WILDFIRE

HOW WILDFIRE AFFECTS WILDLIFE

Fire is an important natural process that removes debris, nourishes the soil, and prevents larger, more damaging fires.

- Fire initially displaces populations of animals and burns their habitat. While some wildlife are able to flee, not all are able to. As a result, populations of some species, particularly fish, may decline after a wildfire.
- After a fire, wildlife habitats can become rejuvenated. Fire leaves room for the growth of new grasses and herbs that provide habitat for many species. It can also leave behind patches of standing dead trees that provide nesting sites for woodpeckers and other species.
- Fire also kills off disease that impacts vegetation and other wildlife.

PLANTS ARE ADAPTED

- The gradual change in plant and animal communities after disturbance like wildfire is called succession, demonstrated by seral (or intermediate) stages.
- Some coniferous trees, such as Jack Pine, have serotinous cones that only open at extremely high temperatures.
- Members of the Heath family, such as Blueberries, Cranberries, and Labrador Tea, contain a flammable resin that intentionally cause ground fires to spread quickly.
- Burning brings nutrients back into the soil. Wildfires leave topsoil with a covering of fresh organic debris that creates excellent fertilizer for new plants.

SUCCESSION STAGES

Early Seral:

High in nutrients.

Usually barren with weedy species, herbs, and grasses.

Mid Seral:

Decline in nutrients.

Weedy species, herbs, grasses decline. Shrubs & poplar dominate.

Late Seral:

Decline in shrubs and poplar.

Coniferous pine & spruce dominate.

WILDFIRE

PROBLEMS WITH FIRE SUPRESSION

Fire suppression occurs when humans intervene in the natural processes of wildfire, extinguishing or preventing their spread.

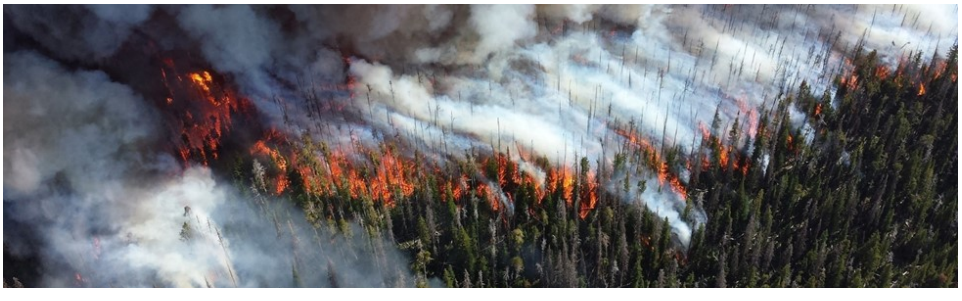
This can be problematic, because preventing some natural wildfires from burning significantly increases the probability of larger, more catastrophic wildfires in the future.

Fire suppression increases the level of diseases.

CLIMATE CHANGE

Changes in the Canadian climate are expected to increase the occurrence and severity of wildfires because:

- Warmer temperatures and longer fire seasons leave forests drier and hotter for long periods of time.
- Insect infestations, thriving in the warmer temperatures (Mountain Pine Beetle), suppress and kill trees, leaving broad ranges of dead and highly combustible trees.
- Boreal forests will likely be especially affected by this change. This could result in a doubling of the amount of area burned by the end of this century, compared with amounts burned in recent decades.



WHAT CAN WE DO

Forest management professionals can conduct prescribed burns (or planned wildfires) to create a landscape more resistant to larger, more catastrophic wildfires. These burns also greatly reduce the cost associated with dealing the impacts of much more severe wildfires.

Take action to reduce climate change. Climate change is one of the driving forces behind more frequent and more severe wildfires.

Be responsible campers and always extinguish campfires properly.

"In a word, the future is smoky."

Mike Flannigan,

Forest Fire Researcher,
University of Alberta.

Edmonton & Area Land Trust