



SUMMARY

“Managed wildfire” is a fire response strategy which allows naturally ignited wildfires to fulfill their fundamental role on the landscape under moderate burning conditions. The strategy accounts for firefighter safety and community protection while ensuring resource benefit and encouraging future forest resilience. A review of the literature suggests that managed wildfire must be a key element of any long-term land management tactic in the western U.S. You will learn about the current science and discussion guiding Managed Wildfire, including its use and benefits, barriers, and future application.

Managed Wildfire: One fire response strategy’s history and use

A rose by any other name...

There is no agreed-upon common name for the strategy of managing wildfire for social and ecological benefit; this leads to confusion as databases, publications, and land managers use varying terminology. The term ‘managed wildfire’ has gained traction in recent years but is somewhat controversial (especially with federal agencies) since all wildfires are technically managed. The term signifies a difference in the type of fire response strategy used, the opposing strategy is full suppression of the wildfire.

Why do we manage wildfire?

Fire-adapted forests across the western U.S. are becoming increasingly vulnerable to insects, pests, disease, and high-severity wildfire. ***Bringing fire back to landscapes that have undergone a century of fire suppression will enlarge the area burned annually but is projected to reduce the number of acres detrimentally burned at high severity.*** Managed wildfire is part of a suite of actions used in reducing wildfire risk and improving forest resilience.

HEADER PHOTO: Sign showing that a managed fire is underway. Credit: USDA Forest Service

PHOTO RIGHT: [Mormon Fire](#) that was managed for resource benefit in Arizona. Credit: Coconino National Forest, 2016.



KEY FINDINGS/MANAGEMENT IMPLICATIONS

- Fire, especially that which burns at low and moderate severity, improves fire-adapted forest health and resilience to pests, disease, and future wildfire.
- Reintroduction of fire must be accelerated to meet the restoration treatment needs of resource-stressed Western forests.
- Managed wildfire is a cost-effective method for initial reintroduction or maintenance burning.
- Use of the strategy is common across the U.S., although terminology and reporting inconsistencies make studying it difficult.
- Barriers to use include local policy or planning, professional or personal risk aversion, operational challenges, and the inherent complexity of fire as a tool.
- Managed wildfire must be a part of climate change planning and is essential to the long-term wildfire crisis solution.





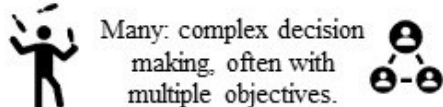

	Managed Wildfire	Full Suppression Fire
Where?	 Often in the wilderness.	 Anywhere – from wilderness to WUI.
When? Conditions drive strategy choice	 Moderate weather, fuels & terrain.	 Hot, dry, windy weather; high fuel loads; challenging topography.
How? Factors of the decision	 Many: complex decision making, often with multiple objectives.	 Single: put fire out.

FIGURE: Comparison of two fire suppression strategies discussed in the paper. These are the current general trends for use of the strategies. For a complete description please refer to the full synthesis and overview text, link below.

Trends in Use and Outcomes

The greatest impediments to the use of managed fire include operational concerns, risk aversion, and the complexity of the decision making process itself. Operational considerations include high fuel loading, unfavorable landscape characteristics, forests experiencing climate change-induced drought conditions, and limited fire management resources such as engines and firefighting crews. Risk aversion encompasses both concern that fire behavior and speed could increase beyond incident control and fear of loss of public or internal organizational support. In contrast, an individual decision-maker’s personal or professional desire to manage wildfire for resource and community benefit is the primary driver for use of the strategy.

Managed wildfires typically result in a mosaic (mixed) severity burn pattern that benefits forests by decreasing tree densities and increasing vegetation density. Additionally, they have been shown to reduce fire severity and negative impacts to lives and infrastructure in subsequent burns.

Future Application

Managing natural ignitions for resource and community benefit during moderate weather conditions offers hope in a climatically uncertain future. Rethinking risk tolerances to allow managed wildfires to burn closer to the Wildland-Urban Interface (WUI) in high-priority landscapes will be integral to building forest resilience. Use of response planning tools such as the Wildland Fire Decision Support System (WFDSS) and Potential Operational Delineations (PODs) will break down some barriers to managed wildfire implementation. Any long-term solution to the tremendous wildfire challenge facing communities and land managers across the western U.S. will involve use of managed wildfire to reintroduce fire, maintain previously treated areas, and improve general forest health.

Read the full paper on managed fires at swfireconsortium.org.

Bean, R., and A. Evans. 2023. Managed Wildfire: A Research Synthesis and Overview. Special Report. Forest Stewards Guild, New Mexico, and Ecological Restoration Institute and Southwest Fire Science Consortium, Northern Arizona University. 12 p

The Southwest Fire Science Consortium (SWFSC) gets emerging science on the ground by connecting scientists, land managers, and the public. By facilitating these connections, the SWFSC helps to assure that scientists are addressing the most pressing questions and managers are applying cutting-edge science and diverse knowledge in their efforts to protect communities and natural resources. The SWFSC is funded by the Joint Fire Science Program.

