



United States Department of Agriculture

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US Forest Service  
**Research  
and  
Development**  
Monthly News and Highlights from  
the World Leader in Forestry Research

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**USDA Forest Service R&D Newsletter - May 2019**  
**Forests and You**  
*News from the Washington Office and Research Stations*

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## FEATURED NEWS

### How People Manage Their Yards Can Help, or Not Help, Native Wildlife

A USDA Forest Service [study](#) funded by the National Science Foundation suggests that how people manage their yards can make a difference to the success of wildlife species. Within the 39-neighborhood study area in Phoenix, Arizona, six native species of continental importance appear to be responding well to native landscaping.



## SHARE SCIENTIFIC BREAKTHROUGHS

### Wood Tornado Shelter Provides Safe, Affordable Storm Protection

Forest Service scientists have [developed](#) a tornado shelter made from wood that can be easily built into an existing home. The eight-by-eight foot room can be built by a homeowner or a local contractor for relatively little expense. It can also double as a bathroom or utility room. Residential tornado shelters made of steel and concrete are already available, but these building materials are more costly than wood, and

shelters using them often must be built during the original construction of a home. The wooden shelter recently passed industry safety standards.



## FARMS AND FORESTS

### *National Geographic: How to Regrow Forests the Right Way*

An [article](#) in *National Geographic* highlights Forest Service research on new ways to bring back forests after fires. Throughout the 20th century, the agency grew trees by planting monocultures in orderly rows after a fire or clear cut. But since this strategy has become too expensive, Forest Service ecologists and silviculturalists are seeking a new model of forestry that would emphasize a variety of spacing and species.



## MITIGATE WILDFIRE RISK

### *NOVA: Inside the Megafire*

A two-hour [film](#) about the spread of Western wildfires called *Inside the Megafire* was presented by the popular PBS show *NOVA* on May 8. The film explores how forestry practices, changing climates, and fire physics have contributed to the recent increase in wildfires. It features scientists from the Forest Service Fire, Fuel, and Smoke Science Program and the Missoula Fire Sciences Lab.



## MITIGATE WILDFIRE RISK

### Engaging the Fire Before it Starts: Proactive Risk Management

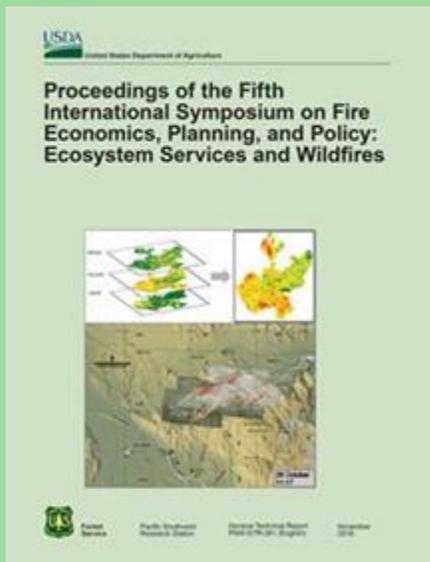
A Forest Service [video](#) shows how proactive risk management can be used to engage fire before it starts. The video provides management tips from the Wildfire Management Science Team that integrated advanced modeling and risk management science with local knowledge to plan future fire response.



## MITIGATE WILDFIRE RISK

### The 2018 USDA National Agroforestry Center Highlights

Because landowners, managers, tribes, and communities are the ultimate decision-makers, the National Agroforestry Center (NAC)'s 2018 [accomplishments](#) explored factors that influence agroforestry outreach and adoption. In March of 2018, NAC organized an event in which more than 60 producers, researchers, investors, government staff, and others met over three days to address the need for ideas on the economic challenges and opportunities facing agroforestry.



## MITIGATE WILDFIRE RISK

### The Fifth International Symposium on Fire Economics, Planning, and Policy: Ecosystem Service and Wildfire

The Forest Service participated in an international [symposium](#) designed to address current issues of agencies with wildland fire protection responsibility in the United States and in the international community. The topics discussed included: an experimental high-resolution fire weather forecast [system](#) called FireBuster to help fire management in California, a [comparison](#) of homeowners' willingness to pay for two different fuel reduction programs in California and Florida, and the [role](#) of native peoples in managing natural disasters.



## PROVIDE EXCELLENT CUSTOMER SERVICE

### The Surprising Science of Fighting Crime with Trees

A recent [article](#) highlights Forest Service research on the benefits of urban green space, including its ability to reduce city crime. A 2012 Forest Service study found trees on urban streets were associated with crime reduction in southeast Portland, Oregon. In a separate Forest Service study on urban greening in Philadelphia, a \$5 investment per square meter to green each lot resulted in a 29 percent reduction in gun violence.



## HISTORY

### What it Takes to Bring Back the Near-Mythical American Chestnut Trees

American chestnut trees were once the giants of Eastern U.S. forests, sometimes reaching heights of more than 100 feet and trunk diameters over 10 feet. Mature American chestnuts have been virtually extinct for decades due to the spread of ink disease in the early 1800s and chestnut blight in the early 20th century. Their disappearance has changed the ecology of Eastern forests. But the Forest Service and its partners are working to [restore](#) American chestnut trees by making them blight resistant and by studying the conditions necessary for the trees to grow and regenerate on a landscape scale.



## DID YOU KNOW?

### Burning Embers from Wildfires are a Bigger Threat to Homes than Large Flames

Forest Service [research](#) shows that a home's susceptibility to damage from wildfires depends on the characteristics of the home and its surroundings in a 100-foot radius, such as vegetation, outbuildings, and neighboring houses. This means that homeowners can help fireproof their homes by making simple changes to the house itself and its immediate surroundings.

**More News**



### Faces of the Forest Service: Meet Ge Sun

Ge Sun is a Forest Service research hydrologist. He grew up in rural northern China and immigrated to the U.S. in 1991 as a graduate student. In 2017, his forest hydrology work was recognized by the Forest Service with the Deputy Chief Outstanding Science award and the Chief's Honor award.



### Vibrant Cities Lab

Vibrant Cities Lab--created by the Forest Service and its partners--is designed to help city managers, policymakers, and advocates build thriving urban forest programs. The Lab includes case studies and research on how urban forests can help improve human health, economic development, water quality, public safety, and more.

### **BY-THE-NUMBERS**

Research shows that a home's **ignitability** during extreme wildland fires depends on the characteristics of the **home, vegetation, outbuildings** and **neighboring houses** within **100 feet** of the home.



[Learn More About Protecting Your Home from Wildfires](#)

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