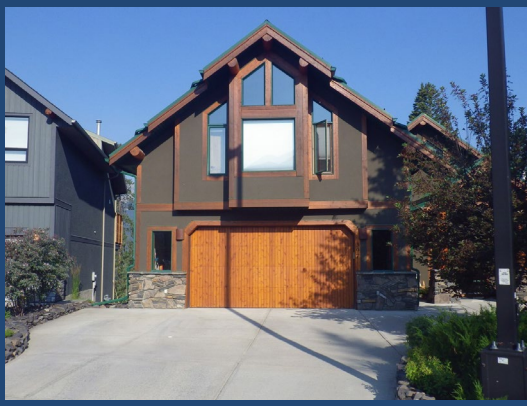
ALBERTA FireSmart™



FireSmart™ Begins at Home GUIDE

ALBERTA FireSmart™

FireSmartAlberta.ca

To order the FireSmart Begins at Home Guide,
please contact: firesmart@gov.ab.ca

The FireSmart Begins at Home Guide is created
by the Canadian Interagency Forest Fire Centre.

CIFFC

ALBERTA FireSmart™

WILDFIRE REALITY

Wildfires are a natural part of our ecosystems. Without them, the landscape loses its diversity. Wildfires recycle nutrients, help plants reproduce, and create a mosaic of vegetation that provide habitats for a variety of wildlife.

By extending our lifestyles and communities further into forested areas, also referred to as the Wildland-Urban Interface, we become more exposed to the danger of wildfire, and this may put your home at risk. It is possible, however, to live safely with this natural event! The recommendations in this guide will help you reduce the risk of wildfire to your home and neighbourhood.

WILDLAND-URBAN INTERFACE

The Wildland-Urban Interface (WUI) is the area where human development meets or intermingles with the natural environment. Over time, our communities and lifestyles increasingly extend further into forested areas. As such, we find interface communities all over Canada in both remote rural locations, and in urban centres. When we live, work, and play in WUI zones, we become more exposed to the danger of wildfire, but it is possible to live safely with this natural event.

Wildland fuels and built fuels all have different burning characteristics. When combined, they create uniquely complex conditions that affect the ignition and spread of fire that are very different than the conditions created by an isolated structure fire or wildfire. This is called the WUI fuel complex. By understanding the complexities of these combined fuels, along with considering the topographic and weather conditions that affect the combustibility of these fuels, we can better appreciate the unique and often overwhelming challenges that a WUI fire presents, especially when it comes to suppression attempts.

UNDERSTANDING FIRE BEHAVIOUR

FIRE + FUEL = WHY HOMES BURN

Unmitigated Property

FireSmart-Mitigated Property

Fuels include trees, woodpiles, structures, fences, plants, etc.

How Wildfires Spread

Embers & Sparks

Embers and sparks can blow up to two kilometres ahead of a wildfire. They can ignite materials on or near your home causing severe damage.

Extreme Heat

Radiant heat from a wildfire can melt vinyl siding, ignite your home, and even break windows. Extreme heat can come from flames within 30 metres of your home.

Direct Flame

As wildfires spread toward homes, they ignite other flammable objects in their path. To stop wildfire from directly affecting your home, create breaks in this path, especially close to your home.

Factors Influencing the Spread of Wildfire

Dense Continuous Forests

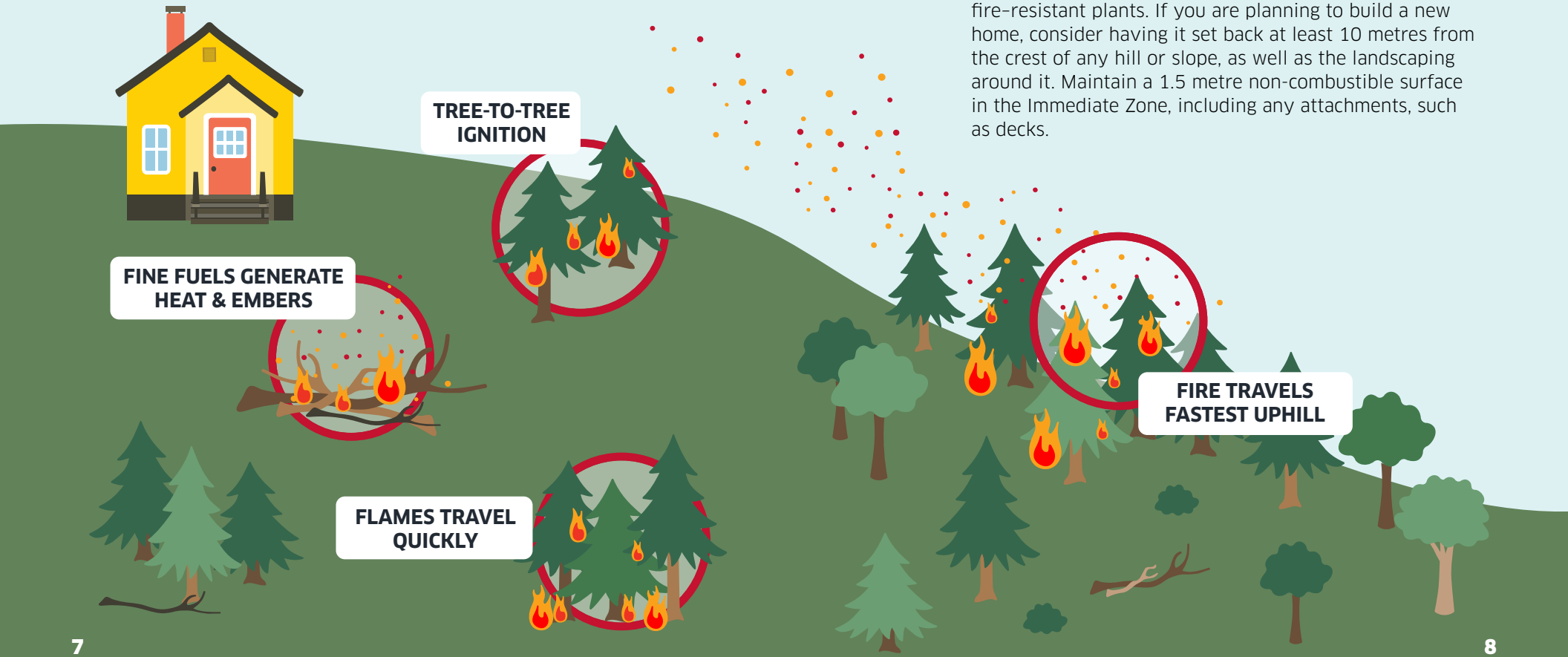
Wildfires can spread quickly in forests where trees are near each other. Fire spreads directly from tree to tree, and can produce sparks and embers that may travel distances of two kilometres. These embers may land on trees or homes well ahead of the fire and create multiple fire situations. It is important to be aware of the dangers of sparks and embers when creating a FireSmart property.

Coniferous (evergreen) trees are highly flammable.

Deciduous (leafy) trees are less flammable.

Slope

Fire moves fastest uphill. The steeper the slope, the faster a wildfire will spread. Homes on hills, or at the top of hills, face the greatest risk from wildfire. If your home is located on a hill, consider taking extra measures, like removing trees adjacent to the slope and planting fire-resistant plants. If you are planning to build a new home, consider having it set back at least 10 metres from the crest of any hill or slope, as well as the landscaping around it. Maintain a 1.5 metre non-combustible surface in the Immediate Zone, including any attachments, such as decks.

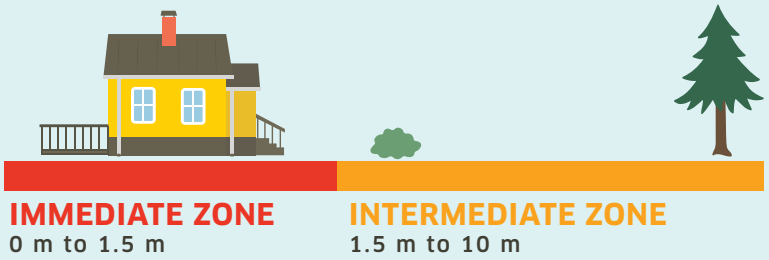


How FireSmart Treatments Influence the Spread of Wildfire

Wildfire can follow a path from the forest or grassland to your home. A wildfire moving via the tops of trees can be slowed if the trees are spaced. It can be further slowed by fire-resistant plants and shrubs in your yard. As plants have different flammability, consider spacing your plants to increase your home's ability to withstand a wildfire.

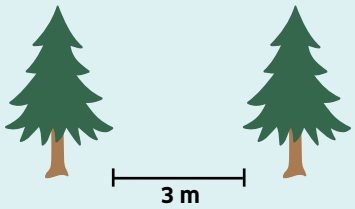
Yard Spacing

Changes within 10 metres of your home will have the biggest impact.



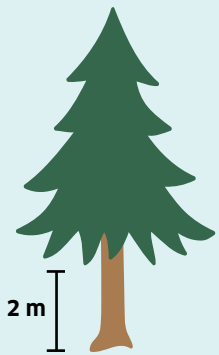
Tree Spacing

Spacing trees at least 3 metres apart will help reduce the intensity of a wildfire.



Prune Trees

Prune all tree branches within 2 metres from the ground.



HOME IGNITION ZONE

The Home Ignition Zone (HIZ) is the area within 30 metres of your home and structures. It is made up of three priority areas: The Immediate Zone, Intermediate Zone, and Extended Zone.

The HIZ shows how you can minimize your home and property's vulnerability to wildfire by addressing threats in each of the three priority zones, starting with the most vulnerable area, the Immediate Zone, and working your way outward.

BEGIN YOUR FIRESMART JOURNEY

Each section of this guide will help you to focus on the changes that protect your home from wildfire. Start from your home and work your way outward. Changes made to the area closest to your home, and your home itself, have the greatest impact in reducing your risk of wildfire damage.

Making the Most of Your Time

Home renovations and upgrades can be costly and time-consuming. FireSmart principles focus on what is realistic for you to achieve to limit the risk of wildfire to your home. Integrate FireSmart into your long-term renovation plans and incorporate regular yard cleanup to reduce your risk of damage from wildfire.

IMMEDIATE ZONE
0 m to 1.5 m

A minimum 1.5 metre non-combustible surface should extend around the entire home and any attachments, such as decks.

INTERMEDIATE ZONE
1.5 m to 10 m

This should be a fire-resistant area, free of all materials that could easily ignite from a wildfire.

EXTENDED ZONE
10 m to 30 m

Thin and prune evergreen trees to reduce hazards in this zone. Regularly remove accumulations of fallen branches, and dry grass/needles to eliminate potential surface fuels.

Look for opportunities to create a fire break by creating space between trees and vegetation. Thinning and pruning is effective here as well. These actions will help reduce the intensity of a wildfire.

IMMEDIATE ZONE

0 m to 1.5 m

The Immediate Zone is a non-combustible area that starts at the house and extends to a 1.5 metre perimeter around the home and attached structures, including decks. Reduce the chance of wind-blown embers igniting your home by starting with proactive measures outlined in this guide.

DOORS

All doors into your home should be fire-rated and have a good seal. This is true for your garage doors, as well as entry doors.

WINDOWS

Tempered or thermal (multi-paned) windows are recommended. Single-pane windows provide little resistance to heat from an advancing wildfire.

ROOF

Material

A Class-A fire-rated roof assembly offers the best protection. Metal, asphalt, clay, and composite rubber tiles are all options. Untreated wood shakes create a dangerous combination of combustible material and crevices for embers or sparks to enter. Refer to manufacturers' guidelines to maintain the fire resistance of your roof.

Maintenance

Every inside-corner of your roof is a place where debris and embers can collect. Regularly clean your roof of combustible materials.

SIDING

Stucco, metal, brick, concrete, and fiber cement siding offer superior fire resistance. Logs and heavy timbers are also reasonably effective. Untreated wood and vinyl siding offer very little protection against wildfire.

GUTTERS

Regularly remove debris from your gutters, as sparks and embers can easily ignite these dry materials. Consider screening your gutters with metal mesh to reduce debris that can accumulate.

DECKS

It is important to sheathe-in the base of decks, balconies, and houses, as embers and sparks can collect under these spaces. Use fire-resistant material to reduce the risk of sparks and embers from igniting your home.

CHIMNEY

A spark arrestor on your chimney will reduce the chance of sparks and embers from escaping and starting fires.

GROUND-TO-SIDING CLEARANCE

Siding is vulnerable when it ignites and when flames or embers get into the cavity behind it. With inadequate ground-to-siding clearance, accumulated embers can ignite combustible siding directly. 15 centimetres of ground-to-siding non-combustible clearance is recommended.

EAVES AND VENTS

While vents play an important role in removing moisture from attics, they create an opening for sparks and embers. Install vents made of non-combustible material with 3 millimetre screening, or ASTM fire-rated vents. Open eaves also create a surface for embers and direct heat. Properly fitted soffits and fascia help to reduce the risk of embers and heat from reaching the wooden rafters of your home.

OTHER

Attachments to Your Home

Wooden fences or boardwalks create a direct path from the fire to your home. Separating your house from a wooden fence with a minimum 1.5 metre metal gate can slow the advance of fire. Remember to cut the grass along your fence line, as long, dry grass easily ignites.

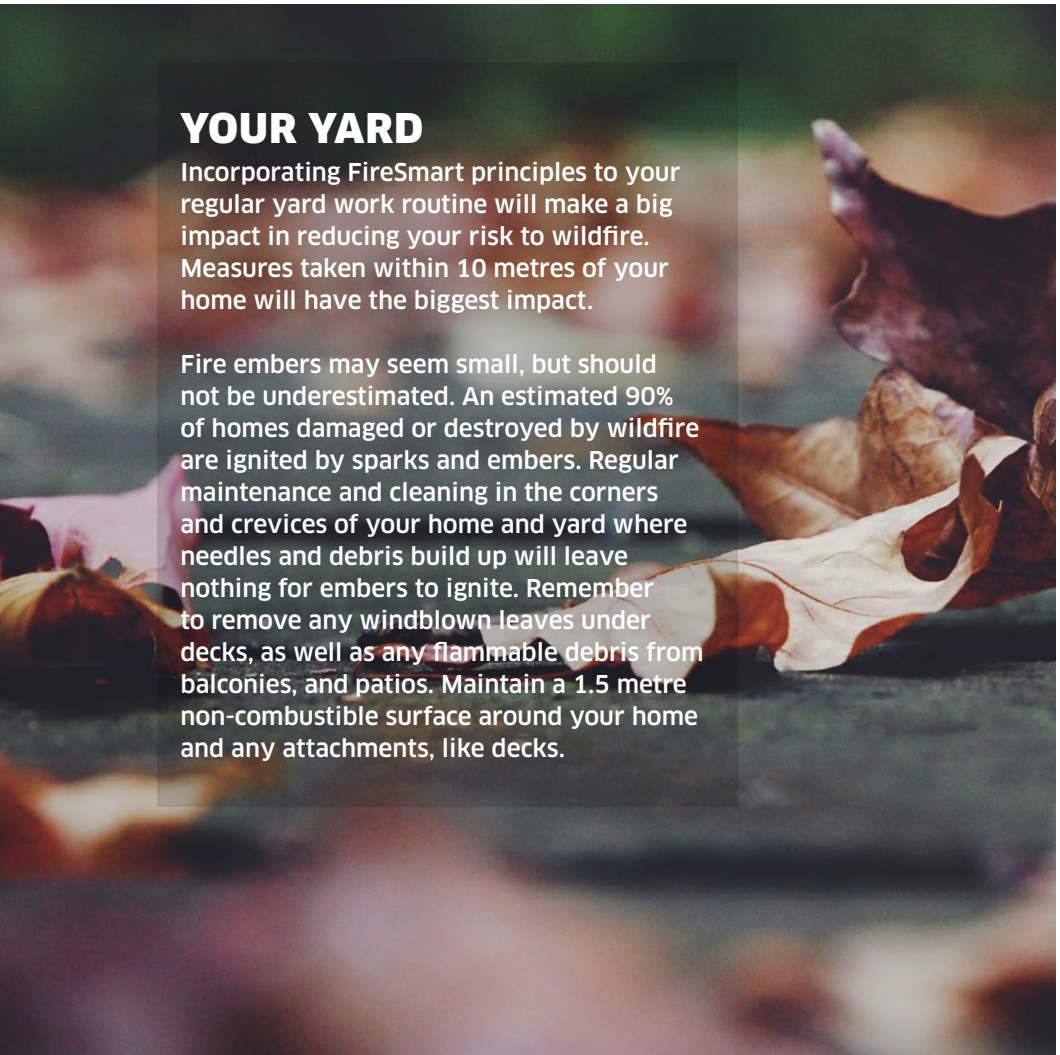
Sheds and Outbuildings

Give sheds and outbuildings the same FireSmart considerations as you do for your home.

INTERMEDIATE ZONE

1.5 m to 10 m

Elements in the Intermediate Zone are managed so they don't transmit fire to your home. There are many actions you can take to reduce your home's vulnerability in the Intermediate Zone.



YOUR YARD

Incorporating FireSmart principles to your regular yard work routine will make a big impact in reducing your risk to wildfire. Measures taken within 10 metres of your home will have the biggest impact.

Fire embers may seem small, but should not be underestimated. An estimated 90% of homes damaged or destroyed by wildfire are ignited by sparks and embers. Regular maintenance and cleaning in the corners and crevices of your home and yard where needles and debris build up will leave nothing for embers to ignite. Remember to remove any windblown leaves under decks, as well as any flammable debris from balconies, and patios. Maintain a 1.5 metre non-combustible surface around your home and any attachments, like decks.

LANDSCAPING WITHIN 10 METRES

A FireSmart yard includes making smart choices for your plants, shrubs, grass, and mulch. Selecting fire-resistant plants and materials can increase the likelihood of your home surviving a wildfire.

Plant low-density, fire-resistant plants and shrubs. Avoid having any woody debris, including mulch, as it provides potential places for fires to start. Make sure that you maintain a 1.5 metre non-combustible surface around your entire home and any attachments.

CHARACTERISTICS OF FIRE-RESISTANT PLANTS

- Moist, supple leaves
- Accumulates minimal dead vegetation
- Water-like sap with little odour
- Low amount of sap or resin material

CHARACTERISTICS OF HIGHLY FLAMMABLE PLANTS

- Leaves or needles are aromatic
- Accumulates fine, dry, dead material
- Contains resin or oils
- Loose, papery, or flaky bark

PLANTS TO AVOID

- Cedar
- Juniper
- Pine
- Tall grass
- Spruce

GRASS

A mowed lawn is a fire-resistant lawn. Grasses shorter than 10 centimetres in height are less likely to burn intensely.

Bark mulches are highly flammable.

Firewood piles should be stored at least 10 metres from your home.

BARK MULCH & PINE NEEDLES

Do not use bark or pine needle mulches within 10 metres of your home, as they are highly combustible. Gravel mulch and decorative crushed rock mulch significantly reduce the risk of wildfire.

FIREWOOD PILES

Wood piled against a house is a major fire hazard. Moving your firewood pile may be the factor that allows your home to survive a wildfire. Move firewood piles to the Extended Zone (10–30 metres from your home), or into a FireSmart-mitigated building.

POWER LINES

Power lines should be clear of branches and other vegetation. Contact your local utility company to discuss removing any branches or vegetation around overhead electrical installations.

ON-SITE FIRE TOOLS

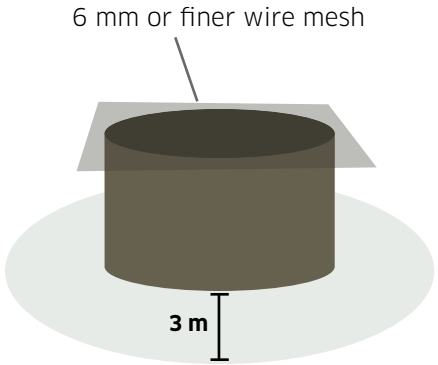
Every home should have readily accessible shovels, rakes, axes, garden hoses, sprinklers, and ladders to assist in suppressing wildfires.

BURN BARRELS & FIRE PITS

Burn barrels should be placed as far as possible from structures and trees. Keep the area within 3 metres of the burn barrel free of combustible material. Always ensure that your burn barrel has proper ventilation and is screened with 6 millimetre or finer wire mesh.

From March 1 to October 31, all burning activities in Alberta's Forest Protection Area (FPA), except campfires, require a fire permit. Please contact your local forest area office for information or visit firepermits.alberta.ca to request a fire permit.

For communities outside the FPA, please contact your local fire department regarding specific fire permit requirements. Fire permits for burn barrels, brush piles and fire pits are required in many jurisdictions.



MAINTENANCE

- Include debris clean-up in spring and fall as part of your yard maintenance.
- Dry leaves, twigs, and branches are flammable and should be removed from your yard and gutters.
- Older leafy trees can have rot and damage that make them susceptible to wildfire. An arborist or forester can help assess the condition of mature trees.
- Remove combustible shrubs from all areas located under the outer outline of tree branches.

TREES

A FireSmart yard can include trees. We often choose to live surrounded by the natural environment, and trees are a cherished part of our relationship with nature. By following the recommendations in this guide, you can have a lush, green yard that is also resistant to wildfire.

TREES TO PLANT

Deciduous (leafy) trees are resistant to wildfire and include:

- Poplar
- Birch
- Aspen
- Cottonwood
- Maple
- Alder
- Ash
- Cherry

TREES TO AVOID

Coniferous (evergreen) trees (with cones and needles) are highly flammable and should not be situated within 10 metres of your home. These include:

- Spruce
- Fir
- Pine
- Cedar

EXTENDED ZONE

10 m to 30 m

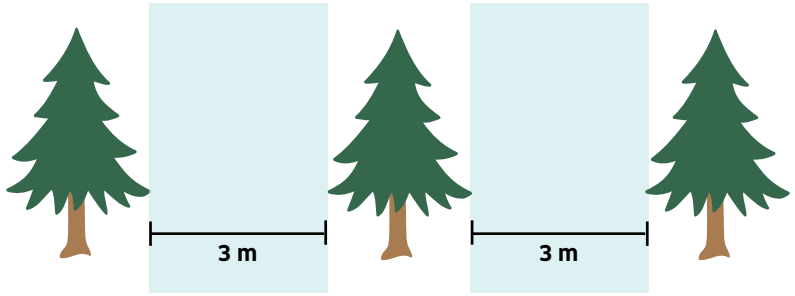
The goal in the Extended Zone is not to eliminate fire, but to reduce its intensity. If your property extends into this zone, there are many proactive measures you can take.

TREE-TO-TREE SPACING

Once fire moves into the treetops, it can easily move into neighbouring trees and increase the overall intensity of the fire. Spacing trees at least 3 metres apart will reduce the risk of this happening.

EVERGREEN TREE SPACING

Because evergreen trees are particularly flammable, it is important to measure the distance between the outermost branches of these trees. There should be a minimum of 3 metres between them.



TREE PRUNING

A surface fire can climb trees quickly. Removing all branches within 2 metres from the ground will help stop surface fires from moving into the treetops.

Pruning all trees within 30 metres of your home is recommended. If possible, prune all trees within 100 metres of your home.

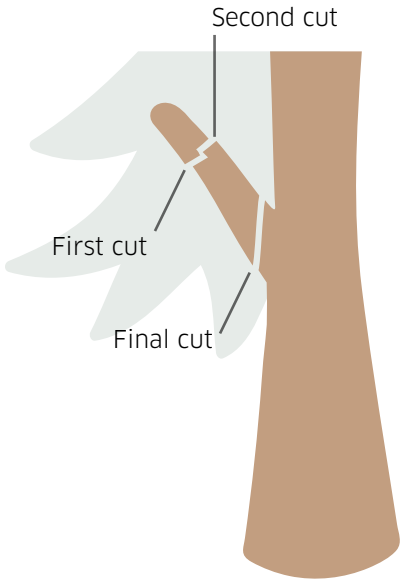
WHEN TO PRUNE

You can prune dead branches at any time of year, but it is best to prune evergreen trees in late winter when they are dormant.

HOW TO PRUNE

Prune branches close to the tree trunk, but not so close that you damage the main trunk and bark of the tree.

Never remove more than 1/3 of the canopy of a tree. Doing so may harm it.



Prune branches within 2 metres from the ground.

LARGE YARDS

30 m+

Taking FireSmart actions beyond 30 metres from your home will influence how a wildfire approaches your home. You can change the dynamics of wildfire behaviour by manipulating vegetation in this space. FireSmart treatments within the Immediate, Intermediate, and Extended Zones can influence the amount of work necessary beyond 30 metres.

Just as in the other zones, slope is a consideration. If your home is on a slope, consider extending this area further, as fire moves fastest uphill. Factor in slope stability when removing trees.

The goal in this area is to reduce the intensity and rate of spread of a wildfire. This is done by thinning and pruning evergreen trees and reducing excess vegetation and branches.

- Remove low-hanging branches within 2 metres from the ground.
- Space trees 3 metres from branch tips to reduce the intensity and rate of spread of fire.
- Remove smaller evergreen trees that can act as a ladder for fire to move into the treetops.
- Clean woody debris and combustible shrubs from the ground.

ROADWAYS AND DRIVEWAYS

In an emergency, you and your family may need to leave your neighbourhood while emergency responders enter. In order for this to happen safely and efficiently, consider the following tips:

- Clearly mark your address.
- Clear vegetation from access routes to and from your home. Target trees and branches that would make it difficult for a fire truck to approach your home.
- If you have a large property, make sure your driveway has a spot to turn around and, when possible, provide two access routes to your home.

FIRESMART IN YOUR NEIGHBOURHOOD

Many of the recommendations in this guide assume that you have direct control over the property within 30 metres of your home. Even if that is not the case, FireSmart recommendations still apply. Chat with your neighbours about FireSmart. Shared information, along with mutual cooperation and planning can help.

The FireSmart Canada Neighbourhood Recognition Program recognizes neighbourhoods that:

- Complete a neighbourhood hazard assessment and create a FireSmart plan
- Organize a neighbourhood FireSmart committee
- Work with a Local FireSmart Representative to host a FireSmart event, like a clean-up day
- Contribute in-kind or provide monetary support toward FireSmart actions

Concerned about your community's risk to wildfire? Ask your local elected officials, planning department, or fire department about how they are integrating FireSmart into their plans.

THERE'S MORE!

Learn more about FireSmart Canada's programs and resources online

www.FireSmartCanada.ca

NOTES:

NOTES:

ALBERTA FireSmart™

ALBERTA
FireSmart™

www.FireSmartAlberta.ca

2303-01