

Protect your home

With the arrival of winter comes the potential for ruined carpets and water damage to your ceilings and walls caused by ice dams on roofs or bursting pipes. Fortunately, there are steps you can take to help prevent this kind of damage to your home. For structural changes, be sure to consult your local building officials, and hire a registered design professional, such as an architect, engineer or licensed building contractor to do the work.

Inside your home

Frozen water in pipes can cause water pressure buildup between the ice blockage and the closed faucet at the end of the pipe. This causes pipes to burst at their weakest point. Pipes in attics, crawl spaces and outside walls are particularly vulnerable to freezing in extremely cold weather. Entry holes for television aerial leads, cable or telephone lines can allow cold air to reach them. Action to keep water in pipes from freezing includes:

- ❖ Fitting exposed pipes with insulation sleeves or wrapping to slow the heat transfer. The more insulation, the better. Water pipes leading to the outside should be equipped with a hydrant-style faucet extending to the interior of the house. Alternatively, an inside shut-off valve should be fitted and closed in cold weather, with the exterior valve being left fully open.
- ❖ Sealing cracks and holes in outside walls and foundations near water pipes with caulking.
- ❖ Keeping cabinet doors open during cold spells to allow warm air to circulate around pipes (particularly in the kitchen and bathrooms).
- ❖ Keeping a slow trickle of water flowing through faucets connected to pipes that run through an unheated or unprotected space. Or drain the water system, especially if your house will be unoccupied during cold periods.

The home itself

An ice dam is an accumulation of ice at the lower edge of a sloped roof, usually at the gutter. When interior heat melts the snow on the roof, the water runs down and refreezes at the roof's edge, where temperatures are much cooler. Eventually, ice builds up and blocks water from draining off the roof. This, in turn, forces the water under the roof covering and into your attic or down the inside walls of your house. An ice dam can cause serious damage. Taking action now can avoid trouble later.

- ❖ Keep the attic well ventilated. The colder the attic, the less melting and refreezing on the roof.
- ❖ Keep the attic floor well insulated to minimize the amount of heat rising through the attic from within the house.
- ❖ Consider installing electric heating cables on roof surfaces and in downspouts known to collect ice.

This three-step approach decreases the likelihood that ice dams will form or, at least, reduces their size. As an extra precaution against roof leaks (in case ice dams do form), install a water-repellent membrane under your roof covering. Talk with your local building official about minimum code requirements for ice dam protection. Unfortunately, ice dams may be unavoidable if your home has recessed lighting near the roof. Heat generated from these lights melts the snow, which then contributes to ice dam buildup. The only sure way to avoid this problem is to eliminate recessed light fixtures near the roof.

Outside your home

The accumulation of ice and snow on trees can cause considerable damage. You can take action before a storm strikes to reduce the vulnerability of your home.

- ❖ Trees and shrubbery should be kept trimmed.
- ❖ Remove weak branches and trees that could fall on your house or on power lines.

Create a family disaster safety plan. Assemble a disaster safety kit. Together, identify escape routes from your home and neighbourhood. Choose an emergency meeting place for the family. Be prepared!

Protect yourself

Winter storms can be dangerous. Learn the best steps to protect yourself and your family as fully as possible.

If you are indoors

- ❖ Stay there!
- ❖ Listen for radio and television broadcasts of storm warnings.

If you are outdoors

If you have to go outdoors, prepare yourself against the cold and find shelter as soon as possible.

- ❖ Several lightweight layers give more warmth than a single heavy coat. Try thermal underwear, a turtleneck, a medium sweater, and a jacket.
- ❖ Wear a hat to prevent heat loss. Cover your mouth to protect your lungs. Wear mittens or gloves and hiking or snow boots.
- ❖ Always tell someone where you are going, how you are getting there, and when you think you will arrive. This way, someone will know where you might be if you are stranded.

If you are in a vehicle

Travel can be dangerous during a severe storm.

- ❖ If you hear news of a blizzard warning, find shelter as soon as possible.
- ❖ If you are stuck in your car, stay with the vehicle.
- ❖ Provide a signal to rescuers such as a bright cloth tied onto the vehicle.
- ❖ Keep the window open a crack for fresh air.
- ❖ Stay warm by moving your arms and legs, keeping the blood flowing.
- ❖ Start the car engine once every hour, and use the heater for ten minutes.
- ❖ When the engine is running, leave the dome light on.
- ❖ Keep the exhaust pipe clear so fumes can escape.
- ❖ Always tell someone where you are going, how you are getting there, and when you expect to arrive.

Become familiar with your community's emergency management system. Every member of your family should know what to do when a disaster strikes. Learn about disaster safety plans in your workplace and at your children's school and/or childcare centre.

Research, the foundation for action

The Institute for Catastrophic Loss Reduction (ICLR) is a world-class centre for multi-disciplinary disaster prevention research and education. Through research, ICLR is working to strengthen the foundation for effective action to achieve its mission to reduce the loss of life, injuries and property damage due to natural hazards.

Building disaster research capacity

ICLR is an independent, not-for-profit research institute founded by the Canadian insurance industry. It is affiliated with The University of Western Ontario. Institute research networks are building the capacity of the research community. ICLR staff and research associates are internationally known for their expertise in wind and seismic engineering, atmospheric science, risk perception, hydrology, economics, geography, health sciences and public policy.

Many losses are preventable

Worldwide, natural disasters killed more than 650,000 people during the 1990s, and caused more than C\$1 trillion in damage. Disaster damage payments by insurance companies, governments and international aid organizations has been doubling every five to seven years since the 1950s, an alarming international trend. Perhaps the greatest tragedy is that many disaster losses are preventable.

Community and individual safety

Nature's extreme events are remarkable forces. They can be relentless and unforgiving, but they do not need to cause disasters. Hazards deserve respect. They demand that individuals prepare, and that communities invest in resilience. Resilient communities and knowledgeable individuals can best prevent hazards from becoming disasters, but are often not doing so.



building resilient communities

Be prepared.
Disasters can strike at any time.

Visit www.ICLR.org
and learn how to protect your family
and home.

Toronto office

20 Richmond Street East, Suite 210
Toronto, Canada
M5C 2R9
tel: (416) 364-8677
fax: (416) 364-5889
info@iclr.org

London office

1389 Western Road
The University of Western Ontario
London, Canada
N6A 5B9
tel: (519) 661-3234
fax: (519) 661-4273

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Winter Storms



Be prepared!
Protect yourself
and your home

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