

THE HOME OWNERS

# FireSmart Manual

*Protect your home from wildfire*

You and your neighbours can reduce the hazards of **Wildfire** by following these simple preventative steps.

Take the **FireSmart Assessment** test!

Is **your** home at risk?



**Cette publication est également disponible en français.**

Ontario Ministry of Natural Resources, would like to thank *Partners in Protection* for providing the information used in this brochure. We would also like to thank *Alberta Sustainable Resource Development* for allowing us to use their FireSmart manual as a model for this Ontario publication.

**Waiver**

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# The Rural Reality

Wildfires are capable of spreading at an astonishing rate. Forest fires can spread through the crowns of trees at up to 15 kilometres per hour.

In Ontario, wildfire is a natural phenomenon. Over the last several centuries, large areas of Ontario have been burned over repeatedly. Lightning is considered the only natural cause of wildfires. However, 90% of all wildfires that start within 3 km of our communities are attributed to human activity.

On average, over 1,200 wildfires are started in the province each year consuming over 200,000 hectares of forested land annually. Sometimes families have been evacuated from their communities and homes and cottages have been destroyed.

If you live in or near a forested region, you're living in an area often referred to as the "Wildland Urban Interface" and sooner or later, you may have to contend with the threat of a wildfire. The best protection against loss, damage or injury due to wildfire is prevention. But there are also things you can do to reduce the risk of loss or damage to your property in the event of a wildfire.

This FireSmart Home Owner's Manual provides you with information and ideas for steps you can take to reduce your risk.



PHOTO: BILL BERESKA

## Be Prepared

### Homeowners can play a key role in fire protection strategies.

Some prevention measures cost very little and reduce fire danger by a great deal; others require planning and a long-term commitment to change. More importantly, the work you do can slow a fire and provide valuable time for fire crews to respond and begin extinguishing a fire when it occurs.

Properly preparing your home and community doesn't guarantee that you will not incur fire damage, but it does reduce the risks. Make sure your home is insured.

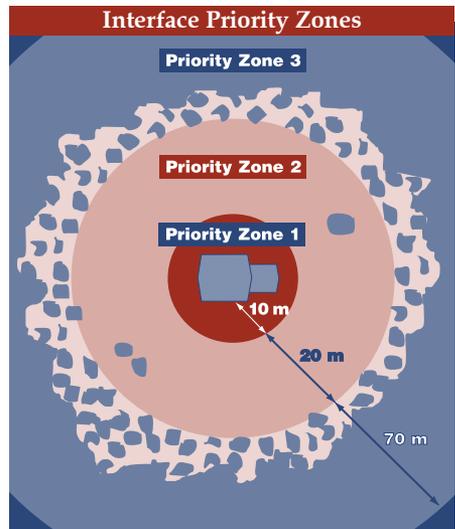
Let's look at three areas that, if properly managed, may reduce the damage to your property should a wildfire occur.

## Site Preparation

### Any kind of vegetation is combustible.

Mature trees, shrubs, dead grass, even your woodpile, are fuels to a wildfire. Their beauty and practicality vanish in an advancing blaze. Managing the space around your house and buildings is of prime importance.

*This diagram shows the Priority Zones surrounding an interface building or group of buildings.*



### Priority Zone 1

The first 10 metres of space around your home is your "First Priority". This is part of the Home Ignition Zone (0 to 30m) and it's the most critical area to consider for fire protection. By modifying or removing the fuels within this zone, you reduce the risk of embers being able to start fires, and give fire fighters a better chance to save your home from an advancing fire.

#### What to do?

Thin or prune any shrubs and trees, remove deadfall or woodpiles from this area and keep your grass mowed and watered. Consider changing conifer trees to hardwood species.

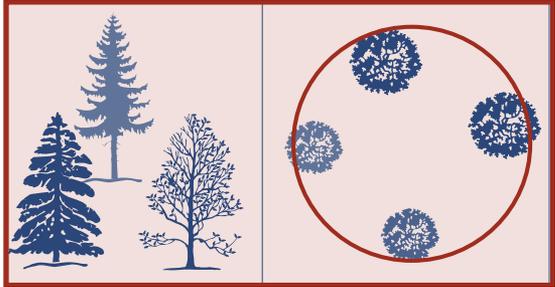
## How FireSmart is your “Second Priority” zone?

The area 10 to 30 metres out from your home is the second priority zone. In this zone, you need to reduce and manage potential fuel sources so that combustion cannot be supported and fire intensity is reduced if a fire occurs.

### What to do?

Thin trees and remove debris that would support the crowning of a spreading fire. The crowns of individual trees should not touch.

Reduce the number of evergreen trees in the area. Evergreens such as pine and spruce are much more combustible than deciduous trees. In fact, aspen, poplar and birch all have very low flammability rates.



*Low stand density where trees are widely spaced and crowns do not touch or overlap.*

Remove dead woody debris, thick shrubbery and mature trees that might provide the opportunity for a ground fire to climb up into the forest canopy. These are called “ladder fuels” which allow a fire to climb into the tree crowns, starting an uncontrollable crown fire.

Because fires spread more rapidly up hill, it’s important to extend the second priority zone precautions further on downhill slopes and on windward exposures.

## Can you extend your FireSmart maintenance plan to the “Third Priority” zone?

The third priority zone begins 30 metres from any structure and extends to a distance of 100 metres and beyond. The idea here is not to remove all combustible fuels from the forest, but to thin the area so fires will be of low intensity and are more easily extinguished.

### What to do?

Thin or remove shrubs and trees that make up the under story, retain fire resistant deciduous trees, and manage the canopy to reduce the potential for a crowning fire.



PHOTO: RICK ARTHUR

### Lawn or non-combustible material

- within 10 metres of building (0 pts).
- within 10 - 30 metres of building (0 pts).

### These are...

simple economical steps anyone can take to create a FireSmart home, community or business site. For these actions to be effective, they must be maintained.

## Home and business construction

Our second set of precautions deals with building materials and construction techniques. While it may not be practical or economical to apply all of them to an existing structure, many of these precautions are easily made. Others can be included in long-term maintenance or renovation plans or incorporated in new dwellings as they are designed and constructed.

### Is your roof FireSmart?

The most fire resistant roofing materials are metal, asphalt, and ULC treated shakes. Untreated wooden shakes and shingles provide no resistance. They can easily ignite if sparks, embers or flames from a fire reach your house.



PHOTO: KELVIN HIRSCH

**Metal, tile, asphalt, ULC-rated treated shakes or non-combustible material (0 pts)** - the most fire resistant and remain effective under severe fire exposure.

Even if your plans for re-roofing are years away, it's still valuable to ensure that your existing roof is free of combustible debris and that no combustible materials such as overhanging trees or vegetation provide fuel for airborne sparks and embers.



PHOTO: KELVIN HIRSCH

**Unrated wood shakes (30 pts)** - provide no fire protection.



PHOTO: KELVIN HIRSCH

### Non-combustible siding (0 pts)

Materials such as stucco, metal siding, brick cement shingles, concrete block, poured concrete, and rock offer superior fire resistance.

### Are your exterior walls FireSmart?

Materials such as stucco, metal, brick and concrete offer superior fire resistance to wildfire.

Logs and heavy timbers are a little less effective, and wood and vinyl siding offer very little protection.

## Is your home free of fire accumulators?

If you are designing or renovating your home, it's wise to reduce areas that offer protection or hiding places for airborne sparks and embers.

Closed-in eaves and screened soffits are better than those left open or unscreened. Decks and balconies that are not closed in and screened also pose potential hazards.

Fire suppression crews call all these openings "fire accumulators". These areas increase the vulnerability of a structure to wildfire.



**Closed eaves, vents screened with 3-millimetre mesh and accessible (0 pts)**



**Closed eaves, vents not screened with 3-millimetre mesh (1 pt)**



**Open eaves, vents not screened (6 pts)**

PHOTOS: DON MORTIMER

## Are your doors and windows FireSmart?

Tempered glass has good resistance to damage by fire. Double or thermal pane window construction provides moderate protection, but single pane glass provides virtually no protection.



PHOTO: PELLA WINDOWS

**Tempered (0 pts)** - optimum protection is provided by tempered glass.



PHOTO: KELVIN HIRSCH

**Single pane (2 or 4 pts)**



PHOTO: PELLA WINDOWS

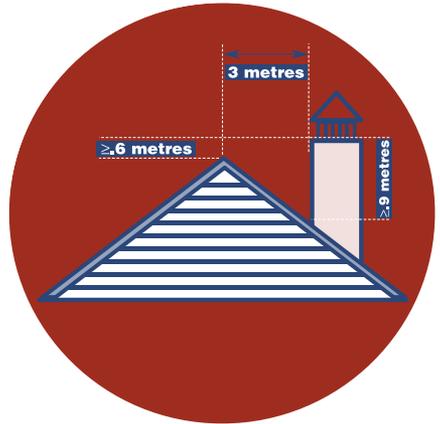
**Double pane (1 or 2 pts)** - moderate protection is provided by double or thermal pane windows.

# Don't Be the Cause of a Wildfire

This set of objectives is aimed at not becoming the source of a fire.

## FireSmart your chimney

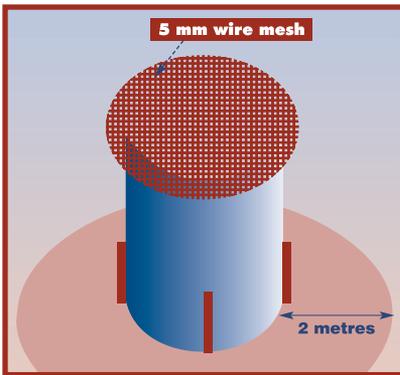
Chimneys should be constructed to meet current Ontario building code requirements and should be screened-in with the appropriate approved spark arrestors.



## Burn barrels and ash pits

For safe disposal of woody debris you should consider chipping and composting or bringing it to a landfill site.

If you must burn, ensure the burn barrel is at least 5 metres from the forest or woodlands, 2 metres from buildings or other combustible sources and that a 2 metre area around the barrel is cleared to mineral soil. Burn barrels should have proper ventilation and screens. and **must never be left unattended!**



## Power lines and propane tanks

Vegetation should be cleared well back from power lines, propane tanks and other fuel supplies.



PHOTO: BRIAN MOTTUS

*Contact utility companies for advice on the clearing of vegetation under overhead electrical installations.*

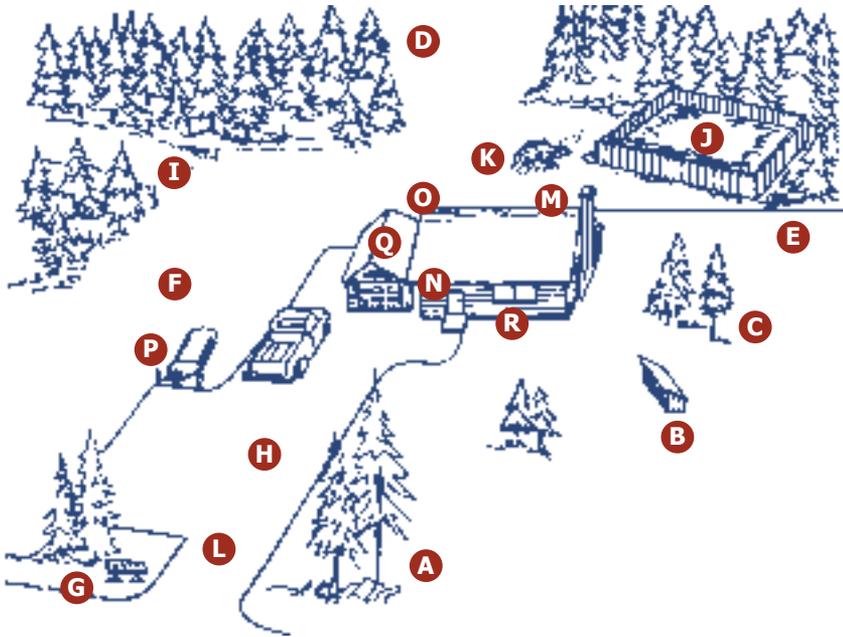
## Emergency facilities

FireSmart building sites have adequate emergency vehicle access, and a readily available water supply such as a pond or dugout nearby.

## Shovels and rakes

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

# A Well Thought Out FireSmart Protection Plan



- A** Prune tree branches to a height of 1 or 2 metres
- B** Store fire wood well away from the house
- C** Remove trees within 10 metres of house
- D** Trees thinned (crowns don't touch) for at least 30 metres from the house
- E** Branches are clear of power lines (if possible bury power service)
- F** Remove brush, mow and water lawn
- G** Your name and lot number clearly visible for quick identification
- H** Driveway is wide enough to accommodate emergency vehicles
- I** Provide additional emergency exit
- J** Pond or cistern with emergency water supply
- K** A FireSmart ash pit or burning barrel
- L** Driveway clear of trees to a distance of at least 3 or 4 metres
- M** Chimney installed to code complete with spark arrestor screens
- N** All soffit vents and gutters should be screened
- O** Porches and balconies screened, crawl spaces enclosed
- P** Position propane tank with valve pointing away from house
- Q** Fire resistant exterior roof and walls
- R** Protective drapes and or shutters on windows to protect interior from radiant heat

## Do Your Own Home and Site Hazard Assessment

Assign yourself the indicated number of points for each assessment area. The fewer points you get, the more prepared your property is to successfully survive a wildfire. If a question does not apply to your home, score 0.



PHOTO: CDF

*Will your home survive a wildfire?*

# Home & Site Hazard Assessment

Important Factors	Characteristics of Material	Point Rating	Your Score
What kind of roofing material do you have?	If you have asphalt, metal, tile, ULC rated shakes	0	
	If you have unrated wooden shakes	30	
How clean is your roof?	No needles, leaves or other combustible materials	0	
	A scattering of needles and leaves	2	
	Clogged gutters and extensive leaf litter	3	
What is the exterior of your home built out of?	Non-combustible material stucco, metal siding, brick	0	
	Logs or heavy timbers	1	
	Wood, vinyl siding or wood shakes	6	
Are your eaves and vents closed up and screened?	Closed eaves and vents with 3 mm wire mesh	0	
	Closed eaves and vents with no mesh	1	
	Open eaves, open vents	6	
Have you screened in your balcony, deck or porch?	All decks, balconies and porches are screened or sheathed in with fire resistant material	0	
	All decks, balconies and porches are screened or sheathed with combustible material	2	
	Decks, balconies and porches are not screened or sheathed in	6	
How fire resistant are your windows and doors?	Tempered glass in all doors/windows	0	
	Double pane glass:		
	• Small/Medium	1	
	• Large	2	
Location of nearby combustibles?	Single pane glass:		
	• Small/Medium	2	
	• Large	4	
Location of nearby combustibles?	More than 10 metres from any building	0	
	Between 3 and 10 metres from any building	3	
	Less than 3 metres from any building	6	
Is your home set back from the edge of a slope?	Building is located on the bottom or lower portion of a hill.	0	
	Building located on the mid to upper portion or crest of a hill	6	

# Home & Site Hazard Assessment

Important Factors	Potential Hazards	Point Rating	Your Score
What type of forest surrounds your home, and how far away is it?	Deciduous trees (poplar, birch) within 10 metres of buildings	0	
	Deciduous trees 10 - 30 metres from buildings	0	
	Mixed wood (poplar, birch, spruce or pine) within 10 metres of buildings	30	
	Mixed wood 10 - 30 metres from buildings	10	
	Conifers (spruce, pine or fir) within 10 metres of buildings	30	
	• separated • continuous	30	
What kind of vegetation grows in the zone around your buildings?	Conifers (spruce, pine or fir) within 10 - 30 metres of buildings	10	
	• separated • continuous	30	
	Well watered lawn or non-combustible landscaping material	0	
	Uncut wild grass or shrubs	30	
Are there abundant underbrush and ladder fuels in the surrounding forest?	• within 10 metres of buildings • within 10 - 30 metres of buildings	5	
	Dead and down woody material within 10 metres of building	30	
	• separated • continuous	30	
	Dead and down woody material within 10 - 30 metres of buildings	5	
None within 10 - 30 metres	Scattered	5	
	• within 10 -30 metres of buildings	5	
	Abundant	10	
	• within 10 - 30 metres of buildings	10	
	The Wildfire Hazard Level for your home is:		Total Score

**Low <21 points   Moderate 21-29 points   High 30-35 points   Extreme >35 points**

## Other FireSmart Considerations

Important Factors	Yes	No
Do you have adequate insurance on your home and property?		
Do you have the necessary fire suppression equipment (shovels, rakes, buckets, hoses, etc.) easily accessible?		
Are your burn barrels screened and at least 10 metres from combustibles and buildings?		
Are overhead powerlines clear of vegetation and at least a tree's height away from nearest forest?		
Are propane tanks clear of vegetation and at least 10 metres from dwellings and other buildings?		
Are emergency fire services within a 10 minute drive from your home?		
Is your chimney safe? Is your chimney clean? Does it have proper clearances and stack heights with proper screens and fire arresters?		
Do you have good emergency access to your property?		
Does your home and other buildings have a clear defensible zone of at least 10 metres on all sides of the structures?		
Do you have an adequate municipal or on site water supply in case of fire?		
Does your family have an emergency fire plan?		

## Emergency Phone Numbers

Find and copy down the emergency numbers for your area and keep them in a visible area close to your telephone.

Fire Department: \_\_\_\_\_

Police: \_\_\_\_\_

To report a wildfire call:

Northwestern Ontario or Northeastern Ontario

### **310- FIRE (3473)**

Central and Southern Ontario – Call 911 or your local municipal fire department

#### **Provide as much detail as you can, such as:**

Location or Address of Fire: \_\_\_\_\_

Nearest Municipality or Town: \_\_\_\_\_

Geographic / Lake Name: \_\_\_\_\_

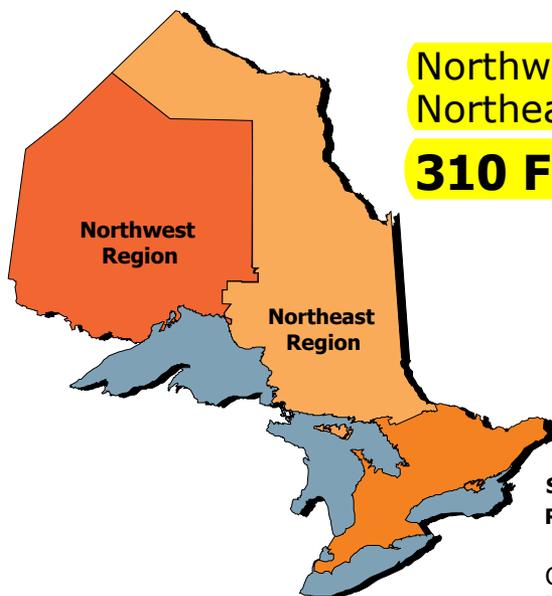
Township: \_\_\_\_\_ Fire Condition: \_\_\_\_\_

Values Threatened: \_\_\_\_\_ Estimated Size of Fire: \_\_\_(Ha.)

Person Making Report: \_\_\_\_\_

Contact: \_\_\_\_\_

**REPORT FOREST FIRES  
SIGNALEZ LES FEUX DE FORÊT**



**Northwestern Ontario  
Northeastern Ontario  
310 FIRE(3473)**

**Southern  
Region**

Call 911 or your  
local municipal fire service

For more information about protecting your home and community from wildfire, contact your local fire department or Ministry of Natural Resources, Fire Management office.  
Or visit us at:  
[ontario.ca/fireprevention](http://ontario.ca/fireprevention)



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