



Severe Winter Weather Emergency Response Plan

Texans are good at preparing for tropical storms, hail, tornadoes, floods, and even the occasional ice storm or light snow. But what about the February 2021 deep freeze when temperatures were below freezing for 154 hours straight in some places, record snowfall blanketed huge swathes of Texas and water and power were out for days? Were we ready for this? A lot of people, towns, utilities, and governments weren't. Most people in Texas had never experienced this kind of winter weather in their lifetimes. Most Community Centers hadn't either.



Lakeway, Texas, photo by R. Wigzell

As a consequence of the storm millions of Texans were without power for various periods of time. Water pipes, big and small, froze solid and people got cold. In fact, over 700 died during the storm, many from cold exposure that exacerbated underlying medical conditions. In the aftermath of the storm the State of Texas, ERCOT (the state's power grid operator), utilities and local governments are still struggling with measures to prevent future calamities like the freeze of 2021. Although the Fund can't predict future events

like this, we can make some recommendations that will help mitigate the impacts felt last winter.

The first step in dealing with a winter weather emergency is awareness. Just as we advise about approaching tropical storms each Community Center should keep close tabs on weather forecasts during the winter. Although this storm was possibly a once in a lifetime event, the National Weather Services issued its first winter weather advisory on February 10th, and then subsequent winter weather warnings across the state. Local television and radio stations also added to awareness of the approaching storm but even those warnings left little time to make significant preparations. So, the real key is preparation in advance through an Emergency Response Plan for severe winter weather.

A good emergency response plan for cold weather includes these basic elements:

- A statement of purpose of the plan,
- A pre-event planning guide,
- Mitigation strategies,
- Recovery, and
- Post event review and plan revision.

The purpose of the Freezing Weather Emergency Response Plan is to “outline the actions to be taken before, during, and after” a freezing weather event. These actions should prepare the Center for the onset of freezing weather, provide for damage prevention and life safety during the event, and help the Center get back in business for the benefit of its clients after the event is over. As we saw in February, the lingering effects of damage to businesses, homes, Community Centers, and local governments lasted long after the temperatures warmed.

The two most damaging impacts from the freeze were the loss of electricity and the loss of water caused by frozen pipes, usually as a result of power loss. The Risk Management Fund experienced 80 claims from 21 different members. As of December 2021, amounts paid and remaining reserves totaled \$4.8 million, most of the claims the result of water damage after the weather warmed up enough to thaw out frozen pipes.

Although this is anecdotal in terms of the Fund it does help focus planning efforts for “before, during, and after” the event. The first planning step is to identify parts of the water supply system at risk from extremely low temperatures. Where are the pipes? Are they insulated or open to ambient air like in attics or outside walls? Can the water be shut off or drained? How do you protect automatic sprinkler systems? Only trained staff should respond to a sprinkler system’s waterflow alarm. Part of the planning process is identifying vulnerable piping and where shut off valves are on drawings that will help staff members locate potential leaks. Remember that fire protection sprinkler systems cannot be disabled unless there is an active leak. Another step is to supply heat or insulation where exposure to low temperatures could cause freezing.

Prior to the February 2021 event, one of the largest property damage claims the Fund experienced was caused by low temperatures over a weekend. Although the low

temperatures were forecast, the thermostats were turned way down in the building left vacant over the weekend. As a result, uninsulated waterlines in the attic burst above the IT offices and caused several hundred thousand dollars of damage to computers, servers, and communications equipment. Planning and awareness of the approaching weather might have prevented this loss and disruption of services and income to the Center.

Once you've identified vulnerable areas you should engage in scenario projections. What damage could occur if pipes freeze? How would operations be impacted without water or power? What can we do to prevent damage and disruption? With power, heat in the building is the best preventive measure. Without it the game changes significantly. Portable heaters that operate without electricity may not be safe for interior use. Heaters should be equipped with a tip sensor for automatic shut off if the heater is tipped over. Fire extinguishers should be located nearby. Exhaust gas from the heater may accumulate to dangerous levels in enclosed spaces. Considering these limitations, a large generator capable of powering key systems in a building may be something to consider.

For each scenario, plan the response and gather the supplies and tools needed. The Emergency Response Plan has a list of materials and tools that might be useful. Also, on the list should be additional facilities or organizations that could help you continue operations or recover from the freeze event. Of most concern is the protection of vulnerable people in your care. Many of the fatalities from the February event were the result of loss of power and extreme cold inside people's homes resulting in hypothermia, loss of power for oxygen generators, or dialysis machines. Availability of prescriptions and other medical supplies also becomes a concern when pharmacies and doctors' offices close.

Arranging for equipment rental or leasing before an event can insure that generators, portable heaters, or pumps are available when you need them. Most Centers have arrangements with other Centers or municipal facilities to shelter group home residents temporarily while emergencies resolve.

The first part of this article has been emergency preparedness planning but there have been some other lessons learned from the February freeze. One of them was the necessity for notifying a Center's power provider of the need for continued power supply for the delivery of water and heat to its clients. One water district was cut off from power by the local power company doing rolling blackouts that did not know they were endangering water supplies for thousands of households. Frantic phone calls restored the power, but the incident illustrated the need to inform power companies and develop contacts with them. A "Critical Infrastructure Form" was to have been filed with the power company. There was a notification process several years before the freeze, but it was not widely publicized. Electric utilities have the forms. This process puts your Center locations on their list of critical infrastructure for which they will maintain electrical service except under extraordinary circumstances. This is especially important for any Center location where clients are in residence.

Another lesson from the storm was the extremely difficult working conditions that affected Center employees as they struggled to keep residents and clients safe. Snow, ice, and extreme cold all have a drastic effect on a person's ability to work safely. Cold weather precautions are important when daily high temperatures may not exceed freezing. Layered clothing, gloves, hats, warm footwear, plenty of fluids, and the ability to stay dry and get warm, all contribute to safer working conditions. Simple plastic crampons are also available that can be slipped on over shoes or boots to improve traction on ice and snow. Sand and salt mixtures should be available for parking areas, building entrances, walkways, and outside steps to improve traction and prevent falls. Shovel snow off walkways, steps, and entrance areas then apply the sand and salt mixture.

The winter driving conditions during the storm were also very dangerous. The best advice is not to drive. Winter driving recommendations were discussed in the [Fall Risk Advisor](#).

The Fund's Risk Control Consultants can help you prepare an Emergency Response Plan for severe freezing weather and advise about dealing with winter working and driving conditions.