

1.1.5 Laws to Mitigate Earthquake Hazard

The Alquist-Priolo Special Studies Zones Act was signed into law in 1972. In 1994 it was renamed the Alquist-Priolo Earthquake Fault Zoning Act (A-P Act). The primary purpose of the Act is to mitigate the hazard of fault rupture by prohibiting the location of structures for human occupancy across the trace of an active fault (Hart and Bryant, 1997). This State law was a direct result of the 1971 San Fernando Earthquake, which was associated with extensive surface fault ruptures that damaged numerous homes, commercial buildings, and other structures. Surface rupture is the most easily avoided seismic hazard.

The A-P Act requires the State Geologist (Chief of the Division of Mines and Geology) to delineate "Earthquake Fault Zones" along faults which are "sufficiently active" and "well-defined." Sufficiently active faults show evidence of Holocene surface displacement along one or more of their segments. Well-defined faults are clearly detectable by a trained geologist as a physical feature at or just below the ground surface. The boundary of an "Earthquake Fault Zone" is generally about 500 feet from major active faults, and 200 to 300 feet from well-defined minor faults. The A-P Act dictates that cities and counties withhold development permits for sites within an Alquist-Priolo Earthquake Fault Zone, until geologic investigations demonstrate that the sites are not threatened by surface displacements from future faulting (Hart and Bryant, 1997).

Alquist-Priolo Earthquake Fault Zone mapping has been completed by the State Geologist for the 45 quadrangles in Riverside County. The maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. Local agencies must regulate most development projects within the zones. Projects include all land divisions and most structures for human occupancy. State law exempts single family wood-frame and steel-frame dwellings which are less than three stories and are not part of a development of four units or more. However, local agencies can be more restrictive than state law requires.

Before a project can be permitted, cities and counties must require a geologic investigation to demonstrate that proposed buildings will not be constructed across active faults. An evaluation and written report of a specific site must be prepared by a licensed geologist. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault (generally 50 feet).

The A-P Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. **The Seismic Hazards Mapping Act**, passed in 1990, addresses non-surface fault rupture earthquake hazards, including strong

ground shaking, liquefaction and seismically-induced landslides.

The California Department of Conservation, Division of Mines and Geology (DMG) is the principal State agency charged with implementing the 1990 Seismic Hazard Mapping Act (SHMA). Pursuant to the SHMA, the DMG is directed to provide local governments with seismic hazard zone maps that identify areas susceptible to amplified shaking, liquefaction, earthquake-induced landslides, and other ground failures. The goal is to minimize loss of life and property by identifying and mitigating seismic hazards. The seismic hazard zones delineated by the DMG are referred to as "zones of required investigation". Site-specific geotechnical hazard investigations are required by SHMA when construction projects fall within these areas. The DMG, pursuant to the 1990 SHMA, has not completed any mapping for Riverside County, nor is any planned for the foreseeable future (DMG, 2000). However, this study provides seismic hazard mapping and information that meets the intent of the Seismic Hazards Mapping Act, and local agencies should require site-specific geotechnical hazard investigations based on this mapping.

Real Estate Disclosure Requirements. Effective June 1, 1998, the Natural Hazards Disclosure Act requires that sellers of real property and their agents provide prospective buyers with a "Natural Hazard Disclosure Statement" when the property being sold lies within one or more state-mapped hazard areas. If a property is located in a Seismic Hazard Zone as shown on a map issued by the State Geologist, the seller or the seller's agent must disclose this fact to potential buyers. The law specifies two ways in which this disclosure can be made. One is to use the new Natural Hazards Disclosure Statement as provided in Section 1102.6c of the California Civil Code. The other way is to use the Local Option Real Estate Disclosure Statement as provided in Section 1102.6a of the California Civil Code. The Local Option Real Estate Disclosure Statement can be substituted for the Natural Hazards Disclosure Statement only if the Local Option Statement contains substantially the same information and substantially the same warning as the Natural Hazards Disclosure Statement.