

# NTHMP 5-Year Review: Mitigation & Outreach Subcommittee Report

Chris Jonientz-Trisler - DHS/FEMA, Chair

May 15, 2007



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# Role of Mitigation & Outreach Subcommittee & Chair

## Subcommittee Role –

- This subcommittee formed to address emergency management issues of mitigation, preparedness, response & recovery that are separate from seismic detection & tsunami modeling & warning issues addressed by other subcommittees & led by other Federal agencies. Members include the states, FEMA, & more recently the TsunamiReady staff from NOAA.
- The subcommittee created a Mitigation Strategy, prioritized needed products, & exchanges tools that individual states have produced with state program funds. It also develops multi-state products that cannot be developed at the state level or that serve as a priority pilot project for the other states.
- How got involved – following the 1994 Kurile Islands Tsunami Warning, the states made it clear that change was needed with tsunami warning messages & procedures.
- Contributions – the Subcommittee has developed dozens of mitigation, preparedness, awareness & education products since 1997, some of these have been translated into other languages & several are being used internationally now.



## Chair's Role -

- FEMA has chaired this subcommittee from the program start as the Federal agency authorized to lead other hazard mitigation, preparedness, response & recovery programs & because of its long experience coordinating these grant programs with the states. FEMA coordinated the NTHMP state grants from 1997 through 2000.
- The Chair is the FEMA Region 10 Earthquake Program Manager for 15 years & FEMA Physical Scientist, is a geologist, & was a Research Scientist in the U.W. Geophysics Program Seismology Lab for 11 years.
- How got involved – The Chair witnessed confusion at the coast during the 1994 Kurile Is. Tsunami Warning, surveyed local emergency managers, & presented results at a tsunami workshop. The survey was re-run in 2001, 2003 & 2005 & most results showed increasingly successful local use of tsunami messages as NOAA improved them.
- Contributions – I facilitate multi-state mitigation coordination, strategy development, & product tracking. I advocate for the states with Federal agencies. I exchange earthquake/tsunami/volcano mitigation & preparedness information internationally including work in Far East Russia in 1997 & Sri Lanka in 2005.



# What is a “tsunami resilient community”?

The MT Subcommittee’s 1998 Strategic Plan says it:

- Understands the tsunami hazard
- Has tools to mitigate tsunami risk
- Disseminates tsunami information
- Shares information with others at-risk
- Institutionalizes planning for a tsunami



“Strategic Implementation Plan for Tsunami Mitigation Products”  
(NOAA Technical Memorandum ERL PMEL-113, 1998)

<http://www.pmel.noaa.gov/tsunami-hazard/mitigation.html>

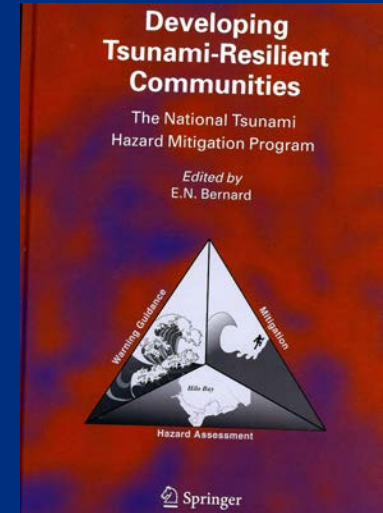
Developing Tsunami-Resilient Communities: The NTHMP  
(Bernard in Natural Hazards, special edition)



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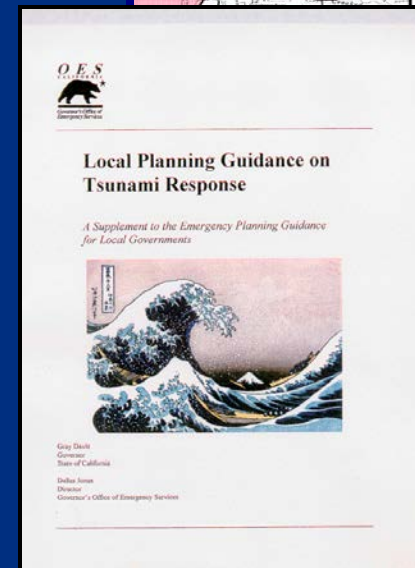
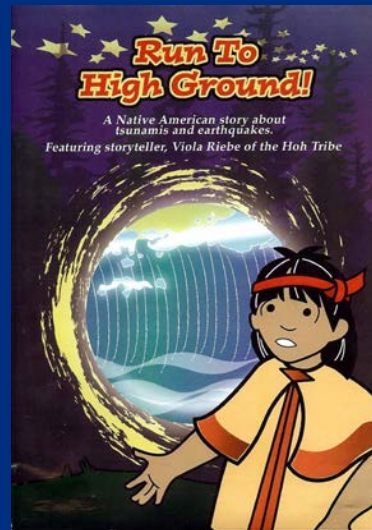
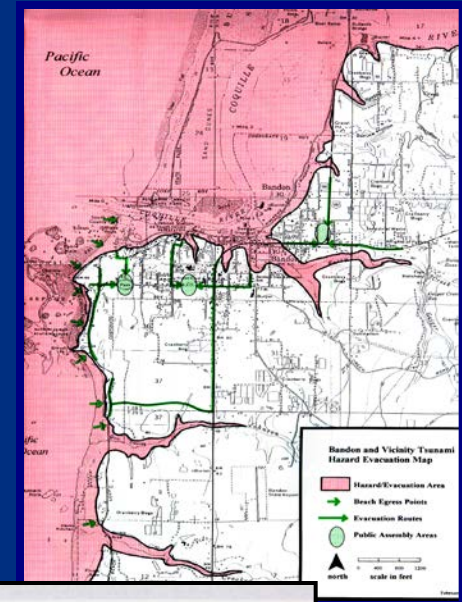
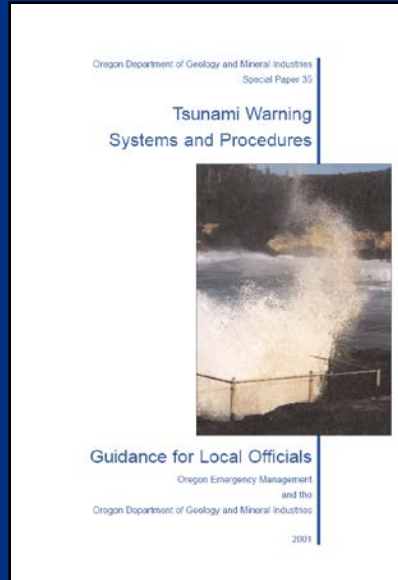
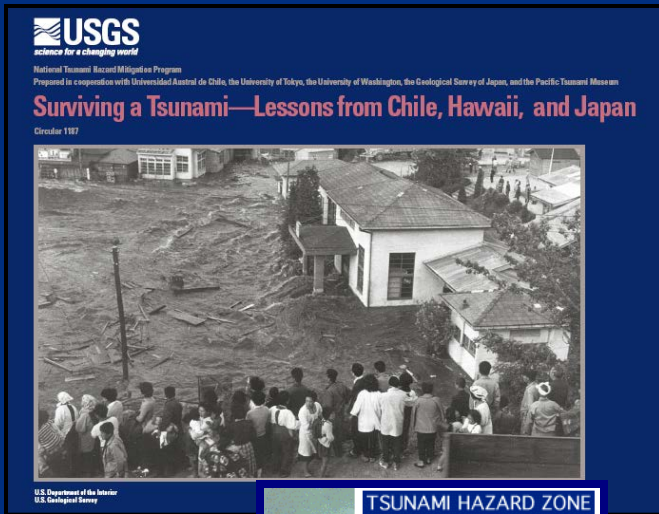
# The Framework – Elements of the Strategic Implementation Plan

- Education
- Tools for emergency managers
- Construction, abatement, land use guides
- Information exchange and coordination
- Long-term mitigation (includes recovery planning)



(Full Activities Matrix can be found in the Developing Tsunami Resilient Communities book).

# Some NTHMP products:



Principles for Planning and Designing for Tsunami Hazards



# Some Multi-state Products 2002-now

**ATC-64**

**Guidelines for Design and Management  
of Structures for Vertical Evacuation  
from Tsunamis**

**90% Complete Draft**

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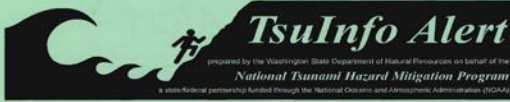
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May 1, 2007

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Researchers apply eg shelterbelt design	FAQ
Stay the course	Video reservations
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April is Earthquake and Tsunami Awareness month	

**Disaster Myths...Fourth in a Series**

**Looting after a Disaster: A Myth or Reality?**

This special article in the Disaster Myth series presents a point-counterpoint on the significance and prevalence of looting after disasters. Both authors were asked to answer, independently, a series of questions, including whether looting after disasters is a myth, what evidence supports that opinion, what previous research has established about looting, and how the myths (and realities) about looting influence disaster planning and response. While the previous articles in this series were meant to help dispel disaster myths, this article demonstrates the debate surrounding the controversial issue of looting and explores it in greater depth. Together these positions reveal the arguments and evidence for both sides of the debate. The editors (Natural Hazards Observer) hope that this point-counterpoint will provoke thought among those concerned with public safety and response in disasters.

The first author, E. L. Quarantelli, provides a historical overview of looting in disaster research to help elucidate the myth. The findings of previous disaster research are used to support the argument that looting, in fact, is not prevalent after disasters. In the end, there is a lack of evidence showing that this behavior is commonplace.

As a counterpoint, Kelly Frailing focuses on the events following Hurricane Katrina as evidence that looting is not a myth, but a reality of disasters. This position is also supported by experience during previous events, such as Hurricane Detsy, and by crime statistics.



**The Myth and the Realities: Keeping the "Looting" Myth in Perspective**  
by E. L. Quarantelli  
Disaster Research Center, University of Delaware



Not all findings about looting reported by disaster researchers have been correctly understood. Important distinctions and qualifications about the phenomena have sometimes been ignored. Thus some demythologization of the looting myth is necessary.



The word "looting," which comes from Sanskrit (to, to rob) entered into European languages centuries ago to refer to the plundering undertaken by invading armies. But until recently, contemporary and historical accounts of disaster have not used the term. The first systematic professional use of the word appears to have been in a well-known National Opinion Center (NORC) study of the 1952 Arkansas tornado.

(continued on page 3)

PROCEEDINGS  
of a  
**WORKSHOP ON CONSTRUCTION GUIDANCE  
FOR AREAS OF HIGH SEISMIC AND TSUNAMI LOADING**  
convened by  
**TIMOTHY J. WALSH<sup>1</sup>, GEORGE CRAWFORD<sup>2</sup>, RICHARD EISNER<sup>3</sup>,  
AND JANE V. PREUSS<sup>4</sup>**  
for the  
**NATIONAL TSUNAMI HAZARD MITIGATION PROGRAM**  
NOVEMBER 21, 2002

1. Washington Department of Natural Resources, Division of Geology and Earth Resources, Olympia, Washington  
2. Washington Emergency Management Division, Camp Murray, Washington  
3. California Governor's Office of Emergency Services, Oakland, California  
4. GeoEngineers, Inc., Redmond, Washington



# Annual Budgets for Multi-State Projects by MT Subcommittee

<b>Projects NTHMP \$</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
TsuInfo Newsletter	26,000	26,000	35,000	35,000	35,000
Construction Design Scoping Workshop	34,000				
Publication Reprint for All		4,000			
Tsunami Outreach Pilot			50,000		
Vertical Evacuation Shelter		100,000		100,000	50,000
<b>NTHMP TOTALS</b>	<b>60,000</b>	<b>130,000</b>	<b>85,000</b>	<b>135,000</b>	<b>85,000</b>
<b>Projects Non-NTHMP \$ (FEMA)</b>					
Vertical Evacuation Shelter		100,000		100,000	50,000



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# NTHMP Mitigation Goal Accomplishments:

## Use Social Science Tools to measure resilience of communities & effectiveness of NTHMP

- Surveys are a primary tool reported used by some, not all, states
- Other means include education curriculum, workshops, community awareness programs, and outreach publications
- Surveys target residents/visitors, school children, businesses and tribes

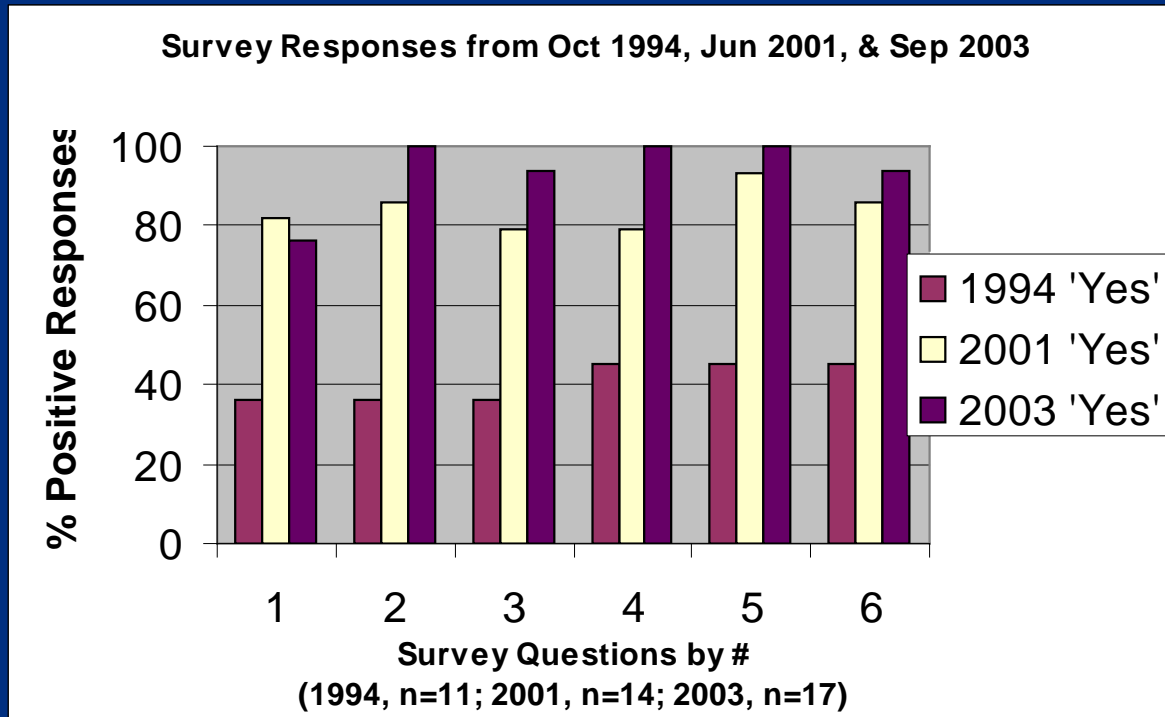
### Challenges

- Funding of focus groups, studies, surveys, and products
- Implementing suggested changes within communities (buy-in)



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# Local Emergency Responders' Use of Watch & Warning Messages Has Improved Over the Years



1 -Was risk to community clear?

4 -Was info understandable?

2 -Was info timely?

5 -Was info usable?

3 -Was info updated regularly?

6 -watch/warning terms clear?



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# State Use of Surveys

- In recent years, at least a dozen formal social science surveys have been completed in the five Pacific States
- ❖ Impacts include:
  - An increase in overall “tsunami awareness”
  - Tailoring of outreach and education materials (e.g. “*How the Smart Family Survived a Tsunami*”, Disaster Response Guidebook for Hotels and Motels on Washington’s Coast, etc.)
  - Forms an evaluation basis for community programs (e.g. Seaside, OR Tsunami Awareness Pilot Project)
  - Targeting our efforts at the “neighborhood” level where they are the most effective (e.g. “Neighbor Helping Neighbor” and “Map your Neighborhood” programs)
  - Helping with warning content products (e.g. Washington State Tsunami Warning Message).



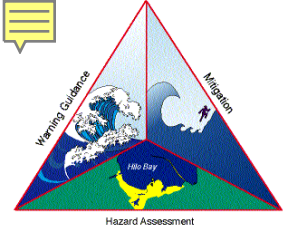
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# NTHMP Mitigation Goal Accomplishments:

Designate that 25% of communities at risk in each state are TsunamiReady.

- In 2002 there were 8 TsunamiReady Communities in 5 states.
- In 2007 there are 40 in 10 of our 23 U.S. coastal states.
- 29 of these additional communities were designated following the Indian Ocean Tsunami in 2005.
- Current challenges
  - We need a consensus definition on target “at-risk communities”. This kept some states from reporting %. 1 state reported less than 5% & 1 reported 30%.
  - resources & competing issues, eg. hurricanes get more attention along the Gulf & East Coasts.



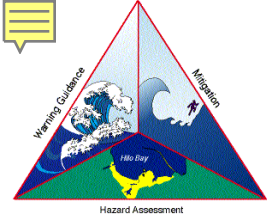


# TsunamiReady

## overview



1. TsunamiReady (TR) must be viewed as partnership program that is evolving:
  - New TR Program Manager in April 2006
  - Worked to formally include TR under the NTHMP's Mitigation and Outreach Subcommittee (2006)
  - Formed TR Task Force with members of the NTHMP's Mitigation and Outreach Subcommittee to work on **“evolving TR from a program that promotes tsunami resilience rather than minimal readiness.”**
    - Some initial debate and correspondence has already taken place on the work to be done toward this goal (TR Task Force Charter is attached.)
    - TR Summit (Task Force participants) is scheduled for August 22-23, 2007 in San Diego. Agenda will focus on the details in strengthening the TR recognition guidelines.
2. TR has a \$750K FY07 and \$300K FY08 budget from NOAA. It is funding projects that help communities strengthen communications infrastructure, preparedness planning, and tsunami hazard education. Examples are warning sirens, evacuation signage, workshops, etc.



# TsunamiReady

## Assessment Questions



### 3. Federal/state partnerships:

- Strengths – NTHMP is a great working forum, we have funding to execute that strengthens partnerships, public law to set program direction, all parties must be involved for any success with TR!
- Weaknesses – communication and meeting logistics can be difficult and delay program goals from being achieved, tough to speak with “one NTHMP voice” when that could strategically be effective (e.g. on the Hill, NOAA Stakeholders Meeting, etc).

### 4. Program achieving its goals/meaningful products:

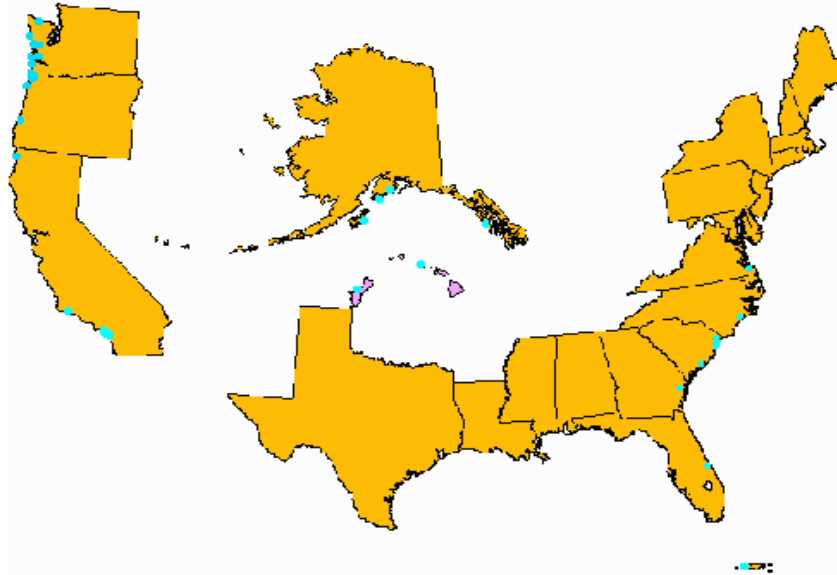
- Again, a work in progress. We do not want TR to be a meaningless PR campaign that fails us, when needed most.

### 5. Program expansion:

- Benefits – more opportunity to educate on hazard, all U.S. Coastal Communities can now pursue TR, Caribbean (high hazard) no longer being ignored, TR can be tied to StormReady.
- Pitfalls – tough sell in Gulf and parts of East Coast...minimal tsunami hazard, more partners...more challenges, funding spread thinner.



As of March 8, 2007 there were **40** TsunamiReady™ Sites in **10** states,  
**Puerto Rico** and **Guam**  
**1** TsunamiReady Supporter



#### Alaska

- Homer
- Kodiak
- Seward
- Sitka

#### Hawaii

- Hawaii County
- Honolulu
- Honolulu County
- Kauai County
- Maui County

#### California

- Crescent City
- Dana Point
- Huntington Beach
- Newport Beach
- San Clemente
- University of California at Santa Barbara

#### Florida

- Indian Harbour Beach

#### Georgia

- Liberty County

#### Guam

- Guam

#### North Carolina

- Onslow County

#### Oregon

- Cannon Beach
- Lincoln City
- Coos County
- Manzanita
- Nehalem
- Rockaway Beach
- Tillamook
- Wheeler

#### Puerto Rico

- Mayaguez

#### South Carolina

- Charleston County
- Horry County
- Myrtle Beach
- North Myrtle Beach
- Surfside Beach

#### Virginia

- Norfolk

#### Washington

- Aberdeen
- Clallam County
- Long Beach
- Ocean Shores
- Pacific County
- Quinault Indian Nation

# National Flood Insurance Program, Community Rating Service, Tsunami Credits

- Subcommittee worked with FEMA from 2001 to 2006 to develop & finalize appropriate tsunami activities that communities could receive credit for under the NFIP CRS
- This provides communities with incentive for implementing these activities since it not only reduces tsunami flood risk in the future, but lowers insurance premiums for eligible communities in the present.
- The CRS supports the TsunamiReady Program by using TsunamiReady designation as a basis to provide credit to eligible local governments.





# NTHMP Mitigation Goal Accomplishments:

Ensure public info is available at all beach access points; ensure evacuation procedures & maps are in all coastal jurisdiction phone books/utility bills/school sites/hotels; display education posters in 75% of coastal water-oriented/recreation businesses.

- Tsunami info & evacuation maps are available in many visitors centers.
- Info is found in phone books in Hawaii. *The phone book idea has been determined ineffective by recent social science studies.*
- Info is available in some hotels now, whereas a West Coast site survey of random coastal hotels in 2001 found one with a plan & client info.
- Tsunami evacuation & education signs/posters are posted in many communities in the 5 Pacific states, but the range varies by state.
- There is still much work to do here...and with awareness comes an increase of demand for these products! "All" or even "75%" are long-term goals if even possible.*



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# NTHMP Mitigation Goal Accomplishments:

Develop approved engineering guidance in the FEMA Coastal Construction Manual or other appropriate document that addresses both high seismic & tsunami-loading for use in new construction & retrofiting of existing structures.

- Phase 1 – Engineering feasibility workshop & plan development, COMPLETED
- Phase 2 – Technical document addressing Vertical Evacuation Tsunami Shelter Construction Guidance, COMPLETE 09/07
- Phase 3 – Local official User Guide of Phase 2 document for tsunami evacuation planning – uses Phase 2 document, begins 10/07.



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# NTHMP Mitigation Goal Accomplishments:

Convince 25% of the potentially threatened businesses to include tsunami components in their business continuity plans.

- States have begun to work with businesses but the 25% has not been reached yet.
- WA & OR have worked with some hotels to produce plans & distribute evacuation maps. A more formal strategic (e.g. economic) approach is needed with the tourist industry.
- HI & OR have worked with some businesses on tsunami recovery planning.
- All states have conducted community (town hall) workshops and addressed local Chambers of Commerce on the tsunami hazard and the need for planning.



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# NTHMP Mitigation Goal Accomplishments:

Ensure the National Response Plan (NRP) comprehensively addresses tsunami response & recovery.

- The NRP is a comprehensive plan for all natural & man-made disaster response & recovery activities.
  - During response & recovery phases, FEMA coordinates with specific agencies holding disaster-type expertise through Essential Support Functions, Mission Assignments, high level conference calls, & recovery projects through programs such as the Hazard Mitigation Grant Program (HMGP).
- During pre-disaster times, FEMA programs have been promoting, approving &/or funding State, Local & Tribal tsunami mitigation plans & projects through the State Hazard Mitigation Plans, Pre-Disaster Mitigation Program (PDM), & National Earthquake Hazard Reduction Program (NEHRP).
- FEMA may lead a high level subduction zone quake/tsunami exercise in future years. FEMA has supported several regional & other agency national exercises in the past.



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# Subcommittee Challenges & Deficiencies

- Several recent non-destructive events have proven TsunamiReady is currently not where it needs to be.
- An increase in our efforts, creates an increase in demand for resources by those we are serving.
- Adequate resources for expensive multi-state projects that will not impact funding of state programs. These are tools that cannot be developed at the state level or by one state but have been requested by them as necessary for their efforts.
- Optimized infusion of social science tools & evaluation methods into our programs.
- Political scrutiny – tsunami remains high profile in the Beltway & in coastal communities since the Indian Ocean event – pressure from both sides.
- Overall funding and leadership uncertainty (current NTHMP climate)
- Danger of NTHMP becoming too bureaucratic – internal communication and coordination challenges, “too many chiefs, not enough firemen” syndrome.



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# Future NTHMP Activities

- Completion of, promotion for, & training on both the technical & user guide documents for Construction Guidance for Vertical Evacuation Tsunami Shelters for low-lying communities.
- Building or strengthening of Caribbean and Atlantic states/territories tsunami programs.
- Reauthorization of the Tsunami Warning and Education Act.
- Implementation of 'best practice' community awareness programs in other locations and states. These include social science surveying.
- Partnering together to evolve TsunamiReady from a program that promotes tsunami resilience rather than minimal readiness.
- Development of other multi-state projects (e.g. a scenario and loss estimate for a Cascadia event, and the initiation of multi-state planning for response to such an event.)
- More effective incorporation of social science tools and evaluation methods into our efforts.



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# Chris Jonientz-Trisler

## Contact Information

- If you have additional questions during the review period, you may contact Chris Jonientz-Trisler at
  - (425) 487-4645 or (425) 985-7576 cell.
- Thank You!



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