



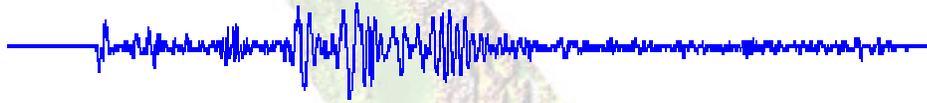
Town of Atherton

Earthquake Safety Handbook

What is the Threat?

How Should I Prepare for a Quake?

What is a Family Emergency Plan?



What Should I do During a Quake?

What Should I do After a Quake?

Where Can I Learn More?

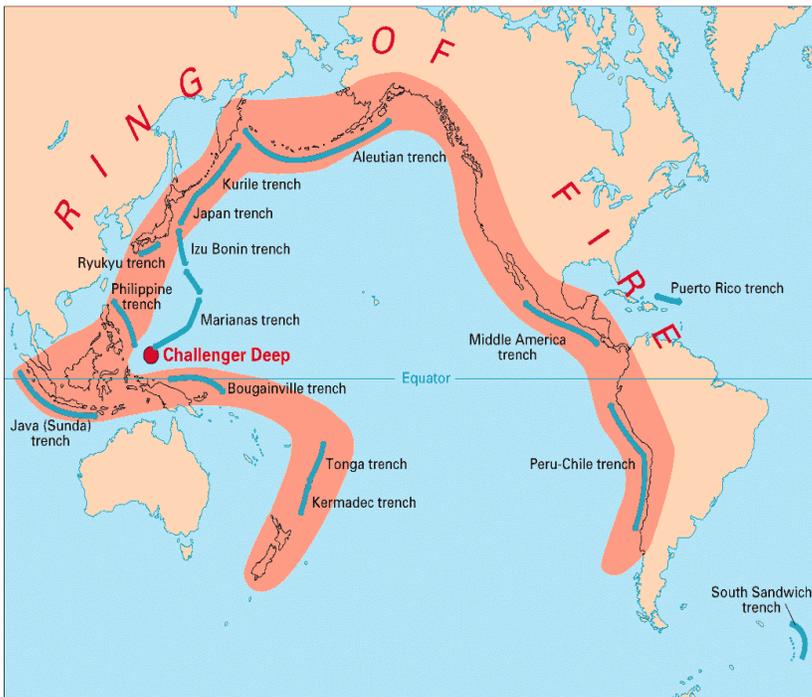
What is an earthquake?

How likely are we to have an earthquake?

How often do we have earthquakes?

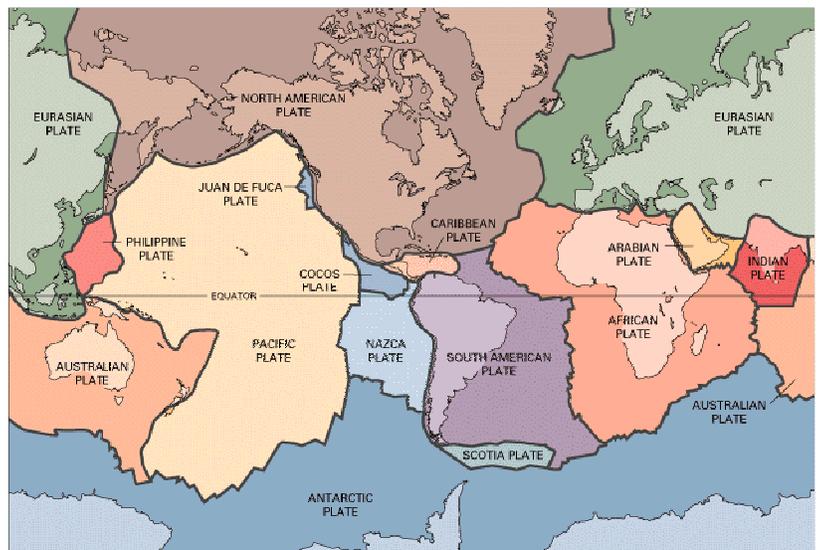
How big can an earthquake be?

California is part of what is referred to as "The Pacific Ring of Fire" - a vast area of volcanic and earthquake activity that encircles the basin of the Pacific Ocean and is about 25,000 miles long!



Countries such as Japan, the Philippines, Indonesia and New Zealand all share the same common feature. Like California, earthquakes are a common concern in all of those countries; however, earthquakes can, and do, occur all around the world. Have you ever wondered how large mountain ranges were formed - that's right...earthquakes.

The earth's crust is made up of several large pieces or "tectonic plates". Through the forces of nature those plates move and shift against each other. As that movement occurs, plates very slowly grind against each other gradually building up pressure. When pressure reaches a level too great for the rock and ground to withstand, the plates slip apart releasing the stored energy causing an earthquake.

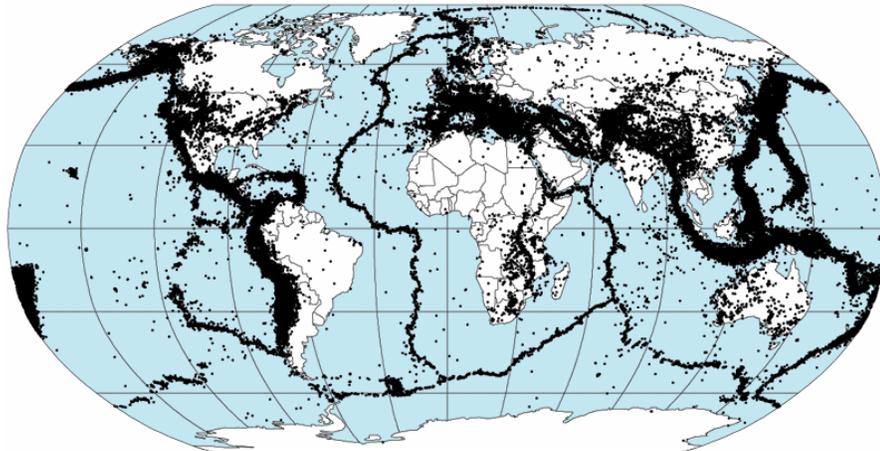


Earthquakes occur everyday around the world - most are too small for us to feel and can normally be detected by specialized monitoring equipment buried in the ground. Occasionally, large earthquakes occur when plate pressure has built up over a long period of time without those small earthquakes to release some of the stored energy. When that happens, humans can feel, and sometimes see, the effects.

Preliminary Determination of Epicenters
358,214 Events, 1963 - 1998

Notice how many earthquakes occurred around the world over a period of 35 years!

Most of those quakes went unnoticed by everyone. Many were large enough to feel and even cause minor damage. Several caused major damage and injury.



Historical overview of California's quakes

- Since 1769 California has experienced about 230 earthquakes measuring near 6.0 or greater on the Richter Scale
 - ◆ 23 of those quakes measured 7.0 or greater
 - ◆ 2 quakes measured 8.0 or greater - 1857 and 1906
 - ◆ In the last 20 years:

1987	5.8	Whittier Narrows	1993	6.1	Big Pine
1987	6.2	Elmore Ranch fault	1994	6.7	Northridge
1987	6.6	Superstition Hills	1994	6.9	Mendocino Fracture Zone
1989	7.1	Loma Prieta	1994	6.0	Carter's Station, NV
1991	6.3	W. of Crescent City	1995	6.6	W. of Eureka
1991	6.2	Punta Gorda	1995	5.5	Ridgecrest
1991	7.1	W. of Crescent City	1996	5.7	W. of Eureka
1992	6.1	Joshua Tree	1997	5.7	Punta Gorda
1992	7.2	Cape Mendocino	1999	5.7	Scotty's Junction, NV
1992	6.5	Cape Mendocino	1999	7.1	Hector Mine
1992	6.6	Cape Mendocino	2000	5.9	Mendocino Fracture Zone
1992	7.3	Landers	2003	6.5	San Simeon
1992	6.2	Big Bear	2004	6.0	Parkfield

Before an Earthquake Identify Potential Hazards in Your Home and Begin to Fix

Check the boxes to
Track your progress

During an earthquake items around your home may become dangerous projectiles. Things such as tall furniture, home electronics, appliances and home décor should be evaluated and either secured or moved to prevent injuries to you and your family or damage to your valuables

First!! Move heavy furniture, such as bookcases, away from beds, couches, and other places where people sit or sleep!



- Hold collectibles, pottery, and lamps in place by using removable museum wax or quake gel
- Store heavy items and breakables on lower shelves
- Secure both top corners of tall furniture into a wall stud, not just to the drywall
- Secure all cabinet doors, especially those overhead, to help prevent contents from falling out during quakes. Use latches designed for child proofing or earthquake and boat safety
- Secure TVs, stereos, computers, and heavy kitchen appliances such as microwave ovens with flexible nylon straps and buckles for easy removal and relocation

- Purchase a gas shutoff tool or adjustable wrench and tie it to your gas meter so it won't be lost
 - Make sure it fits your gas meter's valve
 - Don't turn off your gas unless you hear gas leaking or can smell gas in the air

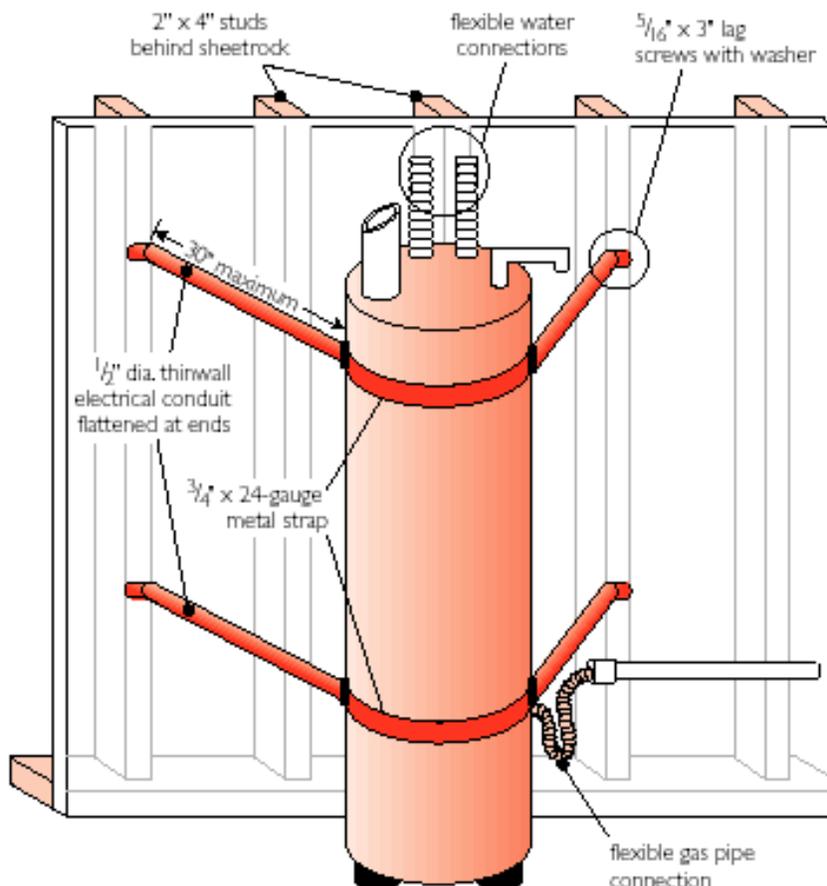


Most home improvement stores carry a wide variety of earthquake safety devices to use in and around your home.

In order to secure your utilities you may need to consult with a professional such as a general contractor or licensed handyman. For questions about your gas and electrical service, consult PG&E (800) 743-5000



- If not already done, have a plumber replace rigid gas connections to water heaters, stoves, dryers, and other gas appliances with flexible (corrugated) gas connectors
- If not already done, have a plumber install flexible (corrugated) water connectors to your water heater
- Water heaters are required to be anchored to wall studs to prevent them from tipping over during an earthquake. “Do-it-Yourself” kits can be purchased at home improvement centers or hire a professional to help you
- Move flammable or hazardous materials and liquids to low areas that are secure and move them away from the water heater and other appliances!



If you're not comfortable doing this kind of work, or don't have the necessary skills or tools to secure your utilities properly - hire a professional!

Create a Disaster Preparedness Plan:
Share your plan with other family members, neighbors, babysitters and houseguests. Be sure that everyone in the family knows the plan - exercise the plan periodically.



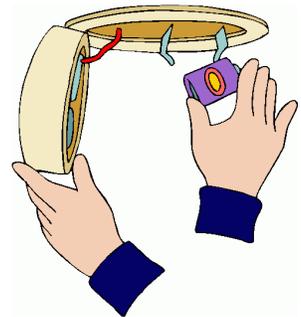
- Identify safe spots in each room where a person can take shelter during an earthquake such as sturdy tables, desks and counters

Practice Drop and Cover with Your Family!

- Keep shoes, a whistle, and a working flashlight in a plastic bag for each person in your home. Tie the bag to the bedpost of each person's bed for easy access at night

- Know the location of utility shutoffs and keep needed tools nearby. Know how to turn off the gas, water, and electricity in your home. Only turn off the gas if you smell or hear leaking gas

- If your home is not equipped with smoke detectors, install them! Change the batteries once a year or sooner if you hear a "chirping" sound coming from a detector



- Install fire extinguishers in your home. The kitchen, garage, and workshop are the most likely places for a fire to start. Consult with the Menlo Park Fire Protection District for recommendations – 650-688-8400



- Take a first-aid and CPR class. Contact the American Red Cross for further information (415) 427-8000

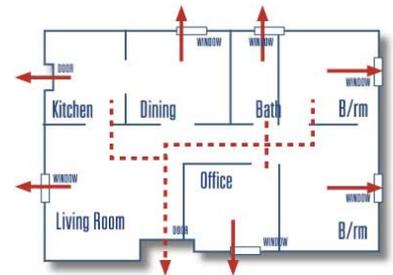
- Enroll in a free CERT course through the Menlo Park Fire Protection District. CERT is a course designed to teach you basic emergency preparedness and response skills that you can use to help you, your family, and your neighbors

- Have a home evacuation plan and locate a safe place outside for your family to meet after an earthquake or fire

- Establish an out-of-area contact person who can be called by everyone in the household to relay information

- Provide all family members with a list of important phone numbers – place a copy in each person's Disaster Kit. Don't forget to include change for a payphone, or a pre-paid phone card. (Emergency contact cards can be found at the end of this booklet)

- Keep copies of insurance policies, financial records, and other essential documents in a secure location, such as with your Disaster Kit. Include a household inventory with photos and descriptions of your belongings



Have a Personal Disaster Kit for Every Member of Your Household

Check the boxes to Track your progress

Every person in your family should have their own personalized Disaster Kit. Each kit provides necessary food, water, medication, and other necessities in case you have to evacuate your home. **The contents of a Disaster Kit are restricted only by your personal creativity!** Keep your Disaster Kits in a location where they can be easily accessed in case of an emergency - they could even be stored in your backyard in a tightly sealed plastic trashcan in a shed, carport, garage, or other protected area.



- Use a backpack, rolling carry-on bag, a duffel bag with carrying handles, or other easily moveable storage container – don't forget you may have to carry it for awhile!
- Have a Kit for the car and office too!
- Spend time with young children discussing what might happen in an earthquake and help them build their own Disaster Kits
- Don't forget a Disaster Kit for your pets! Include food, water, necessary medication and a leash

Items to Consider Including in Your Disaster Kit:

- Medications, a list of prescriptions, copies of medical insurance cards, Medical consent forms for dependents, list of allergies and medical problems, etc.
- First-aid kit and handbook
- Spare eyeglasses, personal hygiene supplies, and sturdy shoes
- A whistle (to alert rescuers of your location)
- Emergency cash
- Personal identification
- List of emergency contact phone numbers
- A copy of the family emergency and communication plan
- Emergency lighting (flashlight, batteries, light sticks, hand-crank flashlight, etc.)
- Comfort items such as games, crayons, writing materials, a favorite book or toy
- Work gloves and rubber or latex gloves
- Change of clothes including a jacket or sweatshirt and rain coat/hat
- Hand-crank radio (Don't forget you have a radio in your car!)
- Water proof matches or small lighters
- Bottled water (1 gallon per person per day), canned food with pop-top lids, military style MREs (Meals-Ready to-Eat) – dehydrated foods require extra water storage
- High calorie, long storing snack foods such as beef jerky, energy bars, etc.
- Don't wait for a disaster. Try out the foods first – make sure your kids will eat it too!
- **Rotate food, water, medicine and batteries on a regular basis – at *least* every year!**

Emergency Food and Water Reminders:

- ✓ Food storage for your Disaster Kit is easy. Use easy open packages and cans that do not require any special equipment such as scissors or can-openers
- ✓ Each person will need about 1 gallon of water per day
- ✓ An emergency is not the time to find out that the food you have stored doesn't taste too good or that your family won't eat it
- ✓ Store canned fruit that has been packed in fruit juice not heavy syrup - the juice can replace some water needs
- ✓ Using dehydrated or freeze-dried foods is a light weight option for Disaster Kits - however, they require a lot of water and heat to reconstitute for a meal



- AquaBlox is a sterile water product packaged in 8 oz. and 1 liter boxes that are easy to store and last for 5 years
- Military style MRE's – Meals Ready to Eat – are prepackaged “wet” food that does not require cooking or re-hydrating. Their shelf life can be several years depending on the environment they are stored in. They come in many flavors and varieties
- Other alternatives are food ration bars. They are compact, have a long shelf life, and provide a high calorie food. They look and taste similar to shortbread; a 3-day supply of calories for 1 person is contained in a package approximately 4” x 3½” x 2½”



- Water can also be stored in larger containers and kept at home. Depending on the needs of your household, food grade plastic drums are ideal for storing water in quantities ranging from 5 gallons to 55 gallons
- Water preservatives can be added to large storage containers to help water stay potable for 5 years
- Easy to use hand pumps are needed to draw water from large, heavy water barrels
- Large storage barrels should not be part of an evacuation kit, but are ideal for more long term storage if you are able to stay at home
- If your water is cloudy or smells “stale” boil for 1 minute and allow it to cool. Add 16 drops of unscented household bleach to each gallon of water – wait 30 minutes. If you smell bleach in your water – it's okay to use. If you can't smell any bleach, add another 16 drops of bleach per gallon - wait 30 minutes. If you still can't smell bleach, discard the water and find another source (www.redcross.org)



During a Quake
Don't panic - think about where you are and act accordingly

- Drop – Cover – Hold On!**
- Find safety under a sturdy desk, table, or counter. **Drop** under the object - use it to **Cover** your body - **Hold On** to a table or desk leg
- If you are not near cover, move away from windows, stairs, tall furniture, heavy appliances, hanging mirrors, and from under hanging lights
- Do Not Go Outside Until the Shaking Has Stopped!
- If you're in bed – stay there and hang on to the headboard. Protect your head with your pillow. Before getting out of bed use the shoes you stored in the plastic bag to protect your bare feet from injury
- If you are outside try and move to the largest open space you can find
- Do Not Run Into a Building
- Stay away from overhead power poles and lines, tall buildings, large trees, windows, and parked cars
- If you are driving – pull over carefully and slow to a stop. Remain in your car until the shaking has stopped
- Avoid driving near overpasses or bridges during or after an earthquake until you are sure it is safe
- If you are near a crowd of people do not begin running – if you fall, get up as fast as you can to avoid being trampled
- If you are near the ocean be aware that strong quakes can cause tsunamis. Move to high ground and avoid low lying areas. Stay there until officials give an “all clear” announcement
- Look around for obvious signs of danger such as fire, gushing water, down electrical lines, etc. Move away from those dangers to a safe area as quickly as you can
- Stay away from buildings made of brick or stone or structures that have brick chimneys and other masonry exteriors
- Avoid walking under large glass windows that might be found in high rise buildings or multistory homes
- Don't Panic! Staying calm will help you make good, safe decisions. It will also help others around you to stay calm

After An Earthquake – Look for Damage

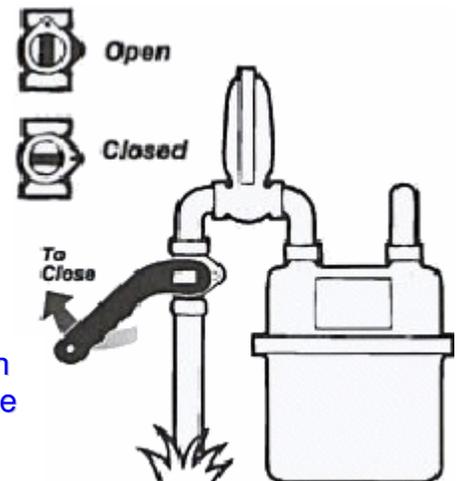
Take care of yourself and your family, and then check on those around you including your neighbors

Do Not Use 911 unless there is a Medical or Life Threatening Emergency!

- ❑ Familiarize yourself with the first-aid section in the front of your telephone book – if you don't have a telephone book, invest in an American Red Cross First-Aid book
- ❑ Have work gloves, rubber or latex gloves, and dust masks in your Disaster Kit or home that you can use to protect yourself
- ❑ Provide first-aid to those around you who may be injured
- ❑ Don't move seriously injured people unless they are in further danger
- ❑ Use a fire extinguisher or hose to put out small fires – do not attempt to put out fires larger than a kitchen trashcan
- ❑ Do not turn off your natural gas unless you can hear gas escaping or can smell gas in the air
- ❑ If you need to turn the gas off at the meter, do not turn it back on by yourself! Call PG&E and let the experts make sure that there aren't any leaks or damage to your meter
- ❑ Turn on the television or radio to get emergency information and instructions. Your car radio is a reliable way to tune into major Bay Area radio stations – see a listing of stations at the end of this booklet

- * Using a gas shutoff tool or adjustable wrench – follow the example in the diagram
- * Once the valve control is turned like the diagram shows, the gas will be stopped from entering your home
- * If a gas leak is present outside your home and turning the meter off doesn't control the leak – **LEAVE THE AREA IMMEDIATELY!**
- * The risk for fire, explosion, injury and death are very real!!
- * Do not strike any matches, lighters, or flashlights. Do not turn on any light switches, electrical appliances, or start your car – **GATHER YOUR FAMILY AND PETS AND LEAVE QUICKLY** – Contact the fire department as soon as you are away from the property

Every few months use your gas shutoff tool or wrench to make sure your gas meter valve isn't stuck. Put the tool on the shutoff valve and turn the dial only $\frac{1}{4}$ of a turn then back again. If it doesn't move, call PG&E right away



Important things to remember:

- Aftershocks will occur after a major earthquake. Some aftershocks can be very strong – perhaps as strong as the original quake!
- Be prepared to repeat Drop-Cover-Hold again
- Just because you don't see any damage to your home doesn't mean that everything is okay
- Be aware that glass, metal, and other debris may have fallen to the ground and broke – be sure you're able to put on shoes to prevent injury to your feet
- If it is safe to do so – assess your home or office for damage. Based on your observations determine if you are able to remain at that location or if you need to leave for your safety
- If you are separated from others in your family, put into action your Family Disaster Plan. Follow your family's procedures for meeting and communicating with each other
- If you have to leave your home or office – leave a detailed note for others of where you have gone, what time you left, and who went with you
- If you are not able to stay in your home because of damage, try and find another place to stay
 - Family and friends should be the first people you check with
 - Hotels and motels are good alternatives, but in a large scale emergency the availability of rooms may be limited
 - Shelters may be opened in your area, but it takes many hours for them to be completely available –shelters will **not** allow you to bring your pets

Important things NOT to do:

- Don't panic!
- Don't use charcoal, propane stoves or heaters, or candles indoors. Serious injury, fire, or death from asphyxiation or carbon monoxide poisoning could result from improper use
- Don't approach down power lines even if they look safe
- Don't approach gas lines or other areas where natural gas or other chemical odors can be smelled in the air
- Don't use a match, lighter, flashlight, or use any electrical tools or lights in areas where you can smell gas or other chemicals
- Don't enter any building or structure that looks unsafe, is on fire, or smells of natural gas
- Don't attempt to fight fires larger than a couple of household trashcans
- Don't forget to help your neighbors!

Ideas for Personal Disaster Kits

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

First Aid Kit

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

- Sterile adhesive bandages in assorted sizes
- Assorted sizes of safety pins
- Cleansing agent/soap
- Latex gloves
- Sunscreen
- Sterile gauze pads
- Non-prescription drugs
- Sterile roller bandages
- Scissors
- Tweezers
- Needle
- Moistened towelettes
- Antiseptic
- Thermometer

Sanitation

- Toilet paper, towelettes
- Soap, liquid detergent
- Feminine supplies
- Personal hygiene items
- Plastic garbage bags
- Plastic bucket with tight lid
- Disinfectant
- Household chlorine bleach

Food

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

Non-Prescription Drugs

- Aspirin or non-aspirin pain reliever
- Anti-diarrhea medication
- Antacid (for stomach upset)
- Syrup of Ipecac (use to induce vomiting if advised by the Poison Control Center)
- Laxative
- Activated charcoal (use if advised by the Poison Control Center)
- Ask your doctor about storing medication

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

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
- Pliers
- Tape
- Matches in a waterproof container
- Signal flare
- Paper, pencil
- Needles, thread
- Whistle
- Plastic sheeting

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)

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

Fill out, Make Copies and Distribute to all Family Members

Emergency Plan

Out of State Contact

Name: _____ City: _____ State: _____

Address: _____ Phone: _____

Local Contact

Name: _____ City: _____ State: _____

Address: _____ Phone: _____

Nearest Relative

Name: _____ City: _____ State: _____

Address: _____ Phone: _____

Reunion Locations:

Right outside your home: _____

Away From Neighborhood if you cannot Return Home: _____

Family Cell Phone Numbers:

_____	_____	_____
_____	_____	_____
_____	_____	_____

Sources of Information after a Quake or Other Emergency

Bay Area Radio Stations Partial List	Bay Area Television Stations Partial List
KSFO 560AM KNBR 680AM KCBS 740AM KGO 810AM KNEW 910AM KCEA 89.1FM KOIT 96.5FM	KTVU Channel 2 KRON Channel 4 KPIX (CBS) Channel 5 ABC Channel 7 NBC Channel 11
Internet Sources	
California Governor's Office of Emergency Services - OES www.oes.ca.gov Federal Emergency Management Administration - FEMA www.fema.gov United States Geological Survey - USGS www.usgs.gov San Mateo County Sheriff's Office of Emergency Services http://www.co.sanmateo.ca.us National Weather Service - NWS http://www.wrh.noaa.gov/mtr/	

Additional Sources of Information

Residents of San Mateo County have been given a unique opportunity to participate in a countywide program whereby immediate emergency information and warnings can be received in a variety of electronic mediums such as email, text messaging, BlackBerry, etc.

If you would like to sign up for messages ranging from traffic delays to natural disasters that occur in San Mateo County visit:



www.smcalert.info

Residents of California have a similar opportunity to receive emergency information and warnings on their electronic devices for emergency notifications around the state. Such information includes Amber Alerts, earthquakes, hazardous materials incidents, wildland fires, and other significant events. Residents can sign up for some or even all counties and areas around the state to receive such information - *however - this system can create many, perhaps dozens of, emails and messages each day.*

If you would like to sign up for statewide service visit:



www.edis.ca.gov

If you visit this webpage you can view daily messages without signing up for daily messaging service

The Town of Atherton will work as quickly as possible to restore services to you and your home. After a severe emergency it may take many hours or even days for normal services to be restored. It is very important that you take every precaution possible and plan for the worst so the disruption to your family and home are minimal.