

Performance of Landslide-HySEA tsunami model for NTHMP benchmarking validation process

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In its FY2009 Strategic Plan, the NTHMP required that all numerical tsunami inundation models be verified as accurate and consistent through a model benchmarking process. This was completed in 2011, but only for seismic tsunami sources and in a limited manner for idealized solid underwater landslides. Recent work by various NTHMP states, however, has shown that landslide tsunami hazard may be dominant along significant parts of the US coastline, as compared to hazards from other tsunamigenic sources.

To perform the above-mentioned validation process, a set of candidate benchmarks were proposed. These benchmarks are based on a subset of available laboratory date sets for solid slide experiments and deformable slide experiments, and include both submarine and subaerial slides. A benchmark based on a historic field event (Valdez, AK, 1964) close the list of proposed benchmarks.

The Landslide-HySEA model has participated in the workshop that was organized at Texas A&M University - Galveston, on January 9-11, 2017. The aim of this presentation is to show some of the numerical results obtained for Landslide-HySEA in the framework of this benchmarking validation/verification effort.

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