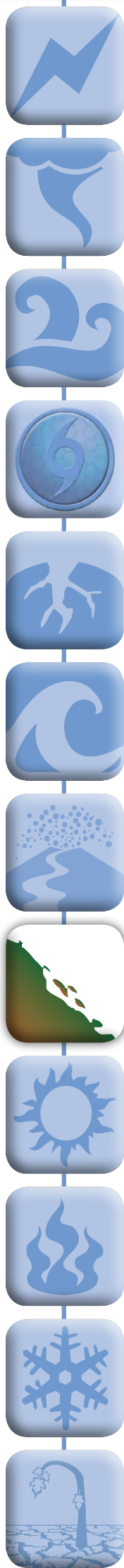




LANDSLIDES AND MUDFLOWS



? WHAT ARE LANDSLIDES?

A landslide is a mass of rock, earth, or debris moving down a slope. They are activated by rainstorms, earthquakes, volcanic eruptions, fires, and by human modification of the land.

WHAT IS A MUDFLOW?

Mudflows (or debris flows) are rivers of rock, earth, and other debris saturated with water. They develop when water rapidly accumulates in the ground such as during heavy rainfall or rapid snow melt, changing the earth into a flowing river of mud or slurry.

LANDSLIDE FACTS

- Landslides may be very small or very large and can move from slow to very high speeds.
- It is estimated that landslides cause between 25 and 50 deaths each year in the U.S. and thousands more in vulnerable areas all around the globe.

MUDFLOW FACTS

- Mudflows may be very small or very large; flowing rapidly down slopes or through channels, and can strike with little or no warning.
- A mudflow can travel several miles from its source, growing in size as it picks up trees, vehicles, and other materials along the way.

! WARNING SIGNS

- Doors or windows begin to stick or jam.
- New cracks appear in plaster, tile, brick, or foundations.
- Outside walls, walks, or stairs begin pulling away from the building.
- Slowly developing, widening cracks appear on the ground or on paved areas such as streets or driveways.
- Underground utility lines break.
- Bulging ground appears at the base of a slope.
- Fences, retaining walls, utility poles, or trees tilt or move.
- The ground slopes downward in one specific direction and may begin shifting in that direction under your feet.
- Be alert for sudden increases or decreases in water flow and a change from clear to muddy water if you are near a stream or channel.

GLOBE DANGER ZONES

- Landslides may occur in all U.S. states/territories; California, West Virginia, Utah, Kentucky, Tennessee, Puerto Rico, Ohio, and Washington are at greatest risk.



ACTIONS TO CONSIDER

BEFORE

- Create an evacuation plan for your family and have a backup route in mind.
- Be prepared to evacuate if instructed to do so.
- Listen for unusual sounds such as trees cracking or boulders knocking.
- Plant ground cover on slopes and build retaining walls.

DURING

- If Indoors**
- Stay indoors. Move to a second story if possible.
 - Take cover under a desk, table, or other piece of sturdy furniture.

If Outdoors

- Get out of the path of the landslide or mudflow. Run to the nearest high ground in a direction away from the path. Do not delay! Save yourself, not your belongings.
- Run for the nearest shelter such as a group of trees or a building if rocks and other debris are approaching.
- Curl into a tight ball and protect your head if escape is not possible.

AFTER

- Stay away from the slide area; there may be danger of additional slides.
- Check for injured or trapped people near the slide area. Provide first aid and CPR if trained to do so.
- Listen to local radio or television stations for the latest emergency information.
- Help a neighbor who may require special assistance – large families, children, elderly, and individuals with disabilities.
- Check the building foundation, chimney, and surrounding land for damage. Be especially careful to check for downed power lines and gas lines that may have ruptured.
- Replant damaged ground as soon as possible since erosion caused by loss of ground cover can lead to flash flooding.
- Report property damage to your insurance agent immediately.

DID YOU KNOW...

The May 1980 eruption of the Mount St. Helens volcano caused the largest landslide in history – a rock slide-debris avalanche large enough to fill 250 million dump trucks.

Contact your Installation Office of Emergency Management for further information.

