

# **Risk Mitigation in the San Francisco Bay Area**

**National Academies Presentation**

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# Urban Risk Challenge

- Developed and developing urban areas pose serious challenge to government
- Recent disasters: 2004 Tsunami; 2005 Hurricanes Katrina and Rita and the Pakistan Earthquake
- Community safety and sustainability as a balanced interaction of public and private sector

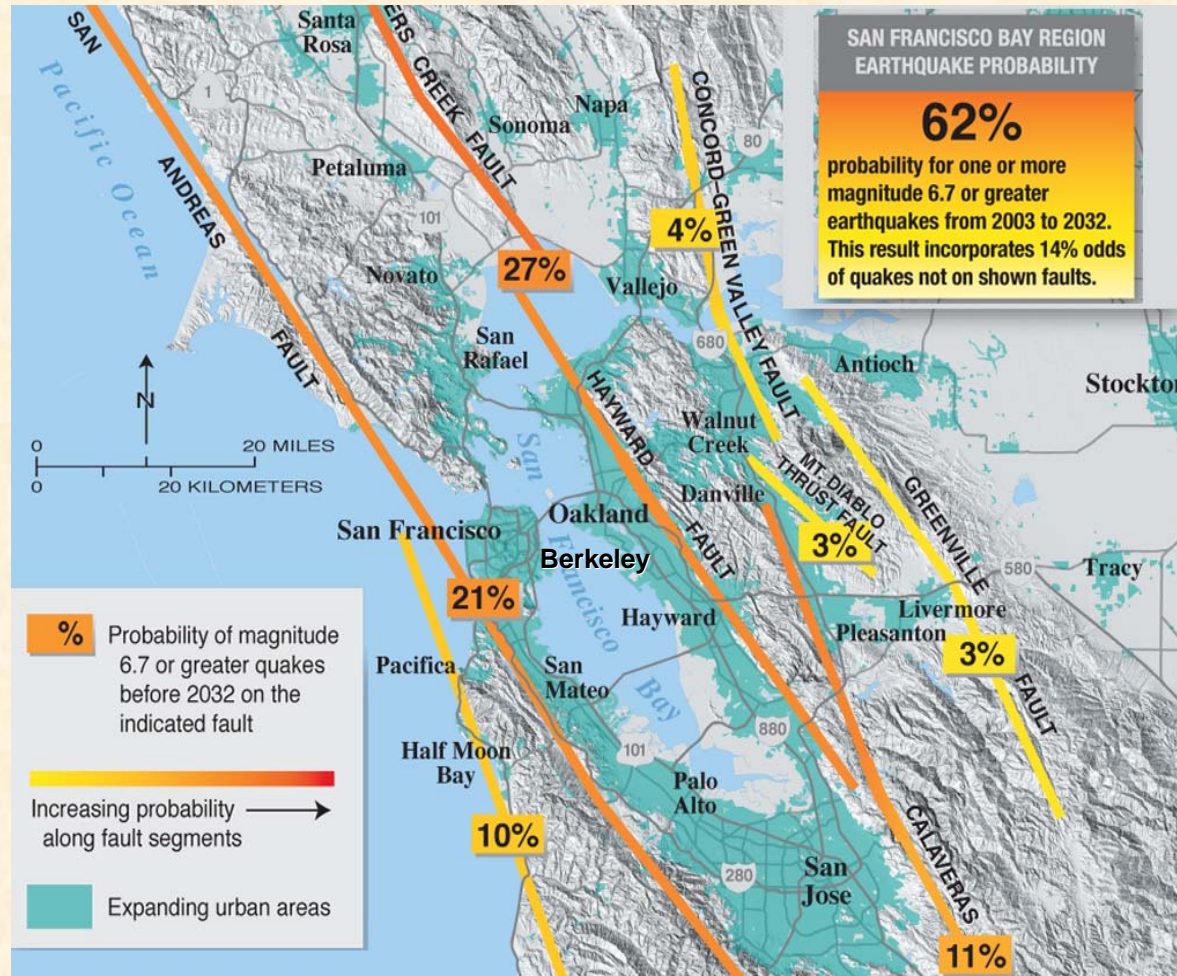


# California Policies as Foundation for Regional and Local Action

- Emergency Response Mutual Aid; Incident Command System and Standardized Emergency Management System (SEMS); State Hazards Mapping Act
- General Plan and Disaster Preparedness/ Safety and Housing Elements required by State Law
- Mitigation/Risk Reduction Mandates for Public School buildings, specific types of hazardous buildings



# San Francisco Bay Region



# Cities Respond to Disaster

- After the 1989 Loma Prieta earthquake and 1991 East Bay Hills Fire, Bay Area cities enacted preparedness/mitigation programs
- Early efforts centered on public sector safety improvements to fire stations, schools and emergency centers
- Private sector safety initiatives follow



# San Francisco Bay Area Risk Reduction Efforts

- Since the 1990s, Bay Area communities act on the “think globally, act locally” adage
- Regional risk from urban/wildland fires, major earthquakes, landslides is significant
- Reactive initiatives begun at local level led to more widespread improvements



# Regional Efforts to Prevent Damage

- San Francisco, San Jose, San Leandro, Oakland and Napa have retrofitted schools, emergency service facilities and high occupancy public buildings
- Alameda, San Jose, San Francisco, San Leandro, Fremont, Livermore, Palo Alto and Berkeley established fiscal and administrative incentives for residential retrofit



# One City Mirrors Many

- Berkeley as an example of community investment in safety measures
- With multi-hazard approach through local legislation, special funding measures and damage prevention programs, risk reduction is incorporated into daily life
- Community engagement and political support integral to success



# Berkeley's Investments in Community Sustainability

- Special taxes dedicated to hazard mitigation
- Every public school, fire station, many City buildings seismically resistant
- Fiscal, technical and administrative incentives for private sector retrofit – up to 65% of single family homes made safer using these programs
- On-going funding for disaster preparedness and response programs



# Berkeley's Risk Reduction Initiatives

- Voters approved local tax bond measures to seismically upgrade public facilities and schools
- Received \$65 million from State bond funds and federal grants for seismic work
- Transfer Tax Rebates and Permit Fee Waivers for homeowner incentives to retrofit
- Loan and grant upgrade programs for low-income seniors and disabled people



# Berkeley's Mitigation Measures

- 1992 – Berkeley voters approve two bond measures to rebuild all Berkeley public schools and fire stations.
- Measure A - \$158 million and Measure G - \$55 million
- 1992 – Special Fire Assessment District established to fund safety programs



# Measures, Continued

- 1996 – Measure S provides \$49 million for additional civic safety projects
- 2000 – Measure AA funds \$116 million for additional schools projects; Measure Q for \$8 million for fire safety equipment and water system
- 2000 -- Disaster Resilient Berkeley recognized by FEMA; Seed funding boosted local investment for the three year program



# Sustaining Community Safety

- Berkeley's 10-year reconstruction program complete
- All schools rebuilt to essential service state codes
- UC Berkeley's seismic safety program - \$1 billion in facility improvements
- Disaster Resilient Berkeley Program promotes safety projects in neighborhoods and schools
  - School Emergency Supply Container Program
  - Neighborhood Emergency Supply Container **Program**



# Comprehensive Plan to Reduce Risk

- Community forum on mitigation held in 2003:
  - “Promoting a Disaster Resistant Berkeley” with 100 leaders from neighborhoods, government and the University of California, Berkeley
- Planning future cooperation on community safety
- July, 2004 adopted comprehensive Disaster Mitigation Plan as long-term framework
  - Specific actions defined to accomplish systematic risk reduction



# Regional Mitigation Initiatives

- Association of Bay Area Government (ABAG) coordinated a multi-jurisdictional mitigation plan to comply with federal Disaster Mitigation Act 2000 requirements
- Bay Area Rapid Transit (BART) garnered \$1 billion Mitigation tax measure in 2004 to upgrade system
- East Bay Municipal Utility District (EBMUD) instituted \$189 million safety program for seismic improvements



# Comprehensive Approach

- Moving to a holistic government framework critical to successful mitigation and recovery
  - General Plan, improved approach in OES, development of comprehensive mitigation plan are ways California cities sustain risk reduction
- Reframed conversation between state and local government
  - Sustaining awareness for preparedness, response and mitigation
  - Continuing community involvement in risk reduction using the *Appreciative Inquiry* approach to encourage action



## Comprehensive Approach, cont'd.

- Public health model of seismic safety as critical community health indicator
  - Moving from “waiting to fail” mode to an “integrated social matrix”
  - Linking hazard mitigation to the larger social agenda of the community sustainability movement
  - Strengthen the successful efforts and expect effective outcomes – concept of resilient community



# Berkeley's General Plan

“Make Berkeley a disaster-resistant community that can survive, recover from and thrive after a disaster. We see the way to making this a reality by identifying and reducing vulnerabilities; improving emergency response and preparation; and by using disaster-resistant land use planning.”

