

Get Ready - Get Certified

Disaster Preparedness Guidelines

For

Palos Verdes Estates



*It's not the will to survive, but the will to **prepare** to survive that makes the difference.*

**A SERVICE OF THE PALOS VERDES ESTATES POLICE
DEPARTMENT (PVEPD)
(310) 378-4211
Palos Verdes Estates, California**

GET READY - GET CERTIFIED

PALOS VERDES ESTATES DISASTER PREPAREDNESS GUIDELINES

Preface

These Disaster Preparedness Guidelines have been developed by the Palos Verdes Estates (PVE) Disaster Preparedness Task Force established by the Palos Verdes Estates Police Department. The guidelines are designed to assist the residents of Palos Verdes Estates to prepare their households for major disasters that may overwhelm the resources of conventional first responders to provide immediate assistance.

These guidelines are based on the most reliable disaster preparedness and emergency education information available at the time they were prepared. The guidelines are, however, too brief to cover all factors, situations, and events that could require personal household emergency response. All residents are encouraged to seek additional disaster preparedness information from additional reliable sources; several websites are suggested in the following Introduction section.

It is the goal of the Palos Verdes Estates Disaster Preparedness Task Force to have resident households informed and prepared to best survive potential disasters. Accordingly, a **Get Ready - Get Certified** program has been established to assist in achieving this goal. These guidelines will assist in preparing each household to **Get Ready** and will provide instructions on how to **Get Certified** as a part of this program.

PALOS VERDES ESTATES DISASTER PREPAREDNESS GUIDELINES

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Introduction

It's not the will to survive, but the will to prepare to survive that makes the difference. These guidelines will assist you to prepare to survive in the event of a disaster.

Huge disasters such as major earthquakes, fires and landslides may seem a remote possibility in Palos Verdes Estates and the Palos Verdes Peninsula. But experts say the risks are substantial.

If your odds of winning the lottery were better than 50/50, would you buy a ticket? If your odds of experiencing a devastating earthquake were better than 50/50 would you prepare yourself? According to a U.S. Geological Survey, there is greater than 50/50 chance that an earthquake of magnitude 6.7 or greater will be experienced on the Palos Verdes Peninsula within 25 years. That 25 years starts now.

The geology of the Palos Verdes Peninsula may make it less likely to sustain catastrophic damage from a major earthquake than the greater Los Angeles basin. However, our gas, water, electric and communications utilities are supplied from sources that are in or pass through the Los Angeles basin. Following a disaster, police, fire and medical first responders will give immediate attention to the most heavily damaged areas. Your home may sustain major or minor damage, but you may be WITHOUT UTILITIES for days. Without utilities and with transportation congested or seriously restricted, your home may be functionally reduced to that of a "nice tent." Will you be ready?

We must realize that following a major disaster:

- Police, paramedics and fire departments will be overwhelmed.
- Potable water may be scarce for many days.
- Sewage disposal may be inoperative for a month or longer
- Streets within or leading out of the City may be closed.
- Health facilities may be overwhelmed, damaged, destroyed, or inaccessible.

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

- Our homes may be seriously damaged or destroyed.
- We may be away from home and unable to get home for several days.
- Children and others needing help may be home alone.
- Communications - phones, cell phones, television and radio may be interrupted.
- We may not have adequate water and food.
- We may not have needed daily medications.
- We, or someone in our families, may experience serious injury or death.

Reliance on government is not an answer. Complacency brings high risk. We must take personal responsibility for our own survival and that of our household. We must know how to survive a potential disaster. We must **Get Ready!**

Please take the time to read these guidelines and seek additional relevant information. *It could save your life and the lives of your loved ones.*

The Palos Verdes Estates Disaster Preparedness Task Force has published an 8-page brochure, "How to Prepare for and Survive a Disaster". Please obtain this brochure, take time to read it, and keep it with your disaster survival supplies. It contains disaster preparedness guidelines and

lists 5 key steps to take immediately following a disaster. The brochure is available from the Community Relations Officer at the PVE Police Department at 310-378-4211.

Get Ready – then Get Certified.

The Palos Verdes Estates Police Chief, Dan Dreiling, recognized the need and opportunity to establish a community-based disaster preparedness program. Together with resident volunteers, disaster preparedness expert professionals and the PVE Police Department staff, Chief Dreiling has established the “**Get Ready – Get Certified**” program. The PVE Police Department does not have the internal expertise in disaster preparedness to originate guidelines, so it has relied on outside expertise. These guidelines have been prepared based on disaster preparedness information taken from the Federal Emergency Management Agency (FEMA), the Red Cross and other public service organizations. The information is considered to be reliable and accurate and has been selected and organized to best fit the needs of the Palos Verdes Estates community.

There are many websites on the internet that provide additional useful disaster preparedness information. These can be helpful in providing information relating to your specific personal needs in response to various emergency situations. Useful websites include:

FEMA

- Ready America, <http://www.ready.gov/>
- Are You Ready? <http://www.fema.gov/areyouready/>

American Red Cross <http://www.prepare.org/>

Equipped to Survive Foundation <http://www.equipped.com/disastertoc.htm>

Southern California Earthquake Center

- Dare to Prepare, <http://www.daretoprepare.org/>
- Putting Down Roots, <http://www.earthquakecountry.info/roots/>

U. S. Geological Survey

- Forecasting California’s Earthquakes, <http://pubs.usgs.gov/fs/2008/3027/>
- The Shakeout Scenario, <http://pubs.usgs.gov/of/2008/1150/>
- The Shakeout Earthquake Scenario, <http://pubs.usgs.gov/circ/1324/c1324.pdf>
- Multi-Hazards Demonstration Project, <http://urbanearth.usgs.gov/>

International Red Cross & Red Crescent

<http://www.ifrc.org/Docs/pubs/disasters/resources/corner/dp-manual/all.pdf>

Humane Society (pets)

http://www.hsus.org/hsus_field/hsus_disaster_center/resources/disaster_preparedness_for_pets.html

Small Business Administration (business readiness)

<http://www.sba.gov/services/disasterassistance/disasterpreparedness/index.html>

Get Certified

It's easy! You can do it yourself.

Join hundreds of your neighbors and do yourself, your family and your community a favor. **Get Ready**, then **Get Certified** that your household is prepared for potential disasters.

You probably have damage insurance on your home. It provides monetary security against losses. But with a simple and low cost disaster preparedness process you can provide insurance for your household against injury, health risks, discomfort, anguish and the uncertainties of disaster recovery not available from other sources.

The self-certification process is an easy 3-step process that you can do yourself. To **Get Certified**, members of your household simply complete the following 3 actions:

1. Become informed on Disaster Preparedness and have a plan.
This website and the previously listed sources of information on disaster preparedness and recovery provide the requisite information.
2. Acquire and safely store at least 5 days of water and 3 days of food for each household member. This website provides guidance in the next section.
3. Acquire and safely store emergency equipment and supplies for your household.
This website provides guidance immediately following the next section on food and water.

When these 3 steps are complete, then print a certification form from this website or request one from the PVE Police Department (310) 378-4211. This one-page form asks you to certify with your signature that your household has completed the 3-step process. Sign the form and return it to the PVE Police Department. Then, **You Are Certified**.

Emergency Food and Water Supply

A person can survive weeks without food, but only a few days without water. Maintain at least a 5-day supply of water and at least a 3-day supply of food for each member of the household.



Water

The Palos Verdes Peninsula relies on water that is piped through the Los Angeles basin where greater damage is likely in a major earthquake. Furthermore, that water must be pumped up the hill to our higher elevation and, without electricity, the pumps won't work.

A normally active person needs to drink at least two quarts (half gallon) of water each day. You also will need water for food preparation and hygiene. Store at least one gallon per person, per day. Consider storing at least a week to 10-day supply of water (5 day minimum) for each member of your family. Remember your pets when planning how much water you need.

Purchase of commercially bottled water is recommended. Its storage life is 6 months to a year. Distilled water will last longer than spring water because all impurities and bacteria have been removed from it.

Tap water should only be stored in very clean containers and has a shorter shelf life. Rotate your storage on an established schedule. Use food-grade water storage containers such as two-liter plastic soft drink bottles. Milk protein and fruit sugars cannot be adequately removed from milk and fruit juice containers; they provide an environment for bacterial growth. Glass containers are safe, but are heavy and may break in an earthquake or in handling.

FOLLOW THIS CHECKLIST:

- Thoroughly clean bottles with dishwashing soap and water, and rinse completely.
- Sanitize by adding a solution of 1 teaspoon of non-scented liquid household chlorine bleach to a quart (1/4 gallon) of water. Swish the sanitizing solution in the bottle so that it touches all surfaces. Then thoroughly rinse out the sanitizing solution with clean water.
- Fill the bottle to the top with regular tap water. (If your water utility company treats your tap water with chlorine, you do not need to add anything else to the water to keep it clean.) If the water you are using comes from a well or water source that is not treated with chlorine, add two drops of non-scented liquid household chlorine bleach to each gallon of water.
- Tightly close the container using the original cap. Be careful not to contaminate the cap by touching the inside of it with your fingers. Write the date on the container. Store in a cool, dark place.
- Replace the water every six months if not using commercially bottled water.

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

Hidden Water Sources in Your Home

Safe water sources in your home include your hot-water tank, pipes, and ice cubes.

DO NOT use water from swimming pools/spas, toilet flush tanks or bowls, radiators, or waterbeds. You need to protect the water sources already in your home from contamination if you hear reports of broken water or sewage lines, or if local officials advise you of a problem. To shut off incoming water, locate the main valve and turn it to the closed position. Be sure you and other family members know beforehand how to perform this important procedure. To use the water in your pipes, let air into the plumbing by turning on the faucet in your home at the highest level. A small amount of water will trickle out. Then obtain water from the lowest faucet in the home. To use the water in your hot-water tank, be sure the electricity or gas is off, and open the drain at the bottom of the tank. Start water flowing by turning off the water intake valve at the tank and turning on a hot-water faucet. Refill the tank before turning the gas or electricity back on. If the gas is turned off, a professional will be needed to turn it back on.

Ways to Treat Water

If you store enough water in advance, you will not need to treat water using these or other methods. In addition to having a bad odor and taste, contaminated water can contain microorganisms (germs, bacteria, and viruses) that cause diseases such as dysentery, typhoid, and hepatitis. You should treat all water of uncertain quality before using it for drinking, food preparation, or hygiene. Boiling or chlorination will kill most microorganisms but will not remove other contaminants such as heavy metals, salts, and most other chemicals. Before treating, let any suspended particles settle to the bottom, or strain them through layers of paper towel, a clean cloth, or a coffee filter.

Boiling

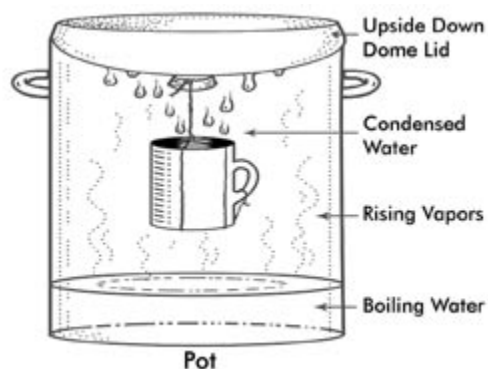
Boiling in a large pot or kettle (rolling boil for 1 minute) is the safest method. Boiled water will taste better if you put oxygen back into it by pouring the water back and forth between two clean containers.

Chlorination

You can use household liquid bleach to kill microorganisms. Use only regular household liquid bleach that contains 5.25 to 6.0 percent sodium hypochlorite. Do not use scented bleaches, color-safe bleaches, or bleaches with added cleaners. Because the potency of bleach diminishes with time, use bleach from a newly opened or unopened bottle. Add 16 drops (1/8 teaspoon) of bleach per gallon of cloudy water or 8 drops per gallon of clear water. For one quart of water reduce the amount of chlorine added to one fourth of the previous amounts. Stir and let stand for 30 minutes. The water should then have a slight bleach odor. If it doesn't, repeat the dosage and let it stand another 15 minutes. If it still does not smell of bleach, discard it and find another source of water.

Distillation

Distillation will remove microorganisms that resist other methods, as well as heavy metals, salts, and most other chemicals. Distillation involves boiling water and then collecting the vapor that condenses back to water. The condensed vapor will not include salt or most other impurities. To distill, fill a pot halfway with water. Tie a cup to the handle on the pot's lid so that the cup will hang right-side-up when the lid is upside-down (make sure the cup is not dangling into the water), and boil the water for 20 minutes. The water that drips from the lid into the cup is distilled. (See illustration.)





Food

A disaster may completely disrupt the food supply. Existing stock in nearby stores will disappear quickly. So, maintain at least a 3 to 5 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.

Typical foods are:

- Canned fruits, vegetables
- Canned meat, stew, pasta
- Dried fruits
- Dry cereal
- Crackers (low sodium)
- Granola bars (fat free)
- Trail mix
- Peanut butter
- Canned nuts (unsalted)
- Fruit & vegetable juice
- Baby & special diet food
- Pet food

Keep your food supply in an accessible, cool, dry place, and in an airtight or tightly sealed container as a precaution against moisture, rodents and insects.

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

Emergency Supplies and Equipment

Following a major disaster you may not have the shelter of your home. You may be relying on your own resources. Plan what you will need to eat, cook, sleep and generally survive on your own, with or without your home for a minimum of 3 days.

Major earthquakes are typically followed by many aftershocks that, in themselves, can be damaging. If your house is structurally damaged in an earthquake, it may be unsafe to occupy it or sleep in it due to the hazards created by aftershocks. If your walls have become badly cracked or bowed or seriously altered, or if there is separation between walls and ceiling, evacuate the house.

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.

Typical supplies are:

Eating & Cooking

- Paper/plastic plates, cups, utensils
- Paper towels
- Manual can opener
- Chlorine bleach & eye dropper to purify water
- Cooking source & fuel (optional)
- Matches

Health & Safety

- First Aid kit & manual
- Soap, detergent, shampoo, comb
- Toothbrushes, toothpaste
- Medications / Prescriptions
- Antiseptic wipes
- Work gloves
- Sturdy shoes
- Seasonal clothes
- Space blanket or sleeping bag
- Tent or other camping equipment
- Extra eyeglasses
- Hearing aid batteries
- Scissors

Sanitation

- Portable toilet or bucket with lid
- Toilet paper
- Disinfectant / Hand sanitizer
- Feminine hygiene supplies
- Diapers & wet wipes
- Plastic garbage bags
- Twist ties
- Shovel

Tools

- Flashlight & batteries
- Wrench (to shut off valves)
- Fire extinguisher
- Sturdy rope (20 ft)
- Utility knife
- Duct tape
- Broom
- Hatchet or axe
- Portable radio & batteries
- Whistle (help signal)

The Palos Verdes Estates Police Department has available for purchase an emergency survival kit with basic essentials to sustain 2 people for 3 days. The survival kit is contained in a compact, but heavy, backpack and has a 5 year shelf life.

Kit contents include:

- What-to-do emergency guide book
- 4-in-1 emergency tool, fits std. gas & water meter valves, also as a pry bar
- 18 boxes of water, 8.45 oz. each
- 2 packs high-calorie food bars
- Flashlight & batteries
- 2 rain pouches
- Whistle
- Radio & batteries
- First aid kit, incl. bandages, antiseptic, aspirin, ibuprofen, tape, scissors, etc.
- 18 wet wipes
- Utility knife
- Duct tape
- 2 emergency blankets
- 6 waste bags

Comparing this list with the prior emergency food, water and supplies lists, it is obvious that this backpack kit is a minimal, but convenient, approach to emergency preparedness. However, compared to no other preparation of emergency supplies, this kit can provide great assistance in preparing for emergencies.

Because this kit is contained in a backpack, it is also applicable to the needs discussed in the next section covering emergency supplies for your car. You could utilize the backpack and some of

the supplies it contains to build your emergency car supply kit and utilize the unused supplies that are most appropriate for your home to build your household emergency supplies.

Car Emergency Supplies

You may not be at home when disaster strikes. What would you need if you must rely on your car for short-term shelter or be forced to make your way home on foot? A mini-kit of supplies in a small backpack will make you prepared.

Following a major earthquake, making your way home may be a difficult journey. Some streets, major freeways and bridges may be closed. All attention will be focused on repairs and providing medical care, food and water to those in need. You will be on your own to get home. You may have nothing more than the clothes you are wearing and your purse, wallet or briefcase. Cell phone communications may be unavailable for hours or days. What will you do? It may become necessary for you to walk home.

Keep a backpack in your car containing the supplies and cash that you would need on the long walk home. Remember that the trip may be dangerous. Disasters tend to bring out both the best and the worst in people. Walking alone you might find help or you could encounter trouble.

A backpack of emergency supplies would typically contain:

- Comfortable shoes and socks
- Jacket and hat
- Heavy gloves
- Bottled water
- Snack food (low sodium, low fat)
- Cash and coins (\$50-\$100)
- Flashlight & batteries
- Portable AM radio & batteries
- Toilet paper and sanitary supplies
- Mylar space blanket
- Pencil/pen and pad of paper
- Trash bags
- Duct tape
- Scissors

These supplies are easy to gather and some would be useful in other emergencies such as a car breakdown. Furthermore, if you can drive home following a major earthquake, or your car is at home when the emergency occurs, these supplies can be utilized by your household.

Preparing Your Home to Survive

It's too late to prepare once disaster strikes. Will next month be too late?

How and When to Shut Off Utilities

A major earthquake may break gas pipes, electric lines and water lines – all major problems. A gas leak can result in a gas-fed fire or explosion. Broken water pipes can result in water damage and a loss of critically needed water. Sparks from electric lines can cause fires. Locate your gas, water and electric utility shutoffs. Teach all family members how to shut off all utilities and when to do so.

Gas

- Leave an adjustable wrench, or a special gas turn off bar at 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 or hear 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 the gas company can turn the gas back on safely once it's been turned off.
- An automatic shutoff valve is commercially available that will turn the gas off when it detects the shaking of an earthquake. However, some experts question the use of these valves because they will turn off your gas whether or not you have a leak. You may need a professional to turn the gas back on, even if there is no gas leak.

Water

- Know how to turn off the water to prevent water damage and to prevent polluted water from entering your home system. Main water shutoffs are often painted blue and may be turned off at either of two locations:

1. At the main meter box (usually by the street), or

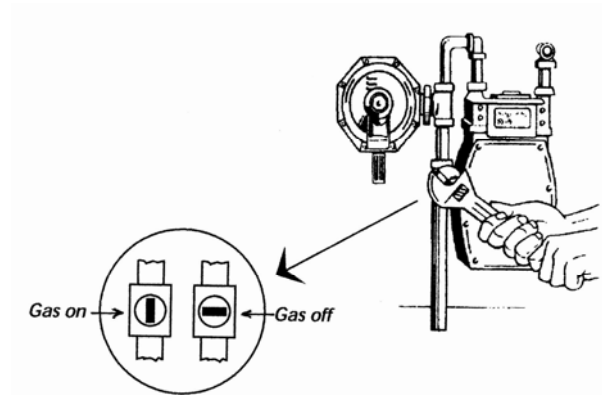
2. At the water main leading into the house.

This shutoff is recommended to prevent water from flowing out of your water heater and back into the main line or from mainline contaminated water entering your water heater. It is best to also shut water off at the water heater inlet valve, often just above the water heater.

The water in your water heater is safe and drinkable and can be accessed by opening the outlet valve at the bottom of the water heater. A wrench or large screwdriver may be required to open this outlet valve. Check yours to be sure you know how to open and close the outlet valve. Turn your water heater control knob to the "OFF" position before removing the water.

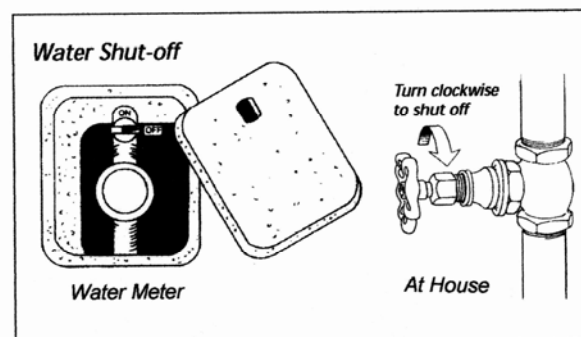
Electricity

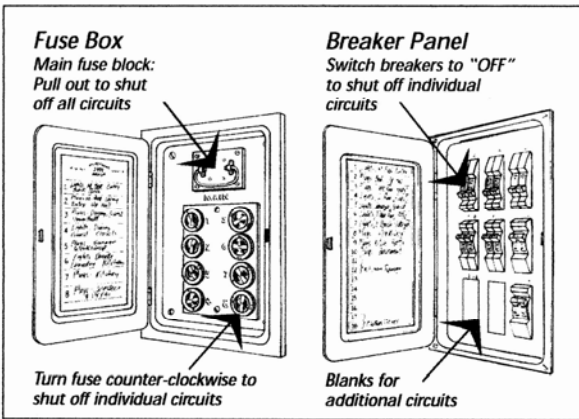
- Know the location of your circuit breaker or fuse box.
- Know how to trip the breakers or remove the fuses if you need to turn off the electricity.



- Locate the water main leading into the house and attach a label to it for quick identification.

- Obtain a valve wrench for the water meter line. (This tool can be purchased at most hardware stores.)





Structural Hazards

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

Although existing homes can not be made earthquake proof, most can be made more earthquake resistant. Important things you can do to mitigate the effects of an earthquake include:

- Repair defective electrical wiring and leaky gas connections. These are potential fire risks.
- Be sure that your water heater is securely fastened to the wall with a strap. If it tips over in an earthquake you would lose a valuable source of water, and if the gas line breaks, and it probably will, it could cause an explosion and fire.
- Install flexible gas connectors on all gas appliances, including the water heater.
- 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.
- Hazards created by breakage of large glass windows can be mitigated by covering them with a window film that provides a margin of safety as well as reducing UV light damage to your interior furnishings.
- Weak or poorly constructed brick chimneys could fall through the ceiling as a unit, which is far more damaging than if the chimney merely cracks and falls in pieces.
- Settling, especially on sloping sites, may have resulted in damage or weakening that should be corrected.

If you are unsure of the structural integrity of your home you may have it evaluated for seismic hazards and safety by a licensed engineer or contractor experienced in performing seismic retrofitting.

Falling Object and Other Hazards

Most people injured or killed in quakes are hit by falling objects. Look at each room in your home and, especially, look 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 and remove heavy or breakable objects on high shelves or in cabinets.
- Fasten high shelves securely to walls.
- Attach tall or top-heavy furniture to the wall using "L" brackets or corner brackets.
- Remove or firmly secure heavily framed pictures and mirrors from above beds, and look for and remove objects that could fall on the bed.
- Store weed killers, pesticides, and flammable products securely in closed cabinets on bottom shelves.
- Store ammonia and bleach in different locations. If these liquids mix, they create deadly fumes.

First Aid

A major disaster can overwhelm paramedics and other medical first responders. Telephone 9-1-1 emergency lines may be down or congested. Will you know what to do in a medical emergency?

The following preparations can reduce the injury and health risks associated with major disasters such as earthquakes and fires:

- Learn basic first aid and CPR.
- Keep well-stocked first aid kits in your home emergency supplies and your automobile.
- Most phone books have a multi-page front section comparable to "First Aid and Survival Guide". Make a copy of it and keep it with your medical emergency supplies.
- The most valuable training for many earthquake-related injuries is in bleeding suppression techniques and infection control. Learn these techniques.
- Teach all family members to STOP, DROP and ROLL if their clothes catch on fire. It is especially important for children and seniors to practice this technique.
- Learn where medically trained people reside in your neighborhood.

First aid kits typically contain only the most basic supplies. Consider supplementing with any of the following:

- First Aid book
- Antibiotic ointment for dressing wounds
- Hydrogen peroxide to wash & disinfect wounds.
- Individually wrapped alcohol swabs.
- Rolled gauze
- Diapers for larger wounds
- Safety pins
- Pre-moistened towelettes
- Prescriptions pills and medications from doctor
- Aspirin or Acetaminophen (generic Tylenol).

- Sunscreen lotion

Tailor your first aid supplies to meet your household needs. Only you can do it. Store your items in a small tool kit or similar protective container in a place that will be convenient following a disaster.

Household Disaster Plan

You may or may not be at home when a disaster happens. Will you and your family members know what to do?

Sit down with your family and discuss what everyone would do during and immediately after a major disaster, regardless of where you may be when the disaster occurs. Listen to all questions and try to find answers. When you understand the family needs and major concerns you are then ready to draw up a family disaster plan.

Your plan should include the following elements:

- Identify two ways to escape from every room in the home. All family members should know how to open windows, remove screens and escape from reasonable heights.
- Teach children how and when to call 9-1-1, for the police or fire department.
- In a disaster 9-1-1 lines may be overloaded. If you don't hear a dial tone, stay on the line. The dial tone could be delayed a minute or two. Don't repeatedly push the switch hook down. This will further delay your call. If you get a "fast busy" or "all circuits busy" recording, hang up and try again.
- Electrical power may be out following a disaster. Should this occur:
 - Turn off and unplug electric appliances such as stoves, washers, dryers, TVs, microwave ovens, and computers. Otherwise, when power is restored, several appliances may come on at one time and overload your circuits. Leave a single lamp on to alert you when power returns.
 - Learn to disconnect electric garage doors so they can be operated manually.
 - If you rely on portable wireless phones, keep a standard corded model which can be plugged into a jack for emergencies.
 - Keep cash available in the event a power outage prevents ATM machines from operating.
- In case family members are separated from one another, develop a plan for reuniting after the disaster. Select a safe location away from the home where your family can meet.
- Identify and become familiar with vehicular routes out of the City. Southern routes, especially P V Drive South, may be less congested than routes on the north side of the peninsula.
- Ask an out-of-state (or at least 200 miles away) relative or friend to serve as the "family contact." After a disaster, it's often easier to call long distance than across town. Make sure everyone in the family knows the name, address, and phone number of the contact person.

- If you have a cell phone, program your “family contact” as "ICE" (In Case of Emergency) in your phone. If you are in an accident, emergency personnel will often check your ICE listings in order to contact someone you know. Make sure to tell your family contact that you’ve listed them as an emergency contact.

- Complete a contact card for each family member and keep these cards handy in a wallet, purse, backpack, etc. You may want to send one to school with each child to keep on file. Include both a local contact and your out-of-state family contact phone numbers on the card. See the sample contact card suggested by FEMA. A copy should also be included in your family disaster supplies kit.

- 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 portable safe deposit box or away from the home.

School Disaster Plan

All schools in Palos Verdes Estates have an Emergency Plan.

The Palos Verdes Peninsula Unified School District (PVPUSD) has established and documented “safe school plans” for all schools. Emergency supplies and equipment have been stored at all school locations. All school employees have individually assigned emergency responsibilities. All schools conduct regular earthquake drills and are prepared to shelter students until they are picked up by a parent or authorized representative. If disaster strikes while school is in session your children may be safer at school than at home.

Familiarize yourself with the disaster plan at your child's school, including the post-disaster student release policy. Students will not evacuate automatically following an emergency. Determine how the school will communicate with families in an emergency.

Expect vehicular congestion around the school as parents seek to pick up their children. If you are near the school and can walk to it, do so. Do not attempt to enter the school unless directed to do so. In certain emergencies the doors will be locked until safe release can occur.

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 child separated from his family following a disaster.

The Palos Verdes Estates **Get Ready - Get Certified** disaster preparedness program utilizes the school grounds – not the buildings – as a community assistance location. This program is a coordinated, but separate, program from the PVPUSD program. Should a community emergency occur when school is in session and you **do not** have children at the school, remain clear of the school building so as not to interfere with student release and evacuation.

Community Disaster Plan

If Katrina taught us one thing about major disasters, it was that national level responders are not locally responsive, local first responders are quickly overwhelmed, and, ultimately, neighbors must depend on neighbors for immediate mutual assistance and protection.

During a major emergency, quick and effective action is required. Local populations in disaster-stricken areas are in-place and the first to respond. If these local residents do not take appropriate action or if the response is delayed, lives and property may be needlessly lost. Community-based disaster preparedness programs can plan, develop and implement locally appropriate strategies and processes for disaster preparedness and risk reduction that can greatly reduce loss of lives and property, and mitigate the suffering of people.

Palos Verdes Estates has an active Neighborhood Watch program and homeowners associations that are community-embedded, resident-operated organizations oriented to local security. These organizations contribute to community well-being; however, they are not focused on disaster preparedness and response.

The goal of the Palos Verdes Estates **Get Ready –Get Certified** disaster preparedness program is to develop and implement an effective, easy-to-follow, detailed disaster mitigation plan to be shared by the community and responding relief officials to increase the community's survivability in a disaster. The program divides the City into 6 districts, each having one of the PVPUSD schools within its boundaries. The school grounds – not the buildings – will serve as residential assembly points following a disaster. A City-provided cache of equipment and supplies to assist recovery will be positioned at each school. District leaders and teams will be present as soon as possible following a disaster to manage each assembly point, organize volunteers and provide a staging area for relief operations. This activity is independent of, but coordinated with, the school district's own disaster mitigation plans. Should the event happen while students are at the school, it will be operated independent of, but in parallel with, the school's emergency plan.

A most responsive recovery can be achieved by utilizing the immediately available imbedded skills and equipment in the neighborhood. An established survey has identified many of the PVE residents with pertinent skills such as medical, CPR/first aid, fire suppression, and equipment such as ham radios, walkie-talkies, and generators. The survey also identifies the locations of special needs residents that are disabled, elderly or children often home alone. This information is kept confidential for emergency purposes only. If you would like to contribute your special skills, equipment or needs to this survey, you can do so by completing a survey form available from the PVE Police Department at phone (310)378-4211.

Two of the most critical needs in a disaster response are for 1) disaster response organization and first aid, and 2) communications, viz. ham radio, since conventional communications methods may be unavailable. The Palos Verdes Peninsula has training in each of these critical skills available for residents at little or no cost. The following sections on the Community Emergency Response Team (CERT) Program and the Neighborhood Amateur Radio Team (NART), provide information on these community resources and how you can participate.

Community Emergency Response Team (CERT) Program

The Community Emergency Response Team (CERT) Program educates people about disaster preparedness for hazards that may impact their area and trains them in basic disaster response skills, such as team organization, light search and rescue, disaster medical operations, and fire safety. It is a nation-wide program administered by the Homeland Security Department and provided locally by Los Angeles County Fire Department.

Using the training learned in the classroom and during exercises, CERT members can assist others in their neighborhood or workplace following an event when professional responders are not immediately available to help. CERT training is available free of charge to anyone 18 or over.

We are fortunate to have a Palos Verdes Peninsula CERT (PVPCERT) organization in place. It regularly provides CERT training, often at Hesse Park in Rancho Palos Verdes. PVPCERT provides essential training and information to enable residents to become part of the disaster preparedness solution. The goal of PVPCERT is to:

- Prepare you, your family and your home to survive a disaster.
- Prepare you to assist families and neighbors in time of a disaster.
- Prepare teams of Peninsula residents as first responders to support regular emergency personnel in a disaster.

Consider joining the over 100, and growing, number of Palos Verdes Estates residents who have been PVPCERT trained. Information regarding PVPCERT and training classes can be found on the internet at <http://www.palosverdes.com/pvpcert/>

Neighborhood Amateur Radio Team (NART)

In any major disaster we can expect the communication systems to go down. Cell phones, landlines and the internet may all be out. Electrical service may be down. However, there is a proven solution. Amateur radio operators (or hams) have taken what used to be a hobby to the heights where they are now the major lifeline in a disaster. Unlike cell phones and the internet, ham radios can handle massive surges in traffic. They are portable, operated with batteries and don't require an infrastructure like cell phones or the internet.

Several hundred Palos Verdes amateur radio operators are an important part of the Peninsula's emergency services. Working together, these operators strengthen the ability of the community to react quickly and positively during an emergency. Some operators are members of DCS (Disaster Communications Service), which is the official amateur radio disaster communications service for Los Angeles County, and is responsible for backing up Sheriff and Fire Department communications.

If a severe emergency should hit Palos Verdes Estates, the ability of the Emergency Operations Center, located at City Hall, to communicate with departmental entities and to contact other South Bay cities for mutual aid is vital. Fortunately, the City has a group of amateur radio operators (hams) who have been trained to help solve these problems. The group is called the Palos Verdes Estates Neighborhood Amateur Radio Team or PVE/NART for short. The City has complete VHF/UHF ham stations in City Hall and in the PVE Police Department Mobile Command Unit that can act as a back up Emergency Operations Center if City Hall becomes unavailable.

NART's value to the community will be increased with more operators. If you are a licensed ham and could help, please call the PVE Police Community Relations Officer at (310) 378-4211. You will enjoy working with your ham-licensed neighbors and there are no dues. If you would like to help but do not have a ham license, there are classes offered locally to help you pass the FCC tests. Knowledge of Morse code is no longer necessary. For information on these classes contact the PVE Police Department, or Mr. Walt Ordway, who teaches the classes, at: walt.ordway@yahoo.com

Earthquakes

Experts have predicted a 99% probability of a major Southern California earthquake in the next 30 years. Are you preparing yourself and your family or are you betting the 1%?

Earthquake Risks

We live in earthquake country. The question is not *if* but *when* Southern California will be hit by a major earthquake— one so damaging that it will permanently change lives, livelihoods and economics in the region. How severe the changes will be depends on the actions that individuals, schools, businesses, organizations, communities, and governments take to get ready.

The Northridge earthquake on January 17, 1994 had a magnitude of 6.7 and lasted for about 20 seconds. The ground acceleration was one of the highest ever instrumentally recorded in an urban area in North America. Seventy-two deaths were attributed to the earthquake, with over 9,000 injured. It triggered landslides in the nearby mountains that blocked roads, ruptured water lines and damaged homes, particularly in the Pacific Palisades area. The earthquake caused an estimated \$20 billion in damage, making it one of the costliest natural disasters in U.S. history.

The San Fernando (Sylmar) earthquake occurred on February 9, 1971, with a magnitude of 6.6. It caused more than 10 miles of discontinuous surface ruptures with average displacements of

about 3 feet both horizontally and vertically. Aftershocks included four quakes in the magnitude 5 range. The quake claimed 65 lives and caused more than half a billion dollars in damage.

The Long Beach earthquake of 1933 took place on March 10 at about 6 PM on the Newport-Inglewood Fault with a magnitude of 6.4. It caused widespread damage and 115 lives were lost. Experts concluded that if children and their teachers were in school at the time of the earthquake, casualties would have been in the thousands. The Newport-Inglewood Fault continues to slip laterally, but only less than one inch every year. The rupture of this fault line caused the recent Inglewood Earthquake in California on May 17, 2009. This 4.7 magnitude quake caused strong shaking, but damage was light.

These 6.x magnitude earthquakes typically cause extensive damage and loss of life. However, even larger 7.x magnitude earthquakes also occur in Southern California. For each whole number you go up in magnitude, the amplitude of the ground motion goes up ten times. Therefore, a magnitude 7 earthquake would result in ten times the level of ground shaking as a magnitude 6 earthquake and 32 times as much energy would be released.

Two very large, 7+ magnitude earthquakes, the Fort Tejon in 1857 (7.9) and the Owens Valley in 1872 (7.6) are evidence of the tremendously damaging potential of earthquakes in Southern California. In more recent times two 7.3 earthquakes struck Southern California, in Kern County (1952) and Landers (1992). The damage from these four large earthquakes was limited because they occurred in areas which were sparsely populated at the time they happened.

The highest potential for a massive earthquake is the Southern San Andreas Fault. Geologic history shows that over the past 1,400 to 1,500 years large earthquakes have occurred at about 130 year intervals on the southern San Andreas Fault. As the last large earthquake (magnitude 7.9) on the southern San Andreas occurred in 1857 (more than 130 years ago), that section of the fault is considered a likely location for an earthquake within the next few decades. The fault section south of the Cajon Pass closest to us hasn't ruptured since 1680! That's over 300 years ago!

The Newport-Inglewood Fault that was the cause of the 1933 Long Beach Earthquake and the 2009 Inglewood Earthquake runs near the Palos Verdes Peninsula. The California Geological Survey has estimated that an earthquake of magnitude 7.0 is credible on this fault. Seismologists believe that a 6.0 earthquake on the Newport-Inglewood Fault could result in far more death and destruction than a "great" quake on the San Andreas Fault, because the San Andreas is relatively remote.

The evidence is clear. We must expect more of these disastrous earthquakes. Your survival and that of your household during a massive earthquake will depend upon the choices you make. Will you prepare to survive or will you be one who helped make the disaster a catastrophe?

What to Do Before an Earthquake

Earthquakes strike without warning. Therefore, only advanced planning and preparation can reduce the dangers of injury or loss of life and property from an earthquake.

Prior sections of these guidelines provide information on how to prepare. Information is provided on storing food and water, emergency supplies, equipment and first aid, preparing your home to survive, and making a household disaster preparedness plan.

FEMA has published guidelines outlining 6 ways to plan ahead. These guidelines, tailored to PVE needs, follow.

Six ways to Plan Ahead

1. Check for Hazards in the Home

- Fasten shelves securely to walls.
- Place large or heavy objects on lower shelves.
- Store breakable items such as bottled foods, glass, and china in low, closed cabinets with latches.
- Store weed killers, pesticides, and flammable products securely in closed cabinets with latches and on bottom shelves.
- Hang heavy items such as pictures and mirrors away from beds, couches, and anywhere people sit.
- Secure a water heater by strapping it to the wall studs and bolting it to the floor.

2. Identify Safe Places Indoors and Outdoors

- Under sturdy furniture such as a heavy desk or table.
- Against an inside wall.
- Away from where glass could shatter around windows, mirrors, pictures, or where heavy bookcases or other heavy furniture could fall over.
- Outside in the open, away from buildings, trees, telephone and electrical lines, overpasses, or elevated expressways.

3. Educate Yourself and Family Members

- Read the earlier sections of these guidelines as well as visit the internet links as suggested.
- Teach children how and when to call 9-1-1, for the police, or fire department and which radio station to tune into for emergency information.
- Teach all family members how and when to turn off gas, electricity, and water.
- Assure all family members know where to find emergency supplies and first aid.

4. Have Disaster Supplies on Hand

See detailed lists in prior sections.

- Emergency water supply. One gallon per person for at least 5 days.
- Emergency food. At least a 3 to 5 day supply per person. Include pets.
- Manual can opener.
- First aid supplies and manual.
- Essential medicines.
- Sanitary supplies. Toilet paper, waste bags, sanitary wipes.
- Utilities (gas, water) shut off wrenches.
- Flashlight and extra batteries.
- Portable battery-operated radio and extra batteries.
- Sturdy shoes and heavy gloves.
- Blankets.

- Special items for infant, elderly, or disabled family members.
- Cash.

5. **Develop an Emergency Communication Plan**

See detailed guidelines in prior section, Household Disaster Plan.

- In case family members are separated from one another, develop a plan for reuniting after the disaster. Select a safe location away from the home where your family can meet.
- Ask an out-of-state relative or friend to serve as the “family contact”. After a disaster, it’s often easier to call long distance. Make sure everyone in the family knows the name, address, and phone number of the contact person.

6. **Help Your Community Get Ready**

The prior section, Community Disaster Plan, describes the need and benefits of neighbors helping neighbors following a community disaster. The **Get Ready - Get Certified** program designed specifically for the PVE community is described.

- Volunteer your pertinent skills such as medical, CPR/first aid, and fire suppression, and equipment such as ham radios, walkie-talkies, and generators to the PVE Police Department data base. You can do so by completing a survey form available from the PVE Police Department at 310-378-4211. Your information is kept confidential for emergency purposes only. These assets may be called upon for community assistance following a disaster.
- Get Community Emergency Response Team (CERT) Program training in basic disaster response skills, such as team organization, light search and rescue, disaster medical operations, and fire safety to assist your family, neighbors and community following a disaster.
- Take free training classes to obtain your amateur radio operator (ham) license, and then join the Palos Verdes Estates Neighborhood Amateur Radio Team (NART) to assist with critical mutual aid communications following a disaster.
- Work together in your community, e. g., the **Get Ready - Get Certified** program team or your Neighborhood Watch group, to apply your knowledge and skills to neighborhood emergency plans.

What to Do During an Earthquake

Stay as safe as possible during an earthquake. Minimize your movements to a few steps to a nearby safe place and stay indoors until the shaking has stopped and you are sure exiting is safe. Remember that major earthquakes are typically followed by potentially damaging aftershocks. Stay alert.

If indoors

- **DROP** to the ground; take **COVER** under a sturdy table or other piece of furniture; and **HOLD ON** until the shaking stops. If there isn’t a table or desk near you, cover your face and head with your arms and crouch in an inside corner of the building away from windows or tall furniture that could fall on you.

- Stay away from glass, windows, outside doors and walls, and anything that could fall, such as lighting fixtures or furniture.
- Stay in bed if you are there when the earthquake strikes. Hold on and protect your head with a pillow unless you are under a heavy light fixture that could fall. In that case, move to the nearest safe place.
- Use a doorway for shelter only if it is in close proximity to you and if you know it is a strongly supported, load bearing doorway.
- Stay inside until shaking stops and it is safe to go outside. Research has shown that most injuries occur when people inside buildings attempt to move to a different location inside the building or try to leave.
- Be aware that the electricity may go out.

If outdoors

- Stay there.
- Move away from buildings, chimneys, utility poles and wires.
- The greatest danger exists directly outside buildings, at exits, and alongside exterior walls. Most earthquake-related casualties result from collapsing walls, flying glass, and falling objects.

If in a moving vehicle

- Stop as quickly as safety permits and stay in the vehicle. Avoid stopping near or under buildings, trees, overpasses, and utility wires. Put on your flashers.
- Proceed cautiously once the earthquake has stopped. Avoid roads, bridges, overpasses, or ramps that might have been damaged by the earthquake. Watch carefully for debris.

If trapped under debris

- Do not move about or kick up dust.
- Cover your mouth with a handkerchief or clothing.
- Make noise. Tap on a pipe or wall so rescuers can locate you. Shout only as a last resort. Shouting can cause you to inhale dangerous amounts of dust.

What to Do After an Earthquake

The **Get Ready - Get Certified** program has established a list of 5 important steps to take immediately following a disaster to secure your home and protect your loved ones. It will be hard to think clearly and order your priorities following a disaster. These 5 steps will provide a framework for immediate action.

These 5 steps are conveniently listed on a single page in the **Get Ready - Get Certified** program brochure, “How to Prepare For and Survive a Disaster”. A copy of these 5 steps should be kept with your emergency supplies so the list of steps will be available to follow when needed. A copy of the brochure may be obtained from the PVE Police Department, phone (310) 378-4211.

1. Protect yourself and your family

- Check yourself and loved ones for injuries. Shock often hides pain. Look for wounds.
- Move yourself and family to safe areas in case additional hazards or fire occur.
- Give first aid if needed. Retrieve first aid supplies from your emergency storage. If there are substantial injuries, skip to Step 3, then return to here.
- Retrieve and don gloves, sturdy shoes, adequate clothing for outside weather, eyeglasses, and flashlight to prepare for exploring your home and its surrounds.

2. Check for fire and the condition of your utilities and home structure

- Check for fire. Use fire extinguisher and garden hose if water is available.
- Do you hear or smell a gas leak? If so, turn off the main gas valve and open the windows. Do NOT turn off the gas unless you suspect a leak. Once you turn off the gas only a licensed plumber or the gas company can safely turn it back on, and this may take days or weeks.
- If you smell hot insulation or an electrical odor, shut off the electricity at the panel.
- Protect your water supply. Your water lines may be broken. If you find leaking water, shut off the water at the main valve outside or at the street. If you suspect sewage lines are damaged, avoid using the toilets. Shut the main inlet and outlet valve to your water heater to preserve the water in the tank for future use. You can obtain safe water by using ice cubes.
- Check for structural damage to the house. Look for large cracks. If your walls have become badly cracked or bowed or seriously altered, or if there is separation between walls and ceiling, evacuate the house. An aftershock could bring it down. If you evacuate, take your emergency supplies. Post a notice that the house is unsafe. Indicate where you've gone.

3. Post your HELP or OK sign

- Posting a HELP or OK sign on your front door or window will assist first responders.
- Do NOT use the telephone to immediately call loved ones to check their condition or to report yours unless you or others are injured. Leave the lines open for emergency calls. Call ONLY if you have an immediate emergency.
- Expect and prepare for potentially damaging aftershocks.

4. Check on your immediate neighbors

- Give priority to those that are disabled, elderly or with children that may need help. Call out to neighbors from outside their house. Ask about their condition. Do not enter a home that appears to have major structural damage or smells of gas.
- Retrieve your emergency radio and listen for news. Tune to AM 1070, 980, or 640. Satellite emergency radio, often in a car, is at SIRIUS XM channel 184 or 247.

5. Go to your neighborhood gathering site

- Your site will be your nearest public school. PVE-designated Disaster Service Workers will set up a site on school grounds – not inside the school.
- Walk or bicycle to your site if possible, parking and vehicle congestion is likely.
- The site will have emergency frequency communications and assistance.
- Be observant and relay to site officials what you know about the neighborhood.
- Be prepared to volunteer your skills in first-aid, search/rescue, child care, etc.

Wildfires

The threat of wildfires in Palos Verdes Estates is real, especially during dry conditions at various times of the year. The City has a fire station operated by the Consolidated Fire Protection District of Los Angeles County that provides fire protection, paramedic and rescue services to the City. This station can quickly call on Los Angeles County fire reserves and equipment; however, fast moving and large wildfires can overwhelm immediately available fire suppression resources. Wildfires fueled by dry vegetation and driven by hot, dry “Santa Ana” winds are extremely dangerous and often impossible to control.

Advance planning and knowing how to protect your home and property can lessen the risks and potential devastation of a wildfire. In some areas of the City there is no way to completely ensure that your home will not be exposed to wildfire. Reducing wildfire risks requires that you take responsibility for your safety, property and pets. You should maintain your property to reduce fire risks and always be prepared to evacuate.

It’s not a question of “if” but “when and where” the next wildfire will occur on the Palos Verdes Peninsula. That’s why the most important person in protecting your life and property is not the firefighter, but yourself. Through advance planning and preparation, we can all be ready for the next wildfire.

How to Reduce Your Wildfire Risks

The following sections provide wildfire risk reduction suggestions that you can implement immediately as well as others to be considered at the time of construction or remodeling. These suggestions are based primarily on protective measures recommended by the Los Angeles County Fire Department for homes and structures built near high vegetation and wooded areas as typical of Palos Verdes Estates.

Assess Your Wildfire Risks

Learn the history of wildfire in your specific area. There exists great variation in risks throughout the City. Heavily wooded areas such as Valmonte have higher risks. Eucalyptus and most conifers are quite flammable. Species with shedding bark and heavy leaf litter are particularly hazardous. Plants with relatively fire-resistant foliage include deciduous trees and shrubs, plants with large, fleshy leaves, and plants lacking volatile chemicals, oils, waxes, etc. The Fire Department, located at Station #2 in the City, or the City’s Forester can advise on wildfire risks in your specific area.

Assess the alternative roads and paths leading away from your home and likely wildfire hazards. Escape routes vary greatly. Plan yours and be sure all family members are familiar with them.

Create Safety Zones Around Your Home

To reduce the wildfire risks, you may need to modify or eliminate brush, trees and other vegetation near your home. The greater the distance is between your home and the vegetation, the greater the protection.

The Los Angeles County Fire Department has established guidelines for brush clearance and landscaping for “Defensible Homes”. Defensible space is the area around a home free of flammable plants and objects that creates a zone in which firefighters can operate safely. This space is wide enough to prevent direct flame impingement and reduce the amount of radiant heat reaching the structure.

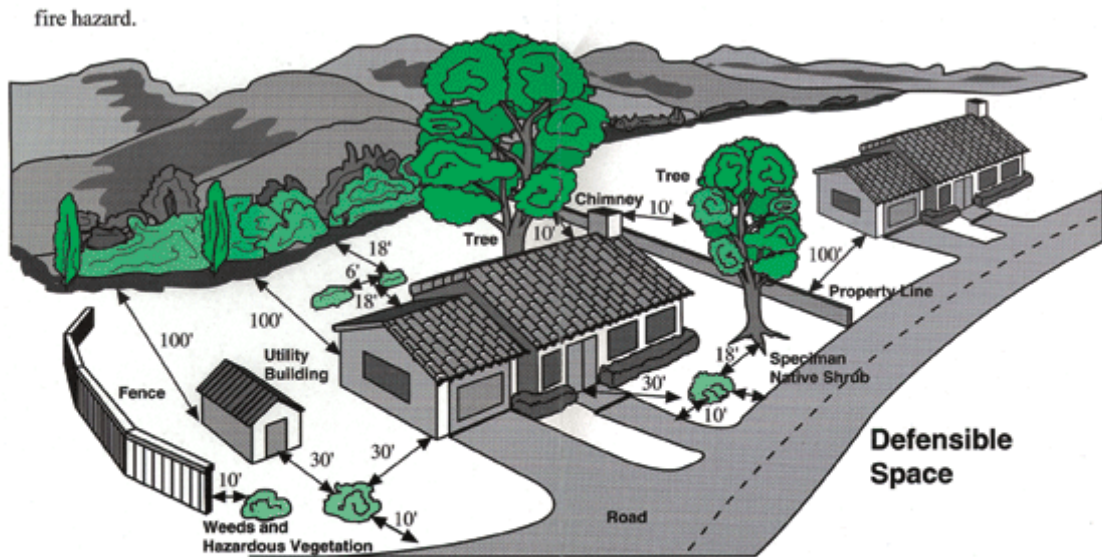
Zone 1: Create a 30-foot safety zone around the house.

Keep the volume of vegetation in this zone to a minimum. Increase this distance to 50 feet in high hazard areas (see diagram below for an explanation of distances). If you live on a hill, extend the zone on the downhill side. Fire spreads rapidly uphill. In this zone, you should also do the following:

- Single tree, ornamental shrubbery and ground covers may be permitted provided they do not readily transmit fire by radiant heat from vegetation to the house.
- Space trees and shrubs a minimum of 15 feet apart. Trees should be spaced to allow a minimum of 30 feet between canopies at maturity.
- For trees taller than 18 feet, prune lower branches within 6 feet from the ground. For trees and shrubs of less than 18 feet, prune lower branches to one third of tree height.
- Prune branches and shrubs within 15 feet of chimneys and stove pipes.
- Prune branches that are near or overhang the roof.
- Remove vines from the walls of the house.
- Maintain all plants by regularly removing dead branches and leaves.
- Clear the area of leaves, brush, evergreen cones, dead limbs and fallen trees.
- Clear your rain gutters of debris during the fire season. Houses can be lost in fires when embers ignite litter in the rain gutters, even when the roofs are fire retardant.
- Store combustible or flammable materials in approved safety containers and keep them away from the house.
- Stack wood at least 30 feet from structures. Remove flammable vegetation within 10 feet of woodpiles.
- Landscape with plants that are drought tolerant and fire resistant. Maintain plants!

Zone 2: Create a second zone at least 100 feet around the house.

This zone should begin about 30 feet from the house and extend to at least 100 feet (see diagram below). In this zone, reduce or replace as much of the most flammable vegetation as possible. If you live on a hill, you may need to extend the zone for several hundred feet to provide the desired level of safety.



NOTE: small lots may make these clearance distances impossible. You are only responsible to clear up to your property line. Clearance of property adjacent to your lot is the responsibility of the property owner.

Special attention should be given to the use and maintenance of ornamental plants known or thought to be high hazard plants when used in close proximity to structures. Examples include Acacia, Cedar, Cypress, Eucalyptus, Juniper, Pine, and Pampas grass. These plantings should be properly maintained and not allowed to be in mass plantings that could transmit fire from the native growth to any structure.

The City of PVE follows the Los Angeles County Fire Code specifications in maintaining its parklands. Vegetation in parklands is maintained annually to establish 100 feet fire safety, establish a 20 feet wide defendable space adjacent to a property lines, and maintain sufficient cover to prevent erosion.

An example of the effectiveness of “defensible space” around a home is available in the following photo of a Rolling Hills home that survived the August 2009 wildfire that burned 235 acres and caused an evacuation of about 1200 residents. The photo clearly shows the brown defensible space around the surviving home and the gray burned area surrounding it.



Protect Your Home

Install a fire-resistant roof and keep it clean.

Your roof is the most vulnerable part of your home because it can easily catch fire from wind-blown embers. Build your roof or re-roof with fire-resistant materials that include tile or metal. Block any spaces between roof decking and covering to prevent ember intrusion. Clear pine needles, leaves and other debris from your roof and gutters. Cut any tree branches within ten feet of your roof.

Keep your defensible space clean.

Keep dry weeds cut. Landscape with fire-resistant plants with high moisture content. Keep woodpiles, propane tanks and combustible materials away from your home and other structures, such as garages, barns, and sheds. Have garden hoses accessible to wet your roof and extinguish embers. Ensure that trees are far away from power lines.

Remove debris from under sun decks and porches.

Any porch, deck or overhang with exposed space underneath is fuel for an approaching fire. Overhangs ignite easily by flying embers and by the heat and fire that get trapped underneath. If the space has leaves, trash and other combustible materials underneath, or if vegetation is allowed to grow, or if the space is used for storage, the hazard is increased significantly. Enclose wooden stilts with non-combustible material such as concrete, brick, rock, stucco or metal. Use

non-combustible patio furniture and covers. If you're planning a porch or sun deck, use non-combustible or fire-resistant materials.

Cover house vents with wire mesh.

Any attic vent, soffit vent, louver or other opening can allow embers and flaming debris to enter a home and ignite it. Cover all openings with 1/4 inch or smaller corrosion-resistant wire mesh.

Install spark arrestors in chimneys and stovepipes.

Chimneys create a hazard when embers escape through the top. To prevent this, install spark arrestors on all chimneys, stovepipes and vents for fuel-burning heaters. If you're building a chimney, use non-combustible materials and make sure the top of the chimney is at least two feet higher than any obstruction within 10 feet of the chimney. Keep the chimney clean.

Use fire resistant siding.

Use fire resistant materials in the siding of your home, such as stucco, metal, brick, cement shingles, concrete and rock. You can treat wood siding with UL-approved fire retardant chemicals, but the treatment and protection are not permanent.

Choose safety glass for windows and sliding glass doors.

Windows allow radiated heat to pass through and ignite combustible materials inside. The larger the pane of glass, the more vulnerable it is to fire. Dual- or triple-pane thermal glass, and fire resistant shutters or drapes, help reduce the wildfire risk. You can also install non-combustible awnings to shield windows and use shatter-resistant glazing such as tempered or wireglass.

Make driveways accessible.

Driveways should be designed to allow fire and emergency vehicles and equipment to reach your house. Access roads should have a minimum 10-foot clearance on either side of the traveled section of the roadway and should allow for two-way traffic. Ensure that all gates open inward and are wide enough to accommodate emergency equipment. Trim trees and shrubs overhanging the road to a minimum of 13 1/2 feet to allow emergency vehicles to pass.

What to Do Before a Wildfire

Create a family evacuation plan.

- include meeting locations and communication plans.
- plan several different escape routes.
- designate an emergency meeting location outside of the fire hazard area.
- plan for evacuation of your pets.
- have fire extinguishers on hand and train your family how to use them.
- ensure that your family knows where your gas, electric and water main shut-off controls are and how to use them.
- assemble an emergency supply kit as recommended by the American Red Cross.
- appoint an out-of-area friend or relative as a point of contact so that you can communicate with family members who have relocated.
- maintain a list of emergency contact numbers posted near your phone and in your emergency supply kit.

If you see a wildfire, call 9-1-1. Don't assume that someone else has already called. Describe the location of the fire, speak slowly and clearly, and answer any questions asked by the dispatcher.

Stay calm. If there is time to prepare your house, take as many of the following steps as can be done safely. If ordered to evacuate, do so at once.

Before the Fire Approaches Your House

- Evacuate all family members who are not essential to preparing the home. Anyone with medical or physical limitations and the young and the elderly should be evacuated immediately. Don't forget the pets.
- Alert neighbors to the danger, especially if they are seniors, disabled, or children who may be home alone.
- Wear protective clothing.
- Remove combustibles. Clear items that will burn from around the house, including wood piles, lawn furniture, tarp coverings, etc. Move them outside of your defensible space.
- Close/Protect Openings. Close outside vents, windows, doors, pet doors, etc. Remove flammable drapes and curtains. Close all shutters, blinds or heavy non-combustible window coverings to reduce radiant heat. Leave windows unlocked.
- Close Inside Doors/Open Damper. Close all doors inside the house to prevent drafts. Open the damper on your fireplace, but close the fireplace screen.
- Shut Off Gas. Shut off any natural gas, propane or fuel oil supplies at the source.
- Water. Connect garden hoses. Fill any pools, hot tubs, garbage cans, tubs or other large containers with water.
- Pumps. If you have gas-powered pumps for water, make sure they are fueled and ready.
- Ladder. Place a ladder against the house in clear view.
- Car. Back your car into the driveway and roll up the windows.
- Garage Doors. Disconnect any automatic garage door openers so that doors can still be opened by hand if the power goes out. Close all garage doors.
- Valuables. Place valuable papers, mementos and anything "you can't live without" inside the car, ready for quick departure.
- Extinguish small fires. Patrol your property and extinguish all embers and small fires.

Preparing to Leave

- When to leave. Leave early enough to avoid being caught in fire, smoke, or road congestion. Don't wait until told by authorities to leave. In an intense wildfire, they may not have time to notify everyone. If you are advised to leave, don't hesitate!
- Lights. Turn on outside lights and leave a light on in every room to make the house more visible in heavy smoke.
- Don't Lock Up. Leave doors and windows closed but unlocked. It may be necessary for firefighters to gain quick entry into your home to fight fire. The entire area will be isolated and patrolled by the police.

What to Do During a Wildfire

If you have waited too long to escape or become trapped by fast-moving flames, the following defensive measures can reduce your risks.

If You Are Trapped at Home

Stay calm. As the fire front approaches, go inside the house. You can survive inside. The fire will pass before your house burns down. Close all windows and doors and leave them unlocked. If available, keep a fire extinguisher with you. Stay low and away from outside walls. Use a damp towel to filter smoke from the air you breathe.

If You Are Trapped in a Vehicle

This is dangerous and should only be done in an emergency, but you can survive the firestorm if you stay in your car. It is much less dangerous than trying to run from a fire on foot.

- Roll up windows and close air vents. Drive slowly with headlights on. Watch for other vehicles and pedestrians. Do not drive through heavy smoke.
- If you have to stop, park away from the heaviest trees and brush. Turn headlights on and ignition off. Roll up windows and close air vents.
- Get on the floor and cover up with a blanket or coat.
- Stay in the vehicle until the main fire passes. Do not run! Air currents may rock the car. Some smoke and sparks may enter the vehicle. Temperature inside will increase. Metal gas tanks and containers rarely explode.

If You Are Caught in the Open

- If the roads out of your neighborhood become impassable, evacuate on foot away from the fire using the many trails in PVE that connect neighborhoods.

- If you are evacuating on foot and become trapped by fire, find an area clear of vegetation along a road or lie in a ditch. Seek a depression with sparse fuel. Lie face down and cover yourself with anything that will shield you from the fire's heat.

What to Do After a Wildfire

- Check the roof closely for sparks or embers. Check the attic for hidden burning sparks. Douse embers with water.
- If you have a fire, call for assistance from fire fighters in the area or get your neighbors to help extinguish it.
- For several hours after the fire, maintain a "fire watch". Re-check for smoke and sparks throughout the house.

House Fires

House fires are one of the most common disasters and also the most preventable. Each year, more than 4,000 Americans die and more than 25,000 are injured in fires. Direct property loss due to fires is estimated at \$8.6 billion annually.

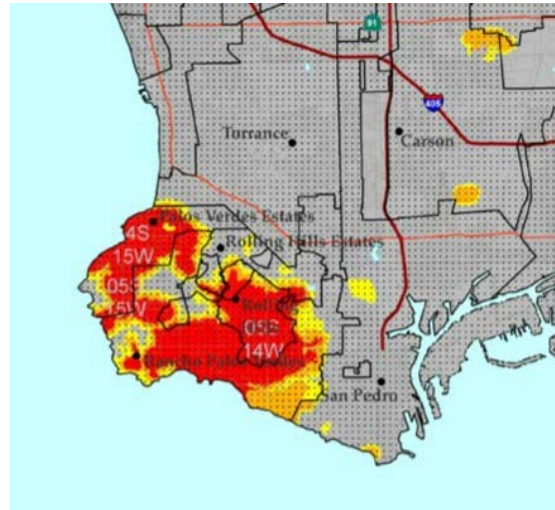
Fire spreads quickly. In just two minutes, a house fire can become life-threatening. In five minutes, a residence can be engulfed in flames.

Heat and smoke from fire can be more dangerous than the flames. Inhaling the super-hot air can sear your lungs. Fire produces poisonous gases that make you disoriented and drowsy. Instead of being awakened at night by a house fire, you may fall into a deeper sleep. Asphyxiation is the leading cause of fire deaths, exceeding burns by a three-to-one ratio.

House Fire Risks

The danger of and from house fires in Palos Verdes Estates is substantial. We live in an urban forest area where one house fire can lead to multiple house fires. Areas of brushland and mixed broadleaf, eucalyptus and pine trees provide fuel for potential fires.

The California Department of Forestry and Fire Protection (Cal Fire) has mapped the State to establish Fire Hazard Severity Zones. These zones are then classified as Very High, High or Moderate Fire Hazard Zones. Essentially all of PVE, excepting small areas in the northeastern and southwestern tips of the City, were classified by Cal Fire as Very High Fire Hazard Zones.



The Oakland fire in October 1991 was one of the largest and most costly in U.S. history. It destroyed 3,354 single-family dwellings and 437 apartment and condominium units. It killed 25 people and injured 150 others. The economic loss has been estimated at \$1.5 billion. It was a fire that, once started, ultimately was fed by house fires and surrounding landscaping.

The Oakland fire started on a Saturday as a grass fire that was incompletely extinguished and reignited on Sunday morning. Driven by dry, hot “Santa Ana” winds it quickly spread to homes. The fire tossed embers from the burning houses and vegetation into the air. These embers were swept by the torrid winds to start blazes in new locations. At the fire's peak, it destroyed one home every 11 seconds. By the first hour, the fire had destroyed nearly 790 structures.

In addition to the winds and the heat, an important factor in the rapid spread of the fire was the fuel supply consisting of an intimate mixture of vegetation and houses. Many of the houses were enveloped with vegetation. Eucalyptus groves intermixed with Monterey pine covered many of the hills in the area. The residents allowed for no defensible space between their homes and the vegetation around them. In some instances vegetation grew underneath over-hanging buildings. When the fire came through, it raced under the structures and completely overtook them.

What to Do Before a House Fire

The following are things you can do to protect yourself, your family, and your property in the event of a fire:

Smoke Alarms

- Place smoke alarms on every level of your residence. Properly working smoke alarms decrease your chances of dying in a fire by half.
- Test and vacuum away cobwebs and dust from smoke alarms once a month and replace batteries in battery-operated alarms at least once a year. Replace smoke alarms once every 10 years.

Escaping the Fire

- Review escape routes with your family. Establish 2 escape paths from each room.
- Make sure all family members know how to open windows and screens. Make sure security gratings on windows have a fire safety opening feature so they can be easily opened from the inside.
- Consider escape ladders if your residence has more than one level.
- Select a safe location away from the home where your family can meet after escaping.
- Teach family members to stay low to the floor (where the air is safer in a fire) when escaping from a fire.
- Clean out storage areas. Do not let trash, such as old newspapers and magazines, accumulate.

Flammable Items

- Never use gasoline, benzene, naphtha, or similar flammable liquids indoors; fumes released are flammable.
- Store flammable liquids in approved containers in well-ventilated storage areas.
- Never smoke near flammable liquids.
- Discard all rags or materials that have been soaked in flammable liquids after you have used them. Safely discard them outdoors in a metal container.
- Install spark arresters on chimney tops. Remove branches hanging above and around the chimney.

Heating Sources

- Be careful when using alternative heating sources like electrical space heaters indoors.
- Place heaters at least three feet away from flammable materials.
- Keep a screen in front of the fireplace. Store fireplace ashes in a metal container outside and away from your residence.
- Keep furnaces clean and have them inspected regularly by a certified specialist.

Matches and Smoking

- Keep matches and lighters up high, away from children, and, if possible, in a locked cabinet.
- Never smoke in bed or when drowsy or medicated. Provide smokers with deep, sturdy ashtrays. Douse cigarette and cigar butts with water before disposal.

Electrical Wiring

- Do not overload extension cords or outlets. If you need to plug in two or three appliances, get a UL-approved unit with built-in circuit breakers to prevent sparks and short circuits.
- Inspect extension cords for frayed or exposed wires or loose plugs.
- Make sure outlets have cover plates and no exposed wiring.
- Make sure wiring does not run under rugs, over nails, or across high-traffic areas.

Other

- Sleep with your door closed.
- Install A-B-C-type fire extinguishers in your residence and teach family members how to use them. Check them at least once a year.
- Display easy-to-read house numbers which should be clearly visible from the street, day or night.
- Consider installing an automatic fire sprinkler system in your residence.

Additional guidelines for protecting your home by managing your landscaping and exterior features are provided in the previous section on Wildfires in subsections, “Create Safety Zones Around Your Home” and “Protect Your Home”.

What to Do During a Fire

To escape a fire, you should:

- Check closed doors for heat before you open them. If you are escaping through a closed door, use the back of your hand to feel the top of the door, the doorknob, and the crack between the door and door frame before you open it. Never use the palm of your hand or fingers to test for heat - burning those areas could impair your ability to escape a fire (i.e., ladders and crawling).
- If the door is hot: Do not open it. Place a rolled towel underneath the door. Escape through a window. If you cannot escape, hang a sheet outside the window or signal for help by waving a brightly colored cloth. At night shine a flashlight at the window. If there is a telephone in the room, call 9-1-1 and let them know your exact location inside the home.
- If the door is cool: Open it slowly and ensure fire and/or smoke is not blocking your escape route. If your escape route is blocked, shut the door immediately and use an alternate escape route. If clear, leave immediately through the door and close it behind you. Be prepared to crawl. The air is clearer and cooler near the floor. Heavy smoke and poisonous gases collect first along the ceiling.
- Stay out once you are safely out. Do not reenter. Call 9-1-1.

If your clothes catch on fire, you should:

- **Stop, Drop, and Roll** - until the fire is extinguished. Running only makes the fire burn faster.

What to Do After a House Fire

The following are guidelines for different circumstances in the period following a fire:

- **If you are with burn victims, or are a burn victim yourself**, call 9-1-1; cool and cover burns to reduce chance of further injury or infection.

- **If you detect heat or smoke** when entering a damaged building, evacuate immediately.
- **If you have a safe or strong box** and it is hot, do not try to open it. It can hold intense heat for several hours. If the door is opened before the box has cooled, the contents could burst into flames.
- **If you must leave your home** because a fire official or building inspector says the building is unsafe, ask someone you trust to watch the property during your absence.
- **Remain on guard for flare ups** of fire. Remaining embers and sparks from extinguished fires can spring back into flames due to vapors and wind.

Floods

Floods are one of the most common hazards in the United States. Fortunately, most areas within the City of PVE are not at risk for major flooding. Due to the hilly terrain, flood risks are highly localized, impacting small areas. Flooding may occur from heavy rainfall where storm water runoff is concentrated by accumulation in canyons, gullies and washes.

Flood Risks

Flood risks have been greatly reduced throughout the City by the construction and improvement of storm drains and road curbs and gutters to carry away storm water. As additional troublesome areas are identified, drainage improvements are made. However, these improvements cannot assure that flooding never occurs.

The Federal Emergency Management Agency (FEMA) has responsibility for identifying flood zones throughout the United States. These zones are depicted on a community's Flood Insurance Rate Map (FIRM) or Flood Hazard Boundary Map. Flood maps for PVE can be viewed on the FEMA website, or at PVE City Hall.

Designated flood areas within PVE are primarily wash areas in Valmonte and Lunada Bay that are at risk from concentrated storm water runoff. These areas, mostly designated as FEMA Zone A, are estimated by FEMA to have a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. The National Flood Insurance Program requires the purchase of flood insurance by property owners in these flood zones who have federally insured home mortgages. FEMA has designated between 50 and 100 homes within the City as being within a flood zone.

What to Do Before a Flood

To prepare for a flood:

- Know flash flood warnings. A flash flood WATCH means flash flooding is possible in your area. A flash flood WARNING means a flash flood may occur *very* soon.
- 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 a low lying area and your cellar or basement is subject to flooding, consider installing a sump pump with a generator backup.
- Seal the walls in your basement with waterproofing compounds to avoid seepage.

- If there is a possibility that water will engulf electrical or gas outlets, turn off electricity and gas at the meters.
- Elevate the furnace, water heater, and electric panel if susceptible to flooding.
- If necessary, use sandbags to divert water from your property to alternative pathways that will channel it to storm drains.
- 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. Fill bags only 1/2 to 2/3 full so the bags will lie flat and not leave gaps. Keep them covered and dry when not in use.

What to Do During a Flood

If a flood is likely in your area:

- Keep gutters and storm drains free of leaves and debris
- Listen to the radio or television for information.
- Be aware of drainage channels in canyons, washes and other areas known to flood suddenly. Flash floods can occur in these areas with little warning.
- If sandbags are needed to divert storm water from your property, put them in place.

If flooding is occurring:

- Do not walk through moving water. Six inches of moving water can make you fall. If you have to walk in water, walk where the water is not moving. Use a stick to check the firmness of the ground in front of you.
- If you need to evacuate, secure your home. If you have time, move essential items to an upper floor. Turn off utilities at the main switches or valves if instructed to do so. Disconnect electrical appliances. Do not touch electrical equipment if you are wet or standing in water.

If you have to drive your car:

- Avoid driving where water is over the road. The road bed you think is there may not be.
- Do not drive around barricades. They are there for your safety.
- Six inches of water will reach the bottom of most passenger cars causing loss of control and possible stalling.
- A foot of water will float many vehicles.
- Two feet of rushing water can carry away most vehicles including sport utility vehicles (SUV's) and pick-ups.
- After driving through a flooded area, gently apply your brakes several times, using slight pedal pressure for three to four seconds. This helps to clean the water off the brake system surfaces so that they are dry and will work properly next time you apply them.
- If your car stalls, abandon the car and move to higher ground if you can do so safely. You and the vehicle can be quickly swept away.

What to Do After a Flood

The following are guidelines for the period immediately following a flood:

- Be aware of areas where floodwaters have receded. Roads may have been weakened.
- Avoid floodwater and moving water. Water may be contaminated by oil, gasoline or raw sewage. Water also may be electrically charged from underground or downed power lines.
- Check with local PVE police, fire or City officials to determine any known hazards in your immediate area.
- Stay out of any building if it surrounded by floodwaters.
- Walk carefully around the outside of the building and check for loose power lines, gas leaks, and structural damage.
- Use extreme caution when entering buildings; there may be hidden damage.
- Stay away from downed power lines and report them to the power company.
- Listen for reports to learn whether the water supply is safe to drink.
- Clean and disinfect everything that got wet. Mud left from floodwater can contain sewage and chemicals.

Landslides and Mudslides

Palos Verdes Estates is characterized by its hilly terrain, steep slopes, gullies, ravines and ocean bluffs and cliffs. These characteristics make it particularly susceptible to landslides and mudslides.

Landslides occur when masses of rock, earth, or debris move down a slope. They are caused by disturbances in the natural stability of a slope. They can accompany heavy rains or follow droughts or earthquakes.

Mudslides, also known as *debris flows*, develop when water rapidly accumulates in the ground and results in a surge of water-saturated rock, earth, and debris. Mudslides usually start on steep slopes, flow in channels and can be activated by natural disasters. Areas where human modification of the land or wildfires has destroyed vegetation on steep slopes are particularly vulnerable to mudslides during and after heavy rains.

Mudslide Risks

The injury and health hazards associated with mudslides include:

- Rapidly moving water and debris that can lead to trauma.
- Broken electrical, water, gas, and sewage lines that can result in injury or illness.
- Disrupted roads that can endanger motorists and disrupt transport and access to health care.

Areas more likely to experience mudslides include:

- Areas where mudslides have occurred before.
- Areas where surface water runoff is directed.
- Steep slopes and areas at the bottom of slopes or canyons.
- Slopes that have been altered for construction of buildings and roads.
- Areas where wildfires have destroyed vegetation.

Mudslides start on steep slopes - slopes steep enough to make walking difficult. Once started, however, mudslides can even travel over gently sloping ground. The most hazardous areas are canyon bottoms, stream channels, areas near the outlets of canyons, and slopes excavated for buildings and roads.

- Mudslides or debris flows generally occur during intense rainfall on water-saturated soil. They usually start on steep hillsides as soil slumps or slides, breaks up, liquefies and accelerates to speeds as great as 35 miles per hour. Multiple flows that start high in canyons commonly funnel into channels. There, they merge, gain volume, and can travel long distances from their source.
- Mudslides commonly begin in swales (depressions at the top of small gullies) on steep slopes, making areas downslope from swales particularly hazardous.
- Roadcuts and other altered or excavated areas of slopes are particularly susceptible to mudslides. Mudslides or debris flows onto roadways are common during rainstorms, and often occur during milder rainfall conditions than those needed for debris flows on natural slopes.
- Areas where surface water runoff is channeled, such as along roadways and below culverts, are common sites of mudslides and debris flows.

Landslide Risks

The city of Palos Verdes Estates has about 4.5 miles of coastline characterized by coastal bluffs and cliffs topped with residential properties. These properties are subjected to the natural processes of surface and groundwater flow and erosion. Management of water flow on these properties is essential to minimizing the risks of landslides.

Hillsides move under the weight and pressure of water. A rain storm of 3 inches of water on a one-half acre parcel of land adds *170 tons* of weight if it is not drained off. If excess water is allowed to penetrate the soil, it adds hydraulic pressure and/or acts as a lubricant between layers of soil. When this happens, the hillsides, and houses, can start to move.



Slides can be simple surface failures (mudslides) or deeper rotational failures (landslides). These rotational slides show up as large blocks of soil broken off from the hill. They often start with cracks in the ground or a slump in the slope. We often see springs form before a failure occurs. If you live on a bluff or a steep slope, you must watch for these warning signs.

Minimizing risks of slope failure requires an informed and coordinated approach to drainage control techniques, slope stabilization, and vegetation management around your slope. Three basic steps can protect your slope against accelerated erosion and landsliding.

- First, understand your property. It is not an extensive effort to generally characterize your slope area and identify the water movement around the slope.

- Second, identify problems and plan appropriate improvements into your site. Include drainage control with your landscaping plan. On each coastal property, there are typical site constraints which must be considered. Identifying the opportunities and constraints of your site are key goals of your planning effort.
- Third, carefully construct and maintain your drainage system. Taking the time to ensure that good materials and workmanship are used on your property cannot be overemphasized. Give your system periodic maintenance tune-ups.

It is critical that surface water flows be controlled since they can lead to rapid, severe erosion of your property. Something as simple as regrading your driveway can change surface water flow patterns and cause erosion. Often the first heavy rain locates potential problem areas. Immediate adjustments should be performed to avoid erosion problems.

What to Do Before a Landslide or Mudslide

Become familiar with the land around you. Learn whether landslides or mudslides have occurred previously in your area. You may contact the Public Works Department at PVE City Hall, a county geologist, state geological surveys, departments of natural resources, or university departments of geology.

Watch the patterns of storm-water drainage on slopes near your home, and note especially the places where runoff water converges, increasing flow over soil-covered slopes. Watch the hillsides around your home for any signs of land movement, such as small landslides or debris flows or progressively tilting trees.

Clean out ditches and drains for proper water flow away from structures.

Discuss landslides and mudslides with your family. Everyone should know what to do in case all family members are not together. Discussing a disaster plan ahead of time helps reduce fear and lets everyone know how to respond during a landslide or mudslide.

Look for the following features around and near your property that may be indications of potential sliding:

- Springs, seeps, or saturated ground in areas that have not typically been wet.
- New cracks or unusual bulges in the ground, street pavements, or sidewalks.
- Soil moving away from foundations.
- Ancillary structures such as decks and patios tilting and/or moving relative to the main house.
- Sticking doors and windows, and visible open spaces indicating jambs and frames out of plumb.
- Tilting or cracking of concrete floors and foundations.
- Broken water lines and other underground utilities.
- Leaning telephone poles, trees, retaining walls, or fences.
- Offset fence lines.
- Sunken or down-dropped road beds.

What to Do During a Landslide or Mudslide

IF YOU SUSPECT IMMINENT LANDSLIDE DANGER:

- Contact the PVE police, fire or public works department.
- Inform affected neighbors. Help neighbors who may need assistance to evacuate.
- Evacuate. Getting out of the path of a landslide or debris flow is your best protection.

During intense storms and rainfall

- Stay alert and stay awake! Many slide fatalities occur when people are sleeping. Listen to the radio or watch TV for warnings about intense rainfall or for information and instructions from local officials.
- Be aware that intense short bursts of rain may be particularly dangerous, especially after longer periods of heavy rainfall and damp weather.
- Look for tilted trees, telephone poles, fences, or walls, and for new holes or bare spots on hillsides.
- Listen for any unusual sounds that might indicate moving debris, such as trees cracking or boulders knocking together. A trickle of flowing or falling mud or debris may precede larger flows. If you are near a stream or channel, be alert for any sudden increase or decrease in water flow and for a change from clear to muddy water.
- Be especially alert when driving. Embankments along roadsides are particularly susceptible to slides. Watch the road for collapsed pavement, mud, and fallen rocks.
- If landslide or debris flow danger is imminent, quickly move away from the path of the slide. Move to the nearest high ground in a direction away from the path. If rocks and debris are approaching, run for the nearest shelter and take cover (if possible, under a desk, table, or other piece of sturdy furniture). If escape is not possible, curl into a tight ball and protect your head. A tight ball will provide the best protection for your body.

What to Do After a Landslide or Mudslide

- Stay away from the slide area. There may be danger of additional slides.
- Check for injured or trapped people near the slide, without entering the slide area. Direct rescuers to their location.
- If rescue officials are not in the area, report the slide to PVE police or fire departments.
- Help a neighbor who may require special assistance--infants, elderly people, and people with disabilities.
- Listen to local radio or television stations for the latest emergency information.
- Watch for flooding, which may occur after a landslide or debris flow. Floods sometimes follow landslides and debris flows because they may both be started by the same event.
- Look for and report broken utility lines to appropriate authorities. Reporting potential hazards will get the utilities turned off as quickly as possible, preventing further hazard and injury.
- Consult a geotechnical expert (a registered professional engineer with soils engineering expertise) for advice on reducing additional landslide problems and risks. The PVE

Public Works Department can identify geotechnical experts that are familiar with local conditions.

- Replant damaged ground as soon as possible, as erosion caused by loss of ground cover can lead to further damage.

Living Immediately After a Disaster

Within a few hours of a major disaster it is likely that official first responders like police, fire and medical teams will be overwhelmed. In that case, however well-prepared we may be as individuals to cope with the emergency, neighbors will have to depend on neighbors for mutual assistance, relief and protection.

Your "neighborhood" may consist of the homes on your street or in close proximity. It may be your apartment or condominium complex. The **Get Ready – Get Certified** program has established 6 districts within the City to serve as gathering locations for assisting in coping with the emergency. Your gathering spot is the one of 6 schools within the City that is closest to you.

As soon as possible after the disaster the **Get Ready – Get Certified** program Disaster Service Workers will set up and operate a residential assembly point and aid station on the school grounds – not in the buildings. A City-provided cache of equipment and supplies to assist recovery will be positioned at each school. District leaders and volunteer teams of residents will manage each assembly point, organize volunteers into disaster response teams to help each other, and provide a staging area for recovery operations.

An Emergency Operations Center will be activated at PVE City Hall to direct and communicate with relief services and to contact other South Bay cities for mutual aid. Amateur radio operators, resident members of the PVE Neighborhood Amateur Radio Team (NART) will be present at the school assembly points to communicate with the Emergency Operations Center and other disaster service radio teams.

Disaster Service Workers at the school assembly sites will have information to assist in identifying and locating PVE neighborhood residents with pertinent skills such as medical, CPR/first aid, and fire suppression, and equipment such as ham radios, walkie-talkies, and generators. Information also is planned to identify the locations of special needs residents that are disabled or elderly and likely in need of assistance.

If you would like to contribute your special skills or equipment to neighborhood relief, you can do so by completing a survey form available from the PVE Police Department at phone (310) 378-4211. Your assistance will be especially valued if you are a:

- Nurse, medical doctor or trained in first aid.
- Firefighter or trained in fire suppression.
- Community Emergency Response Team (CERT) trained member.
- Ham radio operator.
- Psychologist/psychiatrist counselor.
- Member of the clergy.

Your information is kept confidential for emergency purposes only.

First Aid

First priority in disaster relief is to assist the injured. The most seriously injured should be assisted by paramedics, and, where possible, transferred to medical facilities. Assistance for minor injuries should be available from the **Get Ready – Get Certified** school assembly points that can refer neighbors with medical, first aid, and CERT training.

Neighbors can help neighbors by checking on each other. Especially if you have a neighbor who is elderly, disabled or simply alone, checking on their welfare can be of great aid. If a neighbor is in need of assistance beyond your capabilities, you should hang a “HELP” sign on their front door or in a prominent location visible from the street. If they are not in need of additional assistance, then hang an “OK” sign so relief teams will know that the residence is not in need of help. Use signs on your own residence as well.

The **Get Ready, Get Certified** program has published a brochure titled, “How to Prepare For and Survive a Disaster”. This brochure includes a “HELP” and an “OK” sign for use in emergencies. A copy of the brochure should be kept with your emergency supplies so the guidelines and signs it contains will be available when needed. The brochure may be obtained from the PVE Police Department, phone (310) 378-4211.

Shelter

Your primary shelter will be your own home if it is safe. Stay there if you possibly can, or find shelter with a neighbor. If you need assistance in locating shelter, the relief workers at your local school assembly point can assist in locating shelter.

Within your home you may be without utilities. If without electrical power:

- Use a battery-powered radio to determine local, official advisories.
- Car radios may be available if no radio is in the home.
- Resist the urge to keep checking inside your freezer or refrigerator. Every time you do, you let in warm air which reduces useful life of the unit’s contents.
- If you have a fireplace be sure it is safe to use. Burn wood or logs made of newspaper. Don’t burn charcoal indoors as it releases carbon monoxide, an odorless and sometimes deadly poison.
- If you have a generator, it can be useful in powering essential equipment if hooked directly to that equipment. If it is hooked to a house circuit, you are required by law to inform Southern California Edison and make sure that it is installed safely. If it is not, you risk damaging your property and endangering the lives of lineworkers who may be working on power lines.

You may be without water from your home faucets due to water pipe ruptures or notification of contaminated water that should not be consumed. An early section of these guidelines titled “Water” provides information on emergency water storage and usage. Instructions are given on how to use the safe water from your hot water heater. Information on how to purify water for consumption is also provided.

If your home is without water service, household toilets can not be utilized normally since water refill of the toilet tank will not occur. Do not flush toilets or dump water into sinks or bathroom drains until told that sewer lines are intact. If sewer lines are working, then water from a

swimming pool or hot tub can be used to refill the toilet tank to restore toilet operation. Do not use this pool water for drinking.

If your home is without sewer service, 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. 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. Household disinfectant can be used for odor control. 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.

If a camera is available, it may be useful to photograph damage to your property. You should also take the photos and document the damage conditions. This can be useful later in making insurance claims and seeking damage repairs. Keep records of all repairs or demolitions done to establish near-term safety.

Communications

Following a disaster, people naturally want to call their family and friends. As the crisis eases, phone an out-of-state contact (more than 200 miles away) to advise them of your situation. Ask them to relay your information to 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 that are truly necessary.

If telephone service is unavailable and your communication needs are urgent, you may find assistance at the local school gathering site where ham radio operators will be stationed to assist in relaying critical communications.

Rely on your radio for information about local conditions. Do not call 9-1-1 for information!

Neighborhood

When you are out in your neighborhood be observant and relay to relief workers what you know about the neighborhood. Be factual and accurate. There will be many needs; put priority on those most urgent.

When checking on neighbors, call out to them from outside their house. Ask about their condition. Do not enter a home that appears to have major structural damage or smells of gas.

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 police or fire departments, or call 9-1-1. If a power line falls across a car or any other metallic object, do not touch that object.

Psychological Factors

Major disasters such as earthquakes and fires 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.

The volunteer Disaster Service Worker team operating the aid station on your local school grounds will have information to assist in contacting resident volunteers who are psychologists, psychiatrists or trained in counseling who can assist in relieving psychological trauma.

Listen to the radio for news of school closures and activities. Many schools will make a counselor available to talk to the children having difficulty in dealing with their fears and/or their losses.

A Final Word

In any major disaster, police, fire, paramedics and other first responders will do their best to provide relief. In many situations they will be quickly overwhelmed. In all situations they will try to serve the most urgent needs of the community. Ultimately, however, for most community needs following a major disaster, ***neighbors must depend on neighbors for immediate mutual assistance, relief and protection.***

Recognizing this truth, the **Get Ready – Get Certified** disaster preparedness program was established to maximize the mutual assistance of neighbors through education, preparation and organization for disaster relief. The goal is to increase the community's survivability in a disaster and reduce loss of lives and property, and mitigate the suffering of people. The motto for the program is:

It's not the will to survive, but the will to prepare to survive that makes the difference.

The program has identified 3 easy steps that residents can take to prepare to survive. These steps will reduce the risks for you, your family, your friends, your neighbors and your community.

Step 1: **Get Certified.** Get your household certified as prepared for disaster. It's easy. You do it yourself. The first section following the Introduction of these guidelines tells you how.

Step 2: **Contribute your special skills** such as medical, CPR/first aid, and fire suppression, and volunteer your applicable equipment such as ham radios, walkie-talkies, and electric generators to assist your local neighborhood relief. You can do so by completing a survey form available from the PVE Police Department at phone (310) 378-4211. This information is kept confidential for emergency purposes only.

Step 3: **Volunteer to serve** as a member of your local **Get Ready – Get Certified** program Disaster Service Worker team that will operate the aid station at your local school following a major disaster. Call the PVE Police Department at phone (310) 378-4211, ask for the Community Relations Officer, and you will be put in contact with your District team captain.

Get Ready! – Get Certified!

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