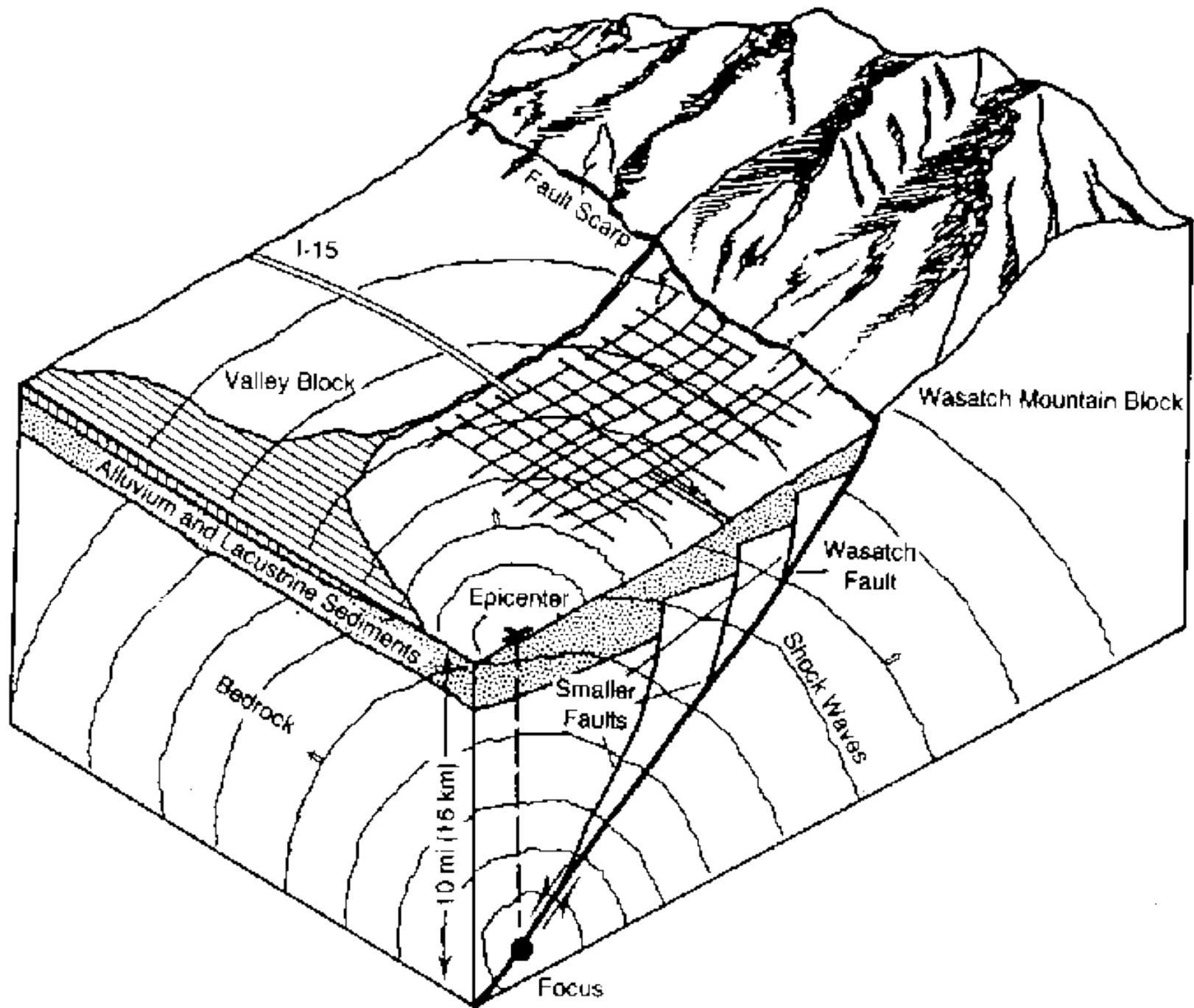
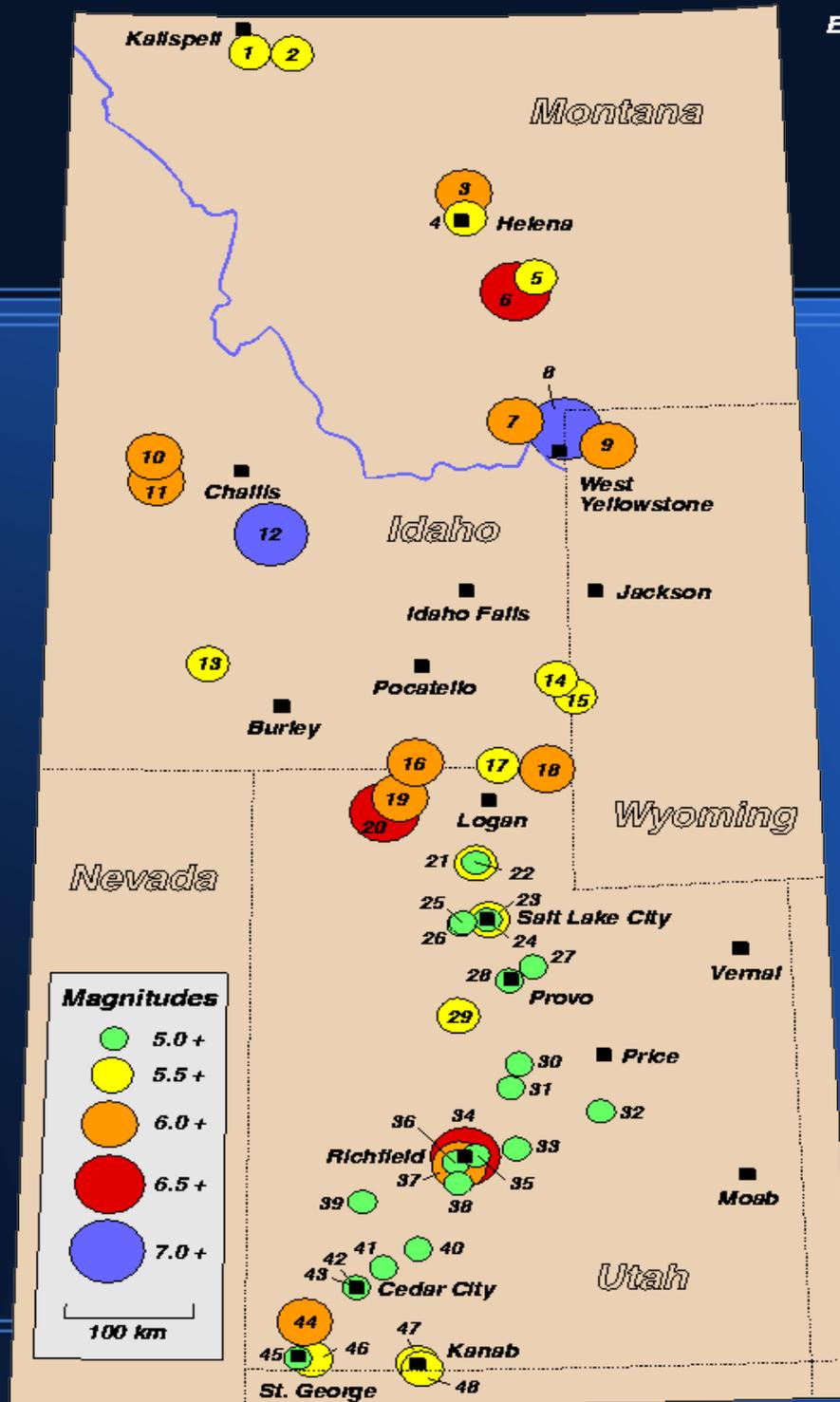


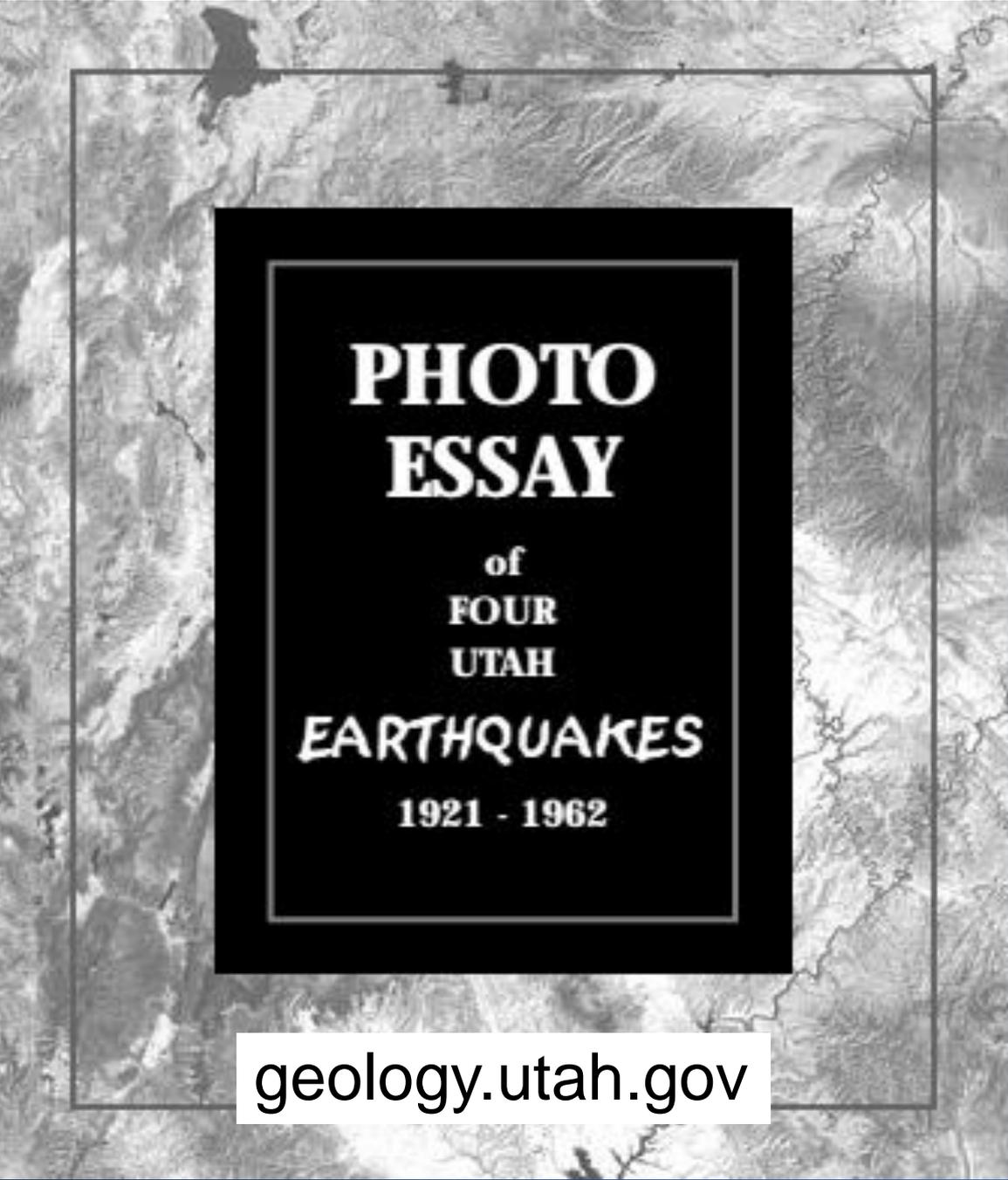
Utah Earthquakes



Hansel Valley 1934







**PHOTO
ESSAY**

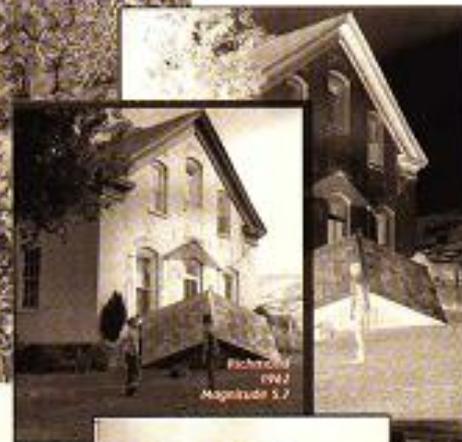
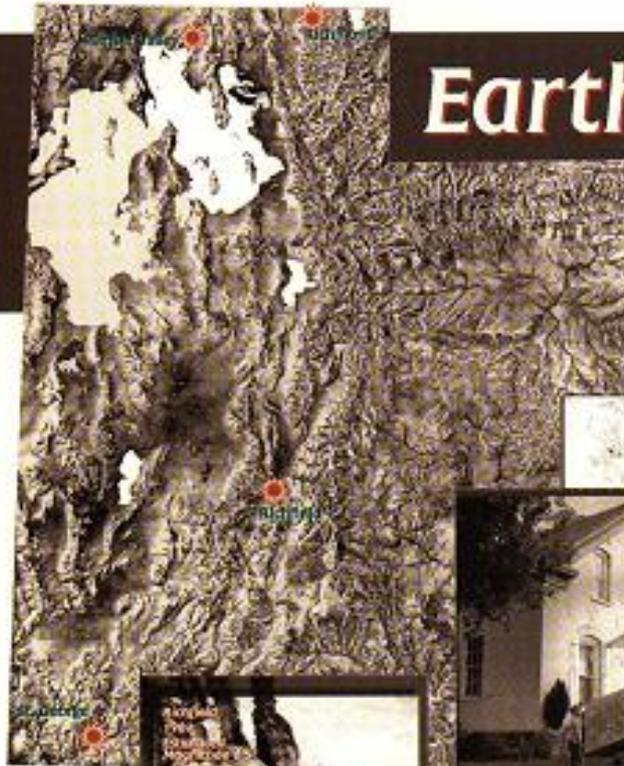
of
**FOUR
UTAH**

EARTHQUAKES

1921 - 1962

geology.utah.gov

Earthquakes & Utah



Wasatch Fault

The combined average repeat time for earthquakes magnitude greater than 7 on any of the five central segments (Brigham City to Nephi segments) of the Wasatch fault zone is 350 years.

The average repeat time on any single segment ranges from about 1,200 to 2,600 years. The time since the last earthquakes on the five central segments ranges from 620 to 2,120 years.

Wasatch Fault

Based on the historical earthquake record and assuming earthquakes are random.

The probability of a large earthquake somewhere in the Wasatch Front region is 25 percent in 50 years.

The probability of a large earthquake on the central segments of the Wasatch fault alone is 13 percent in 50 years and 25 percent in 100 years.

Assuming that large earthquakes occur regularly and not randomly.

The probability of a large earthquake on the Weber, Provo, or Nephi segment of the Wasatch fault is only 1-7 percent in 100 years, because of the short times since the last earthquakes on these segments, on the Brigham City or Salt Lake City segment is greater because the time since the last earthquake is equal to or greater than the average repeat time. On the Salt Lake City segment, the probability is 16.5% in 100 years.

Primary Earthquake Hazards

Liquefaction

Ground Shaking

Surface Rupture

Liquefaction



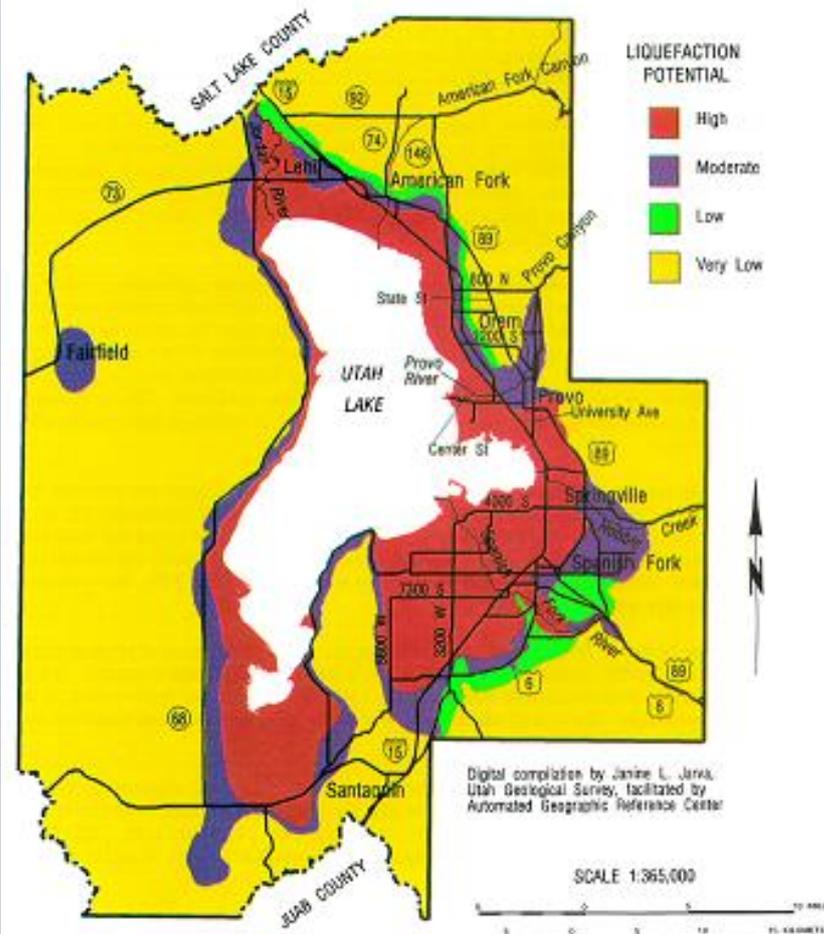
1964 Niigata, Japan

Liquefaction

LIQUEFACTION-POTENTIAL MAP FOR A PART OF UTAH COUNTY, UTAH

UTAH GEOLOGICAL SURVEY
Public Information Series 28

August 1994



This map is for general reference only and was modified from Anderson, L.R., Weston, J.R., and Bischof, J.E., 1994, Liquefaction potential map for Utah County, Utah: Utah Geological Survey Contract Report 94-2, 46 p., scale 1:48,000. Copies of this report are available at the Utah Geological Survey.

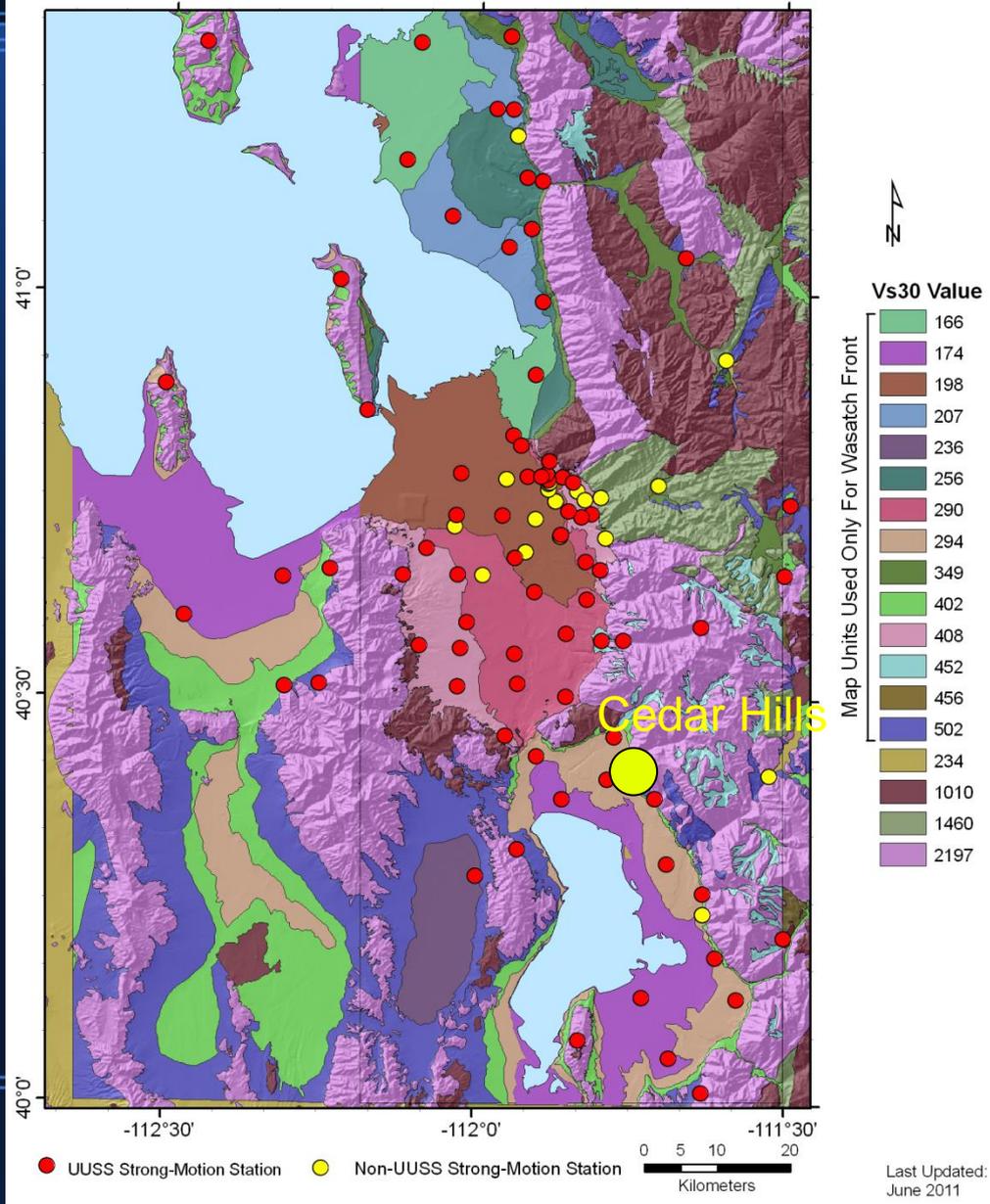
Ground Shaking



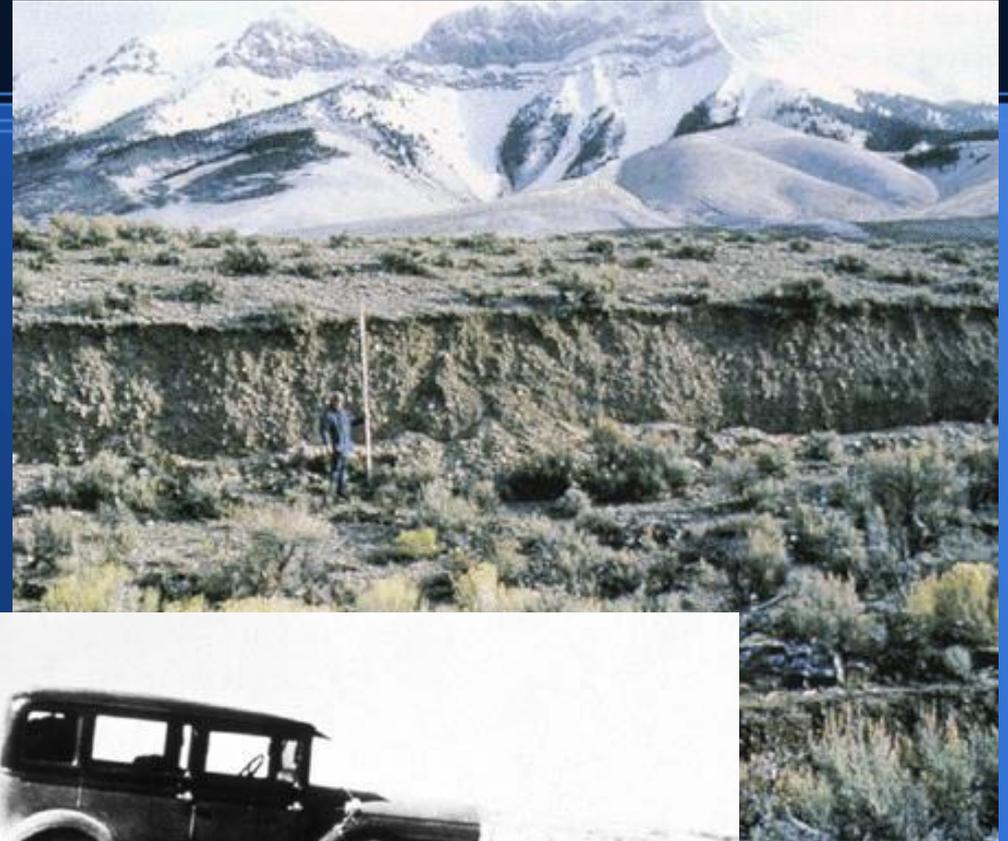
Photo courtesy of Ariel D. Benson, Richmond, UT

Ground Shaking

Vs30- Value and Strong-Motion Stations



Surface Rupture



Discussion

Wasatch Flyby Video

<https://www.youtube.com/watch?v=DByPiCkznE0>