

# Liquefaction

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Liquefaction is an uncommon soil process by which loose, water-saturated sediment (typically sand or silt) just below the ground surface temporarily loses its strength during an earthquake and acts as a fluid. Structures built above on the ground surface can sink, tilt, and suffer significant structural damage in extreme cases. In the process the liquefied granular sediment can be ejected upward through soil cracks and onto the ground surface. Liquefaction is generally limited to flatland situations (such as floodplains) and is usually the result of strong to severe earthquake shaking.

The State of California has created a series of regulatory maps pursuant to the Seismic Hazard Mapping Act of 1990. These statutory maps designate zones where earthquake shaking might cause two types of ground failure: landslides (on slopes) and liquefaction. The seismic hazard maps affect real estate in two principal ways: by requiring a geologic site investigation before a property located within a hazard zone is developed, and by requiring disclosure to a prospective buyer of the fact that any portion of a sale property is within an earthquake-triggered landslide or liquefaction zone. The statutory Natural Hazard Disclosure Statement includes a space for making this disclosure.

Finally, cities and counties may be more restrictive than the state in designating and regulating liquefaction zones. The locally designated zones are typically mapped in the city or county General

Plan Safety Element. Not only do these local zones often differ from the state zones, but city and county planners often identify additional and different types of natural hazard zones in order to best regulate land use within their jurisdiction.

*(Additional sources: California Geological Survey)*

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