

GET PREPARED

A Basic Overview

*The information contained herein has been obtained through the
American Red Cross and compiled for the*

USTC

Emergency Preparedness Series 1 Program

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30 Tips for Emergency Preparedness

Here are 30 tips to help you and your family can become better prepared for an emergency.

Preparedness Tip #1

Take a moment to imagine that there is an emergency, like a fire in your home, and you need to leave quickly. What are the best escape routes from your home? Find at least two ways out of each room. Now, write it down — you've got the beginning of a plan.

Preparedness Tip #2

Pick a place to meet after a disaster. Designate two meeting places. Choose one right outside your home, in case of a sudden household emergency, such as a fire. The second place you choose needs to be outside your neighborhood, in the event that it is not safe to stay near or return to your home.

Preparedness Tip #3

Choose an emergency contact person outside your area because it may be easier to call long distance than locally after a local/regional disaster. Take a minute now to call or e-mail an out-of-town friend or family member to ask him or her to be your family's designated contact in the event of an emergency. Be sure to share the contact's phone number with everyone in the family.

During an emergency, you can call your contact who can share with other family members where you are; how you are doing; and how to get in contact with you.

Preparedness Tip #4

Complete an emergency contact card and make copies for each member of your family to carry with them. Be sure to include an out-of-town contact on your contact card. It may be easier to reach someone out of town if local phone lines are out of service or overloaded. You should also have at least one traditionally wired landline phone, as cordless or cellular phones may not work in an emergency. Visit www.redcross.org or www.ready.gov for sample emergency contact cards.

Preparedness Tip #5

Dogs may be man's best friend, but due to health regulations, most emergency shelters cannot house animals. Find out in advance how to care for your pets and working animals when disaster strikes. Pets should not be left behind, but could be taken to a veterinary office, family member's home or animal shelter during an emergency. Also be sure to store extra food and water for pets. For more information, visit the Animal Safety section on www.redcross.org or visit the Humane Society Web site at www.hsus.org

Preparedness Tip #6

Go through your calendar now, and put a reminder on it — every six months — to review your plan, update numbers, and check supplies to be sure nothing has expired, spoiled, or changed. Also remember to practice your tornado, fire escape or other disaster plans.

Preparedness Tip #7

Check your child's school Web site or call the school office to request a copy of the school's emergency plan. Keep a copy at home and work or other places where you spend a lot of your time and make sure the school's plan is incorporated into your family's emergency plan. Also, learn about the disaster plans at your workplace or other places where you and your family spend time.

Preparedness Tip #8

Teach your children how and when to call 9-1-1 or your local Emergency Medical Services number for help. Post these and other emergency telephone numbers by telephones.

Preparedness Tip #9

Practice. Conduct fire drills and practice evacuating your home twice a year. Drive your planned evacuation route and plot alternate routes on a map in case main roads are blocked or gridlocked. Practice earthquake and tornado drills at home, school and work. Commit a weekend to update telephone numbers, emergency supplies and review your plan with everyone.

Preparedness Tip #10

A community working together during an emergency makes sense.

1. Talk to your neighbors about how you can work together during an emergency.
2. Find out if anyone has specialized equipment like a power generator, or expertise such as medical knowledge, that might help in a crisis.
3. Decide who will check on elderly or disabled neighbors.
4. Make back-up plans for children in case you can't get home in an emergency.
5. Sharing plans and communicating in advance is a good strategy

Preparedness Tip #11

What if disaster strikes while you're at work? Do you know the emergency preparedness plan for your workplace? While many companies have been more alert and pro-active in preparing for disasters of all types since the September 11, 2001 attacks, a national survey indicates that many employees still don't know what their workplace plan is for major or minor disasters. If you don't know yours, make a point to ask. Know multiple ways to exit your building, participate in workplace evacuation drills, and consider keeping some emergency supplies at the office. Visit www.ready.gov and click on Ready Business for more information about business preparedness.

Preparedness Tip #12

You should keep enough supplies in your home to meet the needs of you and your family for at least fourteen days. Build an emergency supply kit to take with you in an evacuation. The basics to stock in your portable kit include: water, food, battery-powered radio and flashlight with extra batteries, first aid supplies, change of clothing, blanket or sleeping bag, wrench or pliers, whistle, dust mask, plastic sheeting and duct tape, trash bags, map, a manual can opener for canned food and special items for infants, elderly, the sick or people with disabilities. Keep these items in an easy to carry container such as a covered trash container, a large backpack, or a duffle bag.

Preparedness Tip #13

Preparing for emergencies needn't be expensive if you're thinking ahead and buying small quantities at a time. Make a list of some foods that:

- Have a long shelf-life and will not spoil (non-perishable).
- You and your family like.
- Do not require cooking.
- Can be easily stored.
- Have a low salt content as salty foods will make you thirstier.

Keep the list in your purse or wallet and pick up a few items each time you're shopping and/or see a sale until you have built up a well-stocked supply that can sustain each member of your family for at least three days following an emergency.

Preparedness Tip #14

Take a minute to check your family's first aid kit, and note any depleted items — then, add them to your shopping list. Don't have a first aid kit? Add that to the list or build a kit yourself. Just add

the following items to your shopping list and assemble a first aid kit. Consider creating a kit for each vehicle as well:

First Aid Kits - Assemble a first aid kit for your home and one for each car.

- (20) adhesive bandages, various sizes
- (1) 5" x 9" sterile dressing
- (1) conforming roller gauze bandage
- (2) triangular bandages
- (2) 3 x 3 sterile gauze pads
- (2) 4 x 4 sterile gauze pads
- (1) roll 3" cohesive bandage
- (2) germicidal hand wipes or waterless alcohol-based hand sanitizer
- (6) antiseptic wipes
- (2) pair large medical grade non-latex gloves
- Adhesive tape, 2" width
- Anti-bacterial ointment
- Cold pack
- Scissors (small, personal)
- Tweezers
- CPR breathing barrier, such as a face shield
- First Aid Manual

Non-Prescription and Prescription Drugs

- Aspirin or non-aspirin pain reliever
- Anti-diarrhea medication
- Antacid (for stomach upset)
- Syrup of Ipecac (use to induce vomiting if advised by the Poison Control Center)
- Laxative
- Activated charcoal (use if advised by the Poison Control Center)
- Prescription drugs, as recommended by your physician, and copies of the prescriptions in case they need to be replaced

For more information about first aid kits, visit www.redcross.org.

Preparedness Tip #15

Keep at least a three-day supply of water per person. Store a minimum of one gallon of water per person per day (two quarts for drinking, two quarts for food preparation and sanitation). Store water in plastic containers such as soft drink bottles. Avoid using containers that will decompose or break, such as milk cartons or glass bottles. A normally active person needs to drink at least two quarts of water each day. Hot environments and strenuous activity can double that amount. Children, nursing mothers, and people who are sick will also need more.

Preparedness Tip #16

One of the easiest ways you can prepare for emergencies is to keep some supplies readily available. Every kit is unique and can be tailored to meet the specific needs of your family, but below is a general list of supplies you may want to consider:

Tools and Supplies (Essential Items are Marked with an Asterisk *)

- Mess kits, or paper cups, plates, and plastic utensils
- Emergency preparedness manual and a copy of your disaster plan, including your emergency contacts list
- Battery-operated radio and extra batteries*

- Flashlight and extra batteries*
- Cash or traveler's checks, change*
- Non-electric can opener, utility knife*
- Fire extinguisher: small ABC type stored near where fires are likely to occur such as a kitchen, or near a fireplace. It should not be kept in the disaster supplies kit.
- Tube tent
- Duct Tape*
- Compass
- Matches in a waterproof container
- Aluminum foil
- Plastic storage containers
- Signal flare
- Paper, pencil*
- Needles, thread
- Medicine dropper
- Shut-off wrench or pliers, to turn off household gas and water
- Whistle*
- Plastic sheeting*
- Map of the area (for locating shelters and evacuation routes)

(Continued in the next tip)

Preparedness Tip #17

Also include items for sanitation in your emergency supply kit. Consider the following:

Sanitation (Essential Items are Marked with an Asterisk *)

- Toilet paper, towelettes*
- Soap, liquid detergent*
- Feminine supplies*
- Personal hygiene items*
- Plastic garbage bags, ties (for personal sanitation uses)*
- Plastic bucket with tight lid
- Disinfectant
- Household chlorine bleach

(Continued in the next tip)

Preparedness Tip #18

Include at least one complete change of clothing and footwear per person in your emergency supply kit. We suggest long pants and long sleeves for additional protection after a disaster.

Clothing and Bedding (Essential Items are Marked with an Asterisk *)

- Sturdy shoes or work boots*
- Rain gear*
- Blankets or sleeping bags*
- Hat and gloves
- Thermal underwear
- Sunglasses

Preparedness Tip #19

You should also keep a smaller version of your emergency supply kit in your vehicle, in case you are commuting or traveling when disaster strikes.

Emergency Kit For Your Vehicle

- Bottled water and non-perishable high energy foods, such as granola bars, raisins and peanut butter
- Flashlight and extra batteries
- Blanket
- Booster cables
- Fire extinguisher (5 lb., A-B-C type)
- First aid kit and manual
- Maps
- Shovel
- Tire repair kit and pump
- Flares or other emergency marking devices

Preparedness Tip #20

Teach children how to dial 9-1-1 in an emergency. Review emergency action steps with all family members:

Check the scene and the victim

Call 9-1-1 or your local emergency number posted by the telephone

Care for the victim

Preparedness Tip #21

Read the information on your city, county and/or state government Web sites as well as the “Be Prepared” section of www.redcross.org or Ready.gov and print emergency preparedness information. Be sure to keep a copy with your disaster supplies kit. It can provide telephone numbers, addresses and other information you need when electronic connections are not available options for obtaining the information.

Preparedness Tip #22

When water is of questionable purity, it is easiest to use bottled water for drinking and cooking if it is available. When it's not available, it is important to know how to treat contaminated water. In addition to having a bad odor and taste, water from questionable sources may be contaminated by a variety of microorganisms, including, bacteria and parasites that cause diseases such as dysentery, cholera, typhoid, and hepatitis. All water of uncertain purity should be treated before use. Use one or a combination of these treatments:

Filter: Filter the water using a piece of cloth or coffee filter to remove solid particles.

Boil: Bring it to a rolling boil for about one full minute. Cool it and pour it back and forth between two clean containers to improve its taste before drinking it.

Chlorinate:

– Add 16 drops (1/8 teaspoon) of liquid chlorine bleach per gallon of water. Stir to mix. Sodium hypochlorite of the concentration of 5.25% to 6% should be the only active ingredient in the bleach. There should not be any added soap or fragrances. A major bleach manufacturer has also added Sodium Hydroxide as an active ingredient, which they state does not pose a health risk for water treatment.

– Let stand 30 minutes.

– If it smells of chlorine. You can use it. If it does not smell of chlorine, add 16 more drops (1/8 teaspoon) of chlorine bleach per gallon of water, let stand 30 minutes, and smell it again. If it smells of chlorine, you can use it. If it does not smell of chlorine, discard it and find another source of water.

Flood water can also be contaminated by toxic chemicals. Do **NOT** try to treat flood water.

Preparedness Tip #23

In some emergencies you may be required to turn off your utilities. To prepare for this type of event:

- Locate the electric, gas and water shut-off valves.
- Keep necessary tools near gas and water shut-off valves
- Teach adult family members how to turn off utilities.

If you turn off the gas, a professional must turn it back on. Do not attempt to do this yourself.

Preparedness Tip #24

Understand that during an emergency you may be asked to “shelter-in-place” or evacuate. Plan for both possibilities and be prepared to listen to instructions from your local emergency management officials. Visit Ready.gov and www.redcross.org/preparedness for more information on sheltering-in-place.

Preparedness Tip #25

A disaster can cause significant financial loss. Your apartment or home may be severely damaged or destroyed. You may be forced to live in temporary housing. Income may be cut off or significantly reduced. Important financial records could be destroyed. Take the time now to assess your situation and ask questions.

To help you, consider using the Emergency Financial First Aid Kit (EFFAK), a tool developed by Operation Hope, FEMA and Citizen Corps or contact your local Red Cross chapter for [Disasters and Financial Planning: A Guide for Preparedness](#).

Preparedness Tip #26

Learn if earthquakes are a risk in your area by contacting your local emergency management office, local American Red Cross chapter, or state geological survey or department of natural resources. Information about earthquake risk is also available from the [U.S. Geological Survey National Seismic Hazards project](#).

Preparedness Tip #27

Floods are among the most frequent and costly natural disasters in terms of human hardship and economic loss. As much as 90 percent of the damage related to all natural disasters (excluding draught) is caused by floods and associated debris flow. Most communities in the United States can experience some kind of flooding. Melting snow can combine with rain in the winter and early spring; severe thunderstorms can bring heavy rain in the spring or summer; or hurricanes can bring intense rainfall to coastal and inland states in the summer and fall. Regardless of how a flood occurs, the rule for being safe is simple: head for higher ground and stay away from floodwater. Even a shallow depth of fast-moving floodwater produces more force than most people imagine. You can protect yourself by being prepared and having time to act. Local radio or television stations or a NOAA Weather Radio are the best sources of information in a flood situation.

Preparedness Tip #28

When there is concern about a potential exposure to a chemical or other airborne hazard, local officials may advise you to “shelter-in-place” and “seal the room.” This is different from taking shelter on the lowest level of your home in case of a natural disaster like a tornado. If you believe the air may be badly contaminated or if you are instructed by local officials, follow the instructions below to create a temporary barrier between you and the contaminated air outside.

To shelter-in-place and seal-the-room:

- Close and lock all windows and exterior doors.
- Turn off all fans, heating and air conditioning systems.
- Close the fireplace damper.
- Get your disaster supplies kit and turn on your battery-powered radio.
- Go to an interior room that is above ground level and without windows, if possible. In the case of a chemical threat, an above-ground location is preferable because some chemicals are heavier than air, and may seep into basements even if the windows are closed.
- If directed by local authorities on the radio, use duct tape to seal all cracks around the door and any vents into the room. Tape plastic sheeting, such as heavy-duty plastic garbage bags, over any windows.
- Listen to your radio or television for further instructions. Local officials will tell you when you can leave the room in which you are sheltering, or they may call for evacuation in specific areas at greatest risk in your community

Preparedness Tip #29

If There is an Explosion:

- Take shelter against your desk or a sturdy table.
- Exit the building immediately.
- Do not use elevators.
- Check for fire and other hazards.
- Take your emergency supply kit if time allows.

If there is a Fire:

- Exit the building immediately.
- If there is smoke, crawl under the smoke to the nearest exit and use a cloth, if possible, to cover your nose and mouth.
- Use the back of your hand to feel the upper, lower, and middle parts of closed doors.
- If the door is not hot, brace yourself against it and open slowly.
- If the door is hot, do not open it. Look for another way out.
- Do not use elevators.
- If your clothes catch on fire, stop-drop-and-roll to put out the fire. Do not run.
- If you are at home, go to your previously designated outside meeting place.
- Account for your family members and carefully supervise small children.
- GET OUT and STAY OUT. Never go back into a burning building.
- Call 9-1-1 or your local emergency number.

Preparedness Tip #30

Unlike an explosion, a biological attack may or may not be immediately obvious. Most likely local health care workers will report a pattern of unusual illness or a wave of sick people seeking medical attention. The best source of information will be radio or television reports.

Understand that some biological agents, such as anthrax, do not cause contagious diseases. Others, like the smallpox virus, can result in diseases you can catch from other people.

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 may have been exposed. You should watch TV, listen to the radio, or check the Internet for official news including the following:

- Are you in the group or area authorities believe may have been exposed?
- What are the signs and symptoms of the disease?
- Are medications or vaccines being distributed?
- Where? Who should get them and how?
- Where should you seek emergency medical care if you become sick?

During a declared biological emergency:

- If a family member becomes sick, it is important to be suspicious.
- Do not assume, however, that you should go to a hospital emergency room or that any illness is the result of the biological attack. Symptoms of many common illnesses may overlap.
- Use common sense, practice good hygiene and cleanliness to avoid spreading germs, and seek medical advice.
- Consider if you are in the group or area authorities believe to be in danger.
- If your symptoms match those described and you are in the group considered at risk, immediately seek emergency medical attention.

If you are potentially exposed:

- Follow instructions of doctors and other public health officials.
- If the disease is contagious expect to receive medical evaluation and treatment. You may be advised to stay away from others or even deliberately quarantined.
- For non-contagious diseases, expect to receive medical evaluation and treatment.

If you become aware of an unusual and suspicious substance nearby:

- Quickly get away.
- Protect yourself. 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. Otherwise, several layers of tissue or paper towels may help.
- Wash with soap and water.
- Contact authorities.
- Watch TV, listen to the radio, or check the Internet for official news and information including what the signs and symptoms of the disease are, if medications or vaccinations are being distributed and where you should seek medical attention if you become sick.

If you become sick seek emergency medical attention.

Introduction

Preparedness

An everyday task for everyday life

Being prepared for emergencies is crucial at home, school, work and in your community.

Disaster can strike quickly and without warning. It can force you to evacuate your neighborhood, workplace or school or can confine you to your home. What would you do if basic services -- water, gas, electricity or telephones--were cut off? Local officials and relief workers will be on the scene after a disaster, but they cannot reach everyone right away. Therefore, the best way to make you and your family safer is to be prepared before disaster strikes.

In the midst of rushing through everyday life, it's important to take a minute or two to prepare for emergencies. Being prepared helps you and your family minimize the impact of a disaster such as a hurricane or an emergency such as a broken leg.

The best way to make your family and your home safer is to be prepared **before** disaster strikes.

Make a Plan

- Make a family communications plan that includes an evacuation plan and coordinates with your school, work and community communication plans. Practice this plan with your entire family.
- Build a disaster supplies kit that includes enough supplies for each family member for three days. Remember to check your kit every six months.

Find out what could happen to you

Contact your American Red Cross chapter or local emergency management or civil defense office — be prepared to take notes:

- Ask what types of disasters are most likely to happen. Request information on how to prepare for each.
- Learn about your community's warning signals: what they sound like and what you should do when you hear them.
- Ask about animal care after disaster. Animals may not be allowed inside emergency shelters due to health regulations.
- Find out how to help elderly or disabled persons, if needed.
- Next, find out about the disaster plans at your workplace, your children's school or daycare center and other places where your family spends time.

Create a disaster plan

Meet with your family and discuss why you need to prepare for disaster. Explain the dangers of fire, severe weather and earthquakes to children. Plan to share responsibilities and work together as a team.

- Discuss the types of disasters that are most likely to happen. Explain what to do in each case.
- Pick two places to meet: 1. Right outside your home in case of a sudden emergency, like a fire. 2. Outside your neighborhood in case you can't return home. Everyone must know the address and phone number.

- Ask an out-of-state friend to be your “family contact.” After a disaster, it’s often easier to call long distance. Other family members should call this person and tell them where they are. Everyone must know your contact’s phone number.
- Discuss what to do in an evacuation. Plan how to take care of your pets.
- Write down all of these contact numbers and information on the family emergency contact card.

Complete this checklist

- Post emergency telephone numbers by phones (fire, police, ambulance, etc.).
- Teach children how and when to call 911 or your local Emergency Medical Services number for emergency help.
- Show each family member how and when to turn off the water, gas and electricity at the main switches.
- Check if you have adequate insurance coverage.
- Teach each family member how to use the fire extinguisher (ABC type), and show them where it’s kept.
- Install smoke detectors on each level of your home, especially near bedrooms.
- Conduct a home hazard hunt.
- Stock emergency supplies and assemble a Disaster Supplies Kit.
- Take a Red Cross first aid and CPR class.
- Determine the best escape routes from your home. Find two ways out of each room.
- Find the safe spots in your home for each type of disaster.

Practice your plan

- Test your smoke detectors monthly and change the batteries at least once a year.
- Quiz your kids every six months so they remember what to do.
- Conduct fire and emergency evacuation drills.
- Replace stored water every three months and stored food every six months.
- Test and recharge your fire extinguisher(s) according to manufacturer’s instructions.

Evacuation Plan

Local government officials, not the Red Cross, issue evacuation orders when disaster threatens. Listen to local radio and television reports when disaster threatens. If local officials ask you to leave, do so immediately; they have a good reason for making this request.

Coordinate your evacuation plan in advance when creating your family’s disaster plan. Ensure that you’ve tested the evacuation routes and that you have planned several in the instance of closed roads and routes.

Remember these simple tips:

- Wear long-sleeved shirts, long pants and sturdy shoes so you can be protected as much as possible.
- Take your disaster supplies kit.
- Take your pets with you; do not leave them behind. Because pets are not permitted in public shelters, follow your plan to go to a relative’s or friend’s home, or find a “pet-friendly” hotel.
- Lock your home.
- Use travel routes specified by local authorities — don’t use shortcuts because certain areas may be impassable or dangerous.
- Stay away from downed power lines.

If you have only moments before leaving, grab these things and go!

- Medical supplies: prescription medications and dentures.
- Disaster supplies: flashlight, batteries, radio, first aid kit, bottled water
- Clothing and bedding: a change of clothes and a sleeping bag or bedroll and pillow for each household member
- Car keys and keys to the place you may be going (friend's or relative's home)

If local officials haven't advised an immediate evacuation

If there's a chance the weather may get worse or flooding may happen, take steps now to protect your home and belongings. Do this only if local officials have not asked you to leave.

Protect your home

- Bring things indoors. Lawn furniture, trash cans, children's toys, garden equipment, clotheslines, hanging plants and any other objects that may fly around and damage property should be brought indoors.
- Leave trees and shrubs alone. If you did not cut away dead or diseased branches or limbs from trees and shrubs, leave them alone. Local rubbish collection services will not have time before the storm to pick anything up.
- Look for potential hazards. Look for coconuts, un-ripened fruit, and other objects in trees around your property that could blow or break off and fly around in high winds. Cut them off and store them indoors until the storm is over.
- Turn off electricity and water. Turn off electricity at the main fuse or breaker, and turn off water at the main valve.
- Leave natural gas on. Unless local officials advise otherwise, leave natural gas on because you will need it for heating and cooking when you return home. If you turn gas off, a licensed professional is required to turn it back on, and it may take weeks for a professional to respond.
- Turn off propane gas service. Propane tanks often become dislodged in disasters.
- If high winds are expected, cover the outside of all windows of your home. Use shutters that are rated to provide significant protection from windblown debris, or fit plywood coverings over all windows.
- If flooding is expected, consider using sand bags to keep water away from your home. It takes two people about one hour to fill and place 100 sandbags, giving you a wall one foot high and 20 feet long. Make sure you have enough sand, burlap or plastic bags, shovels, strong helpers, and time to place them properly.
- Remember. Houses do not explode due to air pressure differences. Damage happens when wind gets inside a home through a broken window, door, or damaged roof.
- Cover the outside of windows with shutters or plywood. Tape does not prevent windows from breaking. All tape does is prevent windows from shattering. Using tape on windows is not recommended.

Protect your valuables

- Move objects that may get damaged by wind or water to safer areas of your home. Move television sets, computers, stereo and electronic equipment, and easily moveable appliances like a microwave oven to higher levels of your home and away from windows. Wrap them in sheets, blankets, or burlap.
- Make a visual or written record of all of your household possessions. Record model and serial numbers. This list could help you prove the value of what you owned if those possessions are damaged or destroyed, and can assist you to claim deductions on taxes.
- Do this for all items in your home, including expensive items such as sofas, chairs, tables, beds, chests, wall units, and any other furniture too heavy to move. Store a copy of the record somewhere away from home, such as in a safe deposit box.
- If it's possible that your home may be significantly damaged by impending disaster, consider storing your household furnishings temporarily elsewhere.

Gather essential supplies and papers

You will need the following supplies when you leave your home; put them all together in a duffle bag or other large container in advance. This is your disaster supplies kit.

- Flashlight with plenty of extra batteries
- Battery-powered radio with extra batteries
- First aid kit
- Prescription medications in their original bottle, plus copies of the prescriptions
- Eyeglasses (with a copy of the prescription)
- Water (at least one gallon per person is recommended; more is better)
- Foods that do not require refrigeration or cooking
- Items that infants and elderly household members may require
- Medical equipment and devices, such as dentures, crutches, prostheses, etc.
- Change of clothes for each household member
- Sleeping bag or bedroll and pillow for each household member
- Checkbook, cash, and credit cards
- Map of the area

Important papers to take with you

- Driver's license or personal identification
- Social Security card
- Proof of residence (deed or lease)
- Insurance policies
- Birth and marriage certificates
- Stocks, bonds, and other negotiable certificates
- Wills, deeds, and copies of recent tax returns

Build A Disaster Supplies Kit

There are six basics you should stock for your home in the case of an emergency: water, food, first aid supplies, clothing and bedding, tools and emergency supplies, and special items for medical conditions.

Keep the items that you would most likely need during an evacuation in an easy-to carry container. Below is a comprehensive list of what should be included in your kit – recommended items are marked with an asterisk (*).

Possible containers include a large, covered trash container, a camping backpack or a duffle bag.

Water

- Store water in plastic containers such as soft drink bottles. Avoid using containers that will decompose or break, such as milk cartons or glass bottles. A normally active person needs to drink at least two quarts of water each day. Hot environments and intense physical activity can double that amount. Children, nursing mothers, and ill people will need more.
- Store one gallon of water per person per day.
- Keep at least a three-day supply of water per person (two quarts for drinking, two quarts for each person in your household for food preparation/sanitation).*

Additional Information

- Water sources during an emergency

Food

Store at least a three-day supply of non-perishable food (10 to 14 days is recommended) that require no refrigeration, preparation or cooking, and little or no water. If you must heat food, pack a can of sterno. Select food items that are compact and lightweight.

Include a selection of the following foods in your Disaster Supplies Kit:

- Ready-to-eat canned meats, fruits, and vegetables
- Canned juices
- Staples (salt, sugar, pepper, spices, etc.)
- High energy foods
- Vitamins
- Food for infants
- Comfort/stress foods

Additional Information

- Food supplies during an emergency

First Aid Kit

Assemble a first aid kit for your home and one for each car.

- (20) adhesive bandages, various sizes.
- (1) 5" x 9" sterile dressing.
- (1) conforming roller gauze bandage.
- (2) triangular bandages.
- (2) 3 x 3 sterile gauze pads.
- (2) 4 x 4 sterile gauze pads.
- (1) roll 3" cohesive bandage.
- (2) germicidal hand wipes or waterless alcohol-based hand sanitizer.
- (6) antiseptic wipes.
- (2) pair large medical grade non-latex gloves.
- Adhesive tape, 2" width.
- Anti-bacterial ointment.
- Cold pack.
- Scissors (small, personal).
- Tweezers.
- CPR breathing barrier, such as a face shield.

Non-Prescription Drugs

- Aspirin or non-aspirin pain reliever
- Anti-diarrhea medication
- Antacid (for stomach upset)

- Syrup of Ipecac (use to induce vomiting if advised by the Poison Control Center)
- Laxative
- Activated charcoal (use if advised by the Poison Control Center)

Tools and Supplies

- Mess kits, or paper cups, plates, and plastic utensils*
- Emergency preparedness manual*
- Battery-operated radio and extra batteries*
- Flashlight and extra batteries*
- Cash or traveler's checks, change*
- Non-electric can opener, utility knife*
- Fire extinguisher: small canister ABC type
- Tube tent
- Pliers
- Tape
- Compass
- Matches in a waterproof container
- Aluminum foil
- Plastic storage containers
- Signal flare
- Paper, pencil
- Needles, thread
- Medicine dropper
- Shut-off wrench, to turn off household gas and water
- Whistle
- Plastic sheeting
- Map of the area (for locating shelters)

Sanitation

- Toilet paper, towelettes*
- Soap, liquid detergent*
- Feminine supplies*
- Personal hygiene items*
- Plastic garbage bags, ties (for personal sanitation uses)
- Plastic bucket with tight lid
- Disinfectant
- Household chlorine bleach

Clothing and Bedding

*Include at least one complete change of clothing and footwear per person.

- Sturdy shoes or work boots*
- Rain gear*
- Blankets or sleeping bags*
- Hat and gloves
- Thermal underwear
- Sunglasses

Special Items

- Remember family members with special requirements, such as infants and elderly or disabled persons

For Baby*

- Formula
- Diapers
- Bottles
- Powdered milk

- Medications

For Adults*

- Heart and high blood pressure medication
- Insulin
- Prescription drugs
- Denture needs
- Contact lenses and supplies
- Extra eye glasses

Entertainment (based on the ages of family members)

- Games (cards) and books
- Portable music device

Important Family Documents

- Keep these records in a waterproof, portable container:
 - Will, insurance policies, contracts deeds, stocks and bonds
 - Passports, social security cards, immunization records
 - Bank account numbers
 - Credit card account numbers and companies
- Inventory of valuable household goods, important telephone numbers
- Family records (birth, marriage, death certificates)
- Store your kit in a convenient place known to all family members. Keep a smaller version of the supplies kit in the trunk of your car.
- Keep items in airtight plastic bags. Change your stored water supply every six months so it stays fresh. Replace your stored food every six months. Re-think your kit and family needs at least once a year. Replace batteries, update clothes, etc.
- Ask your physician or pharmacist about storing prescription medications.

Food and Water in an Emergency (A5055) (FEMA 477) (PDF File)

If an earthquake, hurricane, winter storm or other disaster strikes your community, you might not have access to food, water and electricity for days, or even weeks. By taking some time now to store emergency food and water supplies, you can provide for your entire family. This brochure was developed by the Federal Emergency Management Agency in cooperation with the American Red Cross and the U.S. Department of Agriculture.

Having an ample supply of clean water is a top priority in an emergency. A normally active person needs to drink at least two quarts of water each day. Hot environments can double that amount. Children, nursing mothers and ill people will need even more. You will also need water for food preparation and hygiene. Store a total of at least one gallon per person, per day. You should store at least a two-week supply of water for each member of your family.

If supplies run low, never ration water. Drink the amount you need today, and try to find more for tomorrow. You can minimize the amount of water your body needs by reducing activity and staying cool.

Water Sources

How to Store Water

Store your water in thoroughly washed plastic, glass, fiberglass or enamel-lined metal containers. Never use a container that has held toxic substances. Plastic containers, such as soft drink bottles, are best. You can also purchase food-grade plastic buckets or drums.

Seal water containers tightly, label them and store in a cool, dark place. Rotate water every six months.

Emergency Outdoor Water Sources

If you need to find water outside your home, you can use these sources. Be sure to treat the water according to the instructions on page 3 before drinking it.

- Rainwater
- Streams, rivers and other moving bodies of water
- Ponds and lakes

- Natural springs

Avoid water with floating material, an odor or dark color. Use saltwater only if you distill it first. You should not drink flood water.

Hidden Water Sources in Your Home

If a disaster catches you without a stored supply of clean water, you can use the water in your hot-water tank, pipes and ice cubes. As a last resort, you can use water in the reservoir tank of your toilet (not the bowl).

Do you know the location of your incoming water valve? You'll need to shut it off to stop contaminated water from entering your home if you hear reports of broken water or sewage lines.

To use the water in your pipes, let air into the plumbing by turning on the faucet in your house at the highest level. A small amount of water will trickle out. Then obtain water from the lowest faucet in the house.

To use the water in your hot-water tank, be sure the electricity or gas is off, and open the drain at the bottom of the tank. Start the water flowing by turning off the water intake valve and turning on a hot-water faucet. Do not turn on the gas or electricity when the tank is empty.

Three Ways to Treat Water

In addition to having a bad odor and taste, contaminated water can contain microorganisms that cause diseases such as dysentery, typhoid and hepatitis. You should treat all water of uncertain purity before using it for drinking, food preparation or hygiene.

There are many ways to treat water. None is perfect. Often the best solution is a combination of methods.

Two easy treatment methods are outlined below. These measures will kill most microbes but will not remove other contaminants such as heavy metals, salts and most other chemicals. Before treating, let any suspended particles settle to the bottom, or strain them through layers of paper towel or clean cloth.

Boiling: Boiling is the safest method of treating water. Bring water to a rolling boil for 3-5 minutes, keeping in mind that some water will evaporate. Let the water cool before drinking.

Boiled water will taste better if you put oxygen back into it by pouring the water back and forth between two clean containers. This will also improve the taste of stored water.

Disinfection: You can use household liquid bleach to kill microorganisms. Use only regular household liquid bleach that contains 5.25 percent sodium hypochlorite. Do not use scented bleaches, color safe bleaches or bleaches with added cleaners.

Add 16 drops of bleach per gallon of water, stir and let stand for 30 minutes. If the water does not have a slight bleach odor, repeat the dosage and let stand another 15 minutes.

The only agent used to treat water should be household liquid bleach. Other chemicals, such as iodine or water treatment products sold in camping or surplus stores that do not contain 5.25 percent sodium hypochlorite as the only active ingredient, are not recommended and should not be used.

While the two methods described above will kill most microbes in water, distillation will remove microbes that resist these methods, and heavy metals, salts and most other chemicals.

Distillation: Distillation involves boiling water and then collecting the vapor that condenses back to water. The condensed vapor will not include salt and other impurities. To distill, fill a pot halfway with water. Tie a cup to the handle on the pot's lid so that the cup will hang right-side-up when the lid is upside-down (make sure the cup is not dangling into the water) and boil the water for 20 minutes. The water that drips from the lid into the cup is distilled.

Food Supplies

When Food Supplies Are Low

If activity is reduced, healthy people can survive on half their usual food intake for an extended period and without any food for many days. Food, unlike water, may be rationed safely, except for children and pregnant women.

If your water supply is limited, try to avoid foods that are high in fat and protein, and don't stock salty foods, since they will make you thirsty. Try to eat salt-free crackers, whole grain cereals and canned foods with high liquid content.

You don't need to go out and buy unfamiliar foods to prepare an emergency food supply. You can use the canned foods, dry mixes and other staples on your cupboard shelves. In fact, familiar foods are important. They can lift morale and give a feeling of security in time of stress. Also, canned foods won't require cooking, water or special preparation. Following are recommended short-term food storage plans.

Special Considerations

As you stock food, take into account your family's unique needs and tastes. Try to include foods that they will enjoy and that are also high in calories and nutrition. Foods that require no refrigeration, preparation or cooking are best.

Individuals with special diets and allergies will need particular attention, as will babies, toddlers and elderly people. Nursing mothers may need liquid formula, in case they are unable to nurse. Canned dietetic foods, juices and soups may be helpful for ill or elderly people.

Make sure you have a manual can opener and disposable utensils. And don't forget nonperishable foods for your pets.

Food Storage Tips

- Keep food in a dry, cool spot - a dark area if possible.
- Keep food covered at all times.
- Open food boxes or cans care-fully so that you can close them tightly after each use.
- Wrap cookies and crackers in plastic bags, and keep them in tight containers.
- Empty opened packages of sugar, dried fruits and nuts into screw-top jars or air-tight cans to protect them from pests.
- Inspect all food for signs of spoilage before use.
- Use foods before they go bad, and replace them with fresh supplies, dated with ink or marker. Place new items at the back of the storage area and older ones in front.

Nutrition Tips

- During and right after a disaster, it will be vital that you maintain your strength. So remember:
- Eat at least one well-balanced meal each day.
- Drink enough liquid to enable your body to function properly (two quarts a day).
- Take in enough calories to enable you to do any necessary work.
- Include vitamin, mineral and protein supplements in your stockpile to assure adequate nutrition.

Shelf-life of Foods for Storage

Here are some general guidelines for rotating common emergency foods. (mark containers with date of purchase)

Use within six months:

- Powdered milk (boxed)
- Dried fruit (in metal container)
- Dry, crisp crackers (in metal container)
- Potatoes

Use within one year:

- Canned condensed meat and vegetable soups
- Canned fruits, fruit juices and vegetables
- Ready-to-eat cereals and uncooked instant cereals (in metal containers)
- Peanut butter
- Jelly
- Hard candy and canned nuts
- Vitamin C

May be stored indefinitely (in proper containers and conditions):

- Wheat
- Vegetable oils
- Dried corn
- Baking powder
- Soybeans
- Instant coffee, tea and cocoa
- Salt
- Noncarbonated soft drinks
- White rice
- Bouillon products
- Dry pasta
- Powdered milk (in nitrogen-packed cans)

Blackouts

Top Safety Tips for a Blackout

- Only use a flashlight for emergency lighting. Never use candles!
- Turn off electrical equipment you were using when the power went out.
- Avoid opening the refrigerator and freezer.
- Do not run a generator inside a home or garage.
- If you use a generator, connect the equipment you want to power directly to the outlets on the generator. Do not connect a generator to a home's electrical system.
- Listen to local radio and television for updated information.

How Can I Prepare Before a Blackout Happens?

Assemble essential supplies, including:

- Flashlight
- Batteries
- Portable radio
- at least one gallon of water
- a small supply of food.
- Due to the extreme risk of fire, do not use candles during a power outage.

If you have space in your refrigerator or freezer, consider filling plastic containers with water, leaving about an inch of space inside each one. (Remember, water expands as it freezes, so it is important to leave room in the container for the expanded water). Place the containers in the refrigerator and freezer. This chilled or frozen water will help keep food cold if the power goes out, by displacing air that can warm up quickly with water or ice that keeps cold for several hours without additional refrigeration.

If you use medication that requires refrigeration, most can be kept in a closed refrigerator for several hours without a problem. If unsure, check with your physician or pharmacist.

If you use a computer, keep files and operating systems backed up regularly. Consider buying extra batteries and a power converter if you use a laptop computer. A power converter allows most laptops (12 volts or less) to be operated from the cigarette lighter of a vehicle. Also, turn off all computers, monitors, printers, copiers, scanners and other devices when they're not being used. That way, if the power goes out, this equipment will have already been safely shut down. Get a high quality surge protector for all of your computer equipment. If you use the computer a lot, such as for a home business, consider purchasing and installing an uninterruptible power supply (UPS). Consult with your local computer equipment dealer about available equipment and costs.

If you have an electric garage door opener, find out where the manual release lever is located and learn how to operate it. Sometimes garage doors can be heavy, so get help to lift it. If you regularly use the garage as the primary means of entering your home upon return from work, be sure to keep a key to your house with you, in case the garage door will not open.

If you have a telephone instrument or system at home or at work that requires electricity to work (such as a cordless phone or answering machine), plan for alternate communication, including having a standard telephone handset, cellular telephone, radio, or pager. Remember, too, that some voice mail systems and remote dial-up servers for computer networks may not operate when the power is out where these systems are located. So even if you have power, your access to remote technology may be interrupted if the power that serves those areas is disrupted. Check with remote service providers to see if they have backup power systems, and how long those systems will operate.

Keep your car fuel tank at least half full because gas stations rely on electricity to power their pumps.

Follow energy conservation measures to keep the use of electricity as low as possible, which can help power company(ies) avoid imposing rolling blackouts.

Specific Information for People With Disabilities

If you use a battery-operated wheelchair, life-support system, or other power-dependent equipment, call your power company before rolling blackouts happen. Many utility companies keep a list and map of the locations of power-dependent customers in case of an emergency. Ask them what alternatives are available in your area. Contact the customer service department of your local utility company(ies) to learn if this service is available in your community.

If you use a motorized wheelchair or scooter, have an extra battery. A car battery also can be used with a wheelchair but will not last as long as a wheelchair's deep-cycle battery. If available, store a lightweight manual wheelchair for backup.

If you are Blind or have a visual disability, store a talking or Braille clock or large-print timepiece with extra batteries.

If you are Deaf or have a hearing loss, consider getting a small portable battery-operated television set. Emergency broadcasts may give information in American Sign Language (ASL) or open captioning.

Using a Generator

If you are considering obtaining a generator, get advice from a licensed professional, such as an electrician. Make sure the generator is listed with Underwriter's Laboratories or a similar organization. Some municipalities, Air Quality Districts, or states have "air quality permit" requirements. A licensed electrician will be able to give you more information on these matters. Always plan to keep the generator outdoors -- never operate it inside, including the basement or garage. Do not hook up a generator directly to your home's wiring. The safest thing to do is to connect the equipment you want to power directly to the outlets on the generator. Connecting a cord from the generator to a point on the permanent wiring system and backfeeding power to your home is an unsafe method to supply a building during a power outage.

For more information about using generators safely, see the Generator fact sheet.

What Do I Do During A Blackout?

Turn off or disconnect any appliances, equipment (like air conditioners) or electronics you were using when the power went out. When power comes back on, it may come back with momentary "surges" or "spikes" that can damage equipment such as computers and motors in appliances like the air conditioner, refrigerator, washer, or furnace.

Leave one light turned on so you'll know when your power returns.

Leave the doors of your refrigerator and freezer closed to keep your food as fresh as possible. If you must eat food that was refrigerated or frozen, check it carefully for signs of spoilage. See the Red Cross brochure called, "Help The Power Is Out" for more information.

Use the phone for emergencies only. Listening to a portable radio can provide the latest information. Do not call 9-1-1 for information -- only call to report a life-threatening emergency.

Eliminate unnecessary travel, especially by car. Traffic signals will stop working during an outage, creating traffic congestion.

Remember that equipment such as automated teller machines (ATMs) and elevators may not work during a power outage.

If it is hot outside, take steps to remain cool. Move to the lowest level of your home, as cool air falls. Wear lightweight, light-colored clothing. Drink plenty of water, even if you do not feel thirsty. If the heat is intense and the power may be off for a long time, consider going to a movie theater, shopping mall, or "cooling shelter" that may be opened in your community. Listen to local radio or television for more information. Get more tips on the preparing for a heat wave.

Remember to provide plenty of fresh, cool water for your pets.

If it is cold outside, put on layers of warm clothing. 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 (relative, friend, or public facility) that has heat to keep warm.

Energy Conservation Recommendations

To conserve power to help avoid a blackout, the power industry recommends:

- In heating season, set the furnace thermostat at 68 degrees or lower. In cooling season, set the thermostat at 78 degrees or higher. Consider installing a programmable thermostat that you can set to have the furnace or air conditioning run only when you are at home. Most power is used by heating and cooling, so adjusting the temperatures on your thermostat is the biggest energy conservation measure you can take.
- Turn off lights and computers when not in use. This is especially true about computer monitors, avoid using a "screen saver" and just simply turn the monitor off when you won't be using the computer for a while. Turn the computer off completely each evening. It is no longer true that computer equipment is damaged from turning it off and on.
- Close windows when the heating or cooling system is on.
- Caulk windows and doors to keep air from leaking, and replace old windows with new, energy-efficient windows.
- Clean or replace furnace and air-conditioner filters regularly.
- When buying new appliances be sure to purchase energy-efficient models.
- Wrap the water heater with an insulation jacket, available at most building supplies retailers.
- If you have to wash clothes, wash only full loads and clean the dryer's lint trap after each use.
- When using a dishwasher, wash full loads and use the "light" cycle. If possible, use the "rinse only" cycle and turn off the "high temperature" rinse option. When the regular wash cycle is done, just open the dishwasher door to allow the dishes to air dry.
- Replace incandescent light bulbs with energy-efficient compact fluorescent lights.
- Use one large light bulb rather than several smaller ones.

For More Information

If you would like more information about rolling blackouts and how to deal with them, contact the power company that serves your area.

Chemical Emergencies

Chemicals Are an Important Part of Life

Chemicals are a natural and important part of our environment. Even though we often don't think about it, we use chemicals every day. Chemicals help keep our food fresh and our bodies clean. They help our plants grow and fuel our cars. And chemicals make it possible for us to live longer, healthier lives.

Under certain conditions, chemicals can be poisonous or have a harmful effect on your health. Some chemicals which are safe, and even helpful in small amounts, can be harmful in larger quantities or under certain conditions.

Chemical accidents do happen . . . at home and in the community, and the American Red Cross wants you to be prepared.

How You May Be Exposed to a Chemical

You may be exposed to a chemical in three ways:

1. Breathing the chemical
2. Swallowing contaminated food, water, or medication
3. Touching the chemical, or coming into contact with clothing or things that have touched the chemical.

Remember, you may be exposed to chemicals even though you may not be able to see or smell anything unusual.

Chemical Accidents Can Be Prevented

Many people think of chemicals as only those substances used in manufacturing processes. But chemicals are found everywhere--in our kitchens, medicine cabinets, basements, and garages. In fact, most chemical accidents occur in our own homes. And they can be prevented.

Children and Poisoning

The most common home chemical emergencies involve small children eating medicines. Experts in the field of chemical manufacturing suggest taking hazardous materials out of sight could eliminate up to 75 percent of all poisoning of small children.

Keep all medicines, cosmetics, cleaning products, and other household chemicals out of sight and out of reach of children. If your child should eat or drink a non-food substance, find any containers immediately and take them to the phone. Call the Poison Control Center or Emergency Medical Services (EMS), or 9-1-1, if you have it in your area, or call the operator giving this information. Follow their instructions carefully. Often the first aid advice found on containers may not be appropriate. So, do not give anything by mouth until you have been advised by medical professionals.

Home Product Precautions

Other home accidents can result from trying to improve the way a product works by adding one substance to another, not following directions for use of a product, or by improper storage or disposal of a chemical.

The first precaution you can take is to avoid mixing common household chemical products. Some combinations of these products, such as ammonia and bleach, can create toxic gases.

A second important precaution is to always read the directions before using a new product. Some products should not be used in a small confined space to avoid inhaling dangerous vapors. Other products should not be used without gloves and eye protection to help prevent the chemical from touching your body. Read and follow the directions.

Another effective way to protect yourself and your family is to store chemical products properly. Non-food products should be stored tightly closed in their original containers so you can always identify the contents of each container and how to properly use the product.

Never smoke while using household chemicals. Don't use hair spray, cleaning solutions, paint products, or pesticides near the open flame of an appliance, pilot light, lighted candle, fireplace, wood burning stove, etc. Although you may not be able to see or smell them, vapor particles in the air could catch fire or explode.

If you should spill a chemical, clean it up immediately with some rags, being careful to protect your eyes and skin. Allow the fumes in the rags to evaporate outdoors in a safe place, then dispose of them by wrapping them in a newspaper and then placing them in a sealed plastic bag. Dispose of these materials with your trash. If you don't already have one, buy a fire extinguisher that is labeled for A, B, and C class fires and keep it handy.

Buy only as much of a chemical as you think you will use. If you have product left over, try to give it to someone who will use it. Take care to dispose of it properly. Improper disposal can result in harm to yourself or members of your family, accidentally contaminate our local water supply, or harm other people.

It is also important to dispose of products properly to preserve our environment and protect wildlife. Plus, some products can be recycled and further protect our environment.

Many household chemicals can be taken to your local household hazardous waste collection facility. Many facilities accept pesticides, fertilizers, household cleaners, oil-based paints, drain and pool cleaners, antifreeze, and brake fluid. If you have questions about how to dispose of a chemical, call the facility or the environmental or recycling agency to learn the proper method of disposal.

Family Disaster Plan

Making a Family Disaster Plan will help each family member to stay calm in an emergency. But most important, planning ahead can save the lives of the people you love. The plan should include what task each family member is responsible for during an emergency, where supplies are kept, how family members will let one another know where they are going if they are evacuated, and where everyone will meet when the disaster is over. A brochure describing how to make a Family Disaster Plan is available from your local Red Cross chapter.

Family Disaster Supplies Kit

A Family Disaster Plan should include a Family Disaster Supplies Kit.

Let each member of the family help put it together. The kit should include:

- A first aid kit
- A battery-operated radio, flashlight, and extra batteries
- Bath size towels
- Plastic garbage bags
- Wide tape
- A county map
- Bottled water (at least 3 gallons of water per person)
- Non-perishable snack food
- List of family medications, eyeglasses, hearing aids

Ask one person to be responsible for replacing water every three months and food every six months. Batteries should also be replaced on a regular basis.

Tape the call letters and frequency numbers of your emergency alert radio stations (EAS) on the radio and make sure everyone knows how to work the radio and put in fresh batteries. Also tape the channel number of the television emergency broadcast stations on your TV.

Every member of the family should know where the Family Disaster Supplies Kit is located--it should be stored within easy reach.

If you are a parent, don't assume that you will always be with your children in an emergency. Make sure they know how to protect themselves if you are not available to help.

At the beginning of the school year, take time to study the school or day care center emergency protective action plan, and discuss it with your children and their babysitters.

Major Chemical Emergencies

A major chemical emergency is an accident that releases a hazardous amount of a chemical into the environment. Accidents can happen underground, on railroad tracks or highways, and at manufacturing plants. These accidents sometimes result in a fire or explosion, but many times you cannot see or smell anything unusual.

How You May Be Notified of a Major Chemical Emergency

In the event of a major chemical emergency, you will be notified by the authorities. To get your attention, a siren could sound, you may be called by telephone, or emergency personnel may drive by and give instructions over a loudspeaker. Officials could even come to your door.

Listen carefully to radio or television emergency alert stations (EAS), and strictly follow instructions. Your life could depend on it.

You Will Be Told:

- The type of health hazard
- The area affected
- How to protect yourself
- Evacuation routes (if necessary)
- Shelter locations
- Type and location of medical facilities
- And the phone numbers to call if you need extra help.

Do not call the telephone company, and do not call EMS, 9-1-1, or the operator for information. Dial these numbers only for a possible life-threatening emergency.

Shelter in Place

One of the basic instructions you may be given in a chemical emergency is to "shelter in place". This is a precaution aimed to keep you and your family safe while remaining in your home. If you are told to shelter in place, take your children and pets indoors immediately.

While gathering your family, you can provide a minimal amount of protection to your breathing by covering your mouth and nose with a damp cloth.

Close all windows in your home.

Turn off all fans, heating and air conditioning systems

Close the fireplace damper

Go to an above-ground room (not the basement) with the fewest windows and doors.

Take your Family Disaster Supplies Kit with you.

Wet some towels and jam them in the crack under the doors.

Tape around doors, windows, exhaust fans or vents. Use the plastic garbage bags to cover windows, outlets, and heat registers.

If you are told there is danger of explosion, close the window shades, blinds, or curtains. To avoid injury, stay away from the windows.

Stay in the room and listen to your radio until you are told all is safe or you are told to evacuate.

Evacuation

Authorities may decide to evacuate an area for your protection. Again, it is important to stay calm, listen carefully and follow all instructions.

If you are told to evacuate, listen to your radio to make sure the evacuation order applies to you and to understand if you are to evacuate immediately or if you have time to pack some essentials. Do not use your telephone.

If you are told to evacuate immediately:

- Take your Family Disaster Supplies Kit and medications
- Close and lock your windows
- Shut off all vents
- Lock the door
- Move quickly and calmly

If the authorities tell you to evacuate because of a possible chemical emergency, take your Family Disaster Supplies Kit

A change of clothing for each member of the family

Medication, eyeglasses, hearing aids or dentures, or things like canes and walkers

Personal items such as toothbrushes, deodorant, etc.

Items for your baby such as diapers, formula, or baby food

Books, puzzles or cards and games for entertainment.

Do not assume that a shelter will have everything you need. In most cases, the shelters will provide only emergency items such as meals, cots, and blankets.

You don't need to turn off your refrigerator or freezer, but you should turn off all other appliances and lights before locking your home as you leave.

Check on neighbors to make sure they have been notified, and offer help to those with disabilities or other special needs. If you need a ride, ask a neighbor. If no neighbor is available to help you, listen to the emergency broadcast station for further instructions.

Take only one car to the evacuation site.

Close your car windows and air vents and turn off the heater or air conditioner.

Don't take shortcuts because a shortcut may put you in the path of danger. For your safety, follow the exact route you are told to take.

Emergency Procedures for School Children

In an emergency, your children may be sheltered in place or evacuated from school. If protective actions are being taken at your children's school, do not go to the school. School personnel are trained to handle emergencies.

Do not call your child's school. You could tie up a phone line that is needed for emergency communications.

For further information, listen to local emergency radio and TV stations to learn when and where you can pick up your children.

Chemical Poisoning

There are several symptoms of chemical poisoning whether by swallowing, touching, or breathing:

- Difficulty breathing
- Changes in skin color
- Headache or blurred vision
- Dizziness
- Irritated eyes, skin, throat
- Unusual behavior
- Clumsiness or lack of coordination
- Stomach cramps or diarrhea

If you think you have been exposed to a toxic chemical, call the poison control center, EMS, or 9-1-1, or the operator, whichever applies to your area.

If you see or smell something that you think may be dangerous, or find someone who has been overcome with toxic vapors, your first job is to make sure that you don't become a victim. If you remain in a dangerous area and become injured or unconscious, you cannot help yourself or any victims.

Because chemical poisoning can be a life-threatening emergency:

- Send someone to call EMS, immediately.
- Tell the operator the location of the emergency and the phone number from where you are calling.
- Describe what has happened, how many people are involved, and what is being done to help.
- Stay on the phone until the operator tells you to hang up.

If you are trained in CPR or first aid, and feel confident that you are not in danger, check the person for life-threatening injuries. Administer appropriate treatment, and then deal with the chemical injuries.

If you have not recently taken a course in CPR or first aid, contact your local Red Cross for course information and schedules.

First Aid Treatment for Chemical Burns

A chemical burn can be minor or life threatening, but proper treatment can reduce the chance of infection and the damage caused by contact with the chemical.

Remove any affected clothing or jewelry from the injury. Use lots of cool running water to flush the chemical from the skin until emergency help arrives. The running water will dilute the chemical fast enough to prevent the injury from getting worse.

Use the same treatment for eye burns and remove any contact lenses. Be careful to flush the eye from the nose outward.

If no large amount of clean water is available, gently brush the chemical off the skin and away from the victim and you.

If the chemical is on the face, neck, or shoulders, ask the victim to close his or her eyes before brushing off the chemical.

Cover the wound very loosely with a dry, sterile or clean cloth so that the cloth will not stick to the wound. Do not put any medication on the wound. Seek medical attention immediately.

If you believe you have been contaminated with a chemical, call the Poison Control Center, EMS, 9-1-1, or the operator immediately. If medical help is not immediately available, remove your clothing starting from the top and working your way down to your socks. Take care not to touch your contaminated clothing to your bare skin. Place your clothing in a plastic bag so it cannot contaminate other people or things. Take a thorough shower to wash any chemical away. Re-dress in clean clothing and go for medical help at your first opportunity

Who Helps in a Chemical Emergency

There are many organizations that help the community in an emergency, such as police, fire, and sheriff departments, the American Red Cross, and government agencies. All these groups coordinate their activities through the local office of emergency management. In many areas there are local Hazardous Materials, or Haz-Mat Teams, who are trained to respond to chemical accidents. In the event of a chemical emergency, it is very important that you follow the instructions of these highly trained professionals. They know best how to protect you and your family

Important Points To Remember

- Chemicals are everywhere. They are an important part of life.
- The most common chemical accidents occur in our own homes and can be prevented.
- The best ways to avoid chemical accidents are to read and follow the directions for use, storage, and disposal of the product.
- Don't mix products, especially household cleaning products.
- Develop a Family Disaster Plan and pack a Family Disaster Supplies Kit.
- In the event of an emergency, follow the instructions of the authorities carefully. Listen to your emergency broadcast stations on radio and TV.
- Use your phone only in life-threatening emergencies, and then call the Poison Control Center, EMS, 9-1-1, or the operator immediately.
- If you are told to "shelter in place", go inside, close all windows and vents and turn off all fans, heating or cooling systems. Take family members and pets to a safe room, seal windows and doors, and listen to emergency broadcast stations for instructions.
- If you are told to evacuate immediately, take your Family Disaster Supplies Kit. Pack only the bare essentials, such as medications, and leave your home quickly. Follow the traffic route authorities recommend. Don't take short cuts on the way to the shelter.
- If you find someone who appears to have been injured from chemical exposure, make sure you are not in danger before administering first aid.
- And lastly, remember, the best way to protect yourself and your family is to be prepared.

The American Red Cross is an organization managed by volunteers from your community. Although it receives no money from the government, it is chartered by the U.S. Congress to provide disaster relief. All help given to people during a chemical, house fire, storm, or other emergency is free of charge and supported through charitable contributions and the United Way.

Emergency help may include shelter, meals, replacement of essential medication, and personal hygiene supplies. The Red Cross may also help reunite families by staying in touch with all evacuation sites.

The strength of the Red Cross is its core of volunteers who work in all levels of the organization. If you would like more information about becoming a Red Cross volunteer, either in Disaster Services, Health and Safety, Blood Services, or community programs, call your local Red Cross chapter.

Important telephone numbers emergency medical service: 9-1-1

If an accident involving hazardous materials occurs, you will be notified by the authorities as to what steps to take. You may hear a siren, be called by telephone, or emergency personnel may drive by and give instructions over a loudspeaker. Officials could even come to your door. If you hear a warning signal, you should go indoors and listen to a local Emergency Alert System (EAS) station for emergency instructions from county or state officials. Ask your local office of emergency management or Red Cross chapter which stations carry official messages in your community.

Drought: Fact Sheet on Water Conservation

Many people have asked the American Red Cross for tips on conserving water for environmental reasons, as well as when drought conditions threaten. The following tips were developed by a coalition of specialists on water conservation in Florida, and are also consistent with the recommendations that were developed through the National Disaster Education Coalition's "Drought Forum":

Indoor Use

General

- Never pour water down the drain when there may be another use for it. Use it to water your indoor plants or garden.
- Make sure your home is leak-free. When you are certain that no water is being used in your home, take a reading of the water meter. Wait 30 minutes and then take a second reading. If the meter reading changes, you have a leak!
- Repair dripping faucets by replacing washers. One drop per second wastes 2,700 gallons of water per year!

Bathroom

- Check for toilet leaks by adding food coloring to the tank. If you have a leak, the color will appear in the bowl within 30 minutes. (Flush immediately to avoid stains.)
- If the toilet handle frequently sticks in the flush position letting water run constantly, replace or adjust it.
- Leaky toilets usually can be fixed inexpensively by replacing the flapper.
- Install a toilet displacement device to cut down on the amount of water needed for each flush. (Contrary to popular opinion a brick should not be used because it can dissolve and the loose pieces can cause damage to the internal parts. Instead, place a one-gallon plastic jug of water into the tank to displace toilet flow or purchase a device available at most hardware and home centers designed for this purpose.) Be sure installation does not interfere with the operating parts.
- Consider purchasing a low-volume toilet that uses less than half the water of older models. NOTE: In many areas, low-volume units are required by law.
- Take shorter showers.
- Replace your showerhead with an ultra-low-flow version.
- Place a bucket in the shower to catch excess water for watering plants.
- In the shower, turn the water on to get wet; turn off to lather up; then turn the water back on to rinse. Repeat when washing your hair.
- Don't let the water run while brushing your teeth, washing your face or shaving.
- Avoid flushing the toilet unnecessarily. Dispose of tissues, insects, and other similar waste in the trash rather than the toilet.

Kitchen

- Operate automatic dishwashers only when they are fully loaded. Use the "light wash" feature if available to use less water.
- When hand washing dishes, save water by filling two containers - one with soapy water and the other with rinse water containing a small amount of chlorine bleach.
- Most dishwashers can clean soiled dishes very well, so dishes do not have to be rinsed before washing. Just remove large particles of food, and put the soiled dishes in the dishwasher.
- Store drinking water in the refrigerator. Don't let the tap run while you are waiting for water to cool.
- Do not use running water to thaw meat or other frozen foods. Defrost food overnight in the refrigerator, or use the defrost setting on your microwave.
- Do not waste water waiting for it to get hot. Capture it for other uses such as plant watering or heat it on the stove or in a microwave.
- Clean vegetables in a pan filled with water rather than running water from the tap. Re-use the water that vegetables are washed in for cleaning or watering plants.
- Kitchen sink disposals require lots of water to operate properly. Start a compost pile as an alternate method of disposing of food waste, or simply dispose of food in the garbage.

Laundry

- Operate automatic clothes washers only when they are fully loaded or set the water level for the size of your load.

Long Term Indoor Water Conservation

- Retrofit all household faucets by installing aerators with flow restrictors.
- Consider installing an instant hot water heater on your sink
- Insulate your water pipes to reduce heat loss and prevent them from breaking if you have a sudden and unexpected spell of freezing weather.
- If you are considering installing a new heat pump or air-conditioning system, the new air-to-air models are just as efficient as the water-to-air type and do not waste water.
- Install water-softening systems only when the minerals in the water would damage your pipes. Turn the softener off while on vacation.
- When purchasing a new appliance, choose one that is more energy and water efficient.

Outdoor Use

General

- If you have a well at home, check your pump periodically. If the pump turns on and off while water is not being used, you have a leak.

Car Washing

- Use a shut-off nozzle on your hose that can be adjusted down to a fine spray, so that water flows only as needed. When finished, turn it off at the faucet instead of at the nozzle to avoid leaks. Check hose connectors to make sure plastic or rubber washers are in place to prevent leaks.
- Consider using a commercial car wash that recycles water. If you wash your own car, park on the grass so that you will be watering it at the same time.

Lawn Care

- Don't over water your lawn. Lawns only need to be watered every five to seven days in the summer, and every 10 to 14 days in the winter. A heavy rain eliminates the need for watering for up to two weeks. Most of the year, lawns only need one inch of water per week. Buy a rain gauge so that you can better determine when to water.
- Water in several short sessions rather than one long one in order for your lawn to better absorb moisture. For example, water in ten-minute sessions spaced 30 minutes apart, rather than one straight 30-minute session.
- Water lawns during the designated hours.
- Position sprinklers so water lands on the lawn and shrubs and not on paved areas.
- Avoid sprinklers that spray a fine mist; most of the mist evaporates before it reaches the lawn. Check sprinkler systems and timing devices regularly to be sure they operate properly. Florida law now requires that "anyone who purchases and installs an automatic lawn sprinkler system MUST install a rain sensor device or switch which will override the irrigation cycle when adequate rainfall has occurred."
- Raise the lawn mower blade to at least three inches, or to its highest level. A higher cut encourages grass roots to grow deeper, shades the root system, and holds soil moisture.
- Avoid over fertilizing your lawn. Applying fertilizer increases the need for water. Apply fertilizers that contain slow-release, water-insoluble forms of nitrogen.
- Use a broom or blower instead of a hose to clean leaves and other debris from your driveway or sidewalk.
- Do not leave sprinklers or hoses unattended. A garden hose can pour out 600 gallons or more in only a few hours. Use a bell timer to remind yourself to turn sprinklers off.

Pool

- If you have a swimming pool, consider installing a new water-saving pool filter. A single back flushing with a traditional filter uses 180 to 250 gallons of water.
- Cover pools and spas to reduce evaporation of water.

Long Term Outdoor Conservation

- Plant it smart. Plant native and/or drought-tolerant grasses, ground covers, shrubs and trees. Once established, they do not need water as frequently and usually will survive a dry period without watering. They also require less fertilizer or herbicides. Landscape with plants that are heat and drought tolerant and that do not require much water to live. Small plants require less water to become established. Group plants together based on similar water needs.
- Install irrigation devices that are the most water efficient for each use. Micro and drip irrigation and soaker hoses are examples of efficient devices.
- Use mulch to retain moisture in the soil. (Help preserve native cypress forests by selecting other types of mulch such as treated melaleuca.) Mulch also helps control weeds that compete with landscape plants for water.
- Avoid purchasing recreational water toys that require a constant stream of water.
- Avoid installing ornamental water features (such as fountains) unless they use recycled water.

Within the Community

- Participate in public water conservation meetings conducted by your local government, utility or water management district.
- Follow water conservation and water shortage rules in effect. You are included in the restrictions even if your water comes from a private well.
- Encourage your employer to promote water conservation in the workplace.
- Patronize businesses that practice water conservation, such as restaurants that only serve water upon request.
- Report water losses (broken pipes, open hydrants, errant sprinklers, abandoned free-flowing wells, etc.) to the property owner, local authorities or your water management district.
- Encourage your school system and local government to help develop and promote a water conservation ethic.
- Support projects that will lead to an increased use of reclaimed wastewater for irrigation and other uses.
- Support efforts that create a concern for water conservation among tourists.
- Promote water conservation in community newsletters, on bulletin boards, and by example. Encourage your friends, neighbors, and co-workers to "be water smart."
- Conserve water because it is the right thing to do - even when someone else is footing the bill, such as when you are staying at a hotel.
- Try to do one thing each day that will result in saving water. Every drop counts!

Water Restrictions

In some communities where drought conditions exist, officials may recommend measures to restrict use of water. These recommendations may include such procedures as watering lawns and washing cars on odd or even days of the week, at night, or on weekends. The restrictions may limit hours or prohibit use of water, or require use of hand watering instead of using sprinkler systems that use much more water. You should check with your local authorities or water utility for information on water restrictions that may be imposed for your area.

More Information

Please contact your local water authority or utility district, or your local emergency management agency for information specific to your area.

Earthquake

Prepare a Home Earthquake Plan

- Choose a safe place in every room--under a sturdy table or desk or against an inside wall where nothing can fall on you.
- Practice DROP, COVER, AND HOLD ON at least twice a year. Drop under a sturdy desk or table, hold on, and protect your eyes by pressing your face against your arm. If there's no table or desk nearby, sit on the floor against an interior wall away from windows, bookcases, or tall furniture that could fall on you. Teach children to DROP, COVER, AND HOLD ON!
- Choose an out-of-town family contact.
- Consult a professional to find out additional ways you can protect your home, such as bolting the house to its foundation and other structural mitigation techniques.
- Take a first aid class from your local Red Cross chapter. Keep your training current.
- Get training in how to use a fire extinguisher from your local fire department.
- Inform babysitters and caregivers of your plan.

Eliminate Hazards, Including--

- Bolting bookcases, china cabinets, and other tall furniture to wall studs.
- Installing strong latches on cupboards.
- Strapping the water heater to wall studs.

Prepare a Disaster Supplies Kit For Home and Car, Including--

- First aid kit and essential medications.
- Canned food and can opener.
- At least three gallons of water per person.
- Protective clothing, rainwear, and bedding or sleeping bags.
- Battery-powered radio, flashlight, and extra batteries.
- Special items for infant, elderly, or disabled family members.
- Written instructions for how to turn off gas, electricity, and water if authorities advise you to do so. (Remember, you'll need a professional to turn natural gas service back on.)
- Keeping essentials, such as a flashlight and sturdy shoes, by your bedside.

Know What to Do When the Shaking Begins

- DROP, COVER, AND HOLD ON! Move only a few steps to a nearby safe place. Stay indoors until the shaking stops and you're sure it's safe to exit. Stay away from windows. In a high-rise building, expect the fire alarms and sprinklers to go off during a quake.
- If you are in bed, hold on and stay there, protecting your head with a pillow.
- If you are outdoors, find a clear spot away from buildings, trees, and power lines. Drop to the ground.
- If you are in a car, slow down and drive to a clear place (as described above). Stay in the car until the shaking stops.

Identify What to Do After the Shaking Stops

- Check yourself for injuries. Protect yourself from further danger by putting on long pants, a long-sleeved shirt, sturdy shoes, and work gloves.
- Check others for injuries. Give first aid for serious injuries.
- Look for and extinguish small fires. Eliminate fire hazards. Turn off the gas if you smell gas or think it's leaking. (Remember, only a professional should turn it back on.)
- Listen to the radio for instructions.
- Expect aftershocks. Each time you feel one, DROP, COVER, AND HOLD ON!
- Inspect your home for damage. Get everyone out if your home is unsafe.
- Use the telephone only to report life-threatening emergencies.

Fire

Make Your Home Fire Safe

- Smoke alarms save lives. Install a smoke alarm outside each sleeping area and on each additional level of your home.
- If people sleep with doors closed, install smoke alarms inside sleeping areas, too.
- Use the test button to check each smoke alarm once a month. When necessary, replace batteries immediately. Replace all batteries at least once a year.
- Vacuum away cobwebs and dust from your smoke alarms monthly.
- Smoke alarms become less sensitive over time. Replace your smoke alarms every ten years.
- Consider having one or more working fire extinguishers in your home. Get training from the fire department in how to use them.
- Consider installing an automatic fire sprinkler system in your home.

Plan Your Escape Routes

- Determine at least two ways to escape from every room of your home.
- Consider escape ladders for sleeping areas on the second or third floor. Learn how to use them and store them near the window.
- Select a location outside your home where everyone would meet after escaping.
- Practice your escape plan at least twice a year.

Escape Safely

- Once you are out, stay out! Call the fire department from a neighbor's home.
- If you see smoke or fire in your first escape route, use your second way out. If you must exit through smoke, crawl low under the smoke to your exit.
- If you are escaping through a closed door, feel the door before opening it. If it is warm, use your second way out.
- If smoke, heat, or flames block your exit routes, stay in the room with the door closed. Signal for help using a bright-colored cloth at the window. If there is a telephone in the room, call the fire department and tell them where you are.

Flood and Flash Flood

Know What to Expect

- Know your area's flood risk--if unsure, call your local Red Cross chapter, emergency management office, or planning and zoning department.
- If it has been raining hard for several hours, or steadily raining for several days, be alert to the possibility of a flood.
- Listen to local radio or TV stations for flood information.

Reduce Potential Flood Damage By--

- Raising your furnace, water heater, and electric panel if they are in areas of your home that may be flooded.
- Consult with a professional for further information if this and other damage reduction measures can be taken.

Floods Can Take Several Hours to Days to Develop

- A flood WATCH means a flood is possible in your area.
- A flood WARNING means flooding is already occurring or will occur soon in your area.

Flash Floods Can Take Only a Few Minutes to a Few Hours to Develop

- A flash flood WATCH means flash flooding is possible in your area.
- A flash flood WARNING means a flash flood is occurring or will occur *very* soon.

Prepare a Family Disaster Plan

- Check to see if you have insurance that covers flooding. If not, find out how to get flood insurance.
- Keep insurance policies, documents, and other valuables in a safe-deposit box.

Assemble a Disaster Supplies Kit Containing--

- First aid kit and essential medications.
- Canned food and can opener.
- At least three gallons of water per person
- Protective clothing, rainwear, and bedding or sleeping bags.
- Battery-powered radio, flashlight, and extra batteries.
- Special items for infants, elderly, or disabled family members.
- Written instructions for how to turn off electricity, gas and water if authorities advise you to do so. (Remember, you'll need a professional to turn them back on.)
- Identify where you could go if told to evacuate. Choose several places . . . a friend's home in another town, a motel, or a shelter.

When a Flood WATCH Is Issued . . .

- Move your furniture and valuables to higher floors of your home.
- Fill your car's gas tank, in case an evacuation notice is issued.

When a Flood WARNING Is Issued . . .

- Listen to local radio and TV stations for information and advice. If told to evacuate, do so as soon as possible.

When a Flash Flood WATCH Is Issued . . .

- Be alert to signs of flash flooding and be ready to evacuate on a moment's notice.

When a Flash Flood WARNING Is Issued . . .

- Or if you think it has already started, evacuate immediately. You may have only seconds to escape. Act quickly!
- Move to higher ground away from rivers, streams, creeks, and storm drains. Do not drive around barricades . . . they are there for your safety.
- If your car stalls in rapidly rising waters, abandon it immediately and climb to higher ground.

Heat Waves

Know What These Terms Mean...

- **Heat wave:** Prolonged period of excessive heat and humidity. The National Weather Service steps up its procedures to alert the public during these periods of excessive heat and humidity.
- **Heat index:** A number in degrees Fahrenheit (F) that tells how hot it really feels when relative humidity is added to the actual air temperature. Exposure to full sunshine can increase the heat index by 15 degrees F.
- **Heat cramps:** Heat cramps are muscular pains and spasms due to heavy exertion. Although heat cramps are the least severe, they are an early signal that the body is having trouble with the heat.
- **Heat exhaustion:** Heat exhaustion typically occurs when people exercise heavily or work in a hot, humid place where body fluids are lost through heavy sweating. Blood flow to the skin increases, causing blood flow to decrease to the vital organs. This results in a form of mild shock. If not treated, the victim may suffer heat stroke.
- **Heat stroke:** Heat stroke is life-threatening. 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.
- **Sunstroke:** Another term for heat stroke.

If a Heat Wave Is Predicted or Happening...

- Slow down. Avoid strenuous activity. If you must do strenuous activity, do it during the coolest part of the day, which is usually in the morning between 4:00 a.m. and 7:00 a.m.
- Stay indoors as much as possible. If air conditioning is not available, stay on the lowest floor, out of the sunshine. Try to go to a public building with air conditioning each day for several hours. Remember, electric fans do not cool the air, but they do help sweat evaporate, which cools your body.
- Wear lightweight, light-colored clothing. Light colors will reflect away some of the sun's energy.
- Drink plenty of water regularly and often. Your body needs water to keep cool.
- Drink plenty of fluids even if you do not feel thirsty.
- Water is the safest liquid to drink during heat emergencies. Avoid drinks with alcohol or caffeine in them. They can make you feel good briefly, but make the heat's effects on your body worse. This is especially true about beer, which dehydrates the body.
- Eat small meals and eat more often. Avoid foods that are high in protein, which increase metabolic heat.
- Avoid using salt tablets unless directed to do so by a physician.

Signals of Heat Emergencies...

- **Heat exhaustion:** Cool, moist, pale, or flushed skin; heavy sweating; headache; nausea or vomiting; dizziness; and exhaustion. Body temperature will be near normal.
- **Heat stroke:** Hot, red skin; changes in consciousness; rapid, weak pulse; and rapid, shallow breathing. Body temperature can be very high-- as high as 105 degrees F. If the person was sweating from heavy work or exercise, skin may be wet; otherwise, it will feel dry.

Treatment of Heat Emergencies...

- **Heat cramps:** Get the person to a cooler place and have him or her rest in a comfortable position. Lightly stretch the affected muscle and replenish fluids. Give a half glass of cool water every 15 minutes. Do not give liquids with alcohol or caffeine in them, as they can make conditions worse.
- **Heat exhaustion:** Get the person out of the heat and into a cooler place. Remove or loosen tight clothing and apply cool, wet cloths, such as towels or sheets. If the person is conscious, give cool water to drink. Make sure the person drinks slowly. Give a half glass of cool water every 15 minutes. Do not give liquids that contain alcohol or caffeine. Let the victim rest in a comfortable position, and watch carefully for changes in his or her condition.
- **Heat stroke:** Heat stroke is a life-threatening situation. Help is needed fast. Call 9-1-1 or your local emergency number. Move the person to a cooler place. Quickly cool the body. Immerse victim in a cool bath, or wrap wet sheets around the body and fan it. Watch for signals of breathing problems. Keep the person lying down and continue to cool the body any way you can. If the victim refuses water or is vomiting or there are changes in the level of consciousness, do not give anything to eat or drink.

Hurricane

Know What Hurricane WATCH and WARNING Mean

- WATCH: Hurricane conditions are *possible* in the specified area of the WATCH, usually within 36 hours.
- WARNING: Hurricane conditions are *expected* in the specified area of the WARNING, usually within 24 hours.

Prepare a Personal Evacuation Plan

- Identify ahead of time where you could go if you are told to evacuate. Choose several places--a friend's home in another town, a motel, or a shelter.
- Keep handy the telephone numbers of these places as well as a road map of your locality. You may need to take alternative or unfamiliar routes if major roads are closed or clogged.
- Listen to NOAA Weather Radio or local radio or TV stations for evacuation instructions. If advised to evacuate, do so immediately.
- Take these items with you when evacuating:
 - Prescription medications and medical supplies;
 - Bedding and clothing, including sleeping bags and pillows
 - Bottled water, battery-operated radio and extra batteries, first aid kit, flashlight
 - Car keys and maps
 - Documents, including driver's license, Social Security card, proof of residence, insurance policies, wills, deeds, birth and marriage certificates, tax records, etc.

Assemble a Disaster Supplies Kit Including the Following Items:

- First aid kit and essential medications.
- Canned food and can opener.
- At least three gallons of water per person.
- Protective clothing, rainwear, and bedding or sleeping bags.
- Battery-powered radio, flashlight, and extra batteries.
- Special items for infants, elderly, or disabled family members.
- Written instructions on how to turn off electricity, gas and water if authorities advise you to do so. (Remember, you'll need a professional to turn them back on.)

Prepare for High Winds

- Install hurricane shutters or purchase pre-cut 1/2" outdoor plywood boards for each window of your home. Install anchors for the plywood and pre-drill holes in the plywood so that you can put it up quickly.
- Make trees more wind resistant by removing diseased and damaged limbs, then strategically removing branches so that wind can blow through.

Know What to Do When a Hurricane WATCH Is Issued

- Listen to NOAA Weather Radio or local radio or TV stations for up-to-date storm information.

- Prepare to bring inside any lawn furniture, outdoor decorations or ornaments, trash cans, hanging plants, and anything else that can be picked up by the wind.
- Prepare to cover all windows of your home. If shutters have not been installed, use precut plywood as described above. *Note:* Tape does not prevent windows from breaking, so taping windows is not recommended.
- Fill your car's gas tank.
- Recheck manufactured home tie-downs.
- Check batteries and stock up on canned food, first aid supplies, drinking water, and medications.

Know What to Do When a Hurricane WARNING Is Issued

- Listen to the advice of local officials, and leave if they tell you to do so.
- Complete preparation activities.
- If you are not advised to evacuate, stay indoors, away from windows.
- Be aware that the calm "eye" is deceptive; the storm is not over. The worst part of the storm will happen once the eye passes over and the winds blow from the opposite direction. Trees, shrubs, buildings, and other objects damaged by the first winds can be broken or destroyed by the second winds.
- Be alert for tornadoes. Tornadoes can happen during a hurricane and after it passes over. Remain indoors, in the center of your home, in a closet or bathroom without windows.
- Stay away from flood waters. If you come upon a flooded road, turn around and go another way. If you are caught on a flooded road and waters are rising rapidly around you, get out of the car and climb to higher ground.

Know What to Do After a Hurricane Is Over

- Keep listening to NOAA Weather Radio or local radio or TV stations for instructions.
- If you evacuated, return home when local officials tell you it is safe to do so.
- Inspect your home for damage.
- Use flashlights in the dark; do not use candles.
- Power Outage Safety
- Food Safety
- Chainsaw Safety
- Portable Generator Safety
- Water treatment

Landslide and Debris Flow (Mudslide)

Why Talk About Landslides?

Landslides are a serious geologic hazard common to almost every state in the United States. It is estimated that nationally they cause up to \$2 billion in damages and from 25 to 50 deaths annually. Globally, landslides cause billions of dollars in damage and thousands of deaths and injuries each year. Individuals can take steps to reduce their personal risk. Know about the hazard potential where you live, take steps to reduce your risk, and practice preparedness plans.

What Are Landslides and Debris Flows, and What Causes Them?

Some landslides move slowly and cause damage gradually, whereas others move so rapidly that they can destroy property and take lives suddenly and unexpectedly. Gravity is the force driving landslide movement. Factors that allow the force of gravity to overcome the resistance of earth material to landslide movement include: saturation by water, steepening of slopes by erosion or construction, alternate freezing or thawing, earthquake shaking, and volcanic eruptions.

Landslides are typically associated with periods of heavy rainfall or rapid snow melt and tend to worsen the effects of flooding that often accompanies these events. In areas burned by forest and brush fires, a lower threshold of precipitation may initiate landslides.

Debris flows, sometimes referred to as mudslides, mudflows, lahars, or debris avalanches, are common types of fast-moving landslides. These flows generally occur during periods of intense rainfall or rapid snow melt. They usually start on steep hillsides as shallow landslides that liquefy and accelerate to speeds that are typically about 10 miles per hour, but can exceed 35 miles per hour. The consistency of debris flows ranges from watery mud to thick, rocky mud that can carry large items such as boulders, trees, and cars. Debris flows from many different sources can combine in channels, and their destructive power may be greatly increased. They continue flowing down hills and through channels, growing in volume with the addition of water, sand, mud, boulders, trees, and other materials. When the flows reach flatter ground, the debris spreads over a broad area, sometimes accumulating in thick deposits that can wreak havoc in developed areas.

Among the most destructive types of debris flows are those that accompany volcanic eruptions. A spectacular example in the United States was a massive debris flow resulting from the 1980 eruptions of Mount St. Helens, Washington. Areas near the bases of many volcanoes in the Cascade Mountain Range of California, Oregon, and Washington are at risk from the same types of flows during future volcanic eruptions.

Wildfires can also lead to destructive debris-flow activity. In July 1994, a severe wildfire swept Storm King Mountain, west of Glenwood Springs, Colorado, denuding the slopes of vegetation. Heavy rains on the mountain in September resulted in numerous debris flows, one of which blocked Interstate 70 and threatened to dam the Colorado River.

Learn whether landslides or debris flows have occurred in your area by contacting local officials, state geological surveys or departments of natural resources, and university departments of geology.

Awareness Information

Areas that are generally prone to landslide hazards include existing old landslides; the bases of steep slopes; the bases of drainage channels; and developed hillsides where leach-field septic systems are used.

Areas that are typically considered safe from landslides include areas that have not moved in the past; relatively flat-lying areas away from sudden changes in slope; and areas at the top or along ridges, set back from the tops of slopes.

Learn what to watch for prior to major land-sliding. Look for patterns of storm-water drainage on slopes near your home, noting especially the places where runoff water converges, increasing flow over soil-covered slopes. Check hillsides around your home for any signs of land movement, such as small landslides or debris flows or progressively tilting trees.

Plan for a Landslide

Develop a Family Disaster Plan. Please see the "Family Disaster Plan" section for general family planning information. Develop landslide-specific planning. **Learn about landslide risk in your area.** Contact local officials, state geological surveys or departments of natural resources, and university departments of geology. Landslides occur where they have before, and in identifiable hazard locations. Ask for information on landslides in your area, specific information on areas vulnerable to landslides, and request a professional referral for a very detailed site analysis of your property, and corrective measures you can take, if necessary.

If you are at risk from landslides:

- **Talk to your insurance agent.** Debris flow may be covered by flood insurance policies from the National Flood Insurance Program (NFIP).
- **Develop an evacuation plan.** (See "Evacuation" in the "Family Disaster Plan" section.) You should know where to go if you have to leave. Trying to make plans at the last minute can be upsetting and create confusion.
- **Discuss landslides and debris flow with your family.** Everyone should know what to do in case all family members are not together. Discussing disaster ahead of time helps reduce fear and lets everyone know how to respond during a landslide or debris flow.

How to Protect Your Property

- **If your property is in a landslide-prone area, contract with a private consulting company specializing in earth movement for opinions and advice on landslide problems and on corrective measures you can take.** Such companies would likely be those specializing in geotechnical engineering, structural engineering, or civil engineering. Local officials could possibly advise you as to the best kind of professional to contact in your area. Taking steps without consulting a professional could make your situation worse.
- **Install flexible pipe fittings to avoid gas or water leaks.** Flexible fittings will be less likely to break.

Media and Community Education Ideas

- In an area prone to landslides, publish a special newspaper section with emergency information on landslides and debris flows. Localize the information by including the phone numbers of local emergency services offices, the American Red Cross chapter, and hospitals.
- Report on what city and county governments are doing to reduce the possibility of landslides. Interview local officials about local land-use zoning regulations.
- Interview local officials and major insurers regarding the National Flood Insurance Program. Find out if debris flow is covered by flood insurance policies from the National Flood Insurance Program and contact your local emergency management office to learn more about the program.
- Work with local emergency services and American Red Cross officials to prepare special reports for people with mobility impairments on what to do if evacuation is ordered.
- Support your local government in efforts to develop and enforce land-use and building ordinances that regulate construction in areas susceptible to landslides and debris flows. Buildings should be located away from steep slopes, streams and rivers, intermittent-stream channels, and the mouths of mountain channels.

What to Do Before Intense Storms

- **Become familiar with the land around you.** Learn whether landslides and debris flows have occurred in your area by contacting local officials, state geological surveys or departments of natural resources, and university departments of geology. Knowing the land can help you assess your risk for danger.
- **Watch the patterns of storm-water drainage on slopes near your home, and especially the places where runoff water converges, increasing flow over soil-covered slopes.** Watch the hillsides around your home for any signs of land movement, such as small landslides or debris flows, or progressively tilting trees. Watching small changes could alert you to the potential of a greater landslide threat.

What to Do During Intense Storms

- **Stay alert and awake.** Many debris-flow fatalities occur when people are sleeping. Listen to a NOAA Weather Radio or portable, battery-powered radio or television for warnings of intense rainfall. Be aware that intense, short bursts of rain may be particularly dangerous, especially after longer periods of heavy rainfall and damp weather.
- **If you are in areas susceptible to landslides and debris flows, consider leaving if it is safe to do so.** Remember that driving during an intense storm can be hazardous. If you remain at home, move to a second story if possible. Staying out of the path of a landslide or debris flow saves lives.
- **Listen for any unusual sounds that might indicate moving debris, such as trees cracking or boulders knocking together.** A trickle of flowing or falling mud or debris may precede larger landslides. Moving debris can flow quickly and sometimes without warning.
- **If you are near a stream or channel, be alert for any sudden increase or decrease in water flow and for a change from clear to muddy water.**

Such changes may indicate landslide activity upstream, so be prepared to move quickly. Don't delay! Save yourself, not your belongings.

- **Be especially alert when driving.** Embankments along roadsides are particularly susceptible to landslides. Watch the road for collapsed pavement, mud, fallen rocks, and other indications of possible debris flows.

What to Do if You Suspect Imminent Landslide Danger

- **Contact your local fire, police, or public works department.** Local officials are the best persons able to assess potential danger.
- **Inform affected neighbors.** Your neighbors may not be aware of potential hazards. Advising them of a potential threat may help save lives. Help neighbors who may need assistance to evacuate.
- **Evacuate.** Getting out of the path of a landslide or debris flow is your best protection.

What to Do During a Landslide

- **Quickly move out of the path of the landslide or debris flow.** Moving away from the path of the flow to a stable area will reduce your risk.
- **If escape is not possible, curl into a tight ball and protect your head.** A tight ball will provide the best protection for your body.

What to Do After a Landslide

- **Stay away from the slide area.** There may be danger of additional slides.
- **Check for injured and trapped persons near the slide, without entering the direct slide area. Direct rescuers to their locations.**
- **Help a neighbor who may require special assistance--infants, elderly people, and people with disabilities.** Elderly people and people with disabilities may require additional assistance. People who care for them or who have large families may need additional assistance in emergency situations.
- **Listen to local radio or television stations for the latest emergency information.**
- **Watch for flooding, which may occur after a landslide or debris flow.** Floods sometimes follow landslides and debris flows because they may both be started by the same event.
- **Look for and report broken utility lines to appropriate authorities.** Reporting potential hazards will get the utilities turned off as quickly as possible, preventing further hazard and injury.
- **Check the building foundation, chimney, and surrounding land for damage.** Damage to foundations, chimneys, or surrounding land may help you assess the safety of the area.
- **Replant damaged ground as soon as possible since erosion caused by loss of ground cover can lead to flash flooding.**
- **Seek the advice of a geotechnical expert for evaluating landslide hazards or designing corrective techniques to reduce landslide risk.** A professional will be able to advise you of the best ways to prevent or reduce landslide risk, without creating further hazard.

Terrorism—Preparing for the Unexpected

Devastating acts, such as the terrorist attacks on the World Trade Center and the Pentagon, have left many concerned about the possibility of future incidents in the United States and their potential impact. They have raised uncertainty about what might happen next, increasing stress levels. Nevertheless, there are things you can do to prepare for the unexpected and reduce the stress that you may feel now and later should another emergency arise. Taking preparatory action can reassure you and your children that you can exert a measure of control even in the face of such events.

Shelter-in-Place in an Emergency

What Shelter-in-Place Means:

One of the instructions you may be given in an emergency where hazardous materials may have been released into the atmosphere is to shelter-in-place. This is a precaution aimed to keep you safe while remaining indoors. (This is not the same thing as going to a shelter in case of a storm.) Shelter-in-place means selecting a small, interior room, with no or few windows, and taking refuge there. It does not mean sealing off your entire home or office building. If you are told to shelter-in-place, follow the instructions provided in this Fact Sheet.

Why You Might Need to Shelter-in-Place:

Chemical, biological, or radiological contaminants may be released accidentally or intentionally into the environment. Should this occur, information will be provided by local authorities on television and radio stations on how to protect you and your family. Because information will most likely be provided on television and radio, it is important to keep a TV or radio on, even during the workday. The important thing is for you to follow instructions of local authorities and know what to do if they advise you to shelter-in-place.

How to Shelter-in-Place

At Home:

- Close and lock all windows and exterior doors.
- If you are told there is danger of explosion, close the window shades, blinds, or curtains.
- Turn off all fans, heating and air conditioning systems.
- Close the fireplace damper.
- Get your family disaster supplies kit and make sure the radio is working.
- Go to an interior room without windows that's above ground level. In the case of a chemical threat, an above-ground location is preferable because some chemicals are heavier than air, and may seep into basements even if the windows are closed.
- Bring your pets with you, and be sure to bring additional food and water supplies for them.
- It is ideal to have a hard-wired telephone in the room you select. Call your emergency contact and have the phone available if you need to report a life-threatening condition. Cellular telephone equipment may be overwhelmed or damaged during an emergency.
- Use duct tape and plastic sheeting (heavier than food wrap) to seal all cracks around the door and any vents into the room.
- Keep listening to your radio or television until you are told all is safe or you are told to evacuate. Local officials may call for evacuation in specific areas at greatest risk in your community.

At Work:

- Close the business.
- If there are customers, clients, or visitors in the building, provide for their safety by asking them to stay – not leave. When authorities provide directions to shelter-in-place, they want everyone to take those steps now, where they are, and not drive or walk outdoors.
- Unless there is an imminent threat, ask employees, customers, clients, and visitors to call their emergency contact to let them know where they are and that they are safe.
- Turn on call-forwarding or alternative telephone answering systems or services. If the business has voice mail or an automated attendant, change the recording to indicate that the business is closed, and that staff and visitors are remaining in the building until authorities advise it is safe to leave.
- Close and lock all windows, exterior doors, and any other openings to the outside.
- If you are told there is danger of explosion, close the window shades, blinds, or curtains.
- Have employees familiar with your building's mechanical systems turn off all fans, heating and air conditioning systems. Some systems automatically provide for exchange of inside air with outside air – these systems, in particular, need to be turned off, sealed, or disabled.
- Gather essential disaster supplies, such as nonperishable food, bottled water, battery-powered radios, first aid supplies, flashlights, batteries, duct tape, plastic sheeting, and plastic garbage bags.
- Select interior room(s) above the ground floor, with the fewest windows or vents. The room(s) should have adequate space for everyone to be able to sit in. Avoid overcrowding by selecting several rooms if necessary. Large storage closets, utility rooms, pantries, copy and conference rooms without exterior windows will work well. Avoid selecting a room with mechanical equipment like ventilation blowers or pipes, because this equipment may not be able to be sealed from the outdoors.
- It is ideal to have a hard-wired telephone in the room(s) you select. Call emergency contacts and have the phone available if you need to report a life-threatening condition. Cellular telephone equipment may be overwhelmed or damaged during an emergency.
- Use duct tape and plastic sheeting (heavier than food wrap) to seal all cracks around the door(s) and any vents into the room.
- Bring everyone into the room(s). Shut and lock the door(s).
- Write down the names of everyone in the room, and call your business' designated emergency contact to report who is in the room with you, and their affiliation with your business (employee, visitor, client, customer.)
- Keep listening to the radio or television until you are told all is safe or you are told to evacuate. Local officials may call for evacuation in specific areas at greatest risk in your community.

At School:

- Close the school. Activate the school's emergency plan. Follow reverse evacuation procedures to bring students, faculty, and staff indoors.
- If there are visitors in the building, provide for their safety by asking them to stay – not leave. When authorities provide directions to shelter-in-place, they want everyone to take those steps now, where they are, and not drive or walk outdoors.

- Provide for answering telephone inquiries from concerned parents by having at least one telephone with the school's listed telephone number available in the room selected to provide shelter for the school secretary, or person designated to answer these calls. This room should also be sealed. There should be a way to communicate among all rooms where people are sheltering-in-place in the school.
- Ideally, provide for a way to make announcements over the school-wide public address system from the room where the top school official takes shelter.
- If children have cell phones, allow them to use them to call a parent or guardian to let them know that they have been asked to remain in school until further notice, and that they are safe.
- If the school has voice mail or an automated attendant, change the recording to indicate that the school is closed, students and staff are remaining in the building until authorities advise that it is safe to leave.
- Provide directions to close and lock all windows, exterior doors, and any other openings to the outside.
- If you are told there is danger of explosion, direct that window shades, blinds, or curtains be closed.
- Have employees familiar with your building's mechanical systems turn off all fans, heating and air conditioning systems. Some systems automatically provide for exchange of inside air with outside air – these systems, in particular, need to be turned off, sealed, or disabled.
- Gather essential disaster supplies, such as nonperishable food, bottled water, battery-powered radios, first aid supplies, flashlights, batteries, duct tape, plastic sheeting, and plastic garbage bags.
- Select interior room(s) above the ground floor, with the fewest windows or vents. The room(s) should have adequate space for everyone to be able to sit in. Avoid overcrowding by selecting several rooms if necessary. Classrooms may be used if there are no windows or the windows are sealed and can not be opened. Large storage closets, utility rooms, meeting rooms, and even a gymnasium without exterior windows will also work well.
- It is ideal to have a hard-wired telephone in the room(s) you select. Call emergency contacts and have the phone available if you need to report a life-threatening condition. Cellular telephone equipment may be overwhelmed or damaged during an emergency.
- Bring everyone into the room. Shut and lock the door.
- Use duct tape and plastic sheeting (heavier than food wrap) to seal all cracks around the door(s) and any vents into the room.
- Write down the names of everyone in the room, and call your schools' designated emergency contact to report who is in the room with you.
- Listen for an official announcement from school officials via the public address system, and stay where you are until you are told all is safe or you are told to evacuate. Local officials may call for evacuation in specific areas at greatest risk in your community.

In Your Vehicle:

If you are driving a vehicle and hear advice to "shelter-in-place" on the radio, take these steps:

- If you are very close to home, your office, or a public building, go there immediately and go inside. Follow the shelter-in-place recommendations for the place you pick described above.
- If you are unable to get to a home or building quickly and safely, then pull over to the side of the road. Stop your vehicle in the safest place possible. If

it is sunny outside, it is preferable to stop under a bridge or in a shady spot, to avoid being overheated.

- Turn off the engine. Close windows and vents.
- If possible, seal the heating/air conditioning vents with duct tape.
- Listen to the radio regularly for updated advice and instructions.
- Stay where you are until you are told it is safe to get back on the road. Be aware that some roads may be closed or traffic detoured. Follow the directions of law enforcement officials.

Local officials on the scene are the best source of information for your particular situation. Following their instructions during and after emergencies regarding sheltering, food, water, and clean up methods is your safest choice.

Remember that instructions to shelter-in-place are usually provided for durations of a few hours, not days or weeks. There is little danger that the room in which you are taking shelter will run out of oxygen and you will suffocate.

What You Can Do to Prepare

Finding out what can happen is the first step. Once you have determined the events possible and their potential in your community, it is important that you discuss them with your family or household. Develop a disaster plan together.

1. Create an emergency communications plan.

Choose an out-of-town contact your family or household will call or e-mail to check on each other should a disaster occur. Your selected contact should live far enough away that they would be unlikely to be directly affected by the same event, and they should know they are the chosen contact. Make sure every household member has that contact's, and each other's, e-mail addresses and telephone numbers (home, work, pager and cell). Leave these contact numbers at your children's schools, if you have children, and at your workplace. Your family should know that if telephones are not working, they need to be patient and try again later or try e-mail. Many people flood the telephone lines when emergencies happen but e-mail can sometimes get through when calls don't.

2. Establish a meeting place.

Having a predetermined meeting place away from your home will save time and minimize confusion should your home be affected or the area evacuated. You may even want to make arrangements to stay with a family member or friend in case of an emergency. Be sure to include any pets in these plans, since pets are not permitted in shelters and some hotels will not accept them.

3. Assemble a disaster supplies kit.

If you need to evacuate your home or are asked to "shelter in place," having some essential supplies on hand will make you and your family more comfortable. Prepare a disaster supplies kit in an easy-to-carry container such as a duffel bag or small plastic trash can. Include "special needs" items for any member of your household (infant formula or items for people with disabilities or older people), first aid supplies (including prescription medications), a change of clothing for each household member, a sleeping bag or bedroll for each, a battery powered radio or television and extra batteries, food, bottled water and tools. It is also a good idea to include some cash and copies of important family documents (birth certificates, passports and licenses) in your kit.

Copies of essential documents-like powers of attorney, birth and marriage certificates, insurance policies, life insurance beneficiary designations and a copy of your will-should also be kept in a

safe location outside your home. A safe deposit box or the home of a friend or family member who lives out of town is a good choice.

For more complete instructions, ask your local Red Cross chapter for the brochure titled Your Family Disaster Supplies Kit (stock number A4463).

4. Check on the school emergency plan of any school-age children you may have.

You need to know if they will they keep children at school until a parent or designated adult can pick them up or send them home on their own. Be sure that the school has updated information about how to reach parents and responsible caregivers to arrange for pickup. And, ask what type of authorization the school may require to release a child to someone you designate, if you are not able to pick up your child. During times of emergency the school telephones may be overwhelmed with calls.

For more information on putting together a disaster plan, request a copy of the brochure titled Your Family Disaster Plan (A4466) from your local American Red Cross chapter. You may also want to request a copy of Before Disaster Strikes . . . How to Make Sure You're Financially Prepared (A5075) for specific information on what you can do now to protect your assets.

If Disaster Strikes

- Remain calm and be patient.
- Follow the advice of local emergency officials.
- Listen to your radio or television for news and instructions.
- If the disaster occurs near you, check for injuries. Give first aid and get help for seriously injured people.
- If the disaster occurs near your home while you are there, check for damage using a flashlight. Do not light matches or candles or turn on electrical switches. Check for fires, fire hazards and other household hazards. Sniff for gas leaks, starting at the water heater. If you smell gas or suspect a leak, turn off the main gas valve, open windows, and get everyone outside quickly.
- Shut off any other damaged utilities.
- Confine or secure your pets.
- Call your family contact—do not use the telephone again unless it is a life-threatening emergency.
- Check on your neighbors, especially those who are elderly or disabled.

A Word on What Could Happen

As we learned from the events of September 11, 2001, the following things can happen after a terrorist attack:

- There can be significant numbers of casualties and/or damage to buildings and the infrastructure. So employers need up-to-date information about any medical needs you may have and on how to contact your designated beneficiaries.
- Heavy law enforcement involvement at local, state and federal levels follows a terrorist attack due to the event's criminal nature.
- 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 can continue for a prolonged period.
- 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.

Evacuation

If local authorities ask you to leave your home, they have a good reason to make this request, and you should heed the advice immediately. Listen to your radio or television and follow the instructions of local emergency officials and keep these simple tips in mind-

1. Wear long-sleeved shirts, long pants and sturdy shoes so you can be protected as much as possible.
2. Take your disaster supplies kit.
3. Take your pets with you; do not leave them behind. Because pets are not permitted in public shelters, follow your plan to go to a relative's or friend's home, or find a "pet-friendly" hotel.
4. Lock your home.
5. Use travel routes specified by local authorities—don't use shortcuts because certain areas may be impassable or dangerous.
6. Stay away from downed power lines.

Listen to local authorities.

Your local authorities will provide you with the most accurate information specific to an event in your area. Staying tuned to local radio and television, and following their instructions is your safest choice.

If you're sure you have time:

- ? Call your family contact to tell them where you are going and when you expect to arrive.
- ? Shut off water and electricity before leaving, if instructed to do so. Leave natural gas service ON unless local officials advise you otherwise. You may need gas for heating and cooking, and only a professional can restore gas service in your home once it's been turned off. In a disaster situation it could take weeks for a professional to respond.

Shelter-in-place Fact Sheet (Fact Sheet PDF file)

If you are advised by local officials to "shelter in place," what they mean is for you to remain inside your home or office and protect yourself there. Close and lock all windows and exterior doors. Turn off all fans, heating and air conditioning systems. Close the fireplace damper. Get your disaster supplies kit, and make sure the radio is working. Go to an interior room without windows that's above ground level. In the case of a chemical threat, an above-ground location is preferable because some chemicals are heavier than air, and may seep into basements even if the windows are closed. Using duct tape, seal all cracks around the door and any vents into the room. Keep listening to your radio or television until you are told all is safe or you are told to evacuate. Local officials may call for evacuation in specific areas at greatest risk in your community.

Additional Positive Steps You Can Take

Raw, unedited footage of terrorism events and people's reaction to those events can be very upsetting, especially to children. We do not recommend that children watch television news reports about such events, especially if the news reports show images over and over again about the same incident. Young children do not realize that it is repeated video footage, and think the event is happening again and again. Adults may also need to give themselves a break from watching disturbing footage. However, listening to local radio and television reports will provide you with the most accurate information from responsible governmental authorities on what's

happening and what actions you will need to take. So you may want to make some arrangements to take turns listening to the news with other adult members of your household.

Another useful preparation includes learning some basic first aid. To enroll in a first aid and AED/CPR course, contact your local American Red Cross chapter. In an emergency situation, you need to tend to your own well-being first and then consider first aid for others immediately around you, including possibly assisting injured people to evacuate a building if necessary.

People who may have come into contact with a biological or chemical agent may need to go through a decontamination procedure and receive medical attention. Listen to the advice of local officials on the radio or television to determine what steps you will need to take to protect yourself and your family. As emergency services will likely be overwhelmed, only call 9-1-1 about life-threatening emergencies.

First Aid Primer

If you encounter someone who is injured, apply the emergency action steps: Check-Call-Care. **Check** the scene to make sure it is safe for you to approach. Then check the victim for unconsciousness and life-threatening conditions. Someone who has a life-threatening condition, such as not breathing or severe bleeding, requires immediate care by trained responders and may require treatment by medical professionals. **Call** out for help. There are some steps that you can take, however, to **care** for someone who is hurt, but whose injuries are not life threatening.

Control Bleeding

- Cover the wound with a dressing, and press firmly against the wound (direct pressure).
- Elevate the injured area above the level of the heart if you do not suspect that the victim has a broken bone.
- Cover the dressing with a roller bandage.
- If the bleeding does not stop:
 - Apply additional dressings and bandages.
 - Use a pressure point to squeeze the artery against the bone.
- Provide care for shock.

Care for Shock

- Keep the victim from getting chilled or overheated.
- Elevate the legs about 12 inches (if broken bones are not suspected).
- Do not give food or drink to the victim.

Tend Burns

- Stop the burning by cooling the burn with large amounts of water.
- Cover the burn with dry, clean dressings or cloth.

Care for Injuries to Muscles, Bones and Joints

- Rest the injured part.
- Apply ice or a cold pack to control swelling and reduce pain.
- Avoid any movement or activity that causes pain.
- If you must move the victim because the scene is becoming unsafe, try to immobilize the injured part to keep it from moving.

Be Aware of Biological/Radiological Exposure

- Listen to local radio and television reports for the most accurate information from responsible governmental and medical authorities on what's happening and what actions you will need to take. The Web sites referenced at the end of this brochure can give you more information on how to protect yourself from exposure to biological or radiological hazards.

Reduce Any Care Risks

The risk of getting a disease while giving first aid is extremely rare. However, to reduce the risk even further:

- Avoid direct contact with blood and other body fluids.
- Use protective equipment, such as disposable gloves and breathing barriers.
- Thoroughly wash your hands with soap and water immediately after giving care.

It is important to be prepared for an emergency and to know how to give emergency care.

More Information

All of these recommendations make good sense, regardless of the potential problem. For more information on how to get ready for disaster and be safe when disaster strikes, or to register for a first aid and AED/CPR course, please contact your local American Red Cross chapter. You can find it in your telephone directory under "American Red Cross" or through our home page at www.redcross.org under "your local chapter."

For information about your community's specific plans for response to disasters and other emergencies, contact your local office of emergency management.

For information on what a business can do to protect its employees and customers as well as develop business continuity plans, you may want to get a copy of the *Emergency Management Guide for Business and Industry* and/or *Preparing Your Business for the Unthinkable* from your local American Red Cross chapter or see <http://www.redcross.org/services/disaster/beprepared>

For more information about the specific effects of chemical or biological agents, the following Web sites may be helpful:

Centers for Disease Control and Prevention: www.bt.cdc.gov
U.S. Department of Energy: www.energy.gov
U.S. Department of Health and Human Services: www.hhs.gov
Federal Emergency Management Agency: www.ris.fema.gov
Environmental Protection Agency: www.epa.gov/swercepp

Thunderstorm

Before Lightning Strikes...

- Keep an eye on the sky. Look for darkening skies, flashes of light, or increasing wind. Listen for the sound of thunder.
- If you can hear thunder, you are close enough to the storm to be struck by lightning. Go to safe shelter immediately.
- Listen to NOAA Weather Radio, commercial radio, or television for the latest weather forecasts.

When a Storm Approaches...

- Find shelter in a building or car. Keep car windows closed and avoid convertibles.
- Telephone lines and metal pipes can conduct electricity. Unplug appliances. Avoid using the telephone or any electrical appliances. (Leaving electric lights on, however, does not increase the chances of your home being struck by lightning.)
- Avoid taking a bath or shower, or running water for any other purpose.
- Turn off the air conditioner. Power surges from lightning can overload the compressor, resulting in a costly repair job!
- Draw blinds and shades over windows. If windows break due to objects blown by the wind, the shades will prevent glass from shattering into your home.

If Caught Outside...

- If you are in the woods, take shelter under the shorter trees.
- If you are boating or swimming, get to land and find shelter immediately!

Protecting Yourself Outside...

- Go to a low-lying, open place away from trees, poles, or metal objects. Make sure the place you pick is not subject to flooding.
- Be a very small target! Squat low to the ground. Place your hands on your knees with your head between them. Make yourself the smallest target possible.
- Do not lie flat on the ground--this will make you a larger target!

After the Storm Passes...

- Stay away from storm-damaged areas.
- Listen to the radio for information and instructions.

If Someone is Struck by Lightning...

- People struck by lightning carry no electrical charge and can be handled safely.
- Call for help. Get someone to dial 9-1-1 or your local Emergency Medical Services (EMS) number.
- The injured person has received an electrical shock and may be burned, both where they were struck and where the electricity left their body. Check for burns in both places. Being struck by lightning can also cause nervous system damage, broken bones, and loss of hearing or eyesight.
- Give first aid. If breathing has stopped, begin rescue breathing. If the heart has stopped beating, a trained person should give CPR. If the person has a pulse and is breathing, look and care for other possible injuries. Learn first aid and CPR by taking a Red Cross first aid and CPR course. call your local Red Cross chapter for class schedules and fees.

Tornado

Prepare a Home Tornado Plan

- Pick a place where family members could gather if a tornado is headed your way. It could be your basement or, if there is no basement, a center hallway, bathroom, or closet on the lowest floor. Keep this place uncluttered.
- If you are in a high-rise building, you may not have enough time to go to the lowest floor. Pick a place in a hallway in the center of the building.

Assemble a Disaster Supplies Kit Containing--

- First aid kit and essential medications.
- Canned food and can opener.
- At least three gallons of water per person.
- Protective clothing, bedding, or sleeping bags.
- Battery-powered radio, flashlight, and extra batteries.
- Special items for infant, elderly, or disabled family members.
- Written instructions on how to turn off electricity, gas, and water if authorities advise you to do so. (Remember, you'll need a professional to turn natural gas service back on.)

Stay Tuned for Storm Warnings

- Listen to your local radio and TV stations for updated storm information.
- Know what a tornado WATCH and WARNING means:
 - A tornado WATCH means a tornado is possible in your area.
 - A tornado WARNING means a tornado has been sighted and may be headed for your area. Go to safety immediately.
- Tornado WATCHES and WARNINGS are issued by county or parish.

When a Tornado WATCH Is Issued...

- Listen to local radio and TV stations for further updates.
- Be alert to changing weather conditions. Blowing debris or the sound of an approaching tornado may alert you. Many people say it sounds like a freight train.

When a Tornado WARNING Is Issued...

- If you are inside, go to the safe place you picked to protect yourself from glass and other flying objects. The tornado may be approaching your area.
- If you are outside, hurry to the basement of a nearby sturdy building or lie flat in a ditch or low-lying area.
- If you are in a car or mobile home, get out immediately and head for safety (as above).

After the Tornado Passes...

- Watch out for fallen power lines and stay out of the damaged area.
- Listen to the radio for information and instructions.
- Use a flashlight to inspect your home for damage.
- Do not use candles at any time.

Tsunami

Why Talk About Tsunamis?

Twenty-four tsunamis have caused damage in the United States and its territories during the last 204 years. Just since 1946, six tsunamis have killed more than 350 people and caused a half billion dollars of property damage in Hawaii, Alaska, and the West Coast. As a tsunami nears the coastline, it may rise to several feet or, in rare cases, tens of feet, and can cause great loss of life and property damage when it comes ashore. Tsunamis can travel upstream in coastal estuaries and rivers, with damaging waves extending farther inland than the immediate coast. A tsunami can occur during any season of the year and at any time, day or night.

What Are Tsunamis, and What Causes Them?

Tsunamis are ocean waves produced by earthquakes or underwater landslides. The word is Japanese and means "harbor wave," because of the devastating effects these waves have had on low-lying Japanese coastal communities. Tsunamis are often incorrectly referred to as tidal waves, but a tsunami is actually a series of waves that can travel at speeds averaging 450 (and up to 600) miles per hour in the open ocean. In the open ocean, tsunamis would not be felt by ships because the wavelength would be hundreds of miles long, with an amplitude of only a few feet. This would also make them unnoticeable from the air. As the waves approach the coast, their speed decreases and their amplitude increases. Unusual wave heights have been known to be over 100 feet high. However, waves that are 10 to 20 feet high can be very destructive and cause many deaths or injuries.

Tsunamis are most often generated by earthquake-induced movement of the ocean floor. Landslides, volcanic eruptions, and even meteorites can also generate a tsunami. If a major earthquake is felt, a tsunami could reach the beach in a few minutes, even before a warning is issued. Areas at greatest risk are less than 25 feet above sea level and within one mile of the shoreline. Most deaths caused by a tsunami are because of drowning. Associated risks include flooding, contamination of drinking water, fires from ruptured tanks or gas lines, and the loss of vital community infrastructure (police, fire, and medical facilities).

From an initial tsunami generating source area, waves travel outward in all directions much like the ripples caused by throwing a rock into a pond. As these waves approach coastal areas, the time between successive wave crests varies from 5 to 90 minutes. The first wave is usually not the largest in the series of waves, nor is it the most significant. Furthermore, one coastal community may experience no damaging waves while another, not that far away, may experience destructive deadly waves. Depending on a number of factors, some low-lying areas could experience severe inland inundation of water and debris of more than 1,000 feet.

Learn whether tsunamis have occurred in your area by contacting your local emergency management office, National Weather Service office, or American Red Cross chapter. If you are in a tsunami risk area, learn how to protect yourself, your family, and your property.

Awareness Information

The West Coast/Alaska Tsunami Warning Center (WC/ATWC) is responsible for tsunami warnings for California, Oregon, Washington, British Columbia, and Alaska.

The Pacific Tsunami Warning Center (PTWC) is responsible for providing warnings to international authorities, Hawaii, and U.S. territories within the Pacific basin. The two Tsunami Warning Centers coordinate the information being disseminated.

All tsunamis are potentially dangerous, even though they may not damage every coastline they strike. Damaging tsunamis are very rare. Our coastlines are vulnerable, but tsunamis are infrequent. Understand the hazard and learn how to protect yourself, but don't let the threat of tsunamis ruin your enjoyment of the beach.

The WC/ATWC and PTWC may issue the following bulletins:

- **WARNING:** A tsunami was or may have been generated, which could cause damage; therefore, people in the warned area are strongly advised to evacuate.
- **WATCH:** A tsunami was or may have been generated, but is at least two hours travel time to the area in watch status. Local officials should prepare for possible evacuation if their area is upgraded to a warning.
- **ADVISORY:** An earthquake has occurred in the Pacific basin, which might generate a tsunami. WC/ATWC and PTWC will issue hourly bulletins advising of the situation.
- **INFORMATION:** A message with information about an earthquake that is not expected to generate a tsunami. Usually only one bulletin is issued.

Be familiar with the tsunami warning signs. A strong earthquake lasting 20 seconds or more near the coast may generate a tsunami. A noticeable rapid rise or fall in coastal waters is also a sign that a tsunami is approaching.

Tsunamis most frequently come onshore as a rapidly rising turbulent surge of water choked with debris. They are not V-shaped or rolling waves, and are not "surfable."

Tsunamis may be locally generated or from a distant source. In 1992, the Cape Mendocino, California, earthquake produced a tsunami that reached Eureka in about 20 minutes, and Crescent City in 50 minutes. Although this tsunami had a wave height of about one foot and was not destructive, it illustrates how quickly a wave can arrive at nearby coastal communities and how long the danger can last.

In 1957, a distant-source tsunami generated by an earthquake in the Aleutian Islands in Alaska struck Hawaii, 2,100 miles away. Hawaii experienced \$5 million in damages from that tsunami.

Plan for a Tsunami

Develop a Family Disaster Plan. Please see the "Family Disaster Plan" section for general family planning information. Tsunami-specific planning should include the following:

- **Learn about tsunami risk in your community.** Contact your local emergency management office or American Red Cross chapter. Find out if your home, school, workplace or other frequently visited locations are in tsunami hazard areas. Know the height of your street above sea level and the distance of your street from the coast or other high-risk waters. Evacuation orders may be based on these numbers.
- **If you are visiting an area at risk from tsunamis, check with the hotel, motel, or campground operators for tsunami evacuation information**

and how you would be warned. It is important to know designated escape routes before a warning is issued.

If you are at risk from tsunamis, do the following:

- **Plan an evacuation route from your home, school, workplace, or any other place you'll be where tsunamis present a risk.** If possible, pick an area 100 feet above sea level or go up to two miles inland, away from the coastline. If you can't get this high or far, go as high as you can. Every foot inland or upwards may make a difference. You should be able to reach your safe location on foot within 15 minutes. After a disaster, roads may become impassable or blocked. Be prepared to evacuate by foot if necessary. Footpaths normally lead uphill and inland, while many roads parallel coastlines. Follow posted tsunami evacuation routes; these will lead to safety. Local emergency management officials can help advise you as to the best route to safety and likely shelter locations.
- **Practice your evacuation route.** Familiarity may save your life. Be able to follow your escape route at night and during inclement weather. Practicing your plan makes the appropriate response more of a reaction, requiring less thinking during an actual emergency situation.
- **Use a NOAA Weather Radio with a tone-alert feature to keep you informed of local watches and warnings.** The tone alert feature will warn you of potential danger even if you are not currently listening to local radio or television stations.
- **Talk to your insurance agent.** Homeowners' policies do not cover flooding from a tsunami. Ask about the National Flood Insurance Program.
- **Discuss tsunami with your family.** Everyone should know what to do in case all family members are not together. Discussing tsunamis ahead of time will help reduce fear and anxiety, and let everyone know how to respond. Review flood safety and preparedness measures with your family.

How to Protect Your Property

- **Avoid building or living in buildings within several hundred feet of the coastline.** These areas are more likely to experience damage from tsunamis, strong winds, or coastal storms.
- **Make a list of items to bring inside in the event of a tsunami.** A list will help you remember anything that can be swept away by tsunami waters.
- **Elevate coastal homes.** Most tsunami waves are less than 10 feet. Elevating your house will help reduce damage to your property from most tsunamis.
- **Follow flood preparedness precautions.** Tsunamis are large amounts of water that crash onto the coastline, creating floods.
- **Have an engineer check your home and advise about ways to make it more resistant to tsunami water.** There may be ways to divert waves away from your property. Improperly built walls could make your situation worse. Consult with a professional for advice.

Media and Community Education Ideas

- If your community is at risk, build and publicize locations of tsunami evacuation routes. Post signs directing people to higher ground away from the coast.

- Review land use in tsunami hazard areas so no critical facilities, such as hospitals and police stations; or high occupancy buildings, such as auditoriums or schools; or petroleum-storage tank farms are located where there is a tsunami hazard. Tsunami damage can be minimized through land use planning, preparation, and evacuation.
- Publish a special section in your local newspaper with emergency information on tsunamis. Localize the information by printing the phone numbers of local emergency services offices, the American Red Cross chapter, and hospitals.
- Periodically inform your community of local public warning systems.
- Work with local emergency services and American Red Cross officials to prepare special reports for people with mobility impairments on what to do if an evacuation is ordered, and develop plans to assist them with evacuation if necessary.
- Interview local officials and insurance companies about the proper types of insurance to cover a flood-related loss. Include information on the economic effects of disaster.

What to Do if You Feel a *Strong Coastal Earthquake*

If you feel an earthquake that lasts 20 seconds or longer when you are on the coast:

- **Drop, cover, and hold on.** You should first protect yourself from the earthquake.
- **When the shaking stops, gather your family members and evacuate quickly.** Leave everything else behind. A tsunami may be coming within minutes. Move quickly to higher ground away from the coast.
- Be careful to avoid downed power lines and stay away from buildings and bridges from which heavy objects might fall during an aftershock.

What to Do When a Tsunami WATCH Is Issued

- **Listen to a NOAA Weather Radio, Coast Guard emergency frequency station, or other reliable source for updated emergency information.** As the energy of a tsunami is transferred through open water, it is not detectable. Seismic action may be the only advance warning before the tsunami approaches the coastline.
- **Check your Disaster Supplies Kit.** Some supplies may need to be replaced or restocked.
- **Locate family members and review evacuation plans.** Make sure everyone knows there is a potential threat and the best way to safer ground.
- **If you have special evacuation needs (small children, elderly people, or persons with disabilities), consider early evacuation.** Evacuation may take longer, allow extra time.
- **If time permits, secure unanchored objects around your home or business.** Tsunami waves can sweep away loose objects. Securing these items or moving them inside will reduce potential loss or damage.
- **Be ready to evacuate.** Being prepared will help you to move more quickly if a tsunami warning is issued.

What to Do When a Tsunami WARNING Is Issued

- **Listen to a NOAA Weather Radio, Coast Guard emergency frequency station, or other reliable source for updated emergency information.** Authorities will issue a warning only if they believe there is a real threat from tsunami.
- **Follow instructions issued by local authorities.** Recommended evacuation routes may be different from the one you use, or you may be advised to climb higher.
- If you are in a tsunami risk area, do the following:
 - **If you hear an official tsunami warning or detect signs of a tsunami, evacuate at once.** A tsunami warning is issued when authorities are certain that a tsunami threat exists, and there may be little time to get out.
 - **Take your Disaster Supplies Kit.** Having supplies will make you more comfortable during the evacuation.
 - **Get to higher ground as far inland as possible.** Officials cannot reliably predict either the height or local effects of tsunamis. Watching a tsunami from the beach or cliffs could put you in grave danger. If you can see the wave, you are too close to escape it.

Return home only after local officials tell you it is safe. A tsunami is a series of waves that may continue for hours. Do not assume that after one wave the danger is over. The next wave may be larger than the first one.

What to Do After a Tsunami

- **Continue listening to a NOAA Weather Radio, Coast Guard emergency frequency station, or other reliable source for emergency information.** The tsunami may have damaged roads, bridges, or other places that may be unsafe.
- **Help injured or trapped persons. Give first aid where appropriate.** Call for help. Do not move seriously injured persons unless they are in immediate danger of further injury.
- **Help a neighbor who may require special assistance--infants, elderly people, and people with disabilities.** Elderly people and people with disabilities may require additional assistance. People who care for them or who have large families may need additional assistance in emergency situations.
- **Use the telephone only for emergency calls.** Telephone lines are frequently overwhelmed in disaster situations. They need to be clear for emergency calls to get through.
- **Stay out of the building if waters remain around it.** Tsunami waters, like flood waters, can undermine foundations, causing buildings to sink, floors to crack, or walls to collapse.
- **When re-entering buildings or homes, use extreme caution.** Tsunami-driven flood waters may have damaged buildings where you least expect it. Carefully watch every step you take.
 - **Wear sturdy shoes.** The most common injury following a disaster is cut feet.
 - **Use battery-powered lanterns or flashlights when examining buildings.** Battery-powered lighting is the safest and easiest, preventing fire hazard for the user, occupants, and building.
 - **Examine walls, floors, doors, staircases, and windows to make sure that the building is not in danger of collapsing.**
 - **Inspect foundations for cracks or other damage.** Cracks and damage to a foundation can render a building uninhabitable.
 - **Look for fire hazards.** There may be broken or leaking gas lines, flooded electrical circuits, or submerged furnaces or electrical

appliances. Flammable or explosive materials may come from upstream. Fire is the most frequent hazard following floods.

- **Check for gas leaks.** If you smell gas or hear a blowing or hissing noise, open a window and quickly leave the building. Turn off the gas using the outside main valve if you can, and call the gas company from a neighbor's home. If you turn off the gas for any reason, it must be turned back on by a professional.
- **Look for electrical system damage.** If you see sparks or broken or frayed wires, or if you smell burning insulation, turn off the electricity at the main fuse box or circuit breaker. If you have to step in water to get to the fuse box or circuit breaker, call an electrician first for advice. Electrical equipment should be checked and dried before being returned to service.
- **Check for sewage and water line damage.** If you suspect sewage lines are damaged, avoid using the toilets and call a plumber. If water pipes are damaged, contact the water company and avoid using water from the tap. You can obtain safe water from undamaged water heaters or by melting ice cubes.
- **Use tap water if local health officials advise it is safe.**
- **Watch out for animals, especially poisonous snakes, that may have come into buildings with the water. Use a stick to poke through debris.** Tsunami flood waters flush snakes and animals out of their homes.
- **Watch for loose plaster, drywall, and ceilings that could fall.**
- **Take pictures of the damage, both of the building and its contents, for insurance claims.**
- **Open the windows and doors to help dry the building.**
- **Shovel mud while it is still moist to give walls and floors an opportunity to dry.**
- **Check food supplies.** Any food that has come in contact with flood waters may be contaminated and should be thrown out.

Volcano

Explosive volcanoes blast hot solid and molten rock fragments and gases into the air. As a result, ashflows can occur on all sides of a volcano and ash can fall hundreds of miles downwind. Dangerous mudflows and floods can occur in valleys leading away from volcanoes. If you live near a known volcano, active or dormant, be prepared to follow instructions from your local emergency officials.

Before:

Learn about your community warning systems and emergency plans.

Be prepared for the hazards that can accompany volcanoes:

- Mudflows and flash floods
- Landslides and rockfalls
- Earthquakes
- Ashfall and acid rain
- Tsunamis

Make evacuation plans. If you live in a known volcanic hazard area, plan a route out and have a backup route in mind.

Develop an emergency communication plan. In case family members are separated from one another during a volcanic eruption (a real possibility during the day when adults are at work and children are at school), have a plan for getting back together. Ask an out-of-state relative or friend to serve as the “family contact,” because after a disaster, it’s often easier to call long distance. Make sure everyone knows the name, address, and phone number of the contact person.

Have disaster supplies on hand:

- Flashlight and extra batteries
- First aid kit and manual
- Emergency food and water
- Non-electric can opener
- Essential medicines
- Dust mask
- Sturdy shoes

Get a pair of goggles and a throw-away breathing mask for each member of the household in case of ashfall.

Contact your local emergency management office or American Red Cross chapter for more information on volcanoes.

During:

Follow the evacuation order issued by authorities.

Although it may seem safe to stay at home and wait out an eruption, if you are in a hazardous zone, doing so could be very dangerous. Stay safe. Follow authorities’ instructions and put your disaster plan into action.

Avoid areas downwind and river valleys downstream of the volcano.

If caught indoors:

- Close all windows, doors, and dampers.
- Put all machinery inside a garage or barn.
- Bring animals and livestock into closed shelters.

If trapped outdoors:

- Seek shelter indoors.
- If caught in a rockfall, roll into a ball to protect your head.
- If caught near a stream, be aware of mudflows. Move up slope, especially if you hear the roar of a mudflow.

Protect yourself during ashfall:

- Wear long-sleeved shirts and long pants.
- Use goggles to protect your eyes.
- Use a dust mask or hold a damp cloth over your face to help breathing.
- Keep car or truck engines off.

Stay out of the area defined as a restricted zone by government officials. Effects of a volcanic eruption can be experienced many miles from a volcano. Mudflows and flash flooding, wildland fires, and even deadly hot ashflow can reach you even if you cannot see the volcano during an eruption. Avoid river valleys and low lying areas. Trying to watch an erupting volcano up close is a deadly idea.

Mudflows are powerful “rivers” of mud that can move 20 to 40 mph. Hot ash or lava from a volcanic eruption can rapidly melt snow and ice at the summit of a volcano. The melt water quickly mixes with falling ash, with soil cover on lower slopes, and with debris in its path. This turbulent mixture is dangerous in stream channels and can travel more than 50 miles away from a volcano. Also intense rainfall can erode fresh volcanic deposits to form large mudflows. If you see the water level of a stream begin to rise, quickly move to high ground. If a mud-flow is approaching or passes a bridge, stay away from the bridge.

Listen to a battery-operated radio or television for the latest emergency information.

After: If possible, stay away from volcanic ashfall areas.

When outside:

- Cover your mouth and nose. Volcanic ash can irritate your respiratory system.
- Wear goggles to protect your eyes.
- Keep skin covered to avoid irritation from contact with ash.

Clear roofs of ashfall. Ashfall is very heavy and can cause buildings to collapse. Exercise great caution when working on a roof.

Avoid driving in heavy ashfall. Driving will stir up more ash that can clog engines and stall vehicles.

If you have a respiratory ailment, avoid contact with any amount of ash. Stay indoors until local health officials advise it is safe to go outside.

Remember to help your neighbors who may require special assistance — infants, elderly people, and people with disabilities.

Wildfire

More and more people are making their homes in woodland settings in or near forests, rural areas, or remote mountain sites. There, homeowners enjoy the beauty of the environment but face the very real danger of wildfire.

Wildfires often begin unnoticed. They spread quickly, igniting brush, trees, and homes. Reduce your risk by preparing now before wildfire strikes. Meet with your family to decide what to do and where to go if wildfires threaten your area. Follow the steps listed below to protect your family, home, and property.

Practice Wildfire Safety

- People start most wildfires . . . find out how you can promote and practice wildfire safety.
- Contact your local fire department, health department, or forestry office for information on fire laws. Make sure that fire vehicles can get to your home. Clearly mark all driveway entrances and display your name and address.
- Report hazardous conditions that could cause a wildfire.
- Teach children about fire safety. Keep matches out of their reach.
- Post fire emergency telephone numbers.
- Plan several escape routes away from your home by car and by foot.
- Talk to your neighbors about wildfire safety. Plan how the neighborhood could work together after a wildfire. Make a list of your neighbors' skills, such as medical or technical. Consider how you could help neighbors who have special needs, such as elderly or disabled persons. Make plans to take care of children who may be on their own if parents can't get home.

Protect Your Home

- Regularly clean roof and gutters.
- Inspect chimneys at least twice a year. Clean them at least once a year. Keep the dampers in good working order. Equip chimneys and stovepipes with a spark arrester that meets the requirements of National Fire Protection Association Code 211. (Contact your local fire department for exact specifications.)
- Use 1/2-inch mesh screen beneath porches, decks, floor areas, and the home itself. Also, screen openings to floors, roof, and attic.
- Install a smoke detector on each level of your home, especially near bedrooms; test monthly and change the batteries at least once each year.
- Teach each family member how to use the fire extinguisher (ABC type) and show them where it's kept.
- Keep a ladder that will reach the roof.
- Consider installing protective shutters or heavy fire-resistant drapes.
- Keep handy household items that can be used as fire tools: a rake, axe, handsaw or chainsaw, bucket, and shovel.

Before Wildfire Threatens

- Design and landscape your home with wildfire safety in mind.
- Select materials and plants that can help contain fire rather than fuel it.
- Use fire resistant or non-combustible materials on the roof and exterior structure of the dwelling. Or treat wood or combustible material used in roofs, siding, decking, or trim with UL-approved fire-retardant chemicals.
- Plant fire-resistant shrubs and trees. For example, hardwood trees are less flammable than pine, evergreen, eucalyptus or fir trees.

Create a 30- to 100-Foot Safety Zone Around Your Home.

- Within this area, you can take steps to reduce potential exposure to flames and radiant heat. Homes built in pine forests should have a minimum safety zone of 100 feet. If your home sits on a steep slope, standard protective measures may not suffice. Contact your local fire department or forestry office for additional information.
- Rake leaves, dead limbs, and twigs. Clear all flammable vegetation.
- Remove leaves and rubbish from under structures and dispose of them properly.
- Thin a 15-foot space between tree crowns, and remove limbs within 15 feet of the ground.
- Remove dead branches that extend over the roof.
- Prune tree branches and shrubs within 15 feet of a stovepipe or chimney outlet.
- Ask the power company to clear branches from powerlines.
- Remove vines from the walls of the home.
- Mow grass regularly.
- Clear a 10-foot area around propane tanks and the barbecue. Place a screen over the grill--use non-flammable material with mesh no coarser than one-quarter inch.
- Regularly dispose of newspapers and rubbish at an approved site. Follow local burning regulations.
- Place stove, fireplace, and grill ashes in a metal bucket, soak in water for two days, then bury the cold ashes in mineral soil.
- Store gasoline, oily rags, and other flammable materials in approved safety cans. Place cans in a safe location away from the base of buildings.
- Stack firewood at least 100 feet away and uphill from your home. Clear combustible material within 20 feet. Use only UL-approved woodburning devices.

Plan Your Water Needs

- Identify and maintain an adequate outside water source such as a small pond, cistern, well, swimming pool, or hydrant.
- Have a garden hose that is long enough to reach any area of the home and other structures on the property.
- Install freeze-proof exterior water outlets on at least two sides of the home and near other structures on the property. Install additional outlets at least 50 feet from the home.
- Consider obtaining a portable gasoline-powered pump in case electrical power is cut off.

When Wildfire Threatens

- If you are warned that a wildfire is threatening your area, listen to your battery-operated radio for reports and evacuation information. Follow the instructions of local officials.
- Back your car into the garage or park it in an open space facing the direction of escape. Shut doors and roll up windows. Leave the key in the ignition. Close garage windows and doors, but leave them unlocked. Disconnect automatic garage door openers.
- Confine pets to one room. Make plans to care for your pets in case you must evacuate.
- Arrange temporary housing at a friend or relative's home outside the threatened area.

If Advised to Evacuate, Do So Immediately

- Wear protective clothing--sturdy shoes, cotton or woolen clothing, long pants, a long-sleeved shirt, gloves, and a handkerchief to protect your face.
- Take your *Disaster Supplies Kit*.
- Lock your home.
- Tell someone when you left and where you are going.
- Choose a route away from fire hazards. Watch for changes in the speed and direction of fire and smoke.

If You're sure You Have Time, Take Steps to Protect Your Home

Inside:

- Close windows, vents, doors, venetian blinds or non-combustible window coverings, and heavy drapes. Remove lightweight curtains.
- Shut off gas at the meter. Turn off pilot lights.
- Open fireplace damper. Close fireplace screens.
- Move flammable furniture into the center of the home away from windows and sliding-glass doors.
- Turn on a light in each room to increase the visibility of your home in heavy smoke.

Outside:

- Seal attic and ground vents with pre-cut plywood or commercial seals.
- Turn off propane tanks.
- Place combustible patio furniture inside.
- Connect the garden hose to outside taps.
- Set up the portable gasoline-powered pump.
- Place lawn sprinklers on the roof and near above-ground fuel tanks. Wet the roof.
- Wet or remove shrubs within 15 feet of the home.
- Gather fire tools.

Emergency Supplies

When wildfire threatens, you won't have time to shop or search for supplies. Assemble a *Disaster Supplies Kit* with items you may need if advised to evacuate. Store these supplies in sturdy, easy-to-carry containers such as backpacks, duffelbags, or trash containers.

Include:

- A three-day supply of water (one gallon per person per day) and food that won't spoil.
- One change of clothing and footwear per person and one blanket or sleeping bag per person.
- A first aid kit that includes your family's prescription medications.
- Emergency tools including a battery-powered radio, flashlight, and plenty of extra batteries.
- An extra set of car keys and a credit card, cash, or traveler's checks.
- Sanitation supplies.
- Special items for infant, elderly or disabled family members.
- An extra pair of eyeglasses.
- Keep important family documents in a waterproof container. Assemble a smaller version of your kit to keep in the trunk of your car.

Create a Family Disaster Plan

Wildfire and other types of disasters--hurricane, flood, tornado, earthquake, hazardous materials spill, winter storm--can strike quickly and without warning. You can cope with disaster by preparing in advance and working together. Meet with your family to create a disaster plan. To get started. . .

Contact your local Red Cross chapter

- Find out about the hazards in your community.
- Ask how you would be warned.
- Find out how to prepare for each type of disaster.

Meet With Your Family

- Discuss the types of disasters that could occur.
- Explain how to prepare and respond to each type of disaster.
- Discuss where to go and what to bring if advised to evacuate.
- Practice what you have discussed.

Plan How Your Family Will Stay in Contact if Separated by Disaster

- Pick two meeting places:
 - A place a safe distance from your home in case of a home fire.
 - A place outside your neighborhood in case you can't return home.
- Choose an out-of-state friend as a "check-in contact" for everyone to call.

Complete These Steps

- Post emergency telephone numbers by every phone.
- Show responsible family members how and when to shut off water, gas, and electricity at main switches.
- Contact your local fire department to learn about home fire hazards.
- Learn first aid and CPR. Contact your local American Red Cross chapter for information and training.

Winter Storm

Prepare a Winter Storm Plan

- Have extra blankets on hand.
- Ensure that each member of your household has a warm coat, gloves or mittens, hat, and water-resistant boots.

Assemble a Disaster Supplies Kit Containing--

- First aid kit and essential medications.
- Battery-powered NOAA Weather radio, flashlight, and extra batteries.
- Canned food and can opener.
- Bottled water (at least one gallon of water per person per day to last at least 3 days).
- Extra warm clothing, including boots, mittens, and a hat.
- Assemble a Disaster Supplies Kit for your car, too.
- Have your car winterized before winter storm season.

Stay Tuned for Storm Warnings. . .

- Listen to NOAA Weather Radio and your local radio and TV stations for updated storm information.

Know What Winter Storm WATCHES and WARNINGS Mean

- A winter storm WATCH means a winter storm is possible in your area.
- A winter storm WARNING means a winter storm is headed for your area.
- A blizzard WARNING means strong winds, blinding wind-driven snow, and dangerous wind chill are expected. Seek shelter immediately!

When a Winter Storm WATCH is Issued...

- Listen to NOAA Weather Radio, local radio, and TV stations, or cable TV such as The Weather Channel for further updates.
- Be alert to changing weather conditions.
- Avoid unnecessary travel.

When a Winter Storm WARNING is Issued...

- Stay indoors during the storm.
- If you must go outside, several layers of lightweight clothing will keep you warmer than a single heavy coat. Gloves (or mittens) and a hat will prevent loss of body heat. Cover your mouth to protect your lungs.
- Understand the hazards of wind chill, which combines the cooling effect of wind and cold temperatures on exposed skin.
- As the wind increases, heat is carried away from a person's body at an accelerated rate, driving down the body temperature.
- Walk carefully on snowy, icy, sidewalks.
- After the storm, if you shovel snow, be extremely careful. It is physically strenuous work, so take frequent breaks. Avoid overexertion.
- Avoid traveling by car in a storm, but if you must...

- Carry a Disaster Supplies Kit in the trunk.
- Keep your car's gas tank full for emergency use and to keep the fuel line from freezing.
- Let someone know your destination, your route, and when you expect to arrive. If your car gets stuck along the way, help can be sent along your predetermined route.

If You Do Get Stuck...

- Stay with your car. Do not try to walk to safety.
- Tie a brightly colored cloth (preferably red) to the antenna for rescuers to see.
- Start the car and use the heater for about 10 minutes every hour. Keep the exhaust pipe clear so fumes won't back up in the car.
- Leave the overhead light on when the engine is running so that you can be seen.
- As you sit, keep moving your arms and legs to keep blood circulating and to stay warm.
- Keep one window away from the blowing wind slightly open to let in air.

What to Do After a Winter Storm

- **Continue listening to local radio or television stations or a NOAA Weather Radio for updated information and instructions.** Access may be limited to some parts of the community, or roads may be blocked.
- **Help a neighbor who may require special assistance--infants, elderly people, and people with disabilities.** Elderly people and people with disabilities may require additional assistance. People who care for them or who have large families may need additional assistance in emergency situations.
- **Avoid driving and other travel until conditions have improved.** Roads may be blocked by snow or emergency vehicles.
- **Avoid overexertion.** Heart attacks from shoveling heavy snow are a leading cause of deaths during winter.
- **Follow forecasts and be prepared when venturing outside.** Major winter storms are often followed by even colder conditions.