THE HOME OWNERS

FireSmart Manual

B.C. Edition

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?

Towards a FireSmart Community

PARTNERS IN PROTECTION

BRITISH COLUMBIA

The BC Forest Service - Protection Program, would like to thank the following:

- *Partners in Protection* for providing the information used in this brochure,
- *Alberta Sustainable Resource Development - Forest Protection* for allowing use of the Home Owners Manual, Second Edition as a model,
- The BC Office of the Fire Commissioner and Provincial Emergency Program for their support in producing this publication.

Waiver
The British Columbia Ministry of Forests and the Crown 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.

Cover photo: John Tocher, Kelowna, B.C.
Okanagan Mountain Park fire from West Kelowna Estates - Aug. 19, 2003.

The Rural Reality

Wildland forest fires are capable of spreading at an astonishing rate. Crowning forest fires often spread at up to 5.5 kilometres per hour, with spotting as far as 2 kilometres ahead. Wind blown grass fires can spread at speeds up to 8.5 kilometres per hour.

In British Columbia, an average 48% of all wildfires are caused by human activity. Wildfire is also a natural phenomenon. Nearly 52% of British Columbia's wildfires are caused by lightning strikes. Over the last several centuries, large areas of British Columbia have been burned over repeatedly.

Over the last 10 years, on average over 2,500 wildfires were started in British Columbia each year consuming over 25,000 hectares of forested land annually. Thousands of families were recently evacuated from their communities and hundreds of homes destroyed.

If you live in or near a forested region of our province, sooner or later you may have to contend with the spread of a wildfire. The best protection against loss, damage or injury due to wildfire is prevention.

Following the FireSmart Home Owners Manual can help reduce that risk.

PHOTO: BC FOREST SERVICE

Get Ready

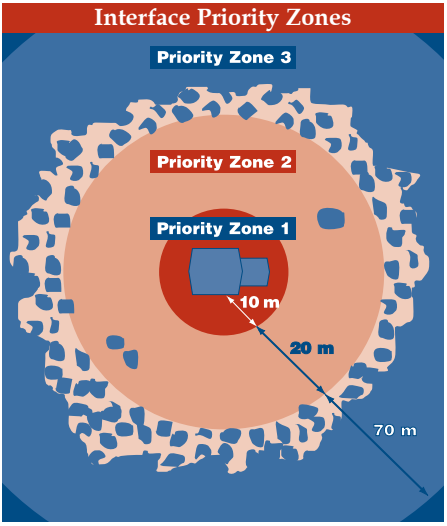
Properly preparing your home and community doesn't guarantee that you will not incur fire damage, but it does reduce the risks. Obtain insurance coverage for all property at risk from fire – government disaster financial assistance is limited and only covers uninsurable perils.

Some of these preventative measures cost very little and reduce fire dangers by a great deal; others require planning and a long-term commitment to change.

Let's look at three areas where you can apply FireSmart standards 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, even your woodpile, are all potential fuels and can easily ignite (increasing the chance of building ignition and loss.) Managing the space around your house and buildings is of prime importance.



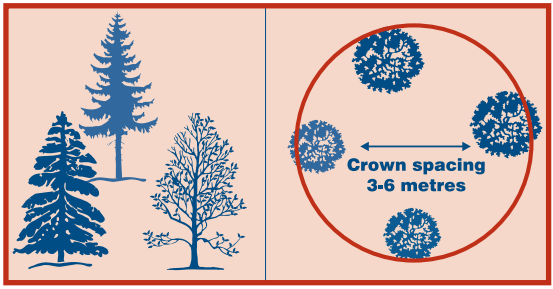
This diagram shows the Priority Zones surrounding an interface building or group of buildings.

Do you have a cleared zone around your house and buildings?
The first 10 metres of space around your home is your "First Priority". It's the most critical area to consider for fire protection. A good fuel free space gives firefighters a chance to save your home from an advancing fire. A home without a good fuel free space around it can make firefighting difficult, if not impossible.

What to do?
Remove any shrubs, trees, deadfall or woodpiles from this area and keep your grass mowed and watered.

How FireSmart is your "Second Priority" zone?
From 10 to 30 metres out from your home is the second priority zone. In this zone, you need to reduce fuels by thinning and pruning so that combustion cannot be supported.

What to do?
Remove trees and debris that can spread fire upwards to become a fast spreading crown fire. Space trees so that the crowns of individual trees are 3 - 6 metres apart.



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

Remove or 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.

Remove deadfall, thick shrubbery and mature trees that might provide the opportunity for a ground fire to climb up into the forest canopy. Once a fire crowns out, it's virtually unstoppable.

Because fires spread more easily 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 more easily extinguished.

PHOTO: RICK ARTHUR

Lawn or non-combustible material
- within 10 metres of building (0 pts).
- within 10 - 30 metres of building (0 pts).

What to do?
Thin or reduce shrubs and trees that make up the under story, retain fire resistant deciduous trees, space trees (3 - 6 metres between crowns) to reduce the potential for a crowning fire.

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.

Building Construction

Our 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 or incorporated in new buildings 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 a roaring wildfire.

PHOTO: KELVIN HIRSCH

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

Ensure that your 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, while wood and vinyl siding offer very little protection.

Is your home vulnerable to firebrand ignitions?
If you are designing your home, try to eliminate areas where 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 (on attics and crawlspaces) are ready-made openings that can allow heat and embers to enter a building and ignite it. Ensure eaves are closed in and screen all vents including soffits. Keep areas under decks and porches clear of debris and sheath in the undersides of balconies and decks with flame resistant materials.

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?
Clear concentrations of fuels within 10 metres of glazed openings. Greater protection is provided by smaller double or thermal pane or tempered glass windows. Single pane glass provides virtually no protection.

PHOTO: KELVIN HIRSCH

Single pane (2 or 4 pts)

PHOTO: PELLA WINDOWS

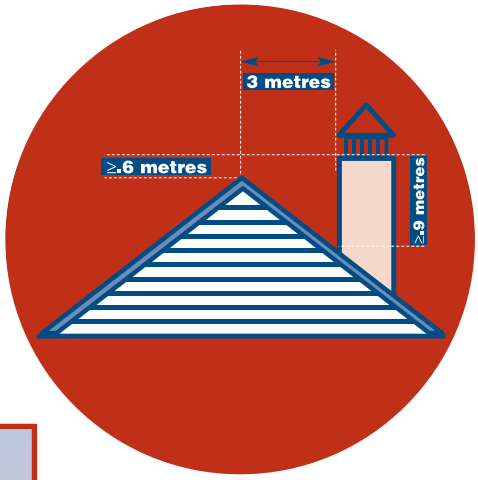
Tempered (0 pts) - *optimum protection is provided by tempered glass.*

PHOTO: PELLA WINDOWS

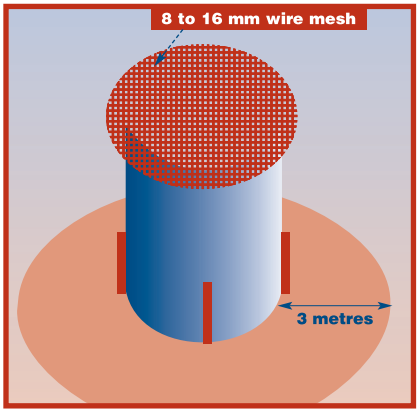
Double pane (1 or 2 pts) - *moderate protection is provided by double or thermal pane windows.*

Don't Be the Cause of a Wildfire

Interface fires often start as small accidental ignitions. FireSmart standards are aimed at helping interface residents to prevent interface fires from starting.



FireSmart your chimney
Chimneys should be constructed to meet current British Columbia building code requirements and should have approved spark arrestors.



Burn barrels
Burn barrels should be located well away from buildings and other combustible items. Burn barrels should have proper ventilation, screens and should never be left burning unattended. For safer disposal, bring your debris to a landfill site.

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

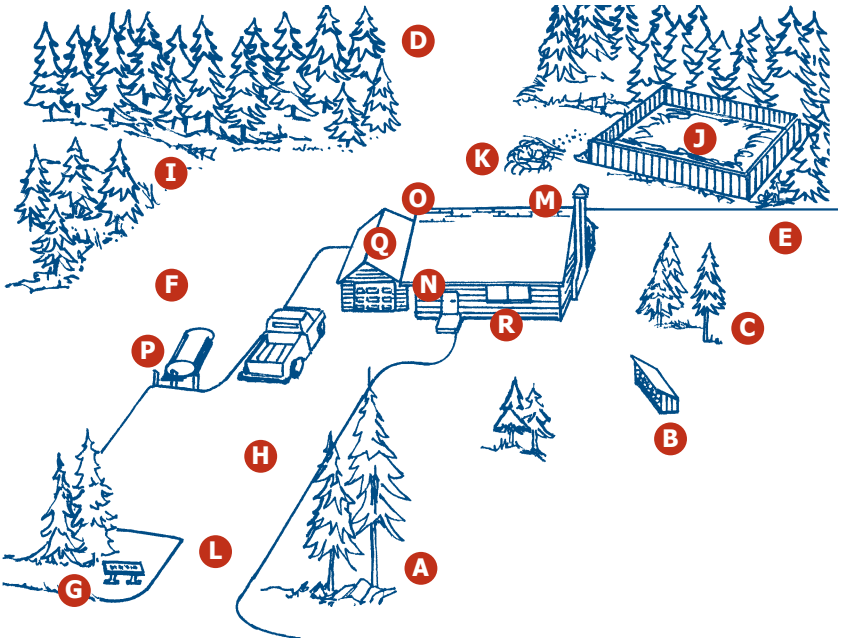
Emergency facilities
FireSmart building sites have adequate emergency vehicle access, with an on-site emergency water supply (pool, pond or tank).

PHOTO: BRIAN MOTTUS

Contact utility companies for clearing of vegetation under overhead electrical installations.

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 2 metres or more
B Store fire wood 10 metres or more from the house (avoid downslope location)
C Remove all trees, long grass, shrubs, logs, branches, twigs and needles within 10 metres of house
D Thin trees (with 3 - 6 metres between crowns) for at least 30 metres from the house
E Contact your utility company if trees or branches are not clear of power lines
F Grass within 10 metres of buildings should be mowed and watered
G Address, fire or lot number clearly signed for quick identification by fire service
H Driveway is wide enough to accommodate emergency vehicles
I Try to provide an alternate emergency access route to your property
J Pond or tank with emergency water supply
K A FireSmart 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 eaves enclosed and screen all vents including soffits
O Undersides of balconies, decks and crawlspaces sheathed in with flame resistant materials
P Propane tanks located at least 10m from building - clear all vegetation within 3 metres
Q Use only fire retardant roofing rated Class A, B or C 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.

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 shingles, metal, clay tile or 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 • Large	 1 2	
	Single pane glass: • Small/Medium • Large	 2 4	
Where is your woodpile located?	More than 10 metres from any building	0	
	Less than 10 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 • separated • continuous	 30 30	
	Conifers (spruce, pine or fir) within 10 - 30 metres of buildings • separated • continuous	 10 30	
What kind of vegetation grows in the zone around your buildings?	Well watered lawn or non-combustible landscaping material	0	
	Uncut wild grass or shrubs • within 10 metres of buildings • within 10 - 30 metres of buildings	 30 5	
	Dead and down woody material within 10 metres of buildings • scattered • abundant	 30 30	
	Dead and down woody material within 10 - 30 metres of buildings • scattered • abundant	 5 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:		**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 access to your property for emergency response vehicles?		
Is the area within 10 metres of your home and other buildings free of trees, flammable vegetation and other combusibles?		
Do you have an adequate municipal or on site water supply in case of fire?		
Does your family have an emergency fire and evacuation 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: _____

British Columbia Forest Service
Local Fire Centre: _____

To report a forest fire call:
1-800-663-5555 or *5555 on your cell phone

Property Identification:

Section _____ Township_____ Range _____ Other _____
Or
Lot _____ Blk _____ Plan_____ Other _____
Or
Street Address _____

For more information about protecting your home and community from wildfire, order a detailed copy of "FireSmart – Protecting Your Community from Wildfire". Copies available from Partners in Protection, phone (780) 435-7283 or **http://www.partnersinprotection.ab.ca/downloads/index.shtml** or from the British Columbia Ministry of Forests, Forest Protection Branch office.

For more information on fire prevention, detection and suppression and burning or travel restrictions, contact our website:
http://www.for.gov.bc.ca/protect/

Wildfire Information Line:
1-888-3FOREST or 1-888-336-7378

For more information on the B.C. Forest Service Protection Program, contact the office nearest you:

B.C. Forest Service, Protection Branch
2957 Jutland Road, 2nd floor
P.O. Box 9502, Stn Prov Govt
Victoria, B.C. V9W 9C1

Coastal Fire Centre
665 Allsbrook Road
Parksville, B.C. V9P 2T3
(250) 951-4222

Northwest Fire Centre
Bag 5000 Airport Road
Smithers, B.C. V0G 2N0
(250) 847-6600

Prince George Fire Centre
1011 4th Avenue
Prince George, B.C. V2L 3H9
(250) 565-6124

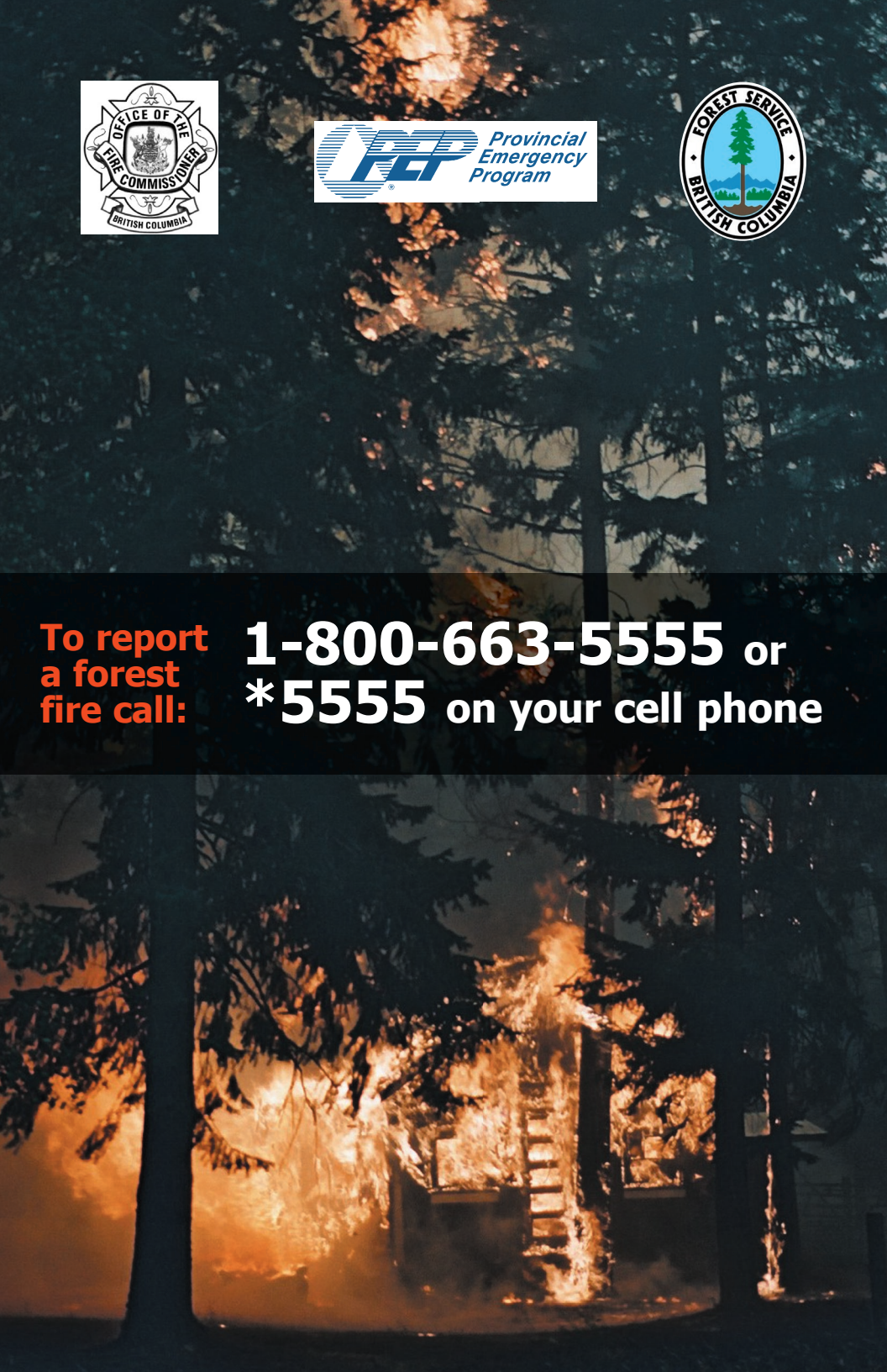
Kamloops Fire Centre
4000 Airport Road
Kamloops, B.C. V2B 7X2
(250) 554-5500

Southeast Fire Centre
208 Hughes Road
Castlegar, B.C. V1N 4M5
(250) 365-4040

Cariboo Fire Centre
3020 Airport Road
Williams Lake, B.C. V2G 5M1
(250) 989-2600

BE FIRE SMART!

Back cover photo: Steve Grimaldi, BC Forest Service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