

WILDFIRE

Congressional Hazards Caucus Alliance Factsheet

Wildfires, or wildland fires, are a natural and critical part of forest ecosystems. Fire removes overgrown or dead vegetation and provides diverse habitats for plants and animals; in fact, some trees cannot reproduce without heat from fire to open pinecones and release seeds. However, natural fire processes often come into conflict with human development, resulting in loss of lives, resources, and property.

In fiscal years 2011 to 2015, the federal government spent an average of \$3.3 billion per year managing wildfire, of which \$1.7 billion each year has gone toward suppression, or actively extinguishing fires.^{1,2} While most wildfires remain relatively small, the two percent of wildfires that exceed 300 acres account for 94 percent of suppression costs.³ Large, long-duration fires are most likely to occur in the western U.S., where the U.S. Forest Service (USFS) and the Department of the Interior (DOI) manage extensive public lands.⁴

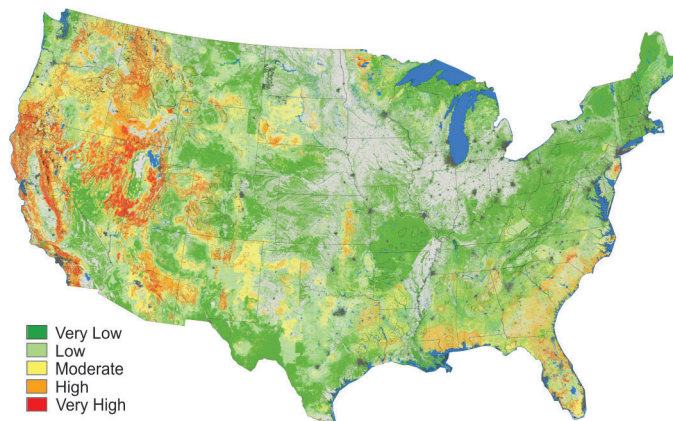
CAUSES AND RISKS

Regardless of whether the source of ignition is natural or human-caused, the potential for wildfire is determined by vegetation and weather conditions. Dense vegetation and prolonged periods of drought can greatly increase the chance of wildfire. The four largest wildfire seasons in U.S. history have occurred in the last 10 years: 2006, 2007, 2012, and 2015. During these seasons, more than 9 million acres—an area approximately the size of Massachusetts, Rhode Island, and Connecticut combined—burned each year.⁵

INCREASING SEVERITY OF WILDFIRE SEASONS

Despite a relatively consistent number of wildfires, their size and severity is increasing. Two main factors contribute to a higher risk of large wildfires:

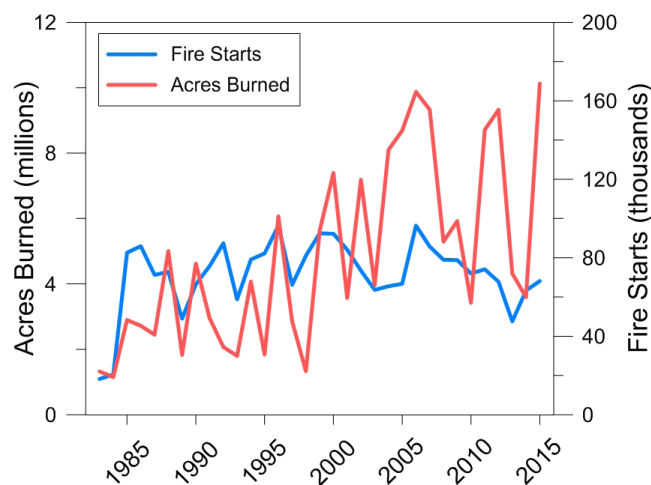
- **Historic practices of aggressive fire suppression** (e.g. immediately putting out every fire) have resulted in the buildup of fuels where frequent, low-intensity fires once regularly reduced this overgrowth. This buildup increases the potential for catastrophic fires.



Wildfire potential map based on modeled estimates of burn probability and fire intensity level (2012).

Credit: USFS Fire, Fuel, and Smoke Science Program (<http://www.firelab.org/project/wildland-fire-potential>)

- **Rising temperatures have led to more frequent droughts, earlier and less snowmelt, and longer fire seasons**, all of which exacerbate wildfire severity. Warmer temperatures have also contributed to the spread of bark beetles and other pests, which kill trees and add to the fuel buildup.



Wildfires started and acres burned by year, 1985-2015.

Data courtesy NIFC (http://www.nifc.gov/fireInfo/fireInfo_stats_totalFires.html)

[1] National Interagency Fire Center.

[2] "Wildfire Management: Federal Funding and Related Statistics," Congressional Research Service, (2013).

[3] "Large Fire Suppression Costs: Strategies for Cost Management," Strategic Issues Panel on Fire Suppression Costs, (2004).

[4] "The National Strategy: The Final Phase in the Development of the National Cohesive Wildland Fire Management Strategy," (2014).

[5] "Getting Burned: A Taxpayer's Guide to Wildfire Suppression Costs," Firefighters United for Safety, Ethics, & Ecology, (2010).



WILDLAND URBAN INTERFACE (WUI)

The WUI is an area where houses and other structures are spread across undeveloped land prone to wildfire. Wildfire funds are disproportionately spent on defending privately owned structures in the WUI, accounting for up to 50 percent of annual suppression budgets, according to fire managers. This risk is growing, with 44 million homes in wildfire-prone WUI areas and a predicted 40 percent increase by 2030.⁶

WILDFIRE AND WATER

Wildfires can affect water quality and quantity. Burned areas erode easily, sending ash and sediment into rivers where they may contaminate water supplies. The influx of sediment may also damage the habitat and breeding grounds of fish and other organisms. In contrast, the absence of fire allows overgrown vegetation to absorb too much water, preventing it from ever reaching streams and rivers.

NATIONAL POLICY AND FUNDING

Under current funding mechanisms, USFS and DOI fund wildfire response from their annual discretionary budgets. In above average fire years when costs exceed expectations, the agencies draw money from other programs to fund fire suppression. This is unique among other major disaster funding procedures, such as those for hurricanes and earthquakes, which are funded through the Disaster Relief Fund that is managed by the Federal Emergency Management Agency (FEMA).

In April 2014, the Departments of Agriculture and the Interior released a National Cohesive Wildland Fire Management Strategy with a related National Action Plan, which were prepared in collaboration with many state, local, and professional stakeholders. The Cohesive Strategy identifies three national goals:

- **Restore and maintain landscapes:** Landscapes across all jurisdictions are resilient to fire-related disturbances in accordance with management objectives.
- **Fire-adapted communities:** Human populations and infrastructure can withstand a wildfire without loss of life and property.
- **Wildfire response:** All jurisdictions participate in making and implementing safe, effective, efficient risk-based wildfire management decisions.

Implementing these goals must reflect local conditions, but some approaches include:

- **Preparedness:** Ensuring that agencies and communities effectively reduce risk and are prepared to respond to wildfires through infrastructure, training, and prevention measures.
- **Suppression:** Managing emergency fire response, which can include actively attempting to contain a wildfire or monitoring a fire for ecological goals.
- **Hazardous fuels reduction:** Mitigating the effects of wildfires and protecting WUI areas through prescribed fire, mechanical thinning, and other techniques.
- **Outreach and education:** Raising wildfire awareness and public understanding of fire safety.

NATIONAL INTERAGENCY FIRE CENTER

Wildfire crosses jurisdictional boundaries, so by nature wildfire response must be collaborative. The National Interagency Fire Center (NIFC) in Boise, Idaho enables eight agencies and organizations to coordinate wildland firefighting activities. It supplies wildfire resources including logistical support, firefighting crews, equipment, and aircraft to incidents throughout the U.S. Federal agencies also work with state and local organizations, which play a significant role in preventing, mitigating, and fighting wildfires.

ADDITIONAL RESOURCES

National Interagency Fire Center

www.nifc.gov

National Park Service Fire Learning Center

<http://www.nps.gov/fire/wildland-fire/learning-center.cfm>

Forests and Rangelands

www.forestsandrangelands.gov

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[6] "Large Fire Suppression Costs: Strategies for Cost Management," Strategic Issues Panel on Fire Suppression Costs, (2004).