

PATHS TO EARTHQUAKE RISK REDUCTION



How can we successfully
reduce earthquake risk?

EERI-WSSPC
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Consider this . . .



Grove Karl Gilbert
1843–1918


- Recognized the significance of fault scarps along the base of the Wasatch Range
- In 1883, in an article in *The Salt Lake City Tribune*, he warned the residents of Salt Lake City of future large earthquakes

116 years later . . .



Pat Bagley, *The Salt Lake Tribune*

Some Key factors in Utah's Experience

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- **1970s–1980s:** Geologic trenching validated the hazard
 - **early 1980s:** SEAU formed, progressive education and policing of local practice
 - **1983–1988:** NEHRP focus on the Wasatch Front area
 - **1985–present:** Coherent state earthquake program (solid partnership, initially between Utah Geological Survey, state emergency management, and Univ. of Utah Seismograph Stations — later involving the Utah Seismic Safety Commission and SEAU)
 - **1990s–present:** Evolution of national building codes and National Seismic Hazard Maps
 - **mid-1970s–present:** LDS Church (behind the scenes in seismic rehabilitation; out front in disaster preparedness)

Plus earthquakes in California and elsewhere in the world!

Some Successes in Utah

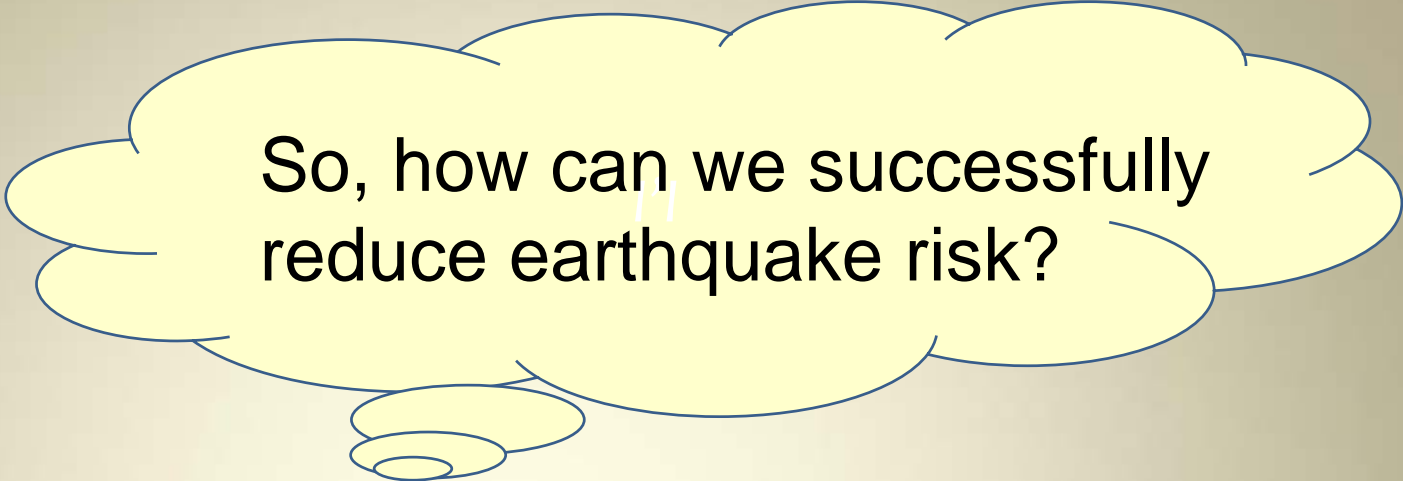
- Awareness (2008 poll: 63–78% have emergency plans in place for family, work, community, school)
- Significant seismic rehabilitation of . . .
 - firestations & police stations in Salt Lake City and County
 - schools (in Salt Lake Valley and other parts of Wasatch Front)
 - hospitals
 - dams and other embankments
 - water treatment facilities
 - utilities and other lifelines
 - Interstate 15 and other UDOT highway structures
 - State Capitol
- Extensive regional and urban seismic network coverage in state (state pays for roughly half)



incremental



voluntary



So, how can we successfully reduce earthquake risk?

Our Speakers

1. A political perspective
2. The challenge of seismic rehabilitation in the built environment
3. Risk perceptions and decision-making