Facilities Management

FM Cold Weather Protocol

Updated January 5, 2023

Cold Weather Protocol

Cold Weather Protocol Steering Group Members:

- FM @ Your Service Manager
- Senior Manager of Operations and Maintenance
- Director of Operations and Maintenance
- Manager of Controls Engineering
- Manager, Maintenance Planning

Annual Preparation Guidance:

- By late November/early December:
  - Steering Team reviews Cold Weather Protocol
  - Building Operations & Maintenance and FMAP@YS team review of Cold Weather Protocol
  - Update the template of the planned work order project:
    - Review of prior year's Cold Weather Event projects to inform creation of the planned work orders for the current year (review/updates to approved projects)
    - Intentional focus on areas currently impacted by construction or maintenance projects, vulnerable areas, etc.

- December:
  - Cold Weather Protocol presented at Building Coordinator Meeting*
  - Refresher communication for on-call team on Cold Weather Protocol

Preparatory Actions when Trigger Event is forecasted:

- When outside air temperature is forecasted below 0° for longer than 24 hours (Accuweather), a steering group meeting will be scheduled (Director responsibility) to discuss which of the following risk mitigation activities are relevant for the given cold weather situation:
  - Resourcing Considerations:
    - Assign designate(s), as necessary
    - Addition of a secondary on-call team member into standby status (FM@YS Manager)
    - Hotel rooms secured for primary and secondary on-call members (FM@YS Manager)
    - Managers secure volunteer lists of team members who will be available to take calls as needed. FM@YS manager compiles this information for the on-call
A Data-Driven Approach:

→ Buildings are vulnerable to damage during extended periods of sub-zero temperatures

→ FM leverages a data-based trigger to implement mitigation plans once the forecast shows more than 24 hours below 0 degrees Fahrenheit.
Continuous Improvement:

Initial version of the Cold Weather Protocol was developed after 2018 and has been evolving ever since:
Annual Cadence Established:

Late November/early December:
• Steering Team reviews Cold Weather Protocol
• Building Operations & Maintenance and FM@YS team review
• Update planned work orders:
  − Review of last year’s notes
  − Addition of any current building-specific vulnerabilities

December/January:
• Building Coordinator Meeting presentation
• Review with On-Call Team
Mitigation Planning:

Theme 1: Resource Considerations

• Addition of a secondary standby team member
• Secure hotel room(s)
• Compile area resource and controls team lists
• Addition of BAS reviews
Mitigation Planning:

Theme 2: Communication Considerations

- Cadence of daily meetings
- Notification to key partners that FM is entering Cold Weather Protocol Mode:
  - Facilities Management team
  - Building Coordinator Group
  - Risk Management
  - Engie
  - Campus Safety
Mitigation Planning:

Theme 3: Workload Organization Considerations
• Promote Cold Weather Project planned work orders
• Cold weather FDD (fault detection & diagnostic) reviews
• Removal of BAS schedules
• Override report reviews
• Outage/shutdown delays

<table>
<thead>
<tr>
<th>Checkpoint</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>COMPLETE</td>
<td>Check outside of building for open windows.</td>
</tr>
<tr>
<td>2</td>
<td>COMPLETE</td>
<td>Check outside air intakes and vents for blockage or obstructions.</td>
</tr>
<tr>
<td>3</td>
<td>COMPLETE</td>
<td>Check building pressure with a simple paper test. If negative, review BAS for issues.</td>
</tr>
<tr>
<td>4</td>
<td>COMPLETE</td>
<td>Check entryways and exterior stairwells for cold areas and ensure heaters are operational.</td>
</tr>
<tr>
<td>5</td>
<td>COMPLETE</td>
<td>Check mechanical spaces.</td>
</tr>
<tr>
<td>6</td>
<td>COMPLETE</td>
<td>Check problem areas throughout the building.</td>
</tr>
<tr>
<td>7</td>
<td>COMPLETE</td>
<td>Check drain to ensure it is not backing up (please note any observations/outages) supplies are in basement for clearing drain.</td>
</tr>
</tbody>
</table>

DATE: 12/21/22 Date Completed
DATE (2): 12/22/22 Second date completed if applicable
DATE (3): 12/23/22 Third date completed if applicable 12/28/2022
Your Partnership is Vital!
The Process Works!

2019 Polar Vortex:

Details
- Wind Chill Warning: Tue, PM–Thu, AM
- Lowest wind chills: -40 to -60°F
- Actual forecast highs Wednesday: 10 to 15 below – Record Cold!

Impacts
- Frostbite may occur on exposed skin in 5 minutes or less
- Hypothermia

Safety Tips
- Limit Time Spent Out In The Cold
- Cover Exposed Skin
- Bring Pets Inside
- Keep Space Heaters in the Open
- Prepare an Emergency Kit For Car
- Check on Loved Ones

February 2021 Extreme Duration & New Records:

This cold weather stretch has been intense, but also extremely long-lasting. Records continue to fall; here’s a sampling of some of the records either broken or possibly matched thus far. This is the coldest February start since 1956 at Cedar Rapids.

December 2022 “Once in a Generation” storm:

SEVERE WINTER WEATHER
FLIGHT DELAYS, CANCELLATIONS EXPECTED ACROSS U.S. AS WINTER STORMS HIT
January 2024

Noteworthy Items:
- One fan coil freeze-up with impact to 4 rooms (VAN)
- Two fire impairments, caught early enough to avoid building damage (MERF, BB)
- Intermittent power issues, great team work with P&T to secure generator fuel (BB)

Mitigation Plans Remain in Place All Week:
- Cold weather inspection work orders
- Building schedules removed
- Planned air handling unit shut-downs rescheduled

Looking Ahead to Next Week:
- Thaw Protocol