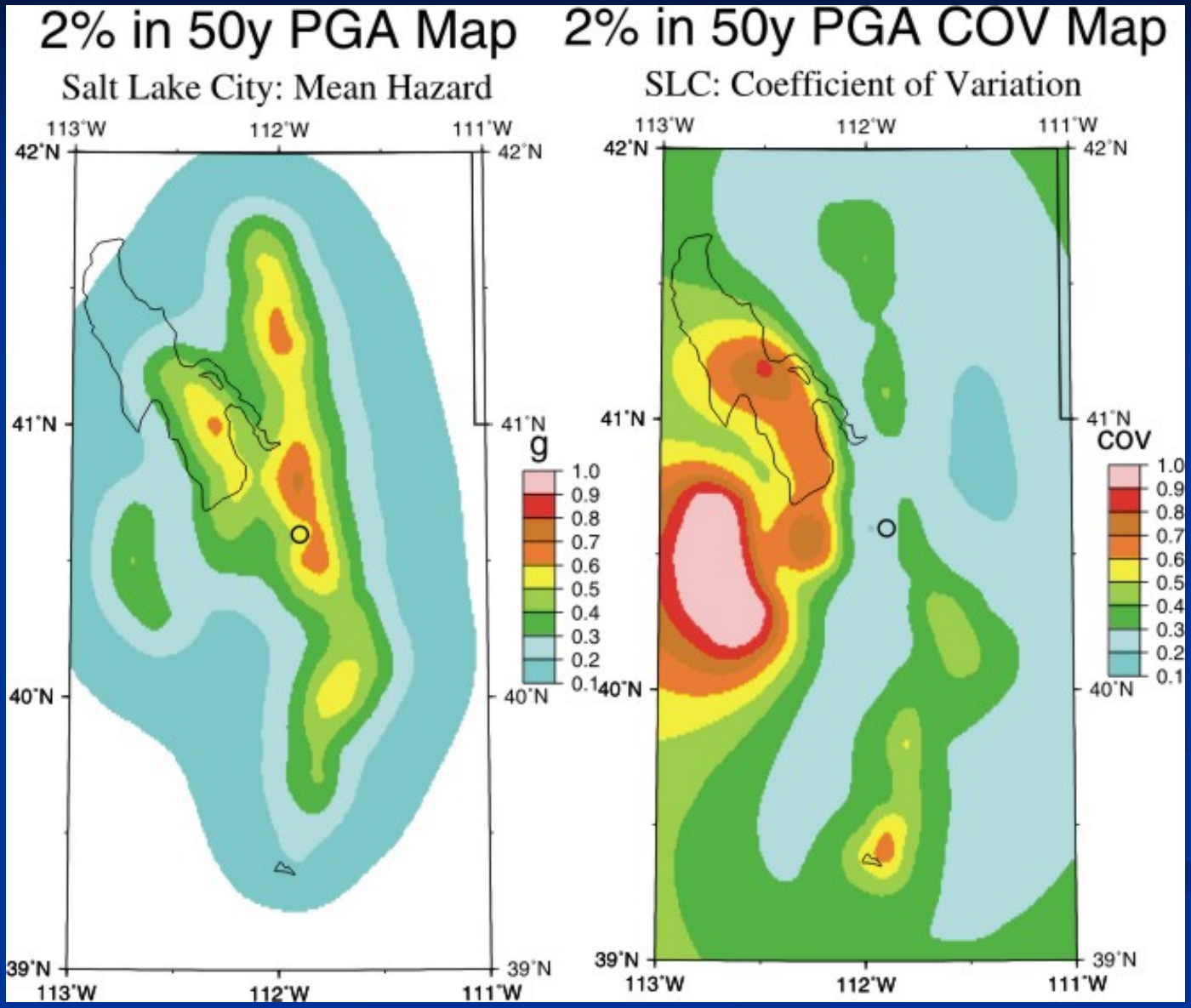
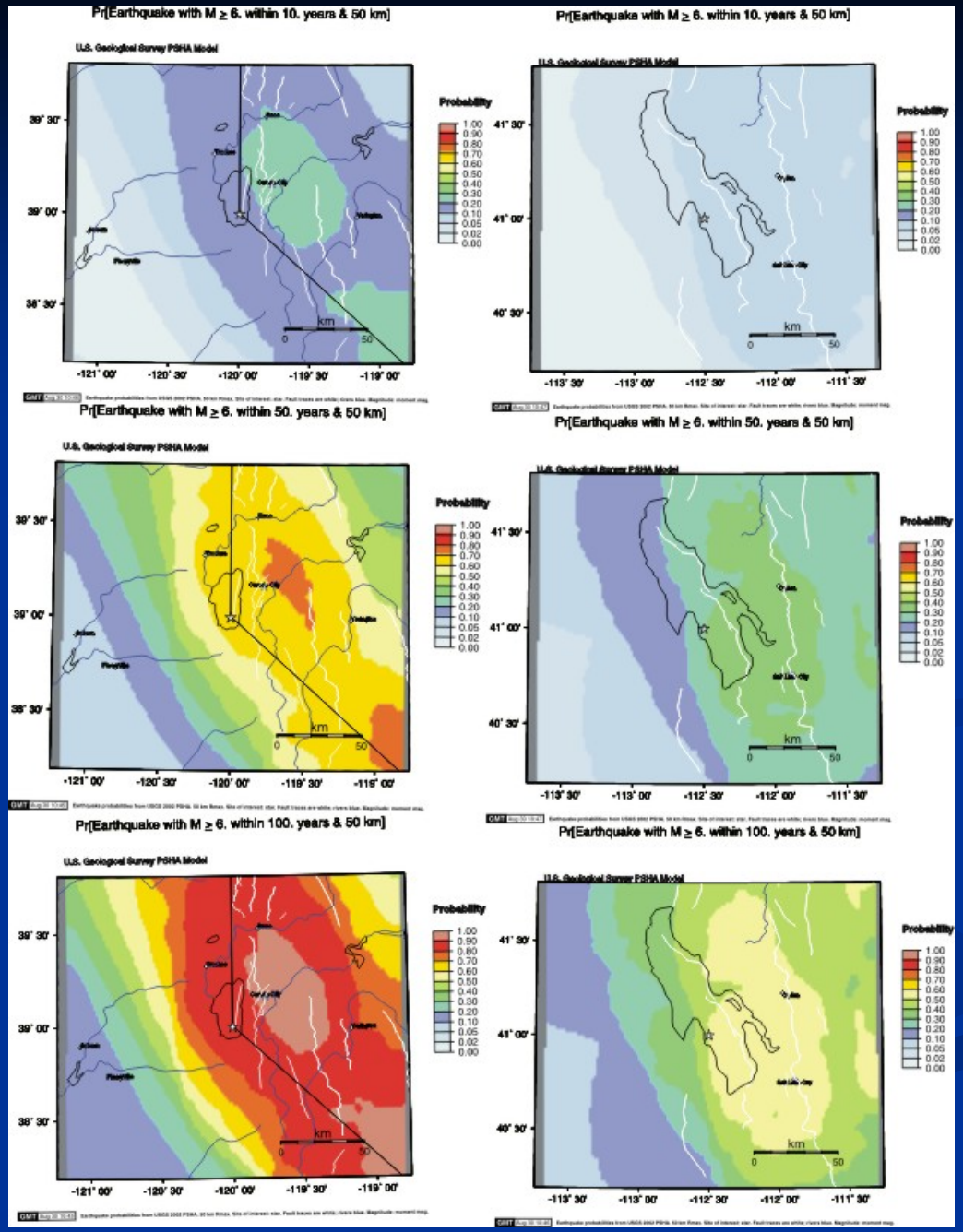
PRODUCTS AND TESTS

Testing and UncertaintyAnalysis

UNCERTAINTY ANALYSIS

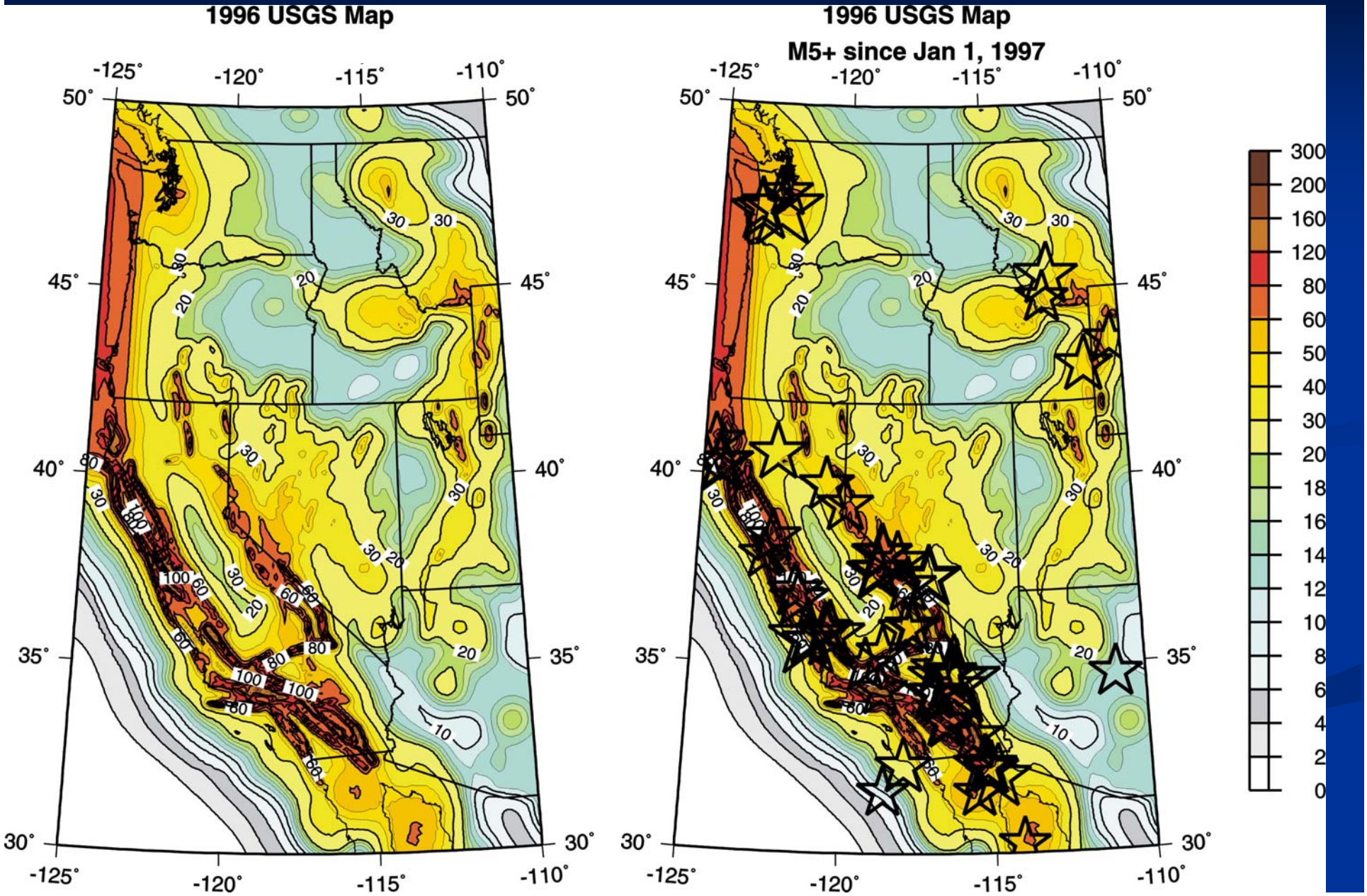


Probability maps

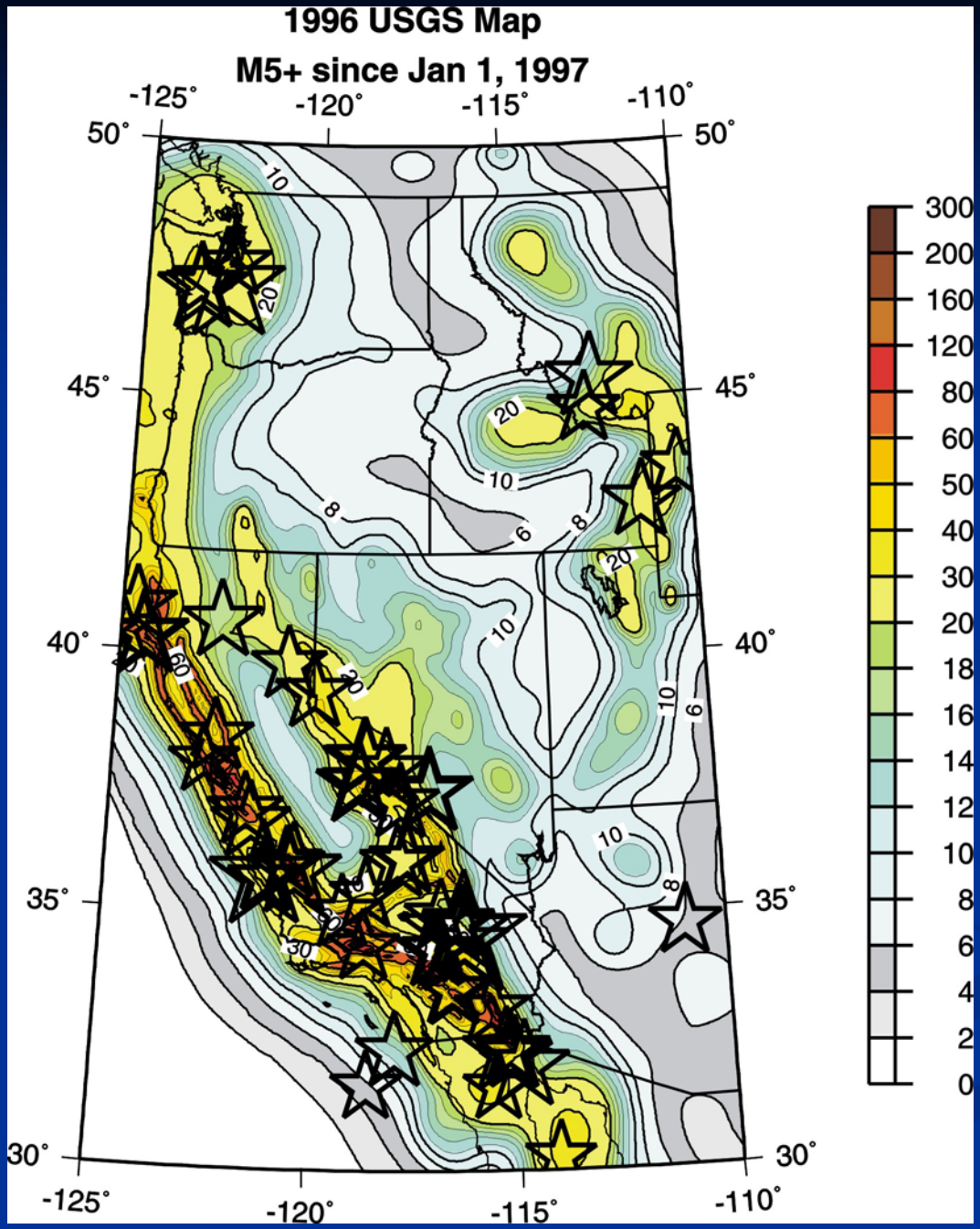


PGA (%g) with 2% PE in 50 yr

62 events

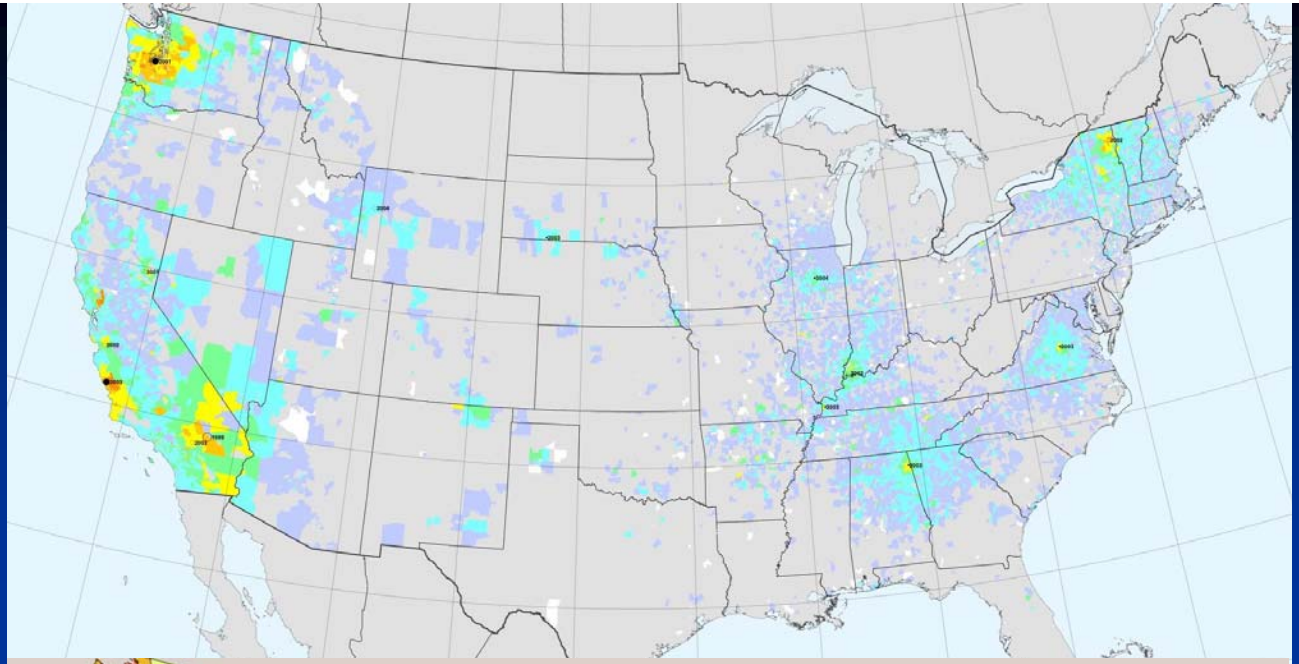


PGA (%g)
With 10% PE
In 50 years



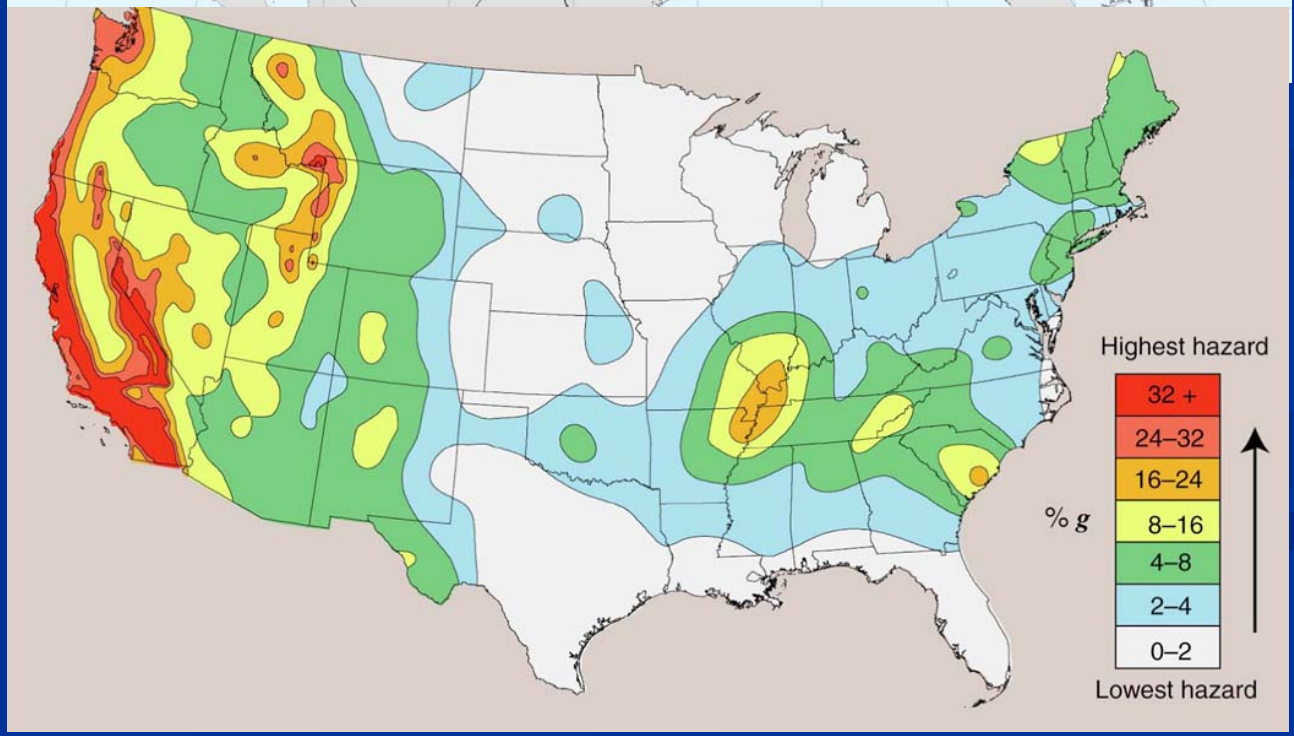
DID YOU FEEL IT?

5 Years



USGS HAZARD MAP

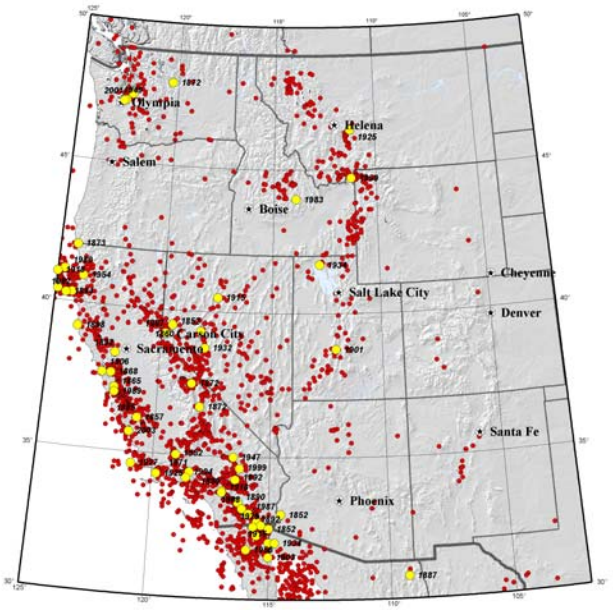
10% probability
Of exceedance in
50 years



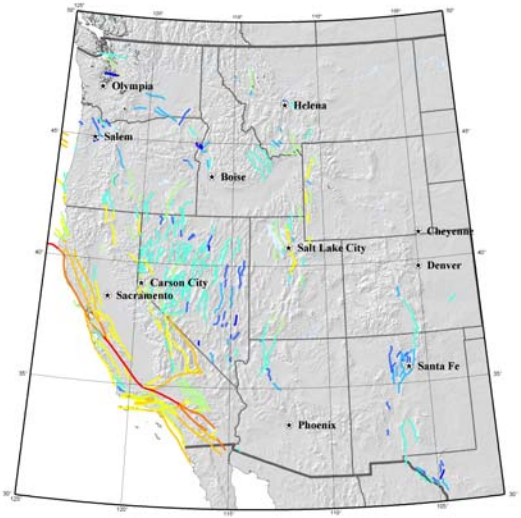
Dave Wald

DATA FOR DEVELOPING MAPS:

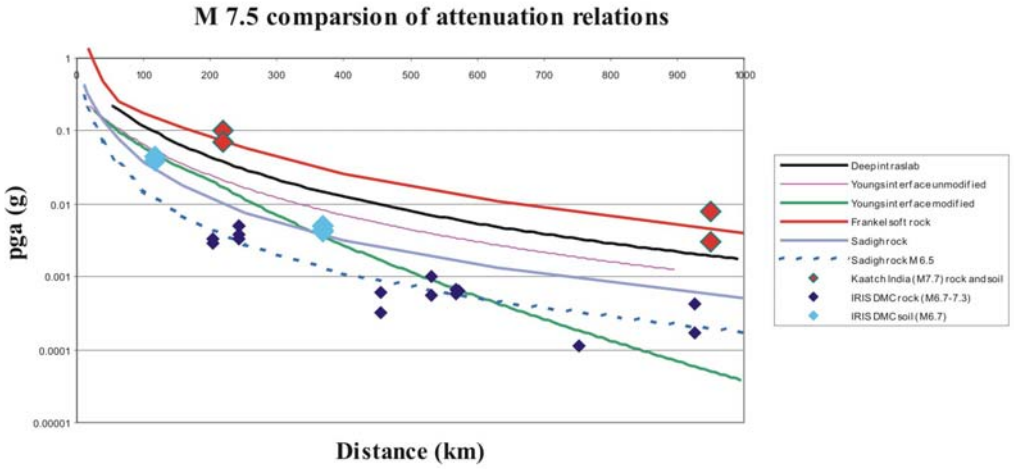
EARTHQUAKES



QUATERNARY FAULTS



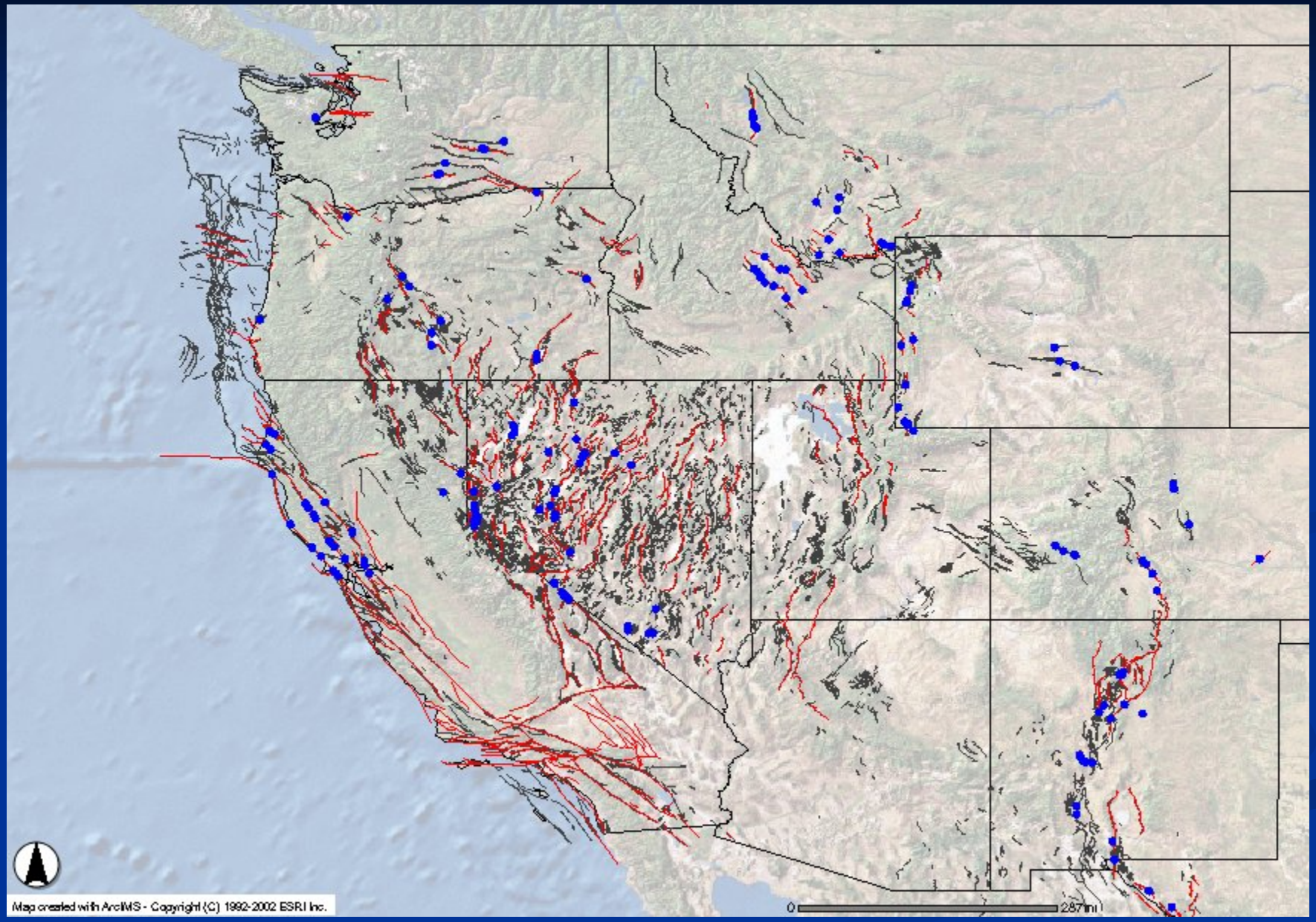
ATTENUATION RELATIONS



GEODETIC DATA

Blue sites surveyed once in 1999 and will be surveyed again June 2003.
Cyan sites surveyed once in 2001, expecting resurvey in 2005
Magenta sites surveyed once in 2000, expecting resurvey in 2004
Red sites have been described and sited, expecting first survey in September 2003.

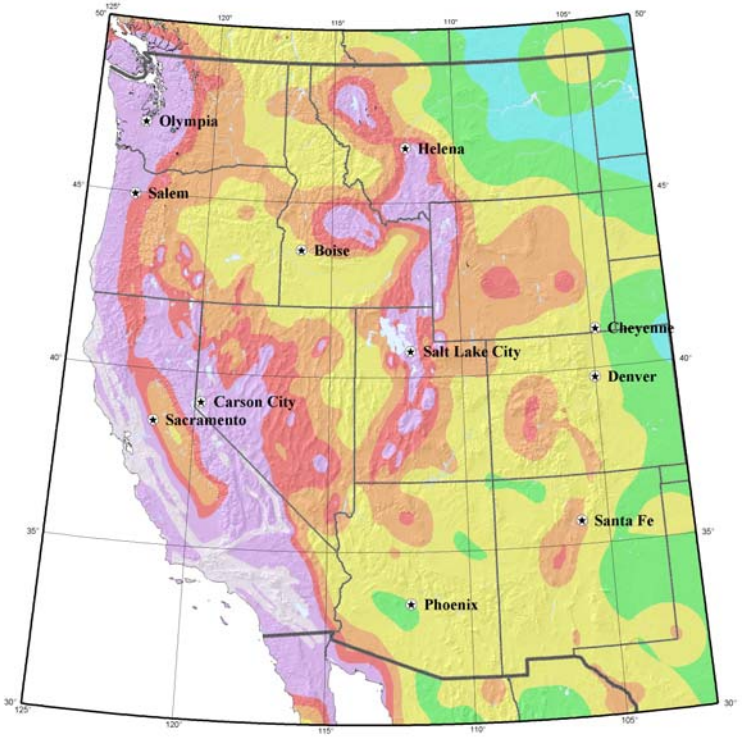
Quaternary Fault – Consensus Fault Database /ARCIMS interface



HAZARD PRODUCTS

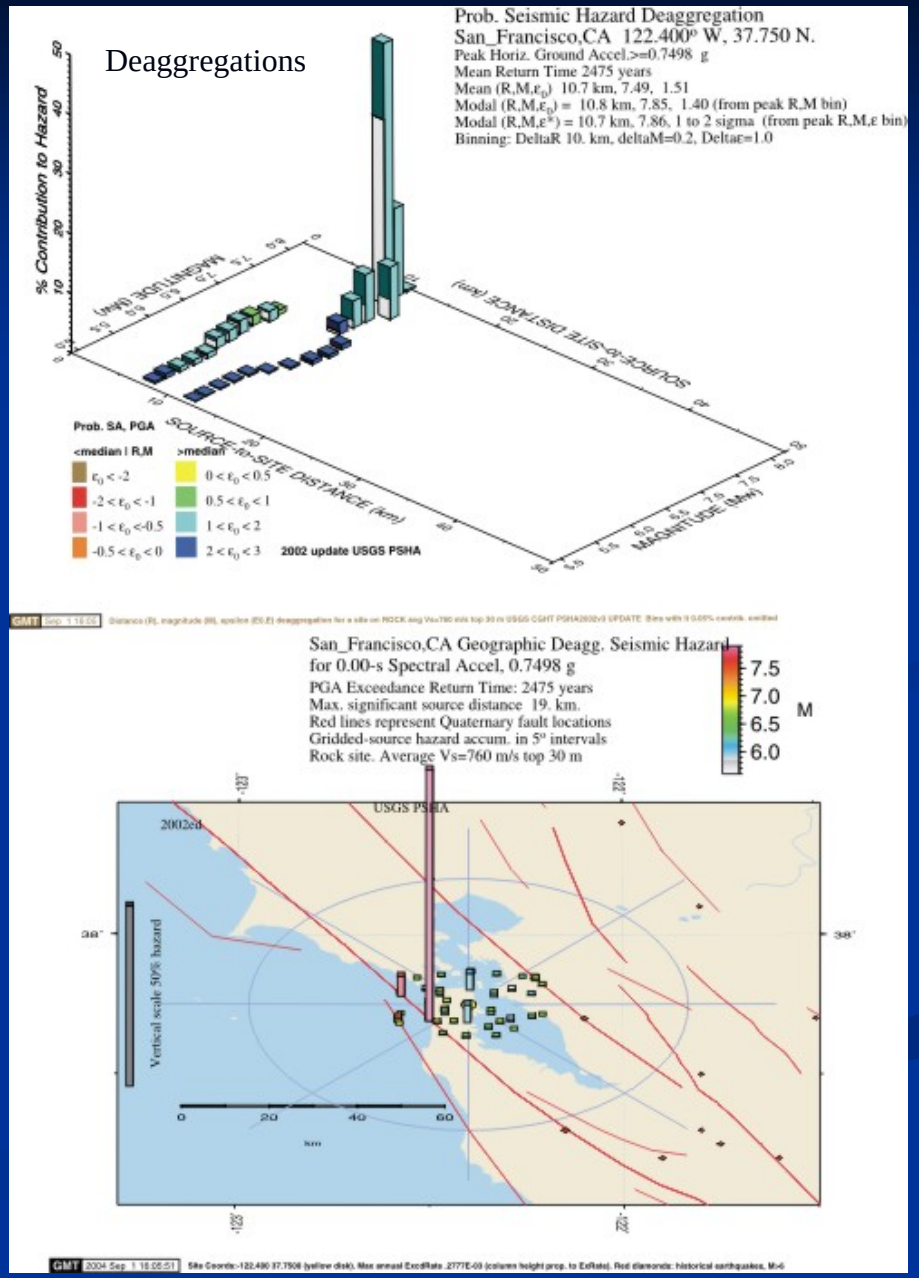
http://eqhazmaps.usgs.gov

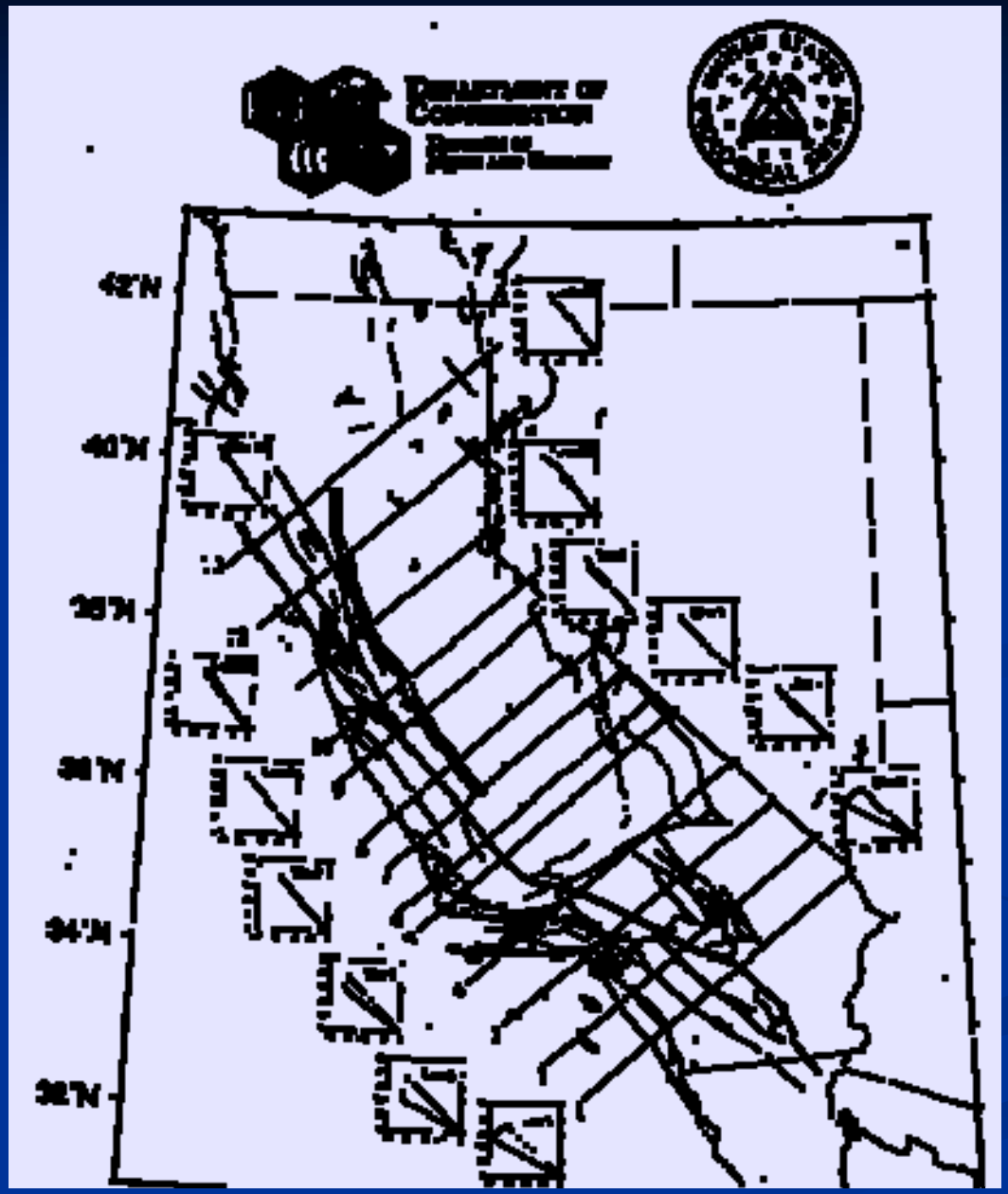
2002 Hazard Maps - PGA-rock
2% probability of exceedance in 50-years



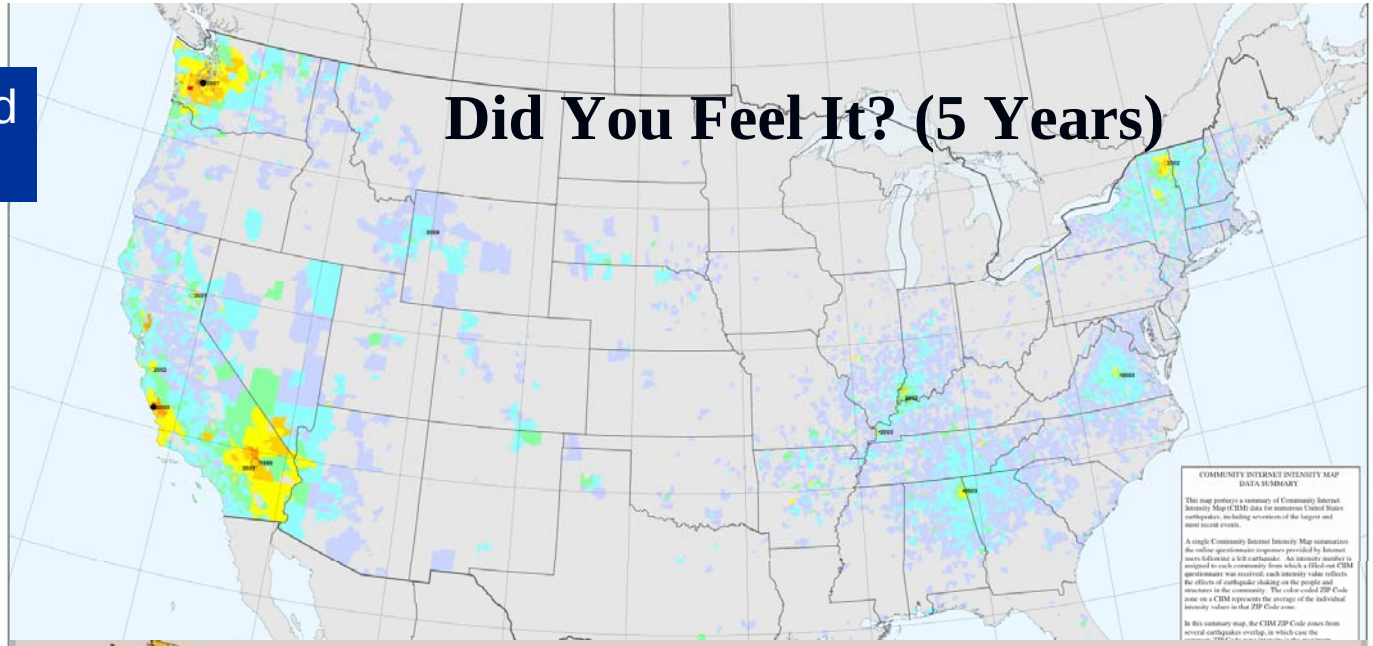
Purple-0.3g and greater
Yellow -0.1g and greater

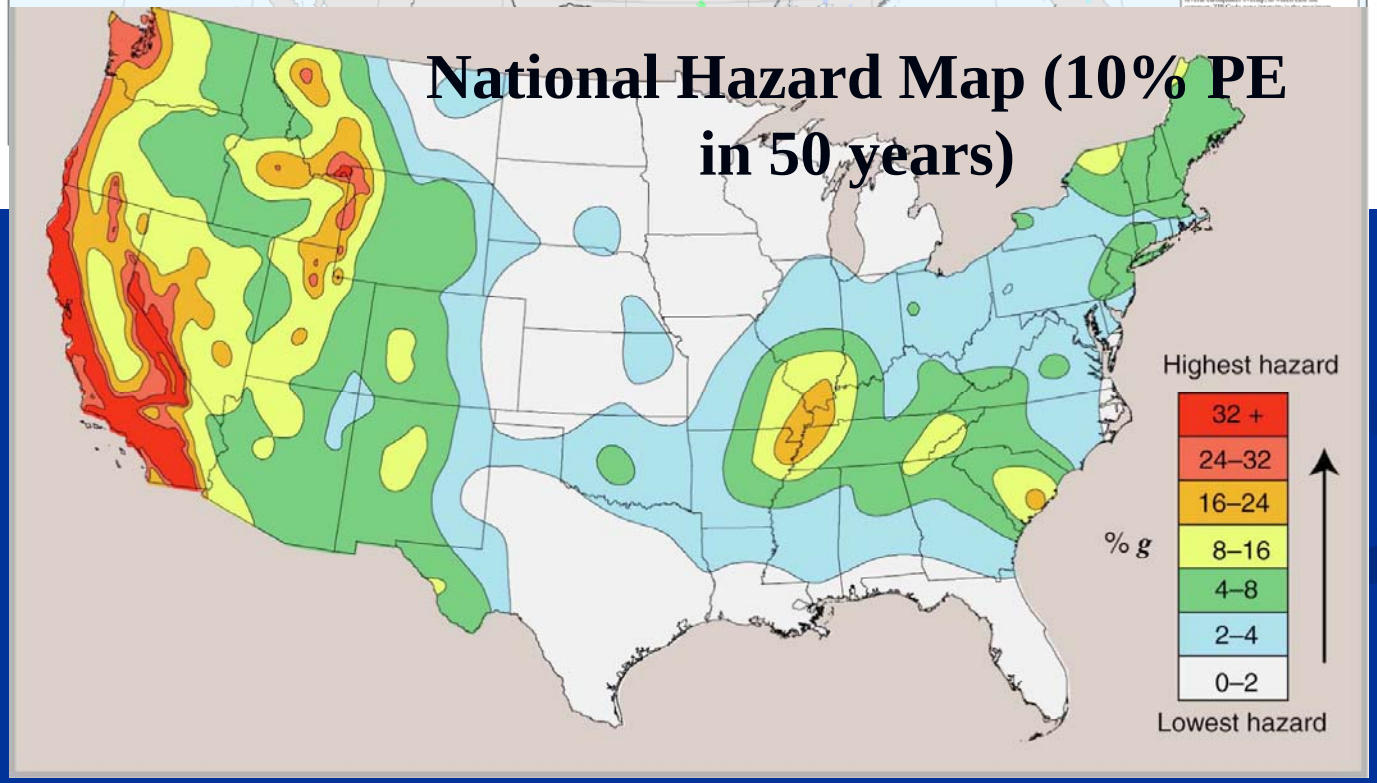
Deaggregations




42°N
40°N
38°N
36°N
34°N
32°N

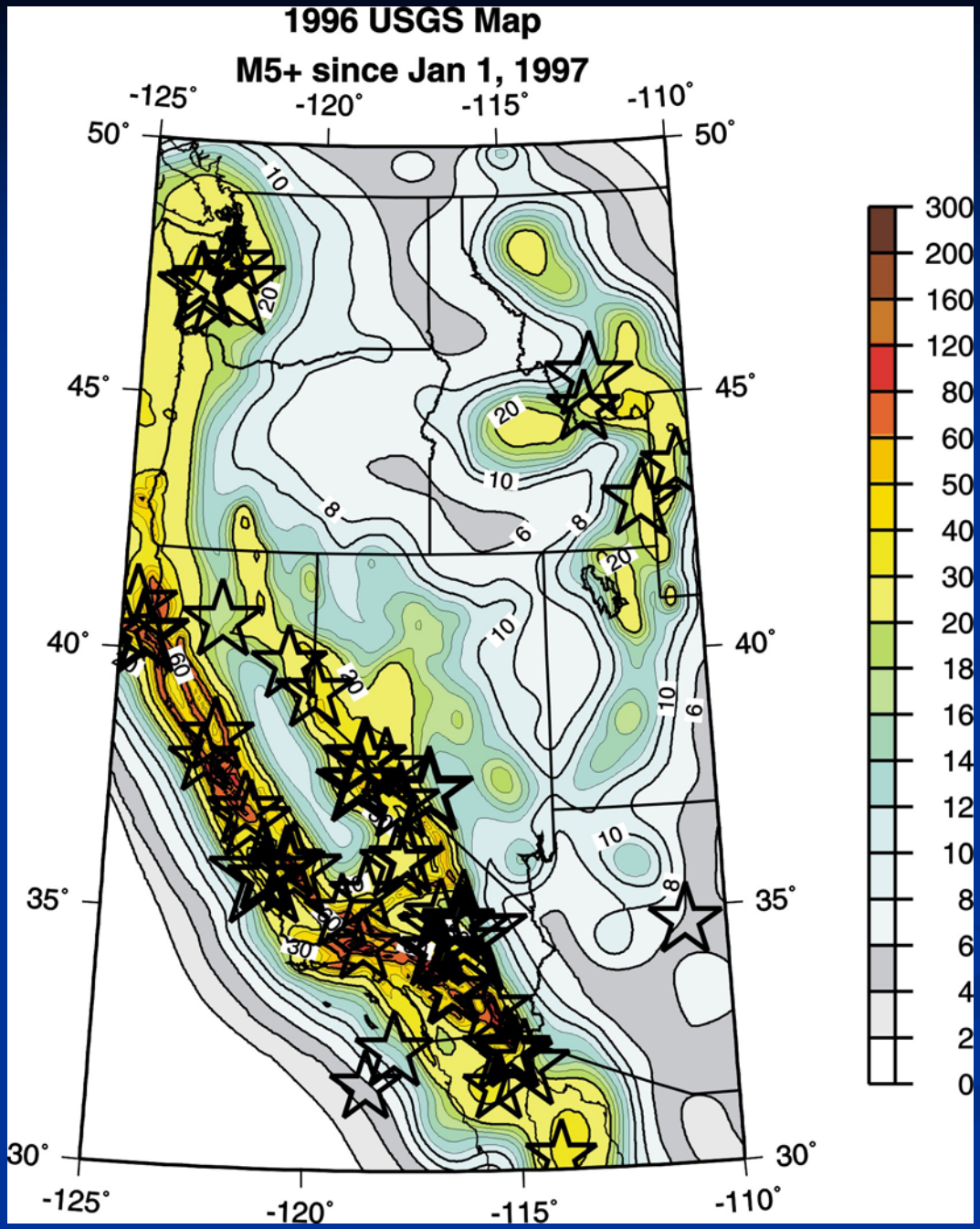
Slide composed by D. Wald

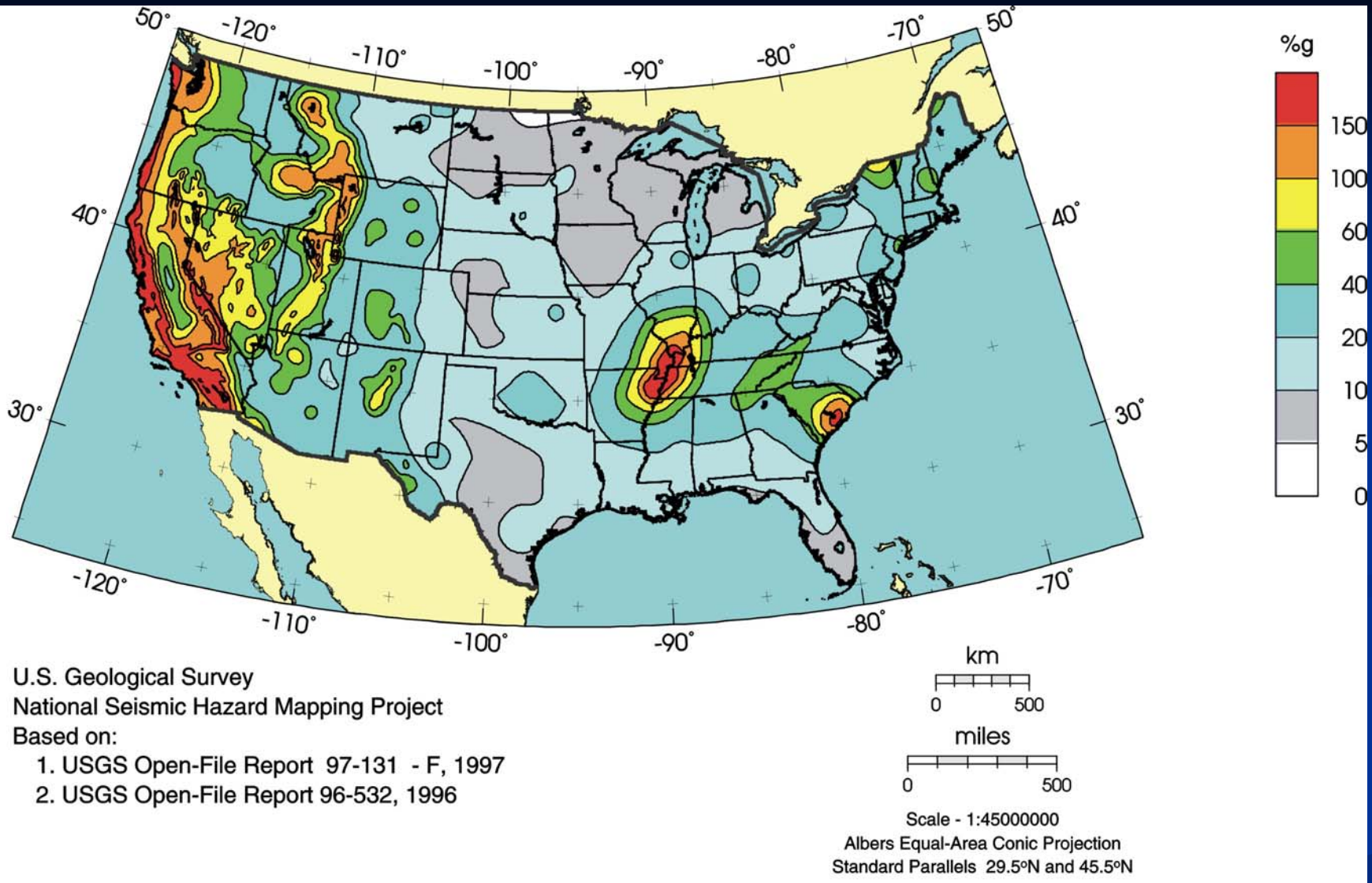




USGS science for a changing world

PGA (%g)
With 10% PE
In 50 years





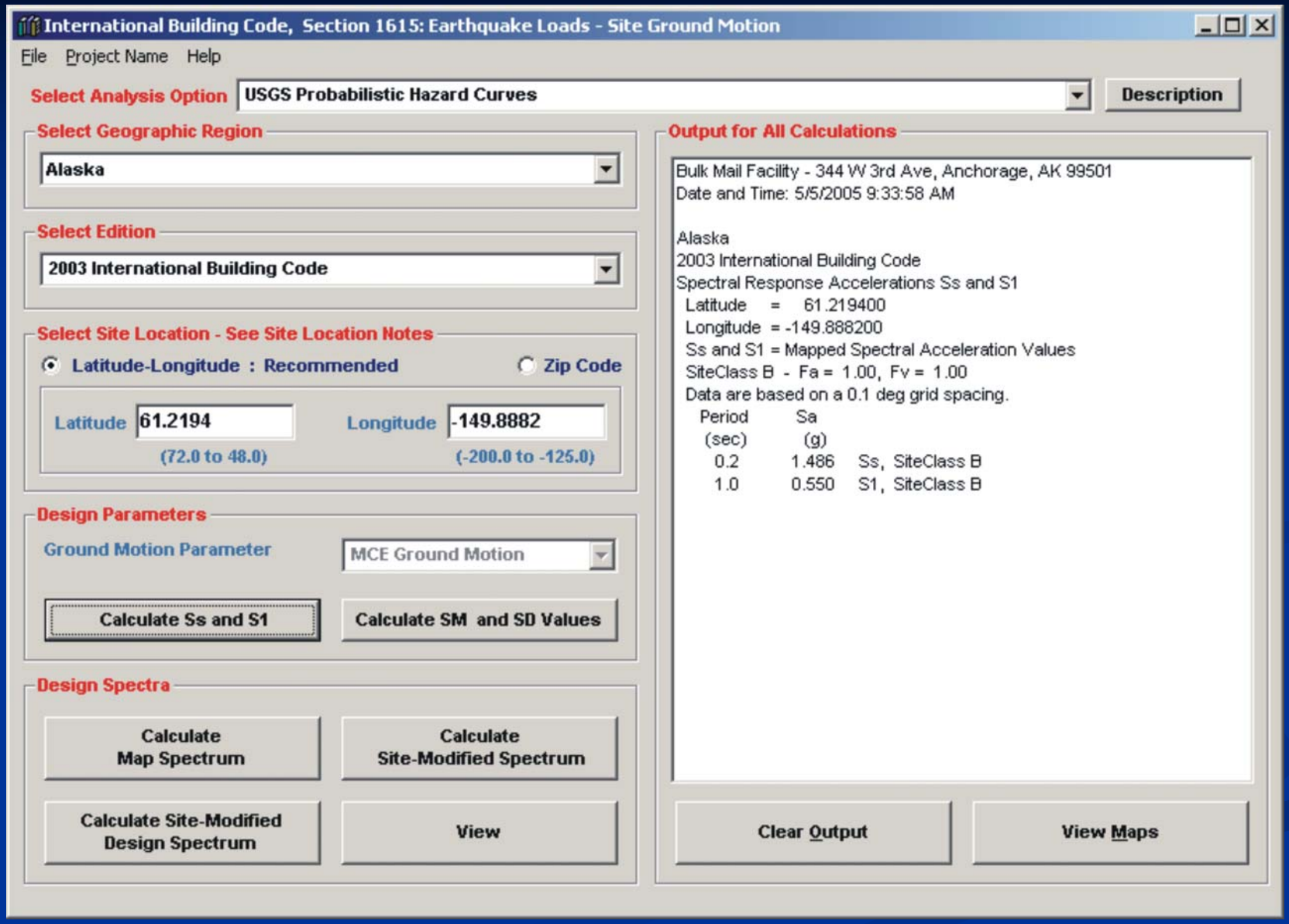
U.S. Geological Survey
National Seismic Hazard Mapping Project
Based on:

1. USGS Open-File Report 97-131 - F, 1997
2. USGS Open-File Report 96-532, 1996

Scale - 1:45000000
Albers Equal-Area Conic Projection
Standard Parallels 29.5°N and 45.5°N

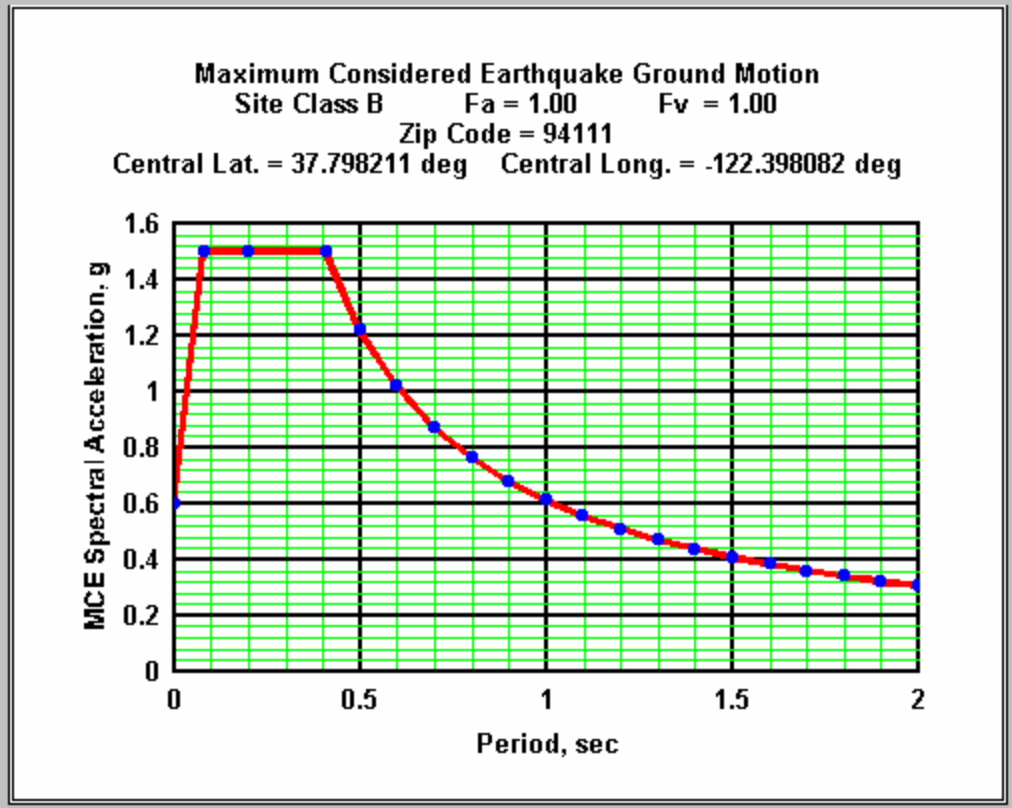
Horizontal Spectral Response Acceleration (%g) for 0.2 Sec Period (5% of Critical Damping)
With 2% Probability of Exceedance in 50 Years
Firm Rock - 760 m/sec shear wave velocity

Design/Hazard curve tool



CD available, Internet version available about December, 2005

Response Spectrum Plot

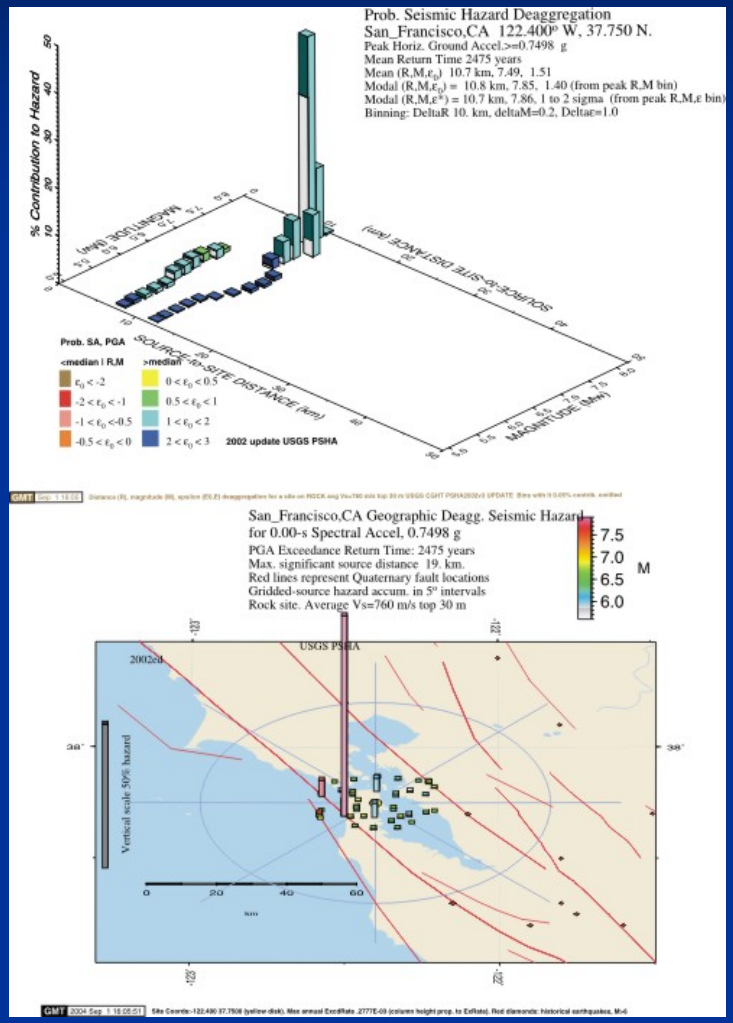


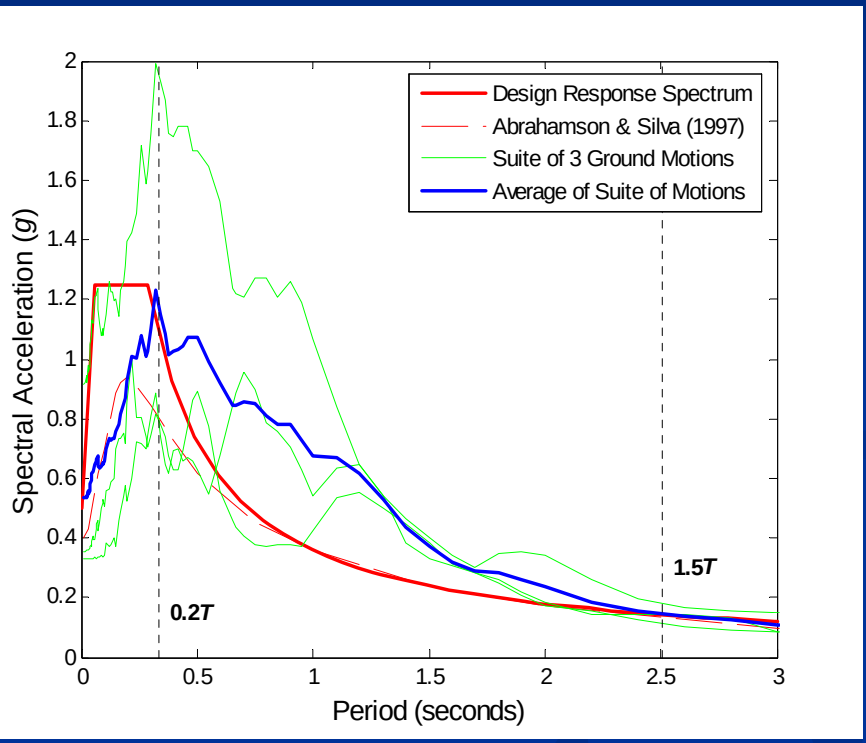
Period, sec	MCE Sa, g
0.00	0.600
0.08	1.500
0.20	1.500
0.41	1.500
0.50	1.221
0.60	1.018
0.70	0.872
0.80	0.763
0.90	0.678
1.00	0.611
1.10	0.555
1.20	0.509
1.30	0.470
1.40	0.436
1.50	0.407
1.60	0.382
1.70	0.359
1.80	0.339
1.90	0.321
2.00	0.305

Exit Viewer

Print Spectrum

Time-history for dynamic analysis





DGML=Design Ground Motion Library