



# DEPARTMENT OF CONSERVATION

## News Release

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## CALIFORNIA GEOLOGICAL SURVEY UNVEILS NEW TOOL TO DETERMINE LANDSLIDE THREAT

SACRAMENTO — With heavy El Niño rains on the way, the California Geological Survey (CGS) unveiled a new tool to help Californians understand the state's landslide potential. The [Landslide Inventory and Deep Landslide Susceptibility Map](#) has information about approximately 70,000 slides in California, including recent, active flows and older occurrences that are dormant but that could be reactivated by extraordinary levels of rainfall.

“This is the most detailed, comprehensive collection of landslide information we've put together,” said Dr. John Parrish, the State Geologist of California and head of CGS. “This information will be valuable to the owners and operators of infrastructure such as roads and pipelines, to local planners, and also to members of the general public who might be interested in potential hazards. The landslide hazard is noticeably higher in some places than in others, and the public isn't always aware of that.”

The map initially presents a statewide view, but users can zoom in on individual landslides. Colors indicate the age and activity level of the landslide, while arrows show the direction and type of slide (some are large and slow, others small and sudden). Users also can click on a landslide and get additional information.

“Our long-term plan has been to get all of our landslide information on a single database and make that available to the public,” said Supervising Engineering Geologist Chris Wills, who heads CGS' Geologic Mapping Program. “This winter's especially intense El Niño heavy rains could make landslides a critical concern.”

The map includes data generated as far back as the 1970s and as recently as a couple of years ago. Hundreds of older paper maps were digitized for inclusion. One of the most recent major landslides in the state – the November 22 Vasquez Canyon slide near Santa Clarita – is not shown, but will be incorporated into the database.

“We intend to continually update this product with both new and older information,” Wills said. “This version of the map doesn't yet include all the landslides that CGS has mapped over the years because we

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*The Department of Conservation's mission is to balance today's needs with tomorrow's challenges and foster intelligent, sustainable, and efficient use of California's energy, land, and mineral resources.*

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haven't had time to digitize all of them. But we'll improve it over time.”

CGS maps landslides for several purposes, including the creation of Seismic Hazard Zone Maps, the regulation of timber harvesting, and, to help Caltrans anticipate potential slide-related damage.

A landslide is any mass of earth or rock that slides, flows and/or falls downhill. Landslides can affect land from a few square yards to hundreds of acres in area and can be a few feet to hundreds of feet thick. Many factors can contribute to the formation of landslides aside from rainfall, including improper construction or grading, earthquakes, weak or loose rock and soil, wildfires, and steep slopes.

Large, slow-moving landslides composed of bedrock can cause extensive property damage but usually do not result in loss of life. A debris flow, commonly called a mudslide, moves quickly and can cause not only property damage, but also injuries.

“Landslides can occur on any sloped surface at any time and in any weather condition,” Parrish said. “But if the rainfall scenarios we’re hearing about come to pass this winter, the potential certainly increases. Those who have property on or at the foot of slopes would be wise to learn more about their landslide risk factors.”

CGS is part of the California Department of Conservation (DOC). In addition to studying and mapping geologic phenomena such as earthquakes and landslides, DOC categorizes mineral resources; administers agricultural and open-space land conservation programs; ensures the reclamation of land used for mining; and regulates oil, gas and geothermal wells. For more information, visit the [DOC web site](#).

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