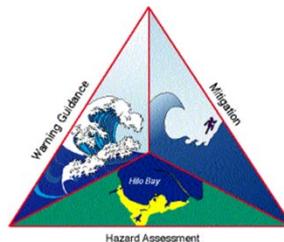


Tsunami Education and Outreach Project Update

Christa Rabenold

National Weather Service
Tsunami Program
(Syneren Technologies)

2015 NTHMP Annual Meeting



Evaluation Manual

- MES High-Priority
- Not prescriptive/required
- Focused on public workshops
- Based on evaluation theory and practice
- Emphasis on learning and behavior outcomes
- Move beyond traditional reaction only
- Post-then-Pre vs. Pre-test Post-test

Kirkpatrick's Model

- **Level 1: Reaction** (evaluates the process) – Measures degree to which participants react favorably to the workshop, are engaged with the workshop, and find the workshop personally relevant.
- **Level 2: Learning** (evaluates outcomes) – Measures degree to which participants acquire the intended knowledge, attitudes, confidence, and intentions based on their participation in the workshop.
- **Level 3: Behavior** (evaluates outcomes) – Measures degree to which participants apply what they learned during the workshop and afterwards.
- **Level 4: Results** (evaluates impacts) – Measures degree to which targeted outcomes occur (i.e., goals are met) as a result of the workshop.

Evaluation Manual

Tsunami Preparedness Public Workshop

End of Workshop Questionnaire

Thank you for joining us today. Your participation and your opinion on the workshop are very important to us. [Coastal Community] is always looking for ways to improve our programs to better serve you. Please do us a favor and take a moment to complete this confidential questionnaire. It will help us understand how we are doing and what we can do to improve the workshop.

Questions 1-3 are designed to compare what you think *now* about tsunamis and tsunami preparedness with what you thought *before* this workshop. Please circle two answers for each statement or question. In the column labeled "After the Workshop," circle the answer that describes what you think now, after attending the workshop. In the column labeled "Before the Workshop," circle the answer that describes what you thought before the workshop.

1. How prepared do you think you are for a tsunami?

After the Workshop				Before the Workshop			
Very	Somewhat	A little	Not at all	Very	Somewhat	A little	Not at all

2. What do you know about tsunamis and tsunami preparedness?

	After the Workshop			Before the Workshop		
	Yes	No	Not sure	Yes	No	Not sure
a. I understand my tsunami threat						
b. I know how to prepare for a tsunami						
c. I understand tsunami warnings						
d. I know how to respond to a tsunami warning						
e. I know how to use a map to identify tsunami evacuation zones and safe areas						

3. What do you plan to do to prepare for a tsunami in the next three months?

	After the Workshop				Before the Workshop			
	Yes	No	Maybe	Already Done	Yes	No	Maybe	Already Done
a. I plan to develop an emergency plan that includes tsunamis or add tsunamis to an existing plan								
b. I plan to put together a portable emergency supply kit								
c. I plan to talk with my family, friends, and neighbors about tsunami preparedness								
d. I plan to participate in the tsunami drill on [date]								

4. A tsunami is not a single wave. It is a series of waves. (Please circle your answer.)

True	Probably True	Not Sure	Probably False	False
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5. A tsunami can reach the coast within minutes of an earthquake. (Please circle your answer.)

True	Probably True	Not Sure	Probably False	False
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6. Please describe the difference between a local and a distant tsunami.

7. It is important to know the natural warning signs of a tsunami since there may not always be time for an official tsunami warning. Please list the three natural warning signs.

8. If you are at the beach and you feel a strong or long earthquake. What would you do? Please rank the following as first (1), second(2), or third(3).

	Go to high ground or inland
	Drop, cover, and hold on
	Try to find out more information

9. After a tsunami, when is it safe to return to the tsunami evacuation zone? (Please circle your answer.)

- a) After the first wave
- b) When local officials tell you it is safe
- c) When the tsunami warning is cancelled
- d) Not sure

10. How satisfied are you with the following? (Please circle your answer.)

	Very Satisfied	Satisfied	Neutral	Somewhat Satisfied	Not Satisfied
a. The usefulness of the information to you					
b. The overall quality of the workshop					

11. Would you recommend this workshop to others? (Please circle your answer.)

	Yes	No	Not Sure
If not, why not?			

12. Please share with us any suggestions you have for improving the workshop.

Evaluation Manual

Sample Cover Letter

Post-Workshop Mail-In Questionnaire

Dear [Participant],

Thank you again for participating in our Tsunami Preparedness Public Workshop on [date]. As you now know, the tsunami threat to [Coastal Community] is real. It is because of this threat that we want to ensure that the people of [Coastal Community] have all the information they need about the tsunami threat and are taking steps to prepare themselves and their families.

In order for this to happen, we need to be delivering information that is useful, motivating, and actionable. As we mentioned at the workshop, we take your safety very seriously, and we are always looking for ways to improve our programs to better serve you. With this questionnaire, we are interested in finding out what tsunami preparedness actions you have taken since the workshop and, based on these actions, if you have any additional suggestions for us. We would greatly appreciate it if you would take the time to fill out and return this questionnaire.

As you may have noticed, there is an ID number on the questionnaire, this is for tracking purposes only. Your response is completely confidential.

When you have completed the questionnaire, please return it in the enclosed, postage paid envelope. If you have any questions about this questionnaire, or tsunami preparedness, please contact me at (xxx) xxx-xxxx or xxx@coastalcommunity.gov.

Thank you in advance for your help.

Sincerely,

[Coastal Community Official]

P.S. Don't forget to visit <http://www.coastalcommunitytsunami.site.gov/> for more information about tsunami preparedness.

Sample Reminder Postcard

Post-Workshop Mail-In Questionnaire

Last week, we mailed you a brief questionnaire asking you for more information related to your participation in the Tsunami Preparedness Public Workshop on [date].

If you have already completed and returned your questionnaire, thank you very much. If you have not, please take some time and do so today. Your response is extremely important to us and will help us further our efforts to keep the people of [Coastal Community] safe from tsunamis.

If you did not receive a questionnaire, or need a replacement, please contact me at (xxx) xxx-xxxx or xxx@coastalcommunity.gov, and I will get another one in the mail to you immediately.

Sincerely,

[Coastal Community Official]

Tsunami Preparedness Public Workshop

Post-Workshop Mail-In Questionnaire

On [date] you attended a Tsunami Preparedness Public Workshop hosted by [Coastal Community]. We are interested in finding out what tsunami preparedness actions you have taken since the workshop and, based on these actions, if you have any additional suggestions for us. Please do us a favor and take a moment to complete this confidential questionnaire. It will help us understand how we are doing and what we can do to improve the workshop.

1. After the workshop, I was eager to increase my tsunami preparedness? (Please circle one answer.) Strongly Agree Agree No Opinion Disagree Strongly Disagree

2. After the workshop, I felt prepared to increase my tsunami preparedness? (Please circle one answer.) Strongly Agree Agree No Opinion Disagree Strongly Disagree

3. What have you done to prepare for a tsunami since the workshop? (Please circle one answer for each item.)

Since the workshop, I have done the following:

a. Developed an emergency plan that includes tsunamis or added tsunamis to an existing plan	True	False	I already had one
b. Put together a portable emergency supply kit	True	False	I already had one
c. Talked with my family, friends, or neighbors about tsunami preparedness	True	False	
d. Participated in the tsunami drill on [date]	True	False	

Got any great photos of you putting together your emergency supply kit, participating in the tsunami drill, practicing evacuation? Be an example. Share them on social media. We'd love to see them.
#TsunamiPrep

4. Please tell us about the tsunami preparedness actions you have taken since the workshop. Have you done anything not listed above?

5. If you have not taken any preparedness actions since the workshop, why not? Is there more information or assistance that you need from us?

6. Please share with us any new suggestions you have for improving the workshop and encouraging tsunami preparedness.

2014 Projects—Done

- Provide content for NWS Tsunami Safety website

NATIONAL WEATHER SERVICE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

HOME FORECAST PAST WEATHER WEATHER SAFETY INFORMATION CENTER NEWS SEARCH ABOUT

[Tsunami Safety Home](#) [Understanding Tsunami Alerts](#) [Before a Tsunami](#) [During a Tsunami](#) [After a Tsunami](#)

****Get Tsunami Alerts****

Tsunami Resources

- Tsunami Safety Home
- About Tsunamis
- Tsunami Warning Centers
- Education and Outreach Materials
- Tsunami Preparedness Week
- TsunamiReady Program
- International Tsunami Information Center
- National Tsunami Hazard Mitigation Program

If you live, work or play on the coast, it is important to learn about tsunami safety.

Tsunamis are among Earth's rarest hazards. But, even though tsunamis do not occur very often, and most are small and nondestructive, they pose a major threat to coastal communities, particularly in the Pacific. A tsunami can strike any ocean coast at any time. There is no season for tsunamis. We cannot predict where, when or how destructive the next tsunami will be. However, while tsunamis cannot be prevented, there are things you can do before, during and after a tsunami that could save your life and the lives of your family and friends. Read these pages to learn about tsunamis and what you can do to keep yourself and your loved ones safe in the event of a tsunami.

weather.gov/tsunamisafety

2014 Projects—Done

- Create an expanded NOAA Tsunami Program fact sheet

National Oceanic and Atmospheric Administration
U.S. Department of Commerce



NOAA Tsunami Program

O f all Earth's natural hazards, tsunamis are among the most infrequent, yet they pose a major threat to coastal populations, particularly in the Pacific. Although tsunamis cannot be prevented, community preparedness, accurate and timely warnings and effective response can save lives and protect property. The 2011 Tohoku Japan tsunami and the 2004 Indian Ocean tsunami have focused world attention on the rare but very real threat of tsunamis and underscored the value of a comprehensive warning system and an educated public. Great strides have been made in improving tsunami warning systems since the 2004 event.

A tsunami is a series of ocean waves created by a sudden displacement of seawater. Most tsunamis are caused by undersea earthquakes, but they can also be caused by landslides, volcanic activity, meteorites and even certain weather-related phenomena. A tsunami could strike at any time and can be very dangerous to life and property when it reaches the shore. It may arrive like a fast-rising flood and can strike with devastating force. Tsunamis can range in size from inches to more than a hundred feet high and can flood low-lying areas more than a mile inland. Waves may continue for several hours, and the first one may not be the largest.

NOAA's Role

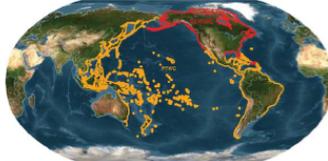
The NOAA Tsunami Program is a cross-NOAA cooperative effort to minimize the impacts of tsunamis. Administered by the National Weather Service (NWS), the program leverages the capabilities of NOAA's other operational line offices, in particular the Office of Oceanic and Atmospheric Research (OAR), the National Ocean Service (NOS) and the National

Environmental Satellite, Data and Information Service (NESDIS). For more than 50 years, NOAA has had operational responsibility for the U.S. Tsunami Warning System. This end-to-end system is dependent on partnerships with federal, state, territorial, international, regional and local organizations. It includes:

- Observation systems to rapidly detect earthquakes and tsunamis,
- Earthquake analysis to characterize tsunami-generating events,
- Models to forecast tsunami impacts,
- Timely and accurate messages,
- Tsunami hazard assessments, and
- Educational efforts to ensure proper public response before and after a tsunami to protect lives and property.

Issuing Tsunami Messages

The NWS operates two tsunami warning centers, which are staffed 24 hours a day, 7 days a week. The two centers are responsible for monitoring Earth for earthquakes and tsunamis, forecasting tsunami impacts



and, in the United States, issuing tsunami alerts (information statements, watches, advisories and warnings) to emergency managers and the public.

NOAA has led the U.S. effort to build a comprehensive tsunami warning system. The result is a nation better equipped to detect and respond to tsunamis.



2014 Projects—Underway/Next

- Coordinate updates of COMET tsunami modules
- Provide national-level support for 2015 National Tsunami Preparedness Week
- Support development of California's Tsunami Zone website as vehicle for Tsunami Preparedness Week activities
- Create a risk assessment summary/fact sheet to support national-level “know your risk” outreach
 - Identify reviewers
- Create NTHMP fact sheet
 - Identify project partners from all subcommittees

2011 Projects—Underway/Next

- Lead in development of consistent tsunami messaging through consensus process
- Revise “Local Tsunami Education and Outreach Plan” (and rename “Disaster Preparedness Education and Outreach” Guide)

Thank You for Your Time!

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Insert link

<http://nws.weather.gov/nthmp/documents/2014edplan.pdf>

- Provide content for NWS Tsunami Safety website
- Create expanded NOAA Tsunami Program fact sheet
- Provide direction and content for Tsunami.gov non-operational web pages
- Coordinate updates of COMET tsunami modules
- Coordinate updates for tsunami pages on NWS JetStream Online Weather School
- Create NTHMP fact sheet
- Develop evacuation modeling guidance
- Create hazard assessment summary/fact sheet to support national-level “know your hazard” outreach
- Provide national-level support for 2015 National Tsunami Preparedness Week
- Support development of the TsunamiZone website as vehicle for Tsunami Preparedness Week activities
- Update Tsunami Awareness and Safety fact sheet
- Create online compilation of links to tsunami evacuation and inundation maps
- Create materials that describe how FEMA’s Community Rating System can enhance tsunami mitigation and support efforts to achieve TsunamiReady recognition
- Update NTHMP Media Guide
- Update Compendium of Tsunami Education Resources and create independent web page
- Create meteotsunami awareness fact sheet
- Develop resource to help commemorate tsunamis as a way to further tsunami awareness and preparedness