

Recommended guidelines for fuel conversion

Plants that are low growing and woody or deciduous are referred to as low-fuel-volume plants. These plants are ideal replacements for more highly flammable species growing close to interface buildings, or in areas where a firebreak is planned.

The type of vegetation and topography in an area will determine the degree of management needed. Replace highly flammable species such as juniper or cedar adjacent to buildings with watered lawns and low-fuel-volume plants. Individual trees and shrubs may be kept, if this vegetation would not readily transmit fire to the building. Where slopes are involved, consider the stability of those slopes in any sort of vegetation management plan.

Different regions within Canada have different climates and soils that determine various vegetation management strategies. Nursery and landscape professionals often have recommended plant lists for specific regions of the country. Cross-referencing of these lists with the recommended guidelines of fire officials will enable homeowners to make a suitable conversion to fire-resistant plants.

In some locations, you may want to replace coniferous trees with deciduous trees.

How to choose FireSmart vegetation

In deciding which vegetation to remove, reduce, or replace in a program of fuel management, it is important to know the characteristics that make one species of vegetation more flammable than another.

The most flammable plants include those that rapidly accumulate quantities of dead foliage and branches, dead and diseased trees, vegetation with high oil or resin content, and plants that dry quickly in arid weather. When planting a new landscape, avoid choosing a species with these characteristics.

Most plants will burn under extreme fire weather conditions such as drought aggravated by high winds, but they will burn at different intensities and rates of spread. *Fire-resistant* plants burn at a relatively low intensity, with a low rate of spread. Interface residents should attempt to use fire-resistant vegetation when planting new landscapes.

Important note: Abnormal weather patterns can create problems with severe fire behavior occurring in normally fire-resistant vegetation. FireSmart recommended guidelines on fuel conversion and fire resistant vegetation are based on general principles and typical weather patterns.

FIRE-RESISTIVE VEGETATION

Fire-resistant vegetation has these characteristics:

CHARACTERISTICS	EXAMPLE
Accumulates minimal dead vegetation	Sparsely branched trees and shrubs
Non-resinous plants	Deciduous trees and shrubs
Plants with low volumes of vegetation	Younger, sparse growing trees and shrubs
Plants with high live fuel moisture	Succulent plants that retain a large amount of water
Drought-tolerant plants	Deeply rooted plants with thick, heavy leaves
Trees without ladder fuels	Deciduous trees or conifers pruned to two metres
Low maintenance vegetation	Slow-growing plants requiring little care
Plants with thick woody stems	Require prolonged heating to ignite

FIRESMART TREES

Use the table below to help you make choices during forest thinning, reduction and conversion operations.

Tree species	Flammability
Aspen	Very Low
Birch	Low
Maple	Very Low
Poplar	Very Low
Black spruce	Very High
White spruce	High
Engelmann spruce	High
Jack pine	High
Lodgepole pine	High
White pine	Medium
Ponderosa pine	Medium
Western red cedar	High
Mountain hemlock	High
Western hemlock	High
Douglas-fir	High
Grand fir	High
Sub-alpine fir	High
Western larch	Low

Priority Zone 2: Area 10-30 Metres from a Building

The goal of vegetation management in Priority Zone 2 is to further extend the fuel modified area by reducing flammable vegetation with a variety of thinning and pruning actions.

Recommended guidelines for Priority Zone 2

Priority Zone 2 should be an environment that will not support high-intensity crown fires. Surface fire may spread across this zone but it will be of low intensity and readily extinguished.

- Fuel reduction (rather than removal) is the main strategy for vegetation management in Priority Zone 2. Actions listed refer largely to coniferous (evergreen) forests or evergreens in mixed wood.
- Thinning of deciduous (e.g., aspen) forests or removal of deciduous trees within mixed-wood forests is discouraged. These forest types hinder fire spread during most times of the year.
- On flat terrain, Priority Zone 2 is concentric and 20 metres wide. It extends outward from 10 metres from the building walls to 30 metres from the facility.
- On sloped terrain, the width of Priority Zone 2 must be extended.
- Effective fuel management in Priority Zone 2 requires an extensive initial effort followed by an ongoing maintenance program.



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