

Prescribed Fire



A prescribed fire is a planned fire—sometimes called a controlled burn—used to manage certain types of landscapes. It reduces the chance of major wildfires and provides numerous other benefits for humans, plants, and wildlife.

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Introduction

Fires play a vital role in keeping certain types of forests, grasslands, and other landscapes healthy. These ecosystems evolved to tolerate semi-regular fires and flourish in their aftermath; despite this, land managers spent much of the 20th century focusing on preventing fire at all costs. But without fires, forests became thick with accumulated branches, leaves, and other organic matter—and this underbrush was fuel for big, deadly wildfires that raged across the United States.

Recognizing this mistake (and the looming threat of climate change), in recent years land managers have embraced prescribed fire—setting intentional, controlled fires set in a specific area with a specific goal—as a necessary and useful tool to prevent dangerous wildfires and manage certain landscapes for long-term ecological health. This guide provides links to resources that offer more detailed information about prescribed fire: how and why it works, crucial elements of safe and effective prescribed burns, and more.

Benefits of Prescribed Fire

By removing dead and overgrown vegetation, prescribed fires help prevent large, intense wildfires that claim lives, destroy communities, and cost billions of dollars in damage and firefighting costs. Prescribed fires also offer other significant benefits for landscapes, humans, and wildlife:

- Removing thick underbrush in forests allows the seedlings of fire-tolerant plant communities to grow; some trees even require the heat from fire to release seeds from their cones.
- As plant communities regrow after a fire, they provide fruit, nuts, grasses, and other food that attracts

a wide variety of wildlife. On lands managed for outdoor recreation, more wildlife draws more hunters, bird watchers, and hikers who spend money in nearby communities.

- Thinner, less dense forests are more accessible, which also increases these outdoor recreation activities that boost local economies. (Nationally, outdoor recreation generates [\\$887 billion in annual consumer spending and supports 7.6 million jobs](#).)
- Prescribed fires can be used to remove specific features from a landscape that would take significant time and labor to remove by hand, such as logging debris or invasive species.

The following resources further explain the benefits of prescribed fire for humans, plants, and wildlife.

- [Wildland Fire Management: Keeping Fire on Our Side](#)
- [“Prescribed Fire as a Forest Management Tool”](#)
- [“Why We Burn: Prescribed Burning as a Management Tool”](#)
- [Benefits of Fire: Case Studies from the U.S. Fish & Wildlife Service](#)
- [“Burning for Wildlife”](#)
- [“What the Research Says: Prescribed Fire and Wildfire Risk Reduction”](#)

For more resources, see the [“Prescribed Fire”](#) section of the [ConservationTools.org](#) library.

Conducting a Prescribed Fire

Prescribed fires are dangerous and complicated and may not be suitable for some landscapes. Land managers should consult with an expert before conducting a prescribed fire. [Find expert Pennsylvania service foresters and consulting foresters here.](#)

The following resources provide information about how to conduct a safe, effective prescribed fire.

(Note: States have different rules governing prescribed fires. In Pennsylvania, prescribed fires are subject to

the regulations in the [Pennsylvania Prescribed Burning Practices Act](#).)

- [Pennsylvania Prescribed Fire Standards](#)
- [Prescribed Fire Plan Template](#)
- [Interagency Fire Planning Implementation and Procedures Guide](#)
- [Prescribed Fire Complexity Rating System Guide](#)
- [The Nature Conservancy Fire Management Manual](#)
- [Sample prescribed burn plan and plan template](#)
- Southern Fire Exchange fact sheet series
 - [“Backfire Technique for Prescribed Burning”](#)
 - [“Fuel Moisture and Prescribed Burning”](#)
 - [“Fire Intensity and Fire Severity: How Hot Is Your Fire and Why Is That Important?”](#)
 - [“Ignition Devices for Prescribed Burning”](#)

See the [“Conducting Prescribed Fires”](#) section of the [ConservationTools.org](#) library for more resources.

General Resources

These websites provide links to a wealth of prescribed-fire resources.

- [National Interagency Prescribed Fire Training Center](#)
- [Wisconsin Prescribed Fire Council toolkit](#)
- [Conservation Gateway: Fire and Landscapes](#)
- [USDA Fire Effects Information System](#)
- [eXtension Prescribed Fire Resources](#)

Organizations and Agencies

The following organizations and agencies promote, research, and employ prescribed fire as a land-management tool. See their websites to learn more.

National

- [National Wildfire Coordinating Group](#)
- [Association for Fire Ecology](#)
- [U.S. Fish and Wildlife Service](#)
- [The Nature Conservancy](#)

State and Regional

- [Pennsylvania Prescribed Fire Council](#)
- [Pennsylvania Department of Conservation and Natural Resources](#)
- [Southern Group of State Foresters](#)

The most recent version of this guide and related resources can be found online at [ConservationTools.org/guides/172](#)

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