

Discussion at SSA regarding USGS-NTHMP interaction.

USGS participants: Bill Leith, Cecily Wolfe, Art Frankel, Mark Petersen, Gavin Hayes, Stephanie Ross.

NTHMP: Rick Wilson (CGS, CA NTHMP rep, recent co-chair of NTHMP mapping and modeling subcommittee), Hong Kie Thio (AECOM, working on tsunami probabilities for ASCE standards), Lewis Kozlosky (NOAA, NTHMP program).

Recommendations from discussion:

- 1) Hold workshop at Jan/Feb 2016 NTHMP meeting to start developing plan for future NTHMP-USGS collaborations/work**
- 2) Hold possible workshops (one/year?) to address immediate and long-term source issues (SZ, non-SZ faults, landslides) for specific geographic areas or other special issues (PTHA, vulnerability/risk assessment)**
- 3) Work toward formalizing NOAA-USGS relationship to help address tsunami source and related Tsunami Warning System issues.**

Coordinating with Subduction Zone Science outside USGS

National Tsunami Hazard Mitigation Program (NTHMP): tsunami source issues

Each state/territory has responsibility for defining and modeling sources and producing tsunami inundation maps for local evacuation maps and plans.

Each state uses their own model but all models have been verified by NOAA through benchmarks for inundation use. However, there are no real standards for source identification.

The National Academy of Science report in 2011 recommended that more consistent sources be used and that the USGS help with consistency.

NTHMP needs

Overarching issues:

- NTHMP would like a regular, more formal exchange between NOAA/state partners and members of the USGS to go over needs and outcomes (working group?). This was a recommendation in 2011 NAS report on “Tsunami Warning and Preparedness...”
- Emergency response – setting upper bounds magnitude and slip for SZs and other potential sources (non-SZ faults, landslides)
- Forecasting – updating Warning Center source DB with SLAB 1.0 and other potential sources
- Probabilistic tsunami hazard analysis for all coastlines
- **Social Science:** help from USGS social scientists on tsunami risk reduction efforts including evacuation modeling, vulnerability, and damage assessment

Discussion:

- Suggestions for meeting location to help USGS bring appropriate personnel (Denver or Menlo Park?)
- What can or should be addressed – MES, MMS, NOAA needs
- Funding: NTHMP/NOAA, USGS (travel, other?)
- Subcommittee/work group to organize the first workshop?
- Which groups from NOAA, USGS, FEMA, PMEL, NTHMP, and other (GEM?) should be included?

STOP

NTHMP needs: tsunami source

Some of the other details states/NOAA could use help/advice with:

- Upper bounds of the maximum and average slip for maximum credible events (on the megathrusts and other local faults); constraints for the up-dip and low-dip limits of the hypothetical ruptures.
- What slip-magnitude scaling relationship is recommended for different subduction zones?
- Are a Tohoku-type and outer-rise events possible along SZs (all tsunamigenic regions impacting the NTHMP study areas). What would be their maximum slip, magnitude, variation along strike.
- Locations for potential submarine mass failures along the continental slope in the Pacific and Atlantic Oceans? Some guidelines regarding their volumes?
- Location of the potential splay faults? Slip partitioning between the megathrust and splay fault
- A unified database with paleoseismic records along the NTHMP study area.