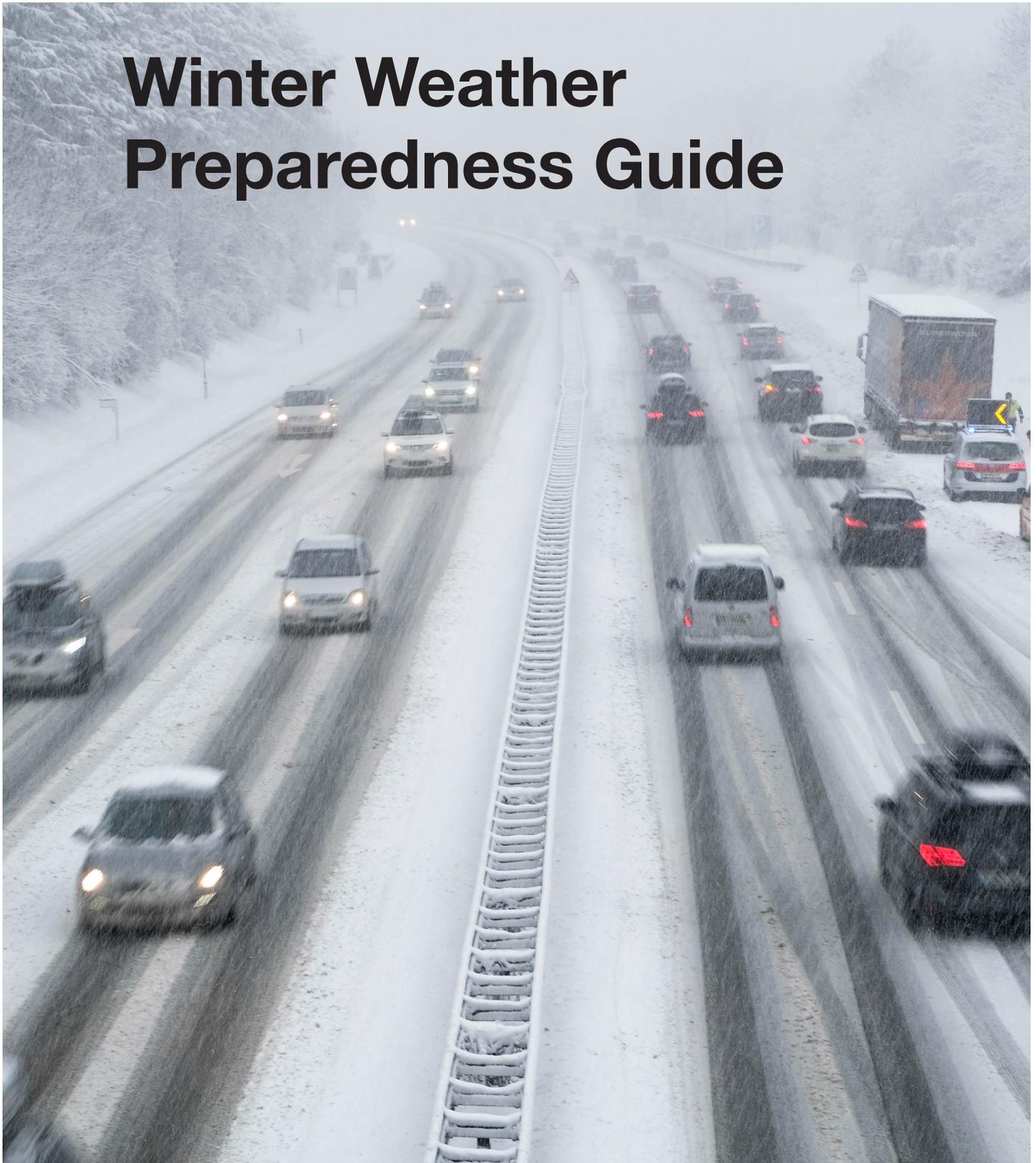




State of Illinois
Illinois Emergency Management Agency

Winter Weather Preparedness Guide



Prepare Today for Winter Weather

Winter weather in Illinois may be inevitable, but being prepared will help you handle whatever weather hazards Mother Nature throws our way this year. Knowing what to do before a disaster strikes can provide peace of mind and ultimately impact our recovery process.

To help Illinois residents be prepared for winter weather this year, the Illinois Emergency Management Agency (IEMA) and the National Weather Service (NWS) developed this Winter Weather Preparedness Guide to help you and your family prepare for and stay safe during winter weather.

Preparing for winter also means adjusting your driving habits. Snowy or ice-coated roads and reduced visibility due to fog or blowing snow results in thousands of motor vehicle crashes every year in Illinois. Many of these crashes can be avoided by slowing down on city streets, rural roads and highways. Recent traffic studies have shown that many times, minor accumulations of snow or ice on roads can be just as dangerous for motorists as major snowstorms. This Winter Weather Preparedness Guide includes information about winter travel safety guidelines, winter weather terminology and tips to prepare your vehicle and home for winter storms.

Proper home heating is also a critical issue during the winter months, and over time has proven deadly for many families. Every year, more than 400 people die in the U.S. from accidental carbon monoxide (CO) poisoning. According to the Centers for Disease Control (CDC), approximately 20,000 people in the U.S. visit the emergency department each year due to accidental CO poisoning. CO is found in fumes produced any time you burn fuel in cars or trucks, small engines, stoves, lanterns, grills, fireplaces, gas ranges, or furnaces. CO can build up indoors and poison people and animals who breathe it. Use this winter weather preparedness guide to educate your family about the dangers associated with this home heating hazard.

Keep in mind, being prepared for winter doesn't have to cost a lot of money or take a lot of time. It could be as simple as making sure your vehicle is in good winter driving condition, adding a winter survival kit to your car, changing your furnace filter at home and stocking or updating your family's emergency supply kit.

Take time now to prepare your family, home, vehicles and driving habits for everything from a dusting of snow to a major winter storm.



Illinois Winter Weather Facts

COLD TEMPERATURES

- A study published in 2020 by the University of Illinois Chicago found that nearly 95% of temperature related deaths in Illinois were due to cold weather.
- The coldest temperature on record occurred on January 31, 2019, when the mercury dipped to minus 38 degrees near Mt. Carroll in Carroll County.

WINTER STORMS

- On average, Illinois experiences five severe winter storms each year. From November 2020 through April 2021 there were eight (8) snow or ice storms that impacted Illinois. There has not been a winter in Illinois without at least one winter storm in the past century.
- Winter driving conditions contribute to an average of nearly 29,000 vehicle crashes, more than 4,500 injuries and 80 fatalities in Illinois each year.

SNOWFALL

- Average annual snowfall ranges from 37 inches of snow in Rockford and Chicago, to as little as 6 to 10 inches at the southern tip of Illinois.
- The greatest snowfall on record from a single storm was 27.9 inches measured near Waukegan in Lake County, from January 3-5, 2015.

ICE STORMS

- On average, locations from just south of Quincy, through Lincoln, to Watseka experience more freezing rain and ice storms than any other part of the state.



Winter Weather Terms

The National Weather Service uses the terms below to convey the weather threat to the public.

WATCHES, WARNINGS & ADVISORIES

- **Winter Storm Watch:** Issued for **potentially significant** winter weather, including heavy snow ice, sleet, and/or blowing snow within the next day or two. Now is the time to prepare!
- **Winter Storm Warning:** Indicates heavy snow, blowing snow, sleet or a combination of winter weather hazards are expected to cause a **significant impact to life or property**. Stay indoors and adjust travel plans.
- **Snow Squall Warning:** Sudden whiteout conditions with near zero visibility and flash freezing of road surfaces resulting in potentially life threatening conditions for travelers due to bursts of heavy snow in a localized area.
- **Blizzard Warning:** Strong winds (35 mph or greater) will produce blinding snow and near zero visibility, resulting in **potentially life-threatening conditions** – particularly for travelers. Blizzards can occur with minimal accumulations of snow.
- **Ice Storm Warning:** Heavy accumulations of ice are expected to cause a **significant impact to life or property**, resulting in hazardous travel conditions, tree damage and extended power outages.
- **Winter Weather Advisory:** Snow, blowing snow, ice and/or sleet is expected to produce **potentially dangerous travel conditions** within the next 12 to 36 hours.
- **Wind Chill Warning:** Life-threatening wind chills of minus 25 degrees or colder.
- **Wind Chill Advisory:** Dangerous wind chills of minus 15 degrees to minus 24 degrees.

WINTER WEATHER TERMS

- **Freezing Rain:** Precipitation that falls from the clouds as rain, but freezes into a glaze of ice on groundbased objects (trees, power lines, roads, cars, etc.).
- **Sleet:** Small pellets of ice created by frozen raindrops. Sleet bounces when hitting a surface and does not stick to objects.
- **Wind Chill:** A calculation of how cold it feels outside when the effects of temperature and wind speed are combined. **Wind chill ONLY applies to bare, human skin.** The effects of wind chill are different for animals and don't apply to non-living objects.

Before a Winter Storm or Extreme Cold

WEATHER TERMS: Know the terms related to winter storms and extreme cold.

COUNTY NAMES: Know the names of the counties in which you live, work and travel. County names are used to identify areas at risk.

HEALTH PRECAUTIONS: Learn how to protect your family's health during the winter months.

- Dress appropriately for the winter.
- Learn the physical dangers to your body.

DISASTER KITS: Gather emergency supplies for work and home.

Create a Family Emergency Supply Kit. See box below for important items for your kit.

FAMILY EMERGENCY SUPPLY KIT

A few important kit items are listed below:

- A battery-powered National Oceanic and Atmospheric Administration (NOAA) Weather Radio and a battery powered commercial radio and extra batteries.
- Foods that do not require cooking or refrigeration are best. Include high energy foods such as dried fruit and granola bars.
- Extra medications and special items for babies, the disabled or elderly.
- Extra water in clean containers.
- Flashlights and extra batteries. Do not use candles.
- A first-aid kit, non-prescription drugs and personal sanitary items.
- Pet supplies.
- Face mask, hand sanitizer, sanitizing wipes

For details, go to: <https://www.illinois.gov/ready/plan/Pages/EmergencyKit.aspx>.

WINTERIZE YOUR HOME: Winterize your home to extend your fuel supply.

- Insulate walls and attics.
- Caulk and weatherize doors and windows.
- Install storm windows or cover windows with plastic.

FROZEN PIPES: Take steps to prevent frozen water pipes.

- Locate and insulate the pipes most susceptible to freezing: typically those near outer walls, in crawl spaces or in attics.
- Heat tape or thermostatically controlled heat cables can be used to wrap pipes. Be sure to use products approved by an independent testing organization, such as Underwriters Laboratories Inc., and only for the use intended (exterior or interior). Closely follow all manufacturers' installation and operation instructions.
- 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.
- Make sure you know how to shut off the water, in case pipes burst.

PREPARE FOR POSSIBLE ISOLATION IN YOUR HOME FOR SEVERAL DAYS:

- 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. **Always ensure proper ventilation to avoid carbon monoxide poisoning.**
- NEVER use an outdoor grill to heat your home or to cook food indoors.
- Keep fire extinguishers on hand and make sure your family knows how to use them.

PREPARE YOUR VEHICLE FOR THE WINTER:

- Winterize your vehicle or have your vehicle serviced by a reputable dealer, garage or mechanic.
- Check your wipers, tires, lights and fluid levels regularly. Make sure the brakes and transmission are working properly. Lubricate door and trunk locks to prevent them from freezing.
- Prepare a Winter Storm Survival Kit and carry it in your vehicle. A kit is important even for short trips. If you have an accident or vehicle breakdown, you may be waiting several hours for assistance to arrive. See below for "Winter Storm Survival Kit for Travelers."

Winter Storm Survival Kit for Travelers

- | | | | | | |
|--------------------------|---|---|--------------------------|---|---|
| <input type="checkbox"/> |  | Cell phone and charger | <input type="checkbox"/> |  | A smaller can and water-proof matches to melt snow for drinking water |
| <input type="checkbox"/> |  | Blankets/sleeping bags | <input type="checkbox"/> |  | Sack of sand (or cat litter) |
| <input type="checkbox"/> |  | Flashlight with extra batteries | <input type="checkbox"/> |  | Shovel |
| <input type="checkbox"/> |  | First-aid kit | <input type="checkbox"/> |  | Windshield scraper and brush |
| <input type="checkbox"/> |  | Knife | <input type="checkbox"/> |  | Tool kit |
| <input type="checkbox"/> |  | High calorie, non-perishable food | <input type="checkbox"/> |  | Tow rope with loops (avoid chains and hooks if at all possible) |
| <input type="checkbox"/> |  | Water | <input type="checkbox"/> |  | Booster cables |
| <input type="checkbox"/> |  | Extra clothing to keep dry | <input type="checkbox"/> |  | Water container |
| <input type="checkbox"/> |  | A large empty can and plastic cover with tissues and paper towels for sanitary purposes | <input type="checkbox"/> |  | Compass and road maps |
| <input type="checkbox"/> |  | Face mask, hand sanitizer | | | |

Illinois Winter During Winter Storms and Extreme Cold

WHEN AT HOME

- Stay indoors in a heated room as much as possible.
- Hang blankets over windows at night, but let the sun shine in during the day. Cover 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 to avoid carbon monoxide poisoning.**
- 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.
- 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 aware of the potential for electric shock in and around standing water.

HOME HEATING HAZARDS

- Carbon Monoxide is a odorless, colorless gas that can kill you.
- Symptoms include headache, dizziness, weakness, upset stomach, vomiting, chest pain and confusion
- Do not use portable flameless chemical heaters indoors.
- Make sure your gas appliances are vented properly.
- Have your chimney checked or cleaned each year.
- Never use a gas range or oven for heating.
- Never burn charcoal indoors
- Never use a portable gas camp stove indoors
- Never use a generator inside your home, basement, garage or less than 20 feet from any window, door or vent.
- Install a battery-operated or battery back-up CO detector in your home and check/replace batteries when you change the time on your clocks each spring and fall.

WHEN 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 of snow shoveling could cause a heart attack at any age – a major cause of death in the winter. Don't ignore chest pain or tightness in your chest.

- If you become stranded outdoors, 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.
- Watch for signs of 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.



- **Hypothermia**, or low body temperature, is a life-threatening condition brought on when the body temperature falls below 95 degrees.

Symptoms of hypothermia 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, immediately seek medical attention. If medical help is not available, begin warming the person slowly. Always warm the body core first. Do NOT warm the arms and legs first – this can force the cold blood toward the heart and can lead to heart failure.

Get the person into dry clothing, and wrap them in a warm blanket covering the head and neck. Do not give the victim alcohol, drugs, coffee or any hot beverage. Warm broth is better.

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. A significant amount 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.
- Cover the mouth and nose with scarves to help protect lungs from cold air.
- Keep your feet as dry as possible. Wear wool socks.

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 it is available. If you decide to drive your vehicle, take the following precautions:

Before You Leave

- Check the latest weather conditions along your planned travel route. Listen to weather forecasts on TV, local radio stations or on a NOAA Weather Radio. Visit the IDOT website (www.gettingaroundillinois.com) to get current road conditions for Illinois' interstate systems.
- Check your wipers, tires, lights and fluid levels. Lubricate door and trunk locks with lock lubricant to prevent freezing. Start with a full tank of gas.
- Travel during daylight hours on main roads and don't travel alone.
- Carry a **Winter Storm Survival Kit** in your vehicle. (see page 5)
- Provide your itinerary to a friend, relative or co-worker. Include information on your destination, 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.



On the Road

- Buckle your seat belts!
- Be prepared to turn back and seek shelter if conditions become threatening.
- Keep your windows clear of snow and ice. Do not start driving 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.
- Only use a cell phone if you are safely over to the side of the road or in a parking lot. Never talk on a cell phone while driving. This is especially dangerous in winter weather conditions.
- Roadway conditions may vary depending on the sun, shade or roadway surface. Watch for slick spots especially under bridges, on overpasses and in shaded areas.
- 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, and then straighten your vehicle.
- If your vehicle becomes stuck in the snow, contact a towing company, but be prepared to wait in the cold weather for up to several hours. If you can be safely pulled out by another vehicle, make sure you use tow ropes with loops on the ends. Avoid chains or hooks if at all possible, since these can slip off and recoil very quickly, causing injury or death.
- When a snowplow is coming toward you, allow plenty of room for the truck to pass. When the center line is being cleared and salted, the plow tip may be on or over the line.
- 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 than usual between you and the plow.
- 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 also help 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 the snow stops falling, raise the hood to indicate trouble. If you have a cell phone, 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.
- Make sure the exhaust pipe is not blocked by snow, and then run the engine and heater about 10 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. Periodically clear away snow from the exhaust pipe.
- Exercise to keep blood circulating and to maintain body heat by vigorously moving arms, legs, fingers and toes. In extreme cold, or if you don’t have a Winter Storm Survival Kit, use road maps, seat covers and floor mats for insulation.
- Take turns sleeping. One person should be awake at all times to watch for rescue crews.
- Be careful not to deplete battery power. Balance electrical energy needs such as lights, heat and radio, with electrical energy supply.



Safety for Schools

Children can be especially susceptible to the dangers associated with winter weather. Even if they are cold, wet or exhausted, they often are not conscious of the potential threats these conditions could pose. School administrators, principals and teachers need to be aware of the risks of winter weather. Emergency plans and procedures must be established or reviewed before the onset of the winter season to ensure children's safety.



WINTER SAFETY PROCEDURES FOR SCHOOLS

Procedures for schools should include:

- A means of receiving current weather information. The National Weather Service (NWS) provides this information via NOAA Weather Radio and websites (see listing on page 10). Commercial radio and television also air winter weather conditions.
- Guidelines for children's outdoor activities.
- Plans 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.

Transportation–Related Considerations:

- Bus driver training for winter conditions.
- Changes in routes (alternate) during winter conditions.
- Procedures for altered school schedules.
- Procedures to deal with stranded buses.

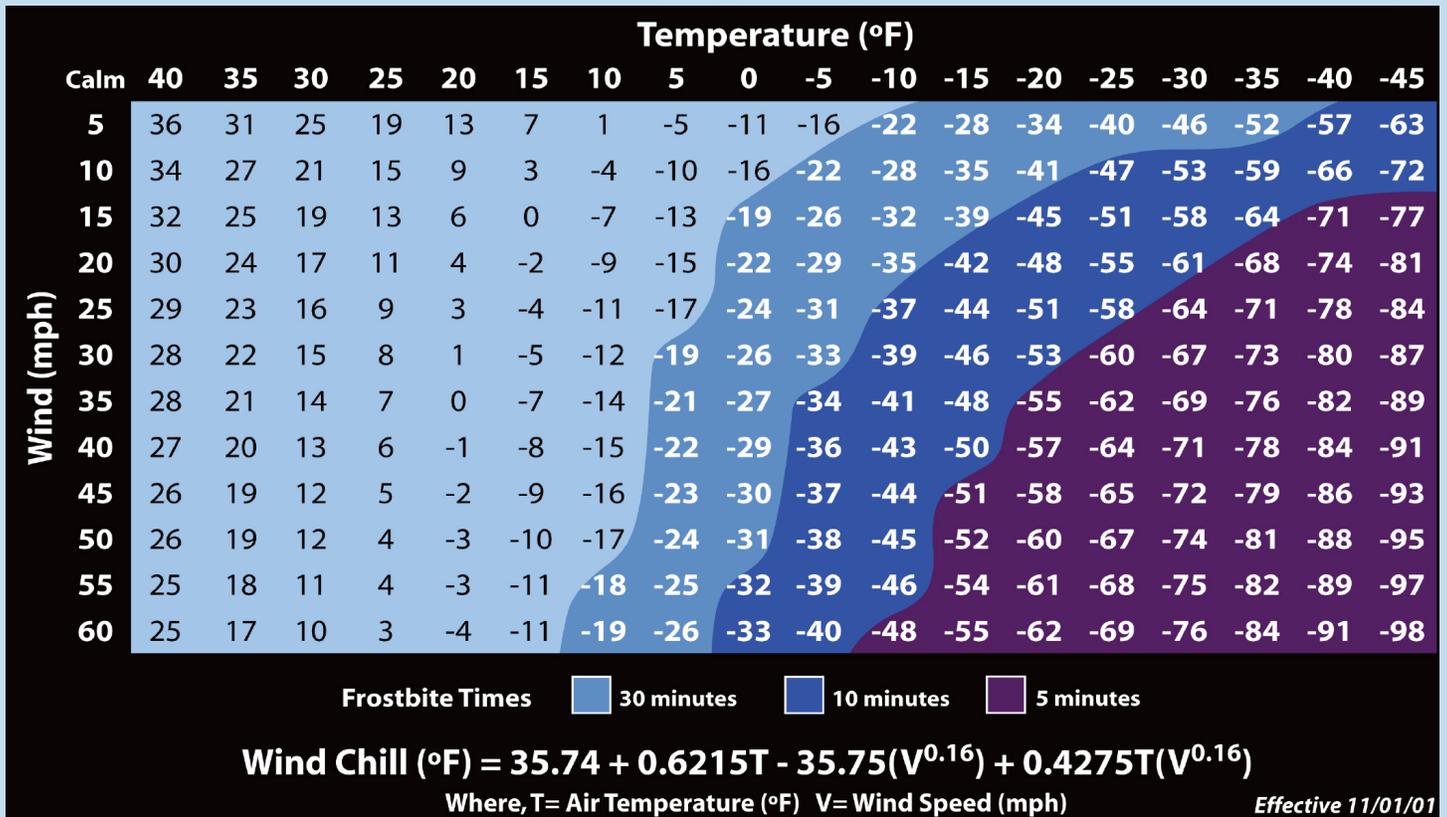
Wind Chill

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 speed and cold temperatures. 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 only applies to people. The effects of wind chill are different for animals. If the temperature is 35 degrees and the wind chill is 10 degrees, objects such as pipes or cars will only cool to 35. The wind chill factor does not apply to nonliving objects.

NATIONAL WEATHER SERVICE WIND CHILL CHART

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



Additional Sources of Information

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

Your local emergency management agency (EMA or ESDA)
 Ready Illinois web page: <http://ready.illinois.gov>

The website of the nearest National Weather Service (NWS) office:

Davenport, IA www.weather.gov/Davenport
 Romeoville, IL www.weather.gov/Chicago
 Lincoln, IL www.weather.gov/Lincoln
 St. Louis, MO www.weather.gov/StLouis
 Paducah, KY www.weather.gov/Paducah

Your local chapter of the American Red Cross (ARC) or www.redcross.org
 Illinois Dept. of Transportation – Road Conditions: www.gettingaroundillinois.com