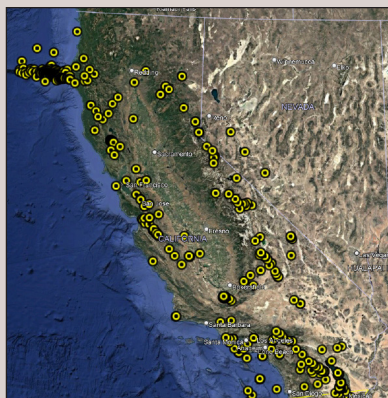


GEOLOGY NEWS

2024 CALIFORNIA EARTHQUAKES

In 2024 California recorded 7,814 $M \geq 1.5$ earthquakes. Of those, 1,046 were $M \geq 2.5$ and 17 were $M \geq 4.5$.

The largest earthquake felt in California in 2024 was the December 5, 2024 $M 7.0$ Offshore Cape Mendocino earthquake, located under the Pacific Ocean about 30 miles (45 km) west of Cape Mendocino. It also has the distinction of being the largest earthquake in the United States during 2024.



Source: CGS Center for Engineering Strong Motion Data; base map from Google Earth

The second largest 2024 earthquake in California was the August 7, 2024 $M 5.2$ Lamont earthquake, near Bakersfield. This was the largest onshore earthquake within California in 2024 and was felt widely in Southern California. Fortunately, it caused little damage.

In California, small earthquakes occur nearly every day. These earthquakes are reminders that California is earthquake country and that we need to be prepared for them.

Special Feature: Dr. Perry Ehlig's Geologic Research Collection

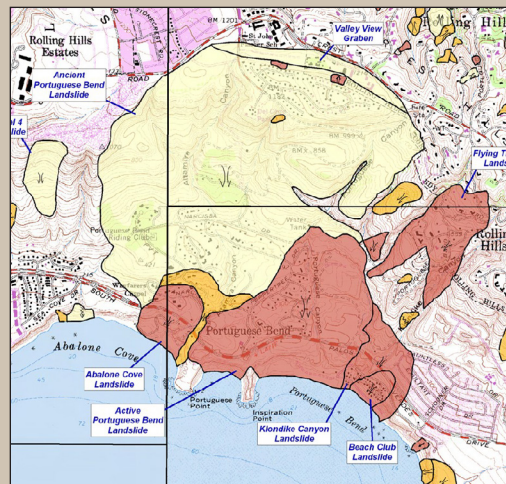
Field maps
Rock specimens
Thin sections



DR. PERRY EHLIG'S GEOLOGIC RESEARCH COLLECTION

Dr. Perry L. Ehlig was a California-registered engineering geologist, concerned primarily with landslide, groundwater, fault, and earthquake problems. He contributed significantly to the understanding of the complex regional geology of southern California, especially of basement rocks and the displacement history of the San Andreas Fault system. You may visit the California Geological Survey's Los Angeles Office to view rock specimens and thin sections collected by Dr. Ehlig. To learn more about his life and research and to preview the collection online, go to <https://www.conservation.ca.gov/cgs/education-resources>.

PORTUGUESE BEND LANDSLIDE



Source: CGS Landslide Inventory Map of the Palos Verdes Peninsula, 2007, <https://filerequest.conservation.ca.gov>

On the southern coast of the Palos Verdes Peninsula is an infamous landslide complex that has been studied and monitored since 1946 when USGS geologist W.P. Woodring first examined it.

CGS mapping from 1998 showed three active landslides named the Portuguese Bend, the Abalone Cove, and the Klondike landslides. These were inset into a larger dormant landslide known as the ancient Portuguese Bend landslide or the ancient complex.

In 1956, the Portuguese Bend landslide began moving during the extension of Crenshaw Boulevard to Palos Verdes Drive due to placement of road fill. The Abalone Cove landslide began moving in 1974 and the Klondike Canyon slide began moving around 1980.

During a rainy period from 2022-2024, landslide activity increased, destroying properties and infrastructure. According to the City of Rancho Palos Verdes, the Portuguese Bend landslide moved approximately 4 feet per month from June to August 2024.