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### I. Active Faults

A significant number of known active earthquake faults are located throughout Los Angeles County. The locations of active faults are mapped to understand the potential likelihood and severity of seismic activity for existing and proposed development. Faults that are considered active by the State of California are included within the Alquist-Priolo Earthquake Fault Zones. Additional faults may be considered active by Los Angeles County and other jurisdictions based on seismic and geological data. Information on known active and inactive faults can be accessed through the source(s) below.

**U.S. Geological Survey’s Quaternary Faults Database:** This source provides fault trace locations, fault name, section name, age, dip direction, slip rate, slip sense, fault class, strike, and fault length, and other fault characteristics.

*Source:*

*U.S. Geological Survey and California Geological Survey, Quaternary fault and fold database for the United States, accessed October 13, 2021, at: <https://www.usgs.gov/natural-hazards/earthquake-hazards/faults>.*

### II. Zones of Required Investigation

The Seismic Hazards Mapping Act (SHMA) of 1990 (Public Resources Code, Chapter 7.8, Section 2690-2699.6) directs the Department of Conservation, California Geological Survey to identify and map areas prone to earthquake hazards of liquefaction, earthquake-induced landslides and amplified ground shaking. The purpose of the SHMA is to reduce the threat to public safety and to minimize the loss of life and property by identifying and mitigating these seismic hazards. The SHMA was passed by the legislature following the 1989 Loma Prieta earthquake.

A Seismic Hazard Zone is a regulatory zone that encompasses areas prone to liquefaction (failure of water-saturated soil) and earthquake-induced landslides.

**Liquefaction** occurs when loose, water-saturated sediments lose strength and fail during strong ground shaking. Liquefaction is defined as the transformation of granular material from a solid state into a liquefied state as a consequence of increased pore-water pressure. The process of zoning for liquefaction combines Quaternary geologic mapping, historical ground-water information and subsurface geotechnical data. Required Investigation boundaries are based on the presence of shallow historic groundwater (< 40 feet depth) in uncompacted sands and silts deposited during the last 15,000 years and sufficiently strong levels of earthquake shaking expected during the next 50 years.

**Landslides** tend to occur in weak soil and rock on sloping terrain. The landslide hazard Zone of Required Investigation boundaries generally indicate steep hillslopes composed of weak materials that may fail when shaken by an earthquake. The process for zoning earthquake-induced landslides incorporates expected future earthquake shaking, existing landslide features, slope gradient, and strength of hillslope materials.





















