

# Fire Facts

*A Few Burning Questions about Fire...*

## Are Fires Natural or Managed?

*There are two types of forest fire - wildfire and prescribed fire.*

- **Wildfires** are unintended and start by lightning or careless human activity. These fires can threaten homes, communities and other irreplaceable natural resources, so they are often quickly extinguished by authorities.
- **Prescribed fires** are carefully planned and intentionally set. Prescribed fires are used as a tool to reduce wildfire risk, improve forest health, and improve wildlife habitat. They are only started when conditions are ideal - light winds, low humidity, and warm weather.

## Are All Forest Fires the Same?

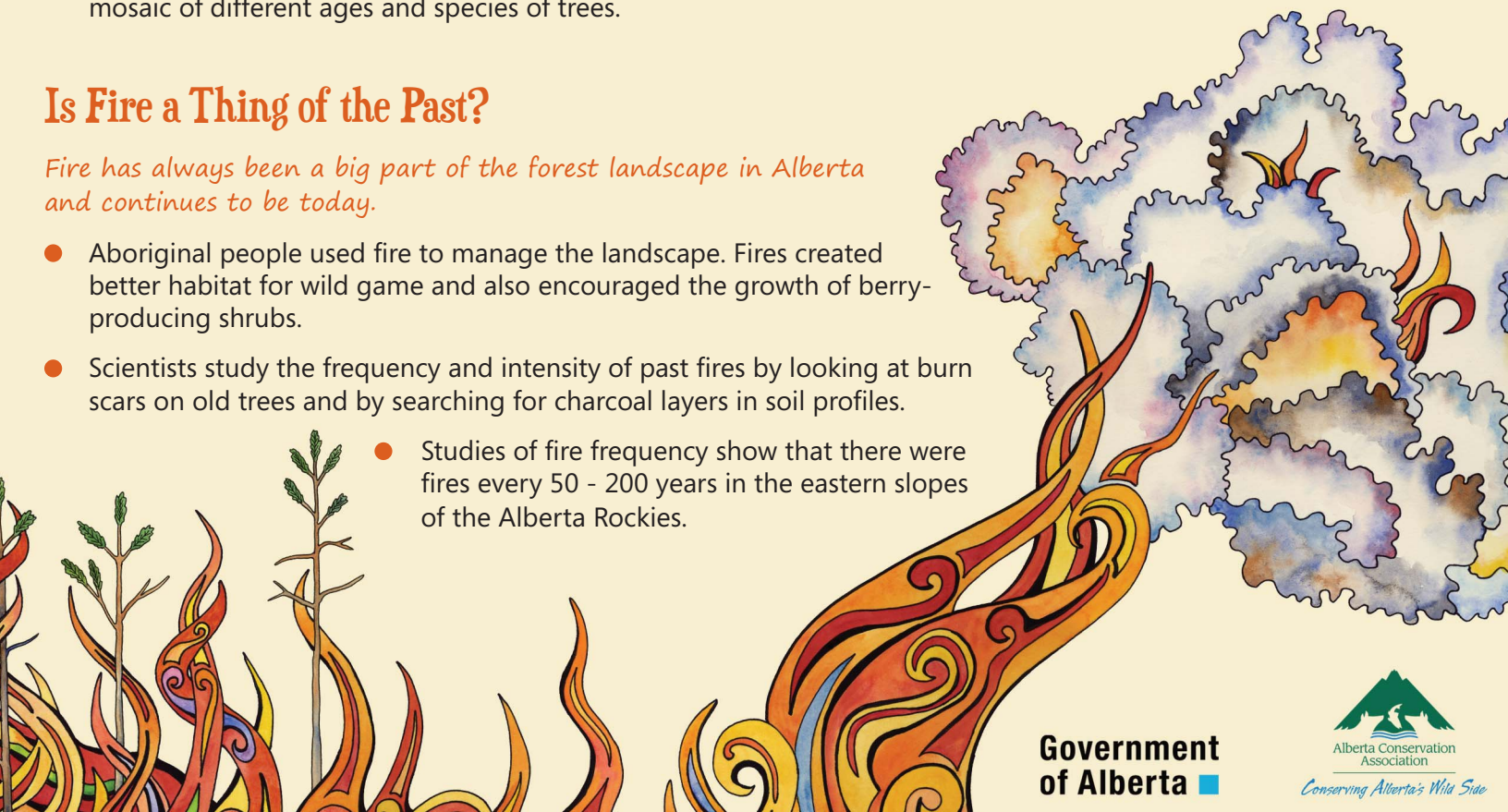
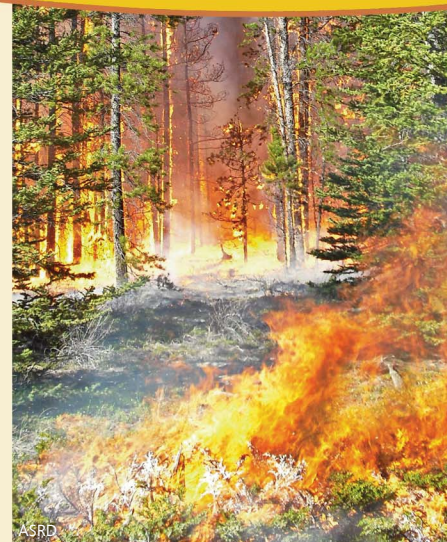
*The frequency and intensity of fires in a given area is referred to as a "fire regime". There are three types of fire regimes:*

- **Surface:** Also known as an understory burn because this lower intensity fire tends to burn leaf litter, grasses, and shrubs, while larger and taller trees are left intact.
- **Crown:** Crown or stand replacement fires burn very hot and kill trees. This type of fire opens up the tree canopy allowing the rapid regrowth of herbs, shrubs, and trees. Over time, this vegetation is gradually replaced by forest.
- **Mixed:** A mixed regime is more common and has a variety of low to high intensity fires, ultimately resulting in a mosaic of different ages and species of trees.

## Is Fire a Thing of the Past?

*Fire has always been a big part of the forest landscape in Alberta and continues to be today.*

- Aboriginal people used fire to manage the landscape. Fires created better habitat for wild game and also encouraged the growth of berry-producing shrubs.
- Scientists study the frequency and intensity of past fires by looking at burn scars on old trees and by searching for charcoal layers in soil profiles.
- Studies of fire frequency show that there were fires every 50 - 200 years in the eastern slopes of the Alberta Rockies.



# How Does Fire Affect Plants?

*Forest plants are well-adapted to fire and some actually need fire to reproduce.*

- Some trees are more susceptible to fire than others. Coniferous trees, such as Lodgepole Pine, are more flammable and burn easily. Deciduous trees, such as Trembling Aspen, do not burn as readily.
- Plant growth is very vigorous after a fire. This is because of the abundance of nutrients, sunlight and warmth on the forest floor.
- Aspen trees have extensive root systems that can survive a fire, producing new suckers that eventually grow into trees.
- Lodgepole Pine, also known as the "fire tree" is well-adapted to fire. The cones need temperatures of more than 45 celsius to open and release their seeds - conditions only found during a fire. After a fire, there can be millions of pine seedlings all battling for their share of sunlight.
- Standing, dead trees that remain after a fire are called snags. Snags and fallen woody debris provide important habitat for many species of wildlife, such as woodpeckers and small mammals.

## How Does Fire Affect Wildlife?

*In the long-term, fires are good for wildlife!*

- Wildlife in fire-adapted landscapes have strategies to cope with fire. Large animals are able to move out of the area to escape fire and smaller animals take refuge underground or in rocky outcrops.
- Once the fire is out, many wildlife species benefit from the lush plant growth and increased diversity of plant communities.
- Some species depend on recently burned areas for their survival, such as the Black-backed Woodpecker which is a fire specialist and feeds on insect larvae in the dead trees.
- Bears, grouse and many songbirds benefit from the berry-producing shrubs that grow after a fire, such as Canada Buffaloberry.
- Hummingbirds, bees and butterflies are attracted to the colourful wildflowers that spring up after a fire.
- Aspen and willow suckers in a recently burned area are a magnet for deer, elk, moose, snowshoe hares and even caterpillars. In turn, these herbivores attract predators such as the Grey Wolf and Canada Lynx.
- A forest mosaic of burned and unburned patches helps to retain forest cover, while also improving feeding opportunities for species such as the Pine Marten.

## For Further Information Contact:

Alberta Conservation Association: 1-877-969-9091

Alberta Sustainable Resource Development (Rocky Mountain House): 403-845-8250

Alberta Sustainable Resource Development Toll Free Number: 310-0000

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