



USGS 2018 NSHM Update Workshop

Day 2: WUS Basin Effects and Smooth Seismicity Model

Presented by Mark Petersen and the NSHMP

USGS, Golden, CO

USGS 2018 NSHM Update Workshop

Thursday, March 8th, 2018

Overview and Motivation for the 2018 NSHM Update and Recap of Day 1 of the Workshop

Mark Petersen

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2018 NSHM Update and Schedule

CEUS	WUS	Conterminous US
<ul style="list-style-type: none">GMMs (i.e., NGA-East)	<ul style="list-style-type: none">WUS Sedimentary Basin EffectsReweight GMMs	<ul style="list-style-type: none">Seismicity CatalogCode updates

- Deadline for publication of peer-reviewed models was March 2017
- Finalize and submit 2018 NSHM to journal by June 30th, 2018
- Public comment period to review draft model after June 30th, 2018
- Peer review of 2018 NSHM by journal and Steering Committee
- Hope to publish 2018 NSHM in journal by summer of 2019

Discussion on Basin Effects and Seismicity Models for 2018 Update

- Summary of discussion yesterday
- Discuss why we are considering basin models (S. Rezaeian, C.B. Crouse) and how USGS is considering implementation (M. Petersen, A. Frankel)
- Discuss NGA-W2 basin terms and how to implement these in Subduction models (K. Campbell and G. Atkinson)
- Discuss new 3D Simulations of ground motions in Seattle and Los Angeles basins (A. Frankel and M. Moschetti)
- Propose USGS model for discussion and consider alternatives (O. Boyd, E. Thompson, and A. Shumway)
- Discussion of new 2018 update model
- Discussion of smoothed seismicity models (C. Mueller)

CEUS GMM Options for the 2018 NSHM

- 1. 2014 USGS NSHM CEUS GMMs**
- 2. NGA-East “Seed” GMMs**
(+ updates & new seed GMMs)
- 3. NGA-East for USGS**
“Sammon’s Mapping” 13 GMMs
- 4. Both #2 & #3, via logic tree**