

MES Mitigation and Recovery Work Group  
Meeting May 15, 2019

Members: Kevin Miller (KM), Rick Wilson (RW), Chip Guard, Elinor Lutu-McMoore (EL), Laura Kong (LK), Jon Allan, Stephanie Ross (SR), Maximilian Dixon (MD), Keily Yemm (KY)

Yellow: attended the call

### Agenda

#### Projects/Products of Interest

- Washington
- American Samoa
- Oregon
- California
- International
- Other examples

#### (Draft) Goals for this group:

- Identify who the **customers/stakeholders** are for this information and determine their needs.
- Determine if other **experts** outside of the NTHMP (engineers, maritime planners, US Coast Guard, cruise industry) should be invited to the Work Group and/or asked to be involved in certain discussions.
- Develop guidance for **mitigation strategies/activities**:
  - Simple/generic strategies/activities that all NTHMP partners and customers can use for inclusion in their mitigation and recovery planning documents (i.e. Local Hazard Mitigation Plans, maritime recovery plans, etc.)
  - Rigorous harbor-specific **analysis methods** and associated mitigation/recovery strategies for ports and harbors. (HIR)
- Determine how this information **dovetails** into other types of maritime planning (hazard assessment, preparedness, response).
- Develop separate **guidance** or add to existing NTHMP guidance for both NTHMP partners and customers. This could include a template for a web-platform through the NTHMP website or individual state websites.

#### Homework:

- Share information on your existing projects
- Review draft generic mitigation strategies and activities document

### NOTES

#### Short Presentation

##### - Kevin's slides:

1. We have a NTHMP National Level Guidance with three existing parts:
  - a. Tsunami Hazard ID/Modeling/Mapping
    - i. Tsunami hazards that could affect harbors and boaters
    - ii. Strong and unpredictable currents (Crescent City video)
    - iii. Sudden water-level fluctuations
    - iv. Bottoming out (ex: Sausalito house boats)

- v. Large Vessels uplifted and deposited on shore (ex: Sendai)
- vi. Vessels and docks overtop piles (ex: Mexico)
- vii. Sed and debris movement, and contamination and other env haz causing delays in recovery (ex: Crescent City 2011)
  - b. Delays that could be avoided in future
    - Q: Maximillian. Visuals help, but he's red/green colorblind so bottom left graphic is hard for him. Circling debris and scour on photo would help.
  - c. Response/Preparedness/Education
  - d. Mitigation/Recovery

- **Rick's slides**

1. Maritime Hazard Mitigation Plan Information:
  - Simple/generic haz mitigation plan elements
  - Harbor-specific analysis and haz mitigation plan elements (in CA, both supported by FEMA Region IX RiskMAP through coop tech partnership)
  - It's about getting products to users. Mitigation/recovery world is more FEMA.
2. General Maritime Tsu Response and Mitigation measures: soft vs. hard mitigation. Binning them into groups.
3. Description of activity, prioritization, other haz addressed, cost/benefit
  - MD: great stuff. Will you be providing visuals with more of these?
  - RW: I like that idea – visuals to help sell the idea.
4. Pile extenders
5. LHMP example: Fuel Dock Reinforcement (Santa Cruz). In most harbors, most fuel docks are near the harbor entrance, which often has high tsunami activity (near narrowed entrance)
6. Harbor Damage Assessments: SAFRR currents in LA/LB.
7. Harbor improvement reports. Sed movement analysis. Model the sed erosion, transport, and dep during a tsu. SAFRR videos (debris movement – small harbors adjacent to port main channel) [MD couldn't see that there were different colors]
8. Harbor improvement reports (HIRs). Cleats, pile guides. Table for each harbor with detailed information of things they could fix. MD: even these simple visuals help.
9. Maritime Tsu Recovery Guidance. Working with Laurie Johnson in CA. Two levels of recovery for harbors (direct – damage, and indirect – time). In Japan, see lack of quick recovery causing younger generation to move out of cities, loss of workforce.

Discussion:

- LK: all the stuff is great. The list is important so that people know these things need to be done. But, how from NTHMP MES group or modelers, how successful have you been at engaging maritime/port authorities, private sector, etc.? How do we get them to want to do it, to be a partner?
- RW: no simple answer because there are so many parts to the maritime community (coastal engineers, cruise industry, planners, etc.) Talking to statewide groups/associations (e.g. harbor masters, harbor engineers) helps. We also have a list of harbors that we can email broadcast info to. We've thought of having a newsletter. A lot of it is personal communication. We meet with harbors individually. We've had a couple of disasters in CA the last couple years that have caught attention and opened up some funding. It's a good point that we need a selling side. We have a list of harbors based on response planning.
- Laura: when you did vertical evac, P-646, there was a guide that helped. Having that list would be helpful to everyone.
- Laura: Second question: require technical people at meetings? Do you get funding from FEMA for engineers and modelers?

- RW: so, coming up with strategy for paying for the product? FEMA helped, we brought in Pat Lynett and Laurie Johnson. WA state reached out to us, they put together a good workshop on this. It help bringing all the people together – modelers, planners, users, engineers ...
- MD: on that point – we developed a non-tech guide. What are the steps, who needs to be involved ...
  - Initially we're not bringing in engineers, we're providing guidance.
    - First set of documentation is fundamental, basic steps
    - Next level, when harbor/maritime facility wants to go deeper, that's when engineers are brought in. cost estimates, analyses. Engineers can be costly.
    - We need to define what projects make the most sense then bring in the appropriate people.
  - Technical folks can assist with how to do the plan. As well as coming up with strategies to pay for mitigation projects/plans.
- KM: we can use WA's workshop and vertical evacuation structure manual models for this process as well.
  - RW: MD, do you have something written up on your procedure?
  - MD: we're using similar approach as vertical evacuation, but focus on specific port (Bellingham for starters) instead of general guidance.
    - The Tsunami Vertical Evacuation Structure, like FEMA's guidance is focused on community officials. However, it considers (lack of) local resources available and provides a cookbook approach
      - Beginning to End
    - Scope:
      - Mitigation Project
      - Outreach
    - How to start a mitigation project from scratch
    - How to succeed, 2-pager, steps (SUGGESTED FORMAT)
      - Convene Workshop
      - Discover X. Y. Z.
      - Invite approp. people (e.g. experts)
      - Next steps
        - Consult
- LK: do you have a 2-pager that would help for maritime projects?
  - RW: in theory, yes.
  - LK: anything people are doing with tourism and cruise ships?
  - RW: we started talking with Christa and others about it in Puerto Rico, but they're looking at local hazards. It is another part of this – focusing on end users and tailoring products to them.
- LK: there are user guide-type things that could be gathered. Don't think HI has any.
- KM: was a maritime guidance in Spanish in PR. We asked for a translation but then Maria happened.
- LK: I have an old one I can share. Do you have new materials we can share? There's a plan for an international guidance, but we're already in a state of identifying what needs to be done. I'm happy to be involved.
- SR: USCG continuity problem.
  - LK: needs to get into their rules, their SOPs, codified. Takes public engagement, going up the chain through Washington, D.C.

- This still needs to get into Coast Guard's Standard Operating Protocols (Criteria for Action).
- Becomes a simple table that Captain of the port and USCG can understand. Should be able to do it well in Crescent City, harder in Puget Sound.
- MD: this is a great conversation, and something I want to pursue in greater detail. 3 buckets of tsu work:
  - outreach, SOP alerting/response (including local/tribal ... levels),
  - mitigation. Huge monumental efforts.
  - Maritime has a lot of partners. We're just getting started. Would love to have this as a discussion going forward for NTHMP.
- EL: thank you KM for putting this together. Like WA, we're just starting our program and looking to CA and others for best practices. Dr. Fai Cheung completed haz map for the harbor. For our territory, very important to have USCG involved. Would like to see them included in this group; that's a key. If our results are in the USCG harbor plans, then the message/communication is consistent. Thank you!
  - RW: do you have after action report for harbor for Pago-pago event?
  - EL: Dr. Fai Cheung met with port captain, USCG and presented results to them. When we had our workshop here, geared toward private and govt maritime, -- so I am in favor of generic slides and templates. Everyone still remembers what happened in 2009.
  - We neglect our mariners. Captain of port is in Honolulu. Want to bring everyone together to the table, from the beginning – that's the key to success.
  - There are people in USCG who understand how their decisions affect the mariners.
  - Learned from local users that there's some inconsistency in messaging. They want it simple (pictures).
  - RW: could you share the report you mentioned?
  - EL: Laura, do you have that 2009 report?
  - LK: we have the video that was collected, specific to the port with the fuel dock. We can pull out useful photos.
- KM: I'll compile action items and set up the next meeting.
- RW: I'll send out generic form for everyone. If you have projects/products that include harbor mitigation, it would be helpful to add to our database. Appreciate everyone's feedback.
- LK: to share things, just email to everyone? Put it on a website? Do we have a place to put it?
- KM: that's longer range. Share with the group for now.
- RW: we can set up base camp if people want.
- KM: watch for a doodle poll.

#### Action Items:

1. Kevin – Compile notes, Actions, schedule next meeting
2. Elinor – Share Report for Pago-Pago Harbor after 2009 Tsunami Event
3. Laura – Share Cruise Industry Report/Brochures (?); Plan for Int'l Guidance; fuel dock video
4. Rick – Send generic Haz Mit Project form
5. Everyone – add projects to the form Rick sends