This map shows the relative intensity of ground shaking and damage in parts of California and Nevada from anticipated future earthquakes. Although the greatest hazard is in the areas of highest intensity as shown on the map, no area within the region is immune from potential earthquake damage.

- The landscape of the area shown on the map has been significantly shaped by faulting and erosion. These processes are still active today.
- A large earthquake in or near a major urban center will disrupt the economy of the entire region. Effective disaster planning by state and local agencies, and by private business, can dramatically reduce losses and speed recovery.
- Current building codes substantially reduce the costs of damage from earthquakes, but the codes are intended only to prevent widespread loss of life by keeping buildings from collapsing, not to protect buildings from damage.
- After a large earthquake, residents and businesses may be isolated from basic police, fire and emergency support for a period ranging from several hours to a few days. Citizens must be prepared to survive solely on their own, and to help others, until outside help arrives.
- Maps of shaking intensity after the next major earthquake will be available within minutes on the internet. The maps will be available at http://quake.wr.usgs.gov/recent/shaking.html, or at http://www.cia.org/shakemap/shake.html for Nevada. The maps will help identify areas most seriously affected and will help guide emergency crews to the most damaged regions.

Level of Potential Shaking

- These regions are near major, active faults and will experience strong shaking from future earthquakes, only weaker, masonry buildings would be damaged. However, very infrequent earthquakes could still cause strong shaking here.
- These regions are distant from known, active faults and will only experience lower levels of shaking less frequently. Intense shaking can damage even strong, modern buildings.
- These regions are far from known, active faults and will not experience significant shaking from future earthquakes. Buildings are not likely to be damaged. However, very infrequent earthquakes could still cause strong shaking here.

References Cited


Building code regulations are intended to prevent significant damage from earthquakes, but are not designed to prevent loss of life.

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Seismic hazards are calculated by the California Geological Survey from the USGS/GIS seismic hazard model (Frankel and others, 2002) and include ground motion from expected earthquakes in the region. The model accounts for the possibility of fault rupture along major faults and the location of active faults. The shaking is estimated using seismic wave attenuation models and empirical relationships relating the magnitude and location of earthquakes to the amount of shaking. The shaking is calculated for two types of ground conditions: rock and sediment. The shaking is calculated for alluvial and bedrock conditions.

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The shaking intensities displayed on this map are calculated for rock conditions, only weaker, masonry buildings would be damaged. However, very infrequent earthquakes could still cause strong shaking here.

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The map is intended to provide a general overview of seismic shaking potential and is not intended for specific engineering design.

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