



Water Pipe Freeze-Up Prevention

As Winter descends upon the State, it is important to spend some time thinking about the importance of protecting municipal properties from freeze-up losses associated with water pipes. Although water losses from frozen pipes are costly, tremendously inconvenient, and often the result of weather extremes, each year we experience a number of losses that could have been prevented with some basic maintenance steps.

While many of the direct costs from pipe freeze-ups are remedied through insurance, the indirect costs to mitigate the damage and reduce the interruption to operations create a much larger total cost of the loss. Most freeze-ups occur when buildings are closed for an extended period of time, particularly over school vacations and extended weekends. While cost-saving measures associated with energy conservation are important, they must be carefully balanced against the total cost of a major water intrusion due to a frozen pipe.

Pipes typically burst when the water inside them freezes and expands. This creates local pressure beyond what normal metal pipes can withstand. When the pipes begin to warm back up, the built-up pressure within them releases at a rate beyond what the pipe can endure.



To prevent freeze-ups:

- Keep thermostats set to 60° or higher. Settings below this may not be suitable, especially with longer runs of pipe.
- Consider adding antifreeze to heating lines. Although some efficiency may be lost in the heating system you will have peace of mind knowing that risk of loss has been significantly reduced. Natural/biodegradable antifreeze solutions are available and will last for a long time.
- Check univents to ensure that outside dampers are fully closed.
- Keep heaters and vents clear. This allows for greater circulation of warm air.
- Set circulator pumps to run continuously.
- Consider installing low temperature sensors/alarms to immediately alert you to potential freezing.
- Check buildings daily. During building closures it is important to assign a competent person to inspect the building each day for potential problems including freeze-ups and vandalism.
- Ensure pipes and walls are adequately insulated. The slightest gaps in insulation can provide a gateway for the introduction of cold air to the area surrounding your pipes.
- Thermographic Inspection – Advancements in technology have led to the introduction of cost-effective and user-friendly thermographic imaging cameras. MIIA provides grant support for the purchase of this equipment which aids in the identification of areas of inadequate insulation, cold spots, and other causes of pipe vulnerability.

MIIA encourages everyone to exercise pre-season planning and inspection protocols to aid in the effort to reduce freeze-up incidents.