



Church safety solutions

January 2007

Special points of interest

- Learn how to safely work outdoors during freezing weather
- Can your property survive a winter storm?
- Lessons of loss—learn from others that have been there

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Inside this issue

Cold weather preparation1

Skating on thin ice and floors1

Prepare to work outside3

Special supplement—cold weather checklist4

Lessons of loss5

Next month!
Learn how to protect your Internet Web site from vandalism and identity theft

Cold weather preparation

Winter storm damage can be minimized when property owners follow a few basic steps to prepare their buildings. Trees that overhang roof lines or are planted near buildings should be removed or trimmed to reduce the strain accumulated snow and ice can cause to the strength of the tree.

An additional source of loss is related to ice dams and roof damage caused by weakened structures and gutter systems that become overloaded or incapable of draining due to debris. In this publication, we will discuss a few steps church leaders can take to prepare for cold weather and severe winter storms.

(Continued on page 2)



Lexington, KY, March 18, 2003 – Damage assessment teams from Kentucky’s Division of Emergency Management, and FEMA look at a tree that fell on a home in Lexington. President Bush declared 51 Kentucky counties federal disaster areas -Jason Pack/FEMA News

Skating on thin ice and floors

When snow and ice accumulate on walking surfaces, the potential for slips and falls greatly increases. Church leaders must make a reasonable effort to reduce the potential for injury to congregation members on walking surfaces both inside and outside the church. Churches should plan ahead by developing a snow and ice removal plan that outlines in advance when and how volunteers or contractors begin snow and ice removal when a weather front moves through the area.

Maintaining a snow and ice removal log is an additional best practice that serves to protect the church against accusations of negligence. Volunteers and contractors record when they removed snow and ice from the church parking lot, noting the time of day and what type of materials were applied such as sand, salt or ice melt products. If budgets permit, use the services of professional snow removal companies for larger properties. Volunteers should be

Cold weather preparation *(continued)*



Independence, MO, February 8, 2002 – The ice has melted, but the resulting damage remains. Ice covered the tree that fell through the roof. Photo by Dave Saville/FEMA News

Winterize your building to save heating costs by insulating walls and attics, caulking and weather-stripping doors and windows, and installing storm windows or covering windows with plastic. Clear rain gutters, repair roof leaks and cut away tree branches that could fall on a house or other structure during a storm.

Insulate pipes with insulation or newspaper and plastic and allow faucets to drip a little during cold weather to avoid freezing.

Keep fire extinguishers on hand and train key church staff. Fires pose an additional risk due to lit candles without taking the necessary safety precautions.

Learn how to shut off water valves (in case a pipe bursts).

Reach out to help elderly or disabled congregation members by developing a list of scheduled visits to their homes and attending to their specific needs. Congregation members with special needs may require assistance winterizing their homes.

Hire a contractor to check the structural ability of the roof to sustain unusually heavy weight from the accumulation of snow - or water, if drains on flat roofs do not work.

Skating on thin ice and floors *(continued)*

provided appropriate equipment, tools and supplies for snow/ice removal. Post warning signs and water-absorbing floor mats at all entryways. Have a mop and bucket handy to remove excess water, slush and snow tracked into the church foyer. Be careful to monitor the use of salt and/or sand. Excessive salt and sand used for snow and ice removal can be tracked indoors resulting in possible damage to carpets and floor surfaces and can even cause another potential slip-and-fall hazard. Ensure the person responsible for custodial work has adequate cleaning supplies and tools that can handle the increase of water and ice tracked into the church.



Prepare to work outside in cold weather

How do I avoid cold weather injuries?

Church volunteers and staff should avoid working outside during wind chill warnings and advisories. If you must work outside wear several layers of loose-fitting, lightweight, warm clothing. Trapped air between the layers will insulate you. Outer garments should be tightly woven, water repellent and hooded. Wear a hat, because 40 percent of your body heat can be lost from your head. Cover your mouth to protect your lungs from extreme cold. Mittens, snug at the wrist, are better than gloves. Try to stay dry and out of the wind. Wind chill temperature is the temperature it “feels like” outside. It is based on the rate of heat loss from exposed skin. As wind levels increase, the body is cooled at a faster rate, causing the skin temperature to drop.

Why is this important to understand?

Wind chill warnings are issued when wind chill temperatures become life threatening. A wind chill advisory is issued when wind chill temperatures are potentially hazardous.

How can I be injured by cold weather?

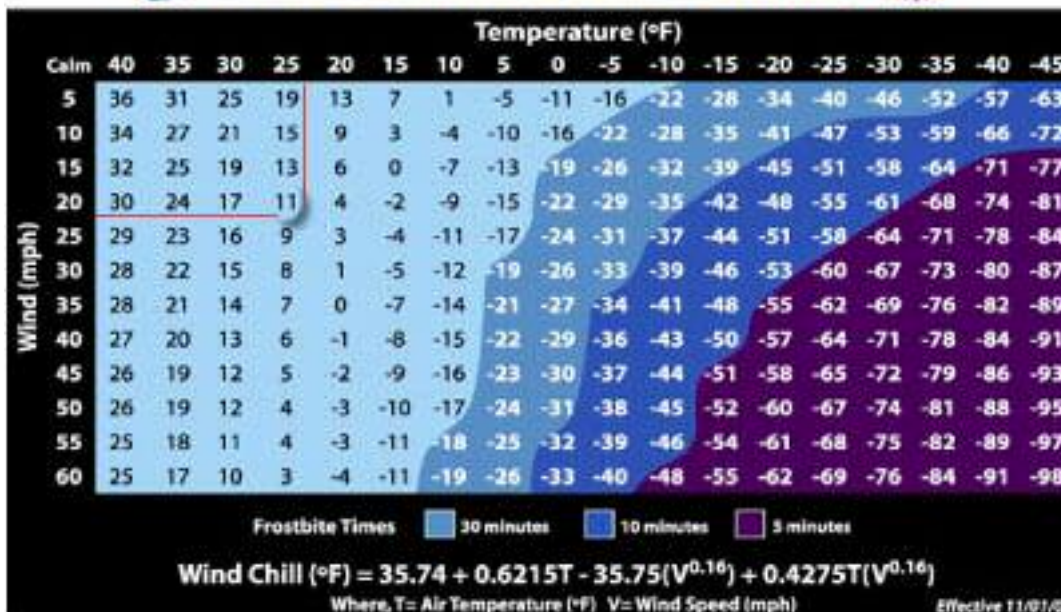
Frostbite is an injury to body tissues caused by freezing. Fingers, toes, ear lobes or the tip of the nose are most susceptible. Symptoms include a loss of feeling and a white or pale appearance. Medical attention is needed immediately for frostbite.

Hypothermia occurs when the body's temperature drops to 95 degrees Fahrenheit. Warning signs include uncontrollable shivering, memory loss, disorientation, incoherence, slurred speech, drowsiness and apparent exhaustion. Medical attention is needed immediately. If it is not available, begin warming the body **slowly**.



Hypothermia occurs when the body's temperature drops to 95 degrees.

NWS Windchill Chart



Using the wind chill chart: Identify the temperature and wind speed. If the temperature is 25° and the wind speed is 20 mph, the temperature will feel like 11°.



Special supplement— cold weather checklist

Use the following checklist to ensure your building is adequately prepared for cold weather:

- Ensure doors and windows are properly sealed to prevent pipes from freezing and inspect service systems to ensure heat is supplied to fire pump houses, dry-pipe valve closets and water tanks.
- Clear snow accumulation around the fire sprinkler system water valves, fire hydrants and critical utilities such as water and gas.
- Clear roof drains and gutters of debris to prevent backup and ponding of water or ice.
- Turn off and drain exterior hose bibs.
- Contact the utility company and have them trim tree branches over power lines.
- Have the boiler and heating system inspected by a qualified professional well in advance of the heating season and ensure a minimum of three-foot clearance between heating units and combustible materials. Minimize or eliminate the use of portable space heaters.
- Maintain a minimum temperature of 40° F (4.4° C) in building areas with fire sprinkler systems, including more complex systems that have fire-pumps or systems with special designs. A qualified contractor should be contacted if you have any question about whether your system requires special maintenance considerations.
- Insulate fire sprinkler pipes located in isolated parts of the building such as garages and storage areas if subject to severe cold temperatures.
- Keep fire hydrants clear of snow and ice. Identify hydrants by using poles that will exceed the highest snow accumulation.
- Ensure fire shut-off valves are locked in an open position. Valves should be lubricated and turned by a qualified service provider to ensure they can be closed in the event of a sprinkler leak or pipe break. Keep the valves clear of snow and ice.
- Ensure emergency lighting and flashlights are available.
- Regularly inspect fire protection equipment to ensure reliability.
- When a severe weather front is announced via the news, plan to have sidewalks and parking lots cleared of snow and ice.

Note deficiencies and steps to be taken to correct problem areas:

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Lessons of loss*

Jim was a church volunteer called by the pastor to help shovel the snow and ice that had been forecast to fall before the Sunday morning service. Church leadership believed they were adequately prepared as this had not been the first time snow had fallen, nor the first time Jim had helped out. Jim arrived at 6:00 a.m. to find six inches of wet, heavy snow. Shoveling the snow off the sidewalks by hand took Jim nearly 90 minutes. The church ran a tight budget and could not afford a gas-powered snow thrower. Some supplies were available but, late in the season no one had anticipated the need to purchase additional salt or ice melt. Jim then spread what little salt he had over the front of the sidewalk but knew the sidewalks were still slippery. Jim called the pastor and alerted him that additional supplies would be needed. The pastor tried to obtain more salt, but found that the hardware store was closed. The pastor met Jim at the front entrance and decided the salt on the ground was the best they could do under the circumstances. The pastor then proceeded to prepare for the service. Between the time the small amount of salt was laid and service was about to begin, the temperatures dropped further and re-froze the slightly

thawed ice on the sidewalk. An elderly woman was dropped off at the entrance by her husband so she would not have to walk through the snow-laden parking lot. As her husband drove off to park the car, the lady stepped onto the slippery surface and fell, breaking her hip. The church was named responsible for the injury and was required to pay out their deductible, which was the least of their concern. The church in effect allowed a hazardous situation to exist that seriously injured a parishioner. Adequate planning could have potentially prevented this injury. The least expensive means of controlling insurance costs is to prevent the loss from ever happening. When church leadership becomes involved in protecting people and property and considers a few basic follow-up steps, they protect people under their care, which supports the church's primary mission.

**Stories contained in this section are compiled from several different actual church losses. Names and locations have been changed or removed to protect the identity of those involved.*

References

Zurich Risktopics
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snow and ice removal

2-7.005, November 2003—
cold weather preparation

[FEMA—News photos](#)

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