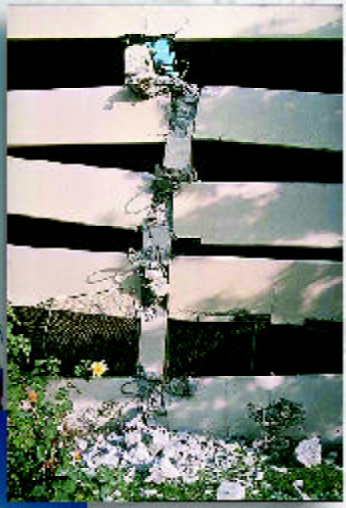
California's Next Earthquake – are you prepared?

a guide for decision-makers

c a l i f o r n i a is Earthquake country ...



THE PUBLIC WILL WANT TO KNOW WHAT YOU DID TO PREPARE

when they happen, managers will be held accountable!

Every Public Agency Manager Needs to ...

☑ Understand the Risk *(What Can Go Wrong!)*

- Death and injuries to staff and the public
- Collapse of buildings and other facilities
- Disruption of emergency response
- Damage from fire, flooding, or hazardous chemical release
- Loss of power, water, gas, and telephone
- Shutdown of normal operations

☑ Upgrade Vulnerable Facilities

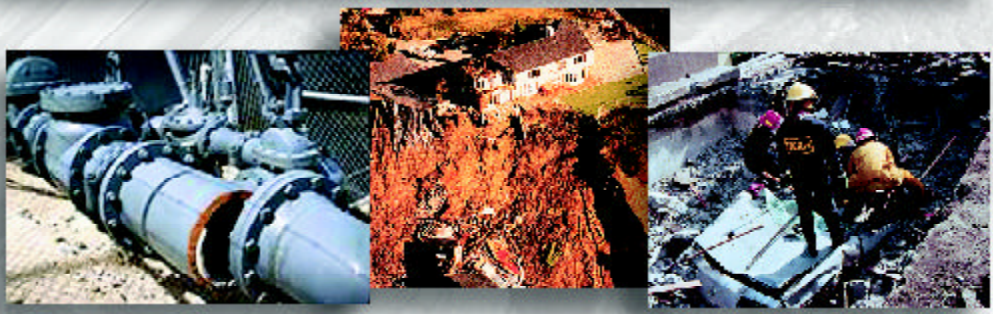
- Strengthen high risk buildings
- Anchor or brace critical equipment

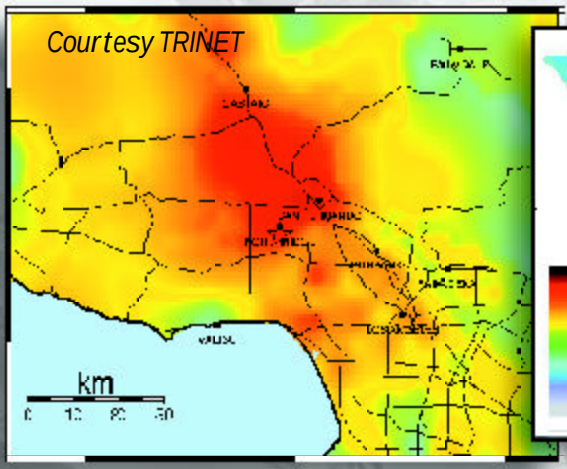
☑ Specify Desired Earthquake Performance when Constructing New Facilities

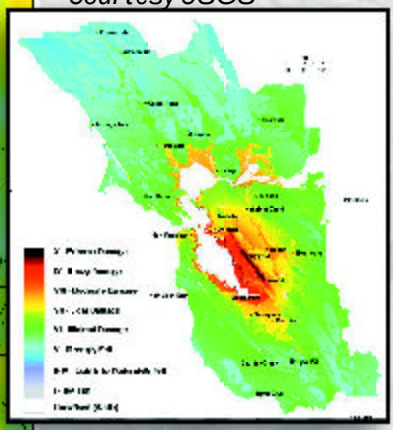
☑ Develop Emergency Response & Recovery Plans

☑ Encourage the Community to Prepare

HAVE YOU DONE THIS?







The potential intensity of future ground shaking is well-known.

A SEISMIC VULNERABILITY STUDY WILL TELL YOU WHAT'S AT RISK

The vulnerability of typical building construction types is also well-known.

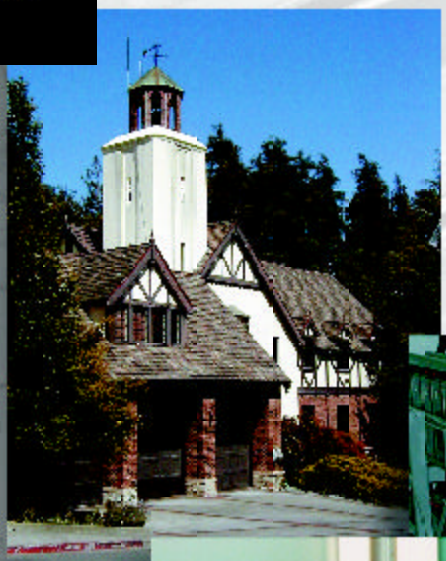
Table of Building Vulnerability*

⇩ Find Your Building Type	Ground Shaking: Moderate	Strong	Very Strong
Wood Frame	Low	Medium	High
Steel Frame	Low	Medium	High
Tilt-up	Medium	High	Collapse ☠
Older Concrete Frame	Medium	High	Collapse ☠
Precast Concrete	Medium	High	Collapse ☠
Unreinforced Masonry (brick)	High	Very High	Collapse ☠
Equipment	Medium	High	Very High

*** This table indicates approximate vulnerabilities - specific building vulnerability requires review by a qualified structural engineer.**

upgrade vulnerable facilities

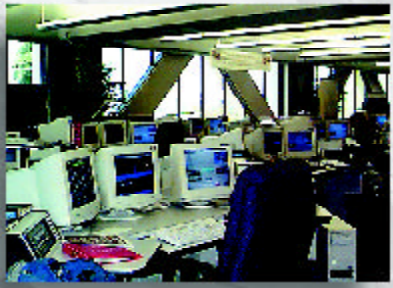
Mill Valley's City Hall and Fire Station both occupied an older, seismically vulnerable concrete building. The building was upgraded to the level of essential service facility criteria at a fraction of the replacement cost while still preserving its historical value.



Important electrical and mechanical equipment can be cost-effectively braced and anchored to prevent damage and to minimize the potential for prolonged disruption of operations.

Design New Facilities for Desired earthquake Performance

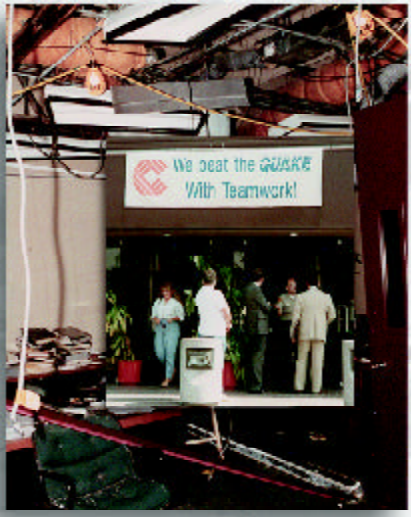
Designing new facilities to meet specific post-earthquake performance goals is the most cost-effective mitigation measure.



Los Angeles County Fire Department's new Fire Communication & Control Facility (FCCF) was constructed using performance-based design criteria, exceeding that provided in the conventional building code. This base-isolated building is expected to remain fully operational following a severe earthquake.

Viscous dampers were integrated into the 15-story steel frame of the new Hiram W. Johnson State Office Building in San Francisco to provide assurance that governmental services would be available in the immediate post-earthquake period.

develop emergency response and recovery plans



Following the 1987 Whittier Narrows earthquake, California Federal Savings restored operation of its severely damaged headquarters through implementation of its Emergency Response Plan.

encourage the community to prepare

Rockwell International has adopted strict performance standards for the design of its new facilities and has retrofitted its existing buildings and equipment to minimize future earthquake losses.

Next Steps

- **Estimate Your Earthquake Risk**
- **Develop an Earthquake Loss Reduction Program**
- **Integrate Loss Reduction into Your Capital Planning**
- **Identity Mitigation Funding Sources**
  (Consider Insurance Savings, Bonds, Hazard Mitigation Grants, Tax Credits,...)

To Find Out How...

Ask for ...

and

1755 Creekside Oaks Drive, Suite 100
Sacramento, California 95833
http://www.seismic.ca.gov
Phone: (916) 263-5506
FAX: (916) 263-0594

State of California
Gray Davis, Governor

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Proposition 122 Product 2.2
Earthquake Risk Management: A Guide for Decision-Makers (SSC Report 99-06)
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