

Know the terms used to describe severe weather

Tornado Watch - Tornadoes are possible. Remain alert for approaching storms. Watch the sky and stay tuned to NOAA Weather Radio, commercial radio or television for information.

Tornado Warning - A tornado has been sighted or indicated by weather radar. Take shelter immediately.

Severe Thunderstorm Watch - Tells you when and where severe thunderstorms are likely to occur. Watch the sky and stay tuned to NOAA Weather Radio, commercial radio or television for information.

Severe Thunderstorm Warning - Issued when severe weather has been reported by spotters or indicated by radar. Warnings indicate imminent danger to life and property to those in the path of the storm.

Flood Watch - Flooding is possible. Tune in to NOAA Weather Radio, commercial radio or television for information.

Flash Flood Watch - Flash flooding is possible. Be prepared to move to higher ground; listen to NOAA Weather Radio, commercial radio or television for information.

Flood Warning - Flooding is occurring or will occur soon; if advised to evacuate, do so immediately.

Flash Flood Warning - A flash flood is occurring; seek higher ground on foot immediately.

Before Thunderstorm and Lightning.

To prepare for a thunderstorm, you should do the following:

- To begin preparing, you should [build an emergency kit](#) and [make a family communications plan](#).
- Remove dead or rotting trees and branches that could fall and cause injury or damage during a severe thunderstorm.
- Postpone outdoor activities.
- Remember the 30/30 Lightning Safety Rule: Go indoors if, after seeing lightning, you cannot count to 30 before hearing thunder. Stay indoors for 30 minutes after hearing the last clap of thunder.
- Secure outdoor objects that could blow away or cause damage.
- Get inside a home, building, or hard top automobile (not a convertible). Although you may be injured if lightning strikes your car, you are much safer inside a vehicle than outside.
- Remember, rubber-soled shoes and rubber tires provide NO protection from lightning. However, the steel frame of a hard-topped vehicle provides increased protection if you are not touching metal.
- Shutter windows and secure outside doors. If shutters are not available, close window blinds, shades or curtains.
- Unplug any electronic equipment well before the storm arrives.

During Thunderstorms and Lightning.

If thunderstorm and lightning are occurring in your area, you should:

- Use your battery-operated NOAA Weather Radio for updates from local officials.
- Avoid contact with corded phones and devices including those plugged into electric for recharging. Cordless and wireless phones not connected to wall outlets are OK to use.
- Avoid contact with electrical equipment or cords. Unplug appliances and other electrical items such as computers and turn off air conditioners. Power surges from lightning can cause serious damage.
- Avoid contact with plumbing. Do not wash your hands, do not take a shower, do not wash dishes, and do not do laundry. Plumbing and bathroom fixtures can conduct electricity.
- Stay away from windows and doors, and stay off porches.
- Do not lie on concrete floors and do not lean against concrete walls.
- Avoid natural lightning rods such as a tall, isolated tree in an open area.
- Avoid hilltops, open fields, the beach or a boat on the water.
- Take shelter in a sturdy building. Avoid isolated sheds or other small

structures in open areas.

- Avoid contact with anything metal—tractors, farm equipment, motorcycles, golf carts, golf clubs, and bicycles.
- If you are driving, try to safely exit the roadway and park. Stay in the vehicle and turn on the emergency flashers until the heavy rain ends. Avoid touching metal or other surfaces that conduct electricity in and outside the vehicle.

After a Thunderstorm or Lightning Strike

If lightning strikes you or someone you know, call 9-1-1 for medical assistance as soon as possible. The following are things you should check when you attempt to give aid to a victim of lightning:

- **Breathing** - if breathing has stopped, begin mouth-to-mouth resuscitation.
- **Heartbeat** - if the heart has stopped, administer CPR.
- **Pulse** - if the victim has a pulse and is breathing, look for other possible injuries. Check for burns where the lightning entered and left the body. Also be alert for nervous system damage, broken bones and loss of hearing and eyesight.

After the storm passes remember to:

- Never drive through a flooded roadway. Turn around, don't drown!
- Stay away from storm-damaged areas to keep from putting yourself at risk from the effects of severe thunderstorms.
- Continue to listen to a NOAA Weather Radio or to local radio and television stations for updated information or instructions, as access to roads or some parts of the community may be blocked.
- Help people who may require special assistance, such as infants, children and the elderly or those with access or functional needs.
- Stay away from downed power lines and report them immediately.
- Watch your animals closely. Keep them under your direct control.

TORNADO SAFETY

TORNADOES ARE NATURE'S MOST VIOLENT STORMS. SPAWNED FROM POWERFUL THUNDERSTORMS, TORNADOES CAN CAUSE FATALITIES AND DEVASTATE A NEIGHBORHOOD IN SECONDS.

A TORNADO APPEARS AS A ROTATING, FUNNEL-SHAPED CLOUD THAT EXTENDS FROM A THUNDERSTORM TO THE GROUND WITH WHIRLING WINDS THAT CAN REACH 300 MILES PER HOUR.

DAMAGE PATHS CAN BE IN EXCESS OF ONE MILE WIDE AND 50 MILES LONG. EVERY STATE IS AT SOME RISK FROM THE HAZARD. SOME TORNADOES ARE CLEARLY VISIBLE, WHILE RAIN OR NEARBY LOW-HANGING CLOUDS OBSCURE OTHERS.

OCCASIONALLY, TORNADOES DEVELOP SO RAPIDLY THAT LITTLE, IF ANY, ADVANCE WARNING IS POSSIBLE.

BEFORE A TORNADO HITS, THE WIND MAY DIE DOWN AND THE AIR MAY BECOME VERY STILL.

A CLOUD OF DEBRIS CAN MARK THE LOCATION OF A TORNADO EVEN IF A FUNNEL IS NOT VISIBLE. TORNADOES GENERALLY OCCUR NEAR THE TRAILING EDGE OF A THUNDERSTORM. IT IS NOT UNCOMMON TO SEE CLEAR, SUNLIT SKIES BEHIND A TORNADO.

BEFORE A TORNADO

- TO BEGIN PREPARING, YOU SHOULD BUILD AN EMERGENCY KIT AND MAKE A FAMILY COMMUNICATIONS PLAN.**
- LISTEN TO NOAA WEATHER RADIO OR TO COMMERCIAL RADIO OR TELEVISION NEWSCASTS FOR THE LATEST INFORMATION. IN ANY EMERGENCY, ALWAYS LISTEN TO THE INSTRUCTIONS GIVEN BY LOCAL EMERGENCY MANAGEMENT OFFICIALS.**
- BE ALERT TO CHANGING WEATHER CONDITIONS. LOOK FOR APPROACHING STORMS.**
- LOOK FOR THE FOLLOWING DANGER SIGNS:**
 - * DARK, OFTEN GREENISH SKY**
 - * LARGE HAIL**
 - *A LARGE, DARK, LOW-LYING CLOUD (PARTICULARLY IF ROTATING)**
 - * LOUD ROAR, SIMILAR TO A FREIGHT TRAIN.**
 - * IF YOU SEE APPROACHING STORMS OR ANY OF THE DANGER SIGNS, BE PREPARED TO TAKE SHELTER IMMEDIATELY.**

During a Tornado

If you are under a tornado warning, seek shelter immediately! Most injuries associated with high winds are from flying debris, so remember to protect your head.

If you are in:

Then:

A structure (e.g. residence, small building, school, nursing home, hospital, factory, shopping center, high-rise building)

- Go to a pre-designated shelter area such as a safe room, basement, storm cellar, or the lowest building level. If there is no basement, go to the center of an interior room on the lowest level (closet, interior hallway) away from corners, windows, doors, and outside walls. Put as many walls as possible between you and the outside. Get under a sturdy table and use your arms to protect your head and neck.
- In a high-rise building, go to a small interior room or hallway on the lowest floor possible.
- Put on sturdy shoes.
- Do not open windows.

A trailer or mobile home

- Get out immediately and go to the lowest floor of a sturdy, nearby building or a storm shelter. Mobile homes, even if tied down, offer little protection from tornadoes.

The outside with no shelter

- Immediately get into a vehicle, buckle your seat belt and try to drive to the closest sturdy shelter.
- If your vehicle is hit by flying debris while you are driving, pull over and park.
- Stay in the car with the seat belt on. Put your head down below the windows; cover your head with your hands and a blanket, coat or other cushion if possible.
- If you can safely get noticeably lower than the level of the roadway, leave your car and lie in that area, covering your head with your hands.
- Do not get under an overpass or bridge. You are safer in a low, flat location.
- Never try to outrun a tornado in urban or congested areas in a car or truck. Instead, leave the vehicle immediately for safe shelter.
- Watch out for flying debris. Flying debris from tornadoes causes most fatalities and injuries.

After a Tornado

Injury may result from the direct impact of a tornado or it may occur afterward when people walk among debris and enter damaged buildings. A study of injuries after a tornado in Marion, Illinois, showed that 50 percent of the tornado-related injuries were suffered during rescue attempts, cleanup and other post-tornado activities. Nearly a third of the injuries resulted from stepping on nails. Because tornadoes often damage power lines, gas lines or electrical systems, there is a risk of fire, electrocution or an explosion. Protecting yourself and your family requires promptly treating any injuries suffered during the storm and using extreme care to avoid further hazards.

Injuries

Check for injuries. Do not attempt to move seriously injured people unless they are in immediate danger of further injury. Get medical assistance immediately. If someone has stopped breathing, begin CPR if you are trained to do so. Stop a bleeding injury by applying direct pressure to the wound. Have any puncture wound evaluated by a physician. If you are trapped, try to attract attention to your location.

General Safety Precautions

Here are some safety precautions that could help you avoid injury after a tornado:

- Continue to monitor your battery-powered radio or television for emergency information.
- Be careful when entering any structure that has been damaged.
- Wear sturdy shoes or boots, long sleeves and gloves when handling or walking on or near debris.
- Be aware of hazards from exposed nails and broken glass.

- Do not touch downed power lines or objects in contact with downed lines. Report electrical hazards to the police and the utility company.
- Use battery-powered lanterns, if possible, rather than candles to light homes without electrical power. If you use candles, make sure they are in safe holders away from curtains, paper, wood or other flammable items. Never leave a candle burning when you are out of the room.
- Never use generators, pressure washers, grills, camp stoves or other gasoline, propane, natural gas or charcoal-burning devices inside your home, basement, garage or camper - or even outside near an open window, door or vent. Carbon monoxide (CO) - an odorless, colorless gas that can cause sudden illness and death if you breathe it - from these sources can build up in your home, garage or camper and poison the people and animals inside. Seek prompt medical attention if you suspect CO poisoning and are feeling dizzy, light-headed or nauseated.
- Hang up displaced telephone receivers that may have been knocked off by the tornado, but stay off the telephone, except to report an emergency.
- Cooperate fully with public safety officials.
- Respond to requests for volunteer assistance by police, fire fighters, emergency management and relief organizations, but do not go into damaged areas unless assistance has been requested. Your presence could hamper relief efforts and you could endanger yourself.

Inspecting the Damage

- After a tornado, be aware of possible structural, electrical or gas-leak hazards in your home. Contact your local city or county building inspectors for information on structural safety codes and standards. They may also offer suggestions on finding a qualified contractor to do work for you.
- In general, if you suspect any damage to your home, shut off electrical power, natural gas and propane tanks to avoid fire, electrocution or explosions.
- If it is dark when you are inspecting your home, use a flashlight rather than a candle or torch to avoid the risk of fire or explosion in a damaged

home.

- If you see frayed wiring or sparks, or if there is an odor of something burning, you should immediately shut off the electrical system at the main circuit breaker if you have not done so already.
- If you smell gas or suspect a leak, turn off the main gas valve, open all windows and leave the house immediately. Notify the gas company, the police or fire departments, or State Fire Marshal's office and do not turn on the lights, light matches, smoke or do anything that could cause a spark. Do not return to your house until you are told it is safe to do so.

Safety During Clean Up

- Wear sturdy shoes or boots, long sleeves and gloves.
- Learn proper safety procedures and operating instructions before operating any gas-powered or electric-powered saws or tools.
- Clean up spilled medicines, drugs, flammable liquids and other potentially hazardous materials.

Floods

Floods are one of the most common hazards in the United States, however not all floods are alike. Some floods develop slowly, while others such as flash floods, can develop in just a few minutes and without visible signs of rain. Additionally, floods can be local, impacting a neighborhood or community, or very large, affecting entire river basins and multiple states. Flash floods can occur within a few minutes or hours of excessive rainfall, a dam or levee failure, or a sudden release of water held by an ice jam. Flash floods often have a dangerous wall of roaring water carrying rocks, mud and other debris. Overland flooding, the most common type of flooding event typically occurs when waterways such as rivers or streams overflow their banks as a result of rainwater or a possible levee breach and cause flooding in surrounding areas. It can also occur when rainfall or snowmelt exceeds the capacity of underground pipes, or the capacity of streets and drains designed to carry flood water away from urban areas.

Be aware of flood hazards no matter where you live or work, but especially if you are in low-lying areas, near water, behind a levee or downstream from a dam. Even very small streams, gullies, creeks, culverts, dry stream beds or low-lying ground that appear harmless in dry weather can flood.

Emergency Kit Worksheet

Food and Water

Water is the most important emergency supply. You can store water from the tap, buy bottled water, or both. In addition, food may not be available during a disaster. It's important that you have enough food and water on-hand so you and your family can be self-sufficient for three days. Stock up now so you're ready for whatever comes along.

What is “sanitary water?” While drinking water is for drinking, sanitary water is for bathing, washing and flushing the toilet if the water system fails.

First Aid and Personal Hygiene

You'll need first-aid and hygiene supplies in your emergency kit. Be sure you are prepared to treat minor injuries, manage pre-existing conditions and reduce your risk for illness during an emergency situation.

Many ready-made first-aid kits don't have everything you need for an emergency. Don't take it for granted that an off-the-shelf kit is complete. Building your own first-aid kit can give you the peace of mind that you have the basic first-aid needs of your family covered. Below is a **list of recommended first-aid essentials**:

- 2 absorbent compress dressings (5 x 9 inches)

- 25 adhesive bandages (assorted sizes)
- 1 adhesive cloth tape (10 yards x 1 inch)
- 5 antibiotic ointment packets (approximately 1 gram)
- 2 packets of aspirin (81 mg each)
- 1 instant cold compress
- 2 pair of nonlatex gloves (size: large)
- 2 hydrocortisone ointment packets (approximately 1 gram each)
- oral thermometer, scissors, tweezers
- 1 roller bandage (3 inches wide)
- 1 roller bandage (4 inches wide)
- 5 sterile gauze pads (3 x 3 inches)
- 5 sterile gauze pads (4 x 4 inches)
- 2 triangular bandages
- Moistened towelettes
- Antiseptic
- Rubbing alcohol
- Needle
- Tongue blades (2)
- Tube of petroleum jelly or other lubricant
- Extra eye glasses
- Insect repellant

Why backup prescriptions? During an emergency, you might not have access to your doctor to refill your prescriptions and/or the drugstores might not be open.

Why hand sanitizer? During a disaster situation, you

might come in contact with harmful chemicals or germs. Keeping your hands clean helps prevent illness.

Baby Items

A young child relies on you to provide the basic care it needs to survive. By setting aside baby items ahead of time, you'll effectively reduce the complications associated with caring for a young child during a stressful, disaster situation.

Lighting and Communication

During a disaster, you might find yourself without power, so you need to have one or more battery-operated radios or TVs on-hand. You'll need to have battery-powered lights as well. Be sure every member of your family has at least one flashlight. Don't forget plenty of extra batteries.

Why are candles not included? If you have pets or children, candles can be a dangerous fire hazard. Use candles only with extreme care and never when there are strong winds.

What's the best radio for an emergency? An AM/FM/Weatherband radio that can be powered by batteries AND plugged into an electrical outlet is your best choice.

Why a corded phone? Cordless phones won't work during a power outage. A corded phone can be used during a power outage, since it doesn't plug in to an electrical outlet. The long cord means you can take it to the safest part of your house.

Family Safety Items

Keeping your family safe during a disaster comes from having the right combination of home safety essentials and handy emergency aids. This list of easy-to-find items for your emergency kit will provide an additional layer of protection for your family.

Why a carbon-monoxide detector? Deadly carbon monoxide from a generator outside your house can filter in through vents or open windows. You would never know it was happening without an inexpensive detector.

What does bleach do? Non-scented bleach can be used to purify water for drinking or sanitize water for bathing, cooking and cleaning.

Why sunscreen and insect repellent? Sunscreen can help protect your skin when you're outdoors, especially waiting in lines for relief aid. Insects can be a problem during the summer months or after heavy rains, so you'll want a strong repellent.

Transportation

Texas is a big state. If you have to leave home, you might have to drive a long way before you find a safe place to stay. These items will help ensure that your family and your car are ready for the journey.

Why state and regional road maps? During an emergency, you might not be able to travel on familiar roadways. Maps will help you navigate your way to safety.

Pet Needs

When you make your emergency plans, don't forget your pets. Here are the essential items your emergency kit should contain to help pets cope with a disaster situation.

Why a pet carrier/cage? While you might not cage your pet at home, having a carrier will help transport your pet safely during an evacuation, and may be required, depending on where you spend the night.

Emergency Document Bag

When and where a disaster might strike is impossible to predict. You might have only a few minutes or a couple hours' notice to gather your family, take what you can and make your way to a safe location. By creating an Emergency Document Bag, you'll have all of your important documents and files ready to go whenever you need to leave home in a hurry.

An Emergency Document Bag is made up of your most important and irreplaceable papers, photos, mementos and a backup of your computer. It's best to keep these items in plastic, Ziploc bags. We recommend you use the two-gallon bags as they will easily protect and secure most of your folders, files and papers. Put the bags in a waterproof and fireproof lockbox. If you don't have one, we recommend you pick one up, or consider double-bagging these valuables.

Imagine how hard life would be after a disaster without insurance papers, birth certificates and your computer files. To protect your family from that nightmare, your Emergency Document Bag should include:

- Social security cards, birth certificates or proof of citizenship
- List of important phone numbers (family, friends, etc.)
- Passports
- Medical records, x-rays, benefits documents
- List of medications with dosages, doctors' phone numbers
- Duplicate prescriptions from doctor
- Immunization records
- Health insurance information
- Insurance documents (homeowner, renter, life, flood)
- Home or other property deeds, leases, mortgages etc
- Inventory of possessions and their value
- Vehicle Insurance documents
- Vehicle titles, leases, loan documents, etc.
- Financial statements (bank accounts, tax returns, etc.)
- Copies of recent bills (power, water, etc.)
- Wills
- Current pet photos
- Paperwork for your pets (medical records, registration, etc.)
- Backup computer files (on a CD, DVD, etc.)
- Copies of important keys