

Winter Freeze-Ups

Lines of Business: General Liability, Property, Workers Compensation

Risk Control Strategy/Key Issues: The potential for burst piping is a serious problem when winter temperatures dip well below freezing. When freezing temperatures occur and water systems freeze, then burst and refreeze, the potential for property damage, general liability losses and even a workers' compensation loss are real. Below are steps to take to minimize this potential.

CONSEQUENCES:

There are many consequences of frozen piping. Burst pipes can cause loss of occupancy and tens of thousands of dollars in property damage, potential damage or losses to tenant rental space and their contents, and workers could be injured in slips and falls cleaning up the water, or initially discovering the event.

Loss Analysis

Several large claims were the result of:

- Inadequate sprinkler maintenance
- Poor boiler maintenance
- Poor construction and placement of insulation

Lessons from Losses

What can happen? Some recent examples:

- One school lost an entire wing and two floors of classrooms.
- Teachers lost papers that cannot be duplicated.
- Long-term projects were lost along with data and experiments.
- Thousands of books were destroyed.
- Along with the dollar losses are hidden losses such as lost use of the space, rearranging activities, etc.

CASE STUDY: A large high school lost the use of its gymnasium for many months due to a pipe break in the hallway. Cold weather over the weekend resulted in a sprinkler pipe bursting above the acoustic ceiling tile. Water ran into the adjacent gymnasium leaving the hardwood floor and the sub flooring permanently damaged.

The best approach is to BE PREPARED – AVOID the hazard through reasonable administrative and engineering controls.

RECOMMENDATIONS TO AVOID FREEZING

Monitor - All interior rooms and areas should be a minimum of 40°F. Sensors and alarms are effective for hard to reach areas. Staff the buildings when extreme temperatures are expected. Buildings must be occupied and monitored during extreme cold evenings. This is the most effective preventive measure.

In one case this past winter, a loss occurred due to the release of water and steam into a classroom from a burst “Univent”. Water and steam poured from the unit for over 12 hours. The building was unoccupied. There were no water flow alarms on the steam boiler, nobody was in the building over the weekend and extreme cold weather was forecasted.

When crews arrived there was **4 inches** of water on the floors, flowing down the hallway to the wing below. Condensation was observed on the ceilings, walls, and furnishings.

This was an older school constructed many decades ago with little or no maintenance on the process piping, plumbing, etc. A “Univent” was situated in each classroom.

Fall Inspections - Take a close look at all your piping and insulation. Look for sealing and any light peeking through. Now is the time to take a good hard look before the cold weather arrives.

Maintain - Clean, inspect and test heating systems, ventilation dampers, switches and controls. Qualified maintenance staff and/or a licensed contractor should complete the work.

Fuel Supply - Maintain a week supply of fuel oil.

Generators - Test to be sure the generator will be online when called for.

Unheated Spaces - These are the areas that are vulnerable during the coldest of days. Insulate or provide heat to keep pipes from bursting.

ADDITIONAL STEPS:

Take the following simple steps in extreme cold weather.

Buildings must be occupied and monitored during extreme cold evenings. This is the most effective preventive measure.

Items to check:

- Buildings not equipped with low heat alarms?
- Building inspection schedule. Are buildings being checked during peak cold periods? Is your schedule frequent enough?
- Sprinkler inspections? Is your system overdue for an inspection? What does the service tag indicate?
- Do you have areas within your building that cannot be maintained at a minimum of 40°F? If yes, then consider **introducing an anti-freeze loop** in the system. Consult your sprinkler contractor for anti-freeze solutions

IF FREEZING OCCURS:

CALL a professional - Thawing pipes is not recommended by other than qualified persons or contractors. Severe injuries and fires have resulted from improper work.

Trident Insurance Services provides the above program information in order to reduce the risk of insurance loss and claims. The information provided is not intended to include all potential controls or address any insured specifically. Trident also does not warrant that all loss and/or claims will be avoided if the program information is followed. By providing this information, Trident in no way intends to relieve the insured of its own duties and obligations, nor is Trident undertaking, on behalf of or for the benefit of the insured or others, that the insured's property or operations are safe, healthful, or in compliance with any law, rule or regulation. Insureds remain responsible for their own efforts to reduce risks and should consult their own legal counsel for appropriate guidance.