PENDING UPDATES TO USGS NATIONAL SEISMIC HAZARD MODEL: FOR EARTHQUAKE ENGINEERS

N. Luco¹, S. Rezaeian², and M.D. Petersen³

ABSTRACT

The week after the 11th National Conference on Earthquake Engineering (11NCEE), the U.S. Geological Survey (USGS) plans to submit for publication an update to its National Seismic Hazard Model (NSHM). It is anticipated that this 2018 update of the USGS NSHM will be incorporated into the next edition of the National Earthquake Hazards Reduction Program (NEHRP) Recommended Seismic Provisions for New Building and Other Structures, as the 2014, 2008, 2002, and 1996 NSHM updates were for the 2015, 2009, 2003, and 1997 editions of the NEHRP Provisions, respectively. The NEHRP Provisions and its seismic maps are, in turn, incorporated into the American Society of Civil Engineers (ASCE) Minimum Design Loads for Building and Other Structures and the International Building (and Residential) Code. The USGS is also planning a 2020 update of the NSHM that could also be incorporated into the next edition of the NEHRP Provisions, developed by the Building Seismic Safety Council (BSSC) with partial funding from the Federal Emergency Management Agency (FEMA). The 2018 and 2020 updates to the USGS NSHM will include changes to the earthquake sources in the model, e.g. to the background seismicity outside of California, and to the characterization of earthquake ground shaking propagation, e.g. from the Next Generation Attenuation (NGA) project for Central and Eastern North America. Expressly for an earthquake engineering audience, this presentation will describe the updates for the 2018 USGS NSHM and those anticipated for the 2020 update.

¹ Research Structural Engineer, U.S. Geological Survey, Golden, CO 80401 (email: nluco@usgs.gov)
² Research Structural Engineer, U.S. Geological Survey, Golden, CO 80401