UTAH PRIORITIES FOR EARTHQUAKE STUDIES - 2005

Faults:
- Resolve the late Holocene earthquake history of the Nephi segment of the Wasatch fault zone.
- Resolve the timing of the most recent event on the Weber segment of the Wasatch fault zone.
- Extend the paleoseismic record into the latest Pleistocene on the Weber and Nephi segments of the Wasatch fault zone.
- Paleoseismic investigations of the northern and southern segments of the East Cache fault zone to determine relation to West Cache fault zone and James Peak fault to the south.
- Improve the paleoseimic record of the central segments of the Hurricane fault.

Ground Shaking/Site Response
- Collect shallow shear-wave velocity (Vs30) data to characterize engineering-geologic units in Utah, Weber, and Davis Counties.
- Collect deeper shear-wave velocity profiles to characterize shear-wave velocities down to R1 (boundary between unconsolidated and semi-consolidated sediments) and R2 (boundary between semi-consolidated sediments and consolidated bedrock) in Salt Lake Valley.
- Begin constructing 3D community velocity model for Salt Lake Valley using existing data.
- Use ANSS data to help evaluate sediment thickness and site amplification factors.

Liquefaction
- In the pilot project area (northern Salt Lake Valley), perform field investigations to characterize liquefaction hazards for surficial geologic units where existing data are inadequate.
- Apply pilot project techniques to southern Salt Lake Valley.

Earthquake-Induced Landslides
- Develop complete Holocene movement histories of potential earthquake-induced landslides around Salt Lake Valley for comparison to paleoseismic fault histories to assess likelihood of earthquake-induced movement.
- Develop methods to produce earthquake-induced landslide hazard maps for the Wasatch Front.