



## Protecting Your Protective Systems

*Sprinkler systems provide a major life saving resource in your buildings. But without proper care they can also be the source of major property damage.*

Every year, too many fire protection systems are damaged or impaired by freeze-ups. Property managers who experience these freeze-ups are confronted with property damage, business interruption, and irate residents. Your fire system contractor may be able to eliminate some of these problems, but it requires your commitment to truly prevent these events.

90% of sprinkler systems are **wet-pipe systems**, as they are the easiest to install and most economical to maintain. But when pipes freeze, water expands, and the result can be cracked fittings, or distorted valve caps and ruptured glass bulbs in pendant heads that all release water when temperatures rise. According to National Fire Prevention Association (NFPA) Standard 25, "the building owner shall ensure that all areas of the building shall be maintained at a minimum temperature of 40° and not exposed to freezing conditions." NFPA codes consider 40° as the threshold for detecting low temperature and the time to take corrective action. Plans for cold weather include preparations for cold weather, routine actions during freezing temperatures and special precautions during periods of extreme cold. Areas most susceptible to problems are:

- Above ceiling spaces
- Stairwells
- Elevator penthouses
- Fire pump rooms
- Dry pipe valve closets
- Attics

Monitoring temperatures can be achieved through electronic or human means. Using staff can be cost effective during hours when workers are present; it is unoccupied spaces and idle periods that are challenging. Having maintenance routinely check room temperatures in unheated spaces only works with 24 hour coverage. Electronic supervision is available using temperature supervisory devices incorporated with your alarm system; these initiate a signal when temperatures fall below 40°. Before the cold weather arrives you should:

- Conduct annual servicing on heating systems protecting water-filled fire protection.
- Verify insulation is in place. Watch for spaces where insulation has been placed between a suspended ceiling and the sprinkler piping, cutting off from the heat below.
- Make sure windows and doors are tight and sources of air intrusion are detected and plugged.
- Provide thermometers to facilitate human supervision.
- When the cold hits, frequently visit normally unattended building spaces, especially when relying on means of heat such as space heaters.

### Fire Pump Maintenance

Fire pumps are used in multi-story building to boost water pressure to levels high enough to supply upper floors. Most building owners follow a routine program of assuring the pump is useful, by running it on a weekly basis, and having an annual inspection by a sprinkler contractor. What may not happen in these situations is an examination of the inside of the electrical panel controlling the pump. Left unattended, wear and tear, and the effects of humidity can compromise the system, and in a recent case, actually be

the source of a fire. Your maintenance team should inspect the exterior of the panel on a weekly basis for signs of rust. A licensed electrician should make an inspection at least annually that involves the interior of the panel.

If you have any questions or would like additional information, please contact your risk management consultant, or NJPHA-JIF safety director, Jim Rhoads at 610-937-2694 or by e-mail at [james\\_rhoads@pmagroup.com](mailto:james_rhoads@pmagroup.com).

Sources: NFPA Journal - May/June 2005, Sprinkler Age – December 2011.

***IMPORTANT NOTICE - The information and suggestions presented by PMA Insurance Group in this risk control technical guide are for your consideration in your loss prevention efforts. They are not intended to be complete or definitive in identifying all hazards associated with your business, preventing workplace accidents, or complying with any safety related or other laws or regulations. You are encouraged to alter the information and suggestions to fit the specific hazards of your business and to have your legal counsel review all of your plans and company policies.***

# SALT/SWEEP LOG

Property: \_\_\_\_\_  
(Name of location)

To be completed as needed during/following snow, sleet, or other conditions that may affect walking surfaces

Date d/m/y	Time Started	Time Completed	Weather Conditions	Specific Area of Attention	Type of Work performed (shovel, sweep, salt)	Name of Person or crew completing work	General comments on conditions,

**\*Comments should focus on condition of premises after snow removal, also on complaints, accidents, or unusual circumstances.**

Signature: \_\_\_\_\_

Date signed: \_\_\_\_\_