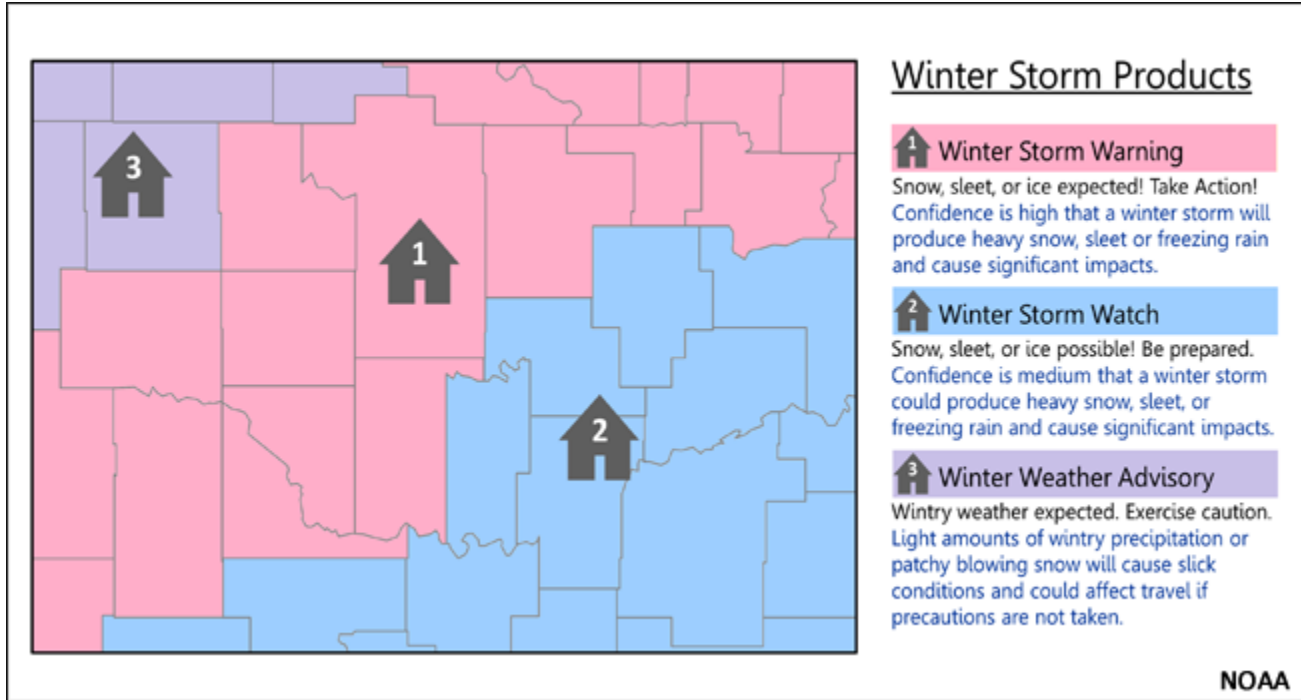


# Information Provided by National Weather Service

For more information go to: <http://www.nws.noaa.gov/om/winter/index.shtml>



## Winter Weather Warnings, Watches and Advisories

Winter weather related Warnings, Watches and Advisories are issued by your local National Weather Service office. Each office knows the local area and will issue Warnings, Watches or Advisories based on local criteria. For example, the amount of snow that triggers a “Winter Storm Warning” in the Northern Plains is typically much higher than the amount needed to trigger a “Winter Storm Warning” in the Southeast.

### Warnings: Take Action!

- **Blizzard Warnings** are issued for frequent gusts greater than or equal to 35 mph accompanied by falling and/or blowing snow, frequently reducing visibility to less than 1/4 mile for three hours or more. A Blizzard Warning means severe winter weather conditions are expected or occurring. Falling and blowing snow with strong winds and poor visibilities are likely, leading to whiteout conditions making travel extremely difficult. Do not travel. If you must travel, have a winter survival kit with you. If you get stranded, stay with your vehicle and wait for help to arrive.
- **Winter Storm Warnings** are issued for a significant winter weather event including snow, ice, sleet or blowing snow or a combination of these hazards. Travel will become difficult or impossible in some situations. Delay your travel plans until conditions improve.
- **Ice Storm Warnings** are usually issued for ice accumulation of around 1/4 inch or more. This amount of ice accumulation will make travel dangerous or impossible and likely lead to snapped power lines and falling tree branches. Travel is strongly discouraged.
- **Wind Chill Warning** are issued for a combination of very cold air and strong winds that will create dangerously low wind chill values. This level of wind chill will result in frostbite and lead to hypothermia if precautions are not taken. Avoid going outdoors and wear warm protective clothing if you must venture outside. See the [NWS Wind Chill Chart](#).
- **Lake Effect Snow Warnings** are issued when widespread or localized lake induced snow squalls or heavy showers are expected to produce significant snowfall accumulation. Lake effect snow usually develops in narrow bands and impacts a limited area. These bands can produce very heavy snow with sudden restrictions in visibility. Driving conditions may become hazardous at times.

## [Watches: Be Prepared](#)

- **Blizzard Watches** are issued when there is a potential for falling and/or blowing snow with strong winds and extremely poor visibilities. This can lead to whiteout conditions and make travel very dangerous.
- **Winter Storm Watches** are issued when conditions are favorable for a significant winter storm event (heavy sleet, heavy snow, ice storm, heavy snow and blowing snow or a combination of events.)
- **Wind Chill Watches** are issued when there is the potential for a combination of extremely cold air and strong winds to create dangerously low wind chill values. See the [NWS Wind Chill Chart](#).
- **Lake Effect Snow Watches** are issued when conditions are favorable for a lake effect snow event. A potential exists for heavy accumulation of lake effect snow. Travel and commerce may be significantly affected.

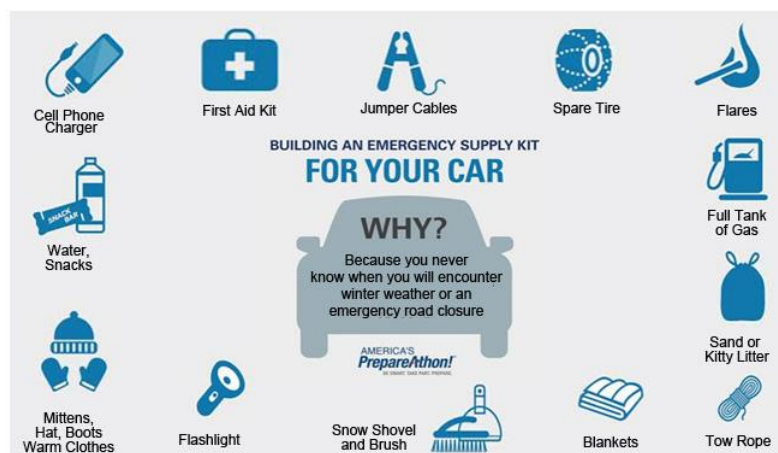
## [Advisories: Be Aware](#)

- **Winter Weather Advisories** are issued when a snow, blowing snow, ice, sleet, or a combination of these wintry elements is expected but conditions should not be hazardous enough to meet warning criteria. Be prepared for winter driving conditions and possible travel difficulties. Use caution when driving.
- **Freezing Rain Advisories** are issued when light ice accumulation (freezing rain and/or freezing drizzle) is expected but will not reach warning criteria. Expect a glaze on roads resulting in hazardous travel. Slow down and use caution while driving because even trace amounts of ice on roads can be dangerous.
- **Wind Chill Advisories** are issued when low wind chill temperatures are expected but will not reach local warning criteria. Extremely cold air and strong winds will combine to generate low wind chill readings. If you must venture outdoors, take precautions against frostbite and hypothermia. See the [NWS Wind Chill Chart](#).
- **Lake Effect Snow Advisory** are issued for widespread or localized lake effect snowfall accumulation (and blowing snow) remaining below warning criteria. Expects lake effect snow showers and assume travel will be difficult in some areas. Some localized snow bands will be intense enough to produce several inches in a few areas with sudden restrictions in visibility.

Here are some more key terms to understand:

- **Freezing Rain:** Rain that freezes when it hits the ground; creating a coating of ice on roads, walkways, trees and power lines.
- **Sleet:** Rain that turns to ice pellets before reaching the ground. Sleet also causes moisture on roads to freeze and become slippery.

**Wind Chill:** A measure of how cold people feel due to the combined effect of wind and cold temperatures; the [Wind chill Index](#) is based on the rate of heat loss from exposed skin. Both cold temperatures and wind remove heat from the body; as the wind speed increases during cold conditions, a body loses heat more quickly. Eventually, the internal body temperature also falls and hypothermia can develop. Animals also feel the effects of wind chill; but inanimate objects, such as vehicles and buildings, do not. They will only cool to the actual air temperature, although much faster during windy conditions. Read how the Wind Chill Index was developed.



# Prepare! Don't Let a Winter Storm Take You by Surprise

Before the storm strikes, make sure your home, office and vehicles are stocked with the supplies you might need. Make sure farm animals and pets also have the essentials they will need during a winter storm. [Know how to dress for varying degrees of cold weather.](#)

## [At Home and Work](#)

Your primary concerns at home or work during a winter storm are loss of heat, power and telephone service and a shortage of supplies if storm conditions continue for more than a day. In either place, you should have available:

- Flashlight and extra batteries
- Battery-powered NOAA Weather Radio and portable radio to receive emergency information
- Extra food and water such as dried fruit, nuts and granola bars, and other food requiring no cooking or refrigeration.
- Extra prescription medicine
- Baby items such as diapers and formula
- First-aid supplies
- Heating fuel: refuel before you are empty; fuel carriers may not reach you for days after a winter storm
- Emergency heat source: fireplace, wood stove or space heater, properly ventilated to prevent a fire
- Fire extinguisher, smoke alarm; test smoke alarms once a month to ensure they work properly
- Extra pet food and warm shelter for pets
- [Review generator safety.](#) You should never run a generator in an enclosed space
- Make sure your carbon dioxide detector is working detector and that the outside vent is clear of leaves and debris. During or after the storm, make sure it is cleared of snow.
- [Home fires](#) are common each winter when trying to stay warm. Review ways to keep your home and loved ones safe.

## [In Vehicles](#)

Each year, on average, more than 6,000 people are killed and more than 480,000 are injured due to weather-related vehicle crashes. If you need to drive in snow or cold conditions, TAKE IT SLOW IN THE SNOW. Black ice can be difficult to see. If the temperature is near freezing, drive like you're on ice--you may be!

Before you leave the house, especially before a longer trip in winter, make sure all fluid levels are full and ensure that the lights, heater, and windshield wipers in proper condition. Keep your gas tank near full to avoid ice in the tank and fuel lines. Avoid traveling alone. Let someone know your timetable and primary and alternate routes. Then call 511 for the latest traffic and road incidents, including construction and weather conditions and restrictions. Every state offers this Department of Transportation service. Call before you leave, it might change your plans!

Fully check and winterize your vehicle before the winter season begins. Carry a Winter Storm Survival Kit that includes the following:

- Mobile phone, charger, batteries
- Blankets/sleeping bags
- Flashlight with extra batteries
- First aid kit
- Knife
- High-calorie, non-perishable food
- Extra clothing to keep dry
- Large empty can to use as emergency toilet, tissues and paper towels for sanitary purposes

- Small can and waterproof matches to melt snow for drinking water
- Sack of sand or cat litter for traction
- Shovel
- Windshield scraper and brush
- Tool kit
- Tow rope
- Battery booster cables
- Water container
- Candle and matches to provide light and in an emergency, lifesaving heat.
- Compass and road maps, don't depend on mobile devices with limited battery life

### [On the Farm, Pet Owners](#)

- Move animals to sheltered areas or bring pets inside. Shelter belts, properly laid out and oriented, are better protection for cattle than confining shelters, such as sheds.
- Haul extra feed to nearby feeding areas.
- Have water available. Most animals die from dehydration in winter storms.

Make sure pets have plenty of food and water and a warm shelter.



## What To Do If You're Caught in a Winter Storm

When caught in a winter storm, there are lifesaving actions you can take to protect yourself outside, in a vehicle and inside your home or office.

### [Outside](#)

- **Find Shelter:** Try to stay dry and cover all exposed body parts.
- **When There Is No Shelter Nearby:** Build a lean-to, windbreak or snow cave for protection from the wind. Build a fire for heat and to attract attention. Place rocks around the fire to absorb and reflect heat.
- **Melt Snow for Drinking Water:** Eating unmelted snow will lower your body temperature.
- **Exercise:** From time to time, move arms, legs, fingers and toes vigorously to keep blood circulating and to keep warm. Avoid overexertion such as shoveling heavy snow, pushing a car or walking in deep snow if you are not in

good health. The strain from the cold and the hard labor may cause a heart attack. Sweating could lead to a chill and hypothermia.

## In Vehicles

### **If you must drive during a storm, take the following precautions:**

- Slow down! Even if the roads just look wet they could still be slick. More than 6,000 fatalities occur on the roadways each year due to weather conditions.
- Make sure your vehicle is completely clear of ice or snow before starting the trip. Flying snow from cars causes accidents.
- Let someone know where you are going and what route you will take. If something happens, this person will know where to start a search.
- Don't leave the house without the following a fully charged mobile phone and car charger and a [emergency supplies kit](#) in your car.
- If you are driving and begin to skid, remain calm, ease your foot off the gas and turn your wheels in the direction you want the front of the car to go. If you have an anti-lock braking system (ABS), apply steady pressure to the brake pedal. Never pump the brakes on an ABS equipped vehicle.
- If you are having trouble seeing due to weather conditions, pull over to the side of the road and stop your car until visibility improves. Turn off your lights and use your parking break when stopped so that another car won't mistakenly follow your tail/brake lights and end up hitting you.

### **If your car gets stuck during a storm:**

- Stay in the vehicle!
  - If you leave your vehicle, you will become disoriented quickly in wind-driven snow and cold.
  - Run the motor about 10 minutes each hour for heat.
  - While running the motor, open the window a little for fresh air to avoid carbon monoxide poisoning.
  - Clear snow from the exhaust pipe to avoid gas poisoning.
- Be visible to rescuers.
  - Turn on the dome light at night when running the engine.
  - Tie a bright colored cloth, preferably red, to your antenna or door.
  - After snow stops falling, raise the hood to indicate you need help.

## Inside

**Stay Inside:** When using heat from a fire place, wood stove, space heater, etc., use fire safeguards and properly ventilate. If you have a gas furnace, make sure it is not blocked by a snowdrift as soon as it's safe to go out. If you have an upstairs gas furnace which vents out the roof, you may need to turn off the upstairs unit until the snow melts off your roof.

### **If Your Heat Goes Out**

- Close off unneeded rooms to avoid wasting heat.
- Stuff towels or rags in cracks under doors.
- Close blinds or curtains to keep in some heat.
- Eat and drink. Food provides the body with energy for producing its own heat. Drink lots of water and other non-caffeinated, non-alcoholic drinks to prevent dehydration. Cold air is very dry.

Wear layers of loose-fitting, lightweight, warm clothing. Remove layers to avoid overheating, perspiration and subsequent chill.

# Caution! Winter Storm Dangers Linger

When the snow and ice melt, it's tempting to relieve that cabin fever and hit the roads. But melting snow can cause floods, partially cleared roads may be icy or blocked, creeks and rivers often overflow from the rush of melting snow and ice. Heavy snow may have knocked down power lines and caused gas leaks, both of which can be deadly, but are not obvious at first glance. Follow the tip below to stay safe and check the other links on this site for actions to take [before](#), [during](#) and [after](#) a winter storm.

## [Stay Informed](#)

- Stay tuned to your local news for updated information on road conditions.
- Check with your local water company to ensure water is safe to drink, cook and clean with after a major winter storm.
- Check with utility companies to find out when electricity or gas services may be restored.
- Before you drive your car, take time to ensure your exhaust pipe is clear
- Brush all the snow off the car so it doesn't fall on your windshield while you are driving or fly onto other cars, causing an accident..
- Leave extra time for blocked, closed or icy roads.

## [Avoid Flooded Roads and Heed Road Danger Signs](#)

- Standing water hides many dangers including toxins and chemicals. There may be debris under the water and the road surface may have completely collapsed beneath the water.
- If it is likely your home will flood, don't wait to be ordered to leave; evacuate when you know you are danger! Make alternative plans for a place to stay with a relative or friend. If you have pets, take them with you or make arrangements to board them at a facility well away from the flooding danger. Many hotels will take pets but check for options during dry weather.
- Road closure, cones, sawhorses and other cautionary signs are put in place for your safety. Pay attention to them!

## [Check Your Home, Contact Family and Isolated Neighbors](#)

- Carbon monoxide poisoning is one of the leading causes of death after storms when areas dealing with power outages.
- Never use a portable generator inside your home or garage. [Review generator safety](#)
- Let your family and close friends know that you're okay so they can help spread the word. Register with [American Red Cross's Safe and Well](#) listings. You can use this resource to search missing friends and relatives as well.

## [Roadway Hazards After a Winter Storm](#)

- Black ice is patchy ice on roadways that cannot easily be seen. Even if roadways have been cleared of snow following a storm, any water left on the roadways may freeze, resulting in a clear sheet of ice, also known as [black ice](#). It is most dangerous in the early morning due to below freezing nighttime temperatures.
- Potholes are a common road hazard following winter precipitation and can be difficult to see and can cause serious damage to your vehicle. Be sure to report potholes to your county or local Department of Transportation.

## Information Provided by National Weather Service

Find the current forecast at [weather.gov](#).