

GET READY



MARIN COUNTY
HOUSEHOLD DISASTER PREPAREDNESS



EMERGENCY CONTACTS

NAME	SERVICE	Primary Phone	Alternate Phone	Email Address

FAMILY REUNION PROCEDURES

Inside or near home	Inside:
	Outside:
Away from home	Priority Location: (neighbor, relative, etc.)

Identify reunion places where your family will meet if house cannot be entered.
 Leave a note in a designated place where you will meet.

OUT-OF-AREA CONTACT

NAME	ADDRESS	PH	EMAIL

10 MINUTE EVACUATION LIST

ITEM	LOCATION	ITEM	LOCATION

Preface

This Disaster Preparedness Manual has been developed by Get Ready Marin.

This manual was originally created by Susan Moxan for the City of Mill Valley. It has been edited and reformatted for the Citizens of Marin County and modeled after the successful Tiburon /Belvedere Get Ready Program.

This guide has been prepared for direct dissemination to the general public and is based on the most reliable hazard awareness and emergency education information available at the time of publication, including advances in scientific knowledge, more accurate technical language, and the latest physical research on what happens in disasters.

This publication is, however, too brief to cover every factor, situation, or difference in buildings, infrastructure, or other environmental features that might be of interest. To help you explore your interest further, additional sources of information have been included.

The guide has been designed to help the citizens of Marin County learn how to protect themselves and their families against all types of hazards. It can be used as a reference source or as a step-by-step manual. The focus of the content is on how to develop, practice, and maintain emergency plans that reflect what must be done before, during, and after a disaster to protect people and their property. Also included is information on how to assemble a disaster supplies kit that contains the food, water, and other supplies in sufficient quantity for individuals and their families to survive following a disaster in the event they must rely on their own resources.

It is the goal of Get Ready Marin to train at least one member from each household Disaster Preparedness for their families, neighbors and community. We hope that you will take the time before disaster strikes to :

Get Ready Marin

e-mail questions to: _____

Get Ready Marin

DISASTER PREPARDNESS MANUAL

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GET READY !

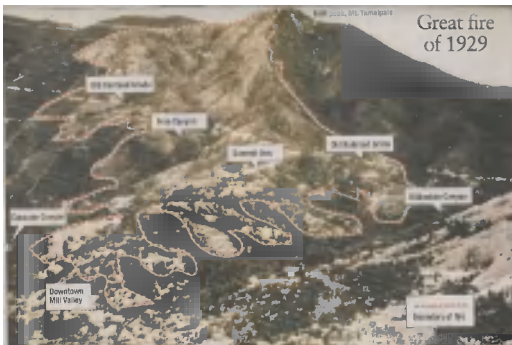
Introduction

Ready or Not Here It Comes



Marin County is uniquely beautiful, with hills, canyons, meadows and water front. Narrow, curving, tree-lined roads, the privacy of dead-end streets, and the little decks and private bridges (that may not support a fire engine) spanning the creeks are charming, until an arsonist, a careless person, or an earthquake starts a fire and a deadly chain of events.

Huge disasters such as major earthquakes and wildland fires seem a remote possibility in tranquil Marin County but the experts say our risk is one of the highest in the state. If you think a disaster can't happen here you are gambling with your life.



Fire

Mill Valley was almost destroyed by a fire that engulfed the southern slopes of Mount Tam and burned to within 100 yards of City Hall in 1929. Another fire in 1945 roared from Fairfax to Stinson Beach. In 1995, a fire burned 12,000 acres and 50 homes in Inverness. Currently, the accumulation of brush has created the potential for a major fire that ranks among the worst in California.



Earthquake

If your odds of winning the lottery were 62%, would you buy a ticket? If your odds of experiencing a devastating earthquake were 62%, would you take steps to prepare yourself? According to a U.S. Geological Survey study in September 2005, there is a 62% chance that an earthquake of magnitude 6.7 or greater will occur in the Bay Area within 26 years; it could happen today. Since the quake is most likely to occur on the Northern Hayward or the Rodgers Creek faults, both of which run through or close to Marin County, there is a real potential for widespread devastation anywhere in the county.

Introduction

What to Expect

Prior disasters, such as the 1989 Loma Prieta earthquake and the 1991 East Bay firestorm, have taught us to expect that:

- 👉 Police, paramedics and fire departments will be overwhelmed. It is unlikely that mutual aid from surrounding communities would be available if all of Marin County is affected, and state mutual aid may be delayed.
- 👉 Utilities may be out for several days, possibly for several weeks.
- 👉 Sewage disposal may be inoperative for a month or longer
- 👉 After a major earthquake, Highway 101 and surface streets may be impassable due to downed overpasses and bridges, slides, or gridlock. If that were to happen, portions of Marin would be cut off.
 - Liquefaction is likely to occur along Highway 101 from Marin City to the Richmond-San Rafael Bridge
 - Many of the freeway overpasses may collapse
- 👉 Damaged bridges will be closed and it may take days for people at work in San Francisco or the East Bay to be reunited with their families in Marin.
- 👉 Health facilities may be overwhelmed, damaged or destroyed. Marin General Hospital may be inaccessible due to freeway closures and gridlock on surface streets.

On a personal level, we must each recognize and expect that:

- 👉 We may not be able to get home for several days.
- 👉 Children and others needing help may be home alone.
- 👉 Our homes may be seriously damaged or destroyed.
- 👉 We, or someone in our families, may experience serious injury or death.

Survivor . . . or Victim?

Complacency and reliance on government have no place in preparing for these anticipated disasters. We must become actively involved, taking personal responsibility for our own survival. This means knowing how to survive an actual event, planning and preparing for an event, and knowing how to live in a disaster area.

Please take the time to read the information in this handbook. It could save your life and the lives of your loved ones.



Before the Event

Preparing Yourself and Your Home

Earthquake preparation takes two forms: mental preparation (knowing what to do) and physical preparation (assembling supplies and mitigating hazards).

Emergency Food Supply

A disaster can dramatically disrupt the food supply at any time. Trucks may be unable to make deliveries to restock shelves.

Existing stock will disappear quickly, so maintain at least a five to seven day supply of food beyond your normal requirements.

Choose foods that:

- Your family, especially the children, will enjoy.

- Require little or no cooking or water for preparation.

- Require no refrigeration.

- Do not increase thirst (i.e. low in sodium).

- Meet the dietary needs of infants, diabetics or others with special needs.

Remember to include food for your pet.



An Emergency Supply kit is a key step towards disaster preparedness.

Tip.....

FOOD

Rotate your food cache every 6-12 months. Use a marking pen to date your food.

Donate your excess food to charity. Mid May of every year the US Postal Service will pick up your donation and it is tax deductible.

During the Holidays you may donate your excess food to a number of charities around Marin and the Bay Area



How to Store Emergency Food:

- ☐ Keep your disaster food supply in one place so that it is easily accessible.
- ☐ Store the food in a cool, dark, dry place (40 to 60 degrees).
- ☐ Don't store food near gasoline, oil or other petroleum products. Smells can be absorbed into the food.
- ☐ Store food in airtight or tightly sealed plastic or metal containers as a precaution against rodents and insects.



9:30 p.m.

The lights suddenly go out in the restaurant in San Francisco where you and your spouse are enjoying dinner. The city goes dark. From every direction, you hear burglar alarms and sirens. A wall has collapsed onto your car. The phones are out. Will your children, home with a babysitter, know where your flashlights and emergency supplies are kept?





Before the Event

Preparing Yourself and Your Home (continued)

Emergency Water Supply

A person can survive weeks without food, but only a few days without water.

How Much Water to Store

Store a minimum of 5 gallons of water per person (1 gallon per person per day for 5-7 days). The more water you can store, the better off you will be.

Remember your pets when planning how much water you need.

How to Store Emergency Water

Water should be stored in sturdy plastic bottles, preferably opaque. Chlorine bleach bottles work well. Plastic juice and milk containers tend to crack and therefore leak more readily.

Add a few drops of chlorine bleach to water that you bottle yourself, and purify it again before you drink it. Change this water every six months.

If you buy bottled water, it should last 1-2 years. Note: distilled water will last longer than spring water because all impurities and bacteria have been removed from it.

Do not store water containers in areas where toxic substances, such as gasoline and pesticides, are present. These vapors will penetrate plastic over time.

To purify your water, boil it vigorously for 10 minutes, or add liquid bleach with 5.25% sodium hypochlorite (chlorine bleach) as its sole ingredient in these amounts:

<u>Water Amount</u>	<u>Chlorine Bleach if Water is Cloudy</u>	<u>Chlorine Bleach if Water is Clear</u>
1 quart	4 drops	2 drops
1 gallon	16 drops	8 drops
5 gallons	1 teaspoon	1/2 teaspoon

Wait 30 minutes. The water should have a slight chlorine smell; if it doesn't, repeat dosage and wait 15 more minutes.

Other Emergency Supplies

In addition to food and water, your home supplies should include items to enable you and your family to cook, eat and sleep outdoors or in a tent if necessary, for several days.

Your family's camping supplies and barbecue equipment may fill this need.

See page 7 for suggestions of food, water, sanitation supplies, and tools to store with your emergency equipment.



Preparing Your Car and Work

Car and Workplace

Following a major earthquake, making your way home from work or shopping may be a long and arduous journey, since bridges and major freeways may be closed.

Experts say that after an earthquake of 7.5 magnitude or greater, it could take many days to travel from San Francisco to Marin. All inland travel will be on foot. Private sailing craft will be used to transport people between points on the Bay.

You will be on your own to get home. All attention will be focused on repairs and providing medical care, food and water to those in need. You may have nothing more than the clothes you are wearing and your purse, briefcase or bookbag. Keep a backpack in your car or workplace containing the supplies and cash that you would need on the long walk home.



Assume you will be walking to the Bay from wherever you are . . . hiring a private boat to drop you off somewhere in Marin . . . spending a few nights out in the open . . .

If it becomes necessary for you to walk home, remember that the trip may be dangerous. Disasters tend to bring out both the best and the worst in people, and walking alone through urban areas may not be advisable. Find a companion to make the journey with you.

1:20 p.m. _____

You are returning home from Oakland on the freeway when you feel what you think is a flat tire. The cars in front of you stop suddenly. Hopelessly trapped in traffic, you learn via your car radio that a major earthquake has damaged the bridges and freeway overpasses. You grab your road map and start walking. It will take you days to get home.

See page 8
for a list of
items to keep
in your car
and workplace
backpacks.



Emergency Supplies

In the event of a major disaster, you might need to rely on your own resources. You may be sleeping outdoors. Plan on what you will need to eat, sleep, cook, and generally survive on your own, with or without the shelter and comfort of your home, for a minimum of 5-7 days.

Eating & Cooking

- ☐ Paper/plastic plates, cups, utensils
- ☐ Paper towels (can double as napkins)
- ☐ Manual can opener
- ☐ Alternate cooking source & fuel
- ☐ Chlorine bleach & eye dropper to purify water
- ☐ Pet food & leashes

Health & Safety

- ☐ First Aid kit
- ☐ First Aid manual
- ☐ Soap, detergent, shampoo
- ☐ Toothbrush, toothpaste
- ☐ Medication
- ☐ Heavy work gloves
- ☐ Sturdy shoes
- ☐ Space blanket or sleeping bag
- ☐ Tent or other camping equipment
- ☐ Hearing aid batteries
- ☐ Dust masks
- ☐ Goggles or safety glasses
- ☐ Scissors

Sanitation

- ☐ Portable toilet or bucket with lid
- ☐ Toilet paper
- ☐ Disinfectant
- ☐ Feminine hygiene supplies
- ☐ Plastic garbage bags
- ☐ Twist ties
- ☐ Shovel
- ☐ Diapers & baby wipes

Tools

- ☐ Wrench (shut-off valves)
- ☐ 1/2" rope (20 ft)
- ☐ Duct tape
- ☐ Broom
- ☐ Axe
- ☐ Flashlight
- ☐ Extra batteries
- ☐ Portable radio
- ☐ Fire extinguisher (2-A:10-B:C)

Emergency Food

Food should be dated, require little or no water or cooking to prepare, not increase thirst (i.e. low sodium and low fat), and be things that your family will enjoy. For example:

- Canned fruits, vegetables (the liquid in which they are packed can also be consumed)
- Canned meat, stew, pasta
- Dried fruits
- Dry cereal
- Crackers (low sodium)
- Canned tuna
- Granola bars (fat free)
- Canned nuts (unsalted)
- Peanut butter
- Fruit or vegetable juices
- Powdered milk
- Bottled soft drinks
- Baby food and food for others on special diets
- Water (minimum of 1 gallon per person per day for 5 days)

Mini-Survival Kits

There is no guarantee that you will be home when disaster strikes. What would you need if you must stay at work for several days, or rely on your car for short-term shelter, or be forced to make your way home on foot?

Storing your supplies in a small backpack will make them convenient to carry if you need to walk home.

Car Mini-Survival Kit

- ☐ Nutritious low sodium, low fat snack food
- ☐ Bottled water
- ☐ Local maps and compass
- ☐ Comfortable shoes and socks
- ☐ Sweats or jogging pants
- ☐ Heavy work gloves
- ☐ Coins for pay phone
- ☐ Cash (\$50-\$100)
- ☐ Flashlight & batteries
- ☐ Waterproof matches
- ☐ Portable AM radio
- ☐ Extra batteries
- ☐ Toilet paper and sanitary supplies
- ☐ Small first aid kit
- ☐ Mylar space blanket
- ☐ Tools: screwdriver, pliers
- ☐ Fire extinguisher: A-B-C type
- ☐ Flares
- ☐ Reading material
- ☐ Pencil and pad of paper
- ☐ Heavy-duty trash bags
- ☐ Duct tape
- ☐ Scissors

Work Mini-Survival Kit

- ☐ Nutritious snack food
- ☐ Bottled water
- ☐ Comfortable shoes and socks
- ☐ Small first aid kit
- ☐ Blanket
- ☐ Flashlight with extra batteries
- ☐ Portable AM radio
- ☐ Heavy work gloves
- ☐ Toilet paper and sanitary supplies
- ☐ Whistle
- ☐ Cash and coins for phone calls
- ☐ Heavy-duty trash bags
- ☐ Duct tape
- ☐ Scissors

TIP . . .

Never let your gas tank fall below one quarter full.



Before The Event

Preparing Yourself and Your Home (continued)

Utility Shut Off (When and How)

A major earthquake will break gas pipes, electric lines and water lines. All of these can cause major problems. One of the most devastating results of an earthquake is a gas-fed fire. Broken water pipes can cause water damage to your home. Sparks from electric lines can cause fires.

Locate your gas, water and electric utilities. Make sure your gas, electric and water valves are not rusted or stuck shut.

Teach all family members how to shut off all utilities and when to do so.

Show your neighbors where your meters are and make arrangements with them to turn off your utilities if you are not home. Know where the shut-off valves are on your neighbors' houses as well.

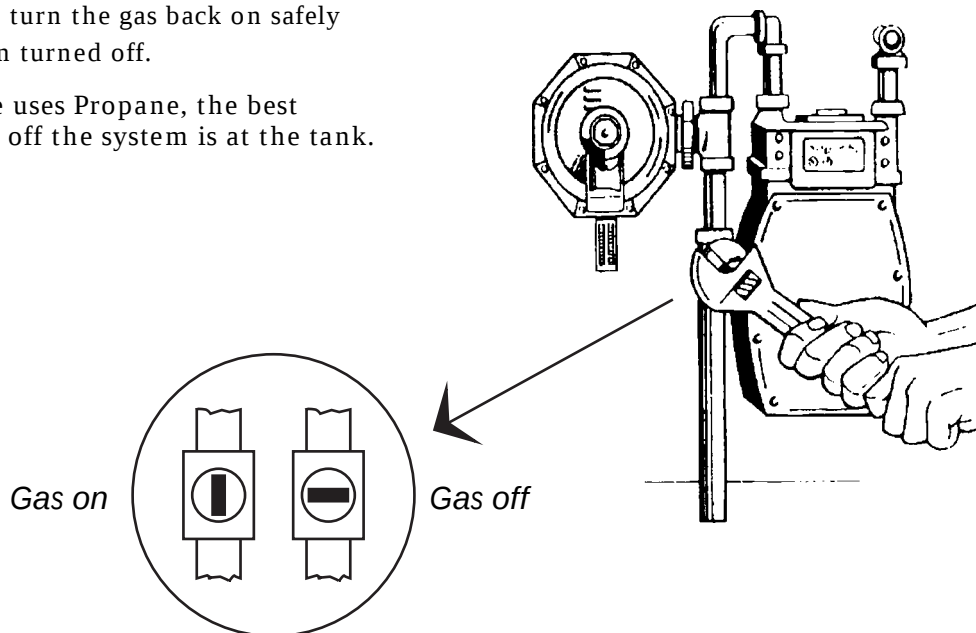
Gas

- ☛ Attach an adjustable wrench, or a special gas turn off bar to the gas meter so that you won't waste time trying to find one following an earthquake.
 - ☛ After a major disaster, shut off the gas immediately only if you smell gas and/or you notice a large consumption of gas being registered on the gas meter.
 - ☛ Remember, if the gas is turned off, do not turn it back on. Only a licensed plumber or PG&E can turn the gas back on safely once it's been turned off.
- If your home uses Propane, the best place to shut off the system is at the tank.

TIP...

An automatic valve is commercially available that will automatically turn the gas off for you when it detects the shaking of an earthquake. However, many experts question the use of these valves because they will turn off your gas whether or not you have a leak. You will be deprived of the use of your gas-fired stove and/or furnace until a professional arrives to turn the gas back on for you, even if there is nothing wrong with your gas lines.

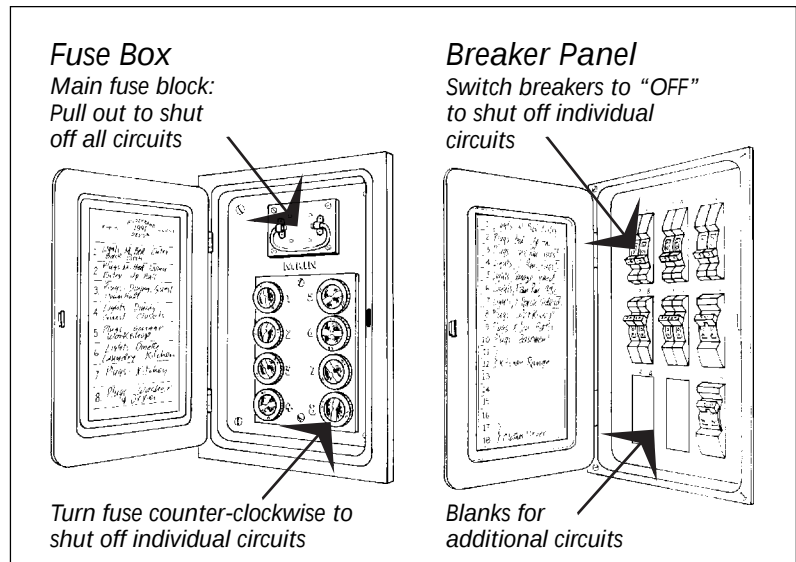
Check with your Local Building Official prior to installation of this device.





Electricity

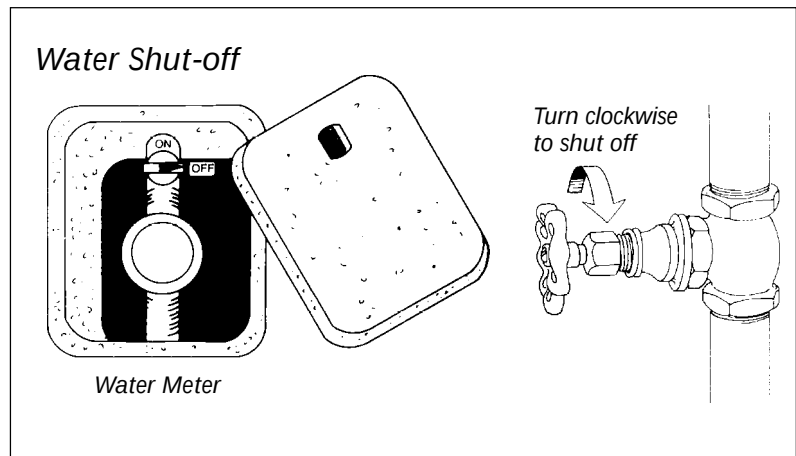
- ☞ Know the location of your circuit breaker or fuse box.
- ☞ Know how to trip the breakers or remove the fuses if you need to turn off the electricity after an earthquake.
- ☞ Be sure that each circuit is properly labeled at the box.
- If your home is uninhabitable shut down the "Main Disconnect" located at the meter before leaving your home.



Water

Know how to turn off the water to prevent water damage and also to prevent polluted water from entering your home system. Water may be turned off at either of two locations:

1. At the main meter box (usually by the street), which controls the water flow to the entire property, or
2. At the water main leading into the house.



TIP...

We recommend that you shut off your water at the water main leading into the house to prevent the water from flowing out of your water heater and back into the main line.

- Locate the water main leading into the house and attach a label to it for quick identification.
- Attach a valve wrench to the water line. (This tool can be purchased at most hardware stores.)

12:00 a.m.

Midnight. You are awakened by the shaking and unbelievable noises of the earth groaning and your house shuddering. Your bed is littered with lamps, books, shards of glass from broken windows. Your children are screaming, terrified, possibly cut by broken glass. The power is out. It is dark. You smell gas.



Reduction of Hazard Risks (continued)

Structural Hazards

Imagine that your home has wheels and is speeding down a twisting, bumpy road. A major earthquake will have a similar effect on your home and its contents.

Next to loss of life, the loss of your home will be the greatest catastrophe to occur in an earthquake. How well your home will perform?



Tip...

See page 12 for details on correction of structural hazards.

The most important things you can do to mitigate the effects of an earthquake are:

Maintain your home.

Insure its structural integrity by having regular inspections for pests and decay.

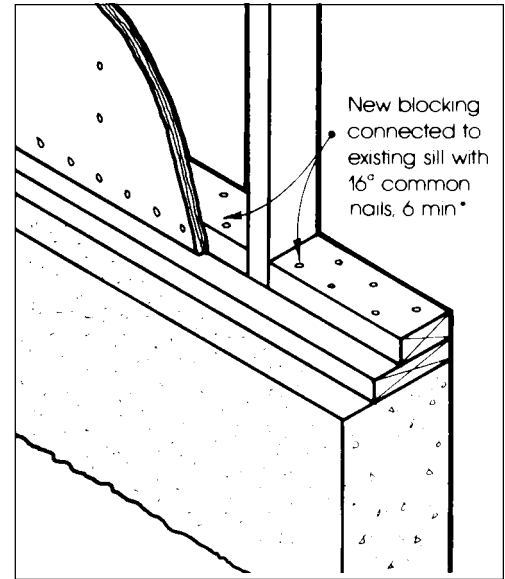
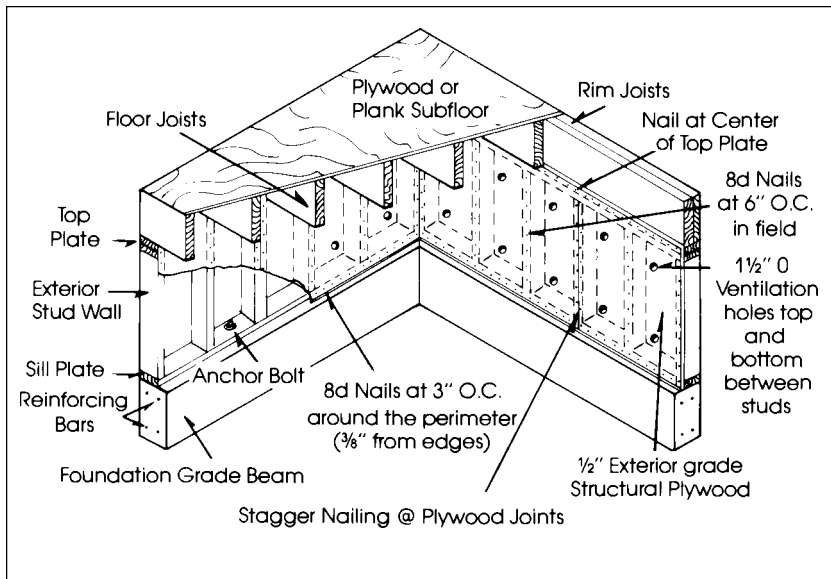
Have your home evaluated for seismic safety and hire a licensed engineer or contractor to perform earthquake retrofitting.

Almost all existing structures can be strengthened to be more earthquake resistant (not earthquake proof). A seismic evaluation might find that:

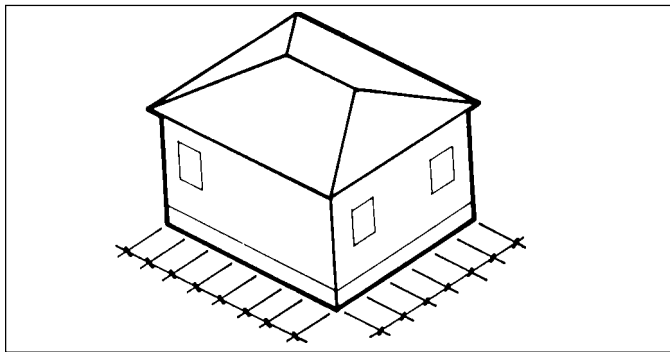
- 🔧 Your wood frame house should be bolted to the foundation. If your home was built before 1950, it probably does not have bolts securing the wood structure to the concrete foundation, but there are options available to correct this.
- 🔧 Dry rot damage in the mudsill should be repaired.
- 🔧 Cripple stud walls should be braced (sheerwalled).
- 🔧 Brick chimneys should be inspected and reinforced. Do not brace the chimney to the roof. Rods connecting the chimney to the roof cause the chimney to fall through the ceiling as a unit, which is far more damaging than if the chimney merely cracks and falls in pieces.
- 🔧 Porches and balconies should be securely attached to the house.
- 🔧 Roof material should be fire resistant.
- 🔧 Settling, especially on sloping sites, may have resulted in damage or weakening that should be corrected.
- 🔧 Renovations or room additions should be securely attached to the house.
- 🔧 Detached footings should be secured.
- 🔧 Houses over garages are more susceptible to collapse. Inside walls may need to be braced.

Contact the City or Town Building Inspector if you have questions about ordinances applicable to structural modifications. It is recommended that all work be done by licensed, experienced professionals.

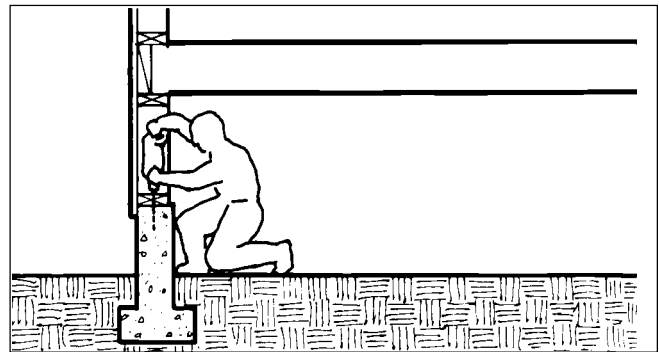
Sheath Cripple Walls



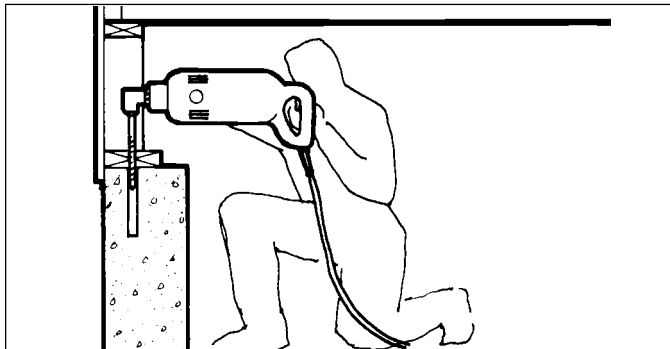
Add Foundation Bolts



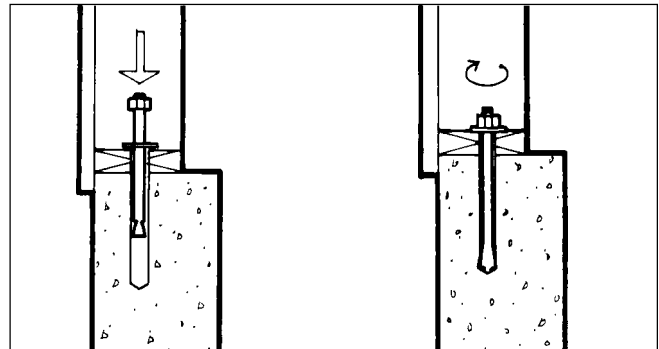
1. Layout bolt locations. For the typical 1-story house, use 1/2 inch diameter bolts at 6 feet on center.



2. Drill holes through existing sill into the concrete foundation for 8 1/2 inch long expansion bolts, using carbide drill bits.



3. Use right angle drill for tight access places where the crawl space is low.



4. Insert expansion bolts with the washer and nut attached. Leave nut at top of bolt when tapping the bolt in place to protect the threads. After tapping bolt in place, tighten the bolt by turning the nut. Do not over tighten or bolt.



Reduction of Hazard Risks

Non-Structural Hazards

Take time to look at each room in your home and workplace. Why? You will most likely be at home or at work when the big quake hits. Since most people injured or killed in quakes are hit by falling objects, begin by looking up.

Ask yourself, what's in this room that could fall if shaken badly enough? Then ask, what are the likely consequences if it falls on me or one of my loved ones?

- ☞ Identify heavy or breakable objects on high shelves or in cabinets. Securely fasten or move these objects to lower locations.
- ☞ Consider removing heavily framed pictures and mirrors from above beds, couches and chairs.
- ☞ Determine whether the full swing of your hanging plants and lamps will strike a window. If they will, consider moving them.
- ☞ Secure hanging plants and lamps by closing the opening in the hook.
- ☞ Attach industrial strength Velcro-like fasteners to the perimeter of frames to hold pictures to the wall.
- ☞ Attach tall or top-heavy furniture to the wall using "L" brackets or corner brackets.
- ☞ Secure appliances, including microwave ovens, and electronic equipment (stereos, computers, etc.) with industrial strength Velcro-like fasteners, or provide a restraining edge on the cabinet or shelf to prevent them from sliding out of their cabinets.

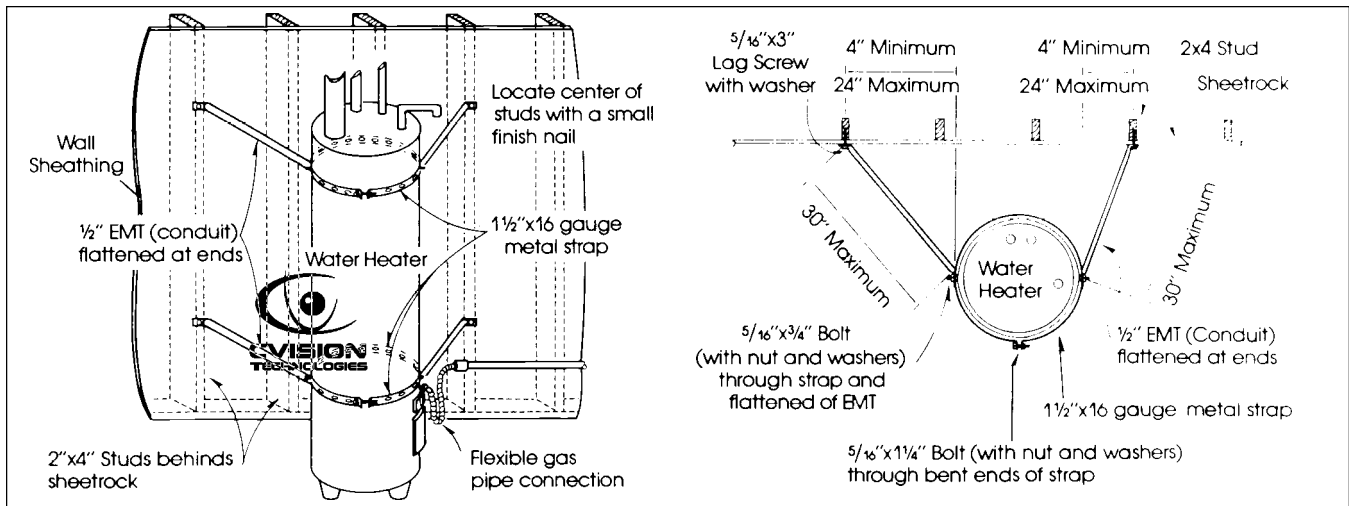
9:30 a.m.

You are cleaning up the kitchen as the house begins to creak and groan. A sudden jolt throws you to the floor as you dodge dishes and glassware flying out of the cabinets. The microwave oven slides out of its cabinet as though on wheels and smashes to the floor. When it's over, you follow the sound of running water, picking your way through the broken glass and dishes and discover that the water heater has toppled over and water is gushing every where.

- ☞ Remove poisons (such as weed killers and pesticides), and flammable products (such as solvents) from high shelves and move them to safe, well-ventilated storage areas away from heat sources.
- ☞ Store ammonia and bleach in different locations. If these liquids mix, they create deadly fumes.
- ☞ Install flexible gas connectors on all gas appliances, including the water heater.
- ☞ Fasten your water heater securely to the wall studs with a strap or a strip of plumber's tape. If it tips over in an earthquake and the gas line breaks, it could cause an explosion and fire. You would also lose a valuable source of water.

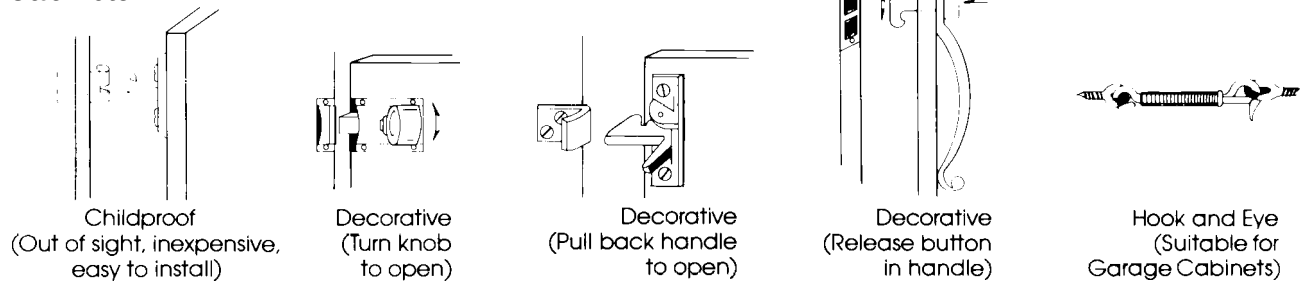
See page 14 for instructions for mitigating non-structural hazards.

Strap Water Heater

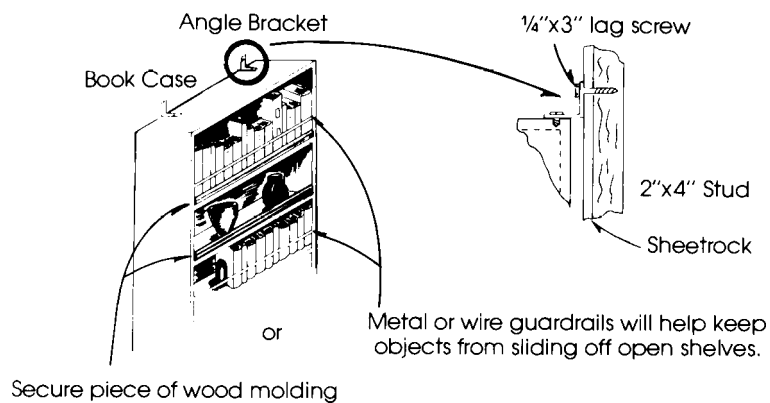


Secure Furniture

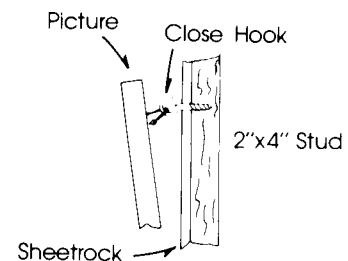
Cabinets



Tall Furniture or Open Shelves



Hanging Pictures





Preparing Yourself and Your Home (continued)

First Aid Training

The most typical types of injuries after a major earthquake are:

- Major extremity injuries (fractures, amputations, wounds)
- Superficial trauma (lacerations, abrasions, contusions)
- Head and facial injuries (concussion, open wounds, internal trauma, fractures)
- Crush injuries
- Entrapment and asphyxiation

If only limited first aid training is available, the most valuable training for earthquake-related injuries is in bleeding suppression techniques and infection control.

Keep well-stocked first aid kits in your automobile and in your home emergency supplies. They will be easy to carry and protected from the weather if you keep them in small tool or fishing tackle boxes.

See page 16 for suggestions on what to include in your first aid kits.



Photo: American Red Cross

A Red Cross-sponsored first aid course can be invaluable training prior to a major disaster.

Tip.....

Contact your local Fire Dept. or Red Cross to inquire about First Aid and CPR Classes

TIP...

The Local Telephone Book Section B, First Aid and Survival Guide contains useful emergency first aid information, including accidents involving bleeding, breathing, broken bones, burns, electric shock, heart attack and seizures.

First Aid Supplies

The items suggested below should be tailored to meet your needs.

Store these items in a small tool kit or fishing tackle box.

Dressings

- ☐ Band-Aids
- ☐ Ace bandages
- ☐ Butterfly bandages
- ☐ Rolled gauze (1 each of 1", 2", and 3")
- ☐ Cotton-tipped swabs

TIP...

Bandages can also be made from disposable diapers, sanitary napkins, and clean sheets. They can be held in place by men's ties, plastic bags, and nylon stockings)

Drugs

- ☐ Hydrogen peroxide to wash & disinfect wounds
- ☐ Antibiotic ointment for dressing wounds
- ☐ Individually wrapped alcohol swabs
- ☐ Antacids
- ☐ Aspirin
- ☐ Acetaminophen (generic Tylenol): chewable tablets for small children
- ☐ Diarrhea medicine
- ☐ _____
- ☐ Eye drops and eye wash
- ☐ Prescriptions from doctor for any long-term medications (keep these current)
- ☐ Diphenhydramine (generic Benadryl) to help sleep and anti-allergy

Other Supplies

- ☐ First Aid book
- ☐ Writing material (pen, pencils, and paper)
- ☐ Scissors
- ☐ Tweezers
- ☐ Thermometer
- ☐ Cotton balls
- ☐ Bar soap
- ☐ Tissues
- ☐ Skin lotion
- ☐ Sunscreen lotion
- ☐ Paper cups
- ☐ Plastic bags
- ☐ Plastic spoons
- ☐ Safety pins
- ☐ Instant cold packs for sprains and burns
- ☐ Sanitary napkins
- ☐ _____
- ☐ Mylar space blankets
- ☐ Pocket knife
- ☐ Pre-moistened towelettes
- ☐ Splinting materials
- ☐ Sling
- ☐ Waterproof matches

Your Personal Disaster Plan





Your Personal Disaster Plan

Major disasters such as earthquakes, fires and floods may occur at times when family members are away at work or school. You can at least be confident that they will be able to take care of themselves if your family is prepared for the emergency.

Make Your Family Plan

- 👤 Sit down with your family and discuss what you will do during and immediately after a major disaster, regardless of where you may be when the disaster occurs. Decide such things as:
 - how to protect yourself during the event.
 - how and where you would evacuate.
 - how you would communicate with each other.
 - where you would rendezvous.
 - where you would stay.
 - how to protect your pets.
 - how much cash to have on hand and where to stash it. ATMs may be out of service in a serious earthquake.
- 👤 Take the time to fill out your Disaster Plan Worksheet, and post it by your telephone.
- 👤 Discuss also the problems associated with living in a disaster area. (see pages 46-49)

TIP . . .

Never let your car's gas tank fall below one quarter full. Gasoline will be scarce following a major earthquake if Highway 101 is closed. Also, electrically operated gas pumps may be inoperable if the electrical power is interrupted.

Tip...10 Minute Evacuation List

Create a list of personal items you would take with you if you only had 10 minutes to evacuate your home. Make duplicates of important papers and documents and store them in a safe deposit box or away from the home.

Keep this list with your
"EMERGENCY CONTACT LIST"

Household Earthquake Drills

The goal of these drills is to condition yourself and your family to react spontaneously and correctly when the first jolt or shaking is felt. Before you begin, review the information under the heading "During the Quake" on pages 26 and 27.

During a family drill, family members should take cover under or next to a heavy piece of furniture, or brace themselves in a strong doorway or an inside corner of the room. This drill is especially important for children.

Family members should also be taught to recognize the unsafe spots in a room: windows and other glass, fireplaces, mirrors, refrigerators, and tall, unsecured furniture.

In addition to duck, cover and hold, you should also review and practice all elements of your family emergency plan by playing "what if" games.



Household Fire Drills

The goal of home fire drills is to train your family how to behave during a fire emergency and how to find their way safely out of your burning home or neighborhood. Before you begin your drill, review the information under the heading "When the Flames Come," on pages 33 - 37.

Begin your drill by testing your smoke detector. Add a note of realism to your drill by activating the smoke detector with a lighted match or cigarette held beneath it. (Do not do this if your smoke detector is linked to a central monitoring system!)

Go through every bedroom in your home and, with family members, identify two ways of getting out of each room. If a window is to be a secondary means of egress, make sure that your children know how to remove the screens from their bedroom windows and how to open the windows.

Review with family members, especially children, the actions they should take if a smoke detector goes off in the home:

- ☞ Do not open any doors without first testing with the back of your hand to see if the doorknob is hot. If it is, do not open the door.
- ☞ If the room or hallway is filled with smoke, drop to your knees and crawl to avoid the smoke as much as possible. A wet towel or blanket thrown over your head and shoulders may also be advisable.
- ☞ Your first priority should be to get yourself and family members safely out of the building. Once outside, do not reenter the home. Call the fire department from a neighbor's home.
- ☞ If the house is on fire and the escape routes are blocked, close the door and stuff wet towels in the cracks under the door to keep out the smoke.

Decide now where family members will reunite after evacuating your burning home or neighborhood.

When conducting a family fire drill, remember that most home fires occur at night. You are apt to be awakened from a sound sleep by your smoke detector. It will be dark, possibly no electricity, and you may be confused and only half awake. Stress the importance of not opening a door if the doorknob feels warm.

In addition to stop, drop and roll, you should also play "what if" games to test your coping skills. For example:

5:00 p.m. _____

You are home alone. You have just opened your bookbag or briefcase to take out some work when you smell smoke. What does it mean? Should you call 911? Should you evacuate? (see page 34 if you aren't sure of the answers)

Teach all family members to STOP, DROP and ROLL if their clothes catch on fire. It is especially important for children and seniors to physically practice this exercise.



Your Personal Disaster Plan

Evacuation

If you are ordered to evacuate your home by a police officer or a firefighter, do so immediately. A delay of even 30 minutes may mean the difference between life and death, a tragic lesson learned from the Oakland hills fire of 1991.



Photo: Contra Costa Times, by Karl Mondon.

The single most important thing to do during a wildland fire or a gas-fed, post-earthquake fire is to get out of its way. Fire can travel faster than you can run. A fire will usually burn uphill during the day, at a rate of 5-10 miles per hour. At night, the pattern reverses and the fire will burn downhill at the same rate of speed. This does not necessarily mean that you must immediately evacuate, though you may choose to do so. It does mean that you should be prepared to evacuate. Tune your radio to local Emergency Radio Systems or to regional stations and listen for emergency evacuation information and emergency bulletins. Also listen for bullhorns ordering evacuations. Pay close attention because instructions will be determined by the fire's origin and direction. Some communities have a siren or horn that will be activated. When this happens follow your Local Emergency Plan.



Do not call 911 unless you have a life-threatening emergency.

Evacuation Routes

Paths, trails and stairs connect many Marin neighborhoods. In some circumstances these may provide your only means of escape. If you do not know where these trails are in your neighborhood, contact your neighborhood association or plan to map them with your neighbors. Also, walk them with your family so that all family members are familiar with them.

Identify at least two alternate vehicular and pedestrian escape routes from your neighborhood in case your primary route is impassable.

If vehicular evacuation is impossible, your bicycle may provide a fast evacuation alternative.



Family Reunification

If the family is unable to reunite at home, identify two or three reunion locations (e.g. neighbors homes, nearby church, school or park).

If your neighborhood has an organized neighborhood emergency response program, make sure that all family members know the location of your Neighborhood Emergency Command Center; include that location as one of your three reunion locations.

Tip... Telephone Service

Your regular phone may not work if you have lost electrical power. Keep a non-electric style phone next to your regular phone that you can plug in to use your phone.



Communications

Prepare yourself to receive information and communicate with family and friends without the use (or with minimal use) of your telephone. Telephone lines will be overloaded and may be inoperative due to damage.

To minimize calls into and out of the area, identify a relative or family friend who lives at least 200 miles away who can relay information regarding your condition to other family members after a disaster.

Inform friends and relatives of the phone number of your out-of-area contact person.

Make sure that family members, especially children, carry that number in their wallet, purse, backpack, etc.

Preset one of the stations on your car and home radios to one of the following emergency broadcast stations:

Ross Valley	1610	AM
Belvedere	840	AM
Corte Madera	1330	AM
KCBS	740	AM
KGO	810	AM

Note: Emergency broadcast stations vary from time to time, and those listed are subject to change.

If you and an ex-spouse have a non- or co-custodial parenting arrangement regarding your children, inform him or her of your disaster plans and out-of-area contact person. If possible, both households should use the same out-of-area contact.



Your Personal Disaster Plan

COMMUNICATIONS Cont'

"TENS"

Marin County participates in the countywide "Telephone Emergency Notification System" (TENS).

TENS is a high speed communications system that delivers emergency information or warnings to designated geographic areas. TENS is a combination of telephone, computer, and Geographic Information System (GIS) technologies.

TENS is designed to save lives by delivering recorded warning messages directly to the public in a very short time period.

The Marin County Sheriff's Office (MCSO) Office of Emergency Services (OES) manages and is the primary activator of the system.

Public Safety agencies in Marin County can use TENS for public safety missions. In the past, TENS has been used for evacuations hazard warnings, and searches for missing subjects. TENS could also be used for other missions including missing children, shelter-in-place advisories and severe storm warnings.

VITAL DOCUMENTS

You will need to document any property loss for insurance claims, income tax purposes, and applications for financial assistance. Having ready access to documents which could be difficult to replace, as well as those needed for completing application forms, will eliminate much delay and frustration.

- ☞ If possible, make two sets of your important documents.
Store them in different places so that if one set is damaged, a second set will be available to you.
- ☞ Take photographs, including a video record, of your house and its contents for documentation for insurance claims.
- ☞ Store the negatives to irreplaceable family photographs with a friend or relative at least 200 miles away.
- ☞ Make a written inventory of your belongings, including purchase price and date of purchase.
- ☞ If you have a computer, back up your information
- MAKE A 10 MINUTE LIST OF ITEMS YOU WILL TAKE WITH YOU, IF YOU HAVE TO EVACUATE QUICKLY. KEEP IT WITH YOUR "EMERGENCY CONTACT LIST"

Suggested Storage Sites for Documents:

- Safety deposit box
- At home, near a primary exit
- At your workplace
- Friend or relative at least 200 miles away
- Water-tight zipper style plastic bags in your freezer (don't include photos or videos)
- Garbage can in garage or storage shed

Important Documents:

- Insurance policies
- Deeds/home loan papers
- Medical/Medicare cards
- Birth/death certificates
- Social Security numbers
- Passports
- Tax returns (3 years)
- Will/trust documents
- Title to vehicles
- Professional licenses/ credentials
- Medical information
- Bank account numbers
- Household inventory



School Plan

Familiarize yourself with the disaster plan at your child's school, including the post-disaster student release policy. All schools conduct regular earthquake drills and most are prepared to shelter students until they are picked up by a parent or authorized representative.

Authorize a neighbor or relative to pick up and care for your child in your absence.

If your child has been asked to bring a "comfort kit" to school, be sure to comply with the request. A snack, a small toy, family photographs, and a comforting note from a parent will go a long way to ease the anxiety of a small child separated from his family following a disaster.



Teachers practice evacuation, search and rescue, and first aid skills during an earthquake drill at Mill Valley's Edna Maguire Elementary School.



Photo: S. Moxon.

Photo: S. Moxon.

Light fixtures were dislodged in Coalinga's schools during a 1983 earthquake.



For your child's safety . . .

- ☛ Place the name and phone number of your out-of-area contact in your child's bookbag or backpack and make certain that the child knows what it is and why it is there.
- ☛ Many families have a password and instruct their children never to go anywhere with anyone who does not know the password.
- ☛ Instead of telling very young children never to talk to or accept rides from strangers, tell them, "Never talk to or accept a ride from someone you don't know". Young children very often do not know what "strangers" are, and will describe them in terms of a fairy tale .



Your Personal Disaster Plan

Insurance

It is suggested that you analyze your specific needs and then consider the quality and cost effectiveness of the alternatives with your insurance professional or attorney.

Earthquake Insurance

Earthquake insurance should be considered by those home owners who cannot afford to lose a major portion of what may be their largest asset—the equity in their home.

www.earthquakeauthority.com

Flood Insurance

If you live in a flood prone area, buy flood insurance. Flooding is not covered by a homeowner's policy.

www.fema.gov/nfip/

Fire Insurance

After a major fire, the only thing standing between you and financial ruin may well be your insurance policy. Read it

carefully. Review the following types of coverage with your insurance professional or attorney.

Replacement Guarantees

Replacement guarantees vary. Some policies offer replacement only to the cash limits of the policy. Other full replacement guarantees end when the coverage amount drops below 80% of the home's current value. If your insurance has not kept pace with your home's value, you can build inflation protection into it or update it periodically.

Code Upgrades

If you live in an older house with features that don't meet current building and zoning codes, you may need additional coverage for the cost of code upgrades. This usually requires a rider that adds about 10% to your premium.

Contents

Contents coverage is crucial. Victims of fire consistently regret having insufficient contents coverage.

Renter's Insurance

If you are a renter, you should consider a renter's insurance policy. This may be your only protection if your personal property is destroyed by fire.

Living Expenses

Fire victims often find that they have inadequate coverage for rent and other living expenses. It can take two years or more to rebuild a home destroyed by fire.

Making a Claim

You will have to document your loss before making an insurance claim. The best way to do this is to take an inventory of your belongings before the loss, documented with dated receipts, photos and serial numbers. Photograph each wall of each room. Write what's in the photos on the back of each, or walk through the house with your camcorder and do a running dialogue. Remember to include the exterior of the house, landscaping, outdoor furniture, pool, etc. Keep these records in a fire resistant box.



During the Earthquake



Photo: San Francisco Chronicle, by Michael Malone.



Earthquake

During the Quake

8:00 p.m. _____

The ground beneath your feet begins to move. The books on the bookcase fall to the floor. The bookcase lurches, then topples. The hanging plant in the corner sways, gathers momentum, sails off its hook and smashes through a window.

A major earthquake will cause violent ground shaking and may make it impossible to stand up. Most injuries result from falling or flying objects and, in some cases, from collapsed ceilings or walls. At the first sign of shaking, you should take cover and protect yourself from falling or flying objects.

If You Are Indoors . . .

Stay there! Unless the building is in danger of collapse, it's the safest place to be.

- ☛ Move away from bookcases, china cabinets, fireplaces, and glass doors and windows which can shatter. Don't try to hold things up, move away from them.
- ☛ Duck, cover and hold. Take cover under a sturdy table or desk; hold onto the legs, if possible. Or brace yourself in a doorway or against an inside wall.
- ☛ If you choose to stand in a doorway, be careful that the door doesn't slam shut and crush your fingers.



If You Are Outdoors . . .

- ☛ Move to an open area away from buildings, power lines, chimneys and trees.
- ☛ Try to duck, cover and hold. Get under a picnic table, bus bench, etc.
- ☛ If you are downtown or near tall buildings, duck inside a building doorway immediately to avoid falling glass and debris. Stay out of the street because that's where falling debris will land.

Do this . . .



NOT this . . .





If You Are in a Crowded Public Place . . .

- 🐾 Don't rush for the door. Your chances of being trampled are greater than your chances of being injured by the quake.
- 🐾 Stay in the center of the room, away from plate glass (it may implode).
- 🐾 Move away from display shelves containing objects that may fall.

If You Are in a High-Rise Building . . .

- 🐾 Stay away from plate glass windows and outside walls.
- 🐾 Move away from filing cabinets and bookcases.
- 🐾 Duck, cover and hold beneath a sturdy desk or table.
- 🐾 Don't be surprised if the lights go out, or if the sprinkler or fire alarm systems go on.
- 🐾 Use the stairs if evacuation is called for. Elevators are an unsafe means of evacuation.

If You Are in Your Car . . .

- 🐾 Put on your flashers and pull over to the side of the road, away from power lines and overpasses.
- 🐾 Turn off your ignition and set the brake.
- 🐾 Duck and cover your face and head so that breaking windshield glass won't hurt you.
- 🐾 Stay inside the car until the shaking stops.
- 🐾 Do not attempt to cross bridges or overpasses that may have been damaged.



If You Are Disabled . . .

- 🐾 If you are in a wheelchair, stay in it. Move into a doorway or to an inside wall away from bookcases, glass, etc. Lock the wheels and cover your head with your arms.



Earthquake

What to do Immediately After the Quake

- 👉 Check yourself and the people around you for injuries. Shock often hides pain. Give first aid if needed.
- 👉 Do not turn on a light switch or light a match until you are sure there are no gas leaks. Use a flashlight.
- 👉 Check for fires and damage to your utilities.
 - Do you hear or smell a gas leak? If so, turn off the gas valve immediately and open the windows to ventilate the room if possible. Do not turn off the gas unless you suspect a leak. Remember, once you turn off the gas only a licensed plumber or PG&E can safely turn it back on, and this may take weeks. Do not attempt to turn the gas back on yourself.
 - If you smell hot insulation or note damaged appliances, shut off the electricity. Turn off nonessential or damaged circuits at the panel. Hang up the telephone. Turn off the TV.
- 👉 Protect your water supply. Your water lines may be broken, especially at the water heater and toilets. If that happens, shut off the water at the main valve (at the street). Shut the main inlet and outlet valve to your water heater to preserve the water in the tank for future use.
- 👉 Check for fallen electrical wires. If any are found, assume that they are hot and do not touch them. If possible, call PG&E.
- 👉 Check for structural damage to the house.

Look for cracks, damage to the foundation, chimneys or roof. Evacuate the building if necessary.

If your walls have become badly cracked or bowed, out of plumb, offset, or otherwise seriously altered, or if there is separation between walls and ceiling, get out of the house. An aftershock could bring it down.

If you evacuate, take your emergency supplies with you. Post a notice that the building is unsafe and empty of inhabitants. Indicate where you've gone.
- 👉 Clean up broken glass, medicines and other hazardous materials.



Do not call 911 unless you have a life-threatening emergency.

For information and emergency bulletins, tune your battery-operated or car radio to one of the local media stations:

Ross Valley	1610	AM
Belvedere	840	AM
Corte Madera	1330	AM
KCBS	740	AM
KGO	810	AM

Note: Emergency broadcast stations vary from time to time, and those listed are subject to change.

- 👉 Retrieve your children from school only when you are certain that your home is safe and hazardous conditions have been cleaned up. They will be safer at school than they will be returning to unsafe conditions at home!
- 👉 Retrieve your emergency supplies.
- 👉 Check on your neighbors.
- 👉 Check in with your neighborhood block captain.
- 👉 Stay tuned to the radio for emergency news, and stay off the telephone.
- 👉 Get ready for aftershocks:

Take down any unsecured artwork that made it through the first shock. Lay it flat on the floor or on a table.



- Wrap breakables in blankets, close cabinet doors with rubber bands, cover furniture.
- Hang up telephones, turn off or unplug kitchen appliances, televisions and computers.
- Don't put back anything that will fall again during an aftershock.

☞ Stay at home if you possibly can, or find shelter with a neighbor. Your primary shelter will be your own home.

☞ Listen to your portable or car radio for your area's Red Cross shelter location if you do not have a neighborhood organization, a relative or someone else to whom to turn.

Local Shelter Locations

Check with your local Town or City for the nearest Shelter and make a family plan to reunite.

Tip:

The best place to seek Shelter is your own home provided it is safe to do so



Photo: EQE International

Do not light a fire in your fireplace or wood stove, even if you have lost your gas heat and it is cold. To do so before the chimney has been checked by experts for unseen damage would be to risk setting fire to your house.

Earthquakes often lead to major fires, fed by broken gas lines, and to landslides.



When the dust settles . . .



Unbraced cripple walls collapse.



Chimney collapse is a widespread problem.



Roof Collapse



Reduction of Hazard Risks (continued)

89 San Francisco 7.1 Richter Scale

Damage to older homes built before earthquake codes.



The basic square single-story, wood-frame house is one of the safest types of structures in an earthquake. The amount of damage incurred should be minimal if the house is properly engineered and built.

The key to a well-designed building is its ability to withstand an earthquake as a single unit. All structural elements must be securely tied together.

The shaking and lateral forces of an earthquake will attack and separate building components at their weakest points. The foundation must act as a single unit; the structure must be tied to the foundation to keep it from sliding; and the studs in the exterior walls must be tied together to reduce deflection and provide strength. The floors, roof, and interior walls must be tied securely to the walls to act as diaphragms and lateral supports.

84 Morgan Hill 6.2 Richter Scale

Damage to newer homes improperly designed or constructed.



Reprinted with permission from Home Earthquake Preparedness Guide by EQE International

Fire!



Photo: Courtesy of Tiburon Fire District

Tiburon Fire District Engine Company 611 at the Point Reyes Fire 1998

The fire generated incredible winds. The fire came through the residential neighborhood of Drakes View Dr. with such intensity, all we could do was seek shelter in the homes until the flames past by. After it was safe we exited the homes and put out all the spot fires that had started around the home

*Ed Lynch, Battalion Chief
Tiburon Fire District*



Fire

When the Flames Come

3:00 p.m. _____

The wail of the Fire Engine's emergency siren rivets your attention. You smell smoke, and at the same time notice that the sun has been obscured as though by summer fog. A major fire is raging up the hillside toward your neighborhood.

If and when the flames come, your life may well depend on making correct decisions, most of them related to when and how to evacuate. Our first inkling of a fire may come from a phone call from a neighbor or from hearing sirens

However you learn of the danger stay calm and don't panic.



Do not call 911 unless you have a life-threatening emergency.

- 👉 Tune your radio to local media such as KCBS 740 AM, KGO 810 AM or local emergency radio system.
- 👉 If ordered to evacuate, do so at once. Any delay can risk your life.
- 👉 Alert neighbors to the danger, especially if they are seniors, disabled, or children who may be home alone.



- 👉 Move your car off the street so that you don't block emergency vehicles. Park in your driveway with the front of the car facing the street.
- 👉 Get dressed in cotton or wool long pants, long sleeved shirt, gloves, and sturdy shoes.
- 👉 Begin assembling your irreplaceable possessions for evacuation (photo albums, original art, address books, stocks, bonds, vital medications, etc).
- 👉 A swimming pool may be a safe place for valuables (dishes, silver, etc.), wrapped in weighted plastic bags.
- 👉 Confine your pets.

*** Assemble your 10 minute evacuation list



Photo: S. Moxon.

A face mask or dry towel will filter smoke from the air you breathe. Goggles will protect your eyes from smoke and wind-borne debris.



You may be strongly tempted to stay and fight the fire. Don't do it. You will be endangering your life only to face the real possibility that there will be no water coming from your garden hose when the flames arrive. The wiser choice is to evacuate quickly and calmly when requested to do so.

🚒 If there is time, prepare your house before you leave:

- Shut the gas off.
- Close metal blinds to deflect heat. (Houses can be ignited from within by intense radiant heat.)
- Remove curtains and drapes. Move flammable items away from the windows, into the center of the room.
- Close all interior doors.

🚒 If there is time, help firefighters do their job:

- Connect garden hoses to all your outside spigots.
- Set a ladder against the house in a visible place on the side away from the fire.
- Place shovels, rakes, and hoes in a visible place.

🚒 Take a portable radio when you evacuate. Listen for updates on the fire's direction and the safest escape routes.

🚒 Get off the road and out of the way if you are evacuating by car and are confronted by approaching fire trucks.

🚒 Be prepared to leave your car if necessary and continue your evacuation on foot. Do not leave your vehicle where it will block the road or hinder firefighters.

Once safely away from the flames, family members should head for your agreed-upon reunion location.

What if you've waited too long to escape, or you become trapped by fast-moving flames on your way out?

🚒 *If the roads out of your neighborhood become impassable due to abandoned vehicles or the approaching fire, evacuate on foot or bicycle using the trails and stairs which connect many neighborhoods.*

🚒 *If you are evacuating by car and become trapped by fire, park clear of vegetation, close the windows and vents, cover yourself and lie on the floor. Do not leave the vehicle.*

🚒 *If you are evacuating on foot or bicycle and become trapped by fire, find an area clear of vegetation along a road or lie in a ditch and cover all areas of exposed skin.*

🚒 *If you are trapped in your home and have no escape route, close all windows and doors, leave them unlocked. Stay away from outside walls. Use a dry towel to filter smoke from the air you breathe.*

- *Remember; Never leave your vehicle blocking a roadway. It may trap your neighbors or block emergency vehicles from accessing your neighborhood.*

🚒 **To do now:**

- Identify alternative vehicular and pedestrian routes from your home.
- Locate neighborhood stairways and walk them with your family.



Protecting Lives from Fire

Most of the vegetation in Marin County is extremely flammable: grasses, broom, oak, pine or eucalyptus, manzanita, and pampas grass.

The keys to protecting ourselves from devastating wildland fires are:

- Prevention of fires
- Notification of the public when a fire develops
- Evacuation in a rapid, orderly fashion

Firefighters assess fire risk by computing a "burning index" based on temperatures, wind speed and direction, humidity, and weather forecasts. When the index rises above 41, a "red flag day" is declared, Mount Tamalpais is closed, and red, fold-down warning signs are opened at key spots.

Your Part: Smoke Detectors

Make sure you have smoke detectors placed where they will do the most good if a fire starts inside your home. Have them

- On the wall or ceiling outside bedrooms
- On each floor of your home

Test smoke detectors monthly and replace batteries once a year, at the same time you rotate your emergency food supply and water supply.

Tip:
Change your food and water supply before the winter holidays and donate the food to a charity

Fire Prevention

The Fire Departments Part: Red Flag Days

Among the many fire prevention steps taken by the Fire Department is the adoption of a "red flag day" warning system to alert residents of extreme fire danger conditions.

Do no burning of any type on red flag days. Do not use your fireplace or your barbecue.

"The index tells us how fast a fire could spread. When we say "red flag," we're really not messing around".

Marin County Fire Marshal

Your Part: Home Hazard Check

Be fire safe inside your home as well as outside

- 🔧 Be sure your electric outlets are adequate to handle your appliance loads.
- 🔧 Keep flammable items away from wall and floor heaters.
- 🔧 Take care with candles and space heaters.
- 🔧 Store flammable liquids in air-tight containers away from ignition sources such as pilot lights.

-Your Part: Fire Extinguishers

Keep multi-purpose fire extinguishers (2-A:10-B:C Rated) handy:

- In the kitchen
- In the garage

Check your fire extinguishers at least once a year and replace them as needed.

Be sure that all family members know how to use your fire extinguishers!

-Your Part: Neighborhood Cooperation

Encourage your neighborhood to organize for mutual protection and benefit. Specific fire prevention measures are discussed in the "Neighborhood Preparedness" section.



Protecting Your Property from Fire

It is estimated that one house caught fire every 11 seconds for the first 10 hours of the Oakland firestorm of 1991. Think about it. The fire ultimately destroyed 2,449 single-family homes and 437 apartment and condominium units. Firefighters must decide which structures to defend when fighting a wildfire. These decisions are based on many variables, including accessibility, vegetation, and building materials. The shake-roofed house surrounded by dense vegetation and overhanging trees at the end of a long, narrow driveway probably would not be defensible. What can you do to make your home defensible? Quite a lot, beginning with yard and home maintenance.

TIP . . .

Fire Safe Marin has excellent information to help Homeowners become safe in the wildland urban interface. Contact Fire Safe Marin at 415-446-4420

or
contact

www.firesafemarin.org

Landscape Against Fire: Vegetation Management

Your Part

Clear brush, weeds and dry grass within 100 feet of your home (the exact amount determined by slope, wind, neighborhood density, house construction). Fire officials throughout the nation agree that this step alone will reduce the odds that your house will be destroyed by a wildfire.

Space the remaining vegetation into distinct groups to create fuel breaks.

Eliminate highly flammable plants from your yard, plants that are known for the amount of dead fuel that accumulates in them, and the high oil, high resin, or low moisture content of their leaves and branches. A list of these plants and trees is available from your local nursery.

Leave garden hoses connected to all outside faucets to provide a means of immediate fire protection.

Trim dead branches out of your trees.

Prune tree branches that overhang roofs. Remove lower tree limbs to a height of 10 feet, and remove trees within 10 feet of structures.

Keep grasses and ground covers trimmed low under trees so that ground fire will not have a ladder to climb up to your tree's canopy.

Keep landscape watered; don't let it dry out.

The City and Town's Part

Through contracted services between cities, County Governments and refuse services, green cans are provided for residents to dispose of weeds and garden trimmings every two weeks. In addition, they have made available free chipper days when neighborhood groups can rid themselves of dead brush and branches.

The City & Town work systematically to keep its roadways clear of trees and vegetation which could obstruct fire trucks, to clear vegetation from open-space interface areas and to remove dead trees from City property.



Protecting Your Property from Fire (continued)

Home Maintenance and Construction

Home maintenance, and the selection of fire resistant building materials, are the next big things you can do to protect your house.

- 🏠 Display easy-to-read house numbers which should be clearly visible from the street, day or night.
- 🏠 Install spark arresters on the chimneys.
- 🏠 Incorporate fire resistive building practices and materials if you are remodeling or building a new home:*

Class "A" fire rated roofing materials

Residential fire sprinklers (required on all new construction and substantial remodels)

Stucco instead of wood or wood shake siding

Tile, concrete, or rammed earth instead of wooden decks

Screens on all porches which have access under the house to prevent embers from landing on them

All eaves eliminated or covered with a noncombustible material, like stucco

Minimal glass on walls where a fire would likely approach

Wide, clear driveway to give fire trucks access to your home

* Contact the your local Fire Department or the local Building Inspector if you have any questions about fire resistive construction or compliance with applicable laws and regulations

TIP . . .

Clear your rain gutters of debris during the fire season as well as the rainy season. Many houses are lost in fires when embers ignite litter in the rain gutters, even when the roofs are fire retardant.

Your Local Fire Department will walk your property or your neighborhood with you to point out the hazards. Contact them for assistance.

Storms:

Flood, Landslide & Power Outages



Swift Water Rescue Member fronting San Anselmo Fire Station 12/31/2005



When the Water Comes

Flooding in the low lying areas could occur when heavy rainfall is combined with high tide. Storm runoff can also cause flooding to hillside homes.

- ☛ If your house is in the path of heavy runoff, keep plywood, plastic sheeting and lumber on hand to divert water.
- ☛ If your house is in one of low lying flat areas, and your basement is subject to flooding, consider installing a sump pump with generator backup.
- ☛ If there is a possibility that water will engulf electrical or gas outlets, turn off electricity and gas at the meters.
- ☛ If sandbags are needed to keep water at bay, purchase the sand and the bags before the rainy season. Stockpile as many filled bags as you think you may need. Refer to "How to Fill and Stack Sandbags" on this page.
- ☛ Don't walk through floodwaters that are more than knee deep. If you are trapped in your home or building, move to a second floor and wait for help to come.
- Keep gutters and storm drains free of leaves and debris



Photo: Downtown San Anselmo 12/31/05.

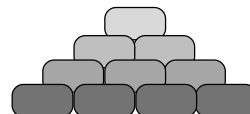


West Marin during 12/31/05 flood

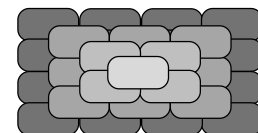
- ☛ Do not drive where water is over the road. The road bed you think is there may not be. If your car stalls, abandon it immediately and seek higher ground.
- ☛ Do not sightsee in flood areas. Avoid unnecessary trips.

How to Fill and Stack Sandbags:

- ☐ Fill bags $\frac{1}{2}$ to $\frac{2}{3}$ full and tie at the top. Overfilled bags will not lie flat, and will leave gaps.
- ☐ Sandbags should be stored or placed as close as possible to the point of use. They should be covered and kept dry when not in use.
- ☐ Stack sandbags flat on ground, overlapped and overstepped. Tamp down.



Side view, stairstepped



From above, overlapped

- ☐ Do not stack them against outer walls of the building. Wet sandbags can add extra pressure to a structure.



Landslides

- 🏠 Inspect your property for land movement, retaining wall failure and blocked drainage ditches, storm water pipes or down spouts. Clean out ditches and drains for proper water flow away from structure.
- 🏠 If you suspect a potential for landslide, contact an engineer to look for signs of land movement and review and, if necessary, repair any retaining walls.
- 🏠 Review an escape route in case you need to vacate your home because of a slide above or below you. Learn the safest routes to adjacent property or city streets.
- 🏠 Meet with your neighbors to discuss and repair mutual drainage problems.
- 🏠 In addition to basic emergency supplies, have sandbags and lumber on hand to block any minor mudflow until you can get a contractor's help.

Tip... Landslides

If you discover any earth movement or landslide, immediately leave the area.

Notify:

neighbors and City or Town Officials immediately





Life Without Power

Power Outages

In addition to causing flooding and landslides, major storms often cut off power for long periods of time.

What to Do:

Treat all downed power lines as if they are "live" or carrying electric current.

Do not touch or try to move them.

Report downed power lines immediately to PG&E and 911. If a power line falls across a car that you are in, stay in the car. If you must leave it, jump clear so that no part of your body is touching the car when your feet touch the ground.

- ☞ If you have a generator, you are required by law to inform PG&E and make sure that it is installed safely. If it's not, you risk damaging your property and endangering the lives of lineworkers who may be working on power lines.
- ☞ If you have a fireplace be sure it is safe to use. Keep an ample supply of dry fire wood in an accessible spot. Burn wood or logs made of newspaper. Don't burn charcoal indoors as it releases carbon monoxide, an odorless and sometimes deadly poison.
- ☞ Every home should have battery-powered radios, flashlights and lanterns, as well as fresh batteries.
- ☞ If your water is pumped electrically and there is enough warning before a major storm, fill your bathtub and spare containers with water in case the power goes off. You can flush toilets by pouring a bucket of water into the bowl.

How to get Information

During an emergency or a lengthy power outage, call PG&E at 1-800-743-5000 for information on progress being made to restore power in your area.

Unplug or turn off electric space heaters and stoves, washers, dryers, TVs, microwave ovens, computers, refrigerators and freezers. Otherwise, when power is restored, several appliances may come on at one time and overload your circuits, or hot appliances may come on when you are away or asleep and pose a fire hazard. Leave a single lamp on to alert you when power returns.

- ☞ Keep cash available in the event a power outage prevents ATM machines from operating.
- ☞ Learn to disconnect electric garage doors so they can be operated manually.
- ☞ If you rely on portable phones, keep a standard model which can be plugged into a jack for emergencies.

TIP . . .

Resist the urge to keep checking inside your freezer or refrigerator. Every time you do, you let in warm air which reduces the unit's effectiveness. You may want to keep a supply of canned foods handy in case your power is off for a long time.

Living In a Disaster Area



People will be displaced from their homes and will live in temporary housing for a number of days or weeks.



Living in a Disaster Area

Communication

In a disaster, people naturally call their family and friends. Too many people calling at the same time overloads the telephone system, and prevents critical calls from getting through. Make only those calls which are truly necessary. Rely on your radio for information about local conditions. Do not call 911 for information!



Do not call 911 unless you have a life-threatening emergency.

Cellular phones, especially if satellite-based rather than land-based, can be very useful and were used extensively after the Loma Prieta earthquake in 1989.

As the crisis eases, check in with your out-of-area contact.

TIP...

If you must use the phone and cannot get a dial tone on your telephone, remember that pay phones have a priority dial tone and usually keep working after a disaster.

Housing, Childcare, and First Aid Assistance

Your primary shelter will be your own home. Stay there if you possibly can, or find shelter with a neighbor.

If you need assistance and your neighborhood has already organized into disaster response teams, you will have support nearby for first aid, housing, childcare, and much more.

If you do not have a neighborhood organization, a relative, or someone else to whom to turn, listen to your portable or car radio for the Red Cross shelter location for your area.



If you can give assistance, the location of a Volunteer Center (if one is established) will be broadcast over the radio. Your assistance will be especially valued if you are a:

1. Nurse or medical doctor
2. Member of the clergy, counselor or psychologist/psychiatrist
3. Engineer or heavy equipment operator
4. Firefighter
5. Ham radio operator
6. or if you are trained in Shelter Management, search and rescue, first aid, or Incident Command System (ICS)

If you have any of the above skills and would like to help in a disaster please call the Local Town, City or Fire Department to inquire about programs available and register your interest.



Sanitation

Do not flush toilets or dump water into sinks or bathroom drains until told that sewer lines are intact.

To avoid the spread of disease or the contamination of water supplies, family members should know emergency methods of waste disposal, including how to make a temporary toilet.

A temporary toilet can be made by lining your toilet bowl (or a watertight plastic or metal container), with a large, extra-strength water-proof trash bag. Household disinfectant can be used for odor control.

Urine is sterile (germ free), so it is more of an odor problem than a health problem. Solid wastes (feces) are the main health problem, and must be dealt with carefully. Whenever possible, dispose of feces by burial. Do not empty bags into the sewer until notified by public officials that it is okay to do so.

Human waste can also be buried in a dug latrine or trench 2 to 3 feet deep. Spread a thin layer of powdered lime and a layer of earth each time it is used.

Using Emergency Food

First: Use perishable food from the refrigerator.

Second: Use food from the freezer. Minimize the number of times you open the freezer.

Third: Use non-perishable food and staples from your pantry or emergency supplies.

When using food from your emergency supplies that has been stored for a long period of time, be sure that it is still safe. Discard cans that bulge at the end or are leaking.

The liquids from canned fruit, vegetables and other canned goods are a good source of consumable fluids.

Do not eat or drink anything from open containers near shattered glass.

Using and Purifying Water

Assume tap water is contaminated until told otherwise. Purify water that you use from other sources in your house besides your emergency supplies, such as your water heater or toilet tank (not the bowl). Use the bowl water for pets.

Water purification tablets may be used; they have a short shelf life, so check the expiration date before using.

To get the water out of your water heater, turn off the heater and its cold-water supply. Open a hot-water faucet somewhere in the house, and drain the tank into a container. If you think the heater's glass inner lining may be broken, filter the water through cloth or paper.

Use water from swimming pool or hot tub only after all other sources of pure water are exhausted. It is better to use it only for sanitary purposes.

Water from radiators or water beds is never safe to drink and should be used only for sanitary purposes.

To purify your water, boil it vigorously for 10 minutes, or add liquid bleach with 5.25% sodium hypochlorite (chlorine bleach) as its sole ingredient in these amounts:

<i>Water Amount</i>	<i>Chlorine Bleach if Water is Cloudy</i>	<i>Chlorine Bleach if Water is Clear</i>
<i>1 quart</i>	<i>4 drops</i>	<i>2 drops</i>
<i>1 gallon</i>	<i>16 drops</i>	<i>8 drops</i>
<i>5 gallons</i>	<i>1 teaspoon</i>	<i>1/2 teaspoon</i>

Wait 30 minutes. The water should have a slight chlorine smell; if it doesn't, repeat dosage and wait 15 more minutes.



Living in a Disaster Area

Travel

Stay off the streets unless it is necessary to travel. Do not go sightseeing. Cooperate with neighborhood and community efforts to keep the streets clear for fire trucks and other emergency vehicles.



After a major earthquake, people living in coastal or near coastal areas are in serious danger from huge earthquake-created tidal waves. Called tsunamis, these tidal waves can reach heights of 50 feet and attain speeds of up to 400 miles per hour, and can cause massive loss of life and property. If you are in a low lying coastal area or close to one, move several miles inland immediately after a major earthquake. Never go to watch a tsunami; if you see one, it'll be too late to get away.

Pets

A safe, familiar place for a frightened pet might be your car. Make sure that it has enough water and adequate ventilation.

If you must evacuate, be aware that animals other than service animals may not be allowed in public shelters.

Following a disaster, the Marin Humane Society will look for and pick up lost animals, as well as put out food for them. They will also house or find foster care for animals waiting to be reunited with their families.

Recovery

Damage Repair

Document damage with photographs or signed statements from neighbors. Keep records of all repairs or demolitions. Talk to your accountant; losses can be tax deductible, and you can amend returns back two years.

If your home suffers damage that requires professional assistance to repair or rebuild, be aware that natural disasters tend to attract unlicensed and unscrupulous contractors who solicit door-to-door, offering to do repair jobs on-the-spot and requiring a large down payment. Many never return to do the work.

Even on the smallest job, get a written contract that contains all the details of the job to be performed. Get three bids. Ask for local references, and check the status of the contractor's license and bond with the California Contractor's State License Board.

Psychological

Fires and earthquakes are terrifying experiences. Be aware of the trauma they cause. Be patient with yourself and with your family.

Make sure you go over the event with your children and get them to talk about their feelings, and try to get them back into a near-normal routine or constructive activity as soon as possible. Listen to the radio for news of school closures and reopenings.

Many schools will make a counselor available to talk to the children having difficulty in dealing with their fears and/or their losses.

Some common emotional responses to disaster:

- Sadness or depression
- Anger or irritability
- Confusion
- Inability to concentrate
- Forgetfulness
- Fatigue or hyperactivity
- Withdrawal
- Poor appetite
- Insomnia or nightmares
- Headaches or nausea
- Increased use of drugs or alcohol

Children may show additional reactions. They are normal, and usually go away within a few weeks:

- Fear of the dark
- Fear when parents are away
- Worry
- Clinging, emotionally needy
- Aggression
- Immature behavior (e.g. bedwetting, thumbsucking)

Neighborhood Preparedness



Photo: Tiburon Peninsula Foundation

Local fire officials meet with residents to review Disaster Cache and Get Ready Program



Neighborhood Preparedness

Working Together

Community Emergency Response Team (C.E.R.T.) Training

All Marin Fire Agencies offer Community Emergency Response Team (C.E.R.T.) training. The program was developed to help citizens be self-sufficient by developing multi-functional teams, cross trained in basic emergency skills, to act as an adjunct to City and County emergency services.

The course teaches utility control, light search and rescue, fire suppression, disaster medicine/triage and team response. Call your Local Fire Department if you are interested in this training.

Southern Marin CERT	415-388-8182
Central Marin CERT	415-927-5077
San Rafael CERT	415-485-5002
Novato Fire District HEART	415-878-2690
Marin County CERT	415-499-6717

General Neighborhood Disaster Planning

However well-prepared we may be as individuals to cope with an emergency, neighbors must depend on neighbors for mutual assistance and protection.

Your "neighborhood" may consist of the homes on your street or in close proximity. It may be your apartment or condominium complex.

Neighborhoods which have a homeowners association, a neighborhood association, or a Neighborhood Watch program may already have the basic framework for effective disaster planning.

Some of the vital disaster prevention and response tasks which neighborhood groups perform are:

1. Disseminating information on personal preparedness.
2. Identifying neighbors who are disabled, elderly, or children who are often home alone and establishing procedures to assist them in case of emergency.
3. Developing fire prevention programs for the neighborhood.
4. Organizing into disaster response teams to help each other after a major disaster such as an earthquake.

Neighborhood Fire Prevention

Experience shows that the most effective fire prevention measures are those implemented by the people living in the neighborhoods effected.

Depending on the needs of your neighborhood, an effective fire prevention program might include:

- Arranging for grass cutting on common open space
- Organizing broom-pulling/fuel elimination work parties
- Encouraging irresponsible neighbors to comply with vegetation management, roof cleaning, brush abatement ordinances, and parking regulations which ensure the passage of fire trucks
- Developing and disseminating information on neighborhood non-vehicular evacuation routes
- Planning work parties to maintain neighborhood steps and trails for non-vehicular evacuation
- Ensuring proper signage for street names, dead-end streets, and trails
- Arranging for fire suppression training

TIP . . .

To help neighborhoods and neighborhood associations develop emergency preparedness planning, an Organizing Your Neighborhood for Disaster Preparedness Program can be obtained by calling your Local Fire Department.



Earthquake Disaster Response Teams

Neighborhoods need to be organized and able to function as a group, independent of any outside help, for at least three days following a major earthquake. That is how long it may be before police, fire and ambulance services are able to respond.

Neighbors typically organize into teams to perform disaster response functions such as:

- Neighborhood Coordinator
- First Aid
- Fire Suppression
- Light Search and Rescue
- Child Care
- Shelter
- Evacuation Planning
- Damage Assessment
- Communication Coordination



Photo: E. Lynd

Urban Search & Rescue Crews Train on old Tiburon Town Hall building

Getting Started

The City, Town and Fire Agencies will be pleased to assist interested neighborhood groups by providing training materials and guidance.

Contact your Local City / Town or Fire Department

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WE ARE READY



Get Ready Marin

HOUSEHOLD DISASTER PREPAREDNESS

Check List: Please check all completed boxes

- ☐ We have completed the two-hour training course and reviewed the Disaster Preparedness Manual and filled in vital information as directed.
- ☐ We have acquired recommended emergency equipment and supplies for our household.
- ☐ We have acquired enough food and beverage to last three days for each member of our household.
- ☐ We have stored equipment, supplies, food and beverage in one place.

(See other side)

GET READY MARIN COURSE COMPLETION RECORD

Please Print

Name _____

Address _____

Phone Number _____

E-Mail _____

(This will be a method to update you on developments in
Local disaster and preparedness issues. We will never
rent, trade or sell our E-mail list to anyone for any reason whatsoever.)

How many in your household? _____

I certify that our household is ready for a disaster _____
signature

DELIVER THIS FORM TO YOUR LOCAL CITY /TOWN HALL OR FIRE DEPARTMENT

THANK YOU FOR MAKING MARIN
A
DISASTER RESISTANT COMMUNITY

20% OFF LISTED DISASTER SUPPLIES AT

FAIRFAX LUMBER

109 Broadway Blvd.
Fairfax, CA 94930

<http://www.fairfaxlumber.com/>

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With completion of the
"Get Ready program"

Present booklet with coupon still attached

**Serving Marin County since 1912
100% employee owned**

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Your Home & Garden and
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1155 Magnolia Ave., Larkspur 461.5330

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