



Risk Management Services

WINTER WEATHER - PROPERTY PROTECTION

Preventing Freeze Up - Frozen & Burst Water Pipes

Cold weather freeze-ups can cause vital fire protection systems to malfunction. Cold temperatures can cause sprinkler piping to burst resulting in major water damage to buildings, contents, and equipment. Pipes bursting can also impair automatic sprinkler systems and leave a major portion of your facility without fire protection. A fire during this situation may result in a major interruption to your business and a huge loss.

In the interest of preventing water damage claims for your property, designated key personnel should be aware of freeze protection and emergency preparedness procedures. Utilize the [Winter Weather Precautions Checklist](#) to assist with your risk control program.

Best Practices include:

Building temperature should be monitored, documented and maintained @ 55° F or higher

- Perform freeze protection inspections and be cognizant of shutdown procedures
- Have a contingency plan with contractors and suppliers
- Pre-emergency planning for fire, water damage and snow removal should be established
- Boilers, furnaces, heaters and flues should be serviced regularly
- 24 hour building surveillance
- Enforce a no smoking policy
- Safeguard flammable or combustible liquids

Water Supplies

- Tanks should not leak and pressure should be checked
- Water temperature should remain at 42°F or above
- Check fire hydrants for proper drainage by outside contractor or water department
- Buried sprinkler control valves and valve pits should be marked in the event of heavy snowfall
- Fire pump room should not drop below 70°F
- Post indicator valve, OS&Y valve, and test header to pump inspected regularly

Wet Pipe Sprinkler Systems

- All areas of buildings with sprinkler systems should maintain a temperature of 40°F or above
- Cold weather valves should be closed while all others remain open
- Windows, skylights and doors should be in good condition and sealed tightly
- Check temperatures with thermometer

Dry Pipe Systems

- Dry lines should be checked for proper drainage so trapped water doesn't cause breakage
- Check drains located in cold places for freezing
- Dry-valve clapper should be properly set with temperature maintained at 40°F or above
- Low air pressure alarms should be provided, calibrated and connected to constantly attended locations
- Low pressure switches should be set at 5 psi which is above trip point of dry pipe valve
- Air pressure checked regularly with records maintained to indicate normal pressure
- Air drying equipment available to supply air to system as designed

Preventing Heavy Roof Loading & Collapse

Snow and ice build up can wreak havoc by placing additional loads on roofs, and supporting bearing members. Snow and winter storm event severity can be hard to predict depending on the location and geography of your facilities. It is best practice to plan ahead to have a written plan in place when the snow or ice arrives.

Roofs collapse mainly due to weather patterns that produce a cycle of 2 events:

- A rapid freeze
- A rapid thaw

This rapid freeze and thaw cycling produce weighty snow/ice buildup that places excess stress on your roof. Flat roofs are especially prone to excessive accumulation and build up by the lack of natural grading, pitch and lack of runoff.

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Best practices include:

Maintain all roofs and keep current with repairs. Winter weather will only further damage any underlayment and the damaging effects of water infiltration will be costly and may cause business interruptions.

Arrange to have all roofs cleared of snow especially where snow drifts are visible. Hire a competent contractor for this dangerous task.

Request contractor to clear any and all roof drains to allow for runoff and limit ponding especially on flat or relatively shallow pitched roofs. Clear pathways to the eaves in situations where there is a pitched roof without drainage pipes.

Premises And Fire Fighting Efforts

Removal of accumulation of snowfall from your driveways, sidewalks and entryways is essential to maintain safe access to your facility by emergency responders.

Clear all driveways, sidewalks, parking areas, access ways, bulkheads, portals, entryways and exits to allow for emergency to safely access your premises.

Onsite fire fighting workers enhanced if hydrants are accessible and clearly marked with colored marker flags in high snow drifts.

Unoccupied buildings

Vacant, idle or otherwise "unoccupied" buildings or large buildings with unused space (compartments, floors, rooms or basements, etc) present another set of hazards that an organization must consider for best practice winter weather controls.

Inadvertent releases of water, left unchecked or allowed to flow unnoticed, usually results in extensive interior damage.

Best practices for these situations involve:

- Maintain fire protection services including water based fire protection services (sprinklers) - consult your contractor to maintain these systems in service
- Maintain interior heat at 40°F or greater
- Maintain remote (electronic) monitoring of indoor temperatures
- Visit and survey daily to verify conditions of building or space
- Install water alarms to detect of release of water, burst pipe, etc.

Unheated Space

- Close main water valves with potable/domestic water
- Contract a plumbing professional to drain all piping from water heaters, faucets and supply piping
- Notify proper authorities when plans call for fire protection system (sprinkler) impairment

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