



Winterizing Best Practices

The Winter Storm in February 2021 served all of us with a big reminder that Mother Nature can inflict her wrath at any moment. The storm caused power and water failures that lasted for days in some areas of the state, due to an overwhelmed power grid. This caused many of our members to scramble to protect employees and property. When the temperatures began to rise above freezing, a good number of Fund members were tasked with addressing pipe breaks. However, this only caused them to join the millions of Texans who were scrambling to find supplies and address the problems. The magnitude of “Snowmageddon” caught all of us by surprise and taught us all a valuable lesson on preparations for future storms.

The biggest key to weathering storms is having a plan. This all begins with an Emergency Response Plan that details who, what, when, where, and how the mitigation process will be conducted. It is important that this response plan be documented so every employee can access and view the process.

You want to start by assigning team members of the response plan. A single team can either cover all locations or a team can be assigned at each respective location. Logistics, accessibility, and weather conditions at the time of an actual event should be factored into this decision.

The plan will identify the team leader, weather watcher, and remaining team members, along with contact information. Weather watching should begin at least 24 hours before the weather is scheduled to impact the area. Necessary mitigation materials should be listed in the plan and staged at each location at the beginning of winter. Do not wait until the last minute to buy necessary materials. You and everyone else will be at the stores fighting over the remaining items on the shelves. The items necessary for freeze-up prevention are (but not limited to):

- Extra tarpaulins for windbreaks
- Steam hoses for thawing frozen lines
- Portable heaters for keeping repair crews warm or mechanical rooms from freezing
- Antifreeze supplies for cooling systems
- Shovels, wheelbarrows, and snow blowers
- Rock salt for walkways
- Warm clothing and hand protection for maintenance and operating crews
- Portable generators if emergency generators or not located on site
- Temperature gauges for critical areas
 - Process equipment
 - Fire suppression system riser and exposed piping

In addition to acquiring all these items before winter begins, you will also want to insulate your buildings and address openings well before any weather event. Additional insulation will help lock in heat in attic spaces. Using insulating wraps or heat tracks for pipes will help reduce the risk of pipes freezing over and eventually breaking. In addition, running your generator at least monthly on a full load will ensure it functioning properly. An added benefit is the fluids are moved through the generator and parts are maintained.

Maintenance, operations, and the emergency response team will be responsible for doing all they can to maintain temperatures above 39°F (4°C) in key areas. Therefore, actions after a loss of power should be in the emergency plan. The fastest way would be the placement of portable heaters in areas with process equipment or where exposed pipes are present. You will want to remove any combustible materials from the area prior to the placement of the heaters. Additional portable heater safeguards include:

- Ensure at least one fire extinguisher is nearby
- Heaters should be equipped with a tip over sensor that shuts the unit off and prevents fuel from spilling
- Do not move or refuel heaters while they are running
- Maintain adequate ventilation as some emit carbon monoxide or other harmful fumes/gases
- Train staff before the winter on how to monitor for proper operation of heaters and firefighting measures.

You will want to keep your fire suppression system in operation during the freeze event. The same conditions apply as they do for critical areas of operation. You want to maintain temperatures above 39°F (4°C) in the building's sprinkler riser room. Therefore, you will want to place a portable heater in this area, too. "Check both wet- and dry-pipe sprinkler systems regularly to make sure they are ice-free and remain in service to protect your business from a fire. For dry-pipe sprinkler systems, drain low points on the system before the winter period to ensure no water is trapped." ("Is your business ready for a big freeze this winter?" originally published in AIRMIC, January 2019).

According to FM Global, an industry leader in property loss mitigation, "If building heat is lost and all efforts to restore adequate heating or otherwise prevent sprinkler piping from freezing (antifreeze introduced into the system) have failed and freezing of sprinkler piping is deemed imminent, it may be necessary to shut down and drain wet-pipe sprinkler systems in order to prevent sprinkler pipes from breaking. Only do this for brief periods of time and strictly follow FM Global Red Tag Permit System impairment procedures." If this process is executed, you will need to assign personnel to 24-hour fire watch of the facility.

During these winter storms, snow levels may reach critical levels that pose a threat to the stability of a building's roof. This happens due to 1) heavy snowfall levels and 2) windblown snow to lower-level roofs of buildings with differing roof heights. Accumulation on the roof will need to be monitored throughout the storm with a plan in place on how to remove the snow, when necessary.

It is not often that all of Texas encounters a harsh winter storm. When it does, building conditions are put to the test, especially when power is pushed to the breaking point. With a lack of heat in the building due to the power outage, now our waterlines start to freeze over and burst. With a plan in place, we can formulate a plan to reduce the damage and downtime of operations. Please contact your Loss Control contact or Jeremy Wade if you have any questions regarding details of a Frozen Weather Response Plan or any other emergency response plan contents.