

## Wildfire Season Prevention

### Protecting Property from Wildfire Risk

## Understanding Wildfire Causes, Spread And Behaviour

### What causes wildfires?

Most wildfires in Canada are caused by lightning strikes and human activity. Fires caused by people are often the result of embers from campfires, improperly disposed of cigarettes and heat and sparks from machinery. Even a hiker walking through the backcountry can inadvertently send a loose rock or stone hurtling down a slope causing a spark if it hits another rock, which can be enough to ignite dry grass or bushes.

### How wildfires behave

Fire is a chemical reaction that requires three elements: oxygen from the air, heat or an ignition source from lightning or humans, and fuel made up of grasses, trees and other organic material. Fire behavior is affected by three sources: available fuel, weather conditions and the contour of the land whether it's in an open grassland, hilly forested area or some other terrain.

#### Fuel

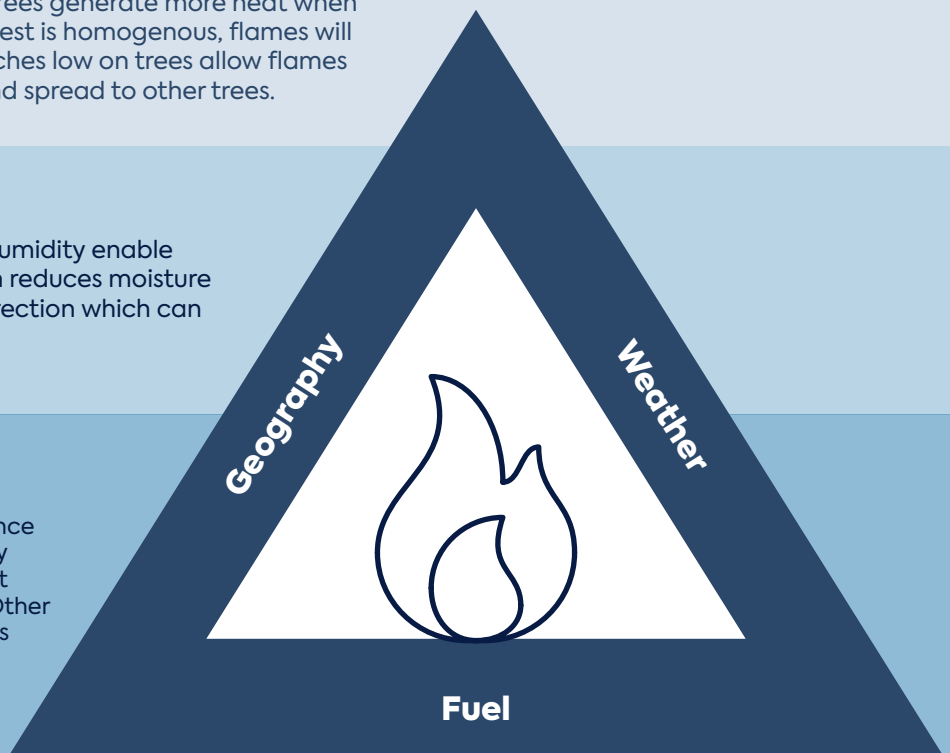
Dead and dry vegetation help fires burn. The size of the material also counts as larger trunks and branches from trees generate more heat when burning. If vegetation on the ground of a forest is homogenous, flames will spread faster and create a fiercer fire. Branches low on trees allow flames to climb up the trunk and other branches and spread to other trees.

#### Weather

Hot weather featuring high winds and low humidity enable fires to start and spread as this combination reduces moisture and provides dry fuel. Wind also changes direction which can completely alter the course of a fire.

#### Geography

The landscape and topography will also influence how a fire starts and more importantly the way it spreads. A fire will spread much faster when it goes uphill, especially if it is boosted by wind. Other factors include which direction a slope faces as a southern exposure will typically be drier and warmer, enhancing the spread of a fire. Mountains and valleys also influence windspeed and direction which can aggravate wildfires and contribute to their growth.



**Fire Behaviour Triangle**