

PRIORITIES FOR 2007 EARTHQUAKE RESEARCH IN UTAH

Utah Ground Shaking, Quaternary Fault Parameters, and Liquefaction Working Groups February 14-16, 2006

The Utah Geological Survey, Utah Seismic Safety Commission, and U.S. Geological Survey convened Utah's Earthquake Working Groups on February 14-16, 2006, to update priorities for earthquake research in Utah. Priorities for 2007 are listed below for each working group.

Ground Shaking Working Group:

- Continue laboratory dynamic soil testing.
- Collect additional shallow Vs30 data for Weber/Davis/Utah Counties (pending analysis of 2005 data).
- Collect additional and/or re-analyze deep-basin-structure data (gravity, seismic, geologic).
- Complete development and verification of the Community Velocity Model and perform additional verification studies to assess sensitivity to basin parameters and determine whether velocity- and basin-structure data are adequate for use in developing urban hazards maps.
- Consider passive instrumental monitoring to model basin effects.

Quaternary Fault Parameters Working Group (perform detailed paleoseismic studies for the following fault zones, listed in order of priority):

- West Valley fault zone
- Weber segment – most recent event
- Weber segment – multi-event trench
- Faults beneath Utah Lake
- East Cache fault zone

Liquefaction Working Group:

- Complete probabilistic lateral spread map and deterministic lateral spread map for a scenario earthquake in southern Salt Lake County.
- Collect and perform preliminary geologic analysis of subsurface data to identify data gaps and data-collection requirements for future mapping in Utah Valley.
- Develop a liquefaction-induced settlement map for Salt Lake County.

Utah's Earthquake Working Groups include over 50 geologists, seismologists, and engineers from state and federal agencies, local governments, universities, and private consulting companies. The working groups are tasked with setting earthquake research goals for the State of Utah, and to develop a plan for the next generation of hazard maps for the state. These plans and the results of the 2006 working group meetings can be viewed at the UGS Web site:
<http://ugs.utah.gov/ghp/workgroups/index.htm>