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Wildfire Management: Federal Funding and Related Statistics

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June 6, 2014

Congressional Research Service

7-5700

www.crs.gov

R43077

Summary

Wildfires can have beneficial and harmful impacts on ecosystems (e.g., by reducing fuel loads, or by damaging communities and timber resources). These impacts are generally measured and discussed based on the priorities of humans in these ecosystems. Federal resources are typically deployed during wildfire season—an annual occurrence of intense wildfire activity—to help manage wildfires and potentially minimize some of the impacts, including the loss of life and property. Approximately 4.3 million acres burned during the 2013 wildfire season, which was less than half of the 9.3 million acres burned in 2012. The acreage burned in 2012 was the third-largest acreage burned annually since 1960.

Federal funding for wildfire management is provided in the Interior, Environment, and Related Agencies appropriations bill. The bill funds wildfire management at the Forest Service and the Department of the Interior, which are the two principal entities tasked with federal wildfire management. Federal wildfire response activities involve preparedness, suppression, fuel reduction, site rehabilitation, and more. Over \$3.9 billion was appropriated for wildfire management for FY2014, including \$600.0 million for the Forest Service to reimburse wildfire transfers that occurred in FY2013. The total wildfire management appropriations for 2013 (post-sequester) were more than \$3.3 billion, and included \$395.4 million appropriated in FY2013 to repay accounts from which funds were transferred in FY2012 for wildfire suppression.

Wildfire funding is of concern to many. This is primarily due to interest in the effectiveness of annual wildfire appropriations (e.g., is the funding allowing agencies to meet wildfire management targets), the amount of appropriations dedicated to certain wildfire management activities (e.g., is enough funding being provided for hazardous fuel reduction), and requests from the agencies for additional appropriations during severe fire activity (e.g., why is more funding needed, and what non-fire programs could be impacted if the agencies fail to receive the additional funding). For 7 of the last 10 years, including FY2013 and FY2014, Congress has provided funding for wildfire management additional to what was granted in the Interior appropriations bill, usually for wildfire suppression. This may cause some to question how wildfire funding is structured and wildfire suppression funding estimation methods, among other things.

The Administration's FY2015 request proposes a new strategy to fund wildfire suppression. The strategy is similar to H.R. 3992 and S. 1875, which would fund wildfire suppression for a select group of fires—theoretically the most extreme fires—by creating a new cap adjustment to the statutory discretionary spending limits. The Administration's FY2015 request for wildfire management is approximately \$4.3 billion, including \$1.2 billion that would be used for the newly proposed cap adjustment for wildfire suppression.

This report provides wildfire management appropriations and briefly discusses the Administration's FY2015 request for wildfire management. The report also provides general wildfire management statistics (e.g., numbers of wildfires, acres burned, select state wildfire activity, and firefighter personnel).

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Introduction

In 2013, wildfire burned approximately 4.3 million acres. This was less than half of the 9.3 million acres burned during the 2012 wildfire season. The acreage burned in 2012 was the third-largest annual acreage burned, based on the reporting of fire statistics from 1960 to the present.¹ Some predict conditions that could lead to more severe wildfire activity potentially occurring in 2014 in certain regions, and possibly an earlier start for the 2014 wildfire season in certain regions due to ongoing drought conditions in the western half of the nation.² Wildfire (or wildland fire),³ an unplanned and an unwanted fire, is a concern to some because it can lead to loss of human life,⁴ damage communities and timber resources,⁵ and impact soils, watersheds, water quality, and wildlife.⁶ On the other hand, wildfire can also reduce fuel loads, increase ecosystem health, and restore fire-adapted ecosystems.

There are several ongoing concerns regarding wildfire management. These include the total federal costs of wildfire management, the strategies and resources used for wildfire management, and the impact of wildfire on both the quality of life and the economy of communities surrounding wildfire activity. Many of these issues are deliberated by Congress, with annual wildfire management appropriations being one indicator of how Congress prioritizes and addresses certain wildfire management concerns. More than \$3.9 billion was appropriated for wildfire management in FY2014, including \$600.0 million for the Forest Service to reimburse wildfire transfers that occurred in FY2013.

This report briefly describes wildfire management appropriations and related issues, and the Administration's FY2015 request for wildfire management. It also provides some general wildfire statistics.⁷

¹ The largest fire year on record for acres burned is 2006 (9.8 million). The second- and third-largest fire years are 2007 (9.328 million) and 2012 (9.326 million). National Interagency Fire Center, *Current Year-to-Date by State (2012)*, December 20, 2012; http://www.nifc.gov/fireInfo/fireInfo_stats_YTD2012.html, National Interagency Fire Center, *Total Wildland Fires and Acres (1960-2009)*.

² National Weather Service, *U.S. Seasonal Drought Outlook February 20 – May 31*, February 20, 2014; National Interagency Fire Center, *National Significant Wildland Fire Potential Outlook Period—February, March, and April through May 2014*, February 1, 2014.

³ The terms wildfire and wildland fire are often used interchangeably. However, each term has a distinct definition. The National Wildfire Coordinating Group (NWCG) defines wildland fire as any non-structure fire that occurs in the wildland, defined as an area in which development is essentially nonexistent, except for roads, railroads, power lines, and similar transportation facilities, and where structures, if any, are widely scattered. NWCG defines wildfire as an unplanned, unwanted wildland fire including unauthorized human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, and all other wildland fires where the objective is to put the fire out. National Wildfire Coordinating Group, *Glossary of Wildland Fire Terminology*, July 2012. This report will use the term wildfire for both.

⁴ An example is the 2013 loss of 19 firefighters of the Granite Mountain Interagency Hotshot Crew assigned to the Yarnell Hill fire. For more information, see CRS Report R43129, *Wildfire Management: Hotshot Crews*.

⁵ For more information on wildfire damages to homes and resources, see CRS Report RL34517, *Wildfire Damages to Homes and Resources: Understanding Causes and Reducing Losses*.

⁶ For more information, see CRS Report RL30755, *Forest Fire/Wildfire Protection*.

⁷ Additional appropriations data and statistics prior to 2008 are available in CRS Report RL33990, *Federal Funding for Wildfire Control and Management*.

What Is Wildfire Management?

Wildfire management is a series of coordinated activities undertaken by federal, state, and local authorities to resolve wildfire events when they occur. Resolution may involve immediate and aggressive measures to quickly suppress a wildfire (e.g., large air tanker response for a wildfire moving quickly toward a populated area), or may involve immediate but less intense measures (e.g., monitoring a grassland wildfire where there is no immediate threat to humans and weather conditions are favorable for natural suppression of the fire within a short time period).

Wildfire management activities are generally categorized into four areas: preparedness, suppression, fuel reduction, and site rehabilitation. Preparedness is any activity that leads to a safe, efficient, and cost-effective fire management program, and includes the range of tasks necessary to build, sustain, and improve the capability to protect against, respond to, and recover from domestic incidents.⁸ Suppression is all of the work associated with extinguishing or confining a fire.⁹ Fuel reduction is manipulation (including combustion) or removal of fuels to reduce the likelihood of ignition and/or to lessen potential damage and resistance to control.¹⁰ Site rehabilitation includes efforts undertaken, generally within three years of a wildfire, to repair or improve fire-damaged lands unlikely to recover to a management-approved condition, or actions taken to repair or replace minor facilities damaged by fire.¹¹

A number of federal, state, and local agencies can and do respond to wildfire.¹² Sometimes more than one agency may respond, depending on where the fire occurs, the potential threats, and the expertise required. In these cases, the National Interagency Fire Center (NIFC)¹³ coordinates the national mobilization of resources for wildfire and other incidents throughout the United States.¹⁴

Wildfire Management Statistics

Wildfire statistics help to illustrate past U.S. wildfire activity. Most of the statistics provided in this section are national in scope. The number of wildfires reported and acres burned for 1983 to 2013 is shown in **Figure 1**. The data indicate that the number of wildfires reported has stayed about the same over time. The number of acres burned has increased steadily over time. **Table 1** gives the corresponding number of wildfires and acres burned for 2009 through 2013. **Table 2** lists the three states with the largest number of wildfire acres burned for 2009 to 2013.

⁸ National Wildfire Coordinating Group, *Glossary of Wildland Fire Terminology*, July 2012.

⁹ Ibid.

¹⁰ Ibid.

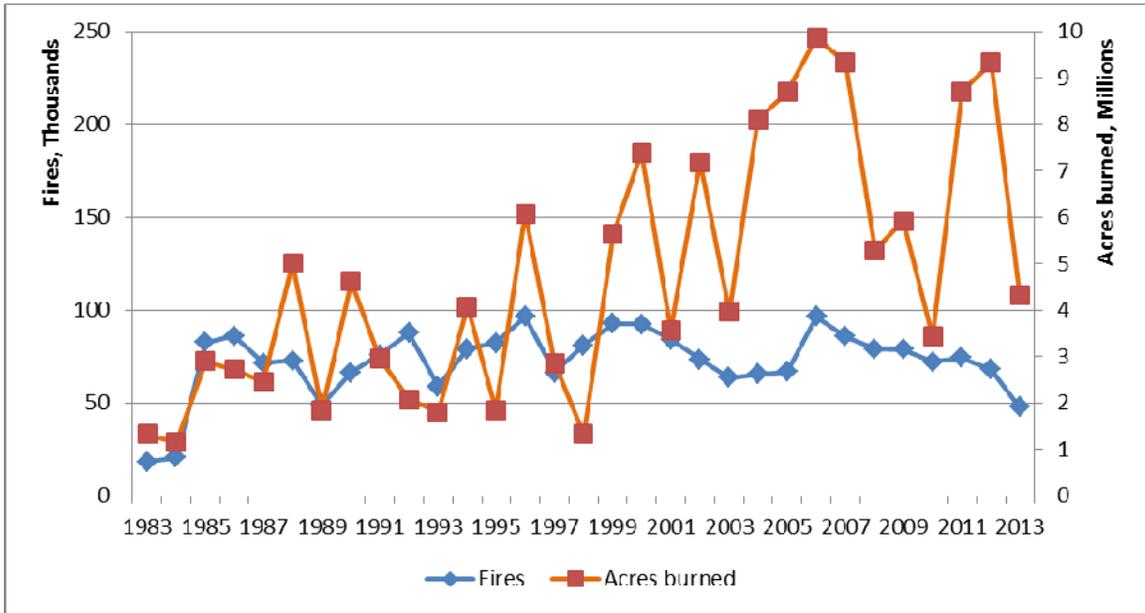
¹¹ U.S. Department of the Interior, *Interagency Burned Area Emergency Response Guidebook*, February 2006.

¹² For more information on federal assistance, see CRS Report R41858, *Federal Assistance for Wildfire Response and Recovery*.

¹³ NIFC comprises eight agencies and organizations: the Bureau of Land Management, the Bureau of Indian Affairs, the U.S. Fish and Wildlife Service, the National Park Service, the U.S. Forest Service, the National Oceanic and Atmospheric Administration, the National Business Center, and the U.S. Fire Administration. Also, a National Association of State Foresters representative is located at NIFC. Additional information about the role of each agency is available in the NWCG *Communicator's Guide for Wildland Fire Management: Fire Education, Prevention, and Mitigation Practices*.

¹⁴ The National Interagency Mobilization Guide identifies standard procedures that guide the operations of multi-agency logistical support activity.

Figure 1. Annual Trends in Wildfires and Acres Burned (1983-2013)



Source: NIFC.

Table 1. Total Number of Wildfires and Acres Burned, 2009-2013

	2009	2010	2011	2012	2013
No. of Fires (in thousands)	78.8	72.0	74.1	67.8	47.6
Acres Burned (in millions)	5.9	3.4	8.7	9.3	4.3

Source: NIFC, Wildland fires and acres.

Table 2. Top Three States for Wildfire Acres Burned, 2009-2013

(acres in millions)

2009	2010	2011	2012	2013
AK – 2.95	AK – 1.13	TX – 2.72	ID – 1.67	AK – 1.32
TX – 0.75	ID – 0.61	NM – 1.29	OR – 1.26	ID – 0.71
NM – 0.42	NM – 0.23	AZ – 1.02	MT – 1.22	CA – 0.58

Source: NIFC, Historical year-end fire statistics by state.

Table 3. Total Hazardous Fuels Acres Treated by FS and DOI, FY2009-FY2013

(in millions)

	FY2009	FY2010	FY2011	FY2012	FY2013
FS	3.60	3.26	2.77	2.62	2.63
DOI	1.50	1.30	0.99	1.00	0.64

Source: Email from FS on April 25, 2013, and February 24, 2014. DOI data are from the National Fire Plan Operations Reporting System. DOI agency budget justification and email from DOI on February 24, 2014.

NIFC reports that in 2013 there were 47,579 wildfires and 4.3 million acres burned (data compiled from federal and state agencies).¹⁵ Less than 2% of the wildfires reported in 2013 were classified as large or significant wildfires.¹⁶ Approximately 71% of the number of wildfires reported occurred on state or other land, but approximately 68% of the acres burned were on federal land. The Forest Service (FS) had the largest percentage (15%) of wildfires, in terms of number of fires occurring on federal land. The FS and Bureau of Land Management (BLM) had the largest percentage of acres burned on federal land, at 32% and 23%, respectively.

Both the FS and Department of the Interior (DOI) keep statistics on hazardous fuels treatment: a measure that may help to mitigate the damaging effects of wildfire activity.¹⁷ Hazardous fuel treatment includes prescribed burning, thinning, and more. Acres treated for FS and DOI lands are provided in **Table 3**.

Wildfires can have a devastating impact, especially for those communities adjacent to wildfire activity. Therefore, statistics showing the level of destruction a wildfire causes can be useful. Some more easily quantifiable measures include acres burned, lives lost (firefighters and civilians), structures destroyed, and suppression costs for a specific wildfire. There is no single source for this type of “destructive” data. Multiple federal and state organizations collect different data. Therefore, the data can usually be found, but in a piecemeal fashion. Firefighter personnel data for the FS and DOI, firefighter fatalities, and structures burned are provided in **Table 4**.

Table 4. FS and DOI Firefighting Personnel, Fatalities, and Structures Burned, FY2009-FY2013

	FY2009	FY2010	FY2011	FY2012	FY2013
FS firefighters ^a	10,480	10,480	10,480	10,480	10,480
DOI firefighters ^b	3,664	3,664	3,664	3,447	3,447
Firefighter fatalities ^c	15	8	12	15	34
Structures burned ^d	1,899	788	5,246	4,244	2,135

Source: Agency budget justifications. Firefighter fatalities for FY2008 through FY2011 from NIFC, Historical Wildland Firefighter Fatality Reports; Firefighter fatalities for FY2012 and FY2013 from NWCG, Fatalities, Entrapments and Serious Accident Summary Safety Gram; Structures burned year-end totals provided by NIFC in an email on May 7, 2013, and the NIFC Wildland Fire Summary and Statistics Annual Report 2013.

- FS firefighter data include hot shot crews, other firefighters, smoke jumpers, and prevention technicians.
- DOI firefighter data include firefighters, smoke jumpers, and Type 1 crews. Although provided in the DOI justification, fire program and support staff are omitted in this table from the DOI firefighter total. DOI reports that the personnel data do not include administratively determined (AD) emergency firefighters who are hired for short durations, often for a single incident. AD firefighter data can fluctuate significantly based on need. Source: Email from DOI on May 2, 2013.
- Corresponds with calendar year.
- Structures include primary residences, commercial buildings, outbuildings, and seasonal dwellings. Corresponds with calendar year.

¹⁵ NIFC, *Wildland Fire Summary and Statistics Annual Report 2013*.

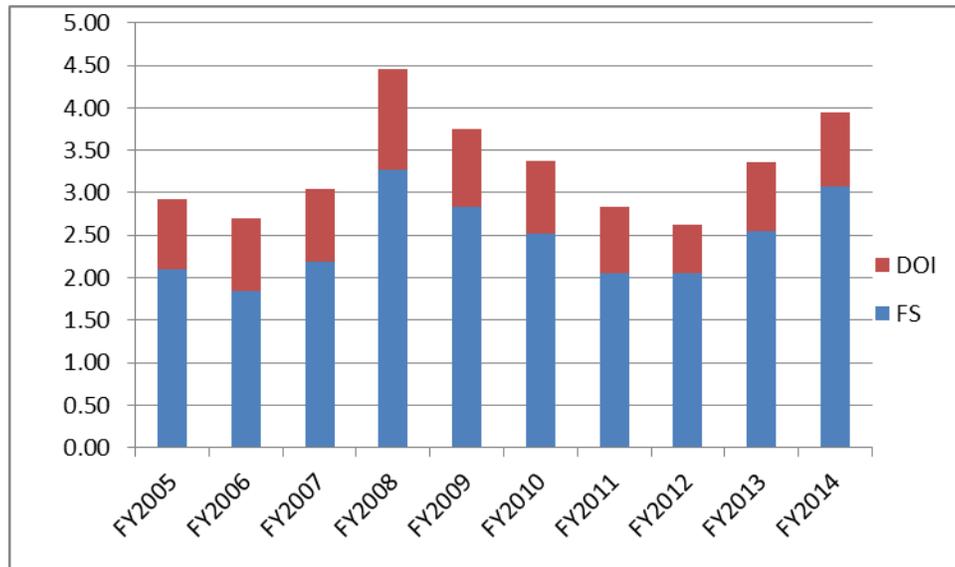
¹⁶ Significant fires are defined as fires that are a minimum of 100 acres in timber fuel types, or 300 acres in grass and brush fuel types, or are managed by a Type 1 or 2 Incident Management Team. An incident management team consists of the incident commander and appropriate general and command staff personnel assigned to an incident. Type refers to resource capability. A Type 1 resource provides a greater overall capability due to power, size, capacity, etc., than would be found in a Type 2 resource.

¹⁷ Additional information on hazardous fuels removal is available in the “Wildfire Management Appropriations” section of this report.

Wildfire Management Appropriations

Wildfire management has been a responsibility of the federal government for over a century. Appropriations for wildfire management are funded in Interior, Environment, and Related Agencies appropriations bills, with both the FS and DOI receiving appropriations to manage wildfires. The FS carries out wildfire response in national forests and national grasslands. DOI manages the wildfire response in national parks, wildlife refuges and preserves, Indian reservations, and other public lands. Wildfire management funding for DOI is provided to the department, which then allocates the funding to the Office of Wildland Fire and four agencies—Bureau of Land Management, Bureau of Indian Affairs, National Park Service, and the U.S. Fish and Wildlife Service. Wildfire management appropriations for both the FS and DOI combined have averaged \$3.2 billion from FY2010 to FY2014 (**Figure 2**).¹⁸ A peak of \$4.5 billion for wildfire appropriations occurred in FY2008. An increase in wildfire management appropriations occurred after FY2000, partly in response to the severe 2000 fire season (**Figure 3**).¹⁹

Figure 2. Total Wildfire Management Appropriations for FY2005-FY2014
(billions of dollars)



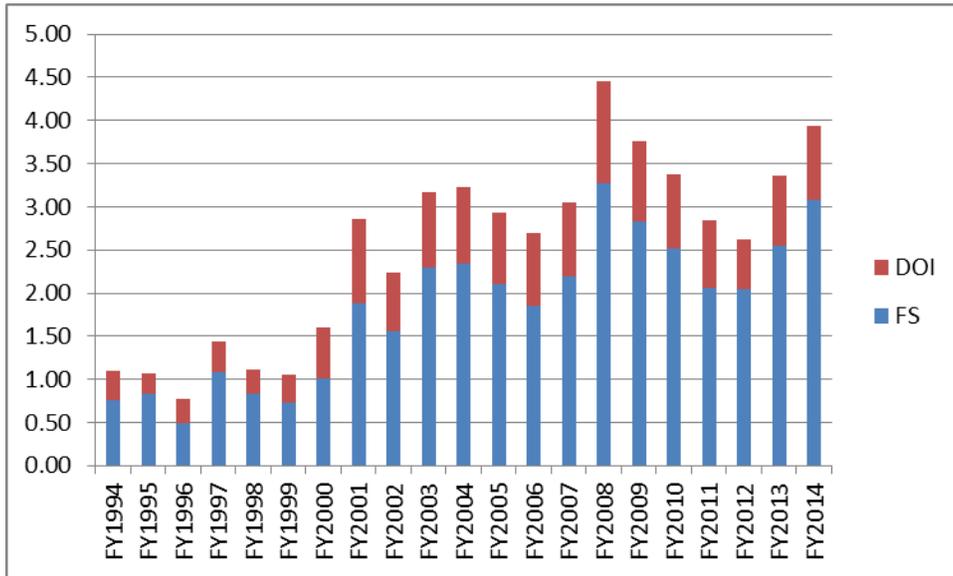
Source: CRS. Data compiled from detailed funding tables prepared by the House Committee on Appropriations.

Notes: Total wildfire management appropriations include appropriations to the WFM account, the FLAME account, and additional funding for wildfire. **Figure 2** includes additional funding to repay previous-year wildfire accounts for FY2013 and FY2014 for the fiscal year in which appropriated (e.g., \$395.4 million appropriated in 2013 to repay 2012 FS and DOI wildfire suppression accounts is reflected in the FY2013 column; \$628.5 million appropriated in 2014 to repay 2013 FS and DOI wildfire accounts is reflected in the FY2014 column).

¹⁸ This includes emergency funds (e.g., supplemental appropriations).

¹⁹ For more information on wildfire management appropriations prior to FY2005, see CRS Report RL33990, *Federal Funding for Wildfire Control and Management*.

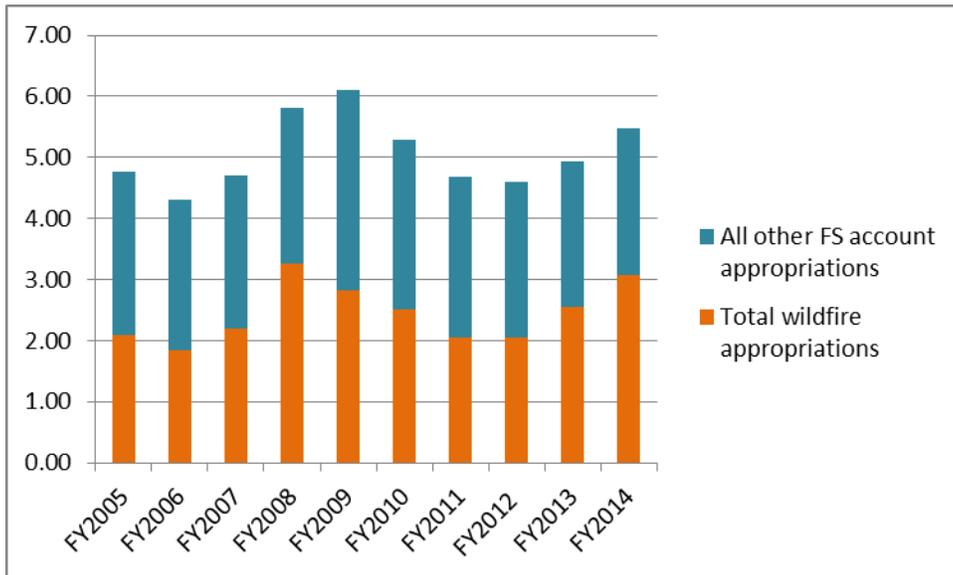
Figure 3. Total Wildfire Management Appropriations, FY1994-FY2014
(billions of dollars)



Source: CRS. Data compiled from detailed funding tables prepared by the House Committee on Appropriations for FY2005 through FY2014, and CRS Report RL33990, *Federal Funding for Wildfire Control and Management*.

Notes: Total wildfire management appropriations include appropriations to the WFM account, the FLAME account, and additional funding for wildfire.

Figure 4. Total FS Wildfire Appropriations Compared to Other FS Account Appropriations for FY2005-FY2014
(billions of dollars)



Source: CRS. Data compiled from detailed funding tables prepared by the House Committee on Appropriations.

Notes: Total wildfire appropriations include appropriations to the WFM account, the FLAME account, and additional funding for wildfire. All other FS account appropriations include appropriations for Forest Rangeland and Research, State and Private Forestry, National Forest System, Capital Improvement and Maintenance, Land Acquisition, and Other.

Forest Service Wildfire Management Appropriations

A majority of wildfire management appropriations go to the FS. From FY2010 to FY2014, the FS received on average 76% of the total wildfire management appropriations. In addition, FS wildfire management appropriations constitute a large portion of the FS overall discretionary funding total. For example, in FY2014 FS wildfire management appropriations were nearly 56% of the total discretionary funds appropriated to the FS (**Figure 4**).

The Interior appropriations law contains two accounts for wildfire for both the FS and DOI: the Wildland Fire Management (WFM) account and Federal Land Assistance, Management, and Enhancement Act (FLAME) account. Each agency's WFM appropriation is distributed among various activities and subactivities.²⁰ Two activities—preparedness and suppression—receive the bulk of the WFM appropriations, followed by hazardous fuels. FLAME is a reserve fund for wildfire suppression that requires certain conditions to be met in order to transfer funding from FLAME to the WFM account. DOI reports that the FLAME fund is used for “the most severe, complex, and threatening fires, and to serve as a contingency reserve.”²¹ **Table 5** contains annual total wildfire management appropriations, with 10-year change in current and constant dollars for FY2005 to FY2014. Both the WFM account and the FLAME account are explained in more detail in the following sections of this report, as is additional funding.²²

Preparedness

Appropriations for preparedness are used to support efforts that assist with fire prevention and detection, equipment, training, and baseline personnel. The FS uses preparedness funds to establish and maintain Web-based decision support tools, manage aviation assets, and offer predictive service analysis, among other things. DOI uses preparedness funds to protect people and property from wildfire with the use of fire management plans, cooperative agreements, infrastructure support, and more.

For the last five years, the preparedness activity for both the FS and DOI has received the largest or second-largest share of total WFM account appropriations. There was an increase of close to 50% in FS preparedness funding from FY2011 (\$673.7 million) to FY2012 (\$1,004.4 million). This was mostly due to a restructuring of the preparedness and suppression activities, which included shifting aviation charges and other charges to the preparedness activity. The funding level for the DOI preparedness activity has seen little fluctuation over the last five years.

²⁰ Appropriations laws typically identify the appropriation for some purpose in general form. The supporting documentation accompanying appropriations bills, primarily conference reports, typically identify appropriations for activities specific to that purpose. Hereinafter, these purposes and activities below the WFM account level are referred to as “activities” for both the FS and DOI.

²¹ U.S. Department of the Interior, *Budget Justifications and Performance Information Fiscal Year 2015 Wildland Fire Management*.

²² Additional funding is any funding provided for wildfire management outside of the normal appropriations process.

Table 5. Total Wildfire Enacted Appropriations, FY2005-FY2014

(millions of dollars)

Agency/ Account/Activity	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013^a	FY2014
Forest Service										
Total	2,098.5	1,846.1	2,193.6	3,269.5	2,831.6	2,516.7	2,058.5	2,050.2	2,547.6	3,077.3
WFM Account ^b	1,703.0	1,746.1	1,823.6	1,943.5	2,131.6	2,178.7	1,968.0	1,734.9	1,868.9	2,162.3
<i>Preparedness</i>	676.5	660.7	665.4	665.8	675.0	675.0	673.7	1,004.4	948.7	1,057.6
<i>Suppression</i>	648.9	690.2	741.5	845.6	993.9	997.5	995.5	538.2	509.8	680.5
<i>Hazardous Fuels</i>	262.5	280.1	301.3	310.1	328.1	350.3	349.6	317.1	301.1	306.5
<i>Rehabilitation^c</i>	12.8	6.1	6.2	10.8	11.5	11.6	11.5	—	—	—
FLAME Account	—	—	—	—	—	413.0	290.4	315.4	299.0	315.0
Additional Appropriations	395.5	100.0	370.0	1,326.0	700.0	—	—	—	379.9	600.0
Rescission							-200.0			
Use of Prior Year Funds						-75.0				
Department of the Interior										
Total	831.3	855.3	853.4	1,192.1	924.5	855.9	778.9	575.4	794.7	861.5
WFM Account	732.7	755.3	758.4	808.1	859.5	919.9	918.1	755.2	687.5	741.0
<i>Preparedness</i>	258.9	268.8	274.9	276.5	281.8	290.5	290.5	276.5	264.8	281.9
<i>Suppression</i>	218.4	230.7	249.2	289.8	335.2	383.8	399.0	270.5	261.2	285.9
<i>Hazardous Fuels Reduction</i>	201.4	208.1	199.8	199.6	203.1	206.2	183.3	183.0	137.7	145.0
<i>Burned Area Rehabilitation</i>	24.0	24.1	22.8	24.2	20.3	20.3	33.2	13.0	12.3	16.0
FLAME Account	—	—	—	—	—	61.0	60.9	91.9	91.7	92.0
Additional Appropriations	98.6	100.0	95.0	384.0	65.0	—	—	—	23.0	28.5
Rescission							-200.0	-82.0	-7.5	

Agency/ Account/Activity	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013^a	FY2014
Use of emergency suppression funds								-189.6		
Use of Prior Year Funds						-125.0				
Total (FS & DOI)										
Total	2,929.8	2,701.4	3,047.0	4,461.5	3,756.1	3,372.6	2,837.4	2,625.7	3,342.4	3,938.8
Total, WFM Account	2,435.7	2,501.4	2,582.0	2,751.5	2,991.1	3,098.6	2,886.1	2,490.0	2,556.4	2,903.3
Total, FLAME Account	—	—	—	—	—	474.0	351.0	407.2	390.6	407.0
Total, Additional Appropriations ^d	494.1	200.0	465.0	1,710.0	765.0	—	—	—	402.9	628.5

Source: Information in this table is derived from detailed funding tables prepared by the House Committee on Appropriations and agency FY2015 budget justifications.

Notes: Figures generally reflect supplemental appropriations and rescissions, but do not reflect scorekeeping adjustments. Total equates to the summation of the WFM account, the FLAME account, additional appropriations, rescissions, and use of prior year funds. Wildfire appropriations for DOI used to go directly to BLM, but since 2009 appropriations have gone to DOI to be allocated among the agencies.

- a. FY2013 reflects post-sequester appropriations.
- b. Does not include state fire assistance or volunteer fire assistance funding under the FS State and Private Forestry (SPF) account for those years when appropriations were provided under the SPF account. Prior to FY2014, appropriations for state fire assistance and volunteer fire were provided to both the SPF account and the WFM account. In 2014, appropriations for state fire assistance and volunteer fire assistance for the SPF account were shifted to state fire assistance and volunteer fire assistance for the WFM account. For both the FS and DOI, activity values provided in this table for the WFM account when combined will not equate to the total WFM account value because there are other activities not included in the table.
- c. There is no specific appropriation for this activity after FY2011. The FS proposed to terminate this line item in FY2012, shifting the responsibilities for this subactivity to the National Forest System account, specifically the Integrated Resource Restoration budget line item.
- d. Total additional appropriations do not include rescissions, use of emergency suppression funds, or use of prior year funds.

Suppression

Funds for suppression typically are provided through two accounts in annual Interior appropriation laws: the WFM account and the FLAME account. In addition, other appropriation laws, such as supplemental laws, sometimes provide additional suppression funds for these accounts. This section of the report focuses on appropriations to the suppression activity under the WFM account. FLAME and additional suppression appropriations are discussed in the FLAME section and the additional funding section.

WFM suppression appropriations are used primarily for wildfire response. The FS reports that funding from this subaccount is used to “efficiently suppress wildland fires on or threatening National Forest System lands and other Federal and non-Federal lands under fire protection agreements.”²³ Some items covered by the FS suppression subaccount are firefighter salaries, aviation asset operations, incident support function, and suppression resources for DOI incidents on a reciprocal non-reimbursement basis. The FS suppression subaccount also covers personnel and resources for the Burned Area Emergency Response (BAER) program.²⁴ DOI reports that wildfire response activities range from “intensive suppression when wildfires on public lands threaten communities, high value resources, or critical ecosystems, to monitoring wildfires in areas where burning accomplishes resource benefits or where it is too dangerous to place firefighters.”²⁵ Items covered by the DOI suppression subaccount include select personnel expenses above what is covered by the preparedness subaccount, temporary emergency firefighters, and aircraft flight operations and support. Both the FS and DOI typically request suppression funds based on the 10-year suppression average. The 10-year suppression average is more fully explored in the “Related Issues” section.

The suppression subaccount received the greatest level of funding compared to all other WFM activities for the FS from FY2006 to FY2011 and for DOI from FY2008 to FY2011. However, from FY2012 to FY2014 appropriations provided for the FS suppression activity were second to the appropriations provided for the preparedness activity, due to budget restructuring that occurred in FY2012.²⁶ Appropriations provided for the DOI suppression activity were second to the appropriations provided for the DOI preparedness activity in FY2012 and FY2013. DOI received slightly more appropriations for the suppression activity than the preparedness activity in FY2014.

Hazardous Fuels

The Forest Service’s hazardous fuels appropriation and DOI’s hazardous fuels reduction appropriation are used to decrease fuel loads, or alter the arrangement of fuel loads, on federal lands to make fires less intense and more controllable. Appropriations for this subaccount are

²³ U.S. Forest Service, *Fiscal Year 2014 Budget Justification*, April 2013.

²⁴ The objective of the BAER program is to determine the need for and to prescribe and implement emergency treatments on federal lands to minimize threats to life or property resulting from the effects of a fire or to stabilize and prevent unacceptable degradation to natural and cultural resources.

²⁵ U.S. Department of the Interior, *Budget Justifications and Performance Information Fiscal Year 2015 Wildland Fire Management*.

²⁶ A similar budget restructuring did not occur for DOI.

used for fuel reduction on federal lands and to treat high-priority areas in the wildland-urban interface (WUI).²⁷ The FS reports that this activity aims to “protect communities (and associated lives, property, and public infrastructure) and important assets which are at the highest risk from damaging wildfire, provide an environment where wildland fire can be managed more safely and effectively, and create healthy landscapes that help maintain our Nation’s wealth and provide places for the American public to visit and enjoy nature.”²⁸ Additionally, DOI reports that the hazardous fuel reduction program “removes or modifies vegetation to restore and maintain healthy, diverse ecosystems; reduces wildfire risks to communities and their values; reduces the risk of severe and potentially dangerous wildfire behavior; lessens post-wildfire damage; and limits the spread and proliferation of invasive species and detrimental pathogens.”²⁹ Since FY2005, the hazardous fuels subaccount has received the third-largest share of WFM appropriations for both agencies.

FLAME

Congress established a FLAME account—under the Federal Land Assistance, Management, and Enhancement Act of 2009 (Title V of Division A of the FY2010 Department of the Interior, Environment, and Related Agencies Appropriations Act, P.L. 111-88)—to cover the costs of large or complex fires, when amounts provided in the FS and DOI WFM accounts for suppression and emergency response are exhausted. Both the Secretary of Agriculture and the Secretary of the Interior may transfer funds from their respective FLAME account into the respective WFM account, for suppression activities, upon a secretarial declaration. The declaration may be issued if the fire covers at least 300 acres or threatens lives, property, or resources, among other criteria. The conferees of the FY2010 Interior appropriations bill stated their intent that the funding in the FLAME account, together with appropriations to the WFM account, should fully fund anticipated wildfire suppression needs and prevent future borrowing of funds from non-fire programs.³⁰ DOI reports that 179 wildfires were eligible for FLAME funding in FY2013 (24 on DOI land and 155 on FS land).³¹ The FS reports that the Secretary of Agriculture signed two declarations in FY2013. The first declaration was specifically for 31 wildfires, while the second declaration did not request funds for specific wildfires; rather, it requested “the remainder of available funds due to the exhaustion of funds within the suppression account.”³² **Table 6** contains FLAME account funds for FY2005 to FY2014.

²⁷ For more information on WUI, see CRS Report RS21880, *Wildfire Protection in the Wildland-Urban Interface*.

²⁸ U.S. Forest Service, *Fiscal Year 2015 Budget Justification*, March 2014.

²⁹ U.S. Department of the Interior, *Budget Justifications and Performance Information Fiscal Year 2015 Wildland Fire Management*. In its FY2015 budget justification, DOI proposes to change the subactivity name from “Hazardous Fuels Reduction” to “Fuels Management.”

³⁰ H.Rept. 111-316.

³¹ U.S. Department of the Interior, *Budget Justifications and Performance Information Fiscal Year 2015 Wildland Fire Management*.

³² U.S. Forest Service, *Fiscal Year 2015 Budget Justification*, March 2014.

Table 6. Wildfire Management Additional Funds and FLAME Account, FY2005-FY2014

(millions of dollars)

	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
FS	395.5	100.0	370.0	1,326.0	700.0	413.0	290.4	315.4	678.9	915.0
<i>Additional appropriations</i>	<i>395.5</i>	<i>100.0</i>	<i>370.0</i>	<i>1,326.0</i>	<i>700.0</i>	—	—	—	<i>379.9</i>	<i>600.0</i>
<i>FLAME</i>	—	—	—	—	—	<i>413.0</i>	<i>290.4</i>	<i>315.4</i>	<i>299.0</i>	<i>315.0</i>
DOI	98.6	100.0	95.0	384.0	65.0	61.0	60.9	91.9	107.2	120.5
<i>Additional appropriations</i>	<i>98.6</i>	<i>100.0</i>	<i>95.0</i>	<i>384.0</i>	<i>65.0</i>	—	—	—	<i>15.5</i>	<i>28.5</i>
<i>FLAME</i>	—	—	—	—	—	<i>61.0</i>	<i>60.9</i>	<i>91.9</i>	<i>91.7</i>	<i>92.0</i>
Total	494.1	200.0	465.0	1,710.0	765.0	474.0	351.3	407.3	786.1	1,035.5

Source: Annual agency budget justifications, conference agreements for select Interior appropriations laws, and detailed funding tables prepared by the House Committee on Appropriations.

Notes: FY2013 reflects post-sequester appropriations. CRS identified the additional appropriations in the table through an analysis of the Appropriations Committee tables accompanying the relevant appropriations bills for FY2008 to FY2014. Additional appropriations identified in the table were typically listed in the detailed committee funding tables as “supplemental,” “additional,” or “emergency.” Some of the additional appropriations over the last seven years were formally designated so as to not be subject to certain statutory or procedural budget enforcement, as “emergency requirements” or for other purposes. For further information on emergency designations, see CRS Report R41564, *Emergency Designation: Current Budget Rules and Procedures*.

Additional Funding

Additional funds for WFM are typically appropriated through legislation that supplements the annual Interior appropriations law. In general, bill or report language specifies how the additional funds are to be used (e.g., for wildfire suppression, for fire transfer reimbursement, for emergency rehabilitation). At times additional appropriations were used to repay accounts from previous years. This shifts the timescale of when funding was needed, sometimes creating record-keeping challenges. Additionally, the severity of certain fire seasons (e.g., the 2012 fire season) fell beyond most expectations for typical emergency wildfire management appropriation needs. Additional funds, when combined with FLAME funds, have at times been at the same level or higher than some of the top-funded WFM subaccounts (e.g., preparedness, suppression). A breakdown of additional funds since FY2005 is provided in **Table 6**.

The Administration's FY2015 Wildfire Management Request

The Administration requested a total of \$4.3 billion for wildfire management for FY2015 (\$3.2 billion for the FS and \$1.0 billion for DOI). This is an increase of \$314.7 million (8%) from the \$3.9 billion provided for FY2014 (see **Table 7**). The request contains a 17% increase in funding for hazardous fuels for the FS, and a 12% increase in preparedness for the DOI. The DOI request contains \$30.0 million to establish a new Resilient Landscapes program that will contribute to the restoration and maintenance of fire-resilient landscapes. Both the FS and DOI requested no funding for FLAME.

The Administration proposed an alternative mechanism for funding wildfire suppression, as discussed below.³³ Currently, wildfire suppression is funded by appropriations that are subject to the statutory discretionary spending limits. In its request, the Administration proposes a new strategy similar to the concept described in the Wildfire Disaster Funding Act (H.R. 3992, S. 1875).³⁴ This strategy would fund wildfire suppression for a select group of fires—theoretically the most extreme fires—by creating a new cap adjustment to the statutory discretionary spending limits. The FS asserts that “fire suppression costs are skyrocketing and seriously jeopardizing [the FS’s] ability to fund [the FS] natural resource mission.”³⁵ The FS reports that the proposed strategy would “minimize the risk of fire transfers and provide more stability and certainty of funding to other programs that support critical forest and rangeland management needs.”³⁶

³³ For more information on the Administration’s proposal, see pages 2-4, 9-2, and 9-8 of the FS *Fiscal Year 2015 Budget Justification*, and pages 3, 19, and 32 of the DOI *Budget Justification and Performance Information Fiscal Year 2015, Wildland Fire Management*.

³⁴ For more information on H.R. 3992 and S. 1875, please contact the author of this report for a CRS congressional distribution memorandum that analyzes the Wildfire Disaster Funding Act.

³⁵ U.S. Forest Service, *The U.S. Forest Service—An Overview*.

³⁶ See page 9-8 of the FS *Fiscal Year 2015 Budget Justification*.

Table 7. FY2014 Appropriations and FY2015 Budget Request for FS and DOI Wildfire Management

(millions of dollars)

Agency	FY2014 Approp.	FY2015 Request
Forest Service		
WFM account	2,162.3	2,265.1
FLAME account	315.0	0
Additional appropriations	600.0	
Suppression Cap Adjustment		954.0
Total, FS	3,077.3	3,219.1
DOI		
WFM account	741.0	794.0
FLAME account	92.0	0
Additional appropriations	28.5	
Suppression Cap Adjustment		240.0
Total, DOI	861.5	1,034.4
FS and DOI		
WFM account	2,903.3	3,059.1
FLAME account	407.0	0
Additional appropriations	628.5	0
Suppression Cap Adjustment	0	1,194.4
Total, FS and DOI	3,938.8	4,253.5

Source: Detailed funding tables prepared by the House Committee on Appropriations and FS Fiscal Year 2015 Budget Justification; DOI Budget Justification and Performance Information Fiscal Year 2015 Wildland Fire Management (WFM).

Related Issues

Fire Transfers

The FS and DOI are authorized to transfer funds from other programs and accounts to fund wildfire suppression, typically when wildfire suppression accounts have been depleted. Transfer authority is granted in the Interior, Environment, and Related Agencies annual appropriations bill, specifically in the general provisions Section 102 for DOI and in the administrative provisions for the FS. The accounts from which funds were transferred have historically been reimbursed in the following fiscal year's appropriation act.

Such transfers of funds can have an impact on the ability of the agency to fulfill its other responsibilities.³⁷ Further, some surmise these fire transfers disrupt the congressional budget

³⁷ For example, the FS Chief stated, "Each time the agency transfers money out of accounts to pay for fire suppression (continued...)"

process.³⁸ When wildfire suppression funding is exhausted, Congress must convene—sometimes outside of its regular budget schedule—and decide if it will reimburse the accounts from which funding was transferred. If a reimbursement decision is made after the end of the fiscal year when the transfers were made, it could create confusion about how much suppression funding is needed for the coming fiscal year during the appropriations process. Further, fire transfers may require the modification or suspension of a non-wildfire program if funding from that program is being transferred to wildfire suppression.³⁹

Wildfire Suppression Funding Estimates

Wildfire management suppression appropriations are of considerable interest to Congress. This is partly because of the amount of funding allocated for wildfire management suppression, but also because of scrutiny about the accuracy of annual WFM suppression estimates provided to Congress. In some cases, wildfire management suppression estimates for a fiscal year provided by federal land management agencies have fallen short of what is needed. Additional funds may then have to be provided via additional appropriations, and funds may also have to be transferred from non-wildfire management suppression accounts, which may impact the performance of those activities.

For at least the last two decades, the FS and DOI have estimated annual wildfire suppression outyear costs by using a 10-year suppression average.⁴⁰ The FS reports the moving 10-year average calculation based on actual suppression obligations reported at the end of the fiscal year. Each end-of-year obligation is adjusted to constant dollars. Once an average is calculated, \$350.0 million is subtracted to account for an FY2012 budget restructure in which funding was transferred from the suppression subaccount to the preparedness subaccount.⁴¹

FLAME requires the Secretaries of the Interior and Agriculture to submit to Congress a report at least three times throughout the year that contains estimates of anticipated wildfire suppression costs. Further, FLAME requires the FS and DOI to submit wildfire suppression cost estimates using the best available climate, weather, and other relevant data, and models and other analytical tools. This estimation is made using econometric models which include weather and climate

(...continued)

there are significant and lasting impacts across the entire Forest Service. Not only do these impacts affect the ability of the Forest Service to conduct stewardship work on national forests, they also affect our partners, local governments and Tribes.” U.S. Congress, Senate Committee on Energy and Natural Resources, hearing to explore ways to improve federal wildland fire management, 113th Cong., June 4, 2013.

³⁸ The issue of fire transfers hindering the ability of the FS and DOI to achieve non-fire related goals is not new. For historical information on fire transfers, see CRS Report RL34772, *Proposals to Merge the Forest Service and the Bureau of Land Management: Issues and Approaches*, and U.S. General Accounting Office, *Wildfire Suppression: Funding Transfers Cause Project Cancellations and Delays, Strained Relationships, and Management Disruptions*, GAO-04-612, June 2004.

³⁹ For more information on FS fire transfers, see the FS FY2015 Budget Justification page 14-44, which contains a detailed account of FS fire transfers, specifically funds withdrawn for transfer for wildfire suppression in FY2013, and funds withdrawn for wildland fire suppression and not repaid from FY2002 to FY2013. Similar information was not available in the DOI FY2015 budget justification.

⁴⁰ Outyear is the fiscal year following the year covered in a budget.

⁴¹ Wildfire 10-year suppression average explanation provided by the FS in emails on April 2, 2013, and February 27, 2014.

variables.⁴² For instance, the FS estimated with 90% confidence that wildfire suppression expenditures for FY2014 will range from \$1.2 billion to \$2.0 billion, with a median forecast of \$1.5 billion.⁴³ DOI estimated with 90% confidence that wildfire suppression expenditures for FY2014 will range from \$173.0 million to \$419.0 million, with a median forecast of \$296.0 million.⁴⁴ Further, the May 2014 FLAME analysis indicates that from 2004 to 2013, annual observed FS wildfire suppression costs exceeded the FLAME forecasts six times, while the annual observed DOI wildfire suppression costs exceeded the FLAME forecasts seven times.⁴⁵

Potential Wildfire Suppression Funding Alternatives

Wildfire suppression funding estimates depend on multiple factors (e.g., weather, fuel load, nearby dwellings, access to wildfire site), and numerous reasons have been given as to why suppression estimates have at times not accurately forecast the needed suppression appropriations, with estimates typically underestimating suppression spending. Wildfire suppression is complicated, and both the efficiency of resources used for wildfire suppression and the federal protocol for wildfire management have an impact on wildfire suppression funding.

Both Congress and the Administration have voiced concerns about rising wildfire suppression spending, and have explored multiple options that could limit requests for additional suppression appropriations.⁴⁶ Some cost-containment options include:

- using an improved formula to better estimate wildfire suppression costs (e.g., a 5-year average, a weighted 10-year average),⁴⁷
- using regression models to better estimate WFM suppression costs and non-biophysical policy remedies that might reduce wildfire suppression expenditures (e.g., guidelines about when it is appropriate not to aggressively suppress wildfires),⁴⁸
- increasing hazardous fuels reduction projects,⁴⁹ and

⁴² Email from the FS May 14, 2013.

⁴³ DOI. *Federal Land Assistance, Management and Enhancement (FLAME) Act Suppression Expenditures for Interior and Agriculture Agencies: FLAME May 2014 Forecasts for Fiscal Year 2014* (April 16, 2014).

⁴⁴ Ibid.

⁴⁵ Ibid. Annual observed FS wildfire suppression costs exceeded the FLAME Act May 2014 forecast in 2005, 2006, 2008, 2011, 2012, and 2013. Annual observed DOI wildfire suppression costs exceeded the FLAME ACT May 2014 forecast in 2005, 2006, 2007, 2008, 2011, 2012, and 2013.

⁴⁶ U.S. Congress, Senate Committee on Energy and Natural Resources, *Wyden, Crapo Introduce Bipartisan Wildfire Funding Reform Legislation*, 113th Cong., December 19, 2013; U.S. Department of Agriculture, “Obama Administration Outlines New Strategy to Better Protect Communities, Businesses and Public and Private Lands from the Threat of Wildland Fire Ahead of 2014 Fire Season,” press release, April 9, 2014.

⁴⁷ U.S. General Accounting Office, *Wildfire Suppression: Funding Transfers Cause Project Cancellations and Delays, Strained Relationships and Management Disruptions*, GAO-04-612, June 2004.

⁴⁸ Karen L. Abt, Jeffrey P. Prestemon, and Krista M. Gebert, “Wildfire Suppression Cost Forecasts for the US Forest Service,” *Journal of Forestry*, June 2009; Geoffrey H. Donovan, Jeffrey P. Prestemon, and Krista Gebert, “The Effect of Newspaper Coverage and Political Pressure on Wildfire Suppression Costs,” *Society and Natural Resources*, vol. 24, no. 8 (2011).

⁴⁹ H.R. 1526, 113th Congress.

- requiring state and local governments, and private landowners in the WUI, to improve current wildfire management strategies and bear more of the firefighting costs.⁵⁰

One wildfire suppression proposal introduced in the 113th Congress (S. 1875 and H.R. 3992), and discussed earlier in the Administration’s FY2015 Wildfire Management Request section of this report, would treat larger wildfires as natural disasters, with a different funding structure than what is currently used. It is not clear if the proposed legislation would be able to limit how much funding was spent on wildfire suppression.

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⁵⁰ Headwaters Economics, *The Rising Cost of Wildfire Protection*, June 2013.