

# Winter Weather

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This Action Plan applies to winter storm events. In general, these events occur with reasonable lead times, and it is possible to take proactive measures, as outlined below. Response and recovery can be time consuming during such events, and they can involve loss of electrical power supply, damage of structures and equipment, disruptions of service, and injuries to utility personnel.

## INITIATION AND NOTIFICATION

When the National Weather Service (NWS) expects hazardous winter weather conditions to affect the region, they issue public advisories. This AP should be initiated upon official notification of a “winter storm watch” or more elevated status.

In order of increasing severity, the standard terminology is as follows:

**Winter Storm Outlook:** Issued prior to a Winter Storm Watch. The Outlook is given when forecasters believe winter storm conditions are possible and are usually issued 3 to 5 days in advance of a winter storm.

**Winter Weather Advisory:** Issued for accumulations of snow, freezing rain, freezing drizzle, and sleet that will cause significant inconveniences and, if caution is not exercised, could lead to life-threatening situations.

**Winter Storm Watch:** Alerts the public to the possibility of a blizzard, heavy snow, heavy freezing rain, or heavy sleet. Winter Storm Watches are usually issued 12 to 48 hours before the beginning of a Winter Storm.

**Winter Storm Warning:** Issued when hazardous winter weather in the form of heavy snow, heavy freezing rain, or heavy sleet is imminent or occurring. Winter Storm Warnings are usually issued 12 to 24 hours before the event is expected to begin.

**Blizzard Warning:** Issued for sustained or gusty winds of 35 mph or more, and falling or blowing snow creating visibilities at or below  $\frac{1}{4}$  mile; these conditions should persist for at least three hours.

It is expected that the local Emergency Manager will carefully and continually monitor conditions and forecasts. During such events, the local Emergency Manager shall be in constant contact with the NWS, disseminate information to agencies via conference call, e-mail, and broadcast fax.

## SPECIFIC ACTIVITIES

### **I. Assess the Problem**

Winter storms, accompanied by strong winds and blizzard conditions, have resulted in localized power and phone outages; closures of streets, highways, schools, businesses, and nonessential government operations. People have been isolated from essential services in their homes and vehicles. A winter storm may escalate into a catastrophic event paralyzing municipalities, and rural areas for several days. Life threatening situations may occur in which emergency response agencies cannot perform their duties due to extreme weather conditions. Individual jurisdictions may be over-whelmed and need mutual aid assistance.

### **II. Isolate and Fix the Problem**

Snow removal capabilities will vary widely. General procedures are as follows:

#### **Before the storm:**

1. Activate Emergency Operations Center (EOC).
  2. Monitor track of storm.
  3. Release nonessential personnel, as warranted.
  4. Assemble essential personnel and designate duties.
  5. Typical duties at this stage may include:
    - Fill gravity storage tanks.
    - Test auxiliary power sources.
    - Fill fuel tanks.
    - Secure windows and doors.
    - Mobilize snow removal equipment, as warranted.
    - Man remote stations essential to operations.
    - Stockpile chemicals, food, etc.
  6. Discuss needs with electric company.
  7. Test back-up communications system.
  8. Review mutual aid agreements and verify connections to/from neighboring water systems.
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Review specific power outage contingency action plan.

**During the storm:**

1. Notify customers, media, and state and local authorities if service disruption or if significant demand management is necessary.
2. Monitor reservoirs.
3. Monitor changes in water quality. If a water quality emergency should develop, follow the appropriate procedure.
4. Open connections with neighboring water systems if necessary.
5. Provide backup power to facilities utilizing mobile generators, as appropriate.

III. **Monitoring**

In order to monitor the infrastructure status and residents' health during a winter weather event, the Utility should assist the local Emergency Manager in gathering the following types of information:

1. Electrical load
2. EMS cold-related responses / total responses
3. Cold weather-related water main breaks
4. Available sheltering centers
5. Status of salt and sand stockpiles
6. Available snow removal assets
7. Cold-related incidents / concerns

During winter weather emergencies, heavy snowfall, coupled with icy roads or ice accumulations on aboveground electrical transmission lines, can result in vehicular accidents and transmission line failure. Power outages during winter weather events can pose serious problems, particularly among those communities where life-sustaining equipment (LSE) is a necessity.

IV. **Recovery and Return to Safety**

Waterworks staff should observe the following safety tips in recovery from winter storm events:

1. After the storm, if personnel are required to shovel snow, be extremely careful. It is physically strenuous work, requiring frequent breaks. Avoid overexertion. Heart attacks from shoveling heavy snow are a leading cause of deaths during winter.
2. Walk carefully on snowy, icy, sidewalks.

V. **Report of Findings**

Assemble relevant personnel to review effectiveness of action plan and reinforce lessons learned.