

This update material (Copyright 2013,14) is useful for both CPP and PSP exam prep purpose.

## **Special Reading – Natural Disasters in the US**

The majority of natural disasters are caused by weather, such as hurricanes, tornadoes, floods, tsunamis, thunderstorms ...etc. Most of these disasters can be predicted. Flooding is the most expensive type of natural disaster due to the wide scale damage it can produce. On the other hand, earthquakes caused by a sudden slipping or movement of a portion of the earth's crust are the most deadliest.

An epicenter is the place on earth directly above the point on the fault, which is the fracture on which displacement has taken place as a result of an earthquake. Seismic waves are vibrations that travel outward from the fault.

The Richter magnitude scale (AKA the Richter scale) assigns a single number for quantifying the energy released by an earthquake. It deploys a base-10 logarithmic scale. When an earthquake is measured, say, 5.0 on the Richter scale, the actual shaking amplitude is 10 times larger than one measured 4.0! In the US, there are at least 39 states that are considered at moderate to very high earthquake risk. As documented by the United States Geological Survey USGS, the states that were hit with a 4.0 or above magnitude earthquake since 2003 include Alaska, Alabama, Arkansas, California, Hawaii, Illinois, Kentucky, Montana, New Mexico, Oregon, South Dakota, Virginia, Washington and Wyoming. FEMA has a page that

classifies earthquake risks geographically:  
<http://www.fema.gov/hazard/earthquake/risk.shtm>.

Another source of information on natural disaster is the National Weather Service web site, available at <http://www.weather.gov/> .

 **NATIONAL WEATHER SERVICE**  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

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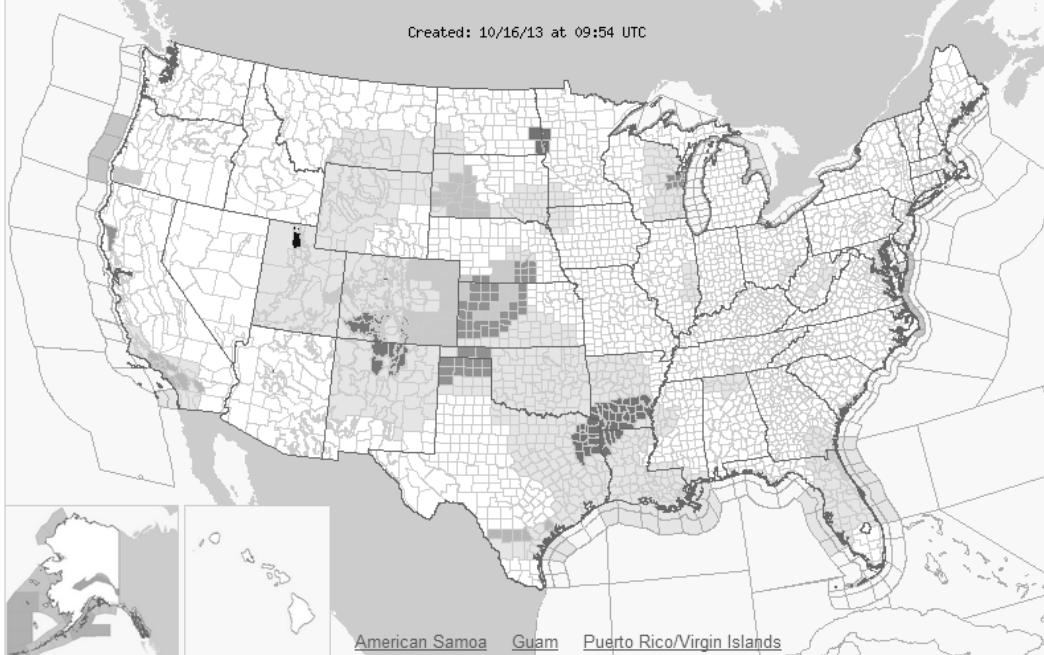
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**Government Shutdown Notice**  
Due to the Federal Government shutdown, NOAA.gov and most associated web sites are unavailable. However, because the information this site provides is necessary to protect life and property, it will be updated and maintained during the Federal Government shutdown.  
[Read More...](#)

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Advise



During an earthquake, those who are in door should drop to the ground and take cover if possible (such as getting under a table). Do not stay close to glass, windows, or anything that may fall and break. Stay there until the shaking stops. And NEVER use the elevators since the electricity may go out anytime. On the other hand, those who stay outside should stay away from buildings, streetlights, utility wires, piping ...etc just to avoid getting killed by falling debris. Stay in the open area until the shaking stops.

These are some useful earthquake preparation tips:

- Shelves and cabinets should be securely fastened to walls.
- Heavy objects should be relocated to the lower shelves.
- Ceiling and overhead light fixtures should be installed with protective enclosures.

- Breakable items should be relocated in low cabinets that are closed with secure latches.
- Flammable and hazardous products should only be kept in approved safety cabinets that are far away from any potential sources of ignition.
- Equipments with gas or electric lines should be secured by being strapped to the wall studs.

Fire prevention is also essential since during a natural disaster fire often follows. You should always ensure that all electrical wirings are inspected and be kept in good repair. Flammable liquids should be stored in approved containers and cabinets that are located in well-ventilated storage areas. When open flames are in use, you must keep them away from walls, insulation and other flammable items.

The exact opposite is flood. Most floods develop slowly thus giving you plenty of time for preparation. However, flash floods can develop real fast. If your site is in a location subject to such risks, you should elevate all power components and install check valves in the sewer traps. If practical, you should construct barriers to prevent floodwater from getting in. Also, consider to seal all walls with waterproofing compounds so to avoid seepage.