

Playbook:

Extreme Winter Weather

Audience: Government

Issue: Safety and Security



Effective and Efficient Communication Strategies

Did you know . . .

- ▶ About 70% of injuries due to ice and snow result from vehicle accidents
- ▶ A snow avalanche may reach a mass of a million tons and travel at speeds up to 200 mph
- ▶ 50% of injuries related to cold happen to people over 60 years old
- ▶ Improperly warming a hypothermia victim can lead to heart failure.¹

What, when and how you communicate before, during and after extreme winter weather is critical.

BEFORE EXTREME WINTER WEATHER STRIKES

Develop a communication plan in advance

While northern climates get a significant amount of extreme winter weather, it can affect regions throughout North America, as evidenced by snow and ice storms in the Dallas, Texas area in the week prior to the 2011 Super Bowl.² Before winter weather strikes, review and revise your crisis communication plan. Determine the length of time for specific actions as detailed in the plan. Set a timeline for the order in which actions need to be put into effect.

Establish protocols to test all procedures and equipment on a regular basis. Periodically test the readiness of your mass notification system. Communicate regularly with the public about extreme winter weather preparedness and issue appropriate safety recommendations.

Coordinate with other agencies

Coordinate efforts with other officials in your region for effective, efficient messaging. On a quarterly basis, publicize and jointly conduct sign-up drives to gather citizen contact information for use with your mass notification system. Work with other agencies, such as local fire departments, police and sheriff's departments, and Emergency Medical Services to streamline messages and reduce duplicate notifications.

When appropriate, coordinate with neighboring jurisdictions to provide redundancy in communication

HOW WINTER STORMS FORM

While there are many ways for winter storms to form, all of them share three common aspects:

- **Cold Air** – For snow and ice to form, temperatures must be below freezing, both in the clouds and at ground level.
- **Moisture** – Water evaporating from lakes, oceans, and other large sources are excellent moisture sources.
- **Lift** – Lift sends moisture into the atmosphere, where it forms clouds, yielding precipitation. Warm air colliding with cold air and rising, and airflow up the side of a mountain are examples of lift. Warm fronts, cold fronts, lake effects, and mountain effects can all generate lift, sending moisture skyward.

From "Winter Storms - The Deceptive Killers: A Preparation Guide," National Weather Service.

systems. Formal mutual aid agreements can include details regarding communications assistance.³ Sources such as amateur radio operators, the Civil Air Patrol, local hospitals and the American Red Cross may also have the capability to assist with communications during extreme winter weather.³

Establish a single point of contact

During and immediately after the onset of a winter weather emergency, there won't be time to determine a spokesperson. Designate an Emergency



Communications Director, who will rapidly assess the need for communications support and identify, acquire and deploy resources to support critical emergency operations. This person

should also have primary responsibility for communicating with the public, other agencies and the media.

Publicize the fact that this office/person will be the primary point of contact during winter weather or other emergencies. Doing so in advance will enable emergency responders to focus on their work with fewer interruptions.

Educate the public

Improvements in forecasting technology have made predicting when extreme winter weather will strike a more reliable process than in years past. Prepare the public for the possibility and educate them about advance planning by taking the following actions:

- ▶ Work with local print and broadcast media to distribute emergency information on winter weather, including the phone numbers of local emergency services offices, the American Red Cross, and area hospitals.

- ▶ Prepare and distribute information about identifying supplies needed during winter weather, including rock salt or other snowmelt chemicals, sand and snow shovels.

- ▶ Coordinate with local emergency services and American Red Cross officials to prepare winter weather information specifically for people with reduced mobility, senior citizens and families with infants and small children.

- ▶ Describe how to prepare homes for winter weather, including having sufficient supplies of heating fuel, winterizing homes in advance, insulating water pipes and knowing how to shut off water valves if pipes break.⁴

Develop backups & contingency plans

Multiple outbreaks of severe winter weather in the northeast United States resulted in the first month of 2011 becoming the snowiest January on record.⁵

During such an outbreak, communication networks and utilities may be disrupted, key officials and staff members may be unavailable, and resources may be in use or otherwise unable to assist. For each communication task, assign a backup who can assume the task if the primary communicator is unable to perform it.

Develop alternate means of creating documentation in the event that electronic systems are unavailable. Event logs and communications traffic records are vital for documenting emergency actions for possible post-emergency investigation or after-action reports.



HOW FORMS OF WINTER PRECIPITATION DEVELOP

Air temperatures vary at different altitudes. Temperatures at different altitude levels will determine what form winter precipitation takes when it hits the ground.

- ▶ **Rain** – Frozen precipitation melts as it falls through air, which is at above-freezing temperatures all the way to the ground.
- ▶ **Freezing Rain** – Frozen precipitation melts in warmer upper-altitude air, then falls through colder air and freezes on cold surfaces.
- ▶ **Sleet** – Frozen precipitation melts in warmer upper-altitude air, then falls through colder air and re-freezes before landing on ground.
- ▶ **Snow** – Precipitation freezes as it begins to fall and remains frozen until landing on ground.

From "Winter Storms – The Deceptive Killers: A Preparation Guide," National Weather Service.

Records documenting the number of people involved in communication activities, whether paid or volunteer, are needed for possible reimbursement under Presidential disaster declarations⁶

Use your mass notification service to send periodic messages reminding your community about extreme winter weather preparedness, and items to include in a disaster preparedness kit. Additional messages can highlight the necessity of calling 911 only in true

emergency situations when winter weather strikes, in order to minimize the demands on the system and facilitate prompt responses.

Extreme winter weather poses significant challenges for special-needs populations, including seniors and people with disabilities. Use your mass notification service to create and maintain a separate list of those with special needs, and send targeted messages designed to meet their specific needs.

DURING EXTREME WINTER WEATHER

What and when to communicate

In most cases, available forecasting tools should provide adequate notice when extreme winter weather is imminent. Monitor NOAA Weather Radio and local broadcast media for updates. Your communication plan should provide details about what messages should be delivered at each stage of risk, based on your emergency action plans.



Understand the warning levels and terms used by weather forecasters:

- ▶ **Freezing Rain** – Rain that freezes upon hitting the ground. Ice coatings develop on roads, walkways, trees and power lines.
- ▶ **Sleet** – Rain that turns to ice pellets before reaching the ground. Sleet freezes moisture on roads, creating hazardous driving conditions.
- ▶ **Winter Storm Watch** – A winter storm is possible in your area.
- ▶ **Winter Storm Warning** – A winter storm is occurring or will soon occur in your area.
- ▶ **Blizzard Warning** – Sustained winds or frequent gusts to 35 miles per hour or greater and considerable amounts of falling or blowing snow (reducing visibility to less than a quarter mile) are expected to prevail for a period of three hours or longer.

- ▶ **Frost/Freeze Warning** – Temperatures below freezing are expected.⁷

As extreme winter weather approaches, immediately advise the public to take the following actions:

- ▶ If indoors, remain inside. In the event of power failure, ensure sufficient ventilation when alternate sources of heat are used. Close off unused rooms, and seal gaps in doors, windows, and other openings. Remain hydrated and eat regularly, but avoid beverages containing alcohol and caffeine.⁸
- ▶ If stranded in a vehicle, remain with the vehicle. Clear snow away from exhaust pipe and run engine for 10 minutes each hour to provide heat. Be visible to rescuers by using vehicle lighting and tying brightly colored cloth to antenna or door handle. Raise hood, if possible, to signal the need for assistance. Vigorously move arms, legs, fingers and toes periodically to maintain circulation and warmth.
- ▶ If stranded outdoors, attempt to find shelter immediately. Remain dry and cover all exposed body parts. If shelter is unavailable, build a lean-to, snow cave or windbreak for protection. Build a fire to provide warmth and to attract the attention of rescuers. Surround the fire with rocks to absorb and reflect heat. Melt snow for drinking water, but avoid eating snow, which will reduce body temperature.¹
- ▶ Take steps to avoid frostbite and hypothermia, including removal of wet clothing, drinking warm non-alcoholic, non-caffeinated beverages, and minimizing skin exposure to extreme cold.⁹
- ▶ Reserve 911 calls for genuine emergencies.

Use your mass notification service to notify the public that winter storm response plans have been activated and are being carried out. Encourage citizens to minimize telephone use, keeping lines open for emergency communications.

Shelter-in-place orders and evacuations: Use your mass notification service to notify community members affected by loss of heat and power failures to evacuate to a pre-designated shelter area. Be sure to note potential evacuation routes, which should NOT be taken due to road damage, fallen debris, or other safety concerns.

Transportation changes: Inform your community of special road conditions which develop during a winter storm, including road closures, evacuation routes, altered traffic patterns, affected lights and detours. If public transportation systems are closing, share that information as well. Advise citizens to avoid unnecessary travel, and if unavoidable, to travel during daylight hours and utilize main roads as much as possible.¹⁰

How to communicate

Set up a point of contact for individuals to speak with about specific questions or concerns, but keep in mind that some communication avenues may be unavailable.

Use a public social network, like Facebook or Twitter, to share information publicly and address common questions in one place.

Use the Emergency Alert System (EAS) to disseminate important emergency information quickly. A state emergency manager can broadcast a warning from one or more major radio stations in a particular state. EAS equipment at other radio and television stations, along with cable television systems, can automatically monitor and rebroadcast the warning.¹⁰

A mass notification service can enable you to distribute messages rapidly by mobile or landline phone, email, or SMS (text messaging), providing multiple channels to reach the public even if some services are disrupted. Such messages can be widely delivered to the general public, or can be tailored for and distributed to specific audiences. Mapping software can target messages toward specific areas, particularly when integrated with mass notification services.

Use templates developed in advance, which allow for details to be added quickly, saving time when extreme winter weather strikes. Maintain a complete and up-to-date list of media contacts to ensure all media receive information and updates throughout the outbreak of winter weather.



WINTER SURVIVAL KIT FOR YOUR CAR

Equip your car with these items:

- Blankets
- First aid kit
- A can and waterproof matches (to melt snow for water)
- Windshield scraper
- Booster cables
- Road maps
- Mobile phone
- Compass
- Tool kit
- Paper towels
- Bag of sand or cat litter (to pour on ice or snow for added traction)
- Tow rope
- Tire chains (in areas with heavy snow)
- Collapsible shovel
- Container of water and high-calorie canned or dried foods and a can opener
- Flashlight and extra batteries
- Canned compressed air with sealant (for emergency tire repair)
- Brightly colored cloth

From "Extreme Cold: A Prevention Guide to Promote Your Personal Health and Safety," Centers for Disease Control and Prevention.

AFTER EXTREME WINTER WEATHER PASSES

Risks Caused by Melting Snow and Ice

Large amounts of snow and ice, which are deposited during a winter storm, can lead to flooding, landslides, and erosion once melting begins.¹¹ Long periods of cold can cause freezing in rivers and lakes. A rise in water levels driven by thawing ice and snow can break river or lake ice into chunks. Ice jams, caused when the chunks of ice are stopped by natural or man-made obstructions, can act as dams and cause severe flooding. Beach erosion and tidal flooding can occur in coastal areas after winter storms.¹



If you are in an area susceptible to these hazards, use your mass notification system to alert residents to their effects and provide information on how to deal with them if they occur.

Declaring an end to the crisis

Once the storm has passed, issue all-clear messages, announce curfews or issue travel advisories. Recommend that residents monitor their property for structural damage, particularly roof damage caused by heavy snowfall, as well as for damaged water, power, and gas lines. Distribute these announcements as widely as possible in order to preempt calls, allowing emergency management staff to stay on task. If certain roads are impassable or hazardous to drive upon, or if “black ice” on roads is a concern, warn citizens to stay off the road until it is safe.

Recovery efforts

After extreme winter weather, let your community know about downed trees, utility service restoration and debris removal. Share insurance claim contact information and announce recovery assistance programs and workshops. If your community is eligible for FEMA assistance, let residents know about the application process.

Recruit and coordinate volunteers, organize community clean-up events, and collect supply donations. Let your community know where they can get items, such as a three-day supply of water and food, first-aid kit, batteries and fuel.

Protect your community from con artists and price gouging in the aftermath of winter storms. If scammers or criminal activities become evident, issue community alerts to raise awareness among citizens.

During winter storms, misinformation can quickly spread, both in the media and via word-of-mouth. Disseminate accurate information to your community about the storm and recovery efforts to provide reassurance. Send up-to-date information and alerts to local media outlets, through known spokespersons, and using an established and trusted method, to deter gossip and misinformation.

Recap of actions taken

Invite community residents, students and staff members to public meetings and encourage participation in discussions of the storm’s effect on the county or local communities. Be sure to announce the time, date and location of such meetings.

Provide as much advance notice as possible, and send regular reminders. Email can also be used to share the meeting agenda and various subjects to be discussed.



Reach out to key reporters in the area and let them know how officials have been providing direction and updates to the community, what kinds of messages have been sent and that more information will follow, including details about road-clearing efforts, and when power will be restored in areas where outages have occurred.

BEFORE, DURING AND AFTER CHECKLIST

Keys to successful communication when extreme winter weather strikes:

Before

- Review and revise your crisis communication plan well in advance of winter weather
- Build alliances with other agencies and municipalities
- Designate a single point of contact for all communications & develop an updated media list
- Educate the public about how to prepare before extreme winter weather occurs

During

- Advise the public on protection from extreme cold, depending on their situation
- Use a mass notification service to deliver important messages quickly
- Communicate using any avenues which may be available, including the Emergency Alert System (EAS)

After

- Distribute announcements widely and quickly to:
 - Preempt calls and allow recovery efforts to continue unimpeded
 - Minimize misinformation and rumors
 - Alert citizens about available assistance and relief efforts
- Advise residents to monitor property for structural and utility damage
- Make citizens aware of any flooding risks and/or hazardous road conditions
- Update local media about response and recovery

ANATOMY OF A SUCCESSFUL MESSAGE

BEFORE: Sample Message - Extreme Winter Weather Approaches

Identify yourself immediately by name and by agency to set an authoritative tone.

→ This is **Jane Smith with the Oaktown County Fire Department** announcing a winter storm warning for our county. **The storm is expected to bring more than twelve inches of snow, along with a mixture of freezing rain and sleet, which are expected to combine to create dangerous, blizzard-like conditions.**

← Get right to the point.

Many residents have special needs that require early preparation.

→ **Please begin making preparations for the storm.** Once the storm hits our area, travel will become nearly impossible. Ensure you have supplies on hand, including food, water, and fuel such as wood or kerosene for heating. Temperatures are expected to reach dangerously low levels and extreme caution is prudent. **For more information on winter weather preparations, visit www.FEMA.gov.**

← Succinctly convey exactly what's at stake.

Give people resources they need to take immediate action.

Once the storm begins, please avoid the roads or any exposure to the outdoors. If you are a senior citizen or a person with a disability, **dial 3-1-1 for information or non-emergency assistance.** Please dial 9-1-1 only in the event of a true emergency.

← Give people resources they need to take immediate action.

Set expectations about when you will contact residents next.

I repeat, a Winter Storm Warning for our County has been issued and we are expecting dangerous, blizzard-like conditions.

← Repeat your key message in one short sentence before closing.

→ **Additional updates will be provided frequently.** Thank you and stay warm.

DURING: Sample Message - Extreme Winter Weather Arrives

Use the same person wherever possible.

→ **Hello, this is Jane Smith with the Oaktown County Fire Department** with a winter storm update.

← Get right to the point.

Succinctly convey exactly what's at stake.

→ **This is an extremely dangerous storm. Ice and snow accumulation are downing trees and power lines and many roads are impassable. Snow removal crews are focusing on critical snow emergency routes and assisting emergency responders' efforts as a priority.**

When giving emergency response instructions, be specific and authoritative.

→ **Remain indoors.** In the event of a power failure, close off unused rooms and seal any gaps in doors, windows and other openings to conserve heat. If you are using an alternative heating source, remember to ensure proper ventilation to avoid the buildup of dangerous fumes.

← Give people resources they need to take immediate action.

We ask that you only dial 9-1-1 in the event of a genuine emergency, as it is critical to dedicate our emergency response appropriately. Use 3-1-1 for non-emergency issues.

Repeat your key message in one short sentence before closing.

→ **This is an extremely dangerous storm.** Additional updates will be provided frequently. **Thank you and stay warm.**

← Repeating your sign-off is one way to set a calming, consistent and reassuring tone.

AFTER: Sample Message - Extreme Winter Weather Passes

Use the same person wherever possible.

→ **Hello, this is Jane Smith with the Oaktown County Fire Department** with a winter storm update.

Get right to the point.

→ **The winter storm warning has been lifted.** While the weather has passed, a number of issues are still confronting our community. Many roads remain closed, following significant snowfall and ice accumulation has downed many power lines. If possible, please stay off the roads and remain at home. Snow removal crews are clearing streets around the clock, while the electric company is restoring power to those without it as quickly as possible.

Schools and non-essential County offices are closed until further notice and we predict the return to normal trash collection schedules by Monday.

Repeat your key message in one short sentence before closing.

→ **Again, due to the risk of falling trees and power lines from the ice storm, we ask that you remain inside as much as possible and that you only dial 9-1-1 in genuine emergencies. Please use 3-1-1 for non-emergency issues.**

Repeating your sign-off is one way to set a calming, consistent and reassuring tone.

→ Additional updates will be provided frequently. **Thank you and stay warm.**

KEY WINTER WEATHER MESSAGE CREATION TIPS

- ▶ Speak with a strong, authoritative voice. A wavering, hesitant tone will undermine the intent of your message.
- ▶ Keep your message short. 30-45 seconds is just right. A minute is probably too long.
- ▶ Every second counts. Pre-record an extreme winter weather message with Blackboard Connect's message templates so that you can get word out in a couple of clicks.
- ▶ Remember that in a crisis situation, your audience will have a lower than usual ability to comprehend your message. You should draft messages accordingly. The sample message on page 7 reads at a sixth-grade level. It's easy to measure the readability of your message using the built-in tools in Microsoft Word: <http://ow.ly/6bMPB>.
- ▶ Where possible, use the same person to record each message related to an event. Continuity breeds assurance in your community. You'll build a personal brand as the "storm guy" or "tornado lady" – which will serve you well in future incidents.
- ▶ Consider sending alerts with zero retries. The time lapse between second and third attempts usually results in warnings being delivered long after winter weather conditions have changed.
- ▶ Don't program a caller ID that is a dispatch or public safety number. The last thing you want to do is tie up these lines and bring down 911.

REFERENCES

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A downloadable guide to dealing with extreme cold from the Centers for Disease Control and Prevention.
- National Weather Service, "Winter Storms - The Deceptive Killers: A Preparation Guide."
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- Ready America - Winter Storms and Extreme Cold
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Steps for what to do before extreme winter weather strikes.
- FEMA: Winter Storms and Extreme Cold
<http://www.fema.gov/hazard/winter/index.shtm>
Tips on what to do before, during, and after winter storms.
- NWS Windchill Chart
<http://www.nws.noaa.gov/om/windchill/>
National Weather Service chart for projecting wind chill effects.
- NOAA StormReady Program
<http://www.stormready.noaa.gov/>
Details regarding the StormReady program offered by the National Weather Service.
- Prepare Your Home for Winter Weather
<http://www.bt.cdc.gov/disasters/winter/beforestorm/prepare-home.asp>
Information about preparing homes before winter weather strikes.
- Know Your Winter Storm and Extreme Cold Terms
http://www.fema.gov/hazard/winter/wi_terms.shtm
List of terms commonly used to describe extreme winter weather.

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http://www.bt.cdc.gov/disasters/winter/pdf/cold_guide.pdf
- 10 Federal Communications Commission, "Emergency Alert System Guide."
<http://www.fcc.gov/guides/emergency-alert-system-eas>
- 11 US Geological Survey, "The Water Cycle: Snowmelt Runoff."
<http://ga.water.usgs.gov/edu/watercyclesnowmelt.html>

ABOUT

Why a Playbook?

When a natural disaster or other urgent event develops, there isn't much time to plan how your city or county will react, and even less time to communicate these actions to a concerned public.

The Blackboard Connect™ Playbooks for Local and State Government series provides you with a blueprint for how to communicate with constituents before, during, and after such events..

Blackboard Connect for Government

Blackboard Connect has been the go-to mass notification service provider for local communities and has proven its reliability time and again in emergency situations. Messages can be sent automatically to all constituents, or targeted to reach groups in affected areas, via phone, email or SMS, providing you with quicker message delivery and increased public safety.

The Blackboard Connect platform allows officials to send thousands of messages in minutes, requires no additional hardware, and can be used from any computer with Internet access or telephone. This ensures that administrators can send vital messages from wherever they are located—even if they are evacuated. Additionally, officials receive detailed reports on contacts that did not receive a message, enabling them to follow up through alternative means as needed.

Ask your Blackboard representative about additional Playbooks, containing communication strategies and information to use when responding to other types of emergencies.

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