



Wildland fire management in Canada

Understanding wildland fires

Wildland fires, also called wildfires, are uncontrolled fires that burn in forests, grasslands, and other natural areas. They can be caused by weather such as lightning or human activity.

Fire is a natural part of many Canadian forest ecosystems. It helps recycle nutrients, remove dead vegetation, create wildlife habitat, and support the regeneration of some tree species.

Each wildland fire season is highly variable and depends on weather trends that develop throughout the season, the type of fuel on the landscape where the fire is burning, and proximity to communities. Wildland fire activity can change quickly within a given week or month, and it can vary significantly in relation to previous years.

Smoke from wildland fires can travel long distances, affecting air quality and public health far from where fires begin. As a result, wildland fire is no longer a local issue but a growing national and global concern.

From 1990 to 2024, Canada experienced an average of 6,500 wildland fires and three million hectares of forest burned per year.

Photo credit (top): Michael Bednar, courtesy naturallywood.com

At a glance

- ~40% of Canada's land area is forested, spanning diverse landscapes and climates that influence wildland fire behaviour and impacts.
- Wildland fire management is a shared responsibility among federal, provincial, territorial, municipal, and Indigenous governments, communities, and industry.
- Forest management can help reduce wildland fire risk through prevention and mitigation, but must be complemented by effective fire response and emergency preparedness.



An aircraft conducts wildland fire suppression.

Photo credit: Michael Bednar, courtesy naturallywood.com

Canada's changing wildland fire landscape

Wildland fires have always shaped Canada's forests, but conditions are changing. Rising temperatures, reduced snowpack, and drought have increased wildland fire risk.

Today, each fire is assessed to determine the most appropriate response based on location, weather conditions, and values at risk:

- In remote areas with few communities or infrastructure, some fires may be managed with a modified response, allowing them to play their natural ecological role.
- When fires threaten people, homes, communities, or critical infrastructure, a full response is typically used to reduce risks and potential impacts.

In 2026, the Canadian Council of Forest Ministers (CCFM) released the [Canadian Wildland Fire Risk Assessment Framework](#), which establishes a common approach to understand and assess fire impacts and hazard characteristics of wildland fires across the country.

The Framework supplements the 2024 [Canadian Wildland Fire Prevention and Mitigation Strategy](#), which established a unified national direction for action across Canada.



A helicopter drops water from a bucket on a wildland fire.
Photo credit: Joe McInnis, Ontario Ministry of Natural Resources

Working together to manage wildland fires

Canada's provinces and territories govern forest management through a multi-tiered system of laws and regulations. Wildland fire management is an integral part of forest management and is led primarily by provincial, territorial, and federal agencies. They are supported by governments, Indigenous communities, industry, agencies, and individuals working together to reduce risk and build resilience. Agencies coordinate across five areas:

Prevention: Reducing the likelihood of wildland fires through public awareness, risk assessments, vegetation management, and community planning.

Mitigation: Reducing potential impacts through fuel management, prescribed burning, and land-use decisions.

Preparedness: Building readiness through planning, training, monitoring, and resource sharing.

Response: Coordinating firefighting activities and emergency support during wildland fire events.

Recovery: Supporting community recovery and restoring affected landscapes.

Strengthening wildland fire resilience

Protecting people, communities, infrastructure, and economic activity is the top priority. Canada is improving wildland fire readiness by:

- Incorporating wildland fire risk into forest management planning, including harvesting, thinning, and other operations.
- Using forest management tools to create more fire-resilient forests near communities and critical infrastructure.
- Ensuring forest harvesting and other management activities are conducted safely to prevent wildland fires from those operations.
- Conducting prescribed burns to reduce fuel buildup and support ecosystem health.
- Modernizing wildland fire management programs.
- Supporting scientific research on wildland fire risk and climate change.

Indigenous fire stewardship and community resilience

Many northern, rural, and Indigenous communities are in forested areas where wildland fire risk can be higher.

Indigenous Peoples have used cultural and prescribed fire for generations to maintain healthy landscapes, reduce fuel buildup, support wildlife habitat, and encourage ecosystem renewal. Today, Indigenous fire stewardship is recognized as an important part of wildland fire management.

Partnerships with Indigenous communities are strengthening wildland fire planning, prevention, and response by combining science with local and Indigenous knowledge. These collaborations help build more resilient communities and forests.



Wildland fires monitored from the air.
Photo credit: Joe McInnis, Ontario Ministry of Natural Resources



FireSmart™ provides practical actions that homeowners, communities, and organizations can take to reduce wildland fire risk around homes and neighbourhoods.



Firefighters work to put out hot spots on the ground.
Photo credit: Michael Bednar, courtesy naturallywood.com

Science and technology

Canada uses advanced science and technology to improve wildland fire management.

Satellite systems, weather monitoring, fire behaviour models, and smoke forecasting tools help fire agencies detect fires earlier, assess risk, and support operational decision-making.

Key tools include:

- [Canadian Wildland Fire Information System](#)
A national system operated by Natural Resources Canada that monitors and reports on wildland fire conditions, fire occurrence, and area burned across Canada using weather, satellite, and fire management agency data.
- [Canadian Forest Fire Danger Rating System](#)
Developed by the Canadian Forest Service, this system helps fire managers assess wildland fire danger and make decisions about prevention, preparedness, and response.
- [Fire Weather Index System](#)
Used in Canada and around the world, the system helps assess wildland fire danger based on weather conditions and supports operational decision-making.
- [WildFireSat](#)
A partnership between Natural Resources Canada, the Canadian Space Agency, and Environment and Climate Change Canada, WildFireSat will be the world's first public satellite mission dedicated to monitoring wildland fires.



The [Canadian Interagency Forest Fire Centre](#) coordinates resource sharing among provinces, territories, and international partners during wildland fire events.

Looking ahead

Wildland fire will always be a natural part of Canada's forests. The goal is not to eliminate fire, but to reduce its harmful impacts while maintaining the ecological benefits it provides.

Building resilience requires continued collaboration among governments, Indigenous Peoples, communities, industry, researchers, and Canadians. By combining prevention, preparedness, science, forest management, and emergency response, Canada can better protect people, communities, and forests in a changing climate.



Fire-affected forests are restored by tree planting and natural regeneration.
Photo credit: Michael Bednar, courtesy naturallywood.com



The Canadian Council of Forest Ministers (CCFM) are federal, provincial, and territorial governments working in partnership to ensure Canada remains a world leader in sustainable forest management while supporting a competitive forest sector.

Visit ccfm.org to learn more.