

# The Home Owner's FireSmart Manual

Fourth Edition

Protect your home from wildfire



Report wildfires: 1-800-782-0076

Protecting  
& Managing  
*our Future*

Manitoba 



# Only You Can Prevent Wildfires.

**Report wildfires: 1-800-782-0076**

Manitoba Conservation 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 Manitoba publication.

This brochure is co-funded by the Manitoba Conservation Fire Program and the Office of the Fire Commissioner.

#### **Waiver**

Manitoba Conservation, the Crown and the Manitoba Office of the Fire Commissioner accept no responsibility of liability for any loss or damage that any person may sustain as a result of the information in, or anything done or omitted pursuant to, this pamphlet.

# The Rural Reality

Forest and prairie wildfires are capable of spreading at an astonishing rate. Wildfires that are raging through the tree tops can spread at rates greater than 12 kilometers per hour and wind blown grass fires have been known to travel at speeds exceeding 15 kilometres per hour.

In Manitoba, fifty-two per cent of all wildfires are caused by human activity. Wildfire is also a natural Phenomenon, with forty-eight per cent of all wildfires being caused by lightning strikes. Over the last several centuries, large areas of Manitoba have been burned over repeatedly.

Over the last 10 years, an average, nearly 600 wildfires were started in Manitoba each year consuming over 370,000 hectares of forested land annually. Hundreds of people have been evacuated from their communities and some 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 in the event of a wildfire.

By following the information and ideas in this FireSmart Home Owner's Manual, you can take steps to reduce the risk.



## Get Ready

Properly preparing your home and community doesn't completely guarantee you won't incur fire damage, but it does reduce the risk. Make sure you have adequate insurance on your home and property.

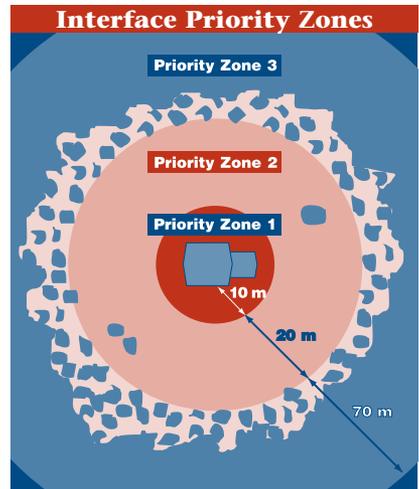
Some of the measures in this manual cost very little and help reduce your vulnerability to wildfire; others require planning and a long-term commitment.

Let's look at three areas where you can apply FireSmart principles to protect or reduce the damage to your property should a wildfire strike.

## Site Preparation

**Any kind of vegetation is combustible.**

Mature trees, shrubs, grass and even your woodpile can easily ignite and increase the chance of wildfire damaging your home and property. Managing the space around your home and buildings is of utmost importance.



**Do you have a cleared zone around your house and buildings?**

The 10 metre space immediately surrounding your home is Priority Zone 1. It's the most critical area to introduce FireSmart principles. A fuel-free space

will give firefighters a chance to save your home from an advancing wildfire. A home without a fuel-free space can make firefighting difficult, if not impossible.



**Lawn or non-combustible material**

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

**What to do?**

Remove flammable trees and shrubs, such as pine, spruce and juniper. Other species such as aspen, poplar and birch have lower flammability rates. Also remove deadfall or woodpiles from this area. Keep your grass mowed and watered.

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

The area extending from 10 to 30 metres away from your home is Priority Zone 2. In this zone, you need to reduce fuels by thinning and pruning trees so that intense wildfires don't have as much fuel to burn.

#### What to do?

Remove any trees and debris that would support the rapid spread of a wildfire. Make sure to thin or space trees so that the crowns (tops) of individual trees are at least 3-6 metres apart.

Remove tree branches up to 2 metres from the ground, thick shrubbery, and deadfall to reduce the chance of a wildfire from climbing up into the forest canopy. Once a wildfire is crowning, it's very difficult to stop.

Because fires spread more easily uphill and downwind it's important to extend Priority Zone 2 further on downhill slopes and on windward exposures.

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

Priority Zone 3 begins 30 metres from your home and extends to a distance of 100 metres and beyond. In this zone the idea is not to remove all combustible fuels from the forest, but to thin the area so fires will be low intensity and more easily extinguished.

#### What to do?

Thin or reduce the shrubs and trees that make up the understory. Try to keep fire resistant trees such as aspen, poplar and birch, while spacing more flammable trees so that their crowns are at least 3-6 metres apart.

#### These are...

simple economical steps anyone can take to create a FireSmart home, community or business site. To ensure years of protection, make sure you maintain your FireSmart Priority Zones.



## Building Construction

The second set of FireSmart guidelines deals with building materials and design standards. While it may not be practical or economical to apply all of them to an existing structure, many FireSmart modifications are easily accomplished. Others can be included in long-term maintenance or renovation plans, and incorporated in new structures as they are designed and constructed.

### Is your roof FireSmart?

The most fire resistant roofing materials are metal, clay tile, and asphalt shingles. Untreated wooden shakes and shingles provide no resistance. They are ideal fuels for an advancing wildfire.

Ensure your roof is free of combustible needles and leaves and there are no overhanging trees or branches that can provide fuel for airborne sparks and embers.



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



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



### 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 resistance to wildfire. Logs and heavy timber are less effective, and wood and vinyl siding offer very little protection.

## Is the exterior of your home vulnerable to firebrand ignition?

If you are designing your home, eliminate areas where firebrands (airborne sparks and embers) could accumulate and ignite siding, windowsills or trim. Exterior siding should be fire resistant and extend from ground level to the roofline.

Eaves and vents are ready-made openings that can allow heat and embers to enter a building and ignite. Ensure eaves are closed in and screen all vents and soffits. Keep areas under decks and porches clear of debris and sheath the undersides with fire resistant material.



**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)**

## Are your doors and windows FireSmart?

Be sure to remove flammable forest fuels within 10 metres of glazed window and door openings. Tempered, thermal, or smaller double-pane windows will provide far greater protection than single pane glass.



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



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



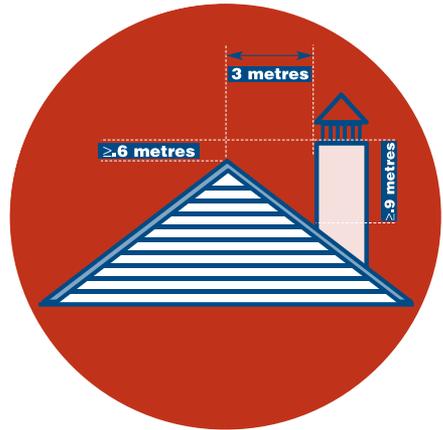
**Double pane (1 or 2 pts)** - moderate protection is provided by double or thermal pane windows.

## Don't Be the Cause of a Wildfire

Wildfires often start as small accidental ignitions. By using FireSmart standards around your property you can help prevent an accidental wildfire from starting.

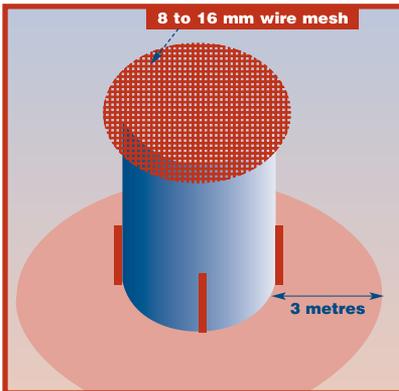
### FireSmart your chimney

Chimneys should be constructed to meet all applicable regulation and code requirements and have approved spark arrestors installed.



### Burn barrels and fire pits

Burn barrels and fire pits should be located away from buildings and other combustible material. Always ensure your burn barrel has proper ventilation and is covered with a screen. Never leave your burning barrel or fire pit unattended while it is in use. For a safer method of disposal bring your debris to a local landfill site.



### Power lines and propane tanks

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



*Contact your utility company to clear away vegetation around overhead electrical installations.*

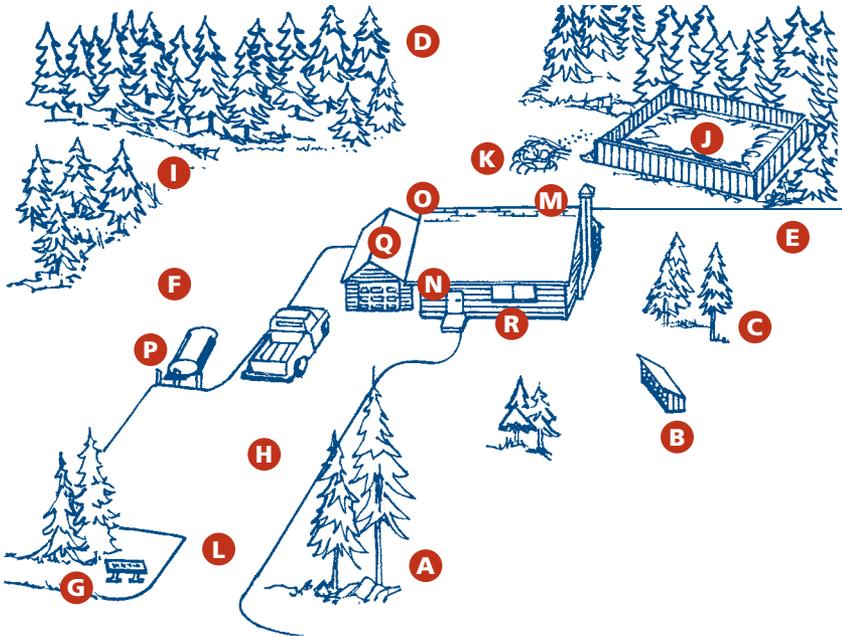
### Emergency facilities

Ensure your property has adequate emergency vehicle access and an on-site emergency water supply, such as a pond, tank, creek or lake.

### On-site fire tools

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

# A Well Thought Out FireSmart Protection Plan



- A** Prune tree branches to a minimum height of 2 metres
- B** Store firewood a minimum of 10 metres from any structures (avoid down slope location)
- C** Remove all combustible trees, long grass, shrubs, logs, branches, twigs and needles within 10 metres of a structure
- D** Thin trees (with 3-6 metres between crowns) for at least 30 metres from any structure
- E** Contact your utility company if trees or branches are not clear of power lines
- F** Keep grass within 10 metres of buildings mowed and watered
- G** Have your address, municipal fire number or lot number clearly visible for quick identification by fire services
- H** Make sure your driveway is wide enough to accommodate emergency vehicles so they have enough space to turn around
- I** Provide an alternate emergency access route to and from your property
- J** Pond or tank with emergency water supply
- K** FireSmart your fire pit or burning barrel
- L** Clear your driveway of trees to a distance of at least 3 metres on either side
- M** Make sure your chimney is to code and has spark arrestor screens installed
- N** Close in your eaves, vents, and soffits
- O** Sheath undersides of balconies, decks and crawlspaces with flame resistant materials
- P** Locate propane tanks at least 10 metres from any building and clear vegetation at least 3 metres around propane tanks
- Q** Use only Class A, B, or C rated fire resistant roofing and fire resistant exterior siding
- R** Solid shutters or metal firescreens will provide increased fire protection for windows and doors

## 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.



# Home & Site Hazard Assessment

| Important Factors  | Characteristics of Material   | Point Rating | Your Score |
|--|---|--------------|------------|
| What kind of roofing material do you have?                         | Metal, clay tile, asphalt shingle, or ULC rated shakes                              | 0            |            |
|  | Unrated wood 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 leaves  | 3            |            |
| What is the exterior of your home built of?                        | Non-combustible material stucco, metal siding or 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 of wire mesh                                       | 0            |            |
|  | Closed eaves and vents with no mesh   | 1            |            |
|  | Open eaves and vents  | 6            |            |
| Have you screened in the underside of your balcony, deck or porch? | Decks, balconies and porches are screened or sheathed with fire resistant materials | 0            |            |
|  | Decks, balconies and porches are screened or sheathed with combustible materials    | 2            |            |
|  | Decks, balconies and porches are not screened or sheathed                           | 6            |            |
| How fire resistant are your windows and doors?                     | Tempered glass in all doors/windows   | 0            |            |
|  | Double pane glass:<br>• Small/Medium<br>• Large                                     | 1<br>2       |            |
|  | Single pane glass:<br>• Small/Medium<br>• Large                                     | 2<br>4       |            |
| Where is your woodpile or other combustibles located?              | More than 10 metres away from any building  | 0            |            |
|  | Less than 10 metres away 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 is located on the mid to upper portion or crest of a hill                  | 6            |            |

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

# 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/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<br>• Separated<br>• Continuous           | 30<br>30           |            |
|  | Conifers (spruce, pine or fir) within 10 - 30 metres of buildings<br>• Separated<br>• Continuous      | 10<br>30           |            |
| What kind of surface vegetation grows in the zones around your buildings?                    | Well watered lawn or non-combustible landscaping material   | 0                  |            |
|  | Uncut wild grass or shrubs<br>• Within 10 metres of buildings<br>• Within 10 - 30 metres of buildings | 30<br>5            |            |
|  | Dead and downed woody material within 10 metres of building<br>• Scattered<br>• Abundant              | 30<br>30           |            |
|  | Dead and downed woody material within 10 - 30 metres of building<br>• Scattered<br>• Abundant         | 5<br>30            |            |
| Are there abundant underbrush and ladder fuels in the surrounding forest?                    | None within 10 - 30 metres  | 0                  |            |
|  | Scattered within 10 - 30 metres of buildings  | 5                  |            |
|  | Abundant within 10 - 30 metres of buildings   | 10                 |            |
| The Wildfire Hazard Level for your home is:  |   | <b>Total Score</b> |            |
| <b>Low &lt;21 points   Moderate 21-29 points   High 30-35 points   Extreme &gt;35 points</b> |   |                    |            |

## 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 power lines clear of vegetation and at least a tree's length away from nearby forest?                                  |     |    |
| Are propane tanks clear of vegetation and at least 10 metres away from your home and other buildings?                               |     |    |
| Are emergency fire services within a 10 minute drive from your home?  |     |    |
| Is your chimney clean? Does it have proper clearances, screens and spark arrestors?   |     |    |
| Do you have adequate access to your property for emergency response vehicles?   |     |    |
| Is the area within 10 metres of your home and other buildings free of flammable trees, other vegetation, and combustible materials? |     |    |
| Do you have an adequate and accessible on-site water supply in case of fire?  |     |    |
| Does your family have an emergency fire and evacuation plan?  |     |    |

### Emergency Phone Numbers

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

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

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

Local RCMP Detachment: \_\_\_\_\_

Local Natural Resource Officer: \_\_\_\_\_

To report a wildfire call **1-800-782-0076**

### Provide as much detail as possible, such as:

Location and/or address of Fire: \_\_\_\_\_

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

Condition of Smoke and/or Fire: \_\_\_\_\_

Size of Fire if known (Ha.): \_\_\_\_\_

Values Threatened: \_\_\_\_\_

Name of Person Making Report: \_\_\_\_\_

Contact Phone Number: \_\_\_\_\_

For more information about protecting your home and community from wildfire, order a copy of "FireSmart, Protecting Your Community from Wildfire". Copies available from Partners in Protection, phone 780-435-7283 or [www.partnersinprotection.ab.ca/downloads/index.shtml](http://www.partnersinprotection.ab.ca/downloads/index.shtml).

## **Manitoba Conservation Regional Fire Centres**

### **NORTHEAST REGION**

Box 28, 59 Elizabeth Drive  
Thompson, MB R8N 1K2  
1-204-677-6624

### **NORTHWEST REGION**

Box 2250  
The Pas, MB R9A 1M4  
1-204-627-8267

### **EASTERN REGION**

Box 4000  
Lac du Bonnet, MB R0E 0C0  
1-204-345-1414

### **Office of the Fire Commissioner**

508-401 York Avenue  
Winnipeg, MB R3C 0P8

Toll Free: 1-800-282-8069  
Phone (in Winnipeg): 204-945-3322  
Fax: 204-948-2089  
Email: [firecomm@gov.mb.ca](mailto:firecomm@gov.mb.ca)

For more information about protecting your home and community from wildfire, contact your local fire department, Manitoba Conservation Office, or Manitoba Office of the Fire Commissioner.

**REPORT WILDFIRES 1-800-782-0076**

