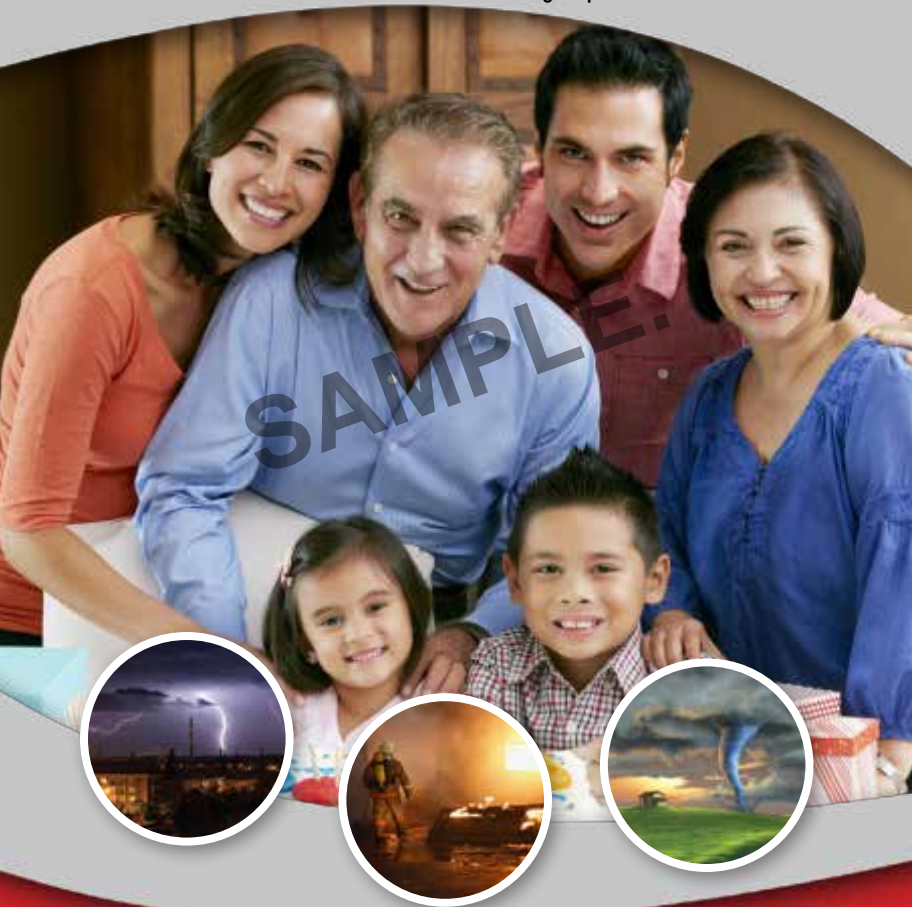


# Emergency Readiness

Being Prepared for Disasters



# Introduction

A disaster is an event that causes serious damage, hardship, loss, or death. Some disasters strike quickly and without warning.

The goal of this flip book is to help you and your family prepare for potential hazards which may occur during and after a disaster. Being as ready as you can helps you feel more in control and can save your life and the lives of family members and others.

## Use this FastFlip book to help you:

- Learn about different kinds of disasters.
- Find out which disasters you are at risk for.
- Know what to do before, during, and after different disasters to help protect you and your family, pets, and property.
- Be prepared to deal with a loss of water, gas, electricity, and telephone services.
- Locate resources to help you to prepare for and recover from disasters.

SAMPLE.



## Resources

Use these resources to help you plan for and deal with disasters.

### Resources

American Red Cross	<a href="http://www.redcross.org">www.redcross.org</a>
Safe and Well Program	<a href="http://safeandwell.communityos.org/cms/index.php">http://safeandwell.communityos.org/cms/index.php</a>
Natural Disaster Mobile Apps	<a href="http://www.redcross.org/prepare/mobile-apps">www.redcross.org/prepare/mobile-apps</a>
Centers for Disease Control and Prevention (CDC)	<a href="http://www.cdc.gov">www.cdc.gov</a> 1-800-CDC-INFO (1-800-232-4636)
Citizen Corps	<a href="http://www.ready.gov/citizen-corps">www.ready.gov/citizen-corps</a>
Community Emergency Training Response Team (CERT)	<a href="http://www.fema.gov/community-emergency-response-teams">www.fema.gov/community-emergency-response-teams</a>
Public Health Emergency	<a href="http://www.phe.gov/preparedness/pages/default.aspx">www.phe.gov/preparedness/pages/default.aspx</a>
Department of Homeland Security	<a href="http://www.dhs.gov">www.dhs.gov</a>
Disaster Assistance.gov	<a href="http://www.disasterassistance.gov">www.disasterassistance.gov</a>
Emergency Alert System	<a href="http://www.fema.gov/emergency-alert-system">www.fema.gov/emergency-alert-system</a>
Environmental Protection Agency	<a href="http://www.epa.gov">www.epa.gov</a>
FEMA – Federal Emergency Management Agency	<a href="http://www.fema.gov">www.fema.gov</a> & <a href="http://www.ready.gov/alerts">www.ready.gov/alerts</a> (800) 621-FEMA (3362)
Ready Campaign – FEMA/Department of Homeland Security (DHS)	<a href="http://www.ready.gov">www.ready.gov</a> <a href="http://www.ready.gov/es">www.ready.gov/es</a> (Spanish) <a href="http://www.ready.gov/kids/know-the-facts">www.ready.gov/kids/know-the-facts</a> (For kids)
National Weather Service	<a href="http://www.weather.gov">www.weather.gov</a>

# Make a Plan

## Make a Family Disaster Plan

Your written disaster plan should include:

- How each of you will get to a safe place
- Who will take charge of the safety of each child and pet, as well as each person with a disability or special need
- How you will contact each other
- How you will get back together
- Workplace, school, and day care center procedures for disasters
- Making and maintaining disaster supply kits, as needed
- An emergency financial first aid kit (EFFAK)

## Meet with Household Members

- Discuss the importance of being ready for disasters.
- Tell children that making plans helps keep them safe.
- Involve all household members in disaster planning.



## Pick a Meeting Spot

- If you have to leave your house quickly, choose a place to meet outside of your house, such as the sidewalk of a certain neighbor's house.
- Pick a place to meet if you are not at home and your neighborhood is being evacuated. Examples are a school or recreation center.
- In some disasters, you will be advised where to go to seek shelter.

## Set Up Contact Information

- Make an emergency call list with every person's phone number. Post the list near a landline phone (if you have one) or other place that is easy to see.
- Program each member's phone number in their cell phones' "contacts." Memorize numbers, too.
- Ask an out-of-town relative or friend to be your remote contact. He or she may be better able to communicate with family members that are separated. Make sure all family members have this number to call and state where they are.
- At <https://safeandwell.communityos.org/cms/index.php>, register for the **American Red Cross Safe and Well** website to let others know you are safe.
- Register for **Contact Loved Ones** at [www.contactlovedones.org](http://www.contactlovedones.org). Call this free voicemail service at 1-443-992-4890 to leave and listen to phone messages that let each other know how you are and how you can be reached.



**NOTE:** If you are in immediate danger, call. If not, send a text. Often, it is easier for texts to get through during times of local emergencies.

# Emergency Supply Kits

## Basic Supplies If You Need to Leave Your House

Store the following items in easy-to-lift and carry backpacks or storage containers that have wheels. Put ID tags on all storage items. Keep these as close as possible to an exit door.

- One gallon of water per person per day for 3 days
- First-aid kit\*
- Cash and coins\*
- Three-day supply of foods that do not spoil. Examples are foods in a can or pouch, such as tuna, salmon, meat, fruit, and beans; protein, granola, fruit, and meal replacement bars; peanut butter, crackers, pretzels; and nuts, sesame and other seeds.
- Battery-powered or hand-crank radio and a NOAA Weather Radio with tone alert and extra batteries
- Flashlight, extra batteries, and light (glow) sticks
- Whistle to signal for help
- Cleaning wipes, hand sanitizer, toilet paper
- Dust masks or cotton t-shirts to help filter the air
- Wrench and pliers to turn off utilities
- Copies of personal documents
- One sleeping bag or blanket per person
- One change of clothing and pair of sturdy shoes per person
- Plastic garbage bags with drawstrings or ties\*
- Extra set of car and house keys
- Maps (state, county, city)
- Solar-powered or hand-crank phone charger for cell phones
- Manual can opener and/or multi-purpose hand tool\*



## Additional Items If You Need to Stay in Your House

- Increase water and food for a two-week supply
- Plastic sheeting or roll of large plastic bags and duct tape\*

*\*An adult should put and store these items in childproof containers.*

## For Infants and Children

- Bottles, formula, and breast-feeding supplies
- Diapers and wipes
- Thermometer (ear, forehead, or digital)
- Activity books, cards, games to keep kids busy. Let your kids pick them out.
- Security blanket, toy, pacifier, teether, as needed
- Infant and/or children's fever reducer and pain reliever (e.g., acetaminophen, ibuprofen)\*
- Medicine spoon and/or dropper\*
- Prescribed medicines, as needed\*

*\*An adult should put and store these items in childproof containers.*





## Medical Needs

- Medications. **NOTE:** It is helpful to get refills and new prescriptions filled as soon as you can so you have them on hand. \*
- Medical supplies and equipment, as needed\*

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## Extra Items to Consider

- Fire extinguisher. Compass.
- Matches in a waterproof container\*
- Paper cups, plates and plastic utensils. Rain gear.
- Latex or other protective gloves
- Disinfectant and household chlorine bleach.\* To use bleach as a disinfectant, dilute nine parts water to one part bleach. In an emergency, you can also use it to treat water. Use 16 drops of regular household liquid bleach per gallon of water. Do not use bleach that is scented, color safe or that has added cleaners.
- Paper and pen or pencil
- Signal flares\*
- First aid book and this Fast FLIP book

*\*An adult should put and store these items in childproof containers.*





## Car Emergency Kit

Keep your gas tank at least half-full in the event you need to evacuate. If you hear warnings of a possible need to evacuate, fill up the gas tank. Store these items in your car(s):

- Foods that will not spoil, such as trail mix, protein bars, hard candy, and crackers
- Battery-powered radio and extra batteries
- Flashlight(s) and extra batteries
- Cell phone and car charger
- Blanket(s)
- Lightweight rain coats in plastic pouches
- Bottled water
- Flares and a whistle
- Jumper cables
- Spare tire or tire repair kit and air pump
- Shovel

**NOTE:** Keep a car window breaker and seatbelt cutter tool in the front seat in the event the car is submerged in water.



## Work Emergency Kit

In case a disaster occurs while you are at work, keep one container of basic supplies that you can easily pick up and take with you that includes:

- Bottles of water
- Snacks that do not spoil, such as protein, granola, fruit, and meal replacement bars; and nuts, sesame and other seeds
- Flashlight and extra batteries. Light sticks.
- Hand sanitizer and antibacterial wipes
- Rain poncho in a pouch
- Whistle
- Pair of walking shoes



# Emergency Plan for Your Pet(s)

## *Explore options ahead of time.*

- Talk to your pet's veterinarian about emergency planning.
- Make a list of vets, veterinary hospitals and other places to take your pet(s) for emergency care, if needed. This includes area animal control agencies, such as the Humane Society and the American Society for the Prevention of Cruelty to Animals (ASPCA). Keep one copy of these phone numbers with you. Keep one in your **Pet Emergency Kit**.
- Due to public health reasons, many public shelters do not allow pets other than those used by people with disabilities.
- Find out about pet shelters and secure lodging options:
  - Kennels. Hotels or motels that accept pets.
  - Family members and friends who would agree to care for you and your pets or just your pets if you go to a temporary shelter that does not accept pets.
- If your pet does not have a microchip, discuss having one implanted in your pet. This device and a registry for it can help identify your pet and you as the owner. Keep your contact information up-to-date with the recovery database.



## Develop a Buddy System

- Plan with neighbors, friends or relatives to make sure that someone is available to care for or evacuate your pets if you are unable to do so.
- Talk with your pet care buddy about your evacuation plans. Show them where you keep your pet's emergency supply kit.
- Choose specific places where you will meet in an emergency. Include one in your neighborhood and another one farther away.

## Pet Emergency Kit

- ID collar or tag, leash, and muzzle
- Food, water, feeding bowls, and treats for 3 days
- Pet bed or blanket and toys
- Cat litter and litter box
- Veterinarian and local animal shelter contact information
- Recent photo of your family with your pet
- Written information on your pet's species, breed, age, sex, color and distinguishing features
- Medications and first-aid supplies. Include cotton bandage rolls, bandage tape and scissors; antibiotic ointment; flea and tick prevention; latex gloves, isopropyl alcohol and saline solution.  
**NOTE:** Store these items in childproof container.
- Pet first-aid reference book
- Your pet's registration information, adoption papers, vaccination documents, and medical records in a clean plastic bag or waterproof container
- Pet cage, carrier or crate



## Financial Preparedness

Disasters leave many people without access to finances and/or with costly damages. To make it easier to recover from your losses, plan to protect your assets and have access to important documents.

Buy life, car, and house insurance. Discuss your needs and budget with an insurance agent to get the best protection you can. Include proper coverage for your house (earthquake, fire, flood, etc.) and its contents. Access the National Flood Insurance Program (NFIP) at [www.FloodSmart.gov](http://www.FloodSmart.gov) to learn about your risk for floods and to find an agent in your area.

### Emergency Financial First Aid Kit (EFFAK) Items

#### *Copies of Family Legal Documents*

- Family records (birth, marriage, divorce, deaths)
- Social Security cards. Passports.
- Will or living trust
- Power(s) of Attorney
- Mortgage or real estate deeds
- Vehicle registration and ownership papers

#### *Copies of Financial Documents*

Examples include:

- Bank and credit union statements
- Credit and debit card statements
- Retirement and investment accounts
- Government benefits (e.g. Social Security, Veterans')
- Alimony and child support income/payments
- Mortgage statement or property lease
- Utility bills (electric, water, gas)
- Car payment
- Student loan(s)
- Property, auto and life insurance policies
- Military ID or discharge papers (DD-214)



## SAMPLE.

### Household Inventory

Keep a list of household items and their values or take photos or a video of these. Store the list, photos, or video on a USB flash drive and place it in a waterproof container in your **Emergency Supply Kit**.

### Store Your EFFAK in Safe Places

1. Keep the original documents in a safety deposit box at your bank.
2. Put a copy of all documents at home in a metal box or safe that is fireproof and waterproof.
3. Have a copy of all documents in a sealed envelope at your lawyer's office.

*Review your EFFAK at least once a year. Update items when you change or add documents.*

# Utility Shut-Off & Safety

## Natural Gas

### *BEFORE a Disaster*

- Keep materials that can catch fire, such as papers, fluids, paints, and rags away from the furnace, water heater, and gas stoves and dryers.
- Get gas appliances serviced on a regular basis by a certified professional.
- Contact your local gas company to instruct all household members (who are able) on the proper way to shut off the natural gas to your house. Keep the right tools to do this nearby.
- Post labels or written instructions on what to do.

### *AFTER a Disaster*

- If you smell gas or hear a blowing or hissing sound, open a window and get everyone out of the house quickly.
- Turn off the gas. Use the outside main valve, if you can.
- Call the gas company **after** you exit the house.
- ALWAYS get a qualified professional to turn the gas back on. NEVER try to do this yourself.

## Electricity

### *BEFORE a Disaster*

- Have a certified electrician check for safety hazards and service your house's electrical circuits, as needed.
- Label each circuit breaker with the outlets it controls.
- Ask the electrician to instruct all household members (who are able) on the proper way to shut off the individual circuits and the main circuit.
- If you have or are thinking about getting a portable generator, read and follow the manufacturer's guidelines for safe use and maintenance. NEVER use a generator in an enclosed area (house, basement, garage, crawl space). Use it outdoors and away from open windows, doors, and vents.
- Install a battery-operated carbon monoxide detector in the area where you run the generator.



### ***AFTER a Disaster***

- Check for and keep all household members and pets away from downed power lines. Report downed lines to your electric company.
- If you are advised to shut off power, shut off the individual circuits before you shut off the main circuit.

## **Water**

### ***BEFORE a Disaster***

- Find the shut-off valve for the water line that enters your house. Show all household members where it is.
- Replace a valve that does not shut off all the way.
- Label the valve with a tag and instructions on how to turn it off.
- Keep the right tool to shut it off nearby.
- If a disaster has been forecasted in your area, fill containers with water for drinking. Run water in the tub and in buckets for flushing toilets and cleaning purposes.

### ***AFTER a Disaster***

- If instructed to do so, shut off the main water valve to your house.
- Keep it off until you hear from authorities that it is safe for drinking. A disaster can cause cracks in water pipes that may pollute the water supply to your house.

Utility  
Shut-Off  
& Safety





# Home Fires

**Home fires** occur in one-or two-family homes, multi-family housing, such as apartments, and manufactured homes. The fire can affect contents within the home or can damage the building.

## Facts

- Cooking is the main cause of home fires.
- Smoking is the leading cause of home fire deaths.
- Most often, fire deaths are due to smoke or toxic gases not burns.
- About 2 out of 3 deaths occur in homes with no smoke alarms or the alarms are not working.

## Danger Zones

Any place inside a residential structure has the potential for a fire. The risk increases with unattended cooking, portable and fixed space heaters, candle burning, and smoking in bed.

## Warning/Danger Signs

- You smell or see smoke or flames.
- You hear your smoke detector alarm.
- When the clothes dryer is on, it smells like something is burning.
- Electrical outlets and switches are warm or make crackling, sizzling, or buzzing noises.



## Actions to PREVENT Home Fires

- Install smoke alarms on every floor of your home, in every bedroom, and outside each sleeping area. Test smoke alarms monthly
- Replace batteries at least once or twice a year. If the device makes a “chirping” sound, change the battery.
- Install carbon monoxide detectors outside every bedroom and on every floor of your home. Test the alarms monthly.
- Keep Class ABC fire extinguishers near the kitchen, in the garage, and at the top of the basement stairwell. Learn how to use them. Check them monthly.
- NEVER allow tobacco use in the house.
- Store matches and lighters out of children’s reach.
- Store flammable chemicals away from heat sources.
- Supervise the use of lit candles. Keep open flames away from curtains and materials that can catch fire. Snuff flames before leaving the house and at bedtime.
- Instead of lit candles, use battery-operated or flameless candles.
- If the power goes out, use flashlights, not candles.
- If oxygen is used in the home for medical reasons, follow the device’s safety rules.
- Do not leave foods cooking on the stove top, in the oven, or on outside grills unattended. Put safety covers on stove knobs.
- Do not keep curtains, towels, and other flammable materials within 3 feet of the stove. Keep space heaters at least 3 feet away from furniture, drapes, etc.
- Use safety approved dryer venting. Clean the dryer vent after each cycle.
- Repair or replace damaged electrical cords.
- Get the furnace inspected yearly. Change furnace filters several times a year. Clean fireplace and wood-burning stoves every year.
- Consider installing a home fire sprinkler. This can control a fire until help arrives even when people inside are unable to act.



***Consider having a home alarm system that notifies the fire department and you of a possible fire at your home.***

## Make and Practice a Fire Escape Plan

On average, you have less than 3 minutes from the time the first smoke alarm sounds to escape a fire. In your plan, include:

- A map of the floors and rooms in the house and the yard outside. Include where the doors and windows are. **NOTE:** You can get a blank grid from [www.usfa.fema.gov/downloads/pdf/escape\\_grid.pdf](http://www.usfa.fema.gov/downloads/pdf/escape_grid.pdf).
- Two ways that each person can get out of each room. If you have a two-story house, keep UL-certified rescue ladders near windows.
- Who will help each young child, pet, and person with special needs. Teach children how to get out of the house on their own in case no one comes to help them.
- A meeting spot outside, such as a light pole or the sidewalk of a neighbor's house
- Discuss the escape plan with all household members. Post the plan on the refrigerator or where everyone can see it.
- Practice the plan every 6 months; once during the day; once at night.

## Actions DURING a Home Fire

***Get out first. Then call 911!***

- If clothes catch fire, **STOP, DROP, and ROLL.**
- If closed doors or handles are hot, exit using your second way out. Do not open doors that are too warm to touch. Crawl low under the smoke.
- If you have a rescue ladder, use it as directed.
- Stay out. Tell firefighters if anyone or any pets are not yet out.



## Protect Your Pet(s)

- If you are home, get your pet(s) outside. Keep their collars and leashes close to the exit.
- When pets are home alone, keep them near entrances where firefighters can easily find them. Post a pet safety sticker so firefighters know how many pets are inside.

## Actions AFTER a Home Fire

- Give first aid and do CPR, as needed, until EMS arrives.
- Do not enter a damaged residence unless the fire department says it is safe!
- Watch out for roof, floor, and wall damage. These could fall down.
- Avoid eating, drinking, and breathing in anything that has been near flames, smoke, soot, or water that put the fire out. Soot and dirty water left behind may contain things that could make you sick.

## Community Resources & Utility Safety

- If firefighters turned water, electricity, and gas utilities off, get professional help to turn them back on.
- Contact the Red Cross, Salvation Army or other local disaster relief service if you need food, clothing, or a place to stay and if you have no house insurance.

Home  
Fires

## Recovery

- Inform your insurance company and landlord or mortgage company about the fire.
- Try to find your fireproof box or safe with important documents. Wait to open it after it has cooled off.
- Save receipts for any money you spend related to fire loss to give to the insurance company and to prove losses claimed on your income tax.
- Check with an accountant or the Internal Revenue Service (IRS) about special benefits for people recovering from fire loss.
- Get help to cope with a disaster from [www.disasterassistance.gov](http://www.disasterassistance.gov).



# Thunderstorms & Lightning

- **Thunderstorms** are intense storms that average 20 miles across and can reach up to 10 miles high. Every thunderstorm includes lightning.
- A **severe thunderstorm** has hail at least an inch wide, has winds of 58 miles per hour or higher, or produces a tornado.

## Facts

- They may occur one at a time, in clusters, or in lines.
- In general, they produce heavy rain from 30 minutes to an hour.
- Warm, humid weather increases their risk.
- The National Weather Service estimates a total of 280 people in the United States get struck by lightning every year.



## Danger Zones

Thunderstorms can occur in all 50 U.S. states, as well as U.S. territories. They are most likely to occur in Central and Southern States or with warm, humid conditions.

## Warning/Danger Signs

- A thunderstorm or lightening storm is forecasted.
- The sky darkens and wind increases.
- Thunder and flashes of light occur.

## Warning Systems

**Severe Thunderstorm Watch:** 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:** Imminent danger exists for people, animals and property in the storm's path. Radar has picked up that severe weather is present.

A local weather alert siren may sound. Consider installing storm warning Apps for your Smartphone.

## Actions BEFORE Thunderstorms

- Remove dead or rotting trees and branches that could fall and cause injury or damage during a severe thunderstorm.
- Listen to the weather forecast. Make sure you can get to a safe location if a thunderstorm develops.
- Postpone activities that could put you at risk for getting struck by lightning (boating, going to the beach, rock climbing).
- If you can hear thunder, you could be struck by lightning.
- Secure outdoor objects that could blow away or cause damage.
- Make an **Emergency Supply Kit** for your home and your car.

## Actions DURING Thunderstorms & Lightening

### *When thunder roars, go indoors!*

- Seek shelter inside a house or building. Avoid concrete floors and walls. Lightning can travel through any metal wires or bars in concrete walls or flooring.
- Unplug electric appliances, TVs, and computers. Turn off the air conditioner. It is okay to leave electric lights on.
- Do not depend on surge protectors to absorb a lightning strike.
- Avoid water. Lightning can travel through plumbing. Do not take a bath or shower. Do not wash and dry clothes.
- Do not talk on corded phones. Use cordless or cellular phones.

### *If you can't get indoors:*

- Seek shelter in a car with a hard top. Keep the car windows closed. Avoid touching metal.
- Do not lie down in an open area. Lightning's electric currents on top of the ground can be deadly over 100 feet away.
- Squat low to the ground in a low area, but not by trees or metal objects. Put your head between your knees and your hands on you head.
- Avoid open fields, the top of a hill, or a ridge.
- Stay away from water and wet items.
- Be alert for flash floods.



Storms & Lightning

## Protect Your Pet(s)

- Bring your pet(s) indoors.
- If thunder, hail, or rain scares your pet, provide comfort.

## Shelter in Place

- Bring children indoors without delay. If your children are at school, do not leave to pick them up unless you are told to.
- Close and lock all outside doors and windows. Secure shutters on windows and/or close blinds, shades, and curtains.
- Turn off all fans, heating, and air-conditioning systems.
- Close the fireplace and/or woodstove damper.
- Get your **Emergency Supply Kit** and have everyone and pets go to an interior room in the house with no or few windows. Close the door.
- Keep listening to your battery-operated or NOAA Weather Radio from your kit for storm condition updates.
- Once you are told that the storm threat is over, open windows and doors. Turn on ventilation systems.

## Actions AFTER Thunderstorms & Lightning

- Wait until 30 minutes have passed without lightning or thunder before you go outside. Lightning can strike up to 10 miles from the area where it is raining.
- If a person is struck by lightning, **call 911** right away. Provide first aid for the person until EMS arrives. **NOTE:** You will not get shocked or electrocuted by a person who has been struck by lightning.
- Continue to listen to a NOAA Weather Radio or battery-operated radio for updates on what to do.
- Do not drive through a flooded roadway. Turn away from that area.
- Look for and stay away from downed power lines. Report them to the power company.
- To avoid hazards left by the storm, keep your children and pets under your direct supervision.
- Help people who may need special aid, such as infants, children, and the elderly, or those with special needs.



## Community Resources & Utility Safety

- Check for and report to your power companies power outages, downed utility lines, or trees or limbs on power lines. Stay away from downed power lines.
- Contact the Red Cross, Salvation Army or other local disaster relief service if you need food, clothing or a place to stay. To search for open shelters, text **SHELTER** and a **Zip Code** to **43362** (4FEMA) or access [www.fema.gov/disaster-recovery-centers](http://www.fema.gov/disaster-recovery-centers).



## Recovery

- Check for hail, lightning, flooding or other damage to your house.
- Repair minor damages you can do on your own, especially ones that pose a safety risk to you and your family.
- Report damages to your insurance company.
- Find out if you are eligible for public assistance from [www.disasterassistance.gov](http://www.disasterassistance.gov).
- For help with emotions, call the Disaster Distress Helpline 24/7, toll-free at 1-800-985-5990, text **TalkWithUs** to **66746**, or access [www.disasterassistance.samhsa.gov](http://www.disasterassistance.samhsa.gov).

Storms &  
Lightning

# Extreme Heat

**Extreme heat** or a **heat wave** is a prolonged period of temperatures that are 10 degrees or more above average. Often, this occurs with excessive humidity. The **Heat Index** (HI) or the “Apparent Temperature” is an accurate measure of how hot it really feels when the Relative Humidity (RH) is added to the actual air temperature.

## Facts

- In the U.S., extreme heat causes more deaths than hurricanes, lightning, tornadoes, earthquakes, and floods **combined**!
- Adults over age 65, children under age 4, people with existing medical conditions, such as heart disease, and people without access to air-conditioning are more at risk.

## Danger Zones

- In the U.S., most summers have heat waves in one section or another East of the Rocky Mountains. Heat waves tend to include both high temperatures and high humidity, but some of the worst have been dry.
- People living in urban areas may be at greater risk from the effects of a prolonged heat wave than those living in rural areas.

## Warning Systems

Listen for weather forecasts of the **heat index**—How it feels when the relative humidity is added to the actual air temperature.

- **Excessive Heat Watch** — Issued when the forecast calls for at least 2 back-to-back days of heat index temperatures of at least 105°F during the day plus overnight low temperatures of 80°F or higher.
- **Excessive Heat Warning** — Issued within 12 hours of the onset of heat index temperatures of at least 105°F for more than 3 hours a day for 2 back-to-back days or more than 115°F for any time span.
- **Heat Advisory** — Issued when the forecast calls for heat index temperatures of at least 105°F, but less than 115°F for less than 3 hours per day or overnight low temperatures above 80° F for 2 back-to-back days.



## Warning/Danger Signs

### **Heat (Sun) Stroke Symptoms:**

Temperature of 104° F or higher; hot, dry and red skin, no sweating; confusion; shallow breathing and weak pulse; loss of consciousness. **This is a medical emergency. Call 911!** Get the person to a cool place and put ice packs or cold compresses on the neck, under the armpits, and on the groin area.

**Heat Exhaustion Symptoms:** Cool, clammy skin; dry mouth; thirst; muscle cramps; fatigue, weakness, dizziness, headache; weak or rapid pulse. Get the person to a cool place and provide cool fluids.

Listen to weather forecasts for heat warnings, watches, or advisories.

## Actions BEFORE

Follow steps on the “**Make a Plan**” and “**Emergency Kits**” tabs plus:

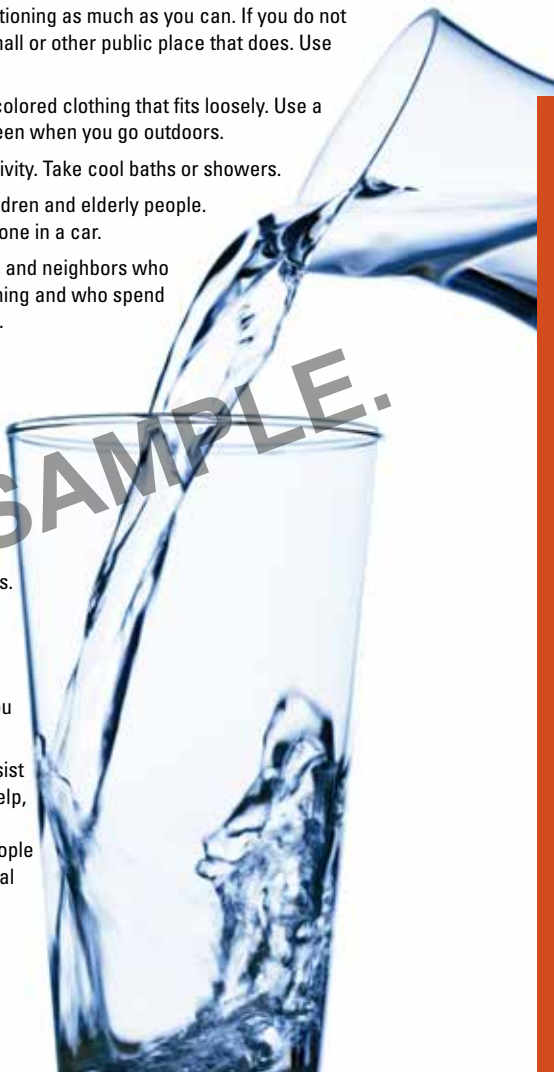
- Take a first-aid course to learn how to treat heat-related problems.
- Listen to local weather forecasts to be aware of the heat index.
- Consider installing air conditioning in your house.
- List public places that have air conditioning that you can go to.
- Cover inside windows with shades, curtains, drapes and aluminum foil-covered cardboard (for use between windows and drapes). Put awnings or louvers outside on windows.
- Find out evacuation routes in your community and places to go for shelter. Prolonged hot weather often means drought, which greatly increases the risk of wild fires.

## Actions DURING

- Drink plenty of water and other non-alcoholic fluids to stay hydrated.
- Eat light, cool, and easy-to-digest foods.
- Stay indoors in air conditioning as much as you can. If you do not have this, go to a local mall or other public place that does. Use ceiling and other fans.
- Wear lightweight, light-colored clothing that fits loosely. Use a broad-spectrum sunscreen when you go outdoors.
- Avoid heavy outdoor activity. Take cool baths or showers.
- Keep a close eye on children and elderly people. NEVER leave children alone in a car.
- Check on family, friends, and neighbors who do not have air conditioning and who spend much of their time alone.

## Actions AFTER

- Monitor household members heat-related problems.
- Stay tuned to NOAA Weather Radio or news broadcasts for weather updates and safety alerts.
- Stay indoors and off the roads, as advised.
- Let family and friends know where and how you are.
- Check on neighbors. Assist people who may need help, such as large families, children, elderly, and people with disabilities or special needs.



## Protect Your Pet(s)

- Provide needed water and shade for your outdoor pets. Check on them often. It is best to bring pets indoors out of the heat.
- NEVER leave pets alone in a car.

## Community Resources & Utility Safety

- Check for and report power outages to your electric company, as needed. Stay away from downed power lines.
- Seek out local cooling centers.
- If your home loses power, consider going to a designated public shelter. Text **SHELTER** + **ZIP code** to **43362** (4FEMA) to find the nearest shelter in your area or access [www.fema.gov/disaster-recovery-centers](http://www.fema.gov/disaster-recovery-centers).

## Recovery

- Let your doctor know if extreme heat has affected your health.
- Report property damage and food spoilage due to a power outage to your insurance company.



# Wildfires

A **wildfire** is an unplanned, unwanted fire that burns in a natural area, such as a forest, grassland, mountain site, or prairie.

## Facts

- Wildfires can start from natural causes, such as lightning.
- More than 4 out of every 5 wildfires are caused by people. Common reasons are not putting out campfires properly and smoking in forested areas. Some fires are set on purpose.
- Wildfires often begin without notice.



## Danger Zones

- Most common areas are woodland settings, rural areas, and mountain sites, especially during periods with little or no rainfall. Brush, grass, and trees are dry and burn more easily. Wind adds fuel to the fire.
- Forest, grassland, or prairie areas where homes and businesses are being built. This is called **Wildland Urban Interface**.

### Types of Wildfires

<b>Surface fires:</b>	<b>Ground fires:</b>	<b>Crown fires:</b>	<b>Conflagration:</b>	<b>Santa Ana winds:</b>
Move slowly and burn along the forest floor, killing and damaging vegetation	Burn on or below the forest floor through the root system. Lightning is the usual cause	Spread by wind moving quickly along the tops of trees	A large and destructive fire, usually provoked by strong winds that carry burning debris over natural or artificial barriers	Gust, hot, and very dry northeast or east wind during fall and winter months in Southern California

## Warning/Danger Signs

- A cloud of smoke. Flames.
- If you see a wildfire, **call 911!** Report the location.
- A warning has been issued for a wildfire.
- Periods of drought or very low rainfall increase the risk of severe wildfires.

### Warning Signals

**Fire Danger Rating:** Fire potential estimate based upon the integration of weather elements and other factors affecting the fire potential. The key weather elements include wind speed, temperature, and estimates of dead-fuel moisture.

**Fire Weather:** A group of weather conditions that favors the kindling and spread of forest or brush fires. Typically, this includes low humidity and a lack of recent rainfall.

## Actions BEFORE a Wildfire

Follow steps on the “**Make a Plan**” and “**Emergency Kits**” tabs plus:

- Find out if you live in an area at risk for wildfires.
- Choose building materials and plants that resist fire.
- Clear flammable vegetation 30-500 feet around your home.
- Find or get and maintain a large water source outside of your house. Examples are a hot tub, swimming pool, well, and water-storage tank.
- Keep gutters, roofs, and chimneys free of debris and damage.
- Build fires away from nearby trees or bushes. Ash and cinders may be blown into nearby areas, starting wildfires.
- Keep items you can access fast that can be used as fire tools. These include long hoses, a bucket, rake, axe, and shovels.
- Park the car facing your escape route.



Wildfire



## Actions DURING a Wildfire

*If you are told to evacuate, follow orders from local officials.*

- Keep listening to your local TV or radio station, or NOAA Weather Radio. A shift in the wind can easily change the direction the fire spreads.
- Evacuate children, the elderly, pets, and anyone with medical, physical, or special needs right away.

*If there is time, have capable adults prepare the home:*

- Shut off the gas at the meter and propane or fuel oil supplies.
- Run lawn sprinklers on the roof and near above-ground fuel tanks.
- Close, but unlock windows and doors.
- Leave inside and outside lights on so firefighters can see your house.

*If driving through smoke or fire in a vehicle:*

- Close all windows and vents.

*If caught in the fire outdoors:*

- Stoop down in a pond or river. If water is not nearby, shelter in a cleared area or among a bed of rocks.
- Cover your head and upper body with wet clothing.
- Breathe the air closest to the ground with a wet cloth over your mouth and nose.

*If caught in the fire indoors:*

- Close, but unlock windows and doors. Stay away from outside walls.
- Keep everyone together. Try to stay calm.

## Protect Your Pet(s)

- Try to keep pets in one room to locate them quickly.
- Prepare an emergency Pet Emergency Kit. (See **Pet Safety** tab).

## Actions AFTER a Wildfire

- Stay tuned to NOAA Weather Radio or news broadcasts for weather updates and safety alerts. Do not return home unless advised.
- Let family, friends, and your emergency contact know where and how you are.

### *When you can return home:*

- Check your roof right away. Put out any embers, sparks, or fires.
- Look for smoke and fires throughout the house. Use the water you stored outdoors to put out any signs of fire.
- Check on neighbors. Assist people who may need help, such as large families, children, elderly, and people with disabilities or special needs.



## Community Resources & Utility Safety

- If the power is out, connect a hose to the outlet on your water heater.
- If needed, contact services in your community that aid in disasters, such as EMS, police, the Red Cross, Salvation Army, or a local disaster relief service. To search for open shelters, text **SHELTER** and a **Zip Code** to **43362** (4FEMA).

## Recovery

- Report damages to your insurance company.
- Find out if you are eligible for public assistance from [www.disasterassistance.gov](http://www.disasterassistance.gov).
- For help with emotions, call the Disaster Distress Helpline 24/7 at 1-800-985-5990, text **TalkWithUs** to **66746**, or access [www.disasterdistress.samhsa.gov](http://www.disasterdistress.samhsa.gov).

# Extreme Cold & Winter Storms

A **severe winter storm** drops 4 or more inches of snow during a 12-hour period, or 6 or more inches during 24 straight hours.



## Facts

- **Winter storms** include low temperatures and blowing snow. A severe winter storm can cut off your source of food, fuel, and electrical power.
- **Frostbite** and **hypothermia** (that can result in death) are hazards of winter storms and extreme cold weather. Carbon monoxide poisoning, electric shock, and a fire can occur from improper use of fuels and heating equipment.

## Danger Zones

- The worst winter storms usually occur in the northern U.S., but can happen in other states.
- Extreme cold temperatures can be a concern in all states, even Florida.

## Warning/Danger Signs

**Frostbite** — Cold, numb skin swells and feels hard.

**Hypothermia** — Body temperature drops below 90°F. Signs include shivering, slow speech, and lapses in memory. After shivering stops, the skin feels ice cold and looks blue. Confusion, drowsiness, rigid and stiff muscles, and slow breathing and pulse occur.

## Warning Systems

<b>Winter Storm Watch:</b>	<b>Winter Storm Warning:</b>	<b>Blizzard Warning:</b>	<b>Wind Chill:</b>
Within 48 hours, severe and hazardous winter weather is possible.	Hazardous winter weather that can threaten life is occurring or will begin soon.	Snow and winds of 35 mph or greater are expected to last for 3 hours or longer.	How cold it feels outside when the temperature and wind speed are combined.

## Actions BEFORE Extreme Cold & Winter Storms

Get all family members home or to another place of safety before the storm arrives. Follow steps on the “**Make a Plan**” and “**Emergency Kits**” tabs plus gather these items for each person:

- Sleeping bag or warm blanket(s)
- Warm coat, hat, gloves or mittens
- Thermal underwear, wool socks
- Long pants, long-sleeve shirt, and sweater
- Sturdy shoes or boots
- To your **Car Emergency Kit**, add bags of sand (or kitty litter), a windshield brush and scraper, a tire pressure gauge, and a tow chain or rope.

### *Get your house ready for warmth and safety:*

- Insulate walls, roofs, and pipes. Put weather stripping around windows and doors. Install storm windows. Cover inside windows with plastic.
- Get your furnace and chimney checked and cleaned yearly. Properly vent fuel-burning equipment to the outside.
- Install and check smoke and carbon monoxide detectors.
- Plan for back-up heating, such as a wood stove (and wood).
- Consider getting a portable generator. Follow directions for use.



### *Winterize your vehicle:*

- Check the battery, lights, hazard lights, wiper blades, heater, window defroster, ignition system, tires, tire pressure, and engine oil.
- Keep your gas tank near full to avoid ice in the tank and fuel lines.

**Stock up on food, fuel, medications, batteries, and rock salt or kitty litter (to put on icy sidewalks and driveways).**

## Actions DURING Extreme Cold & Winter Storms

- Listen to weather updates to stay informed of weather advisories.
- Stay indoors and off the roads, if advised.
- Postpone outdoor activities that could lead to frostbite and hypothermia.

### *When you go outdoors:*

- Dress in layers under a coat that repels water and wind. Wear a hat, mittens, and a scarf that covers your mouth and nose.
- Shovel snow without overdoing it.
- Look for signs of frostbite and hypothermia.
- Before travelling, find out about travel advisories. Travel during daylight. If possible, take at least one other person. Notify others of your travel and route.



### *If you get stranded in your car:*

- Do not leave your car unless you can safely walk to a building for shelter.
- Turn on the hazard lights. Call for help. Run the engine for 10 minutes every hour. Keep the exhaust pipe clear of snow. Open a downwind window slightly for ventilation.
- Alternate using the heater and lights to conserve the battery.

## Protect Your Pet(s)

Bring pet(s) indoors. If you take your dog outdoors for a walk, limit the time and put a sweater or coat on him or her. Wipe your dog's paws to clear them of toxic deicers and antifreeze.

## Actions AFTER Extreme Cold & Winter Storms

- Stay tuned to NOAA Weather Radio or news broadcasts for weather updates and safety alerts. Stay indoors and off the roads, as advised.
- Let family and friends know where and how you are.
- Check on neighbors. Assist people who may need help, such as large families, children, elderly, and people with disabilities or special needs.

## Community Resources & Utility Safety

- If needed, contact services in your community that aid in disasters, such as EMS, police, the Red Cross, Salvation Army, or a local disaster relief service. To search for open shelters, text **SHELTER** and a **Zip Code** to **43362** (4FEMA), or access [www.fema.gov/disaster-recovery-centers](http://www.fema.gov/disaster-recovery-centers).
- Let faucets drip a little to prevent pipes from freezing.

### *To avoid burst pipes from water that freezes:*

- Drain water heaters and boilers, pumps, and supply lines.
- Shut off the main water valve.
- Open the spigots and supply lines and drain them.

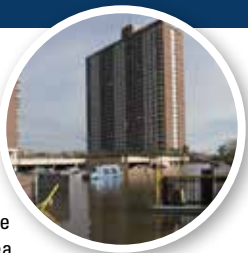
See, also, the **Utility Shut Off & Safety** tab.

## Recovery

- Report damages to your insurance company.
- Find out if you are eligible for public assistance from [www.disasterassistance.gov](http://www.disasterassistance.gov).
- For help with emotions, call the Disaster Distress Helpline 24/7 at 1-800-985-5990, or text **TalkWithUs** to 66746, or access [www.disasterdistress.samhsa.gov](http://www.disasterdistress.samhsa.gov).

# Floods

- **Flood** — An overflow of water onto normally dry land. Causes include rising water in an existing river, stream, or drainage ditch and pooling of water at or near the point where rain fell.
- **Flash flood** — A flood in less than 6 hours. Causes include heavy rainfall, a dam or levee failure, overflow of city drains, or a sudden release of water held by an ice jam. Rapidly rising water along a stream or low-lying area can also cause a sudden flash flood.



## Facts

- Flood hazards include property damage, water contamination, near-drowning, and death.
- About 75 percent of all Presidential disaster declarations are linked to flooding.

## Danger Zones

- Floods can occur in every U.S. state in every month of the year.
- People who live in low-lying areas – near water or behind a levee or dam – are at even greater risk.

## Warning/Danger Signs

- Heavy rain, thunder, lightening
- Rising water levels or a tidal surge
- High temperatures that can lead to snow melts and ice break-ups
- Flash floods can develop in minutes without seeing any rain.

### Warning Systems

<b><i>Flood Watch:</i></b> Flooding is possible within 12-36 hours.	<b><i>Flood Warning:</i></b> Flooding is occurring or is about to occur soon.	<b><i>Flash Flood Watch:</i></b> Flash flooding is possible and could occur without warning.	<b><i>Flash Flood Warning:</i></b> Flash flooding is occurring or is about to occur soon.
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## Actions BEFORE a Flood

Follow steps on the “**Make a Plan**” and “**Emergency Kits**” tabs plus:

- Visit [www.FloodSmart.gov](http://www.FloodSmart.gov) (or call 1-800-427-2419) to find out about flood risk in your area and flood insurance options.
- Seal basement walls with waterproofing compounds.
- Keep a sump pump in good working order. Have a battery backup.
- Keep downspouts and gutters clear of debris.
- Store items in tightly sealed plastic containers on plastic shelves 12 or more inches above the floor.
- Consider putting your water heater, furnace, and major appliances on cement blocks.
- If needed, put barriers (sandbags, floodwalls, levees) around your house.



## Actions DURING a Flood

- Listen for and follow guidelines from local authorities. Be ready to leave for higher ground if a flood **warning** is issued.
- If the house is flooded, turn off the electricity. If flood waters could reach pilot lights in the furnace and water heater, shut the gas valve off. (See the **Utility Shut Off & Safety** tab.)
- If you are in a vehicle and come upon a flooded road, turn around. If the car stalls in water, get out and move to higher ground. If necessary, wait on the roof of the car until help arrives.
- Stay out of floodwater. Just 6 inches of water can knock you off your feet. The water can also contain harmful sewage, gasoline, oil, or chemicals.

## Protect Your Pet(s)

- Bring pets indoors. Keep them away from outdoor flood water, which could be contaminated or contain harmful debris.
- Take pets with you if possible, but, most public shelters do not allow pets other than those used by people with disabilities. Locate pet shelters on evacuation routes. Prepare a **Pet Emergency Kit**. (See **Pet Safety** tab).

## Actions AFTER a Flood

- Return home only if authorities say it is safe.
- Be careful when you enter your home and search for damage. Wear gloves, safety goggles, and boots. Wash your hands often.
- Remove wet carpeting, furniture, bedding and any other items holding moisture. Mold can develop within 24-48 hours.
- Clean and disinfect everything touched by floodwaters.
- Take photos or videos of damaged property.
- Contact your insurance agent about filing a claim.
- Keep receipts for cleaning and repair costs.
- Keep checking for landslides. (See "**Landslides & Mudflows**" tab.)

## Community Resources & Utility Safety

- If needed, contact services in your community that aid in disasters, such as EMS, police, the Red Cross, Salvation Army, or a local disaster relief service. To search for open shelters, text **SHELTER** and a **Zip Code** to **43362** (4FEMA), or access [www.fema.gov/disaster-recovery-centers](http://www.fema.gov/disaster-recovery-centers).
- Check for and report power outages, downed utility lines, or trees or limbs on power lines to your power companies. Stay away from downed power lines.
- If the gas was shut off, get the gas company to turn it back on.  
(See **Utility Shut Off & Safety** tab.)

## Recovery

- Clean up flood water and mold. Discard damaged items.
- Repair minor damages you can do on your own.
- Report damages to your insurance company.
- Find out if you are eligible for public assistance from [www.disasterassistance.gov](http://www.disasterassistance.gov).
- For help with emotions, call the Disaster Distress Helpline 24/7 at 1-800-985-5990, or text **TalkWithUs** to **66746**, or access [www.disasterdistress.samhsa.gov](http://www.disasterdistress.samhsa.gov).

# Landslides & Mudflows

**Landslides** are masses of rock, earth, or debris that move down a slope.

**Mudslides**, also called debris flows, are a common type of landslide that are saturated with water, move fast, and tend to flow in channels.

## Facts

Landslides and mudflows occur when soil and rock on slopes fail to stay securely in place. These can be triggered by earthquakes, volcanoes, heavy and prolonged rainfall, rapid snowmelt, and forest and brush fires. Man-made triggers include the clearing of trees and their roots, road building, mining, and any construction that makes the ground less stable.

## Danger Zones

Landslides have occurred in every U.S. state, but are more common in coastal regions, such as California, Utah, Washington, Puerto Rico, and areas where landslides have occurred in the past.

## Warning/Danger Signs

- Trees, fences, utility poles, or retaining walls tilt.
- Sounds of trees cracking or boulders banging together
- Sudden increase or decrease in creek water, which may have changed from clear to muddy
- New cracks appear in plaster, tile, brick, or foundations. Soil moves away from building foundations. Concrete floors and foundations tilt.
- The ground, streets, or roads have new cracks or unusual bulges.

## Warning Systems

Listen for local warnings and check [www.weather.gov](http://www.weather.gov).

## Actions BEFORE Landslides & Mudflows

Follow steps on the “**Make a Plan**” and “**Emergency Kits**” tabs plus:

- Before building or buying a house, find out if landslides or mudflows have occurred in the area. Get a professional ground assessment.
- If you already live in an area prone to landslides or mudflows, contact local authorities to find out about evacuation plans.
- Build retaining walls, plant ground cover on slopes, and get other expert advice on ways to protect your property.

## Actions DURING Landslides & Mudflows

- Follow advice by authorities to get to the nearest high ground or shelter right away. Avoid pavement that has collapsed, debris flow, and falling rocks. Watch out for large animals that roam freely in the environment.
- If escape is not possible, curl into a tight ball and cover your head.

## Protect Your Pet(s)

Take your pets and their emergency kit with you.

## Actions AFTER Landslides & Mudflows

- Keep listening to radio, TV or NOAA Weather Radio for advice.
- Without putting yourself in danger, look for persons who are injured or trapped and give first aid as needed. Give CPR if trained.
- Stay away from the slide area. Do not return home unless advised.
- As soon as possible, stabilize the ground on your property to replace ground loss due to erosion from the storm.
- Watch for flooding which can come after landslides or mudflows.
- Keep looking for signs that the land is moving. Landslides can occur weeks or months after intense storms.

## Community Resources & Utility Safety

- If needed, contact services in your community that aid in disasters, such as EMS, police, the Red Cross, Salvation Army, or a local disaster relief service. To search for open shelters, text **SHELTER** and **ZIP Code** to **43362** (4FEMA), or access [www.fema.gov/disaster-recover-centers](http://www.fema.gov/disaster-recover-centers).
- Check for and report power outages and downed utility lines to your power companies. Stay away from downed power lines. (See the **Utility Shut Off & Safety** tab.)

## Recovery

- Report damages to your insurance company.
- Find out if you are eligible for public assistance from [www.disasterassistance.gov](http://www.disasterassistance.gov).
- For help with emotions, call the Disaster Distress Helpline 24/7 at 1-800-985-5990 or text **TalkWithUs** to **66746**, or access [www.disasterdistress.samhsa.gov](http://www.disasterdistress.samhsa.gov).

# Earthquakes

An **earthquake** is a sudden, rapid shaking of the earth due to breaking and shifting of rock beneath the surface of the earth.

## Facts

- **Aftershock**—A less intense earthquake occurring after the main one
- **Fault**—A fracture in the earth's crust, such as the San Andreas fault line in California
- **Epicenter**—The point on the earth's surface directly above the focus of the earthquake
- **Seismic Waves**—Vibrations that travel out from the fault at hundreds of miles per hour. These are the main cause of damage.
- **Magnitude**—The amount of energy released during an earthquake. A magnitude of 7.0 on the Richter Scale is extremely strong. Every whole number added to the scale means an increase of about 30 times more energy released.

## Danger Zones

- Alaska, California, the Pacific Northwest, Hawaii, and the New Madrid fault zone in the Central States
- Earthquakes are likely to occur where they took place in the past.

## Warning/Danger Signs

Earthquakes can strike quickly without warning signs.

## Warning Systems

Notices of earthquakes come from Emergency Alert System (EAS) for radio and TV, Wireless Emergency Alerts (WEA) on wireless devices, and NOAA's National Weather Service networks.

## Actions BEFORE an Earthquake

Follow steps on the "**Make a Plan**" and "**Emergency Kits**" tabs plus:

- Attach bookcases and other tall furniture to wall studs. Store heavy items on bottom shelves. Arrange furniture to keep pathways clear.
- Do not put mirrors or heavy pictures over beds or sleeping areas.
- Put latches or locks on cabinets to keep items from falling out.
- To lessen breakage of gas and power lines, install flexible pipe fittings. Bolt gas appliances and water heaters to wall studs.

## Actions DURING an Earthquake

- **If you are inside your house or other building, drop, cover, and hold on!** Get under a sturdy table or against an inside wall. If you cannot get under a table, sit on the floor and cover your head and neck with your arms or a pillow. If you are in bed, curl up and protect your head and neck with a pillow, but not under a light fixture or anything that could fall on you. **Stay inside until the shaking stops.**
- **If you are outside,** move to an open area away from buildings, power lines, and trees. Cover your head and neck with your arms.
- **If you are in a vehicle,** pull over to the side of the road, but away from bridges, buildings, overpasses, power lines, and trees. Stay inside the vehicle until the shaking stops.

## Protect Your Pet(s)

Bring outdoor pets indoors. Do not try to hold your pet during the shaking. Animals tend to find a safe place by instinct. (See **Pet Safety** tab.)

## Actions AFTER an Earthquake

- When the shaking stops, look around to make sure everyone is all right and for a safe way out. Be aware of aftershocks.
- Help people who are trapped or injured. Give first aid or CPR (if trained).
- Move to higher ground if you live near a coast. A tsunami could occur.
- Clean up spilled items that pose a hazard, such as flammable liquids.

## Community Resources & Utility Safety

- Turn off utilities as needed. (See the **Utility Shut Off & Safety** tab.)
- If needed, contact EMS, police, the Red Cross, Salvation Army, or a local disaster relief service. To search for open shelters, text **SHELTER** and a **Zip Code** to **43362** (4FEMA), or access [www.fema.gov/disaster-recovery-centers](http://www.fema.gov/disaster-recovery-centers).

## Recovery

- Report damages to your insurance company. Find out if you are eligible for public assistance from [www.disasterassistance.gov](http://www.disasterassistance.gov).
- For help with emotions, call the Disaster Distress Helpline 24/7 at 1-800-985-5990, text **TalkWithUs** to **66746**, or access [www.disasterdistress.samhsa.gov](http://www.disasterdistress.samhsa.gov).

# Tornadoes

A **tornado** is a violently rotating column of air that spreads from the base of a thunderstorm to the ground. Often, but not always, a funnel cloud is present. Lightning, heavy rains, flash flooding, and hail are common in thunderstorms with tornadoes.

## Facts

- Wind from tornadoes can reach more than 200 miles per hour and cover an area more than 1 mile wide and 50 miles long. Flying debris causes most tornado injuries.
- After a tornado has passed, it is rated using the Enhanced Fujita (EF) scale: (EF0–light damage to EF5–total devastation).

## Danger Zones

In the U.S., tornadoes can happen in any state but occur most often east of the Rocky Mountains and in Central and Southern States. Peak tornado season in Southern States is March through May; in Northern States is late spring through early summer.

## Warning/Danger Signs

- Dark or green-colored sky. A large, dark, low-lying cloud. Large hail.
- A strange quiet that occurs within or shortly after a thunderstorm. The wind may die down and the air may become very still.
- A loud roar that sounds like a freight train.
- You may or may not see a funnel-shaped cloud.

## Warning Systems

**Tornado Watch:** Severe thunderstorms and tornadoes are possible in and near the watch area. These thunderstorms have winds of 58 mph or higher and/or hail 1 inch in diameter or larger.

**Tornado Warning:** A tornado has been sighted or indicated by radar. Seek safe shelter immediately.

## Actions BEFORE a Tornado

Follow steps on “**Make a Plan**” and “**Emergency Kits**” tabs plus:

- Choose a safe place to shelter in your house, such as a basement, storm cellar, or an inside room on the lowest floor without windows.
- Remove dead trees, tree limbs, and items that cause damage by high winds.
- Listen to local weather forecasts and check [www.weather.gov](http://www.weather.gov) for tornado activity.



## Actions DURING a Tornado

- Shut doors and windows and have all household members and pets take shelter right away in your home's "safe" place. Stay away from windows, doors, and wall corners.
- Charge your cell phone in case the power goes out.
- Do not stay in a mobile home or vehicle. Seek shelter in a nearby building. One with a basement is best. Do not try to outrun a tornado in a vehicle.
- If you cannot shelter indoors, lie flat on the ground or in a ditch. Cover your head and neck with your arms. Cover your body as best you can, with a coat, blanket, etc.
- Do not go under a bridge or overpass or near trees.

## Protect Your Pet(s)

Shelter pets with you and your family. Use your **Pet Emergency Kit**. (See **Pet Safety** tab).

## Actions AFTER a Tornado

- Keep listening to radio, TV or NOAA Weather Radio for advice.
- Give first aid and CPR (if trained), as needed.
- Keep away from downed power lines. Report these to the power company.
- Wear sturdy shoes or boots when walking around debris.
- Take photos or videos of property damage.

## Community Resources & Utility Safety

- 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. Do not light matches. (See the **Utility Shut Off & Safety** tab.)
- If needed, contact EMS, police, the Red Cross, Salvation Army, or a local disaster relief service. To search for open shelters, text **SHELTER** and a **Zip Code** to **43362** (4FEMA), or access [www.fema.gov/disaster-recover-centers](http://www.fema.gov/disaster-recover-centers).

## Recovery

- Report damage to your insurance company.
- Find out if you are eligible for public assistance from [www.disasterassistance.gov](http://www.disasterassistance.gov).
- For help with emotions, call the Disaster Distress Helpline 24/7 at 1-800-985-5990, text **TalkWithUs** to **66746**, or access [www.disasterdistress.samhsa.gov](http://www.disasterdistress.samhsa.gov).

# Hurricanes/Typhoons

Typhoons and hurricanes are the same type of storm, but occur in different places.

- **Hurricanes** occur on the eastern seaboard along the U.S. and Central America.
- **Typhoons** occur in the Pacific Ocean around Hawaii, Asia, and the western North Pacific.
- Similar storms in the Indian Ocean and South Pacific Ocean are called cyclones.

## Facts

- Hurricanes are tropical storms with maximum nonstop winds of 74 mph or higher. A major hurricane has maximum nonstop winds of 111 mph or higher. Winds can blow up to 200 mph.
- Hurricanes can span up to 600 miles wide.
- In the Atlantic, hurricane season runs June 1 to November 30. The Eastern Pacific hurricane season runs May 15 to November 30. Hurricanes have occurred at other times, too.
- Hurricanes can lead to tornadoes.

## Danger Zones

- Hurricanes are common in coastal areas of the Atlantic ocean, such as New Orleans, La., Tampa/St. Petersburg, Fla., Miami, Fla., Norfolk/Virginia Beach, Va., and Houston/Galveston, Texas.
- Typhoons are common in coastal areas in the Pacific Ocean, such as the western region in the Philippines.

## Warning/Danger Signs

Within 2 to 5 days, weather forecasters can predict when and where hurricanes are expected. Listen for these alerts.

## Warning Systems

### ***Hurricane Watch:***

A tropical cyclone containing winds of 74 mph or higher poses a possible threat, generally within 48 hours. These winds may be accompanied by storm surge, coastal flooding, and/or river flooding. The watch does not mean that hurricane conditions will occur. It only means that these conditions are *possible*.

### ***Hurricane Warning:***

Sustained winds of 74 mph or higher linked with a tropical cyclone are expected in 36 hours or less. A storm surge, coastal flooding, and/or river flooding may occur with these winds.

## Actions BEFORE a Hurricane/Typhoon

Follow steps on the “**Make a Plan**” and “**Emergency Kits**” tabs plus:

- Check weather forecasts and [www.weather.gov](http://www.weather.gov) for hurricane/typhoon activity.
- Find out about hurricane response plans in your community. Inform authorities about persons with special mobility or medical needs.
- Find friends or relatives who live at a low-rise inland house to stay with or locate hotels or public shelters outside the flood zone.
- Have materials on hand to protect your house, such as permanent shutters or precut sheets of marine-grade plywood for windows.
- Bring outdoor furniture, garbage cans, toys, etc. inside.
- Fill the gas tank in your car. Keep your car in good working order.
- Turn off utilities if advised by authorities. Unplug small appliances.
- Turn off propane tanks.
- Set your refrigerator to the coldest setting and keep it closed.



Hurricane  
Typhoon

## Actions DURING a Hurricane/Typhoon

- Follow directions from local officials to evacuate to a shelter right away! Take your Emergency Supply Kits.
- DO NOT stay in a mobile home or trailer, manufactured home, or high rise building.
- Stay away from windows and doors, even if they are covered. Go to a small interior room or closet. Close all interior doors. Secure and brace external doors. If you are in a two-story house, go to an interior first floor room.
- If you are in a multi-story building and away from water, go to the 1st or 2nd floor. Stay in an interior room away from windows.
- Lie on the floor under a table or other sturdy object.

## Actions AFTER a Hurricane/Typhoon

- Keep listening to radio, TV or NOAA Weather Radio for advice. Return home only when officials say it is safe.
- Watch for and avoid closed or flooded roads and downed power lines. Report downed power lines to your power company.
- Do not enter a building that has water around it.
- When it is safe to enter your house, use a flashlight to check gas, water and electrical appliances for damage. NEVER use candles or other open flames.
- Wear sturdy shoes or boots to prevent cutting feet on sharp debris.
- NEVER use a generator indoors.
- Do not drink or prepare food with tap water until officials say it is safe. Discard spoiled foods.
- Keep pets comforted and under control.
- Take photos or a video of damages to the inside and outside of your house to show your insurance company.

## Protect Your Pet(s)

Take pets with you or take them to a safe place listed in your Family Disaster Plan. (See **Pet Safety** tab.)

## Community Resources & Utility Safety

- If needed, contact services in your community that aid in disasters, such as EMS, police, the Red Cross, Salvation Army, or a local disaster relief service. To search for open shelters, text **SHELTER** and a **Zip Code** to **43362** (4FEMA), or access [www.fema.gov/disaster-recovery-centers](http://www.fema.gov/disaster-recovery-centers).
- Check for and report power outages, downed utility lines, or trees or limbs on power lines to your power companies. Stay away from downed power lines.
- See the **Utility Shut Off & Safety** tab.

## Recovery

- Report damages to your insurance company.
- Find out if you are eligible for public assistance from [www.disasterassistance.gov](http://www.disasterassistance.gov).
- For help with emotions, call the Disaster Distress Helpline 24/7, toll-free at 1-800-985-5990, text **TalkWithUs** to **66746**, or access [www.disasterdistress.samhsa.gov](http://www.disasterdistress.samhsa.gov).

Hurricane  
Typhoon

# Tsunamis

A **tsunami** is large destructive ocean waves caused by:

- An underwater earthquake
- A landslide above sea level or below water
- Another movement of the earth's surface.

Examples are undersea explosions from volcanoes, and meteorites.

## Tsunami Facts

- With a tsunami, the whole water column moves, not just the surface water. Waves can continue for hours. The first one may not be the most dangerous. Waves move faster than you can run.
- When tsunami waves enter shallow water, they rise to form massive moving water called "runup," which can be many feet high. The runup rushes onto the shore and strikes the coast with extreme, destructive force.
- Large areas of coastlines can be affected. A small tsunami at one beach can be a giant tsunami a few miles away.

### Danger Zones

- Most tsunamis begin in the Pacific Ocean and can occur in any low-lying U.S. or other coastal area.
- States in the U.S. most at risk are Hawaii, Alaska, Washington, Oregon, and California.

### Warning/Danger Signs

- A strong earthquake is felt in a coastal area. The shaking makes it hard to stand.
- A loud, roaring sound (like a train) comes from the ocean
- An obvious rise or fall in waters on a coast

## Warning Systems

### **Warning:**

A tsunami is about to happen or is expected. Significant and widespread inland water surges are also expected. Widespread dangerous coastal flooding and powerful currents are possible and may last for several hours after the first wave arrives.

### **Advisory:**

A tsunami which may produce strong currents or waves could occur. Significant widespread inland water surges are not expected.

### **Watch:**

Potential danger for a tsunami.

## Actions BEFORE a Tsunami

Get up-to-date active weather alerts and forecasts from the National Weather Service at [www.weather.gov](http://www.weather.gov).

Follow steps on the “**Make a Plan**” and “**Emergency Kits**” tabs plus:

- Learn about the history and flooding height of tsunamis that have occurred where you live and places you visit, such as Hawaii.
- Find out where the closest tsunami shelter or safe area is located.
- Hire a contractor for advice on making your house more resistant to tsunami water.



Tsunamis

## Actions DURING a Tsunami

- If you are in a coastal area and feel a strong earthquake, drop, cover, and hold on for protection from the earthquake. A tsunami can come within minutes after the earth shakes.
- Once the shaking stops, quickly gather your household members, pets, and emergency supply kits. Move to your local tsunami shelter. Follow the advised routes to evacuate. Assist neighbors and others who need help leaving.
- If no route is assigned, move to higher ground that is at least 100 feet in elevation, a mile inland, or to the highest floor of a sturdy building and STAY there. If already in a safe location, STAY there.
- To keep the roads clear for emergency vehicles, do not drive. Walk, run, or bicycle (if possible) to a safer location.
- Look for and avoid downed power lines.
- Stay away from buildings and bridges.
- For each aftershock that occurs, drop, cover, and hold on. Then go to an assigned shelter or as far inland and uphill as possible.
- Stay tuned to NOAA Weather Radio or news broadcasts for updates of tsunami and safety alerts.

## Actions AFTER a Tsunami

- Check yourself and others for injuries. Give first aid as needed.
- If anyone needs to be rescued, **call 911!**
- Closely supervise and comfort children and pet(s).
- Do not go back to your house, vacation site, the coast, and low-lying areas until local officials say it's safe to return.
- Avoid any areas that are damaged.
- Stay out of any building that has water around it.
- When you are cleared to return to your house, wear protective clothing and gloves. Be careful. The tsunami's floodwaters may have damaged buildings in places you might not expect.



## Community Resources & Utility Safety

- If needed, contact services in your community that aid in disasters, such as EMS, police, the Red Cross, Salvation Army, or a local disaster relief service. To search for open shelters, text **SHELTER** and a **Zip Code** to **43362** (4FEMA), or access [www.fema.gov/disaster-recover-centers](http://www.fema.gov/disaster-recover-centers).
- Check for and report power outages, downed utility lines, or trees or limbs on power lines to your power companies. Stay away from downed power lines. (See the **Utility Shut Off & Safety** tab.)

## Recovery

- Find out if you are eligible for public assistance from [www.disasterassistance.gov](http://www.disasterassistance.gov).
- For help with emotions, call the Disaster Distress Helpline 24/7, toll-free at 1-800-985-5990, text **TalkWithUs** to **66746**, or access [www.disasterdistress.samhsa.gov](http://www.disasterdistress.samhsa.gov).



Tsunamis

# Volcanoes

A volcano is a mountain that opens downward to a reservoir of molten rock (lava) beneath the surface of the earth.

- **Active volcanoes** erupt often.
- **Dormant volcanoes** have not erupted in awhile.

## Facts

- Earthquakes, mudflows, flash floods, and wildfires can occur with a volcano.
- Dangerous effects of a volcano cover about a 20 mile radius, but can go as far as 100 or more miles.
- Inhaling ash from volcanoes can cause serious breathing problems for people with lung and heart conditions.



## Danger Zones

Hawaii and Alaska have active volcanoes and are at the greatest risk for volcanoes. Also at risk are active volcanoes in the Cascade Mountain Range in California, Oregon, and Washington.

## Warning Systems

U.S. Geological Survey scientists forecast and issue warnings for volcanoes.

## Actions BEFORE

Follow steps on the **"Make a Plan"** and **"Emergency Kits"** tabs plus:

- Plan a back-up escape route.
- Add goggles and disposable dust masks (one for each person) in case of ash fall exposure.
- Find out if your area is at risk for volcanoes and discuss the insurance for possible damage with your insurance agent.

## Actions DURING

- Do not go near an active volcano. Listen for and follow advice from local officials.
- If advised to evacuate, avoid areas downwind of the volcano, river valleys, and low-lying areas. Quickly move out of the way of a mudflow.
- If advised to stay indoors, close windows, doors, and fireplace dampers.

## Protect Your Pet(s)

Bring pets and store livestock inside to prevent them from breathing in ash fall or being covered in it. Use your Pet Emergency Kit. (See Pet Safety tab).

## Actions AFTER

- Keep listening to radio, TV or NOAA Weather Radio for advice.
- Stay away from areas with volcanic ash. If you are not able to, wear goggles, a facemask, long-sleeve shirts and pants, and sturdy shoes or boots.
- Do not drive through ash fall. It can cause the vehicle to stall.
- Remove ash from the roof and gutters.
- Keep children from playing outdoors in areas where ash is deep or has piled up.
- Clean the house more often to lessen the amount of ash that has collected indoors.

## Community Resources & Utility Safety

- If needed, contact EMS, police, the Red Cross, Salvation Army, or a local disaster relief service. To search for open shelters, text **SHELTER** and a **Zip Code** to **43362** (4FEMA), or access [www.fema.gov/disaster-recover-centers](http://www.fema.gov/disaster-recover-centers).
- Check for and report power outages, downed utility lines, or trees or limbs on power lines to your power companies. Stay away from downed power lines. See the **Utility Shut Off & Safety** tab.

## Recovery

- Report damages to your insurance company.
- Find out if you are eligible for public assistance from [www.disasterassistance.gov](http://www.disasterassistance.gov).
- For help with emotions, call the Disaster Distress Helpline 24/7 at 1-800-985-5990, text **TalkWithUs** to **66746**, or access [www.disasterdistress.samhsa.gov](http://www.disasterdistress.samhsa.gov).

# Hazardous Materials (Hazmat)



A **hazardous material** is any substance or material that can cause a significant risk to human health, safety, or the environment when it's transported, used incorrectly, or not properly stored or contained.

## Facts

- Harmful materials can be accidentally released when they are made, stored, transported, or disposed.
- Chemical or biological toxins can be inhaled, swallowed, or come in contact with the skin. The most common chemical accidents occur inside homes, such as mixing bleach with ammonia.

## Danger Zones

- Areas near chemical manufacturing plants are at a greater risk.
- Roadways, railways, and waterways, are at increased risk due to possible accident spills of harmful substances.

## Warning/Danger Signs

- You see the release of a hazardous material or smell it.
- **Signs of toxic poisoning:** Having a hard time breathing; eye, skin, respiratory tract or throat irritation; blurred vision, severe headache; seizure; confusion; passing out.

## Warning Systems

### **Emergency Alert System (EAS):**

Warnings and alerts from local radio and TV, online news, and smart phone Apps.

Local siren and/or advice from emergency personnel through a loud speaker, phone call, or door-to-door warning.

## Actions BEFORE a HAZMAT Event

Follow steps on the “**Make a Plan**” and “**Emergency Kits**” tabs plus:

- Find out how your community notifies you of a HAZMAT event.
- Choose the best room to shelter-in-place. Allow 10 square feet of floor space per person. Store these items in the room, but out of reach for children: Sealable, large plastic bags for contaminated clothing; thick, large garbage bags or pre-cut plastic sheeting to cover windows vents, and cracks around the door; and duct tape to secure plastic.

## Actions DURING a HAZMAT Event

- For signs of **toxic poisoning** listed on page 56, **call 911!**
- Report Hazardous Materials Transportation and Pipeline Accidents to the 24-hour National Response Center (NRC): **1-800-424-8802**. Follow advice by authorities to evacuate or shelter-in-place.

### *To Shelter-in-Place:*

- Get everyone and pets inside. Follow instructions from authorities. Listen to your battery-powered radio for advice from officials.
- Turn off fans, air conditioning, heating, and the fireplace damper.
- Use the plastic and duct tape on the door, windows, and vents to seal out air from coming into the room. Cover electrical outlets with duct tape.

*If you are in a vehicle:* Stop and seek shelter in a permanent building. If you must stay in the vehicle, turn the engine, air conditioner or heater off. Close windows. Seal vents with duct tape if you have it. Listen to your battery-powered radio for advice from officials.

*If you are outside:* Consider if you can get out of the area or if you should go inside the closest building and shelter-in-place. If you choose to leave the area, go in a direction upwind of the source.

## Protect Your Pet(s)

Bring pets inside or take them with you if you evacuate. (See **Pet Safety** tab.)

## Actions AFTER a HAZMAT Event

- Keep listening to the radio for updates. If you evacuated, return home only when you are told it is safe. When you are given the all-clear, open all the doors and windows for natural ventilation.
- Follow clean-up advice from local officials. Discard water and food that were contaminated. Get medical care as needed.

## Community Resources & Utility Safety

Use community resources as advised by authorities.

### Recovery

Get tips to help cope with different types of HAZMAT disasters from [www.ready.gov/hazardous-materials-incidents](http://www.ready.gov/hazardous-materials-incidents) and [www.phmsa.dot.gov](http://www.phmsa.dot.gov).

# Terrorism

**Terrorism** is the use of force or violence against people or property in violation of the criminal laws of the U.S. for purposes of intimidation, coercion, or ransom.

## Facts

- Acts of terrorism include: threats of terrorism; assassinations; kidnappings; hijackings; bomb scares and bombings; cyber attacks (computer-based); and the use of chemical, biological, and nuclear weapons.
- Terrorists often use threats to create fear among the public, to convince citizens that their government is unable to protect them, and to get immediate publicity for their causes.

## Danger Zones

- High-risk targets for acts of terrorism include military and civilian government facilities, international airports, large cities, and high profile landmarks.
- Terrorists might also target large public gatherings, water and food supplies, utilities, and corporate centers.

## Warning/Danger Signs

- A backpack left alone in a public place
- Buying or stealing weapons, explosives, or explosive-making materials
- Someone trying to gain access to a restricted area or trying to get floor plans or blueprints of government, military, or financial facilities

### Warning Systems

#### ***Imminent Threat Alert:***

Warns of a credible, specific, and impending terrorist threat against the U.S.

#### ***Elevated Threat Alert:***

Warns of a credible terrorist threat against the U.S.

#### ***Sunset Provision:***

An alert for one threat is issued for a specific time period and then automatically expires

Sign up for email alerts from [www.dhs.gov/alerts](http://www.dhs.gov/alerts).

## Protect Your Pet(s)

Bring your pets indoors. If you need to evacuate, take pets to a safe place listed in your Family Disaster Plan. (See **Pet Safety** tab.)

## Actions BEFORE an Act of Terror

Follow steps on the “**Make a Plan**” and “**Emergency Kits**” tabs plus:

- Find out about terrorism warnings from the media and the National Terrorism Advisory System at [www.dhs.gov/alerts](http://www.dhs.gov/alerts). Follow advice given.
- Report suspicious activity to your local law enforcement. Leave an area if something does not seem right.

## Actions DURING an Act of Terror

- If you get any suspicious mail from an unknown source, open mail that emits puff, dust, or particles, leave it alone and call the police.
- Evacuate or shelter in place as advised.

### *If you are a victim of an explosion:*

- Exit the building as soon as you can. Help others if possible.
- Watch for falling objects. If you get trapped in debris, tap on a wall or pipe so someone can hear you. Limit movement.

**For biological and chemical acts of terror, follow national and local authority guidelines to decontaminate and get medical care. Get information from [www.bt.cdc.com](http://www.bt.cdc.com).**

**For a nuclear or radiological attack, take shelter as advised.**

## Actions AFTER an Act of Terror

- Stay away from the incident area due to danger of secondary devices.
- Check for injured or trapped people. Give first aid and CPR if trained.
- Listen to local radio or television stations for the updates and advice.

## Community Resources & Utility Safety

If needed, contact EMS, police, the Red Cross, Salvation Army, or a local disaster relief service. To search for open shelters, text **SHELTER** and a **Zip Code** to **43362** (4FEMA), or access [www.fema.gov/disaster-recovery-centers](http://www.fema.gov/disaster-recovery-centers).

## Recovery

- Keep children from watching TV and Internet footage of terrorism events. Take turns with other adults to get updated information.
- Get help to cope with terrorism from [www.fbi.gov](http://www.fbi.gov). Search for “Coping after Terrorism.”



# **Knowledge** is **POWER**, but being **PREPARED** could **save your life** and the lives your family, neighbors, and others.

House fires, floods, tornadoes, and extreme hot and cold weather hazards affect thousands of people each year. These and other disasters could occur with little or no warning.

Protect yourself, your family, and others in your community by being ready to take appropriate action before, during, and after different types of disasters.

