemented the WFSA process falls short in effectively reaching any of these goals. All 19 of the initial WFSAs selected target in terms of predicting the size of the fire (acres burned) and choosing suppression strategy were exceeded by the actual final size of the fire. WFSAs also include a worst case scenario, and even that estimated size was below the fire size approximately half the time. The panel concluded that the current WFSA process on these fires was inadequate in helping forests determine their suppression strategy, concurring with the comments of several forest supervisors that the WFSA failed in "forcing us to think big enough."

The Panel also reviewed the delegation of authority letter. This document is vital because it provides the IMT commander legal authority to operate and make decisions on behalf of the line officer. This review revealed that in the vast majority of cases (16 out of 19 fires) it was a standard form letter with little detail specific to the wildfire. It referenced the WFSA and included text reaffirming public and firefighter safety. In only two or three instances did the delegation of authority letter include a specific cost containment objective.

Several recommendations were made on WFSAs and Delegation of authority letters to change the content, timing, and levels of collaboration. The panel urged that WFSAs develop and contain scale-down triggers for resource management, especially with regard to the length of time Type I and Type II teams remain on fires. Likewise, on campaign or longer duration fires, there should be mechanisms for switching procurement and resource ordering strategies from short term to long term.

3. INCIDENT MANAGEMENT TEAM STRUCTURE & TRANSITIONS AS FIRE SUPPRESSION COST FACTORS

Large fire management is a complex interaction between local forces on the national forest where the fire breaks out and the various nationally and regionally assigned incident management teams who come to the forest to lead the suppression effort. Current policy limits assignments to 14 days for national teams, although some teams depart early and occasionally a team will extend past the 14 day deadline. National Type I and Type II teams are essentially franchise assets with their assignments being carefully monitored with an expectation that they will be assigned to the most complex and highest priority situations.

The panel saw several significant issues with the assignment and use of incident management teams and found transition costs due to IMT deployment time limits and rotations were rising. The panel also found:

- Flexibility and agility of IMTs are not currently core strengths. IMTs are founded on consistency and reliability which is ingrained in their structure, team member selection, and training and development. Understanding the need to staff fully supported IMTs, some of the core ICS tenants must change to have

scalable and flexible IMT organizations. Lack of management flexibility adds to cost.

- Type III IMT in-house capabilities for handling the end stages of incidents are often regarded as insufficient. The Panel's review looked especially hard at the last 20% of the fire cycle-namely, how long it took the forest to get the fire turned over to a local type III team and hence a lower cost expenditure level. Many Type I and II IMTs remained on scene after the fire exhibited other than Type I incident characteristics. Comments during the site visits were repeatedly made that additional time on scene generated costs that would not have been incurred if the Type III IMT had the needed capacity to take over.

4. FORMULATING A NEW COLLABORATIVE COST MANAGEMENT STRATEGY

There is general recognition and acceptance from IMTs and field personnel to agency administrators of the importance of keeping fire suppression costs in check. However, no one is exactly sure what cost management means or how to achieve it other than exercising various forms of fiscal vigilance on resource ordering and usage. Asked about the escalating costs for the full range of assets used on large wildfires, fire staff would generally reply that people had to understand fire fighting is expensive, but still cost-effective considering the potential losses averted. Similarly, in the panel's interviews with Forest Supervisors, line officers would note that when wildfires reach large sizes, there is enormous social and political pressure to use every available resource, regardless of cost, to control the fire.

In this last issue area, the Panel attempted to address some of the political and economic factors that must be confronted if cost management strategies are to have any chance of keeping fire costs from growing even larger. These factors included understanding the complete cost cycle on large wildfires. Costs are large on wildfires in part because different actions are being taken and then lumped into one incident cost. Initial Attack costs are not reported. Likewise, demobilization, rehabilitation and restoration efforts towards the end of the fire are not broken out. Burn-out operations, often taken at the end of the incident are not accounted for separately and actually add acres to the final fire size. Each of these components has cost implications and should be tracked from fire origin to completion of the burned area emergency restoration work.

While some of these components are covered by different budget funding codes, at the forest (and regional level) there is not an accounting of the separate phases, core activities, and cost implications within each large wildfire.

The panel's final main point remains that collaborative cost management must be both strategic and innovative. It should focus on national and regional costs and contracts and not induce forests to try to contain costs by searching for the cheapest resources. However, it should also draw IMTs and forests and contract suppliers into a productive search for "constraints-driven" solutions and cost innovations. Finally, collaboration should include clarifying protection priorities, suppression objectives and cost between the national forests and neighboring jurisdictions beyond current practice of agreeing on protection boundaries and responsibilities.

SUMMARY OF RECOMMENDATIONS

THE COMPLETE LIST OF PANEL RECOMMENDATIONS FOLLOWS

Land Management & Fire Management Plans

1A. Develop guidance for future revisions of land management plans. Future land management plans would incorporate elements on fuels reduction activities, changes in the Wildland Urban Interface, the impacts of climate change and forest health, including fire history as an integral component.

1B. Transform the fire management plan from a static, program reference document to a strategic assessment of fire management planning and policies. The fire management plan would factor in fire protection policies with state, local, tribal neighbors, cost management expectations, and establishes a strong linkage from the fire management plan to the wildland fire situational analysis process.

1C. Expand appropriate management response guidance beyond the model and textual boilerplate currently found in most fire management plans.

Wildland Fire Situational Analysis (WFSA) and Delegation of Authority

2A. Encourage more collaboration in the WFSA process while rethinking the WFSA process to allow incident management teams and line staff to jointly develop wildfire strategies through (WFSA or replacement process for the WFSA), within 36 hours from the time of assignment.

2B. Address options for short term and long term management of suppression resources. WFSAs should develop and contain scale-down triggers for resource management, especially with regard to the length of time Type I and Type II incident management teams remain on fires.

2C. Make delegation of authority letters strategic documents. They should contain specific statements outlining larger suppression objectives, resource values and final restoration concerns, and expectations about containing fire cost growth.

Incident Management Team Structure and Transitions

3A. Tailor more agile incident management teams to the needs of the incident, as opposed to a standard incident management team formula. Make teams more adaptable towards selective deployment capability.

3B. Enhance local Type III incident management teams to provide for a more robust capability during incident close out while capitalizing on state and local resources to provide additional protection resources or to supplement the incident management team.

3C. Instill more flexibility when committing incident management teams to prolonged large fire operations. By pre-setting trigger points (up/down/maintain) based on incident complexity and tactical resource commitments that indicate a need to rescale incident operations, particularly during the closing phases of fire fighting operations.

Formulating a New Collaborative Cost Management Strategy

4. Formulate a collaborative cost management strategy that provides a better picture of fire suppression costs over the incident span, establishes short term and longer term cost plans for fire resource ordering and procurement, and reaffirms the regional and national role in pricing fire resources (federal, state & local, private contractor and military).

TABLE 1—FY 2006 FIRES THAT EXCEED $10 MILLION (REVIEWED BY LFC PANEL)

Fire	Dates	State	Region/Forest	County	Size (acres)	Cost ($MM)
Derby	Aug 22—Oct 3	MT	1/Gallatin and Custer	Sweet Grass, Stillwater, Park	223,570	22.5
Potato	Jul 27—Aug 25	ID	4/Salmon-Challis	Custer	18,236	14.1
Red Mountain	Aug 14—Sep 24	ID	4/Boise	Boise	35,482	13.7
Rattle-snake	Aug 21—Oct 3	ID	4/Boise	Valley	45,500	13.2
Bar Complex	Jul 23—Oct 15	CA	5N/Shasta-Trinity	Trinity	100,024	66.0
Pigeon (pt of Bar)	Aug 2—Sep 7	CA	5N Shasta-Trinity	Trinity	in Bar	22.0
Orleans Complex	Jul 24—Aug 31	CA	5N/Six Rivers	Humboldt, Siskiyou	15,710	16.9
Uncle Complex	Jul 23—Oct 15	CA	5N/Klamath	Siskiyou	30,425	14.7
Happy Camp	Jul 23—Sep 24	CA	5N/Klamath	Siskiyou	6,134	12.5
Ralston	Sep 5—Sep 19	CA	5N/Tahoe	Placer	8,423	13.0
Hunter	Jul 24—Aug 7	CA	5N/Mendocino	Mendocino	16,297	12.1
Day	Aug 4—Oct 5	CA	5S/Los Padres	Ventura, Los Angeles	162,702	73.5
Horse	Jul 23—Aug 1	CA	Cleveland	San Diego	16,681	13.7
Sawtooth	Jul 9—Jul 26	CA	5S/San Bernardino	San Bernardino	61,700	17.9
Heart/Millard Complex	Jul 9—Jul 25	CA	5S/San Bernardino	San Bernardino	23,917	13.0
Tripod Complex	Jul 24—Oct 5	WA	6/Okanogan	Okanogan	175,184	74.2
Columbia Complex	Aug 21—Sep 2	WA	6/Umatilla	Columbia, Garfield	109,402	35.9
Shake Table Complex	Aug 22—Sep 15	OR	6/Malheur	Grant	14,453	16.1
Maxwell	Jul 24—Aug 13	OR	6/ Ochoco	Wheeler	7,157	11.3
Cavity Lake	Jul 14—Aug 20	MN	9/Superior	Cook	31,380	11.4

Data Source: Final ICS 209's submitted for each incident, provided by NIFC.

FIREFIGHTERS UNITED FOR SAFETY, ETHICS, AND ECOLOGY,
Eugene, OR, June 21, 2007.

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

Hon. PETE DOMENICI,
Ranking Member, Committee on Energy and Natural Resources, U.S. Senate, Washington, DC.

DEAR CHAIRMAN BINGAMAN AND SENATOR DOMENICI: Thank you for this opportunity for Firefighters United for Safety, Ethics, and Ecology (FUSEE) to provide input on issues related to the preparedness of federal land management agencies for the 2007 wildfire season and suppression cost containment issues.

FUSEE is a nonprofit organization whose members include current, former, and retired wildland firefighters; fire ecologists and managers; fire scientists and educators; forest conservationists; and other citizens who promote safe, ethical, ecological wildland fire management. We support a new, emerging paradigm that seeks to holistically manage wildland fire for its multiple social and ecological benefits instead of endlessly "fighting" it across the landscape. Our ultimate vision is the creation of fire-compatible human communities able to live safely and sustainably within fire-adapted ecosystems and fire-permeable landscapes.

In our view, preparing for wildland fires and containing the costs of emergency wildfire suppression is both a practical and an ethical issue for two important reasons. First, every taxpayer dollar that goes to suppressing wildfires represents less money available for other valued public services, including ecological restoration of public lands. Federal lands are degraded by decades of inappropriate fire suppression, commercial logging, livestock grazing, and road-building—all of which contribute to increased wildfire hazards and suppression costs. These public lands are in desperate need of restoration treatments not only to repair the damage of the past but also to prepare for the changes in the future due to global warming.

Second, for those times and places where wildfire suppression is necessary and desirable, every taxpayer dollar that is spent on inefficient or ineffective suppression actions represents waste and abuse not only in terms of misspent money, but also degraded natural resources, destroyed homes, and increasingly, lost firefighter lives. Thus, in our view, lack of preparedness for wildland fires leads to lack of cost constraints for emergency wildfire suppression. Thus, requiring federal land management agencies to be fully prepared for wildland fire is fundamentally an ethical issue interrelated with issues involved firefighter and community safety, environmental protection, and ecological restoration.

In this spirit, FUSEE would like to offer the following constructive criticisms and policy recommendations:

1) Fire management planning is vital for wildfire preparedness.

The 1995 Federal Wildland Fire Management Policy (Fire Policy) was developed in the wake of the terrible 1994 fire season in which 34 of the nation's most elite trained firefighters died in the line of duty. The 1995 Fire Policy called for a fundamental shift in agency philosophy and cultural attitudes toward fire, the integration of fire management with forest and resource management objectives, and the full involvement of interagency partners and the public in fire management. This effectively expanded the mission of fire managers beyond their traditional duties of preventing or suppressing wildfires to include reducing hazardous fuels and restoring fire-adapted ecosystems.

The 1995 Fire Policy clearly stated that,

> Every area with burnable vegetation must have an approved Fire Management Plan (FMP) . . . Fire Management Plans must also address all potential wildland fire occurrences and include the full range of fire management actions.

Essentially, the entire federally-managed landbase should undergo fire planning wherever wildland fires might start or spread.

Proactive fire management planning was so important that it was discussed in four of the Fire Policy's nine Guiding Principles, and was put at the top of the list of 83 Action Items in the Fire Policy's 1996 Implementation Action Plan.

Following the "millennial fire season" of 2000, the Fire Policy was formally reviewed and updated, further emphasizing the importance of developing current, approved FMPs in six of the 17 Policy Statements, and four of the 11 Implementation Actions. Noting that federal land management agencies had not been developing FMPs, the Fire Policy Update stated that,

> Fire Management Plans that implement Federal Fire Policy must be completed as soon as possible. All land management agencies should place a high priority on completion of these plans. If necessary, land management plans should be updated, revised, or amended to allow full implementation of Federal Fire Policy.

This call to action to develop FMPs was also echoed in reviews conducted by the National Academy of Public Administration, and the Government Accountability Office.

In 2000 the Western Governors' Association (WGA) also developed an important policy document, "A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10-Year Comprehensive Strategy," (Comprehensive Strategy) that later became a formal part of the National Fire Plan. The WGA's Comprehensive Strategy emphasized the importance of FMPs in two of its Implementation Tasks and two of its Performance Measures; for example, "Percent of burnable acres covered in federal FMPs in compliance with Federal Wildland Fire Policy" was a performance measure for federal fire managers.

In sum, the 1995 and 2001 Federal Wildland Fire Policy provides the philosophical and policy foundation for all federal wildland fire management activities. The WGA's Comprehensive Strategy and the National Fire Plan also guide fire management programs. Each of these policy documents clearly state the critical need to develop science-based collaborate FMPs. We emphasize this history of policy development of FMPs because FMPs are one of the essential elements of Fire Preparedness that helps make fire management safer, more efficient, more effective, and less costly.

Unfortunately, Forest Service officials and some members of Congress dismiss fire planning as nothing more than "bureaucratic paperwork" that needlessly takes time, energy, or money away from "actions on the ground." On the contrary, FMPs represent wise, strategic investments essential to wildfire preparedness. Indeed, it begs the question, what does it mean to be "prepared" if one does not have an adequate plan?

2) FMPs can help contain wildfire suppression costs

FMPs can contain suppression costs by helping to focus firefighting actions to the times and places and methods it is most safe, effective, and necessary. FMPs can also reduce suppression costs by setting priorities for hazardous fuels reduction, and designing ecosystem restoration programs and projects that in the long run will reduce uncharacteristic wildfire severity and improve forest ecosystem health. One fire management method that effectively accomplishes both hazardous fuels reduction and ecosystem restoration is Wildland Fire Use (WFU). WFU has the added economic benefit of avoiding damaging suppression actions that then require costly post-fire rehabilitation treatments.

In fact, the U.S.D.A. Inspector General's recent "Audit Report on Forest Service Large Fire Suppression Costs" noted the potential cost savings related to WFU, and strongly recommended its increased application. According to current Forest Service policy, though, FMPs are required in order to implement WFU. Without a current, approved FMP in place that authorizes WFU, the agency has only one option in response to wildland fires: total aggressive suppression. It must be emphasized that each and every time the agencies engage in emergency wildfire suppression, it involves risks to firefighter safety, costs taxpayers lots of money, and inflicts damages on the natural environment. WFU is a proven means of reducing those risks, costs, and impacts.

In comparing costs of wildfire suppression versus WFU, acre for acre WFU is far cheaper. For example, in the Environmental Assessment for the Sequoia/Kings Canyon National Park's FMP, it was disclosed that for large fires, wildfire suppression cost an average $1,300 per acre, while WFU on large fires cost only $87 per acre! On small fires, wildfire suppression cost $5,900 per acre while WFU cost $2,600 per acre (the difference in costs between large and small fires are due to the economies of scale). Increasing the use of WFU would have multiple positive impacts on reducing fire management costs, especially wildfire suppression and hazardous fuels reduction programs, however, WFU is not an option if there is no FMP in place. We support the Inspector General's call for increasing the use of WFU, and removing all institutional and policy obstacles that constrain WFU opportunities.

3) Existing Forest Service FMPs have serious flaws

The U.S.D.A. Secretary chartered an Independent Large Wildfire Cost Panel to explore suppression cost containment issues. Their report, "Towards a Collaborative Cost Management Strategy: 2006 U.S. Forest Service Large Wildfire Cost Review Recommendations" (The Brookings Report), discusses in detail the shortcomings of

Forest Service FMPs, and recommends the use of FMPs as "strategic frameworks for managing fire suppression investment." In the Brookings Report's examination of the FMPs for the National Forests that experienced the largest, most expensive wildfires in 2006, the majority of FMPs:

- Lacked information on recent fire history that could have guided suppression strategies and tactics.
- Defined fire management units according to management objectives rather than geographic boundaries that made sense for managing fire.
- Lacked information on the Wildland/Urban Interface and Intermix or adjacent non-Forest Service lands.
- Did not define management techniques for the implementing the Appropriate Management Response (AMR), and defined AMR only from a suppression point of view.
- Authorized WFU on less than half of available lands; nearly half of the National Forests in the sample did not authorize WFU at all.
- Lacked up-to-date information on recent fuels reduction treatments.
- Did not provide any substantive guidance for managing the costs of wildfire suppression.

The Brookings Report concludes that existing Forest Service FMPs were static documents poorly linked to underlying Land and Resource Management Plans, and have minimal to no value in developing the actual strategies and tactics used to respond to wildfires. Clearly, the agency's whole approach to pre-fire planning-the essence of wildfire preparedness-needs to be fully examined and fundamentally changed.

4) The U.S. Forest Service is shirking its responsibility to develop FMPs that comply with the Nation's environmental laws, best available science, and democratic principles

Existing Forest Service FMPs are not only insufficient for meeting the challenges of modern fire management, but they are also illegal since they do not comply with the National Environmental Policy Act (NEPA). For example, almost all Forest Service FMPs lack a foundation in sound fire ecology science. Thus, when FMPs mandate aggressive fire suppression and fire exclusion in remote areas located in fire-dependent ecosystems, this causes forest health problems that ultimately increase wildfire hazards, thereby increasing suppression costs. All FMPs are devoid of analysis and discussion of a range of alternative management strategies. This analysis is essential for implementing AMR and developing successful cost containment strategies. All FMPs fail to include public processes for informed citizen review and comment. FMPs developed by a few Forest Service staff thus lack the benefit of local community knowledge of the values-at-risk, and this leads to the agency engaging in suppression actions where the costs of suppression outweigh the benefits. Moreover, the agency lacks the ability to prioritize both fuels reduction treatments and protection actions that matter most to the public.

In response to litigation by environmental organizations and the California Attorney General's Office, two separate federal court decisions ordered the Forest Service to develop FMPs that comply with the NEPA. The Forest Service reacted to these court orders in 2006 by withdrawing the FMPs from the Six Rivers and Sequoia National Forests at the onset of wildfire season. The agency is threatening to withdraw more FMPs if additional lawsuits are filed. Furthermore, it is in the process of eliminating requirements for FMPs in the Forest Service Manual. It took over a decade since the adoption of the Federal Fire Policy for the Forest Service to develop FMPs for every National Forest, and now the agency is beginning to remove them. In essence, the Forest Service is going in reverse in terms of implementing the Fire Policy, and in so doing, is becoming dangerously less prepared for wildland fire.

Imagine if a federal court ordered the city of New Orleans to involve the public and scientists in hurricane response planning, and the response of local government officials was to withdraw its plan and eliminate hurricane planning altogether! The Forest Service's attitude and response to FMP litigation is analogous, and is a recipe for future wildfire disasters at huge taxpayer costs.

We have belabored the issue of FMPs in the Forest Service because we feel that it is the very foundation of preparedness for all aspects of wildland fire management. Beyond planning for wildfire suppression, FMPs should also provide analysis and strategic guidance for prescribed burning and ecological restoration projects, fuels management and vegetation monitoring, fire communication and prevention education programs, wildland fire use objectives, Appropriate Management Response methods, analysis of the environmental effects of fire suppression and fire exclusion, and especially cost containment factors for fire management activities.

After numerous internal reviews and external studies on this subject, the Forest Service continues to approach suppression cost containment from a reactive perspective-how to cut costs during wildfire emergencies-rather than from a proactive and strategic perspective-how to prevent the need for costly emergency wildfire suppression in the first place.

FUSEE believes that the solution to efficient and effective wildfire preparedness and cost reductions in fire management programs is not to "cheapen" suppression operations, but rather, to invest in more robust pre-fire planning, public fire education, fire ecology research, community fire preparedness, and ecological fire restoration. The goal really should be to make emergency wildfire suppression the exception, rather than the norm.

Again, without strategic FMPs in place before wildfires ignite, the Forest Service is basically choosing to blindly fight wildfires, with all the risks to firefighters, costs to taxpayers, and impacts to natural resources and ecosystems inherent in reactive, emergency wildfire suppression. There is one additional value and need for strategic, long-term fire planning—perhaps the most important one of all: the need to prepare for the coming changes in vegetation, fuels, and fire regimes caused by global warming and climate change. We strongly urge that members of the Committee examine the "San Diego Declaration on Climate Change and Fire Management," drafted by the Association for Fire Ecology and ratified at the Third International Fire Ecology and Management Congress, for advice on policies helping to developing long-range fire and land management plans to prepare for climate change.

Thank you for this opportunity to provide input to the Senate Energy and Natural Resources Committee for your June 26, 2007 Oversight Hearing on wildfire preparedness and suppression cost containment issues.

Sincerely,

TIMOTHY INGALSBEE,
Executive Director.

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