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## NEW SEISMIC HAZARD MAPPING FOR SACRAMENTO

**OVERVIEW:** *CGS released new seismic hazard maps for the Sacramento region, creating new requirements for future developments and existing buildings.*

On May 22, 2025, the California Geological Survey (CGS) released preliminary seismic hazard maps for the Sacramento West and East quadrangles. This marks a significant research and regulatory development for parts of Sacramento and Yolo Counties that were not previously mapped for seismic hazards. When the maps are finalized later this year, cities and counties will be required to adequately evaluate the effects of earthquake-triggered ground failures for new development, as required by the Seismic Hazards Mapping Act (Public Resources Code Sections 2690-2699.6).

The maps identify zones susceptible to liquefaction, which occurs when saturated sandy soil loses strength during an earthquake and can lead to ground failure and/or settlement. While Sacramento faces a lower risk of severe seismic shaking compared to the Bay Area or Southern California, the identification of liquefaction zones in these seismic hazard maps indicates the importance of earthquake preparedness and mitigation for development and planning in the region. Developers and property owners in the area should be aware of how these new maps will affect them.

### Seismic Risks in Sacramento

The shaking that was considered in the analysis accounts for the probability of various earthquake magnitudes and distances, consistent with the requirements of the California Building Code. Shaking hazards in the Sacramento region are predominantly controlled by background seismicity, with contributions from more distant Bay Area faults. Background seismicity refers to seismic activity that is not associated with known, mapped fault lines or specific seismic sources. This approach helps capture the potential for earthquakes in areas without previously identified faults, recognizing that seismic activity is very difficult to predict.

### Implications for New Developments

For future developments in these newly identified liquefaction zones, developers must comply with CGS Special Publication (SP) 117A, which requires them to:

- **Conduct an adequate, appropriate geotechnical investigation** to evaluate the potential for liquefaction and determine mitigation measures.
- **Evaluate the impacts of liquefaction and seismic shaking** to confirm that new developments are designed to withstand seismic hazards, meeting the life safety performance level at a minimum.
- **Coordinate with local authorities** to understand specific permitting requirements of the city and county that will review the plans.

### Implications for New Developments

Owners of properties located within a mapped hazard zone must disclose that their property lies within such a zone at the time of sale. Owners of buildings in these zones may also consider:

- Assessing existing structural integrity to evaluate the resilience of properties against liquefaction-induced ground failure.
- Implementing retrofit measures to enhance safety and stability based on assessment results.

### Conclusion

The release of these preliminary seismic hazard maps is a step forward in earthquake preparedness for the Sacramento area. While seismic forces and liquefaction are already being considered for most projects, additional analysis and attention will be needed to satisfy the law and requirements of SP-117A. Developers should take proactive measures to comply with guidelines to confirm the resilience of their structures and avoid delaying approval of their projects.

To discuss this matter and how it may impact your projects, please contact your Langan Project Manager or:



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