

**Meeting Minutes of the National Tsunami Hazard Mitigation Program  
Coordinating Committee  
February 18-19, 2009  
Menlo Park, CA**

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**Attendees:**

**NOAA/NWS** – Vickie Nadolski, National Weather Service Deputy Assistant Administrator  
**NOAA/NWS** – Jenifer Rhoades, NOAA Tsunami Program Coordinator/NTHMP Program Administrator  
**NOAA/NWS** – Paul Whitmore, Director, West Coast/Alaska Tsunami Warning Center  
**NOAA/OAR** – Eddie Bernard, Director Pacific Marine and Environmental Laboratories  
**AK** - Erv Petty – Homeland Security State of AK  
**AK** – Roger Hansen – University of Alaska Fairbanks  
**CA** – Jim Goltz, California Office of Emergency Services  
**CA** – Rick Wilson, California  
**DHS/FEMA** – Mike Mahoney  
**DHS/FEMA** – Tamra Biasco  
**HI** - Kevin Richards, State of Hawaii  
**OR** - Rob Witter, DOGAMI  
**OR** – Althea Turner  
**East Coast States** – Robert Ward, Maryland Emergency Management Agency  
**PR** - Christa G. von Hillebrandt-Andrade, Puerto Rico Seismic Network, UPR  
**WA** - Tim Walsh, Washington Division of Geology and Earth Resources  
**WA** – John Schelling, Washington Emergency Management  
**USGS** – David Oppenheimer  
**USGS** – Craig Weaver  
**Gulf Coast States** – Juan Horillio, Texas A&M  
Gulf Coast States – Charles Williams

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## **Minutes**

### **February 18, 2009**

8:30 MMS Breakout session to discuss FY09 tasks

9:10 Opening remarks and welcome, David Oppenheimer

9:15 Introductions and opening remarks by Vickie Nadolski

- Acknowledged accomplishments of the NTHMP CC over the last year
- ITIC – Vickie will go out to Hawaii to visit the ITIC to get a better understanding of its function and relevance to NTHMP
- Encouraged all to review partner proposals and ask relevant questions

9:20 Jen Rhoades presented the FY09 NTHMP budget overview (see Jen's PowerPoint for details)

- Provided detailed explanation of NOAA items in the FY09 budget
- Question: is NOAA part of the Omnibus bill in discussion? Answer: yes, but until the Omnibus or Appropriations Bill is passed by Congress and signed by the President, NOAA will remain under a continuing resolution.
- WARN Act Grants are for siren purchase for small rural communities
- Stimulus bill does not provide funding for tsunami or NWS efforts; most stimulus-related spending for NOAA focuses on climate issues
- **\$4.877M** available in FY09 for NTHMP partner projects for mitigation

Jen Rhoades reviewed the grant application process through Grants.gov

- Flexibility to tweak outlying year proposals (FY10-12) exists. Funding above what is applied for will have to be awarded with either a new or a supplemental grant.
- The purpose of going to 4-yr grant process was to reduce administrative effort to submit multi-year proposals
- New proposals in outlying years will be considered and the CC will have to address (possibility with the use of a reserve fund.) The CC will discuss a contingency plan to address this issue during Thursday's budget discussion
- FY08 Semi-annual Grant status reports are due March 2
- Semi-annual reports will be coordinated through subcommittees – the CC will revisit/discuss actions to assign the subcommittees
  - E.g., various models used for inundation mapping must be validated according to a procedure established by MMS (benchmarking); other guidelines and best practices will be developed for inundation maps; MES has responsibility annually to review how goals of NTHMP are being achieved or not achieved.

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- The Strategic Plan was structured so that subcommittees are responsible for ensuring program goals and milestones are met. Sub-Committees are to monitor NTHMP partner performance for funded activities that support their respective sub-committee actions
  - Action: Develop a template to describe how Semi-annual reports should be formulated to address this requirement.

10:10 Break

10:30 NOAA projects funded by NTHMP – Jen Rhoades provided a briefing on all of the NOAA activities that are funded in the NTHMP budget.

- TsunamiReady – Base budget \$750k funded annually
  - Highlights of FY07/08 TR projects presented
  - Current number of TR communities exceeding performance measures
  - ACTION: CC charged MES with task of enumerating the total TR communities *needed*, and reevaluating the performance measure (currently 10 TR communities per year) – recommended to move toward an outcome measure rather than output measure. How many “communities” are required and what is the gap?
  - Question: How does the NTHMP define a “community?” A census may recognize multiple “places” within a single “community.”
- TR Staff Outreach – provides outreach for TR program
  - \$521k covers the staff time of NWS Warning Coordination Meteorologists. This includes their time to support TR workshops, develop/edit materials.
- Tsunami Warning Center Outreach – \$300k annually for labor funding (2 FTE) + travel to support NTHMP activities
- NESDIS/NGDC – tsunami data archive
  - FY09 \$276K for labor, historical events, deposits database, run-up, coastal DEM archive, other geophysical data
  - NESDIS provides in-kind support of about \$640k for IT and staff
  - Does not include funding for archiving NTHMP products and data (WHY? Is this function funded separately? Does NGDC or the CC need to address this? MMS and Jen need to coordinate this action)
  - ACTION: Reevaluate performance measures for data archive – quality over quantity desired
- NGDC DEM development – FY09 base budget is \$522k (plus \$120.3k additional provided by AK), plus in-kind support to the tune of \$470K from NESDIS
  - FY07 request for 9 DEMs and NGDC exceeded this by producing 14 DEMs
  - In FY08, 9 DEMs requested and NGDC produced 12 DEMs
- ITIC – base budget of \$564k; activities supporting NTHMP include:
  - TR program support
  - Provided education materials to states

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- Supported tsunami awareness campaigns
- Supported tsunami exercises and drills, e.g., Pacific Wave and Hawaii state exercises
- **Action: How does ITIC's web site relate to overall NTHMP web repository in development?**
- How do ITIC's activities integrate with NTHMP activities?
- ITIC does not report to MES; however, ITIC historically has participated in NTHMP meetings
- Eddie suggested ITIC, which works for the IOC, has lost its mission.
- How is ITIC trying to reinvent itself?

11:45 Vickie Nadolski initiated the review of FY09 Proposals and reminded to group to ask, "Why are we here?" We need to consider looking at the following factors:

- (1) Does proposal address a **risk** to tsunamis?
  - (2) Is it **relevant**? What performance outcomes apply?
  - (3) **Leveraging** other sources?
  - (4) Does outcome benefit other activities? What is the proposed **application** to NTHMP?
  - (5) **Probability of success**: Is proposer capable of completing work?
  - (6) Are products **open** to public domain?
  - (7) Is there any **duplication of effort**?
- How do we set priorities? Our first guide is the strategic plan, but questions remain on how to assess risk.
  - Hazard assessment for the US has been completed, but we have yet to complete a risk assessment. NTHMP struggles to define risk.
  - Concern raised over whether priorities based on risk would make funding projects on the East coast irrelevant. Vickie responded that priorities should be used to gage and evaluate state proposals and direct objectives of state programs. Vickie stressed that there is no intention to leave any state or region out of the program.
  - David Oppenheimer commented that strategic plan concluded that risk was too difficult to evaluate and that in the interim hazard should be used as a guide to prioritize NTHMP projects

12:00 Noon, NTHMP Proposal Reviews/Q&A

*Each NTHMP Member presented an overview of their FY09 proposal, and then the CC asked questions regarding each proposal.*

*Each proposal is on the NTHMP Website*

**California (FY09 \$841,288) – Jim Goltz**

- Mapping and modeling tasks proposed address 2<sup>nd</sup> generation inundation maps, probabilistic maps for land-use planning and seaward zones of tsunami impact
- Tasks related to tsunami planning and response proposed

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- Education projects include 2 videos, educational poster, education materials and efforts to support regional advocacy groups (e.g., Redwood Coast Tsunami Work Group)
- Jim pointed out that several tasks listed under NTHMP component might be more appropriately funded under the TR component
- Other activities proposed include: support for live code testing, baseline surveys of planning and mitigation activities in CA, follow up on Crescent City pilot study
- TR tasks include working with NWS offices and initiating a multi state project to develop a HAZUS-tsunami conceptual module
- Questions:
  - Mike Mahoney offered that FEMA supports the effort to pursue a conceptual HAZUS-tsunami module; however, Jen pointed out that the public law Section 5c3 does not include development of HAZUS products through NTHMP funding
  - Rumor of Beta version of HAZUS-tsunami module was squelched by Mike Mahoney
  - Paul Whitmore raised several issues:
    - Should travel costs should be consistent between states
    - Should the funding of inundation maps between states be consistent?
    - How much does a map cost?
    - Why is there no funding for local dissemination methods? Utilized WARN Act funding for that purpose. Jim Goltz response: We are using the WARN Act Funding for this, and we will be able to bring siren coverage from 15% to 85% coverage with those grants
    - Is there a plan to validate the models CA is developing? Jim Goltz responded: Yes, we are using the MOST model and we will work with Vasily Titov to complete benchmarking.
    - Question is, is the version CA uses an earlier version? DEM priorities for community maps should drive production of DEM development – perhaps request extra SPECTRUM funds for acceleration of DEMs for CA.
    - Not enough detail in out years.
    - Strategic plan could be more specific in how to link state’s tasks with NTHMP outcomes. Suggestion: Strategic Plan team review strategic plan, so that it can incorporate additional measures that the NTHMP-CC determines need to be added.
  - Suggestion: Could NGDC complete the DEM development for CA?
  - Craig Weaver asked: What product will come out of land-use planning task? Not clear what CA is after, how will communities use it, what are the incentives? Rick Wilson responded: Rick Wilson responded: 1990 Seismic Hazard Mapping Act specifies that tsunami hazard zones should be delineated if funding and methodology is available. Proposed project is exploratory. Land-use planning would apply to specific buildings

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- identified in the Act, with the option of stronger enforcement at the local level.
- David Oppenheimer raised an open question: as we move forward, how do we ensure that the objectives/products states are pursuing will comply with NTHMP guidelines?
  - Charles Williams' question: what are CA's benchmarks for success? Jim Goltz responded: performance measures are valid and necessary, but what about intangible benefits? For example, TR communities did not respond better than other communities. Jim stressed we should look beyond performance measures.
  - Charles also questioned whether the NTHMP should be charged with funding multiple different web sites. A distinction was made between a web repository/portal vs. regional web sites with region-specific maps and materials.
  - Eddie Bernard commented that about half of CA proposed funding would go to mapping and modeling and about half would go to preparedness. How many TR communities have come out of the program in the past and what are goals/priorities to achieve new TR communities? Jim said: you have to have a reasonable idea of the inundation zone before you can certify a community is TR. Have to know where the inundation will occur.
  - Eddie added that FEMA conducted the Seaside pilot tsunami study to produce probabilistic inundation maps. Mike clarified: where tsunami hazard is primary hazard the flood map developed under map mod program would include tsunami; where tsunami is not relevant the tsunami flooding will not be included on FEMA flood maps.
  - Eddie pointed out that Hawaii has established the 50 m depth as a seaward limit for marine tsunami safety. This should be of interest to multiple states.
  - Jen noted that CA requested funding to attend MMS Meetings, but funding to pay for all MMS Meeting attendees is also requested in MMS' proposal. The MMS is the appropriate place for the funding to go, so CA should review this budget request from their proposal.
  - Eddie Bernard asked "You are planning on doing maps for land-use planning maps before the inundation map guidelines are complete, how does this mesh?" Rick Wilson responded "CA made assumptions about what will be included in the maps, and work move forward in tandem with the MMS on this issue."
  - I can not determine the benchmark for success; what are you using? **Did not get this response.**
  - Jen Rhoades asked, "You are developing a portal for CA materials, how does this apply to the national effort?" Jim Goltz responded, "Our goal is to put all of our products on one site, but we do need to have state/local specific groups." Vickie Nadolski added: we need to be thinking about results oriented investments; we need to develop a national web-portal to link all state projects together.

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- Jen Rhoades asked, “What is the total number of communities in CA that could be recognized as TsunamiReady?” Jim Goltz: 73.
- Eddie Bernard asked: “The probabilistic studies are part of FEMA’s Flood mapping pilot, why isn’t this being used for CA modeling requests?” Mike Mahoney responded, “The flooding study does not include tsunami; it is up to the local community or state to develop tsunami models. This should be subject to discussion between FEMA and NOAA.”

**Puerto Rico (FY09 \$850,000) – Chris Von Hillebrandt-Andrade**

Note: current proposal does not include additional costs to increased overhead

- Proposed tasks include next generation inundation mapping, inventories of local emergency response/mitigation plans
- Goal is to have a total of 44 communities TsunamiReady
- Funding request supports the development of GIS bilingual evacuation maps and various outreach activities.
- Other activities: workshop to build on Disaster Decision Support Tool originally developed by NSF; PR media toolkit, survey of tsunami preparedness; prepare tsunami response plan for Caribbean and Central Am Games
- Activities in communications tests and maintaining AHAB systems
- TR activities include hiring a TR officer and purchase of AHAB systems (\$120k)
- Questions:
  - David Oppenheimer asked whether we are considering the cost of maintaining siren systems. Christa responded “In Puerto Rico maintenance of AHABs is assumed by local municipality.
  - Cell phones may be new technology that can be effectively applied to automate EAS warnings
  - Mike Mahoney said FEMA would cover printing costs of a Spanish translation of FEMA 646
  - Paul Whitmore asked if NTHMP funds should support travel for scientist to attend professional meetings. Chris responded: Yes, it is an opportunity for synergy.
  - Jen Rhoades noted that travel to sub-committee meetings is included in Puerto Rico’s proposal. She said travel for subcommittee meetings should not be part of partner proposals.
  - Jen Rhoades asked “How will Puerto Rico’s educational activities link with MES’s efforts to develop an NTHMP tsunami education plan?” This needs to be covered in Puerto Rico’s revised proposal.
  - Should MES come up with a “standard” survey to evaluate community preparedness? Surveys could be used to help establish performance measures. Surveys could be used to evaluate TR certification, but John pointed out that a standard survey may not address specific issues/needs for all communities.
  - Will the \$40K for the TR officer be included in personal in your revised proposal? Yes.

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- Jen noted that this is one of three proposals that contain a social science survey. She asked the CC if this something the MES should address. Paul Whitmore added that these studies could complement a social science study NOAA is pursuing, should this be done at the state level? Jen asked, “Could a study address all tsunami questions at local and state levels?” Althea Turner said that there is no tsunami social science data base, and this could begin to address this. She said that this research could and should be nationalized and localized.

**CNMI (FY09-12 \$42, 500) – Not Present**

Questions/Comments:

- CNMI is going to do some mapping and modeling, but no mention of collaborating with any one to complete this. Jen Rhoades responded by saying that she believes the mapping and modeling is being coordinated with the Pacific Sciences Center and PMEL. We will make sure CNMI addresses this in their proposal rewrite
- The NTHMP CC noted that there is no linkage to NTHMP milestones
- There is no ability to determine indirect costs for each year; needs to be in there when they submit their final proposals.
- Why are they asking for funds to develop a coloring book when one is exists already? Why do they need to develop their own?
- Can’t determine what activities are TsunamiReady and NTHMP.
- Why do they need brochures re-translated into six when this has been done elsewhere? Why can’t the ITIC support?
- Are these generally available education brochures or specific evacuation maps?

**Washington (\$822,370) – John Schelling**

- Proposed objectives include modeling Seattle fault-generated landslide tsunami in Lake Washington; promote mitigation and preparedness
- Other activities: Community specific fact sheets, highlight vulnerable assets/population that lie in harms way; increase the use of map your neighborhood; Tsunami Work Group meetings; contracted awareness surveys; printing of tsunami education materials
- \$334k toward AHAB sirens
- Propose to continue TsuInfo Alert through a multi-state project (\$50k)
- Questions:
  - Is TsuInfo Alert a useful product? Answer: Gives a view of what other states/locals are doing. Only tsunami-specific newsletter for domestic entities.
  - Christa suggested there may be synergy between the resources at TsuInfo and the web repository being developed by NOAA. What are the costs? Mailing vs. personnel vs. printing, etc. Consider sending only via email?

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- Is most of the TsuInfo funding going to mailing? Funding includes 19% overhead, 20% acquisition of materials, 15% to mailing, and rest is labor.  
**Action: MES to review TsuInfo for applicability and use to NTHMP Members**
- How many communities are left that do not have inundation maps?  
Include in proposal re-write
- Jen Rhoades asked: Why do you conduct quasi-EAS tests, and not use a live-code? John Schelling responded, “I am not sure if it is state or legislative issue, but I am working to determine who has set the mandate.”
- Paul Whitmore asked, “Why isn’t WA requesting funding to build a structure based on vertical evacuation document? John Schelling said, “WA is looking to get funding through other grant programs. This will lay the ground work for future items.”
  - **Action to MES: Can NTHMP fund ‘bricks and mortar’ mitigation structures (e.g., vertical evacuation berms, etc)**
- Should we support funding the modeling of lakes?
  - Action: MMS to determine if NTHMP funding is appropriate for the modeling of lakes.
- Can we purchase sirens through this program? Yes.

**Guam (FY09 \$111,407) – Not Present**

Questions/Comments

- Guam is going to do some mapping and modeling, but no mention of collaborating with any one to complete this. Jen Rhoades responded by saying that like CNMI she believes the mapping and modeling is being coordinated with the Pacific Sciences Center and PMEL. We will make sure Guam addresses this in their proposal rewrite
- The NTHMP CC noted that there is no linkage to NTHMP milestones
- Why are they asking for funds to develop a coloring book when one is exists already? Why do they need to develop their own?
- Can’t determine what activities are TsunamiReady and NTHMP.
- Why do they need brochures translated into six when this has been done elsewhere? Why can’t the ITIC support?
- Are these generally available education brochures or specific evacuation maps?
- How does the “vehicle alert sirens” warning system work? Why aren’t they using NWR? Why are they using the mayor’s car being used for warning?

**Gulf Coast (FY09 \$71,682) – Juan Horillio**

- Objective: initiate construction of tsunami inundation maps in Gulf of Mexico
- Tsunami sources include 3 submarine landslides studied by USGS group
- Challenges/limitations: accurate simulations require dispersive models because landslides produce impulsive waves. The expectation is a dispersive wave would cause a lot of local damage but quickly disperse with increasing distance from the source.

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- Questions/Comments:
  - What is the youngest landslide? Answer: occurred ~7000 ago
  - There were earthquakes a couple of years ago, were landslides associated with this event? No landslide source, but there were some landslides as a result.
  - This part of the country has a lot of storm-surge models developed for this region, is there any synergy that can be used from the tsunami landslide model that can be used as input for the storm surge model? Has this been looked at? Answer: This is a next step
  - What is no additional funding for FY10-12 requested? Answer: We want to determine if the next steps need to be pursued first. If that is the case, new funding will be requested in FY10.
  - Appendix C was much appreciated by NWS

**Oregon (FY09 \$610,990) – Althea Turner and Rob Witter**

- Complete Bandon, OR modeling and Tsunami Hazard Assessment Technical Report; Develop compilation of tsunami deposits data for the southern Oregon coasts, and extend Bandon, Or modeling to other areas of the Oregon Coast
- Develop evacuation maps for 7 Oregon communities and update on-line tsunami map data base
- Compile data for Tsunami Information Clearinghouse
- Assist 3 communities meet TsunamiReady Guidelines
- Identify and contract for an Oregon Tsunami Coordinator to assist with TsunamiReady and outreach activities
- Questions/Comments:
  - What differences did you determine between the old and new map at Cannon Beach? Answer: In the original map, we only had 3 earthquakes. They resulted in “stop-light” maps. The new maps considered 25 sources (covered the range of uncertainty on the Cascadia fault.) The worst tsunami scenario is used for inundation maps. We also teamed with PMEL to consider Alaska sources for distant tsunamis. New maps show inundation both local and distant tsunamis.
  - What are you on the process of validating models? Answer: our modeler has run through all the benchmark tests on PMEL website and will be delivering a paper to validate the model.
  - Is your assumption that the sand deposits are the empirical validation of past tsunamis? Answer: No, that is not a rigorous test for tsunami model validation. Our models accounts for changes in topographic, artificial fill, erosion, etc.
  - You mention contract help for TsunamiReady (Tsu Coord.); is this one-time funding or will it grow? Answer: Tsu Coord will be static, but will utilize local support within each community that is pursuing
  - Who chooses the communities to pursue for TsunamiReady recognition? Answer: The TAC and future Tsunami Coordinator.

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- Where does funding for signage, sirens, etc...come from? Answer: It's in other direct costs; we are requesting \$50K per community.

**Hawaii (FY09 \$529,200) – Kevin Richards**

- Objectives include:
  - Tsunami planner
  - Tsunami observer program
  - Complete inundation mapping
  - Tsunami siren warning system hardening enhancement
  - Tsunami runup recorder
- Questions/Comments:
  - Are the tsunami runup recorders a legitimate mitigation tool; they appear to be similar to tide gages? Is it an observing tool that would be more appropriately funded from other sources? Answer: NTHMP-CC believes this is more of a warning tool (for the PTWC) and should not be funded by the NTHMP (this activity supports the alert/warning of the population of Hawaii).
  - Is the tsunami observer program relevant in the age of satellite observation systems and Google Earth applications? E.g., impact of 2004 tsunami in Sumatra has been mapped with satellite imagery.
  - Paul Whitmore asked if results of inundation mapping will be available publicly. **Kevin Richards responded, "Yes, all mapping data will be made available."**
  - Proposal hard to follow because it is in five different documents.
  - What are outcomes of TR program request for \$100k? What are you going to do? **Schedule workshops and informational meetings on all islands to re-energize theTsunamiReady communities. There are two counties recently asking for assistance with signage and evacuation informational items which will be followed up on.**
  - Metrics and performance measures built into the proposal help the committee evaluate proposals. How many TR communities do you expect to certify in four years? Kevin noted that we have not defined what constitutes a community (e.g., Business community, healthcare community, etc. these are non traditional communities
  - Why did the costs for administration change? Answer: Original proposal did not account for true staff time.
  - In your proposal, upgrading sirens in alluded to; does the state have a program to fund sirens? Answer: Yes, the funding requested, is to maintain and enhance.
  - What is the higher priority, sirens or maps? Answer, I base it on what can be done and how much funding is available.

**M&M Subcommittee (FY09 \$132,000) – Rob Witter**

- Funding is for meetings and workshops

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**NOAA/MES (Combined FY09 \$343,250) – Jen Rhoades**

- Initiate NTHMP web repository (\$80k)
- Admin to support NTHMP (\$97.25k)
- Warning Coord Subcommittee – post-tsunami warning evaluation/survey (\$100k)
- MES – meetings etc. (\$65k)
- Figures for funding state travel will be adjusted accordingly to account for regions who have submitted proposals vs. those that haven't
- The Cost for initiating web repository does not include development costs. The proposal is to determine the repository requirements. Once the requirements are determined NOAA will submit a proposal for the development costs.

**Vickie Nadolski adjourned the meeting for the day**

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Vickie Nadolski opened the meeting and presentations and questions of the proposals resumed.

**Maryland (East Coast) (FY09 - \$66,350) – Robert Ward**

- Make Ocean City the first Tsunami Ready Community in Maryland by July 2010
- Develop a comprehensive tsunami awareness program for Ocean City
- Host a workshop for East Coast states to develop strategy for participation in NTHMP
- Audience of workshops will be state agency representatives
- Despite being involved in NTHMP for four years, East Coast and Gulf Coast emergency managers continue to pursue tsunami risks, we still need to better characterize the hazard in both areas, whether they are landslide sources or earthquake sources in the Atlantic
- Increases in requested funding in out-lying years includes building on TR community criteria, more workshops and initial mapping and modeling involving Jim Kirby
- Questions/Comments
  - Who is your target audience for the LANTEX Exercise/Workshop?  
Answer: We are coordinating with all East Coast State Ems.
  - You should invite NOAA and USGS to the workshop.
  - Action MMS should look into supporting quantifying the risk/hazard for Gulf and East Coasts.
  - The Canary Islands source is widely disputed and should not be used in these proposals.
  - Need to let the East Coast proceed with the same process the Gulf Coast is using to determine their hazard/risk. (note: East Coast is planning on submitting a proposal similar to what the Gulf Coast has done next year).

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- Do you feel there is a level of tsunami planning on the east coast to justify holding an exercise? Answer: In terms of planning, most east coast states do not have a tsunami plan. I see this as an opportunity to stimulate the tsunami planning for the East Coast.
- Why does the cost of your proposal increase in the out years? Answer: For NTHMP, is to continue and expand attendance) the workshops. For TsunamiReady, **did not get this response.**

**Alaska (FY09 \$736,625) – Erv Petty**

- Goals include inundation mapping, promoting preparedness, strengthening tsunami notification infrastructure, support TR program and increase number of TR Communities
- Siren systems costs are increasing; a siren used to cost \$35k now costs upwards of \$70-80k partly based on increased fuel costs to ship
- Web-based community preparedness module for COMET to prepare material (multi-lingual material costs \$20k extra)
- Two objectives to modeling: (1) validation of model codes (benchmarking), and (2) inundation models and mapping
- Question/Comments
  - What are sub awards for? Answer: CIRES.
  - Is there a way to directly give money to CIRES for DEM development thus avoiding compounding overhead costs? Yes, NOAA can directly send this to NGDC. **Action: Revise Alaska proposal to not include a cost for this. Need to let Jen know how much to transfer to NGDC. Action: Jen transfer funding to NGDC once UAF provides funding information**
  - Since there is TWEAK funding to UAF for \$368K and some of that supported modeling at Seward, how does this relate to proposed mapping costs? Roger indicated TWEAK funds may be directed elsewhere.
  - What is the equipment in TsunamiReady for? Answer: Primarily for NWRs
  - Why is the modeling cost so high (\$520K)? Answer: We haven't defined the cost by map.
  - What is the percentage of indirect costs for UAF? Answer: 25%

**Review of Criteria**

**10:40 am What's in, What's not – Section 5 (c)**

- Jen reviewed the types of activities that fall under Section 5 of the Public Law
- General discussion on the strategy to develop a model benchmarking procedure and how this relates to rule that NTHMP does not pay for benchmarking. Benchmarking is considered part of model development and not covered under Section 5c1

**Paul Whitmore Covered Inconsistencies Between Proposals**

- Travel –

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- Should NTHMP pay for travel to scientific meetings? In the past several partners have used NTHMP funding to pay for travel to AGU and other conferences.
- Eddie expressed concern that AGU focuses too much on geosciences and does not include emergency managers. May be worth considering a different venue, e.g., American Meteorological Society, more appropriate for tsunami related issues
- Vickie suggested NTHMP accept limited travel to scientific meetings (up to 1 meeting)
- Christa stressed there should be leeway and that it is more important to indicate the benefits to the NTHMP goals
- Yes, we will support attendance, but the need must be identified in each proposal. Each request will be reviewed on a case-by-case basis. Need to have reports back from meeting attendees to the NTHMP-CC. (Note: abstracts could be attached to semi-annual reports)
- Inundation maps
  - How much does it cost to make a map? Cost for the development of inundation maps is not consistent across the board. Need to set some standard for review.
  - Costs are driven by complexity of coastline, available data, person hours/level of effort, level of detail of source modeling
  - David stressed that we have not reached the level of knowing how much a model/map costs, we shouldn't go there to define cost per map
  - Eddie suggest that we more rigorously lay out level of effort and costs encumbered by modeling mapping projects
  - Jen Rhoades suggested that the cost of models be more clearly defined to justify the variance in costs.
- Website development – how do state efforts tie into national plan to develop NHTMP web-repository
  - Concept that fell out of discussion: national website focus on archiving and “portal”? State websites applied to present regional tsunami materials. States use the internet to deliver outreach materials.
  - Do we need to fund state and national information repositories? Yes, but not the development
  - Should there be consistency in level of effort to develop/maintain web site.
- Leveraging criteria – proposals should clearly layout cost sharing of state agencies
- Reviewing the proposals raised some inconsistencies in the Strategic Plan. Paul is prepared to review the current Plan and revise it – NOAA proposal feedback expected in early April, this should be considered in the revision. **Action: Strategic Plan tiger team will get together to review the document to account for needed updates to the Strategic Plan. A revised plan to be completed by June 2009.**

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**12:45 pm – Proposal Revisions/Review Process**

Goal for today is to identify actions needed to improve each state's proposal before submitting to Grants.gov

**General:**

- Take out travel to annual meetings and subcommittee meetings – NOAA will process the travel orders for: 1) two people from each state to travel to the annual and budget meetings, 2) Subcommittee member travel to meetings and workshops for each respective subcommittee
- Consider adding DEM development as a task to assign to NGDC; DEM priority will be assigned by MMS. Jen can directly transfer NTHMP DEM funding to NGDC to reduce overhead costs.
- Include targets for TsunamiReady and Modeling
- A map of communities that have been mapped and what will be mapped would be helpful
- There is a variation in how groups addressed out-year proposed efforts. This disparity needs to be addressed...
- Craig Weaver suggested each proposal use a consistent budget format like the one in the proposal guidance Jen distributed.

**Action: All NTHMP Members will submit revised proposals to Grants.gov due March 20<sup>th</sup>**

- Intent is that proposals for out years will be revised during the review process for each out year
- **Action: Jen will send out Grant.gov proposal submission guidance by the first week in March.**
- Vickie and Jen need to go back to NWS grants people to figure out the details of the review process.
- A panel of 4 to 5 reviewers will be convened; they may not be familiar with the NTHMP.

**Suggestions on how to improve each proposal**

**California**

- If there are no strong linkages to the strategic plan, please relay that back to the Strategic Planning Team.
- Task 1.1 – Demonstrate/justify the collection of tsunami deposit information.
- Task 2.1 – Demonstrate the legislative requirement this addresses
- Take out travel to NTHMP and Sub-Committee meetings

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Alaska

- Add goals in terms of TR communities, maps, percentage of coastline with evacuation maps
- We have been instructed to address four areas: 1. mapping/modeling, 2. mitigation and education, 3. warning coordination, and 4. TR program. Proposals should be structured according to these areas.
- Suggestion to show areas that have been mapped already
- Roger expressed a concern that Alaska's DEMs cost more (\$100-120k per DEM) than DEMs NGDC makes for PMEL (\$58k? per DEM). **Action: Jen Rhoades and Sue McLean to look into this.**
- Provide better linkages to the NTHMP Strategic Plan
- The cost for Mapping and Modeling for Alaska is considerably higher than other proposals. Please provide additional details to justify.
- Discuss how you prioritize your model development.

Washington

- Exhibit A Proposal summary was appreciated by reviewers.
- Consider proposing a vertical evacuation structure or discuss how you might use other opportunities (grants) to support the overall objective – pending MES Meeting outcome.
- Define how you will use town hall meetings for the “T3” project
- Task 1.2 how many workshops per year
- Define why you have to do a ‘quasi’-End-to-end test.

Puerto Rico

- Take out travel to NTHMP and Sub-Committee meetings
- Define who is contributing to which activity (PRSN vs. PREMA)
- Include budget activities for out years (FY10-FY12); see proposal guidance
- Task 6.1, Define how task fits into MES strategies
- Task 7.1 Include when you expect Puerto Rico to participate in an End-to-End testing
- Item 8.1 Ensure the timing of plans to implement changes to TsunamiReady (re Improvement Plan) are in-line with the MES Plans
- Christa stressed that the Central Am games are coming and it's important to know how much NTHMP support PR should expect for related activities

Guam and CNMI

- **Action: Jen to ensure Guam and CNMI receive feedback from yesterday's meeting.**

Gulf Coast

- Well written proposal, good to go.

Oregon –

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- Add description about TAC, who's involved (DOGAMI OEM, Parks and stakeholders, who is the chair, etc.).
- Add schedule about plans to validate the model by 2012 (in accordance with strategic plan)
  - Eddie suggests that there is a technical impasse because in order for benchmarked models to be used, first they need to be "validated" and "approved." How is the approval accomplished?
  - Jen suggested there needs to be some flexibility to address the needs of the NTHMP and the Strategic Plan.
  - Charles noted that the Strategic Plan goals were implemented to fill gaps while we continue to work.
- Milestone chart looks good.

#### Maryland

- More strongly link Jim Kirby's involvement and advantages gained by NRC sources study
  - Describe how will you use USGS' and NRC's efforts to determine tsunami sources in the Atlantic
- 1) Re-write 1<sup>st</sup> paragraph of benefits section to remove incorrect portrayals of risk (e.g., Canary Islands)
  - 2) Some items in the proposals are done by WCMs (e.g., what needs to be done to become TsunamiReady, please consider changing the request for funding by considering the support WCMs can provide.

#### Hawaii

- Kevin stated that he has noted many comments and will rewrite the proposal.
- Improve the explanation of the state interface of the your emergency alert system

#### NOAA

- Add explanation of how the NGDC archive will be addressed and schedule, possibly through coordination with MMS
- Improve description of when it is expected that components of the repository will be brought on-line (e.g., NGDC proposal)
- Revised budget numbers to account for travel, etc...

Vickie stated that she will work on making the review process that we've all just participated in, go more efficiently in the future.

#### **Contingency Plan**

Vickie asked the Committee to think about project to propose for contingency funds available.

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**Action (Jen): Ask NTHMP-CC for funding ideas for Contingency Plan.**

**2:50 pm National Tsunami Awareness Week Proclamation**

- National Tsunami Awareness Week is planned for March 22-28, 2009
- Proclamation is currently at OMB, so it is a good possibility that the President will sign the proclamation. Jen will provide updates with more information as she receives it.
- Craig proposed we put together an NTHMP briefing on the Hill

**FY09 NTHMP Budget Vote**

Discussion

- Vickie will investigate whether ITIC should stay in the budget, but for this year she recommends the program continue
- Rob asked that the other NOAA projects submit a proposal similar to partner proposals in future years
- The budget was unanimously approved by the committee

Follow up discussion: Vickie wants to take a closer look at the Rules and Procedures.

**Action: Jen will form a small tiger team to address this.**

Jen indicated that the proposal template will be revised to benefit from our suggestions.

**Action: Jen to develop an improved template based on the review this week and the proposal review panel input.**

**3:00 NTHMP GRANT Proposal Process: Grants.gov**

- Due date for revised proposals: March 20 through Grants.gov
- Jen will provide directions for grant app process first week of March
- Next Steps:
  - Panel review
  - Legal review
- Proposal "criteria" handout developed by the NTHMP-CC in November will be part of the criteria for the NTHMP Grant Review Panel, The text of Section 5(c)(1) page be changed from "Inputs to modeling" to "Inputs to modeling and mapping" to reflect that there are "inputs" used in inundation mapping outside of the modeling itself. **Action: Jen to change Section 5 Criteria (c)(1) to "Inputs to Modeling and Mapping."**
- Plan on early April conference call to update committee on panel structure and grant review process
- Committee agreed to leave the COMET "multi-state" proposal in the Alaska proposal and add \$20k for bilingual products. It was agreed that it's a worthwhile project.
- "Son of Stimulus" does NOAA have a procedure to evaluate how to use funds for 'shovel ready' projects? Answer: This is why we are developing a list of activities to be placed on a contingency fund list.

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**Update on Tribal Governments Issue – Jen Rhoades**

- Current structure with states working with local government and tribes is appropriate under law
- If a tribe wished to participate in NTHMP meetings they would be welcome?  
Answer: Yes.

Vickie closed the meeting at 3:25 pm.