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PREPAREDNESS FACT OF THE WEEK

This Week:
THREATS & HAZARDS IN CALIFORNIA
Part 4 of 12

LANDSLIDES



Photo of the 2005 La Conchita, CA Landslide

Landslides may not be a common occurrence in Kings County, but we have had some minor landslides/mudslides not too far from home. Even though they are not common to our area, you may need this information should you travel in or around areas that are prone to such disasters.

Landslides commonly occur in connection with other major natural disasters such as earthquakes, volcanic eruptions, wildfires and floods; however, landslides can also be caused by normal, seasonal rainfall or erosion. Expansion of residential and recreational developments into hillside areas leads to more people that are threatened by landslides each year.

Landslide Warning Signs

- Springs, seeps, or saturated ground in areas that have not typically been wet before.
- 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.
- 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.
- Rapid increase in creek water levels, possibly accompanied by increased turbidity (soil content).
- Sudden decrease in creek water levels though rain is still falling or just recently stopped.
- Sticking doors and windows, and visible open spaces indicating jambs and frames out of plumb.
- A faint rumbling sound that increases in volume is noticeable as the landslide nears.
- Unusual sounds, such as trees cracking or boulders knocking together, might indicate moving debris.

Areas that are generally prone to landslide hazards

- On existing old landslides.
- On or at the base of slopes.
- In or at the base of minor drainage hollows.
- At the base or top of an old fill slope.
- At the base or top of a steep cut slope.
- Developed hillsides where leach field septic systems are used.

Areas that are typically considered safe from landslides

- On hard, non - jointed bedrock that has not moved in the past.
- On relatively flat - lying areas away from sudden changes in slope angle.
- At the top or along the nose of ridges, set back from the tops of slopes.

[Landslide Risks and Prevention Information \(pdf download of info above\)](#)

Preparing for Landslides

Before the Landslide

You can reduce the potential impacts of land movement by taking steps to remove yourself from harm's way:

- Assume that burn areas and canyon, hillside, mountain and other steep areas are vulnerable to landslides and mudslides.
- Build away from steep slopes.
- Build away from the bottoms or mouths of steep ravines and drainage facilities.
- Consult with a soil engineer or an engineering geologist to minimize the potential impacts of landslides.

Develop a family plan that includes:

- Out-of-state contact
- Place to reunite if family members are separated
- Routes to evacuate
- Locations of utility shut-offs

Store the following emergency supplies:

- Food
- Water
- First aid kit
- Flashlights and batteries
- Battery-operated radios
- Special medications/eye care products

Store an evacuation kit that includes:

- Cash (small bills and change)
- Important documents (Birth certificates, insurance policies, marriage certificates, mortgage documents)
- Irreplaceable objects
- Games, toys for children

Purchase supplies to protect your home:

- Hammer
- Nails
- Plywood

- Rain gauge
- Sand
- Sandbags
- Shovel

Property Preparedness

- Limit the height of plants near buildings to 18 inches.
- Use fire-retardant plants and bushes to replace chaparral and highly combustible vegetation.
- Water landscape to promote early growth.
- Eliminate litter and dead and dry vegetation.
- Inspect slopes for increases in cracks, holes and other changes.
- Contact your local public works department for information on protection measures.

When it Rains

Monitor the amount of rain during intense storms. More than three to four inches of rain per day, or 1/2-inch per hour, have been known to trigger mudslides.

Look for geological changes near your home:

- New springs
- Cracked snow, ice, soil or rocks
- Bulging slopes
- New holes or bare spots on hillsides
- Tilted trees
- Muddy waters

Listen to the radio or watch television for information and instructions from local officials. Prepare to evacuate if requested to do so. Respect the power of the potential mudslide. Remember, mudslides move quickly, can cause damage and kill.

Prioritize protection measures:

- Make your health and safety and that of family members the number one priority.
- Make your home the number two priority.
- Make pools, spas, patios and other elements the next priority.

Implement protection measures when necessary:

- Place sandbags
- Board up windows and doors

Above tips courtesy of the American Red Cross (ARC) - ([pdf download here](#))

Additional resources:

California Department of Public Health (CDPH) - "[Landslides and Mudslides](#)"

California Geological Survey (CGS) - "[Landslides](#)"

California Department of Food and Agriculture (CDFA) - "[Landslide](#)"

Centers for Disease Control and Prevention (CDC) - "[Landslides and Mudslides](#)"

Federal Emergency Management Agency (FEMA) - "[Landslide and Debris Flow \(Mudslide\)](#)"

United States Geological Survey (USGS) - "[Landslides Hazards Program](#)"



Resources:

<http://cms.calema.ca.gov>

Photo of 2005 La Conchita, CA Landslide;

<http://landslides.usgs.gov/>

Photo by United States Geological Survey (USGS)

