



# **BUSINESS SOLUTIONS**

Volume & Issue:

## **Dealing with Frozen Piping in Fire Protection Systems**

While freezing is common and often anticipated in colder climates, losses occur more frequently in climates where temperatures are not normally associated with cold weather when unexpected cold fronts impact the area. During periods of very cold weather, the likelihood of automatic sprinkler systems becoming impaired by freezing pipes increases substantially. Additionally, freezing may cause pipes to burst, resulting in water damage. This handout suggests measures that should be taken to restore sprinkler protection if freezing occurs, to limit the loss if a fire occurs before repairs can be completed, and to prevent future freezing of pipes.

The following recommended pre-loss and post loss measures do not address every possible solution. It is intended to guide property owners with approaches to be taken in the event of freezing in a fire protection system, restoring protection systems as quickly as possible, and taking special precautions while the system is out of service to minimize a property loss.

### **Pre – Loss Measures (before a freeze)**

- Repair broken windows, doors, heating equipment, or other items whose condition, failure, or breakdown caused the impairment.
- Provide heat at not less than 40°F in areas that were not previously heated and resulted in the impairment.
- Extend existing heating systems to heat the unheated areas.
- Ensure that the anti-freeze solution has the proper proportions of anti-freeze and water. (See NFPA 13, *Standard for the Installation of Sprinkler Systems*, for recommended solution percentages.)
- Provide heated or adequately insulated enclosures for exposed pipes.
- During the annual servicing of the sprinkler system by your contractor, have them demonstrate the operation of all valves. Have appropriate personnel rehearse closing the valves so they can shut down the system in the event of a burst pipe.
- Designate an employee(s) who will be responsible for regularly checking all fire protection systems for impairments.

### **Post – Loss Measures (after a freeze)**

- Notify the insurance agent of the impairment include: the nature and location of the problem, the estimated time of the impairment, and what precautions are being taken until full service is restored.
- Notify the local fire department.
- Institute a watchperson patrol, or increase existing watchperson service.
- Do not use torches or other open flame equipment to thaw pipes
- Take precautions against water damage if water is present
- Thaw sprinkler piping, if not severely frozen, by pouring hot water over cloths wrapped around the pipe or electric heating cables.
- Avoid the use of temporary heating equipment, such as salamanders and other unvented, portable fuel-burning heaters, since they introduce a fire and health hazard
- Check thoroughly and replace affected materials (pipe, fittings, and sprinkler heads) anytime freezing has occurred.