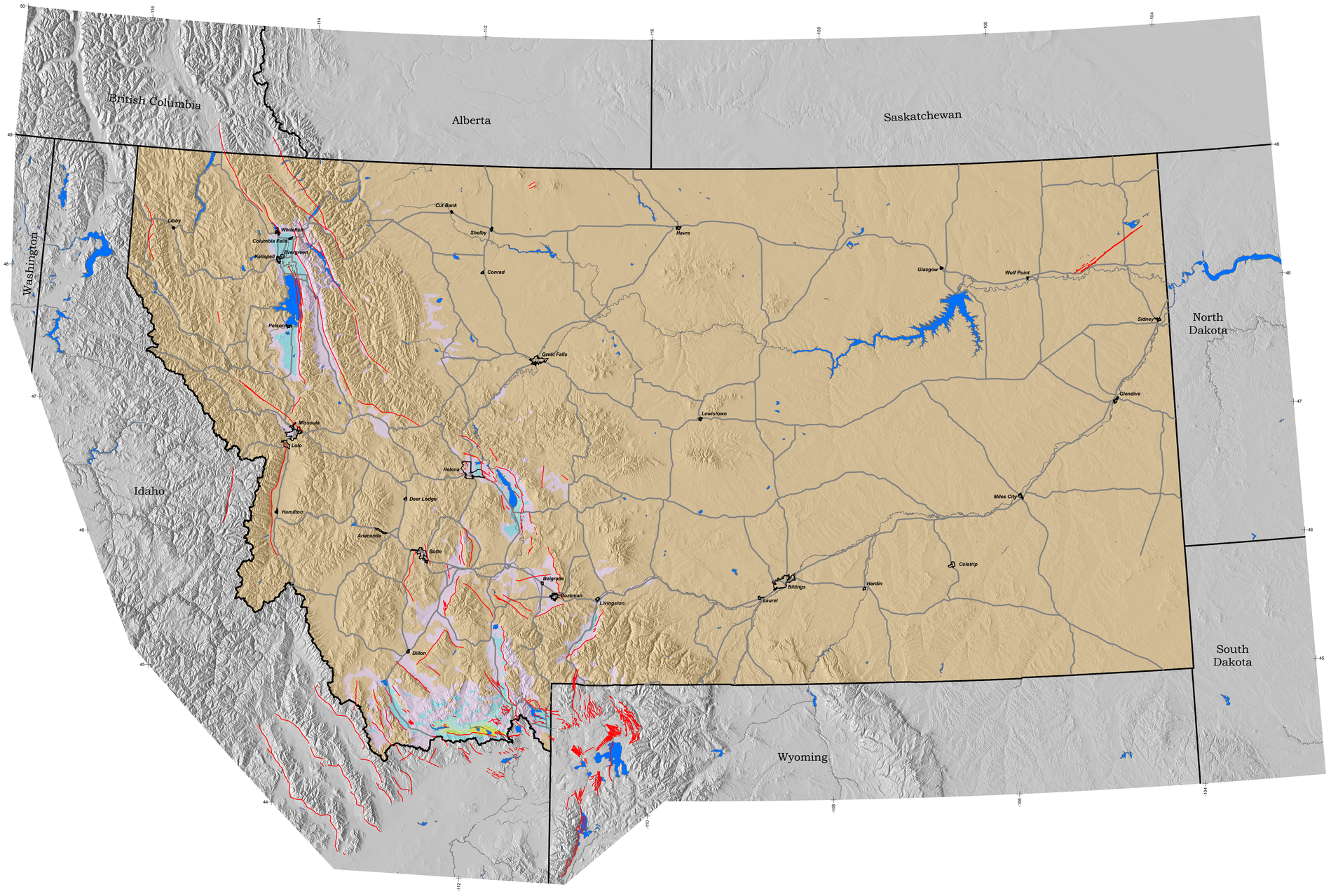
Plate 19
2% Probability of Exceedance in 50 Years
1.0 Sec Horizontal Spectral Acceleration (g) at the Ground Surface



MBMG Publication XXX

Probabilistic Earthquake Ground Shaking Maps for the State of Montana

by
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2005

1.0 Sec Horizontal Spectral Acceleration (g)

- 0.0 – 0.2
- 0.2 – 0.4
- 0.4 – 0.6
- 0.6 – 0.8
- 0.8 – 1.0
- 1.0 – 1.2
- 1.2 – 1.4

Quaternary Faults

Fault Database modified from Stickney and others, 2000
(See Appendix for other fault map sources)

Explanation
This map illustrates the estimated potential ground shaking that may occur or be exceeded at a specified probability of 2% in 50 years or one chance in 2500 on an annual basis. All known significant seismic sources which could generate strong ground shaking in the area have been included in the probabilistic seismic hazard analysis.

Limitations
There are large uncertainties associated with earthquake ground motion prediction in Montana due to limited region-specific information and data on the characteristics of seismic sources and ground motion attenuation. Additional uncertainty stems from the characterization of the subsurface geology beneath the map area and the estimation of the associated site response effects on ground motions.

The maps should not be used directly for site-specific design or in place of site-specific hazard evaluations.

N
W E
S

20 10 0 20 40 60 80 100 Kilometers
20 10 0 20 40 60 80 100 Miles

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