

# MMS outcomes from 2013-2017 NTHMP Strategic Plan

MMS meeting in Portland, 2017  
08:30 – 09:30am

# Outline

- Two Outcomes for the MMS activity

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**Strategies** to support outcomes

- Milestone
- Milestone
- Milestone

# Outcomes

- **Successful execution of NTHMP tsunami mapping, modeling, mitigation, and education efforts**
- **Tsunami Hazard Assessment that Supports Informed Decision Making in Tsunami-Threatened Communities**

# Strengthen NTHMP subcommittees to execute the Strategic Plan

- **90% of action items from subcommittee meetings will be completed within one year of being assigned**
  - Mostly yes
- **Conduct at least one in-person meeting per year for each subcommittee**
  - Done
- **Update NTHMP Rules of Procedure and subcommittee Terms of Reference by end of 2013 and bi-annually thereafter**
  - Completed

## Support a research effort to develop U.S. tsunami risk assessment methodologies

- **Provide expertise to the FEMA HAZUS tsunami module development as requested**
  - Discussion at the meeting: Review team, Pilot projects in WA, AK, CA, OR, HI; Helping with validation of the results, providing inundation lines and other GIS products; beta testing in OR (building inventory); NTWC-FEMA coordination

# Support and implement post-tsunami event protocol for U.S. states and territories

- **Develop plans for implementing post-tsunami protocols for field teams**
  - CA and HI: Published a paper, offered a protocol to the MMS, incorporated lessons from AS.
  - PR: Pilot project for the post-tsunami surveys with Herman Fritz (IOC guidance => custom)
  - Gulf Coast, AK: GPS equipment to do a survey
  - WA: discussion with NASA, an idea to prepare pilots for the surveying
  - WA, OR: looking into drone mapping

# Outcomes

- Successful execution of NTHMP tsunami mapping, modeling, mitigation, and education efforts
- **Tsunami Hazard Assessment that Supports Informed Decision Making in Tsunami-Threatened Communities**

# Continue to ensure all models utilized in mapping efforts funded by NTHMP meet the NOAA standards for inundation models as defined in NOAA-NTHMP (2012)

- **MMS, in coordination with PMEL and TWCs, update inundation modeling standards to include new advancements in modeling technology by end of 2014**
  - Good on this point
- **Add current benchmarks to modeling standards by end of 2014**
  - Tsunami current workshop => deliverables from USC
  - Applying quantitative criteria vs holistic approach vs ensemble modeling;
  - CA, OR, WA, AK: developed an approach to incorporate uncertainties
- **Develop archive location for numerical model benchmark data by 2014**
  - On-going discussions, ideas where to store data, NCEI will move forward
  - An idea to use Design Safe, NSF funded

# Ensure all NTHMP-funded inundation studies adhere to the NTHMP inundation modeling and map guidelines, except where they conflict with state/territorial-mandated laws or policies

- **NTHMP-funded maps meet established guidelines**
  - Yes
- **Update inundation map guidelines by the end of 2014**
  - Everyone reads in the guidelines and review them, move to the next Strategic Plan
- **All NTHMP-funded inundation model results publicly available via internet using GIS technologies (e.g., GoogleEarth)**
  - Kara reviewed/collected GIS/KML/viewers
  - Nation wide GIS overlay is missing (updates on the national layer might be missed and it might be better to work with States/territories)
  - Lots of paper maps in counties

# Support an update to the 2008 National Tsunami Hazards Assessment

- **Provide expertise as requested to help NOAA/USGS update the National Tsunami Hazards Assessment**
  - Done
- **All inundation model code used for NTHMP-funded work shall be freely available to all NTHMP partners upon request by 2013**
  - They all are available per request

# Develop inundation maps for all communities with high tsunami hazard as defined by state tsunami programs

- **Complete inundation maps for all threatened communities in Washington, Oregon, California, Hawaii, Puerto Rico, and the U.S. Virgin Islands by 2013**
  - Yes. Some additional/new scenarios might need to be modeled. USVI: TBA
- **Complete inundation maps for 50% of highly- threatened communities in Alaska and the U.S. Pacific Island Territories by 2017**
  - Yes
- **Test in a high-hazard-rated selected community the importance of updating previously computed inundation maps based on new tsunami source information, improved digital-elevation models, and/or improved modeling technology by the end of 2014.**
  - CA: 90-30m modeling => re-did at 10m resolution; AK: Kodiak mapping; Gulf: Landslide modeling: number of sources; HI, AS: 10 m resolution; WA: modeling with a better topography and L1 scenario; OR, PR: Multiple scenarios at two communities & LIDAR data; East Coast: 1<sup>st</sup> generation maps, landslide rheology

# Develop inundation maps for all communities with high tsunami hazard as defined by state tsunami programs

- **Develop expected inundation limits for communities which are not provided with high-resolution inundation maps**
  - Alaska, Gulf of Mexico, East Coast: Working on this, Extrapolating inundation from near-by areas

# Develop new tsunami hazard products to assist the maritime community and meet EM and other NTHMP customer requirements

- **Review existing demonstration projects and develop product guidelines (including offshore safety zones, drawdown, and currents) for maritime planning by the end of 2013.**
  - AK, OR, CA, HI: Demonstration projects, maritime guidelines
- **Benchmark numerical tsunami models for use on maritime products to ensure NTHMP funded models meet NOAA-NTHMP standards by end of 2015.**
  - Completed
- **Develop prototype maritime products for one community within each high tsunami hazard state/territory by the end of 2015.**
  - Some states/territories have developed maritime products
- **Dependent on success of the two above milestones and Emergency Management and other NTHMP customer requirements, develop maritime products for 25% of threatened communities within each high tsunami hazard state/territory by the end of 2017.**
  - It is not complete, most partners are working towards this
- **Produce guidelines/standards and prototypes for new products specified by EM and other NTHMP customer requirements.**
  - Completed and transferred to MES