

Torrance County Emergency Management

Preparedness Guide



February 21, 2018

This document is a guide for the public to help plan for various emergencies and to provide a basic understanding of what to do in the event of an emergency. The Torrance County Office of Emergency Management's goal is to plan, prepare, recover and respond to these disasters.

Each household can utilize this guide as a baseline for how to respond to emergencies. This guide is not intended to provide specific guidance but rather a very broad scope of need to know actions.

The information provided is not static, as methodology for emergencies is constantly changing. The concepts utilized are meant for standardization and can be used in most environments. For specific guidance please refer to the Office of Emergency Management (505) 705-0836.

Martin Lucero

Emergency Manager

Torrance County

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Emergency Alerts

Public safety officials use timely and reliable systems to alert you and your family in the event of natural or man-made disasters. This page describes different warning alerts you can receive and the types of devices that receive the alerts.

Wireless Emergency Alerts

During an emergency, alert and warning officials need to provide the public with life-saving information quickly. Wireless Emergency Alerts (WEAs), made available through the [Integrated Public Alert and Warning System \(IPAWS\)](#) infrastructure, are just one of the ways public safety officials can quickly and effectively alert and warn the public about serious emergencies.

What you need to know about WEAs:

- WEAs can be sent by state and local public safety officials, the National Weather Service, the National Center for Missing and Exploited Children, and the President of the United States
- WEAs can be issued for three alert categories – imminent threat, AMBER, and presidential
- WEAs look like text messages, but are designed to get your attention and alert you with a unique sound and vibration, both repeated twice
- WEAs are no more than 90 characters, and will include the type and time of the alert, any action you should take, as well as the agency issuing the alert
- WEAs are not affected by network congestion and will not disrupt texts, calls, or data sessions that are in progress

- Mobile users are not charged for receiving WEAs and there is no need to subscribe
- To ensure your device is WEA-capable, check with your service provider

Visit the FEMA Media Library and download these tools:

- Visit the FEMA Library to download [Wireless Emergency Alerts PSA \(:30\)](#)
View "[Wireless Emergency Alerts PSA \(:30\)" on YouTube.](#)
- [Facts and FAQs on Wireless Emergency Alerts](#)
- [Images, and videos on Wireless Emergency Alerts](#)
- [For Kids: Wireless Emergency Alerts \(WEA\) and Word Search Puzzle](#)
- [For Educators: Wireless Emergency Alerts Instructional Materials](#)
- [Online Training Courses](#)

Emergency Alert System

- The Integrated Public Alert and Warning System (IPAWS), is a modernization and integration of the nation's existing and future alert and warning systems, technologies, and infrastructure.
- The Emergency Alert System (EAS) is a national public warning system that requires broadcasters, satellite digital audio service and direct broadcast satellite providers, cable television systems, and wireless cable systems to provide the President with a communications capability to address the American people within 10 minutes during a national emergency.
- EAS may also be used by state and local authorities, in cooperation with the broadcast community, to deliver important emergency

information, such as weather information, imminent threats, AMBER alerts, and local incident information targeted to specific areas.

- The President has sole responsibility for determining when the national-level EAS will be activated. FEMA is responsible for national-level EAS tests and exercises.
- EAS is also used when all other means of alerting the public are unavailable, providing an added layer of resiliency to the suite of available emergency communication tools.

[Emergency Alert System fact sheet](#)

NOAA Weather Radio

[NOAA Weather Radio All Hazards \(NWR\)](#) is a nationwide network of radio stations broadcasting continuous weather information from the nearest National Weather Service office.

- NWR broadcasts official warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.
- It also broadcasts alerts of non-weather emergencies such as national security, natural, environmental, and public safety through the Emergency Alert System.

Active Shooter

This page describes what to do if you find yourself in an active shooting event, how to recognize signs of potential violence around you, and what to expect after an active shooting takes place. Remember during an active shooting to RUN. HIDE. FIGHT.

Be Informed

- Sign up for an active shooter training.
- If you see something, say something to an authority right away.
- Sign up to receive local emergency alerts and register your work and personal contact information with any work sponsored alert system.
- Be aware of your environment and any possible dangers.

Make a Plan

- Make a plan with your family, and ensure everyone knows what they would do, if confronted with an active shooter.
- Look for the two nearest exits anywhere you go, and have an escape path in mind & identify places you could hide.
- Understand the plans for individuals with disabilities or other access and functional needs.

During

RUN and escape, if possible.

- Getting away from the shooter or shooters is the top priority.
- Leave your belongings behind and get away.
- Help others escape, if possible, but evacuate regardless of whether others agree to follow.

- Warn and prevent individuals from entering an area where the active shooter may be.
- Call 911 when you are safe, and describe shooter, location, and weapons.

HIDE, if escape is not possible.

- Get out of the shooter's view and stay very quiet.
- Silence all electronic devices and make sure they won't vibrate.
- Lock and block doors, close blinds, and turn off lights.
- Don't hide in groups- spread out along walls or hide separately to make it more difficult for the shooter.
- Try to communicate with police silently. Use text message or social media to tag your location, or put a sign in a window.
- Stay in place until law enforcement gives you the all clear.
- Your hiding place should be out of the shooter's view and provide protection if shots are fired in your direction.

FIGHT as an absolute last resort.

- Commit to your actions and act as aggressively as possible against the shooter.
- Recruit others to ambush the shooter with makeshift weapons like chairs, fire extinguishers, scissors, books, etc.
- Be prepared to cause severe or lethal injury to the shooter.
- Throw items and improvise weapons to distract and disarm the shooter.

After

- Keep hands visible and empty.
- Know that law enforcement's first task is to end the incident, and they may have to pass injured along the way.
- Officers may be armed with rifles, shotguns, and/or handguns and may use pepper spray or tear gas to control the situation.
- Officers will shout commands and may push individuals to the ground for their safety.
- Follow law enforcement instructions and evacuate in the direction they come from, unless otherwise instructed.
- Take care of yourself first, and then you may be able to help the wounded before first responders arrive.
- If the injured are in immediate danger, help get them to safety.
- While you wait for first responder to arrive, provide first aid. Apply direct pressure to wounded areas and use tourniquets if you have been trained to do so.
- Turn wounded people onto their sides if they are unconscious and keep them warm.
- Consider seeking professional help for you and your family to cope with the long-term effects of the trauma.

Cybersecurity

Cybersecurity involves preventing, detecting, and responding to cyber incidents that can have wide ranging effects on the individual, organizations, the community and at the national level.

Before a Cyber Incident

You can increase your chances of avoiding cyber risks by setting up the proper controls. The following are things you can do to protect yourself, your family, and your property before a cyber-incident occurs.

- Only connect to the Internet over secure, password-protected networks.
- Do not click on links or pop-ups, open attachments, or respond to emails from strangers.
- Always enter a URL by hand instead of following links if you are unsure of the sender.
- Do not respond to online requests for Personally Identifiable Information (PII); most organizations – banks, universities, companies, etc. – do not ask for your personal information over the Internet.
- Limit who you are sharing information with by reviewing the privacy settings on your social media accounts.
- Trust your gut; if you think an offer is too good to be true, then it probably is.
- Password protect all devices that connect to the Internet and user accounts.
- Do not use the same password twice; choose a password that means something to you and you only; change your passwords on a regular basis.
- If you see something suspicious, report it to the proper authorities.

- Familiarize yourself with the types of threats and protective measures you can take by:
 - [Sign up](#) for the United States Computer Emergency Readiness Team mailing list.
 - [Sign up](#) for the Department of Homeland Security's Stop.Think.Connect. Campaign and receive a monthly newsletter with cybersecurity current events and tips.

During a Cyber Incident

Immediate Actions

- Check to make sure the software on all of your systems is up-to-date.
- Run a scan to make sure your system is not infected or acting suspiciously.
- If you find a problem, disconnect your device from the Internet and perform a full system restore.
- If in a public setting immediately inform a librarian, teacher, or manager in charge to contact their IT department.
- Report the incident. Your local police so there is a record of the incident. You may also contact federal agencies able to provide assistance and investigate the incident:
 - FBI [field offices](#) and [Internet Crime Complaint Center](#)
 - [National Cyber Investigative Joint Task Force](#) or call 855-292-3937
 - United States [Secret Service](#)
 - U.S. Immigration and Customs [field offices](#) or [cyber crimes](#) or call 866-347-2423

- [National Cybersecurity and Communications Integration Center](#) or call 888-282-0870
- [U.S. Computer Readiness Team](#)

At Work

- If you have access to an IT department, contact them immediately. The sooner they can investigate and clean your computer, the less damage to your computer and other computers on the network.
- If you believe you might have revealed sensitive information about your organization, report it to the appropriate people within the organization, including network administrators. They can be alert for any suspicious or unusual activity.

Immediate Actions if your Personally Identifiable Information (PII) is compromised:

PII is information that can be used to uniquely identify, contact, or locate a single person. PII includes but is not limited to:

- Full Name
- Social security number
- Address
- Date of birth
- Place of birth
- Driver's License Number
- Vehicle registration plate number
- Credit card numbers
- Physical appearance
- Gender or race

If you believe your PII is compromised:

- Immediately change all passwords; financial passwords first. If you used the same password for multiple resources, make sure to change it for each account, and do not use that password in the future.
- Contact companies, including banks, where you have accounts as well as credit reporting companies.
- Close any accounts that may have been compromised. Watch for any unexplainable or unauthorized charges to your accounts.

After a Cyber Incident

- File a report with the local police so there is an official record of the incident.
- Report identity theft to the [Federal Trade Commission](#).
- Contact additional agencies depending on what information was stolen. Examples include contacting the Social Security Administration if your social security number was compromised, or the Department of Motor Vehicles if your driver's license or car registration has been stolen.
- Report online crime or fraud to your local United States Secret Service (USSS) [Electronic Crimes Task Force](#) or the [Internet Crime Complaint Center](#).

Bioterrorism

Biological agents are organisms or toxins that can kill or incapacitate people, livestock and crops. A biological attack is the deliberate release of germs or other biological substances that can make you sick.

There are three basic groups of biological agents that could likely be used as weapons: bacteria, viruses and toxins. Biological agents can be dispersed by spraying them into the air, person-to-person contact, infecting animals that carry the disease to humans and by contaminating food and water.

Before a Biological Threat

A biological attack may or may not be immediately obvious. In most cases local health care workers will report a pattern of unusual illness or there will be a wave of sick people seeking emergency medical attention. The public would be alerted through an emergency radio or TV broadcast, or some other signal used in your community, such as a telephone call or a home visit from an emergency response worker.

The following are things you can do to protect yourself, your family and your property from the effects of a biological threat:

- Build an [Emergency Supply Kit](#)
- Make a [Family Emergency Plan](#)
- Check with your doctor to ensure all required or suggested immunizations are up to date for yourself, your children and elderly family members.
- Consider installing a High-Efficiency Particulate Air (HEPA) filter in your furnace return duct, which will filter out most biological agents that may enter your house

During a Biological Threat

The first evidence of an attack may be when you notice symptoms of the disease caused by exposure to an agent. In the event of a biological attack, public health officials may not immediately be able to provide information on what you should do. It will take time to determine exactly what the illness is, how it should be treated, and who is in danger.

Follow these guidelines during a biological threat:

- Watch TV, listen to the radio, or check the Internet for official news and information including signs and symptoms of the disease, areas in danger, if medications or vaccinations are being distributed and where you should seek medical attention if you become ill.
- If you become aware of an unusual and suspicious substance, quickly get away.
- Cover your mouth and nose with layers of fabric that can filter the air but still allow breathing. Examples include two to three layers of cotton such as a t-shirt, handkerchief or towel.
- Depending on the situation, wear a face mask to reduce inhaling or spreading germs.
- If you have been exposed to a biological agent, remove and bag your clothes and personal items. Follow official instructions for disposal of contaminated items.
- Wash yourself with soap and water and put on clean clothes.
- Contact authorities and seek medical assistance. You may be advised to stay away from others or even quarantined.
- If your symptoms match those described and you are in the group considered at risk, immediately seek emergency medical attention.

- Follow instructions of doctors and other public health officials.
- If the disease is contagious expect to receive medical evaluation and treatment.
- For non-contagious diseases, expect to receive medical evaluation and treatment.
- In a declared biological emergency or developing epidemic avoid crowds
- Wash your hands with soap and water frequently.
- Do not share food or utensils.

After a Biological Threat

Pay close attention to all official warnings and instructions on how to proceed. The delivery of medical services for a biological event may be handled differently to respond to increased demand.

The basic public health procedures and medical protocols for handling exposure to biological agents are the same as for any infectious disease. It is important for you to pay attention to official instructions via radio, television, and emergency alert systems.

Visit the [Centers for Disease Control and Prevention](#) for a complete list of potential agents/diseases and appropriate treatments.

Earthquakes

This page describes what to do before, during, and, after an earthquake.

Know your risk

What

An earthquake is the sudden, rapid shaking of the earth, caused by the breaking and shifting of subterranean rock as it releases strain that has accumulated over a long time. Initial mild shaking may strengthen and become extremely violent within seconds. Additional earthquakes, called aftershocks, may follow the initial earthquake. Most are smaller than the initial earthquake but larger magnitude aftershocks also occur. Earthquakes may cause household items to become dangerous projectiles; cause buildings to move off foundations or collapse, damage utilities, roads and structures such as bridges and dams, or cause fires and explosions. They may also trigger landslides, avalanches, and tsunamis.

Where

All 50 states and 5 U.S. territories are at some risk for earthquakes. The risk is higher in identified seismic zones including the San Andreas Fault in California, the Cascadia Subduction Zone in western Oregon and Washington and Alaska, the New Madrid Fault Zone spanning areas in Missouri, Arkansas, Tennessee, and Kentucky, and areas on the east coast including the mid-Atlantic, coastal South Carolina and New England.

When

Earthquakes can happen at any time of the year and occur without warning, although they usually last less than one minute. Aftershocks following the initial earthquake may occur for hours, days, or even months. Earthquakes cannot be predicted — although scientists are working on it!

Before An Earthquake

- Before an earthquake occurs, secure items that could fall or move and cause injuries or damage (e.g., bookshelves, mirrors, light fixtures, televisions, computers, hot water heaters. Move beds away from windows and secure any hanging items over beds, couches, cribs or other places people sit or lie.
- Practice how to “**Drop, Cover, and Hold On!**”
 - Plan and practice how to Drop to the ground, Cover your head and neck with your arms, and if a safer place is nearby that you can get to without exposing yourself to flying debris, crawl to it and Hold On to maintain cover.
 - To react quickly you must practice often. You may only have seconds to protect yourself in an earthquake.
- Store critical supplies (e.g., water, medication) and documents.
- Plan how you will communicate with family members, including multiple methods by making a [family emergency communication plan](#).
- Consult a structural engineer to evaluate your home and ask about updates to strengthen areas that would be weak during an earthquake. When choosing your home or business to rent or buy, check if the building is earthquake resistant per local building codes.

During An Earthquake

If you are inside a building:

- Drop down onto your hands and knees so the earthquake doesn't knock you down. Drop to the ground (before the earthquake drops you!)
- Cover your head and neck with your arms to protect yourself from falling debris.
 - If you are in danger from falling objects, and you can move safely, crawl for additional cover under a sturdy desk or table.
 - If no sturdy shelter is nearby, crawl away from windows, next to an interior wall. Stay away from glass, windows, outside doors and walls, and anything that could fall, such as light fixtures or furniture.
- Hold on to any sturdy covering so you can move with it until the shaking stops.
- Stay where you are until the shaking stops. Do not run outside. Do not get in a doorway as this does not provide protection from falling or flying objects, and you may not be able to remain standing.
- **If getting safely to the floor to take cover won't be possible:**
 - If getting safely to the floor will be difficult, actions before an earthquake to secure or remove items that can fall or become projectiles should be a priority to create spaces.
 - Identify an away from windows and objects that could fall on you. The Earthquake Country Alliance advises getting as low as possible to the floor. People who use wheelchairs or other mobility

devices should lock their wheels, bend over, and remain seated until the shaking stops. Protect your head and neck with your arms, a pillow, a book, or whatever is available.

If you are in bed when you feel the shaking:

- If you are in bed: Stay there and Cover your head and neck with a pillow. At night, hazards and debris are difficult to see and avoid; attempts to move in the dark result in more injuries than remaining in bed.

If you are outside when you feel the shaking:

- If you are outdoors when the shaking starts, move away from buildings, streetlights, and utility wires. Once in the open, “Drop, Cover, and Hold On.” Stay there until the shaking stops.

If you are in a moving vehicle when you feel the shaking:

- It is difficult to control a vehicle during the shaking. If you are in a moving vehicle, stop as quickly and safely as possible and stay in the vehicle. Avoid stopping near or under buildings, trees, overpasses, and utility wires. Proceed cautiously once the earthquake has stopped. Avoid roads, bridges, or ramps that the earthquake may have damaged.

After an Earthquake

- When the shaking stops, look around. If the building is damaged and there is a clear path to safety, leave the building and go to an open space away from damaged areas.
- If you are trapped, do not move about or kick up dust.
- If you have a cell phone with you, use it to call or text for help.
- Tap on a pipe or wall or use a whistle, if you have one, so that rescuers can locate you.

- Once safe, monitor local news reports via battery operated radio, TV, social media, and cell phone text alerts for emergency information and instructions.
- Check for injuries and provide assistance if you have training. Assist with rescues if you can do so safely.
- If you are near the coast, learn about tsunamis in your area. If you are in an area that may have tsunamis, when the shaking stops, walk inland and to higher ground immediately. Monitor official reports for more information on the area's tsunami evacuation plans.
- Use extreme caution during post-disaster clean-up of buildings and around debris. Do not attempt to remove heavy debris by yourself. Wear protective clothing, including a long-sleeved shirt, long pants, work gloves, and sturdy, thick-soled shoes during clean-up.
- Be prepared to “Drop, Cover, and Hold on” in the likely event of aftershocks.

Explosions

Explosive devices can be highly portable, using vehicles and humans as a means of transport. They are easily detonated from remote locations or by suicide bombers. There are steps you can take to prepare for the unexpected.

Before an Explosion

The following are things you can do to protect yourself, your family and your property in the event of an explosion.

- Build an [Emergency Supply Kit](#)
- Make a [Family Emergency Plan](#)
- Learn what to do in case of bomb threats or receiving suspicious packages and letters
- Ensure your employers have up-to-date information about any medical needs you may have and how to contact designated beneficiaries or emergency contacts.

Bomb Threats

If you receive a telephoned bomb threat:

- Get as much information from the caller as possible. Try to ask the following questions:
 - When is the bomb going to explode?
 - Where is it right now?
 - What does it look like?
 - What kind of bomb is it?
 - What will cause it to explode?
 - Did you place the bomb?

- Keep the caller on the line and record everything that is said.
- Notify the police and building management immediately.

Suspicious Packages and Letters

Some typical characteristics postal inspectors have detected over the years, which should trigger suspicion, include parcels that:

- Are unexpected or from someone unfamiliar to you.
- Have no return address, one that doesn't match the postmark, or can't be verified as legitimate.
- Are marked with restrictive endorsements such as "Personal," "Confidential," or "Do not X-ray."
- Have inappropriate or unusual labeling such as threatening language
- Have protruding wires or aluminum foil, strange odors or stains.
- Have excessive postage or packaging material, such as masking tape and string.
- Are of unusual weight given their size or are lopsided or oddly shaped.
- Are not addressed to a specific person.

Take these additional steps against possible biological and chemical agents:

- Never sniff or smell suspicious mail.
- Place suspicious envelopes or packages in a plastic bag or some other type of container to prevent leakage of contents.
- Leave the room and close the door or section off the area to prevent others from entering.

- Wash your hands with soap and water to prevent spreading any powder to your face.
- If you are at work, report the incident to your building security official or an available supervisor, who should notify police and other authorities without delay.
- List all people who were in the room or area when this suspicious letter or package was recognized. Give a copy of this list to both the local public health authorities and law enforcement officials for follow-up investigations and advice.
- If you are at home, report the incident to local police.

During an Explosion

- Get under a sturdy table or desk if things are falling around you. When they stop falling, leave quickly, watching for obviously weakened floors and stairways.
- Do not use elevators.
- Stay low if there is smoke. Do not stop to retrieve personal possessions or make phone calls.
- [Check for fire](#) and other hazards.
- Once you are out, do not stand in front of windows, glass doors or other potentially hazardous areas.
- If you are trapped in debris, use a flashlight, whistle or tap on pipes to signal your location to rescuers.
- Shout only as a last resort to avoid inhaling dangerous dust.
- Cover your nose and mouth with anything you have on hand.

After an Explosion

- There may be significant numbers of casualties or damage to buildings and infrastructure.

- Heavy law enforcement involvement at local, state and federal levels.
- Health and mental health resources in the affected communities can be strained to their limits, maybe even overwhelmed.
- Extensive media coverage, strong public fear and international implications and consequences.
- Workplaces and schools may be closed, and there may be restrictions on domestic and international travel.
- You and your family or household may have to evacuate an area, avoiding roads blocked for your safety.
- Clean-up may take many months.

Extreme Heat

This page explains what actions you can take when the weather is extremely hot and how to understand heat alerts from the National Weather Service that you could receive in your local area. Heat kills by pushing the human body beyond its limits. In extreme heat and high humidity, evaporation is slowed and the body must work extra hard to maintain a normal temperature.

Before Extreme Heat

- To begin preparing, you should [build an emergency kit](#) and make a [family communications plan](#).
- Know those in your neighborhood who are older, young, sick or overweight. They are more likely to become victims of excessive heat and may need help.
- Be aware that people living in urban areas may be at greater risk from the effects of a prolonged heat wave than are people living in rural areas.
- Get trained in first aid to learn how to treat heat-related emergencies.
- Check to see if your home's cooling system is working properly.
- Make sure your home is well insulated and that you have weather stripping around your doors and window sills to keep the cool air inside.
- Install window air conditioners snugly; insulate if necessary.
- Check air-conditioning ducts for proper insulation.
- Install temporary window reflectors (for use between windows and drapes), such as aluminum foil-covered cardboard, to reflect heat back outside, and weather-strip doors and sills to keep cool air in.

- Cover windows that receive morning or afternoon sun with drapes, shades, awnings, or louvers. (Outdoor awnings or louvers can reduce the heat that enters a home by up to 80 percent.)
- Keep storm windows up all year.
- Learn about the types of medical conditions that can result from heat waves, and the proper first aid measures that should be taken.

Heat Related Illnesses

- Heat Cramps - Muscular pains and spasms due to heavy exertion. Although heat cramps are the least severe, they are often the first signal that the body is having trouble with the heat.
 - If these symptoms are observed:
- Get the person to a cooler location and remove excess clothing.
- Give cool sports drinks. Do not give liquids with caffeine or alcohol. Discontinue liquids if victim is nauseated.
- Seek medical attention if: the cramps do not subside in an hour, the victim has heart problems, or is on a low-sodium diet
- Heat exhaustion typically occurs when people exercise heavily or work in a hot, humid place where body fluids are lost through heavy sweating. Symptoms include heavy sweating, paleness, muscle cramps, tiredness, weakness, dizziness, headaches, nausea, fainting. If not treated, the victim's condition will worsen.
 - If these symptoms are observed:
 - Move victim to air-conditioned place and lie down. Loosen or remove clothing.
 - Cool the victim by placing them in a cool shower or bath, or by applying cool, wet cloths.

- Give sips of water or cool sports drinks containing salt and sugar. Do not give liquids with caffeine or alcohol. Discontinue liquids if victim is nauseated.
- Seek immediate medical attention if there is no improvement, the victim is unable to take fluids, vomiting occurs, or any symptoms are severe.
- Heat stroke is a life-threatening condition. The victim's temperature control system, which produces sweating to cool the body, stops working. The body temperature can rise so high that brain damage and death may result if the body is not cooled quickly. Symptoms include extremely high body temperature above 103°F, hot dry red skin, rapid strong pulse, headache, dizziness, nausea, confusion, unconsciousness.
- If these symptoms are observed:
 - Call 911 or emergency medical services, or get the victim to a hospital immediately. Delay can be fatal.
 - Until the emergency medical personnel arrive on scene or during transport to the hospital, move the person to a cooler location, cool by removing clothing, bath, sponging, applying a cold wet sheet.
 - Do not give the victim fluids to drink.

During Extreme Heat

- Stay indoors as much as possible and limit exposure to the sun.
- Drink plenty of fluids and replace salts and minerals in your body. Anyone on a fluid-restricted diet or who has a problem with fluid retention should consult a doctor before increasing liquid intake. People with epilepsy or heart, kidney, or liver disease should also consult a doctor before increasing liquid intake. A sports beverage

can replace the salt and minerals you lose in sweat. Avoid using salt tablets unless directed to do so by a physician.

- Limit intake of alcoholic beverages.
- Closely monitor a local radio station, TV station or [NOAA Weather Radio](#) for the latest information.
- Dress in loose-fitting, lightweight, and light-colored clothes that cover as much skin as possible. Protect face and head by wearing a wide-brimmed hat.
- Spend time in air-conditioned places. If you cannot afford an air conditioner, spend some time each day in an air-conditioned environment such as public libraries, shopping malls or other indoor public spaces.
- Stay on the lowest floor, out of the sunshine if air conditioning is not available.
- Check on family, friends, and neighbors who do not have air conditioning and who spend much of their time alone.
- Never leave children or pets alone in closed vehicles.
- Avoid strenuous work during the warmest part of the day. Use a buddy system when working in extreme heat, and take frequent breaks.
- Eat well-balanced, light, and regular meals. Hot, heavy meals add heat to your body. Avoid using salt tablets unless directed to do so by a physician.
- Check on family, friends, and neighbors who do not have air conditioning and who spend much of their time alone.

Heat Watches and Warnings

Familiarize yourself with these terms to help identify an extreme heat hazard:

- Heat Wave - Prolonged period of excessive heat, often combined with excessive humidity.
- Heat Index - A number in degrees Fahrenheit (F) that tells how hot it feels when relative humidity is added to the air temperature. Exposure to full sunshine can increase the heat index by 15 degrees.
- Excessive Heat Watch - Conditions are favorable for an excessive heat event to meet or exceed local Excessive Heat Warning criteria in the next 24 to 72 hours.
- Excessive Heat Warning - Heat Index values are forecast to meet or exceed locally defined warning criteria for at least 2 days (daytime highs=105-110° Fahrenheit).
- Heat Advisory - Heat Index values are forecast to meet locally defined advisory criteria for 1 to 2 days (daytime highs=100-105° Fahrenheit).

Floods

This page explains what actions to take when you receive a flood watch or warning alert from the National Weather Service for your local area and what to do before, during, and after a flood.

Know your Risk

What

Flooding is a temporary overflowing of water onto land that is normally dry. Flooding may happen with only a few inches of water, or it may cover a house to the rooftop. There are many possible causes of floods including heavy rain or snowmelt, coastal storms and storm surge, waterway overflow from being blocked with debris or ice, or overflow of levees, dams, or waste water systems. Flooding can occur slowly over many days or happen very quickly with little or no warning, called flash floods.

Where

Flooding can happen in any U.S. state or territory. It is particularly important to be prepared for flooding if you live in a low-lying area near a body of water, such as near a river, stream, or culvert; along a coast; or downstream from a dam or levee.

When

Flooding can occur during every season, but some areas of the country are at greater risk at certain times of the year. Coastal areas are at greater risk for flooding during hurricane season (i.e., June to November), while the Midwest is more at risk in the spring and during heavy summer rains. Ice jams occur in the spring in the Northeast and Northwest. Even the deserts of the Southwest are at risk during the late summer monsoon season.

Basic Safety Tips

- Turn Around, Don't Drown!
- Avoid walking or driving through flood waters.
- Do not drive over bridges that are over fast-moving floodwaters. Floodwaters can scour foundation material from around the footings and make the bridge unstable.
- Just 6 inches of moving water can knock you down, and one foot of moving water can sweep your vehicle away.
- If there is a chance of flash flooding, move immediately to higher ground.
- If floodwaters rise around your car but the water is not moving, abandon the car and move to higher ground. Do not leave the car and enter moving water.
- Avoid camping or parking along streams, rivers, and creeks during heavy rainfall. These areas can flood quickly and with little warning.

Flood watch

Flood Watch = “Be Aware.” Conditions are right for flooding to occur in your area.

Steps to Take

- Turn on your TV/radio. You will receive the latest weather updates and emergency instructions.
- Know where to go. You may need to reach higher ground quickly and on foot.
- Build or restock your emergency preparedness kit. Include a flashlight, batteries, cash, and first aid supplies.

Prepare Your Home

- Bring in outdoor furniture and move important indoor items to the highest possible floor. This will help protect them from flood damage.
- Disconnect electrical appliances and do not touch electrical equipment if you are wet or standing in water. You could be electrocuted.
- If instructed, turn off your gas and electricity at the main switch or valve. This helps prevent fires and explosions.

Flood warning

Flood Warning = "Take Action!" Flooding is either happening or will happen shortly.

Steps to Take

- Move immediately to higher ground or stay on high ground.
- Evacuate if directed.
- Avoid walking or driving through flood waters. Turn Around, Don't Drown! Just 6 inches of moving water can knock you down and one foot of moving water can sweep your vehicle away.

After a flood

- Return home only when authorities say it is safe.
- Be aware of areas where floodwaters have receded and watch out for debris. Floodwaters often erode roads and walkways.
- Do not attempt to drive through areas that are still flooded.
- Avoid standing water as it may be electrically charged from underground or downed power lines.
- Photograph damage to your property for insurance purposes.

When it is not flooding: Make a flood plan

- [Know your flood risk.](#)
- Familiarize yourself with local emergency plans. Know where to go and how to get there should you need to get to higher ground, the highest level of a building, or to evacuate.
- Make a flood [emergency plan](#) for the relevant type/s of local flood risk with plans such as evacuation, shelter, locations for high ground.
- Build or restock your [emergency preparedness kit](#), including a minimum of 3 days of food and water, flashlight, batteries, cash, and first aid supplies.
- Consider buying [flood insurance](#).
- Stay tuned to your phone [alerts](#), TV, or radio for weather updates, emergency instructions, or evacuation orders.

Home Fires

In just two minutes, a fire can become life-threatening. In five minutes, a residence can be engulfed in flames.

Learn About Fires

- Fire is FAST! In less than 30 seconds a small flame can turn into a major fire. It only takes minutes for thick black smoke to fill a house or for it to be engulfed in flames.
- Fire is HOT! Heat is more threatening than flames. Room temperatures in a fire can be 100 degrees at floor level and rise to 600 degrees at eye level. Inhaling this super-hot air will scorch your lungs and melt clothes to your skin.
- Fire is DARK! Fire starts bright, but quickly produces black smoke and complete darkness.
- Fire is DEADLY! Smoke and toxic gases kill more people than flames do. Fire produces poisonous gases that make you disoriented and drowsy. Asphyxiation is the leading cause of fire deaths, exceeding burns by a three-to-one ratio.

Before a Fire

Create and Practice a Fire Escape Plan

In the event of a fire, remember that every second counts, so you and your family must always be prepared. Escape plans help you get out of your home quickly.

Twice each year, practice your home fire escape plan. Some tips to consider when preparing this plan include:

- Find two ways to get out of each room in the event the primary way is blocked by fire or smoke.

- A secondary route might be a window onto a neighboring roof or a collapsible ladder for escape from upper story windows.
- Make sure that windows are not stuck, screens can be taken out quickly, and that security bars can be properly opened.
- Practice feeling your way out of the house in the dark or with your eyes closed.
- Teach children not to hide from firefighters.

Smoke Alarms

A working smoke alarm significantly increases your chances of surviving a deadly home fire.

- Install both ionization AND photoelectric smoke alarms, OR dual sensor smoke alarms, which contain both ionization and photoelectric smoke sensors.
- Test batteries monthly.
- Replace batteries in battery-powered and hard-wired smoke alarms at least once a year (except non-replaceable 10-year lithium batteries).
- Install smoke alarms on every level of your home, including the basement, both inside and outside of sleeping areas.
- Replace the entire smoke alarm unit every 8-10 years or according to manufacturer's instructions.
- Never disable a smoke alarm while cooking – it can be a deadly mistake.

Smoke Alarm Safety for People with Access or Functional Needs

- Audible alarms for visually impaired people should pause with a small window of silence between each successive cycle so that they can listen to instructions or voices of others.

- Smoke alarms with a vibrating pad or flashing light are available for the hearing impaired. Contact your local fire department for information about obtaining a flashing or vibrating smoke alarm.
- Smoke alarms with a strobe light outside the home to catch the attention of neighbors, and emergency call systems for summoning help, are also available.

More Fire Safety Tips

- Make digital copies of valuable documents and records like birth certificates.
- Sleep with your door closed.
- Contact your local fire department for information on training on the proper use and maintenance of fire extinguishers.
- Consider installing an automatic fire sprinkler system in your residence.

During a Fire

- Crawl low under any smoke to your exit - heavy smoke and poisonous gases collect first along the ceiling.
- Before opening a door, feel the doorknob and door. If either is hot, or if there is smoke coming around the door, leave the door closed and use your second way out.
- If you open a door, open it slowly. Be ready to shut it quickly if heavy smoke or fire is present.
- If you can't get to someone needing assistance, leave the home and call 9-1-1 or the fire department. Tell the emergency operator where the person is located.
- If pets are trapped inside your home, tell firefighters right away.

- If you can't get out, close the door and cover vents and cracks around doors with cloth or tape to keep smoke out. Call 9-1-1 or your fire department. Say where you are and signal for help at the window with a light-colored cloth or a flashlight.
- If your clothes catch fire, stop, drop, and roll – stop immediately, drop to the ground, and cover your face with your hands. Roll over and over or back and forth until the fire is out. If you or someone else cannot stop, drop, and roll, smother the flames with a blanket or towel. Use cool water to treat the burn immediately for 3 to 5 minutes. Cover with a clean, dry cloth. Get medical help right away by calling 9-1-1 or the fire department.

Fire Escape Planning for Older Adults and People with Access or Functional Needs

- Live near an exit. You'll be safest on the ground floor if you live in an apartment building. If you live in a multi-story home, arrange to sleep on the ground floor, and near an exit.
- If you use a walker or wheelchair, check all exits to be sure you get through the doorways.
- Make any necessary accommodations, such as providing exit ramps and widening doorways, to facilitate an emergency escape.
- Speak to your family members, building manager, or neighbors about your fire safety plan and practice it with them.
- Contact your local fire department's non-emergency line and explain your special needs. Ask emergency providers to keep your special needs information on file.
- Keep a phone near your bed and be ready to call 911 or your local emergency number if a fire occurs.

After a Fire

The following checklist serves as a quick reference and guide for you to follow after a fire strikes.

- Contact your local disaster relief service, such as The Red Cross, if you need temporary housing, food and medicines.
- If you are insured, contact your insurance company for detailed instructions on protecting the property, conducting inventory and contacting fire damage restoration companies. If you are not insured, try contacting private organizations for aid and assistance.
- Check with the fire department to make sure your residence is safe to enter. Be watchful of any structural damage caused by the fire.
- The fire department should see that utilities are either safe to use or are disconnected before they leave the site. DO NOT attempt to reconnect utilities yourself.
- Conduct an inventory of damaged property and items. Do not throw away any damaged goods until after an inventory is made.
- Try to locate valuable documents and records. Refer to information on contacts and the replacement process inside this brochure.
- Begin saving receipts for any money you spend related to fire loss. The receipts may be needed later by the insurance company and for verifying losses claimed on income tax.
- Notify your mortgage company of the fire.

Pandemic

This page will help you gather the information and resources you may need in case of a pandemic such as the flu.

Before a Pandemic

- Store a two week supply of water and food.
- Periodically check your regular prescription drugs to ensure a continuous supply in your home.
- Have any nonprescription drugs and other health supplies on hand, including pain relievers, stomach remedies, cough and cold medicines, fluids with electrolytes, and vitamins.
- Get copies and maintain electronic versions of health records from doctors, hospitals, pharmacies and other sources and store them, for personal reference. Get [help](#) accessing electronic help records.
- Talk with family members and loved ones about how they would be cared for if they got sick, or what will be needed to care for them in your home.

During a Pandemic

Limit the Spread of Germs and Prevent Infection

- **Avoid close contact** with people who are sick.
- When you are sick, **keep your distance** from others to protect them from getting sick too.
- **Cover your mouth and nose** with a tissue when coughing or sneezing. It may prevent those around you from getting sick.
- **Washing your hands** often will help protect you from germs.
- **Avoid touching your eyes, nose or mouth.**

- **Practice other good health habits.** Get plenty of sleep, be physically active, manage your stress, drink plenty of fluids, and eat nutritious food.

Power Outages

This page provides basic safety tips and how to what to do before, during and after a power outage.

Before a Power Outage

- Build or restock your [emergency preparedness kit](#), including a flashlight, batteries, cash, and first aid supplies.
- Make sure you have alternative charging methods for your phone or any device that requires power. For more information visit: [Get Tech Ready](#)
- Charge cell phones and any battery powered devices.
- Know where the manual release lever of your electric garage door opener is located and how to operate it.
- Purchase ice or freeze water-filled plastic containers to help keep food cold during a temporary power outage.
- Keep your car's gas tank full-gas stations rely on electricity to power their pumps. If you use your car to re-charge devices, do NOT keep the car running in a garage, partially enclosed space, or close to a home, this can lead to carbon monoxide poisoning.
- Learn about the emergency plans that have been established in your area by visiting your state's or local website so you can locate the closest cooling and warming shelters.
- If you rely on anything that is battery-operated or power dependent like a medical device determine a back-up plan. For more planning information tips visit: [Seniors](#) and [Individuals with Disabilities and Others with Access and Functional Needs](#)

During a Power Outage: Safety Tips

- Only use flashlights for emergency lighting, candles can cause fires.
- Keep refrigerator and freezer doors closed. Most food requiring refrigeration can be kept safely in a closed refrigerator for several hours. An unopened refrigerator will keep food cold for about 4 hours. A full freezer will keep the temperature for about 48 hours. For more information about food safety visit our [food](#) page.
- Take steps to remain cool if it is hot outside. In intense heat when the power may be off for a long time, consider going to a movie theater, shopping mall or “cooling shelter” that may be open in your community. If you remain at home, move to the lowest level of your home, since cool air falls. Wear lightweight, light-colored clothing. Drink plenty of water, even if you do not feel thirsty.
- Put on layers of warm clothing if it is cold outside. Never burn charcoal for heating or cooking indoors. Never use your oven as a source of heat. If the power may be out for a prolonged period, plan to go to another location (the home of a relative or friend, or a public facility) that has heat to keep warm.
- Turn off or disconnect appliances and other equipment in case of a momentary power “surge” that can damage computers and other devices. Consider adding surge protectors.
- If you are considering purchasing a generator for your home, consult an electrician or engineer before purchasing and installing.
- Only use generators away from your home and NEVER run a generator inside a home or garage, or connect it to your home's electrical system.

After a Power Outage

- Throw away any food that has been exposed to temperatures 40° F (4° C) for 2 hours or more or that has an unusual odor, color or texture. When in doubt, throw it out!
- If food in the freezer is colder than 40° F and has ice crystals on it, you can refreeze it.
- Contact your doctor if you're concerned about medications having spoiled.
- Restock your emergency kit with fresh batteries, canned foods and other supplies

Snowstorms & Extreme Cold

This page explains what actions to take when you receive a winter weather storm alert from the National Weather Service for your local area and what to do before, during, and after a snowstorm or extreme cold.

Know your risk

What

A winter storm occurs when there is significant precipitation and the temperature is low enough that precipitation forms as sleet or snow, or when rain turns to ice. A winter storm can range from freezing rain and ice, to moderate snowfall over a few hours, to a blizzard that lasts for several days. Many winter storms are accompanied by dangerously low temperatures.

Winter storms can cause power outages that last for days. They can make roads and walkways extremely dangerous or impassable and close or limit critical community services such as public transportation, child care, health programs and schools. Injuries and deaths may occur from exposure, dangerous road conditions, and carbon monoxide poisoning and other conditions.

Where

Winter storms and colder than normal temperatures can happen in every region of the country.

When

Winter storms can occur from early autumn to late spring depending on the region.

Before Snowstorms and Extreme Cold

- Make a [Family Communications Plan](#). Your family may not be together when disaster strikes, so it is important to know how you will contact one another, how you will get back together and what you will do in case of an emergency.
- Make an [emergency kit](#) for at least three days of self-sufficiency.
- Keep space heater safety in mind: Use electric space heaters with automatic shut-off switches and non-glowing elements. Remember to keep all heat sources at least three feet away from furniture and drapes.
- **Prepare your home:**
 - Make sure your home is well insulated and that you have weather stripping around your doors and window sills to keep the warm air inside.
 - Make sure you have a working carbon monoxide detector.
 - Keep fire extinguishers on hand, and make sure everyone in your house knows how to use them. House fires pose an additional risk, as more people turn to alternate heating sources without taking the necessary safety precautions.
 - Learn how to [shut off water valves](#) (in case a pipe bursts).
 - Insulate your home by installing storm windows or covering windows with plastic from the inside to keep cold air out.
- Hire a contractor to check the structural ability of the roof to sustain unusually heavy weight from the accumulation of snow - or water, if drains on flat roofs do not work.
 - If you have a wood burning fireplace, consider storing wood to keep you warm if winter weather knocks out your heat.

Also, make sure you have your chimney cleaned and inspected every year.

- Have at least one of the following heat sources in case the power goes out:
 - Extra blankets, sleeping bags and warm winter coats
 - Fireplace or wood-burning stove with plenty of dry firewood, or a gas log fireplace
- **Prepare your vehicle:**
 - Fully winterize your vehicle: Have a mechanic check antifreeze, brakes, heater and defroster, tires, and windshield wipers to ensure they are in good shape. Keep your gas tank at least half full.
 - Keep an [extra emergency kit specifically created for your car](#). In addition to the basic essentials, consider adding a portable cell phone charger, ice scraper, extra blanket, sand for traction and jumper cables.
 - Rock salt or more environmentally safe products to melt ice on walkways. Visit the [Environmental Protection Agency](#) for a complete list of recommended products.
 - Sand to improve traction.
- Make sure you have a cell phone with an emergency charging option (car, solar, hand crank, etc.) in case of a power failure.
- People who depend on electricity to operate medical equipment should have alternate arrangements in place in case power is out for an extended period of time.
- Plan to check on elderly/disabled relatives and neighbors.
- Plan to bring [pets](#) inside.

- Know where the manual release lever of your electric garage door opener is located and how to operate it in case you lose power.
- Fill a gallon container with water and place them in the freezer to help keep food cold.
- A NOAA Weather Radio broadcasts alerts and warnings directly from the NWS for all hazards. You may also sign up in advance to receive notifications from your local emergency services.

During Snowstorms and Extreme Cold

- Stay indoors during the storm.
- Drive only if it is absolutely necessary. If you must drive: travel in the day; don't travel alone; keep others informed of your schedule and your route; stay on main roads and avoid back road shortcuts.
- Walk carefully on snowy, icy, walkways.
- Avoid overexertion when shoveling snow. Overexertion can bring on a heart attack—a major cause of death in the winter. Use caution, take breaks, push the snow instead of lifting it when possible, and lift lighter loads.
- Keep dry. Change wet clothing frequently to prevent a loss of body heat. Wet clothing loses all of its insulating value and transmits heat rapidly.
- If you must go outside, wear several layers of loose-fitting, lightweight, warm clothing rather than one layer of heavy clothing. The outer garments should be tightly woven and water repellent.
- Wear mittens, which are warmer than gloves.
- Wear a hat and cover your mouth with a scarf to reduce heat loss.

Cold Related Illness

- **Frostbite is a serious condition that's caused by exposure to extremely cold temperatures.**
 - a white or grayish-yellow skin area
 - skin that feels unusually firm or waxy
 - numbness
 - **If you detect symptoms of frostbite, seek medical care.**
- **Hypothermia, or abnormally low body temperature, is a dangerous condition that can occur when a person is exposed to extremely cold temperatures.** Hypothermia is caused by prolonged exposures to very cold temperatures. When exposed to cold temperatures, your body begins to lose heat faster than it's produced. Lengthy exposures will eventually use up your body's stored energy, which leads to lower body temperature.
 - Warnings signs of hypothermia:
 - **Adults:** shivering, exhaustion, confusion, fumbling hands, memory loss, slurred speech drowsiness
 - **Infants:** bright red, cold skin, very low energy

If you notice any of these signs, take the person's temperature. **If it is below 95° F, the situation is an emergency—get medical attention immediately.**

Carbon Monoxide

Caution: Each year, an average of 430 Americans die from unintentional carbon monoxide poisoning, and there are more than 20,000 visits to the emergency room with more than 4,000 hospitalizations. Carbon monoxide-related deaths are highest during colder months. These deaths are likely due to increased use of gas-powered furnaces and alternative

heating, cooking, and power sources used inappropriately indoors during power outages.

- Never use a generator, grill, camp stove or other gasoline, propane, natural gas or charcoal-burning devices inside a home, garage, basement, crawlspace or any partially enclosed area. Locate unit away from doors, windows and vents that could allow carbon monoxide to come indoors. Keep these devices at least 20 feet from doors, windows, and vents.
- The primary hazards to avoid when using alternate sources for electricity, heating or cooking are carbon monoxide poisoning, electric shock and fire.
- Install carbon monoxide alarms in central locations on every level of your home and outside sleeping areas to provide early warning of accumulating carbon monoxide.
- If the carbon monoxide alarm sounds, move quickly to a fresh air location outdoors or by an open window or door.
- Call for help from the fresh air location and remain there until emergency personnel arrive to assist you.

Stay or Go

STAY:

- If stuck on the road to avoid exposure and/or when rescue is likely
- If a safe location is neither nearby or visible
- If you do not have appropriate clothing to go outside
- If you do not have the ability to call for help

GO:

- If the distance to call for help is accessible.
- If you have visibility and outside conditions are safe.

- If you have appropriate clothing.
- Once the storm has passed, if you are not already home, follow instructions from your local transportation department and emergency management agency to determine if it is safe to drive and, if so, which route will be safest for you to get home. Drive with extra caution.

After Snowstorms and Extreme Cold

- If your home loses power or heat for more than a few hours or if you do not have adequate supplies to stay warm in your home overnight, you may want to go to a designated public shelter if you can get there safely. Text **SHELTER** + your **ZIP code** to **43362** (4FEMA) to find the nearest shelter in your area (e.g., SHELTER20472)
- Bring any personal items that you would need to spend the night (such as toiletries, medicines). Take precautions when traveling to the shelter. Dress warmly in layers, wear boots, mittens, and a hat.
- Continue to protect yourself from frostbite and hypothermia by wearing warm, loose-fitting, lightweight clothing in several layers. Stay indoors, if possible.

Winter Weather Watches and Warnings

- Familiarize yourself with these terms to help identify an extreme winter weather alerts:
- **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**- Wind-chill is the temperature it “feels like” when you are outside. The NWS provides a Wind-chill Chart to show the

difference between air temperature and the perceived temperature and the amount of time until frostbite occurs. For more information,

visit: <http://www.nws.noaa.gov/om/winter/windchill.shtml>.

- **Winter Weather Advisory** - Winter weather conditions are expected to cause significant inconveniences and may be hazardous. When caution is used, these situations should not be life threatening. The NWS issues a winter weather advisory when conditions are expected to cause significant inconveniences that may be hazardous. If caution is used, these situations should not be life-threatening.
- **Winter Storm Watch** - A winter storm is possible in your area. Tune in to NOAA Weather Radio, commercial radio, or television for more information. The NWS issues a winter storm watch when severe winter conditions, such as heavy snow and/or ice, may affect your area but the location and timing are still uncertain. A winter storm watch is issued 12 to 36 hours in advance of a potential severe storm. Tune in to NOAA Weather Radio, local radio, TV, or other news sources for more information. Monitor alerts, check your emergency supplies, and gather any items you may need if you lose power.
- **Winter Storm Warning** - A winter storm is occurring or will soon occur in your area.
- **Blizzard Warning** - Sustained winds or frequent gusts to 35 miles per hour or greater and considerable amounts of falling or blowing snow (reducing visibility to less than a quarter mile) are expected to prevail for a period of three hours or longer.
- **Frost/Freeze Warning** - Below freezing temperatures are expected.

Thunderstorms & Lightning

All thunderstorms are dangerous. Every thunderstorm produces lightning. While lightning fatalities have decreased over the past 30 years, lightning continues to be one of the top three storm-related killers in the United States. On average in the U.S., lightning kills 51 people and injures hundreds more. Although most lightning victims survive, people struck by lightning often report a variety of long-term, debilitating symptoms.

Other associated dangers of thunderstorms include [tornadoes](#), strong winds, hail and [flash flooding](#). Flash flooding is responsible for more fatalities – more than 140 annually – than any other thunderstorm-associated hazard. Dry thunderstorms that do not produce rain that reaches the ground are most prevalent in the western United States. Falling raindrops evaporate, but lightning can still reach the ground and can start [wildfires](#).

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.
- 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.

Lightning Risk Reduction When Outdoors

If you are in a forest then, seek shelter in a low area under a thick growth of small trees.

In an open area, go to a low place such as a ravine or valley. Be alert for flash floods.

On open water, get to land and find shelter immediately.

Facts about Thunderstorms

- They may occur singly, in clusters or in lines.
- Some of the most severe occur when a single thunderstorm affects one location for an extended time.
- Thunderstorms typically produce heavy rain for a brief period, anywhere from 30 minutes to an hour.
- Warm, humid conditions are highly favorable for thunderstorm development.
- About 10 percent of thunderstorms are classified as severe – one that produces hail at least an inch or larger in diameter, has winds of 58 miles per hour or higher or produces a [tornado](#).

Facts about Lightning

- Lightning's unpredictability increases the risk to individuals and property.

- Lightning often strikes outside of heavy rain and may occur as far as 10 miles away from any rainfall.
- “Heat lightning” is actually lightning from a thunderstorm too far away from thunder to be heard. However, the storm may be moving in your direction.
- Most lightning deaths and injuries occur when people are caught outdoors in the summer months during the afternoon and evening.
- Your chances of being struck by lightning are estimated to be 1 in 600,000 but could be reduced even further by following safety precautions.
- Lightning strike victims carry no electrical charge and should be attended to immediately.

Know the Terms

Familiarize yourself with these terms to help identify a thunderstorm hazard:

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.

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.

Tornadoes

This page explains what actions to take when you receive a tornado watch or warning alert from the National Weather Service for your local area and what to do before, during, and after a tornado.

Know your risk

What

A tornado is a violently rotating column of air that extends from a thunderstorm to the ground and is often—although not always—visible as a funnel cloud. Lightning and hail are common in thunderstorms that produce tornadoes. Tornadoes cause extensive damage to structures and disrupt transportation, power, water, gas, communications, and other services in its direct path and in neighboring areas. Related thunderstorms can cause heavy rains, flash flooding, and hail

Where

About 1,200 tornadoes hit the United States every year and every state is at risk. Most tornadoes in the United States occur east of the Rocky Mountains with concentrations in the central and southern plains, the Gulf Coast and Florida.

When

Tornadoes can strike in any season, but occur most often in the spring and summer months. They can occur at all hours of the day and night, but are most likely to occur between 3 p.m. and 9 p.m.

Before a Tornado

- Identify safe rooms built to FEMA criteria or ICC500 storm shelters or other potential protective locations in sturdy buildings near your home, work, and other locations you frequent so you have a plan for where you will go quickly for safety when there is a Warning or an approaching tornado.

- For schools, malls, and other buildings with long-span roofs or open space plans, or many occupants, ask the building manager to identify the best available refuge.
- **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.

Tornado Facts

The extent of destruction caused by tornadoes depends on the tornado's intensity, size, path, time of day, and amount of time it is on the ground. Wind from tornadoes can reach more than 300 miles per hour, and damage paths can be more than 1 mile wide and 50 miles long. Wind from tornadoes can destroy buildings and trees, transform debris into deadly projectiles, and roll vehicles.

- They may strike quickly, with little or no warning.

- They may appear nearly transparent until dust and debris are picked up or a cloud forms in the funnel.
- The average tornado moves Southwest to Northeast, but tornadoes have been known to move in any direction.
- Tornadoes can accompany tropical storms and hurricanes as they move onto land.
- Waterspouts are tornadoes that form over water.

Know the Terms

Familiarize yourself with these terms to help identify a tornado hazard:

- **Tornado Watch** - Tornadoes are possible. When there is a Watch, move to be near enough to a shelter or sturdy building to be able to get there quickly in a few minutes if there is a Warning or if you see signs of a tornado approaching. 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.

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 school, nursing home, hospital, factory, shopping center, high-rise building pre-identified best available refuge then:

- Go to a pre-designated area such as a safe room built to FEMA criteria, or a small interior windowless room on the lowest level, below ground in a basement, or storm cellar, is best. (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 cover your head and neck with your arms and cover your body as best you can e.g., with a heavy coat or blankets, pillows. .

- In a high-rise building, go to a small interior room or hallway on the lowest floor possible.
- Do not open windows.
- A sturdy structure (e.g. residence, small building) , school, nursing home, hospital, factory, shopping center, high-rise building)

A manufactured home or office then:

- Get out immediately and go to a pre-identified location such as the lowest floor of a sturdy, nearby building or a storm shelter. Mobile homes, even if tied down, do not offer protection from tornadoes.

The outside with no shelter then:

- If you are not in a sturdy building, there is no single research-based recommendation for what last-resort action to take because many factors can affect your decision. Possible actions include:
- 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.
- Take cover in a stationary vehicle. Put the seat belt on and cover your head with your arms and a blanket, coat or other cushion if possible.
- In all situations:

- 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 protection in a sturdy building. .
- Outdoor areas are not protected from flying debris. Flying debris from tornadoes causes most fatalities and injuries.

After a Tornado

- If you are trapped, do not move about or kick up dust. Tap on a pipe or wall or use a whistle, if you have one, so that rescuers can locate you.
- Listen to local officials for updates and instructions.
- Check-in with family and friends by texting or using social media.
- Watch out for debris and downed power lines.
- Stay out of damaged buildings and homes until local authorities indicate it is safe.
- Use extreme caution during post-disaster clean-up of buildings and around debris. Do not attempt to remove heavy debris by yourself. Wear protective clothing, including a long-sleeved shirt, long pants, work gloves, and sturdy, thick-soled shoes during clean-up.
- Photograph the damage to your property in order to assist in filing an insurance claim.
- Do what you can to prevent further damage to your property, (e.g., putting a tarp on a damaged roof), as insurance may not cover additional damage that occurs after the storm.

- If your home is without power, use flashlights or battery-powered lanterns rather than candles to prevent accidental fires.

Build a Safe Room

Extreme windstorms in many parts of the country pose a serious threat to buildings and their occupants. Your residence may be built "to code" but that does not mean it can withstand winds from extreme events such as tornadoes and major hurricanes. The purpose of a safe room built to FEMA criteria or a storm shelter built to ICC 500 standards is to provide a space where you and your family can seek refuge that provides a high level of protection. You can build a safe room in one of several places in your home.

- Your basement
- Atop a concrete slab-on-grade foundation or garage floor.
- An interior room on the first floor.

Safe rooms built below ground level provide the greatest protection, but a safe room built in a first-floor interior room also can provide the necessary protection. Below-ground safe rooms must be designed to avoid accumulating water during the heavy rains that often accompany severe windstorms.

To protect its occupants, a safe room must be built to withstand high winds and flying debris, even if the rest of the residence is severely damaged or destroyed. Consider the following when building a safe room:

- The safe room must be adequately anchored to resist overturning and uplift.
- The walls, ceiling and door of the shelter must withstand wind pressure and resist penetration by windborne objects and falling debris.

- The connections between all parts of the safe room must be strong enough to resist the wind.
- Sections of either interior or exterior residence walls that are used as walls of the safe room must be separated from the structure of the residence so that damage to the residence will not cause damage to the safe room.

Wildfires

This page explains what actions to take if you receive a fire weather watch alert from the National Weather Service for your local area and what to do before, during, and after a wildfire. Know your risk Wildfires can occur anywhere and can destroy homes, businesses, infrastructure, natural resources, and agriculture. This page explains what actions to take if you receive a fire weather watch alert from the National Weather Service for your local area and what to do before, during, and after a wildfire.

Know your risk

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What

A wildfire is an unplanned, unwanted fire burning in a natural area, such as a forest, grassland, or prairie. As building development expands into these areas, homes and businesses may be situated in or near areas susceptible to wildfires. This is called the wild land urban interface. Wildfires can cause death or injury to people and animals, damage or destroy structures, and disrupt community services including transportation, gas, power, communications, and other services. The impact may cover large areas with extensive burning, embers traveling more than a mile away from the wildfire itself, and smoke causing health issues for people far away from the fire. Wildfires damage watersheds leave areas prone to flooding and mudslides for many years.

Where

Wildfires can occur anywhere in the country. They can start in remote wilderness areas, in national parks, or even in your back yard. Wildfires can start from natural causes, such as lightning, but most are caused by

humans, either accidentally—from cigarettes, campfires, or outdoor burning—or intentionally.

When

Wildfires can occur at any time throughout the year, but the potential is always higher during periods with little or no rainfall, which make brush, grass, and trees dry and burn more easily. High winds can also contribute to spreading the fire. Your community may have a designated wildfire season when the risk is particularly high.

Fire Weather Watch

Fire weather watch = dangerous fire weather conditions are possible over the next 12 to 72 hours

Steps to Take

Turn on your TV/radio. You'll get the latest weather updates and emergency instructions.

Know where to go. If you are ordered to evacuate, know the route to take and have plan of where you will go. Check-in with your friends and family. Keep your car fueled, in good condition, and stocked with emergency supplies and a change of clothes.

Before Wildfire season

- Make a Wildfire plan

- Know your wildfire risk.

- Familiarize yourself with local emergency plans. Know where to go and how to get there should you need to evacuate.

- Make a wildfire emergency plan including an evacuation plan and a communication plan.

-Many communities have text or email alerting systems for emergency notifications. To find out what alerts are available in your area, search the Internet with your town, city, or county name and the word “alerts.”

-Build or restock your emergency preparedness kit, including a flashlight, batteries, cash, and first aid supplies.

-Stay tuned to your phone alerts, TV, or radio, for weather updates, emergency instructions or evacuation orders.

Prepare Your Home

Create and maintain an area approximately 30’ away from you home that is free of anything that will burn, such as wood piles, dried leaves, newspapers, brush, and other landscaping that can burn. From 30 feet to 100 feet reduce or replace as much of the most flammable vegetation as possible and prune vegetation, create “fuel breaks,” such as driveways, gravel walkways, and lawns.

Work with neighbors to create spaces up to 200 feet around your homes where vegetation is thinned to remove underbrush and tall trees do not touch each other for continuous canopies.

Regularly clean the roof and gutters. Connect garden hoses long enough to reach any area of the home and fill garbage cans, tubs, or other large containers with water.

Review your homeowner's insurance policy and also prepare/update a list of your home's contents.

During a Wildfire

If there is a wildfire in the area, be ready to evacuate on short notice.

If you see a wildfire and haven't received evacuation orders yet, call 9-1-1. Don't assume that someone else has already called.

If ordered to evacuate during a wildfire, do it immediately- make sure and tell someone where you are going and when you have arrived.

If you or someone you are with has been burned, call 9-1-1 or seek help immediately; cool and cover burns to reduce chance of further injury or infection.

After a Wildfire

Return home only when authorities say it is safe.

For several hours after the fire, maintain a "fire watch." Check and re-check for smoke, sparks or hidden embers throughout the house, including the roof and the attic.

Use caution when entering burned areas as hazards may still exist, including hot spots, which can flare up without warning. Evacuate immediately if you smell smoke.

Cleaning Your Home

Wear a NIOSH certified-respirator (dust mask) and wet debris down to minimize breathing dust particles.

Discard any food that has been exposed to heat, smoke or soot.

Do NOT use water that you think may be contaminated to wash dishes, brush teeth, prepare food, wash hands, or to make ice or baby formula.

Photograph damage to your property for insurance purposes