

FireSmart begins at home

Homeowner's FireSmart manual



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- any loss or damage caused by a wildfire to insured or uninsured structures and/or property where FireSmart principles have been applied.

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Wildfire reality

Wildfires are a natural part of Yukon's boreal forest. They promote diversity, recycle nutrients, and create a mosaic of vegetation that provides habitat for a variety of wildlife. But as Yukon's communities and our economic and social activities extend further into forested areas, we become more exposed to wildfire danger. Despite this reality, there are things you can do to reduce your home's wildfire risk.



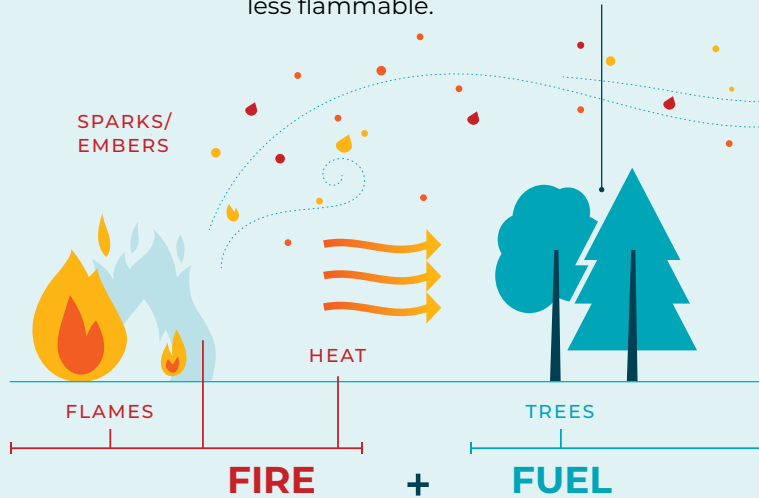
The Government of Yukon's Wildland Fire Management branch manages wildland fires and protects Yukon communities. We work with local partners to develop FireSmart strategies that reduce wildfires' impact on communities. This community-level planning is important, but the most important things we can do to keep our homes safe literally happen in our own backyards.

The simple and effective steps in this manual can help reduce your property's wildfire risk. They will also help firefighters defend your home should a wildfire approach. By following the FireSmart principles in this manual, you are doing your part to help us build wildfire-resilient Yukon communities.

How wildfires grow

Trees

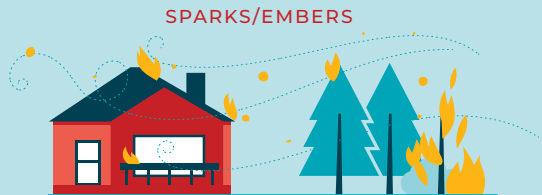
Evergreens are highly flammable, deciduous (leafy) trees are much less flammable.



How wildfires spread

Sparks/embers

This is the burning debris that can be thrown up to two kilometres ahead of a wildfire. Sparks and embers can ignite materials on or near your home causing severe damage.

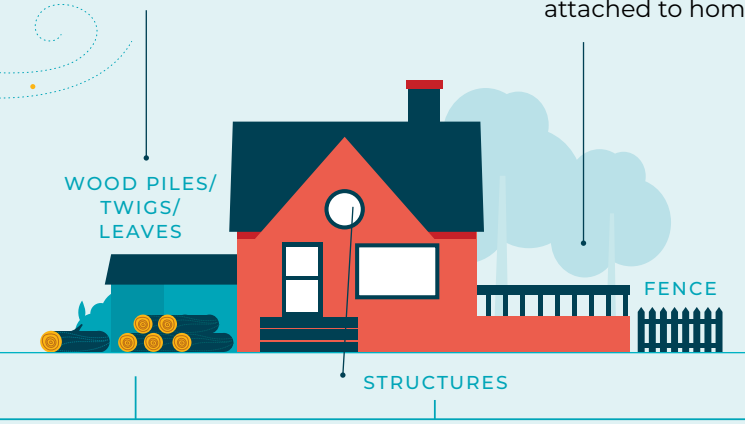


Surface fuels

Plants, leaves, twigs, wood piles and dried grasses are surface fuels.

Structures

Combustible building materials include: wood shakes, wood or vinyl siding, wooden fences attached to homes.



= WHY HOMES BURN

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 towards homes, they ignite other flammable objects in their path. To stop fire from directly affecting your home, create breaks in this path, especially closest to your home.



Factors influencing wildfire spread

Dense continuous forest

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



Slope can affect wildfire

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, you should consider taking on extra measures suggested in this manual such as removing trees adjacent to the slope and planting fire resistant plants. If you are planning on building a new home, consider having your home set back at least 10 metres from the crest of any hills or slopes as well as the landscaping around it. Maintain a 1.5 metre non-combustible surface around your entire home and any attachments, such as decks.



How FireSmart treatments influence wildfire spread



Wildfire can follow a path from the forest or grassland to your home. A wildfire moving from the tops of the trees can be slowed if the trees are spaced. It can be further slowed by flame-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.





FireSmart rules of thumb

1 Yard spacing

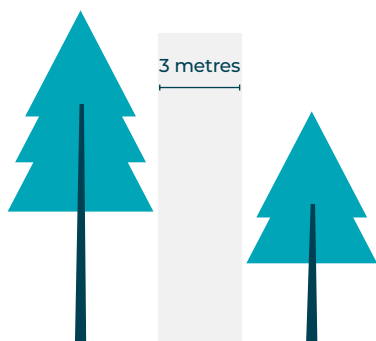
Changes within 10 metres of your home will have the biggest impact.

1.5 - 10 metres



NON-COMBUSTIBLE

ZONE 1



2 Tree spacing

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

2 metres



3 Prune trees

Prune all tree branches within 2 metres of the ground.

Beginning your FireSmart journey

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

IMPACT TO REDUCE RISK FROM WILDFIRE

HOME

YARD

OUTER YARD



NON-COMBUSTIBLE ZONE 0 - 1.5 metres

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

ZONE 1 1.5 - 10 metres

Should be a fire resistant zone, free of all materials that could easily ignite from a wildfire.

Making the most of your time

Home renovations and upgrades can be costly and time consuming. FireSmart focuses on what is realistic for you to achieve in order to limit the risk of wildfire to your home. Integrate FireSmart into your long term renovations and incorporate yard clean up to reduce your risk of damage from wildfire.

LARGE YARD OR NEIGHBOURHOOD



ZONE 2 10 - 30 metres

Thin and prune evergreen trees to reduce hazard in this area. Regularly clean up accumulations of fallen branches, dry grass and needles from on the ground to eliminate potential surface fuels.

ZONE 3 30 - 100 metres

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

NON-COMBUSTIBLE ZONE / HOME

0 - 1.5 METRES

1 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 manufacturer's 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.

2 CHIMNEY

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

3 GUTTERS

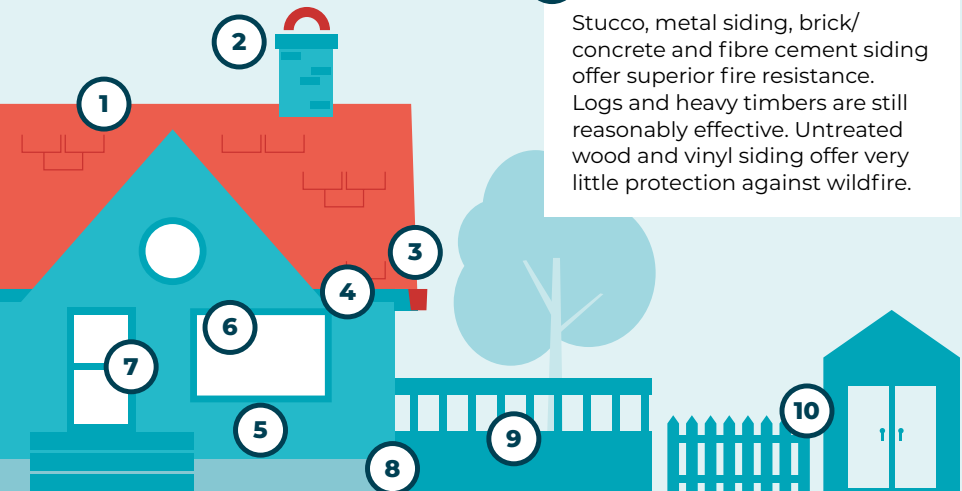
Regularly remove debris from your gutters as sparks and embers can easily ignite these dry materials. Consider screening your gutters with metal mesh to reduce the amount of debris that can accumulate.

4 EAVES AND VENTS

While vents play an important role in removing moisture from attics, they create an opening for sparks and embers. Install non-combustible material for all vents. Should be 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 reaching the wooden rafters of your home.

5 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.



Preparing your home and yard as recommended can help your home survive a wildfire.

6 WINDOWS

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

7 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 your entry doors.

8 GROUND TO SIDING CLEARANCE

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

9 DECKS

Embers and sparks can collect under these spaces. Enclose these areas. Sheath in the base of the decks, balconies and houses with fire resistant material to reduce the risk of sparks and embers igniting your home.

10 OTHER

ATTACHMENTS TO YOUR HOME

Fence lines

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

Sheds/out buildings

If these are within 10 metres of your home, give these the same FireSmart consideration as you do your home.



Check for other ignition points in and around your home — look around your yard for other combustible materials. Consider how close you store combustible lawn furniture or deck storage boxes are to your home.

ZONE 1 / YARD

1.5 - 10 METRES



Your yard

Adding a few FireSmart actions to your regular yard work routine will make a big impact to reduce your risk to wildfire. Changes within 10 metres of your home will have the biggest impact to reducing the threat of wildfire.

Fire embers may seem small but are not to be underestimated — 90% of the homes that burn from wildfires are started 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 the deck as well as any flammable debris from balconies and patios. Maintain a 1.5 metre non-combustible zone around your home and any attachments, such as decks.



ZONE 1 / YARD

1.5 - 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.

Landscaping within 10 metres

Plant a low density of 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 zone 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 highly 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 mulch and 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. Clean up this area regularly as easily ignited 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 3 metres of the burn barrel free of combustible material. Always ensure your burn barrel has proper ventilation and is screened with 6 millimetre or finer wire mesh.

Check with your local municipality regarding specific requirements and restrictions regarding backyard fire pits.

Fire permits for both burn barrels and fire pits are required in many jurisdictions.

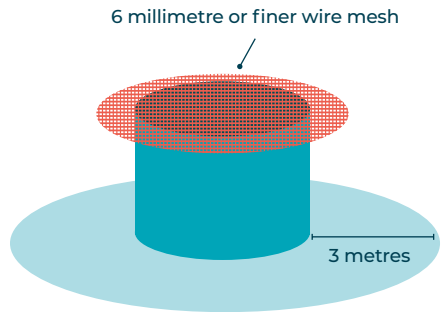
On-site fire tools

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.

Burn barrel



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



Bark mulches are highly flammable

ZONE 1 / YARD

1.5 - 10 METRES



A FireSmart yard includes trees. Often we 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.

Trees to plant

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

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

Trees closest to your home

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 deciduous (leafy) trees can have rot and damage that makes them susceptible to fire—and arborist or forester can help you asses the condition of mature trees.
- Remove combustible shrubs from the drip line of trees.



Trees to avoid

Evergreen trees with cones and needles (conifer trees) are highly flammable and should not be within 10 metres of your home.

- Spruce
- Fir
- Pine
- Cedar
- Juniper

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

ZONE 2 / YARD

10 - 30 METRES

Evergreen tree spacing

Once fire moves into the tree tops 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.



Tree to tree spacing

Measure the distance between the outermost branches of your trees. There should be a minimum of 3 metres between trees.

Trees further from your home

Tree pruning

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

Remove all branches to a height of 2 metres from the ground on evergreen trees within 30 metres of your home. If possible, pruning trees up to 100 metres from your home (Zone 3) is recommended.

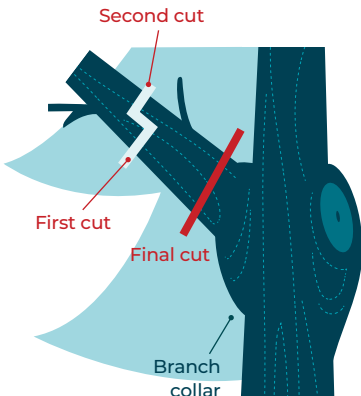
When to prune

You can prune dead branches at any time of year, but it is best to prune evergreen 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 1/3 of the canopy of a tree, doing so can harm the tree.

 Prune tree branches within 2 metres from the ground.



ZONE 3 / LARGE YARDS

30 - 100 METRES

Taking FireSmart actions in Zone 3 will influence how a wildfire approaches your home. You can change the dynamics of wildfire behaviour by manipulating vegetation within this zone. FireSmart treatments within the Non-combustible Zone, Zone 1 and Zone 2 can influence the amount of work necessary in Zone 3.

Just as in Zone 1 and Zone 2, slope is a consideration. If your home is on a slope, consider extending this area further as fire moves fastest up hill. Consider slope stability when removing trees.

The goal in this zone 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 of the ground.
- Space trees 3 metres from branch tips to reduce the intensity and rate of spread of a wildfire.
- Remove smaller evergreen trees that can act as a ladder for fire to move into the tree tops.
- Clean woody debris and combustible shrubs from the ground.

Roadways and driveways

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

1. Clearly mark your address
2. 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
3. If you have a large property, make sure your driveway has a turn around and, when possible, provide two access routes to your home

Your neighbourhood

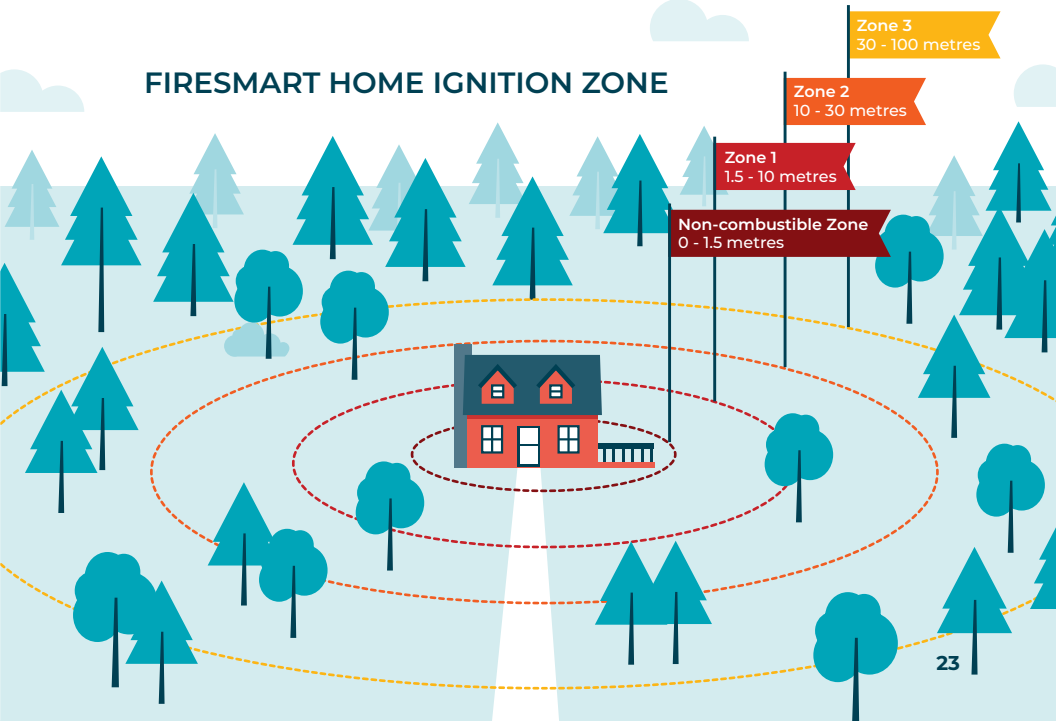
- 1** Many of the recommendations in this manual assume that you have direct control over the property within 100 metres of your home. If that is not the case, the FireSmart recommendations still apply. Chat with your neighbours about FireSmart. Shared information, along with mutual cooperation and planning, can help.
- 2** Concerned about your community's risk to wildfire? Ask your municipal councillor, planning department or fire service how they are integrating FireSmart into their plans.

- 3** The FireSmart Canada Community Recognition Program gives recognition to communities that:
 - Complete a community 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 towards FireSmart actions.



To learn more go to:
[FireSmartCanada.ca](https://www.fire-smartcanada.ca)

FIRESMART HOME IGNITION ZONE



Take the next step: reduce your neighbourhood's wildfire risk



FireSmart begins at home, but it doesn't stop at your property line.

Yukon's community of Local FireSmart Representatives are trained volunteers

A Local FireSmart Representative can help your community:

- lead a community wildfire danger assessment
- help your community apply for recognition from FireSmart Canada
- support applications to get government funding for local FireSmart projects

Learn more about how Wildland Fire Management funds local government, non-profit association, school council, or community association-led FireSmart projects at Yukon.ca/Wildfires.

Get in touch with your Local FireSmart Representative by emailing FireSmart@gov.yk.ca.

FireSmart begins at home

Home assessment

FireSmart score card

Assess your risk from wildfire

Answer the questions below to see what changes will make the greatest difference in reducing your home's risk from wildfire.

HOME

What type of roofing material and construction do you have?	Class A UL/ASTM fire rated (e.g. metal, clay tile or asphalt shingles)	0
	Unrated roof assembly (including wood shakes and wood shingle roofs)	30
Are your gutters combustible or non-combustible?	Non- combustible gutters (metal or aluminum)	0
	Combustible (plastic, vinyl, wood)	6
How clean are your roof and gutters?	No needles, leaves or other combustible material	0
	Needles, leaves or other combustible material present	10

HOME

Are your eaves closed up and vents screened?	Closed eaves and vents with 3 mm (1/8") screening or ASTM ember resistant rated vents	0	
	Open eaves, vents not 3 mm (1/8") screened or ember resistant rated; louvres/ flaps not operational with accumulated combustible debris (e.g. dryer vents)	30	
What type of exterior siding do you have?	Ignition resistant (fibre cement board, log) or non-combustible (stucco, metals, brick/stone)	0	
	Combustible siding or non-ignition resistant siding (vinyl, wood, acrylic stucco)	6	
Is exterior siding free of gaps, holes, or other areas where embers could accumulate, lodge, or penetrate?	No gaps or cracks, missing siding or holes	0	
	Gaps, cracks or holes	10	
Are walls protected with a minimum 15 centimetres (6 inches) of non-combustible ground-to-siding clearance?	No less than 15 centimetre non-combustible vertical ground-to-siding surface	0	
	Less than 15 centimetres non-combustible vertical ground-to-siding surface	30	

HOME

How fire resistant are your windows or doors (including garage doors)?	Tempered glass in all doors and windows and treated Non-combustible Zone and Priority Zone 1; no gaps in ANY doors	0
	Multi pane glass small/medium and treated Non-combustible Zone and Priority Zone 1; no gaps in ANY doors	1
	Multi pane glass large and treated Non-combustible Zone and Priority Zone 1; no gaps in ANY doors	2
	Single pane glass- small/medium and treated Non-combustible Zone, Priority Zone 1 and Priority Zone 2; no gaps in ANY doors	4
	Single pane glass large and treated Non-combustible Zone, Priority Zone 1 and Priority Zone 2	6
	Single or Multi pane glass – any size and no treatment to Non-combustible Zone and Priority Zone 1; gaps in ANY doors	30
Is the underside of your balcony, deck, porch or open foundation completely sheathed-in or open and free of combustible materials?	N/A, no gaps or cracks, heavy timber, non-combustible or fire-rated construction with non-combustible surface and no combustible debris under deck	0
	Gaps or cracks, no solid wood or fire-rated construction with combustible surface and/or combustible debris under deck	30

HOME

Is your home set back from the edge of a slope?	Building is located on the bottom	3
	Building is located on the mid to upper portion or crest of a hill and set back	10
	Building is located on the mid to upper portion or crest of a hill with no set back with no Non-combustible Zone, Priority Zone 1, 2 and 3 treatment	30

HOME - SCORE

YARD / Non-combustible Zone (0 - 1.5 metres)

1.5 metres from furthest extent of home (includes overhangs, extensions and decks)	Non-combustible surface, no combustible debris, materials, fences or plants present	0
	Combustible surface, combustible debris, fences or plants present	30

YARD / Non-combustible Zone - SCORE

YARD / Zone 1 (1.5 - 10 metres or 5 - 30 feet)

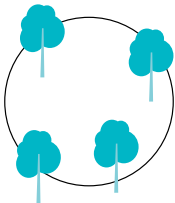
Where are your woodpiles or other combustible materials stored? (Vehicles, construction materials, debris etc.)	More than 10 metres from home	0
	Less than 10 metres from home	30
Where are your unmitigated outbuildings located? (buildings that are not-mitigated to the same standards as the primary home)	More than 15 metres (50 feet) from home	0
	Less than 15 metres from home	30
What type of forest grows within 10 metres of your home?	Trees	
	Healthy deciduous (i.e. poplar, aspen, birch)	0
	Mixedwood (both deciduous and conifer)	30
	Conifer (i.e. spruce, pine, fir, cedar)	30
What kind of surface vegetation and combustible materials are within 10 metres of your home and outbuildings?	Well maintained lawn (15 centimetres; 6 inches or shorter; low flammability; low growing discontinuous plants with treated Non-combustible Zone (0-1.5 metres)	0
	Unmaintained grass (greater than 15 centimetres in length); flammable plants; continuous plants or tall growing plants; untreated Non-combustible Zone	30
	Twigs, branches, logs and accumulations of tree needles or leaves and other combustible materials	30

YARD / Zone 1 - SCORE

YARD / Zone 2 (10-30 metres or 30-100 feet)

What type of forest surrounds your home?	Trees	
	Healthy deciduous (i.e. poplar, birch, cottonwood)	0
	Mixedwood (both deciduous and conifer)	10
	Conifer (i.e. spruce, pine, fir, cedar) See below illustration*	
	Separated	10
	Continuous	30
What kind of surface vegetation grows within 10 – 30 metres of your home?	None within 10 - 30 metres	0
	Scattered within 10 - 30 metres	5
	Unmaintained grass (greater than 15 cm)	5
	Abundant within 10 - 30 metres	10
Are flammable shrubs well-spaced?	None within 10 - 30 metres	0
	Scattered within 10 – 30 metres	5
	Abundant within 10 – 30 metres	10
	Separated coniferous	10
Are there low tree branches within 2 metres of the ground?	None within 10 – 30 metres	0
	Present within 10 – 30 metres	10

YARD / Zone 2 - SCORE



Separated

Trees are widely spaced and crowns do not touch or overlap.



Continuous

High stand density where trees are tightly spaced and crowns frequently touch or overlap.

Home and yard hazard score

SITE		TOTAL SCORE
HOME	<i>Home</i>	
YARD / Non-combustible Zone	<i>0 - 1.5 metres from the home</i>	
YARD / Zone 1	<i>1.5 - 10 metres from the home</i>	
YARD / Zone 2	<i>10 - 30 metres from the home</i>	

HAZARD: Low: <21 | Moderate: 21-29 | High: 30-35 | Extreme: >35

Home considerations

- Have you discussed wildfire damage and loss with your insurance provider?
- Is your roof in poor condition? A roof in poor condition will not provide protection from sparks and embers. Fire resistance deteriorates over time; check manufacturer guidelines to assess roof condition and potential fire resistance.
- Is your chimney clean? Does it have proper clearances, screens and spark arrestors?

Yard considerations

- Is the area within 10 metres of buildings free of flammable trees, other vegetation and combustible materials?
- Are large capacity propane tanks within 10 metres of buildings? Are they clear of vegetation?
- Is fire suppression equipment readily available? Shovels, rakes, buckets and hoses should be easily accessible.
- Are burn barrels screened and at least 10 metres from combustible materials and buildings?
- Are overhead power lines clear of vegetation? Contact your service provider for assistance with removing trees in close proximity to utility lines.

Evacuation tips

Ready to go kit

2 litres of water for each person
Non-refrigerated food and a manual can opener
Plastic or paper plates, cups and utensils
Flashlights and extra batteries
Radio with batteries
A change of clothes
Emergency contact information and the number of someone to call who lives out of town
Pet food and supplies for at least three days
Small first aid kit
Personal identification card
Personal hygiene items, soap and hand sanitizer
Store medicine you usually take near your ready-to-go kit
Cash in small denominations

When you leave, remember to

Make sure you are safe before assisting others
Listen to the radio or television for information from authorities
Turn off your home water, electricity and gas
Post easy to see signs for water and gas shut-offs
Follow your family evacuation plan
Bring your ready-to-go kit
Close doors and windows

