During or After
A DISASTER FACTSHEET

Earthquake Fire Safety

A wide range of natural disasters occurs within the United States every year. Natural disasters can have a devastating effect on you and your home.

The Federal Emergency Management Agency's U.S. Fire Administration encourages you to use the following safety tips to help protect yourself, your family and your home from the potential threat of fire during or after an earthquake. You can greatly reduce your chances of becoming a fire casualty by being able to identify potential hazards and following the outlined safety tips.

SOME TYPES OF FIRE RELATED HAZARDS PRESENT DURING AND AFTER AN EARTHQUAKE

- Appliances, furniture, and household products can shift, fall, and spill.
- Gas, chemical and electrical hazards may be present.
- Leaking gas lines, damaged or leaking gas propane containers, and leaking vehicle gas tanks could explode or ignite.
- Pools of water or even appliances can be electrically charged.

CHEMICAL SAFETY

- Look for flammable liquids like gasoline, lighter fluid, and paint thinner that may have spilled.
- Thoroughly clean the spill and place containers in a well-ventilated area.
- Keep combustible liquids away from heat sources.

ELECTRICAL SAFETY

- If you can safely get to the main breaker or fuse box, turn off the power.
- Look for items that might have jarred loose during the earthquake. Appliances or power connectors could create a fire hazard.
- Assume all wires on the ground are electrically charged. This includes cable TV feeds.
- Look for and replace frayed or cracked extension and appliance cords, loose prongs, and plugs.
- Exposed outlets and wiring could present a fire and life safety hazard.
- Appliances that emit smoke or sparks should be repaired or replaced.
- Have a licensed electrician check your home for damage.

GAS SAFETY

- Smell and listen for leaky gas connections. If you believe there is a gas leak, immediately leave the house and leave the door(s) open.
- Never strike a match. Any size flame can spark an explosion.
- Before turning the gas back on, have the gas system checked by a professional.

GENERATOR SAFETY

- Follow the manufacturer's instructions and guidelines when using generators.
- Use a generator or other fuel-powered machines outside the home. CO fumes are odorless and can quickly overwhelm you indoors.
- Use the appropriate sized and type power cords to carry the electric load. Overloaded cords can overheat and cause fires.
- Never run cords under rugs or carpets where heat might build up or damage to a cord may go unnoticed.
- Never connect generators to another power source such as power lines. The reverse flow of electricity or "backfeed" can electrocute an unsuspecting utility worker.

HEATING SAFETY

- Kerosene heaters may not be legal in your area and should only be used where approved by authorities.
- Do not use the kitchen oven range to heat your home. In addition to being a fire hazard, it can be a source of toxic fumes.
- Alternative heaters need their space. Keep anything combustible at least 3 feet away.
- Make sure your alternative heaters have "tip switches." These "tip switches" are designed to automatically turn off the heater in the event they tip over.
- Only use the type of fuel recommended by the manufacturer and follow suggested guidelines.
- Never refill a space heater while it is operating or still hot.
- Refuel heaters only outdoors.
- Make sure wood stoves are properly installed, and at least 3 feet away from combustible materials. Ensure they have the proper floor support and adequate ventilation.
- Use a glass or metal screen in front of your fireplace to prevent sparks from igniting nearby carpets, furniture or other combustible items.

AND REMEMBER...

- Be careful when using candles. Keep the flame away from combustible objects and out of the reach of children.
- Some smoke alarms may be dependent on your home's electrical service and could be inoperative during a power outage. Check to see if your smoke alarm uses a back-up battery and install a new battery at least once a year.
- Smoke alarms should be installed on every level of your home.
- All smoke alarms should be tested monthly. All batteries should be replaced with new ones at least once a year.
- If there is a fire hydrant near your home, keep it clear of debris for easy access by the fire department.

FOR MORE INFORMATION CONTACT:

The United States Fire Administration
Office of Fire Management Programs
16825 South Seton Avenue
Emmitsburg, Maryland 21727

Or visit the USFA web site:
www.usfa.fema.gov

TORNADO • FLASH FLOOD • EARTHQUAKE • WINTER STORM • HURRICANE • FIRE • HAZARDOUS MATERIALS SPILL

Preparing for Emergencies

A Checklist for People with Mobility Problems

Federal Emergency Management Agency

American Red Cross

For the millions of Americans with mobility problems, emergencies such as fires and floods present a special challenge. Protecting yourself and your family when disaster strikes requires planning ahead.

This checklist will help you get started. Discuss these ideas with your family, friends, or a personal care attendant, and prepare an emergency plan. Post the plan where everyone will see it.

Emergency Checklist

Ask Questions

Call your local emergency management office or Red Cross chapter.

- ❑ Ask what kind of disasters could occur in your area and how to prepare for each.
- ❑ Ask how you would be warned of an emergency.
- ❑ Ask about special assistance that may be available to you in an emergency. Many communities ask people with a disability to register, usually with the local fire department or emergency management office, so needed help can be provided quickly in an emergency.
- ❑ Ask your supervisor about emergency plans at your workplace.
- ❑ Ask your childrens' teachers and caregivers about emergency plans for schools and day-care centers.
- ❑ If you currently use a personal care attendant obtained from an agency, check to see if the agency has special provisions for emergencies (e.g., providing services at another location should an evacuation be ordered).

Create a Plan

- ❑ Meet with household members or your personal care attendant. Discuss the dangers of fire, severe weather, earthquakes and other emergencies that might occur in your community.
- ❑ Determine what you will need to do for each type of emergency. For example, most people head for a basement when there is a tornado warning, but most basements are not wheelchair-accessible. Determine in advance what your alternative shelter will be and how you will get there.
- ❑ Post emergency telephone numbers near telephones and teach your children how and when to call for help.
- ❑ Learn what to do in case of power outages and personal injuries. Know how to connect or start a back-up power supply for essential medical equipment.
- ❑ If you or someone in your household uses a wheelchair, make more than one exit from your home wheelchair-accessible in case the primary exit is blocked in a disaster.
- ❑ Teach those who may need to assist you in an emergency how to operate necessary equipment.
- ❑ Arrange for a relative or neighbor to check on you in an emergency.
- ❑ Learn how to turn off the water, gas, and electricity at main valves or switches.
- ❑ Plan and practice how to escape from your home in an emergency.
- ❑ Consider getting a medical alert system that will allow you to call for help if you are immobilized in an emergency.
- ❑ If you live in an apartment, ask the management to identify and mark accessible exits.
- ❑ Learn your community's evacuation routes.
- ❑ Listen to a battery-operated radio for emergency information.
- ❑ Pick one out-of-state and one local friend or relative for family members to call if separated by disaster.
- ❑ Pick two meeting places:
  1) A place near your home in case of fire.
  2) A place outside your neighborhood in case you cannot return home after a disaster.
- ❑ Keep family records in a watertight, fire-proof container.

Prepare a Disaster Supplies Kit

Assemble supplies you might need in an evacuation. Store them in an easy-to-carry container such as a backpack or duffle bag.

Include:

- ❑ A battery-powered radio, flashlight, and plenty of extra batteries for them.
- ❑ A first aid kit, prescription medicines, and an extra pair of glasses.
- ❑ A supply of water (one gallon per person per day). Store water in sealed, unbreakable containers. Identify the storage date and replace every six months.
- ❑ A supply of non-perishable food and a non-electric can opener, plus any special foods you require.
- ❑ If you have a baby, include extra diapers and other infant care items.
- ❑ Extra wheelchair batteries, oxygen, medication, catheters, food for guide or service dogs, or other special equipment you might need.
- ❑ A change of clothing, rain gear, and sturdy shoes.
- ❑ Blankets or sleeping bags.
- ❑ A list of family physicians and the relative or friend who should be notified if you are injured.
- ❑ A list of the style and serial numbers of medical devices such as pacemakers.
- ❑ An extra set of car keys.

Also...

- ❑ Store back-up equipment, such as a manual wheelchair, at your neighbor's home, school, or your workplace.

Emergency Plan

Out-of-State Contact

Name _____

City _____

Telephone (Day) _____ (Evening) _____

Local Contact

Name _____

Telephone (Day) _____ (Evening) _____

Nearest Relative

Name _____

City _____

Telephone (Day) _____ (Evening) _____

Family Work Numbers

Father _____ Mother _____

Other _____

Emergency Telephone Numbers

In a life threatening emergency, dial 911 or the local emergency medical services system number.

Police Department _____

Fire Department _____

Hospital _____

Family Physicians

Name _____ Telephone _____

Name _____ Telephone _____

Name _____ Telephone _____

Reunion Locations

1. Right outside your home _____

_____

2. Away from the neighborhood, in case you cannot return home _____

_____

Address _____

Telephone _____

Route to try first _____

_____

Escape Plan

In a fire or other emergency, you may need to evacuate on a moment's notice. Be ready to get out fast.

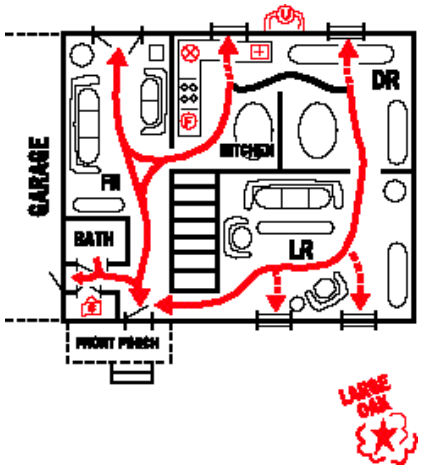
Develop an escape plan by drawing a floor plan of your residence. Show the location of doors, windows, stairways, large furniture, and emergency supplies (Disaster Supplies Kit), fire extinguishers, smoke detectors, collapsible ladders, first aid kits and utility shut-off points.

Indicate at least two escape routs from each room, and mark a place outside of the home where household members and/or your personal care attendant should meet in case of fire. If you or someone in your household uses a wheelchair, make more than one exit from your home wheelchair-accessable in case the primary exit is blocked in a disaster.

Include important points outside such as garages, patios, stairways, elevators, driveways, and porches. If your home has more than two floors, use an additional sheet of paper. Practice emergency evacuation drills at least twice each year.

Example:

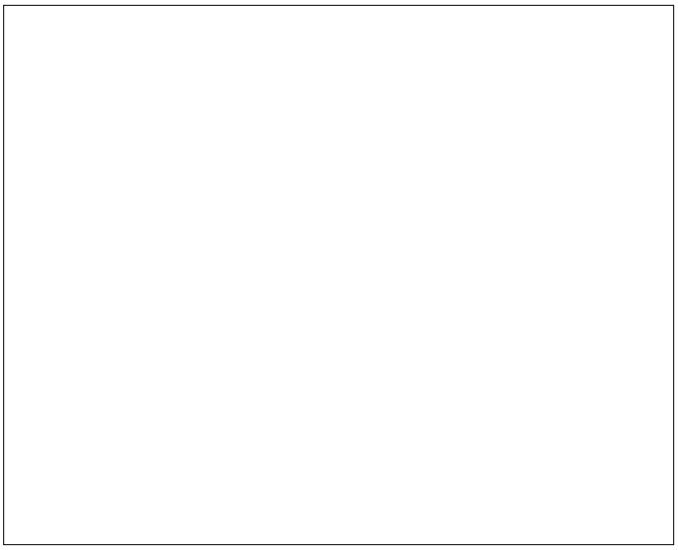
Floor one



Floor Plan

Floor One

Floor Two



- Normal Exit Route
- Emergency Exit Routes
- Fire Extinguisher
- Smoke Detectors
- Disaster Supplies Kit
- Doors
- Collapsible Ladder
- Reunion Location (Outside)
- Stairways
- Utility Shut-Off
- Windows
- First Aid Kit

Home Hazard Hunt

In a disaster, anything that can move, fall, break, or cause a fire is a potential hazard.

- ❑ Repair defective electrical wiring. Smell for leaky gas connections. If you smell gas, turn the gas off and call a professional to repair it.
- ❑ Keep the shut-off switch for oxygen equipment near your bed or chair, so you can get to it quickly if there is a fire.
- ❑ Fasten shelves securely to the wall. Place large, heavy objects on lower shelves or the floor.
- ❑ Hang pictures and mirrors away from beds. Bolt large pictures or mirrors to the wall.
- ❑ Secure water heater by strapping it to a nearby wall.
- ❑ Repair cracks in ceilings or foundations. Brace overhead light fixtures.
- ❑ Store weed killers, pesticides and flammable products away from heat sources.
- ❑ Have chimneys, flue pipes, vent connectors, and gas vents cleaned and repaired by a professional.

If You Need to Evacuate

- ❑ Listen to a battery-powered radio for the location of emergency shelters. Know in advance the location of wheelchair-accessable shelters. Follow instructions of local officials.
- ❑ Wear appropriate clothing and sturdy shoes.
- ❑ Take your Disaster Supplies Kit.
- ❑ Lock your house.
- ❑ Use travel routes specified or special assistance provided by local officials.

If you are sure you have time...

- ❑ Shut off water, gas and electricity *if* instructed to do so.
- ❑ Let others know when you left and where you are going.
- ❑ Make arrangements for pets. Animals other than service animals may not be allowed in public shelters.

Prepare a Car Kit

Include:

- ❑ Battery-powered radio, flashlight, extra batteries, and maps.
- ❑ Blanket and first aid kit.
- ❑ Shovel.
- ❑ Tire repair kit, booster cables, pump and flares.
- ❑ Fire extinguisher (5 lb., A-B-C type).
- ❑ Bottled water and non-perishable foods such as granola bars, raisins, and cookies.

Fire Safety

- ❑ Plan two escape routes out of each room. If you cannot use the stairways, make special arrangements for help in advance. Never use the elevators.
- ❑ Install smoke detectors. Clean and test smoke detectors once a month. Change batteries at least once a year.
- ❑ Consider installing home sprinklers.
- ❑ If there is a fire, do not try to fight the fire. Get out fast. Do not stop for pets or possessions. Call the fire department after you are outside. Never go back into a burning building.
- ❑ Feel the bottom of the door with the palm of your hand. If it is hot, find another way out.

The Federal Emergency Management Agency's Community and Family Preparedness Program and the American Red Cross Community Disaster Education Program are nationwide efforts to help people prepare for disasters of all types. For more information, please contact your local emergency management office and American Red Cross chapter. This brochure and other preparedness materials are available by calling FEMA at 1-800-480-2520, or writing: FEMA, P.O. Box 2012, Jessup, MD 20794-2012. Publications are also available on the World Wide Web at:

FEMA's Web site: http://www.fema.gov

American Red Cross Web site: http://www.redcross.org

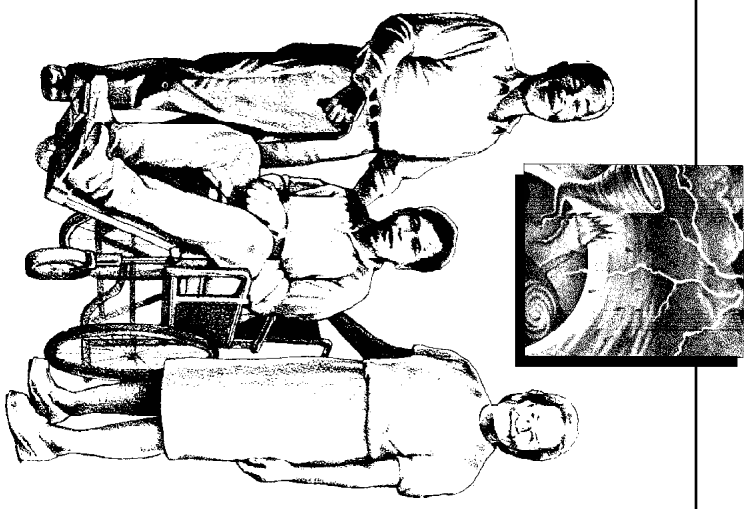
Your Local Contact is:

L-154/July 1992

TORNADO • FLASH FLOOD • EARTHQUAKE • WINTER STORM

Federal Emergency Management Agency

American Red Cross



Preparing for Emergencies: A Checklist

For people with Mobility Problems

TORNADO • FLASH FLOOD • EARTHQUAKE • WINTER STORM

Emergency Food and Water Supplies

If an earthquake, hurricane, winter storm or other disaster ever strikes your community, you might not have access to food, water and electricity for days, or even weeks. By taking a little time now to store emergency food and water supplies, you can provide for your entire family.

This brochure was developed by the Federal Emergency Management Agency's Community and Family Preparedness Programs which provides information to help families prepare for all types of disasters.

WATER: THE ABSOLUTE NECESSITY

Stocking water reserves and learning how to purify contaminated water should be among your top priorities in preparing for an emergency. You should store at least a two-week supply of water for each member of your family. Everyone's needs will differ, depending upon age, physical condition, activity, diet and climate. A normally active person needs to drink at least two quarts of water each day. Hot environments can double that amount. Children, nursing mothers and ill people will need more. You will need additional water for food preparation and hygiene. Store a total of at least one-gallon per person, per day. If your supplies begin to run low, remember: Never ration water. Drink the amount you need today, and try to find more for tomorrow. You can minimize the amount of water your body needs by reducing activity and staying cool.

How to Store Emergency Water Supplies

You can store your water in thoroughly washed plastic, glass, fiberglass or enamel-lined metal containers. Never use a container that has held toxic substances, because tiny amounts may remain in the container's pores. Sound plastic containers, such as soft drink bottles, are best. You can also purchase food-grade plastic buckets or drums.

Before storing your water, treat it with a preservative, such as chlorine bleach, to prevent the growth of microorganisms. Use liquid bleach that contains 5.25 percent sodium hypochlorite and no soap.

Some containers warn, "Not For Personal Use." You can disregard these warnings if the label states sodium hypochlorite is the only active ingredient and if you use only the small quantities in these instructions. Add four drops of bleach per quart of water (or two scant teaspoons per 10 gallons), and stir. Seal your water containers tightly, label them and store them in a cool, dark place.

Hidden Water Sources in Your Home

If a disaster catches you without a stored supply of clean water, you can use water in your hot-water tank, in your plumbing and in ice cubes. As a last resort, you can use water in the reservoir tank of your toilet (not the bowl), but purify it first (described later). Waterbeds hold up to 400 gallons, but some waterbeds contain toxic chemicals that are not fully removed by many purifiers. If you designate a waterbed in your home as an emergency resource, drain it yearly and refill it with fresh water containing two ounces of bleach per 120 gallons.

To use the water in your pipes, let air into the plumbing by turning on the highest faucet in your house and draining the water from the lowest one.

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

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

Emergency Outdoor Water Sources

If you need to seek water outside your home, you can use these sources: (But purify the water before drinking it)

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

Avoid water with floating material, an odor or dark color. Use saltwater only if you distill it first (described later).

Three Easy Ways to Purify Water

In addition to having a bad odor and taste, contaminated water can contain microorganisms that cause diseases such as dysentery, cholera, typhoid and hepatitis. You should therefore purify all water of uncertain purity before using it for drinking, food preparation or hygiene. There are many ways to purify water. None are perfect. Often the best solution is a combination of methods. Before purifying, let any suspended particles settle to the bottom, or strain them through layers of paper towel or clean cloth. Three easy purification methods are outlined below. These measures will kill microbes but will not remove other contaminants such as heavy metals, salts, most other chemicals and radioactive fallout.

1. Boiling is the safest method of purifying water. Bring water to a rolling boil for 10 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 it back and forth between two containers. This will also improve the taste of stored water.

2. Chlorination uses liquid chlorine bleach to kill microorganisms. (See page 1 for bleach safety information.) Add two drops of bleach per quart of water (four drops if the water is cloudy), stir and let stand for 30 minutes. If the water does not taste and smell of chlorine at that point, add another dose and let stand another 15 minutes.
If you do not have a dropper, use a spoon and a square-ended strip of paper or thin cloth about 1/4 inch by 2 inches. Put the strip in the spoon with an end hanging down about 1/2 inch below the scoop of the spoon. Place bleach in the spoon and carefully tip it. Drops the size of those from a medicine dropper will drip off the end of the strip.

3. Purification tablets release chlorine or iodine. They are inexpensive and available at most sporting goods stores and some drugstores. Follow the package directions. Usually one tablet is enough for one quart of water. Double the dose for cloudy water.
More Rigorous Purification Methods. While the three methods described above will remove only microbes from water, the following two purification methods will remove other contaminants.

a. Distillation will remove microbes, heavy metals, salts, most other chemicals, and radioactive dust and dirt, called radioactive fallout.

b. Filtering will also remove radioactive fallout. (Water itself cannot become radioactive, but it can be contaminated by radioactive fallout. It is unsafe to drink water that contains radioactive fallout.)

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.

To make a fallout filter, punch holes in the bottom of a large bucket, and put a layer of gravel in the bucket about 1-1/2 inches high. Cover the gravel with a towel cut in a circle slightly larger than the bucket. Cover soil with a towel, place the filter over a large container, and pour contaminated water through. Then, disinfect the filtered water using one of the methods described above. Change the soil in your filter after every 50 quarts of water.

Family Disaster Supply Kit

It's 2:00 a.m. and a flash flood forces you to evacuate your home--fast. There's no time to gather food from the kitchen, fill bottles with water, grab a first-aid kit from the closet and snatch a flashlight and a portable radio from the bedroom. You need to have these items packed and ready in one place before disaster hits.

Pack at least a three-day supply of food and water, and store it in a handy place. Choose foods that are easy to carry, nutritious and ready-to-eat. In addition, pack these emergency items:

- Medical supplies and first aid manual
- Hygiene supplies
- Portable radio, flashlights and extra batteries
- Shovel and other useful tools
- Money and matches in a waterproof container
- Fire extinguisher
- Blanket and extra clothing
- Infant and small children's needs (if appropriate)

FOOD: PREPARING AN EMERGENCY STOCKPILE

If activity is reduced, healthy people can survive on half their usual food intake for an extended period and without any food for many days. Food, unlike water, may be rationed safely, except for children and pregnant women.
If your water supply is limited, try to avoid foods that are high in fat and protein, and don't stock salty foods, since they will make you thirsty. Try to eat salt-free crackers, whole grain cereals and canned foods with high liquid content.
You don't need to go out and buy unfamiliar foods to prepare an emergency food supply. You can use the canned foods, dry mixes and other staples on your cupboard shelves. In fact, familiar foods are important. They can lift morale and give a feeling of security in time of stress. Also, canned foods won't require cooking, water or special preparation. Following are recommended short-term and long-term food storage plans.

Storage Tips

- Keep food in the driest and coolest spot in the house--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 containers for signs of spoilage before use.

Short-Term Food Supplies

Even though it is unlikely that an emergency would cut off your food supply for two weeks, you should prepare a supply that will last that long. A two-week supply can relieve a great deal of inconvenience and uncertainty until services are restored.

The easiest way to develop a two-week stockpile is to increase the amount of basic foods you normally keep on your shelves. Remember to compensate for the amount you eat from other sources (such as restaurants) during an average two-week period. You may already have a two-week supply of food on hand. Keeping it fresh is simple. Just rotate your supply once or twice a year.

Special Considerations to Keep in Mind

As you stock food, take into account your family's unique needs and tastes. Try to include foods that they will enjoy and that are also high in calories and nutrition. Foods that require no refrigeration, preparation or cooking are best. Individuals with special diets and allergies will need particular attention, as will babies, toddlers and the elderly. Nursing mothers may need liquid formula, in case they are unable to nurse. Canned dietetic foods, juices and soups may be helpful for the ill or elderly. Make sure you have a can opener and disposable utensils. And don't forget nonperishable foods for your pets.

How to Store Your Short-Term Stockpile

Keep canned foods in a dry place where the temperature is fairly cool--not above 70 degrees Fahrenheit and not below freezing. To protect boxed foods from pests and extend their shelf life, store the boxes in tightly closed cans or metal containers.

Rotate your food supply. 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. Your emergency food supply should be of the highest quality possible. Inspect your reserves periodically to make sure there are no broken seals or dented containers.

How to Cook if the Power Goes Out

For emergency cooking you can use a fireplace, or a charcoal grill or camp stove outdoors only. You can also heat food with candle warmers, chafing dishes and fondue pots. 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.

Long-Term Food Supplies

In the unlikely event of a military attack or some other national disaster, you may need long-term emergency food supplies. The best approach is to store large amounts of staples along with a variety of canned and dried foods. Bulk quantities of wheat, corn, beans and salt are inexpensive and have nearly unlimited shelf life.

If necessary, you could survive for years on small daily amounts of these staples. Stock the following amounts per person, per month:

Wheat--20 pounds
Powdered Milk (for babies and infants)*-- 20 pounds
Corn--20 pounds
Iodized Salt--1 pound
Soybeans--10 pounds
Vitamin C**--15 grams

* Buy in nitrogen-packed cans
** Rotate every two years

Storage and Preparation of Food Supplies
Store wheat, corn and beans in sealed cans or plastic buckets. Buy powdered milk in nitrogen-packed cans. And leave salt and vitamin C in their original packages. If these staples comprise your entire menu, you must eat all of them together to stay healthy. To avoid serious digestive problems, you'll need to grind the corn and wheat into flour and cook them, as well as boil the beans, before eating. Many health food stores sell hand-cranked grain mills or can tell you where you can get one. Make sure you buy one that can grind corn. If you are caught without a mill, you can grind your grain by filling a large can with whole grain one inch deep, holding the can on the ground between your feet and pounding the grain with a pipe.

Nutrition Tips
In a crisis, it will be vital that you maintain your strength. So remember:

- Eat at least one well-balanced meal each day.
- Drink enough liquid to enable your body to function properly (two quarts a day).
- Take in enough calories to enable you to do any necessary work.
- Include vitamin, mineral and protein supplements in your stockpile to assure adequate nutrition.

Shelf Life of Foods for Storage
Here are some general guidelines for rotating common emergency foods.

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, chocolate bars and canned nuts
May be stored indefinitely (in proper containers and conditions):
Wheat
Vegetable oils
Corn
Baking powder
Soybeans
Instant coffee and/or tea
Vitamin C
Cocoa
Salt
Non-carbonated soft drinks
White rice
Bouillon products
Dry pasta
Powdered milk (in nitrogen-packed cans)

Ways to Supplement Your Long-Term Stockpile
The above staples offer a limited menu, but you can supplement them with commercially packed air-dried or freeze-dried foods and supermarket goods. Rice, popcorn and varieties of beans are nutritious and long lasting. The more supplements you include, the more expensive your stockpile will be.

Following is an easy approach to long-term food storage:

- Buy a supply of the bulk staples listed above.
- Build up your everyday stock of canned goods until you have a two-week to one-month surplus. Rotate it periodically to maintain a supply of common foods that will not require special preparation, water or cooking.
- From a sporting or camping equipment store, buy commercially packaged freeze-dried or air-dried foods. Although costly, this will be your best form of stored meat, so buy accordingly.
- If the Electricity goes off... FIRST, use perishable food and foods from the refrigerator.
- THEN use the foods from the freezer. To minimize the number of times you open the freezer door, post a list of freezer contents on it. In a well-filled, well-insulated freezer, foods will usually still have ice crystals in their centers (meaning foods are safe to eat) for at least three days.
- FINALLY, begin to use non-perishable foods and staples.

If you are interested in learning more about how to prepare for emergencies, contact your local or State Office of Emergency Management, or write to the Federal Emergency Management Agency, P.O. Box 70274, Washington, D.C. 20024, and ask for any of the following publications:

- Emergency Preparedness Checklist (L-154) Item #8-0872
- Are You Ready? Your Guide to Disaster Preparedness (H-34)
- Item #8-0908
- Emergency Preparedness Publications (L-164) Item #8-0822
- Your Family Disaster Plan (L-191) Item #8-0954
- Your Family Disaster Supplies Kit (L-189) Item #8-0941

Special thanks to the U.S. Department of Agriculture and the American Red Cross for reviewing this publication.
FEMA-215 March 1992

Updated: November 29, 1999

GUIDE

EMERGENCY MANAGEMENT GUIDE FOR BUSINESS & INDUSTRY

A STEP-BY-STEP APPROACH

TO EMERGENCY PLANNING,

RESPONSE AND RECOVERY

FOR COMPANIES OF ALL SIZES

Sponsored by a Public-Partnership with
the Federal Emergency Management Agency

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Sponsored by a Public-Private Partnership with the Federal Emergency Management Agency

Special thanks to the following organizations for supporting the development, promotion and distribution of the Emergency Management Guide for Business & Industry:

American Red Cross

American Insurance Association

Building Owners and Managers Association International

Chemical Manufacturers Association

Fertilizer Institute

National Association of Manufacturers

National Commercial Builders Council
of the National Association of Home Builders

National Coordinating Council on Emergency Management

National Emergency Management Association

National Industrial Council — State Associations Group

New Jersey Business & Industry Association

Pacific Bell

Pennsylvania Emergency Management Agency

The Emergency Management Guide for Business & Industry was produced by the Federal Emergency Management Agency (FEMA) and supported by a number of private companies and associations representing business and industry.

The approaches described in this guide are recommendations, not regulations. There are no reporting requirements, nor will following these principles ensure compliance with any Federal, State or local codes or regulations that may apply to your facility.

FEMA is not a regulatory agency. Specific regulatory issues should be addressed with the appropriate agencies such as the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA).

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INTRODUCTION. A hurricane blasts through South Florida causing more than $25 billion in damages.

A fire at a food processing plant results in 25 deaths, a company out of business and a small town devastated.

A bombing in the World Trade Center results in six deaths, hundreds of injuries and the evacuation of 40,000 people.

A blizzard shuts down much of the East Coast for days. More than 150 lives are lost and millions of dollars in damages incurred.

Every year emergencies take their toll on business and industry — in lives and dollars. But something can be done. Business and industry can limit injuries and damages and return more quickly to normal operations if they plan ahead.

About This Guide

This guide provides step-by-step advice on how to create and maintain a comprehensive emergency management program. It can be used by manufacturers, corporate offices, retailers, utilities or any organization where a sizable number of people work or gather.

Whether you operate from a high-rise building or an industrial complex; whether you own, rent or lease your property; whether you are a large or small company; the concepts in this guide will apply.

To begin, you need not have in-depth knowledge of emergency management. What you need is the authority to create a plan and a commitment from the chief executive officer to make emergency management part of your corporate culture.

If you already have a plan, use this guide as a resource to assess and update your plan.

The guide is organized as follows:

Section 1: 4 Steps in the Planning Process — how to form a planning team; how to conduct a vulnerability analysis; how to develop a plan; and how to implement the plan. The information can be applied to virtually any type of business or industry.

Section 2: Emergency Management Considerations — how to build such emergency management capabilities as life safety, property protection, communications and community outreach.

Section 3: Hazard-Specific Information — technical information about specific hazards your facility may face.

Section 4: Information Sources — where to turn for additional information.

What Is an Emergency?

An emergency is any unplanned event that can cause deaths or significant injuries to employees, customers or the public; or that can shut down your business, disrupt operations, cause physical or environmental damage, or threaten the facility's financial standing or public image.

Obviously, numerous events can be "emergencies," including:

- Fire
- Hazardous materials incident
- Flood or flash flood
- Hurricane
- Tornado
- Winter storm
- Earthquake
- Communications failure
- Radiological accident
- Civil disturbance
- Loss of key supplier or customer
- Explosion

The term "disaster" has been left out of this document because it lends itself to a preconceived notion of a large-scale event, usually a "natural disaster." In fact, each event must be addressed within the context of the impact it has on the company and the community. What might constitute a nuisance to a large industrial facility could be a "disaster" to a small business.

What Is Emergency Management?

Emergency management is the process of preparing for, mitigating, responding to and recovering from an emergency.

Emergency management is a dynamic process. Planning, though critical, is not the only component. Training, conducting drills, testing equipment and coordinating activities with the community are other important functions.

Making the "Case" for Emergency Management

To be successful, emergency management requires upper management support. The chief executive sets the tone by authorizing planning to take place and directing senior management to get involved.

When presenting the "case" for emergency management, avoid dwelling on the negative effects of an emergency (e.g., deaths, fines, criminal prosecution) and emphasize the positive aspects of preparedness. For example:

- It helps companies fulfill their moral responsibility to protect employees, the community and the environment.
- It facilitates compliance with regulatory requirements of Federal, State and local agencies.
- It enhances a company's ability to recover from financial losses, regulatory fines, loss of market share, damages to equipment or products or business interruption.
- It reduces exposure to civil or criminal liability in the event of an incident.
- It enhances a company's image and credibility with employees, customers, suppliers and the community.
- It may reduce your insurance premiums.

SECTION

1

4 STEPS IN THE PLANNING PROCESS

STEP 1

Establish a Planning Team

STEP 2

Analyze Capabilities and Hazards

STEP 3

Develop the Plan

STEP 4

Implement the Plan

ESTABLISH A PLANNING TEAM. There must be an individual or group in charge of developing the emergency management plan. The following is guidance for making the appointment.

Form the Team

The size of the planning team will depend on the facility's operations, requirements and resources. Usually involving a group of people is best because:

- It encourages participation and gets more people invested in the process.
- It increases the amount of time and energy participants are able to give.
- It enhances the visibility and stature of the planning process.
- It provides for a broad perspective on the issues.

Determine who can be an active member and who can serve in an advisory capacity. In most cases, one or two people will be doing the bulk of the work. At the very least, you should obtain input from all functional areas. Remember:

- Upper management
- Line management
- Labor
- Human Resources
- Engineering and maintenance
- Safety, health and environmental affairs
- Public information officer
- Security
- Community relations
- Sales and marketing
- Legal
- Finance and purchasing

Have participants appointed in writing by upper management.

Their job descriptions could also reflect this assignment.

Here's one example of a planning team.

Establish Authority

Demonstrate management's commitment and promote an atmosphere of cooperation by "authorizing" the planning group to take the steps necessary to develop a plan. The group should be led by the chief executive or the plant manager.

Establish a clear line of authority between group members and the group leader, though not so rigid as to prevent the free flow of ideas.

Issue a Mission Statement

Have the chief executive or plant manager issue a mission statement to demonstrate the company's commitment to emergency management. The statement should:

- Define the purpose of the plan and indicate that it will involve the entire organization
- Define the authority and structure of the planning group

Establish a Schedule and Budget

Establish a work schedule and planning deadlines. Timelines can be modified as priorities become more clearly defined.

Develop an initial budget for such things as research, printing, seminars, consulting services and other expenses that may be necessary during the development process.

ANALYZE CAPABILITIES AND HAZARDS. This step entails gathering information about current capabilities and about possible hazards and emergencies, and then conducting a vulnerability analysis to determine the facility's capabilities for handling emergencies.

WHERE DO YOU STAND RIGHT NOW?

Review Internal Plans and Policies

Documents to look for include:

- Evacuation plan
- Fire protection plan
- Safety and health program
- Environmental policies
- Security procedures
- Insurance programs
- Finance and purchasing procedures
- Plant closing policy
- Employee manuals
- Hazardous materials plan
- Process safety assessment
- Risk management plan
- Capital improvement program
- Mutual aid agreements

Meet with Outside Groups

Meet with government agencies, community organizations and utilities. Ask about potential emergencies and about plans and available resources for responding to them. Sources of information include:

- Community emergency management office
- Mayor or Community Administrator's office
- Local Emergency Planning Committee (LEPC)
- Fire Department
- Police Department
- Emergency Medical Services organizations
- American Red Cross
- National Weather Service
- Public Works Department
- Planning Commission
- Telephone companies
- Electric utilities
- Neighboring businesses

While researching potential emergencies, one facility discovered that a dam — 50 miles away — posed a threat to its community. The facility was able to plan accordingly.

One way to increase response capabilities is to identify employee skills (medical, engineering, communications, foreign language) that might be needed in an emergency.

Identify Codes and Regulations

Identify applicable Federal, State and local regulations such as:

- Occupational safety and health regulations
- Environmental regulations
- Fire codes
- Seismic safety codes
- Transportation regulations
- Zoning regulations
- Corporate policies

Identify Critical Products, Services and Operations

You'll need this information to assess the impact of potential emergencies and to determine the need for backup systems. Areas to review include:

- Company products and services and the facilities and equipment needed to produce them
- Products and services provided by suppliers, especially sole source vendors
- Lifeline services such as electrical power, water, sewer, gas, telecommunications and transportation
- Operations, equipment and personnel vital to the continued functioning of the facility

Identify Internal Resources and Capabilities

Resources and capabilities that could be needed in an emergency include:

- Personnel — fire brigade, hazardous materials response team, emergency medical services, security, emergency management group, evacuation team, public information officer
- Equipment — fire protection and suppression equipment, communications equipment, first aid supplies, emergency supplies, warning systems, emergency power equipment, decontamination equipment
- Facilities — emergency operating center, media briefing area, shelter areas, first-aid stations, sanitation facilities
- Organizational capabilities — training, evacuation plan, employee support system
- Backup systems — arrangements with other facilities to provide for:
  - Payroll
  - Communications
  - Production
  - Customer services
  - Shipping and receiving
  - Information systems support
  - Emergency power
  - Recovery support

Identify External Resources

There are many external resources that could be needed in an emergency. In some cases, formal agreements may be necessary to define the facility's relationship with the following:

- Local emergency management office
- Fire Department
- Hazardous materials response organization
- Emergency medical services
- Hospitals
- Local and State police
- Community service organizations
- Utilities
- Contractors
- Suppliers of emergency equipment
- Insurance carriers

Do an Insurance Review

Meet with insurance carriers to review all policies. (See Section 2: Recovery and Restoration.)

The next step is to assess the vulnerability of your facility — the probability and potential impact of each emergency. Use the Vulnerability Analysis Chart in the appendix section to guide the process, which entails assigning probabilities, estimating impact and assessing resources, using a numerical system. The lower the score the better.

List Potential Emergencies

In the first column of the chart, list all emergencies that could affect your facility, including those identified by your local emergency management office. Consider both:

- Emergencies that could occur within your facility
- Emergencies that could occur in your community

Below are some other factors to consider.

- **Historical** — What types of emergencies have occurred in the community, at this facility and at other facilities in the area?
  - Fires
  - Severe weather
  - Hazardous material spills
  - Transportation accidents
  - Earthquakes
  - Hurricanes
  - Tornadoes
  - Terrorism
  - Utility outages
- **Geographic** — What can happen as a result of the facility's location? Keep in mind:
  - Proximity to flood plains, seismic faults and dams
  - Proximity to companies that produce, store, use or transport hazardous materials
  - Proximity to major transportation routes and airports
  - Proximity to nuclear power plants
- **Technological** — What could result from a process or system failure? Possibilities include:
  - Fire, explosion, hazardous materials incident
  - Safety system failure
  - Telecommunications failure
  - Computer system failure
  - Power failure
  - Heating/cooling system failure
  - Emergency notification system failure
- **Human Error** — What emergencies can be caused by employee error? Are employees trained to work safely? Do they know what to do in an emergency?

  Human error is the single largest cause of workplace emergencies and can result from:
  - Poor training
  - Poor maintenance
  - Carelessness
  - Misconduct
  - Substance abuse
  - Fatigue

- **Physical** — What types of emergencies could result from the design or construction of the facility? Does the physical facility enhance safety? Consider:
  - The physical construction of the facility
  - Hazardous processes or byproducts
  - Facilities for storing combustibles
  - Layout of equipment
  - Lighting
  - Evacuation routes and exits
  - Proximity of shelter areas
- **Regulatory** — What emergencies or hazards are you regulated to deal with?

Analyze each potential emergency from beginning to end. Consider what could happen as a result of:

- Prohibited access to the facility
- Loss of electric power
- Communication lines down
- Ruptured gas mains
- Water damage
- Smoke damage
- Structural damage
- Air or water contamination
- Explosion
- Building collapse
- Trapped persons
- Chemical release

Estimate Probability

In the Probability column, rate the likelihood of each emergency's occurrence. This is a subjective consideration, but useful nonetheless.

Use a simple scale of 1 to 5 with 1 as the lowest probability and 5 as the highest.

Assess the Potential Human Impact

Analyze the potential human impact of each emergency — the possibility of death or injury.

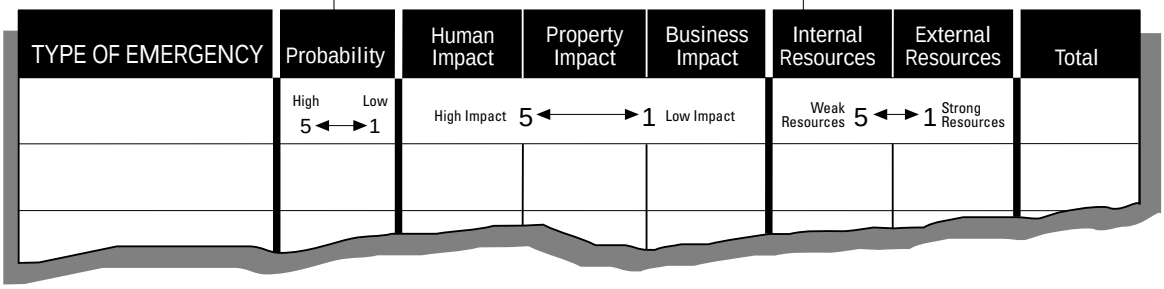
Assign a rating in the Human Impact column of the Vulnerability Analysis Chart. Use a 1 to 5 scale with 1 as the lowest impact and 5 as the highest.

Assess the Potential Property Impact

Consider the potential property for losses and damages. Again, assign a rating in the Property Impact column, 1 being the lowest impact and 5 being the highest. Consider:

- Cost to replace
- Cost to set up temporary replacement
- Cost to repair

A bank's vulnerability analysis concluded that a "small" fire could be as catastrophic to the business as a computer system failure. The planning group discovered that bank employees did not know how to use fire extinguishers, and that the bank lacked any kind of evacuation or emergency response system.



A full-page chart is located in the Appendix

Assess the Potential Business Impact

Consider the potential loss of market share. Assign a rating in the Business Impact column. Again, 1 is the lowest impact and 5 is the highest. Assess the impact of:

- Business interruption
- Employees unable to report to work
- Customers unable to reach facility
- Company in violation of contractual agreements
- Imposition of fines and penalties or legal costs
- Interruption of critical supplies
- Interruption of product distribution

Assess Internal and External Resources

Next assess your resources and ability to respond. Assign a score to your Internal Resources and External Resources. The lower the score the better.

To help you do this, consider each potential emergency from beginning to end and each resource that would be needed to respond. For each emergency ask these questions:

- Do we have the needed resources and capabilities to respond?
- Will external resources be able to respond to us for this emergency as quickly as we may need them, or will they have other priority areas to serve?

If the answers are yes, move on to the next assessment. If the answers are no, identify what can be done to correct the problem. For example, you may need to:

- Develop additional emergency procedures
- Conduct additional training
- Acquire additional equipment
- Establish mutual aid agreements
- Establish agreements with specialized contractors

Add the Columns

Total the scores for each emergency. The lower the score the better. While this is a subjective rating, the comparisons will help determine planning and resource priorities — the subject of the pages to follow.

When assessing resources, remember that community emergency workers — police, paramedics, firefighters — will focus their response where the need is greatest. Or they may be victims themselves and be unable to respond immediately. That means response to your facility may be delayed.

DEVELOP THE PLAN. You are now ready to develop an emergency management plan. This section describes how.

PLAN COMPONENTS

Your plan should include the following basic components.

Executive Summary

The executive summary gives management a brief overview of:

- The purpose of the plan
- The facility's emergency management policy
- Authorities and responsibilities of key personnel
- The types of emergencies that could occur
- Where response operations will be managed

Emergency Management Elements

This section of the plan briefly describes the facility's approach to the core elements of emergency management, which are:

- Direction and control
- Communications
- Life safety
- Property protection
- Community outreach
- Recovery and restoration
- Administration and logistics

These elements, which are described in detail in Section 2, are the foundation for the emergency procedures that your facility will follow to protect personnel and equipment and resume operations.

In an emergency, all personnel should know: 1. What is my role? 2. Where should I go?

Some facilities are required to develop:

- Emergency escape procedures and routes
- Procedures for employees who perform or shut down critical operations before an evacuation
- Procedures to account for all employees, visitors and contractors after an evacuation is completed
- Rescue and medical duties for assigned employees
- Procedures for reporting emergencies
- Names of persons or departments to be contacted for information regarding the plan

Emergency Response Procedures

The procedures spell out how the facility will respond to emergencies. Whenever possible, develop them as a series of checklists that can be quickly accessed by senior management, department heads, response personnel and employees.

Determine what actions would be necessary to:

- Assess the situation
- Protect employees, customers, visitors, equipment, vital records and other assets, particularly during the first three days
- Get the business back up and running

Specific procedures might be needed for any number of situations such as bomb threats or tornadoes, and for such functions as :

- Warning employees and customers
- Communicating with personnel and community responders
- Conducting an evacuation and accounting for all persons in the facility
- Managing response activities
- Activating and operating an emergency operations center
- Fighting fires
- Shutting down operations
- Protecting vital records
- Restoring operations

Support Documents

Documents that could be needed in an emergency include:

- **Emergency call lists** — lists (wallet size if possible) of all persons on and off site who would be involved in responding to an emergency, their responsibilities and their 24-hour telephone numbers
- **Building and site maps** that indicate:
  - Utility shutoffs
  - Water hydrants
  - Water main valves
  - Water lines
  - Gas main valves
  - Gas lines
  - Electrical cutoffs
  - Electrical substations
  - Storm drains
  - Sewer lines
  - Location of each building (include name of building, street name and number)
  - Floor plans
  - Alarm and enunciators
  - Fire extinguishers
  - Fire suppression systems
  - Exits
  - Stairways
  - Designated escape routes
  - Restricted areas
  - Hazardous materials (including cleaning supplies and chemicals)
  - High-value items
- **Resource lists** — lists of major resources (equipment, supplies, services) that could be needed in an emergency; mutual aid agreements with other companies and government agencies

The following is guidance for developing the plan.

Identify Challenges and Prioritize Activities

Determine specific goals and milestones. Make a list of tasks to be performed, by whom and when. Determine how you will address the problem areas and resource shortfalls that were identified in the vulnerability analysis.

Write the Plan

Assign each member of the planning group a section to write. Determine the most appropriate format for each section.

Establish an aggressive timeline with specific goals. Provide enough time for completion of work, but not so much as to allow assignments to linger. Establish a schedule for:

- First draft
- Review
- Second draft
- Tabletop exercise
- Final draft
- Printing
- Distribution

Establish a Training Schedule

Have one person or department responsible for developing a training schedule for your facility. For specific ideas about training, refer to Step 4.

Coordinate with Outside Organizations

Meet periodically with local government agencies and community organizations. Inform appropriate government agencies that you are creating an emergency management plan. While their official approval may not be required, they will likely have valuable insights and information to offer.

Determine State and local requirements for reporting emergencies, and incorporate them into your procedures.

Determine protocols for turning control of a response over to outside agencies. Some details that may need to be worked out are:

- Which gate or entrance will responding units use?
- Where and to whom will they report?
- How will they be identified?
- How will facility personnel communicate with outside responders?
- Who will be in charge of response activities?

Determine what kind of identification authorities will require to allow your key personnel into your facility during an emergency.

Determine the needs of disabled persons and non-English-speaking personnel. For example, a blind employee could be assigned a partner in case an evacuation is necessary.

The Americans with Disabilities Act (ADA) defines a disabled person as anyone who has a physical or mental impairment that substantially limits one or more major life activities, such as seeing, hearing, walking, breathing, performing manual tasks, learning, caring for oneself or working.

Your emergency planning priorities may be influenced by government regulation. To remain in compliance you may be required to address specific emergency management functions that might otherwise be a lower priority activity for that given year.

Consolidate emergency plans for better coordination. Stand-alone plans, such as a Spill Prevention Control and Countermeasures (SPCC) plan, fire protection plan or safety and health plan, should be incorporated into one comprehensive plan.

Maintain Contact with Other Corporate Offices

Communicate with other offices and divisions in your company to learn:

- Their emergency notification requirements
- The conditions where mutual assistance would be necessary
- How offices will support each other in an emergency
- Names, telephone numbers and pager numbers of key personnel

Incorporate this information into your procedures.

Review, Conduct Training and Revise

Distribute the first draft to group members for review. Revise as needed.

For a second review, conduct a tabletop exercise with management and personnel who have a key emergency management responsibility. In a conference room setting, describe an emergency scenario and have participants discuss their responsibilities and how they would react to the situation. Based on this discussion, identify areas of confusion and overlap, and modify the plan accordingly.

Seek Final Approval

Arrange a briefing for the chief executive officer and senior management and obtain written approval.

Distribute the Plan

Place the final plan in three-ring binders and number all copies and pages. Each individual who receives a copy should be required to sign for it and be responsible for posting subsequent changes.

Determine which sections of the plan would be appropriate to show to government agencies (some sections may refer to corporate secrets or include private listings of names, telephone numbers or radio frequencies).

Distribute the final plan to:

- Chief executive and senior managers
- Key members of the company's emergency response organization
- Company headquarters
- Community emergency response agencies (appropriate sections)

Have key personnel keep a copy of the plan in their homes.

Inform employees about the plan and training schedule.

IMPLEMENT THE PLAN. Implementation means more than simply exercising the plan during an emergency. It means acting on recommendations made during the vulnerability analysis, integrating the plan into company operations, training employees and evaluating the plan.

INTEGRATE THE PLAN INTO COMPANY OPERATIONS

Emergency planning must become part of the corporate culture.

Look for opportunities to build awareness; to educate and train personnel; to test procedures; to involve all levels of management, all departments and the community in the planning process; and to make emergency management part of what personnel do on a day-to-day basis.

Test how completely the plan has been integrated by asking:

- How well does senior management support the responsibilities outlined in the plan?
- Have emergency planning concepts been fully incorporated into the facility's accounting, personnel and financial procedures?
- How can the facility's processes for evaluating employees and defining job classifications better address emergency management responsibilities?
- Are there opportunities for distributing emergency preparedness information through corporate newsletters, employee manuals or employee mailings?
- What kinds of safety posters or other visible reminders would be helpful?
- Do personnel know what they should do in an emergency?
- How can all levels of the organization be involved in evaluating and updating the plan?

Everyone who works at or visits the facility requires some form of training. This could include periodic employee discussion sessions to review procedures, technical training in equipment use for emergency responders, evacuation drills and full-scale exercises. Below are basic considerations for developing a training plan.

Planning Considerations

Assign responsibility for developing a training plan. Consider the training and information needs for employees, contractors, visitors, managers and those with an emergency response role identified in the plan.

Determine for a 12 month period:

- Who will be trained
- Who will do the training
- What training activities will be used
- When and where each session will take place
- How the session will be evaluated and documented

Use the Training Drills and Exercises Chart in the appendix section to schedule training activities or create one of your own.

Consider how to involve community responders in training activities.

Conduct reviews after each training activity. Involve both personnel and community responders in the evaluation process.

Training Activities

Training can take many forms:

- **Orientation and Education Sessions** — These are regularly scheduled discussion sessions to provide information, answer questions and identify needs and concerns.
- **Tabletop Exercise** — Members of the emergency management group meet in a conference room setting to discuss their responsibilities and how they would react to emergency scenarios. This is a cost-effective and efficient way to identify areas of overlap and confusion before conducting more demanding training activities.
- **Walk-through Drill** — The emergency management group and response teams actually perform their emergency response functions. This activity generally involves more people and is more thorough than a tabletop exercise.
- **Functional Drills** — These drills test specific functions such as medical response, emergency notifications, warning and communications procedures and equipment, though not necessarily at the same time. Personnel are asked to evaluate the systems and identify problem areas.

- **Evacuation Drill** — Personnel walk the evacuation route to a designated area where procedures for accounting for all personnel are tested. Participants are asked to make notes as they go along of what might become a hazard during an emergency, e.g., stairways cluttered with debris, smoke in the hallways. Plans are modified accordingly.
- **Full-scale Exercise** — A real-life emergency situation is simulated as closely as possible. This exercise involves company emergency response personnel, employees, management and community response organizations.

Employee Training

General training for all employees should address:

- Individual roles and responsibilities
- Information about threats, hazards and protective actions
- Notification, warning and communications procedures
- Means for locating family members in an emergency
- Emergency response procedures
- Evacuation, shelter and accountability procedures
- Location and use of common emergency equipment
- Emergency shutdown procedures

The scenarios developed during the vulnerability analysis can serve as the basis for training events.

OSHA training requirements are a minimum standard for many facilities that have a fire brigade, hazardous materials team, rescue team or emergency medical response team.

	January	February	March	April	May	June	July	August	September	October	November	December
MANAGEMENT ORIENTATION/REVIEW												
EMPLOYEE ORIENTATION/REVIEW												
CONTRACTOR ORIENTATION/REVIEW												
COMMUNITY/MEDIA ORIENTATION/REVIEW												
MANAGEMENT TABLETOP EXERCISE												
RESPONSE TEAM TABLETOP EXERCISE												
WALK-THROUGH DRILL												
FUNCTIONAL DRILLS												
EVACUATION DRILL												
FULL-SCALE EXERCISE												

A full-page chart is located in the Appendix

When siting a new location, conduct a hazard analysis of the area. Modify your plan when a new site becomes operable.

Conduct a formal audit of the entire plan at least once a year. Among the issues to consider are:

- How can you involve all levels of management in evaluating and updating the plan?
- Are the problem areas and resource shortfalls identified in the vulnerability analysis being sufficiently addressed?
- Does the plan reflect lessons learned from drills and actual events?
- Do members of the emergency management group and emergency response team understand their respective responsibilities? Have new members been trained?
- Does the plan reflect changes in the physical layout of the facility? Does it reflect new facility processes?
- Are photographs and other records of facility assets up to date?
- Is the facility attaining its training objectives?
- Have the hazards in the facility changed?
- Are the names, titles and telephone numbers in the plan current?
- Are steps being taken to incorporate emergency management into other facility processes?
- Have community agencies and organizations been briefed on the plan? Are they involved in evaluating the plan?

In addition to a yearly audit, evaluate and modify the plan at these times:

- After each training drill or exercise
- After each emergency
- When personnel or their responsibilities change
- When the layout or design of the facility changes
- When policies or procedures change

Remember to brief personnel on changes to the plan.

SECTION

2

EMERGENCY MANAGEMENT CONSIDERATIONS

This section describes the core operational considerations of emergency management. They are:

- Direction and Control
- Communications
- Life Safety
- Property Protection
- Community Outreach
- Recovery and Restoration
- Administration and Logistics

DIRECTION AND CONTROL. Someone must be in charge in an emergency. The system for managing resources, analyzing information and making decisions in an emergency is called direction and control.

The direction and control system described below assumes a facility of sufficient size. Your facility may require a less sophisticated system, though the principles described here will still apply.

The configuration of your system will depend on many factors. Larger industries may have their own fire team, emergency medical technicians or hazardous materials team, while smaller organizations may need to rely on mutual aid agreements. They may also be able to consolidate positions or combine responsibilities. Tenants of office buildings or industrial parks may be part of an emergency management program for the entire facility.

Emergency Management Group (EMG)

The EMG is the team responsible for the big picture. It controls all incident-related activities. The Incident Commander (IC) oversees the technical aspects of the response.

The EMG supports the IC by allocating resources and by interfacing with the community, the media, outside response organizations and regulatory agencies.

The EMG is headed by the Emergency Director (ED), who should be the facility manager. The ED is in command and control of all aspects of the emergency. Other EMG members should be senior managers who have the authority to:

- Determine the short- and long-term effects of an emergency
- Order the evacuation or shutdown of the facility
- Interface with outside organizations and the media
- Issue press releases

The relationship between the EMG and the IC is shown in Figure 1.

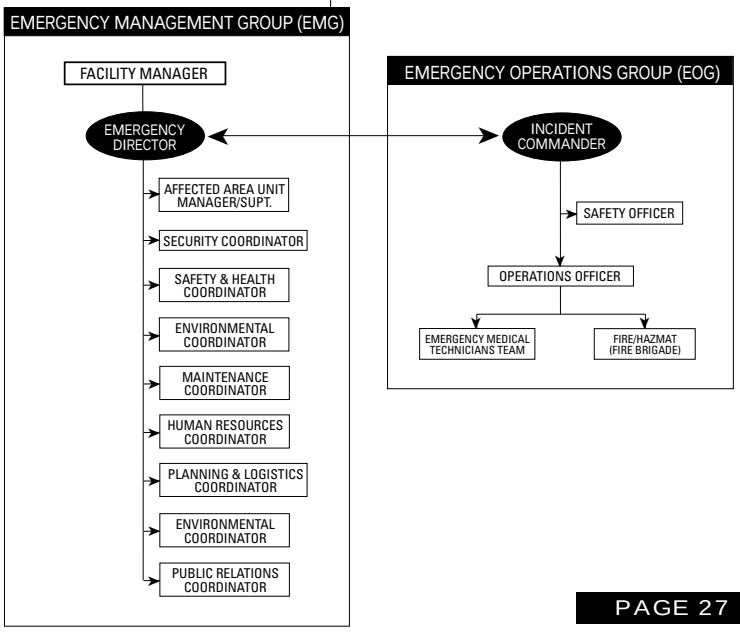


Figure 1: Relationship between the EMG and the IC.

In a hazardous materials accident, an off-site medic was exposed to the spilled material and required hospitalization. It was determined that the person was able to enter the hazardous area unprotected because no one among a host of managers and facility responders was "in charge" at the scene.

EOC Resources:

- Communications equipment
- A copy of the emergency management plan and EOC procedures
- Blueprints, maps, status boards
- A list of EOC personnel and descriptions of their duties
- Technical information and data for advising responders
- Building security system information
- Information and data management capabilities
- Telephone directories
- Backup power, communications and lighting
- Emergency supplies

Incident Command System (ICS)

The ICS was developed specifically for the fire service, but its principles can be applied to all emergencies. The ICS provides for coordinated response and a clear chain of command and safe operations.

The Incident Commander (IC) is responsible for front-line management of the incident, for tactical planning and execution, for determining whether outside assistance is needed and for relaying requests for internal resources or outside assistance through the Emergency Operations Center (EOC).

The IC can be any employee, but a member of management with the authority to make decisions is usually the best choice.

The IC must have the capability and authority to:

- Assume command
- Assess the situation
- Implement the emergency management plan
- Determine response strategies
- Activate resources
- Order an evacuation
- Oversee all incident response activities
- Declare that the incident is "over"

Emergency Operations Center (EOC)

The EOC serves as a centralized management center for emergency operations. Here, decisions are made by the EMG based upon information provided by the IC and other personnel. Regardless of size or process, every facility should designate an area where decision makers can gather during an emergency.

The EOC should be located in an area of the facility not likely to be involved in an incident, perhaps the security department, the manager's office, a conference room or the training center. An alternate EOC should be designated in the event that the primary location is not usable.

Each facility must determine its requirements for an EOC based upon the functions to be performed and the number of people involved. Ideally, the EOC is a dedicated area equipped with communications equipment, reference materials, activity logs and all the tools necessary to respond quickly and appropriately to an emergency.

Planning Considerations

To develop a direction and control system:

- Define the duties of personnel with an assigned role. Establish procedures for each position. Prepare checklists for all procedures.
- Define procedures and responsibilities for fire fighting, medical and health, and engineering.
- Determine lines of succession to ensure continuous leadership, authority and responsibility in key positions.
- Determine equipment and supply needs for each response function.
- At a minimum, assign all personnel responsibility for:
  - Recognizing and reporting an emergency
  - Warning other employees in the area
  - Taking security and safety measures
  - Evacuating safely
- Provide training.

Security

Isolation of the incident scene must begin when the emergency is discovered. If possible, the discoverer should attempt to secure the scene and control access, but no one should be placed in physical danger to perform these functions.

Basic security measures include:

- Closing doors or windows
- Establishing temporary barriers with furniture after people have safely evacuated
- Dropping containment materials (sorbent pads, etc.) in the path of leaking materials
- Closing file cabinets or desk drawers

Only trained personnel should be allowed to perform advanced security measures. Access to the facility, the EOC and the incident scene should be limited to persons directly involved in the response.

Coordination of Outside Response

In some cases, laws, codes, prior agreements or the very nature of the emergency require the IC to turn operations over to an outside response organization.

When this happens, the protocols established between the facility and outside response organizations are implemented. The facility's IC provides the community's IC a complete report on the situation.

The facility IC keeps track of which organizations are on-site and how the response is being coordinated. This helps increase personnel safety and accountability, and prevents duplication of effort.

Keep detailed logs of actions taken during an emergency. Describe what happened, decisions made and any deviations from policy. Log the time for each event.

COMMUNICATIONS. Communications are essential to any business operation. A communications failure can be a disaster in itself, cutting off vital business activities.

Communications are needed to report emergencies, to warn personnel of the danger, to keep families and off-duty employees informed about what's happening at the facility to coordinate response actions and to keep in contact with customers and suppliers.

Contingency Planning

Plan for all possible contingencies from a temporary or short-term disruption to a total communications failure.

- Consider the everyday functions performed by your facility and the communications, both voice and data, used to support them.
- Consider the business impact if your communications were inoperable. How would this impact your emergency operations?
- Prioritize all facility communications. Determine which should be restored first in an emergency.
- Establish procedures for restoring communications systems.
- Talk to your communications vendors about their emergency response capabilities. Establish procedures for restoring services.
- Determine needs for backup communications for each business function. Options include messengers, telephones, portable microwave, amateur radios, point-to-point private lines, satellite, high-frequency radio.

Emergency Communications

Consider the functions your facility might need to perform in an emergency and the communications systems needed to support them.

Consider communications between:

- Emergency responders
- Responders and the Incident Commander (IC)
- The IC and the Emergency Operations Center (EOC)
- The IC and employees
- The EOC and outside response organizations
- The EOC and neighboring businesses
- The EOC and employees' families
- The EOC and customers
- The EOC and media

Methods of communication include:

- Messenger
- Telephone
- Two-way radio
- FAX machine
- Microwave
- Satellite
- Dial-up modems
- Local area networks
- Hand signals

Family Communications

In an emergency, personnel will need to know whether their families are okay. Taking care of one's loved ones is always a first priority.

Make plans for communicating with employees' families in an emergency.

Also, encourage employees to:

- Consider how they would communicate with their families in case they are separated from one another or injured in an emergency.
- Arrange for an out-of-town contact for all family members to call in an emergency.
- Designate a place to meet family members in case they cannot get home in an emergency.

Notification

Establish procedures for employees to report an emergency. Inform employees of procedures. Train personnel assigned specific notification tasks.

Post emergency telephone numbers near each telephone, on employee bulletin boards and in other prominent locations.

Maintain an updated list of addresses and telephone and pager numbers of key emergency response personnel (from within and outside the facility).

Listen for tornado, hurricane and other severe weather warnings issued by the National Weather Service.

Determine government agencies' notification requirements in advance. Notification must be made immediately to local government agencies when an emergency has the potential to affect public health and safety.

Prepare announcements that could be made over public address systems.

Warning

Establish a system for warning personnel of an emergency. The system should:

- Be audible or within view by all people in the facility
- Have an auxiliary power supply
- Have a distinct and recognizable signal

Make plans for warning persons with disabilities. For instance, a flashing strobe light can be used to warn hearing-impaired people.

Familiarize personnel with procedures for responding when the warning system is activated.

Establish procedures for warning customers, contractors, visitors and others who may not be familiar with the facility's warning system.

Test your facility's warning system at least monthly.

Test communications often. A research firm discovered in a drill that its two-way radio system did not work, limiting communications between the Emergency Operating Center (EOC) and the Incident Commander (IC) to a single telephone line. The Emergency Management Group had failed to provide a backup radio for the EOC. Fortunately, this was discovered during training.

Test alarm systems monthly. One company conducted its first test of a sophisticated alarm system 21 years after the system was installed. Rather than alarm bells, the system played Christmas music.

LIFE SAFETY. Protecting the health and safety of everyone in the facility is the first priority during an emergency.

Evacuation Planning

One common means of protection is evacuation. In the case of fire, an immediate evacuation to a predetermined area away from the facility may be necessary. In a hurricane, evacuation could involve the entire community and take place over a period of days.

To develop an evacuation policy and procedure:

- Determine the conditions under which an evacuation would be necessary.
- Establish a clear chain of command. Identify personnel with the authority to order an evacuation. Designate "evacuation wardens" to assist others in an evacuation and to account for personnel.
- Establish specific evacuation procedures. Establish a system for accounting for personnel. Consider employees' transportation needs for community-wide evacuations.
- Establish procedures for assisting persons with disabilities and those who do not speak English.
- Post evacuation procedures.
- Designate personnel to continue or shut down critical operations while an evacuation is underway. They must be capable of recognizing when to abandon the operation and evacuate themselves.
- Coordinate plans with the local emergency management office.

Evacuation Routes and Exits

Designate primary and secondary evacuation routes and exits. Have them clearly marked and well lit. Post signs.

Install emergency lighting in case a power outage occurs during an evacuation.

Ensure that evacuation routes and emergency exits are:

- Wide enough to accommodate the number of evacuating personnel
- Clear and unobstructed at all times
- Unlikely to expose evacuating personnel to additional hazards

Have evacuation routes evaluated by someone not in your organization.

Consider how you would access important personal information about employees (home phone, next-of-kin, medical) in an emergency. Storing information on computer disks or in sealed envelopes are two options.

A gas explosion and fire in a nursing home caused the evacuation of all patients, most of whom were disabled. Because the staff had trained for this scenario, all patients were evacuated safely.

Search and rescue should be conducted only by properly trained and equipped professionals. Death or serious injury can occur when untrained employees reenter a damaged or contaminated facility.

Assembly Areas and Accountability

Obtaining an accurate account of personnel after a site evacuation requires planning and practice.

- Designate assembly areas where personnel should gather after evacuating.
- Take a head count after the evacuation. The names and last known locations of personnel not accounted for should be determined and given to the EOC. (Confusion in the assembly areas can lead to unnecessary and dangerous search and rescue operations.)
- Establish a method for accounting for non-employees such as suppliers and customers.
- Establish procedures for further evacuation in case the incident expands. This may consist of sending employees home by normal means or providing them with transportation to an off-site location.

Shelter

In some emergencies, the best means of protection is to take shelter either within the facility or away from the facility in a public building.

- Consider the conditions for taking shelter, e.g., tornado warning.
- Identify shelter space in the facility and in the community. Establish procedures for sending personnel to shelter.
- Determine needs for emergency supplies such as water, food and medical supplies.
- Designate shelter managers, if appropriate.
- Coordinate plans with local authorities.

Training and Information

Train employees in evacuation, shelter and other safety procedures. Conduct sessions at least annually or when:

- Employees are hired
- Evacuation wardens, shelter managers and others with special assignments are designated
- New equipment, materials or processes are introduced
- Procedures are updated or revised
- Exercises show that employee performance must be improved

Provide emergency information such as checklists and evacuation maps.

Post evacuation maps in strategic locations.

Consider the information needs of customers and others who visit the facility.

Family Preparedness

Consider ways to help employees prepare their families for emergencies. This will increase their personal safety and help the facility get back up and running. Those who are prepared at home will be better able to carry out their responsibilities at work.

PROPERTY PROTECTION. Protecting facilities, equipment and vital records is essential to restoring operations once an emergency has occurred.

Planning Considerations

Establish procedures for:

- Fighting fires
- Containing material spills
- Closing or barricading doors and windows
- Shutting down equipment
- Covering or securing equipment
- Moving equipment to a safe location

Identify sources of backup equipment, parts and supplies.

Designate personnel to authorize, supervise and perform a facility shutdown. Train them to recognize when to abandon the effort.

Obtain materials to carry out protection procedures and keep them on hand for use only in emergencies.

Protection Systems

Determine needs for systems to detect abnormal situations, provide warning and protect property. Consider:

- Fire protection systems
- Lightning protection systems
- Water-level monitoring systems
- Overflow detection devices
- Automatic shutoffs
- Emergency power generation systems

Consult your property insurer about special protective systems.

Mitigation

Consider ways to reduce the effects of emergencies, such as moving or constructing facilities away from flood plains and fault zones. Also consider ways to reduce the chances of emergencies from occurring, such as changing processes or materials used to run the business.

Consider physical retrofitting measures such as:

- Upgrading facilities to withstand the shaking of an earthquake or high winds
- "Floodproofing" facilities by constructing flood walls or other flood protection devices (see Section 3 for additional information)
- Installing fire sprinkler systems
- Installing fire-resistant materials and furnishing
- Installing storm shutters for all exterior windows and doors

There are also non-structural mitigation measures to consider, including:

- Installing fire-resistant materials and furnishing
- Securing light fixtures and other items that could fall or shake loose in an emergency
- Moving heavy or breakable objects to low shelves
- Attaching cabinets and files to low walls or bolting them together
- Placing Velcro strips under typewriters, tabletop computers and television monitors
- Moving work stations away from large windows
- Installing curtains or blinds that can be drawn over windows to prevent glass from shattering onto employees
- Anchoring water heaters and bolting them to wall studs

Consult a structural engineer or architect and your community's building and zoning offices for additional information.

Facility Shutdown

Facility shutdown is generally a last resort but always a possibility. Improper or disorganized shutdown can result in confusion, injury and property damage.

Some facilities require only simple actions such as turning off equipment, locking doors and activating alarms. Others require complex shutdown procedures.

Work with department heads to establish shutdown procedures. Include information about when and how to shut off utilities. Identify:

- The conditions that could necessitate a shutdown
- Who can order a shutdown
- Who will carry out shutdown procedures
- How a partial shutdown would affect other facility operations
- The length of time required for shutdown and restarting

Train personnel in shutdown procedures. Post procedures.

Records Preservation

Vital records may include:

- Financial and insurance information
- Engineering plans and drawings
- Product lists and specifications
- Employee, customer and supplier databases
- Formulas and trade secrets
- Personnel files

Preserving vital records is essential to the quick restoration of operations. Analyzing vital records involves:

1. Classifying operations into functional categories, e.g., finance, production, sales, administration
2. Determining essential functions for keeping the business up and running, such as finance, production, sales, etc.
3. Identifying the minimum information that must be readily accessible to perform essential functions, e.g., maintaining customer collections may require access to account statements
4. Identifying the records that contain the essential information and where they are located
5. Identifying the equipment and materials needed to access and use the information

Next, establish procedures for protecting and accessing vital records. Among the many approaches to consider are:

- Labeling vital records
- Backing up computer systems
- Making copies of records
- Storing tapes and disks in insulated containers
- Storing data off-site where they would not likely be damaged by an event affecting your facility
- Increasing security of computer facilities
- Arranging for evacuation of records to backup facilities
- Backing up systems handled by service bureaus
- Arranging for backup power

COMMUNITY OUTREACH. Your facility's relationship with the community will influence your ability to protect personnel and property and return to normal operations.

This section describes ways to involve outside organizations in the emergency management plan.

Involving the Community

Maintain a dialogue with community leaders, first responders, government agencies, community organizations and utilities, including:

- Appointed and elected leaders
- Fire, police and emergency medical services personnel
- Local Emergency Planning Committee (LEPC) members
- Emergency management director
- Public Works Department
- American Red Cross
- Hospitals
- Telephone company
- Electric utility
- Neighborhood groups

Have regular meetings with community emergency personnel to review emergency plans and procedures. Talk about what you're doing to prepare for and prevent emergencies. Explain your concern for the community's welfare.

Identify ways your facility could help the community in a community-wide emergency.

Look for common interests and concerns. Identify opportunities for sharing resources and information.

Conduct confidence-building activities such as facility tours. Do a facility walk-through with community response groups.

Involve community fire, police and emergency management personnel in drills and exercises.

Meet with your neighbors to determine how you could assist each other in an emergency.

Mutual Aid Agreements

To avoid confusion and conflict in an emergency, establish mutual aid agreements with local response agencies and businesses.

These agreements should:

- Define the type of assistance
- Identify the chain of command for activating the agreement
- Define communications procedures

Include these agencies in facility training exercises whenever possible.

Mutual aid agreements can address any number of activities or resources that might be needed in an emergency. For example:

- Providing for firefighting and HAZMAT response.
- Providing shelter space, emergency storage, emergency supplies, medical support.
- Businesses allowing neighbors to use their property to account for personnel after an evacuation.

The community wants to know:

- What does the facility do?
- What are the hazards?
- What programs are in place to respond to emergencies?
- How could a site emergency affect the community?
- What assistance will be required from the community?

Community Service

In community-wide emergencies, business and industry are often needed to assist the community with:

- Personnel
- Equipment
- Shelter
- Training
- Storage
- Feeding facilities
- EOC facilities
- Food, clothing, building materials
- Funding
- Transportation

While there is no way to predict what demands will be placed on your company's resources, give some thought to how the community's needs might influence your corporate responsibilities in an emergency. Also, consider the opportunities for community service before an emergency occurs.

Public Information

When site emergencies expand beyond the facility, the community will want to know the nature of the incident, whether the public's safety or health is in danger, what is being done to resolve the problem and what was done to prevent the situation from happening.

Determine the audiences that may be affected by an emergency and identify their information needs. Include:

- The public
- The media
- Employees and retirees
- Unions
- Contractors and suppliers
- Customers
- Shareholders
- Emergency response organizations
- Regulatory agencies
- Appointed and elected officials
- Special interest groups
- Neighbors

Media Relations

In an emergency, the media are the most important link to the public. Try to develop and maintain positive relations with media outlets in your area. Determine their particular needs and interests. Explain your plan for protecting personnel and preventing emergencies.

Determine how you would communicate important public information through the media in an emergency.

- Designate a trained spokesperson and an alternate spokesperson
- Set up a media briefing area
- Establish security procedures
- Establish procedures for ensuring that information is complete, accurate and approved for public release
- Determine an appropriate and useful way of communicating technical information
- Prepare background information about the facility

When providing information to the media during an emergency:

Do's

- Give all media equal access to information.
- When appropriate, conduct press briefings and interviews. Give local and national media equal time.
- Try to observe media deadlines.
- Escort media representatives to ensure safety.
- Keep records of information released.
- Provide press releases when possible.

Don'ts

- Do not speculate about the incident.
- Do not permit unauthorized personnel to release information.
- Do not cover up facts or mislead the media.
- Do not place blame for the incident.

Press releases about facility-generated emergencies should describe who is involved in the incident and what happened, including when, where, why and how.

RECOVERY AND RESTORATION. Business recovery and restoration, or business resumption, goes right to a facility's bottom line: keeping people employed and the business running.

Planning Considerations

Consider making contractual arrangements with vendors for such post-emergency services as records preservation, equipment repair, earthmoving or engineering.

Meet with your insurance carriers to discuss your property and business resumptions policies (see the next page for guidelines).

Determine critical operations and make plans for bringing those systems back on-line. The process may entail:

- Repairing or replacing equipment
- Relocating operations to an alternate location
- Contracting operations on a temporary basis

Take photographs or videotape the facility to document company assets. Update these records regularly.

Continuity of Management

You can assume that not every key person will be readily available or physically at the facility after an emergency. Ensure that recovery decisions can be made without undue delay. Consult your legal department regarding laws and corporate bylaws governing continuity of management.

Establish procedures for:

- Assuring the chain of command
- Maintaining lines of succession for key personnel
- Moving to alternate headquarters

Include these considerations in all exercise scenarios.

After a site emergency, assess the impact of the event on business neighbors and the community and take appropriate action. How you handle this issue will have long-lasting consequences.

Insurance

Most companies discover that they are not properly insured only after they have suffered a loss. Lack of appropriate insurance can be financially devastating. Discuss the following topics with your insurance advisor to determine your individual needs.

- How will my property be valued?
- Does my policy cover the cost of required upgrades to code?
- How much insurance am I required to carry to avoid becoming a co-insurer?
- What perils or causes of loss does my policy cover?
- What are my deductibles?
- What does my policy require me to do in the event of a loss?
- What types of records and documentation will my insurance company want to see? Are records in a safe place where they can be obtained after an emergency?
- To what extent am I covered for loss due to interruption of power? Is coverage provided for both on- and off-premises power interruption?
- Am I covered for lost income in the event of business interruption because of a loss? Do I have enough coverage? For how long is coverage provided? How long is my coverage for lost income if my business is closed by order of a civil authority?
- To what extent am I covered for reduced income due to customers' not all immediately coming back once the business reopens?
- How will my emergency management program affect my rates?

Employee Support

Since employees who will rely on you for support after an emergency are your most valuable asset, consider the range of services that you could provide or arrange for, including:

- Cash advances
- Salary continuation
- Flexible work hours
- Reduced work hours
- Crisis counseling
- Care packages
- Day care

Resuming Operations

Immediately after an emergency, take steps to resume operations.

- Establish a recovery team, if necessary. Establish priorities for resuming operations.
- Continue to ensure the safety of personnel on the property. Assess remaining hazards. Maintain security at the incident scene.
- Conduct an employee briefing.
- Keep detailed records. Consider audio recording all decisions. Take photographs of or videotape the damage.
- Account for all damage-related costs. Establish special job order numbers and charge codes for purchases and repair work.
- Follow notification procedures. Notify employees' families about the status of personnel on the property. Notify off-duty personnel about work status. Notify insurance carriers and appropriate government agencies.
- Protect undamaged property. Close up building openings. Remove smoke, water and debris. Protect equipment against moisture. Restore sprinkler systems. Physically secure the property. Restore power.
- Conduct an investigation. Coordinate actions with appropriate government agencies.
- Conduct salvage operations. Segregate damaged from undamaged property. Keep damaged goods on hand until an insurance adjuster has visited the premises, but you can move material outside if it's seriously in the way and exposure to the elements won't make matters worse.
- Take an inventory of damaged goods. This is usually done with the adjuster, or the adjuster's salvor if there is any appreciable amount of goods or value. If you release goods to the salvor, obtain a signed inventory stating the quantity and type of goods being removed.
- Restore equipment and property. For major repair work, review restoration plans with the insurance adjuster and appropriate government agencies.
- Assess the value of damaged property. Assess the impact of business interruption.
- Maintain contact with customers and suppliers.

ADMINISTRATION AND LOGISTICS. Maintain complete and accurate records at all times to ensure a more efficient emergency response and recovery. Certain records may also be required by regulation or by your insurance carriers or prove invaluable in the case of legal action after an incident.

Administrative Actions

Administrative actions prior to an emergency include:

- Establishing a written emergency management plan
- Maintaining training records
- Maintaining all written communications
- Documenting drills and exercises and their critiques
- Involving community emergency response organizations in planning activities

Administrative actions during and after an emergency include:

- Maintaining telephone logs
- Keeping a detailed record of events
- Maintaining a record of injuries and follow-up actions
- Accounting for personnel
- Coordinating notification of family members
- Issuing press releases
- Maintaining sampling records
- Managing finances
- Coordinating personnel services
- Documenting incident investigations and recovery operations

Logistics

Before an emergency, logistics may entail:

- Acquiring equipment
- Stockpiling supplies
- Designating emergency facilities
- Establishing training facilities
- Establishing mutual aid agreements
- Preparing a resource inventory

During an emergency, logistics may entail the provision of:

- Providing utility maps to emergency responders
- Providing material safety data sheets to employees
- Moving backup equipment in place
- Repairing parts
- Arranging for medical support, food and transportation
- Arranging for shelter facilities
- Providing for backup power
- Providing for backup communications

Emergency funding can be critical immediately following an emergency. Consider the need for pre-approved purchase requisitions and whether special funding authorities may be necessary.

SECTION

3

HAZARD-SPECIFIC INFORMATION

This section provides information about some of the most common hazards:

- Fire
- Hazardous Materials Incidents
- Floods and Flash Floods
- Hurricanes
- Tornadoes
- Severe Winter Storms
- Earthquakes
- Technological Emergencies

FIRE. Fire is the most common of all the hazards. Every year fires cause thousands of deaths and injuries and billions of dollars in property damage.

Planning Considerations

Consider the following when developing your plan:

- Meet with the fire department to talk about the community's fire response capabilities. Talk about your operations. Identify processes and materials that could cause or fuel a fire, or contaminate the environment in a fire.
- Have your facility inspected for fire hazards. Ask about fire codes and regulations.
- Ask your insurance carrier to recommend fire prevention and protection measures. Your carrier may also offer training.
- Distribute fire safety information to employees: how to prevent fires in the workplace, how to contain a fire, how to evacuate the facility, where to report a fire.
- Instruct personnel to use the stairs — not elevators — in a fire. Instruct them to crawl on their hands and knees when escaping a hot or smoke-filled area.
- Conduct evacuation drills. Post maps of evacuation routes in prominent places. Keep evacuation routes including stairways and doorways clear of debris.
- Assign fire wardens for each area to monitor shutdown and evacuation procedures.
- Establish procedures for the safe handling and storage of flammable liquids and gases. Establish procedures to prevent the accumulation of combustible materials.
- Provide for the safe disposal of smoking materials.
- Establish a preventive maintenance schedule to keep equipment operating safely.
- Place fire extinguishers in appropriate locations.
- Train employees in use of fire extinguishers.

- Install smoke detectors. Check smoke detectors once a month, change batteries at least once a year.
- Establish a system for warning personnel of a fire. Consider installing a fire alarm with automatic notification to the fire department.
- Consider installing a sprinkler system, fire hoses and fire-resistant walls and doors.
- Ensure that key personnel are familiar with all fire safety systems.
- Identify and mark all utility shutoffs so that electrical power, gas or water can be shut off quickly by fire wardens or responding personnel.
- Determine the level of response your facility will take if a fire occurs. Among the options are:

  Option 1 — Immediate evacuation of all personnel on alarm.

  Option 2 — All personnel are trained in fire extinguisher use. Personnel in the immediate area of a fire attempt to control it. If they cannot, the fire alarm is sounded and all personnel evacuate.

  Option 3 — Only designated personnel are trained in fire extinguisher use.

  Option 4 — A fire team is trained to fight incipient-stage fires that can be controlled without protective equipment or breathing apparatus. Beyond this level fire, the team evacuates.

  Option 5 — A fire team is trained and equipped to fight structural fires using protective equipment and breathing apparatus.

HAZARDOUS MATERIALS INCIDENTS.

Hazardous materials are substances that are either flammable or combustible, explosive, toxic, noxious, corrosive, oxidizable, an irritant or radioactive.

A hazardous material spill or release can pose a risk to life, health or property. An incident can result in the evacuation of a few people, a section of a facility or an entire neighborhood.

There are a number of Federal laws that regulate hazardous materials, including: the Superfund Amendments and Reauthorization Act of 1986 (SARA), the Resource Conservation and Recovery Act of 1976 (RCRA), the Hazardous Materials Transportation Act (HMTA), the Occupational Safety and Health Act (OSHA), the Toxic Substances Control Act (TSCA) and the Clean Air Act.

Title III of SARA regulates the packaging, labeling, handling, storage and transportation of hazardous materials. The law requires facilities to furnish information about the quantities and health effects of materials used at the facility, and to promptly notify local and State officials whenever a significant release of hazardous materials occurs.

In addition to on-site hazards, you should be aware of the potential for an off-site incident affecting your operations. You should also be aware of hazardous materials used in facility processes and in the construction of the physical plant.

Detailed definitions as well as lists of hazardous materials can be obtained from the Environmental Protection Agency (EPA) and the Occupational Safety and Health Administration (OSHA).

Planning Considerations

Consider the following when developing your plan:

- Identify and label all hazardous materials stored, handled, produced and disposed of by your facility. Follow government regulations that apply to your facility. Obtain material safety data sheets (MSDS) for all hazardous materials at your location.
- Ask the local fire department for assistance in developing appropriate response procedures.
- Train employees to recognize and report hazardous material spills and releases. Train employees in proper handling and storage.
- Establish a hazardous material response plan:
  - Establish procedures to notify management and emergency response organizations of an incident.
  - Establish procedures to warn employees of an incident.
  - Establish evacuation procedures.
  - Depending on your operations, organize and train an emergency response team to confine and control hazardous material spills in accordance with applicable regulations.
- Identify other facilities in your area that use hazardous materials. Determine whether an incident could affect your facility.
- Identify highways, railroads and waterways near your facility used for the transportation of hazardous materials. Determine how a transportation accident near your facility could affect your operations.

FLOODS AND FLASH FLOODS. Floods are the most common and widespread of all natural disasters. Most communities in the United States can experience some degree of flooding after spring rains, heavy thunderstorms or winter snow thaws.

Most floods develop slowly over a period of days. Flash floods, however, are like walls of water that develop in a matter of minutes. Flash floods can be caused by intense storms or dam failure.

Planning Considerations

Consider the following when preparing for floods:

- Ask your local emergency management office whether your facility is located in a flood plain. Learn the history of flooding in your area. Learn the elevation of your facility in relation to steams, rivers and dams.
- Review the community's emergency plan. Learn the community's evacuation routes. Know where to find higher ground in case of a flood.
- Establish warning and evacuation procedures for the facility. Make plans for assisting employees who may need transportation.
- Inspect areas in your facility subject to flooding. Identify records and equipment that can be moved to a higher location. Make plans to move records and equipment in case of flood.
- Purchase a NOAA Weather Radio with a warning alarm tone and battery backup. Listen for flood watches and warnings.

  Flood Watch — Flooding is possible. Stay tuned to NOAA radio. Be prepared to evacuate. Tune to local radio and television stations for additional information.

  Flood Warning — Flooding is already occurring or will occur soon. Take precautions at once. Be prepared to go to higher ground. If advised, evacuate immediately.
- Ask your insurance carrier for information about flood insurance. Regular property and casualty insurance does not cover flooding.

- Consider the feasibility of floodproofing your facility. There are three basic types of methods.

1. **Permanent floodproofing measures** are taken before a flood occurs and require no human intervention when flood waters rise. They include:
   - Filling windows, doors or other openings with water-resistant materials such as concrete blocks or bricks. This approach assumes the structure is strong enough to withstand flood waters.
   - Installing check valves to prevent water from entering where utility and sewer lines enter the facility.
   - Reinforcing walls to resist water pressure. Sealing walls to prevent or reduce seepage.
   - Building watertight walls around equipment or work areas within the facility that are particularly susceptible to flood damage.
   - Constructing floodwalls or levees outside the facility to keep flood waters away.
   - Elevating the facility on walls, columns or compacted fill. This approach is most applicable to new construction, though many types of buildings can be elevated.
2. **Contingent floodproofing measures** are also taken before a flood but require some additional action when flooding occurs. These measures include:
   - Installing watertight barriers called flood shields to prevent the passage of water through doors, windows, ventilation shafts or other openings
   - Installing permanent watertight doors
   - Constructing movable floodwalls
   - Installing permanent pumps to remove flood waters
3. **Emergency floodproofing measures** are generally less expensive than those listed above, though they require substantial advance warning and do not satisfy the minimum requirements for watertight floodproofing as set forth by the National Flood Insurance Program (NFIP). They include:
   - Building walls with sandbags
   - Constructing a double row of walls with boards and posts to create a "crib," then filling the crib with soil
   - Constructing a single wall by stacking small beams or planks on top of each other

- Consider the need for backup systems:
  - Portable pumps to remove flood water
  - Alternate power sources such as generators or gasoline-powered pumps
  - Battery-powered emergency lighting
- Participate in community flood control projects.

HURRICANES. Hurricanes are severe tropical storms with sustained winds of 74 miles per hour or greater. Hurricane winds can reach 160 miles per hour and extend inland for hundreds of miles.

Hurricanes bring torrential rains and a storm surge of ocean water that crashes into land as the storm approaches. Hurricanes also spawn tornadoes.

Hurricane advisories are issued by the National Weather Service as soon as a hurricane appears to be a threat. The hurricane season lasts from June through November.

Planning Considerations

The following are considerations when preparing for hurricanes:

- Ask your local emergency management office about community evacuation plans.
- Establish facility shutdown procedures. Establish warning and evacuation procedures. Make plans for assisting employees who may need transportation.
- Make plans for communicating with employees' families before and after a hurricane.
- Purchase a NOAA Weather Radio with a warning alarm tone and battery backup. Listen for hurricane watches and warnings.

Hurricane Watch — A hurricane is possible within 24 to 36 hours. Stay tuned for additional advisories. Tune to local radio and television stations for additional information. An evacuation may be necessary.

Hurricane Warning — A hurricane will hit land within 24 hours. Take precautions at once. If advised, evacuate immediately.

- Survey your facility. Make plans to protect outside equipment and structures.
- Make plans to protect windows. Permanent storm shutters offer the best protection. Covering windows with 5/8" marine plywood is a second option.
- Consider the need for backup systems:
  - Portable pumps to remove flood water
  - Alternate power sources such as generators or gasoline-powered pumps
  - Battery-powered emergency lighting
- Prepare to move records, computers and other items within your facility or to another location.

TORNADOES. Tornadoes are incredibly violent local storms that extend to the ground with whirling winds that can reach 300 mph.

Spawned from powerful thunderstorms, tornadoes can uproot trees and buildings and turn harmless objects into deadly missiles in a matter of seconds. Damage paths can be in excess of one mile wide and 50 miles long.

Tornadoes can occur in any state but occur more frequently in the Midwest, Southeast and Southwest. They occur with little or no warning.

Planning Considerations

The following are considerations when planning for tornadoes:

- Ask your local emergency management office about the community's tornado warning system.
- Purchase a NOAA Weather Radio with a warning alarm tone and battery backup. Listen for tornado watches and warnings.

  Tornado Watch — Tornadoes are likely. Be ready to take shelter. Stay tuned to radio and television stations for additional information.

  Tornado Warning — A tornado has been sighted in the area or is indicated by radar. Take shelter immediately.
- Establish procedures to inform personnel when tornado warnings are posted. Consider the need for spotters to be responsible for looking out for approaching storms.
- Work with a structural engineer or architect to designate shelter areas in your facility. Ask your local emergency management office or National Weather Service office for guidance.
- Consider the amount of space you will need. Adults require about six square feet of space; nursing home and hospital patients require more.
- The best protection in a tornado is usually an underground area. If an underground area is not available, consider:

- ◆Small interior rooms on the lowest floor and without windows
- ◆Hallways on the lowest floor away from doors and windows
- ◆Rooms constructed with reinforced concrete, brick or block with no windows and a heavy concrete floor or roof system overhead
- ◆Protected areas away from doors and windows

Note: Auditoriums, cafeterias and gymnasiums that are covered with a flat, wide-span roof are not considered safe.

- Make plans for evacuating personnel away from lightweight modular offices or mobile home-size buildings. These structures offer no protection from tornadoes.
- Conduct tornado drills.
- Once in the shelter, personnel should protect their heads with their arms and crouch down.

SEVERE WINTER STORMS. Severe winter storms bring heavy snow, ice, strong winds and freezing rain. Winter storms can prevent employees and customers from reaching the facility, leading to a temporary shutdown until roads are cleared. Heavy snow and ice can also cause structural damage and power outages.

Planning Considerations

Following are considerations for preparing for winter storms:

- Listen to NOAA Weather Radio and local radio and television stations for weather information:

  Winter Storm Watch — Severe winter weather is possible.

  Winter Storm Warning — Severe winter weather is expected.

  Blizzard Warning — Severe winter weather with sustained winds of at least 35 mph is expected.

  Traveler's Advisory — Severe winter conditions may make driving difficult or dangerous.

- Establish procedures for facility shutdown and early release of employees.
- Store food, water, blankets, battery-powered radios with extra batteries and other emergency supplies for employees who become stranded at the facility.
- Provide a backup power source for critical operations.
- Arrange for snow and ice removal from parking lots, walkways, loading docks, etc.

EARTHQUAKES. Earthquakes occur most frequently west of the Rocky Mountains, although historically the most violent earthquakes have occurred in the central United States. Earthquakes occur suddenly and without warning.

Earthquakes can seriously damage buildings and their contents; disrupt gas, electric and telephone services; and trigger landslides, avalanches, flash floods, fires and huge ocean waves called tsunamis. Aftershocks can occur for weeks following an earthquake.

In many buildings, the greatest danger to people in an earthquake is when equipment and non-structural elements such as ceilings, partitions, windows and lighting fixtures shake loose.

Planning Considerations

Following are guidelines for preparing for earthquakes:

- Assess your facility's vulnerability to earthquakes. Ask local government agencies for seismic information for your area.
- Have your facility inspected by a structural engineer. Develop and prioritize strengthening measures. These may include:
  - Adding steel bracing to frames
  - Adding sheer walls to frames
  - Strengthening columns and building foundations
  - Replacing unreinforced brick filler walls
- Follow safety codes when constructing a facility or making major renovations.
- Inspect non-structural systems such as air conditioning, communications and pollution control systems. Assess the potential for damage. Prioritize measures to prevent damages.
- Inspect your facility for any item that could fall, spill, break or move during an earthquake. Take steps to reduce these hazards:
  - Move large and heavy objects to lower shelves or the floor. Hang heavy items away from where people work.
  - Secure shelves, filing cabinets, tall furniture, desktop equipment, computers, printers, copiers and light fixtures.
  - Secure fixed equipment and heavy machinery to the floor. Larger equipment can be placed on casters and attached to tethers which attach to the wall.
  - Add bracing to suspended ceilings, if necessary.
  - Install safety glass where appropriate.
  - Secure large utility and process piping.

- Keep copies of design drawings of the facility to be used in assessing the facility's safety after an earthquake.
- Review processes for handling and storing hazardous materials. Have incompatible chemicals stored separately.
- Ask your insurance carrier about earthquake insurance and mitigation techniques.
- Establish procedures to determine whether an evacuation is necessary after an earthquake.
- Designate areas in the facility away from exterior walls and windows where occupants should gather after an earthquake if an evacuation is not necessary.
- Conduct earthquake drills. Provide personnel with the following safety information:
  - In an earthquake, if indoors, stay there. Take cover under a sturdy piece of furniture or counter, or brace yourself against an inside wall. Protect your head and neck.
  - If outdoors, move into the open, away from buildings, street lights and utility wires.
  - After an earthquake, stay away from windows, skylights and items that could fall. Do not use the elevators.
  - Use stairways to leave the building if it is determined that a building evacuation is necessary.

TECHNOLOGICAL EMERGENCIES. Technological emergencies include any interruption or loss of a utility service, power source, life support system, information system or equipment needed to keep the business in operation.

Planning Considerations

The following are suggestions for planning for technological emergencies:

- Identify all critical operations, including:
  - Utilities including electric power, gas, water, hydraulics, compressed air, municipal and internal sewer systems, wastewater treatment services
  - Security and alarm systems, elevators, lighting, life support systems, heating, ventilation and air conditioning systems, electrical distribution system.
  - Manufacturing equipment, pollution control equipment
  - Communication systems, both data and voice computer networks
  - Transportation systems including air, highway, railroad and waterway
- Determine the impact of service disruption.
- Ensure that key safety and maintenance personnel are thoroughly familiar with all building systems.
- Establish procedures for restoring systems. Determine need for backup systems.
- Establish preventive maintenance schedules for all systems and equipment.

SECTION

4

INFORMATION SOURCES

This section provides information sources:

- Additional Readings from FEMA
- Ready-to-Print Brochures
- Emergency Management Offices

ADDITIONAL READINGS FROM FEMA. The following publications can be obtained from FEMA by writing to: FEMA, Publications, P.O. Box 2012, Jessup, MD 20794-2012.

- Principal Threats Facing Communities and Local Emergency Management Coordinators (FEMA 191) — Statistics and analyses of natural disasters and man-made threats in the U.S.
- Floodproofing Non-Residential Structures (FEMA 102) — Technical information for building owners, designers and contractors on floodproofing techniques (200 pages).
- Non-Residential Floodproofing — Requirements and Certification for Buildings Located in Flood Hazard Areas in Accordance with the National Flood Insurance Program (FIA-TB-3) — Planning and engineering considerations for floodproofing new commercial buildings.
- Building Performance: Hurricane Andrew in Florida (FIA 22) — Technical guidance for enhancing the performance of buildings in hurricanes.
- Building Performance: Hurricane Iniki in Hawaii (FIA 23) — Technical guidance for reducing hurricane and flood damage.
- Answers to Questions About Substantially Damaged Buildings (FEMA 213) — Information about regulations and policies of the National Flood Insurance Program regarding substantially damaged buildings (25 pages).
- Design Guidelines for Flood Damage Reduction (FEMA 15) — A study on land use, watershed management, design and construction practices in flood-prone areas.
- Comprehensive Earthquake Preparedness Planning Guidelines: Corporate (FEMA 71) — Earthquake planning guidance for corporate safety officers and managers.

READY-TO-PRINT BROCHURE MECHANICALS FOR YOUR EMPLOYEE SAFETY PROGRAM. You can provide your employees and customers with life-saving information from FEMA and the American Red Cross. Available at no charge is ready-to-print artwork for a series of brochures on disaster preparedness and family safety.

Select any of the brochures below, and you'll receive camera-ready materials, printing instructions and ideas for adding your own logo or sponsor message. Write to: Camera-ready Requests, Community & Family Preparedness Program, 500 C Street, SW Washington, DC 20472.

- Your Family Disaster Plan — A 4-step plan for individuals and families on how to prepare for any type of disaster.
- Emergency Preparedness Checklist — An action checklist on home safety, evacuation and disaster preparedness.
- Your Family Disaster Supplies Kit — A checklist of emergency supplies for the home and car.
- Helping Children Cope With Disaster — Practical advice on how to help children deal with the stress of disaster.

FEMA Headquarters

Federal Emergency Management Agency, 500 C Street, SW, Washington, DC 20472, (202)646-2500.

FEMA Regional Offices

- Region 1: Boston (617)223-9540
- Region 2: New York (212)225-7209
- Region 3: Philadelphia (215)931-5500
- Region 4: Atlanta (404)853-4200
- Region 5: Chicago (312)408-5500
- Region 6: Denton, TX (817)898-5104
- Region 7: Kansas City, MO (816)283-7061
- Region 8: Denver (303)235-1813
- Region 9: San Francisco (415)923-7100
- Region 10: Bothell, WA (206)487-4604

State Emergency Management Agencies

(FEMA region numbers are in parentheses.)

Alabama (4)
Alabama Emergency Management Agency
5898 S. County Rd.41 Drawer 2160
Clanton, AL 35045-5160
(205)280-2201

Alaska (10)
Department of Military & Veteran Affairs
P.O. Box 5750
Camp Denali, AK 99595-5750
(907)428-7000

Arizona (9)
Arizona Division of Emergency Services
National Guard Bldg.
5636 E. McDowell Rd.
Phoenix, AZ 85008
(602)231-6245

Arkansas (6)
Office of Emergency Services
P.O. Box 758
Conway, AR 72032
(501)321-5601

California (9)
Office of Emergency Services
2800 Meadowview Rd.
Sacramento, CA 95823
(916)262-1816

Colorado (8)
Colorado Office of Emergency Management
Camp George West
Golden, CO 80401
(303)273-1622

Connecticut (1)
Connecticut Office of Emergency Management
360 Broad St.
Hartford, CT 06105
(203)566-3180

Delaware (3)
Division of Emergency Planning and Operations
P.O. Box 527
Delaware City, DE 19706
(302) 326-6000

District of Columbia (3)
Office of Emergency Preparedness
200 14th St., NW, 8th Floor
Washington, DC 20009
(202)727-3159

Florida (4)
Division of Emergency Management
2555 Shumar Oak Blvd.
Tallahassee, FL 32399-2100
(904)413-9969

Georgia (4)
Georgia Emergency Management Agency
P.O. Box 18055
Atlanta, GA 30316-0055
(404)635-7001

Hawaii (9)
State Civil Defense
3949 Diamond Head Rd.
Honolulu, HI 96816-4495
(808)733-4300

Idaho (10)
Bureau of Disaster Services
650 W. State St.
Boise, ID 83720
(208)334-2336

Illinois (5)
Illinois Emergency Management Agency
110 E. Adams St.
Springfield, IL 62706
(217)782-2700

Indiana (5)
Indiana Emergency Management Agency
State Office Bldg., Room E-208
302 W. Washington St.
Indianapolis, IN 46204
(317)232-3980

Iowa (7)
Iowa Emergency Management Division
Hoover State Office Bldg.
Level A, Room 29
Des Moines, IA 50319
(515)281-3231

Kansas (7)
Division of Emergency Preparedness
2800 S.W. Topeka Blvd
Topeka,KS 66611-1401

(913)274-1401

Kentucky (4)
Kentucky Disaster and Emergency Services
100 Minutemen Pkwy
Frankfort, KY 40601-6168
(502)564-8682

Louisiana (6)
Office of Emergency Preparedness
Department of Public Safety
LA Military Dept.
P.O. Box 44217
Capitol Station
Baton Rouge, LA 70804
(504)342-5470

Maine (1)
Maine Emergency Management Agency
72 State House Station
Augusta, ME 04333-0072
(207)287-4080

Maryland (3)
Maryland Emergency Management and Civil Defense Agency
Two Sudbrook Ln., East
Pikesville, MD 21208
(410)486-4422

Massachusetts (1)
Massachusetts Emergency Management Agency
P.O. Box 1496
Framingham, MA 01701-0317
(508)820-2000

Michigan (5)
Emergency Management Division
Michigan State Police
300 S. Washington Sq.
Suite 300
Lansing, MI 48913
(517)366-6198

Minnesota (5)
Division of Emergency Services
Department of Public Safety
State Capitol, B-5
St. Paul, MN 55155
(612)296-0450

Mississippi (4)
Mississippi Emergency Management Agency
P.O. Box 4501, Fondren Station
Jackson, MS 39296
(601)352-9100

Missouri (7)
State Emergency Management Agency
P.O. Box 116
Jefferson City, MO 65102
(573)526-9101

Montana (8)
Emergency Management Specialist
Disaster and Emergency Services
P.O. Box 4789
Helena, MT 59604-4789
(406)444-6911

Nebraska
Nebraska Civil Defense Agency
National Guard Center
1300 Military Road
Lincoln, NE 68508-1090
(402)471-7410

Nevada (9)
Nevada Division of Emergency Services
2525 S. Carson St.
Carson City, NV 89710
(702) 687-4240

New Hampshire (1)
Governor's Office of Emergency Management
State Office Park South
107 Pleasant St.
Concord, NH 03301-3809
(603)271-2231

New Jersey (2)
Office of Emergency Management
P.O. Box 7068
W. Trenton, NJ 08628-0068
(609)538-6050

New Mexico (6)
Emergency Planning and Coordination
Department of Public Safety
4491 Cerrillos Rd.
P.O. Box 1628
Santa Fe, NM 87504-1628
(505)827-9222

New York (2)
State Emergency Management Office
Bldg. #22, Suite 101

Albany, NY 12226-2251
(518)457-2222

North Carolina
Division of Emergency Management
116 West Jones St.
Raleigh, NC 27603-1335
(919)733-5406

North Dakota (8)
North Dakota Division of Emergency Management
P.O. Box 5511
Bismarck, ND 58502-5511
(701) 328-3300

Ohio (5)
Ohio Emergency Management Agency
2825 W. Dublin Granville Rd.
Columbus, OH 43235-2206
(614)889-7150

Oklahoma (6)
Oklahoma Civil Defense
P.O. Box 53365
Oklahoma City, OK 73152-3365
(405)521-2481

Oregon (10)
Emergency Management Division
Oregon State Executive Department
595 Cottage St., NE
Salem, OR 97310
(503)378-2911

Pennsylvania (3)
Pennsylvania Emergency Management Agency
P.O. Box 3321
Harrisburg, PA 17105-3321
(717) 651-2007

Puerto Rico (2)
State Civil Defense
Commonwealth of Puerto Rico
P.O. Box 5127
San Juan, PR 00906
(809)724-0124

Rhode Island (1)
Rhode Island Emergency Management Agency
675 New London Avenue
Cranston, RI 02920
(401) 946-9996

South Carolina (4)
South Carolina Emergency Management Division
1429 Senate St., Rutledge Bldg.
Columbia, SC 29201-3782
(803)734-8020

South Dakota (8)
Division of Emergency and Disaster Services
State Capitol, 500 East Capitol
Pierre, SD 57501
(605)773-3231

Tennessee (4)
Tennessee Emergency Management Agency
3041 Sidco Dr. P.O. 41502
Nashville, TN 37204-1502
(615)741-6528

Texas (6)
Division of Emergency Management
P.O. Box 4087
Austin, TX 78773-0001
(512)424-2000

Utah (8)
Division of Comprehensive Emergency Management
Sate Office Bldg., Room 1110
Salt Lake City, UT 84114
(801)538-3400

Vermont (1)
Vermont Emergency Management Agency
Dept. of Public Safety
Waterbury State Complex
103 S. Main St.
Waterbury, VT 05671-2101
(802)244-8271

Virgin Islands (2)
Territorial Emergency Management Agency
A & Q Building # 2c Estate Content
St Thomas, VI 00820
(809)773-2244

Virginia (3)
Department of Emergency Services
P.O. Box 40955
Richmond, VA 23225-6491
(804)674-2497

Washington (10)
Division of Emergency Management
4220 E. Martin Way, MS-PT 11
Olympia, WA 98504-0955
(360) 923-4505

West Virginia (3)
West Virginia Office of Emergency Services
State Capitol Complex
Room EB80
Charleston, WV 25305-0360
(304)558-5380

Wisconsin (5)
Division of Emergency Government
2400 Wright St. P.O. Box 7865
Madison, WI 53707
(608) 242-3232

Wyoming (8)
Wyoming Emergency Management Agency
P.O. Box 1709
Cheyenne, WY 82003
(307)777-7566

Vulnerability Analysis Chart

TYPE OF EMERGENCY	Probability	Human Impact	Property Impact	Business Impact	Internal Resources	External Resources	Total
	High 5 ◄► 1 Low	High Impact 5 ◄► 1 Low Impact			Weak Resources 5 ◄► 1 Strong Resources		

The lower the score the better

Training Drills and Exercises

	January	February	March	April	May	June	July	August	September	October	November	December
MANAGEMENT ORIENTATION/REVIEW												
EMPLOYEE ORIENTATION/REVIEW												
CONTRACTOR ORIENTATION/REVIEW												
COMMUNITY/MEDIA ORIENTATION/REVIEW												
MANAGEMENT TABLETOP EXERCISE												
RESPONSE TEAM TABLETOP EXERCISE												
WALK-THROUGH DRILL												
FUNCTIONAL DRILLS												
EVACUATION DRILL												
FULL-SCALE EXERCISE												

TORNADO • FLASH FLOOD • EARTHQUAKE • WINTER STORM • HURRICANE • FIRE • HAZARDOUS MATERIALS SPILL

Emergency Preparedness Checklist

Federal Emergency Management Agency

American Red Cross

The next time disaster strikes, you may not have much time to act. Prepare now for a sudden emergency.

Learn how to protect yourself and cope with disaster by planning ahead. This checklist will help you get started. Discuss these ideas with your family, then prepare an emergency plan. Post the plan where everyone will see it—on the refrigerator or bulletin board.

For additional information about how to prepare for hazards in your community, contact your local emergency management or civil defense office and American Red Cross chapter.

Emergency Checklist

Call Your Emergency Management Office or American Red Cross Chapter

- ❑ Find out which disasters could occur in your area.
- ❑ Ask how to prepare for each disaster.
- ❑ Ask how you would be warned of an emergency.
- ❑ Learn your community's evacuation routes.
- ❑ Ask about special assistance for elderly or disabled persons.

Also...

- ❑ Ask your workplace about emergency plans.
- ❑ Learn about emergency plans for your children's school or day care center.

Create an Emergency Plan

- ❑ Meet with household members to discuss the dangers of fire, severe weather, earthquakes and other emergencies. Explain how to respond to each.
- ❑ Find the safe spots in your home for each type of disaster.
- ❑ Discuss what to do about power outages and personal injuries.
- ❑ Draw a floor plan of your home. Mark two escape routes from each room.
- ❑ Show family members how to turn off the water, gas and electricity at main switches when necessary.
- ❑ Post emergency telephone numbers near telephones.
- ❑ Teach children how and when to call 911, police and fire.
- ❑ Instruct household members to turn on the radio for emergency information.
- ❑ Pick one out-of-state and one local friend or relative for family members to call if separated during a disaster (it is often easier to call out-of-state than within the affected area).
- ❑ Teach children your out-of-state contact's phone numbers.
- ❑ Pick two emergency meeting places.
  1) A place near your home in case of a fire.
  2) A place outside your neighborhood in case you cannot return home after a disaster.
- ❑ Take a basic first aid and CPR class.
- ❑ Keep family records in a water and fire-proof container.

Prepare a Disaster Supplies Kit

Assemble supplies you might need in an evacuation. Store them in an easy-to-carry container such as a backpack or duffle bag.

Include:

- ❑ A supply of water (one gallon per person per day). Store water in sealed, unbreakable containers. Identify the storage date and replace every six months.
- ❑ A supply of non-perishable packaged or canned food and a non-electric can opener.
- ❑ A change of clothing, rain gear and sturdy shoes.
- ❑ Blankets or sleeping bags.
- ❑ A first aid kit and prescription medications.
- ❑ An extra pair of glasses.
- ❑ A battery-powered radio, flashlight and plenty of extra batteries.
- ❑ Credit cards and cash.
- ❑ An extra set of car keys.
- ❑ A list of family physicians.
- ❑ A list of important family information; the style and serial number of medical devices such as pacemakers.
- ❑ Special items for infants, elderly or disabled family members.

Emergency Plan

Out-of-State Contact

Name _____

City _____

Telephone (Day) _____ (Evening) _____

Local Contact

Name _____

Telephone (Day) _____ (Evening) _____

Nearest Relative

Name _____

City _____

Telephone (Day) _____ (Evening) _____

Family Work Numbers

Father _____ Mother _____

Other _____

Emergency Telephone Numbers

In a life threatening emergency, dial 911 or the local emergency medical services system number

Police Department _____

Fire Department _____

Hospital _____

Family Physicians

Name _____ Telephone _____

Name _____ Telephone _____

Name _____ Telephone _____

Reunion Locations

1. Right outside your home _____

_____

2. Away from the neighborhood, in case you cannot return home _____

_____

Address _____

Telephone _____

Route to try first _____

_____

Escape Plan

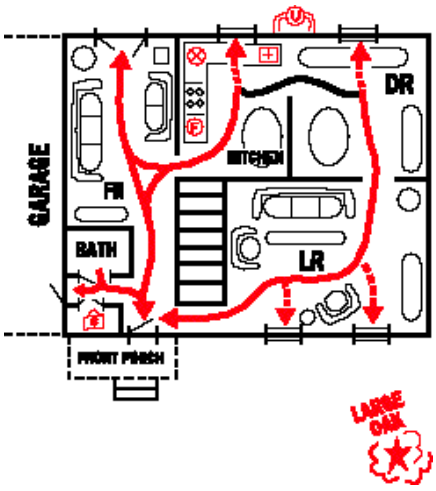
In a fire or other emergency, you may need to evacuate your house, apartment or mobile home on a moment's notice. You should be ready to get out fast.

Develop an escape plan by drawing a floor plan of your residence. Using a black or blue pen, show the location of doors, windows, stairways, and large furniture. Indicate the location of emergency supplies (Disaster Supplies Kit), fire extinguishers, smoke detectors, collapsible ladders, first aid kits and utility shut off points. Next, use a colored pen to draw a broken line charting at least two escape routes from each room. Finally, mark a place outside of the home where household members should meet in case of fire.

Be sure to include important points outside such as garages, patios, stairways, elevators, driveways and porches. If your home has more than two floors, use an additional sheet of paper. Practice emergency evacuation drills with all household members at least two times each year.

Example:

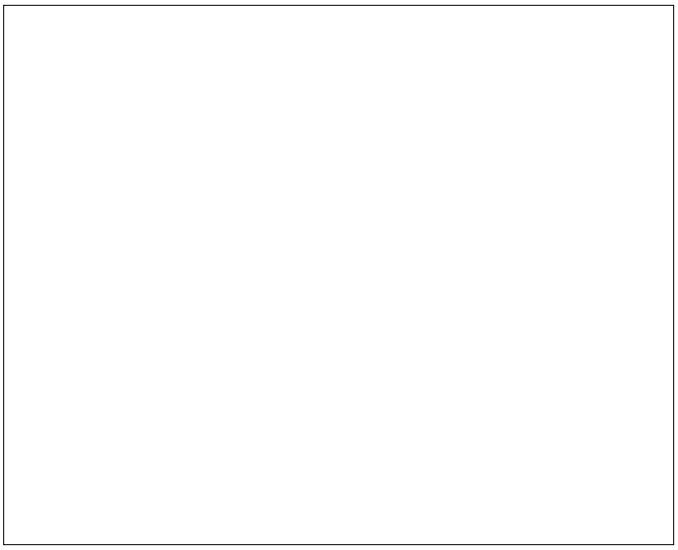
Floor one



Floor Plan

Floor One

Floor Two



- Normal Exit Route
- Emergency Exit Routes
- Fire Extinguisher
- Smoke Detectors
- Disaster Supplies Kit
- Doors
- Collapsible Ladder
- Reunion Location (Outside)
- Stairways
- Utility Shut Off
- Windows
- First Aid Kit

Home Hazard Hunt

In a disaster, ordinary items in the home can cause injury and damage. Anything that can move, fall, break or cause a fire is a potential hazard.

- ❑ Repair defective electrical wiring and leaky gas connections.
- ❑ Fasten shelves securely and brace overhead light fixtures.
- ❑ Place large, heavy objects on lower shelves.
- ❑ Hang pictures and mirrors away from beds.
- ❑ Strap water heater to wall studs.
- ❑ Repair cracks in ceilings or foundations.
- ❑ Store weed killers, pesticides and flammable products away from heat sources.
- ❑ Place oily polishing rags or waste in covered metal cans.
- ❑ Clean and repair chimneys, flue pipes, vent connectors and gas vents.

If You Need to Evacuate

- ❑ Listen to a battery powered radio for the location of emergency shelters. Follow instructions of local officials.
- ❑ Wear protective clothing and sturdy shoes.
- ❑ Take your Disaster Supplies Kit.
- ❑ Lock your house.
- ❑ Use travel routes specified by local officials.

If you are sure you have time ...

- ❑ Shut off water, gas and electricity, if instructed to do so.
- ❑ Let others know when you left and where you are going.
- ❑ Make arrangements for pets. Animals may not be allowed in public shelters.

Prepare an Emergency Car Kit

Include:

- ❑ Battery powered radio, flashlight and extra batteries
- ❑ Blanket
- ❑ Booster cables
- ❑ Fire extinguisher (5 lb., A-B-C type)
- ❑ First aid kit and manual
- ❑ Bottled water and non-perishable high energy foods such as granola bars, raisins and peanut butter
- ❑ Maps, Shovel, Flares
- ❑ Tire repair kit and pump

Fire Safety

- ❑ Plan two escape routes out of each room.
- ❑ Practice fire drills at least twice a year.
- ❑ Teach family members to stay low to the ground when escaping from a fire.
- ❑ Teach family members never to open doors that are hot. In a fire, feel the bottom of the door with the palm of your hand. If it is hot, do not open the door. Find another way out.
- ❑ Install smoke detectors on every level of your home. Clean and test them at least once a month. Change batteries at least once a year.
- ❑ Keep a whistle in each bedroom to awaken household in case of fire.
- ❑ Check electrical outlets. Do not overload outlets.
- ❑ Purchase and learn how to use a fire extinguisher (5 lb., A-B-C type).
- ❑ Have a collapsible ladder on each upper floor of your house.
- ❑ Consider installing home sprinklers.

The Federal Emergency Management Agency's Community and Family Preparedness Program and the American Red Cross Community Disaster Education Program are nationwide efforts to help people prepare for disasters of all types. For more information, please contact your local emergency management office and American Red Cross chapter. This brochure and other preparedness materials are available by calling FEMA at 1-800-480-2520, or writing: FEMA, P.O. Box 2012, Jessup, MD 20794-2012. Publications are also available on the World Wide Web at:

FEMA's Web site: http://www.fema.gov
American Red Cross Web site: http://www.redcross.org

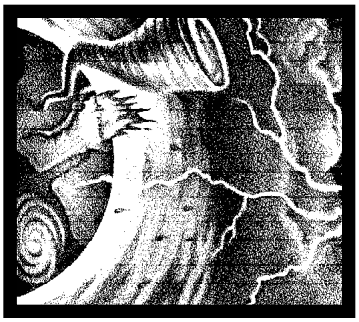
Your Local Contact is:

L-154
ARC 4471
Aug. 1993

HURRICANE • FIRE • HAZARDOUS MATERIALS SPIL

Federal Emergency Management Agency

EMERGENCY PREPAREDNESS CHECKLIST



TORNADO • FLASH FLOOD • EARTHQUAKE • WINTER STOR

FEMA
Helping Children Cope with Disaster
Earthquakes...Tornadoes...Fires...
Floods...Hurricanes... Hazardous Materials Spills

Disaster may strike quickly and without warning. These events can be frightening for adults, but they are traumatic for children if they don't know what to do.

During a disaster, your family may have to leave your home and daily routine. Children may become anxious, confused or frightened. As an adult, you'll need to cope with the disaster in a way that will help children avoid developing a permanent sense of loss. It is important to give children guidance that will help them reduce their fears. The Federal Emergency Management Agency (FEMA) and the American Red Cross have prepared this brochure to help you help your children cope. Ultimately, you should decide what's best for your children, but consider using these suggestions as guidelines.

Children and Their Response to Disaster

Children depend on daily routines: They wake up, eat breakfast, go to school, play with friends. When emergencies or disasters interrupt this routine, children may become anxious.

In a disaster, they'll look to you and other adults for help. How *you* react to an emergency gives them clues on how to act. If you react with alarm, a child may become more scared. They see our fear as proof that the danger is real. If you seem overcome with a sense of loss, a child may feel their losses more strongly.

Children's fears also may stem from their imagination, and you should take these feelings seriously. A child who *feels* afraid *is* afraid. Your words and actions can provide reassurance. When talking with your child, be sure to present a realistic picture that is both honest and manageable.

Feeling or fear are healthy and natural for adults and children. But as an adult, you need to keep control of the situation. When you're sure that danger has passed, concentrate on your child's emotional needs

by asking the child what's uppermost in his or her mind. Having children participate in the family's recovery activities will help them feel that their life will return to "normal." Your response during this time may have a lasting impact.

Be aware that after a disaster, children are *most afraid* that--

- the event will happen again,
- someone will be injured or killed,
- they will be separated from the family,
- they will be left alone.

Advice to Parents: Prepare for Disaster

You can create a Family Disaster Plan by taking four simple steps. First, learn what hazards exist in your community and how to prepare for each. Then meet with your family to discuss what you would do, as a group, in each situation. Next, take steps to prepare your family for disaster such as: posting emergency phone numbers, selecting an out-of-state family contact, assembling disaster supplies kits for each member of your household and installing smoke detectors on each level of your home. Finally, practice your Family Disaster Plan so that everyone will remember what to do when a disaster does occur.

Develop and practice a Family Disaster Plan. Contact your local emergency management or civil defense office, or your local Red Cross chapter for materials that describe how your family can create a disaster plan. Everyone in the household, including children, should play a part in the family's response and recovery efforts.

Teach your child how to recognize danger signals. Make sure your child knows what smoke detectors, fire alarms and local community warning systems (horns, sirens) sound like.

Explain how to call for help. Teach your child how and when to call for help. Check the telephone directory for local emergency phone numbers and post these phone numbers by all telephones. If you live in a 9-1-1-service area, tell your child to call 9-1-1.

Help your child memorize important family information. Children should memorize their family name, address and phone number. They should also know where to meet in case of an emergency.

Some children may not be old enough to memorize the information. They could carry a small index card that lists emergency information to give to an adult or babysitter.

AFTER THE DISASTER: TIME FOR RECOVERY

Immediately after the disaster, try to reduce your child's fear and anxiety. Keep the family together. While you look for housing and assistance, you may want to leave your children with relatives or friends. Instead, keep the family together as much as possible and make children a part of what you are doing to get the family back on its feet. Children get anxious, and they'll worry that their parents won't return.

Calmly and firmly explain the situation. As best as you can, tell children what you know about the disaster. Explain what will happen next. For example, say, "Tonight, we will all stay together in the shelter." Get down to the child's eye level and talk to them. Encourage children to talk. Let children talk about the disaster and ask questions as much as they want. Encourage children to describe what they're feeling. Listen to what they say. If possible, include the entire family in the discussion.

Include children in recovery activities. Give children chores that are their responsibility. This will help children feel they are part of the recovery. Having a task will help them understand that everything will be all right.

You can help children cope by understanding what causes their anxieties and fears. Reassure them with firmness and love. Your children will realize that life will eventually return to normal. If a child does not respond to the above suggestions, seek help from a mental health specialist or a member of the clergy.

The Federal Emergency Management Agency's Community and Family Preparedness Program developed this brochure in cooperation with the American Red Cross' Community Disaster Education Program. Both are national efforts to help people prepare for disasters of all types.

For more information on how to prepare for and respond to disaster, contact your local or State office of emergency management and your local Red Cross chapter. Ask for "Your Family Disaster Plan" Or, write to:

FEMA
P.O. Box 70274
Washington, D.C. 20024

FEMA L-196
February 1993
ARC 4499

Updated: June 16, 1998

Published by the Massachusetts Emergency Management Agency and the Federal Emergency Management Agency

Surviving the Storm

A Guide to Hurricane Preparedness

FEMA Photo

Water from storm surge and heavy rains can inundate low lying areas.

Safer, Stronger, Smarter

Building to Survive the Storm

Before a hurricane hits, even before you build, you need to know the flood risks facing your residence. Forearmed, you can take steps to protect your home from excess damage.

Here are some of the risks in hurricane flooding. In coastal areas, high winds and waves can drive fast floodwaters ashore where they pick up debris. The storm surge can batter your house, knock it over or collapse it. Severe coastal flooding erodes soil under your home, weakening its foundation and encouraging collapse.

Inland, torrential rains can cause rivers and streams to rise and flood rapidly, posing the same threats to your home.

You Need to Know

Ask local emergency management and building officials about hurricane threats to your area. Also consult local floodplain administrators. State officials in the federal Coastal Zone Management Program can tell you about erosion rates and history where you live.

How to Protect Your Home

If your area is at high risk, consider relocating your home to a less flood-prone area. Or, consider elevating it on an open foundation of piles or columns, so floodwaters can pass underneath.

Buy flood insurance. Disaster assistance provides a helping hand toward recovery, but is not sufficient to fully replace your property. You want maximum resources to recover from flooding.

If You Are Building a Home

Contact local building officials, floodplain administrators and emergency management officials to learn about hurricane hazards. They can explain regulatory and permit requirements. Ask about state requirements, too.

Have work performed in compliance with a model state or national code. A qualified contractor, professional engineer or architect can assist you. Always obtain the proper building permits from your local building inspector or permitting authority.

Tropical Depressions Produce Deadly Storms

Hurricanes develop from tropical depressions (sustained winds up to 38 mph) to tropical storms (winds 39-73 mph) before becoming hurricanes (winds 74 mph or more).

The winds, a product of extremely low pressure zones powered by moisture from the sea and heat from condensation, spiral downward counter-clockwise. If the barometer drops below 1,000 millibars (29.53 inches), you should start monitoring weather broadcasts on the radio.

Usually the most dangerous part of a hurricane is the northeastern quadrant.

Wind gusts within a hurricane may exceed the sustained winds by as much as 50 percent. The time between the first rise in wind and a return to moderate levels is often 24 hours or more. But this varies greatly, depending on the size of the hurricane, its forward speed and its path. Rainfall also varies with these factors. As a hurricane passes through an area, 5 to 30 inches of rain may fall.

Keep in mind that a hurricane does not have to be a direct hit to cause great damage and that the course and intensity of a storm can change as it approaches your area.

Low pressure and strong winds around the hurricane's center raise the surface of the sea a foot or two higher than the surrounding water in a dome sometimes 50 miles across.

As the storm reaches shallow coastal waters, the dome becomes a surge that can rise 20 feet or more. The surge may smash onto land as a whole, producing massive destruction and flash flooding of coastal lowlands, or it may come ashore in a series of giant waves.

The highest storm surge is usually from near the eye of the hurricane in the quadrant where winds are blowing toward shore.

A storm surge can crush vessels and structures, erode miles of beach and undermine poorly anchored low-lying buildings.

FEMA Director James L. Witt

Each year, millions of Americans face the threat posed by hurricanes. Violent winds, destructive storm surge and torrential rains can cause devastation of property, personal injury and death.

We at FEMA, together with our partners in your state emergency management agency, stand committed to assist you in protecting your homes and loved ones from these dramatic reminders of nature's power.

Experience has shown us that lives can be saved and damage to property significantly reduced by consistently enforcing building codes, building safer, stronger buildings, and making the proper preparations when a storm is approaching.

Along with the many protective responsibilities that lie with government, there are individual responsibilities as well. Understanding and using the information contained in this publication will help you better prepare for this hurricane season. Working together we can prevent injuries and deaths associated with these powerful storms.

Protect Your Home From Hurricane Winds

Homes located in hurricane prone areas should be designed and constructed to withstand hurricane-force winds. High winds blow on the coast and inland, tearing off roofs, windows and doors. Heavy gusts can weaken or destroy your home's structural components.

See your local building officials, emergency management officials or floodplain administrator to learn how vulnerable your home is to hurricane winds.

Simple methods are available to protect your home from wind damage. For example, install hurricane straps and clips around your house to hold it together. Your roof should be rated for hurricane wind speeds in your community.

Put shutters on windows and glass doors to protect them from flying debris.

Consult a professional engineer or architect licensed in your state before taking these measures.

Hurricane Preparedness Tips

When a hurricane threatens your area, you must decide whether to evacuate or ride out the storm at home. Listen to the radio for weather advisories, and if authorities recommend evacuation for your area, leave promptly.

In general, plan to leave if you live on the coast or in a low-lying area not far inland, in a mobile home, or aboard a boat. You also should leave if you know your home is not structurally sound or if it is in an area that continually floods or is near a stream or gut likely to overflow in heavy rainfall.

If you need to seek emergency shelter, wait for notification from the American Red Cross officials of shelter locations.

Public shelters are set up as a temporary, emergency means of caring for people. A shelter's primary function is to provide a roof over your head. Food, blankets and amenities may not be available. Pets, weapons, alcoholic beverages and illegal drugs are not allowed in shelters. Smoking may be banned.

If you go to a shelter, travel light. Put everything into a portable disaster kit, including:

- Non-perishable food
- Drinking water (two to four quarts per person per day)
- Valuable papers such as your driver's license or other identification, bank books, insurance policies, property inventory and photographs
- Eating and cooking utensils, can and bottle openers
- Toiletries and sanitary supplies
- Medications, prescriptions, important medical information, eyeglasses, cleaning solution for contact lenses, hearing aid, and walking aids.
- Rope
- Portable radio with extra batteries
- Flashlight with extra batteries
- Blanket or sleeping bag for each person
- Small valuables such as photographs

Before you leave your home:

- Unplug all electrical appliances and machines and store them as high as possible.
- Turn off electricity at all breakers plus the main switch. Label breakers to identify what the lines carry.
- Store toxic materials as high as possible in the most protected area available.
- Agree with family members on a location to meet or a means of reaching one another with messages in the event you become separated.

Severity of Damage Linked to Wind Speed

The amount of damage you can expect from a hurricane is directly linked to the wind velocity of the storm. Winds in an intense storm may reach a sustained velocity of more than 150 mph with gusts up to 200 mph.

The National Hurricane Center uses the Saffir/Simpson scale that classifies storms into five categories. Here is a summary of possible damage to shorelines and vessels in each case.

CATEGORY 1

Winds 74-95 mph, storm surge four-to-five feet above normal. Flooded low-lying coastal roads, minor pier damage, some small craft in exposed anchorages torn from moorings.

CATEGORY 2

Winds 96-110 mph, storm surge six-to-eight feet. Coastal and low-lying roads leading inland flooded two to four hours before the hurricane eye passes over. Piers damaged, marinas flooded, small craft in unprotected anchorages torn from moorings.

CATEGORY 3

Winds 111-130 mph, storm surge nine-to-twelve feet. Smaller structures destroyed by coastal flooding; larger structures destroyed by battering waves and floating debris. Low-lying roads leading inland flooded three-to-five hours before the eye passes over.

CATEGORY 4

Winds 131-155 mph, storm surge 13-18 feet. Flooding of flat terrain up to 10 feet above sea level as far as six miles inland. Major flooding and wave battering damage to lower floors of structures near shore. Low-lying roads leading inland flooded three-to-five hours before the eye passes over. Major beach erosion.

CATEGORY 5

Winds above 155 mph, storm surge more than 18 feet. Major damage to lower floors of all structures less than 15 feet above sea level within 500 yards of shore.

For Flood Insurance Information Call
1-800-427-4661

Plywood or shutters properly installed over windows and glass doors provides the best protection from high winds and flying debris.

Know Your Weather Terminology

ADVISORY. Hurricane and storm information disseminated to the public every six hours.

INTERMEDIATE ADVISORY. Information update every two-to-three hours, or as necessary.

SPECIAL ADVISORY. Information disseminated with any significant change in storm-related weather conditions or warnings.

GALE WARNING. An advisory of 39-54 mph sustained winds and strong wave action.

STORM WARNING. An advisory that sustained winds of 55-73 mph are expected.

HURRICANE WATCH. An indication that a hurricane may threaten a specific area but is not imminent.

HURRICANE WARNING. An advisory that a hurricane is expected to strike the specified area within 24 hours or less, with sustained winds of 74 mph or higher and dangerously high water and waves.

TROPICAL DISTURBANCE. A moving area of thunderstorms in the tropics.

TROPICAL WAVE. A westward-moving, low-pressure trough in the deep easterly current that tends to organize low-level circulation and sometimes travels thousands of miles with little change in shape, producing showers and thunderstorms along its path.

TROPICAL DEPRESSION. An area of low pressure, rotary circulation of clouds and winds up to 38 mph.

TROPICAL STORM. Counter-clockwise circulation of clouds and winds of 39-73 mph. At this stage the storm is assigned a name.

HURRICANE. A tropical storm with winds of 74 mph or more.

HURRICANE CENTER or EYE. The relatively calm area near the center of the storm which can last from several minutes to more than an hour.

CAUTION!

When venturing out after a storm stay away from downed power lines as they present a danger of electrical shock or electricution.

Hurricane Preparations: Know Wh

A Hurricane Warning Means Get Ready

A **hurricane warning** is issued for an area when a hurricane is expected to strike within 24 hours. If you know your home is structurally sound and not likely to flood and you decide to ride the hurricane out, there are many simple but important precautions to take before the storm strikes. For your own well-being and that of others:

Listen to the radio for advisories and emergency information from local officials and the National Weather Service.

Limit telephone calls to short, essential messages.

If you are elderly or disabled, consider asking a friend to stay with you.

If you have room, consider giving refuge to neighbors, relatives, or elderly or disabled persons who live in a flood-prone area.

If a doctor has advised that any ill or disabled persons in your home stay elsewhere, move them early.

If you don't have a vehicle, arrange ahead of time for transportation in case evacuation becomes necessary.

When you complete your precautions, offer to assist neighbors, particularly families with very young, elderly or disabled persons.

Surviving the Storm is published by the Federal Emergency Management Agency, and your state emergency management agency. Comments and inquiries about *Surviving the Storm* may be directed to 1-800-525-0321.

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SURVIVING THE STORM
Internet/WorldWideWeb http://www.fema.gov

As the Hurricane Approaches

OUTSIDE

Disconnect and take down any TV antenna or small satellite dish.

Remove or roll up and lash canvas awnings. Close and secure shutters. If you don't have shutters, board windows and sliding-glass doors. Cover screens in plastic trash bags and make sure they are securely in place.

Secure outdoor items that might blow away or be torn loose and hurled through the air by the wind.

Move carts and trailers from under trees and turn them over or remove the wheels.

Cut down dead tree limbs and remove them, along with limbs on the ground near your home. Pick any fruit on your trees.

Drain swimming pools about halfway. Disconnect the power and add extra chlorine to the water. If the filter pump is exposed, wrap it with a waterproof covering and tie it in place.

Fill buckets with sand and take them inside for use if fire breaks out.

Park vehicles in a garage or away from trees, utility poles and guts. Set emergency brakes.

INSIDE

Make sure door and window locks hold securely. Wedge sliding glass doors with braces or broom handles to prevent their being lifted off the tracks or ripped loose by wind or vibrations. Have towels ready in case rain seeps in.

Move furniture away from exposed doors and windows.

Draw drapes and close blinds.

Wrap glass objects, artwork, photographs, fragile items of sentimental value, tools, electronic equipment and small appliances and store them in a protected area. Do the same with jewelry, titles, deeds, insurance papers, licenses, stocks and bonds and inventory lists after placing them in waterproof containers.

Sterilize the bathtub, washing machine and other containers with bleach and let them dry. Line the tub with plastic to prevent drain leakage and fill it and the other containers with water for drinking, cooking, washing and bathing. (Note: Boil this water before drinking it.)

As hurricane winds strengthen, disconnect power at the master switch. If power is still on, don't touch electrical equipment in a wet location unless you are standing on a piece of dry wood and wearing rubber footwear and gloves.

During the Hurricane

Remain indoors. Wind, downed live power lines and falling or flying trees and debris all pose serious danger.

Stay on the side of the house opposite the direction the wind is coming from. As the wind shifts, move to a room on the opposite side. If you have a room within a room, such as a bathroom, stay there during the height of the hurricane. Keep away from windows and glass doors.

Don't go out during the calm as the eye of the hurricane passes overhead. The wind may cease for several minutes or for an hour or more, and the sky may clear, but this is only the mid-point of the hurricane. The lull will end suddenly as the wind strikes from the opposite direction, rising rapidly to hurricane force, often stronger than before.

If the roof blows off or the house shows signs of collapsing, take cover in a room within a room such as a bathroom or under a stairway, strong table or door frame.

Make the effort to remain calm and encourage your family members, especially children, to stay calm. Stay inside until you are absolutely sure it's safe to go out again.

hat to do Before the Storm Strikes

FEMA Photo by Andrea Booher

Hurricane winds were strong enough to uproot this tree and send it crashing onto this couple's car.

In case of a Hurricane Watch

A hurricane watch is issued when a hurricane may threaten an area but is not imminent. At this point, you should immediately begin to gather the survival supplies and materials that you will need in the event that a hurricane reaches your area.

Some examples:

Materials to protect glass windows and doors (shutters, plywood, masking tape) and the tools to install and apply them.

Several days' supply of canned food and beverages and non-perishable foods that don't need refrigeration or cooking. Buy food and beverages in containers and packages that will allow for immediate consumption with no leftovers.

An adequate supply of needed prescription drugs, other medications and basic first aid supplies.

Filled fuel tanks and safe battery water levels on your vehicles.

A good supply of clean clothing and linens.

A transistor radio and flashlights that work, along with fresh batteries to last several days.

In addition, you should:

Be sure all doors are watertight.

Use bleach to clean the bathtub, washing machine and containers with covers to store water for drinking, cooking and washing for severa`l days. For drinking, you will need containers with covers to hold two quarts of water per person per day. (If you rely on commercially bottled water for drinking, be sure to have several days' supply on hand.)

Know how to use any fuel-operated lanterns you have safely, and have several days' supply of fuel.

Be sure your fire extinguishers are fully charged.

Know where your main turn-off switches are for electricity, water and gas.

If there are ill or disabled persons in your home, ask a doctor on where they should stay in the event a hurricane approaches your area. If relocation will be necessary, have plans in place.

Make arrangements ahead of time if you want to board pets at a veterinary facility.

Animals Need Help, Too

Here are ways to protect your pets and livestock as a hurricane approaches:

Put identification tags on the animals.

If you plan to remain at home, bring pets inside with you. Have newspapers on hand for sanitary purposes.

Shelt birds and chickens. Put larger livestock on the loose in an open field with plenty of food and water.

As a rule, public shelters will not take pets.

If you are not going to stay in your home during the hurricane and can't take your pets with you, arrange to leave your pets with your veterinarian or friends, or leave them loose inside your home with dry food and plenty of water. Remove the toilet tank lid, raise the seat and brace the bathroom door open so they can drink.

Do not leave pets outside or tied on leashes.

Hurricane First Aid Kit

Hydrogen peroxide or Betadine solution
Rubbing alcohol
12 gauze bandages (4" x 4")
1 roll 1/2" adhesive tape
1 roll 2" gauze bandage
Antibiotic cream
Box of adhesive bandage strips
Aspirin or acetaminophen
Petroleum jelly
Eye drops
Clean fabric for sling
Baking soda or Epsom salts
Milk of magnesia
Cotton swabs

FEMA Photo

Torrential rains associated with hurricanes and tropical storms can cause flooding hundreds of miles inland.

Flood Insurance:

The Best Protection Money Can Buy

Most homeowners' policies do not cover flood damage. Fortunately, however, federally backed flood insurance protection is available through the National Flood Insurance Program (NFIP).

NFIP coverage is available from any property and casualty insurance agent or broker. Homeowners can get up to $250,000 in coverage; businesses, up to $500,000.

Flood insurance is available for virtually any building that is walled, roofed and principally above ground, along with building contents. Separate policies are needed for each structure.

Building owners can insure both structure and contents; renters and condominium owners, only the contents of their units. Condo associations should insure such commonly owned areas as walls, roofs, floors and stairways.

Mobile homes can be insured if they are on a permanent foundation and anchored to resist flotation, collapse or lateral movement.

NFIP rates are set by the federal government. A 30-day waiting period applies from the date of application until coverage becomes effective with payment of the premium.

If property is located in a Special Flood Hazard Area on the Flood Insurance Rate Map, flood insurance must be purchased to be eligible for any federal or federally related financial construction or acquisition assistance.

Those who live in Special Flood Hazard Areas and receive federal disaster loans or grants are required to purchase and maintain flood insurance. Otherwise, many forms of disaster assistance may be denied in future floods.

Since 1969, the NFIP has paid over $6.9 billion in claims to policyholders. Currently, the NFIP protects more than three million policyholders with more than $330 billion in coverage. All NFIP claims and operating expenses are paid by policy premiums. No federal tax dollars are used for this purpose.

For more information about flood insurance call toll free 1-800-427-4661.

Emergency Planning Could Save Your Business

If a hurricane is threatening the area where your business is located, take the following steps:

Photograph your business establishment, inside and out, from all angles, to help substantiate any insurance claims later.

Assemble papers such as insurance policies, checkbooks and financial records, and pack them in waterproof containers.

Arrange to pay your employees, preferably in cash, as it may be some time before banking institutions reopen after a hurricane.

Clear out areas with extensive glass frontage, as much as possible. If you have shutters, use them. Otherwise, board up windows and glass doors.

Remove outdoor hanging signs.

Bring inside or secure any objects that might become airborne and cause damage in strong winds.

Secure and tape showcases, turning the glass side toward an inside wall where possible.

Store as much merchandise as high off the floor as possible, especially goods that could be in short supply after a storm.

Move merchandise that cannot be stored away from windows and glass skylights, and cover it with tarpaulins or heavy plastic.

Secure generators, along with the fuel needed for its operation.

Secure all goods in warehouses above the water level, and place sandbags in spaces where water could enter. Remove lower drawers from file cabinets, put them in plastic trash bags and store them on top of the cabinets.

Turn off gas, water heaters, stoves, pilot lights and other burners.

A Boater's Guide to Hurricane Readiness

Planning, preparation and timely action are the keys to saving lives, preventing injury and reducing property damage to pleasure boats and live-aboard vessels in a hurricane.

Each boat owner needs a plan specific to the vessel, for where it is normally kept and for where it might be moved for protection.

PRIOR TO HURRICANE SEASON

See that your vessel is in sound condition. Check out the hull, deck hardware, rigging, ground tackle, machinery and electronics; be sure batteries are charged, bilge pumps are operable and all equipment is secured. Absentee owners should arrange for a haulout or supervised inspection.

Inspect primary cleats, chocks, winches, bitts and bollards. Be sure they have substantial backplates and adequate-size stainless steel bolts.

Acquire any needed *emergency gear* such as extra mooring lines, screw anchors, fenders, fender boards, chafing gear and anchors.

Identify hurricane holes and safe harbors in the area, assemble emergency equipment and supplies, come up with a *refuge plan* — and then *practice* it to see how much time and work are involved and what aspects need to be revised.

Make sure your *insurance coverage* is current; read the policy thoroughly for information relative to the coverage, exclusions and your responsibilities as the vessel owner.

Assemble your insurance policies, boat registration, a recent photograph of the vessel, gear inventory, marina or storage lease agreement and important telephone numbers — the local harbormaster, Coast Guard, National Weather Service, insurance agent — and put them in a secure place off the boat.

Know your responsibilities and liabilities as well as those of the marina or storage facility, if you keep your boat tied up or in storage.

Inventory items to be removed from the boat and items to leave aboard; keep copies on board and ashore. Mark valuable items for identification.

WHEN A HURRICANE WATCH IS ISSUED

Monitor marine radio weather reports continuously.

Identify the safest reachable haven and move your boat there at least 48 hours before a hurricane is expected to strike your area.

Have written copies of your *hurricane plan* aboard and with associates on shore; be sure family members and crew read and understand it.

See that fuel tanks are full, fuel filters are clean, batteries are charged, bilges are clean, cockpit drains are clear, firefighting equipment works and livesaving equipment is in good condition and readily accessible.

Make anchoring or mooring provisions. Check the condition of existing mooring hardware and lines.

Ensure watertightness above and below the waterline by sealing hatches, windows and doors with duct tape if necessary, shutting seacocks and capping off or plugging unvalved through-hull fittings.

Remove all equipment on deck that you can, including roller furling sails. Lash down everything you cannot move, such as tillers, wheels and booms.

Double all lines. The second set of lines should be a size larger than the regular ones. Rig crossing spring lines fore and aft. At a marina with strong pilings, attach lines high on them to allow for surge and install preventers so they cannot slip off the top. To prevent chafing, use double neoprene hose, or wrap lines at rough points with tape, rags or other protective material. Put out fenders and fender boards to guard against rubbing against pilings, pier and other vessels. If possible, occupy two slips, rather than one. Recheck the attachment of primary cleats, winches and chocks.

See that your *batteries are fully charged* to operate automatic bilge pumps for the duration of the storm. Consider backup batteries. Disconnect all devices that use electricity except bilge pumps.

WHEN A HURRICANE WARNING IS ISSUED

Monitor marine radio reports continuously.

Prepare to have all aboard leave the vessel. Boat owners unwilling to do this must weigh the desire to stay aboard carefully. **Of eight confirmed deaths in Hurricane Marilyn, at least seven, were individuals who remained aboard boats.**

AFTER THE HURRICANE

Check the condition and security of the vessel as soon as it is safe to do so.

If it has been damaged, take immediate action to save the vessel and/or equipment and prevent further loss or damage — this is a requirement of all marine insurance. Notify your insurance agent as soon as you can.

Pickle the engine immediately and purge the boat of marine life and saltwater.

Report any theft or vandalism loss or damage to law-enforcement authorities promptly; obtain a copy of the incident report or at least its number.

If salvage removal of the vessel is necessary and you must make arrangements yourself, read the salvage contract, and find out where your vessel is being taken and if security is to be provided.

Take Special Precautions With Mobile Homes

Mobile homes are particularly vulnerable to hurricane-force winds. Do what you can to secure your home, and then take refuge with friends or relatives or at a public shelter. But before you leave, be sure to take the following suggested precautions:

- Wrap breakables, pack them in boxes and put the boxes on the floor.
- Remove and tape mirrors. Place lamps and mirrors in the bathtub or shower wrapped in blankets.
- Tape X's on the inside of windows.
- Disconnect electricity, sewer and water lines. Shut off propane tanks. Leave the tanks outside and anchor them securely.
- Store awnings, cabanas, folding furniture, trash cans and other such outdoor objects.
- Use over-the-top and frame ties to anchor the mobile home.

FEMA Photo

Hurricane force winds can cause serious roof and structural damage. Proper use of hurricane connectors reduces the possibility of structural failure.

Roofs Most Prone to Wind Damage

Roofs are the portion of the house most prone to hurricane damage. Proper roof construction is essential. All lumber used in roof construction should be structural grade material.

The roof framing members should be properly tied with hurricane connections to the exterior walls and in some cases to the interior walls of the house.

The roof should have adequate ventilation to remove humidity and to help equalize the interior and exterior pressures. These vents should be properly sized and strategically located.

All construction must comply with your local building code and you should obtain all required permits from your local building department.

Federal Emergency Management Agency
500 C Street S.W.
Room 820
Washington, D.C. 20472
Official Business - Penalty for Private Use $300

BULK RATE
POSTAGE &
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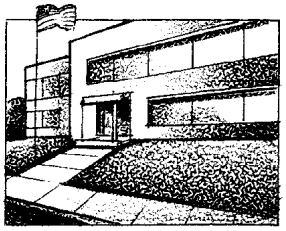
Federal Emergency
Management Agency
Permit No. G-114

HURRICANE • FLASH FLOOD • FIRE • HAZARDOUS MATERIALS SPILL • EARTHQUAKE • TORNADO • WINTER STORM

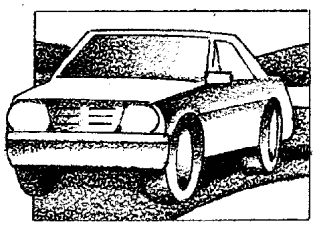
Your Family Disaster Plan

Where will your family be when disaster strikes? They could be anywhere—

at work



at school



or in the car.

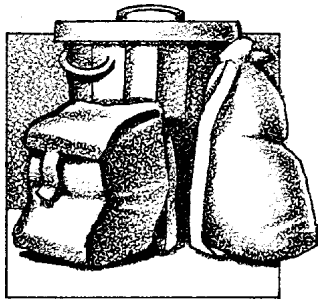
How will you find each other? Will you know if your children are safe?

Disaster can strike quickly and without warning. It can force you to evacuate your neighborhood or confine you to your home. What would you do if basic services–water, gas, electricity or telephones–were cut off? Local officials and relief workers will be on the scene after a disaster, but they cannot reach everyone right away.

Families can–and do–cope with disaster by preparing in advance and working together as a team. Follow the steps listed in this brochure to create your family's disaster plan. Knowing what to do is your best protection and your responsibility.

EMERGENCY SUPPLIES

Keep enough supplies in your home to meet your needs for at least three days. Assemble a Disaster Supplies Kit with items you may need in an evacuation. Store these supplies in sturdy, easy-to-carry containers such as backpacks, duffle bags or covered trash containers.



Include:

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

Keep important family documents in a waterproof container. Keep a smaller kit in the trunk of your car.

UTILITIES

Locate the main electric fuse box, water service main and natural gas main. Learn how and when to turn these utilities off. Teach all responsible family members. Keep necessary tools near gas and water shut-off valves.

Remember, turn off the utilities only if you suspect the lines are damaged or if you are instructed to do so. *If you turn the gas off, you will need a professional to turn it back on.*

4 Steps to Safety

1

Find Out What Could Happen to You

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

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

2

Create a Disaster Plan

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

- ❑ Discuss the types of disasters that are most likely to happen. Explain what to do in each case.
- ❑ Pick two places to meet:
  1. Right outside your home in case of a sudden emergency, like a fire.
  2. Outside your neighborhood in case you can't return home. Everyone must know the address and phone number.
- ❑ Ask an out-of-state friend to be your "family contact." After a disaster, it's often easier to call long distance. Other family members should call this person and tell them where they are. Everyone must know your contact's phone number.
- ❑ Discuss what to do in an evacuation. Plan how to take care of your pets.

Fill out, copy and distribute to all family members

Family Disaster Plan

Emergency Meeting Place _____ (outside your home)

Meeting Place _____ (outside your neighborhood) Phone _____

Address _____

_____

Family Contact _____ (name)

Phone ( ) _____ (day) Phone ( ) _____ (evening)

3

Complete This Checklist

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

4

Practice and Maintain Your Plan

- ❑ Quiz your kids every six months so they remember what to do.
- ❑ Conduct fire and emergency evacuation drills.

Year	Drill Date
_____	_____
_____	_____
_____	_____

- ❑ Replace stored water every three months and stored food every six months.
- ❑ Test and recharge your fire extinguisher(s) according to manufacturer's instructions.
- ❑ Test your smoke detectors monthly and change the batteries at least once a year.

Jan. ❑	July ❑
Feb. ❑	Aug. ❑
Mar. ❑	Sep. ❑
Apr. ❑	Oct. ❑
May ❑	Nov. ❑
June ❑	Dec. ❑

Change batteries in _____ (month) each year.

NEIGHBORS HELPING NEIGHBORS

Working with neighbors can save lives and property. Meet with your neighbors to plan how the neighborhood could work together after a disaster until help arrives. If you're a member of a neighborhood organization, such as a home association or crime watch group, introduce disaster preparedness as a new activity. Know your neighbors' special skills (e.g., medical, technical) and consider how you could help neighbors who have special needs, such as disabled and elderly persons. Make plans for child care in case parents can't get home.

HOME HAZARD HUNT

During a disaster, ordinary objects in your home can cause injury or damage. Anything that can move, fall, break or cause a fire is a home hazard. For example, a hot water heater or a bookshelf can fall. Inspect your home at least once a year and fix potential hazards.

Contact your local fire department to learn about home fire hazards.

EVACUATION

Evacuate immediately if told to do so:

- Listen to your battery-powered radio and follow the instructions of local emergency officials.
- Wear protective clothing and sturdy shoes.
- Take your Disaster Supplies Kit.
- Lock your home.
- Use travel routes specified by local authorities — don't use shortcuts because certain areas may be impassable or dangerous.

If you're sure you have time:

- Shut off water, gas and electricity before leaving, if instructed to do so.
- Post a note telling others when you left and where you are going.
- Make arrangements for your pets.

IF DISASTER STRIKES

If disaster strikes

Remain calm and patient. Put your plan into action.

Check for injuries

Give first aid and get help for seriously injured people.

Listen to your battery powered radio for news and instructions

Evacuate, if advised to do so. Wear protective clothing and sturdy shoes.

Check for damage in your home. . .

- Use flashlights — do not light matches or turn on electrical switches, if you suspect damage.
- Check for fires, fire hazards and other household hazards.
- Sniff for gas leaks, starting at the water heater. If you smell gas or suspect a leak, turn off the main gas valve, open windows, and get everyone outside quickly.
- Shut off any other damaged utilities.
- Clean up spilled medicines, bleaches, gasoline and other flammable liquids immediately.

Remember to. . .

- Confine or secure your pets.
- Call your family contact— do not use the telephone again unless it is a life-threatening emergency.
- Check on your neighbors, especially elderly or disabled persons.
- Make sure you have an adequate water supply in case service is cut off.
- Stay away from downed power lines.

The Federal Emergency Management Agency's Community and Family Preparedness Program and the American Red Cross Community Disaster Education Program are nationwide efforts to help people prepare for disasters of all types. For more information, please contact your local emergency management office and American Red Cross chapter. This brochure and other preparedness materials are available by calling FEMA at 1-800-480-2520, or writing: FEMA, P.O. Box 2012, Jessup, MD 20794-2012.
Publications are also available on the World Wide Web at:
FEMA's Web site: http://www.fema.gov
American Red Cross Web site: http://www.redcross.org

Ask for: *Are You Ready?*, *Your Family Disaster Supplies Kit* and *Food & Water in an Emergency.*

Local sponsorship provided by:

September 1991
FEMA L-191
ARC 4466

EARTHQUAKE • TORNADO • WINTER STORM • FIRE

Federal Emergency Management Agency

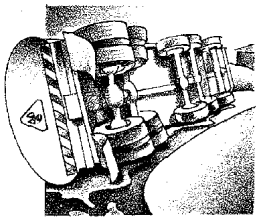
Your Family Disaster Pla

HURRICANE • FLASH FLOOD • HAZARDOUS MATERIALS SPIL

HURRICANE • FLASH FLOOD • HAZARDOUS MATERIALS SPILL • EARTHQUAKE • TORNADO • WINTER STORM • FIRE

Your Family Disaster Supplies Kit

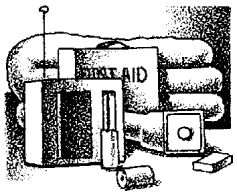
Disasters happen anytime and anywhere. And when disaster strikes, you may not have much time to respond.



A highway spill of hazardous material could mean instant evacuation.

A winter storm could confine your family at home. An earthquake, flood, tornado or any other disaster could cut off basic services—gas, water, electricity and telephones—for days.

After a disaster, local officials and relief workers will be on the scene, but they cannot reach everyone immediately. You could get help in hours, or it may take days. Would your family be prepared to cope with the emergency until help arrives?



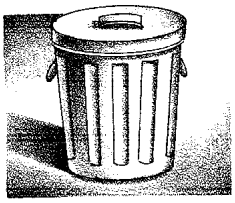
Your family will cope best by preparing for disaster *before* it strikes. One way to prepare is by assembling a Disaster Supplies Kit. Once disaster hits, you won't have time to shop or search for supplies. But if you've gathered supplies in advance, your family can endure an evacuation or home confinement.

To prepare your kit

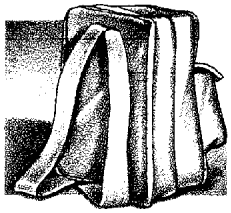
- Review the checklist in this brochure.
- Gather the supplies that are listed. You may need them if your family is confined at home.
- Place the supplies you'd most likely need for an evacuation in an easy-to-carry container. These supplies are listed with an asterisk (*).

SUPPLIES

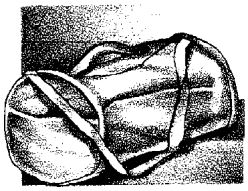
There are six basics you should stock in your home: water, food, first aid supplies, clothing and bedding, tools and emergency supplies and special items. Keep the items that you would most likely need during an evacuation in an easy-to-carry container—suggested items are marked with an asterisk (*). Possible containers include



a large, covered trash container,



camping backpack,



or a duffle bag.

Water

Store water in plastic containers such as soft drink bottles. Avoid using containers that will decompose or break, such as milk cartons or glass bottles. A normally active person needs to drink at least two quarts of water each day. Hot environments and intense physical activity can double that amount. Children, nursing mothers and ill people will need more.

- ❑ Store one gallon of water per person per day (two quarts for drinking, two quarts for food preparation/sanitation)*
- ❑ Keep at least a three-day supply of water for each person in your household.

Food

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

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

- ❑ Ready-to-eat canned meats, fruits and vegetables
- ❑ Canned juices, milk, soup (if powdered, store extra water)
- ❑ Staples — sugar, salt, pepper
- ❑ High energy foods — peanut butter, jelly, crackers, granloa bars, trail mix
- ❑ Vitamins
- ❑ Foods for infants, elderly persons or persons on special diets
- ❑ Comfort/stress foods — cookies, hard candy, sweetened cereals lollipops, instant coffee, tea bags

First Aid Kit

Assemble a first aid kit for your home and one for each car. A first aid kit* should include:

- ❑ Sterile adhesive bandages in assorted sizes
- ❑ 2-inch sterile gauze pads (4-6)
- ❑ 4-inch sterile gauze pads (4-6)
- ❑ Hypoallergenic adhesive tape
- ❑ Triangular bandages (3)
- ❑ 2-inch sterile roller bandages (3 rolls)
- ❑ 3-inch sterile roller bandages (3 rolls)
- ❑ Scissors
- ❑ Tweezers
- ❑ Needle
- ❑ Moistened towelettes
- ❑ Antiseptic
- ❑ Thermometer
- ❑ Tongue blades (2)
- ❑ Tube of petroleum jelly or other lubricant
- ❑ Assorted sizes of safety pins
- ❑ Cleansing agent/soap
- ❑ Latex gloves (2 pair)
- ❑ Sunscreen

Non-prescription drugs

- ❑ Aspirin or nonaspirin pain reliever
- ❑ Anti-diarrhea medication
- ❑ Antacid (for stomach upset)
- ❑ Syrup of Ipecac (use to induce vomiting if advised by the Poison Control Center)
- ❑ Laxative
- ❑ Activated charcoal (use if advised by the Poison Control Center)

Contact your local American Red Cross chapter to obtain a basic first aid manual.

Tools and Supplies

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

Sanitation

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

Clothing and Bedding

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

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

Special Items

Remember family members with special needs, such as infants and elderly or disabled persons.

For Baby*

- ❑ Formula
- ❑ Diapers
- ❑ Bottles
- ❑ Powdered milk
- ❑ Medications

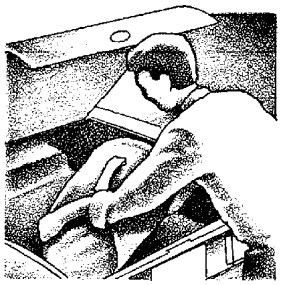
For Adults*

- ❑ Heart and high blood pressure medication
- ❑ Insulin
- ❑ Prescription drugs
- ❑ Denture needs
- ❑ Contact lenses and supplies
- ❑ Extra eye glasses
- ❑ **Entertainment** - games and books
- ❑ **Important Family Documents**
  Keep these records in a waterproof, portable container.

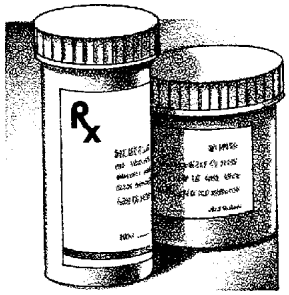
- Will, insurance policies, contracts, deeds, stocks and bonds
- Passports, social security cards, immunization records
- Bank account numbers
- Credit card account numbers and companies
- Inventory of valuable household goods, important telephone numbers
- Family records (birth, marriage, death certificates)

SUGGESTIONS AND REMINDERS

- Store your kit in a convenient place known to all family members. Keep a smaller version of the Disaster Supplies Kit in the trunk of your car.



- Keep items in air tight plastic bags.
- Change your stored water supply every six months so it stays fresh.
- Rotate your stored food every six months.
- Re-think your kit and family needs at least once a year. Replace batteries, update clothes, etc.
- Ask your physician or pharmacist about storing prescription medications.



CREATE A FAMILY DISASTER PLAN

To get started...

Contact your local emergency management or civil defense office and your local American Red Cross chapter.

- Find out which disasters are most likely to happen in your community.
- Ask how you would be warned
- Find out how to prepare for each.

Meet with your family.

- Discuss the types of disasters that could occur.
- Explain how to prepare and respond.
- Discuss what to do if advised to evacuate.
- Practice what you have discussed.

Plan how your family will stay in contact if separated by disaster.

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

Complete these steps.

- Post emergency telephone numbers by every phone.
- Show responsible family members how and when to shut off water, gas and electricity at main switches.
- Install a smoke detector on each level of your home, especially near bedrooms; test monthly and change the batteries two times each year.
- Contact your local fire department to learn about home fire hazards.
- Learn first aid and CPR. Contact your local American Red Cross chapter for information and training

Meet with your neighbors.

Plan how the neighborhood could work together after a disaster. Know your neighbor's skills (medical, technical). Consider how you could help neighbors who have special needs, such as elderly or disabled persons. Make plans for child care in case parents can't get home.

Remember to practice and maintain your plan.

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FEMA's Web site: http://www.fema.gov

American Red Cross Web site: http://www.redcross.org

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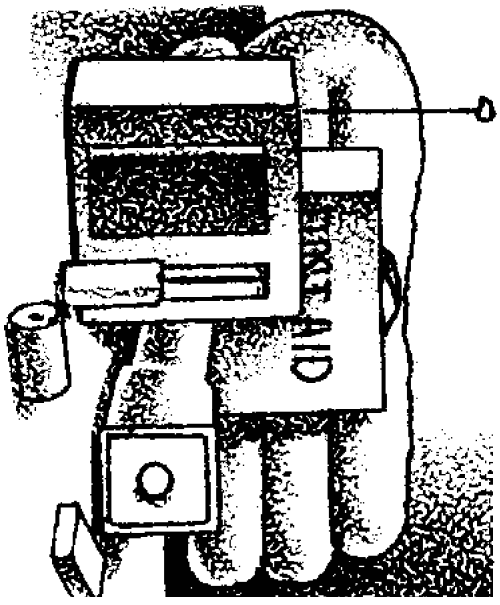
Federal Emergency Management Agency



Your Family Disaster Supplies Ki

HURRICANE • FLASH FLOOD • HAZARDOUS MATERIALS SPIL