# BACKGROUNDER

# LANDSLIDES AND MUDFLOWS

### **EMERGENCY INFORMATION**

- 1. Acres of property may be damaged and buildings and homes destroyed by landslides. Landslides can provoke associated dangers, such as broken electrical, water, gas, and sewage lines, and disrupted roadways and railways.
- 2. Landslide warning signs include cracks opening on hillslopes; evidence of slow, downhill movement of rock and soil; tilting of trees, poles, or walls; or visible changes such as the formation of sags and bumps in the slope.
- 3. Landslide, mudflow, and debris-flow problems are often caused by land mismanagement. Improper land-use practices on ground of questionable stability, particularly in mountain, canyon, and coastal regions, can create many problems associated with landslides, mudflows, and debris flows.

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REGIONS AT RISK FROM LANDSLIDES

Landslides occur in every state of the Union and its island territories. California, West Virginia, Utah, Kentucky, Tennessee, Puerto Rico, Ohio, and Washington have the most severe landslide problems.

### WHAT IS A LANDSLIDE?

Landslides occur when masses of rock, earth, or debris move down a slope. Landslides may be very small or very large, and can move at slow to very high speeds. Many landslides have been occurring over the same terrain since prehistoric times. They are activated by earthquakes, storms, fires, and by human modification of the land. New landslides occur as a result of rainstorms, earthquakes, volcanic eruptions, and various human activities.

### WHAT IS A MUDFLOW?

Mudflows (or debris flows) are rapid movements of rock, earth, and other debris saturated with water. They develop when the ground becomes saturated such as during heavy rainfall or rapid snowmelt, or during a volcanic eruption, changing the earth into a flowing river of mud or "slurry." A slurry can flow rapidly down slopes or through channels, and can strike with little or no warning at avalanche speeds. A slurry can travel several miles from its source, growing in size as it picks up trees, cars and other materials along the way.

### HELP YOUR COMMUNITY GET READY-

The media can raise awareness about landslides and mudflows by providing important information to the community. Here are some suggestions:



- In an area prone to landslides, publish a special section with emergency information on landslides and mudflows. Localize the information by including the phone numbers of local emergency services offices, the American Red Cross, and hospitals.
- Report on what city and county governments are doing to reduce the possibility of landslides. Interview local officials about local land-use zoning regulations.



3. Interview local officials and major insurers regarding the National Flood Insurance Program. Remind your community that mudflow is covered by flood insurance policies from the National Flood Insurance Program.



4. Work with local emergency services and American Red Cross officials to prepare special reports for people with mobility impairments on what to do if evacuation is ordered.

### **DID YOU KNOW...**

- The most expensive landslide in U.S. history occurred in Thistle, Utah, in spring 1983. It reached 1½ miles from top to bottom and ranged in width from 1,000 feet to about 1 mile. Total costs attributable to the landslide exceeded \$500 million.
- Landsliding in the United States is estimated to cause an annual loss of about \$1.5 billion and at least 25 fatalities.
- The Loma Prieta earthquake in October 1989 triggered thousands of landslides throughout an area of 5,400 square miles. In addition to causing tens of millions of dollars of damage to houses, other structures, and utilities, landslides blocked many transportation routes, greatly hampering rescue and relief efforts.
- Mudflows tend to flow in channels, but will often spread out over a floodplain. They generally occur in places where they have occurred before.

## HOW THE PUBLIC CAN HELP AFTER A DISASTER

When disaster strikes, people everywhere want to help those in need. To ensure that this compassion and generosity are put to good use, the media can highlight these facts:

- Financial aid is an immediate need of disaster victims. Financial contributions should be made through a recognized voluntary organization to help ensure that contributions are put to their intended use.
- Before donating food or clothing, wait for instructions from local officials.

  Immediately after a disaster, relief workers usually don't have the time or facilities to set up distribution channels, and too often these items go to waste.
- Volunteers should go through a recognized voluntary agency such as the American Red Cross or the Salvation Army. They know what is needed and are prepared to deal with the need. Local emergency services officials also coordinate volunteer efforts for helping in disaster.
- Organizations and community groups wishing to donate items should first contact local officials, the American Red Cross, or the Salvation Army to find out what is needed and where to send it. Be prepared to deliver the items to one place, tell officials when you'll be there, and provide for transportation, a driver, and unloading.