





◦ Blizzard

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➦ Parent-task	 <u>1. Natural Disasters:</u>
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Blizzard Preparedness

Overview:

- A blizzard is a severe snowstorm characterized by strong winds, low visibility, and heavy snowfall. Blizzards can occur in both rural and urban areas and pose significant risks to life, property, and transportation.

Causes:

- Cold Fronts: Arctic air masses colliding with warmer air can lead to the formation of blizzard conditions, particularly in winter months.
- Low Pressure Systems: Intensifying low-pressure systems can generate strong winds and heavy snowfall, creating blizzard conditions across large geographic areas.
- Nor'easters: Coastal storms known as nor'easters can produce blizzard conditions along the eastern seaboard of the United States, combining heavy snow, high winds, and coastal flooding.

Effects:

- **Travel Disruptions:** Blizzards can cause road closures, flight cancellations, and delays in public transportation, making travel hazardous or impossible.
- **Power Outages:** High winds and heavy snowfall can damage power lines and infrastructure, resulting in widespread power outages and utility disruptions.
- **Hypothermia and Frostbite:** Exposure to cold temperatures and wind chill can lead to hypothermia, frostbite, and other cold-related injuries or illnesses.

Preparedness:

1. Winterization:

- Prepare your home and vehicle for winter weather conditions by insulating pipes, sealing drafts, and checking heating systems.
- Winterize your car with snow tires, antifreeze, and emergency supplies such as blankets, food, and water.

2. Emergency Supplies:

- Create an emergency kit containing essential supplies such as food, water, medications, flashlights, batteries, and a battery-powered or hand-crank radio.
- Include extra clothing, blankets, and sleeping bags to stay warm in case of prolonged power outages or sheltering in place.

3. Weather Monitoring:

- Stay informed about weather forecasts, winter storm warnings, and blizzard advisories issued by meteorological agencies and emergency management authorities.
- Monitor local news, radio broadcasts, and weather apps for updates on road conditions, school closures, and emergency services.

4. Home Safety:

- Insulate windows and doors with weather-stripping, plastic sheeting, or storm shutters to minimize heat loss and drafts during blizzard conditions.
- Keep a supply of firewood, propane, or alternative heating sources in case of power outages or loss of heat.

5. **Vehicle Safety:**

- Maintain a full tank of gas and keep your vehicle's fuel tank at least half full during winter months to prevent fuel line freeze-up.
- Equip your car with emergency supplies such as a shovel, ice scraper, snow brush, jumper cables, and sand or kitty litter for traction.

6. **Travel Restrictions:**

- Avoid unnecessary travel during blizzard conditions, as roads may be impassable, and visibility may be severely limited.
- If travel is necessary, inform others of your itinerary, route, and expected arrival time, and check road conditions and travel advisories beforehand.

7. **Community Support:**

- Stay connected with neighbors, family members, and vulnerable individuals such as the elderly or disabled to offer assistance and support during blizzard conditions.
- Coordinate with local emergency response agencies, community organizations, and volunteer groups to provide mutual aid and assistance to those in need.

Building Vulnerability During Blizzards:

Building Collapse:

- Structures may be at risk of collapse during blizzards due to heavy snow accumulation, ice loading, and roof failure.
- Factors such as building design, construction materials, and roof slope can influence a building's vulnerability to snow-related hazards.

Types of Structural Failure:

1. **Roof Collapse:** Excessive snow accumulation on roofs can exceed structural load limits and lead to roof collapse, particularly on flat or low-slope roofs.
2. **Ice Damming:** Ice dams formed along roof edges and eaves can trap water, leading to roof leaks, water damage, and interior flooding.

3. **Structural Instability:** Older or poorly maintained buildings may experience structural instability during blizzards, resulting in partial or total collapse.

Safe Areas Within a Home:

1. Interior Rooms:

- Seek shelter in interior rooms located away from windows, exterior walls, and doors, which are more vulnerable to wind-driven snow, ice, and debris.
- Choose rooms on the ground floor or basement level, as they may offer greater protection from high winds and snow drifts.

2. Reinforced Structures:

- Take cover under sturdy furniture such as tables, desks, or beds, which can provide additional protection from falling debris and structural collapse.
- Position yourself next to load-bearing walls, columns, or structural pillars, as they are more resistant to lateral forces and wind pressure.

3. Low-Elevation Areas:

- Stay on the lower levels of multi-story buildings, as upper floors may experience greater sway and structural stress during high winds and heavy snowfall.
- Avoid areas near roof overhangs, awnings, or balconies, as they may be susceptible to collapse or ice damming.

4. Exterior Escape Routes:

- Plan and maintain clear pathways for emergency evacuation from your home, ensuring unobstructed access to doors, windows, and exits.
- Install safety features such as handrails, guardrails, and emergency lighting to facilitate safe egress during blizzard conditions.

5. Post-Blizzard Safety:

- After the blizzard subsides, assess your home for snow accumulation, roof damage, or other hazards before venturing outside.
- Monitor for signs of roof leaks, water intrusion, or structural damage, and take immediate action to address any safety concerns or emergency

repairs.