

## **1.9 Reducing Earthquake Hazards in the County of Riverside**

This section identifies and discusses the opportunities available for seismic upgrading of existing development and capital facilities, including potentially hazardous buildings and other critical facilities. Many of the issues and opportunities available to the County apply to new development, redevelopment and infilling. Issues involving rehabilitation and strengthening of existing development are decidedly more complex, given the inherent economic and societal impacts.

To prioritize rehabilitation and strengthening projects, the County must consider where its resources are best spent to reduce earthquake hazards in the existing development, and how mitigation programs can be implemented to avoid undue hardship in the community. Certainly, potentially hazardous buildings, critical facilities, and high-risk lifeline utilities will have high priority.

Only the County can set its priorities. This hazard evaluation helps define the scope of the problem.

Recent California earthquakes, with their relatively low loss of life, have demonstrated that the best mitigation technique is our ongoing improvement of building codes as we incorporate lessons from damaging earthquakes, worldwide. Our most recent building codes (1997, adopted by the County of Riverside Department of Building and Safety in July 1999), are a prime example. However, while hazard is reduced by new building codes, it is simultaneously increased by population growth, which leads to development in vulnerable areas, and by the aging of the existing building stock.

It must be stressed that building codes are designed to protect lives, not structures. Under recent building code improvements, buildings will still be damaged, but are far less likely to fail catastrophically.

It also needs to be emphasized that all development choices have some hazards associated with them. Most can and have been mitigated by engineered solutions. The recognition that these solutions require maintenance to function properly has been an expensive lesson to many. The recognition that engineered solutions have a finite design life has yet to be appreciated because of the relative youth of the County's development. This is an expense that will be passed on to future generations. Minimizing engineered mitigation, and maximizing land use planning, is the most environmentally balanced - and in the long-term, the most economical - route to a sustainable, safe community.

### **1.9.1 1997 Uniform Building Code Impacts on the County of Riverside**

Changes in the 1997 UBC represent the most significant increases in ground shaking criteria in the last 30 years. Two changes have special significance for the