Earthquake Safety Checklist

FEMA B-526 / March 2010

FEMA

nehrp

Important Numbers and Addresses

911

Call 911 for emergencies

Your family may not be together when an earthquake strikes, so use the spaces below to record information that will help you communicate with one another. Remember, during the first 24 hours following a major earthquake, use your telephone only in case of an emergency (see page 9).

Name and telephone/cell phone _____

Work address _____

Name and telephone/cell phone _____

Work address _____

Name and school telephone/cell phone _____

School address _____

School policy: ❏ Hold student ❏ Release student

Name and school telephone/cell phone _____

School address _____

School policy: ❏ Hold student ❏ Release student

Name and school telephone/cell phone _____

School address _____

School policy: ❏ Hold student ❏ Release student

Name and school telephone/cell phone _____

School address _____

School policy: ❏ Hold student ❏ Release student

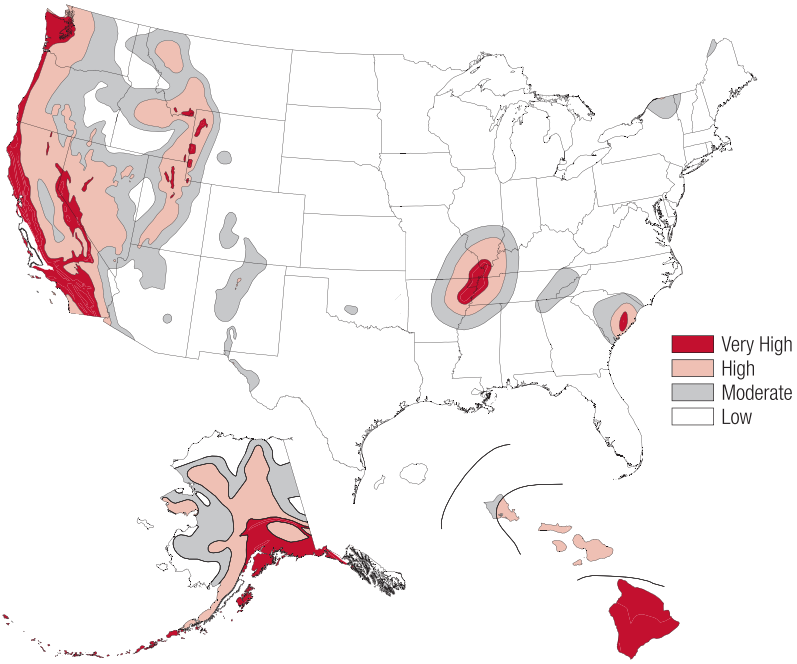
Name and telephone/cell phone number of an out-of-town relative or friend who can act as a point-of-contact for separated family members: _____

_____

Location of Disaster Supplies Kit:_____

_____

Earthquake Hazards in the United States



Based on/converted from Proposed 2012 International Residential Code Figures R301.2(2) Seismic Design Categories – Site Class D maps

Are You Prepared for the Next Earthquake?

This booklet is designed to help you and your family plan for and survive a major earthquake. By taking action to be prepared, you can lessen the impact of an earthquake on your family. Set aside some emergency supplies, and teach your family what to do at home during and after a disaster. You could be without help for up to 72 hours, so learn to cope for at least that long.

Movement of the ground is seldom the actual cause of death or injury. Most casualties result from partial building collapse and falling objects and debris, like toppling chimneys, falling bricks, ceiling plaster, and light fixtures. Many of these conditions are easily preventable.

Because earthquakes occur without warning, it's important to take steps now to prepare, especially if you live in Very High and High earthquake areas. Knowing what you can do and how to respond with constructive and protective actions, can make yourself, your family, and your home safer. Consult your local Building Department if you are unsure of the earthquake hazard in your locale.

Have on Hand for Any Emergency – Ideas for Home, Workplace, and Car

Because you don't know where you will be when an earthquake occurs, prepare a Disaster Supplies Kit for your home, workplace, and car.

❑ **Water**. Store at least 1 gallon of water per person per day and be prepared for a 72-hour period. A normally active person needs at least ½ gallon of water daily just for drinking. In determining adequate quantities, take the following into account:

- Individual needs vary, depending on age, physical condition, activity, diet, and climate.
- Children, nursing mothers, and ill people need more water.
- Very hot temperatures can double the amount of water needed.
- A medical emergency might require more water.

It is recommended that you buy commercially bottled water. Keep bottled water in its original container and do not open it until you need to use it. Also, pay attention to the expiration or "use by" date. Store water in plastic containers, and avoid using containers that may break, such as glass bottles. Do not store any plastic water container directly on concrete to prevent contaminating chemicals leaching from the concrete into the water and also degrading the plastic bottle.

If you choose to prepare your own containers of water, you should buy air-tight, food-grade water storage containers from surplus or camping supply stores. Before filling the containers, clean them with dish washing soap and water, and rinse them completely so that there is no residual soap. Keep all water in a cool dark place. Water stored in your own containers should be replaced about every 6 months.

If you have questions about the quality of the water, purify it before drinking. You can heat water to a rolling boil for 1 minute or use commercial purification tablets to purify the water. You can also use household liquid chlorine bleach if it is pure, unscented, 5 to 6 percent sodium hypochlorite. To purify water, use the following table as a guide:

Ratios for Purifying Water with Bleach

Water Quantity	Bleach Added
1 Quart	4 Drops
1 Gallon	16 Drops
5 Gallons	1 Teaspoon

Ratios for purifying water with bleach: Water quantity and bleach added.

After adding bleach, shake or stir the water container and let it stand 30 minutes before drinking.

http://www.fema.gov/areyouready/assemble_disaster_supplies_kit.shtm.

❑ **Food**. It's always a practical idea to keep a supply of non-perishable food on hand that can be rotated into your diet and replenished on a regular basis. Have a sufficient supply of canned or dehydrated food, powdered milk, and canned juices for at least 72 hours. Dried cereals and fruits and non-salted nuts are good sources of nutrition. Keep the following points in mind:

- Avoid foods that will make you thirsty. Choose salt-free crackers, whole grain cereals, and canned goods with high liquid content.
- Stock foods that do not require refrigeration, cooking, water, or special preparation. You may already have many of these on hand.
- Remember to include foods for infants and special dietary needs.

You should also have kitchen accessories and cooking utensils, especially a manual can opener.

❑ **Flashlights and spare batteries**. Keep a flashlight beside your bed, at your place of work, and in your car. Do not use matches or candles after an earthquake until you are certain that no gas leaks exist. Use a wind-up powered generator to have unlimited emergency power.

❑ **Portable, battery-powered radio or television and spare batteries**. Most telephones will be out of order or used for emergency purposes, so portable radios or portable digital televisions will be your best source of information. You may also want to

have a battery-powered CB, other two-way radio, or wind-up powered radio.

❑ **First aid kit and manual**. Keep a first aid kit at home and in your car. Also, have a manual such as *Standard First Aid & Personal Safety* by the American Red Cross. Have members of your household take basic first aid and CPR courses.

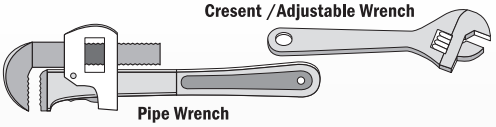
❑ **Fire extinguishers**. Keep a fire extinguisher at home and in your car. Some extinguishers are good only for certain types of fires — electrical, grease, or gas. Class ABC extinguishers are designed for safe use on any type of fire. Your fire department can show you how to properly use an extinguisher.

❑ **Special needs**. Keep a supply of special needs items, such as medications, extra eyeglasses, contact lens solutions, hearing aid batteries, items for infants (formula, diapers, bottles, and pacifiers), sanitation and hygiene items (moist towelettes and toilet paper), and any items unique to your family's needs.

❑ **Prepare customized emergency plans for people with disabilities in advance.** Whether small or widespread, emergencies can pose special challenges for individuals with disabilities. Make more than one exit from your home wheelchair-accessible in case the primary exit is blocked in a disaster.

❑ **Important papers and cash**. Be sure to have a supply of cash for use if ATMs, banks, and credit card systems are not operating Also, keep copies of credit and identification cards and important documents, such as insurance policies and financial records.

❑ **Tools**. In addition to a pipe wrench and crescent/adjustable wrench (for turning off gas and water valves), you should have a lighter, a supply of matches in a waterproof container, and a whistle for signaling rescue workers.



❑ **Clothes**. If you live in a cold climate, you must think about warmth. You might not have heat after an earthquake. Think about your clothing and bedding supplies. Be sure to have one complete change of clothing and shoes per person, including the following:

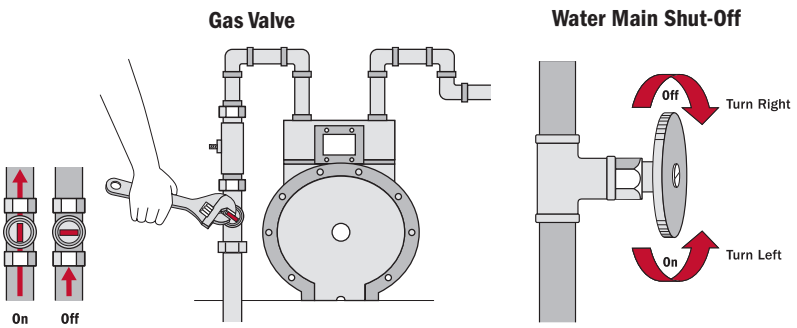
- jacket or coat
- long pants
- long sleeve shirt
- sturdy shoes
- hat, mittens or gloves, and scarf
- sleeping bag or warm blanket (per person)

❑ **Pet needs**. Identify a shelter area for your pet, gather the necessary supplies, ensure that your pet has proper ID and up-to-date veterinarian records, and make sure you have a pet carrier and a leash.

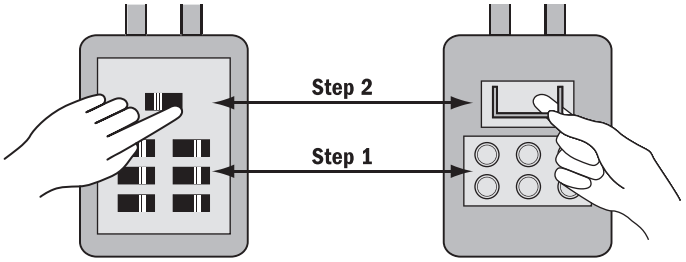
Home Preparedness

In the event of an earthquake, you may be instructed to shut off the utility services at your home. Teach responsible members of your family how to turn off the gas, electricity, and water at valves and main switches. Consult your local utilities if you need more information.

You can shut off all water to your property by finding the water meter box (usually at the street or sidewalk). Inside the water meter box, you will see a valve that is similar to the valve on your gas meter. Turn it the same as you would your gas valve. Based on your geographic location, the water main shut-off valve may be located inside your home.



Electrical Shut-Offs



Circuit Box with Shut-Off

Step 1: Shut off individual breaker.
Step 2: Shut off main breaker.

Pull Out Electrical Cartridge Fuses

Step 1: Pull out individual fuses.
Step 2: Pull out main fuses.

Caution: Do not shut off gas unless an emergency exists. If gas is ever turned off, a professional must restore service.

Earthquake Hazard Hunt

You can identify potential dangers in your home by conducting an earthquake hazard hunt. Foresight and common sense are all that are needed as you go from room to room and imagine what would happen in an earthquake.

Some possible hazards are:

- Tall, heavy furniture that could topple, such as bookcases, china cabinets, or modular wall units.
- Water heaters that could be pulled away from pipes and rupture.
- Appliances that could move enough to rupture gas or electrical lines.
- Hanging plants in heavy pots that could swing free of hooks.
- Heavy picture frames or mirrors over a bed.
- Latches on kitchen or other cabinets that will not hold the door closed during shaking.
- Breakables or heavy objects that are kept on high or open shelves.
- A masonry chimney that could crumble and fall through an unsupported roof.
- Flammable liquids, like painting or cleaning products, that would be safer in a garage or outside shed.

Take steps to correct these hazards — secure or relocate heavy items as appropriate.

Family Earthquake Drill

It's important to know where you should go for protection when your home starts to shake. By planning and practicing what to do before an earthquake occurs, you can condition yourself and your family to react correctly and spontaneously when the first jolt or shaking is felt. An earthquake drill can teach your family what to do in an earthquake.

- Each family member should know safe spots in each room.
- Safe spots: The best places to be are under heavy pieces of furniture, such as a desk or sturdy table; under supported archways; and against inside walls.
- Danger spots: Be aware of the dangers associated with breaking window glass, falling objects, falling mirrors, falling chimneys, and toppling of tall, unsecured pieces of furniture.
- Reinforce this knowledge by physically placing yourself in the safe locations. This is especially important for children.
- Be aware of a possible tsunami if you live in a coastal area. Some communities have local tsunami hazard maps.
- Be prepared to evacuate in a tsunami emergency. Some communities have high ground or safe areas identified as Tsunami Evacuation Sites.
- In the days or weeks after this exercise, hold surprise drills.
- Be prepared to deal with what you may experience after an earthquake — both physically and emotionally.

How to Ride Out the Earthquake

Limit your movements during an earthquake to a few steps to a nearby safe place. Stay indoors until the shaking has stopped and you are sure it is safe to leave.

If you are indoors:

- Drop, Cover, and Hold — Take cover under a sturdy desk, table, or bench, or against an inside wall, and hold on. If there is no desk or table near you, cover your face and head with your arms and crouch in an inside corner of the building.

- Stay away from glass, windows, outside doors and walls, and anything that could fall, such as lighting fixtures and furniture.
- If you are in bed when the earthquake strikes, stay there. Hold on and protect your head with a pillow, unless you are under a heavy light fixture that could fall. In that case, move to the nearest safe place.
- Stay inside until the shaking stops and it is safe to go outside. Most injuries during earthquakes occur when people are hit by falling objects while entering or leaving buildings.
- Be aware that electricity may go out or that sprinkler systems or fire alarms may turn on.
- Do not use elevators.

If you are outdoors:

- Stay there.
- Move away from buildings, trees, streetlights, and utility wires.

If you are in a car:

- Stop as quickly as safety permits, pull to the side of the road, and stay in the car.
- Use a GPS tracking device or satellite messenger to send an emergency assistance request if there is a severe medical emergency. A satellite messenger device is an advanced GPS, which is able to send your exact GPS coordinates and selected messages over commercial satellites to tell others of your location and status.
- Avoid stopping near or under buildings, trees, overpasses, and utility wires.
- Do not attempt to drive across bridges or overpasses that have been damaged.
- Proceed cautiously after the earthquake has stopped, watching for road and bridge damage.

If you are stranded in a public transportation vehicle:

- Listen to or become familiar with public transportation emergency plans.

If you are trapped under debris:

- Do not light a match.
- Cover your mouth with a handkerchief or clothing. Do not move about or kick up dust.
- Tap on a pipe or wall so that rescuers can find you. Use a whistle if one is available. Shout only as a last resort — shouting can cause you to inhale dangerous amounts of dust.

When the Ground Stops Shaking

Check for Injuries. If anyone has stopped breathing, give mouth-to-mouth resuscitation. Stop any bleeding injury by applying direct pressure to the wound. Do not move seriously injured people unless they are in immediate danger of further injury. Cover injured persons with blankets to keep them warm.

Keep a battery-powered radio with you so you can listen for emergency updates and news reports.

Be aware of possible tsunamis if you live in a coastal area. Tsunamis are also known as seismic sea waves. When local authorities issue a tsunami warning, assume that a series of dangerous waves is on the way. Move inland to higher ground as quickly as possible.

Do not use the telephone as telephone lines may be down and service limited. **Use mobile phones or text messaging** to report an emergency. Be aware of wireless network traffic during emergencies, which can cause congestion and blocked calls or text messages.

Wear shoes in areas near fallen debris or broken glass.

Check for Hazards

If possible, put out small fires. If not, leave your home immediately, notify the fire department if possible, and alert your neighbors.

Use a battery-powered flashlight to inspect your home. Turn the flashlight on outside, before entering, because the battery may produce a spark that could ignite leaking gas, if present.

Check gas, electrical, and water lines, and check appliances for damage. If you smell gas or see a broken line, shut off the main valve from the outside. Do not switch on the electricity again until the power company has first checked your home. Remember, if gas is turned off, a professional must restore service. Do not search for gas leaks with a lighted match.

Caution: Do not use electrical switches or appliances if gas leaks are suspected, because sparks can ignite gas from broken lines.

Switch off electrical power if there is damage to your home's electrical wiring. If the situation is unsafe, leave your home and seek help.

Do not touch downed lines or broken appliances.

Check the building for cracks and damage, particularly around chimneys and masonry walls. Leave immediately if it looks like the building might collapse. Use fireplaces only if the chimney has no damage and no cracks.

Clean up spilled medicines, bleaches, and gasoline and other flammable liquids.

Check to see that water and sewage lines are intact before using the toilet. Plug bathtub and sink drains to prevent sewage backup.

Check water and food supplies. If the water is cut off, use emergency water supplies — in water heaters and melted ice cubes. Throw out all food that may be spoiled or contaminated.

Check closets and cupboards. Open doors cautiously. Beware of objects tumbling off shelves.

Use charcoal or gas grills for emergency cooking, only out of doors.

Do not use your car, unless there is an emergency. Do not go sightseeing through areas of damage. You will only hamper the relief effort. Keep streets clear for the passage of emergency vehicles.

Be prepared for aftershocks. These secondary earthquakes are usually less violent than the main quake, but they can be strong enough to cause additional damage and weaken buildings. Stay away from damage areas unless your assistance has been specifically requested by police, fire, or relief organizations.

Plan to Reunite

Post a message in clear view that states where you can be found. Take your Disaster Supplies Kit. List reunion points in case of separation. Such points may be the homes of neighbors, friends, or relatives; schools; or community centers. Use the blanks below to list reunion points, or by adding an emergency phone registration in the Next of Kin Registry (NOKR) by calling 1-800-915-5413; or by making an entry via an Emergency Information Link (http://pleaseno.ipoer.com/nok/restricted/reg.php/reg.php).

1._____

_____

_____

2. _____

_____

_____

Information about earthquake hazards and measures for reducing risks is available from the following:

FEMA/U.S. Department of Homeland Security
FEMA helpline: 1-800-621-3362
FEMA website: http://www.fema.gov

The National Earthquake Hazards Reduction Program
http://www.nehrp.gov/

FEMA Publications

You can order printed copies of the following publications by calling the FEMA Distribution Facility at 1-800-480-2520. As noted, some are available for download from the FEMA website.

Before Disaster Strikes, FEMA A-291, June 2009. Available in both English and Spanish. No downloads available. Information can be found at: http://www.fema.gov/areyouready/practicing_maintaining_plan.shtm.

After Disaster Strikes: How to Recover Financially from a National Disaster, FEMA 292, May 1997. Available in English. No downloads available, but information can be found at: http://www.fema.gov/library/viewRecord.do?id=1647.

Are You Ready? An In-depth Guide to Citizen Preparedness, IS-22, August 2004. Full publication and individual sections available online in both English and Spanish at: http://www.fema.gov/areyouready.

Earthquake Home Hazard Hunt, FEMA 528, September 2005. Available in English at: http://www.fema.gov/library/viewRecord.do?id=1666.

Food and Water in an Emergency, FEMA 477, August 2004. Available online in both English and Spanish at: http://www.fema.gov/plan/prepare/pubs.shtm.

Helping Children Cope with Disaster, FEMA 478, August 2004. Available online in both English and Spanish at: http://www.fema.gov/plan/prepare/pubs.shtm.

Preparing for Disaster for People with Disabilities and Other Special Needs, FEMA 476, August 2004. Available online in both English and Spanish at: http://www.fema.gov/plan/prepare/pubs.shtm.

Preparing for Disaster, FEMA 475, August 2004. Available online in both English and Spanish at: http://www.fema.gov/plan/prepare/pubs.shtm.

U.S. Geological Survey

For earthquake information, consult the USGS Earthquake Hazards Program at: http://earthquake.usgs.gov/

American Red Cross

Information about the American Red Cross can be found at: http://www.redcross.org.

Emergency Contact Information — Wallet Card

1. Call a friend or relative who lives outside the state and ask them to be your family's "out-of-state contact".

2. Explain to them that after a disaster they will be your surest means of communicating with other family members, both in and out of state. Make sure that they understand that it will be their responsibility to be available to take calls immediately following a disaster in your area.

3. Call your emergency out-of-area contact and:
   - Tell them how you are, where you are, and/or plan to be.
   - Ask if other family members have checked in and left messages.
   - Let them know when you plan to call back and check in again.

4. Notify all your friends and family members that this one person will be the person to contact if they need to get a message to you. Tell them not to call direct.

Cut Line

EMERGENCY CONTACT INFORMATION

Card Holder: _____ Phone _____

Address: _____ State: _____ Zip: _____

email: _____

WORK

Business Name: _____

Address: _____ City: _____ State: _____

Zip: _____ Office Phone: _____

EMERGENCY OUT-OF-STTE CONTACT

Main Contact: _____ Phone: _____

Alternate Contact: _____ Phone: _____

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CHILDREN

Name: _____ DOB: _____ Sex: _____

Identifying Characteristics: _____

School/Daycare: _____ School Phone: _____

Address: _____ State: _____ Zip: _____

Name: _____ DOB: _____ Sex: _____

Identifying Characteristics: _____

School/Daycare: _____ School Phone: _____

Address: _____ State: _____ Zip: _____

Name: _____ DOB: _____ Sex: _____

Identifying Characteristics: _____

School/Daycare: _____ School Phone: _____

Address: _____ State: _____ Zip: _____

Fold Fold

PERSONAL MEDICAL INFORMATION

Medication: _____ Prescription #: _____

Allergies: _____

Doctor's Name: _____ Phone: _____

Pharmacy Phone: _____ Blood Type: _____

Notes: _____

_____

_____

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Cut Line

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