Center for American Progress

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Too Hot to Handle

Climate Denial Is Driving Up the Dangers and Costs of Western Wildfires

By Matt Lee-Ashley and Michael Madowitz October 2015

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Introduction and summary

In the American West, catastrophic wildfires have grown increasingly frequent, damaging, and dangerous. In the first nine months of 2015, wildfires burned more than 9 million acres of land in the region—an area more than four times larger than Yellowstone National Park.[1] Two of the year's most damaging fires destroyed a combined 2,853 homes and structures, resulted in five deaths, and prompted President Barack Obama to issue a major disaster declaration.[2] By the start of September, the U.S. Forest Service had spent its entire firefighting budget for the year, forcing the agency to transfer money away from other fire prevention and forest restoration programs to pay the costs of battling blazes in the West.[3]

Congress' response to wildfire seasons has become predictable and inadequate. Lawmakers commit to helping communities rebuild, backfill some of the Forest Service's budget to pay for the costs of fighting wildfires, and then—when the embers cool to ash—shift their attention elsewhere, ignoring both the causes of worsening wildfires and the long-term solutions that are needed.[4] This failure to address both the growing costs of and damage from wildfires is partly rooted in some lawmakers' unwillingness to acknowledge that human-caused climate change is making wildfires hotter, deadlier, and more expensive. Their determination to ignore the role of climate change in Western wildfires is contributing to bad budgeting, resource shortages, and additional risks for local communities.

This report reviews climate change's impact on Western wildfires, discusses their rising costs and increasing size, and projects that in order to fight them, the Forest Service will have to spend nearly twice as much every year over the next decade. It then outlines three policy changes necessary to confront the increasing severity and frequency of wildfires:

1. Reform Congress' broken budgeting system for wildfire suppression
2. Help Western communities prepare for and adapt to the impacts of climate change, including wildfires
3. Reduce U.S. greenhouse gas emissions

The final section illustrates how these changes are set to be undermined by climate inaction—and how they will prove impossible unless lawmakers accept the scientific consensus about climate change and act to confront its costs and causes.

Climate change is worsening Western wildfire seasons

Wildfires are a natural and necessary part of the ecosystems of Western forests and rangelands, but wildfires in the West have grown in size and intensity over the past century. These changes are the result of several factors. In the first decades of the 20th century, for example, U.S. forest policy called for the immediate suppression of all wildfires—a practice that disrupted historic fire cycles and contributed to a buildup of fuel loads in the forests.[5] The expansion of housing and development into fire-prone areas has further increased the need for, and expense of, suppression. A study of historic wildfire data in the West, however, found that climatic factors such as drought, precipitation levels, and precipitation patterns are the primary determinants of how much land area will burn in a given year. Therefore, policymakers and land managers need to understand and anticipate how changes in climatic conditions will affect Western ecosystems if they are to adequately prepare for and mitigate future wildfire patterns.[6]

The United States' leading climate scientists and experts agree that across most of the West, climate change is contributing to larger and more severe fires. The most recent National Climate Assessment, released in 2014, concluded that "increased warming due to climate change, drought, insect infestations, and accumulation of woody fuels and non-native grasses make the Southwest vulnerable to increased wildfire."[7] In the southern Rockies, modeling suggests that areas burned could double in size by the middle of the century.[8] And in the Northwest, scientists project that by the 2080s, wildfires will consume a median annual area that is four times larger than the 1916 to 2007 period. The National Climate Assessment reports that "climate change will alter Northwest forests by increasing wildfire risk and insect and tree disease outbreaks, and by forcing longer-term shifts in forest types and species."[9]

The U.S. Department of Agriculture and the U.S. Forest Service are also documenting fundamental changes to wildfire patterns as a result of climate change.[10] The Forest Service, which manages 193 million acres of national forests, stated in a recent report that "climate change has led to fire seasons that are now on average 78 days longer than in 1970. The U.S. burns twice as many acres as three decades

ago, and Forest Service scientists believe the acreage burned may double again by mid-century."[11] The report also notes that the six worst wildfire seasons in the United States since 1960 have all occurred in the past 15 years.[12] In August, with more than 60 large wildfires burning across 13 states, Secretary of Agriculture Tom Vilsack observed, "Fire seasons are growing longer, hotter, more unpredictable and more expensive every year, and there is no end in sight."[13]

The costs and size of wildfires are increasing rapidly

As wildfires seasons have become more severe, the costs to the federal government of preparing for and responding to them have climbed. According to a June 2013 report from Headwaters Economics, total federal spending on wildfires has grown to an average of $3 billion per year since 2002, more than doubling since the 1990s.[14]

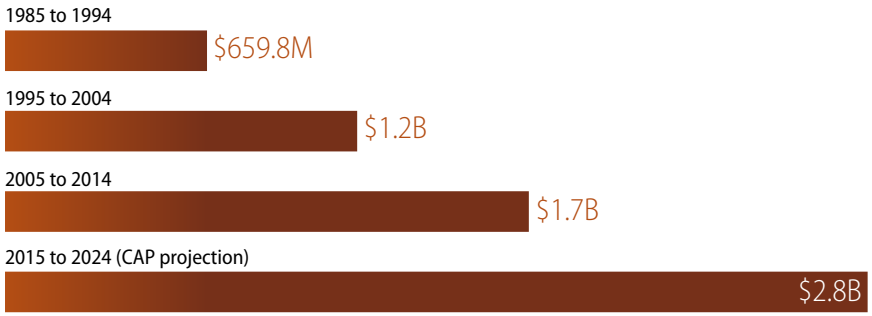
The majority of the federal government's spending on wildfires is dedicated to containing, fighting, and extinguishing wildfires; this is known as wildfire suppression.[15] Suppression costs are rising rapidly: In 2014, federal agencies spent more than three times as much in inflation-adjusted dollars on wildfire suppression as they did in 1985.[16] Over the past 10 years, federal agencies have spent an average of approximately $1.7 billion per year in 2014 dollars on wildfire suppression. This figure—referred to as the 10-year average—has been rising approximately 5 percent annually in inflation-adjusted dollars for the past two decades. Assuming that the 10-year average cost of wildfire suppression continues to rise at the same rate, the Center for American Progress estimates that the U.S. Department of the Interior and the Forest Service will spend an average of $2.8 billion per year in 2014 dollars on wildfire suppression between 2015 and 2024. The Forest Service alone could spend an average of $2.3 billion per year on wildfire suppression during that time period.[17]

The rising cost of fighting wildfires is related, in part, to the growing number of homes and structures that are being built in wildfire-prone areas. Federal, state, and local firefighters incur additional costs and risks to defend these structures during a fire.[18]

FIGURE 1

Federal wildlife suppression costs

Average annual spending by the U.S. Forest Service and the Department of the Interior to suppress wildfires, by decade in 2014 dollars



Source: CAP analysis of National Interagency Fire Center, "Federal Firefighting Costs (Suppression Only)," available at https://www.nifc.gov/fireInfo/fireInfo_documents/SuppCosts.pdf (last accessed October 2015).

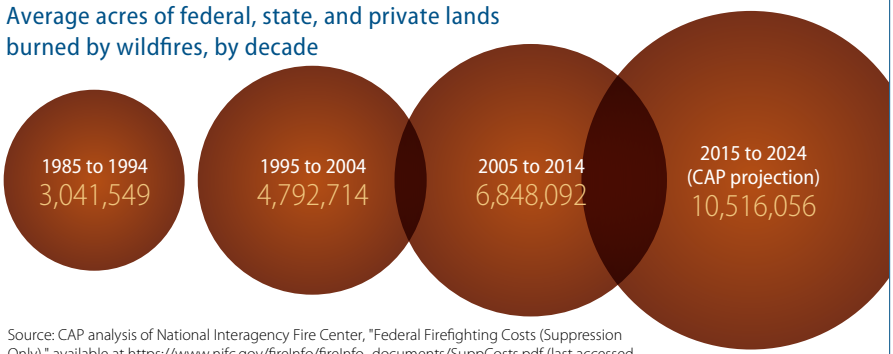
*** Correction, October 22, 2015:** A previous version of this figure listed incorrect time periods for each bar. The correct time periods are 1985 to 1994, 1995 to 2004, 2005 to 2014, and 2015 to 2024.

However, rising wildfire suppression costs are also the result of more acres burning every year. Between 1985 and 1994, wildfires burned an average of approximately 3 million acres of federal, state, and private land per year. Between 2005 and 2014, that figure more than doubled to an average of 6.8 million acres per year. Assuming continued linear growth in the 10-year average of acres burned, CAP estimates that wildfires will consume an average of 10.5 million acres of land per year between 2015 and 2024.[19]

FIGURE 2

Land area burned by wildfire each year

Average acres of federal, state, and private lands burned by wildfires, by decade



Source: CAP analysis of National Interagency Fire Center, "Federal Firefighting Costs (Suppression Only)," available at https://www.nifc.gov/fireInfo/fireInfo_documents/SuppCosts.pdf (last accessed October 2015).

Western states likely to experience even more variable and catastrophic wildfire patterns in next decade

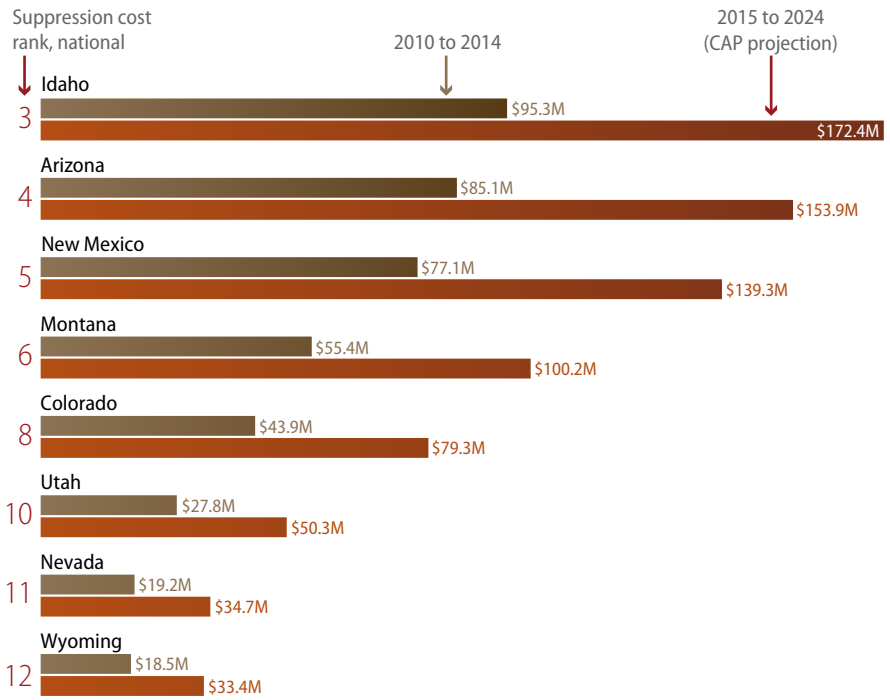
A CAP analysis of new state-by-state wildfire spending data provided by the Forest Service suggests that if recent patterns and trends continue, the agency will have to spend dramatically more money over the next decade to fight fires in the West and will face even higher fluctuations in the severity of fire seasons in each state from year to year.

The data show that Western states accounted for 91 percent of the U.S. Forest Service's spending on wildfire suppression between 2010 and 2014. In fact, 11 of the 12 states where the Forest Service spent the most on wildfire suppression are west of the 100th meridian. The 12th state, Texas, straddles the 100th meridian.[20]

FIGURE 3

U.S. Forest Service: Wildfire suppression costs by state, Rocky Mountain region

Average annual wildfire suppression costs, U.S. Forest Service



Sources: 2015–2024 projections are based on CAP analysis of 2010–2014 data requested from the U.S. Forest Service data and historic acreage and cost data from National Interagency Fire Center, "Federal Firefighting Costs (Suppression Only)," available at https://www.nifc.gov/fireInfo/fireInfo_documents/SuppCosts.pdf (last accessed October 2015).

Wildfire suppression costs in Western states have experienced extreme variations over the past five years. Forest Service suppression spending in Colorado has swung widely over the period; the ratio of the highest spending year—2012's $92 million—to the lowest spending year—2014's $7 million—is approximately 12-to-1. The ratios of the highest to lowest spending years in Nevada, Montana, and New Mexico are all around 5-to-1.[21]

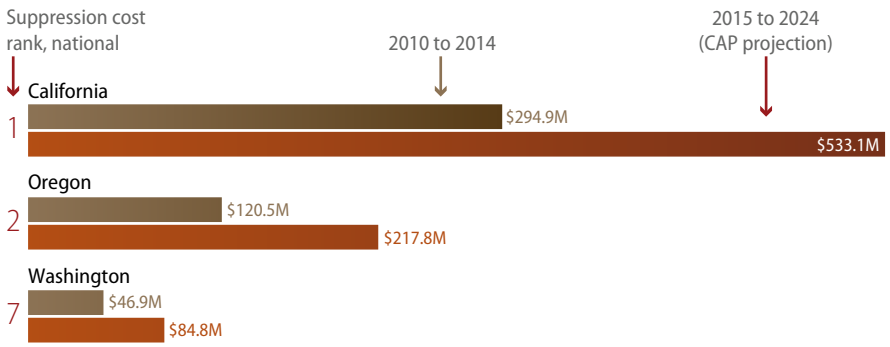
Over the next decade, the Forest Service will likely spend an average of 80 percent more per year than it has in the past five years to fight fires in Western states. In the Rocky Mountain states, average annual Forest Service suppression spending between 2015 and 2024 could climb to $172 million in Idaho, $154 million in Arizona, $139 million in New Mexico, $100 million in Montana, and $79 million in Colorado.[22]

The Pacific states will likely see similarly large jumps, with the Forest Service's wildfire suppression spending in California rising to as much as $533 million per year over the next decade—up from approximately $295 million per year between 2010 and 2014. Its annual wildfire suppression costs in Oregon and Washington are projected to climb to $218 million and $85 million per year, respectively.

FIGURE 4

U.S. Forest Service: Wildfire suppression costs by state, Pacific region

Average annual wildfire suppression costs, U.S. Forest Service



Sources: 2015–2024 projections are based on CAP analysis of 2010–2014 data requested from the U.S. Forest Service and historic acreage and cost data from National Interagency Fire Center, "Federal Firefighting Costs (Suppression Only)," available at https://www.nifc.gov/fireInfo/fireInfo_documents/SuppCosts.pdf (last accessed October 2015).

Shortchanging Western states

Congressional funding for wildfire suppression has not kept pace with the growing costs of battling blazes. In seven of the past 10 years, the Forest Service and the U.S. Department of the Interior's costs of fighting wildfires have exceeded their annual suppression budgets, forcing the agencies to transfer budgeted funds from other programs, including fire prevention.[23] As of September, the Forest Service had transferred $250 million in 2015 from other budgeted funds to fight blazes in the West.[24]

When federal agencies are forced to transfer funds from non-wildfire suppression accounts to cover the costs of fighting fires, Western communities are adversely affected. In recent years, emergency funding transfers have caused delays and cancellations to dozens of priority forest restoration, environmental protection, recreation, and wildfire prevention projects across the region. In Colorado, for example, the Forest Service had to delay abandoned mine mitigation work in 2012 and 2013; cancel or delay more than $300,000 in wildfire management projects; and cut funding for restoration work related to the bark beetle epidemic and invasive plant species, as well as halt $400,000 in watershed management projects.[25] The Forest Service has also noted that its recreation programs—from building trails to managing permits and helping youth get outside—have also suffered.[26] For Western communities that depend on national forests for a broad range of benefits—including recreation, tourism, and clean drinking water—delays and cancellations of these projects can have profound consequences for local economies, residents' quality of life, and their health.

Policy changes are needed

To confront the growing risks and costs of Western wildfires, congressional leaders need to enact at least three fundamental policy changes: 1) reform Congress' broken budgeting system for wildfire suppression; 2) help Western communities prepare for and adapt to the impacts of climate change, including wildfires; and 3) reduce U.S. greenhouse gas emissions.

1. Reform Congress' broken budgeting system for wildfire suppression

Congress needs to change how it budgets for wildfire suppression costs so that federal agencies have the resources they need without having to raid other programs. This policy change should be rooted in an understanding that catastrophic wildfires are burning more land, costing more money to fight, and contributing to a high variability in the amount of resources that federal agencies need to fight fires.

A proposal from President Obama and the Wildfire Disaster Funding Act would achieve these goals.[27] These proposals—discussed in more detail in a May 2014 CAP column—are straightforward: They would treat the most destructive and expensive 1 percent to 2 percent of wildfires, which currently consume up to 30 percent of the Forest Service's suppression spending, as natural disasters.[28] Federal agencies would have access to emergency disaster funding to battle these most destructive fires.[29] This change to wildfire budgeting would avoid the practice of so-called fire borrowing, whereby the Forest Service is forced to raid fire mitigation, prevention, and conservation programs to pay for wildfire suppression.[30]

2. Help Western communities prepare for and adapt to the impacts of climate change, including wildfires

In addition to providing adequate resources for wildfire suppression, Congress should develop policies and invest in programs that reduce fire risk, improve the health of ecosystems, and help land managers adapt to a changing climate. Over the past two decades, however, Congress has largely starved off resources for the Forest Service's initiatives that are not related to wildfire suppression. Since 1995, for example, the Forest Service's budget for nonfire programs has decreased 32 percent—adjusted for inflation—while nonfire staffing levels have fallen more than 39 percent.[31] Nonsuppression investments in priorities such as ecosystem restoration, hazardous fuels reduction, and watershed management can both help reduce wildfire risk and improve the healthy functioning of forests.

In addition to making smarter investments in nonsuppression accounts, Congress should enact legislation that focuses on helping communities adapt to the growing risks of wildfire and the changing climate. A 2014 white paper from Headwaters Economics introduces several policy ideas that Congress should consider, including proposals that would help local communities avoid home construction in the most wildfire-prone areas, provide better information to homebuyers on wildfire risks, create financial incentives for smarter land use planning, and protect particularly wildfire-prone areas from development.[32]

3. Fight climate change by cutting greenhouse gas pollution

To confront the rising risks of wildfires in the West, Congress needs to address both the costs and causes of climate change. Unfortunately, Congress has been unable to take any meaningful action to reduce greenhouse gas pollution in recent years, which prompted President Obama to use executive authority to develop and implement the Climate Action Plan, beginning in 2013.[33] Legislators who claim to be concerned with Western wildfires should support the Climate Action Plan and renew legislative efforts to build a clean energy economy and cut pollution. A new Senate proposal, for example, would set rigorous national targets for greenhouse gas reductions, accelerate the deployment of renewable energy, and incentivize more energy savings by utilities.[34]

Denying or ignoring climate science exacerbates the wildfire risks facing Western communities

The three policy changes outlined above are essential components of any meaningful strategy to confront the rising risks and costs of wildfires in the West, yet they face roadblocks from conservative members of Congress who deny that climate change is real and remain unwilling to confront its causes and consequences.

The wildfire budget reform proposal that President Obama put forward, as well as its legislative parallel known as the Wildfire Disaster Funding Act, have widespread bipartisan support—including from both Republicans and Democrats in the West.[35] But congressional climate deniers are blocking their progress. A primary barrier to wildfire budget reform is House Ways and Means Committee Chairman Paul Ryan (R-WI), who has argued against allowing federal agencies to access disaster funding for the small proportion of catastrophic fires that consume the most resources. Notably, in both a 2014 letter to his colleagues and a fact sheet stating his position, Rep. Ryan failed to mention that wildfire costs are rising, that wildfires are increasing in size and severity, or that climate change is contributing to these changes.[36]

Rep. Ryan's objection to reform is rooted in a presumption that wildfire suppression costs are predictable and can be paid by making offsetting cuts to other programs—a presumption that has proved costly for Western communities in recent years. Rep. Ryan has questioned whether climate change is happening, based on the observation that it still snows in his home state of Wisconsin.[37] In a 2014 election debate, he also said he thought that the benefits of confronting climate change "do not outweigh the costs."[38]

Notwithstanding Rep. Ryan's objections, the Wildfire Disaster Funding Act has the most bipartisan support of any other piece of natural resource legislation, and it may yet pass this Congress.[39] It is far less likely, however, that Congress will take any action to reduce the greenhouse gas pollution exacerbating Western wildfires or to help Western communities adapt to the impacts of a changing climate. In

July, the House of Representatives passed a bill that its proponents described as a wildfire bill but is composed primarily of provisions aiming to increase logging and weaken environmental protections in national forests. The 10,000-word bill does not include the words "climate change."[40]

Sen. Lisa Murkowski (R-AK), chair of the Senate Energy and Natural Resources Committee, did mention climate change in her opening remarks at a wildfire hearing in May. "Over the last 50 years, we have seen a rapid escalation in the size, frequency, and severity of wildfires," she said. "The most often cited causes are severe drought, a changing climate, hazardous fuel buildups due in part to decades of fire exclusion, insect and disease infestation, and an explosion of nonnative invasive species. These are big problems."[41]

Despite acknowledging climate change as a big problem for wildfires, however, neither Sen. Murkowski's committee nor the House Committee on Natural Resources has held a hearing this year focused on actions to combat climate change.[42] As a consequence, neither the House nor the Senate appears poised to pass any meaningful bills to cut carbon pollution.

Conclusion

Each wildfire season that passes without reform or meaningful climate action from Congress means that the costs and challenges facing federal agencies and Western communities grow larger. The U.S. Forest Service is increasingly playing the role of a firefighting agency, instead of the land management agency it is supposed to be. For the first time in its history, the agency will spend more than 50 percent of its budget fighting wildfires this year, up from just 16 percent in 1995.[43] State and local communities are likewise spending more time and money preparing for wildfire season, battling blazes, and helping neighbors rebuild.

In August, as 14 fires burned in California, Secretary of Agriculture Vilsack made yet another pitch for congressional intervention: "The reality is, every year there's an acknowledgement that there's a problem, and every year, for whatever reason, Congress finds it difficult to actually solve it."[44] This cycle of inaction will only be broken when policymakers finally confront the causes of escalating wildfire risks, address the role of climate change in shifting wildfire patterns, and modernize policies to reflect the reality they are inflicting upon the nation.

About the authors

Matt Lee-Ashley is a Senior Fellow and the Director of Public Lands at the Center for American Progress. He previously served as deputy chief of staff at the U.S. Department of the Interior, overseeing policy, external affairs, communications, and legislative matters on behalf of Secretary Ken Salazar. He also served as director of communications for the Department of the Interior. From 2005 to 2008, Lee-Ashley worked in the U.S. Senate for then-Sen. Salazar (D-CO), handling military, veterans affairs, and energy and environmental policy. A native of Colorado Springs, Colorado, Lee-Ashley graduated from Pomona College in Claremont, California, in 2004.

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