

Winter storms can be devastating, causing those affected to lose their business, inventory, property and lives. Winter storms can affect more than those living in Northern climates. In recent history, freezing pipes and snow collapse losses have occurred in many Southern states. It is wise to be as prepared as possible in the event a winter storm threatens your business and your employees. You can take steps to maintain and protect your facilities by knowing the potential risks and planning ahead.

Know the Risks

While the danger from winter weather varies across the country, nearly all Americans, regardless of where they live, are likely to face some type of severe winter weather at some point in their lives.

Winter storms can range from a moderate snow over a few hours to a **blizzard** with blinding, wind-driven snow that lasts for several days. Many winter storms are accompanied by dangerously **low temperatures** and sometimes by *strong winds, icing, sleet and freezing rain*. One of the primary concerns is the winter weather's ability to knock out heat, power and communications services to your home or office, sometimes for days at a time. **Heavy snowfall** and extreme cold can immobilize an entire region.

The National Weather Service refers to winter storms as the “Deceptive Killers” because most deaths are indirectly related to the storm. Instead, people die in traffic accidents on icy roads and of hypothermia from prolonged exposure to cold. It is important to be prepared for winter weather before it strikes.

Freeze-Ups

- During severe cold spells, water in sprinkler system piping, domestic water systems, HVAC or process equipment can freeze and expand causing pipes or fittings to burst. Water damage from this type of incident can be extensive, especially if the water continues to flow for an extended period. Total costs of the damage and business interruption can be substantial.
- In deep freeze conditions, a broken window or open door can let in enough cold air to freeze nearby water pipes and start a catastrophic chain of events.
- Any equipment that contains or uses water, produces condensation or depends on pneumatic controls is vulnerable to freezing.
- Heating systems that lack reserve capacity beyond their normal heating load, or inadequate building insulation and piping that runs through unheated areas of concealed spaces can also wreak havoc.

Many businesses find themselves unprepared when normal winter weather suddenly turns extreme. The following guidelines will help you implement preventive measures to better protect your business from the threat of freeze-ups.

Snow Loading and Roof Collapse

Most businesses plan for snow and severe weather by winterizing vehicles, contracting for snowplowing, etc. However, many businesses neglect to adequately plan for excessive snow loading on roofs. The potential for roof collapse or structural damage increases as the weight of accumulated snow and ice exceeds the snow load capacity of the roof.

Rain falling on accumulated snow is especially dangerous because snow-covered roofs do not drain well and accumulating water and ice can quickly exceed the design limits on the roof.

Even if you are in a warm area of the country, you should not ignore this hazard. In fact, your facilities may be more susceptible to an unusually severe winter storm because they are not designed for extreme weather and personnel are less accustomed to, and less prepared for extreme conditions. In addition, building codes in these areas have lower snow load requirements that can make roofs more susceptible to collapse from unusual snow loading.

Planning, preparation and prompt action to remove accumulated snow can help minimize the potential risk of roof collapse.

Winter Weather Alerts

What is the difference between a Winter Storm Warning, Watch and Advisory issued by the National Weather Service?

- **Winter Storm Warning: Take Action!** A warning is issued when a winter storm is imminent or occurring. If you hear a warning, immediately go home or shelter in place until it is safe to travel again. If you are home, bring in pets and plan to stay inside until you are told it is safe to go out again. Blizzards, extreme cold and wind-chill can quickly become deadly outside.
- **Winter Storm Watch: Be Prepared:** A watch is issued when conditions are favorable for a specific hazardous weather event to occur. NWS issues a Winter Storm Watch when conditions are favorable for dangerous winter weather. It does not mean the weather will occur, but it is possible and you should start making preparations such as checking on isolated family members or friends, bringing in firewood, etc.
- **Winter Weather Advisory:** Winter weather conditions are expected to cause significant inconveniences and may be hazardous. When caution is used, these situations should not be life threatening.