Issue 12
Basin Effects – WUS & CEUS

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Issue Statement

• Basins affect duration & intensity of ground motion
• Empirical & simulation methods available to implement effects of basins nationally
• Same methods for all regions or region-specific methods?
Importance

• Site amplification factors, Fa & Fv, included in seismic codes to account for local geology
• Codes do not have similar factors or maps to account for regional basin geology

• Goal: Improved estimates of long period ground motions in basins throughout US
Risks

• Time & resources (funds & manpower)

USGS may be able begin mapping US basins & obtain basin parameters required for ground-motion calculation

• Min requirement: Basin Depth, $z$

$$z = f(\text{lat.}, \text{long.})$$
Resources

• USGS could begin gathering basin data if manpower is available
• State geological surveys may have data in oil/gas producing regions
Schedule

• Not clear if inclusion of basin effects in ground-motion maps can be accomplished this cycle
• Progress could be made if USGS can commit resources