

BrightSide



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City of Palm Desert

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Major Earthquake

As the staggering magnitude of the Gulf Coast hurricane disasters unfold, Palm Desert residents probably wonder "Will we be prepared if a major disaster happens here?"

By reviewing this special issue of the *BrightSide*, you are taking the first step in being prepared. This information will assist you in getting as prepared as possible for a major earthquake and to let you know that preparation must be an ongoing process. The City of Palm Desert, our neighboring cities, Riverside County, and California have spent much time and money preparing for a disaster.

However, there are limitations of what can be done to help you. The best source of help will be yourself. It is extremely important to realize you may need to be self-sufficient for one, two, or more days. The only way to be truly self-sufficient is to take two main actions in advance: 1) *Plan* and 2) *Prepare*.



Gary Rosenblum
City of Palm Desert
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Manager

What is the difference between Planning and Preparation? Planning for a disaster is taking the steps to imagine what it could be like when the earthquake hits, and deciding ahead of time what you will do before, during, and after the quake. Preparation is assembling the necessities to



San Andreas Fault

photo credit: Arthur Coleman

be self-sufficient before the big quake strikes and making sure your supplies are accessible in the days that follow.

Please review the checklists and tips included in this publication. Be creative and add your own ideas. If you have not started planning and preparing, please start today. Earthquakes are not like hurricanes. They strike without warning and can happen any time of the day or night. The size of the earthquake also is unpredictable. The only known factor is that the potential size of the earthquake is related to the size of the fault line on which it occurs. We live near California's largest fault line, the San Andreas Fault, so everyone must be prepared for the largest potential earthquake. Statistics show that one is overdue.

The good news is planning and preparing is not difficult. Once it is done, all you need to do is regularly refresh your supplies and fine-tune your plans, perhaps each year at Daylight Saving Time. You may find that being prepared and knowing what it takes to survive a disaster makes living in earthquake country easier.

Business Emergency Planning

Businesses of all sizes must plan and prepare for a major disaster. This can be simple for small businesses and more complex for larger ones. Businesses that are part of national or regional chains need to make sure that Corporate Headquarters understands the potential for an earthquake disaster at its Palm Desert store or office and provides resources accordingly. The basics for businesses:

- **Direction and Control:** Develop a chain of command. Know who is in charge and organize employees into teams and evacuation groups. Make sure there are alternates because not everyone will be present.
- **Communications:** Assess communications from two key points of view: Business continuity communications and emergency response communications.
- **Life Safety:** Assess how your employees can protect themselves during the quake. Assess your facility for special safety or environmental issues with chemical storage or process risks. Make sure employees know how to search and rescue, perform first aid, evacuate safely, and maintain a presence without electricity, phones, or outside water supplies.
- **Property Protection:** Establish procedures for fire fighting, water, process control, orderly shutdowns, control of chemicals, and secure closure. Identify sources of back up equipment and supplies. Do not forget protection for both electronic and paper records.
- **Community Outreach:** Businesses are often asked to assist local governments because they can be sources of people, supplies, transportation, and shelter. Plan to provide whatever assistance could be feasible and establish mutual aid agreements with local agencies.
- **Recovery and Restoration:** Plan ways to keep your business running, protect the assets and data, work with suppliers and customers, and operate with limited resources.
- **Administration and Logistics:** Make arrangements for food, water, and shelter for employees. Establish back up communications and records. Document exceptional costs and anything else that would assist in running the operation after a disaster.
- For a detailed Business Emergency Planner, visit www.fema.gov/pdf/library/bizindst.pdf

Local Emergency Operations



City of Palm Desert's Emergency Operations Center (EOC). The EOC will be activated in the event of an emergency. It is located at the Civic Center and is staffed by City employees who work in conjunction with Riverside County, and if necessary, state and federal governments. The activities that occur in the EOC are setting overall priorities, receiving and processing information, coordinating between departments and agencies, and establishing recovery priorities.



Palm Desert Police Chief
Steve Thetford



Palm Desert Fire Chief
Ignacio Otero

For more information please visit the following websites:

www.cityofpalmdesert.com
www.fema.gov/areyouready
www.usgs.gov
www.cisn.org

When the Earth Starts Shaking

Best Practices: Drop, Cover, and Hold On

The Federal Emergency Management Agency (FEMA) reiterates its long-standing advice for staying as safe as possible during an earthquake. It's easy to remember and even easier to do: **DROP** to the ground; take **COVER** by getting under a sturdy table or other piece of furniture; **HOLD ON** until the shaking stops.

Following the spread of a "Triangle of Life" Internet/Email rumor that contradicts the advice given by FEMA, the American Red Cross, the U.S. Centers for Disease Control and Prevention and a number of other agencies about the proper actions to take during an earthquake, FEMA has been asked for clarification on its policy. FEMA continues to advocate DROP, COVER and HOLD ON as the safest action when the earth begins to shake.

Research has shown that most injuries in U.S. earthquakes occur when people inside buildings attempt to move to a different location inside the building or try to leave. Quickly seeking a place of safety, such as under a sturdy table or desk, and moving as short a distance as possible to that place of safety, is recommended based on research.

In the 2003 San Simeon, California, earthquake, two people were crushed by falling debris when they ran from the building. Studies of the 1979 El Centro, 1987 Whittier, 1989 Loma Prieta, and 1994 Northridge earthquakes, as well as mounting evidence from earthquakes outside the United States, confirm this pattern of injuries. **DROP, COVER, and HOLD ON** reduces the likelihood of serious injury from falling objects.

Other recommendations, which are contrary to the DROP, COVER and HOLD ON advice, have been made by individuals with limited expertise and questionable credibility. Practice DROP, COVER and HOLD ON at school, in the office, and other buildings so that when the earth shakes, you'll be ready.



FACT OR FICTION

You may not be able to receive any assistance from police, fire, or other government or utility services for three or more days

Fact: Unfortunately this is a fact you need to take into account when preparing for an earthquake. You may also be without power, phones, water, and/or transportation for three or more days.

Standing in a doorway during an earthquake is safest

Fiction: In modern frame buildings, the doorways are not stronger than any other part of the house. It also increases your chances of being hit hard by a swinging door. However, the doorway is the safest place in unreinforced masonry buildings.

"Triangle of Life" method of protection

Fiction: This is a dubious concept created by a discredited publicity seeker amplified by the Internet. All earthquake authorities agree that "drop-cover-hold" is the best protection in an earthquake.

The fault cracks the earth open

Fiction: The earth may shake up and down or side to side, the ground may settle (*subside*), and sections drop, making it seem like cracks opening. The earthquake is caused by friction on the sides of the fault; if it splits apart, there is no friction.

Animals sense earthquakes before they happen

Partial Fiction: While there is no conclusive scientific data, some animals may sense the first shock wave that travels faster than the shaking waves. This shock wave arrives a few seconds before the shaking starts.

Earthquakes happen in early morning

Fiction: The geology of the Earth does not "know" what time it is, and earthquakes can happen at any time of the day or night.

Hot and Dry means earthquake weather

Fiction: Weather does not affect the geology in the ground.

California will fall into ocean

Fiction: The California coast west of the San Andreas Fault is moving northward a fraction of an inch per year. In a few million years, the Dodgers and Giants will be cross-town rivals again, but the coastal land mass is not heading out to sea.

Planning for an Earthquake

INDIVIDUAL AND FAMILY PLANNING

- Know the safe spots in each room such as under sturdy tables, desks, or against inside walls.
- Know the danger spots including windows, mirrors, hanging objects, fireplaces, and tall furniture.
- Clear beds of potential danger from falling bookcases, mirrors, framed pictures, sculpture, etc.
- Learn how to shut off gas, water, and electricity in case the lines are damaged, and learn how to make that determination.
- It is important that children learn to recite or write their names, parents' or guardian's names, and their phone number and address at the earliest possible age.
- Check chimneys, roofs, and wall foundations for stability.
- Make sure your home is bolted to its foundation. Call a licensed contractor if there are any questions.
- Conduct practice drills. Physically place yourself and your children in safe locations. Show children where to "drop, cover, and hold."
- Learn first aid and CPR (*cardiopulmonary resuscitation*) from your local Red Cross Chapter or other community organization.
- Decide where your family will reunite if separated. Discuss what to do if an earthquake occurs at night while you are in bed, during a normal day of school and work, and during after school or evening social activities. Plan for communication, transportation, and locations to reunite.
- Plan for alternates to take children out of schools or day care centers should you be unable to get there. Make sure the schools know your alternates and that everyone is aware of your communication, transportation, and reuniting location plans.
- Keep a list of emergency phone numbers. Long distance service will probably be restored sooner than local services. Choose an out-of-state friend or relative whom family members can call after the quake to report whereabouts and conditions.
- Remember, do not use the phone immediately after an earthquake, and make local calls only for emergencies.

MAKE A FAMILY EARTHQUAKE PLAN

Know Your Environment

Safest place in the house:

During an earthquake, stay away from heavy furniture, appliances, large panes of glass, shelves holding heavy objects, and masonry veneer (*such as the fireplace*). The most likely way to be injured in an earthquake is having something heavy fall on you. The second most likely is to be cut by broken glass. Usually, a hallway is one of the safest places if it is not crowded with objects. Kitchens and garages tend to be the most dangerous.

Also, know the safest place in each room. It will be difficult to move from one place to another during a severe earthquake. You cannot run far in a severe earthquake without falling in a possibly unprotected position. Think about safe, "drop, cover, and hold" locations within two or three steps of where you are.



Exits and alternative exits:

Always know all the possible ways to exit your house and workplace in emergency situations.

Location of shutoff valves:

Know the location of the shutoff valves for water, gas, and electricity, and how to operate the valves. If you are not sure, contact your utility companies. Do not automatically shut off your gas unless you are sure there is damage to the gas lines; it may be weeks before the gas company can visit your home to restart your appliances.



Make Special Provisions

Elderly, disabled, or persons under medication:

These people may have difficulty moving around after an earthquake. Plan to have someone help them to evacuate if necessary. Also, they may need special foods or medication. Be sure to store enough of these special provisions for several days. People who require electricity for medical equipment should contact their utility provider and also consider a portable generator.

Persons who do not speak English:

People who cannot speak English often rely on their family or friends for information. If they are separated during an earthquake, they may need help. Prepare emergency cards for them to have that are written in English indicating identification, address, and any special needs.

Pets:

After an earthquake, you should be concerned with your own safety first, but taking care of your pets is also very important. Storing extra food and water for pets is always a good idea. Keep your pets in a secure place at home after an earthquake. If you are directed to an emergency shelter, note that your pets will not be allowed. The City currently is working with Animal Samaritans and the Coachella Valley Animal Campus to finalize an emergency pet care plan.

Plan for transportation difficulties:

After a large earthquake, it may not be possible to drive to where you need to go. Consider this when making your plans. Know how far the distance is from home, school, work, and how much time it would take to walk.

Know Community Resources

Police and fire:

- Know the locations of the nearest fire and police station.

Food, water, shelter, and medical care:

- After a damaging earthquake, emergency shelters and temporary medical centers will be set up in your community. We cannot tell you in advance where these may be because we cannot predict the condition of any particular facility or building after a quake.
- Do not call authorities for information. Instead, listen to battery operated radios and televisions which will relay the most up-to-the-minute information.
- The government will establish supply lines for emergency food and water with the assistance of the Red Cross.
- The Red Cross also will set up distribution centers as soon as possible after the quake. The exact locations of these facilities will be announced after they are assessed for damages and deemed safe.

Community plans:

- Know where to go within walking distance to help your community after a disaster.
- It may be days before outside emergency assistance arrives. It is important to help each other.

Community Preparedness

Suggest that local organizations of which you are a member undertake a specific preparedness program or acquire special training to be of assistance in the event of an emergency.

Check with your homeowners association for its emergency plan. If there isn't one, strongly suggest that one be developed.

Organize a neighborhood earthquake preparedness program.

Conduct preparedness training for neighborhood residents in first aid, fire suppression, damage assessment, and search and rescue. Check for the next Community Emergency Response Team (CERT) program in your neighborhood and take the classes.

Develop self-help networks between families and neighborhood through a skills and resource bank which includes a listing of tools, equipment, materials, and neighborhood members who have special skills and resources to share.

Identify neighbors who have special needs or will require special assistance.

Have neighbors agree to hang a white flag out after the quake if everyone and everything is okay.



HOME AND FAMILY PREPARATION

- Stock emergency supplies at home, at work, and in your car.
- Check emergency supply lists to be sure you do not forget anything.
- Prepare duplicate financial and identity papers and store them in airtight plastic bags.



- Stockpile an affordable amount of cash.
- Store extra necessary medication. Take into consideration shelf life and affordability.
- Prepare supplies for your pets.
- Secure water heater and appliances that could shift enough to rupture utility lines.
- Keep breakable and heavy objects on lower shelves. Assess the garage for breakable, heavy objects, and chemical or paint containers on shelves and in storage. Identify which items might fall and damage a parked car and relocate them.
- Secure hanging plants, heavy picture frames, and mirrors. Keep these objects away from beds.
- Put latches on cabinet doors, especially in the kitchen to keep them closed during shaking.
- Keep flammable or hazardous liquids such as paints, pest sprays, or cleaning products in cabinets or secured on lower shelves.
- Maintain emergency food, water, and other supplies, including medicine, a first aid kit, and clothing that will last at least three to five days. When in doubt about how much is enough, store more supplies than you think you may need. If you store canned foods, include a manual can opener. See emergency supply lists.
- Consider purchasing "Family Radio Frequency" walkie-talkies that can provide communications across two to ten miles.

WORK PLACE PREPARATION

- All the same basic preparation steps should be duplicated at work.
- If your work clothes and shoes are based on appearance and not utility, have a change of clothes and a comfortable pair of shoes available in case you need to walk a long distance.
- If you own, operate, or manage a business with many employees, check the Business Emergency Planning Guide on page 2.

Home Emergency Supplies



WATER

Each person needs a minimum of one gallon of water per day. However because of our desert environment, it is a good idea to store up to 10 gallons per person in a cool dry place (*that is 2 gallons per person for 5 days*). Do not forget that pets need water too.

Consider purchasing water specifically packaged for emergency storage which is printed with expiration dates and can usually be stored safely for several years. Pre-packaged bottled water can be stored for two years if it has not been unsealed.

Water that is bottled yourself should not be stored more than a few months before it is replaced, making it a more labor intensive option of water storage. If you require additional emergency water, the water in your hot water heater tank or the top tank of toilets can be used. Purifying your own water should be used as a last resort.

To Purify Water:

The safest method of purifying water is to boil it vigorously for 1 to 3 minutes.

You can also purify water by adding any household bleach solution that contains 5.25 percent of sodium hypochlorite. (*Most common bleach solutions contain this amount.*) Let stand for 30 minutes. The following table shows the proper amount of 5.25 percent solution to add to water.

Amount of Water	Amount of solution to add to:	
	Clear water	Cloudy water
1 quart – (1/4 gallon)	2 drops	4 drops
1 gallon	8 drops	16 drops
5 gallons	1/2 teaspoon	1 teaspoon

STORAGE OF EMERGENCY SUPPLIES

Some families prefer to store their emergency supplies in one location. Choose a place in your home, which would be relatively safe in time of an earthquake (*such as a closet or under a bed*). The perishable supplies will remain stable longer if stored in a cool, dark location.

One suggested method for storing emergency supplies is to place them in a large, covered trash container. Plastic containers come in all shapes and sizes. They are water and rodent proof and are fairly durable. Be sure the container comes with a securing lid and preferably on wheels for easy transport.

Following are suggestions on how to store emergency supplies:

Top of the Container

Flashlight, radio, batteries, and first aid kits.



Middle of the Container

Three-day supply of food requiring no refrigeration. Date all food items.

Bottom of the Container

Bedding, clothing, personal supplies (*toiletries, paper/pencil*), fuel & lighter, hand-operated can opener, personal

documents, cash, and water purification tablets.

SURVIVAL KIT FOR AUTO

Blankets, drinking water, change of clothes, fire extinguisher, first aid kit, a manual emergency signal device, flashlight, prescription medicines, toilet tissue, whistle, and tools.



EMERGENCY FOOD SUPPLY

Why?

In an emergency such as a large earthquake, food suppliers such as grocery stores will probably sustain heavy damage and will not be open for several days. Roads may be blocked and extended power outages could occur.

What Should I Do?

Prepare an emergency food supply that will last each individual several days or up to a week. Use foods that your family enjoys. Consider canned foods, dry mixes, dehydrated fruit, etc. Try for a balanced meal approach. Do not forget a manual can opener. Foods stored in dark, cool areas last longer. Rotate food items from storage at least once or twice a year to avoid spoilage and to keep freshness. It may be helpful to write the date on the items the day they were stored.

After the Quake

You Survived the Quake...What next?

What About Foods in Refrigerators or Freezers?

Perishable foods such as milk, meats, etc., that are normally stored under refrigeration will spoil quickly without it. If still cold, these foods should be used first. Foods in freezers can last several days without power if the door is not opened frequently.

What Not to Do...

Do not use perishable foods that have lost refrigeration and have become warm. Bacteria grow rapidly without refrigeration and may cause food poisoning.

Do not use canned foods that have been damaged, are bulging, or leaking.

Do not use food from open containers where broken glass is present or where household chemicals have spilled.

Do not use unsealed containers or those that have been punctured by rodents or have rodent droppings.

There are several reputable suppliers of prepared emergency food supplies for individuals, families, and businesses. Check your local listings for a distributor near you.

Supplies Needed in an Emergency

Food: Nonperishable, canned or dehydrated, requiring minimum heat and water. Remember food for infants and pets.

Water: A minimum of two gallons per person per day for drinking. An additional half gallon of water per person per day is required for cooking and hygiene.

First aid kit: Customized, based on family needs. Include first aid manual.

Flashlight: Do not forget spare bulbs.

Radio: Portable type.

Spare batteries: For flashlights and radios.

Fire extinguisher: ABC multipurpose type.

Prescription medicines: Keep extra supply on hand; note expiration dates.

Can opener: Manual type.

Matches: Waterproof type or dipped in wax.

Knife: Sheath or pocket type.

Tools: Pliers, screwdriver, crescent wrench, shovel, wire, broom, etc.

Plastic bags with ties: Assorted sizes for waste disposal, storage of personal items, etc.

Rope: Polyethylene type preferred.

Sterno or other brand of heating fuel:

For food preparation. **Note:** Fumes from charcoal are especially deadly – cook with charcoal only outdoors.

Blanket: One per person, made of woolen material.

Gloves: Work type of durable material.

Eyeglasses: Keep an extra pair of prescription glasses in a safe place.

Expect aftershocks. Some may be as large as the original quake.



Try to locate everyone who was in the building.

Check yourself and those around you for injuries. After everyone in your house is accounted for, check on your neighbors.

Use first aid at home, unless the injury is significant and the patient can be moved. If seriously injured, then attempt to travel to a medical facility.

Immediately check your home for significant damage, the smell of gas, water leaks, and smoke. Should you find cracks in walls and ceilings, this does not automatically mean your house is unsafe. If you feel your building is unsafe, slowly and carefully leave. Consider whether or not there is time to take your emergency supplies with you.

Do not use an elevator, even if the power is on. Use the stairs after checking that they are safe (*use flashlights at night*).

Watch for downed power lines and broken lamps that are mixing with water or liquids.

Check your phones. Old-fashioned, direct plug in phones may work without external power source. If you can get a dial tone, call your emergency contact **OUTSIDE** the area and leave a brief message. Plan to have all family members call the same out of town number.

Open closets cautiously: Contents will have shifted and may fall on you when you open the door.

Clean up spilled chemicals and medications as quickly as possible, especially if you have pets.

Watch pets carefully. Many dangerous things are now at pet level, especially glass.

Use a battery operated radio or television to find out information on shelter, first aid, medical care, and police and fire service activities. Remember your car radio is battery operated too.

Do not use candles.

Run portable generators outside only.

Do not use charcoal or gas grills inside.

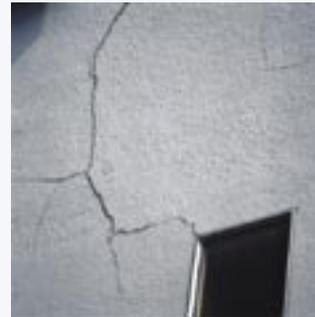


Apartment & Mobile Home Plan

A major earthquake can damage apartment complexes and mobile home parks, and can injure or kill residents.

The following steps should be taken by owners or managers:

- Consult local building codes to ensure that your building meets current seismic safety standards.
- Develop an emergency plan for your building or mobile home park. This plan should include measures for storing water and food, obtaining first aid training, appointing floor or area leaders, conducting drills, and other such activities.
- Encourage mobile home residents to better secure their homes by leaving wheels on homes rather than removing them, installing structural support bracing systems and securing the coach's awnings. *(A list of state certified bracing systems is available from the State Department of Housing and Community Development.)*
- Provide tenants with information on how to secure furniture and other household items. Also provide them with information on what to do during and after an earthquake.
- Encourage tenants to develop individual family plans for shutting off damaged utilities, reuniting family members and evacuation, if necessary.
- Identify residents with special needs such as mobility impaired, non-English speaking, elderly, or hearing and sight impaired. Make sure their needs are addressed in your emergency plans.
- Organize teams that are responsible for first aid, search and rescue, communications, and firefighting. Compile a list of resources and skills available among your tenants.
- Provide tenants with a white flag or some other distinguishable sign to be posted after an earthquake, symbolizing that no one in the apartment or mobile home has suffered serious injuries.
- Practice earthquake drills in your complex or park.
- Organize a meeting at which a local emergency and disaster planner can provide information on earthquake preparedness.



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SPECIAL
EDITION

Planning and Preparing for a **Major Earthquake**