Forest Service
U.S. DEPARTMENT OF AGRICULTURE

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CONFRONTING THE WILDFIRE CRISIS

A CHRONICLE FROM THE NATIONAL FIRE PLAN TO THE WILDFIRE CRISIS STRATEGY

In January 2022, Secretary of Agriculture Tom Vilsack announced a 10-year strategy for confronting the wildfire crisis in the United States (Confronting the Wildfire Crisis: A Strategy for Protecting Communities and Improving Resilience in America's Forests). After building for decades, the crisis erupted in the 2000s as wildfires destroyed lives, homes, and communities on a rising scale. The national response, though initially swift, was not enough to keep the crisis from continuing to grow—until now.

From the start, the U.S. Department of Agriculture (USDA) Forest Service and the wildland fire community took steps to confront the growing crisis, laying the foundations for collaboration across landscapes to reduce wildfire risk. At the core of the strategy is ramping up fuels and forest health treatments to match the scale of wildfire risk. This paper traces the steps that Congress, various administrations, and the wildland fire community took to get here.

Cover photo: Incident Commander Riley Rhoades watches as the fire crosses Highway 21. USDA Forest Service photo by Jace James.

The Pioneer Fire, Boise National Forest, ID, 2016. USDA Forest Service photo by Kari Greer.

In 1988, wildfire burned 1.2 million acres in the greater Yellowstone area, including several national forests. During recovery, some areas were replanted, while many other areas reseeded naturally.

RISING WILDFIRE RISK

The Yellowstone Fires of 1988 burned much of a beloved national park despite the best efforts of the Nation's wildland firefighters. The lodgepole pine forests that dominate Yellowstone National Park are adapted to stand-replacing wildfires. Wildfires were long overdue, and since then Yellowstone's landscapes are naturally recovering. But a public used to decades of fire control success was shocked.

Wildfires and fire seasons worsened and fire suppression costs soared in the 1990s, especially in 1994 and 1996. By then, the Forest Service was aware of rising wildfire risk from forests overgrown with fuels after decades of fire exclusion, the policy that prevailed nationwide from the 1910s until the 1970s (Pyne 2015). In 1995, the five Federal land management agencies[1] responsible for wildland fire management adopted an innovative fire management policy, a radical departure from the past. The policy called on Federal land managers to integrate wildland fire "as a critical natural process" into their land and resource management plans, allowing wildland fire "as nearly as possible … to function in its natural ecological role" (NWCG 1995). With some modifications (Brown 2019; NWCG 2001, 2003; FEC 2009), the policy remains in effect to this day.

Accordingly, with congressional support, the Forest Service stepped up the pace of fuels and forest health treatments, including the use of wildland fire. In fiscal years 1997–2000, congressional allocations for hazardous fuels treatments more than doubled, rising from $29.1 million to $71.2 million.

It wasn't enough. In 2000, for the first time since the 1960s, wildfires burned more than 7.4 million acres—more than twice the average annual area burned for the previous 17 years (Oswalt et al. 2019). Fires such as the Valley Complex in Montana showed extreme fire behavior, rarely seen before.

In response, under former President Bill Clinton (1993–2001), the administration prepared a National Fire Plan with five goals, including reducing hazardous fuels on the Nation's forests and grasslands. Congressional funding for fuels and forest health treatments rose from $71.2 million[2] in fiscal year 2000 to about $205 million the following year, an increase of almost 300 percent in a single year.

In 2001, under former President George W. Bush (2001–09), the administration coordinated with the Western Governors' Association to formulate a national strategy for reducing wildfire risk, followed by an implementation plan in 2002. Updated in 2006, the strategy and plan reflected the need for a national framework for preventing and suppressing wildfires, reducing hazardous fuels, restoring ecosystems, and helping communities protect themselves from wildfire.

WILDFIRE RISK ASSESSMENTS

Drawing on national data about fuels and fire return intervals, Forest Service scientists have long published wildfire risk assessments. A 2002 study estimated that 73 million acres on the National Forest System were at moderate to high risk of catastrophic wildfire (Schmidt et al. 2002). More than a decade later, Dillon et al. (2015) found that the Nation had more than 460 million acres at moderate to very high risk from wildfire—about a quarter of the contiguous United States, mostly in the West.

In 2002, the Forest Service's Policy Analysis staff, based on average fuels treatment costs and number of acres at wildfire risk, estimated that tens of billions of dollars would be needed for a single round of fuels treatments across the National Forest System. The last such cost estimate, essentially unchanged, came in 2016.

1 USDA's Forest Service, Department of the Interior's Bureau of Indian Affairs, Bureau of Land Management, Fish and Wildlife Service, and National Park Service.
2 The figures were taken from the Forest Service's website for Budget & Performance, where figures for fiscal years before 2009 have since been removed. Dollars have not been adjusted for comparison across years.

COHESIVE STRATEGY

In 1999, concerned about rising wildfire risk, Congress asked the Government Accountability Office (GAO) to examine declining forest health on the national forests of the Interior West. Citing Forest Service research, the GAO (1999) concluded that rising wildfire risk was due to fuel buildups caused by a history of fire exclusion. Even hundreds of millions of dollars spent annually on fuels treatments, the study accurately predicted, "may not be adequate to prevent many catastrophic fires over the next few decades." The report recommended "a cohesive strategy to reduce accumulated fuels on national forests" (GAO 1999).

In response, the Forest Service published *Protecting People and Sustaining Resources in Fire-Adapted Ecosystems: A Cohesive Strategy*. Foreshadowing today's wildfire crisis strategy, the agency envisioned "a framework that restores and maintains ecosystem health in fire-adapted ecosystems for high-priority areas across the interior West" (Laverty and Williams 2000).

Congress remained skeptical. In congressional testimony, the GAO noted that the Federal agencies were not coordinated well enough to "effectively and efficiently implement the [National Fire] Plan" (GAO 2001). "As a result," the report concluded, "the five agencies continue to plan and manage wildland fire management activities primarily on an agency-by-agency and unit-by-unit basis." The message was clear: 21st-century wildland fire management called for a more comprehensive interdisciplinary and cross-jurisdictional approach.

In the 2000s, as wildfire severity and suppression costs continued to mount, the GAO reiterated its call for a cohesive strategy for both cost containment and effective wildland fire management (GAO 2007a, 2007b). Congress took up the call in the Federal Land Assistance, Management, and Enhancement (FLAME) Act of 2009, which required the Federal agencies to formulate a joint "cohesive strategy" for wildland fire management.

In 2008, representatives from across the wildland fire community convened what came to be known as the Emmitsburg 13 Meeting. Federal, State, and local partners met in Emmitsburg, MD, to launch a collaborative process of agreeing on a common strategy for confronting rising fire year severity and growing wildfire risk.

The Emmitsburg meeting kicked off a multiyear process in three phases. From 2010 to 2014, the interagency Wildland Fire Leadership Council brought together Federal, Tribal, State, and local governments and nongovernmental organizations to formulate a national blueprint for wildland fire management called the National Cohesive Wildland Fire Management Strategy. Finalized in 2014, the Cohesive Strategy has three core goals: (1) restoring resilient fire-adapted landscapes; (2) building fire-adapted human communities; and (3) responding safely and effectively to wildland fire.

Forest Service Hot Shots and Job Corps firefighters perform a prescribed burn on the Monongahela National Forest, WV. USDA Forest Service photo by Cecilio Ricardo.

Burn Boss Susan Greenleaf supervises a prescribed burn just south of Minnehaha Springs in Pocahontas County, WV, on the Monongahela National Forest. USDA Forest Service photo by Kelly Bridges.

COLLABORATIVE APPROACHES

In the 1990s, the Forest Service replaced its longstanding timber focus with ecosystem-based approaches to national forest management. Increasingly, Forest Service managers worked with partners for healthy fire-adapted forests across ownerships through collaborative community-based forestry (Bosworth and Brown 2007a, 2007b). The focus shifted from timber outputs to long-term landscape-scale outcomes: healthy, resilient ecosystems supporting a full range of values, including clean air and water, habitat for native species, and opportunities for outdoor recreation.

As public conflicts over Federal land management waned in the 1990s–2000s, former adversaries increasingly sought common ground, giving rise to local collaborative groups. The Forest Service engaged such groups in sharing resources and participating in projects on the national forests. In 2010, building on the growing number of collaborative groups across the country, Congress established the Collaborative Forest Landscape Restoration Program (CFLRP). The program now funds more than 20 large-scale projects nationwide, with goals that include restoring forest health and reducing wildfire risk across shared landscapes.

In 2012, intent on ramping up fuels and forest health treatments, the Forest Service published Increasing the Pace of Restoration and Job Creation on Our National Forests. The agency renewed its commitment to restoring forests across landscapes in multiple ownerships by expanding collaborative frameworks, improving and accelerating stewardship contracting, and establishing public/private partnerships for watershed restoration.

In pursuing an all-lands approach, the Forest Service was able to build on an array of new tools and authorities for cross-boundary partnerships. Laws passed in the 2000s–2010s created a new authorizing environment for the Forest Service, paving the way for collaborative community-based stewardship. The new tools and authorities included Cohesive Strategy projects; 20-year stewardship contracting; cross-boundary projects with Tribes; expanded Good Neighbor Authority; Joint Chiefs' Landscape Restoration projects; and expedited processes for environmental analysis and decision making, including various new categorical exclusions under the National Environmental Policy Act, making it easier to launch projects on Federal lands.

The Four Forest Restoration Initiative in the Kaibab, Coconino, Apache-Sitgreaves, and Tonto National Forests, AZ. USDA Forest Service photo by Kaibab National Forest.

Prescribed burn operations at Manning Creek as part of 2019 Fire and Smoke Model Evaluation Experiment (FASMEE) project. USDA Forest Service photo by Kreig Rasmussen.

CONGRESSIONAL ACTIONS

Beginning with the National Fire Plan in fiscal year 2001, Congress stepped up funding for fuels and forest health treatments. With a boost from stimulus spending during the Great Recession (2007–09), the Forest Service was able to use the new funding to greatly expand its treatments. As a result, the 5-year average area treated on the National Forest System rose from 1.9 million acres in fiscal year 2005 to 3.1 million acres in fiscal year 2011 (USDA Forest Service 2019).

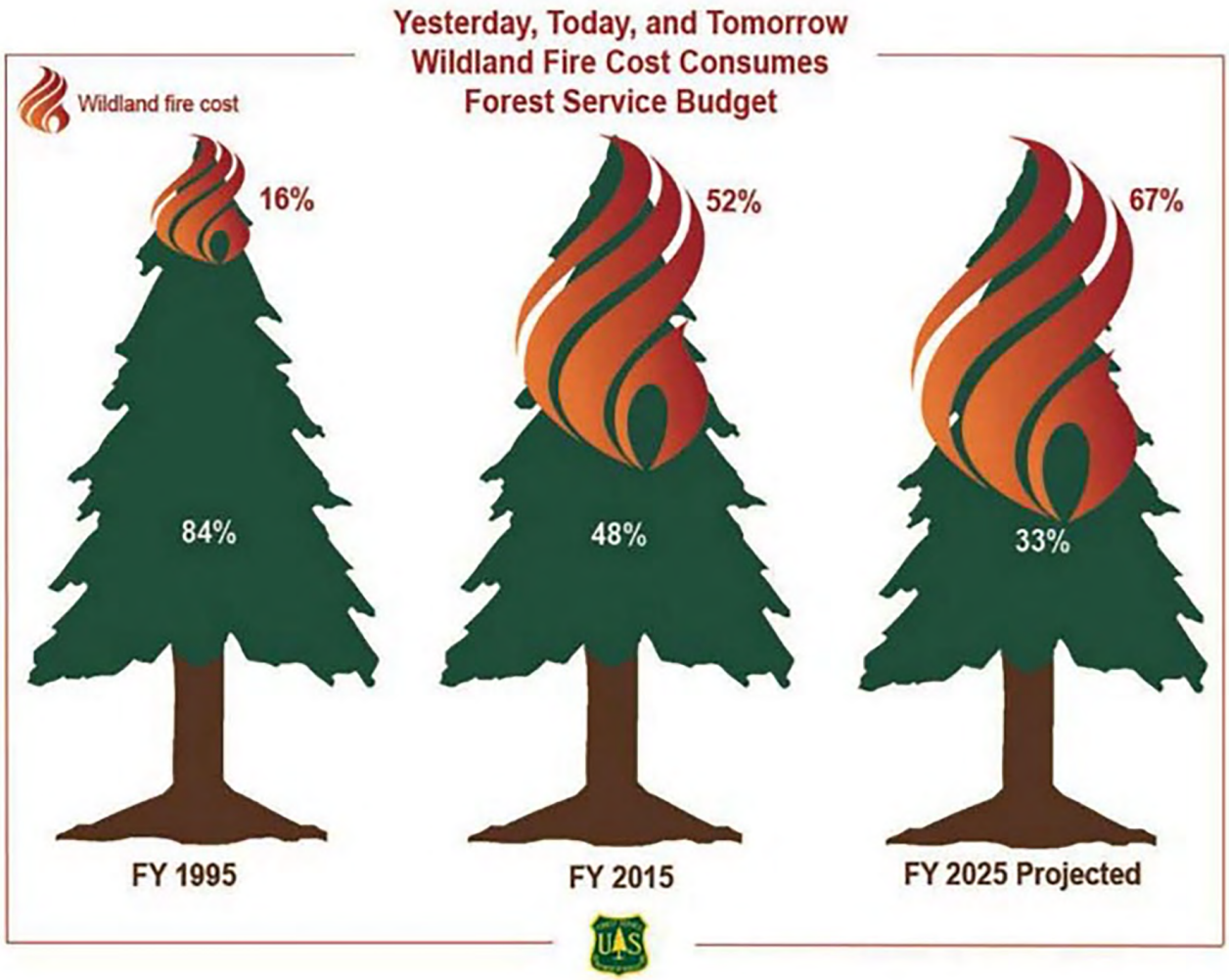
However, Congress never fully funded the National Fire Plan (Rains and Hubbard 2002); allocated funds fell consistently short of estimated needs for suppression, partnership programs, fuels treatments, and more. The Bush administration's focus shifted to the Healthy Forests Initiative, leading to passage of the Healthy Forests Restoration Act of 2003. In addition to other measures, the new legislation added categorical exclusions to make it easier to treat Federal lands in the West. Subsequent legislation contained further categorical exclusions.

Nevertheless, record fires continued to mount during worsening fire years in the West. The area burned nationwide exceeded 8 million acres in 2004 and 2005 and 9 million acres in 2006 and 2007. Suppression costs soared, routinely exceeding budgeted amounts and leading to annual "fire borrowing" from nonfire programs to cover costs.

The Forest Service was also forced to shift personnel and resources from nonfire mission areas to wildland fire management. By 2015, suppression accounted for about 52 percent of the total Forest Service budget, up from just 16 percent in 1995. "Left unchecked," a Forest Service study concluded, "the share of the budget devoted to fire in 2025 could exceed 67 percent" (USDA Forest Service 2015).

In response, Congress passed the FLAME Act of 2009, which set up contingency funds that the Federal fire organizations could draw on. However, after 2010, Congress still did not accept the need for emergency fire contingency funds. When suppression costs climbed again in 2011 and 2012, fire borrowing resumed.

In the 2010s, with strong support from partners, the Forest Service worked with Congress and multiple administrations to find a lasting solution. In 2018, Congress passed an Omnibus Bill containing a "fire funding fix." The new law froze annual appropriations for wildland fire suppression at the 2015 requested level so that they no longer grew at the expense of nonfire work. The law also provided offbudget funding for suppression during severe fire years to prevent fire borrowing. Due to cost-of-living salary increases, austere budget requests aimed at reducing the national debt, and other factors, the Forest Service was unable to use the savings to ramp up its capacity for fuels treatments.

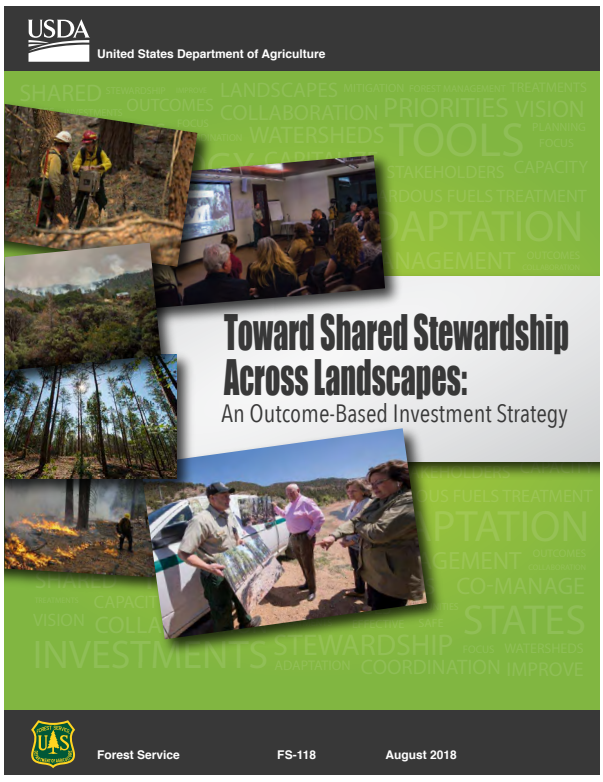


Top: Forest Service employees, partners, and Government officials after the signing of the Shared Stewardship memorandum of understanding between the Forest Service and the state of New Mexico. USDA Forest Service photo by Dorilis Camacho Torres. Bottom: Shared Stewardship publication.

SHARED STEWARDSHIP INITIATIVE

In passing the 2018 Omnibus Bill, Congress asked the Forest Service to take further steps to reduce wildfire risk. In response, former Forest Service Chief Vicki Christiansen formed a team to prepare a strategy for reducing wildfire risk based on cutting-edge research by Dr. Alan Ager and fellow scientists at the Rocky Mountain Research Station under the leadership of Station Director John Phipps.

In August 2018, the Forest Service released Toward Shared Stewardship Across Landscapes: An Outcome-Based Investment Strategy. Building on scientific breakthroughs and the Forest Service's growing collaborative capacity, the agency began signing Shared Stewardship agreements with States and other partners to bring stakeholders together across shared landscapes, agree on common goals, and reduce wildfire risk by funding fuels and forest health treatments at the needed scale. Shared Stewardship agreements now cover most of the country, including most Western States. Using tools such as scenario investment planning, the partners work together across shared landscapes to place the right treatments in the right places at the right scale.



WILDFIRE CRISIS: GROWING AWARENESS

In the 2010s, Forest Service funding for hazardous fuels treatments leveled off. After 2013, the 5-year running average area treated across the National Forest System never again exceeded 2.8 million acres (USDA Forest Service 2019). With allocations for fuels treatments inadequate and uncertain, wildfire risk continued to grow. In 2015, a Forest Service study estimated that almost 100 million acres on the National Forest System were at moderate to very high risk of catastrophic wildfire (Dillon et al. 2015).

Due to the rising risk, Congress asked the administration under former President Donald Trump (2017–21) to "review and update the National Fire Plan, as needed." In response, the Forest Service launched "The Case for Change," which focused on the creation of a year-round workforce for wildfire response. First presented to the Forest Service's Senior Fire Leaders in April 2019, the initiative also called for more integration of the agency's fire and fuels staff and resources and for getting more low-intensity fire on the landscape.

Station Director John Phipps, after overseeing the science behind Shared Stewardship at the Rocky Mountain Research Station, was named as Deputy Chief for State and Private Forestry. In September 2020, in congressional testimony, Deputy Chief Phipps called for changing the trajectory of fuel buildups through a paradigm shift in thinking leading to scaling up fuels and forest health treatments by at least two to three times. In fall 2020, at the request of Congress, the Forest Service delivered a "thought piece" paper on how to greatly scale up fuels treatments and the projected costs of doing so.

From fall 2020 to spring 2021, Deputy Chief Phipps and other members of the Forest Service's Executive Leadership Team met with counterparts from the National Association of State Foresters, American Forest Foundation, The Nature Conservancy, American Forests, and other organizations to agree on a common vision for the future of America's forests. The partners formed a coalition to support the vision, posted position papers online (NAFSR 2021; TNC 2021), and crafted common talking points for meetings. Elements included the shared perception of a wildfire crisis and the need for a new land management paradigm, including greatly expanded Federal spending on fuels treatments at the scale of actual wildfire risk.

In December 2020, Congress passed an Omnibus Bill directing the Forest Service and U.S. Department of the Interior to provide "an estimate of the Federal investment required to treat and restore all of the acres (Federal and non-Federal) classified as being at high or very high risk on the 2018 Wildfire Hazard Potential Map." The Forest Service followed up by engaging National Forest System directors and others in analyzing the Nation's wildfire crisis in the West and planning for reducing wildfire risk by scaling up fuels and forest health treatments.

Thinning ponderosa pine. USDA Forest Service photo.

10-YEAR STRATEGY DEVELOPMENT

In August 2021, the Senate passed a bipartisan Infrastructure Bill investing about $5.5 billion in natural-resources-related infrastructure, including a 5-year investment of about $3 billion in restoring ecosystems and reducing wildfire risk. In November, the bill passed the House and the President signed it into law. The House and Senate began to consider further investments in hazardous fuels reduction over the next 10 years through the budget reconciliation process.

In view of the possibility of unprecedented new funding for fuels and forest health treatments, Chief Randy Moore asked researchers at the Rocky Mountain Research Station, led by Dr. Ager, to draft a white paper for review by Executive Leadership Team members. Based on the Forest Service's new Fireshed Registry, the paper outlined a 10-year framework for scaling up treatments to reduce wildfire risk in the West, including treatments on up to 20 million acres on the National Forest System and up to 30 million acres on other lands. In September, Chief Moore named Brian Ferebee to lead a team that completed the 10-year strategy and a plan to operationalize it when funded.

In January 2022, Chief Moore joined Secretary Vilsack to formally release the wildfire crisis strategy and implementation plan at a ceremony in Arizona. The strategy articulates the need for a new land management paradigm to step up the pace and scale of fuels and forest health treatments to match the scale of wildfire risk across western landscapes. The treatments focus on firesheds that are the highest priority for reducing wildfire risk to homes, communities, infrastructure, watersheds, and natural resources. Working with partners, the Forest Service will use cutting-edge tools like scenario investment planning and the Fireshed Registry, along with Good Neighbor Authority, Shared Stewardship agreements, and other frameworks for partnerships and collaboration, to place the right treatments in the right places at the right scale.

Collaborative forest landscape restoration program in Oregon. USDA Forest Service photo. Right: Watershed and forest treatments in Santa Fe, NM. USDA Photo by Lance Cheung.

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