Preparing for Winter Weather Property Hazards

Hosted by: Michigan Catholic Conference
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Remember when snow was fun?
Agenda

• What Can Go Wrong?
  ▪ Roof Issues
  ▪ Frozen Pipes
  ▪ Power Failure
  ▪ Property Fires

• What you can do to limit damage
What Can Go Wrong?
Is Roof Ready for Winter?

A comprehensive roof maintenance program should include, at minimum, the following basic steps:

- Keep roofs clean and free of debris
- Keep drainage systems clear and functional
- Eliminate / make repairs to areas with standing water or “ponding”
- Train maintenance personnel on roof construction and related ongoing maintenance needs
- Restrict roof access to authorized personnel only
- Limit penetrations of the roof system
- Monitor sloped roofs with overhangs for the creation of ice dams and add insulation to the attic as necessary
What Can Go Wrong?
Too Much Snow?

SNOT LOAD DANGER ZONES
Some Areas to Watch

- Drifts around large object
- Blocked air intake
- Blocked HVAC equipment
- Blocked windows and leakage
- Large drifts on lower roof
- Ramp
- Blocked door
- Parapet
- Buried plumbing vent
- Blocked access

TRAVELERS
What Can Go Wrong?
Roof Collapse
What Can Go Wrong?
Do you have a sloped roof?
What you can do:
Sample Roof Inspection Checklist

1. **Supporting Structure**:
   - Exterior and Interior Walls
     - Expansion/Contraction
     - Settlement Cracks
     - Deterioration
     - Moisture Stains
     - Physical Damage
     - Comments:
   - Exterior and Interior Roof
     - Securement
     - Expansion/Contraction
     - Structural Deterioration
     - Water Stains
     - Physical Damage
     - Attachment of Felt/Insulation
     - New Equipment/Alterations
     - Comments:

2. **Roof Condition**:
   - General Appearance
     - Debris
     - Drainage
     - Physical Damage
     - General Condition
     - New Equipment
     - Comments:
   - Surface Condition
     - Bare Spots in Ballast
     - Cracking/Splitting
     - Contamination
     - Comments:
   - Membrane Condition
     - Blistering
     - Splitting
     - Ridging
     - Unwelded Laps
     - Punctures/Slices
     - Adhesion to Substrate
     - Fasteners
     - Comments:

3. **Flashing Condition**:
   - Base Flashing
     - Punctures
     - Deterioration
     - Open Laps
     - Attachment
     - Ridging or Wrinkling
     - Comments:
   - Counter Flashing
     - Open Laps
     - Punctures
     - Attachment
     - Rusting
     - Fasteners
     - Caulking
     - Comments:
   - Coping
     - Open Fractures
     - Punctures
     - Attachment
     - Rusting
     - Drainage
     - Fasteners
     - Caulking
     - Comments:

4. **Roof Edging/Fascia**:
   - Splitting
   - Securement
   - Rusting
   - Fasteners
   - Punctures
   - Comments:

5. **Roof Penetrations**:
   - Equipment Base Flashing
     - Open Laps
     - Punctures
     - Attachments/Fasteners
     - Comments:
   - Equipment Housing
     - Counter Flashing
     - Open Seams
     - Physical Damage
     - Physical Damage
     - Caulking
     - Drainage
     - Comments:
What Can Go Wrong?
Frozen Water Pipes

• How do you Prevent Pipes From Freezing?
• Which Pipes are at Risk?
What you can do:
What you can do:
Tips to Minimize Risks of Frozen Pipes

• Water Piping

• Fire Protection Sprinklers
What you can do:
Remember Unheated Crawl Spaces and Concealed Spaces
What you can do:
Maintain 40 degrees+

• Insulate your buildings

• Evaluate the building envelope

• Add weather stripping around doors and caulk windows to guard against drafts and heat loss.
What can you do:
Why and When to use Heat Tape?
What Can Go Wrong?
Why should you be concerned about Hot Works?
What can you do:
Hot Work Permit System
What Can Go Wrong?
How about your Fire Protection Systems?
What can you do:
Make Sure that Systems are Ready!

Perform regular inspections of fire protection systems including alarms, sprinkler systems and fire extinguishers.
What Can Go Wrong?
The Power Goes Out, Now What?
Polling Question

Why is it important to visually inspect Sprinkler System valves?

- To ensure valves are fully open
- To make sure that they are working properly
- To ensure they have proper lubrication
- Check on valve supervision devices
- All of the above
What Can Go Wrong?
During Power Failure, What Happens to Your Fire Alarm System?
What You Can Do:
What does Power Failure mean to You?
What we covered

- Roof Issues
- Frozen Pipes
- Power Failure
- Property Fires
Steps to Take Before Winter Arrives

• Safety Measures
• Trim Trees
• Steps & handrails
• Supplies & equipment
Steps to Take Before Winter Arrives

1. Check all heating systems for proper operation

2. Develop plan to respond to lengthy power failure and loss of heat

3. Maintain safe roof access. Keep roof drains clear & remove excess snow loads from roof.

4. Line up ahead of time licensed contractors to assist with protecting your buildings. This may include: sprinkler contractor, plumbers, electricians, roofers, HVAC, and snow removal companies

5. If for any reason if your fire alarm or fire sprinkler system is impaired follow your impairment procedures and call your local Travelers RCC.
Winter Weather Checklist

Almost every building in North America is subject to severe winter weather, such as blizzard conditions, ice storms and severe cold (Arctic breeze). This is true not only of facilities located in the central and northern portions of the continent, but also has occurred in areas as far south as Florida and Texas. Indeed, less historic indications are that the areas that are most vulnerable to damage are the southern parts of the country because they are not accustomed to long periods of prolonged cold.

For these reasons, it is important that every facility prepare in advance for the possibility of severe winter weather. The following checklist provides a starting point in developing a comprehensive plan to prevent unnecessary losses that can result from winter weather conditions.

<table>
<thead>
<tr>
<th>SPRINKLER SYSTEMS</th>
<th>YES</th>
<th>NO*</th>
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<tbody>
<tr>
<td>1. Unattended areas inspected hourly or temperature monitored by central station?</td>
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<td>2. Concealed spaces containing piping provided with adequate heat?</td>
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<td>3. Building heat, maintained at or above 40°F for areas protected by wet pipe sprinklers?</td>
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<td>4. Solution strength of anti-freeze systems has been checked?</td>
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<td>5. Dry pipe valve enclosures are adequately heated and monitored?</td>
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<td>6. Dry pipe valves are properly set and proper air pressure maintained in the system?</td>
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<td>7. Dry pipe system air pressure electrically supervised or visually inspected daily?</td>
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<td>8. Dry pipe system auxiliary drains and low point drains have been drained?</td>
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<tr>
<th>WATER SUPPLIES</th>
<th>YES</th>
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<tr>
<td>1. Fire pump room heat maintained at 40°F (70°F for diesel engine without heater)?</td>
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<td>2. Diesel drivers provided with water jacket heater to maintain temperature of 100°F?</td>
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<td>3. Fire pumps operated weekly?</td>
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<td>4. Water supply reservoirs heated and monitored to maintain temperature over 40°F?</td>
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<td>5. Gravity tank expansion joints and riser boxing in good condition? Any leaks in tank corrected?</td>
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<td>6. Hydrants, valves and fire department connections are accessible and cleared of snow?</td>
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<td>7. Caps for fire hydrants and fire department connections are in place and operate freely?</td>
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<td>8. Fire hydrants are deiced and lubricated? (Date completed)</td>
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<td>9. Control valves are open, lubricated and provided with electronic supervision or locked open?</td>
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<td>10. Valve pits are dry and accessible?</td>
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<tr>
<th>BUILDING FEATURES</th>
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<tr>
<td>1. Building heating system repairs or annual maintenance scheduled before cold weather?</td>
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<td>2. Heating equipment, combustion controls and safety devices tested for proper operation?</td>
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<td>3. Windows and doors in good repair and properly weather-sealed?</td>
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<td>4. Gutters, downspouts and roof drains are clear?</td>
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<td>5. Roofs visually inspected for water ponding, structural deficiencies, etc.?</td>
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<td>6. Areas subject to freezing provided with non-freeze type fire extinguishers?</td>
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<td>7. Designated individuals authorized to initiate a winter weather alert?</td>
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<td>8. Procedure for monitoring snow depth on roofs and snow removal action plan established?</td>
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<td>9. List of equipment containing water that is to be drained before cold weather?</td>
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<td>10. List of supplies for portable heater and/or heating units developed?</td>
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| LIST OTHER FEATURES UNIQUE TO YOUR FACILITY | YES | NO* |
Questions?