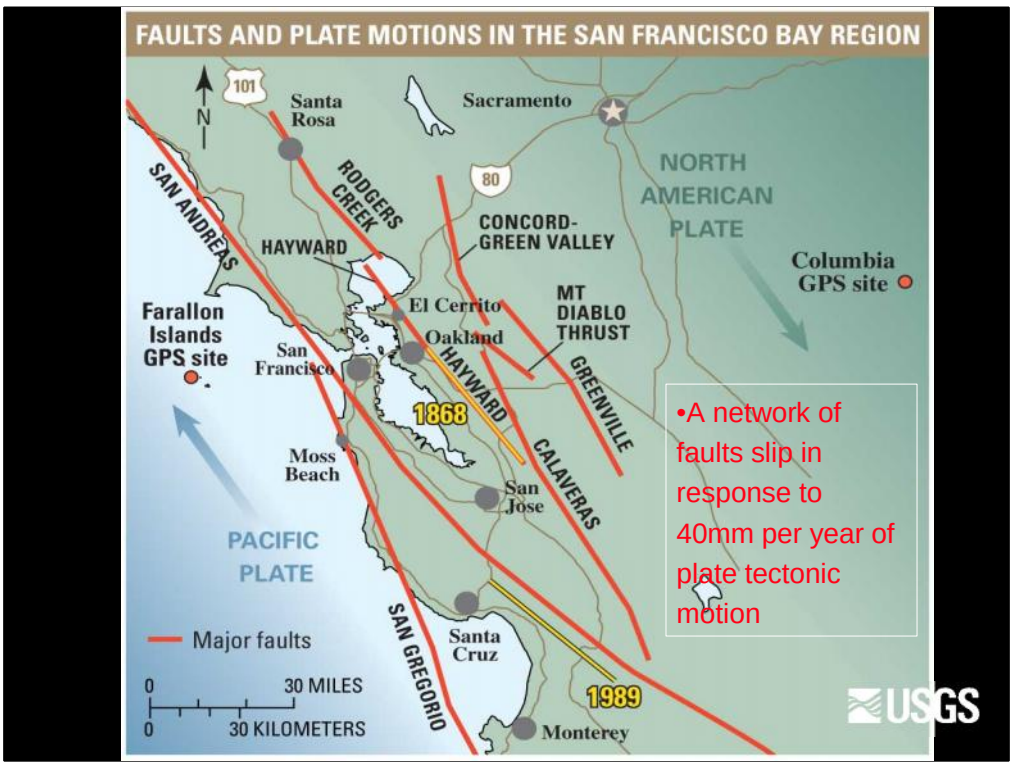
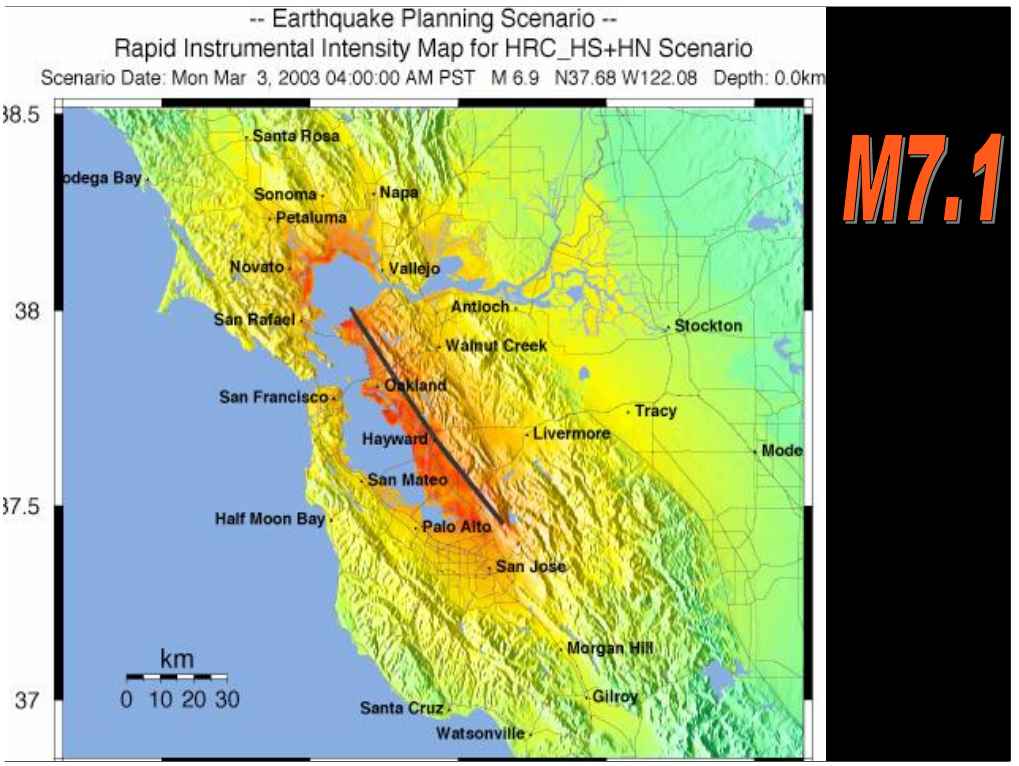
Images of Earthquake Effects compiled by David Schwartz, US Geological Survey (2006).



N. American and Pacific Plate margin in SF Bay Area consists of several faults that are driven by the 40mm/yr net tectonic slip rate.



Red colors show highest intensity shaking owing to modeled 6.9 Hayward Fault earthquake in above planning scenario.

Denali Fault trace crosses principal drainages and intervening terrain at Km 140 near Slate Creek, in Alaska's Alaska Range.

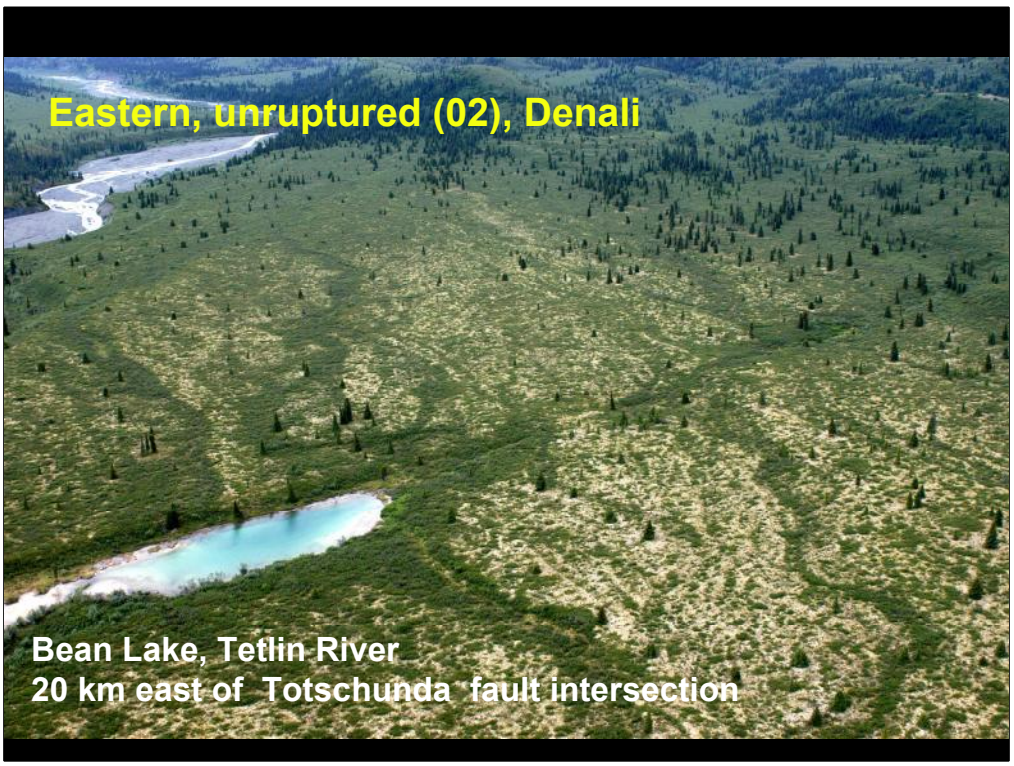
View from helicopter shows Denali Fault trace and broken ground, with two field party members shown for scale.

Cut-off road (Glenn Highway), shown as offset by Denali Fault, Alaska Range, at Km 211.

Primary surface rupture of Denali Fault marches across steep terrain in Alaska Range.

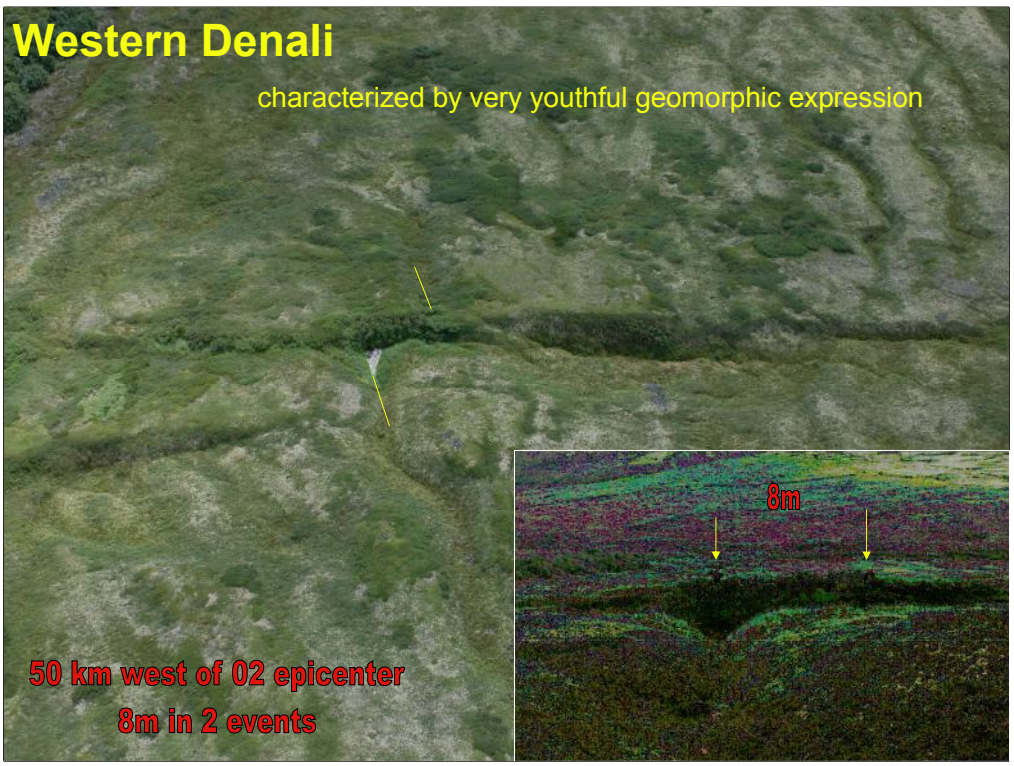
Offset drainages, water ponded in small basins, and straight trace of features mark Denali Fault trace in Alaska Range.

Totschunda Fault trace, a branch of Denali Fault system, shows right-lateral movement across Alaskan terrain.

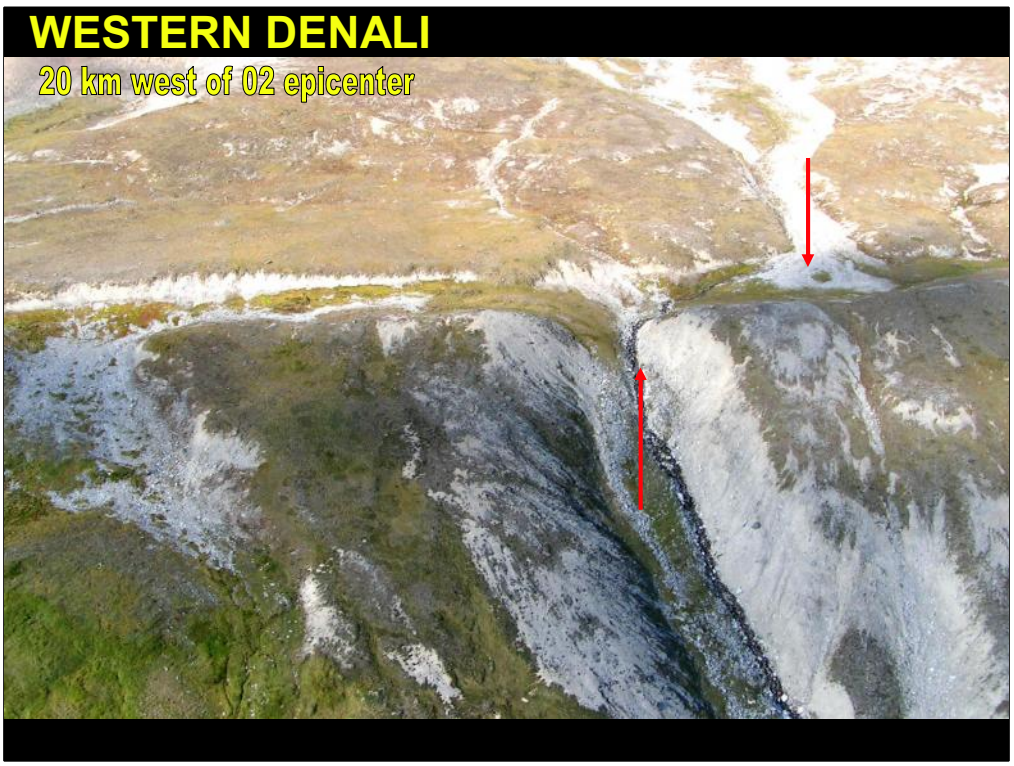


Fault trace crosses flat terrain; ponded water in depression elongated along the fault is probably a sag pond.

Fault trace offsets drainages in a right-lateral sense along Denali Fault or one of its branches (Totschunda Fault?).



Western Denali Fault seems to be a youthful feature, geologically speaking.



Right-lateral stream offset along surface trace of the Denali Fault, Alaska.

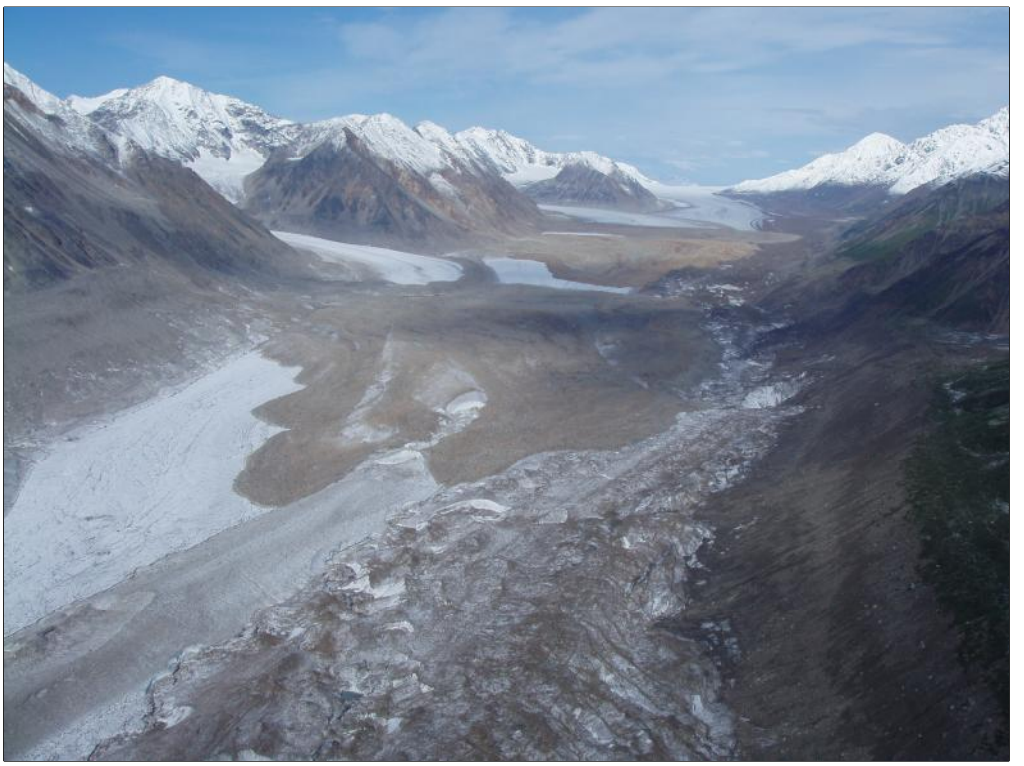
Head scarp of landslide crosses ground and disrupts structures at left. Foreground appears to have moved down slope relative to background.

Fault trace crosses poorly drained terrain, offsetting vehicle tracks and a levee.

Large landslide in south-central California Coast Ranges shows light-toned soil exposed near head, and disrupted ground below head scarp.

Not quite sure of image. Will check with Schwartz to confirm. Probably lateral spread ground failure in point-bar deposit in foreground.

Bare ground in result of recent landslide or slope failure. Heavy equipment works to repair highway.



Need to get Schwartz's comments on this one.

Seismically-triggered landslides on flanks of Alaska Range, caused by 2002 Denali earthquake.

Apartment houses, Niigata, Japan. M 7.4 quake caused liquefaction. Ground failed under buildings that sank and tilted. Bearing capacity failure.

Balboa Street, where liquefaction-related lateral spread broke gas and water pipes in 1994 Northridge, CA earthquake.

Balboa Street ground failure; gas is now shut off, but water mains are still discharging lots of water. Northridge earthquake, 1994, California.

Liquefaction-related ground failure in south levee of Arroyo Grande; 2003 San Simeon earthquake.

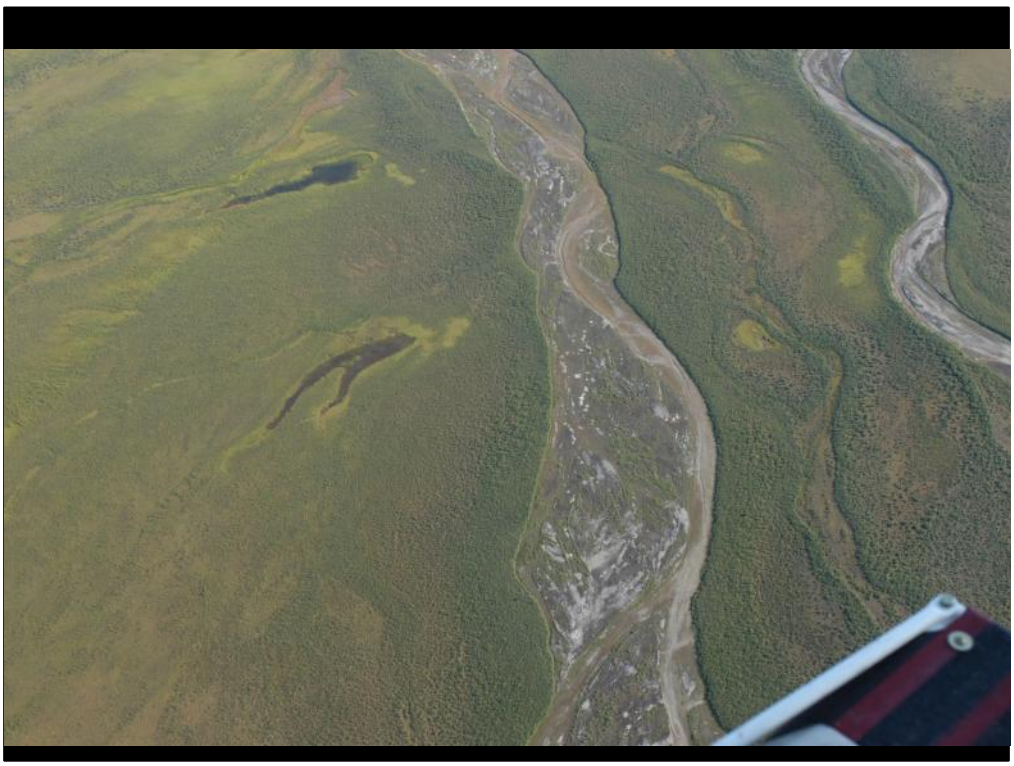
Liquefaction caused levee of Pajaro River to move laterally and to sink into liquefied substrate, moving down and to left. Loma Prieta quake.

Loma Prieta quake, 1989. Liquefaction caused land to move 90 cm towards Pajaro River channel at right; model plane airport largely wrecked.

Confluence of Pajaro River and Salsipuedes Creek, Watsonville, CA. Sand boils in strawberry fields. Blue arrow shows vents

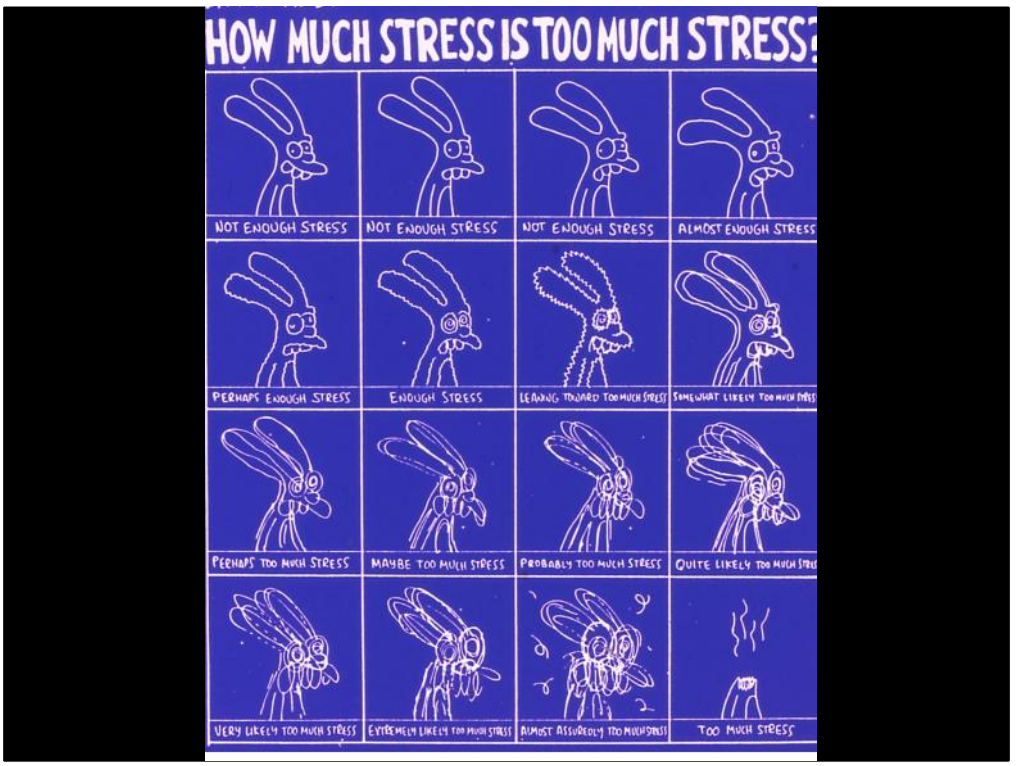
Arcuate vent shows where liquefied sand escaped, with erupted sand filling furrows in strawberry field near Watsonville, CA.

Sand and fine gravel, also termed “sand boils” shows as gray material vented from liquefied layers below ground. Denali earthquake, Alaska.



Light-toned patches along channels of braided streams are sand boils caused by liquefaction. Piedmont of Alaska Range. Denali earthquake.

Closer view of vented sand along streams of Alaska Range piedmont.



Ending on a humorous note?