Earthquake Mitigation for Hospitals Workshop

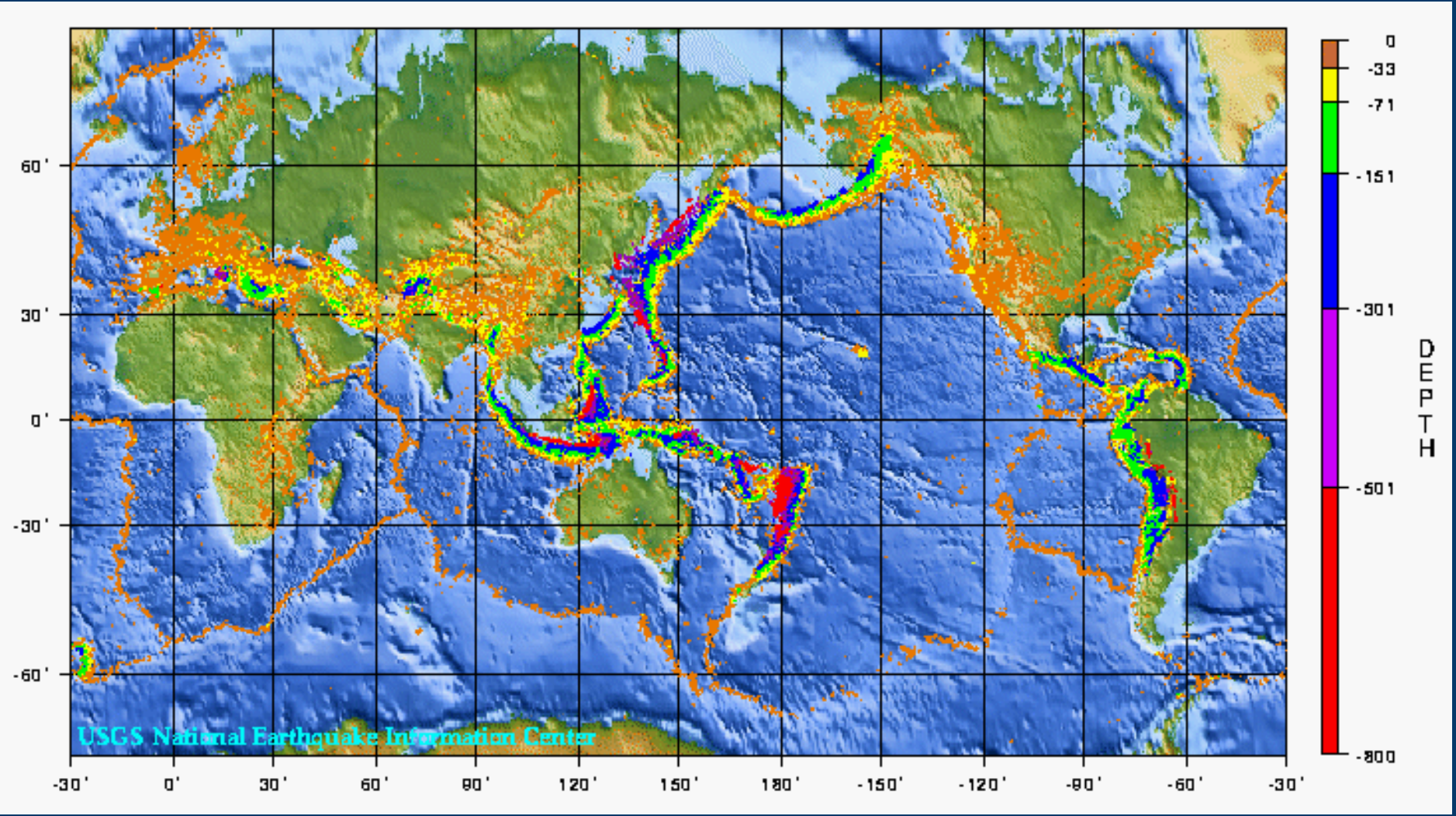
Part 2 – Earthquake Hazards

EARTHQUAKE HAZARD

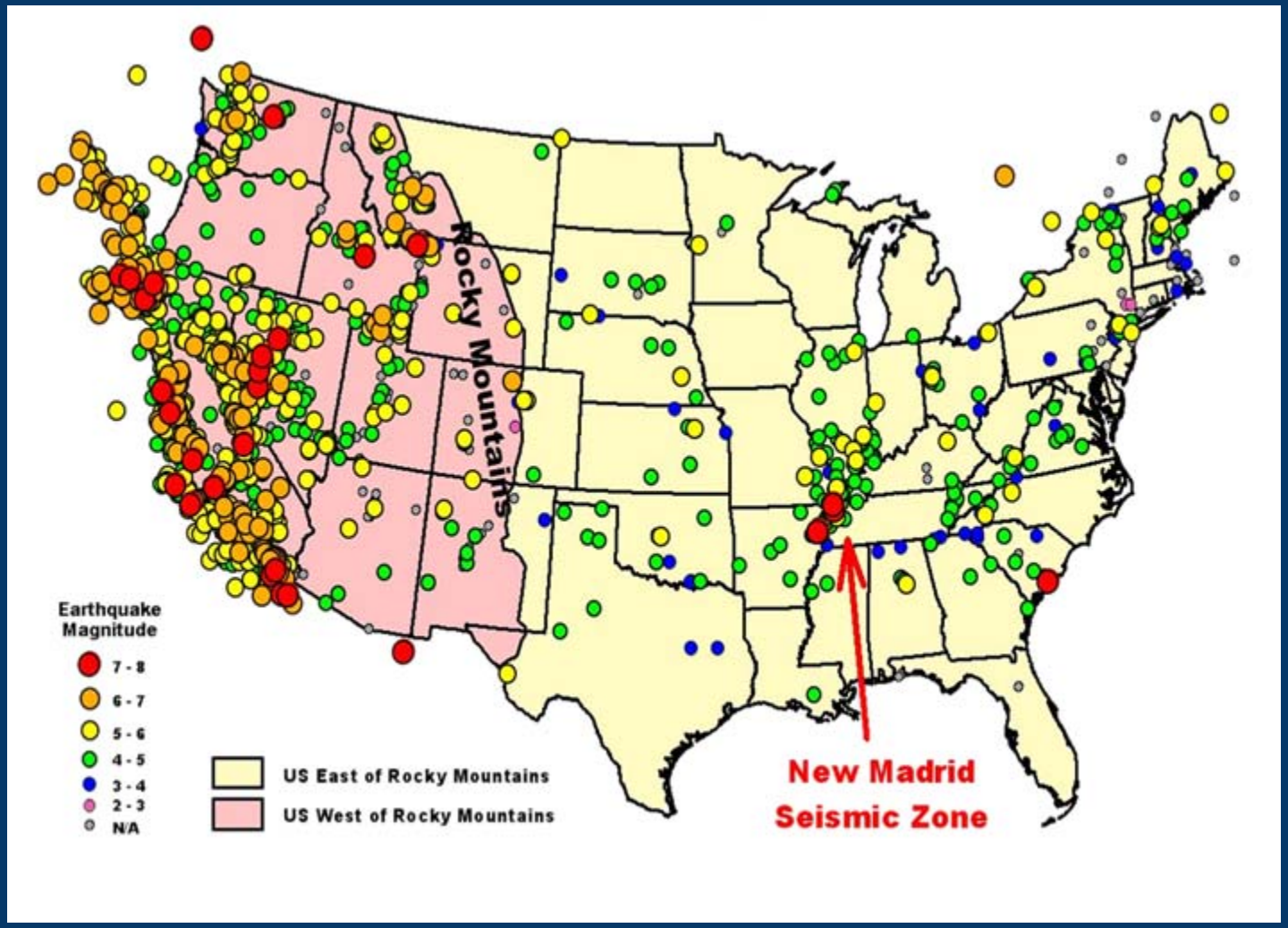
RISK = f(HAZARD, VULNERABILITY)

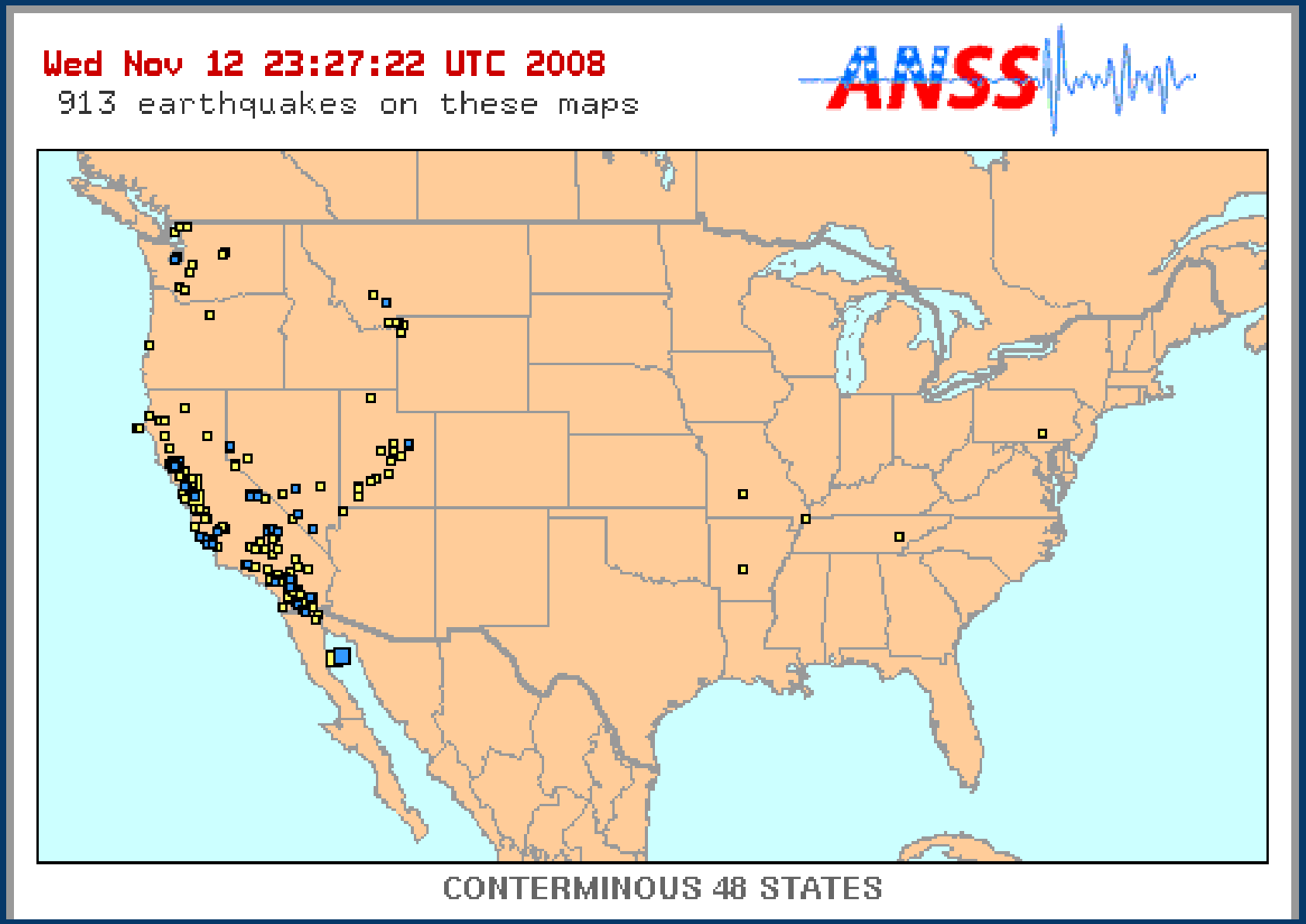
Risk is a function of both the potential hazard (seismic ground motion) and vulnerability (lack of seismic preparedness in structural and nonstructural systems)

Plate Boundaries & Earthquakes



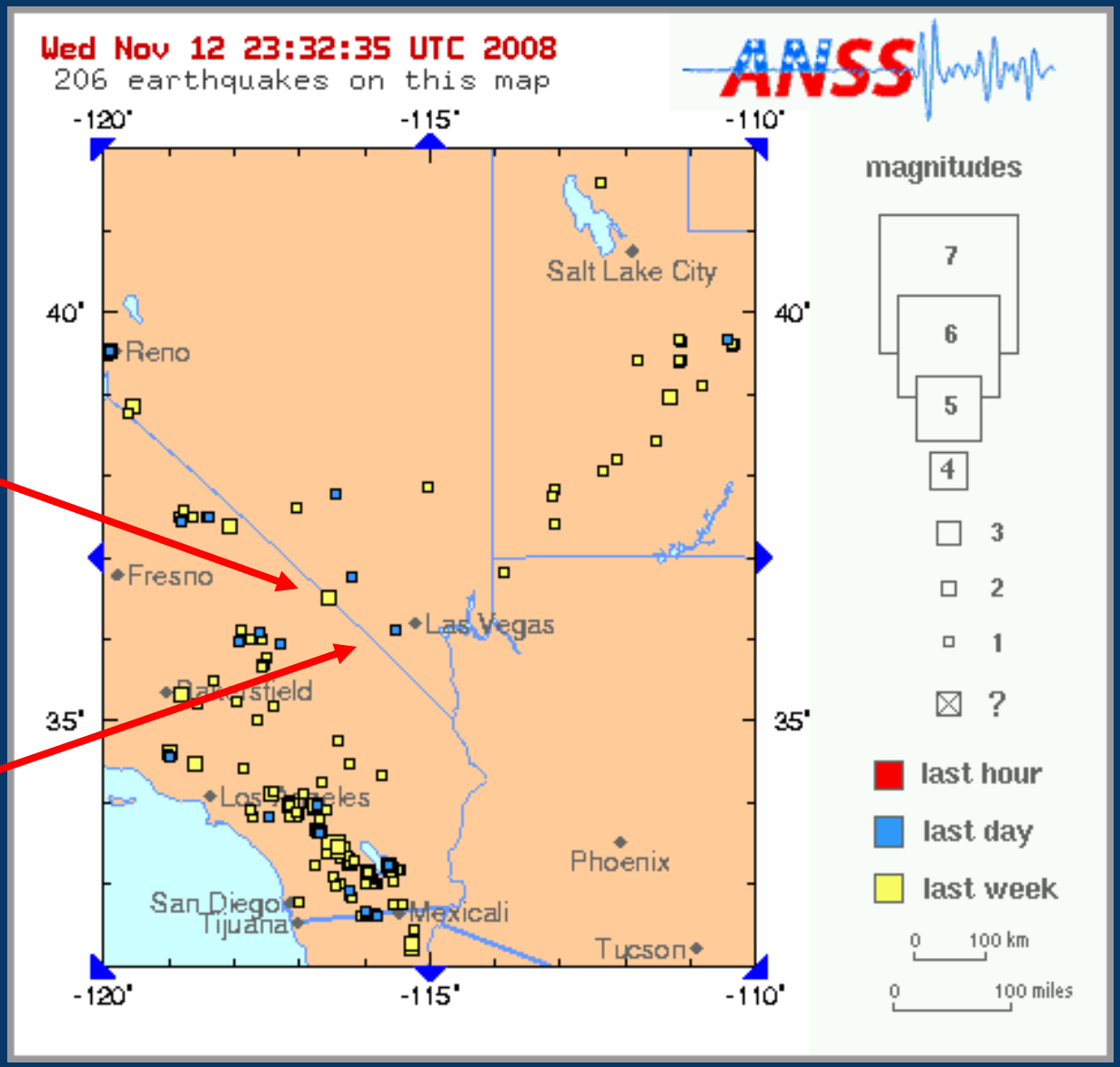
Historic Damaging Earthquakes

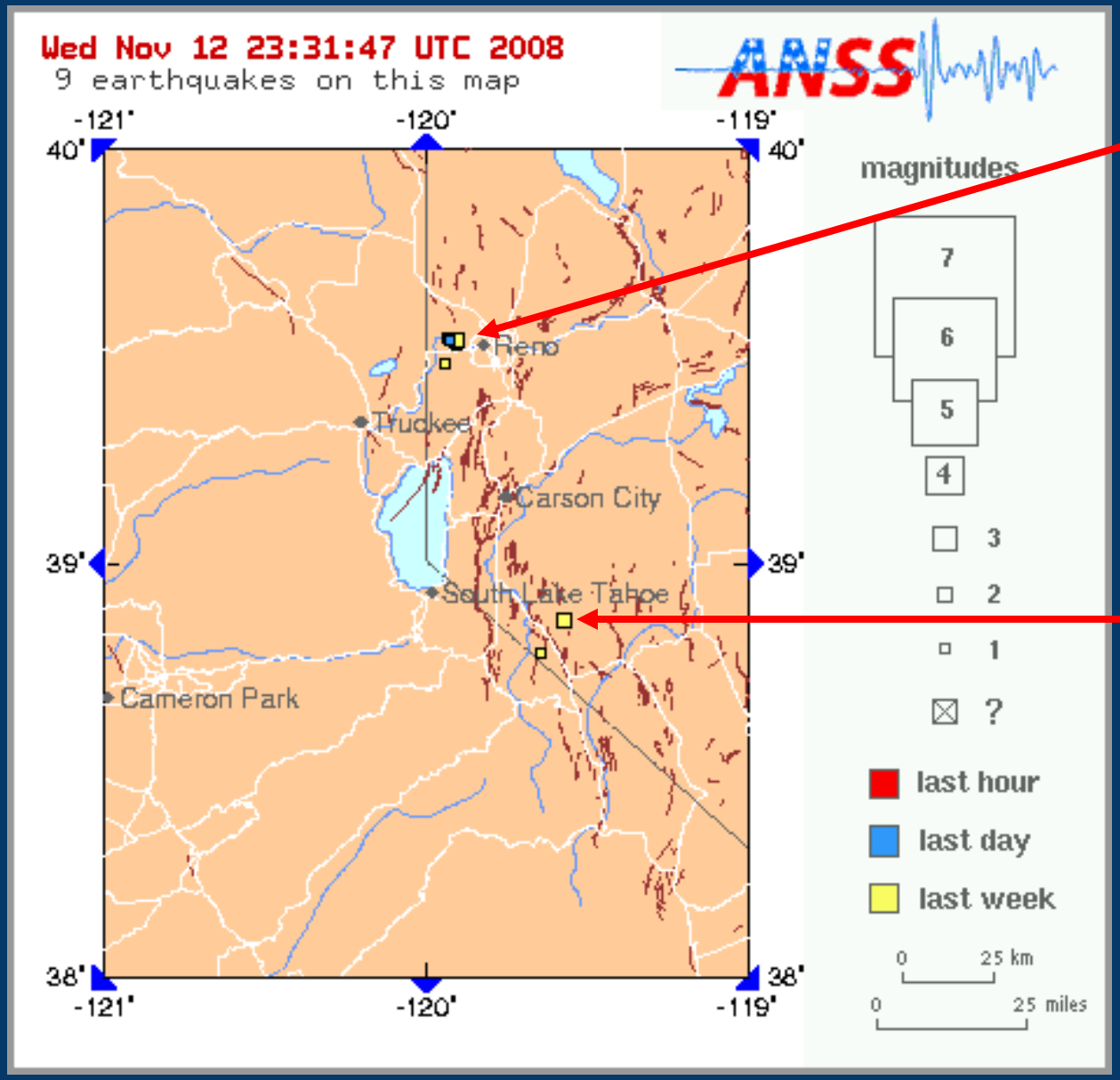



Wed Nov 12 23:27:22 UTC 2008
913 earthquakes on these maps
ANSS
CONTERMINOUS 48 STATES

M2.3 11-8-08

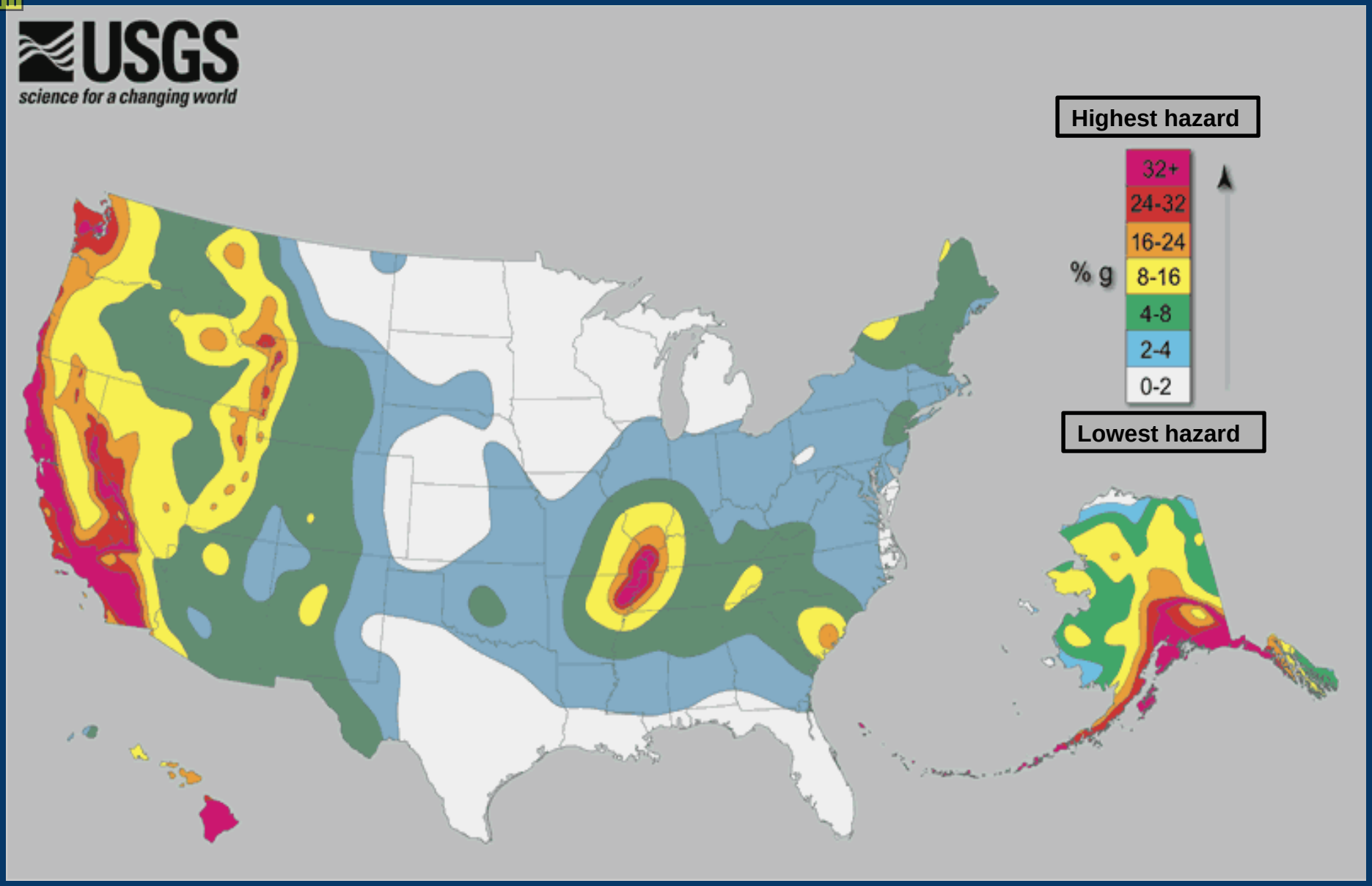
M1.7 11-12-08

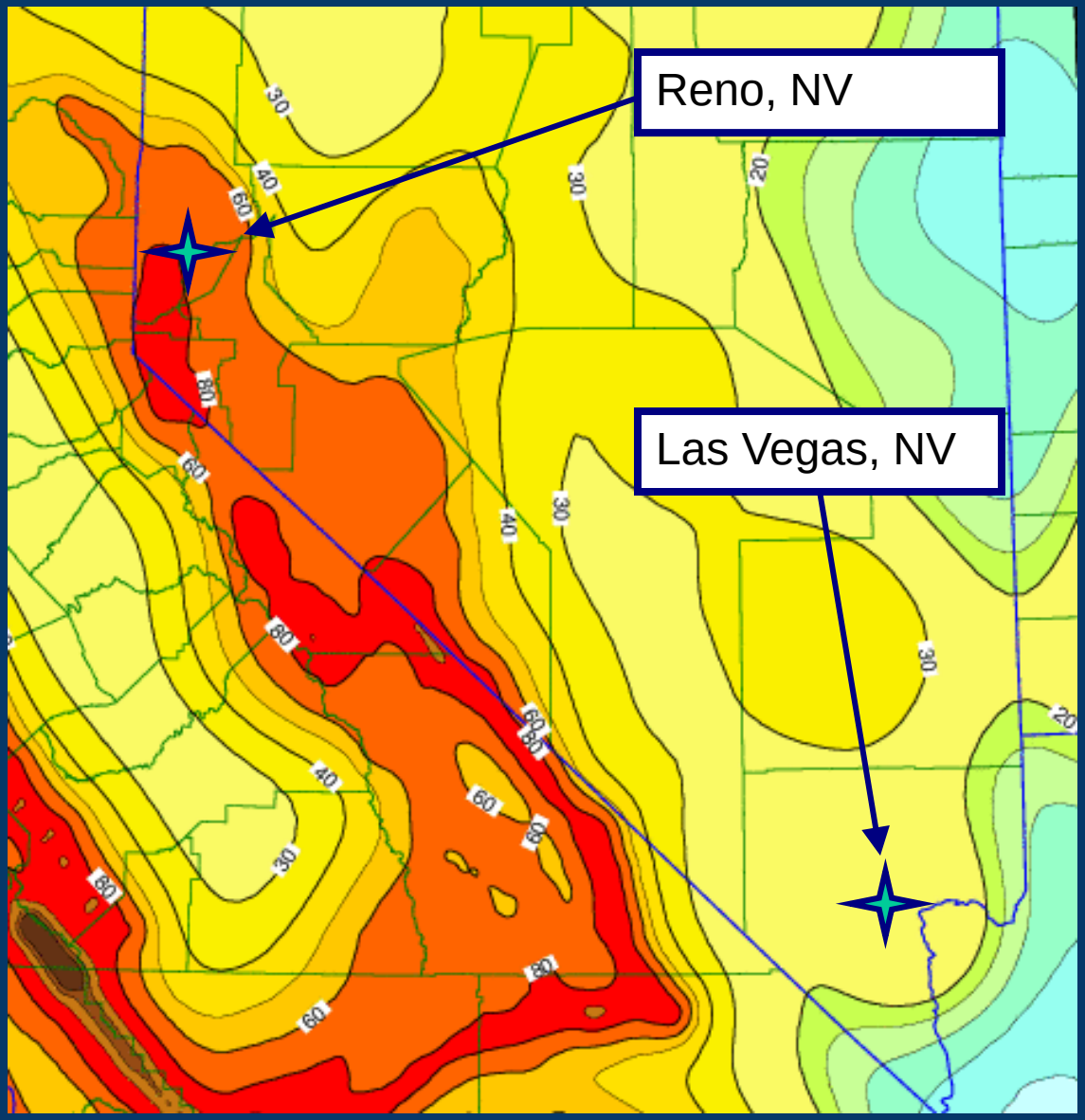




M2.2 11-10-08

M2.6 11-7-08

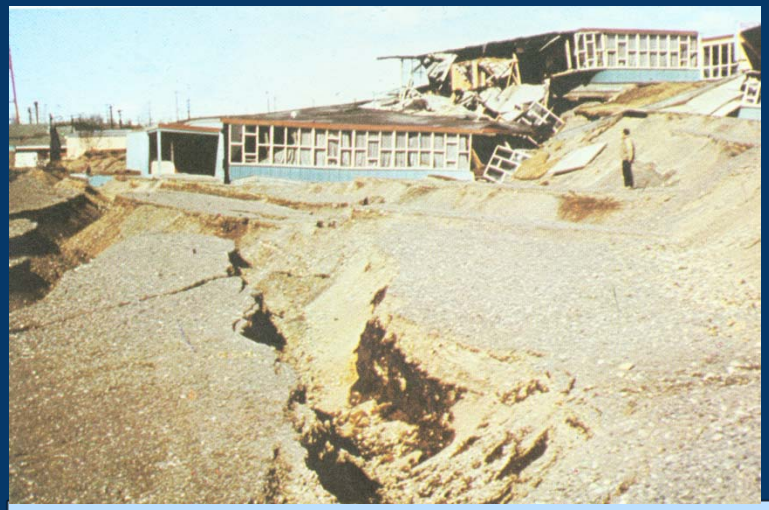

USGS
science for a changing world
Highest hazard
32+
24-32
16-24
% g
8-16
4-8
2-4
0-2
Lowest hazard

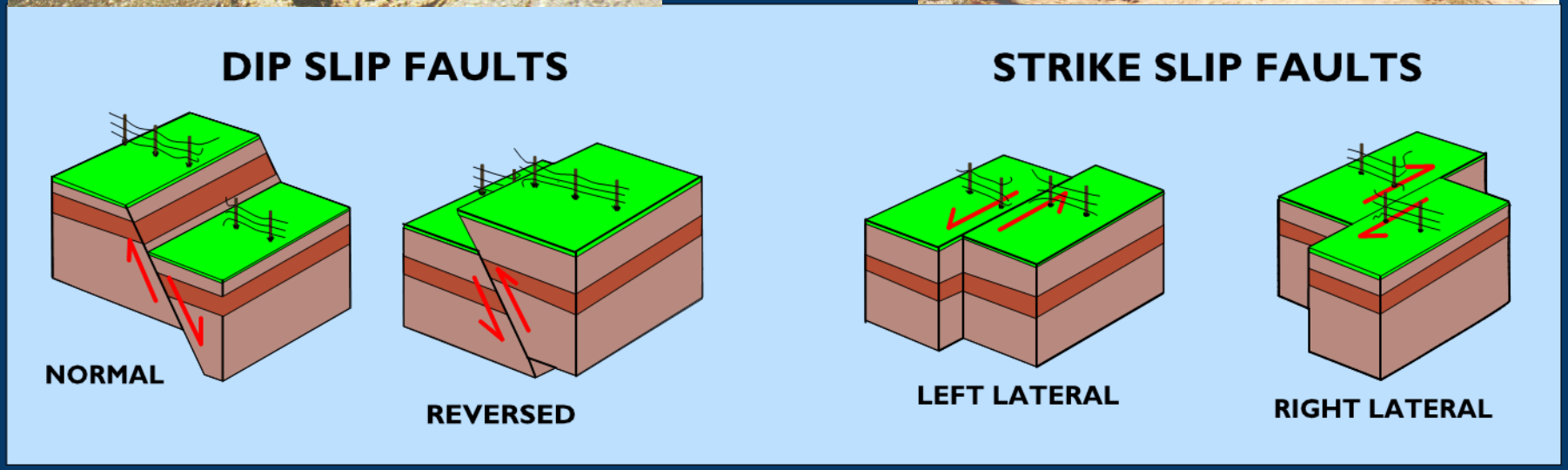

Reno, NV
Las Vegas, NV
30
40
60
80
20

Earthquake Hazards

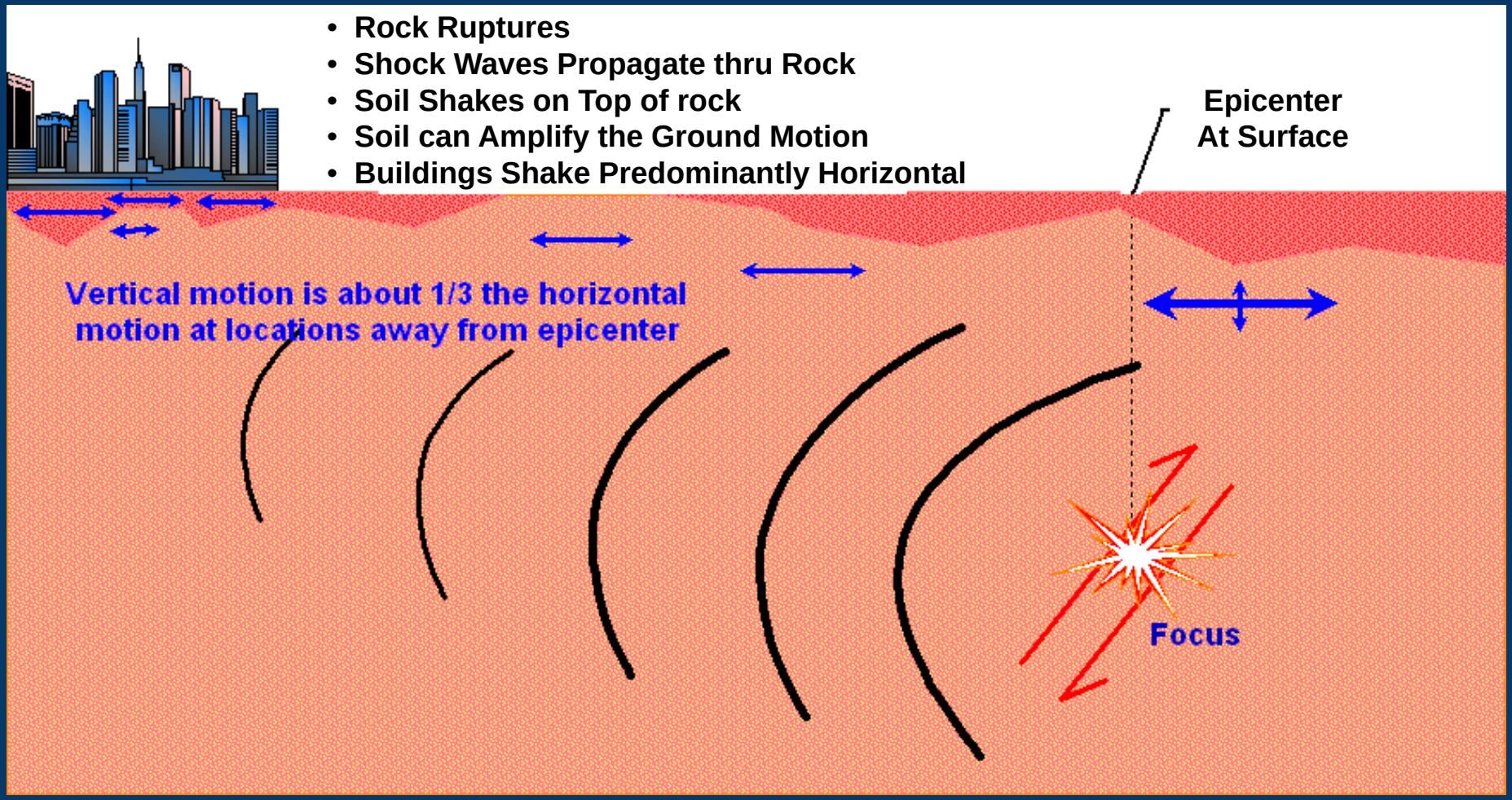
- Fault rupture
- Ground shaking
- Settlement
- Landslides
- Liquefaction
- Tsunami

Faulting




DIP SLIP FAULTS
NORMAL
REVERSED
STRIKE SLIP FAULTS
LEFT LATERAL
RIGHT LATERAL

Ground Shaking



Liquefaction

Questions?