



Reducing the Risk of Severe Wildfire Across Boundaries

America's forests evolved with repeated fire over millennia. Today, fire continues to be a critical tool to sustain forest health. However, wildfire can also be a potential hazard to both forests and communities when it burns with uncharacteristic intensity.

Wildfire ignores land ownership and political boundaries. A single blaze originating on one ownership can spread unabated onto surrounding properties. Therefore, agencies and communities must work as a cohesive, well-organized unit across boundaries to reduce the risk of wildfire. The wildland-urban interface (WUI) is an especially important area of focus for these efforts. The WUI features homes constructed near or within forests and grasslands, which makes these communities [notably vulnerable to wildfire](#). Fifty percent of Californian buildings lost to wildfire between 1985 and 2013 were in the WUI, even though the WUI composed only 2 percent of the burned area. In addition, [the WUI is growing rapidly](#). Between 1990 and 2010, the number of houses in the WUI across the United States increased by more than 40 percent, from roughly 31 to 44 million. The amount of land covered by the WUI increased by 33 percent and now covers more total area than Washington State. The [WUI surrounding national forests](#) contained 7.1 million houses in 2010, nearly a 50-percent increase from the preceding two decades.

U.S. Department of Agriculture (USDA), Forest Service scientists cooperate with Tribes, communities, and the public across the country to benefit both people and forests by reducing wildfire risk in the WUI. Additionally, the Forest Service manages a wealth of online and publicly available resources to assist and complement fire management and continues to develop cutting-edge technology to help reduce forest and community hazard and vulnerability to severe wildfire.

Coalitions Working to Reduce Risk to Severe Wildfire

Reducing the risk of severe wildfire in the WUI necessitates careful planning. Forest Service scientists collaborate with diverse teams across the country to integrate tested forest management strategies with local knowledge and community priorities. For example:

- The [West-Side Fire Research Initiative](#) blends the expertise of scientists, fire managers, and other stakeholders to produce actionable research findings that will help [provide more clarity to decision makers](#) in the densely populated western parts of Washington and Oregon.
- The [Lake Tahoe West Restoration Partnership](#) combines science teams from the Forest Service and other institutions with community program leaders to restore and maintain the western Lake Tahoe basin. The partnership's key findings can be found in its "[Science Summary of Findings Report](#)."
- [Co-Management of Fire Risk Transmission](#) (CoMFRT) unites a diverse group of researchers, fire managers, and State and national policymakers with the goal of reducing wildfire risk in neighborhoods, towns, and cities. CoMFRT considers multiple factors, including local knowledge, when developing strategies to mitigate fire.



Forest Service scientists collaborate with fire and land managers to combine forest management strategies with local knowledge and community priorities. USDA Forest Service photo by Cecilio Ricardo.

Resources To Help Communities Understand and Explore Wildfire Risk

The Forest Service provides several resources that inform the public about fire risks and prepare them for blazes. Some of these resources are listed below.

- [Wildfire Risk to Communities](#) aids local leaders in assessing and reducing risk to homes, businesses, and other resources with interactive charts and maps. This is the first publicly available, nationwide, easy-to-use resource that maps regional wildfire risk.
- The [Wildfire Research Team](#) (WiRē) is a nonprofit organization that includes Forest Service scientists and other partners who strive to build fire-adapted communities. WiRē works with fire practitioners and members of the public to perform neighborhood-level wildfire risk assessments and build tailored programs to reduce wildfire damage and reduce the ignitability and flammability of homes and other structures.
- [WildfireSAFE](#) integrates real-time data from the Wildland Fire Assessment System and allows both natural resource professionals and the public to view weather analyses for active fires, assess the fire risk in areas surrounding a blaze, and observe data about fire behavior. This resource can be accessed by anyone with a mobile device, making it an invaluable safety tool.
- The [Forest Management Handbook](#) is a resource designed for private landowners in the Sierra Nevada and southern Cascade regions. The handbook outlines strategies for landowners with small parcels for improving general forest health and reducing risk to wildfire. The handbook also explains how to obtain technical and financial support and outlines the conditions that might indicate whether permits will be needed.

Resources and Tools To Help Landowners and Managers Identify High-Risk Areas

By studying the nature of the vegetation, terrain, and climate, Forest Service scientists and land managers identify where fires are likely to start and use natural systems to reduce damage in the WUI. Scientists work with land managers to reduce potential fire intensity before fires ignite and execute thoughtful plans when they do. For example:

- The [Wildfire Risk Management Science Team](#) analyzes natural and man-made geographic boundaries such as roads, ridge tops, and water bodies where fires can be contained in pockets—“PODs”—to identify and prioritize areas at risk.
- The [Scenario Planning Framework](#) provides scientific advice to land managers as they work across agency and land ownership boundaries to identify and evaluate forest and fire management priorities, tradeoffs, and outcomes.
- The [Fireshed Registry](#) delineates where fires typically ignite and where they may endanger communities and buildings. This interactive geospatial data portal allows users to simulate scenarios featuring differing levels of wildfire risk.
- The [All Lands Risk Explorer](#) is a [web portal](#) that helps users to consider biophysical and social factors in managing wildfire risk to communities.



A forestry crew pretreats around a house as a blaze approaches during the Taylor Creek and Klondike Fires in the Rogue River-Siskiyou National Forest, OR, 2018. USDA Forest Service photo by Kari Greer.

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