

WINTER STORM PREPAREDNESS

Illinois Emergency Management Agency

_____ **Rod R. Blagojevich** _____
GOVERNOR

_____ **William C. Burke** _____
Director

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<http://www.state.il.us/iema>

WINTER STORMS AND EXTREME COLD

There has not been a winter in Illinois this century without a severe winter storm. On average, Illinois experiences five severe winter storms each year. As few as two (in the winters of 1921-1922 and 1980-1981) and as many as 18 (in the winters of 1977-1978 and 1981-1982) have occurred.

Severe winter storms can cause widespread damage and disruption. Heavy snow often results in paralyzed transportation systems, automobile accidents due to slippery roads and stranded vehicles. When accompanied by intense winds and extreme cold, snow can isolate entire towns. These conditions are a dangerous threat to life. Glazing from ice storms topples utility lines and poles and makes travel virtually impossible. Even walking may be a dangerous venture.

The hazards posed by winter storms and extreme cold can be catastrophic. However, you and your family can take actions now that will increase your chances of surviving winter storms and extreme cold.

BEFORE A WINTER STORM OR EXTREME COLD

- Know the terms relating to winter storms and extreme cold (see page 5).
- Know the names of the counties in which you live, work and frequent. County names are used to identify areas at risk.
- Learn how to protect your family's health during the winter months:
 - Learn to dress appropriately for the winter (see page 6).
 - Learn the physical dangers to your body (see page 7).
- Gather emergency supplies for work or home:
 - A battery-powered NOAA Weather Radio and a battery-powered commercial radio and extra batteries. These may be your only links to the outside world if electrical service is interrupted.
 - Foods that do not require cooking or refrigeration are best. Include high energy foods such as dried fruit and candy.
 - Extra medications and special items for babies, the disabled or elderly.
 - Extra water in clean containers.
 - Rock salt to melt ice on walkways and sand to improve traction.
 - Flashlights and extra batteries. Do not use candles; they are a fire hazard.
- Winterize your home to extend the life of your fuel supply:
 - Insulate walls and attics.
 - Caulk and weather-strip doors and windows.
 - Install storm windows or cover windows with plastic.

- Take steps to prevent frozen water pipes:
 - Locate and insulate pipes most susceptible to freezing--typically those near outer walls, in crawl spaces, or in attics.
 - Wrap pipes with heat tape (UL approved).
 - Seal any leaks that allow cold air inside where pipes are located.
 - Disconnect garden hoses and shut off and drain water from pipes leading to outside faucets. This reduces the chance of freezing in the short span of pipe just inside the house.
 - Make sure you and your family know how to shut off the water, in case pipes burst.

- Prepare for possible isolation in your home:
 - Make sure you have sufficient heating fuel. After a severe winter storm, regular fuel carriers may not reach you for days.
 - Have emergency heating equipment (fireplaces, wood burning stoves or space heaters) and ample fuel so you can keep at least one room of your house warm enough to be livable. If a thermostat controls your furnace and your electricity is cut off by a storm, you will need emergency heat. Another option is a kerosene heater. However, it is important that the manufacturer's operating instructions be followed. Learn to use emergency heating sources properly to prevent a fire. Always ensure proper ventilation.
 - Keep fire extinguishers on hand, and make sure your family knows how to use them.

- Prepare your vehicle for the winter:
 - Winterize your vehicle following the suggested maintenance schedule included in the owners manual or have your vehicle serviced by a reputable dealer, garage, or mechanic.
 - Check your wipers, tires, lights, and fluid levels (radiator, windshield washer, power steering, oil and brakes) regularly. Make sure the brakes and transmission are working properly. Lubricate door and trunk locks with lock lubricant to prevent them from freezing.
 - Prepare a Winter Storm Survival Kit (see page 7) and carry it in your vehicle.

DURING A WINTER STORM AND EXTREME COLD

Listen to the radio or television for weather reports and emergency information. Dress for the season.

When At Home

- Stay indoors as much as possible.
- Wear layers of loose fitting, lightweight, warm clothing. Remove layers to avoid overheating, perspiration and subsequent chill.

- Conserve fuel if necessary by keeping your house cooler than normal. Temporarily "close off" heat to some rooms.
- Hang blankets over windows at night (let the sun shine in during the day). Stuff cracks around doors with rugs, newspapers, towels or other such material.
- When using alternative heat from a fireplace, wood stove, space heater, etc., use safeguards and ensure proper ventilation.
- Refuel kerosene heaters outside and keep them at least three feet away from flammable objects.
- If you have no heat, close off unneeded rooms and place towels or rags under the doors. Cover windows at night.
- Eat to supply heat and drink non-alcoholic beverages to avoid dehydration.
- If your water pipes freeze:
 - Shut off water at the main source. This can minimize the damage to your home.
 - Call a plumber and contact your insurance agent.
 - Never try to thaw a frozen pipe with an open flame or torch.
 - Always be careful of the potential for electric shock in and around standing water.

Outside

- Avoid overexertion, such as shoveling heavy snow, pushing a car or walking in deep snow. The strain from the cold and the hard labor could cause a heart attack - a major cause of death in the winter. Sweating can lead to a chill and even hypothermia.
- Watch for signs of frostbite and hypothermia.
- If you become stranded:
 - Seek shelter to stay dry.
 - Cover all exposed parts of the body.
 - If no shelter is nearby, prepare a lean-to, windbreak or snow cave for protection from the wind. Build a fire for heat and to attract attention.
 - Do not eat snow as it will lower your body temperature. Melt it first.

On The Farm

- Move animals to sheltered areas.
- Haul extra feed to nearby feeding areas.
- Have a water supply available. Most animal deaths in winter storms occur from dehydration.

When Traveling

If you decide a trip cannot be delayed, consider using public transportation. If you decide to drive your vehicle:

- **Before You Leave**

- Plan your travel and check the latest weather conditions along your travel route. Listen to weather forecasts on TV, local radio stations or NOAA Weather Radio. Call 1-800-452-IDOT to get current road conditions for Illinois' interstate and freeway systems. Information is updated every two hours during a storm. Winter driving is often the most difficult due to rain, fog, snow or sleet. There are fewer daylight hours.
- Check your wipers, tires, lights and fluid levels (radiator, windshield washer, power steering, oil and brakes). Lubricate door and trunk locks with lock lubricant to prevent them from freezing.
- Travel during daylight hours on main roads (avoid back-road shortcuts) and don't travel alone.
- Carry a Winter Storm Survival Kit in your vehicle.
- Provide your itinerary to a friend, relative or co-workers. Include information on where you are going, the routes you will travel and when you expect to arrive. When you reach your destination, make a call to report that you have arrived.
- Start your trip with a full tank of gas.

- **On The Road**

- Buckle your seat belts!
- Be prepared to turn back and seek shelter if conditions become threatening.
- In fog, drive with your headlights set on dim, or use fog lights. If the fog is too dense, pull off the roadway at a safe location. Do not drive at five or ten miles per hour.
- In rain, fog, snow, or sleet, do not overdrive your headlights. Stay within the limits of your vision.
- Keep your windows clear of snow and ice. Do not start until your windshield is defrosted.
- Drive slower and increase your following distance. Your speed should be adjusted for the conditions and match the flow of traffic.
- Roadway conditions may vary depending on the sun, shade, or roadway surface. Watch for slick spots especially under bridges, on overpasses and in shaded spots. Be prepared to react physically and mentally to deteriorating conditions.
- If the pavement is snow or ice covered, 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 feel you have regained traction then straighten your vehicle.
- When a snowplow is coming toward you, allow plenty of room for the truck to pass. When the centerline is being cleared and salted, the plow tip may be on or

over the line. Snowplows are big, heavy pieces of equipment. So play it safe and give them room to pass.

- When you approach a snowplow from behind, pass with care and only when you can see the road ahead of the truck. You should not try to pass in blowing snow; there may be a vehicle in that cloud of snow. Allow more distance between you and the plow which may be spreading salt.
- Be alert when you approach a cloud of snow that covers the road, especially on passing lanes of interstates or freeways. A snowplow may be at work clearing the lane or preparing to turn around.
- Be careful after a minor rear end accident. If you are bumped from behind and you do not feel comfortable exiting your vehicle, motion the other driver and drive to the nearest police station or other safe location.
- While traveling, refuel often, keeping your gas tank near full to prevent ice in the tank and fuel lines, which could leave you stranded. These frequent stops should relieve tense muscles.

- **If Stranded**

- Pull as far off the road as possible, set your hazard lights to "flashing," and hang or tie a colored cloth (preferably red) to your antenna, window or door. After snow stops falling, raise the hood to indicate trouble.
- If you have a cellular phone or citizens band radio, call for help.
- Stay in your vehicle where rescuers are most likely to find you. Do not set out on foot unless you can see a building close by where you know you can take shelter. Be careful. Distances are distorted by blowing snow. A building may seem close but be too far to walk to in deep snow. Visibility can diminish quickly in wind-driven snow. This, added to the cold, can leave you disoriented.
- Run the engine and heater (after making sure the exhaust pipe is not blocked) about ten minutes each hour to keep warm. Turn on the dome light at night when running the engine. When the engine is running, open a window slightly for ventilation. The fresh air will protect you from carbon monoxide poisoning. Periodically clear away snow from the exhaust pipe.
- Use items in your Winter Storm Survival Kit.
- Exercise to keep blood circulating and to maintain body heat by vigorously moving arms, legs, fingers, and toes. But, avoid overexertion. In extreme cold or if you don't have a Winter Storm Survival Kit, use road maps, seat covers and floor mats for insulation. Huddle with passengers and use your coats as blankets.
- Take turns sleeping. One person should be awake at all times to look out for rescue crews.
- Be careful not to use up battery power. Balance electrical energy needs -- the use of lights, heat and radio -- with supply.
- If stranded in a remote rural area or wilderness area, spread a large cloth over the snow to attract attention of rescue personnel who may be surveying the area by airplane. Once the blizzard passes, you may need to leave the vehicle and proceed on foot.

WINTER WEATHER TERMS

The National Weather Service uses the terms below to convey the weather threat to the public. It is important that everyone understands these terms and knows what protective actions need to be taken.

Blizzard Warning -- Snow and strong winds will combine to produce blinding snow, near zero visibility, deep drifts, and life threatening wind chill.

Blowing/Drifting Snow Advisory -- Poor visibility and hazardous driving conditions.

Freezing Fog Advisory -- Very light ice accumulation on roadways, bridge decks and overpasses, predominately from freezing fog, causing hazardous travel.

Freezing Rain -- Rain that freezes when it hits the ground, creating a coating of ice on roads and walkways.

Freezing Rain/Sleet Advisory -- Light accumulations of ice will cause hazardous travel.

Heavy Snow Warning -- Snowfall of six inches or more in north and central Illinois, four inches or more in southern Illinois.

Ice Storm Warning -- Heavy accumulations of ice will create extremely dangerous travel and damage trees and power lines.

Sleet -- Rain that turns to ice pellets before reaching the ground. Sleet bounces when hitting a surface and does not stick to objects. An accumulation of sleet can make roads slick and hazardous.

Snow Advisory -- Snowfall of three to five inches.

Wind Chill -- A calculation of how cold it feels outside when the effects of temperature and wind speed are combined. A strong wind combination with a temperature of just below freezing can have the same effect as a still air temperature about 35 degrees colder.

Wind Chill Advisory -- Dangerous wind chills of 30 to 50 below zero in northern and central Illinois, 20 to 30 below zero in southern Illinois.

Wind Chill Warning -- Life threatening wind chills of 50 below zero or colder in northern and central Illinois, 35 below zero or colder in southern Illinois.

Winter Storm Warning -- Indicates severe winter weather conditions are occurring, imminent, or highly likely. Stay indoors!

Winter Storm Watch -- Indicates severe winter weather such as heavy snow or ice is possible within the next day or two. Prepare now!

Winter Weather Advisory -- Indicates winter weather conditions will cause significant inconveniences and may be hazardous, especially to motorists. Use caution!

RECOMMENDED WINTER ATTIRE

- Wear loose fitting, lightweight, warm clothing in several layers (the trapped air between the layers insulates). Layers can be removed to avoid perspiration and subsequent chill.
- Wear outer garments that are tightly woven, water repellent, and hooded.
- Wear a hat (half of body heat is lost through the top of the head).
- Wear mittens that are snug at the wrist. Mittens offer better protection. Gloves allow your fingers to cool much faster than mittens do.
- Cover the mouth and nose with scarves to help protect lungs from cold air.
- Attempt to keep your feet as dry as possible. Wear wool socks.

WINTER STORM SURVIVAL KIT

- Blankets/sleeping bags
- Flashlight with extra batteries
- First-aid kit
- Knife
- High calorie, non-perishable food
- Extra clothing to keep dry
- A large empty can and plastic cover with tissues and paper towels for sanitary purposes
- Smaller can and waterproof matches to melt snow for drinking water
- Sack of sand (or cat litter)
- Shovel
- Windshield scraper and brush
- Tool kit

- Towrope
- Booster cables
- Water container
- Compass and roadmaps

FROSTBITE AND HYPOTHERMIA

Frostbite is a severe reaction to cold exposure of the skin that can permanently damage fingers, toes, the nose, and ear lobes. Symptoms are numbness and a white or pale appearance to the skin. When symptoms are apparent, seek medical help immediately. If medical help is not immediately available, slowly warm the affected areas. If the victim is also showing signs of hypothermia, always warm the body core before the extremities.

Hypothermia, or low body temperature, is a condition brought on when the body temperature drops to less than 95 degrees F. Symptoms include slow or slurred speech, incoherence, memory loss, disorientation, uncontrollable shivering, drowsiness, repeated stumbling, and apparent exhaustion. If these symptoms are detected, take the person's temperature. If below 95 degrees F, immediately seek medical attention. If medical help is not available, begin warming the person slowly. Always warm the body core first. Get the person into dry clothing, and wrap them in a warm blanket covering the head and neck. As a last resort, use your own body heat to warm the victim. Do not give the victim alcohol, drugs, coffee, or any hot beverage. Warm broth is better. Do not warm extremities (arms and legs) first. This drives the cold blood toward the heart and can lead to heart failure.

SAFETY FOR SCHOOLS

Children can be especially susceptible to the dangers associated with winter weather. Their youthful enthusiasm often takes over when common sense and safety should prevail. Even if they are cold, wet, or exhausted, they often are not conscious of the potential impact these conditions could pose.

School administrators and principals need to be aware of the dangers winter weather pose. Emergency plans and procedures must be established or reviewed before the onset of the winter season to ensure children's safety.

Winter safety procedures should include:

- A means of receiving current weather information. The National Weather Service (NWS) provides this information via NOAA Weather Radio. Commercial radio and television also air winter weather conditions.
- Guidelines for children's outdoor activities.

- Plans and procedures for closures, early dismissal or holding children and staff at school due to snow, ice or extreme cold.
- Provisions for children who arrive earlier than usual or stay later than usual due to driving conditions parents may encounter.
- Considerations for bus drivers:
 - Training for winter conditions.
 - Procedures for altered school schedules.
 - Changes in routes (alternate) during winter conditions.
 - Procedures to deal with stranded buses.

SOURCES OF INFORMATION

For additional information on winter storms or other hazards, contact the following:

- Your local Emergency Management Agency (EMA)
- Your local chapter of the American Red Cross (ARC) or www.redcross.org
- The nearest office of the National Weather Service (NWS)
- National Weather Service Forecast Office websites:
 - Davenport, IA www.crh.noaa.gov/dvn
 - Romeoville, IL www.crh.noaa.gov/lot
 - Lincoln, IL www.crh.noaa.gov/ilx
 - St. Louis, MO www.crh.noaa.gov/lxx/lxx.htm
 - Paducah, KY www.crh.noaa.gov/pah
- IEMA Home Page www.state.il.us/iema

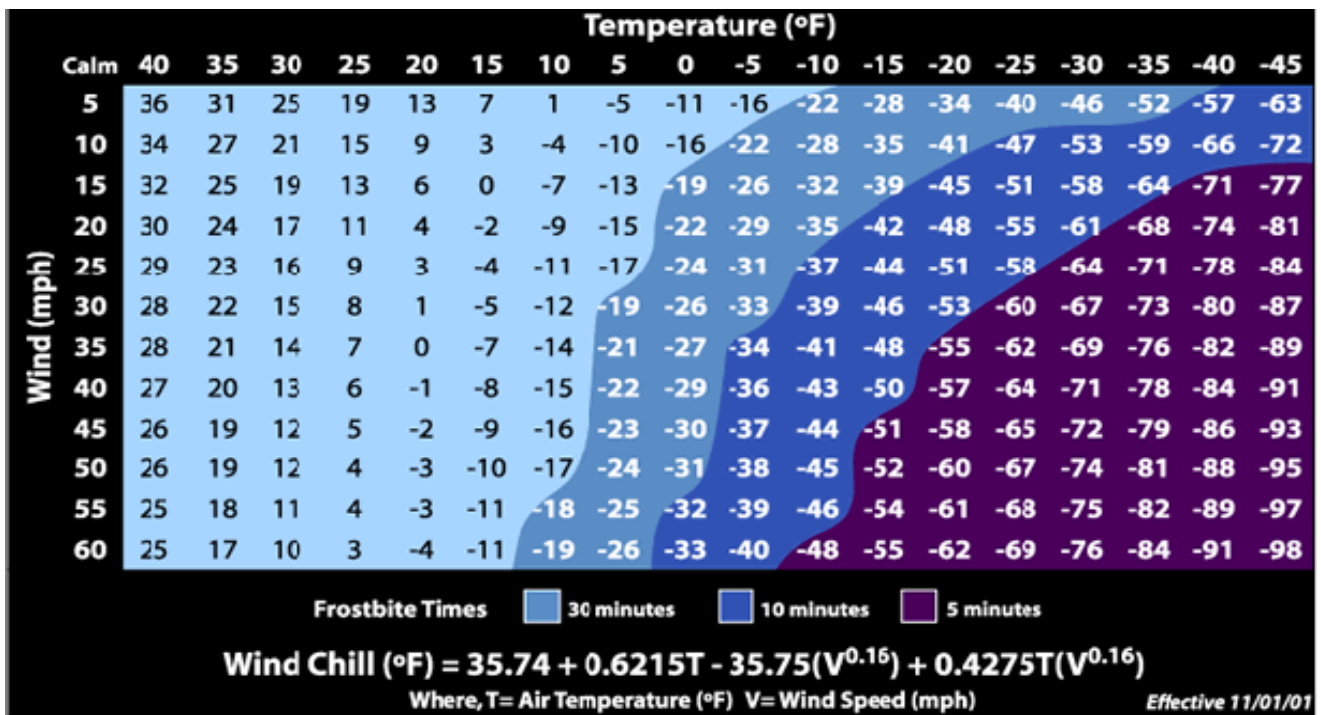
WIND CHILL

Most of the time, cold is judged in terms of a thermometer reading. With people and other living things though, both temperature and wind speed are needed to produce a “wind chill factor.” The wind chill is based on the rate of heat loss from exposed skin caused by the combined effects of the wind and cold. As the wind increases, heat is carried away from the body at an accelerated rate, driving down the body temperature. The wind chill shows how cold the wind makes exposed flesh feel and is a good way to determine the potential for frostbite or hypothermia.

Remember, wind chill temperatures apply only to people and other living things. If the temperature is 35 degrees F and the wind chill is 10 degrees F, objects such as pipes or cars will only cool to 35 degrees F. The wind chill factor does not apply to non-living objects.

NATIONAL WEATHER SERVICE WIND CHILL CHART

Read right and down from the calm-air line. For example, a temperature of 0 degrees F combined with a 20-mph wind, has an equivalent cooling effect of -22 degrees F.



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