

Disaster
preparedness

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Natural disasters, like 2005's Hurricane Katrina, which devastated much of the north-central Gulf Coast region of the United States, make us keenly aware of our vulnerability in the face of catastrophe. So too, do tragic events such as the September 11, 2001 terrorist attacks on the World Trade Centers and Pentagon. Fortunately, such catastrophic occurrences are rare.

However, because emergencies can occur both on a large and small scale, and by their nature are often unanticipated, unexpected events, it is vital that each of us plan for and be prepared should a crisis arise.

In an effort to provide Johns Hopkins employees and their families with practical information regarding crisis and disaster preparedness we've produced the following guide to assist in planning for and responding to emergency situations.

Please use this pamphlet and the resources listed within so that you and your family have a plan that ensures for your safety and care in the event of an emergency.

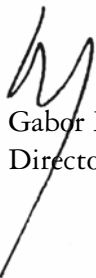
Sincerely,



Charlene Moore Hayes
Vice President, Human Resources
Johns Hopkins University



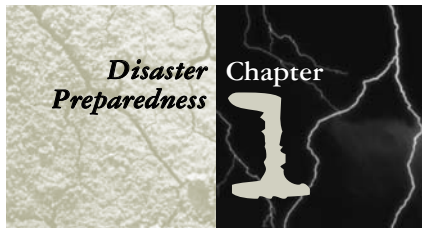
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Getting Ready: Basic Preparedness

Maryland's geographic location makes it prone to an array of weather-related emergencies, including hurricanes, severe thunderstorms, heavy snowfall, and flooding. Additionally, like the rest of the nation, Marylanders must be prepared for a public health emergency or terrorist attack.

Being prepared before a natural or man-made disaster strikes can reduce fear, anxiety, and potential losses. This chapter provides information to assist individuals and their families to become better informed and aware of their needs should an emergency or disaster occur.

Preparation for an emergency means more than having a supply of water on hand or extra batteries for your flashlight. It includes knowing the potential dangers that may put your home and community at risk.

The Federal Emergency Management Agency (FEMA)¹ suggests contacting local authorities about possible hazards and/or emergencies in your community. A worksheet is provided in Appendix 1.1 to assist you in recording your findings and suggestions for reducing your risk.

Additionally, individuals should become knowledgeable about local/community disaster preparedness, warning systems, and evacuation plans; workplace emergency policies; safety procedures to protect your child, elderly or disabled adult at school or daycare, and how to plan for pets. The following should serve only as a guide; you may have additional questions or require specific information not included here.

Community

- Does my community have an emergency disaster plan?
- What does the plan include?
- What hazards does it cover?
- How often is it updated?
- Does it provide information about public spaces that can be used for shelter?
- Does it provide information and maps regarding evacuation routes?
- How can I obtain a copy?
- What are the local warning signals for our area? What do they sound like?

Workplace

- Is emergency/disaster training provided to employees?
- How will information regarding an emergency be provided?
- What policies are in place to provide for the safety and well-being of employees?

School/Daycare

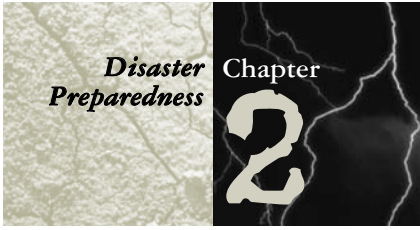
- How will the school/daycare communicate with families during a crisis?
- Does the school/daycare store adequate food, water, and other basic provisions including medical supplies to provide for individuals for at least three days?
- Is the school/daycare prepared to shelter-in-place if needed? If they must move participants, where will they go?
- What emergency policies are in place for sports teams or other activities involving family members? How will coaches/instructors communicate with families during a crisis?

Pets

- Familiarize yourself with local lodgings (hotels/motels) and those outside your immediate area that will allow you to bring your pet onto their premises.
 - Is there a limit to the number of pets allowed?
 - What form of restraint/containment is required?
- Keep a list of local animal shelters and those outside your immediate area that can provide care for your pet during and following an emergency or disaster.
 - Can they meet the special needs or requirements of your pet?
 - Is medical care provided?
 - Do they provide food?
- Keep handy the names and numbers of friends and relatives outside the affected area willing to shelter your pet.
 - How long can your pet stay?
 - Will you need to provide food?
 - Does your pet have special needs that will need to be communicated?

Additional Notes:

1. Federal Emergency Management Agency (FEMA). (2006). "Are You Ready Guide." Retrieved Aug. 15, 2006 from <http://www.fema.gov/areyouready/index.shtm>.



Planning for Your Individual and Family Safety

Disasters and emergencies strike with little if any warning and can result in devastating consequences. Being prepared can reduce your risk of injury or inability to provide for yourself and your family should unexpected events force you to be confined to your home, evacuate from your community, or do without basic services such as water, electricity, and gas. This chapter provides information to assist you in creating your household emergency plan and preparing your

basic emergency supply kit.

The first step in your family disaster plan is to hold a family meeting to discuss the potential risks and hazards in your community (review Community Hazard Checklist). It is also the time to determine specific actions family members will take in the event of an emergency or disaster. Complete the following and assure that each family member is aware of its contents.

Household Emergency Plan

Name:
Address and phone number:
If an emergency prevents us from getting home or contacting each other, we will meet or leave a message at <i>(phone service in the affected area is often unavailable; choose an out-of-town relative or friend as your phone contact):</i>
Alternate meeting/message contact:
The person responsible for collecting the child(ren) from school in an emergency is <i>(name and phone #)</i> :
Alternate:
The person responsible for collecting an elderly or disabled adult(s) from daycare in an emergency is <i>(name and phone #)</i> :
Alternate:

The person responsible for caring for your child(ren) should the schools remain closed following an emergency or during a public health outbreak (name and phone #):
Alternate:
The person responsible for caring for an elderly or disabled adult(s) should routine care become unavailable following an emergency or during a public health outbreak (name and phone #):
Alternate:
The person responsible for transporting pet(s) to shelter or other temporary emergency care (name and phone #):
Neighbors (include at least two names and phone #s):
The person responsible for maintaining our emergency supplies is:
The person responsible for keeping this checklist updated is:
Checklist last updated (record dates here):

Table adapted from Te Rakau Whakamarumaruru, Ministry of Civil Defence & Emergency Management¹

In addition to the above plan, it is recommended that each member of the family carry a contact card containing emergency meeting/message information. A sample card can be found in Appendix 2.1.

Emergency Planning for People With Disabilities

A disaster preparedness plan for a person with a disability should include a personal support network consisting of family members and friends who know about the individual's special needs and who are willing to help if disaster strikes. Members of your network may be roommates, relatives, neighbors, friends, and co-workers. They

should be available during or immediately after a disaster. They should be people whom you trust and who care about your safety. They should know your capabilities and needs and be able to make the necessary health and safety arrangements if you are trapped or unable to care for yourself following an emergency. Organize a separate self-help network for your home, school, workplace, volunteer site, and any other place where you spend a lot of time.

The American Red Cross² recommends incorporating the following into your personal support network plan (a needs assessment worksheet is provided in Appendix 2.2):

- Do not depend on one person. Include a minimum of three people in your network for each location where you regularly spend a lot of time.

- Think about what your needs will be during a disaster. Write them down. Describe your needs in the areas of personal care, personal care equipment, medications (prescription and over-the-counter medicines), adaptive feeding devices, electricity-dependent equipment, and transportation.
- Give the network members copies of your evacuation plans, relevant emergency documents, and necessary keys to get into your house or car.
- Arrange with members of your network to check on you immediately if local officials give an evacuation order or if a disaster occurs. This is especially important if you are hard-of-hearing or deaf. Agree on how you and your network will communicate during and after an emergency. Your telephone may not be working.
- Choose a signal for help that your network will understand, such as knocking on a wall or using a whistle, bell, or high-pitched noisemaker. Visual signals could include hanging a sheet outside your window.
- Make sure your service animal is familiar with the people in your network. This will make it easier for the animal to accept care from someone other than yourself.

Basic Emergency Supplies

Critical to emergency preparedness is the emergency supply kit. It is important to keep in mind that basic utilities, such as electricity, water, and gas, are often unavailable. The following items³ should be stowed in a movable container(s) and kept in a designated place that all family members are aware of:

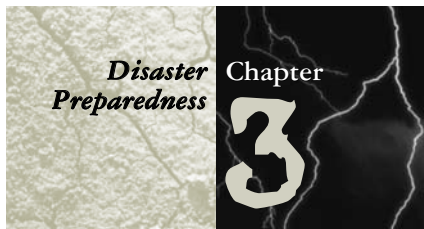
- Three-to-five-day supply of water—one gallon of water per person, per day. Keep water in sealed, unbreakable, labeled containers. Replace every six months.
- Three-to-five-day supply of nonperishable food. Replace at expiration date.
- Portable, battery-powered radio or television and extra batteries.
- Two flashlights and extra batteries.
- First aid kit and manual. If applicable, include three-to-five day supply of prescription medication. Replace at expiration date.
- Fire extinguisher and flares.
- Street map of the local area and compass.
- Matches in waterproof container.
- Special needs items, such as eyeglasses, contact lens solutions, hearing aid batteries, and mobility aids.
- Items for infants, such as formula, diapers, bottles, pacifiers, and favorite toy.
- Sanitation and hygiene items (toothbrush/toothpaste, moist towelettes, toilet paper). Plastic garbage bags for your emergency toilet.
- Kitchen accessories and cooking utensils, including a manual can opener.
- Pet supplies, such as canned food and feeding/water bowl, leash.
- A copy of your “Household Emergency Plan.”
- Photocopies of credit and identification cards. Copies of important documents, such as marriage license, birth certificate, immunization records (including pet), insurance policies.
- Up-to-date photograph of each family member.
- Extra set of car and house keys.
- Tool kit.
- Cash and coins.
- Whistle.
- Pen and paper.
- Regular household bleach (not scented bleaches, color-safe bleaches, or bleaches with added cleaners).
- Extra clothing (per person):
 - Jacket or coat (wind- and rainproof).
 - Long pants.
 - Long-sleeve shirt.
 - Sturdy shoes.
 - Hat (summer and winter), mittens, and scarf.
 - Sleeping bag or warm blanket.
- Other items to meet your unique family needs.
- All items should be stored in airtight plastic bags and placed in one or two easy-to-carry containers, such as an unused trash can or duffel bag.
- Check batteries every three months.
- Keep your automobile fueled; if electric power is cut off, gas stations may not be able to operate pumps for several days.

See Appendix 2.3 for first aid and medication supply checklists.

1. Te Rakau Whakamarumaru Ministry of Civil Defence & Emergency Management. (N.D.). “Surviving an Emergency: Household Emergency Plan for Our Home.” Retrieved Aug. 17, 2006 from [http://www.civildefence.govt.nz/memwebsite.nsf/Files/EmergencyPlan/\\$file/EmrgncyPlan.pdf](http://www.civildefence.govt.nz/memwebsite.nsf/Files/EmergencyPlan/$file/EmrgncyPlan.pdf)

2. The American Red Cross, “Disaster Preparedness for People With Disabilities.” (N.D.). Retrieved Aug. 17, 2006, from <http://www.redcross.org/services/disaster/beprepared/create.html>

3. List adapted from Federal Emergency Management Agency (FEMA) (2006) “Are You Ready Guide: Basic Disaster Supplies Kit.” Retrieved Aug. 19, 2006, from http://www.fema.gov/areyouready/assemble_disaster_supplies_kit.shtm



Emergency Food and Water Supply

One of the most critical aspects of your family's survival in the event of an emergency or disaster is access to an ample supply of clean water. Unlike food, which a healthy person can go without for many days,¹ water should not be rationed. The Red Cross recommends storing at least one gallon of water per person, per day for up to a two-week period of time. If your water supply runs low they advise drinking what you need that day and looking for a new source for the next. Additionally, if your water supply is limited, minimize activity and avoid foods that are salty, or high in fat and protein, since they will make you thirsty. The following was obtained from the American Red Cross "Disaster Services" website,² and provides you with information regarding how to locate emergency water sources and methods of water treatment to avoid ingesting contaminated water.

Water Supply Emergency Outdoor Water Sources

(see the following water treatment methods)

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

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

Hidden Water Sources in Your Home

- Hot-water tank: *Turn off the electricity or gas*, and open the drain at the bottom of the tank. Start the water flowing by turning off the water intake valve and turning on a hot-water faucet. Allow the tank to refill before turning the gas or electricity back on.

Caution: If you turn the gas off, call your local gas utility company to restore service. *Never* attempt to turn gas on yourself.

- Water pipes: Let air into the plumbing by turning on the faucet in your house at the highest level. A small amount

of water will trickle out. Then obtain water from the lowest faucet in the house.

- Ice cubes.
- Water in the reservoir tank of your toilet (not the bowl).

Caution: Should you hear reports of broken water or sewage lines, shut off your incoming water valve to stop contaminated water from entering your home.

Three Ways to Treat Water

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

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

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

Boiling

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

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

Disinfection

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

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

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

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

Distillation

Distillation involves boiling water and then collecting the vapor that condenses back to water. The condensed vapor will not include salt and other impurities. To distill, fill a pot

halfway with water. Tie a cup to the handle on the pot's lid so that the cup will hang right-side-up when the lid is upside-down (make sure the cup is not dangling into the water) and boil the water for 20 minutes. The water that drips from the lid into the cup is distilled.

Food Supply

While healthy people can survive on half their usual food intake for an extended period of time and without any food for many days,³ having a ready supply of food in the event of an emergency or disaster is preferable. The American Red Cross⁴ provides the following information regarding selection, storage, preparation, nutrition, and shelf life of foods you may want to consider for your emergency food supply.

Special Considerations

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

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

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

Storage Tips

- Keep food in a dry, cool spot—a dark area if possible.
- Keep food covered at all times.
- Open food boxes or cans carefully so that you can close them tightly after each use.
- Wrap cookies and crackers in plastic bags, and keep them in tight containers.
- Empty opened packages of sugar, dried fruits, and nuts into screw-top jars or airtight cans to protect them from pests.
- Inspect all food for signs of spoilage before use.

Use foods before they go bad, and replace them with fresh supplies, dated with ink or marker. Place new items at the back of the storage area and older ones in front.

Nutrition Tips

During and right after a disaster, it will be vital that you maintain your strength. So remember:

- Eat at least one well-balanced meal each day.
- Drink enough liquid to enable your body to function properly (two quarts a day).
- Take in enough calories to enable you to do any necessary work.

- Include vitamin, mineral, and protein supplements in your stockpile to assure adequate nutrition.

How to Cook If The Power Goes Out

For indoor emergency cooking you can use a fireplace, candle warmers, a chafing dish, and fondue pot. *Charcoal grills and camp stoves are to be used outdoors only.* Canned food can be eaten right out of the can. If you heat it in the can, be sure to open the can and remove the label first.

Shelf Life/Guidelines for Rotating Common Emergency Foods

Use within six months:

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

Use within one year:

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

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

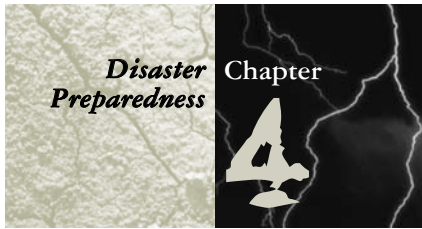
- Wheat
- Vegetable oils
- Dried corn
- Baking powder
- Soybeans
- Instant coffee, tea, and cocoa
- Salt
- Noncarbonated soft drinks
- White rice
- Bouillon products
- Dry pasta
- Powdered milk (in nitrogen-packed cans)

1. *Except Children and pregnant or lactating women.*

2. American Red Cross. (N.D.) "Disaster Services: Food and Water in an Emergency." Retrieved Aug. 19, 2006 from <http://www.redcross.org/services/disaster/beprepared/foodwtr.html>

3. *Except children and pregnant or lactating women.*

4. American Red Cross. (N.D.) "Disaster Services: Food and Water in an Emergency." Retrieved Aug. 19, 2006 from <http://www.redcross.org/services/disaster/beprepared/foodwtr.html>



Natural Hazards

Each year across the United States natural hazards account for hundreds of deaths and the destruction of homes and businesses, costing tens of billions of dollars in aid. This section examines natural hazards common to the Maryland area and offers information and instructions for how to protect yourself and your family.

Floods

Floods are one of the most common disasters in the United States. According to the U.S. Geological Survey,¹ floods kill about 140 people each year and cause \$6 billion in property damage. It is important to be aware of your flood risk no matter where you live but especially if your home is located in a low-lying area, near water or downstream from a dam. Additionally, creeks and streams that appear harmless in dry weather can become extremely hazardous in a heavy rain or snowmelt.

Floods can develop over many hours or days, while flash floods can take only a few minutes to a few hours to build. The following terms will help to familiarize you with the level of hazard associated with a flood:

Flood Watch – Flooding is possible. Stay tuned to your local radio/television news station or the National Oceanic and Atmosphere Administration – Weather Radio All Hazards (NOAA-NWR).

Flash Flood Watch – Flash flooding is possible. Stay tuned to your local radio/television news station or NOAA-NWR. **Be prepared to move to higher ground.**

Flood Warning – Flooding is occurring or soon will be. Stay tuned to your local radio/television news station or NOAA-NWR. **Be prepared to evacuate if advised to do so.**

Flash Flood Warning – A flash flood is occurring. Immediately seek higher ground. **Do not wait for instructions to do so.**

Preparing for a Flood

In order to decrease your risk of injury or death and damage to your property, the Federal Emergency Management Agency (FEMA)² recommends the following actions before, during, and after a flood.

Before a flood – To decrease your level of flood risk, you should:

- Avoid building in a flood plain unless you elevate and reinforce your home.
- Elevate the furnace, water heater, and electric panel if susceptible to flooding.
- Install “check valves” in sewer traps to prevent flood water from backing up into the drains of your home.
- Construct barriers (levees, beams, flood walls) to stop flood water from entering the building.
- Seal walls in basements with waterproofing compounds to avoid seepage.

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.**

If you have to leave your home, remember these evacuation tips:

- **Do not walk through moving water.** Six inches of moving water can make you fall. If you have to walk in water, walk where the water is not moving. Use a stick to check the firmness of the ground in front of you.
- **Do not drive into flooded areas.** If floodwaters rise around your car, abandon the car and move to higher ground if you can do so safely.

Driving: Flood Facts

- Almost half of all flash-flood fatalities occur in vehicles.
- Six inches of water will reach the bottom of most passenger cars causing loss of control and possible stalling.
- Two feet of water can float most vehicles.
- If water is moving rapidly, a car, truck, or SUV can be swept away.
- Underpasses can fill rapidly with water, while the adjacent roadway remains clear. Driving into a flooded underpass can quickly put you in five to six feet of water.
- Many flash floods occur at night when flooded roads are difficult to see.

Information obtained from "Floods the Awesome Power."³

After a flood – follow these guidelines:

- Listen for news reports to learn whether the community's water supply is safe to drink.
- Avoid floodwaters; water may be contaminated by oil, gasoline, or raw sewage. Water may also be electrically charged from underground or downed power lines.
- Avoid moving water.
- Be aware of areas where floodwaters have receded. Roads may have weakened and could collapse under the weight of a car.
- Stay away from downed power lines, and report them to the power company.
- Return home only when authorities indicate it is safe.
- Stay out of any building if surrounded by floodwaters.
- Use extreme caution when entering buildings; there may be hidden damage, particularly in foundations.
- Service damaged septic tanks, cesspools, pits, and leaching systems as soon as possible. Damaged sewage systems are serious health hazards.
- Clean and disinfect everything that got wet. Mud left from floodwater can contain sewage and chemicals.

Storms

Thunderstorms and Lightning

Thunderstorms and lightning are very common in Maryland, usually occurring in late spring, summer, or early fall.⁴

All thunderstorms produce lightning. Lightning often occurs outside of heavy rain and may occur as far as 10 miles away from any rainfall. Each year in the United States, an average of 300 people are injured and 80 killed by lightning strikes.⁵ In addition, to the danger posed by

lightning, thunderstorms can produce tornadoes, strong winds, heavy rains, hail, and flash flooding.

The following safety measures⁶ are recommended to protect yourself and your family from the effects of thunderstorms and lightning.

- If you are planning outdoor activities, obtain the weather forecast beforehand. Schedule outdoor activities around the weather to avoid exposure to the lightning hazard. Identify and stay within traveling range of a proper shelter.
- Employ the "30–30 Rule" to know when to seek a safer location. Note, however, the "30–30 Rule" cannot protect against the first lightning strike. Be alert to changes in sky conditions portending thunderstorm development directly overhead. Larger outdoor activities, with longer evacuation times, may require more lead time than the "30–30 Rule" stipulates.

"30–30 Rule" – When you see lightning, count the seconds until you hear thunder. If that time is 30 seconds or less, the thunderstorm is within 6 miles and is dangerous. Seek shelter immediately. The threat of lightning continues for much longer than most people realize. Wait at least 30 minutes after the last clap of thunder before leaving shelter.⁷

- The safest place commonly available during a lightning storm is a large, fully enclosed, substantially constructed building (e.g., your typical house, school, library, or other public building).
 - Avoid using corded telephones, electrical appliances, lighting fixtures, ham radio microphones, electric sockets, and plumbing.
 - Unplug appliances and other electrical items such as computers and turn off air conditioners. Power surges from lightning can cause serious damage.
 - Don't watch lightning from open windows or doorways. Inner rooms are generally preferable from a safety viewpoint.
 - Avoid showering, bathing, washing your hands, or doing dishes. Lightning travels easily through metal pipes.
- If you can't reach a substantial building, an enclosed vehicle with a solid metal roof and metal sides is a reasonable second choice.
 - Close the windows, lean away from the door, put your hands in your lap, and don't touch the steering wheel, ignition, gear shifter, or radio.
 - Convertibles, cars with fiberglass or plastic shells, and open-framed vehicles are not suitable lightning shelters.

If you are unable to get to a sheltered structure, DO:

- Proceed from higher to lower elevations.
- In a forest or wooded area, seek shelter in a low area under a thick growth of small trees.
- In an open area, seek a low spot away from trees and poles. If you seek shelter in a ravine or valley, be alert for flash floods.
- If swimming or playing near the water, move immediately away from the water (this includes indoor pools) and to a protective shelter.
- If you are in a boat, go immediately to shore and move to protective shelter. If you are unable to get to shore, take down any metal object higher than the boat and lay it on the deck. Squat down in the middle of the boat (away from deck water) as close to the deck as possible. Place your hands over your ears and your head between your knees. Make yourself as small a target as possible. *Do not lie flat on the deck.*

DO NOT:

- Remain in open vehicles like farm tractors, cables construction machinery, riding lawnmowers, and golf carts (sunroofs offer no protection).
- Consider unprotected open structures such as picnic pavilions, rain shelters, and bus stops. Avoid contact with metal fences, metal bleachers, or other long metal structures.
- Take shelter under trees to keep dry during thunderstorms.

If lightning is about to strike, it will sometimes provide a very few seconds of warning.

- Your hair may stand on end and your skin will tingle. Light metal objects will vibrate and you may hear a crackling or “kee-kee” sound.
- If you are in a group, spread out so there are several body lengths between each person (at least 20 feet apart).
- Once you’ve spread out, squat low to the ground on the balls of your feet. Place your hands over your ears and your head between your knees. Make yourself the smallest target possible and minimize your contact with the

ground. *Do not lie flat on the ground.*

- When the immediate threat of lightning has passed, continue heading to the safest place possible.

Attending to a lightning strike victim:

- Call 911.
- Check breathing and pulse. If the victim has a pulse but is not breathing, begin mouth-to-mouth-resuscitation. If there is no pulse, begin CPR. Most lightning strike deaths result from cardiac arrest and/or stopped breathing. Begin treatment as soon as possible.
- Check for other injuries, such as bleeding, burns, or fractures.
- Lightning victims should be examined by a medical professional even if they do not appear to require such attention.

Note: Individuals struck by lightning do not carry an electrical charge and it is safe to touch them to render medical treatment.

Hurricanes and Tropical Storms

Maryland has experienced the destructive force of several hurricanes, most recently Floyd in 1999 and Isabelle in 2003. However, because the strength of a hurricane often dissipates before making landfall in the state, Maryland is more likely to experience tropical storm conditions. Though less powerful than hurricanes, tropical storms are often no less damaging, producing high winds, storm surges, thunderstorms, tornadoes, heavy rainfall, and flooding. The following information will assist you to prepare for and remain safe should a hurricane or tropical storm make landfall in your area.

The Atlantic hurricane season is officially from June 1 to November 30. Though hurricanes have occurred outside of these six months, these dates encompass over 97% of tropical activity, according to Neal Dorst at the Atlantic Oceanographic and Meteorological Laboratory. The Atlantic basin shows a peaked season from August through October, with 78% of the tropical storm days, 87% of the minor hurricane days, and 96% of the major hurricane days occurring then. Maximum activity is in early to mid-September.⁸

Hurricanes are classified into five categories based on their wind speed, central pressure, and damage potential.

Saffir-Simpson Hurricane Scale			
Scale Numbers (Category)	Sustained Winds (MPH)	Damage	Storm Surge
1	74-95	Minimal. Unanchored mobile homes, vegetation, and signs	4-5 feet
2	96-110	Moderate. All mobile homes, roofs, small craft; flooding	6-8 feet
3	111-130	Extensive. Small buildings; low-lying roads cut off	9-12 feet
4	131-155	Extreme. Roofs destroyed, trees down, roads cut off, mobile homes destroyed, beach homes flooded	13-18 feet
5	More than 155	Catastrophic. Most buildings destroyed, vegetation destroyed, major roads cut off, homes flooded	Greater than 18 feet

The following terms and definitions, obtained from the FEMA¹⁰ website, will help to familiarize you with tropical storms and hurricanes, their accompanying weather conditions, and types of warnings.

Tropical Depression – An organized system of clouds and thunderstorms with a defined surface circulation and maximum sustained winds of 38 mph (33 knots) or less. Sustained winds are defined as one-minute average wind measured at about 33 feet (10 meters) above the surface.

Tropical Storm – An organized system of strong thunderstorms with a defined surface circulation and maximum sustained winds of 39–73 mph (34–63 knots).

Hurricane – An intense tropical weather system of strong thunderstorms with a well-defined surface circulation and maximum sustained winds of 74 mph (64 knots) or higher.

Storm Surge – A dome of water pushed onshore by hurricane and tropical storm winds. Storm surges can reach 25 feet high and be 50–100 miles wide.

Storm Tide – A combination of storm surge and the normal tide (i.e., a 15-foot storm surge combined with a 2-foot normal high tide over the mean sea level creates a 17-foot storm tide).

Hurricane/Tropical Storm Watch – Hurricane/tropical storm conditions are possible in the specified area, usually within 36 hours. Tune in to NOAA Weather Radio, commercial radio, or television for information.

Hurricane/Tropical Storm Warning – Hurricane/tropical storm conditions are expected in the specified area, usually within 24 hours.

Short-Term Watches and Warnings – These warnings provide detailed information about specific hurricane threats, such as flash floods and tornadoes.

The best protection against hurricane and tropical storm damage is to prepare before hurricane season begins. It is also vital that you know what to do during a storm and after it has passed.

FEMA¹¹ recommends the following:

Before a Hurricane

- Make plans to secure your property. Permanent storm shutters offer the best protection for windows. A second option is to board up windows with 5/8" marine plywood, cut to fit and ready to install. Tape does not prevent windows from breaking.
- Install straps or additional clips to securely fasten your roof to the frame structure. This will reduce roof damage.
- Be sure trees and shrubs around your home are well trimmed.

- Clear loose and clogged rain gutters and downspouts.
- Determine how and where to secure your boat.
- Consider building a safe room. (For resources on building a safe room for use in a hurricane or tornado, see "Resources" in the Appendix.)

During a Hurricane

- Listen to the radio or TV for information.
- Secure your home, close storm shutters, and secure outdoor objects or bring them indoors.
- Turn off utilities if instructed to do so. Otherwise, turn the refrigerator thermostat to its coldest setting and keep its doors closed.
- Turn off propane tanks.
- Avoid using the phone, except for serious emergencies.
- Moor your boat if time permits.
- Ensure a supply of water for sanitary purposes such as cleaning and flushing toilets. Fill the bathtub and other large containers with water.

Evacuation

You should evacuate under the following conditions:

- If you are directed by local authorities to do so. Be sure to follow their instructions.
- If you live in a mobile home or temporary structure—such shelters are particularly hazardous during hurricanes no matter how well fastened to the ground.
- If you live in a high-rise building—hurricane winds are stronger at higher elevations.
- If you live on the coast, on a flood plain, near a river, or on an inland waterway.
- If you feel you are in danger.

If you are unable to evacuate, go to your wind-safe room. If you do not have one, follow these guidelines:

- Stay indoors during the hurricane and away from windows and glass doors.
- Close all interior doors—secure and brace external doors.
- Keep curtains and blinds closed. Do not be fooled if there is a lull; it could be the eye of the storm—winds will pick up again.
- Take refuge in a small interior room, closet, or hallway on the lowest level.
- Lie on the floor under a table or another sturdy object.

After a hurricane, follow the instructions in chapter 6, "Recovering From a Disaster."

Winter Storms

People often think of winter storms in terms of snowfall. However, there are other types of winter conditions that may occur with or without snowfall, and have the potential to immobilize an entire region due to extremely hazardous conditions. The National Weather Service¹² highlights the following storms and their consequences:

- *Storms With Strong Winds* – Sometimes winter storms are accompanied by strong winds creating blizzard conditions with blinding wind-driven snow, severe drifting, and dangerous wind chill. Strong winds with these intense storms and cold fronts can knock down trees, utility poles, and power lines. Storms near the coast can cause coastal flooding and beach erosion as well as sink ships at sea.
- *Extreme Cold* – Extreme cold often accompanies a winter storm or is left in its wake. Prolonged exposure to the cold can cause frostbite or hypothermia and become life-threatening. Infants and elderly people are most susceptible. Freezing temperatures can cause severe damage to citrus fruit crops and other vegetation. Pipes may freeze and burst in homes that are poorly insulated or without heat.
- *Ice Storms* – Heavy accumulations of ice can bring down trees, electrical wires, telephone poles and lines, and communication towers. Communications and power can be disrupted for days while utility companies work to repair the extensive damage. Even small accumulations of ice may cause extreme hazards to motorists and pedestrians.
- *Heavy Snowstorms* – Heavy snow can strand commuters, stop the flow of supplies, and disrupt emergency and medical services. Accumulations of snow can collapse buildings and knock down trees and power lines. In rural areas, homes and farms may be isolated for days, and unprotected livestock may be lost. The cost of snow removal, repairing damages, and loss of business can have large economic impacts on cities and towns.

To decrease the risks to you and your family from winter-related hazards, prepare for and take the following protective measures as advised by FEMA.¹³

Keep on hand:

- Rock salt to melt ice on walkways.
- Sand to improve traction.
- Snow shovels and other snow removal equipment.

Prepare for possible isolation in your home by:

- Having sufficient heating fuel; regular fuel sources may be cut off. For example, store a good supply of dry, seasoned wood for your fireplace or wood-burning stove.
- Winterize your home to extend the life of your fuel supply by insulating walls and attics, caulking and weather-strip-

ping doors and windows, and installing storm windows or covering windows with plastic.

What to do during a winter storm or under conditions of extreme cold:

- Listen to your radio, television, or NOAA Weather Radio for weather reports and emergency information.
- Eat regularly and drink ample fluids, but avoid caffeine and alcohol.
- Avoid overexertion when shoveling snow. Overexertion can bring on a heart attack—a major cause of death in the winter. If you must shovel snow, stretch before going outside.
- Watch for signs of frostbite. These include loss of feeling and white or pale appearance in extremities such as fingers, toes, ear lobes, and the tip of the nose. If symptoms are detected, get medical help immediately.
- Watch for signs of hypothermia. These include uncontrollable shivering, memory loss, disorientation, incoherence, slurred speech, drowsiness, and apparent exhaustion. If symptoms of hypothermia are detected, get the victim to a warm location, remove wet clothing, warm the center of the body first, and give warm, non-alcoholic beverages if the victim is conscious. Get medical help as soon as possible.
- Conserve fuel, if necessary, by keeping your residence cooler than normal. Temporarily close off heat to some rooms.
- Maintain ventilation when using kerosene heaters to avoid buildup of toxic fumes. Refuel kerosene heaters outside and keep them at least three feet from flammable objects.

Dress for the weather:

- Wear several layers of loose-fitting, lightweight, warm clothing rather than one layer of heavy clothing. The outer garments should be tightly woven and water repellent.
- Wear mittens, which are warmer than gloves.
- Wear a hat.
- Cover your mouth with a scarf to protect your lungs.

Drive only if it is absolutely necessary. If you must drive, consider the following:

- Travel in the day, don't travel alone, and keep others informed of your schedule.
- Stay on main roads; avoid back road shortcuts.

If a blizzard traps you in the car, keep these guidelines in mind:

- Pull off the highway. Turn on hazard lights and hang a distress flag from the radio antenna or window.
- Remain in your vehicle where rescuers are most likely to find you. Do not set out on foot unless you can see a building close by where you know you can take shelter. Be careful; distances are distorted by blowing snow. A building may seem close but be too far to walk to in deep snow.

- Run the engine and heater about 10 minutes each hour to keep warm. When the engine is running, open an upwind window slightly for ventilation. This will protect you from possible carbon monoxide poisoning. Periodically clear snow from the exhaust pipe.
- Exercise to maintain body heat, but avoid overexertion. In extreme cold, use road maps, seat covers, and floor mats for insulation. Huddle with passengers and use your coat for a blanket.
- Take turns sleeping. One person should be awake at all times to look for rescue crews.
- Drink fluids to avoid dehydration.
- Be careful not to waste battery power. Balance electrical energy needs—the use of lights, heat, and radio—with supply.
- Turn on the inside light at night so work crews or rescuers can see you.
- If stranded in a remote area, stomp large block letters in an open area spelling out HELP or SOS and line with rocks or tree limbs to attract the attention of rescue personnel who may be surveying the area by airplane.
- Leave the car and proceed on foot—if necessary—once the blizzard passes.

Extreme Heat

Temperatures that hover 10 degrees or more above the average high temperature for a region and last for several weeks are defined as extreme heat. Humid or muggy conditions, which add to the discomfort of high temperatures, occur when a “dome” of high atmospheric pressure traps hazy, damp air near the ground.¹⁴

People suffer heat-related illness when their bodies are unable to compensate and properly cool themselves. The body normally cools itself by sweating. But under some conditions, sweating just isn't enough. In such cases, a person's body temperature rises rapidly. Very high body temperatures may damage the brain or other vital organs.

Several factors affect the body's ability to cool itself during extremely hot weather. When the humidity is high, sweat will not evaporate as quickly, preventing the body from releasing heat quickly. Other conditions related to risk include age, obesity, fever, dehydration, heart disease, mental illness, poor circulation, sunburn, and prescription drug and alcohol use.

The elderly, the very young, and people with mental illness and chronic diseases are at highest risk. However, even young and healthy individuals can succumb to heat if they participate in strenuous physical activities during hot weather. Air conditioning is the number one protective factor against heat-related illness and death. If a home is not air-conditioned, people can reduce their risk for heat-related illness by spending time in public facilities that are air-con-

ditioned.¹⁵

Your best protection against extreme heat is to remain cool and use common sense. The following tips and recommendations¹⁶ will help you to reduce the risk for heat-related illnesses and to recognize them if they occur.

- **Drink Plenty of Fluids (non-alcoholic)** – In hot weather increase your fluid intake, regardless of your activity level. Don't wait until you're thirsty to drink.
 - During heavy exercise in a hot environment, drink two to four glasses (16–32 ounces) of cool fluids each hour.
 - **Don't** drink liquids that contain alcohol or large amounts of sugar—these actually cause you to lose more body fluid.
 - Avoid very cold drinks because they can cause stomach cramps.

Caution: If your doctor generally limits the amount of fluid you drink or has you on water pills, ask how much you should drink while the weather is hot.

- **Replace salt and minerals** – Heavy sweating removes salt and minerals from the body. These are necessary for your body and must be replaced. A sports beverage can replace the salt and minerals you lose in sweat.

Caution: If you are on a low-salt diet, talk with your doctor before drinking a sports beverage.

- **Stay cool indoors** – Stay indoors and, if at all possible, stay in an air-conditioned place. If your home does not have air conditioning, go to the shopping mall or public library—even a few hours spent in air conditioning can help your body stay cooler when you go back into the heat.
 - Electric fans may provide comfort, but when the temperature is in the high 90s, fans will not prevent heat-related illness. Taking a cool shower or bath or moving to an air-conditioned place is a much better way to cool off.

If you must be outdoors:

- **Wear appropriate clothing** – Choose lightweight, light-colored, loose-fitting clothing. Wear a wide-brimmed hat and sunglasses.
- **Use sunscreen** – Apply sunscreen of SPF 15 or higher 30 minutes before you go outdoors. Continue to reapply according to package directions.
- **Limit your activity to morning and evening hours** – Limit sun exposure during midday hours and in places of potential severe exposure such as the beach.
- **Rest often** – Choose shady areas to take a break from the sun so that your body's thermostat will have a chance to recover.

- *Pace yourself* – If you are not accustomed to working or exercising in a hot environment, start slowly and pick up the pace gradually. If exertion in the heat makes your heart pound and leaves you gasping for breath, STOP all activity. Get into a cool area or at least into the shade, and rest, especially if you become lightheaded, confused, weak, or faint.
- *Adjust to the environment* – Be aware that any sudden change in temperature, such as an early summer heat wave, will be stressful to your body. You will have a greater tolerance for heat if you limit your physical activity until you become accustomed to the heat. If you travel to a hotter climate, allow several days to become acclimated before attempting any vigorous exercise, and work up to it gradually.
- *Use a buddy system* – When working in the heat, monitor the condition of your co-workers and have someone do the same for you. Heat-induced illness can cause a person to become confused or lose consciousness.

Although anyone at any time can suffer from heat-related illness, some people are at greater risk than others:

- **Monitor those at high risk**
 - Infants and children up to 4 years of age are sensitive to the effects of high temperatures and rely on others to regulate their environments and provide adequate liquids.
 - People 65 years of age or older may not compensate for heat stress efficiently and are less likely to sense and respond to change in temperature.
 - People who are overweight may be prone to heat sickness because of their tendency to retain more body heat.
 - People who overexert during work or exercise may become dehydrated and susceptible to heat sickness.
 - People who are physically ill, especially with heart disease or high blood pressure, or who take certain medications, such as for depression, insomnia, or poor circulation, may be affected by extreme heat.
- Visit adults at risk at least twice a day and closely watch them for signs of heat exhaustion or heat stroke. Infants and young children, of course, need much more frequent watching.

Special consideration for children and pets:

- **Do not leave children or pets in cars** – Even in cool temperatures, cars can heat up to dangerous temperatures very quickly. Even with the windows cracked open, interior temperatures can rise almost 20 degrees Fahrenheit within the first 10 minutes. Anyone left inside is at risk for serious heat-related illnesses or even death. When traveling with children, remember to do the following:

- Never leave infants, children, or pets in a parked car, even if the windows are cracked open.
- To remind yourself that a child is in the car, keep a stuffed animal in the car seat. When the child is buckled in, place the stuffed animal in the front with the driver.
- When leaving your car, check to be sure everyone is out of the car. Do not overlook any children who have fallen asleep in the car.
- Provide plenty of fresh water for pets—in your home and outdoors in shady areas.

Know the symptoms of heat disorders and overexposure to the sun, and be ready to give first aid treatment.

Heat Stroke

Heat stroke occurs when the body is unable to regulate its temperature. The body's temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down. Body temperature may rise to 106°F or higher within 10 to 15 minutes. Heat stroke can cause death or permanent disability if emergency treatment is not provided.

Recognizing Heat Stroke

Warning signs of heat stroke vary but may include the following:

- An extremely high body temperature (above 103°F, orally)
- Red, hot, and dry skin (no sweating)
- Rapid, strong pulse
- Throbbing headache
- Dizziness
- Nausea
- Confusion
- Unconsciousness

What to Do

If you see any of these signs, you may be dealing with a life-threatening emergency. Have someone call for immediate medical assistance (911) while you begin cooling the victim. Do the following:

- Get the victim to a shady area.
- Cool the victim rapidly using whatever methods you can. For example, immerse the victim in a tub of cool water; place the person in a cool shower; spray the victim with cool water from a garden hose; sponge the person with cool water; or if the humidity is low, wrap the victim in a cool, wet sheet and fan him or her vigorously.
- Monitor body temperature, and continue cooling efforts until the body temperature drops to 101–102°F.

- If emergency medical personnel are delayed, call the hospital emergency room for further instructions.
- Do not give the victim fluids to drink.
- Get medical assistance as soon as possible.

Sometimes a victim's muscles will begin to twitch uncontrollably as a result of heat stroke. If this happens, keep the victim from injuring himself, but do not place any object in the mouth and do not give fluids. If there is vomiting, make sure the airway remains open by turning the victim on his or her side.

Heat Exhaustion

Heat exhaustion is a milder form of heat-related illness that can develop after several days of exposure to high temperatures and inadequate or unbalanced replacement of fluids. It is the body's response to an excessive loss of the water and salt contained in sweat. Those most prone to heat exhaustion are elderly people, people with high blood pressure, and people working or exercising in a hot environment.

Recognizing Heat Exhaustion

Warning signs of heat exhaustion include the following:

- Heavy sweating
- Paleness
- Muscle cramps
- Tiredness
- Weakness
- Dizziness
- Headache
- Nausea or vomiting
- Fainting

The skin may be cool and moist. The victim's pulse rate will be fast and weak, and breathing will be fast and shallow. If heat exhaustion is untreated, it may progress to heat stroke. Seek medical attention immediately if any of the following occurs:

- Symptoms are severe.
- The victim has heart problems or high blood pressure.

Otherwise, help the victim to cool off, and seek medical attention if symptoms worsen or last longer than one hour.

What to Do

Cooling measures that may be effective include the following:

- Cool, nonalcoholic beverages
- Rest
- Cool shower, bath, or sponge bath
- An air-conditioned environment
- Lightweight clothing

Heat Cramps

Heat cramps usually affect people who sweat a lot during strenuous activity. This sweating depletes the body's salt and moisture. The low salt level in the muscles may be the cause of heat cramps. Heat cramps may also be a symptom of heat exhaustion.

Recognizing Heat Cramps

Heat cramps are muscle pains or spasms—usually in the abdomen, arms, or legs—that may occur in association with strenuous activity. If you have heart problems or are on a low-sodium diet, get medical attention for heat cramps.

What to Do

If medical attention is not necessary, take these steps:

- Stop all activity, and sit quietly in a cool place.
- Drink clear juice or a sports beverage.
- Do not return to strenuous activity for a few hours after the cramps subside because further exertion may lead to heat exhaustion or heat stroke.
- Seek medical attention for heat cramps if they do not subside in one hour.

Sunburn

Sunburn should be avoided because it damages the skin. Although the discomfort is usually minor and healing often occurs in about a week, a more severe sunburn may require medical attention.

Recognizing Sunburn

Symptoms of sunburn are well-known: the skin becomes red, painful, and abnormally warm after sun exposure.

What to Do

Consult a doctor if the sunburn affects an infant younger than 1 year of age or if these symptoms are present:

- Fever
- Fluid-filled blisters
- Severe pain

Also, remember these tips when treating sunburn:

- Avoid repeated sun exposure.
- Apply cold compresses or immerse the sunburned area in cool water.
- Apply moisturizing lotion to affected areas. Do not use salve, butter, or ointment.
- Do not break blisters.

Heat Rash

Heat rash is a skin irritation caused by excessive sweating during hot, humid weather. It can occur at any age but is most common in young children.

Recognizing Heat Rash

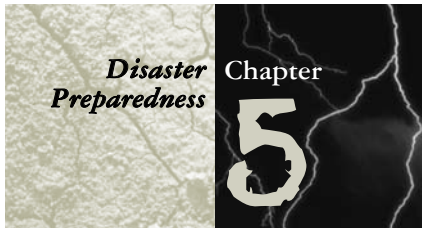
Heat rash looks like a red cluster of pimples or small blisters. It is more likely to occur on the neck and upper chest, in the groin, under the breasts, and in elbow creases.

What to Do

The best treatment for heat rash is to provide a cooler, less humid environment. Keep the affected area dry. Dusting powder may be used to increase comfort.

Treating heat rash is simple and usually does not require medical assistance.

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Health and Environmental Emergencies

The potential for health and environmental emergencies is a fact of life in our increasingly global and technological world. The challenges we face range from concerns about a flu pandemic to an intentional release by terrorists of a biological agent into the atmosphere. As in any emergency or disaster, being informed and prepared are your best protection. This chapter offers general guidelines and recommendations should a health or environmental emergency arise in your community.

Health Emergencies

In the event of a large-scale health crisis, such as an influenza pandemic, access to basic services and the ability to go to work or school will likely be compromised. The U.S. Department of Health and Human Services¹ offers the following information and recommendations. Additionally, review chapters 2 and 3 of this guidebook.

Access to stores and other services may be disrupted.

- Plan for the possibility that usual services may be disrupted. These could include services provided by hospitals and other health care facilities, banks, restaurants, government offices, telephone and cellular phone companies, and post offices.
- Stores may close or have limited supplies.
- Transportation services may be disrupted and you may not be able to rely on public transportation. Plan to take fewer trips and store essential supplies.
- Public gatherings, such as volunteer meetings and worship services, may be canceled. Prepare contact lists including conference calls, telephone chains, and email distribution lists, to access or distribute necessary information.
- Consider that the ability to travel, even by car if there are fuel shortages, may be limited.
- There may be widespread illness that could result in the shutdown of local ATMs and banks. Keep a small amount of cash or traveler's checks in small denominations for easy use.

Being able to work may be difficult or impossible.

- Ask your employer how business will continue during the health crisis.

- Discuss staggered shifts or working at home with your employer. Discuss telecommuting possibilities and needs, accessing remote networks, and using portable computers.
- Discuss possible flexibility in leave policies. Discuss with your employer how much leave you can take to care for yourself or a family member.
- Plan for possible loss of income if you are unable to work or the company you work for temporarily closes.

Schools and daycare centers may be closed for an extended period of time.

- Talk to your teachers, administrators, and parent-teacher organizations about your school's health emergency plan.
- Plan now for children staying at home for extended periods of time, as school closings may occur along with restrictions on public gatherings, such as at malls and movie theaters.
- Plan learning activities and exercises that your children can do at home. Have learning materials, such as books, school supplies, and educational computer activities and movies, on hand.
- Talk to teachers, administrators, and parent-teacher organizations about possible activities, lesson plans, and exercises that children can do at home if schools are closed. This could include continuing courses by TV or the Internet.
- Plan entertainment and recreational activities that your children can do at home. Have materials, such as reading books, coloring books, and games, on hand for your children to use.

Medical care for people with chronic illness could be disrupted.

In a severe health crisis, hospitals and doctors' offices may be overwhelmed.

- If you have a chronic disease, such as heart disease, high blood pressure, diabetes, asthma, or depression, you should continue taking medication as prescribed by your doctor.
- Make sure you have necessary medical supplies such as glucose and blood-pressure monitoring equipment.
- Talk to your health care provider to ensure adequate access to your medications.
- If you receive ongoing medical care such as dialysis, chemotherapy, or other therapies, talk with your health care provider about plans to continue care during the health emergency.

Record important information about your family's health using the worksheet provided in Appendix 5.1.

The following steps may help prevent the spread of respiratory illnesses such as the flu:

- Cover your nose and mouth with a tissue when you cough or sneeze—throw the tissue away immediately after you use it.

- Wash your hands often with soap and water, especially after you cough or sneeze. If you are not near water, use an alcohol-based (60–95%) hand cleaner.
- Avoid close contact with people who are sick. When you are sick, keep your distance from others to protect them from getting sick, too.
- If you get the flu, stay home from work, school, and social gatherings. In this way you will help prevent others from catching your illness.
- Try not to touch your eyes, nose, or mouth. Germs often spread this way.

Environmental Emergencies

As technology and science advance so too does the risk of environmental emergencies. Incidents such as oil and chemical spills, or the release of radioactive materials or biological agents, can occur as a result of transportation accidents, equipment failure, human error, or natural/man-made disaster events. Being prepared and using common sense is your best protection.

The first three chapters of this guidebook provide the information you need to be prepared in the event of an environmental emergency. In addition, the American Red Cross² provides the following information and recommendations:

How you may be notified:

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

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

You will be told:

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

Do not call the telephone company, and do not call EMS, 911, or the operator for information. Dial these numbers only for a possible life-threatening emergency.

Shelter in Place

One of the basic instructions you may be given in an emergency is to “shelter in place.” This is a precaution aimed

to keep you and your family safe while remaining in your home. If you are told to shelter in place, take your children and pets indoors immediately.

In the event of a chemical spill you should:

- Use a damp cloth to cover your mouth and nose; this will offer some protection to your breathing.
- Close all windows in your home.
- Turn off all fans, heating and air-conditioning systems.
- Close the fireplace damper.
- Go to an above-ground room (not the basement) with the fewest windows and doors.
- Take your Family Disaster Supplies Kit with you.
- Wet some towels and jam them in the crack under the doors.
- Tape around doors, windows, exhaust fans, or vents. Use the plastic garbage bags to cover windows, outlets, and heat registers.
- If you are told there is danger of explosion, close the window shades, blinds, or curtains. To avoid injury, stay away from the windows.
- Stay in the room and listen to your radio until you are told all is safe or you are told to evacuate.

Evacuation

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

If you are told to evacuate immediately:

- Take your Family Disaster Supplies Kit and medications. (Do not assume that a shelter will have everything you need. In most cases, the shelters will provide only emergency items such as meals, cots, and blankets.)
- Close and lock your windows.
- Shut off all vents.
- Turn off all appliances (except for refrigerator and freezer).
- Lock the door.
- Move quickly and calmly.
- Check on neighbors to make sure they have been notified, and offer help to those with disabilities or other special needs.
- If you need a ride, ask a neighbor. If no neighbor is available to help you, listen to the emergency broadcast station for further instructions.
- Take only one car to the evacuation site.
- Close your car windows and air vents and turn off the heater or air conditioner.

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

Chemical Poisoning

If you think you have been exposed to a toxic chemical, call your local poison control or 911.

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

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

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

Because chemical poisoning can be a life-threatening emergency:

1. Send someone to call 911, immediately.
2. Tell the operator the location of the emergency and the phone number from which you are calling.
3. Describe what has happened, how many people are involved, and what is being done to help.
4. Stay on the phone until the operator tells you to hang up.

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

First Aid Treatment for Chemical Burns

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

- Remove any affected clothing or jewelry from the injury. Use lots of cool running water to flush the chemical from the skin until emergency help arrives. The running water will dilute the chemical fast enough to prevent the injury from getting worse.
- Use the same treatment for eye burns and remove any contact lenses. Be careful to flush the eye from the nose outward.
- If no large amount of clean water is available, gently brush the chemical off the skin and away from the victim and you.

- If the chemical is on the face, neck, or shoulders, ask the victim to close his or her eyes before brushing off the chemical.
- Cover the wound very loosely with a dry, sterile, or clean cloth so that the cloth will not stick to the wound. Do not put any medication on the wound. Seek medical attention immediately.

If you believe you have been contaminated with a chemical:

- Call your local poison control center, or 911, immediately.
- If medical help is not immediately available, remove your clothing starting from the top and working your way down to your socks. Take care not to touch your contaminated clothing to your bare skin.
- Place your clothing in a plastic bag so it cannot contaminate other people or things.
- Take a thorough shower to wash away any chemical.
- Re-dress in clean clothing and go for medical help at your first opportunity.

Household Chemical Emergency

While the above information is directly applicable to household chemical emergencies, FEMA³ recommends the following additional guidelines to protect yourself and your family:

- Buy only as much of a chemical as you think you will use.
- Keep products containing hazardous materials in their original containers, and never remove the labels unless the container is corroding. Corroding containers should be repackaged and clearly labeled.
- Store household chemicals in places where children cannot access them.
- Never store hazardous products in food containers.
- Never mix household hazardous chemicals or waste with other products. Incompatibles, such as chlorine bleach and ammonia, may react, ignite, or explode.

Take the following precautions to prevent and respond to accidents:

- Follow the manufacturer's instructions for the proper use of the household chemical.
- Never smoke while using household chemicals.
- Never use hair spray, cleaning solutions, paint products, or pesticides near an open flame (e.g., pilot light, lighted candle, fireplace, wood burning stove, etc.). Although you may not be able to see or smell them, vapor particles in the air could catch fire or explode.
- Clean up any chemical spill immediately. Use rags to clean up the spill. Wear gloves and eye protection. Allow the fumes in the rags to evaporate outdoors, then dispose of the rags by wrapping them in a newspaper and placing them in a sealed plastic bag in your trash can.

- Dispose of hazardous materials correctly. Take household hazardous waste to a local collection program. Check with your county or state environmental or solid waste agency to learn if there is a household hazardous waste collection program in your area.

Be prepared to seek medical assistance:

- Post the number of the emergency medical services and the poison control center by all telephones. In an emergency situation, you may not have time to look up critical phone numbers.

If there is a danger of fire or explosion:

- Get out of the residence immediately. Do not waste time collecting items or calling the fire department when you are in danger. Call the fire department from outside (a cellular phone or a neighbor's phone) once you are safely away from danger.
- Stay upwind and away from the residence to avoid breathing toxic fumes.

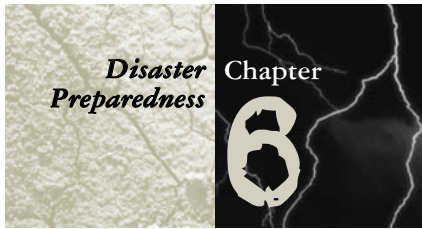
If someone has been exposed to a household chemical:

- Find any containers of the substance that are readily available in order to provide requested information. Call 911.
- Follow the emergency operator or dispatcher's first aid instructions carefully. The first aid advice found on containers may be out-of-date or inappropriate. Do not give anything by mouth unless advised to do so by a medical professional.
- Discard clothing that may have been contaminated. Some chemicals may not wash out completely.

1. U.S. Department of Health and Human Services (2006). "Pandemic Influenza Planning: A Guide for Individuals and Families." Retrieved Aug. 24, 2006, from <http://pandemicflu.gov/planguide/>

2. American Red Cross (2006). "Chemical Emergencies." Retrieved Aug. 25, 2006, from http://www.redcross.org/services/prepare/0,1082,0_94_00.html

3. Federal Emergency Management Agency (2006). "Are You Ready Guide: Household Chemical Emergencies." Retrieved Aug. 27, 2006, from http://www.fema.gov/areyouready/household_chemical_emergencies.shtm



Recovering From a Disaster

The recovery process following a disaster or major emergency is usually gradual and encompasses both your physical and mental well-being. The following guidelines from FEMA's "Are You Ready Guide,"¹ will assist you to pick up the pieces and put order back into your life.

Your first concern after a disaster is your family's health and safety.

Aiding the Injured

- Check for injuries. Do not attempt to move seriously injured persons unless they are in immediate danger of death or further injury. If you must move an unconscious person, first stabilize the neck and back, then call for help immediately.
- If the victim is not breathing, carefully position the victim for artificial respiration, clear the airway, and commence mouth-to-mouth resuscitation.
- Maintain body temperature with blankets. Be sure the victim does not become overheated.
- Never try to feed liquids to an unconscious person.

Health

- Be aware of exhaustion. Don't try to do too much at once. Set priorities and pace yourself. Get enough rest.
- Drink plenty of clean water and eat well.
- Wear sturdy work boots and gloves.
- When working in debris, wash your hands thoroughly and often with soap and clean water.

Be aware of new safety issues created by the disaster

- Watch for washed-out roads, contaminated buildings, contaminated water, gas leaks, broken glass, damaged electrical wiring, and slippery floors.
- Inform local authorities about health and safety issues, including chemical spills, downed power lines, washed-out roads, smoldering insulation, and dead animals.

Returning home

- Keep a battery-powered radio with you so you can listen for emergency updates and news reports.
- Use a battery-powered flashlight to inspect a damaged home. (Note: The flashlight should be turned on outside

before entering—the battery may produce a spark that could ignite leaking gas, if present.)

- Watch out for animals, especially poisonous snakes. Use a stick to poke through debris.
- Use the phone only to report life-threatening emergencies.
- Stay off the streets. If you must go out, watch for fallen objects, downed electrical wires, and weakened walls, bridges, roads, and sidewalks.

Before You Enter Your Home

Walk carefully around the outside and check for loose power lines, gas leaks, and structural damage. If you have any doubts about safety, have your residence inspected by a qualified building inspector or structural engineer before entering.

Do not enter if:

- You smell gas.
- Floodwaters remain around the building.
- Your home was damaged by fire and the authorities have not declared it safe.

Going inside your home – Enter the home carefully and check for damage. Be aware of loose boards and slippery floors.

Be aware of:

- Natural gas – If you smell gas or hear a hissing or blowing sound, open a window and leave immediately. Turn off the main gas valve from the outside, if you can. Call the gas company from a neighbor's residence. **If you shut off the gas supply at the main valve, you will need a professional to turn it back on.**
- Do not smoke or use oil, gas lanterns, candles, or torches for lighting inside a damaged home until you are sure there is no leaking gas or other flammable materials present.
- Sparks, broken or frayed wires – Check the electrical system **unless you are wet, standing in water, or unsure of your safety.** If possible, turn off the electricity at the main fuse box or circuit breaker. If the situation is unsafe, leave the building and call for help. Do not turn on the lights until you are sure they're safe to use. You may want to have an electrician inspect your wiring.
- Roof, foundation, and chimney cracks – If it looks like the building may collapse, leave immediately.
- Appliances – If appliances are wet, turn off the electricity at the main fuse box or circuit breaker. Then, unplug appliances and let them dry out. Have appliances checked by a professional before using them again. Also, have the electrical system checked by an electrician before turning the power back on.
- Water and sewage systems – If pipes are damaged, turn off the main water valve. **Check with local authorities**

before using any water; the water could be contaminated. Pump out wells and have the water tested by authorities before drinking. Do not flush toilets until you know that sewage lines are intact.

- Food and other supplies – Throw out all food and other supplies that you suspect may have become contaminated or come into contact with floodwater.
- Your basement – If your basement has flooded, pump it out gradually (about one-third of the water per day) to avoid damage. The walls may collapse and the floor may buckle if the basement is pumped out while the surrounding ground is still waterlogged.
- Open cabinets. Be alert for objects that may fall.
- Clean up household chemical spills. Disinfect items that may have been contaminated by raw sewage, bacteria, or chemicals. Also clean salvageable items.
- Call your insurance agent. Take pictures of damages. Keep good records of repair and cleaning costs.

Wildlife

Disaster and life-threatening situations will exacerbate the unpredictable nature of wild animals. To protect yourself and your family:

- Do not approach or attempt to help an injured or stranded animal. Call your local animal control office or wildlife resource office.
- Do not corner wild animals or try to rescue them. Wild animals will likely feel threatened and may endanger themselves by dashing off into floodwaters, fire, and so forth.
- Do not approach wild animals that have taken refuge in your home. Wild animals such as snakes, opossums, and raccoons often seek refuge from floodwaters on upper levels of homes and have been known to remain after water recedes. If you encounter animals in this situation, open a window or provide another escape route and the animal will likely leave on its own. Do not attempt to capture or handle the animal. Should the animal stay, call your local animal control office or wildlife resource office.
- Do not attempt to move a dead animal. Animal carcasses can present serious health risks. Contact your local emergency management office or health department for help and instructions.
- If bitten by an animal, seek immediate medical attention.

Seeking Disaster Assistance

Throughout the recovery period, it is important to monitor local radio or television reports and other media sources for information about where to get emergency housing, food, first aid, clothing, and financial assistance. The following

section provides general information about the kinds of assistance that may be available.

Direct Assistance

Direct assistance to individuals and families may come from any number of organizations, including:

- American Red Cross
- Salvation Army
- Other volunteer organization

These organizations provide food, shelter, and supplies and assist in cleanup efforts.

The Federal Role

In the most severe disasters, the federal government is also called in to help individuals and families with temporary housing, counseling (for post-disaster trauma), low-interest loans and grants, and other assistance. The federal government also has programs that help small businesses and farmers.

Most federal assistance becomes available when the president of the United States declares a “Major Disaster” for the affected area at the request of a state governor. FEMA will provide information through the media and community outreach about federal assistance and how to apply.

Coping With Emotions

The emotional toll that disaster brings can sometimes be even more devastating than the financial strains of damage and loss of home, business, or personal property.

Understand Disaster Events

- Everyone who sees or experiences a disaster is affected by it in some way.
- It is normal to feel anxious about your own safety and that of your family and close friends.
- Profound sadness, grief, and anger are normal reactions to an abnormal event.
- Acknowledging your feelings helps you recover.
- Focusing on your strengths and abilities helps you heal.
- Accepting help from community programs and resources is healthy.
- Everyone has different needs and different ways of coping.
- It is common to want to strike back at people who have caused great pain.

Contact local faith-based organizations, voluntary agencies, or professional counselors for counseling. Additionally, FEMA and state and local governments of the affected area may provide crisis counseling assistance.

Recognize Signs of Disaster-Related Stress

When adults have the following signs, they might need crisis counseling or stress management assistance:

- Difficulty communicating thoughts
- Difficulty sleeping
- Difficulty maintaining balance in their lives
- Low threshold of frustration
- Increased use of drugs/alcohol
- Limited attention span
- Poor work performance
- Headaches/stomach problems
- Tunnel vision/muffled hearing
- Colds or flu-like symptoms
- Disorientation or confusion
- Difficulty concentrating
- Reluctance to leave home
- Depression, sadness
- Feelings of hopelessness
- Mood swings and easy bouts of crying
- Overwhelming guilt and self-doubt
- Fear of crowds, strangers, or being alone

Easing Disaster-Related Stress

- Talk with someone about your feelings—anger, sorrow, and other emotions—even though it may be difficult.
- Seek help from professional counselors who deal with post-disaster stress.
- Do not hold yourself responsible for the disastrous event or be frustrated because you feel you cannot help directly in the rescue work.
- Take steps to promote your own physical and emotional healing by healthy eating, rest, exercise, relaxation, and meditation.
- Maintain a normal family and daily routine, limiting demanding responsibilities on yourself and your family.
- Spend time with family and friends.
- Participate in memorials.
- Use existing support groups of family, friends, and religious institutions.
- Ensure you are ready for future events by restocking your disaster supplies kits and updating your family disaster plan. Doing these positive actions can be comforting.

Helping Children Cope With Disaster

Disasters can leave children feeling frightened, confused, and insecure. Whether a child has personally experienced trauma, has merely seen the event on television, or has heard it discussed by adults, it is important for parents and teachers to be informed and ready to help if reactions to stress begin to occur.

Children may respond to disaster by demonstrating fears, sadness, or behavioral problems. Younger children may return to earlier behavior patterns, such as bedwetting, sleep problems, and separation anxiety. Older children may also display anger, aggression, school problems, or withdrawal. Some children who have only indirect contact with the disaster but witness it on television may develop distress.

Who Is at Risk?

For many children, reactions to disasters are brief and represent normal reactions to abnormal events. A smaller number of children can be at risk for more enduring psychological distress as a function of three major risk factors:

- Direct exposure to the disaster, such as being evacuated, observing injuries or death of others, or experiencing injury along with fearing one's life is in danger.
- Loss/grief: This relates to the death or serious injury of family or friends.
- Ongoing stress from the secondary effects of disaster, such as temporarily living elsewhere, loss of friends and social networks, loss of personal property, parental unemployment, and costs incurred during recovery to return the family to pre-disaster life and living conditions.

Children often cope with disasters or emergencies in the same way their parents cope. Parents and adults can make disasters less traumatic for children by taking steps to manage their own feelings and plans for coping. Parents are almost always the best source of support for children in disasters. One way to establish a sense of control and to build confidence in children before a disaster is to engage and involve them in preparing a family disaster plan. After a disaster, children can contribute to a family recovery plan.

A Child's Reaction to Disaster by Age

Birth through 2 years – When children are pre-verbal and experience a trauma, they do not have the words to describe the event or their feelings. However, they can retain memories of particular sights, sounds, or smells. Infants may react to trauma by being irritable, crying more than usual, or wanting to be held and cuddled.

Preschool (3 through 6 years) – Preschool children often feel helpless and powerless in the face of an overwhelming event. Because of their age and small size, they lack the ability to protect themselves or others. As a result, they feel intense fear and insecurity about being separated from caregivers. Preschoolers cannot grasp the concept of permanent loss. They can see consequences as being reversible or permanent. In the weeks following a traumatic event, preschoolers' play activities may re-enact the incident or the disaster over and over again.

School age (7 through 10 years) – The school-age child has the ability to understand the permanence of loss. Some children become intensely preoccupied with the details of a traumatic event and want to talk about it continually. This preoccupation can interfere with the child’s concentration at school and academic performance may decline. At school, children may hear inaccurate information from peers. They may display a wide range of reactions—sadness, generalized fear, or specific fears of the disaster happening again, guilt over action or inaction during the disaster, anger that the event was not prevented, or fantasies of playing rescuer.

Pre-adolescence to adolescence (11 through 18 years) – As children grow older, they develop a more sophisticated understanding of the disaster event. Their responses are more similar to adults’. Teenagers may become involved in dangerous, risk-taking behaviors, such as reckless driving, or alcohol or drug use. Others can become fearful of leaving home and avoid previous levels of activities. Much of adolescence is focused on moving out into the world. After a trauma, the view of the world can seem more dangerous and unsafe. A teenager may feel overwhelmed by intense emotions and yet feel unable to discuss them with others.

Meeting the Child’s Emotional Needs

Children’s reactions are influenced by the behavior, thoughts, and feelings of adults. Adults should encourage children and adolescents to share their thoughts and feelings about the incident. Clarify misunderstandings about risk and danger by listening to children’s concerns and answering questions. Maintain a sense of calm by validating children’s concerns and perceptions and with discussion of concrete plans for safety.

Listen to what the child is saying. If a young child is asking questions about the event, answer them simply without the elaboration needed for an older child or adult. Some children are comforted by knowing more or less information than others; decide what level of information your particular child needs. If a child has difficulty expressing feelings, allow the child to draw a picture or tell a story of what happened.

Following a disaster, children are most afraid that:

- The event will happen again.
- Someone close to them will be killed or injured.
- They will be left alone or separated from the family.

Reassuring Children After a Disaster

- Personal contact is reassuring. Hug and touch your children.
- Calmly provide factual information about the recent disaster

and current plans for ensuring their safety along with recovery plans.

- Encourage your children to talk about their feelings.
- Spend extra time with your children such as at bedtime.
- Re-establish your daily routine for work, school, play, meals, and rest.
- Involve your children by giving them specific chores to help them feel they are helping to restore family and community life.
- Praise and recognize responsible behavior.
- Understand that your children will have a range of reactions to disasters.
- Encourage your children to help update your family disaster plan.

Monitor and Limit Your Family’s Exposure to the Media

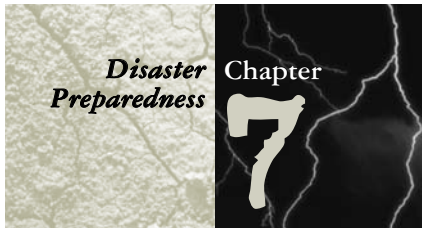
News coverage related to a disaster may elicit fear and confusion and arouse anxiety in children. This is particularly true for large-scale disasters or a terrorist event where significant property damage and loss of life have occurred. Particularly for younger children, repeated images of an event may cause them to believe the event is happening over and over.

If parents allow children to watch television or use the Internet where images or news about the disaster is shown, parents should be with them to encourage communication and provide explanations. This may also include parents’ monitoring and appropriately limiting their own exposure to anxiety-provoking information.

Use Support Networks

Parents help their children when they take steps to understand and manage their own feelings and ways of coping. They can do this by building and using social support systems of family, friends, community organizations and agencies, faith-based institutions, or other resources that work for that family. Parents can build their own unique social support systems so that in an emergency situation or when a disaster strikes, they can be supported and helped to manage their reactions. As a result, parents will be more available to their children and better able to support them. Parents are almost always the best source of support for children in difficult times. But to support their children, parents need to attend to their own needs and have a plan for their own support.

1. Federal Emergency Management Agency. (2006). “Are You Ready Guide: Recovering From Disaster.” Retrieved Aug. 27, 2006 from http://www.fema.gov/areyouready/recovering_from_disaster.shtm



Conclusion

Unexpected emergencies and disasters happen. Being prepared is your best protection. Not only will preparation decrease feelings of anxiety and fear should a disaster occur, being prepared will help you and your family to cope better during and after the emergency event.

We hope that you find this guidebook useful as you prepare for the safety and well-being of yourself and your family. Don't wait until a disaster strikes. Implement the action plans now. And consider taking a first aid and CPR training course from your local American Red Cross chapter or other community training agency.



1.1 Community Hazard Checklist

Community Hazard Checklist (page 1 of 2)

Possible Hazards and Emergencies	Risk Level (None, Low, Moderate, or High)	How can I reduce my risk?
Natural Hazards		
1. Floods		
2. Hurricanes		
3. Thunderstorms and Lightning		
4. Tornadoes		
5. Winter Storms and Extreme Cold		
6. Extreme Heat		
7. Earthquakes		
8. Volcanoes		
9. Landslides and Debris Flow		

Community Hazard Checklist (page 2 of 2)

Possible Hazards and Emergencies	Risk Level (None, Low, Moderate, or High)	How can I reduce my risk?
Natural Hazards, continued		
10. Tsunamis		
11. Fires		
12. Wildfires		
Technological Hazards		
1. Hazardous Materials Incidents		
2. Nuclear Power Plants		
Terrorism		
1. Explosions		
2. Biological Threats		
3. Chemical Threats		
4. Nuclear Blasts		
5. Radiological Dispersion Device (RDD)		

Table developed by the Federal Emergency Management Agency (FEMA).¹

1. Federal Emergency Management Agency (2006). "Are You Ready Guide: Getting Informed." Retrieved Aug. 27, 2006, from http://www.fema.gov/areyouready/getting_informed.shtml



2.1 Emergency Contact Card.¹

Other important phone numbers and information:

Family Communications Plan

Contact name: _____
 Telephone: _____

Out-of-State contact name: _____
 Telephone: _____

Neighborhood meeting place: _____
 Meeting place telephone: _____

Dial 9-1-1 for Emergencies!

Other important phone numbers and information:

Family Communications Plan

Contact name: _____
 Telephone: _____

Out-of-State contact name: _____
 Telephone: _____

Neighborhood meeting place: _____
 Meeting place telephone: _____

Dial 9-1-1 for Emergencies!

Other important phone numbers and information:

Family Communications Plan

Contact name: _____
 Telephone: _____

Out-of-State contact name: _____
 Telephone: _____

Neighborhood meeting place: _____
 Meeting place telephone: _____

Dial 9-1-1 for Emergencies!

Other important phone numbers and information:

Family Communications Plan

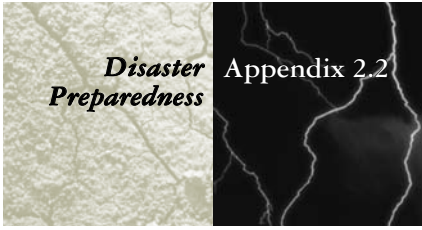
Contact name: _____
 Telephone: _____

Out-of-State contact name: _____
 Telephone: _____

Neighborhood meeting place: _____
 Meeting place telephone: _____

Dial 9-1-1 for Emergencies!

1. Federal Emergency Management Agency (2006). "Are You Ready Guide: Emergency and Planning Checklist." Retrieved Aug. 27, 2006, from http://www.fema.gov/areyouready/emergency_planning.shtml



2.2 Emergency Planning for People With Disabilities: Needs Assessment Worksheet¹ (page 1 of 4)

Think about the following questions and note your answers in writing or record them on a tape cassette that you will share with your network. These answers should describe both your physical capabilities right now and the assistance

you will need during the time that the disaster disrupts your normal routine. Base your plan on your lowest anticipated level of functioning.

Daily Living

Personal Care

Do you need assistance with personal care, such as bathing and grooming? Do you use adaptive equipment to help you get dressed?

- My capabilities today:

- Assistance I need because of disaster:

Water Service

What will you do if water service is cut off for several days, or if you are unable to heat water?

- My capabilities today:

- Assistance I need because of disaster:

Personal Care Equipment

Do you use a shower chair, tub-transfer bench, or other similar equipment?

- My capabilities today:

Needs Assessment Worksheet (page 2 of 4)

- Assistance I need because of disaster:
-
-

Adaptive Feeding Devices

Do you use special utensils that help you prepare or eat food independently?

- My capabilities today:
-
-

- Assistance I need because of disaster:
-
-

Electricity-Dependent Equipment

How will you continue to use equipment that runs on electricity, such as dialysis, electrical lifts, etc. ?

- My capabilities today:
-
-

- Assistance I need because of disaster:
-
-

Getting Around

Disaster Debris

How will you cope with the debris in your home following the disaster?

- My capabilities today:
-
-

- Assistance I need because of disaster:
-
-

Transportation

Do you need a specially equipped vehicle or accessible transportation?

- My capabilities today:
-
-

Needs Assessment Worksheet (page 3 of 4)

- Assistance I need because of disaster:
-
-

Errands

Do you need to get groceries, medications, and medical supplies? Think about what you will do if you depend on only one person to shop or run errands for you. What if your assistant cannot reach you because roads are blocked or because the disaster has affected him or her as well?

- My capabilities today:
-
-

- Assistance I need because of disaster:
-
-

Evacuating

Building Evacuation

Do you need help to leave your home or office?

- My capabilities today:
-
-

- Assistance I need because of disaster:
-
-

Building Exits

If the elevator is not working or cannot be used, are there other exits? (Include using a window as an alternate escape.)

- My capabilities today:
-
-

- Assistance I need because of disaster:
-
-

Getting Help

How will you call for the help you will need to leave the building?

- My capabilities today:
-
-

Needs Assessment Worksheet (page 4 of 4)

- Assistance I need because of disaster:
-
-

Mobility Aids

What will you do if you cannot find your mobility aids, or cannot find or use equipment necessary for your service animal?

- My capabilities today:
-
-

- Assistance I need because of disaster:
-
-

Ramp Access

What will you do if your ramps are shaken loose or become separated from the building?

- My capabilities today:
-
-

- Assistance I need because of disaster:
-
-

Service Animals/Pets

Will you be able to care for your animal (provide food, shelter, veterinary attention, etc.) during and after a disaster? Do you have another caregiver for your animal if you are unable to meet its needs?

- My capabilities today:
-
-

- Assistance I need because of disaster:
-
-

³¹ American Red Cross. (N.D.). "Disaster Preparedness for People With Disabilities." Retrieved Aug. 27, 2006 from <http://www.redcross.org/services/disaster/beprepared/assess.html>



2.3 First Aid and Medication Supply Checklist

First Aid Supplies

Supplies	Home	Vehicle	Work
Adhesive bandages, various sizes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5" x 9" sterile dressing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conforming roller gauze bandage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Triangular bandages	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3" x 3" sterile gauze pads	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4" x 4" sterile gauze pads	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Roll 3" cohesive bandage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Germicidal hand wipes or waterless, alcohol-based hand sanitizer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Antiseptic wipes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pairs large, medical grade, non-latex gloves	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tongue depressor blades	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adhesive tape, 2" width	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Antibacterial ointment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cold pack	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scissors (small, personal)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tweezers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assorted sizes of safety pins	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cotton balls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thermometer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tube of petroleum jelly or other lubricant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sunscreen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CPR breathing barrier, such as a face shield	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
First aid manual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Non-Prescription and Prescription Medicine Kit Supplies

Supplies	Home	Vehicle	Work
Aspirin and non-aspirin pain reliever	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anti-diarrhea medication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Antacid (for stomach upset)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Laxative	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vitamins	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prescriptions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Extra eyeglasses/contact lenses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Checklist developed by Federal Emergency Management Agency (FEMA).¹

1. Federal Emergency Management Agency.(2006). "Are You Ready Guide: Disaster Supplies Checklist." Retrieved Aug. 27, 2006 from http://www.fema.gov/areyouready/appendix_b.shtml



Resources

- 911 Emergency**
- 311 Non-Emergency (on-campus)**
- 1-800-222-1222 Poison Control Center**
- 1-800-232-4636 Centers for Disease Control and Prevention (CDC) Hotline**
- 410-516-7781 Weather Emergency Line (local)**
<http://www.hopkinsmedicine.org/weather> or <http://webapps.jhu.edu/emergencynotices>
- 1-800-548-9004 Weather Emergency Line (long distance)**
- 410-625-4204 The Johns Hopkins Office of Critical Event Preparedness and Response (CEPAR)**
<http://www.hopkins-cepar.org>
- 410-502-0011 or Hopkins on Alert Information Hotline**
- 1-866-262-8747** http://www.hopkins-cepar.org/alert_levels
- 410-516-7781 The Johns Hopkins University Emergency Telephone**
- 1-800-548-9004** <http://webapps.jhu.edu/emergencynotices>
- 410-955-5588 The Johns Hopkins Hospital Office of Security**
- 1-800-424-8802 National Response Center (Report chemical/oil spills and chemical/biological terrorism)**
<http://www.nrc.uscg.mil/nrchp.html>
- 443-997-7000 Faculty and Staff Assistance Program (FASAP) / WORKLife Programs**
www.fasap.org / www.HopkinsWorklife.org

American Red Cross

www.redcross.org

Atlantic Oceanographic and Meteorological Laboratory (AOML)

<http://www.aoml.noaa.gov/hrd/index.html>

Department of Health and Human Services – Disasters and Emergencies

www.hhs.gov/disasters/index.shtml

Federal Emergency Management Agency (FEMA)

www.fema.gov

How to Prepare for Any Disaster – Your Easy Step-by-Step Preparedness Guide

www.areyouprepared.com

National Weather Service

www.nws.noaa.gov

Maryland Emergency Management Agency (MEMA)

<http://www.mema.state.md.us/MEMA/index.jsp>

Preparing a Safe Room

<http://www.fema.gov/plan/prevent/saferoom/shplans>

U.S. Department of the Interior/U.S. Geological Survey

<http://www.usgs.gov/aboutusgs>

U.S. Government Avian and Pandemic Flu Information

<http://pandemicflu.gov>