



COLD WEATHER PROPERTY CONSIDERATIONS

Cold weather can have a significant impact on businesses that are not prepared. Heavy precipitation, freezing temperatures and damaging winds can have a negative impact. Cold weather preparedness is important for businesses to continue to operate. The following are a few tips to help ensure that you are prepared.

Roofs

Roofs are a key property consideration in winter. Every year there are numerous reports of roof collapses from excessive ice and snow accumulation. A number of building features contribute to the potential for roof collapse. These include design that allows for snow drifting and inadequate drainage. Snowdrifts on roofs can cause a collapse during and after large snowstorms. While roofs in many regions of the country may be designed to withstand the weight of snow, sometimes a contractor, architect, engineer or even local building codes may not take into account the potential affect snow drifting has on roofs. Depending on the moisture content, one inch of snow depth exerts approximately 1.3 pounds of weight on each square foot of the roof. Roofs should be well designed, inspected and maintained to help minimize snow drifting and load stress.

Proper roof design also should include adequate drainage. Drainage systems should be inspected to ensure clearance and effectiveness. Gutter downspouts should direct drainage away from the building.

Other factors that contribute to the potential for roof collapse include deformities in the roof, bent or cracked metal or wooden supports, broken rivets and pooling of water. It is important to inspect the roof and its supports routinely and address any of these conditions. It also is important to inspect the roof during and after a storm to check for any signs of collapse. Most collapses occur in sections and happen gradually. Consult structural engineers if you have concerns before making repairs. Procedures should be in place for removing snow and ice from roofs, ensuring that appropriate safety precautions are taken. Life safety is critical. Never allow anyone into a building or onto a roof that might be unsafe.

Water Pipes

In severe winter weather, water pipes have the potential to freeze and break. Make sure pipes are not located in exterior walls or unheated spaces. If they are, it is recommended that they be insulated to help minimize the chance of freezing and bursting. During long freezes, experts suggest leaving faucets slightly open to let them drip as it is harder for flowing water to freeze. If water pipes run under cabinets, the cabinet doors can be left ajar so that the room heat may circulate around the pipes. Drain any pipes that are not needed in the winter. If pipes do freeze, experts suggest applying heat by using a hand-held hair dryer or heating coil. (See heat tracing below, under "Boilers and Process Equipment"). Never thaw a pipe with an open flame or torch. If pipes burst, turn off the water valves and immediately call a plumber.

Boilers and Process Equipment

Freeze protection for boilers and process equipment is important for all businesses, including those in the southern regions of the United States where this equipment is often located outside. Freeze damage is most likely to happen in water piping, including wet process, cooling tower, condensate and fire protection water lines. Freezing of water columns, level controllers and flow switches can lead to equipment damage. Experts offer a number of suggestions for providing freeze protection for boilers and process equipment, including protecting wind-exposed and draft-exposed equipment through the use of a windscreen, insulation or appropriate heat. Pipes, valves, filters and instruments also should be insulated. Water flow through process cooling lines and cooling towers should be maintained to prevent freeze-up and possible damage. "Heat tracing" is recommended, preferably under insulation, on pipes and water columns, valves, controllers and other equipment. If the heat tracing is electric, it should be UL listed for that purpose. If steam tracing is used, drips should be returned, where possible, to help maintain condensate inventory. Pipes, valves and pumps not needed in the winter should be drained. Anti-freeze may be used as an alternative to draining if done in accordance with the equipment manufacturers' recommendations.

Fire Prevention Considerations

Fire/life safety protection is always dependent on the readiness of your fire prevention equipment. Severe cold weather can delay the arrival of the local fire department, so it becomes imperative to maintain your fire prevention suppression systems. Fire pump and dry-pipe riser rooms should be checked to make sure heaters are in good operating order. Low temperature alarms can help monitor and ensure that the heaters are operating. Dry-pipe sprinkler system low points and auxiliary drains should be opened and any condensation or water removed. Wet-pipe systems with an anti-freeze solution should be checked to ensure the adequacy of the specific gravity. Prior to the arrival of cold weather, fire hydrants should be flushed, lubricated and checked to ensure proper drainage. Pits and key valve access housings should be dry and also checked for proper drainage. Exit doorways, fire hydrants and access to sprinkler control valves should be kept clear of snow and ice.

To print a winter checklist, log in to our Risk Control Customer Center and search for "winter weather checklist" in our product database.

Please Contact Us

For more information, visit our Web site at travelers.com/riskcontrol or e-mail Ask-Risk-Control@travelers.com.

Disclaimer

The information provided in this document is intended for use as a guideline and is not intended as, nor does it constitute, legal or professional advice. The Travelers Indemnity Company does not warrant that adherence to, or compliance with, any recommendations, best practices, checklists, or guidelines will result in a particular outcome. In no event will The Travelers Indemnity Company or any of its subsidiaries or affiliates be liable in tort or in contract to anyone who has access to or uses this information. The Travelers Indemnity Company does not warrant that the information in this document constitutes a complete and finite list of each and every item or procedure related to the topics or issues referenced herein. Furthermore, federal, state or local laws, regulations, standards or codes may change from time to time and the reader should always refer to the most current requirements.