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Forest Service

Research
and Development

Monthly News and Highlights from
the World Leader in Forestry Research

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The banner features a green and orange color scheme. On the left is the U.S. Forest Service shield logo. The text "Forest Service" is in white. "Research and Development" is in large white font. Below it, an orange box contains the text "Monthly News and Highlights from the World Leader in Forestry Research". On the right is a graphic of a globe with a white leaf. At the bottom right are social media icons for Twitter, Instagram, Facebook, and YouTube, along with the hashtag #SoundScience.

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U.S. Forest Service R&D Newsletter: October 2019
News from the Washington Office and Research Stations



FEATURED NEWS

Surprising Discovery About California Wildfires

Research by the Forest Service and partners shows that destruction of homes and other buildings from California wildfires are disproportionately concentrated in parts of the Wildland-Urban Interface (WUI) known as "interfaces" — areas that have sparse or no wildland vegetation, but are close to large patches of wildland. This finding underscores the importance of mitigating human-made fuels, such as cars that contain gasoline and wood piles. By contrast, many risk reduction plans focus on natural vegetation that fuels fire.



DELIVERING BENEFITS TO THE PUBLIC

Trees Do Dirty Work of Waste Cleanup

Certain types of trees are increasingly being used to efficiently and cost-effectively absorb toxins from leaking dumps, closed landfills, and other waste sites. As part of a Forest Service study, 20,000 tree types were planted in 16 cleanup sites in Great Lakes watersheds.



DELIVERING BENEFITS TO THE PUBLIC

In the Pipeline: Effects of Oil and Gas Development

Advances in horizontal drilling and hydraulic fracturing are helping to increase Western oil and gas development. A Forest Service [report](#) describes impacts of oil and gas development on the largest National Grassland in the U.S., which is located in North Dakota.



SUSTAINING NATIONAL FORESTS

Drones Help Sustain Shorelines

A partnership with Michigan Technological University is allowing the Forest Service to use high-tech drone equipment to [collect](#) data about pristine shoreline habitats in Hiawatha National Forest, which is nestled among three Great Lakes. Resulting data will support the management of tall invasive grasses that crowd out native plants; degrade fish and wildlife habitat; block views; and reduce access for swimming, fishing, and hunting.



SUSTAINABLE FOREST MANAGEMENT

Spotted Owls vs. Nonnative Owls

Nonnative and aggressive barred owls are contributing to declines of northern spotted owls. But a Forest Service-led [study](#) provides the first evidence that spotted owls and barred owls rely on different forest elements within overlapping territories. This information may help managers promote forest structures that benefit spotted owls.



DELIVERING BENEFITS TO THE PUBLIC

Your Home Can Survive a Wildfire

National Fire Protection Association video: Watch this [video](#), which features Forest Service research on protecting homes from wildfire, and send it to homeowners.



SUSTAINABLE FOREST MANAGEMENT

Protecting Urban Trees from Pests

Because urban trees lack the diversity of natural forests and may be exposed to transported goods, urban trees are ideal hosts and invasion gateways for non-native forest pests. To support better tracking of such pests, Forest Service researchers developed a new [approach](#) for modeling regional distributions of urban trees.



DELIVERING BENEFITS TO THE PUBLIC

Biomass Use Impacts Wood Markets

If more wood is used for bioenergy in the future--as predicted, markets for wood and conventional wood products could be affected. Forest service [modeling](#) revealed information on potential impacts of increased biomass demand on aspects of wood economies, including timber harvesting rates, timber prices and uses of forest lands.



SUSTAINABLE FOREST MANAGEMENT

Invasives Decrease Forest Carbon

A first-of-its-kind [study](#) by the Forest Service and others shows that non-native insects and diseases are reducing carbon storage by U.S. trees.



ENHANCING RECREATION

Seeking Ground Less Traveled: Elk Responses to Recreation

In a [study](#) of relationships between human activities and elk responses, use of all-terrain vehicles ranked most disruptive to elk, followed by mountain biking, hiking, and horseback riding. When exposed to these human activities, elk spent more time moving rather than feeding and resting. These results may support assessments of trade-offs between multiple land uses.



SEASONAL SPECIAL

WHY LEAVES CHANGE COLOR

Although fall colors seem like sheer art and poetry, they are caused by chemistry. Learn more [here](#).



DID YOU KNOW?

LONGLEAF PINES ARE AMONG THE WORLD'S MOST DIVERSE ECOSYSTEMS

[Longleaf pine forests](#) are home to hundreds of plant and animal species, including 29 threatened and endangered species. Among these is the endangered [red-cockaded woodpecker](#), a cavity-creator that other species depend on.

[Longleaf pines](#)--which once covered 90 million acres from Virginia to Texas--have been reduced to just a few million acres. But longleaf stands now exceed 4 million acres, up from a low of about 3 million acres two decades ago. Forest Service [research](#) supports longleaf restoration. (Scroll down to infographic.)

Messages from the Deputy Chief of Research and Development



Forest Service Diversity Showcased at Women of Color STEM Awards

Four Forest Service employees received awards at the 24th Annual Women of Color STEM Conference. Leslie Weldon, Chief Executive for Work Environment and Performance, received the Career Achievement Award in Government. Tina Terrell, Associate Deputy Chief for the National Forest System, received the Community Service Award in Government. Technology All-Stars Awards were awarded to Emily Blount, Assistant Director of Engineering, Technology and Geospatial Services and to Grizelle Gonzalez, Research and Development Project Leader at International Institute of Tropical Forestry.



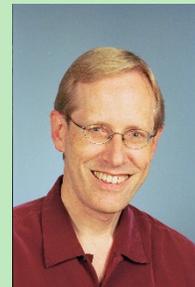
Research and Development Director Starts White House Leadership Program

Tracy Hancock, Director of Forest Service R&D Knowledge Management and Communications, recently started a one-year Fellowship in the White House Leadership Development Program. During her Fellowship, Tracy will be a Senior Policy Advisor at the White House Office of Science and Technology Policy and will lead The President's Management Agenda Cross-Agency Priority (CAP) Goal: Improve Transfer of Federally Funded Technologies from Lab-to-Market.



Forest Service Represented in Climate Adaptation Leadership Awards

Jessica Halofsky, a Research Scientist with the Forest Service and University of Washington, was recognized for "Individual Achievement." The Tribal Adaptation Team, which includes three members of the Forest Service's Northern Institute of Applied Climate Science, was recognized in the "Tribal" category.



Faces of the Forest Service: Meet Dave Rugg

Dave Rugg is the Program Manager for Research and Development's Research Data Services.

FOREST SERVICE RESEARCH: BY-THE-NUMBERS

The Forest Service conducts research and active management to help understand and restore longleaf pine ecosystems.



This work is critical to the American Longleaf Restoration Initiative's goal of increasing longleaf pine ecosystems from **less than 5 million acres to 8 million acres by 2025.**

[More About Longleaf Pines](#)

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Forest Service

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