NGA-East Site Effects meeting 10-11-2016

Walt:

No nonlinearity below 500 ft. Based on comparison to AS97 gmpe and recordings.

Kappa-based: they select damping below 500 ft so that a constant kappa (across sites) is achieved 0.04 sec.

Youssef:

Dmin model: Observations of surface kappa from Campbell 2009. Model 1 Q vs Vs, Q then converted to Dmin. Resulting damping is much higher than suggested by Darendeli. Discussion that Darendeli should be too low.

Nonlinear (D-Dmin) from Darendeli.

Joseph on 760/3000: Depth-dependent and generic 760/3000 model – peak at 0.1 sec is characteristic. Use depth-independent model when we know Vs30 only.

Grace:

Develop comparative Vs and Dmin plot for PEA, GWG, literature studies too.

Literature review: LRSM: Long range seismic measurements in east. Bob Herrmann, U Memphis.

Gail and Behzad: Model with fpeak component has some VS30 dependence for glaciated, but this dependence is weak for non-glaciated. Monte Carlo approach for dealing with data variability.

Comparison of f0 between glaciated and nonglaciated sites? (histogram)

Discussion/To-do:

Use something like blue curve (empirical) from Grace's plots for the mean model. We likely don't keep the distinction between G and NG.

Check the Vs profiles used for the 760/3000 factors by Walt. Compare to those from GWG. Decide which ones to keep. This may affect our judgement of the mean.

Define epistemic as a σ_{ln} or a fixed sigma on amp (arithmetic).

Make vs30-space plots at additional periods.

Add GWG-sim L5 model to period-space comparison plots

Add NGA-West2 site amp model.