



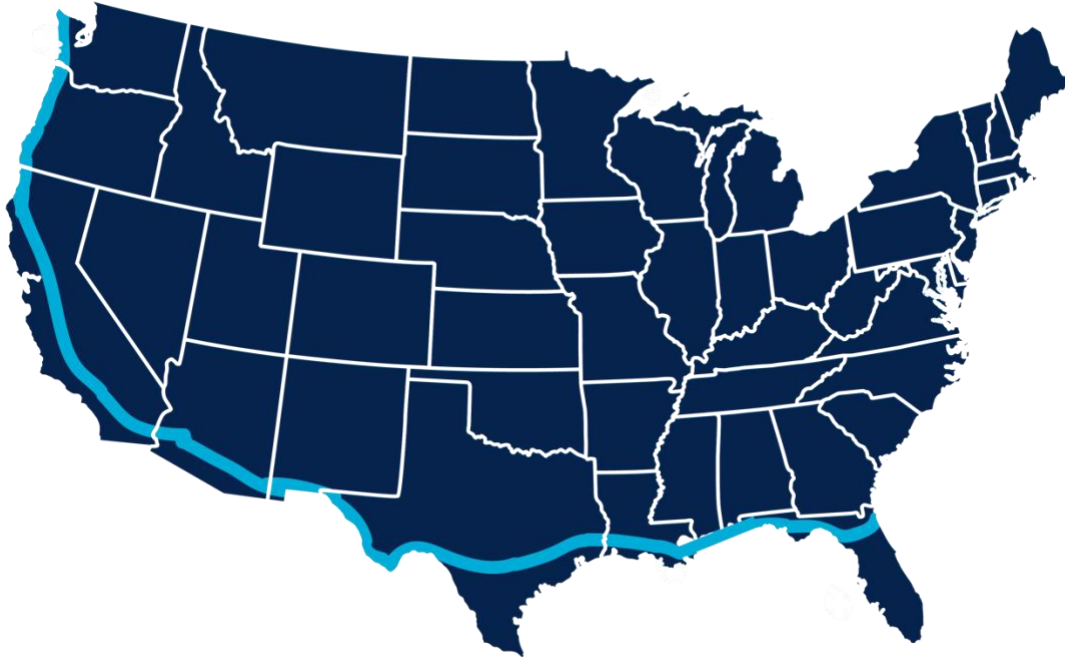
Protect Your Business from Winter Weather



1. Understand Your Exposure

Exposure to freezing temperatures can leave your commercial property at risk. The map on the following page is based on the winter design temperature map in the 2018 International Building Code (IBC). The maintenance recommendations highlighted in this article apply to buildings located north of the 32°F line designated on the map.

Visit [DisasterSafety.org](https://www.disastersafety.org) for additional guidance on protecting your commercial property.



Recommendations in this article apply to businesses located north of the 32°F line.

2. Pipe Burst

Burst pipes are the leading cause of property damage resulting from winter weather. Maintaining proper insulation and a minimum interior temperature is required to prevent bursts.

- a. Adjust the temperature to a minimum of 55°F and monitor to ensure the internal temperature does not go below 40°F. Seal all crack, holes, windows, doors, and other openings on exterior walls with caulk or insulation to prevent cold air from penetrating wall cavities.
- b. Install a monitoring system that provides notifications if the temperature inside the building dips below a pre-determined level.
- c. For small commercial properties, let faucets drip during extreme cold weather to prevent freezing of the water inside the pipes and. If freezing still occurs, this will also relieve pressure buildup in the pipes between the ice blockage and the faucet.

3. Excess Snow and Ice

Excess snow and ice accumulation can put a building's structure at risk of failure. After a snowstorm, a visual assessment should be conducted to see if excess snow removal is necessary. A qualified professional may need to be hired if it is not safe to remove it yourself. To understand how much snow is too much, see IBHS recommendations to [Prevent Roof Damage from Heavy Snow and Ice](#).

Note: Excessive snow accumulations are more prevalent in the following focus areas:

a. Snow Drifts

When snow and wind play a role in winter storms, businesses are likely to see concentrated snow accumulations known as snow drifts. Snow drifts can form around roof protrusions such as mechanical units, elevator and stairwell shafts, parapets, photovoltaic units, chimneys, and adjacent taller buildings.

b. Sliding Snow

Steep-sloped and curved roofs are subjected to sliding snow if snow cleats are not installed. This sliding snow can fall onto a lower roof and overload the structural deck and frame, which can lead to failure.



Snow accumulation, known as snow drifts (shown above), is common during heavy snowfall. Remove the snow if safe to do so. Otherwise, hire a professional.

4. Ice Dams: Drains and Gutters

Water that does not properly drain off a roof has the potential to re-freeze, creating ice dams. Ice dams can add significant additional loads to the roof and could cause interior water damage if left unattended.

- a. Throughout the winter season, periodically remove all debris and other items that may prevent drainage of water from the roof from roof drainage systems.
- b. During the off-season, hire a qualified licensed contractor to verify the drainage capacity is adequate.



If drains are not able to operate properly, ice dams (shown above) can form and cause significant interior water damage.

5. Backup Power

Generators are an integral part of the preparedness planning process for businesses of every size, and they can greatly reduce business disruption when normal power is interrupted. This can be especially crucial when temperatures are below freezing, leaving the building vulnerable to internal temperature drops. Backup power can help maintain a consistent building temperature and reduce the risk of freezing pipes.

- a) Select a generator that fits the needs of your business; see “[Battle Business Disruption with a Generator.](#)”
- b) Portable generators should be operated outside in a well-ventilated area. A garage or docking bay may not provide enough ventilation. Use extreme caution when determining where to operate a generator.
- c) For permanent generators, a proper maintenance plan that includes weekly, monthly, and annual checks should be in place. See the manufacturer’s specifications for more information.

Winter Weather Risk Engineering Bulletin

For more detailed engineering design guidance and maintenance, reference our members-only [Winter Weather Risk Engineering Bulletin](#). This bulletin will provide information on excessive snow loads, structural roof design, heavy rain on snow, ice dams, fire protection systems, backup power and more!



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