## Wildfires burn science capacity

ith just over 3 months remaining, it looks like 2015 could be a record-breaking year for wildfires in the United States. So far this year, more than 8.5 million acres have burned and severe fires often happen in October. For the first time, the U.S. Forest Service will spend over 50% of its budget on

fire management. Ironically, this is directing resources away from projects and re-

search that would reduce the risk of forest fires. This must be fixed.

Trends show the need for action by Congress. Wildfires are getting more severe; the wildfire season continues to grow longer, increasing in some areas by 7 weeks over the past 35 years. More people are living in the fire-prone wildland/ urban interface, raising the risk of damaging wildfires. Vast areas have an unnatural buildup of highly flammable trees and brush due to past overzealous restraining of low-intensity natural fires.

Not surprisingly, firefighting costs have soared. Indeed, federal appropriations for fire suppression and fire operations zoomed

from about \$600 million in 1995 to nearly \$3 billion in 2014. State fire-suppression expenditures doubled from 1998 to 2014, to \$1.6 billion. So far, available appropriations this year for firefighting are \$700 million less than actually spent, so non-fire funds have been borrowed to cover these emergency needs. This season, the U.S. Forest Service spent as much as \$243 million per week fighting wildfires. Fire-related costs take up over 50% of its budget, up from 16% in 1995. If changes are not made, fire management will consume 67% of its budget by 2025.

Making matters worse is that in the United States, wildfires are the only kind of natural disaster for which a response consumes regular federal agency funding. Wildfire fighting is largely supported by federal appropriations to the Forest Service and the Department of the Interior, along with state, tribal, county, and municipal participation. Paying for firefighting using normal operating funds has vast consequences for both

land management and the science that can address fire problems. This science capacity is hurt not only at the Forest Service but also at the U.S. Geological Survey, the U.S. Environmental Protection Agency, the Smithsonian Institution, and others that are funded in the same legislation from Congress. For example, the Forest Service Research and Development arm has had a 33% reduction in staffing from 2001 to 2014.

There is much at stake with this loss of land management and science capacity. Forestlands provide half of our nation's water and sequester about 13% of total U.S. fossil fuel carbon emissions, but projections suggest that forests will become net carbon emitters later this century if steps are not taken to make them more resilient. Science is needed for inventories, for modeling fire behavior and predicting treatment efficacy, and for helping with risk evaluation to improve management decisions.

A 4-year-long effort by all levels of government, including federal, state, tribal, county, and municipal units, developed the National Cohesive Wildland

Fire Management Strategy, a plan that uses science and data analysis to support three major goals: restore and maintain fire-adapted landscapes, create fire-adapted communities, and improve wildfire response. The actions include such things as engaging citizens in safer building practices, implementing controlled burns, and removing vegetation to safeguard communities, wild-life, and water resources. All levels of government have agreed to this strategy, but now they must provide resources to make it work. If implemented, it will reduce firefighting costs while enhancing many other benefits to society and nature.

In addition, Congress should pass the Wildfire Disaster Funding Act. Pending in the House and the Senate, the bill would change how the federal government budgets for the suppression of wildfire disasters, making it similar to the way other responses to natural disasters are funded.

- Christopher Topik



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JTOS: (TOP RIGHT) C. TOPIK; (INSET) AP PHOTO/KEVIN WA

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