



Winter Weather Hazards

Preparing for Winter Emergencies

Winter in New Jersey is a time of unique beauty and unique risks. Wind chill can cause frostbite. Freezing rain can cause dangers on the road. Nor'easters have the potential to cause more damage than hurricanes.



#WinterSafetyReadyNJ

The following items provide essential facts on winter preparedness:

Winter Weather Threats

Nor'Easter

Nor'easters have the potential to cause as much damage as hurricanes in New Jersey, with powerful winds, rain or snow and large waves.

They can pound and erode beaches with heavy surf, affect inland areas with flooding, or coat the land with thick layers of ice and snow.

Nor'easters result from the counterclockwise rotation of a low pressure system and the clockwise rotation of a high pressure system, combining to bring wind and moisture to New Jersey from the Northeast. The nor'easter's ferocity will depend on the strength of the two systems.

One reason nor'easters are so dangerous is that they tend to move much more slowly than hurricanes at our latitudes. That slow movement allows the storm's effects to accumulate in a given area. The worst natural disasters in New Jersey history, in terms of cost and widespread damage, have been from nor'easters that moved slowly and remained for several days.

A nor'easter's wind circulation can cause tidal waters in back bays to be held in place, and not allow the water to drain through inlets and into the ocean. The accumulation of more and more water in tidal areas can cause widespread flooding.

Nor'easters can occur all year long, but in New Jersey they are primarily a risk between September and April.

Blizzard Or Other Heavy Snow Events

A Blizzard includes winds of 35 mph or more and blowing snow that reduces visibility to less than 1/4 mile for three hours or more.

Heavy snow can immobilize a region and strand commuters, close airports, stop the flow of supplies and disrupt emergency and medical services.

Accumulations of snow can cause the collapse of roofs, trees and power lines. Homes and farms may be isolated for days, and unprotected crops may be lost.

- Stay tuned to NOAA Weather Radio All Hazards, your local radio and TV stations or The Weather Channel for updates, watches, warnings or emergency instructions.
- Avoid overexertion such as shoveling heavy snow, pushing a car or walking in deep snow. Cold weather puts an additional strain on the heart and can cause a heart attack. Sweating could lead to a chill and hypothermia.

Wind Chill, Frostbite And Hypothermia



Beyond the actual temperature, Wind Chill demonstrates the way the wind and cold combine to affect exposed skin. As the wind increases, heat leaches away from the body at an exposed rate, driving down the body temperature.

The [NWS Wind Chill Chart](#) indicates how quickly the wind and cold can cause frostbite.

The following information on Hypothermia and Frostbite is adapted from information by the Centers for Disease Control and Prevention (CDC). More can be found at the CDC [Winter Weather FAQ page](#).

Hypothermia, or abnormally low body temperature, results when the body starts losing heat faster than it can be produced. Hypothermia can affect the brain, making it difficult for the victim to think clearly or move well, or even to know they are in danger. When the body temperature is below 95 degrees Fahrenheit, the situation is an emergency.

- Those most at risk include the elderly, babies sleeping in cold bedrooms, children left unattended, and anyone who remains outdoors for long periods.
- Hypothermia symptoms include uncontrolled shivering, memory loss, disorientation, and drowsiness. Warning signs in infants include cold, bright red skin and very low energy.
- If you notice these signs, take the person's temperature. If below 95 degrees Fahrenheit, **seek medical help immediately!**
- If medical care is not available, get the person into a warm room or shelter.
- Remove any wet clothing.
- Warm the center of the body first, including chest, head, neck and groin, using an electric blanket if available. Or use skin-to-skin contact under loose, dry layers of blankets, clothing, towels or sheets.
- Warm beverages can help increase the body temperature, but **DO NOT** give alcoholic beverages. **DO NOT** try to give beverages to an unconscious person.
- Keep the person dry and wrapped in a warm blanket, including head and neck.
- **IMPORTANT:** Individuals with severe hypothermia may be unconscious and may not seem to have a pulse or be breathing. CPR should be provided until the person is being warmed, until the person responds or medical help becomes available. In some cases, hypothermia victims who appear to be dead can be successfully resuscitated.

Frostbite is damage to body tissue caused by extreme cold.

- Frostbite symptoms include numbness and a pale color in extremities, such as fingers, toes, earlobes or the nose. Skin may feel unusually firm or waxy.
- If you detect these symptoms, get medical help immediately and slowly re-warm the affected areas.
- Get into a warm room as quickly as possible.
- **NEVER** rub or massage frostbitten skin, especially not with snow. This can cause more damage.
- Unless absolutely necessary, **NEVER** walk on frostbitten feet or toes. This can cause more damage.
- Warm affected areas with warm, NOT HOT, water. Or use body heat – for example, placing hands under armpits.
- **DO NOT** use a heating pad, heat lamp or the heat of a stove, fireplace or radiator for warming. Affected areas are numb and can be easily burned.
- For more frostbite tips visit the [CDC Winter Weather FAQ page](#).

Ice And Road Hazards

Heavy accumulations of ice can cause the collapse of trees, utility poles and communication towers.

Ice can disrupt communications and power for days while utility companies repair damage.

Even small amounts of ice can cause great danger for motorists and pedestrians. Bridges and overpasses are particularly dangerous because they freeze before other surfaces.

Remember: For drivers, ice is not the only deadly hazard during winter. Heavy snow can impede visibility and create real danger. If at all possible, avoid driving during a winter storm.



Winter Flooding

Coastal Floods:

- Winds during intense winter storms can cause widespread coastal flooding and beach erosion.

Ice Jams:

- Long cold spells can cause rivers and lakes to freeze. A rise in water level or a thaw can break the ice into large chunks, which can become jammed at manmade and natural obstructions. Ice jams can act as a dam, resulting in severe flooding.

Snow melt:

- Sudden thaw of a heavy snow pack often leads to flooding.
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Power Outages

During a power outage:

- If someone in the home is on life-support or otherwise electric dependent due to a disability, immediately notify your Utility and your local Police Department.

For everyone else:

- Call your utility to determine area repair schedules.
- Turn off or unplug lights and appliances to prevent a circuit overload when the power returns. Leave one light on to let you know when power has been restored.
- Turn on faucets slightly to prevent pipes from freezing. Running water will not freeze as quickly.
- Protect yourself from carbon monoxide poisoning.
 - **Do not** operate generators indoors.
 - **Do not** use charcoal to cook indoors.
 - **Do not** use your gas oven to heat your home.
 - All of these activities can cause a deadly buildup of carbon monoxide gas. Use space heaters with proper ventilation.
- Keep your refrigerator and freezer doors closed as much as possible to avoid food spoilage.

Winter Safety at Home

Winterize Your Home

- Have a professional inspect your heating system annually.
- Clean your fireplace or stove and have your flue checked for any buildup of creosote. Be sure other fuel burning equipment is properly vented to the outside.
- Insulate your home properly. If necessary, insulate walls and attics to conserve energy.
- Caulk doors and windows to keep cold air out.
- Install storm windows, or cover windows with plastic from the inside to provide an extra layer of insulation.
- Protect pipes from freezing:
 - Wrap pipes in insulation or layers of old newspapers. Cover the newspapers with plastic to keep out moisture.
 - Turn both hot and cold faucets to continuously drip a little.
 - Keep a wrench near the valves and know how to shut off your water valves if a pipe bursts.
 - For more information: "[Preventing and Thawing Frozen Pipes](#)" from the American Red Cross
- Inspect and flush your water heater.
- Clean gutters. Leaves and other debris will hamper drainage.
- Cut away tree branches that can fall on the house during an ice storm or from heavy snow. Notify the utility company of branches that overhang power lines; do not attempt to trim by yourself.
- Replace batteries for smoke, and carbon monoxide detectors. If you did not do this when you set the clocks back, do it now.



- Have a back-up power source in place if you are dependent upon electricity for medical or mobility needs.
- Know where your snow shovel is located and have a supply of sand and sand or a substitute.
- Prepare a warm, safe place for your animals in severe winter weather. Make sure any outbuilding that houses or shelters animals can withstand wind, heavy snow and ice.
 - Bring pets indoors. Horses and livestock should have a shelter protected from wind, snow, ice and rain. Grazing animals need access to a protected supply of food and non-frozen water.
 - Make sure your animals have access to high ground in case you do not have time to relocate them during a flood.
- Be aware of the potential for flooding when snow and ice melt.
- Consider purchasing flood insurance. Homeowners' policies do not cover damage from floods. Ask your insurance agent about the [National Flood Insurance Program](#) if you are at risk.

If Power Goes Out

Follow these tips:

- Dress in warm, light layers and wear a cap for warmth.
- Close off unused rooms.
- Eat well-balanced meals for energy.
- Use only safe sources of alternate heat such as a fireplace, a small well-vented wood or coal stove, or portable space heaters. Always follow manufacturers' instructions and never substitute one type of fuel for another.

Visit our web page for additional information about what to do [during a blackout](#).

Clearing Your Roof

- Clearing your roof is a dangerous task. Always think about safety first. If possible, do not attempt to clear the roof alone.
- When possible use long-handled rakes or poles.
- If you must use a ladder, make sure the base is securely anchored. Ask someone to hold the ladder while you climb.
- Know where the snow is going to fall before clearing the area.
- Make sure you do not touch electrical wires.
- If the job is too big for you, **HIRE HELP**.

Winter Safety in the Neighborhood

Helping Your Neighbors

If someone you know is elderly or dependent on life-sustaining or health-related equipment such as a ventilator, respirator or oxygen concentrator, encourage them to be safe during severe winter weather and possible power outages.

- Offer to help them stock an emergency kit including a flashlight and extra batteries, a battery-operated radio, bottled water, non-perishable foods, essential medicines and extra blankets or sleeping bags. For more details: [NJOEM Basic Preparedness page](#)
- Encourage them to register as a person with disability with [Register Ready - New Jersey Special Needs Registry for Disasters](#). Also encourage them to register with the [local Office of Emergency Management](#), the local police department and utility company.
- Encourage your neighbor develop a list of emergency numbers and encourage them to keep it handy. Ask them how you can be most helpful if they needed assistance. Offer to include your neighbor's emergency contacts in your list.
- Check on them after a storm or power outage.

Winter Safety on the Road



Avoid driving during a winter storm unless it's necessary. Blowing snow, icy slick spots and fewer daylight hours all create hazards. If you must drive, use this information for a safe trip.

Winterize your vehicle

Have a mechanic check the following:

- Battery
- Wipers and windshield washer fluid
- Antifreeze
- Ignition system
- Thermostat
- Lights
- Exhaust system
- Flashing hazard lights
- Heater
- Brakes
- Defroster
- Oil level
- Tires and air pressure. Consider getting snow tires or chains.

Before You Leave

- **Get a Kit** - create an emergency kit for your car. Include items from the **NJOEM Basic Preparedness page**. Add cell phone and car charger, road maps, a shovel, windshield scraper, tow rope, booster cables, bright cloth to use as flag or distress signal, a bag of sand or non-clumping cat litter to place under tires if stuck in the snow.
- **Make a Plan** - Fill your car's gas tank and know where you can refuel on your way. Tell someone your travel plans: where you are going, planned route and expected arrival time. Call that person when you arrive at your destination.
- **Stay Informed.**

On The Road

- **Buckle up** - secure yourself and all passengers.
- **Brake properly to avoid skidding.** If driving on snow or ice, start slowly and brake gently. Begin braking early when you come to an intersection.
- **If you start to slide:** ease off the gas pedal or brakes. Steer into the direction of the skid until you regain traction then straighten your vehicle. If you have antilock brakes, apply steady pressure.
- **Expect decreased visibility**
 - In fog, drive with headlights set on dim or use fog lights.
 - In rain, fog, snow or sleet, stay within the limits of your vision. Pull off the road and stop if you can't see clearly.
- **Slow down**
 - Physically and mentally prepare to react quickly.
 - Drive slowly and increase your following distance. Adjust your speed for conditions. Match the flow of traffic.
 - Watch for slick spots.
- **Watch out for other vehicles:**
 - Never try to pass a vehicle in blowing snow because there may be vehicles ahead you cannot see.
 - Watch for snowplows. When a plow is coming toward you, allow plenty of room for it to pass. Its blade may cross the centerline. Allow extra distance between your vehicle and service vehicles as they may be spreading salt.



- Be careful when you approach a cloud of snow that obscures the road, especially on passing lanes of interstates or freeways. A snow plow may be ahead clearing the lane or preparing to turn around.
- Be careful after any minor accident. If you are bumped from behind and do not feel comfortable exiting your vehicle, motion to the other driver and drive to the nearest safe place to stop, such as a 24-hour store.
- **Turn back and seek shelter** if conditions become threatening

If You Become Stranded

- **Pull off the road as far as possible** if you break down. Passing cars are your greatest danger.
- **Stay in the car.** You may become disoriented and lost while wandering in a snowstorm.
- **Call for help** if you have a cell phone.
- **Display a trouble sign.** Attach a brightly colored cloth to your car's antenna.
- **Run the engine and the heater for 10 minutes each hour.** This gives you a chance to warm up.
- **Clear snow away from the exhaust pipe and open a downwind window slightly for ventilation** to avoid carbon monoxide poisoning.
- **Turn on your vehicle's interior light** to make it easier for rescuers to find you.
- **Avoid overexertion.** Cold weather puts added strain on the heart. Shoveling snow or pushing the car in freezing temperatures can cause a heart attack or make other medical conditions worse.
- **Watch out for hypothermia or frostbite:**
 - Hypothermia signs include uncontrollable shivering, memory lapses and drowsiness.
 - Frostbite symptoms include numb or pale fingers, toes, nose and ears.
 - Warm the torso area first and work outward, finishing with the extremities. Use a blanket. Occasionally moving arms and legs will stimulate circulation

Winter Safety Outdoors

Know the symptoms of hypothermia

- **Hypothermia and frost bite are serious health risks.** Act immediately if you or your children show the following symptoms:
 - Bouts of shivering and fatigue (signs of hypothermia)
 - Numbness or paleness of the nose, fingers, toes or earlobes (signs of frostbite)
- **Teach your children the signs of hypothermia and frostbite.** Reinforce the need to tell an adult immediately if they or anyone with them experience any symptoms

Physical exertion for adults

- **Winter storm conditions and cold waves are the deadliest types of weather for adults.** Cold puts an extra strain on your heart. Heavy exertion, such as shoveling snow, clearing debris or pushing a car, can increase the risk of a heart attack. Winter sports can be dangerous for the same reasons.
- Stay warm, dress warm and slow down when working outdoors.
- Take frequent rest breaks to avoid overexertion whether you are working or enjoying winter sports.
- **If you feel chest pain, experience heavy sweating and/or have shortness of breath, stop and seek help immediately.** Women can experience cardiac pain in their backs.
- Learn about frostbite and hypothermia.

Shoveling tips

- Use a small shovel to decrease physical strain.
- Be sure shovel is not damaged. A damaged tool will make you work harder.



- Move snow just enough to clear a path. Efforts to throw snow long distances are an extra strain on the body.
 - Take frequent rest breaks
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Safety for children

- Enjoy skiing, skating and sledding while following these safety tips:
 - **Keep children inside during a snowstorm.** Long periods of exposure to severe cold increase the risk of frostbite or hypothermia.
 - **Dress children in layers when they go out to play after a storm.** Wear a hat, mittens or gloves, and a scarf to cover your mouth.
 - Many layers of thin clothing are better than a single layer of thick clothing. Outer garments should be tightly woven, water repellent and hooded.
 - Always wear a hat to protect ears and slow heat loss from body.
 - Mittens are better than gloves, because fingers maintain more warmth when they touch each other.
 - A scarf worn over your mouth will protect your lungs from extreme cold.
 - **Bring children inside often for warm-up breaks.**
 - Learn the rules below for "Physical Exertion" and "Winter Sports."
 - For more information see: "[Caring for Kids: Winter Safety](#)" from the Canadian Paediatric Society
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Winter Sports Safety

- **Always use the proper equipment.** Check to make sure everything is in proper working condition.
- **Wear a helmet specifically designed for the activity you are going to enjoy.** Winter sports are as risky for head injuries as bicycling.
- **Check the weather forecast** but be prepared for anything.
- **Focus 100 percent of your attention** on the activity and the terrain you are on.
- **Rest when you are tired.**
- **Skiing and snowboarding:**
 - Stay on runs that are appropriate for your level of ability.
 - Stay in control at all times and be able to stop to avoid people or objects.
 - Obey all posted signs and warnings.
- **Sledding:**
 - Never use streets or roads unless they are blocked off from traffic.
 - Never sled on icy hills.
 - Avoid snow bumps or anything that can cause a sled to become airborne.
- **Skating:**
 - **Never skate alone.**
 - **Children must always be supervised by adults**
 - Skate in areas that have been approved and posted for ice-skating.
 - Remember that ice thickness is never even on lakes and ponds. Always beware of thin areas.
 - Always avoid cracks, seams, pressure ridges, slushy areas and darker areas that mean thinner ice.
 - Never skate after dark.

Winter Weather Terms

Watches:



A watch means that conditions are right for dangerous weather in your area.

- When a Watch is issued:
 - Be alert to changing weather conditions
 - Listen to NOAA Weather Radio, local radio and TV stations, or The Weather Channel for updates.
 - NJOEM on social media.
Follow on Twitter at <http://www.twitter.com/ReadyNJ> ↗.
Like on Facebook at <http://www.facebook.com/READYNEWJERSEY> ↗
 - Avoid unnecessary travel.
 - Winter Storm Watch: Indicates the potential for severe life-threatening winter weather conditions including heavy snow, heavy ice or near-blizzard conditions.
 - Blizzard Watch: Indicates the potential for blizzard conditions.
 - Wind Chill Watch: Indicates the potential of wind chills of -25F or less, which can cause rapid frostbite and increase the risk of hypothermia.
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Warnings:

- **When a Warning is issued:**
 - Stay indoors during the storm.
 - If you must go outside wear several layers of lightweight clothing, including gloves, a hat and a scarf to cover your mouth and protect your lungs.
 - Know the hazards of wind chill.
 - Walk carefully on snowy, icy sidewalks.
 - After the storm if you shovel snow, be sure to take frequent breaks. Cold weather puts an additional strain on the heart.
 - **Winter Storm Warning:** A combination of snow, ice and/or other winter conditions is expected to cause life-threatening public impact.
 - **Heavy Snow Warning:** Seven inches of more or snow is expected in 12 hours or less, or 9 inches or more is expected in 24 hours or less.
 - **Ice Storm Warning:** A half-inch or more of ice accumulation is expected, which can damage power lines and trees.
 - **Blizzard Warning:** Blizzard Conditions are imminent or expected in the next 12 to 24 hours. A Blizzard is a severe snow event including 1/4 mile or less visibility for three hours or more, falling or blowing snow, and winds over 35 mph.
 - **Wind Chill Warning:** Wind chill is expected to be -25F or less.
Frostbite can occur in less than 10 minutes.
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Warnings & Advisories:

A **warning** means that dangerous weather is occurring in your area.

- **When a Warning is issued:**
 - Stay indoors during the storm.
 - If you must go outside wear several layers of lightweight clothing, including gloves, a hat and a scarf to cover your mouth and protect your lungs.
 - Know the hazards of wind chill.
 - Walk carefully on snowy, icy sidewalks.
 - After the storm if you shovel snow, be sure to take frequent breaks. Cold weather puts an additional strain on the heart.
 - Continue to monitor local and social media for information about weather conditions.
- **Winter Storm Warning:** A combination of snow, ice and/or other winter conditions is expected to cause life-threatening public impact.
- **Heavy Snow Warning:** Seven inches of more or snow is expected in 12 hours or less, or 9 inches or more is expected in 24 hours or less.



- **Ice Storm Warning:** A half-inch or more of ice accumulation is expected, which can damage power lines and trees.
- **Blizzard Warning:** Blizzard Conditions are imminent or expected in the next 12 to 24 hours. A Blizzard is a severe snow event including 1/4 mile or less visibility for three hours or more, falling or blowing snow, and winds over 35 mph.
- **Wind Chill Warning: Frostbite can occur in less than 10 minutes.** Wind chill is expected to be -25F or less.

Advisories are more than a watch but less than a warning; the expected weather condition has a relatively good chance of occurring.

- **Winter Weather Advisory:** Indicates a hazardous combination of snow and ice that is not expected to reach warning criteria. Winter weather can cause significant inconvenience, or can be life-threatening if proper precautions are not taken.
- **Snow Advisory:** Four to six inches of snow are expected in 12 hours or less.
- **Freezing Rain Advisory:** An accumulation of freezing rain may make roads slippery.
- **Snow and Blowing Snow Advisory:** Sustained wind or frequent gusts of 25 to 34 mph accompanied by falling and blowing snow, occasionally reducing visibility to 1/4 mile or less for three hours or more.
- **Blowing Snow Advisory:** Widespread or localized blowing snow reducing visibility to 1/4 mile or less with winds less than 35 mph.
- **Wind Chill Advisory:** Indicates wind chills of -15F to -24F. Frostbite can occur in less than 30 minutes

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