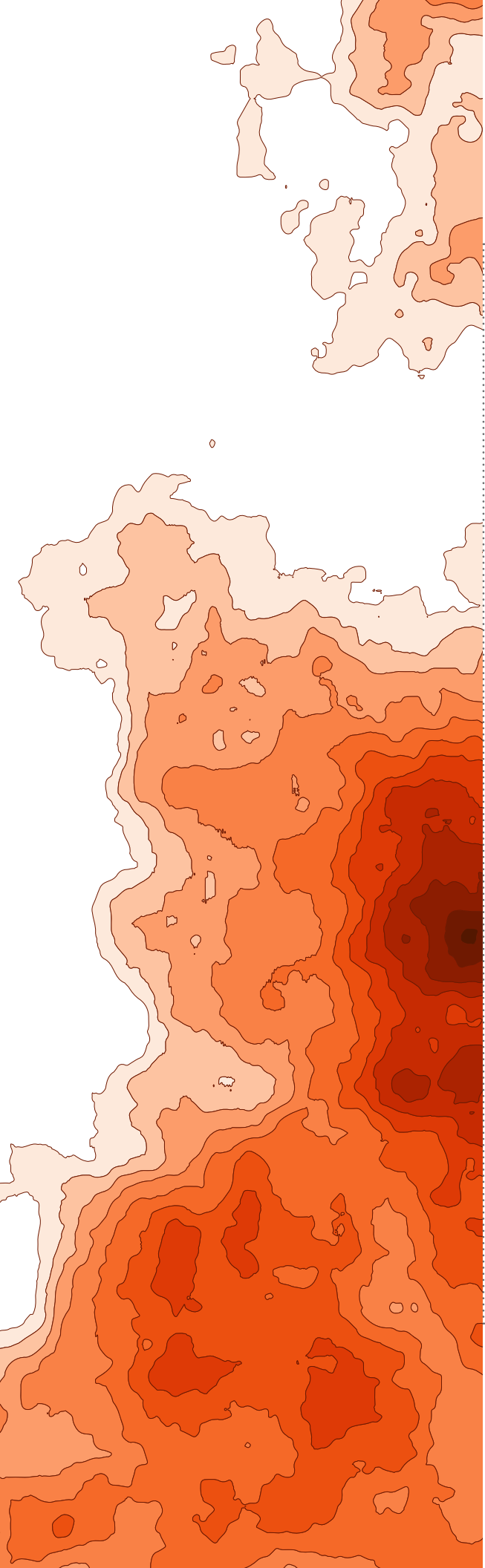


Natural Hazards

Preparing your business for extreme weather events and earthquakes





Natural hazards cause billions of dollars of damage in Canada every year. The cost is expected to increase with the impacts of climate change — and no business or industry is immune.

An increase in natural hazards translates into increasing costs for both insurers and taxpayers. And the 'new normal' for average insured catastrophic losses in Canada [exceeds \\$2 billion annually](#), according to Catastrophe Indices and Quantification (CatIQ) Inc. In comparison, between 1983 and 2008, Canadian insurers [averaged only \\$422 million a year](#) in severe weather-related losses. A report from the Insurance Institute of Canada (IIC) titled [Climate Risks: Implications for the Insurance Industry in Canada](#) says, "Severe weather and climate risks have replaced fire to become the most important peril for property insurance in Canada."

Some of the biggest losses of the past decade include the Calgary hailstorm in June 2020 that cost about [\\$1.3 billion](#), the Fort McMurray wildfire in May 2016 that cost about \$3.6 billion, and the Calgary flood in 2013 that cost [\\$1.7 billion](#).

Floods, droughts, and other major storms could cost Canada's economy [\\$139 billion over the next 30 years](#), according to a climate-based analysis published by GHD, a global engineering and architecture services firm. From ice storms and wildfires to hail, floods, and tornadoes, natural hazards often can't be predicted, but you can prepare for them.

With an increase in natural hazards, there's a need to develop proactive solutions to increase awareness of the risks, build long-term resiliency, and prevent or mitigate losses — including loss of life, as well as damage to property and disruption to businesses. This requires industries, associations, academia, and government to work together, along with homeowners, business owners, builders, developers, and other stakeholders.

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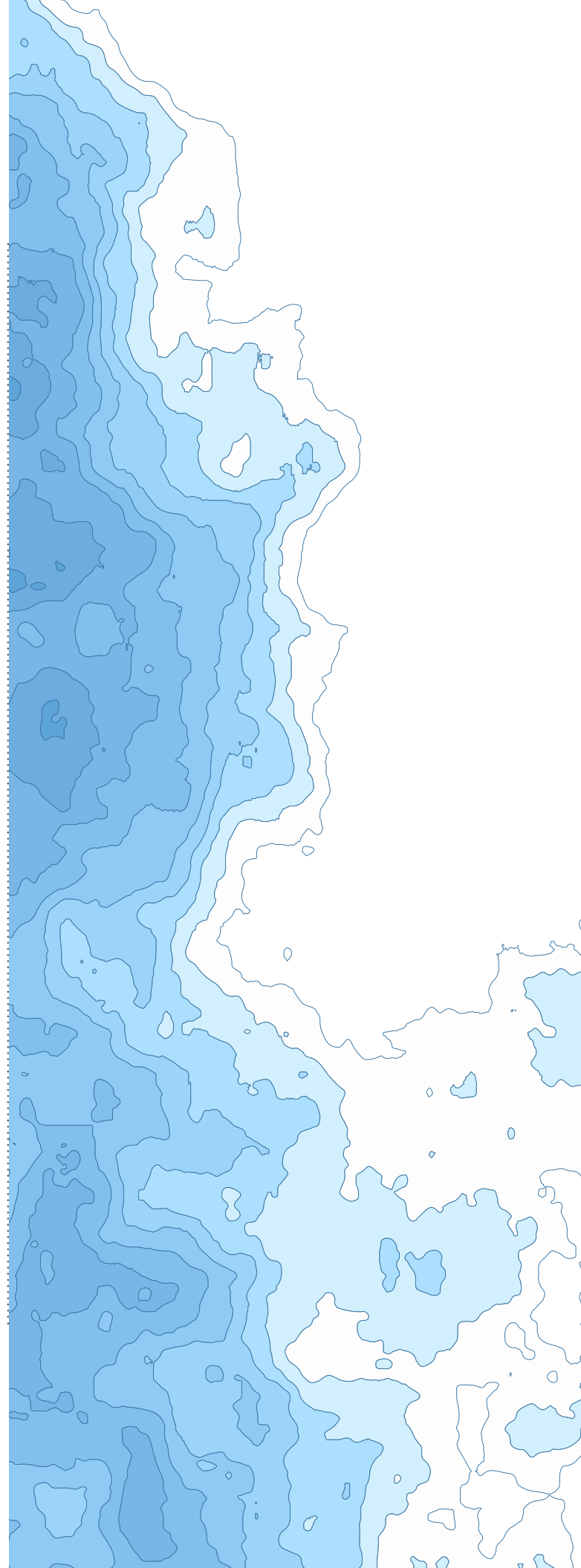
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A photograph of a construction site. In the foreground, there's a large area covered with white plastic sheeting, possibly for insulation or protection. A tall, yellow and red crane stands prominently in the middle ground. To the left, a multi-story building is under construction, with some concrete structures visible. The background shows a hazy, overcast sky and some distant hills or mountains. A circular graphic with a white border is centered over the image, containing the text '01 IMPACTS OF CLIMATE CHANGE'.

01
IMPACTS
OF CLIMATE
CHANGE

Climate change is no longer a future consideration; we're already seeing the impacts of increases in extreme weather and natural hazards in the form of increased damage and destruction. The World Economic Forum's 2022 [Global Risks Report](#) lists climate action failure, extreme weather, and biodiversity loss as its top three global risks over the next 10 years.

In Canada, the climate has warmed in response to global emissions of carbon dioxide from human activity, according to [Canada's Changing Climate Report](#) (CCCR), a national assessment led by Environment and Climate Change Canada in 2022 on [how and why Canada's climate is changing](#). And this warming is "effectively irreversible."

Since 1948, Canada's annual average temperature over land has warmed by 1.7°C, with higher temperature increases observed in the North, the Prairies, and northern British Columbia. In northern Canada, for example, the annual average temperature has increased by 2.3°C. Given the annual average temperature on earth is 13.9°C, these increases are substantial.

CCCR notes that warming in Canada is, on average, about twice the global average. The effects are already evident in many parts of Canada and are projected to intensify in the future, including more extreme heat, shorter snow and ice cover seasons, earlier spring peak streamflow, thinning glaciers, thawing permafrost, and rising sea levels.

"A warmer climate will intensify some weather extremes in the future," says the report. "Extreme hot temperatures will become more frequent and more intense. This will increase the severity of heatwaves and contribute to increased drought and wildfire risks. While inland flooding results from

multiple factors, more intense rainfalls will increase urban flood risks."

"The thing about climate change is that it makes natural hazards more unpredictable," says Glenn McGillivray, Managing Director of [the Institute for Catastrophic Loss Reduction](#) (ICLR), which has a mandate to confront the increase in losses caused by natural hazards and to reduce disaster deaths, injuries, and property damage.

"At the start of each January, we don't know what kind of year we're going to have anymore. We don't know if it's going to be a \$2 billion loss year or a \$5 billion loss year. That's one of the things about climate change: the unpredictability," says McGillivray.

What we do know is that disaster damage has been doubling every five to seven years since the 1960s, according to the ICLR, and many disaster losses are preventable. In Canada, some of the key challenges that businesses will face due to climate change include disrupted construction or logistics, unavailable resources or raw materials, and increased or unpredictable energy costs, according to a brief by [Chartered Professional Accountants](#) (CPA) Canada. This translates into lost productivity and lost revenue.

The following is a closer look at some of the top natural hazards that are being exacerbated by climate change — including wildfires, flooding, severe wind, and snow and ice storms — and offer key tips on how to be prepared for a future of unknown risks.

We also take a look at earthquakes, a hazard not connected with climate change but one that can cause significant damage and impacts to a business that is not prepared.



02
WILDFIRES

Wildfires are a natural occurrence in Canada, thanks to our many forested and grassland regions. Typically, wildfires occur from early spring through fall, and each year about 8,000 wildfires burn across 2.5 million hectares of land in Canada; some are caused by lightning (45 per cent), while human-caused fires represent 55 per cent of all fires, according to [Natural Resources Canada](#).

But the total area burned by wildfires has more than doubled over the past 50 years, and the number and average severity of large fires has increased, according to the [IIC's Climate Risk report](#). An increase in hot, dry, and windy conditions in forested zones could result in an increase of extreme fire weather conditions, the number of fire spread days (days during which fires grow substantially), and the overall length of the fire season.

Over the past decade, we've seen an increasing number of wildfires encroach on communities, from the wildfire that destroyed 90 per cent of Lytton, B.C. in June 2021, to fires that ravaged Slave Lake and Fort McMurray in Alberta, resulting in mass evacuations and displacement.

"We've seen a doubling of area burned by wildfires in Canada since the 1970s. And we're going to see a further doubling, possibly a tripling by 2100," says McGillivray.

How wildfires spread

A building can sustain significant damage from a wildfire even if it's not directly in the line of fire. While radiant heat from a fire that's physically close to a building can cause a building to ignite, most wildfire damage is caused by burning embers carried by winds — sometimes over

one kilometre or even further. This risk is heightened if flammable material is near the property, such as dry plant matter.

"Most people think that a wildfire rolls through the forest, hits a community and keeps going. But what happens is that embers are blown ahead of the fire, and it's the embers that ignite flammable material. So, a town will be subject to an ember storm, which will ignite fuels like wood fences and wood decking, and cause a chain reaction. If you can guard against ember ignition, then you can protect a good deal of property," says McGillivray.

Protect your property

To help protect your property, experts suggest that you monitor your local news, stay up-to-date on weather developments, and check weather alerts frequently. Natural Resources Canada offers the [Canadian Wildland Fire Information System](#) with daily fire weather and fire behaviour maps, as well as hot spot maps, throughout the duration of the forest fire season. Federal, provincial, and territorial governments also provide up-to-date reports on the fire situation across Canada via the [Canadian Interagency Forest Fire Centre](#).


In the event of a wildfire, there are several ways to help protect your property and operations. Do you have fire protection equipment, such as fire extinguishers and smoke alarms, installed on your property? Are employees properly trained on handling and operating equipment and storing and handling of fuel that may cause fires, property damage, or serious injury? Our checklist can help you understand and mitigate risks so you're better prepared in a worst-case scenario.



Fire safety checklist

- ❑ **Create a safety zone**
Follow [National Fire Protection Association \(NFPA\) standards](#) and maintain at minimum a 10-metre separation between buildings (as well as vehicles, fuel tanks, and outside storage areas) and high grass or wooded areas. If trees in this area are primarily coniferous (such as pine and fir), this zone should be expanded to at least 30 metres.
- ❑ **Provide a safe smoking area**
Some wildfires are caused by an easily preventable accident, such as a cigarette butt that wasn't properly extinguished. Establish a safe outdoor smoking area and provide appropriate containers for discarding smoking materials.
- ❑ **Clear debris**
Clear dry or dead brush, trees, grass, and other debris within 15 metres of all buildings, or within 60 metres of buildings on slopes. Trees should be trimmed so branches are a minimum of two metres from the ground.
- ❑ **Store combustibles**
Store combustible and flammable materials in approved containers at an acceptable distance from buildings, fences, and vehicles. Consult your local authorities for specific laws and requirements.
- ❑ **Upgrade your infrastructure**
Easy, cost-effective upgrades include covering roof vents with fire- and corrosion-resistant screens, installing spark arrestors on chimneys and vents, and installing doors and windows with at least a 20-minute fire-resistance rating.
- ❑ **Upgrade your roof and siding**
Consider roof coverings and siding made of fire-resistant materials, such as metal, slate, or fiber-cement (look for a Class A rating). Also consider brick or stucco walls, which typically meet or even exceed one-hour fire ratings, depending on thickness.

The above fire safety guidelines are provided by [FireSmart Canada](#), the [NRCC WUI Fire Guide](#), and [ICLR commercial loss bulletins](#).



"We've seen a doubling of area burned by wildfires in Canada since the 1970s. And we're going to see a further doubling, possibly a tripling by 2100"

Glenn McGillivray

Managing Director of the Institute for Catastrophic Loss Reduction (ICLR)



Canada is surrounded by three oceans and has more lakes than any other country in the world, including four of the Great Lakes, so it's no surprise the country is prone to flooding. Many Canadian rivers have flooded at some point, particularly where there's development on low-lying lands.

But even heavy rainfall can result in flooding, particularly when the ground is already saturated or still frozen. Flash flooding, which occurs when the ground can't absorb the water quickly enough, can be caused by violent storms or torrential downpours. Flash flooding is unanticipated and there's usually little time to prepare.

"If you think you can't be affected by a flood because your home or your business isn't near a body of water, think again. Flooding caused by extreme rainfall can happen absolutely anywhere," says McGillivray.

Incidents of flooding will likely increase as the planet warms. More intense rainfall is expected to increase urban flood risks, and coastal flooding is expected to increase as sea levels rise. Increased frequency and severity of extreme rainfall could occasionally overwhelm aging sewer systems and flood basements, [according to the IIC](#).

"Flooding is Canada's most costly natural disaster: four of the top 10 largest insured natural catastrophes in Canada have been flood events," says Kim Court, Vice-President of Reinsurance and Exposure Analysis with Federated Insurance, who works closely with underwriting teams who investigate potential risks. "Every year, floods cause an average of \$1B of damage to homes, businesses, and infrastructure; with increasing frequency and severity this number is expected to grow."

Common causes of flooding

Flooding can occur at any time of year, caused by heavy rainfall, ice jams, and/or rapid melting of snow packs, as well as issues with plumbing or infrastructure. Oftentimes, several types of flooding occur simultaneously, especially during spring flooding in Canada, [according to the ICLR](#). Some areas and circumstances lend themselves to a higher likelihood of flooding:

- Snowmelt runoff floods are the most common type of flooding in Canada. While this typically occurs in the spring, it can also happen during sudden winter thaws.
- Ice jams, which result from the accumulation of ice fragments that obstruct water flow, are a major cause of flooding. In the Saint John River basin in Atlantic Canada, more than two-thirds of provincial flood damage costs are due to ice-related events.
- Flooding takes place along lake and coastal shorelines when higher water levels inundate low-lying areas.
- Flooding in concrete jungles such as Toronto is becoming more commonplace due to aging or inadequate infrastructure being unable to handle surface runoff.

Monitor your flood risks

Water damage makes up [most of the catastrophic losses in Canada](#), according to the IBC. That's why a flood plan should be part of your business continuity plan. Understanding your risks and being proactive can help to mitigate losses related to water damage and flooding.

Each province and territory responds to floods in co-operation with local authorities, and the majority have information online about the flood situation in their area. There are also [regional flood forecasting centres](#) across Canada that provide flood warnings. It's helpful to designate a person in your organization to be responsible for monitoring reports from reliable sources and providing updates to senior management or the disaster planning team.



"Flooding is
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Vice-President of Reinsurance and Exposure Analysis with Federated Insurance

Flood protection checklist

- ❑ Make sure that employees know what to do in the event of a flood. As part of your flood plan, identify evacuation routes and organize emergency drills for staff.
- ❑ Install backflow prevention check valves in basements or lower levels of properties to stop wastewater from entering the facility.
- ❑ Consider installing sump pump(s) with backup pump and backup power supply in the basement or lower levels of the facility.
- ❑ Seal walls to prevent or reduce seepage and, if necessary, reinforce walls to resist water pressure.
- ❑ Install flood shields to prevent the passage of water through doors, windows, ventilation shafts, or other openings.
- ❑ Ensure backup systems are available for use during emergencies, such as portable pumps to remove flood water, alternate power sources such as generators or diesel/gasoline-powered pumps, and battery-powered emergency lighting, located well above the high water mark.
- ❑ Program elevators so the default resting place is above ground level.
- ❑ Ensure your business is adequately insured for flood damage. Property damage, business interruption, and liability insurance are critical coverages if your business is to bounce back. Keep in mind, surface flooding and sewer flooding are two different perils and require two different insurance coverages.





04
ICE, SNOW,
AND WINTER
STORMS

Canada has one of the most severe winter climates in the world. A big winter storm could knock out electricity, heat, and communications for hours, even days, as evidenced by the devastating 1998 ice storm in central and eastern Canada. Climate change is expected to make these [winter storms more frequent and intense](#).

Environment Canada has [four types of severe winter weather alerts](#), including special weather statements, advisories, watches, and warnings. Understanding your risks, and having a contingency plan in place, can help you weather the (winter) storm. Designate someone in your organization to monitor weather warnings and keep an eye on notices from [Environment Canada](#) for wind chill warnings and cold alert notices.

“Snow load is an issue that people need to be proactive about,” says Christopher Mastro, Director of Risk Services with Federated Insurance. “Many of these catastrophes are linked together. For example, snow load could become a flood issue when it melts.”

As part of your business continuity plan, here are a few points to consider:

- **Prepare for power outages:** Make sure you have emergency power available, such as backup generators, as well as a supply of flashlights and batteries so employees can move safely through the workspace. Use heating sources only in well-ventilated areas to avoid buildup of lethal carbon monoxide gas. Keep a fire extinguisher close by, and install a smoke detector and battery-operated carbon monoxide detector near the area to be heated (which should be tested monthly).

- **Winterize your property:** Perform regular maintenance before, during, and after the winter season. Heavy snowfall can damage roofing or even cause it to collapse, while excess snow and ice can create ice dams that prevent drainage of the roof covering. As a preventative measure, inspect your roof twice a year. During winter, remove snow and ice from the roof when it's more than 20 cm high, as excess weight on the roof can cause it to collapse. To keep track of your snow removal activities, download our [snow removal log](#).
- **Prevent frozen pipes:** Accidental bursting of plumbing pipes is common during extreme cold — and the damage can be costly. Indeed, frozen pipes are a leading source of property damage during severe winter weather, according to the [Insurance Institute for Business & Home Safety](#) (IBHS). To reduce risks, seal all windows, doors, and wall cracks on exterior walls with caulk or insulation, and insulate and seal partition walls, vents, plumbing stacks, and electric and mechanical chases.

Reduce your chances of a burst pipe by using our [water damage checklist](#) as a jumping-off point for your own inspection routine. Your business insurance can help if a winter storm causes damage or destruction, but every business is unique, so make sure your coverage extends far enough to cover your needs.



05
WINDSTORMS,
TORNADOES,
& HURRICANES

Canada experiences all types of extreme wind events, from violent windstorms to tornadoes and hurricanes. Violent winds are often a component of natural hazards, causing power outages and damage to roofs and properties — and turning loose items into dangerous projectiles.

The IIC expects to see an increase in the number of tornadoes over the next 10 years and possibly a larger increase through the rest of the century.

Tornadoes

Canada experiences the [second-highest number of tornadoes](#) in the world, after the U.S., with about 80 tornadoes on average per year, according to

the ICLR. Southern Ontario, southwestern Quebec, and the Prairies, as well as the British Columbia interior and western New Brunswick, are most prone to these events.

In Canada, tornado season typically runs between March and October, with activity peaking in late June or early July. These rotating columns of wind move up to [70 km/h](#), leaving a wide path of destruction in their wake: uprooting trees, flipping cars, and demolishing buildings. Environment Canada is responsible for [warning the public](#) about potential tornadoes, but not all tornadoes come with warning signs — meaning you may need to react quickly.

Hurricanes

A hurricane is a tropical storm with a minimum wind speed of 120 km/h. Hurricanes tend to cause more widespread damage than tornadoes because they're much larger, sometimes stretching 1,000 kilometres, and storm surges can cause widespread coastal flooding. Hurricanes originating in the Atlantic or Pacific oceans often have their classification downgraded to post-tropical storms by the time they hit Canada, but they can still cause significant damage.

For instance, in 2022, Hurricane Fiona hit Atlantic Canada as a post-tropical storm and cost nearly [\\$4 billion in damages](#).

"We've seen some fairly strong hurricanes over the years," says McGillivray. "One of the major concerns about hurricanes is not necessarily the wind, but the storm surge — more people die from storm surges than they do from wind itself."

Be prepared

You can help reduce damage to your property from tornadoes and other wind-related weather events by taking simple precautions, such as performing routine maintenance. For example, inspect and repair loose or damaged building components such as siding, shingles, roofing, and brickwork, and remove trees and branches that could fall on the roof or on power lines.

If you're building, rebuilding, or renovating, consider retrofitting your property and/or replacing your roof. Retrofitting could include bracing and strapping the roof; adding fasteners, ties, and reinforcements; and installing doors that are pressure and impact rated. Choose wind- and hail-rated shingles for your roof (a wind rating is the force of wind required to blow the shingle off the roof). And if you have a gable roof, make sure it's properly braced.

"One of the major concerns about hurricanes is not necessarily the wind, but the storm surge — more people die from storm surges than they do from wind itself."

Glenn McGillivray

Managing Director of the Institute for Catastrophic Loss Reduction (ICLR)



06
HAIL

Property owners have experienced [hundreds of millions of dollars](#) in hail damage over the past 25 years. The Calgary hailstorm of 2020 alone cost at least [\\$1.3 billion in insurance claims](#).

Damage from hailstorms is expected to increase “due to the increased concentration of assets in Canadian cities and suburban housing developments, and the ever-growing costs of replacing damaged and destroyed property,” [according to the ICLR](#).

How hail is formed

Hail can affect any region in Canada — typically from June through September — but it's of particular concern in the Prairie provinces, especially southern Alberta. It's formed inside thunderstorm updrafts, which creates pellets of ice that can range in size from a pea to a golf ball (or even larger).

Once hailstones are the size of a quarter or larger, they can cause significant damage to industrial and commercial assets, public infrastructure, homes, vehicles, crops, trees, vegetation, and livestock. Wind-driven hail can fall at an angle that rips apart siding and breaks windows. Once hailstones punch a hole in a roof or tear through siding, there's also the possibility of water damage.

Hail protection checklist

- ❑ When re-roofing, install a full roof underlayment, preferably a self-adhering waterproofing underlayment (also referred to as an ice-and-water shield).
- ❑ Use roofing products with the Underwriters Laboratories UL 2218 Class 4 impact resistance rating.
- ❑ Use brick cladding or fiber cement board siding in place of aluminum or vinyl.
- ❑ For skylights, windows, and doors, use products made to withstand high debris impact such as those with a 'Miami-Dade' impact-resistance rating. A less expensive alternative is window-safety films, which are readily available at most home renovation stores.
- ❑ Place a specially designed cage around rooftop A/C units on commercial and industrial buildings that are vulnerable to damage from strong winds.
- ❑ Whenever possible, keep vehicles parked under permanent cover, such as a garage or carport.
- ❑ Select impact-resistant solar panels: Select solar panels designed to International Electrotechnical Commission (IEC) standards, per the IEC 61215 code, which includes a provision for impact resistance.



07 EARTHQUAKES

Canada experiences up to [5,000 earthquakes each year](#), though most of them are small and undetectable without special equipment. However, they can strike suddenly, without warning, and occur at any time of year. While all provinces and territories have some degree of earthquake risk, the western and southwestern regions of British Columbia are most at risk, [according to the ICLR](#). Other at-risk areas include the St. Lawrence and Ottawa River valleys, as well as parts of the three northern territories.

Larger earthquakes can cause significant damage in densely populated areas. Over the past 100 years, at least 10 earthquakes in or near Canada have registered a magnitude greater than 7, but even a magnitude 6 earthquake could cause extensive damage to poorly constructed buildings in urban centres.

"You have the earthquake itself, but then you have the potential for gas leaks and fire to follow the earthquake. So that's a big, big issue, particularly in high rises. And if the water supply is cut off, then there's no water to fight the fire," says McGillivray.

Earthquake-resistant construction

When building, rebuilding, or renovating in an earthquake zone, consider construction design and materials that can resist earthquake forces:

- **Windows and glass doors:** If you're replacing your windows, consider tempered glass, which is designed to break into small pieces that are far less likely to injure anyone. Another option is to install a protective film (4 mm minimum thickness) on the inside of the windows.
- **Water heaters:** If a water heater tips over during an earthquake, a broken water pipe could flood the building; there's additional risk of possible explosion and fire damage if the water heater is powered by natural gas. Water tanks should be secured using an approved seismic restraint kit that's strong enough for the size of tank.
- **Cripple walls:** Cripple walls are short wood-frame walls situated between the foundation of the building and the first-floor framing. Strengthen the cripple wall so that it and the foundation behave more like a single unit.
- **Masonry walls:** A building with walls made entirely of brick, stone, clay tile, concrete block, or adobe could be susceptible to earthquake damage. If the walls are reinforced and well anchored to the foundation, floor, and roof, they can usually withstand an earthquake.
- **Building foundations:** Buildings that are not properly attached to the foundation can shift during an earthquake. A building should be connected to the foundation with anchor bolts or other steel connectors (including anchors, steel plates, or straps) that secure the sill plate to the foundation.
- **Roof systems:** Structural damage is less likely if the roof is attached securely to the walls and the walls are fastened to each other, as well as anchored to a strong foundation. Wood or asphalt shingles tend to handle earthquakes well, while tile and slate coverings are susceptible to sliding off. Both plywood and OSB roof sheathing give strength to the roof regardless of the roof style. Roofs fully sheathed with structural-grade plywood or OSB provide the greatest stability to the overall structure.





08
**BUILD
BACK
BETTER**

If you're restoring or rebuilding after having sustained damage from a natural hazard (or planning to build a brand-new facility), it's a good time to think about building back better.

"Architects, builders, and developers need to start thinking about where they're building — whether it's in the middle of a floodplain or in an area that gets snow squalls every winter. Municipalities also need to look at their urban footprint and how they can protect public infrastructure from climate change," says Mastro.

Residents, businesses, and governments should consider what they can do to mitigate these risks, which are happening on a more frequent basis. For example, properties in southern Alberta may want to put vehicles under hard protection to help reduce damage from hailstorms. Properties located on a known floodplain could benefit from flood gates; builders could also consider historical water levels during construction to help mitigate risk.

But another component is building for resilience and rethinking construction. For example, wood is flexible and could help to withstand earthquakes, so it's an ideal building material for construction in Vancouver.

Each province has its own building codes and each municipality has its own bylaws, but they don't necessarily take climate change into consideration — such as installing wildfire sprinkler systems (external

to the property) within a wildfire zone. Yet, bylaws could make a big difference.

"What we use to construct these buildings will make them more resilient to flooding, windstorms, and other weather-related events," says Mastro.

Build Back Better: Roofs

Asphalt shingles are the most common roof covering in Canada, but they're also prone to damage from wind, rain, and hail. Extreme weather — from heat waves to snowstorms — can cause asphalt shingles to curl or blow off, increasing the potential for water damage.

A longer-term solution is to replace roofing with impact-resistant materials, particularly for properties in a moderate to high-risk hail zone. Proper roof cladding is also essential in protecting against water infiltration. On new builds or when re-roofing, consider Class 4 shingles (which can include asphalt shingles) or impact-resistant materials such as rubber or metal.

[Underwriters Laboratory \(UL\)](#), a widely recognized independent organization that provides testing, inspection, and certification services, has testing protocols in place for roofing materials (impact-resistant roofing is [covered under UL 2218](#)). If roofing is rated as Class 4, it's expected to hold up against most hailstorms. However, certain materials — such as ceramic, slate, concrete, and some metals — could still suffer cosmetic damage in a hailstorm.



09

**BUSINESS
CONTINUITY
& DISASTER
PLANNING**

Come In

WE'RE

OPEN

Natural hazards can happen anytime, anywhere, and without warning. Without a plan, your business could be sidelined for a lot longer than anticipated and the costs could be debilitating. Business continuity planning is about preparing your business for the worst, including unforeseen natural hazards.

ICLR offers a [free business continuity toolkit for small business](#), which helps to not only reduce potential disaster losses but also assists businesses in reopening quickly should disaster strike. And [Red Cross](#) offers a free Hazard App, which allows you to set alerts on your mobile phone for various perils, from tornadoes to floods to excessive heat. The app will send an alert if there's an imminent peril, which is especially useful for perils that are time-sensitive and unpredictable, such as tornadoes.

"In Canada we are exposed to just about every natural catastrophe possible: tornadoes, hail, flooding — we even have volcanoes in B.C.," says Court.

"Seven per cent of the world's renewable water and 11 per cent of the world's water in general is in Canada — we are going to flood. We have more trees than most countries, so we will have forest fires," she says. "Climate change and the growth of urban environments are putting larger portions of Canada at risk to catastrophic events."

The more preparatory steps you take, the better. It doesn't guarantee nothing will go wrong, but it can reduce the magnitude of any damages.

Risk management

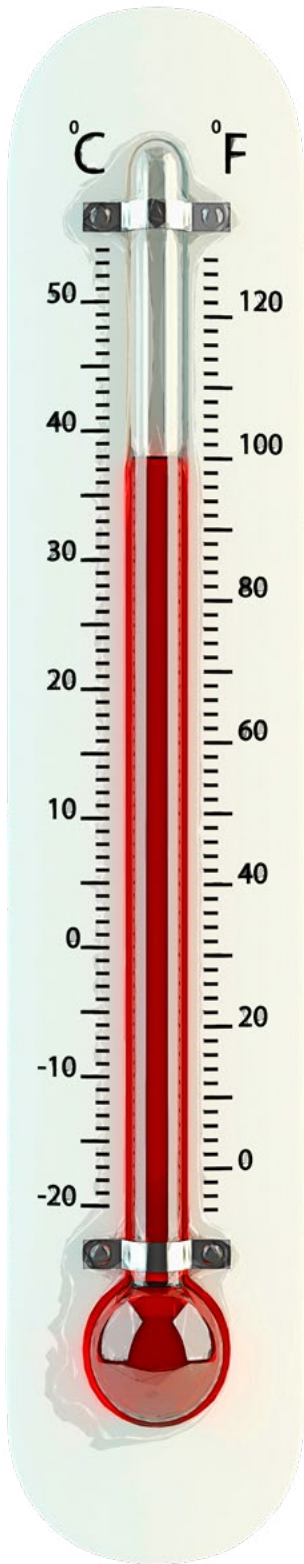
To help mitigate these risks, conduct a business risk analysis. Understand potential vulnerabilities in your geographic location and your industry, and improve infrastructure where possible, such as better roofing or natural drainage to protect against severe storms. This should be part of an overall business continuity plan that includes appropriate insurance coverage.

"Whether it's hail, wind, tornadoes, or flooding, it's a good idea to get alerts," says Mastro. "If a windstorm is approaching and you have a tower crane in the air, how much time would you need to protect that tower crane? Providing alerts gives companies time to protect their property and ensure that the damage is minimal."

A significant part of your risk management strategy should be dedicated to ensuring business continuity and resumption of normal operations as quickly as possible. Having a step-by-step plan greatly increases your ability to resume operations after a severe weather-related event.

This plan should answer some key questions, including:

- If you can't immediately return to your business facility after a natural catastrophe, where could you temporarily set up?
- Is your staff trained on the proper protocols for an emergency situation?
- Do you have data stored in a safe place to retrieve after a natural hazard?
- Do you have a communications statement ready for your customers if you're unable to fulfill commitments?



Insurance

You should also determine how much a natural hazard could cost your business. Insurance is sometimes a low priority, especially for small business owners, due to time, resources, and money. Unfortunately, those without a plan are left unprepared in emergency situations and, if they aren't properly insured, they could be on the hook for the entire amount.

While insurance coverage is a central part of an effective business continuity strategy, it's not a cure-all. "Insurance is not mitigation. You need that one-two punch of having proper insurance but also doing what you can to prevent damage from happening. Insurance can only replace so much," says McGillivray.

If you already have insurance, take the time to know exactly what's covered by your policy — if you see gaps, it may be time to update your insurance coverage. [Business interruption insurance](#) is particularly important, since it's designed to help your operations continue after a crisis.

Next steps

Catastrophic weather events and natural hazards are expected to increase over the coming years. Having a plan in place can save time and money when severe weather strikes. Knowing in advance what your insurance policy covers is a great first step — but pair that knowledge with preparation to weather any storm that comes your way.

Our Risk Services team can help you understand what types of damage are covered under your policy and if there are ways to reduce your deductible. They can even help you with your risk management strategies, including things such as recommending ways to help your property withstand hail.

Learn more by visiting our [website](#) today!



Knowing
your business
matters.

About Federated Insurance

At Federated Insurance, we believe that knowing your business matters because no two are alike. That's why we take the time to get to know yours. Our industry experts can help you better understand your risks and tailor solutions to meet your unique needs, so you can stay focused on what matters most – running your business. It's this personal touch that has set us apart for over 100 years and why we're recommended by more than 80 trade associations and buying groups across Canada. For more information, please visit www.federated.ca or contact our Risk Services Department at 1.844.628.6800.

About the Institute for Catastrophic Loss Reduction

Established in 1997 by Canada's property and casualty insurers, the Institute for Catastrophic Loss Reduction is an independent, not-for-profit research institute based in Toronto and at Western University in London, Canada. The Institute is a founding member of the Global Alliance of Disaster Research Institutes. The Institute's research staff are 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 the Institute's work to build communities more resilient to disasters.

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Institute for Catastrophic
Loss Reduction

Building resilient communities