



# Community Emergency Guide



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# GET PREPARED

## MEDICAL EMERGENCIES

In case of a medical emergency:

- Dial 911 (if your community does not have a designated number, call fire, police, or emergency medical services, or dial "0" for the operator)
- Stay calm
- Don't hang up on emergency dispatchers
- Answer all questions clearly

## FOR COMMUNITY-WIDE EMERGENCIES

Turn the TV to emergency broadcast stations, watch the local news or listen to the radio for further instructions. Keep the phone lines clear as much as possible. Phone lines will be needed for official business.

A disaster can strike anywhere at any time. Being prepared can help decrease fear and anxiety and may possibly reduce the impact to your family. Should a disaster occur in your community, you may need to shelter in place, evacuate or stay in a public shelter. Depending on the type of disaster, local responders may not be able to reach you immediately. Therefore, you need to be ready to be self-sufficient until you can get the necessary assistance. This includes caring for your basic medical needs. This booklet is intended to give you possible suggestions and information you may want to include in an emergency plan for your family. It is not all-inclusive and should be modified as needed based on your specific needs.

Knowing what to do before during and after an emergency or disaster can help you protect yourself and your family.

## BEFORE AN EMERGENCY EVENT

- Be aware of emergencies/disasters that could occur in your community
- Develop a plan for what your family would do
- Have an emergency kit assembled
- Write down instructions on how to turn off electricity, gas, and water service to your property.
- Familiarize each member of your household with the location of shut-offs and how they operate
- Know where to go if you must evacuate; map out an evacuation route
- Contact your municipality's Emergency Management Coordinator for information about shelters in your area
- Keep insurance policies, household inventories, valuables, and other important papers in a safe deposit box
- Have and learn to use a fire extinguisher

## DURING AN EMERGENCY EVENT

- Put your plan in action
- Follow the recommendations of local emergency officials
- Assist others if possible

## AFTER AN EMERGENCY EVENT

- Assess damages
- Make needed repairs
- Reassess your emergency plan and make any needed adjustments



Persons with special needs may require additional consideration when planning for emergencies. Some considerations may include, but not limited to:

- Register with the office of emergency services or local fire department
- Where possible, have other trained in caring for the individual with special needs, this includes operating medical equipment
- Let neighbors know you may need additional assistance in an emergency
- Have an escape plan for individuals on a second floor or in a high rise building
- Keep battery operated equipment charged
- Where possible have extra medical supplies and medications available
- Keep a list of emergency numbers accessible
- Make provisions to be able to keep medications that need to be refrigerated cold

Safety skills that may prove beneficial during emergency events may include, but are not limited to:

- CPR
- First aid
- Use of a fire extinguisher

## ESCAPE PLAN

Draw a floor plan of your home. Be sure to mark exits, locations for utility shut offs and safety equipment like fire extinguishers, disaster supplies, etc.



## PREPARE A DISASTER KIT

In an emergency, you may not have time to search for needed supplies. Emergency events can result in an outage of basic services such as water, electricity, phones, internet, gas and sewage for days or sometimes weeks. Assemble a disaster kit to be ready at moment's notice. Disaster kits will be specific based on the needs of each individual/family.

The following list of items are recommended to be included in your disaster kit:

- Special needs items, such as prescription medications, eye glasses, contact lens solutions, and hearing aid batteries
- Medical supplies
- Style and model number of any required medical devices
- Water. Three-day supply/ one gallon of water per person per day

- Food. Three-day supply of non-perishable food
- Baby items - formula, diapers
- Flashlight and batteries
- First aid kit
- Portable radio with batteries
- Prescriptions and phone numbers of physicians and pharmacist
- 2 Blankets or a sleeping bag for each person
- Extra clothing
  - In cold weather
    - Jacket/coat
    - Hat, scarf, gloves
    - Boots/rain boots
    - Long pants/long sleeve shirt/sweatshirt
- Sanitation and hygiene items
- Whistle
- Matches in a water proof container
- Cash
- Copies of identification, insurance cards, credit cards, etc.
- Emergency numbers

This list is not all inclusive. Be sure you evaluate the needs of each member of the family and include all necessary items in the disaster kit. Be sure to review all supplies on a regular basis. Ensure all supplies are in working order and replaced expired items. The patient Go Bag should also go with the patient if an evacuation is necessary.

## BE PREPARED! THE LIFE YOU SAVE MAY BE YOUR OWN!

### EMERGENCY WEBSITE RESOURCE LIST

Resource	URL
USA.gov	<a href="https://www.usa.gov/prepare-for-disasters">https://www.usa.gov/prepare-for-disasters</a>
Ready.gov	<a href="https://www.ready.gov/">https://www.ready.gov/</a>
FEMA Preparing for Disaster for People with Disabilities and other Special Needs	<a href="https://www.fema.gov/media-library/assets/documents/897">https://www.fema.gov/media-library/assets/documents/897</a>
Red Cross	<a href="http://www.redcross.org/get-help/how-to-prepare-for-emergencies">http://www.redcross.org/get-help/how-to-prepare-for-emergencies</a>
American Red Cross Find Open Shelters	<a href="http://www.redcross.org/get-help/disaster-relief-and-recovery-services/find-an-open-shelter">http://www.redcross.org/get-help/disaster-relief-and-recovery-services/find-an-open-shelter</a>
American Red Cross Safe and Well	<a href="https://safeandwell.communityos.org/cms/index.php">https://safeandwell.communityos.org/cms/index.php</a>
Centers for Disease Control and Prevention	<a href="https://emergency.cdc.gov/preparedness/index.asp">https://emergency.cdc.gov/preparedness/index.asp</a>
National Weather Service	<a href="http://www.nws.noaa.gov/education.html">www.nws.noaa.gov/education.html</a>
Department of Health and Human Services	<a href="http://www.hhs.gov/disasters">www.hhs.gov/disasters</a>
Department of Health and Human Services/ Disaster APPs	<a href="https://sis.nlm.nih.gov/dimrc/disasterapps.html">https://sis.nlm.nih.gov/dimrc/disasterapps.html</a>
Institute for Business and Home Safety	<a href="http://www.ibhs.org">www.ibhs.org</a>
Nuclear Regulatory Commission	<a href="http://www.nrc.gov">www.nrc.gov</a>
Disaster Assistance	<a href="https://www.disasterassistance.gov/information/disaster-types">https://www.disasterassistance.gov/information/disaster-types</a>
State Health & Human Services	<a href="https://healthfinder.gov/FindServices/SearchOrgType.aspx?OrgTypeID=8">https://healthfinder.gov/FindServices/SearchOrgType.aspx?OrgTypeID=8</a>
FEMA Emergency Management Agencies	<a href="https://www.fema.gov/emergency-management-agencies">https://www.fema.gov/emergency-management-agencies</a>

Include this plan with your emergency kit. Save an electronic version and email it to yourself as a backup.

## EMERGENCY CONTACT

Name: \_\_\_\_\_ City: \_\_\_\_\_  
Cell Phone: \_\_\_\_\_ Home Phone: \_\_\_\_\_ Work Phone: \_\_\_\_\_

*If you are having trouble placing a phone call, try sending a text message instead. They use less bandwidth on the networks and may be more reliable in emergency situations.*

## OUT-OF-STATE EMERGENCY CONTACT

Name: \_\_\_\_\_ City: \_\_\_\_\_  
Cell Phone: \_\_\_\_\_ Home Phone: \_\_\_\_\_ Work Phone: \_\_\_\_\_

*This contact is important because local phone service may be disrupted in emergencies, but long-distance calls may still connect.*

## EMERGENCY TELEPHONE NUMBERS

EMERGENCIES: **911**

Free information about health and human services in your area: **211**

Poison Control: **1-800-222-1222**

Non-Emergency Local Police: \_\_\_\_\_

Other: \_\_\_\_\_

## MEETING SPOTS

- Neighborhood Meeting Spot: \_\_\_\_\_
  - Address: \_\_\_\_\_
  - Phone: \_\_\_\_\_
  
- Outside of Neighborhood Meeting Spot: \_\_\_\_\_
  - Address: \_\_\_\_\_
  - Phone: \_\_\_\_\_
  - Additional Instructions: \_\_\_\_\_

*If you are separated from other members of your household in an emergency situation, The Red Cross Safe and Well website allows you to list yourself as 'safe and well' and to search for others who have registered. <https://safeandwell.communityos.org>*

## WORK AND SCHOOL INFORMATION

- Work: \_\_\_\_\_
  - Work Phone: \_\_\_\_\_
- Work: \_\_\_\_\_
  - Work Phone: \_\_\_\_\_

Emergency Plan Info/Evacuation Locations: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- School: \_\_\_\_\_
  - School Phone: \_\_\_\_\_
- School: \_\_\_\_\_
  - School Phone: \_\_\_\_\_

Emergency Plan Info/Evacuation Locations: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# HOUSEHOLD DISASTER PLAN

## INSURANCE INFORMATION

Homeowners/Rental: \_\_\_\_\_ Policy #: \_\_\_\_\_ Phone #: \_\_\_\_\_  
Auto: \_\_\_\_\_ Policy #: \_\_\_\_\_ Phone #: \_\_\_\_\_  
Health: \_\_\_\_\_ Policy #: \_\_\_\_\_ Phone #: \_\_\_\_\_

## HEALTH INFORMATION FOR OTHER HOUSEHOLD MEMBERS

Name: \_\_\_\_\_  
Date of Birth: \_\_\_\_\_  
Medical Conditions: \_\_\_\_\_  
Medications: \_\_\_\_\_  
Doctor: \_\_\_\_\_  
Doctor Phone: \_\_\_\_\_  
Doctor Address: \_\_\_\_\_  
Pharmacist: \_\_\_\_\_  
Additional Info: \_\_\_\_\_  
\_\_\_\_\_

Name: \_\_\_\_\_  
Date of Birth: \_\_\_\_\_  
Medical Conditions: \_\_\_\_\_  
Medications: \_\_\_\_\_  
Doctor: \_\_\_\_\_  
Doctor Phone: \_\_\_\_\_  
Doctor Address: \_\_\_\_\_  
Pharmacist: \_\_\_\_\_  
Additional Info: \_\_\_\_\_  
\_\_\_\_\_

Name: \_\_\_\_\_  
Date of Birth: \_\_\_\_\_  
Medical Conditions: \_\_\_\_\_  
Medications: \_\_\_\_\_  
Doctor: \_\_\_\_\_  
Doctor Phone: \_\_\_\_\_  
Doctor Address: \_\_\_\_\_  
Pharmacist: \_\_\_\_\_  
Additional Info: \_\_\_\_\_  
\_\_\_\_\_

Name: \_\_\_\_\_  
Date of Birth: \_\_\_\_\_  
Medical Conditions: \_\_\_\_\_  
Medications: \_\_\_\_\_  
Doctor: \_\_\_\_\_  
Doctor Phone: \_\_\_\_\_  
Doctor Address: \_\_\_\_\_  
Pharmacist: \_\_\_\_\_  
Additional Info: \_\_\_\_\_  
\_\_\_\_\_

## PETS

Name: \_\_\_\_\_  
Type of pet: \_\_\_\_\_  
Veterinarian: \_\_\_\_\_  
Vet Phone: \_\_\_\_\_  
Medical Conditions: \_\_\_\_\_  
Medications: \_\_\_\_\_  
Additional Info: \_\_\_\_\_  
\_\_\_\_\_

Name: \_\_\_\_\_  
Type of pet: \_\_\_\_\_  
Veterinarian: \_\_\_\_\_  
Vet Phone: \_\_\_\_\_  
Medical Conditions: \_\_\_\_\_  
Medications: \_\_\_\_\_  
Additional Info: \_\_\_\_\_  
\_\_\_\_\_

Keep copies of bank account and credit card information in a safe location along with this plan.

# ENVIRONMENTAL EVENTS



# AFTER A DISASTER

After an environmental disaster, there are special considerations for our patients who use medical devices. There are also things to consider regarding access to clean water for consumption or medical care.

## FDA RECOMMENDATIONS FOR MEDICAL DEVICES AND DISASTERS

In the aftermath of Hurricane Katrina, and in preparation for other disaster situations, the FDA provides tips to help people who use medical devices. <http://www.fda.gov/oc/opacom/hottopics/hurricane.html>

### General Safety

- Keep your device and supplies clean and dry.
- If you depend on your device to keep you alive, seek emergency services immediately. If possible, notify your local Public Health Authority to request evacuation prior to adverse weather events.
- Always use battery powered flashlights or lanterns rather than gas lights or torches when oxygen is in use (to minimize the risk of fire).
- If your device appears to be damaged, or if you need a back-up device, contact your distributor or device manufacturer.
- Check all power cords and batteries to make sure they are not wet or damaged by water. If electrical circuits and electrical equipment have gotten wet, turn off the power at the main breaker.
- Maintain your device only in a well-lit area so you can assess your device's performance (e.g., refilling your insulin pump, checking your glucose meter).
- Keep your device in as clean and secure location as possible: off the ground, away from animals or crowded areas.
- Always check your device for pests before you use it (e.g., syringes, mechanical devices).

### Power Outage

- Notify your electric company and fire department to let them know you have a medical device that needs power (e.g., ventilator, apnea monitor).
- Read your user instructions or call your distributor or device manufacturer to find out if your device can be used with batteries or a generator.
- Locate a generator if possible.
- Make sure you check for water before plugging in your device. Do not plug in a power cord if the cord or the device is wet.
- When the power is restored, check to make sure the settings on your medical device have not changed (often medical devices reset to a default mode when power is interrupted).

## **WARNING: POTENTIAL CARBON MONOXIDE PROBLEMS WHILE USING GENERATORS**

Since many medical devices used in the home require a source of electrical power, generators are often used to supply electricity during a general power outage. The following points should

be followed to prevent carbon monoxide poisoning.

- Never run a generator, pressure washer, or any gasoline-powered engine inside a basement, garage, or other enclosed structure, even if the doors or windows are open, unless the equipment is professionally installed and vented.
- Never run a motor vehicle, generator, pressure washer, or any gasoline-powered engine outside an open window or door where exhaust can vent into an enclosed area.

## WATER CONTAMINATION

Some medical devices and equipment, such as dialyzers or IV pumps, require safe water in their use, cleaning, and maintenance.

Disasters, especially if accompanied by a tidal surge or flooding, can contaminate the public water supply. In the area hit by a disaster, water treatment plants may not be operating; even if they are, storm damage and flooding can contaminate water lines. **Listen for public announcements about the safety of the municipal water supply.**

In an emergency situation, follow these steps to ensure that your water is safe for use with your medical device:

- Use only bottled, boiled, or treated water until your supply is tested and found safe.
- If you use bottled water, be sure it came from a safe source. If you do not know that the water came from a safe source, you should boil or treat it before you use it.
- Boiling water, when practical, is the preferred way to kill harmful bacteria and parasites. Bringing water to a rolling boil for 1 minute will kill most organisms.
- When boiling water is not practical, you can treat water with chlorine tablets, iodine tablets, or unscented household chlorine bleach (5.25% sodium hypochlorite).
- If you use household chlorine bleach, add 1/8 teaspoon (~0.75 mL) of bleach per gallon of water if the water is clear. For cloudy water, add 1/4 teaspoon (~1.50 mL) of bleach per gallon. Mix the solution thoroughly and let it stand for about 30 minutes before using it.

**Note: Treating water with chlorine tablets, iodine tablets, or liquid bleach will not kill parasitic organisms.**

Use a bleach solution to rinse water containers before reusing them. Use water storage tanks and other types of containers with caution. For example, fire truck storage tanks and previously used cans or bottles may be contaminated with microbes or chemicals.

### Sterility

- When performing medical procedures, maintain a clean environment by using bleach, alcohol, or a disinfectant in the area you are working (e.g., catheter changes, dressing changes, suctioning).
- Check sterile packaging to make sure it is dry and intact (e.g., sterile gauze).
- When you purchase supplies, always check the packaging to make sure it hasn't been damaged.

## REUSE OF MEDICAL DEVICES

- Do not reuse a medical device intended for single use.
- If you have supplies that are intended for multiple use with your medical device, follow all the

procedures for cleaning and disinfecting. If you find that you need additional single use products, contact a healthcare provider or emergency response personnel.

- If your device or its components can be cleaned with sterile water, follow the above procedures for ensuring that your water is safe. For some medical devices, other cleaning agents may be specified by the manufacturer.

## **MEDICAL DEVICES THAT HAVE BEEN EXPOSED TO HEAT AND/OR HUMIDITY**

### **FDA advice regarding medical devices that have been exposed to unusual levels of heat and humidity**

Many medical devices may not function correctly if they have been exposed to high levels of heat or humidity. The manufacturer's instructions in the product labeling may describe the device's tolerance levels for heat and humidity. Medical devices may not function properly outside the tolerance levels recommended in the product labeling.

Unusually high levels of heat and humidity may:

- Cause instruments to operate in unexpected or unusual ways;
- Reduce shelf-lives or totally destroy products;
- Cause laboratory reagents to lose potency; or
- Compromise the sterility of packaged devices.

Many devices that require specific storage requirements are not safe if those requirements have been violated. If there are no specific storage requirements listed on the packaging, and the device appears to be working properly, you may continue using the device. If you have any questions about whether or not the device is working properly, or if you cannot locate the product labeling, contact the product manufacturer.

### **Electrical Equipment**

#### **Do not use electrical equipment if the power cord or device is wet!**

If electronic devices are exposed to water or high levels of humidity, they may not operate properly. Before using the device, make sure to:

- Dry the device thoroughly. Wipe the outside of the device with a dry cloth and check that power cords and electronic components are dry.
- Check all settings and alarms to make sure that they are working properly. Some devices reset to a default mode when the power is interrupted.

*Note: As area power networks are restored, voltage levels may continue to fluctuate even after electricity has returned.*

*This may cause devices to reset or operate improperly.*

- Run self-tests and quality control checks often to make sure the device is working properly.
- If a medical device is not working properly, turn it off and do not use it. Depending on the extent of the damage, the device may be able to be repaired or refurbished.

### **Laboratory Reagents and Test Kits**

Most laboratory reagents and test kits require controlled levels of heat and humidity. If your reagents

have been exposed to levels of heat or humidity that exceed those listed in the product packaging, the test results may not be accurate. Run quality control checks and follow all instructions on the product packaging. Do not use reagents or test kits that give inaccurate results.

### **Packaged Devices**

Always check devices before using them to make sure that seals and packaging are intact. If there is any water damage or breaks in the package seal, you should assume that the sterility of the product has been compromised. There are two types of medical devices: single-use devices and reusable devices.

#### **Single Use Devices**

- If the device is damaged or dirty (for example, a bandage or a pulse oximeter), you should discard the device and not use it.
- If the device packaging is open, but the device has not been used (i.e. sutures), you should check with the original manufacturer to see how to re-sterilize the device.

#### **Reusable Devices**

- If a reusable device is not visibly clean, it should be cleaned and dried before it is repackaged and sterilized.
- If you need to re-sterilize a reusable device, check the original device packaging to see how the device was originally sterilized. Always package and sterilize the device using the same methods that were used originally.

## **SPECIAL INFORMATION REGARDING BLOOD GLUCOSE METERS**

- Heat and humidity can damage blood glucose meters and test strips.
- If you use a blood glucose meter, store and handle the meter and test strips according to the instructions and test strip packaging.
- Perform frequent quality-control checks to make sure that your glucose testing is accurate and reliable.

## **FOR FURTHER INFORMATION CONTACT YOUR LOCAL:**

- County Health Department \_\_\_\_\_
- American Red Cross \_\_\_\_\_
- Emergency Management Agency \_\_\_\_\_
- Emergency Medical Services \_\_\_\_\_

# DROUGHT

The Department of Homeland Security has compiled helpful tips to help you prepare for and react during a drought. Nearly every part of our country experiences periods of reduced rainfall. If we plan for drought, then we can enjoy the benefits of normal or rainy years and not get caught unprepared in dry years.<sup>1</sup>

## BEFORE A DROUGHT

One of the best ways to prepare for a drought is to conserve water. Making these practices part of your daily life will help to preserve water, an essential natural resource.

### Indoor-General

- Never pour water down the drain when there may be another use for it. For example, use it to water your indoor plants or garden.
- Repair dripping faucets by replacing washers. One drop per second wastes 2,700 gallons of water per year.
- Check all plumbing for leaks and have any leaks repaired by a plumber.
- Retrofit all household faucets by installing aerators with flow restrictors.
- Install an instant hot water heater on your sink.
- Insulate your water pipes to reduce heat loss and prevent them from breaking.
- Install a water-softening system only when the minerals in the water would damage your pipes. Turn the softener off while on vacation.
- Choose appliances that are more energy and water efficient.

### Bathroom

- 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.
- Install a toilet displacement device to cut down on the amount of water needed to flush. Place a one-gallon plastic jug of water into the tank to displace toilet flow (do not use a brick, it may dissolve and loose pieces may cause damage to the internal parts). Be sure installation does not interfere with the operating parts.
- Replace your showerhead with an ultra-low-flow version.

### Kitchen

- Start a compost pile as an alternate method of disposing of food waste or simply dispose of food in the garbage. (Kitchen sink disposals require a lot of water to operate properly).

### Outdoor-General

- Check your well pump periodically. If the automatic pump turns on and off while water is not being used, you have a leak.
- Plant native and/or drought-tolerant grasses, ground covers, shrubs, and trees. Once established, plants adapted to your local climate do not need water as frequently and usually will survive a dry period without watering. 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, such as micro and drip irrigation, and soaker hoses.
- Use mulch to retain moisture in the soil. 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 re-circulated water.
- Consider rainwater harvesting where practical.
- Contact your local water provider for information and assistance.

### Lawn Care

- Position sprinklers so water lands on the lawn and shrubs and not on paved areas.
- Repair sprinklers that spray a fine mist. Most misting issues result from a pressure problem, properly regulating pressure in an irrigation system will prevent misting.
- Check sprinkler systems and timing devices regularly to be sure they operate properly.
- 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.

<sup>1</sup> <https://www.ready.gov/drought>



# DROUGHT

(continued)

- Plant drought-resistant lawn seed. Reduce or eliminate lawn areas that are not used frequently.
- Avoid over-fertilizing your lawn. Applying fertilizer increases the need for water. Apply fertilizers that contain slow-release, water-insoluble forms of nitrogen.
- Choose a water-efficient irrigation system such as drip irrigation for your trees, shrubs, and flowers.
- Turn irrigation down in fall and off in winter. Water manually in winter only if needed.
- Put a layer of mulch around trees and plants to reduce evaporation and keep the soil cool. Organic mulch also improves the soil and prevents weeds.
- Invest in a weather-based irrigation controller—or a smart controller. These devices will automatically adjust the watering time and frequency based on soil moisture, rain, wind, and evaporation and transpiration rates. Check with your local water agency to see if there is a rebate available for the purchase of a smart controller.

## Pool

- Install 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.

## DURING A DROUGHT

Always observe state and local restrictions on water use during a drought. If restricted, for example, do not water your lawn, wash your car, or other non-essential uses, to help ensure there is enough water for essential uses. Contact your state or local government for current information and suggestions.

### Bathroom

- Avoid flushing the toilet unnecessarily. Dispose of tissues, insects, and other similar waste in the trash rather than the toilet.
- Avoid taking baths—take short showers—turn on water only to get wet and lather and then again to rinse off.
- Avoid letting the water run while brushing your teeth, washing your face or shaving.
- Place a bucket in the shower to catch excess water for watering plants.

### Kitchen

- Operate automatic dishwashers only when they are fully loaded. Use the "light wash" feature, if available, to use less water.
- Hand wash dishes by filling two containers—one with soapy water and the other with rinse water containing a small amount of chlorine bleach.
- Clean vegetables in a pan filled with water rather than running water from the tap.

- Store drinking water in the refrigerator. Do not let the tap run while you are waiting for water to cool.
- Avoid wasting 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.
- Avoid rinsing dishes before placing them in the dishwasher; just remove large particles of food. (Most dishwashers can clean soiled dishes very well, so dishes do not have to be rinsed before washing)
- Avoid using running water to thaw meat or other frozen foods. Defrost food overnight in the refrigerator or use the defrost setting on your microwave oven.

### Laundry

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

### Car Washing

- Use a commercial car wash that recycles water.
- If you wash your own car, use a shut-off nozzle that can be adjusted down to a fine spray on your hose.

### Lawn Care

- Avoid over watering your lawn and water only when needed:
- 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. 14

# DROUGHT

(continued)

- Check the soil moisture levels with a soil probe, spade or large screwdriver. You don't need to water if the soil is still moist. If your grass springs back when you step on it, it doesn't need water yet.
- If your lawn does require watering, do so early in the morning or later in the evening, when temperatures are cooler.
- Check your sprinkler system frequently and adjust sprinklers so only your lawn is watered and not the house, sidewalk, or street.
- Water in several short sessions rather than one long one, in order for your lawn to better absorb moisture and avoid runoff.
- Use a broom or blower instead of a hose to clean leaves and other debris from your driveway or sidewalk.
- Avoid leaving sprinklers or hoses unattended. A garden hose can pour out 600 gallons or more in only a few hours.
- In extreme drought, allow lawns to die in favor of preserving trees and large shrubs.

# EARTHQUAKE

According to FEMA, an earthquake is a sudden movement of the earth, caused by the abrupt release of strain that has accumulated over a long time. For hundreds of millions of years, the forces of plate tectonics have shaped the earth, as the huge plates that form the earth's surface slowly move over, under, and past each other. Sometimes, the movement is gradual. At other times, the plates are locked together, unable to release the accumulating energy. When the accumulated energy grows strong enough, the plates break free, causing an earthquake.<sup>1</sup>

## TERMINOLOGY

- **Earthquake**  
A sudden slipping or movement of a portion of the earth's crust, accompanied and followed by a series of vibrations.
- **Aftershock**  
An earthquake of similar or lesser intensity that follows the main earthquake.
- **Epicenter**  
The place on the earth's surface directly above the point on the fault where the earthquake rupture began. Once fault slippage begins, it expands along the fault during the earthquake and can extend hundreds of miles before stopping.
- **Seismic Waves**  
Vibrations that travel outward from the earthquake fault at speeds of several miles per second. Although fault slippage directly under a structure can cause considerable damage, the vibrations of seismic waves cause most of the destruction during earthquakes.
- **Magnitude**  
The amount of energy released during an earthquake, which is computed from the amplitude of the seismic waves. A magnitude of 7.0 on the Richter Scale indicates an extremely strong earthquake. Each whole number on the scale represents an increase of about 30 times more energy released than the previous whole number represents. Therefore, an earthquake measuring 6.0 is about 30 times more powerful than one measuring 5.0<sup>1</sup>

## DURING AN EARTHQUAKE

- **If you are indoors**, duck or drop down to the floor. Take cover under a sturdy desk, table or other furniture. Hold on to it and be prepared to move with it. Hold the position until the ground stops shaking and it is safe to move. Stay clear of windows, fireplaces, and heavy furniture or appliances. Don't rush outside. You may be injured by falling glass or building parts. DO NOT try using the stairs or elevators while the building is shaking or while there is danger of being hit by falling glass or debris.
- **If you are outside**, get into the open, away from buildings and power lines.
- **If you are driving**, stop if it is safe — but stay inside. DO NOT stop on or under a bridge, overpass or tunnel. Move your car as far out of the normal traffic pattern as possible. DO NOT stop under trees, light posts, electrical power lines or signs.
- **If you are in a mountainous area**, be alert for falling rock and other debris that could be loosened by the quake.
- **In a crowded public place**, DO NOT rush for the exits. Stay calm and encourage others to do so.

## PREPARE FOR AN EARTHQUAKE

### Evaluate Your Home

Check that:

- The water heater is braced, anchored, or strapped to prevent tipping.
- Your house is attached to its foundation with bolts through the sill.

<sup>1</sup> United States, Congress, "Are You Ready? An In-Depth Guide to Citizen Preparedness, IS-22 August 2004." *Are You Ready? An In-Depth Guide to Citizen Preparedness, IS-22 August 2004*, Publisher not identified, 2004, p. 94.

# EARTHQUAKE

(continued)

- The perimeter foundation cripple walls (the walls that enclose the crawl space under your home) are properly braced.
- Mobile homes should be securely anchored to the ground or a certified earthquake-resistant bracing system installed.
- Children's play areas are located away from earthquake hazards, such as brick walls or chimneys.

## Stock Emergency Supplies

Be sure you have these basic supplies on hand and in an accessible location:

- A good fire extinguisher.
- Portable radio and extra batteries (long-life alkaline batteries are best; store in a cool, dry place).
- Flashlights and extra batteries. Any two-battery cell flashlights are excellent. Lights using more than two D battery cells, or any lights requiring higher voltage batteries, should be of the sealed "safety" type.
- First-aid kit and handbook.
- Enough drinkable water for each family member for at least three days: allow 1 gallon

per person per day. Keep a canteen of water in the car, too.

- Food (canned foods, mechanical can opener, and powdered milk for at least one week's meals.)
- Required medications, glasses.
- Pipe or crescent wrenches to turn off gas and water supplies.
- Alternate means of cooking like a barbecue or camp stove. These must be used outdoors. Be sure to store fuel matches and lighters out of children's reach.
- Blankets, warm clothes, and sturdy shoes.
- Waterproof, heavy-duty plastic bags for waste disposal.

The above emergency supplies list is for the home. Keep many of the same supplies in your car and at your place of work. Twice a year, inspect emergency items for leakage and quality.

## Know the Following:

- The safest places in your home. They should be away from heavy furniture or appliances, masonry veneers (such as fireplaces), and large windows, pictures, bookcases or mirrors.
- Where your gas, electric and water main shutoffs are. Know how to turn each off. If in doubt, ask your utility company.
- Your family plan for when the earthquake occurs, including:
  - A place where your family can reunite after the earthquake. You may be at work when the earthquake occurs, or the children may be in school. Know the earthquake plan developed by your children's school. You may have to stay at your workplace for a day or two following

a major earthquake. Transportation and communication may be disrupted. Do not expect 9-1-1 to be available.

- Who to call out of the area for family notification. Select a relative or friend out of the immediate area to act as a contact for information about your family. It will probably be easier to place a call out of the earthquake area, so all family members should call this contact to report their location and condition. Make sure this contact name and number is on school and work records, as well as known to other friends and relatives.
- The locations of your nearest fire and police stations, and local emergency medical facility.



# EARTHQUAKE

(continued)

- Listen to your radio for emergency broadcast information.
- Do not use the telephone except for emergencies.

## ORGANIZE YOUR NEIGHBORHOOD

It may take up to 72 hours or longer for emergency assistance to reach you after a major earthquake. You and your neighbors will have to depend on one another until help arrives. Just like your family, your neighbors will be better able to cope with the aftermath of an earthquake if everyone is prepared. Communities with an existing program such as "Neighborhood Watch," should include earthquake preparedness. Use the following checklist to organize a self-help group. To encourage participation, try passing out newspaper clippings along with the questionnaire right after a recent earthquake.

- Schedule a meeting of your neighbors to discuss earthquake preparedness. Your Office of Emergency Services, American Red Cross Chapter, or fire department can help with speakers, films and printed materials. You should include your building manager and landlord, if applicable.
- Distribute the questionnaire in person before the meeting. It should ask the following:
  - Number of residents per household.
  - Home phone number.
  - Work address and phone number.
  - Name, address and phone number of school(s).
  - Phone numbers of friends, relatives and out-of-area contact.
  - Special skills, such as nursing or radio operation that could be helpful in an emergency.
- At the meeting, assign emergency tasks to each person. Assign enough work to maintain interest but not enough to discourage volunteers. Try matching assignments with special skills. The Medical Officer should have professional skills or first aid training. Radio amateurs could handle communications. Plumbers and electricians could help restore utility service.
- These same suggestions apply to the workplace. If your employer hasn't mentioned earthquake plans, ask what arrangements have been made.

## AFTER AN EARTHQUAKE

### Check for injuries.

- If a person is not breathing, open the airway. If after a few seconds the victim is still not breathing, immediately begin Rescue Breathing.
- If a person is bleeding, put pressure over the wound. Use clean gauze or cloth, if available.
- DO NOT attempt to move seriously injured persons unless they are in immediate danger of further injury.
- Cover the injured with blankets to keep warm.

### Check for the following potential risks:

- Fire or fire hazards.
- Gas leaks. Shut off the main gas valve if you suspect or identify the odor of natural gas. Ask the gas company to check it and turn it back on.
- Shut off power at the control box if there is any damage to your house wiring.
- DO NOT touch downed power lines or objects of any kind touching them.

- Approach chimneys with caution. They may be weakened and could topple during an aftershock. Don't use a damaged chimney. It could start a fire.
- Immediately clean up any spilled medicines, drugs or other potentially harmful materials such as bleach, lye, gasoline or other petroleum products without endangering yourself.
- Beware of items tumbling off shelves when you open cabinet or closet doors.
- Check that each telephone is on its receiver. Phones that are off-hook tie up the telephone network unnecessarily.
- Wear sturdy shoes and gloves to avoid injury from broken glass and debris.
- If damage is extensive, wear a dust mask, wet handkerchief, or other cover for the nose and mouth to reduce inhalation of dust.

### Check your food and water supplies.

- DO NOT eat or drink anything from open containers near shattered glass.



# EARTHQUAKE

(continued)

- If power is off, plan meals to use up foods that will spoil quickly, or frozen foods.
- Use barbecues or camp stoves outdoors for emergency cooking.
- If water is off, you can use supplies from water

heaters, toilet tanks, melted ice cubes, canned vegetables. Because it contains chemicals, swimming pool or spa water should not be used as a primary source of drinking water.

Keep streets clear for emergency vehicles. Cooperate with Public Safety Officials.

Be prepared for aftershocks. Most of these are smaller than the main quake, but some may be large enough to do additional damage.

## **DO NOT:**

- Use lighters, candles, open-flame appliances or smoke until you are sure there are no gas leaks.
- Operate electrical switches or appliances, including telephones, if you suspect a gas leak. The appliance may create a spark that could ignite the leaking gas.
- Use your telephone except for an emergency.

You could tie up lines needed for emergency services. Turn on your portable radio for information and damage reports.

- Go sightseeing afterwards, especially in beach and waterfront areas where seismic waves could strike.

# EVACUATION

For some disaster situations, evacuating may be the best option for you and your family. In other situations, evacuations may be mandatory. Follow instructions from government officials. When getting ready to leave your home, consider the following:

- Gas up early to avoid lines at the service station. Gasoline may not be available for a few days after a disaster.
- Relocate early to avoid traffic jams and dangerous conditions.
- If dangerous conditions are near when you depart, use a current road map to plan a safe route.
- If you plan to fly out when a warning is posted, remember that airlines may be booked and airports will be closed when conditions become dangerous.
- If you have ill or disabled family members, consult your doctor on where they should stay.
- If you do not have transportation, ask your neighbor for assistance or call the local authorities or the Red Cross for transportation.
- Be sure to take enough clothes, medical supplies, money, and necessities to last at least a week.

# EXTREME HEAT

According to FEMA, conditions that can induce heat-related illnesses include stagnant atmospheric conditions and poor air quality. Consequently, people living in urban areas may be at greater risk from the effects of a prolonged heat wave than those living in rural areas. Also, asphalt and concrete store heat longer and gradually release heat at night, which can produce higher nighttime temperatures known as the "urban heat island effect."<sup>1</sup>

## TERMINOLOGY

- **Heat Stroke**

A serious, life-threatening condition. Seek emergency medical care. Symptoms include abnormally high body temperature. Hot and dry skin, reddening of the face, rapid breathing, fast but weak pulse, and/or fainting. Also may be referred to as "Sun Stroke."

- **Heat Exhaustion**

Symptoms include weakness, dizziness, headache, nausea, vomiting and/or loss of

appetite. Call your physician or nearest healthcare facility for advice.

- **Heat Cramps**

Muscle pains and spasms that occur after over exertion. This may be the least severe heat illness, but it is often the first sign of a problem. Drink lots of fluids, and apply warm wet towels to affected muscles.

## DURING TIMES OF EXTREME HEAT

- Stay out of direct sunlight.
- Spend time in air conditioned or fan ventilated areas.
- Avoid strenuous activity, particularly in the afternoon between 2 and 4 PM.
- Drink plenty of liquids.
- Avoid alcoholic beverages.
- Wear lightweight, loose-fitting, light colored clothing.
- Check on your neighbors, particularly the elderly and medical shut-ins.
- Avoid overeating.

<sup>1</sup> United States, Congress, "Are You Ready? An In-Depth Guide to Citizen Preparedness, IS-22 August 2004." *Are You Ready? An In-Depth Guide to Citizen Preparedness, IS-22 August 2004*, Publisher not identified, 2004, p. 87.

# FIRE

According to FEMA, each year, more than 4,000 Americans die and more than 25,000 are injured in fires, many of which could be prevented. Direct property loss due to fires is estimated at \$8.6 billion annually.

To protect yourself, it is important to understand the basic characteristics of fire. Fire spreads quickly; there is no time to gather valuables or make a phone call. In just two minutes, a fire can become life-threatening. In five minutes, a residence can be engulfed in flames.

Heat and smoke from fire can be more dangerous than the flames. Inhaling the super-hot air can sear your lungs. Fire produces poisonous gases that make you disoriented and drowsy. Instead of being awakened by a fire, you may fall into a deeper sleep. Asphyxiation is the leading cause of fire deaths, exceeding burns by a three-to-one ratio.<sup>1</sup>

## DURING A FIRE

- Don't Delay. Call 911, "0" for an operator or your local fire department.
- Get everyone out and stay out.
- Remember to "Stop, Drop and Roll" if clothing is on fire.

## BEFORE A FIRE

- Install smoke detectors on every floor.
- Purchase a fire extinguisher and know how to use it.
- Know and practice your escape routes and instruct members of your household.
- Agree on a place to meet if you become separated.
- Clean out basements, attics, closets, and garages of trash.
- Store flammable liquids in approved containers having fire suppression baffles.
- Never use gasoline, benzene, or naphtha indoors.
- Have your furnace and heating system checked annually.
- Never substitute fuel in kerosene heaters and provide adequate ventilation to prevent build-up of dangerous vapors or inadequate air for breathing.
- Keep space heaters away from combustible materials like drapes, furniture or clothing.
- Know how to turn off gas and electrical service.
- Ask your Fire Department for a safety and fire prevention courtesy inspection.

## AFTER A FIRE

- Secure your home. If you rent, call your landlord.
- Contact your insurance agent.
- Don't enter a fire damaged property unless fire authorities allow it.
- Have an electrician check all wiring.
- Discard all foods and medicines that have been exposed to heat, soot, or smoke.
- Don't refreeze foods that have thawed. "If in doubt, throw it out!"
- Maintain receipts for all purchases.
- Don't throw anything away until an inventory of damages is complete.

<sup>1</sup> United States, Congress, "Are You Ready? An In-Depth Guide to Citizen Preparedness, IS-22 August 2004." *Are You Ready? An In-Depth Guide to Citizen Preparedness, IS-22 August 2004*, Publisher not identified, 2004, p. 116.

# FLOODING

FEMA explains that floods are one of the most common hazards in the United States. Flood effects can be local, impacting a neighborhood or community, or very large, affecting entire river basins and multiple states.

However, all floods are not alike. Some floods develop slowly, sometimes over a period of days. But flash floods can develop quickly, sometimes in just a few minutes and without any visible signs of rain. Flash floods often have a dangerous wall of roaring water that carries rocks, mud, and other debris and can sweep away most things in its path. Overland flooding occurs outside a defined river or stream, such as when a levee is breached, but still can be destructive. Flooding can also occur when a dam breaks, producing effects similar to flash floods.<sup>1</sup>

## TERMINOLOGY

- **Flood Watch**  
Flooding is possible. Tune in to NOAA Weather Radio, commercial radio, or television for information.
- **Flash Flood Watch**  
Flash flooding is possible. Be prepared to move to higher ground; listen to NOAA Weather Radio, commercial radio, or television for information.
- **Flood Warning**  
Flooding is occurring or will occur soon; if advised to evacuate, do so immediately.
- **Flash Flood Warning**  
A flash flood is occurring; seek higher ground on foot immediately.

## DURING A FLOOD

### If a flood is likely in your area, you should:

- Listen to the radio or television for information.
- Be aware that flash flooding can occur. If there is any possibility of a flash flood, move immediately to higher ground. Do not wait for instructions to move.
- Be aware of streams, drainage channels, canyons, and other areas known to flood suddenly. Flash floods can occur in these areas with or without such typical warnings as rain clouds or heavy rain.

### If you must prepare to evacuate, you should do the following:

- Secure your home. If you have time, bring in outdoor furniture. Move essential items to an upper floor.
- Turn off utilities at the main switches or valves if instructed to do so. Disconnect electrical appliances. Do not touch electrical equipment if you are wet or standing in water.

## BEFORE A FLOOD

- Prepare your disaster kit.
- Listen to the radio for weather advisories.
- Know if you live in a flood-prone area.
- Obtain flood insurance if you live in a flood-prone area.
- Keep important papers and values in a safety deposit box.
- Know how to turn off gas, electric and water service.
- Evacuate immediately, if requested to do so. (Turn the page on Evacuation for more information.)

## AFTER A FLOOD

- Assume all water is contaminated until properly tested by authorities. Flush fixtures if asked to do so.
- Don't enter structurally damaged property.
- Open doors and windows to ventilate any gases or vapors that may have accumulated.

<sup>1</sup> United States, Congress, "Are You Ready? An In-Depth Guide to Citizen Preparedness, IS-22 August 2004." *Are You Ready? An In-Depth Guide to Citizen Preparedness, IS-22 August 2004*, Publisher not identified, 2004, p. 50.



# FLOODING

(continued)

- Do not use foods that have come in contact with flood waters.
- Don't handle electrical equipment in wet areas.
- Use only battery operated flashlights – **no oil or gas lanterns.**
- Report broken water, sewage, or electric lines to authorities.
- Notify your insurance agent.
- Stay tuned to the radio or television for important instructions.
- All washable surfaces in contact with flood waters must be cleaned with soap and water and then disinfected. A disinfection solution may be made by adding one tablespoon of household bleach per gallon of water.
- Discard any upholstered furniture, mattresses and bedding, or stuffed toys that are water soaked.
- Wells used for drinking water must be pumped and disinfected before use. Contact the Health Department for instructions on well disinfection.

# HABOOB

Thunderstorms frequently produce strong downward rushes of air called microbursts that spread out along the ground and spread dense blowing dust called "haboobs." Haboobs (also called dust storms) are unexpected, unpredictable and can sweep across Arizona's desert landscape at any time. You can endure these brief but powerful storms if you know how to react.

## TERMINOLOGY

- **Dust Storm Watch**  
Based on current conditions, dust storms are likely to occur. Watch the sky and stay tuned to NOAA Weather Radio, commercial radio or television for information.
- **Dust Storm Warning**  
Issued when visibility is 1/2 mile or less due to blowing dust or sand, and wind speeds of 30 miles an hour or more.

## BEFORE A HABOOB

Straight line winds in a thunderstorm can lift huge clouds of dust and reduce visibilities to near zero in seconds, which can quickly result in deadly, multi-vehicle accidents on roadways. The large amount of dust in the air can cause respiratory issues in healthy individuals, so those with respiratory illnesses should take extra caution to protect their nose and mouth. Dust storms are more common in the early part of the monsoon season and near agricultural or desert-like areas. Use caution in these areas any time thunderstorms are nearby.

## DURING A HABOOB

- Dust storms usually last a few minutes, and up to an hour at most. Stay where you are until the dust storm passes.  
**Avoid driving into or through a dust storm. If you encounter a dust storm:**
  - Immediately check traffic around your vehicle (front, back and to the side) and begin slowing down.
  - Do not wait until poor visibility makes it difficult to safely pull off the roadway -- do it as soon as possible. Completely exit the highway if you can.
  - Do not stop in a travel lane or in the emergency lane. Look for a safe place to pull completely off the paved portion of the roadway.
- Pull off! Lights off! Foot off!**
- If you encounter a dust storm while driving, pull off the road immediately.
  - Turn off your headlights and taillights, put your vehicle in "PARK," and take your foot off the brake (so your brake lights are not illuminated.) Other motorists may tend to follow taillights in an attempt to get through the dust storm, and may strike your vehicle from behind.
  - Stay in the vehicle with your seatbelts buckled and wait for the storm to pass.
  - Drivers of high-profile vehicles should be especially aware of changing weather conditions and travel at reduced speeds.

# HURRICANE

The hurricane is one of several classifications of tropical cyclones. In the Northern Hemisphere, these cyclones rotate counter-clockwise and form over the warm tropical waters of the Atlantic and Caribbean Oceans, the eastern Pacific Ocean and the Gulf of Mexico. Often referred to as the greatest storms on earth, hurricanes have the potential to cause widespread destruction and loss of life. During a typical hurricane season, which officially begins on June 1<sup>st</sup> and lasts through November, an average of 6 hurricanes will develop from 10 tropical storms each year.

The weakest of these storm systems is the tropical depression. This somewhat organized low-pressure area occurs frequently during "hurricane season" and usually meanders across the open tropical waters until raining itself out. However, if conditions are favorable a tropical depression may intensify, and is reclassified as a tropical storm when winds swirling around its center exceed 39 mph. A tropical cyclone is classified a hurricane when its wind speed reaches 74 mph. Hurricanes are then classified into 5 categories according to their central barometric pressure, associated wind velocity, and storm surge potential. This information, referred to as the Saffir-Simpson Hurricane Scale, is used to predict storm damage estimates (See table below).

## Saffir - Simpson Hurricane Scale

Storm Strength	Category Pressure (Millibars)	Winds (mph)	Storm Surge (ft)	Damage Estimate
Category 1	> 980	74-95	4-5	Minimal
Category 2	965-979	96-110	6-8	Moderate
Category 3	945-964	111-130	9-12	Extensive
Category 4	920-977	131-155	12-18	Extreme
Category 5	< 920	>155	> 18	Catastrophic

### Category 1. Minimal Damage

No real wind damage caused to buildings. Some damage is done to poorly constructed signs. Some damage primarily occurs to unanchored mobile homes, shrubbery, trees, and foliage. Low-lying roads are inundated by storm surge. Minor pier damage occurs.

### Category 2. Moderate Damage

Some roofing materials, doors, windows of homes and businesses are damaged by winds. Considerable wind damage is done to mobile homes and vegetation. Low-lying roads are inundated by storm surge. Considerable damage is done by storm surge and wave action to piers. Small craft in unprotected anchorage break their moorings.

### Category 3. Extensive Damage

Winds cause structural damage to homes and utility buildings with minor amount of curtain wall failure. Mobile

homes are destroyed. Storm surge flooding destroys many smaller buildings while floating debris damages large buildings. Terrain continuously lower than 10 feet above mean sea level is flooded.

### Category 4. Extreme Damage

More extensive curtain wall failures with some complete roof failure on homes occur. Major damage is caused to lower floors of homes and businesses from storm surge flooding. Terrain continuously lower than 15 feet above mean sea level is flooded.

### Category 5. Catastrophic Damage

There is complete roof failure of many homes and businesses as well as complete building failure of many small structures. Major storm surge flooding to lower floors of buildings located less than 20 feet above mean sea level occurs.

## TERMINOLOGY

**Tropical Disturbance** - Organized thunderstorm activity in the tropics or subtropics, not associated with a front, maintaining identity for 24 hours or more.

**Tropical Depression** - A tropical low-pressure system in which the maximum sustained wind is 33 knots (38 mph)<sup>0/23/2017</sup>

or less.

**Tropical Storm** - A tropical low-pressure in which the maximum surface wind ranges from 34 to 63 knots (39 to 73 mph).

# HURRICANE

(continued)

**Hurricane** - A tropical low-pressure system in which the maximum wind range is 74 mph or greater.

**Tropical Storm Watch** - Issued when a tropical storm or tropical conditions will pose a threat to coastal areas within 36 hours. A tropical storm watch will not be issued if the system is forecast to attain tropical storm strength.

**Tropical Storm Warning** - Issued when tropical storm conditions with sustained wind speeds of 39 mph to 73 mph are experienced.

**Hurricane Watch** - Issued for a coastal area when there is a threat of hurricane conditions within 24 to 36 hours.

**Hurricane Warnings** - Issued when hurricane conditions are expected to impact coastal areas within 24 hours. Hurricane conditions include winds of 74 mph or greater, and/or dangerously high tides and waves. Action to protect life and property should begin immediately when a hurricane warning is issued.

## THE HURRICANE'S DESTRUCTIVE FORCES

### Storm Surge

- Greatest danger associated with hurricanes.
- Nine out of 10 hurricane related fatalities are caused by storm surge.
- Shallow coastal waters extremely vulnerable.
- Levees offer minimal protection during minor hurricanes only.

### Wind

- Wind gusts, in some cases greater than 200 mph, can cause widespread and
- significant damage to many buildings.
- Wind driven "missiles" such as roofing material,

metal siding, and outdoor furniture can be deadly.

- Wind toppled trees often disrupts electrical services.
- Hurricane force winds are often felt well inland.

### Rain

- Rainfall totals of 10 inches or more are not uncommon.
- Flash Flooding is a major concern.

### Tornadoes

- Greatest threat when hurricane makes landfall and moves inland.

## HURRICANE ADVISORIES AND LOCAL ACTION STATEMENTS

The National Hurricane Center in Miami, Florida issues Advisories for all tropical storms and hurricanes in the Atlantic, Gulf of Mexico, and Caribbean Ocean. Each Advisory gives the name of the storm, the center of "eye" position, current intensity and the storm's forecasted movement. Advisories are issued every six hours until the storm nears land. As the storm nears land, Intermediate Advisories are issued every two to three hours.

The regional National Weather Service Forecast Office issues local Action Statements. These statements supplement Advisories from the National Hurricane Center. Local Action Statements give detailed information on current and expected weather and tide conditions for the local area and advice on preparedness measures residents should be taking. Local Action Statements will be issued every 3 to 4 hours, more frequently when the storm approaches the coast, or immediately if important information becomes available.

## PRE-EMERGENCY PLAN

**Decide which of the following options is best for you:**

### • Stay At Home

- A well-constructed dwelling that is in good condition, and not located in an area prone to flooding, should be safe during a hurricane provided you prepare for the storm.

10/23/2017

- A mobile home is not safe during a hurricane.
- If you stay at home, be prepared with the following items:

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# HURRICANE

(continued)

- First aid kit.
- Battery operated radio and/or TV, and extra batteries.
- Flashlight with extra bulbs and batteries.
- Enough canned or dried food for a week.
- Extra medicine, baby food, etc.
- Fully charged fire extinguishers.
- Matches or disposable lighters.
- Emergency cooking facilities and fuel.
- Lantern and fuel.
- Water containers.
- Bleach.
- Caulk or putty to seal drain on tub.
- Wide masking tape.
- Strong material to board up windows, etc.
- A variety of tools, including a hammer and axe.
- Up-to-date emergency phone list.

## ● Evacuate to Designated Shelter

- If you are advised to evacuate your area or you do not feel secure at your home, evacuating to a designated shelter is a good alternative if traveling a great distance to get out of harm's way is a problem.
- Tune to designated radio or television stations for details concerning the location and opening times of hurricane shelters.
- When open, leave for shelters as soon as possible. Bring only:

## ● Evacuate The Area

Leaving the area may be the best action for you. If so, turn to the evacuation page for more information.

- Since water supplies may be disrupted or contaminated, sterilize the bathtub and other containers with bleach and let dry. Then place caulk around the bathtub to prevent leakage; then fill the tub and other containers with water.
- Once the storm hits, stay where you are.
- Stay away from windows to avoid flying glass.
- Do not go out during the calm "eye" of the storm except for necessary emergency repairs or life-saving activities.
- Watch out for fallen power lines during and after the storm.
- Use your phone only for emergencies.
- It is not necessary to crack open your window.

- Non-perishable food items
- Irreplaceable pictures and documents
- Bedding items such as pillows, sheets and blankets
- Make arrangements ahead of time if you plan to stay with friends or relatives to ensure an adequate supply of food and necessities.
- Pets are not allowed in hurricane shelters. Leave them at home with plenty of food and water and call your veterinarian for advice.

## PROTECT YOUR RESIDENCE

### House or Apartment

- To conserve refrigerated food, turn your refrigerator and freezer to the coldest setting. Open only when necessary. A well-built refrigerator/freezer can maintain food up to two days without electricity.
- Remove or lash awnings and close shutters. Board up windows and be sure to use strong material and fasten securely.
- Tap wedges in the top track of sliding doors and brace all French doors.
- Collect and secure all loose objects like garbage cans, yard tools and lawn furniture. Flying objects are one of the greatest hazards during hurricanes.
- Tape your windows with two-inch wide masking tape in an "X" pattern to prevent the glass from shattering. If you have protective sun coating, apply the tape on the side opposite the coating.
- Lower or remove your television/CB antenna with extreme caution. Be aware of power lines and make sure you turn off the power first.
- If you have a wind turbine on your roof for ventilation, cover it with plastic and tie down.
- Check trees, shrubbery and remove limbs that may cause damage to your house or utility lines.



# HURRICANE

## **WARNING: Mobile Homes Are Not Safe During A Hurricane!**

Mobile homes are particularly vulnerable to overturning during strong winds. Those who reside in mobile homes or trailers should evacuate as soon as a hurricane warning is issued, if not sooner.

Do the following to secure your home:

- Secure your mobile home with heavy cables anchored in concrete.
- Tape all windows.
- Turn off the water where it enters the home. Open faucets and leave them open.
- Turn off fuel lines and/or turn off gas at the tanks.
- Disconnect electricity and sewer lines.
- Anchor or stow away outside objects such as garbage cans, awnings, etc.
- Relocate early!

## **PROTECT YOUR PROPERTY**

### **Secure Your Pool and Patio**

- Don't drain your swimming pool. Instead, lower the water level slightly to accommodate heavy rains.
- Add extra chlorine to prevent contamination.
- Turn off electricity to your pool motor. Wrap the motor in plastic to avoid damage from the rain.
- Remove all loose items around the pool and patio. Lawn furniture can be safely placed underwater in the pool.
- To protect your screened-in pool or patio, let the wind through by removing six-foot panels on each side of the enclosure.

### **Safety for Boats**

- Relocate your boat and trailer to an enclosed shelter. If the boat must be left in the open let the

air out of the trailer's tires. If the boat is small, slide it off the trailer onto the ground and partially fill it with water. This will keep the boat from being blown about.

- If your boat must remain in the water, make arrangements ahead of time with property owners, marina owners or storage yards for a place to secure your boat.

### **Your Automobile**

- Fill your gas tank at the first warning — pumps may be out after the storm.
- Park your car in your garage if you have one, or in a public garage if one is nearby.
- If you have access to a covered area, park your car close to the wall of a well-constructed building. Stay clear of any trees.

## **AFTER THE STORM**

- Tune in to your radio or television for information and official instructions.
- Stay inside until officials announce that the danger has passed.
- Stay out of disaster areas. Unless you are qualified to help, your presence might hamper first aid and rescue efforts.
- If there is flooding, do not drink tap water until it has been determined to be safe.
- Check refrigerated foods for spoilage if power has been off during the storm.
- While outside, stay clear of any downed or low hanging power lines and report them to the Power Company.
- Report broken sewers or water mains to the water department.
- Do not attempt to travel until roads have been declared open. At all times, drive carefully. Roads may be compromised and may collapse.
- Prevent fires. Lower water pressure may make firefighting difficult.
- Only use the telephone for emergencies.
- Check on neighbors to see if they need help.
- If you are without gas or electricity, cooking on bottled gas burners is safe and efficient. However, good ventilation is extremely important. Using portable grills is strongly discouraged. Never burn charcoal indoors. Always have a fire extinguisher handy.

# LANDSLIDE

FEMA warns that landslides occur in all U.S. states and territories. In a landslide, masses of rock, earth, or debris move down a slope. Landslides may be small or large, slow or rapid. They are activated by storms, earthquakes, volcanic eruptions, fires, and human modification of land.

Debris and mud flows are rivers of rock, earth, and other debris saturated with water. They develop when water rapidly accumulates in the ground, during heavy rainfall or rapid snowmelt, changing the earth into a flowing river of mud or "slurry." They flow can rapidly, striking with little or no warning at avalanche speeds. They also can travel several miles from their source, growing in size as they pick up trees, boulders, cars, and other materials.

Landslide problems can be caused by land mismanagement, particularly in mountain, canyon, and coastal regions. Land-use zoning, professional inspections, and proper design can minimize many landslide, mudflow, and debris flow problems.<sup>1</sup>

## DURING A LANDSLIDE

- Get out of the path of a landslide as quickly and safely as possible.
- If you are not able to escape the path, curl into a tight ball and protect your head and neck.

## BEFORE A LANDSLIDE

### Recognize warning signs:

- New changes in your landscape, like different patterns of water drainage, movement of land or trees that begin to lean.
- New cracks on your walls or floors.
- Cracks in the sidewalks or roadways that develop slowly and begin to widen.
- Utility lines underground may break.
- Swelling ground at the bottom of a slope.
- A rumbling sound that may begin faintly and get louder as the landslide gets closer.

## AFTER A LANDSLIDE

- Don't enter the slide area until it has been deemed safe. Additional slides could occur.
- Listen and look for trapped or injured people near the landslide, but do not enter the area. Direct rescue personnel to them.
- Keep a close eye out for broken electrical, water, gas and sewage lines.
- Drive carefully. Roadways may be damaged.
- Contact a geotechnical expert to evaluate landslide hazards and/or to implement changes to reduce your risk of additional landslides.

<sup>1</sup> United States, Congress, "Are You Ready? An In-Depth Guide to Citizen Preparedness, IS-22 August 2004." *Are You Ready? An In-Depth Guide to Citizen Preparedness, IS-22 August 2004*, Publisher not identified, 2004, p. 106-108.

# SEVERE THUNDERSTORM

According to FEMA, all thunderstorms are dangerous. Associated dangers of thunderstorms include tornadoes, strong winds, hail, and flash flooding. Flash flooding is responsible for more fatalities—more than 140 annually—than any other thunderstorm-associated hazard.<sup>1</sup>

## TERMINOLOGY

**Watch** – Signifies that conditions are favorable for a severe thunderstorm.

**Warning** – Signifies that a severe thunderstorm is in the area. Seek shelter immediately.

## DURING A STORM

- Shutter windows and secure outside doors. If shutters are not available, close window blinds, shades, or curtains.
- Avoid showering or bathing. Plumbing and bathroom fixtures can conduct electricity.
- Use a corded telephone only for emergencies. Cordless and cellular telephones are safe to use.
- Unplug appliances and other electrical items such as computers and turn off air conditioners. Power surges from lightning can cause serious damage.

## PREPARE FOR A STORM

- Know how to turn off gas, electric, and water service at main shut-off.
- If gas is shut off, contact the gas company to check that all pilot lights are working and gas appliances are operating properly.
- The National Weather Service continuously broadcasts weather warnings and forecasts received on National Oceanic and Atmospheric Administration (NOAA) Weather Radios sold in most appliance or electronics stores.
- Purchase a radio with a battery back-up and tone alert feature that automatically activates the radio when an advisory is issued.
- Remove dead or rotting trees and branches that could fall and cause injury or damage during a severe thunderstorm.
- Remember the 30/30 lightning safety rule: Go indoors if, after seeing lightning, you cannot count to 30 before hearing thunder. Stay indoors for 30 minutes after hearing the last clap of thunder.

<sup>1</sup> United States, Congress, "Are You Ready? An In-Depth Guide to Citizen Preparedness, IS-22 August 2004." *Are You Ready? An In-Depth Guide to Citizen Preparedness, IS-22 August 2004*, Publisher not identified, 2004, p. 58.

# TORNADO

According to FEMA, tornadoes are nature's most violent storms. Spawned from powerful thunderstorms, tornadoes can cause fatalities and devastate a neighborhood in seconds. A tornado appears as a rotating, funnel-shaped cloud that extends from a thunderstorm to the ground with whirling winds that can reach 300 miles per hour. Damage paths can be in excess of one-mile-wide and 50 miles long. Every state is at some risk from this hazard.

Some tornadoes are clearly visible, while rain or nearby low-hanging clouds obscure others. Occasionally, tornadoes develop so rapidly that little, if any, advance warning is possible.

Before a tornado hits, the wind may die down and the air may become very still. A cloud of debris can mark the location of a tornado even if a funnel is not visible. Tornadoes generally occur near the trailing edge of a thunderstorm. It is not uncommon to see clear, sunlit skies behind a tornado.<sup>1</sup>

## TERMINOLOGY

**Watch** – Signifies that conditions are favorable for a tornado.

**Warning** – Signifies that a tornado is in the area. Seek shelter immediately.

## WARNING SIGNS

- Frequent thunder and lightning.
- Heavy rain often accompanied by hail.
- Roaring wind and noise.
- Funnel shaped clouds may not be visible to you.

## DURING THE STORM

- If you see a funnel shaped cloud or revolving winds, contact the police.
- Go to the basement or lowest level of your building.
- **If you live in a mobile home, choose another shelter in a sturdy building.**
- Pick a central location in a protected area under stairwells or heavy furniture.
- Stay away from windows or chimneys.
- Cover your head.

## PREPARE FOR A STORM

- Know how to turn off gas, electric, and water service at main shut-off.
- If gas is shut off, contact the gas company to check that all pilot lights are working and gas appliances are operating properly.
- The National Weather Service continuously broadcasts weather warnings and forecasts
- received on National Oceanic and Atmospheric Administration (NOAA) Weather Radios sold in most appliance or electronics stores.
- Purchase a radio with a battery back-up and tone alert feature that automatically activates the radio when an advisory is issued.

<sup>1</sup> United States, Congress, "Are You Ready? An In-Depth Guide to Citizen Preparedness, IS-22 August 2004." *Are You Ready? An In-Depth Guide to Citizen Preparedness*, IS-22 August 2004, Publisher not identified, 2004, p. 58.



# TSUNAMI

FEMA explains that Tsunamis (pronounced soo-ná-mees), also known as seismic sea waves (mistakenly called “tidal waves”), are a series of enormous waves created by an underwater disturbance such as an earthquake, landslide, volcanic eruption, or meteorite. A tsunami can move hundreds of miles per hour in the open ocean and smash into land with waves as high as 100 feet or more.

From the area where the tsunami originates, waves travel outward in all directions. Once the wave approaches the shore, it builds in height. The topography of the coastline and the ocean floor will influence the size of the wave. There may be more than one wave and the succeeding one may be larger than the one before. That is why a small tsunami at one beach can be a giant wave a few miles away..<sup>1</sup>

## TERMINOLOGY

- **Advisory**  
An earthquake has occurred in the Pacific basin, which might generate a tsunami.
- **Watch**  
A tsunami was or may have been generated, but is at least two hours travel time to the area in Watch status.
- **Warning**  
A tsunami was, or may have been generated, which could cause damage; therefore, people in the warned area are strongly advised to evacuate.

## BEFORE A TSUNAMI

- If you are in a coastal area and an earthquake occurs, turn on your radio to see if your area is at risk for a tsunami.
- Get to higher ground immediately and remain there until the area has been cleared by officials.
- If you notice water rapidly receding from the shoreline, this is a sign that a tsunami is in the area. Move immediately.

## AFTER A TSUNAMI

- Don't enter flooded or damaged areas until they have been cleared by officials.
- Avoid debris in the water. It may be hazardous to people and boats.



# VOLCANO

FEMA describes a volcano as a vent through which molten rock escapes to the earth's surface. When pressure from gases within the molten rock becomes too great, an eruption occurs. Eruptions can be quiet or explosive. There may be lava flows, flattened landscapes, poisonous gases, and flying rock and ash.

Because of their intense heat, lava flows are great fire hazards. Lava flows destroy everything in their path, but most move slowly enough that people can move out of the way.

Fresh volcanic ash, made of pulverized rock, can be abrasive, acidic, gritty, gassy, and odorous. While not immediately dangerous to most adults, the acidic gas and ash can cause lung damage to small infants, to older adults, and to those suffering from severe respiratory illnesses. Volcanic ash also can damage machinery, including engines and electrical equipment. Ash accumulations mixed with water become heavy and can collapse roofs.

Volcanic eruptions can be accompanied by other natural hazards, including earth- quakes, mudflows and flash floods, rock falls and landslides, acid rain, fire, and (under special conditions) tsunamis. Active volcanoes in the U.S. are found mainly in Hawaii, Alaska, and the Pacific Northwest.<sup>1</sup>

## DURING A VOLCANO

- Evacuate immediately. See the evacuation page for more information about evacuations.
- Keep your eyes out for mud and lava flows. They can move faster than you are able to walk or run.
- Find high ground.
- Stay away from valleys and low-lying areas.

## BEFORE A VOLCANO

- Ensure that your disaster kit includes a pair of goggles and breathing mask for each member of your family.
- Stay clear of active volcanoes.

# WINTER STORM

FEMA warns us that heavy snowfall and extreme cold can immobilize an entire region. Even areas that normally experience mild winters can be hit with a major snowstorm or extreme cold. Winter storms can result in flooding, storm surge, closed highways, blocked roads, downed power lines and hypothermia.<sup>1</sup>

## TERMINOLOGY

- **Freezing Rain**  
Rain that freezes when it hits the ground, creating a coating of ice on roads, walkways, trees, and power lines.
- **Sleet**  
Rain that turns to ice pellets before reaching the ground. Sleet also causes moisture on roads to freeze and become slippery.
- **Winter Storm Watch**  
A winter storm is possible in your area. Tune in to NOAA Weather Radio, commercial radio, or television for more information.
- **Winter Storm Warning**  
A winter storm is occurring or will soon occur in your area.
- **Blizzard Warning**  
Sustained winds or frequent gusts to 35 miles per hour or greater and considerable amounts of falling or blowing snow (reducing visibility to less than a quarter mile) are expected to prevail for a period of three hours or longer.
- **Frost/Freeze Warning**  
Below freezing temperatures are expected.

## DURING A STORM

- Conserve energy.
- Close off rooms not used.
- Dress warmly, in layers. Mittens are warmer than gloves. Wear a hat! Wear boots with non-slip soles.
- Have emergency heating equipment on-hand to heat at least one room.
- Provide adequate ventilation for kerosene heaters. USE KEROSENE HEATERS SPARINGLY TO PREVENT BUILD-UP OF POTENTIALLY DANGEROUS FUMES.
- Travel in daylight and only if absolutely necessary. Keep your vehicle in good working order. Have battery and antifreeze checked annually. Keep fuel tank filled. Travel with a friend. Let others know you are on the road and when to expect arrival.
- Stay with your vehicle if a breakdown occurs. Attach a brightly colored cloth to the antenna or door handle to attract attention. Leave the dome light on after dark to help emergency workers find you and to prevent being struck by snow removal vehicles.
- Keep a shovel, scraper, brush, flares, jumper cables, extra gloves, blanket, and a brightly colored cloth in the trunk to signal help.
- If you are in trouble, stay calm. Avoid over exertion.

## PREPARE FOR A STORM

- If mobility is impaired, let your neighbors and your Fire Department know you may need special assistance.
- Stock an emergency supply of food and water. Purchase ready-to-eat canned meats, fruits, and vegetables that require no cooking or refrigeration. Have high energy foods like peanut butter, crackers, jelly, trail mix, nuts, or cookies available at all times. Comfort foods like candy, coffee, tea, sweetened cereals, and powdered milk are good choices.
- Store at least one gallon of water in the refrigerator for emergency use. Water service may be disrupted because of broken pipes.
- Make sure you have a battery powered radio and flashlight on hand with plenty of spare batteries.
- Keep a fire extinguisher handy. Fire Department response times may be longer than usual.

<sup>1</sup> United States, Congress, "Are You Ready? An In-Depth Guide to Citizen Preparedness, IS-22 August 2004." *Are You Ready? An In-Depth Guide to Citizen Preparedness, IS-22 August 2004*, Publisher not identified, 2004, p. 80.

# BIOLOGICAL EVENTS

# AIR POLLUTION

Asthmatics, children, elderly, and those with chronic respiratory or heart conditions are at greater risk of complications due to air pollution or an air quality advisory. Air Pollution can trigger Angina attacks in heart patients.

## **DURING AN AIR QUALITY ADVISORY**

- Cut down on physical activity, indoors or out. The more you move, the more pollution enters your lungs. Joggers should refrain from jogging until air quality improves.
- Stay indoors, keep windows closed.
- Avoid smoke filled rooms.
- Don't Smoke
- Don't light fires in fireplaces or wood stoves.
- Don't drive. Use public transit instead.
- If you must drive, avoid heavy traffic, and turn off your engine rather than idling for long periods.
- Cut down on non-essential electric use, like washers, dryers, and dishwashers. Remember that electrical power requires the burning of fuels that contribute to air pollution.
- Don't wear contact lenses; these will irritate the eyes on smog days.
- Postpone dust-producing jobs like sweeping, raking, or sanding.

# CHEMICAL EMERGENCY

The Department of Homeland Security has compiled helpful tips for a chemical emergency, such as a chemical attack. Chemical agents are poisonous vapors, aerosols, liquids and solids that have toxic effects on people, animals or plants. While potentially lethal, chemical agents are difficult to deliver in lethal concentrations because they dissipate rapidly outdoors and are difficult to produce.

A chemical attack could come without warning. Signs of a chemical release include people having difficulty breathing, eye irritation, loss of coordination, nausea, or burning in the nose, throat and lungs. The presence of many dead insects or birds may indicate a chemical agent release.<sup>1</sup>

## BEFORE A CHEMICAL EMERGENCY

- Ensure your emergency supply kit includes scissors, rolls of plastic sheeting, and duct tape
- Know how to operate your home's ventilation system
- Identify an above-ground shelter room with as few openings as possible.

## DURING A CHEMICAL EMERGENCY

Listen to local radio or television stations for detailed information and follow instructions carefully. Remember that some toxic chemicals are odorless.

- Quickly try to define the impacted area or where the chemical is coming from, if possible.
- Take immediate action to get away.
- If the chemical is inside a building where you are, get out of the building without passing through the contaminated area, if possible.
- If you can't get out of the building or find clean air without passing through the affected area, move as far away as possible and shelter-in-place.

**If you are instructed to remain in your home or office building, you should:**

- Close doors and windows and turn off all ventilation, including furnaces, air conditioners,

vents, and fans.

- Seek shelter in an internal room with your disaster supplies kit.
- Seal the room with duct tape and plastic sheeting.
- Listen to the radio or television for instructions from authorities.

**If you are caught in or near a contaminated area outdoors:**

- Quickly decide what is the fastest way to find clean air:
  - Move away immediately, in a direction upwind of the source.
  - Find the closest building to shelter-in-place.

## AFTER A CHEMICAL EMERGENCY

- Do not leave the safety of a shelter to go outdoors to help others until authorities announce it is safe to do so.
- A person affected by a chemical agent requires immediate medical attention from a professional. If medical help is not immediately available, decontaminate yourself and assist in decontaminating others.
- Decontamination guidelines are as follows:
  - Use extreme caution when helping others who have been exposed to chemical agents.
  - Remove all clothing and other items in contact with the body.

- Cut off clothing normally removed over the head to avoid contact with the eyes, nose and mouth.
- Put contaminated clothing and items into a plastic bag and seal it.
- Remove eyeglasses or contact lenses. Put glasses in a pan of household bleach to decontaminate them and then rinse and dry.
  - Wash hands with soap and water.
  - Flush eyes with water.
  - Gently wash face and hair with soap and water before thoroughly rinsing with water.
  - Proceed to a medical facility for screening and professional treatment.

<sup>1</sup> <https://www.ready.gov/hazardous-materials-incidents>



# HAZARDOUS MATERIALS

The Department of Homeland Security has compiled helpful tips for a hazardous materials, or Haz Mat, incident. Hazardous materials come in the form of explosives, flammable and combustible substances, poisons and radioactive materials. Hazards can occur during production, storage, transportation, use or disposal. You and your community are at risk if a chemical is used unsafely or released in harmful amounts into the environment where you live, work or play.<sup>1</sup>

## BEFORE A HAZARDOUS MATERIALS INCIDENT

Many communities have Local Emergency Planning Committees (LEPCs) whose responsibilities include collecting information about hazardous materials in the community and planning made available to the public upon request. Contact your local emergency management office for more information on LEPCs.

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

- Ensure your emergency supply kit includes rolls of plastic sheeting and duct tape
- Know how to operate your home's ventilation system
- Identify an above-ground shelter room with as few openings as possible.

## DURING A HAZARDOUS MATERIALS INCIDENT

Listen to local radio or television stations for detailed information and follow instructions carefully. Remember that some toxic chemicals are odorless.

### If you are asked to evacuate:

- Do so immediately.
- Stay tuned to a radio or television for information on evacuation routes, temporary shelters, and procedures.
- If you have time, minimize contamination in the house by closing all windows, shutting all vents, and turning off attic fans.
- Take pre-assembled disaster supplies.
- Remember to help your neighbors who may require special assistance--infants, elderly people and people with access and functional needs.

### If you are caught outside:

- Stay upstream, uphill, and upwind. In general, try to go at least one-half mile (usually 8-10 city blocks) from the danger area.
- Do not walk into or touch any spilled liquids, airborne mists, or condensed solid chemical deposits. Try not to inhale gases, fumes and smoke. If possible, cover mouth with a cloth or mask while leaving the area.
- Stay away from accident victims until the hazardous material has been identified.

### If you are in a motor vehicle:

- Stop and seek shelter in a permanent building.

- If you must remain in your car, keep car windows and vents closed and shut off the air conditioner and heater.

### If you are asked to remain indoors:

- Bring pets inside.
- Close and lock all exterior doors and windows. Close vents, fireplace dampers, and as many interior doors as possible.
- Turn off air conditioners and ventilation systems, or set ventilation systems to 100 percent recirculation so that no outside air is drawn into the building.
- If gas or vapors could have entered the building, take shallow breaths through a cloth or a towel.
- Avoid eating or drinking any food or water that may be contaminated.
- Go into your pre-selected shelter room.
- Seal gaps under and around the following areas with wet towels, plastic sheeting, duct tape, wax paper or aluminum foil:
  - Doorways and windows
  - Air conditioning units
  - Bathroom and kitchen exhaust fans
  - Stove and dryer vents

<sup>1</sup> <https://www.ready.gov/hazardous-materials-incidents>

# HAZARDOUS MATERIALS

(continued)

## AFTER A HAZARDOUS MATERIALS INCIDENT

- Listen to local radio or television stations for the latest emergency information.
- Go to a designated public shelter if you have been told to evacuate, or you feel it is unsafe to remain in your home.
  - Text SHELTER + your ZIP code to 43362 (4FEMA) to find the nearest shelter in your area (example: shelter 12345).
- Act quickly if you have come in to contact with or have been exposed to hazardous chemicals.
- Follow decontamination instructions from local authorities.
- Seek medical treatment for unusual symptoms as soon as possible.
- Place exposed clothing and shoes in tightly sealed containers.
- Advise everyone who comes in to contact with you that you may have been exposed to a toxic substance.
- Return home only when authorities say it is safe. Open windows and vents and turn on fans to provide ventilation.
- Find out from local authorities how to clean up your land and property.
- Report any lingering vapors or other hazards to your local emergency services office.<sup>1</sup>

# NUCLEAR INCIDENT

The Department of Homeland Security has compiled helpful tips for a nuclear blast or other nuclear incident. A nuclear blast is an explosion with intense light and heat, a damaging pressure wave, and widespread radioactive material that can contaminate the air, water, and ground surfaces for miles around. A nuclear device can range from a weapon carried by an intercontinental missile, to a small portable nuclear device transported by an individual. All nuclear devices cause deadly effects when exploded. The danger of a massive strategic nuclear attack on the United States is predicted by experts to be less likely today. However, terrorism, by nature, is unpredictable. In general, potential targets include:

- Strategic missile sites and military bases.
- Centers of government such as Washington, DC, and state capitals.
- Important transportation and communication centers.
- Manufacturing, industrial, technology, and financial centers.
- Petroleum refineries, electrical power plants, and chemical plants.
- Major ports and airfields.

## BEFORE A NUCLEAR INCIDENT

- Find out from officials if any public buildings in your community have been designated as fallout shelters.
- If your community has no designated fallout shelters, make a list of potential shelters near your home, workplace and school, such as basements, subways, tunnels, or the windowless center area of middle floors in a high-rise building.
- During periods of heightened threat, increase your disaster supplies to be adequate for up to two weeks.
- Distance - the more distance between you and the fallout particles, the better. An underground area such as a home or office building basement offers more protection than the first floor of a building.
- Shielding - the heavier and denser the materials - thick walls, concrete, bricks, books and earth - between you and the fallout particles, the better.
- Time - fallout radiation loses its intensity fairly rapidly. In time, you will be able to leave the fallout shelter. Radioactive fallout poses the greatest threat to people during the first two weeks, by which time it has declined to about 1 percent of its initial radiation level.

**The three factors for protecting oneself from radiation and fallout are distance, shielding and time.**

## DURING A NUCLEAR INCIDENT

- Listen for official information and follow the instructions provided by emergency response personnel.
- If an attack warning is issued, take cover as quickly as you can, below ground if possible, and stay there until instructed to do otherwise.
- Find the nearest building, preferably built of brick or concrete, and go inside to avoid any radioactive material outside.
- If better shelter, such as a multi-story building or basement can be reached within a few minutes, go there immediately.
- Go as far below ground as possible or in the center of a tall building.
- During the time with the highest radiation levels it is safest to stay inside, sheltered away from the radioactive material outside.
- Radiation levels are extremely dangerous after a nuclear detonation but the levels reduce rapidly.
- Expect to stay inside for at least 24 hours unless told otherwise by authorities.
- When evacuating is in your best interest, you will be instructed to do so. All available methods of communication will be used to provide news and / or instructions.

### **If you are caught outside and unable to get inside immediately**

- Do not look at the flash or fireball - it can blind you.

# NUCLEAR INCIDENT

(continued)

- Take cover behind anything that might offer protection.
- Lie flat on the ground and cover your head. If the explosion is some distance away, it could take 30 seconds or more for the blast wave to hit.
- Take shelter as soon as you can, even if you are many miles from ground zero where the attack occurred - radioactive fallout can be carried by the winds for hundreds of miles.
- If you were outside during or after the blast, get clean as soon as possible, to remove radioactive material that may have settled on your body.
- Remove your clothing to keep radioactive material from spreading. Removing the outer layer of clothing can remove up to 90% of radioactive material.
- If practical, place your contaminated clothing in a plastic bag and seal or tie the bag. Place the bag as far away as possible from humans and animals so that the radiation it gives off does not affect others.
- When possible, take a shower with lots of soap and water to help remove radioactive contamination. Do not scrub or scratch the skin.
- Wash your hair with shampoo or soap and water. Do not use conditioner in your hair because it will bind radioactive material to your hair, keeping it from rinsing out easily.
- Gently blow your nose and wipe your eyelids and eyelashes with a clean wet cloth. Gently wipe your ears.
- If you cannot shower, use a wipe or clean wet cloth to wipe your skin that was not covered by clothing.

## AFTER A NUCLEAR INCIDENT

- People in most of the areas that would be affected could be allowed to come out of shelter within a few days and, if necessary, evacuate to unaffected areas. The heaviest fallout would be limited to the area at or downwind from the explosion. It might be necessary for those in the areas with highest radiation levels to shelter for up to a month.
- Remember the following when returning home**
- Keep listening to the radio and television for news about what to do, where to go and places to avoid.
  - Stay away from damaged areas. Stay away from areas marked "radiation hazard" or "HAZMAT."



# PANDEMIC

A Pandemic occurs when an infectious disease, like the flu, Ebola or malaria, spreads over a wide area and affects a large number of people. The Department of Homeland Security has developed procedures to help you during a pandemic<sup>1</sup>:

## BEFORE A PANDEMIC

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

## DURING A PANDEMIC

It is crucial to limit the spread of germs and prevent infection.

- Avoid close contact with people who are sick.
- When you are sick, keep your distance from others to protect them from getting sick too.
- Cover your mouth and nose with a tissue when coughing or sneezing. It may prevent those around you from getting sick.
- Washing your hands often will help protect you from germs.
- Avoid touching your eyes, nose or mouth.
- Practice other good health habits. Get plenty of sleep, be physically active, manage your stress, drink plenty of fluids, and eat nutritious food.

<sup>1</sup> <https://www.ready.gov/hazardous-materials-incidents>



# HUMAN EVENTS

# ACTIVE SHOOTER

In an active shooter situation, the Department of Homeland encourages you to RUN. HIDE. FIGHT.<sup>1</sup>

## BEFORE AN ACTIVE SHOOTER SITUATION

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

## DURING AN ACTIVE SHOOTER SITUATION

### **RUN and escape, if possible.**

- Get away from the shooter or shooters is the top priority.
- Leave your belongings behind and get away.
- Help others escape, if possible, but evacuate regardless of whether others agree to follow.
- Warn and prevent individuals from entering an area where the active shooter may be.
- Call 911 when you are safe, and describe shooter, location, and weapons.

### **HIDE, if escape is not possible.**

- Get out of the shooter's view and stay very quiet.
- Silence all electronic devices and make sure they won't vibrate.
- Lock and block doors, close blinds, and turn off lights.
- Don't hide in groups- spread out along walls or hide separately to make it more difficult for the shooter.

## AFTER AN ACTIVE SHOOTER SITUATION

- Keep hands visible and empty
- Know that law enforcement's first task is to end the incident, and they may have to pass injured along the way.
- Follow law enforcement instructions and evacuate in the direction they come from.
- Officers may be armed with rifles, shotguns, and/or handguns and may use pepper spray or tear gas to control the situation.
- Officers will shout commands and may push individuals to the ground for their safety.

- Try to communicate with police silently through text message or social media- so they know geo-tagged location, or by putting a sign in a window.
- Stay in place until law enforcement gives you the all clear.
- Your hiding place should be out of the shooter's view and provide protection if shots are fired in your direction.  
**FIGHT as an absolute last resort.**
- Commit to your actions and act as aggressively as possible against him/her.
- Recruit others to ambush the shooter with makeshift weapons like chairs, fire extinguishers, scissors, books, etc. to distract and disarm the shooter.
- Be prepared to cause severe or lethal injury to the shooter.
- Throw items and improvise weapons.

- Take care of yourself first, and then you may be able to help the wounded before first responders arrive:
- If the injured are in immediate danger, help get them to safety.
- While you wait for first responder to arrive, provide first aid. Apply direct pressure to wounded and use tourniquets if you have been trained to do so.
- Turn wounded people onto their sides if they are unconscious and keep them warm.
- Consider seeking professional help for you and your family to cope with the long-term effects of the trauma.

<sup>1</sup> <https://www.ready.gov/active-shooter>

# BOMB THREAT

Bomb threats are usually received by telephone, but they may also be received by note, letter or e-mail. All bomb threats should be taken very seriously and handled as though an explosive were in the building. Your place of employment should have a plan in place instructing what to do when a bomb threat is received.

## IF YOU RECEIVE A BOMB THREAT

- Get as much information from the caller as possible.
- Take good notes when talking to the person on the telephone. Keep the caller on the line, and write down everything that is said.
- Be aware of background noise, special voice characteristics, music, machinery or other sounds.
- If you are in an office, have a co-worker call 911 and building security immediately. Plan how you are going to alert your co-workers.
- If you receive a bomb threat, do not touch any suspicious packages.
- Clear the area around the suspicious package, and notify police immediately.
- While evacuating a building, avoid standing in front of windows or other potentially hazardous areas.
- Do not block sidewalks or other areas used by emergency officials.
- If you find a bomb, don't touch it or attempt to move it. Call for help and evacuate the area immediately.

## VITAL INFORMATION TO TAKE DOWN WHEN RECEIVING A BOMB THREAT

- Exact time of call.
- Exact words of caller.  
**Be sure to ask**
- When is the bomb going to explode?
- Where is the bomb?
- What does it look like?
- What kind of bomb is it?
- What will cause it to explode?
- Did you place the bomb?
- Why?
- Where are you calling from?
- What is your address?
- What is your name?

## CALLER'S VOICE (CIRCLE ALL THAT APPLY)

Calm	Slow	Crying	Slurred
Stutter	Deep	Loud	Broken
Giggling	Accent	Angry	Rapid
Stressed	Nasal	Lisp	Excited
Disguised	Sincere	Squeaky	Normal

# CIVIL DISTURBANCE

Civil disturbances are rare, but can interfere with patient care and duties of a home healthcare worker.

## TERMINOLOGY

- Civil disturbance - an act of disorder or violence to the public law and order. Some examples of civil disturbances include riots, acts of violence, insurrections, and unlawful obstructions or assemblies.

## DURING A CIVIL DISTURBANCE

- Remain calm.
- If possible, leave and avoid areas of civil disturbance.
- Triage patient visits as appropriate.
- If visits need to be made to the area, then they should be made in pairs or with an escort.
- Transfer of patients from the area to a safe location should be considered and arrangements made.
- If civil disturbance is occurring and visible at the office or a patient's home, notify 911 immediately and seek a secure location.
- All doors should be locked with entrance only by verification of credentials.
- Listen to officials. If need be, evacuation of the building or relocation of personnel will be decided.

# HOSTAGE SITUATION

## IF YOU HEAR OR SEE A HOSTAGE SITUATION

- Immediately remove yourself from any danger.
- Immediately call 911 from any phone.
- Be prepared to give the 911 dispatcher the following information:
  - Address/location and your location of incident
  - Number of possible hostage takers
  - Physical description and names of hostage takers, if possible
  - Number of possible hostages
  - Any weapons the hostage takers may have
  - Your name
  - Your phone number

## IF YOU ARE TAKEN HOSTAGE

- Remain calm, be polite, and cooperate with your captors.
- DO NOT attempt to escape unless there is an extremely good chance of survival. It is safer to be submissive and obey your captors.
- Speak normally. DO NOT complain, avoid being belligerent, and comply with all orders and instructions.
- DO NOT draw attention to yourself with sudden body movements, statements, comments, or hostile looks.
- Observe the captors and try to memorize their physical traits, voice patterns, clothing, or other details that can help provide a description later.
- Avoid getting into political or ideological discussions with the captors.
- Try to establish a relationship with your captors and get to know them. Captors are less likely to harm you if they respect you.
- If forced to present terrorist demands to authorities, either in writing or on tape, state clearly that the demands are from your captors. Avoid making a plea on your own behalf.
- Try to stay low to the ground or behind cover from windows or doors, if possible.

## IF YOU ARE IN A RESCUE SITUATION

- DO NOT RUN.
- Drop to the floor and remain still. If that is not possible, cross your arms, bow your head, and stand still.
- Make no sudden moves that a tense rescuer may interpret as hostile or threatening.
- Wait for instructions and obey all instructions you are given.
- Do not be upset, resist, or argue if a rescuer isn't sure whether you are a terrorist or a hostage.
- Even if you are handcuffed and searched, DO NOT resist. Just wait for the confusion to clear.
- You will be taken to a safe area where proper identification and status will be determined.



# MASS CASUALTY

A “mass casualty” is described as a large number and/or high acuity of casualties which exceeds available resources, and is usually within a short period of time (DeJong, et al., 2010). Whether an incident happens within a healthcare facility or in the community, you, your family or nurses and other healthcare professionals may be involved in a mass casualty response. One study of 291 healthcare staff showed that although 53% of respondents were willing to assist in a mass casualty incident, only 23% had the knowledge or confidence to respond (Whitty & Burnett, 2012).

Staff outside of emergency areas receive little to no training on how to respond to a mass casualty (Whitty & Burnett, 2012). Other studies have shown some reasons why healthcare professionals may not respond in a mass casualty or disaster situation. In addition to lack of knowledge, other reasons include transportation issues, personal health concerns, child or elder care, pet care, fear and concern for self and family, and personal health problems (International Council of Nurses, 2009).

## TYPES OF MASS CASUALTY SITUATIONS

- Terrorism.
- Active shooter incidents.
- Natural disasters.
- Any other event that produces a large number and/or high acuity of casualties.

## THE NURSE’S ROLE IN MASS CASUALTY SITUATIONS

Much training is available for first responders of mass casualty incidents, including emergency medical responders and nurses in the emergency department. But what about nurses or other individuals who are not in those roles? As discussed earlier, most healthcare professionals and many individuals are willing to assist, but may not have the knowledge or skills, or do not believe they have the abilities to help.

In 2003, the International Nursing Coalition for Mass Casualty Education (INCMCE) developed competencies for nurses responding to mass casualty incidents (INCMCE, 2003). In 2009, the International Council of Nurses (ICN), supported by the World Health Organization (WHO), developed a framework of disaster nursing competencies. Although these resources are older, these educational competencies continued to be used and validated (Fountain et al., 2015; Whitty & Burnett, 2012.)

## DISASTER FRAMEWORK

Disasters are described as a series of separate phases, all of which require action in order to decrease the impact of a disaster. Nurses have important roles in all phases. The disaster phases are pre-incident, incident and post incident:

- Pre-incident phase: Includes activities intended to prevent or mitigate the potential impact of a disaster as well as prepare the community and population for a disaster or emergency
- Incident phase: All the activities involved in the response to the disaster or emergency
- Post-incident phase: Recovery and rehabilitation form the post-incident phase

# PATIENT ABDUCTION

## IF YOU WITNESS A PATIENT ABDUCTION

- Call 911.
- Gather facts about abduction and description of abductor and any vehicle.
- Notify family.
- Activate Crisis Management Team.
- Decide on plan of action.
- Prepare staff to be supportive.
- Prepare fact sheet and media statement.
- Crisis Management Team meets to debrief at the end of day.

## IF THE PATIENT IS MISSING, BUT YOU DID NOT WITNESS AN ABDUCTION

- Verify the person is missing. Search the housing area and neighborhood.
- Call 911.
- Notify family.
- Activate Crisis Management Team.
- Question neighbors or ensure availability for police questioning.
- Decide on plan of action.
- Prepare staff to be supportive.
- Prepare fact sheet and media statement.
- Crisis Management Team meets to debrief at the end of day.

# TERRORIST THREAT

This document was produced in cooperation with the Emergency Management Division of the Washington State Military Department. Terrorists look for prominent targets where they can avoid detection before or after an attack, such as international airports, large cities, major public events, resorts, and high-profile landmarks.

## BEFORE A TERRORIST THREAT

- Be aware of your surroundings.
- If you see what appears to be a dangerous situation, call 911 and explain your concerns to the operator. The operator will help determine what actions should be taken.
- Take precautions when traveling. Be aware of conspicuous or unusual behavior. Do not accept packages from strangers. Do not leave your luggage unattended.
- Learn where emergency exits are located, and how to quickly evacuate a building, transportation corridor or congested public area.
- Stay clear of heavy or breakable objects that could move, fall or break in an explosion.

**The use of explosives by terrorists can result in collapsed buildings and fires. People who live or work in a multi-level building should follow these guidelines.**

- Know the emergency evacuation procedures that are in place.
- Know where the fire exits are located and be able to find them in the dark.
- Keep fire extinguishers in working order. Know where they are located and know how to use them.
- Learn first aid and CPR.
- Businesses and organizations should keep and maintain a disaster supply kit on each floor of their buildings.

## DURING A TERRORIST EVENT

### **If an explosion occurs**

- Immediately get under a sturdy table or desk if things are falling around you.
- Heavy smoke and poisonous gases collect first along the ceiling. Stay below the smoke at all times.

### **If you are trapped in debris**

- If you have a flashlight, use it to help rescuers locate you.
- Stay in your area so that you don't kick up dust.
- Cover your mouth with a handkerchief or clothing.
- Tap on a pipe or wall so that rescuers can locate you. Use a whistle if one is available. Shout only as a last resort — shouting can cause a person to inhale dangerous amounts of dust.
- Stay low to the floor and exit the building as quickly and calmly as possible.
- Cover your nose and mouth with a wet cloth, if possible.
- Test closed doors for heat with the palm of your hand and forearm on the lower and upper portions of the door. If it is not hot, brace yourself against the door and open it slowly. If

it is hot or warm to the touch, do not open the door. Seek an alternate escape route.

### **Biological agents**

- Biological agents are organisms or toxins that may harm people, livestock and crops. Because biological agents cannot necessarily be detected and may take time to grow and cause disease, it is almost impossible to know that a biological attack has occurred.
- If the government were to become aware of a biological attack through an informant or warning by terrorists, they would most likely instruct people to either seek shelter where they are and seal the premises (shelter-in-place), or evacuate immediately.
- A person affected by a biological agent requires the immediate attention of professional medical personnel. Some agents are contagious, and victims may need to be quarantined. Also, some medical facilities may not be receiving victims for fear of contaminating the hospital population.

# WORKPLACE VIOLENCE

Individuals including health care professionals are faced with increased risk of workplace violence due to several factors, including prevalence of handguns in patients' homes and neighborhoods, number of mentally ill patients living independently in communities without follow-up care, abuse of drugs and alcohol, increased presence of gang membership, dealing with distraught families and the solo work associated with home care.

## TERMINOLOGY

- **Workplace violence**  
Any act or threat of physical violence, harassment, intimidation, or other threatening disruptive behavior that occurs at the worksite, including patient homes.

## BEFORE WORKPLACE VIOLENCE OCCURS

- Identification and mitigation of potential workplace violence should occur continuously.
- Upon admission, employees should screen each patient's environment for potential threats and follow policy for refusal of admission due to an unsafe environment.
- Communication to all visiting employees should be made, identifying any potential issues or disruptive situations in a patient's home.
- Employees are encouraged to report any incident or questionable behavior to a supervisor immediately.
- Staff members are encouraged to report incidents of violence to local police.  
**There are several things that a health care provider can do to prevent or respond to workplace violence, including:**
- Ensure that there is always an unobstructed exit from room/building during patient visits.
- Immediately recognize and respond to escalating behaviors and warning signs.
- If feeling threatened at any time, conclude the visit, vacate the location, and immediately contact a supervisor.
- Utilize a "buddy system" if there is a potential for violence by combining nursing, therapy, or aide.
- visits at the same time. It may be necessary to consider security escorts in cases of high risk locations or if there is a potential for escalation of behaviors due to crucial conversations that could lead to violence.
- Communicate with the office upon arrival and departure of patient home with a planned check-in time set.
- Avoid visiting a patient during high-risk times, such as after hours or evenings.

## DURING ACTIVE WORKPLACE VIOLENCE

If violent behavior is exhibited, immediately leave the area, if possible.

### Evacuate

- Leave belongings behind and seek a safe area.
- Assist patients or others in leaving if possible.
- Prevent others from entering areas where the violence may be occurring.
- When safe to do so, call 911.
- **If evacuation is not possible**
- Find a place to **hide** where the violent person is less likely to find you.
- The hiding place should be out of view in an area with protection, such as in a locked room or under desk/furniture.
- If possible, avoid locations that would keep you from exiting.
- Turn off or silence cell phones and do not talk.
- Remain calm and hide behind large items.

- Dial 911 and alert police to the violent person's location.
- If unable to speak, leave the line open and allow the dispatcher to listen.  
**Defend. As a last resort, and only when in imminent danger,** attempt to disrupt or incapacitate the violent person.
- Take aggressive action toward the person, such as throwing items, improvising a weapon, and yelling.
- **After Police Arrive**
- Remain calm and follow officers' instructions.
- Raise your hands and keep them empty and visible at all times.
- If given orders to evacuate, immediately leave the area with hands visible and empty.



# FOR MORE INFORMATION

**This Community Guide is a plan template and is intended to give you a format and possible suggestions about information you might want to include in a family disaster plan. It is not all-inclusive and should be modified as needed. You should adapt this plan to your own specific needs or requirements.**

**If you need assistance in developing your family disaster plan or would like more information, contact your Local County and City Emergency Management Officials.**