



DID YOU KNOW?

Forest fires can be devastating natural disasters, presenting dangers to human health, infrastructure, and forest ecosystems. Even though forest fires are a natural and necessary part of renewing Boreal forest ecosystems by releasing nutrients and stimulating growth, climate change is increasing fire risk, increasing the chances of more fires starting, spreading, and increasing intensity, while losing many of the associated benefits.

Here in Thunder Bay, we are surrounded by forest, and forest fire presents a consistent risk, though thankfully we have not experienced extreme fires like Fort McMurray in 2016, or BC in 2017 and 2018.

However, we continue to have a role supporting forest fires in our region, often straining local capacity. Thunder Bay is a frequent host of forest fire evacuees from northern communities, but did not have enough capacity to host all evacuees when Pikangikum, a community of 3,800, was evacuated twice in 2019 resulting in hundreds being hosted as far away as Saskatchewan. In 2020, with emergency capacity already strained due to the COVID-19 pandemic, Thunder Bay was called upon to host community members from Red Lake and Eabametoong, both evacuated due to forest fire risk.



What the future may look like:

The number of forest fires and the area burned varies greatly from year to year in the Boreal forest. Wildfires are a complex interplay of weather, topography, and fuel that controls the ignition and behavior of a particular fire event.

Warmer temperatures from climate change are causing drier soils, and drier fuels. Earlier snow melts lead to longer fire seasons. Increases in insect infestation from the warmer temperatures can also lead to more damaged, easily burning trees. The increase in extreme weather also is projected to increase the amount of lightning strikes causing forest fires, more storm damaged trees providing fuel, and more frequent dry windy days to spread fires.

Estimates of increase in total numbers of fires in Canada by 75% by 2100, with the total amount of burned area doubling, with 95% of those fires expected to happen within Boreal forest, like the forest surrounding Thunder Bay.

If trends continue the future of the Boreal forest itself is at risk due to the warming climate and connected impacts. Increasing fragmentation would occur due to increased fire and insect disturbance. More severe fires may also contribute to loss of permafrost if the fires burn more of the insulating soils. Increasing forest fires and decaying trees turn regions into carbon sources rather than carbon sinks.

Many wildlife species and plant life known to thrive in the Boreal forest may not be able to adapt. The snow forest, as it is sometimes called, is a part of many people's lives, both indigenous and non-indigenous. People depend on it.

Prevention of and protection from forest fires is important due to the increasing risk of fires and also the possibility that future forest fire suppression services provided by the government to protect valuables and communities are likely to be stretched. Resources may be required in multiple areas across the country or internationally. If fire seasons start even before lake ice is out, water bombers may not be able to provide as much assistance.



WHAT CAN WE DO?

Prevent forest fires:

- Although most fires in Boreal regions are started by lightning, there is increasing human activity in forested areas. It is important to be aware of the fire risk and how to avoid starting a wildfire.
- [Learn how to prevent forest fires](#)
- [How to safely have an outdoor fire](#)

Protect your property:

- There are a number of things that homeowners, property owners and communities can do to prevent forest fires or to be prepared should they occur. For homeowners this can include following guidance from [FIRESMART CANADA](#) for home, yard and farmland protection; or organizing a [Wildlife Fire Community Preparedness Day](#)



Reduce carbon emissions:

- Let your members of parliament know that you support efforts to reduce greenhouse gas emissions now



TAKE ACTION NOW!

- *Communicate about climate change*
- *Encourage decision makers to take action*
- *Get involved with community initiatives*

REFERENCES:

- [Why forests need fires, insects and diseases \(nrcan.gc.ca\)](#)
- <https://www.carbonbrief.org/explainer-how-climate-change-is-affecting-wildfires-around-the-world>
- [Climate Change and Wildfires | Union of Concerned Scientists \(ucsusa.org\)](#)
- [IIC - CIP Society Trends Paper - Wildfires in Canada \(insuranceinstitute.ca\)](#)
- [The Rapid and Startling Decline Of World's Vast Boreal Forests - Yale E360](#)
- [Northwestern Ontario forests becoming more susceptible to frequent fires, insect damage, expert says | CBC News](#)
- http://www.climateontario.ca/MNR_Publications/276920.pdf

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