

# Wildfire-Ready: Practical Guidance to Strengthen the Resilience of Canadian Homes and Communities

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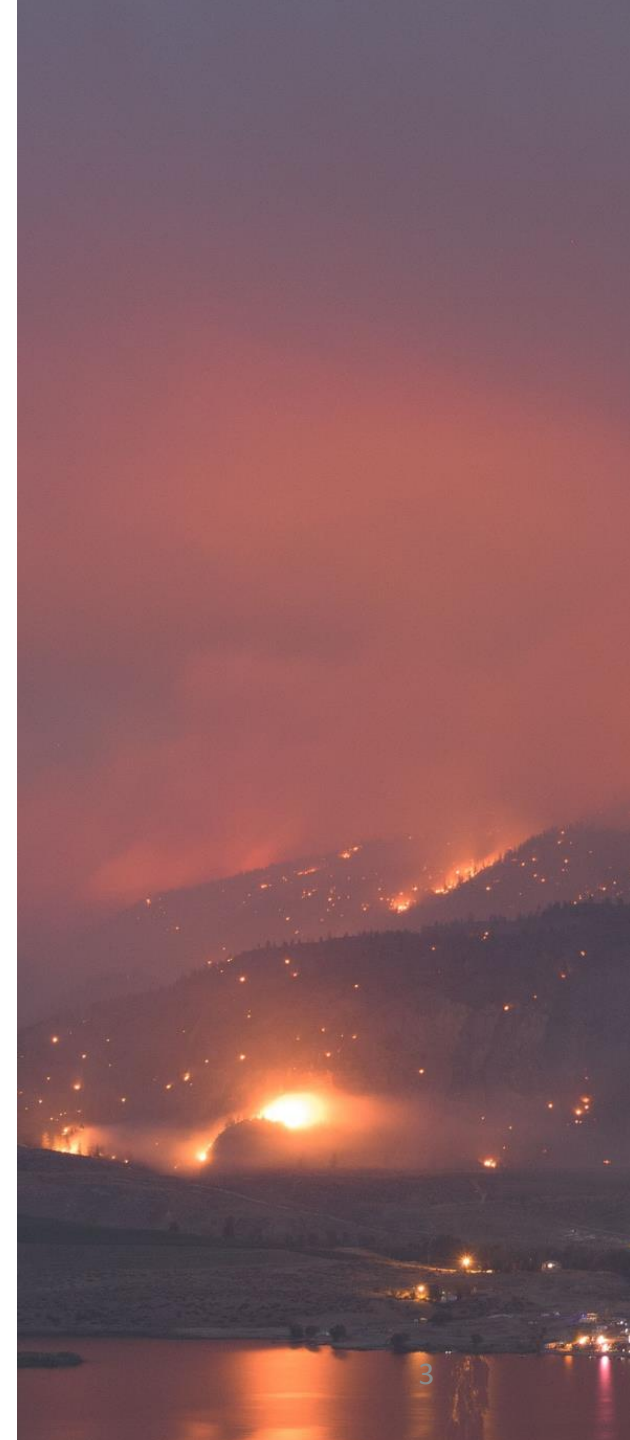


Source: Alan Westhaver, Fort Mac, 2016

# Outline

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1. Introduction to the Intact Centre on Climate Adaptation
2. Climate change is irreversible, severe weather is increasing
3. Financial costs of extreme weather are going up
4. Wildfire-Ready: Practical Guidance to Strengthen Resilience of Canadian Homes and Communities
5. Key takeaways



# About the Intact Centre

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**Applied research  
institute with  
national focus**



**Easy to follow,  
actionable  
guidance**



**Whole-of-society  
approach**



**Address climate  
adaptation**



**Focus on  
knowledge  
mobilization**





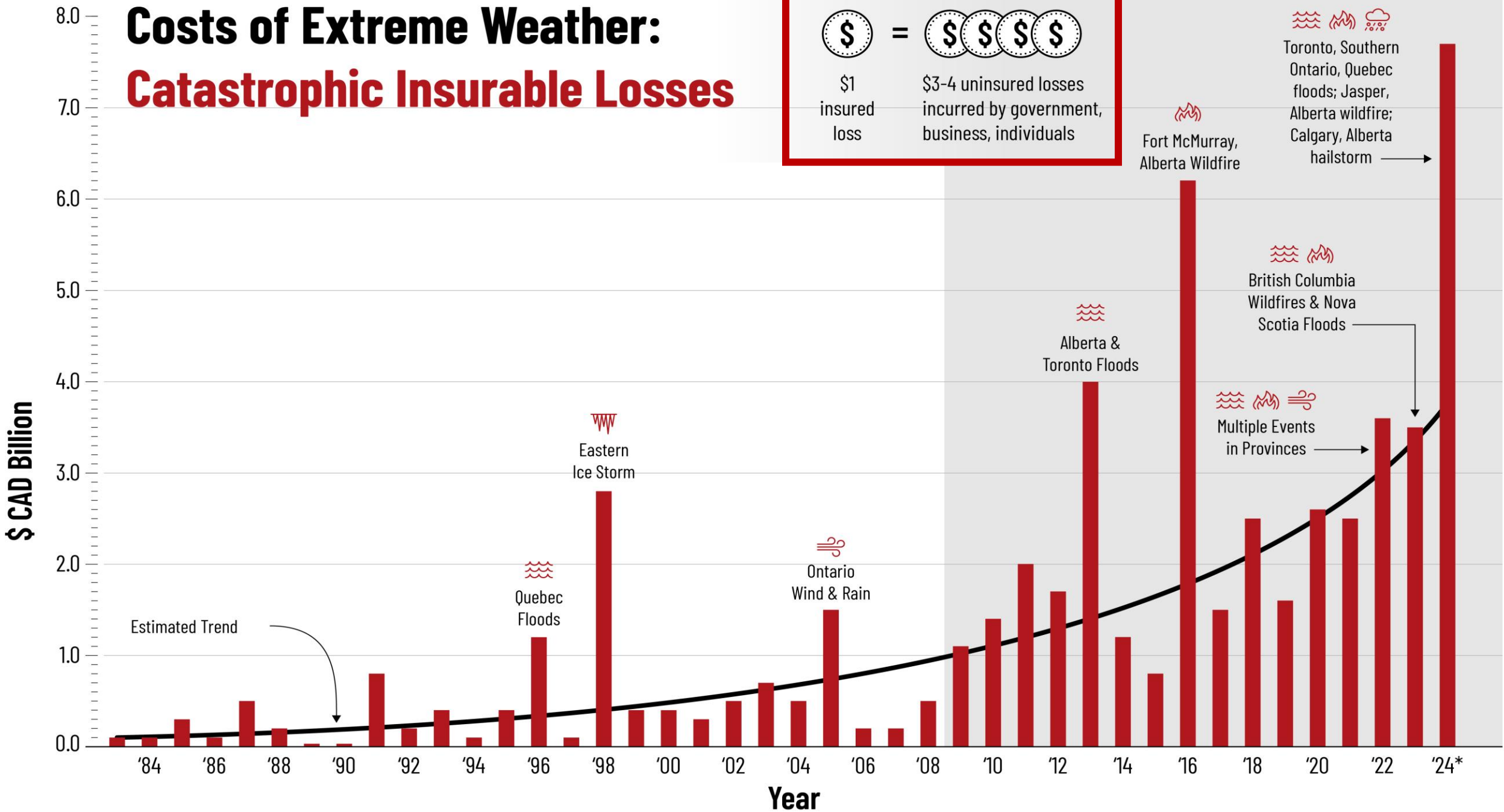
# Climate change is an irreversible threat: severe weather will increase



1. Over the past 60 years, Canada has warmed by nearly 2°C—**twice the global average**—and this trend will continue.
2. Warming is **effectively irreversible**, even if we reduce emissions, we cannot stop it, only reduce it.
3. This has led to an **increase in the frequency, intensity and duration of extreme weather events** and this will continue to the end of this century.

# Costs of Extreme Weather: Catastrophic Insurable Losses

\$1 insured loss = \$3-4 uninsured losses incurred by government, business, individuals



Source: IBC Facts Book, PCS, CatIQ, Swiss Re, Munich Re & Deloitte

\*2024 preliminary values in 2024\$ CAD, corrected for inflation and per capita wealth accumulation.

The New York Times

## *Climate Shocks Are Making Parts of America Uninsurable. It Just Got Worse.*

The largest insurer in California said it would stop offering new coverage. It's part of a broader trend of companies pulling back from dangerous areas.

CBC

## **Some insurers stop covering California homes over costs linked to wildfires. Is Canada next?**

There are concerning trends for Canadian homeowners who need insurance in high-risk disaster areas



**1.5 homes in Canada (~10%) are uninsurable due to flooding**



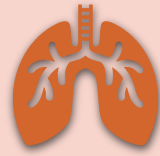
**Insurance premiums have gone up 20-25% over past 6 years**



**Insurance cap coverage is lowering**

# The Social Impacts of Wildfire

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**Physical health:** Wildfires pose serious risks to physical health. In 2023, wildfire smoke affected millions of people, which can lead to respiratory and cardiovascular disease.



**Mental health:** The loss of homes, belongings, and safety often leaves survivors feeling anxious, depressed, and traumatized, with some turning to substances as a coping mechanism.



**Indigenous communities:** Indigenous communities face disproportionate impacts. Although First Nations make up **only 5% of Canada's population**, they account for **42% of wildfire evacuations**.





**That was the bad news,  
now for the good news**



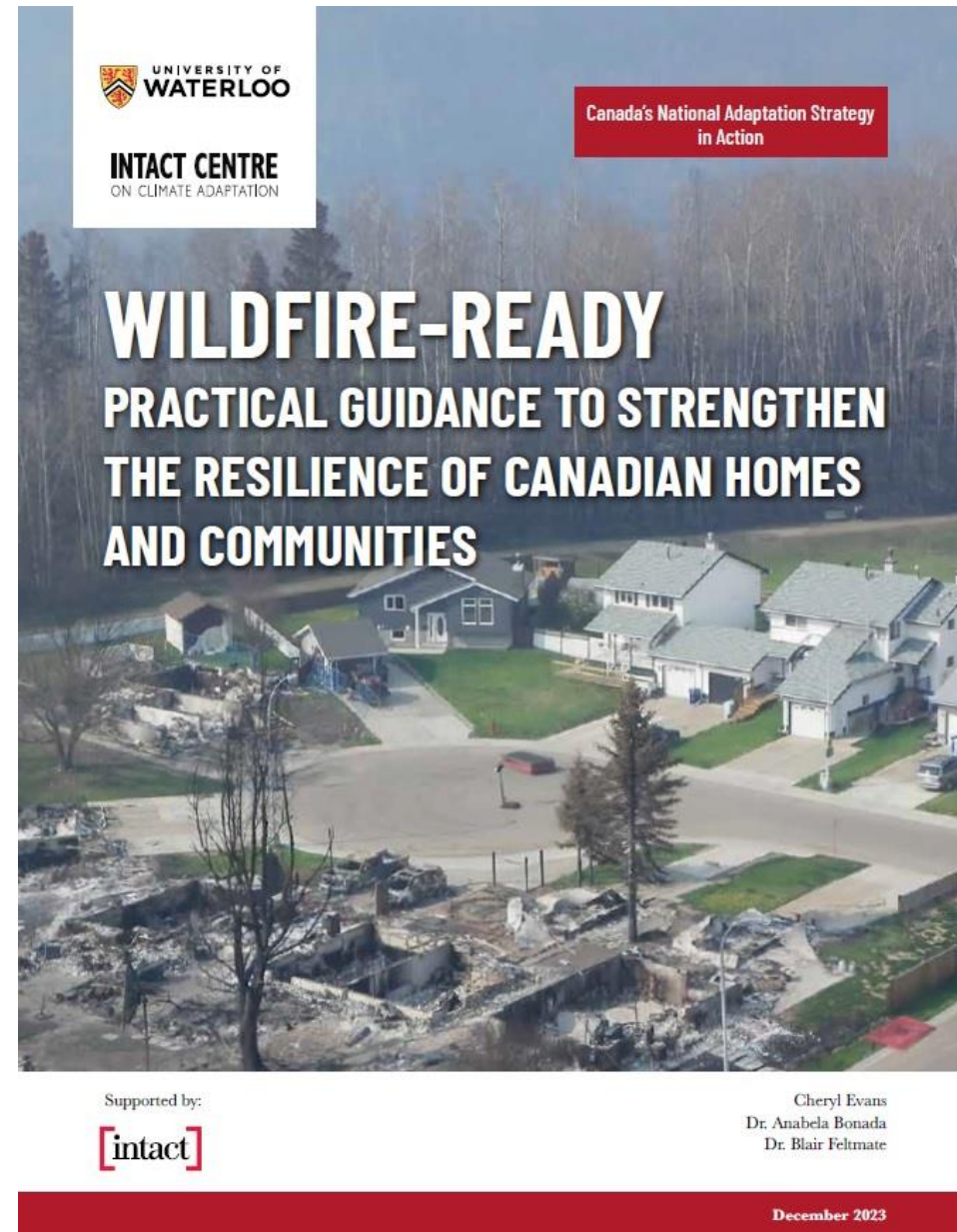
# Wildfire-Ready

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Developed using:

- The National Research Council's Wildland-Urban Interface Guide
- FireSmart Canada best practices

- ✓ **User-friendly and easy to read**
- ✓ **Brief and concise**
- ✓ **Adopts a whole-of-society approach**
- ✓ **Includes a clear call to action**



# THREE STEPS TO A COST-EFFECTIVE FIRESMART™ HOME

## Step 1: Maintain what you've got at least twice per year

Do-it-yourself, \$0 - \$300



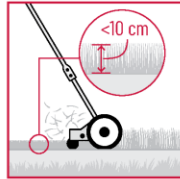
**1** Remove needles, leaves and other debris from gutters, roof surfaces, decks and balconies. Regularly clean vents.



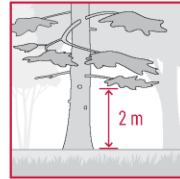
**2** Remove all combustible ground cover (mulch and plants) within 1.5 m of the house perimeter.



**3** Remove combustible materials (firewood and lumber) stored within 10 m of house perimeter and under decks.



**4** Mow the lawn to <10 cm and plant low-growing, well-spaced shrubs and other fire-resistant plants.



**5** Prune trees to create a 2 m clearance from the ground to the lowest tree branches.

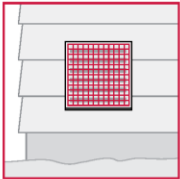


## Step 2: Complete simple upgrades

\$300 - \$3,000



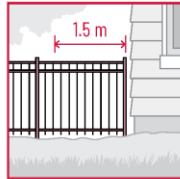
**1** Replace worn or missing weather stripping on all doors including garage doors.



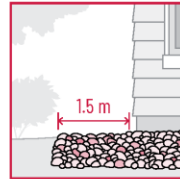
**2** Add a non-combustible 3 mm screen to all external vents, except dryer vents.



**3** Create a 15 cm ground-to-siding non-combustible clearance (e.g., install cement board or metal skirting).



**4** Install non-combustible fencing within 1.5 m of the house (cement fiber, metal, chain link or stone).



**5** Install non-combustible ground surfaces within 1.5 m of the house (mineral soil, rock, concrete or stone).

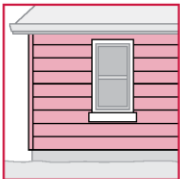


## Step 3: Complete more complex upgrades

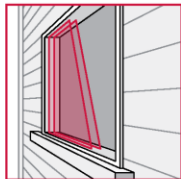
Work with a contractor, \$3,000 - \$30,000



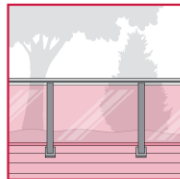
**1** Install Class A fire-resistant roof covering (e.g., cement fibre, metal or asphalt shingles).



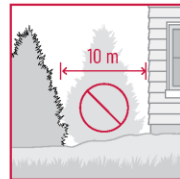
**2** Install non-combustible siding (stucco, metal, stone, cement fibre board).



**3** Install multi-pane or tempered glass windows and exterior fire rated doors.



**4** Retrofit all deck components to be fire-rated, with a continuous surface.

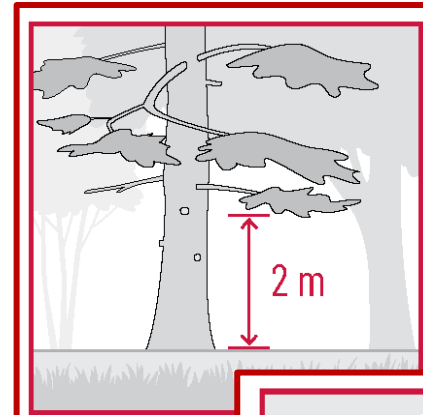


**5** Remove conifer trees that are within 10 m of the house.

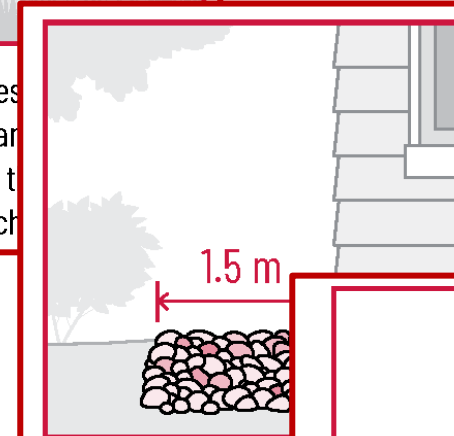


FireSmart, Intelli-You and other associated marks are trademarks of the Canadian Interagency Forest Fire Centre

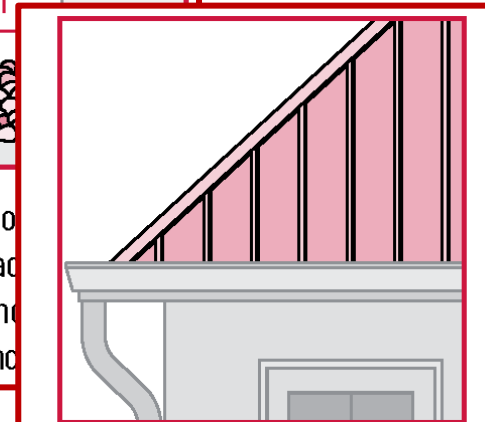
Note: not all actions will be applicable to each home. Completing these steps does not guarantee the prevention of fire.



**5** Prune trees to create a 2 m clearance from the ground to the lowest tree branches.



**5** Install non-combustible ground surfaces within 1.5 m of the house (mineral soil, rock, concrete or stone).



**1** Install Class A fire-resistant roof covering (e.g., cement fibre, metal or asphalt shingles).

# THREE FEATURES OF A WILDFIRE-READY COMMUNITY

Communities can integrate wildfire-ready features into their risk management plans to limit damage and disruption due to wildfire events and strengthen emergency preparedness. By working with Provincial/Territorial wildfire agencies and municipal/structural fire departments, communities can access available tools, training, and resources to help them assess their unique risks, and create customized action plans.

## Feature 1: Wildfire-Ready Structures & Infrastructure

<p>1</p>	<p>2</p>	<p>3</p>	<p>4</p>
<p>Complete regular maintenance of structures, infrastructure, and landscaping within 10 m to limit accumulation of flammable materials (e.g., leaves, brush piles, stored items, fuel tanks).</p>	<p>Install/replace landscaping with fire resistant materials within 10 m of structures and infrastructure.</p>	<p>Build/update structures and infrastructure using fire resistant building materials (e.g., Class A roofing/metal roofs, non-combustible siding, metal, or concrete hydro poles).</p>	<p>Design/update structures and infrastructure to be ignition resistant (e.g., 5 m distance between vegetation and power lines, power supply lines below ground where feasible).</p>

## Feature 2: Wildfire-Ready Community Design

<p>1</p>	<p>2</p>	<p>3</p>	<p>4</p>
<p>Integrate minimum 30 m wide zones (fire breaks) featuring ignition resistant materials (e.g., mowed grasses, ponds, roads) into community design to limit the spread of fire. Increase minimum to 50 m on steep slopes.</p>	<p>Provide greater spatial separation between structures in hazard areas to limit the spread of fire from one structure to another.</p>	<p>Require minimum 10 m setback from the crest of a hill to limit spread of fire to structures.</p>	<p>Restrict development in hazard areas where mitigation measures cannot meet minimum standards for health, safety, and environmental protection.</p>

## Feature 3: Wildfire-Ready Emergency Response

<p>1</p>	<p>2</p>	<p>3</p>	<p>4</p>
<p>Complete annual emergency planning and cross-training exercises that include multiple agencies (e.g., wildland and structural firefighters).</p>	<p>Designate at least one emergency shelter per community.</p>	<p>Ensure minimum water supply for firefighting.</p>	<p>Provide two or more suitably sized access and egress routes to accommodate the movement of emergency vehicles.</p>

Note: The guidance in this document is voluntary. Completion of actions should not conflict with applicable building and fire codes. Wildfire-ready communities can reduce but not eliminate risk.



4

Design/update structures and infrastructure to be ignition resistant (e.g., 5 m distance between vegetation and power lines, power supply lines below ground where feasible).

1

Integrate minimum 30 m wide zones (fire breaks) featuring ignition resistant materials (e.g., mowed grasses, ponds, roads) into community design to limit the spread of fire. Increase minimum to 50 m on steep slopes.

2

Designate at least one emergency shelter per community.



# Key Takeaways



Over the next years, temperatures will continue to increase, leading to **more extreme weather**, which **increases likelihood of wildfire**.



We don't need to convince each other of the need for preparedness, we need to **engage other parties** who can support and collaborate with us.



In the face of challenges as significant as climate change and increased risk of wildfire, **success is best achieved through a whole-of-society approach**.

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**FOR MORE INFORMATION  
VISIT INTACTCENTRE.CA**

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**INTACT CENTRE**  
ON CLIMATE ADAPTATION

