



FireSmart BC Homeowner's Manual

Reduce the potential impacts of wildfire on your home



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How Do Wildfires Grow & Spread?

How Wildfires Grow

Fuel

It's simple: to grow, wildfire needs fuel such as trees or other vegetation, as well as unmitigated homes. Importantly, some vegetation, such as coniferous trees, are highly flammable. Others, such as deciduous (leafy) trees, are much less flammable.



How Wildfires Spread

Embers

Embers or firebrands are the burning debris that can be cast up to two kilometres ahead of a wildfire, by wind or energy from the fire. Embers can ignite materials on or near your home, causing severe damage or total home loss. Once homes or adjacent materials begin burning, they can continue casting embers further into the community.



Direct Flame

As wildfires spread toward homes, they ignite other flammable objects in their path. Breaks in this path, especially close to your home, can help reduce this threat.



Radiant and Extreme Heat

Radiant heat from a wildfire can melt vinyl siding, ignite your home and even break windows. This can be caused by the extreme heat of flames within 30 metres of the home, or from close-by burning vegetation such as a shrub directly adjacent to the home.



Factors That Influence Wildfire Spread

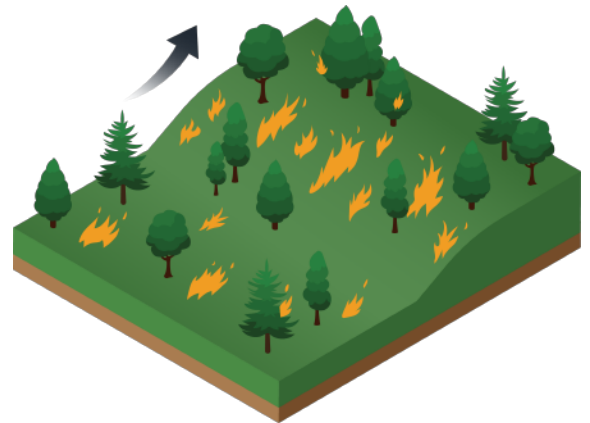
Dense, Continuous Vegetation

Wildfire can spread quickly in forests where vegetation is dense and continuous. In these types of environments, wildfires will spread rapidly along the surface, and then up into the trees. They can produce embers and firebrands that may travel distances of up to two kilometres. These embers may land on trees or unmitigated homes well ahead of the fire and create a multiple-fire situation. It is important to be aware of the dangers of embers when creating a FireSmart property.



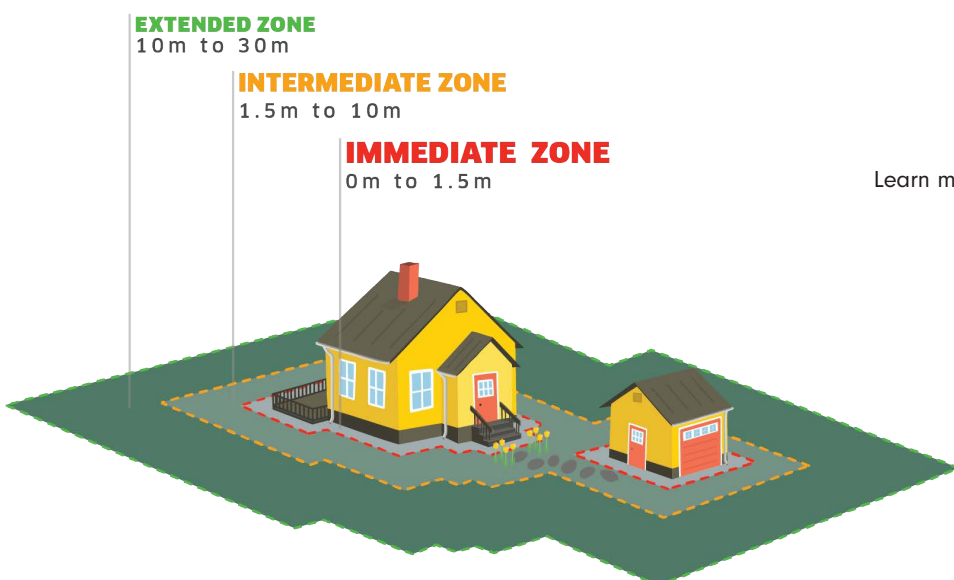
Slope

Wildfires move faster uphill. The steeper the slope, the faster a wildfire will spread. Homes, mid-slope on hills or at the top of hills are at the greatest risk from wildfire. If your home is located on a hill, you should take extra measures suggested in this manual, such as removing trees adjacent to the slope and planting fire-resistant plants. If you plan to build a new home, consider having it set back at least 10 metres from the crest of any hills or slopes.



How to Create a FireSmart Property

By taking action and creating a FireSmart property, you will dramatically increase the resistance of your home and property to damage caused by wildfire. The best part is, it's surprisingly easy to do. The actions recommended in this manual start from the home, and progress outward. Changes made to the area closest to your home, and your home itself, have the greatest potential to reduce the risk of wildfire damage.



Learn more about your property's ignition zones

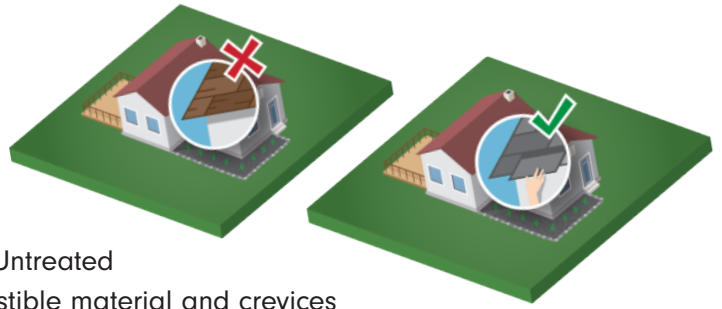


The Home / Immediate Zone: 0 – 1.5 Metres

① Assess your roof

Maintenance: Roofs contain many areas in which debris and embers may collect; clean your roof regularly of combustible materials such as leaves and branches.

Roofing Materials: Fire-resistant or fire-retardant roofing is referred to as Class A-, B- or C-rated roofing. Options include metal, asphalt, clay and composite rubber tiles. Untreated wood shakes create a dangerous combination of combustible material and crevices for embers or firebrands to enter. Refer to manufacturer's guidelines to maintain the fire resistance of your roof.



② Install a spark arrestor on the chimney

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



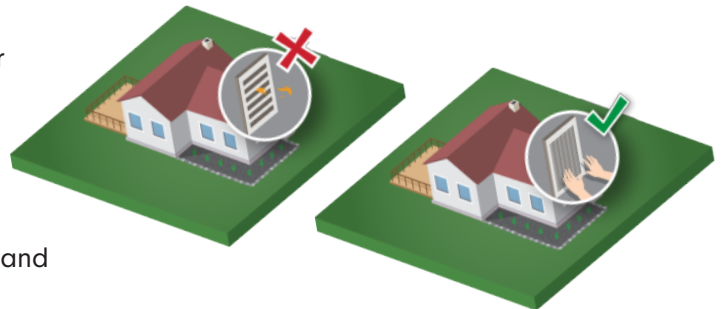
③ Keep gutters clean

Regularly remove debris from gutters, since embers can easily ignite dry materials. Consider screening gutters with metal mesh to reduce the volume of debris that can accumulate.



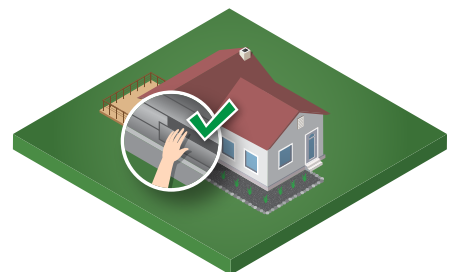
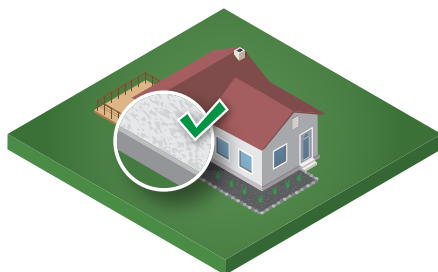
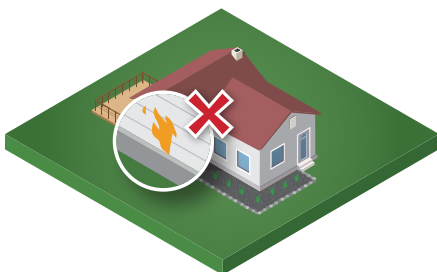
④ Assess eaves and vents

While vents play a significant role in removing moisture from attics, they create an opening for embers. Consider screening vents with three-millimetre non-combustible wire mesh. Open eaves also create a surface that can be affected by embers and direct heat. Properly fitted soffits, fascia, blocking, and/or 3mm non-combustible screens help reduce the risk of embers and heat reaching the attic.



⑤ Use fire-resistant siding

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



⑥ Install the fire-resistant windows

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



⑦ Ensure doors are fire-rated and have a proper seal.

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



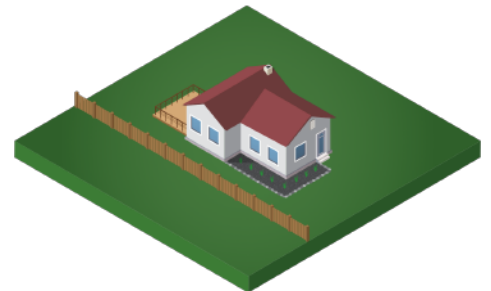
⑧ Clean under decks

Sheath the base of the decks, balconies and houses with fire-resistant material to reduce the risk of sparks and embers igniting the home. Embers can collect under decks, so be sure to enclose the areas and, more importantly, remove fuel that may accumulate underneath them.



⑨ Separate any fencing to be at least 1.5 metres from the home

Wooden fences/boardwalks create a direct path from a wildfire to your home. Separating the house from a wooden fence with a metal gate can slow the advance of a fire. Remember to cut the grass along the fence line, since long, dry grass can ignite easily.



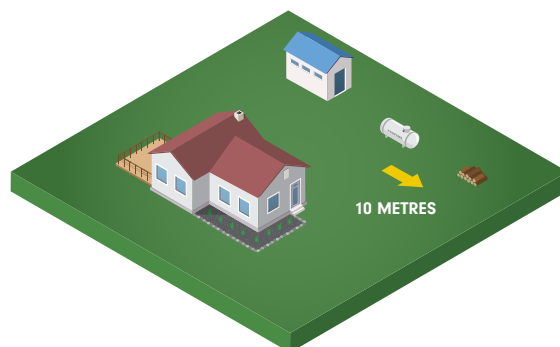
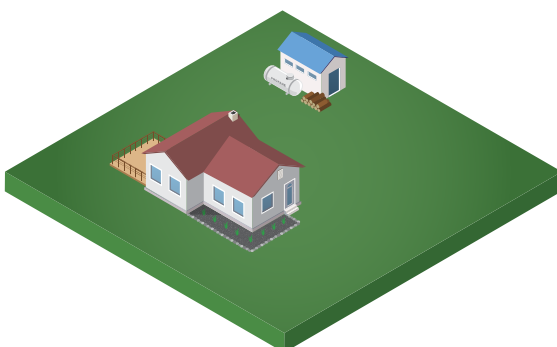
⑩ Maintain the exterior of the home

Regular maintenance and cleaning the corners and crevices of your home and yard (where needles and debris build up) will leave nothing for embers to ignite.



⑪ Don't forget about outbuildings

Give sheds and outbuildings within 10 metres of the home the same FireSmart considerations as the main structure.



Intermediate Zone: 1.5 - 10 Metres

The yard

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



Landscaping within 10 metres

Plant low-growing, well-spaced, fire-resistant plants and shrubs. Avoid having any woody debris present, including mulch, since it can provide places for fires to start. Make sure that you maintain a 1.5-metre, non-combustible zone around your entire home and any attachments. What is a non-combustible zone? It's a surface of soil, rock, or stone, with no plants, debris or combustible materials.

Characteristics of fire-resistant plants

- moist, supple leaves
- minimal accumulation of dead vegetation
- water-like sap that produces little odour
- low amount of sap or resin material

Characteristics of highly flammable plants

- aromatic leaves or needles
- accumulations of fine, dry, dead material
- resin or oils
- loose, papery or flaky bark

Plants to avoid

- cedar
- juniper
- pine
- tall grass
- spruce



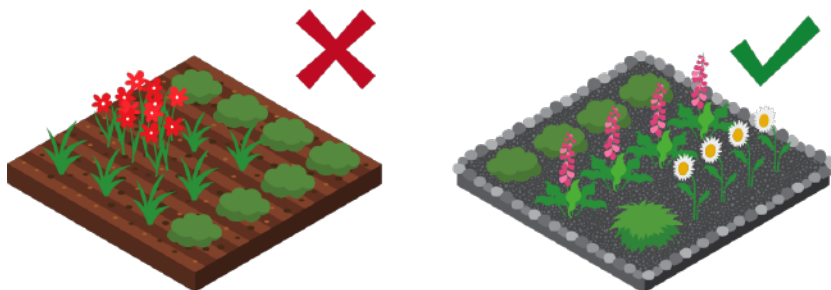
Grass

A mowed lawn is a fire-resistant lawn. Grass shorter than 10 centimetres is less likely to burn intensely. If possible, ensure your lawn is well hydrated, as dry grass has a higher flammability potential. Lastly, consider a xeriscape yard to reduce or eliminate the need for irrigation.



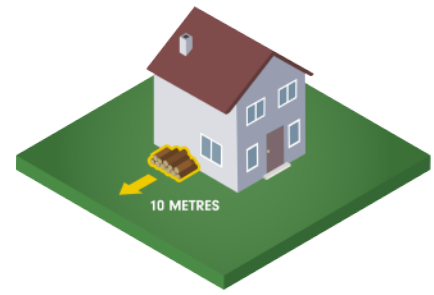
Bark mulch and pine needles

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



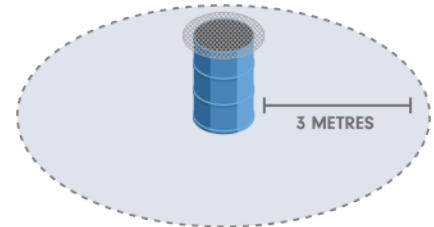
Firewood piles

Wood piled against a house is a major fire hazard. Moving your firewood pile may be a key factor that allows your home to survive a wildfire. Clean up any such areas regularly, since easily ignitable debris often collects here.



Burn barrels and fire pits

Burn barrels should be placed as far as possible from structures and trees. Keep the area within three metres of the burn barrel free of combustible material. Always ensure that your burn barrel has proper ventilation and is screened with six-millimetre (or finer) wire mesh. Check with your local government about specific requirements and restrictions regarding backyard fire pits. Fire permits for burn barrels and fire pits are required in many jurisdictions.



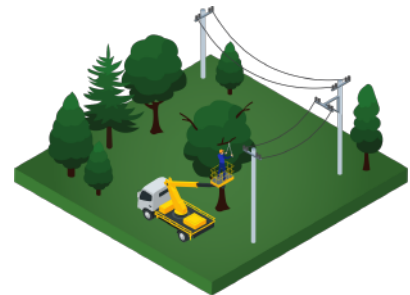
On-site fire tools

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



Power lines

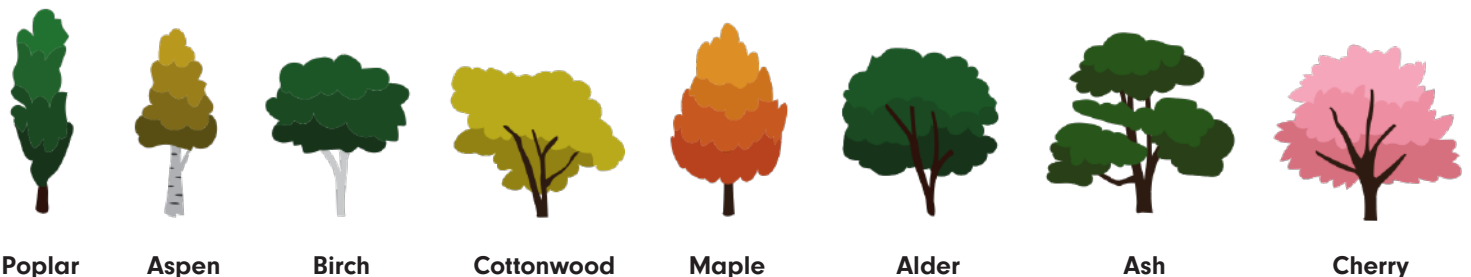
Power lines should be clear of branches and other vegetation. Contact your local utility company to discuss removing any branches or vegetation around overhead electrical installations.



Trees

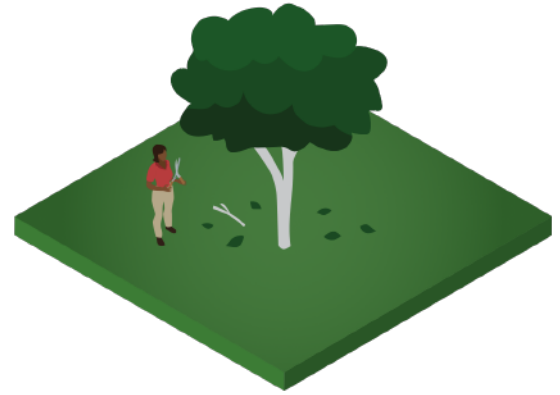
A FireSmart yard can include trees. We often choose to live surrounded by the natural environment and trees are a cherished part of our relationship with nature. By following the recommendations in this manual, you can have a lush, green yard that is also resistant to wildfire.

Which trees should you plant? Deciduous (leafy) trees are resistant to wildfire and include:



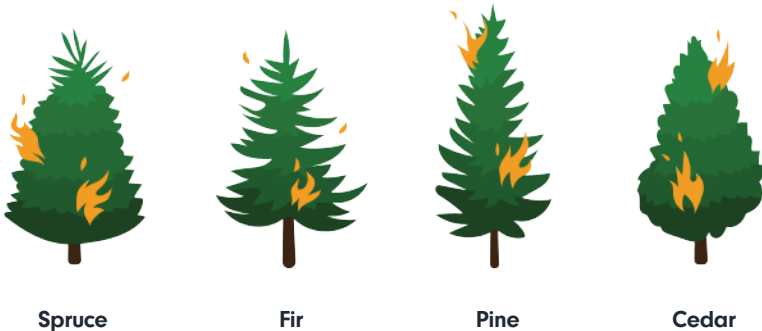
Maintaining trees

Include debris clean-up in your spring and fall yard maintenance. Dry leaves, twigs and branches are flammable and should be removed from the yard and gutters. Older deciduous (leafy) trees can have rot and damage that makes them susceptible to fire. An arborist or forester can help you assess the condition of mature trees.



Trees to avoid

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



Want to learn more about FireSmart landscaping? Download the FireSmart Landscaping Guide for tips on how to make a more wildfire resistant yard.

[Landscaping Guide](#)

If these trees ignite within 10 metres of your home, the direct flames and intense heat can cause damage or even ignite your home.

Extended Zone: 10 - 30 Metres

Coniferous tree spacing

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

Removal of combustible material

Remove smaller coniferous trees that could act as a "ladder" and allow fire to move into the treetops. Clean up woody debris on the ground.



Tree pruning

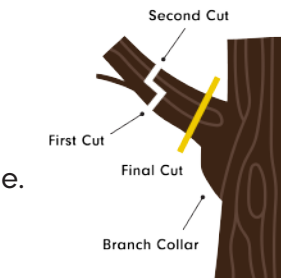
A surface fire can climb up into trees quickly. Removing branches within two metres of the ground will help stop surface fires from moving into treetops.

When to prune

You can prune dead branches at any time of year, but it is best to prune coniferous trees in the 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 one-third of the canopy of a tree. Doing so can harm the tree



Roadways and driveways

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

1. Clearly mark your property with your address.
2. Clear vegetation from access routes to and from your home. Target trees and branches that could make it difficult for a firetruck to approach your home.
3. If you have a large property, make sure that your driveway has a turnaround and, if possible, provide two access routes to your home.



Your neighbourhood

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



The FireSmart Canada Neighbourhood Recognition Program

The FireSmart Canada Neighbourhood Recognition Program (FCNRP) recognizes neighbourhoods that:

- complete a neighbourhood assessment and FireSmart plan
- organize a local FireSmart committee
- host a FireSmart event, such as a clean-up day
- contribute in-kind or monetary support toward FireSmart actions



Your Local FireSmart Representative

Reach out to your Local FireSmart Representative - they're here to advise you on everything FireSmart. They can help you:

- get a FireSmart assessment for your home and neighbourhood
- enroll your neighbourhood in the FireSmart Canada Neighbourhood Recognition Program
- understand wildland-urban interface concepts and hazards



Local government and First Nations

Are you concerned about your neighbourhood's wildfire risk? Ask local authorities, the planning department or local fire department how they are integrating FireSmart principles into their plans.



The Home Partners Program

FireSmart Home Partners is a voluntary property assessment program that helps residents identify specific actions and upgrades they can take on their property to reduce wildfire risks. The program's primary purpose is to engage homeowners in voluntary wildfire mitigation activities by offering a professional home assessment with property-specific recommendations. This approach provides them with a comprehensive FireSmart road map for their property.

[Learn More](#)

Take Action Today

[Download Scorecard](#)

Download our Homeowner's Assessment Score Card to find out how prepared you are for wildfire.

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