



Institute for Catastrophic
Loss Reduction

Building resilient communities

Institut de Prévention
des Sinistres Catastrophiques

Construction de résilient communities

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FOR IMMEDIATE RELEASE

Institute for Catastrophic Loss Reduction releases 'build back better' guidelines for Fort McMurray

TORONTO: The Institute for Catastrophic Loss Reduction has identified best practices for the design and construction of homes to reduce the risk of loss and damage from several natural hazards, including wildfire. These elements, part of ICLR's 'Insurers Rebuild Better Homes' program, are actively encouraged when insurance companies respond to a total loss, and should be considered with a partial loss event.

The program sets out three essential elements for each hazard (basement flooding, wildfire, extreme wind and hail) that provide the greatest impact on risk reduction, and several additional elements that would further improve resilience if funds are available.

The wildfire elements of the program are recommended in all areas at risk of wildfire, and are particularly important in the wildland-urban interface.

Wildland fire

Priority protection:

- All roofing materials and installation requirements must be A, B or C rated fire resistant. Asphalt, clay tile or metal roofing should be given preference.
- Use fire resistant siding, such as stucco, metal siding, brick or cement shingles. Sheath exterior walls from the ground level to the roofline with minimum ½" sheathing. Exterior walls should be free of gaps or openings that would allow embers to enter building envelope or become trapped behind siding. Heavy timber construction must provide a minimum 20-minute fire rating.
- Ensure that exterior windows, windows within exterior doors and skylights are made of tempered glass, multi-layered glazed panels, glass block, or have fire resistance rating of no less than 20 minutes. Exterior doors shall be solid-core wood no less than 1 3/4" thick, approved non-combustible construction, or have a fire protection rating of no less than 20 minutes.

Enhanced protection:

- Install non-combustible roof gutters, downspouts and connectors, with a cover to prevent accumulation of debris. Use a roof drip edge.
- Screen vents and soffits with a corrosion-resistant, non-combustible wire mesh (mesh opening not to exceed ¼" in size).
- Close in eaves, attics, decks and openings under floors with non-combustible materials or, as a minimum, all openings should be screened with corrosion-resistant, ¼" non-combustible wire

mesh. Cover attic, foundation and vertical wall ventilation openings with ¼” mesh corrosion-resistant metal screen or other non-combustible material.

- Install non-combustible mesh window screening to prevent the collection of firebrands and embers or their entry into open windows.
- Exterior projections (e.g., decks, balconies, car port covers, etc.) should be constructed of non-combustible material, fire-retardant-treated wood, or other ignition-resistant materials, or be a 1-hour fire-rated assembly.
- Non-combustible materials should be used for balcony and deck surfaces. Decks should be either sheathed with non-flammable materials with access to allow for clean out of flammable materials beneath decks, or have a non-combustible surface free of combustible material below the deck and out to 1 m horizontal from the edge of the deck. Stilts should be built from, or encased in non-combustible materials.
- Install a spark arrester on every fireplace and wood stove chimney (minimum 12-gauge welded wire or woven wire mesh, openings not to exceed ½”).
- No attic ventilation openings or ventilation louvers shall be permitted in soffits, in eave overhangs, between rafters at eaves, or in other overhanging areas on exposures facing hazardous vegetation.

ICLR's 'Insurers Rebuild Stronger Homes' is the first program in the world setting out the actions that insurance companies can take to strengthen the disaster preparedness of homeowners by building back better homes after a disaster strikes. The insurance industry provides the majority of funds to support the recovery, rehabilitation, and reconstruction of homes damaged or destroyed in Canada by natural hazards. The recovery and rebuilding process is a critical opportunity to build back better, enhancing the resilience of Canadian homes to future hazards at little or no additional cost.

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Established in 1998 by Canada's property and casualty insurers, ICLR is an independent, not-for-profit research institute based in Toronto and at Western University in London, Canada. ICLR is a centre of excellence for disaster loss prevention research and education. ICLR's research staff is internationally recognized for pioneering work in a number of fields including wind and seismic engineering, atmospheric sciences, water resources engineering and economics. Multi-disciplined research is a foundation for ICLR's work to build communities more resilient to disasters.

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