

## Earthquake

An earthquake is a sudden release of pent-up energy along a fault line in the earth's crust. Without warning, the ground under your feet will begin to shake and roll.

A timely response is critical. Gas leaks may have occurred, which could lead to fire and explosion. People may have been injured. What you do in the *first hour* following an earthquake can save lives, reduce the severity of injuries, and save property.



### What To Do:

1. Check on the well-being of your loved ones.
2. Dress for safety - protect your head, hands, and feet. Sturdy shoes will protect your feet from broken glass. Leather gloves will protect your hands from sharp debris. A hard hat will protect your head from fallen objects, like chimney bricks teetering on roof edges. (See **Month #7 – Under the Bed**, for more information.)
3. Check your natural or propane gas, and shut it off if necessary. (See **Month #8 - Utility Safety**, for more information.)
4. Shut off your water at the house master shut-off valve. If water pipes have broken, this will help keep the water in your water heater safe from pollutants. (See **Month #8 - Utility Safety**, for more information.)
5. Post an OK/Help card in your front window or on your front door. If you – or a neighbor – have been injured and are going into shock, time is critical. This signals your status to your neighbors and helps prioritize your response activity. (See **Neighborhood Preparedness - Map Your Neighborhood**, or simply write OK or Help in a paper and post it.)
6. Place your fire extinguishers outside on the sidewalk or street edge so they are visible and available for immediate use should anyone in the neighborhood experience fire. Time is critical. In a disaster, 9-1-1 fire responders will likely be unavailable.

See **Neighborhood Preparedness** for programs and resources that will help your neighbors organize and prepare for a timely and safe response to disasters.

## Tsunami

- Tsunamis that strike the Washington Coast are most often caused by earthquakes. These earthquakes might occur far away or near where you live.
- Some tsunamis can be very large. In coastal areas their height can be as great as 30 feet or more (100 feet in extreme cases), and they can move inland several hundred feet.
- A tsunami consists of a series of waves. Often the first wave may not be the largest. The danger from a tsunami can last for several hours after the arrival of the first wave.
- Tsunamis move faster than a person can run.
- Sometimes a tsunami causes the water near the shore to recede, exposing the ocean floor.
- The force of some tsunamis is enormous. Large rocks weighing several tons along with boats and other debris can be moved inland hundreds of feet by tsunami wave activity. Homes and other buildings are destroyed. All this material and water move with great force and can kill or injure people.



### What To Do:

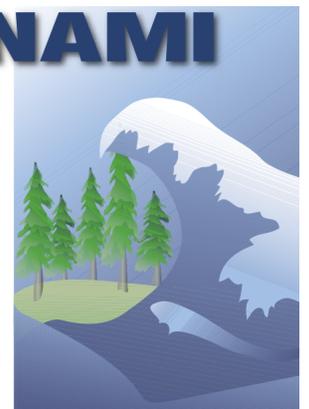
- If you are at home and hear there is a tsunami warning, make sure your entire family is aware of the warning. Evacuate immediately.
- If you are at the beach or near the ocean and you feel the earth shake, move immediately to higher ground, **DO NOT** wait for a tsunami warning to be announced.

## TSUNAMI

### WHEN AT THE BEACH:

- IF THE GROUND SHAKES...
- IF YOU HEAR A SIREN...
- IF THE OCEAN RECEDES FROM THE SHORELINE...

**IMMEDIATELY — HEAD FOR HIGH GROUND!**



## Volcano

A **volcano** is an opening (or rupture) in the Earth's surface or crust, which allows hot, molten rock, ash and gases to escape from deep below the surface.

**Magma** is molten rock within the Earth's crust. When magma erupts through the earth's surface it is called lava. Lava can be thick and slow-moving or thin and fast-moving.

A **lahar** is a type of volcanic mudflow that flows down from a volcano, typically along a river valley. Lahars have the consistency of concrete: fluid when moving, then solid when stopped. Lahars can be huge. 5,600 years ago, a Mount Rainier lahar produced a wall of mud 600 feet deep in the White River canyon, extending over an area of nearly 200 miles.

Lahars can be extremely dangerous, because of their energy and speed.



### What To Do:

#### During an Eruption or Lahar

1. Grab your 72-hour Comfort Kit (see **Month #4 - 72 hour Kits**)
2. Evacuate immediately. Follow designated evacuation routes.
3. Keep tuned to a NOAA radio or a local emergency alert station for updates.



#### During an Ash Fall

1. Close all doors and windows and place damp towels at door thresholds.
2. When going outside, wear dusk masks and goggles.
3. Put stoppers in the tops of drainpipes.
4. Constantly sweep or shovel ash from roofs and gutters (roofs generally cannot support more than four inches of wet ash).
5. Remove outdoor clothing before entering a building.
6. Listen to a battery operated radio to receive updates.

## Chemical Release

A chemical release is an accidental release of harmful chemicals into the air. It can occur at manufacturing plants, or from accidents involving transport trucks or trains. They can also be the result of terrorist acts and those intending to create harm and injury.



### What To Do:

#### Shelter In Place Immediately

1. Go inside immediately. Remember your pets.
2. Tightly lock all doors and windows.
3. Shut off fans and all devices that circulate air throughout your home.
4. Go into your pre-selected room and tightly seal it with plastic sheeting and duct tape. Place a dampened towel under the door. (See **Month #11 - Shelter in Place.**)
5. Listen to the radio for instructions.
6. Thoroughly air out your home once the emergency is over.

#### In Your Car

1. Tightly roll up all windows.
2. Shut off the motor to avoid drawing outside air in through the engine.
3. Turn off all heating and cooling and close all vents.
4. Breathe through a dampened cloth.
5. Turn on the radio and listen for instructions.

