

Exercise LANTEX12 Participant Handbook

An Atlantic/Gulf of Mexico Tsunami Warning
Exercise
March 28, 2012

US National Tsunami Hazard Mitigation Program
Warning Coordination Subcommittee



NOTE: The contents of this handbook are patterned after the Exercise Pacific Wave 08 manual published by the Intergovernmental Oceanographic Commission. Citation: *Exercise Pacific Wave 08. A Pacific-wide Tsunami Warning and Communication Exercise, 28-30 October 2008*. IOC Technical Series No. 82. Paris, UNESCO, 2008, and the LANTEX 9, 10 and 11 handbooks.

Exercise

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0. Summary

The US NOAA/National Weather Service and the National Tsunami Hazard Mitigation Program will be conducting a tsunami exercise on March 28, 2012 to assist tsunami preparedness efforts along the U.S. and Canadian east coasts, the Gulf of Mexico, and in Puerto Rico and the Virgin Islands. The LANTEX12 tsunami exercise consists of two separate scenarios. Scenario 1 simulates a Gulf of Mexico earthquake west of Florida which generates a tsunami by triggering a submarine slump on the continental slope. The second scenario consists of an earthquake located east of South Carolina which also generates a tsunami by triggering a slump along the continental slope further to the east. The earthquakes for both of the scenarios will be on March 28, 2012 at 1300 UTC and the initial warnings would be at 1304 UTC. The initial dummy message will be issued by the West Coast/Alaska Tsunami Warning Center (WCATWC) at 1304 UTC and disseminated over all its standard broadcast channels. The dummy message is issued to test communications with Emergency Management Organizations (EMOs) and Tsunami Warning Focal Points, and to start the exercise. It will be the only exercise message broadcast from the WCATWC excluding special email messages. The manual includes the scenario information, time lines, the WCATWC exercise messages and a model press release. High levels of vulnerability and risk to life and livelihoods from tsunamis along the U.S. and Canadian east coasts, the Gulf of Mexico, and in Puerto Rico and the Virgin Islands should provide a strong incentive for local jurisdictions to prepare for a tsunami and participate in this exercise. As this is an exercise for jurisdictions currently served by the WCATWC, no products will be issued by the PTWC for this exercise, but all are welcome to use this manual to develop their own exercise.

1. Background

This tsunami exercise is being conducted to assist tsunami preparedness efforts along the U.S. and Canadian east coasts, the Gulf of Mexico, and in Puerto Rico and the Virgin Islands. While the historic occurrence of destructive tsunamis along the US and Canadian Atlantic coasts indicate these events are rare, there are a few areas in the Atlantic basin and Gulf of Mexico where tsunamis may be generated and the risk to life associated with these events is very high. These areas include the coasts of Puerto Rico, the US Virgin Islands, the region east of the Azores Islands, and portions of the continental slope off the US and Canadian coast due to sub-sea landslides.

The LANTEX12 tsunami exercise consists of two separate scenarios. Scenario 1 simulates a Gulf of Mexico earthquake west of Florida which generates a tsunami by triggering a submarine slump on the continental slope. Tsunami model studies conducted by Juan Horillo at Texas A&M U. based on previous USGS geologic studies are used to generate the impacts of this event (Horillo, et al., 2010).

The second scenario consists of an earthquake located east of South Carolina which also generates a tsunami by triggering a slump along the continental slope further to the east. Geologic and tsunami studies performed by Uri ten Brink and others at the

United States Geological Survey provide guidance for potential events in this region (ten Brink, et al., 2008).

Participants in the exercise can choose the most appropriate scenario for their region. Due to the shoreline configurations of the Atlantic and Gulf of Mexico, tsunami modelling studies indicate tsunamis generated in the Atlantic are not expected to significantly impact the Gulf and conversely tsunamis generated in the Gulf are not expected to impact Atlantic shores (Knight, 2006).

Scenario 1: Gulf of Mexico

The following description of Scenario 1 is based on the *Regional Assessment of Tsunami Potential in the Gulf of Mexico* (ten Brink et al., 2009).

The Gulf Coast of the U.S. is vulnerable to tsunami damage because major population centers and industrial facilities are located near the shoreline at low-lying elevations. This is in comparison with the Pacific coast of the United States where tsunamis are more frequent but the coastal regions are more sparsely populated and the coastline has much greater relief. A challenge for scientists is to define and quantify the hazard for these rare events.

Tsunami run-up can be significant along coastlines proximal to submarine landslides, as exemplified by the 1929 Grand Banks tsunami, offshore Nova Scotia. Some of the main points identified in the ten Brink report are listed below.

- There is sufficient evidence to consider submarine landslides in the Gulf of Mexico as a present-day tsunami hazard, considering the clear observations of large landslides along the continental margin of the Gulf.
- Three geologic landslide provinces are defined in the Gulf of Mexico: the Northwest Gulf of Mexico, the Mississippi Canyon and fan, and the Florida/Campeche Margin.
- Source parameters for the maximum credible submarine landslide were determined for each of the provinces, except for the Florida/Campeche Margin where data were unavailable. All provinces contain landslides of sufficient volume to generate destructive tsunamis along the Gulf of Mexico coasts.
- Analysis suggests that the East Breaks landslide parameters in the Northwest Gulf of Mexico are similar to the parameters for other known east coast landslides.
- The largest Gulf landslides are found in the submarine canyon and fan provinces extending from the Mississippi and former larger rivers that emptied into the Gulf of Mexico. Available data suggests that these large landslides were probably active prior to 7,000 years ago, when large quantities of sediments were emptied into the Gulf. However, sediment supply, especially from the Mississippi river, continues to contribute to slope steepening and increasing fluid pore pressure in the sediments, which may lead to further landslide activity. On the northern Gulf continental slope, landslides may still be active, probably because of salt movement, but are small and may not pose a tsunami hazard.
- There are no significant earthquake sources within the Gulf of Mexico that are likely to generate tsunamis, despite recent seismic activity in the area. Tsunami propagation from significant earthquake sources outside the Gulf of Mexico, such as the northern Panama Convergence Zone, Northern South America, Cayman Trough, the Puerto Rico trench, or the Gibraltar area shows that wave amplitude is greatly

attenuated by the narrow and shallow passages into the Gulf, and as a result, these tsunami sources do not constitute a tsunami hazard to the Gulf of Mexico coast.

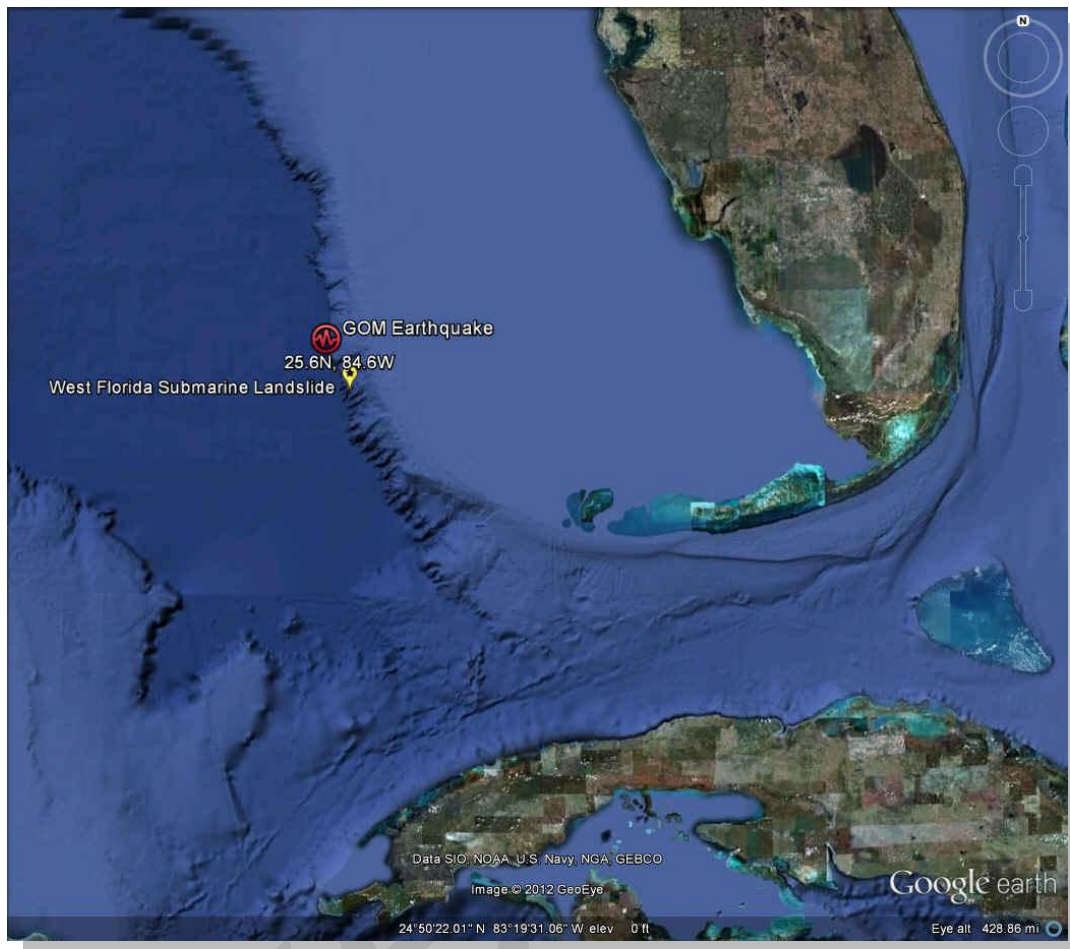


Figure 1a: Location of exercise earthquake and submarine landslide.

Figure 1a shows the location of the Scenario 1 earthquake and landslide. The exercise will provide simulated tsunami warning and advisory messages from the WCATWC triggered by a hypothetical earthquake and submarine landslide located west of southern Florida.

Scenario 2: U.S. Atlantic coast

The following description of Scenario 2 is based on work by ten Brink, et al. (2008) and information found at the web site:

<http://deepwatercanyons.wordpress.com/2011/06/02/submarine-landslides-and-tsunamis/> .

The United States Geological Survey, in cooperation with other government agencies and academic partners, has been studying the continental margin along the U.S. east coast in order to better understand submarine landslides and their role in tsunami generation as well as the overall tsunami hazard along the coast.

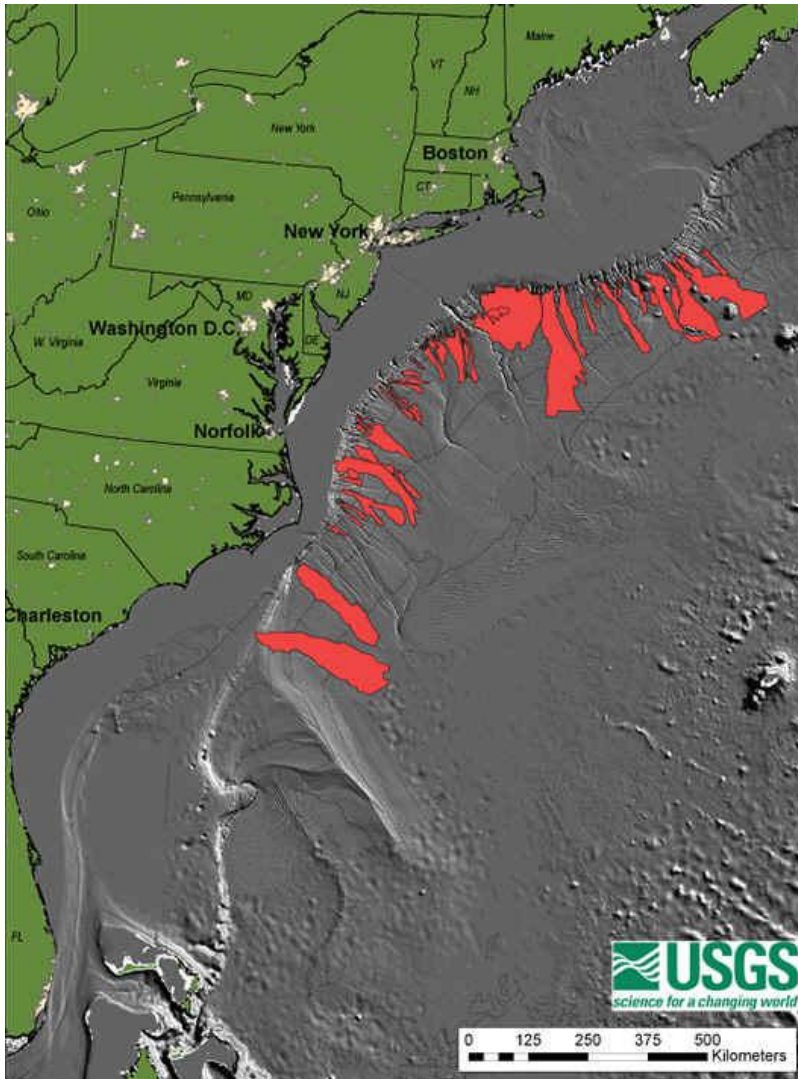


Figure 1b: Submarine landslides along the U.S. Atlantic continental margin (ten Brink, et al. (2008))

A recent assessment of tsunami hazards along the U.S. east coast, carried out by the USGS and funded by the U.S. Nuclear Regulatory Commission, has identified submarine landslides along the submerged continental margin as the primary potential source of dangerous tsunamis to this coast. The seriousness of this hazard was demonstrated by the 1929 Grand Banks submarine landslide, which produced a tsunami 3 to 8 m high that killed 28 people along the sparsely populated Newfoundland coast. Most submarine landslides on the continental margin occur on the continental slope, but the limited amount of detailed seafloor mapping along many parts of the east coast has limited efforts to produce a quantitative assessment of tsunami hazards.

Submarine landslides and canyons are ubiquitous features along the continental margin adjacent to the U.S. Atlantic coast (Figure 1b). Based on their characteristics (mostly determined from multi-beam bathymetry maps), some of these submarine landslides would have the potential to generate a tsunami along the east coast of the United States. Seafloor mapping and other geological and geophysical investigations show that the largest submarine landslides are concentrated along the New England and Long Island sections of the margin (outward of major ancient rivers along the mid-Atlantic margin) and in the salt dome province off South Carolina.

Whether or not a submarine landslide will generate a tsunami and its resulting size are functions of the depth of the landslide, the amount of material that moves downslope (the landslide volume), the initial acceleration of the material and the speed at which it moves downslope, and the characteristics of the material (its strength, composition, etc.). While seafloor maps can directly provide information about the depth and size of a landslide, they are invaluable in pinpointing locations where additional studies can yield information about the properties of the seafloor within and around the landslides and the age of the landslides along the margin.

NOAA and the NTHMP:

NOAA operates a tsunami warning system for U.S. Atlantic and Gulf of Mexico coasts, eastern Canada, Puerto Rico, and the Virgin Islands through its West Coast/Alaska Tsunami Warning Center (WCATWC) in Palmer, Alaska. This Center provides tsunami warning, advisory, watch, and information messages to these coasts approximately five minutes after an earthquake's occurrence. Primary recipients of WCATWC Atlantic messages include National Weather Service (NWS) coastal Weather Forecast Offices (WFO), state/territory warning points/emergency operation centers, the U.S. Coast Guard, the Canadian Atlantic Storm Prediction Center, and the U.S. military. These agencies transmit the message to people potentially impacted by a tsunami. NOAA's Pacific Tsunami Warning Center (PTWC) in Ewa Beach, Hawaii provides a similar service internationally in the Caribbean Sea. The Puerto Rico Seismic Network (PRSN) of the University of Puerto Rico at Mayagüez also provides earthquake and tsunami information and warning service to Puerto Rico and the Virgin Islands in coordination with the WCATWC.

The NOAA National Weather Service and the National Tsunami Hazard Mitigation Program (NTHMP) are providing the framework for this exercise as a means for emergency responders along the Gulf and Atlantic coasts and in PR/VI to test and update tsunami response plans. High levels of vulnerability along these coasts should provide a strong incentive for local jurisdictions to prepare for a tsunami. Exercises like this will ensure that the U.S./Canadian Atlantic and Caribbean coasts are better prepared to respond in the case of a dangerous tsunami.

2. Exercise Concept

2.1 Purpose

The purpose of the exercise is to improve Tsunami Warning System effectiveness along the Caribbean, east coast, and Gulf coast regions. The exercise provides an opportunity for emergency management organizations throughout these regions to exercise their operational lines of communications, review their tsunami response procedures, and promote tsunami preparedness. Regular exercising of response plans is critical to maintain readiness for an emergency. This is particularly true for tsunamis, which are infrequent but high impact events. Every coastal emergency management organization (EMO) is encouraged to participate.

2.2 Objectives

Each organization can develop their objectives for the exercise depending on their level of involvement in the scenario. The following are the exercise's overarching objectives.

- Ensure message transmission from the TWCs to Tsunami Warning Focal Points (TWFP) and from these primary contacts to the EMOs.
- Test tsunami response plans for Gulf, Atlantic, and PR/VI EMOs that have developed plans, and provide a catalyst for countries and EMOs that have not developed plans.
- EMOs, Tsunami Warning Focal Points (TFWP) and Tsunami National Contacts review, discuss, and evaluate the various communication alternatives for receiving and disseminating tsunami messages.
- EMOs, Tsunami Warning Focal Points, and Tsunami National Contacts review, discuss, and evaluate potential response actions and challenges.
- Identify processes to issue local all-clear notices.

2.3 Type of Exercise

The exercise should be carried out such that communications and decision making at various organizational levels are exercised and conducted without disrupting or alarming the general public. Individual localities, however, may at their discretion elect to extend the exercise down to the level of testing local notification systems such as the Emergency Alert System (EAS), sirens, or loudspeakers.

Exercises stimulate the development, training, testing, and evaluation of Disaster Plans and Standard Operating Procedures. Exercise participants may use their own past multi-hazard drills (e.g. flood, hurricane, tsunami, earthquake, etc.) as a framework to conduct LANTEX 12.

Exercises can be conducted at various scales of magnitude and sophistication. The following are examples of types of exercises conducted by EMOs:

1. **Orientation Exercise (Seminar):** An Orientation Exercise lays the groundwork for a comprehensive exercise program. It is a planned event, developed to bring together individuals and officials with a role or interest in multi-hazard response planning, problem solving, development of standard operational procedures (SOPs), and resource integration and coordination. An Orientation Exercise will have a specific goal and written objectives and result in an agreed upon Plan of Action.
2. **Drill:** The Drill is a planned activity that tests, develops, and/or maintains skills in a single or limited emergency response procedure. Drills generally involve operational response of single departments or agencies. Drills can involve internal notifications and/or field activities.

3. **Tabletop Exercise:** The Tabletop Exercise is a planned activity in which local officials, key staff, and organizations with disaster management responsibilities are presented with simulated emergency situations. It is usually informal, in a conference room environment, and is designed to elicit constructive discussion from the participants. Participants will examine and attempt to resolve problems, based on plans and procedures, if they exist. Individuals are encouraged to discuss decisions in depth with emphasis on slow-paced problem solving, rather than rapid, real time decision-making. A Tabletop Exercise should have specific goals, objectives, and a scenario narrative (see Appendix A for a Sample Tabletop Exercise Outline).
4. **Functional Exercise:** A Functional Exercise is a planned activity designed to test and evaluate organizational capacities. It is also utilized to evaluate the capability of a community's emergency management system by testing the Emergency Operations Plan (EOP). It is based on a simulation of a realistic emergency situation that includes a description of the situation (narrative) with communications between players and simulators. The Functional Exercise gives the players (decision-makers) a fully simulated experience of being in a major disaster event. It should take place at the appropriate coordination location (i.e. emergency operations center, emergency command center, command post, master control center, etc.) and activate all the appropriate members designated by the plan. Both internal and external agencies (government, private sector, and volunteer agencies) should be involved. It requires players, controllers, simulators, and evaluators. Message traffic will be simulated and inserted by the control team for player response/actions, under real time constraints. It may or may not include public evacuations. A Functional Exercise should have specific goals, objectives, and a scenario narrative.
5. **Full-scale Exercise:** A Full-scale Exercise is the culmination of a progressive exercise program that has grown with the capacity of the community to conduct exercises. A Full-Scale exercise is a planned activity in a "challenging" environment that encompasses a majority of the emergency management functions. This type of exercise involves the actual mobilization and deployment of the appropriate personnel and resources needed to demonstrate operational capabilities. EOCs and other command centers are required to be activated. A Full-scale Exercise is the largest, costliest, and most complex exercise type. It may or may not include public evacuations.

Example Time Frames for Different Exercise Types

Style	Planning Period	Duration	Comments
Orientation Exercise	2 wks	1 day	Individual or mixed groups
Drill	2 days	1 day	Individual technical groups generally
Tabletop Exercise	2 weeks	1-3 days	Single or multiple agency

Functional Exercise	1-2 months	1-5 days	Multiple Agency participation
Full-scale Exercise	2-6 months	1 day/ week	Multiple Agency participation

3. Exercise Outline

3.1 General

The two scenarios are described in the sections below followed by general comments on the exercise.

Scenario 1: Gulf of Mexico

The scenario will start with a magnitude 6.7 earthquake located at 25.6°N, 84.6°W which is approximately northwest of Key West Florida. The earthquake occurs at 1300UTC on March 28, 2012 and immediately triggers a 17 cubic km underwater slide of sediment, sliding generally west from 25.4°N, 84.7°W. The earthquake uplift does not generate a significant tsunami, but the slide generates a significant tsunami along some portions of the Gulf of Mexico coast (tsunami amplitudes over up to 2 m). The tsunami is not significant outside of the Gulf. A map showing maximum amplitudes recorded throughout the Gulf is provided in Figure 2a.

Initially, a tsunami warning is issued by WCATWC for the entire Gulf of Mexico region. The U.S. east coast and the Caribbean are included in the WCATWC message as information only since the tsunami threat there is expected to be minimal. Some Gulf coasts are dropped to an advisory level about an hour after the earthquake. Definitions of the products that will be issued by WCATWC during this exercise are provided below:

Tsunami Warning - A tsunami warning is issued when a tsunami with the potential to generate widespread inundation is imminent, expected, or occurring. Warnings alert the public that dangerous coastal flooding accompanied by powerful currents is possible and may continue for several hours after initial arrival. Warnings alert emergency management officials to take action for the entire tsunami hazard zone. Appropriate actions to be taken by local officials may include the evacuation of low-lying coastal areas, and the repositioning of ships to deep waters when there is time to safely do so. Warnings may be updated, adjusted geographically, downgraded, or canceled. To provide the earliest possible alert, initial warnings are normally based only on seismic information.

Tsunami Advisory - A tsunami advisory is issued when a tsunami with the potential to generate strong currents or waves dangerous to those in or very near the water is imminent, expected, or occurring. The threat may continue for several hours after initial arrival, but significant inundation is not expected for areas under an advisory. Appropriate actions to be taken by local officials may include closing beaches, evacuating harbors and marinas, and the repositioning of ships to deep waters when

there is time to safely do so. Advisories are normally updated to continue the advisory, expand/contract affected areas, upgrade to a warning, or cancel the advisory.

Impacts for this event were based on work presented in Horillo et al (2010). This report notes that the probability of tsunamis generated by large landslides in the Gulf is very low. This probability of occurrence is based on ancient, large landslides which were likely active prior to 7,000 years ago when large quantities of sediments were emptied into the Gulf of Mexico. The probability of slides like this occurring today has not been quantitatively defined. Further information on the modeling work is provided in Appendix B.

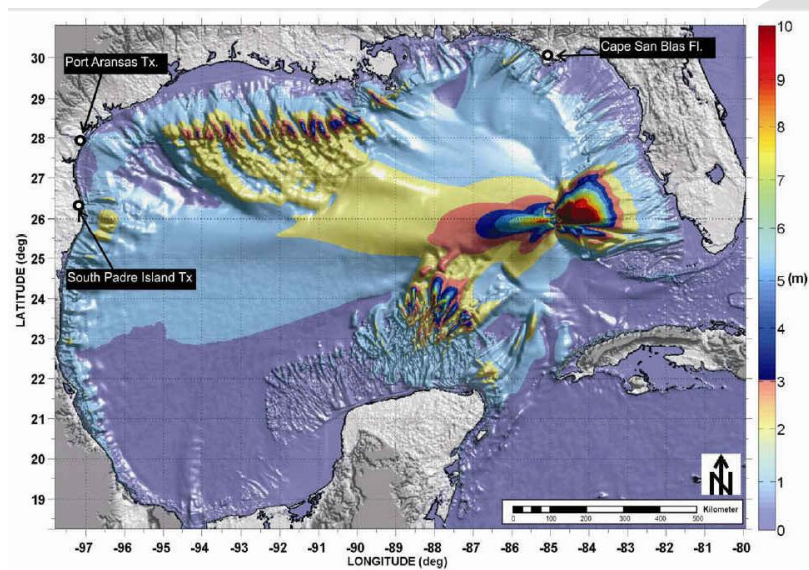


Figure 40. West Florida landslide maximum wave amplitude using 60 arc-seconds grid resolution.

Figure 2a: West Florida landslide maximum wave amplitude from Horillo et al. (2010).

Scenario 2: U.S. Atlantic coast

The scenario will start with a magnitude 7.7 earthquake located at 32.0°N, 78.0°W which is 125 miles southeast of Myrtle Beach, South Carolina. The earthquake occurs at 1300UTC on March 28, 2012 and immediately triggers a 100 cubic km underwater slide of sediment, sliding east from 31.52°N, 77.05°W at a maximum of 50 meters/second. The slide width is 30km and the block length is 20km. The earthquake uplift does not generate a significant tsunami, but the slide generates a destructive tsunami along some portions of the east coast and in some locations in Puerto Rico and the Virgin Islands (tsunami amplitudes over 1.5 m). A moderate, though damaging, tsunami is observed along other portions the U.S. and Canadian Atlantic coast (tsunami amplitudes less than 1 m). Most regions along the coast do not experience major inundations, though all areas experience at a minimum strong currents which may produce damage to boats, harbors, and docks as well as make swimming dangerous. A map showing maximum amplitudes recorded throughout the western Atlantic is provided in Figure 2b.

Lantex 2012 - Tsunami Propagation Forecast

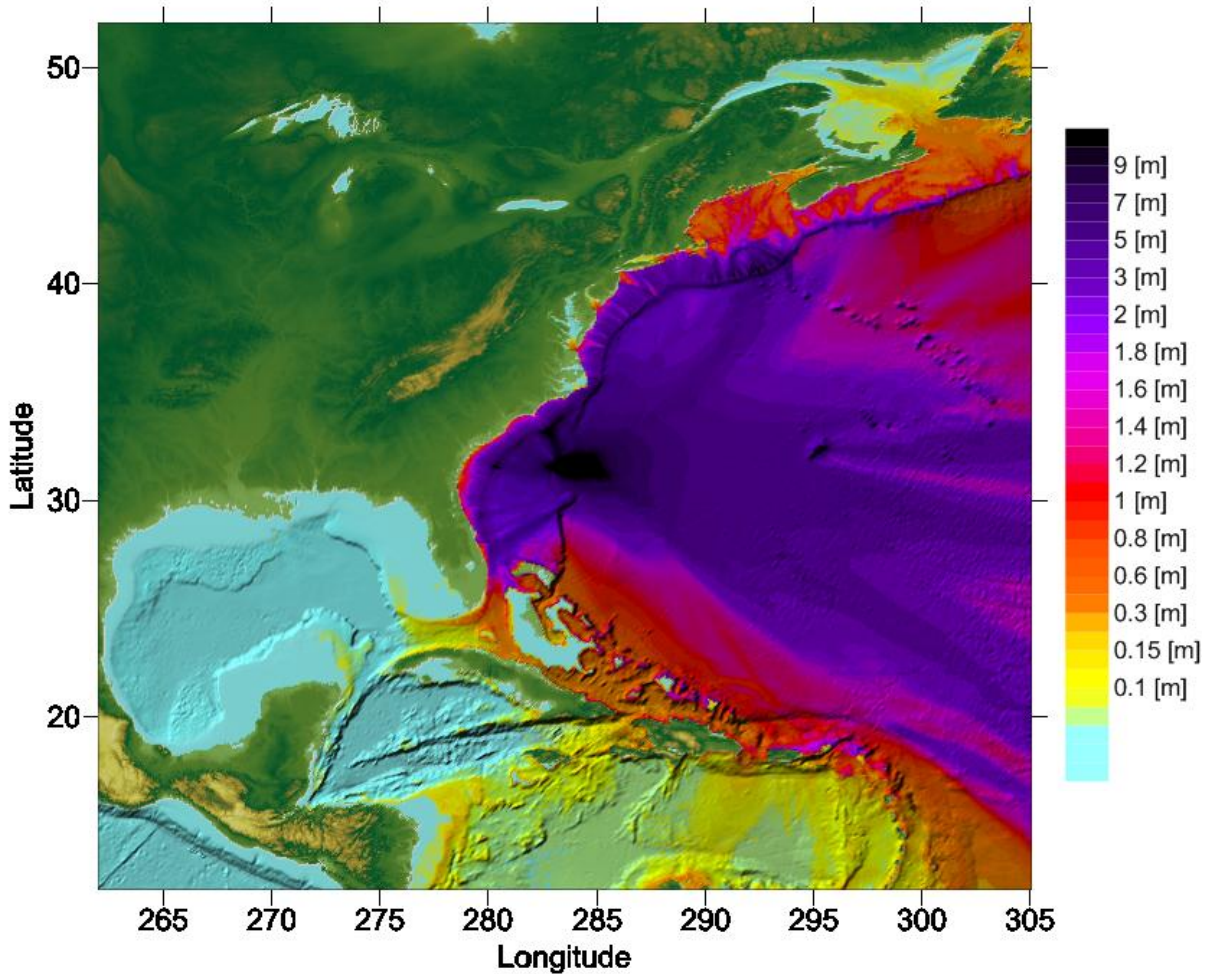


Figure 2b. Forecast maximum wave amplitudes (meters) from the landslide which indicates tsunami energy propagation.

Initially, a warning is issued for the epicentral region with an advisory for surrounding coastal regions. Then, the warning is expanded to include most of the U.S./Canada east coast as well as Puerto Rico and the Virgin Islands. An advisory is issued for parts of Florida, Labrador, and parts of Newfoundland. Definitions of the products that will be issued by WCATWC during this exercise are provided in the section above.

Impacts for this event were based on models computed at the WCATWC. Further explanation of the modeling is provided in Appendix B.

General comments on scenarios:

The WCATWC will not issue live messages over broadcast dissemination channels other than to issue an initial dummy message to start the exercises at 1304 UTC on March 28, 2012. However, WCATWC will email and fax the message to specific recipients who have requested live dissemination throughout the event. The content of the dummy message is given in Appendix C. The dummy message will indicate that exercise participants should refer to the first message provided in this handbook. From then on, if participants are not receiving messages via email or fax, Tables 1

and 2 are the timelines for when messages would be issued by WCATWC if this were a real event, and can be used by EMOs to drive the exercise timing. The warning messages (as shown in Appendix D) cover a 7-hour period, though in an actual event they would likely continue longer. World Meteorological Organization (WMO) and Advanced Weather Interactive Processing System (AWIPS) headers used in the dummy message are listed in Table 3.

During real events, the WCATWC issues two official products each time a message is issued. The first, and the ones provided in Appendix D, are known as the standard message. This message is a segmented message which includes encoded NWS zones, Valid Time Event Codes (VTEC), and their level of threat in the lower section of the message. The segmentation is used for automated processing systems which parse NWS products. The standard product also lists expected arrival times. The second product is known as the public message. This message has no segmentation and is written in a non-tabular, easier-to-read format. The products contain the same basic information. EMOs generally use the standard product for warning response as it has more complete information. WCATWC also issues additional graphical and web-based products to its web site. Examples of these are shown in Appendix E.

Participants may elect to exercise using their own timelines in order to achieve their particular objectives. For example, a particular EMO's Exercise Controller may choose to feed the TWC bulletins into the exercise at times of their own choosing, or alternatively put them in envelopes with the time they must be opened written on each, with each key participant agency having their own set of envelopes. The messages, provided in Appendix D, will facilitate this approach.

EMOs are welcome to modify estimated arrival times and/or wave amplitudes to suit their exercise – for example, to have the tsunami arrive sooner and with larger amplitude. Other exercise injects, such as tsunami damage reports, are also encouraged.

3.2 Master Schedule (Exercise Script)

Table 1: Scenario 1 Timeline

Tsunami generated by a magnitude 6.7 earthquake with epicenter at 25.6°N, 84.6°W occurring on March 28, 2012 at 1300 UTC which triggers in a submarine landslide located at 25.4°N, 84.7°W, approximately one minute later. The initial warning is disseminated at 1304 UTC.

Date (UTC)	Time (UTC)	WCATWC Message		
		#	Type	Dummy
03/28/2012	1300			
03/28/2012	1304	01	Warn	Yes
03/28/2012	1336	02	Warn	No
03/28/2012	1411	03	Warn/Adv	No
03/28/2012	1436	04	Warn/Adv	No
03/28/2012	1505	05	Warn/Adv	No
03/28/2012	1535	06	Warn/Adv	No
03/28/2012	1605	07	Warn/Adv	No
03/28/2012	1635	08	Warn/Adv	No
03/28/2012	1705	09	Warn/Adv	No
03/28/2012	1735	10	Warn/Adv	No
03/28/2012	1805	11	Warn/Adv	No
03/28/2012	1835	12	Warn/Adv	No
03/28/2012	1905	13	Warn/Adv	No
03/28/2012	1935	14	Warn/Adv	No
03/28/2012	2006	15	Can	No

Table 2: Scenario 2 Timeline

Tsunami generated by a magnitude 7.7 earthquake with epicenter at 32.0°N, 78.0°W occurring on March 28, 2012 at 1300 UTC which triggers in a submarine landslide located at 32.0°N, 77.6°W, approximately one minute later. The initial warning is disseminated at 1304 UTC.

Date (UTC)	Time (UTC)	WCATWC Message		
		#	Type	Dummy
03/28/2012	1300			
03/28/2012	1304	01	Warn/Adv	Yes
03/28/2012	1331	02	Warn/Adv	No
03/28/2012	1408	03	Warn/Adv	No
03/28/2012	1436	04	Warn/Adv	No
03/28/2012	1506	05	Warn/Adv	No
03/28/2012	1536	06	Warn/Adv	No
03/28/2012	1604	07	Warn/Adv	No
03/28/2012	1633	08	Warn/Adv	No
03/28/2012	1705	09	Warn/Adv	No
03/28/2012	1733	10	Warn/Adv	No
03/28/2012	1802	11	Warn/Adv	No
03/28/2012	1832	12	Warn/Adv	No
03/28/2012	1903	13	Warn/Adv	No
03/28/2012	1933	14	Warn/Adv	No
03/28/2012	2003	15	Warn/Adv	No
03/28/2012	2032	16	Warn/Adv	No
03/28/2012	2103	17	Warn/Adv	No
03/28/2012	2131	18	Warn/Adv	No
03/28/2012	2201	19	Can	No

The initial dummy message will be disseminated over all standard WCATWC broadcast channels as listed in Table 3. This is being issued to test communications

with EMOs and to start the exercise. All messages will be disseminated over a special email list to provide the messages in real time to organizations requesting this service. To request this service, please contact Christa von Hillebrandt (address listed in 3.5) with your organization name and email address.

WCATWC Message Types:

Warn	Tsunami Warning
Adv	Tsunami Advisory
Watch	Tsunami Watch
Can	Cancellation

Dummy:

Yes	Dummy Issued
No	Dummy Not Issued

Table 3: Product Types

Product Types Issued for Dummy Message with Transmission Methods

Center	WMO ID	AWIPS ID	NWWS	GTS	EMWIN	Fax	Email
WCATWC	WEXX20 PAAQ	TSUAT1	Yes	Yes	Yes	Yes	Yes

NWWS	NOAA Weather Wire Service
GTS	Global Telecommunications System
EMWIN	Emergency Manager's Weather Information Network

3.3 Actions in Case of a Real Event

In the case of a real event occurring during the exercise, the TWCs will issue their normal messages for the event. Such messages will be given full priority and a decision will be made by WCATWC whether to issue the dummy message and to send email messages to selected recipients. Smaller earthquakes that only trigger a Tsunami Information Statement will not disrupt the exercise. All documentation and correspondence relating to this exercise is to be clearly identified as “**LANTEX 12**” and “**Exercise.**”

3.4 Procedure for False Alarm

Any time disaster response exercises are conducted, the potential exists for the public or media to interpret the event as real. Procedures should be set up by all participating entities to address public or media concerns involving this exercise in case of misinterpretation by media or the public.

3.5 Resources

Although EMOs will have advance notice of the exercise and may elect to stand up a special dedicated shift to allow normal core business to continue uninterrupted, it is

requested that realistic resource levels be deployed in order to reflect some of the issues that are likely to be faced in a real event.

Questions on the exercise can be addressed to:

<u>Person</u>	<u>Telephone #</u>	<u>Email</u>
Christa von Hillebrandt, NWS CTWP Manager	787-833-8433	christa.vonh@noaa.gov
Melinda Bailey, NWS SR	817-978-1100x107	melinda.bailey@noaa.gov
Wilfredo Ramos, PREMA Rep.	787-724-0124	wramos@aemead.gobierno.pr
Paul Whitmore, WCATWC Director	907-745-4212	paul.whitmore@noaa.gov
Paul Huang, WCATWC TWSO	907-745-4212	paul.huang@noaa.gov
James Waddell, WCATWC Rep.	907-745-4212	james.waddell@noaa.gov
Victor Huerfano, PRSN Director	787-833-8433	victor@prsn.uprm.edu
John Koch, NWS ER	631-244-0104	john.koch@noaa.gov
Charles Williams, NTHMP S. Region	205-280-2222	charles.williams@ema.alabama.gov
Rainer Dombrowsky, NTHMP E. Region	410-517-3628	rdombrowsky@mema.state.md.us

3.6 Media Arrangements

One advantage in conducting exercises is that it provides a venue to promote awareness of the exercise topic. Many residents along the east and Gulf coasts may not realize that a tsunami warning system exists for their region, let alone the proper response. Communities may wish to invite their local media to the exercise to promote local awareness of the tsunami hazard. Appendix F contains a sample press release which can be adapted as necessary.

4 Post-Exercise Evaluation

All participating agencies are requested to provide brief feedback on the exercise. This feedback will assist NTHMP and NOAA in the evaluation of LANTEX 12 and the development of future exercises, and help response agencies document lessons learned.

Please provide feedback by April 1, 2012 at the NTHMP internet web site:
<http://nthmp.tsunami.gov/exercise2012.php>.

5 References

Knight, W. (2006). Model Predictions of Gulf and Southern Atlantic Coast Tsunami Impacts from a Distribution of Sources, *Science of Tsunami Hazards*, **24**, 304-312.

Horillo, J. J., A. L. Wood, C. Williams, A. Parambath, and G. B. Kim (2010). Construction of Tsunami Inundation Maps in the Gulf of Mexico, *Report to the National Tsunami Hazards Mitigation Program*, 90 pp.

ten Brink, U., D. Twichell¹, E. Geist, J. Chaytor, J. Locat, H. Lee, B. Buczkowski, R. Barkan, A. Solow, B. Andrews, T. Parsons, P. Lynett, J. Lin, and M. Sansoucy (2008). Evaluation of tsunami sources with the potential to impact the U.S. Atlantic and Gulf coasts, *USGS Administrative report to the U.S. Nuclear Regulatory Commission*, 300 pp.

ten Brink, U., D. Twichell¹, P. Lynett, E. Geist, J. Chaytor, H. Lee, B. Buczkowski, and C. Flores (2009). Regional Assessment of Tsunami Potential in the Gulf of Mexico, *USGS report to the National Tsunami Hazards Mitigation Program*, 90 pp.

Exercise

Appendix A. Example Table Top Exercise

Tabletop Exercise Development Steps

Source: California Office of Emergency Services

A Tabletop Exercise is a planned activity in which local officials, key staff, and organizations with disaster management responsibilities are presented with simulated emergency situations. It is usually informal and slow paced, in a conference room environment, and is designed to elicit constructive discussion from the participants to assess plans, policies, and procedures. Participants will examine and attempt to resolve problems, based on plans and procedures, if they exist. Individuals are encouraged to discuss decisions in depth based on their organization's Standard Operating Procedures (SOPs), with emphasis on slow-paced problem solving, rather than rapid, real time decision-making. An Exercise Controller (moderator) introduces a simulated tsunami scenario to participants via written message, simulated telephone or radio call, or by other means. Exercise problems and activities (injects) are further introduced. Participants conduct group discussions where resolution is generally agreed upon and then summarized by a group leader. A Tabletop Exercise should have specific goals, objectives, and a scenario narrative.

The following provides a Tabletop Exercise structure with sample text and example.

1. Vulnerability Analysis: Problem Statement

An example for a hurricane might be:

Due to the recent Hurricane incidents that the Southeast region of the United States, an awareness of the threat risk involved in these disasters has become more apparent, therefore the need for evacuation system is vital. The state of Louisiana continues its ongoing tasks of planning, preparing, and training for Hurricane preparedness.

2. Purpose (Mission): Intent, what you plan to accomplish (Policy Statement)

An example for a hurricane might be:

The State of Louisiana has realized and recognizes the need for a more efficient and effective evacuation system, and is responding with this Comprehensive Exercise Plan. These events will include seminars, workshops, a tabletop exercise, functional and full-scale exercises within an 18-month time frame, under the State Homeland Security grant program.

3. Scope: **Exercise Activities** **Agencies Involved** **Hazard Type** **Geographic Impact Area**

An example might be:

Emergency Services coordinators at local levels of government will identify representative jurisdictions from each of the six mutual aid regions located throughout the State to participate as host jurisdictions in a series of disaster preparedness exercises. These host jurisdictions will develop a progressive series of exercises each type building upon the previous type of exercise. The process will begin with a vulnerability analysis for each jurisdiction and continue through a progression of exercise activities including: orientation seminars, workshops, and tabletop and functional exercises. The eventual objective of these activities will be to reduce disaster impacts to their populations and city infrastructure. All events will be evaluated utilizing US Homeland Security Exercise Evaluation Program (HSEEP) after action reporting (AAR)

standards. Steps for corrective actions will be made a part of the after action process and report. Surrounding jurisdictions in the mutual aid area will act as exercise design team members, exercise evaluators, or exercise observers for the purpose of information transfer to increase their operational readiness. Jurisdictions will participate on a rotational basis every two years to provide the opportunity for multiple jurisdiction participation.

4. Goals and Objectives:

Criteria for good objectives: Think SMART

- Simple (concise)
- Measurable
- Achievable (can this be done during the exercise?)
- Realistic (and challenging)
- Task Oriented (oriented to functions)

An example might be:

Comprehensive Exercise Program (CEP) Objectives

- *To improve operational readiness*
- *To improve multi-agency coordination and response capabilities for effective disaster response*
- *To identify communication pathways and problem areas pre-event between local jurisdictions and operational area, regional and state emergency operations centers*
- *To establish uniform methods for resource ordering, tracking, and supply for agencies involved at all levels of government.*

5. Narrative:

The Narrative should describe the following:

- Triggering emergency/disaster event
- Describe the environment at the time the exercise begins
- Provide necessary background information
- Prepare participants for the exercise
- Discovery, report: how do you find out?
- Advance notice?
- Time, location, extent or level of damage

6. Evaluation:

The Evaluation should describe the following:

- Objectives Based
- Train Evaluation Teams
- Develop Evaluation Forms

7. After Action Report (AAR): The AAR should be compiled using the evaluation reports

8. Improvement Plan (IP): The IP should reduce vulnerabilities.

Appendix B.

Scenario 1 Description – Gulf of Mexico submarine landslide:

This exercise is based on model results presented by Horillo et al., (2010). Landslide and model computation parameters are listed below; see the publication for further information on the tsunami model methodology. The coastal amplitudes estimates were provided by Horillo (personal communication).

Florida Margin Landslide

Geologic Setting:	Edge of a carbonate platform
Post Failure Sedimentation:	None visible on multi-beam images or on available high-resolution seismic profiles
Age:	Early Holocene or older
Maximum Credible Single Event:	Volume: 16.2 km ³ Area: 647.57 km ²
Excavation Depth:	~150 m, but quite variable
Runout Distance:	Uncertain. The landslide deposit is at the base of the Florida Escarpment buried under younger Mississippi Fan deposits

Model Parameters (Horillo, et al., 2010)

Model domain for source region:	
Number of Cells:	X Direction 360
Number of Cells:	Y Direction 360
Number of Cells:	Z Direction 120
Total Number of Cells:	15,552,000
dx	416 m
dy	464 m
dz	Variable (minimum 2 m)
dt	Variable (maximum 0.2 sec)
Physical Properties:	
Water Density:	1025 Kg/ m ³
Mud Density:	2000 kg/m ³
Mud Angle of Repose:	0°
Eddy Viscosity:	1e-5 m ² /sec

Figure B1 shows the development of the tsunami as the slide takes place along the Florida continental slope. This sequence takes place over 2.1 minutes time frame.

Figure B2 shows the initial outgoing tsunami profile as a positive wave with amplitude of 52ft (16m) followed by a negative wave or initial surface depression of 62ft (19m) caused by the landslide down slope motion. The 3D model results from the source zone were used as initial condition to a 2D model over the wider Gulf region to quantify expected impacts along the coast.

Figure B3 shows the West Florida landslide maximum wave amplitude recorded after 4 hours of tsunami propagation. Tsunami energy amplifications on coastal regions are observed in Port Aransas, South Padre Island, TX., and Fort Walton Beach-to-Cape San Blas, FL.

Table B1 provides the forecast range of coastal amplitudes for many sites along the Gulf coast. Tsunami model results are provided to better understand the scenario and are not intended for evacuation planning. Coastal amplitudes may induce runups along shore that are approximately double the forecast amplitude.

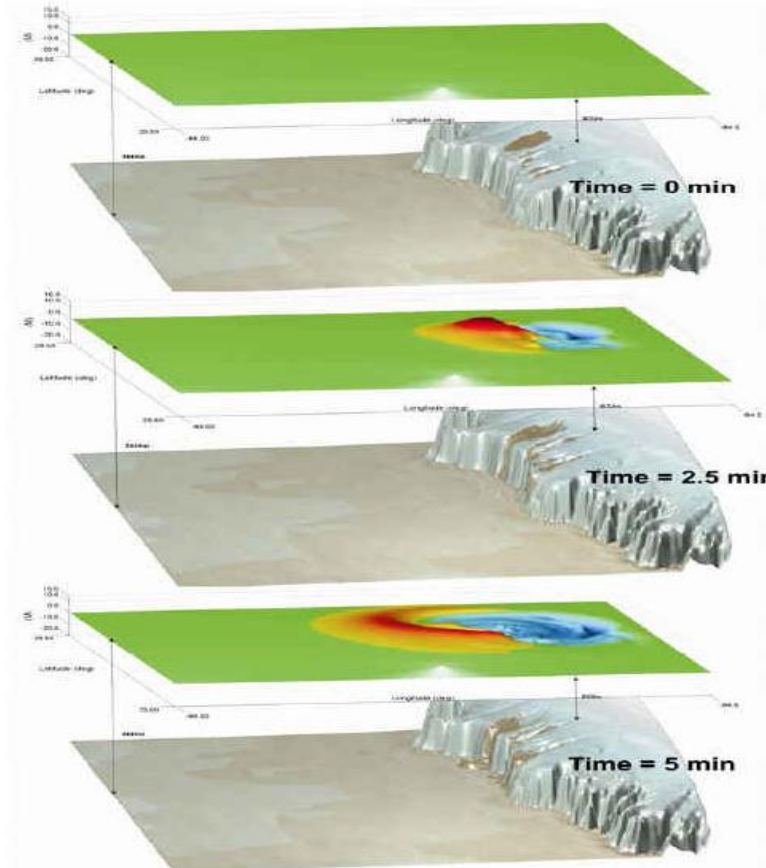


Figure 38. Sequence in perspective-view. TSUNAMI3D's numerical result for the determination of the initial tsunami source caused by the West Florida submarine landslide.

Figure B1. Initial source motion over first 2.1 minutes from Horillo, et al. (2010).

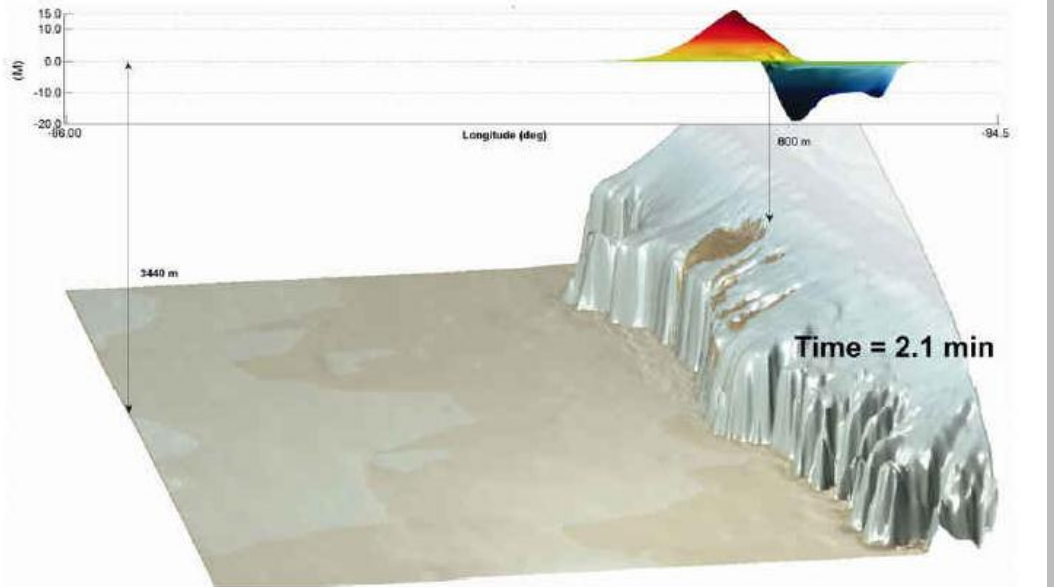


Figure 39. TSUNAMI3D's numerical result side-view for the West Florida submarine landslide. Maximum wave height recorded at 2.1 minutes after the landslide initiation.

Figure B2. Initial wave profile for the West Florida submarine landslide from Horillo et al. (2010).

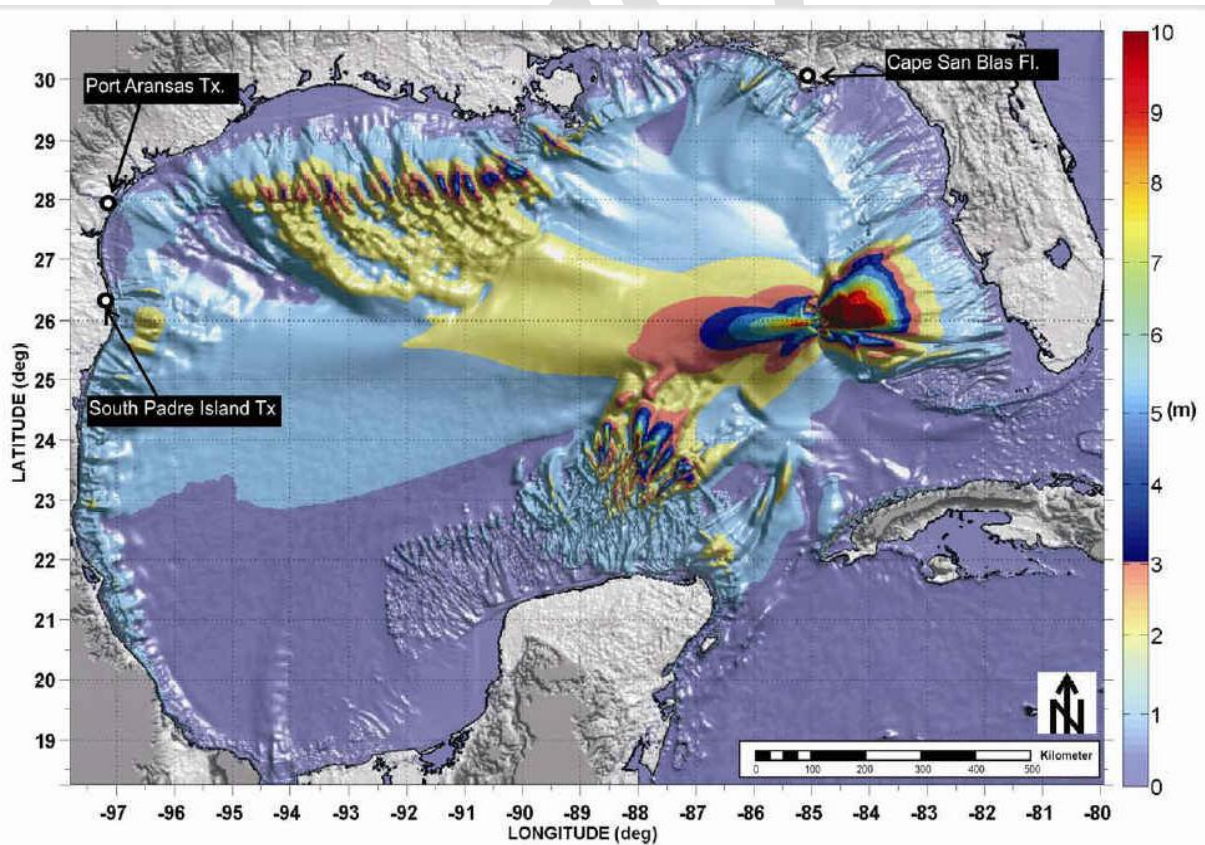


Figure 40. West Florida landslide maximum wave amplitude using 60 arc-seconds grid resolution.

Figure B3: West Florida landslide maximum wave amplitude from Horillo et al. (2010).

Coastal Location	Tsunami amplitude range at coast (m)
South Padre Island, TX	1.2-1.5
Port Aransas, TX	0.9-1.2
Freeport, TX	< 0.3
Galveston, TX	< 0.3
Grand Isle, LA	0.6-0.9
Biloxi, MS	< 0.3
Dauphin Island, AL	< 0.3
Gulf Shore, AL	< 0.3
Okaloosa Is., FL	< 0.3
Destin, FL	< 0.3
Miramar Beach, FL	0.3-0.6
Alys Beach, FL	0.9-1.2
Laguna Beach, FL	0.9-1.2
Panama City, FL	0.9-1.2
Cape San Blas, FL	0.6-0.9
Tampa region, FL	0.3-0.6
Siesta Key, FL	0.3-0.6
Venice, FL	0.3-0.6
Boca Grande, FL	0.3-0.6
Captiva Is., FL	0.3-0.6
Sanibel, FL	0.3-0.6
Fort Meyers Beach, FL	0.3-0.6
Naples, FL	0.3-0.6
Marco Is., FL	0.3-0.6
Key West, FL	1.5-2.1

Table B1. Forecast range of coastal amplitudes for Scenario 1 (Horillo, personal communication, 2012)

Scenario 2 Description – U.S. Atlantic coast submarine landslide:

The Alaska Tsunami Forecast Model was used to simulate the tsunami generated by a 100 cubic km slide directed eastward off the continental slope which was triggered by a hypothetical magnitude 7.7 earthquake located 125 miles southeast of Myrtle Beach, South Carolina at 32.0°N, 78.0°W. The tsunami generated by the earthquake uplift was not included in the impact determination as it was very small by comparison.

Continental slope landslide parameters are:

Location: 31.52°N, 77.05°W

Width: 30km

Length (down-slope): 20km

Velocity: 0 to 50m/s

The model was computed using a 4-minute resolution grid in the open ocean and additional 15-second resolution grids along the U.S./Canadian Atlantic coasts, Bermuda, and the Puerto Rico/Virgin Islands region. Figure B4 shows the landslide location and subsequent tsunami generation and propagation.

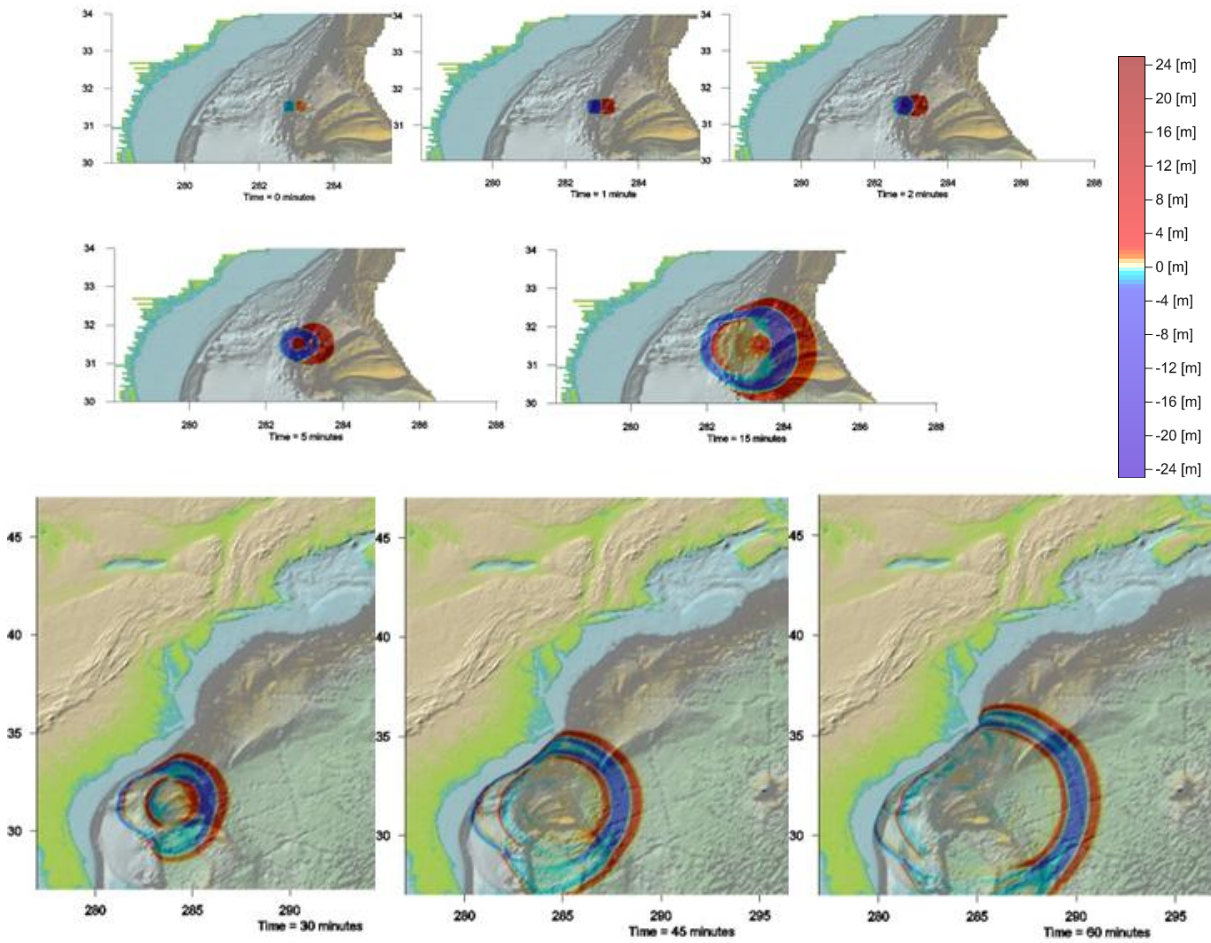


Figure B4: Landslide location and tsunami propagation.

Figures B5-B7 below display forecasted maximum wave amplitudes.

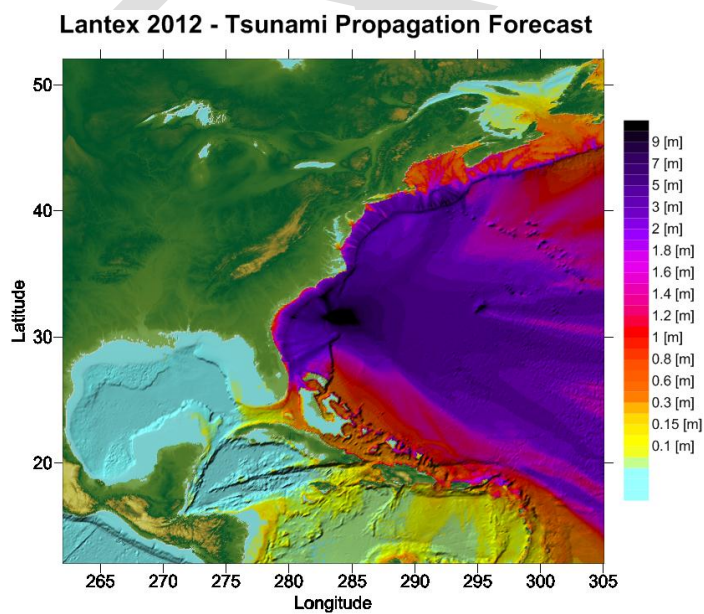


Figure B5. Forecast maximum wave amplitudes (meters) from the landslide which indicates tsunami energy propagation.

Lantex 2012 - Tsunami Propagation Forecast Puerto Rico and the US/British Virgin Islands

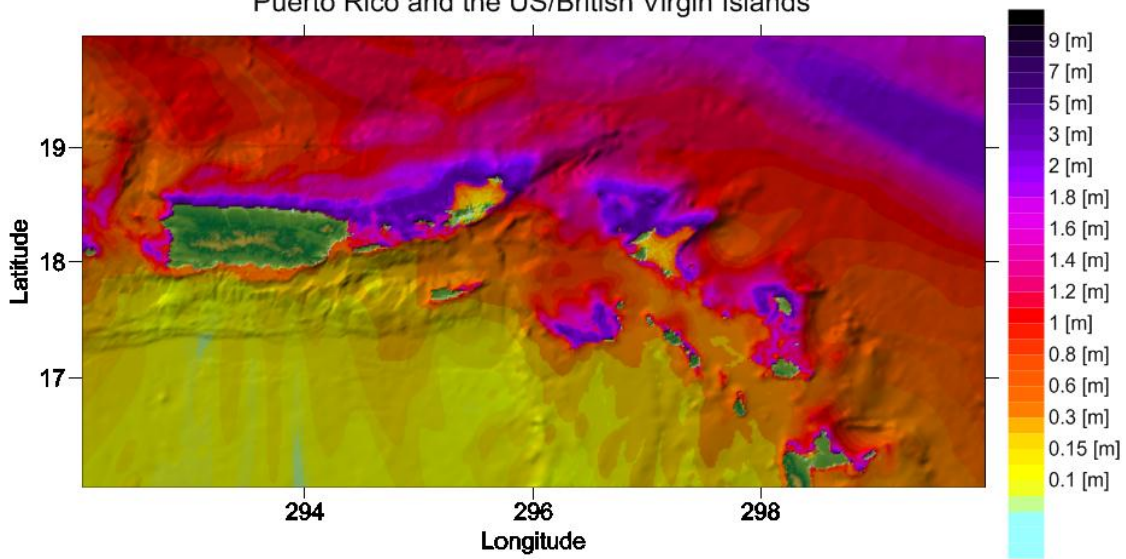


Figure B6. Forecast maximum wave amplitudes (meters) for Puerto Rico and the US/British Virgin Islands.

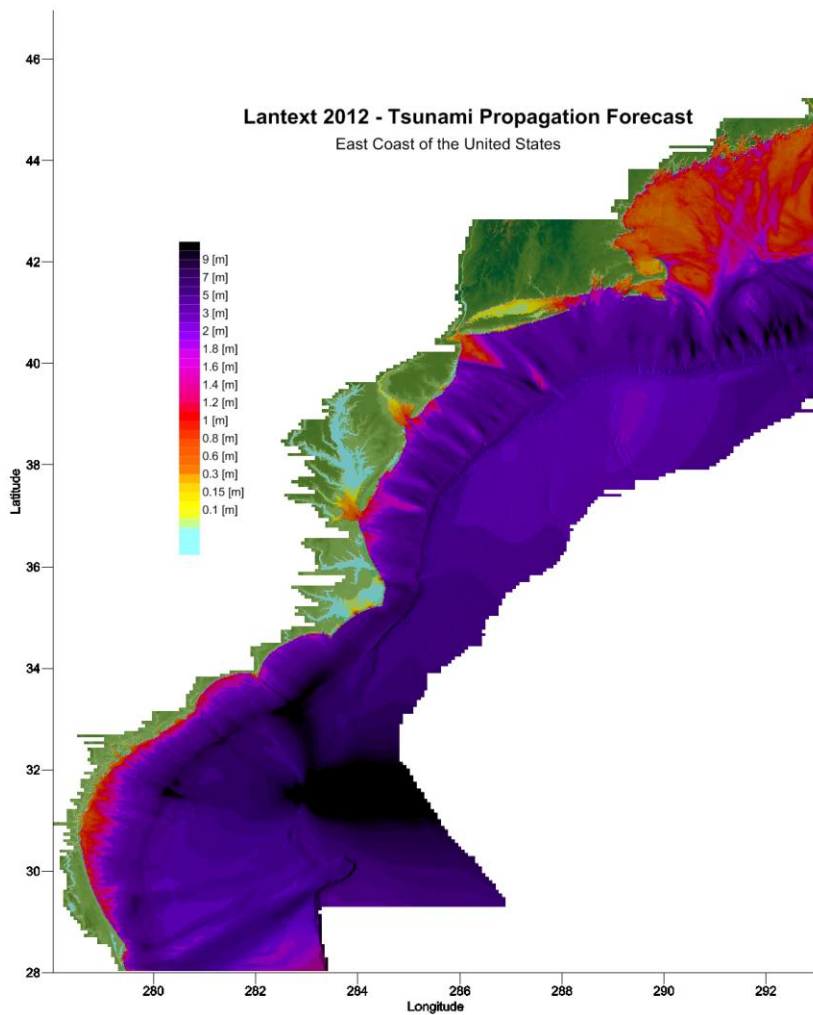


Figure B7. Forecast maximum wave amplitudes (meters) for the East Coast of the United States.

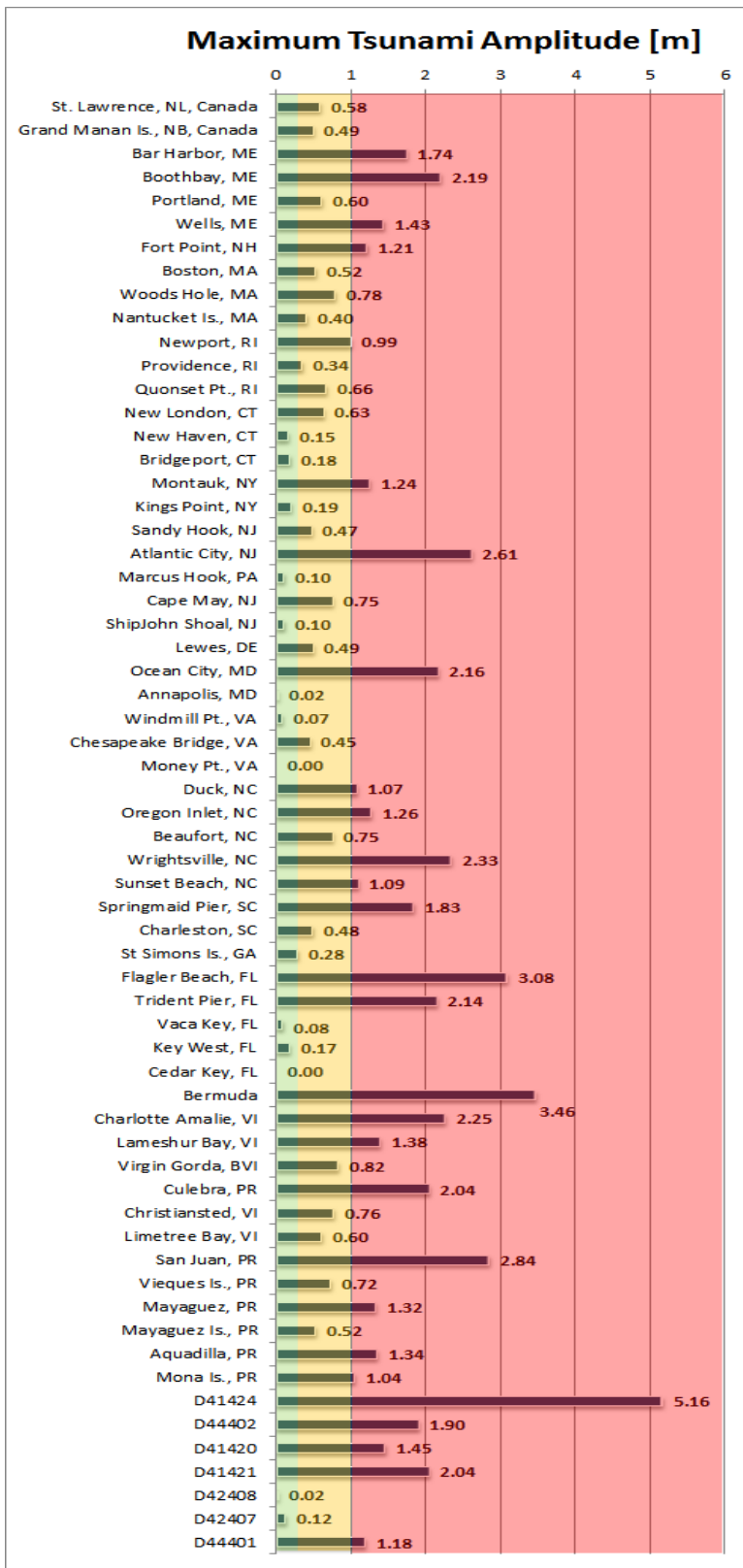
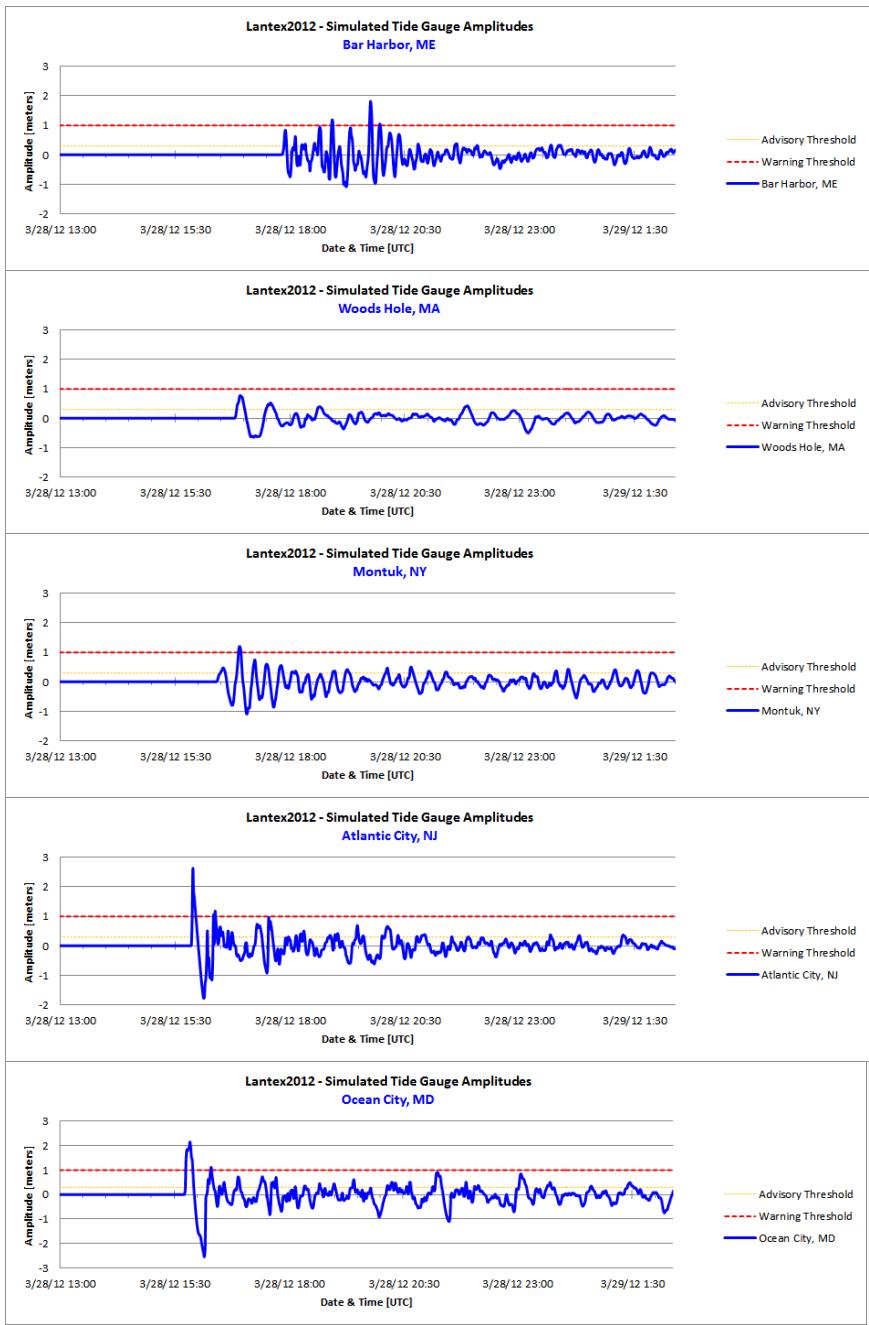


Figure B8. Maximum amplitudes forecast for various coastal locations.

Figure B8 provides forecasted tsunami maximum amplitudes for coastal locations. The green shaded areas are representative of areas of no tsunami threat, yellow for areas that would be under Advisory conditions and red for Warnings. Figure B9 are simulated time series for select coastal tide gauges. Coastal amplitudes may induce

runups along shore that are approximately double the forecast amplitude.



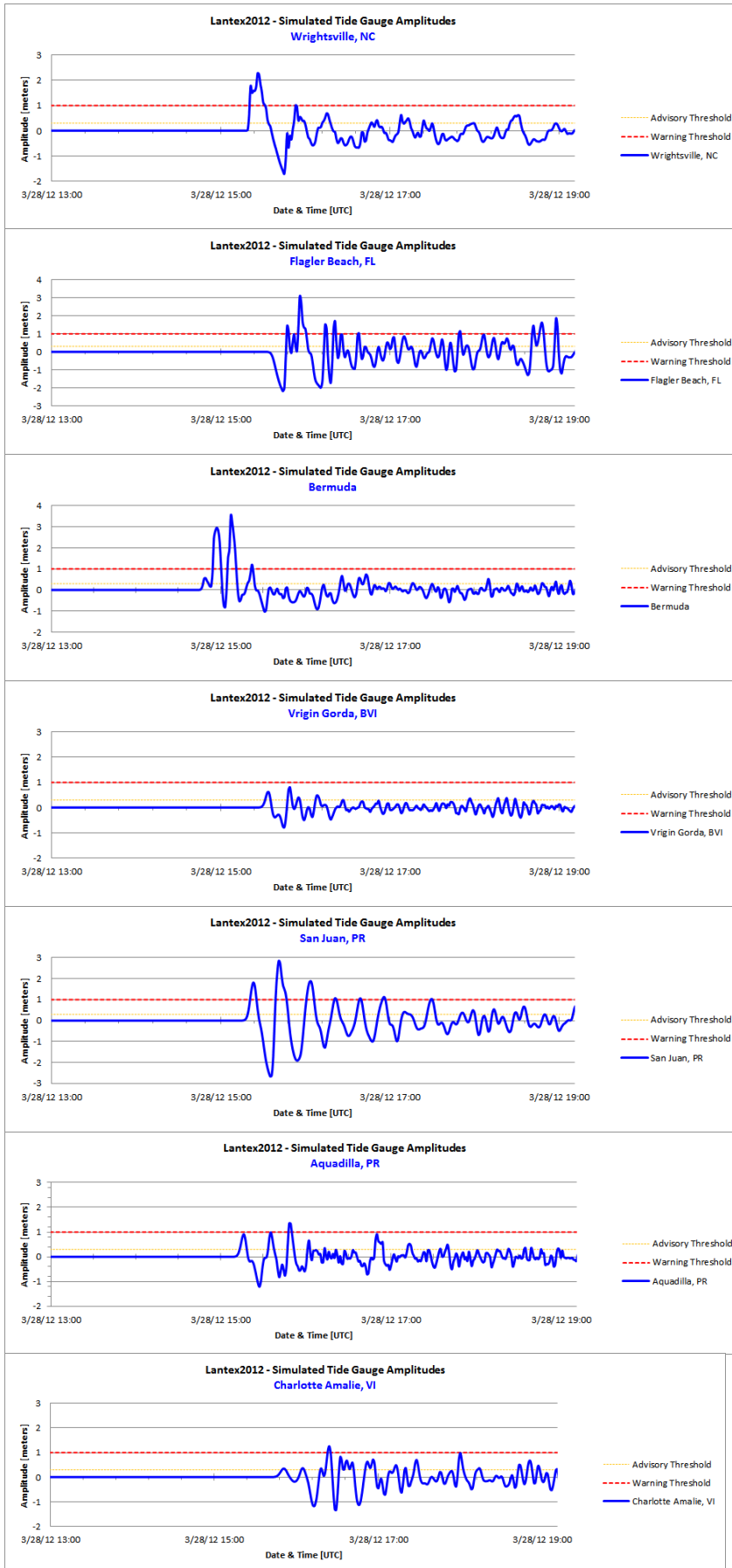


Figure B9. Time series for select coastal locations (note that the time series location for the San Juan location is not at the tide gauge, but on the outer coast).

Appendix C. Dummy Message

WCATWC

WEXX20 PAAQ 281304
TSUAT1

TEST...TSUNAMI EXERCISE MESSAGE NUMBER 1...TEST
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
904 AM EDT WED MAR 28 2012

...LANTEX 12 TSUNAMI EXERCISE MESSAGE. REFER TO WCATWC MESSAGE 1 IN
THE EXERCISE HANDBOOK. THIS IS AN EXERCISE ONLY...

THIS MESSAGE IS BEING USED TO START THE LANTEX 12 TSUNAMI EXERCISE.
THIS WILL BE THE ONLY EXERCISE MESSAGE BROADCAST FROM THE WEST
COAST/ALASKA TSUNAMI WARNING CENTER EXCLUDING SPECIAL EMAIL
MESSAGES DISCUSSED IN THE HANDBOOK. THE HANDBOOK IS AVAILABLE
AT THE WEB SITE WCATWC.ARH.NOAA.GOV. THE EXERCISE PURPOSE IS
TO PROVIDE EMERGENCY MANAGEMENT A REALISTIC SCENARIO TO TEST
TSUNAMI RESPONSE PLANS.

THIS IS ONLY AN EXERCISE.

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Exercise

Appendix D. WCATWC Exercise Messages

Scenario 1: Gulf of Mexico

The following messages, created for the LANTEX 12 Gulf of Mexico tsunami exercise (Scenario 1), are representative of the official standard products issued by the WCATWC during a magnitude 6.7 earthquake and tsunami originating approximately 190 miles northwest of Key West, Florida on the Florida Escarpment at 25.6°N, 84.6°W. During a real event, WCATWC would also issue graphical and html-based products to their web sites and via RSS.

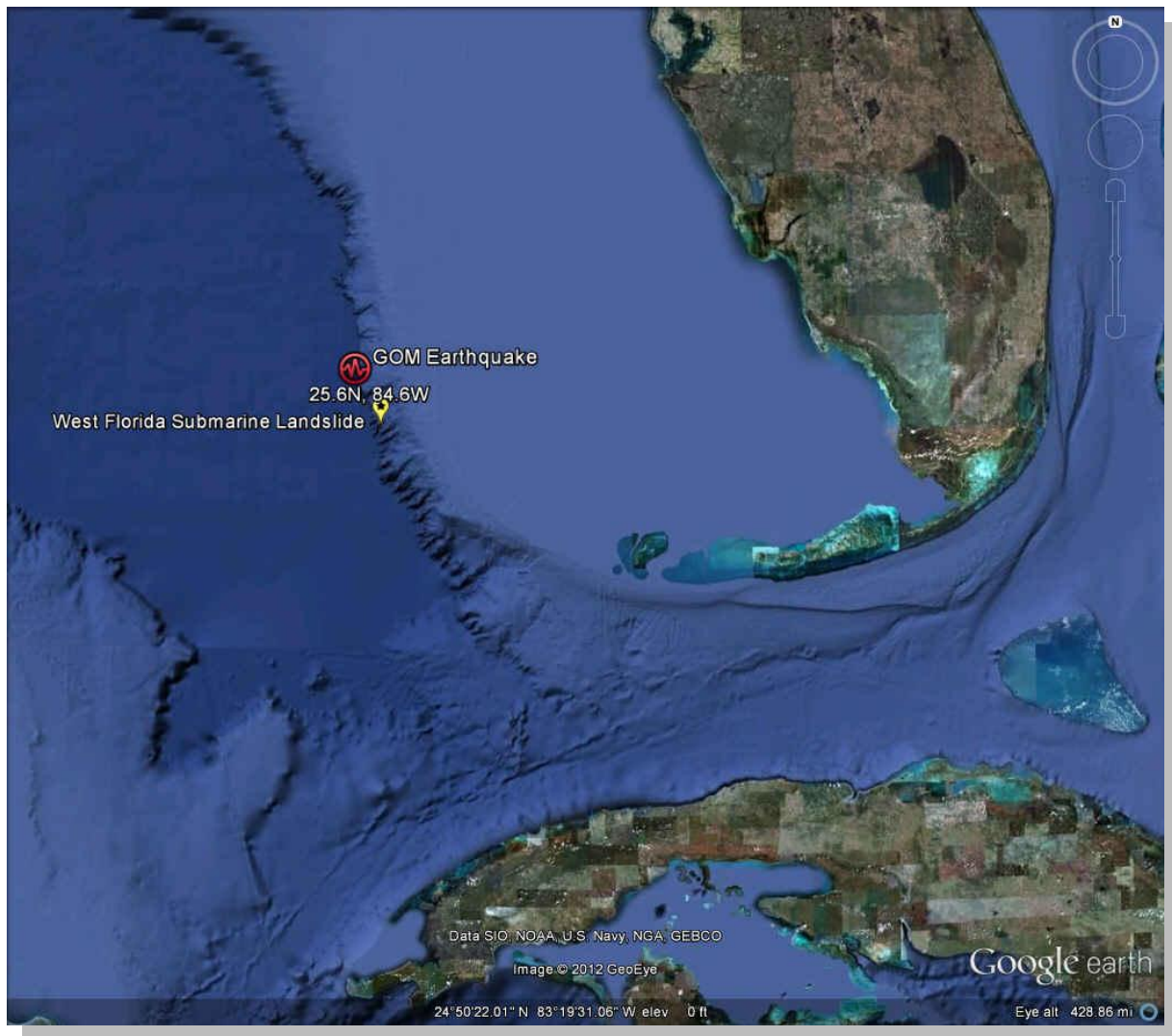


Figure D1: Scenario 1 tsunami source at zero minutes.

Scenario 1: WCATWC Message #1

WEXX20 PAAQ 281304
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 1
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK

904 AM EDT WED MAR 28 2012

...A TSUNAMI WARNING IS NOW IN EFFECT WHICH INCLUDES THE COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA - NEWFOUNDLAND AND LABRADOR FROM OCEAN REEF FLORIDA TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS...

RECOMMENDED ACTIONS

PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES. - IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 6.7
TIME - 0900 EDT MAR 28 2012
0800 CDT MAR 28 2012
0900 AST MAR 28 2012
1300 UTC MAR 28 2012
LOCATION - 25.6 NORTH 84.6 WEST
190 MILES/306 KM NW OF KEY WEST FLORIDA
210 MILES/338 KM SW OF TAMPA FLORIDA
DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ130-150-155-230-235-250-255-330-335-350-355-450-452-455-532-534-536-538-550-552-555-630-650-655-730-750-755-765-830-850-853-856-656-657-031-032-034-052>055-TXZ251-256-257-242>247-213-214-236>238-215-216-LAZ052>054-073-074-040-062-064-066>070-MSZ080>082-ALZ061>064-FLZ002-004-006-008-012-014-015-018-027-028-034-039-042-048>051-055-060-062-065-069-070-075-076>078-174-281404-/T.NEW.PAAQ.TS.W.0140.120328T1304Z-120328T1404Z/COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA 904 AM EDT WED MAR 28 2012

...A TSUNAMI WARNING IS NOW IN EFFECT WHICH INCLUDES THE COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

KEY WEST-FL 1012 EDT MAR 28 ST PETERSBURG-FL 1319 EDT MAR 28
 PANAMA CITY-FL 1027 CDT MAR 28 BILOXI-MS 1225 CDT MAR 28
 CORPUS CHRISTI-TX 1120 CDT MAR 28 GALVESTON-TX 1236 CDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
 WCATWC.ARH.NOAA.GOV

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Scenario 1: WCATWC Message #2

WEXX20 PAAQ 281335
 TSUAT1

BULLETIN
 TSUNAMI MESSAGE NUMBER 2
 NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
 935 AM EDT WED MAR 28 2012

NO NEW UPDATES SINCE LAST MESSAGE.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA - NEWFOUNDLAND AND LABRADOR FROM OCEAN REEF FLORIDA TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS...

RECOMMENDED ACTIONS
 PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.
 - IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.

PRELIMINARY EARTHQUAKE PARAMETERS
 MAGNITUDE - 6.7
 TIME - 0900 EDT MAR 28 2012
 0800 CDT MAR 28 2012
 0900 AST MAR 28 2012
 1300 UTC MAR 28 2012
 LOCATION - 25.6 NORTH 84.6 WEST
 190 MILES/306 KM NW OF KEY WEST FLORIDA
 210 MILES/338 KM SW OF TAMPA FLORIDA
 DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE

INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ130-150-155-230-235-250-255-330-335-350-355-450-452-455-532-534-536-538-550-552-555-630-650-655-730-750-755-765-830-850-853-856-656-657-031-032-034-052>055-TXZ251-256-257-242>247-213-214-236>238-215-216-LAZ052>054-073-074-040-062-064-066>070-MSZ080>082-ALZ061>064-FLZ002-004-006-008-012-014-015-018-027-028-034-039-042-048>051-055-060-062-065-069-070-075-076>078-174-281435-
/T.CON.PAAQ.TS.W.0140.120328T1335Z-120328T1435Z/
COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA
935 AM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

KEY WEST-FL	1012	EDT MAR 28	ST PETERSBURG-FL	1319	EDT MAR 28
PANAMA CITY-FL	1027	CDT MAR 28	BILOXI-MS	1225	CDT MAR 28
CORPUS CHRISTI-TX	1120	CDT MAR 28	GALVESTON-TX	1236	CDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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Scenario 1: WCATWC Message #3

WEXX20 PAAQ 281409
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 3
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
1009 AM EDT WED MAR 28 2012

DEEP OCEAN PRESSURE SENSOR INDICATES A SUBMARINE LANDSLIDE. THE WARNING IS DOWNGRADED TO AN ADVISORY FROM HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA

BORDER TO OCEAN REEF FLORIDA...

...A TSUNAMI ADVISORY IS NOW IN EFFECT WHICH INCLUDES THE COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA - NEWFOUNDLAND AND LABRADOR FROM OCEAN REEF FLORIDA TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE. PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.
- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

DEEP OCEAN PRESSURE SENSOR DATA INDICATES A TSUNAMI WAS GENERATED.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 6.7
TIME - 0900 EDT MAR 28 2012
0800 CDT MAR 28 2012
0900 AST MAR 28 2012
1300 UTC MAR 28 2012
LOCATION - 25.6 NORTH 84.6 WEST
190 MILES/306 KM NW OF KEY WEST FLORIDA
210 MILES/338 KM SW OF TAMPA FLORIDA
DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ130-150-155-230-235-250-255-330-335-350-355-TXZ251-256-

257-242>247-213-214-236>238-281509-
/T.CON.PAAQ.TS.W.0140.120328T1409Z-120328T1509Z/
COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO
HIGH ISLAND TEXAS
1009 AM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND
TEXAS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO
HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD
INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A
SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED
SITES IN THE WARNING ARE PROVIDED BELOW.

CORPUS CHRISTI-TX 1120 CDT MAR 28 GALVESTON-TX 1236 CDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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GMZ630-650-655-730-750-755-765-830-850-853-856-656-657-031-
032-034-052>055-ALZ061>064-FLZ002-004-006-008-012-014-015-
018-027-028-034-039-042-048>051-055-060-062-065-069-070-075-
076>078-174-281509-
/T.CON.PAAQ.TS.W.0140.120328T1409Z-120328T1509Z/
COASTAL AREAS BETWEEN AND INCLUDING THE MISSISSIPPI-ALABAMA
BORDER TO OCEAN REEF FLORIDA
1009 AM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA
BORDER TO OCEAN REEF FLORIDA...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO
HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD
INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A
SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED
SITES IN THE WARNING ARE PROVIDED BELOW.

KEY WEST-FL 1012 EDT MAR 28 ST PETERSBURG-FL 1319 EDT MAR 28
PANAMA CITY-FL 1027 CDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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GMZ450-452-455-532-534-536-538-550-552-555-TXZ215-216-LAZ052>054-
073-074-040-062-064-066>070-MSZ080>082-281509-
/T.CAN.PAAQ.TS.W.0140.120328T1409Z-120328T1509Z/
/T.NEW.PAAQ.TS.Y.0140.120328T1409Z-120328T1509Z/
COASTAL AREAS BETWEEN AND INCLUDING HIGH ISLAND TEXAS TO
THE MISSISSIPPI-ALABAMA BORDER
1009 AM EDT WED MAR 28 2012

...A TSUNAMI ADVISORY IS NOW IN EFFECT WHICH INCLUDES THE COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE ADVISORY ARE PROVIDED BELOW.

BILOXI-MS 1225 CDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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Scenario 1: WCATWC Message #4

WEXX20 PAAQ 281435
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 4
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
1035 AM EDT WED MAR 28 2012

TSUNAMI OBSERVATIONS ADDED BELOW.
NO CHANGE TO WARNING OR ADVISORY REGIONS.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA - NEWFOUNDLAND AND LABRADOR FROM OCEAN REEF FLORIDA TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE. PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.
- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.

- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
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KEY WEST FL	24.6N	81.8W	1412UTC	03.94FT/01.20M

TIME - TIME OF MEASUREMENT
 AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL.
 IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.
 VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

DEEP OCEAN PRESSURE SENSOR DATA INDICATES A TSUNAMI WAS GENERATED.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 6.7
 TIME - 0900 EDT MAR 28 2012
 0800 CDT MAR 28 2012
 0900 AST MAR 28 2012
 1300 UTC MAR 28 2012
 LOCATION - 25.6 NORTH 84.6 WEST
 190 MILES/306 KM NW OF KEY WEST FLORIDA
 210 MILES/338 KM SW OF TAMPA FLORIDA
 DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ130-150-155-230-235-250-255-330-335-350-355-TXZ251-256-257-242>247-213-214-236>238-281535- /T.CON.PAAQ.TS.W.0140.120328T1435Z-120328T1535Z/ COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS
 1035 AM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

CORPUS CHRISTI-TX 1120 CDT MAR 28 GALVESTON-TX 1236 CDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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GMZ630-650-655-730-750-755-765-830-850-853-856-656-657-031-032-034-052>055-ALZ061>064-FLZ002-004-006-008-012-014-015-018-027-028-034-039-042-048>051-055-060-062-065-069-070-075-076>078-174-281535- /T.CON.PAAQ.TS.W.0140.120328T1435Z-120328T1535Z/ COASTAL AREAS BETWEEN AND INCLUDING THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA 1035 AM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

KEY WEST-FL 1012 EDT MAR 28 ST PETERSBURG-FL 1319 EDT MAR 28 PANAMA CITY-FL 1027 CDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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GMZ450-452-455-532-534-536-538-550-552-555-TXZ215-216-LAZ052>054-073-074-040-062-064-066>070-MSZ080>082-281535- /T.CON.PAAQ.TS.Y.0140.120328T1435Z-120328T1535Z/ COASTAL AREAS BETWEEN AND INCLUDING HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER 1035 AM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE ADVISORY ARE PROVIDED BELOW.

BILOXI-MS 1225 CDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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Scenario 1: WCATWC Message #5

WEXX20 PAAQ 281504
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 5
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
1104 AM EDT WED MAR 28 2012

TSUNAMI OBSERVATIONS ADDED BELOW.
NO CHANGE TO WARNING OR ADVISORY REGIONS.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND
TEXAS...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA
BORDER TO OCEAN REEF FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM
HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF
FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA -
VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK -
CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE
- MAINE - NEW BRUNSWICK - NOVA SCOTIA - NEWFOUNDLAND AND
LABRADOR FROM OCEAN REEF FLORIDA TO CAPE CHIDLEY
LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF
PUERTO RICO AND THE VIRGIN ISLANDS...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE
TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE.
PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO
INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS
ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO
HIGHER GROUND.
- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF
THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
KEY WEST FL	24.6N	81.8W	1412UTC	03.94FT/01.20M
VACA KEY FL	24.7N	81.1W	1444UTC	03.28FT/01.00M

TIME - TIME OF MEASUREMENT

AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL.
IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.
VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

KEY WEST REPORTS DAMAGE TO SMALL BOATS IN A HARBOR NEAR ANGELA ST AND
ESTIMATES DAMAGE TO THE HARBOR AND BOATS TO BE BETWEEN \$150,000 AND \$250,000.

PRELIMINARY EARTHQUAKE PARAMETERS
MAGNITUDE - 6.7

TIME - 0900 EDT MAR 28 2012
 0800 CDT MAR 28 2012
 0900 AST MAR 28 2012
 1300 UTC MAR 28 2012
 LOCATION - 25.6 NORTH 84.6 WEST
 190 MILES/306 KM NW OF KEY WEST FLORIDA
 210 MILES/338 KM SW OF TAMPA FLORIDA
 DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ130-150-155-230-235-250-255-330-335-350-355-TXZ251-256-257-242>247-213-214-236>238-281604- /T.CON.PAAQ.TS.W.0140.120328T1504Z-120328T1604Z/ COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS
 1104 AM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

CORPUS CHRISTI-TX 1120 CDT MAR 28 GALVESTON-TX 1236 CDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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GMZ630-650-655-730-750-755-765-830-850-853-856-656-657-031-032-034-052>055-ALZ061>064-FLZ002-004-006-008-012-014-015-018-027-028-034-039-042-048>051-055-060-062-065-069-070-075-076>078-174-281604- /T.CON.PAAQ.TS.W.0140.120328T1504Z-120328T1604Z/ COASTAL AREAS BETWEEN AND INCLUDING THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA
 1104 AM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

KEY WEST-FL 1012 EDT MAR 28 ST PETERSBURG-FL 1319 EDT MAR 28
PANAMA CITY-FL 1027 CDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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GMZ450-452-455-532-534-536-538-550-552-555-TXZ215-216-LAZ052>054-
073-074-040-062-064-066>070-MSZ080>082-281604-
/T.CON.PAAQ.TS.Y.0140.120328T1504Z-120328T1604Z/
COASTAL AREAS BETWEEN AND INCLUDING HIGH ISLAND TEXAS TO
THE MISSISSIPPI-ALABAMA BORDER
1104 AM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE ADVISORY ARE PROVIDED BELOW.

BILOXI-MS 1225 CDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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Scenario 1: WCATWC Message #6

WEXX20 PAAQ 281534
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 6
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
1134 AM EDT WED MAR 28 2012

TSUNAMI OBSERVATIONS ADDED BELOW.
NO CHANGE TO WARNING OR ADVISORY REGIONS.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND

TEXAS...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA - NEWFOUNDLAND AND LABRADOR FROM OCEAN REEF FLORIDA TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE. PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.
- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
KEY WEST FL	24.6N	81.8W	1412UTC	03.94FT/01.20M
VACA KEY FL	24.7N	81.1W	1444UTC	03.28FT/01.00M
GRAND ISLE LA	29.2N	90.0W	1510UTC	02.95FT/00.90M
PANAMA CITY FL	30.2N	85.7W	1527UTC	03.93FT/01.20M

TIME - TIME OF MEASUREMENT

AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL. IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT. VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

VACA KEY FL REPORTS FLOODING ON CO ROAD 931. GRAND ISLE LA REPORTS TWO INJURIES TO PEOPLE WHO WERE STRUCK BY WAVES NEAR BAYSIDE CIRCLE.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 6.7
 TIME - 0900 EDT MAR 28 2012
 0800 CDT MAR 28 2012
 0900 AST MAR 28 2012
 1300 UTC MAR 28 2012
 LOCATION - 25.6 NORTH 84.6 WEST
 190 MILES/306 KM NW OF KEY WEST FLORIDA
 210 MILES/338 KM SW OF TAMPA FLORIDA
 DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING

STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ130-150-155-230-235-250-255-330-335-350-355-TXZ251-256-257-242>247-213-214-236>238-281634-
/T.CON.PAAQ.TS.W.0140.120328T1534Z-120328T1634Z/
COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS
1134 AM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

CORPUS CHRISTI-TX 1120 CDT MAR 28 GALVESTON-TX 1236 CDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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GMZ630-650-655-730-750-755-765-830-850-853-856-656-657-031-032-034-052>055-ALZ061>064-FLZ002-004-006-008-012-014-015-018-027-028-034-039-042-048>051-055-060-062-065-069-070-075-076>078-174-281634-
/T.CON.PAAQ.TS.W.0140.120328T1534Z-120328T1634Z/
COASTAL AREAS BETWEEN AND INCLUDING THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA
1134 AM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

PANAMA CITY-FL 1027 CDT MAR 28 ST PETERSBURG-FL 1319 EDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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GMZ450-452-455-532-534-536-538-550-552-555-TXZ215-216-LAZ052>054-
073-074-040-062-064-066>070-MSZ080>082-281634-
/T.CON.PAAQ.TS.Y.0140.120328T1534Z-120328T1634Z/
COASTAL AREAS BETWEEN AND INCLUDING HIGH ISLAND TEXAS TO
THE MISSISSIPPI-ALABAMA BORDER
1134 AM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM
HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF
THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING
STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR
WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD
INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE
A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED
SITES IN THE ADVISORY ARE PROVIDED BELOW.

BILOXI-MS 1225 CDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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Scenario 1: WCATWC Message #7

WEXX20 PAAQ 281604
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 7
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
1204 PM EDT WED MAR 28 2012

TSUNAMI OBSERVATIONS ADDED BELOW.
NO CHANGE TO WARNING OR ADVISORY REGIONS.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND
TEXAS...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA
BORDER TO OCEAN REEF FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM
HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF
FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA -
VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK -
CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE
- MAINE - NEW BRUNSWICK - NOVA SCOTIA - NEWFOUNDLAND AND
LABRADOR FROM OCEAN REEF FLORIDA TO CAPE CHIDLEY

LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF
PUERTO RICO AND THE VIRGIN ISLANDS...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE. PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.
- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
VACA KEY FL	24.7N	81.1W	1444UTC	03.28FT/01.00M
GRAND ISLE LA	29.2N	90.0W	1510UTC	02.95FT/00.90M
PANAMA CITY FL	30.2N	85.7W	1527UTC	03.93FT/01.20M
KEY WEST FL	24.6N	81.8W	1534UTC	06.89FT/02.10M
APALACHICOLA FL	29.7N	85.0W	1550UTC	02.95FT/00.90M
BROWNSVILLE TX	25.9N	97.5W	1559UTC	01.97FT/00.60M

TIME - TIME OF MEASUREMENT

AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL.
IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.
VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

KEY WEST FL REPORTS WAVES APPROXIMATELY 06.00FT/01.83M IN HEIGHT THAT HAVE FLOODED AREAS OF WHITEHEAD AND EATON STREETS. FLOODING HAS ALSO BEEN REPORTED AT FLORIDA KEYS COMMUNITY COLLEGE. ESTIMATED DAMAGED FOR KEY WEST FL IS NOW AT \$3 MILLION AND FIVE PEOPLE ARE REPORTED MISSING THAT WERE VISITING FORT ZACHARY TAYLOR HISTORIC STATE PARK. APALACHICOLA FL REPORTS SOME FLOODING IN LAFAYETTE PARK AND BATTERY PARK.

PRELIMINARY EARTHQUAKE PARAMETERS

- MAGNITUDE - 6.7
- TIME - 0900 EDT MAR 28 2012
- 0800 CDT MAR 28 2012
- 0900 AST MAR 28 2012
- 1300 UTC MAR 28 2012
- LOCATION - 25.6 NORTH 84.6 WEST
- 190 MILES/306 KM NW OF KEY WEST FLORIDA
- 210 MILES/338 KM SW OF TAMPA FLORIDA
- DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ130-150-155-230-235-250-255-330-335-350-355-TXZ251-256-257-242>247-213-214-236>238-281704-
/T.CON.PAAQ.TS.W.0140.120328T1604Z-120328T1704Z/
COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS
1204 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

CORPUS CHRISTI-TX 1120 CDT MAR 28 GALVESTON-TX 1236 CDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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GMZ630-650-655-730-750-755-765-830-850-853-856-656-657-031-032-034-052>055-ALZ061>064-FLZ002-004-006-008-012-014-015-018-027-028-034-039-042-048>051-055-060-062-065-069-070-075-076>078-174-281704-
/T.CON.PAAQ.TS.W.0140.120328T1604Z-120328T1704Z/
COASTAL AREAS BETWEEN AND INCLUDING THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA
1204 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

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ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

PANAMA CITY-FL 1027 CDT MAR 28 ST PETERSBURG-FL 1319 EDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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GMZ450-452-455-532-534-536-538-550-552-555-TXZ215-216-LAZ052>054-073-074-040-062-064-066>070-MSZ080>082-281704-
/T.CON.PAAQ.TS.Y.0140.120328T1604Z-120328T1704Z/

COASTAL AREAS BETWEEN AND INCLUDING HIGH ISLAND TEXAS TO
THE MISSISSIPPI-ALABAMA BORDER
1204 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM
HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF
THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING
STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR
WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD
INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE
A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED
SITES IN THE ADVISORY ARE PROVIDED BELOW.

BILOXI-MS 1225 CDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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Scenario 1: WCATWC Message #8

WEXX20 PAAQ 281635
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 8
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
1235 PM EDT WED MAR 28 2012

TSUNAMI OBSERVATIONS ADDED BELOW.
NO CHANGE TO WARNING OR ADVISORY REGIONS.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND
TEXAS...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA
BORDER TO OCEAN REEF FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM
HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF
FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA -
VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK -
CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE
- MAINE - NEW BRUNSWICK - NOVA SCOTIA - NEWFOUNDLAND AND
LABRADOR FROM OCEAN REEF FLORIDA TO CAPE CHIDLEY
LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF
PUERTO RICO AND THE VIRGIN ISLANDS...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE
TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE.
PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO
INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS

- ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.
- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.
- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
VACA KEY FL	24.7N	81.1W	1444UTC	03.28FT/01.00M
GRAND ISLE LA	29.2N	90.0W	1510UTC	02.95FT/00.90M
PANAMA CITY FL	30.2N	85.7W	1527UTC	03.93FT/01.20M
KEY WEST FL	24.6N	81.8W	1534UTC	06.89FT/02.10M
APALACHICOLA FL	29.7N	85.0W	1550UTC	02.95FT/00.90M
BROWNSVILLE TX	25.9N	97.5W	1559UTC	01.97FT/00.60M
CLEARWATER FL	28.0N	82.8W	1614UTC	01.97FT/00.60M
CORPUS CHRISTI TX	27.8N	97.4W	1620UTC	03.94FT/01.20M

TIME - TIME OF MEASUREMENT
 AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL.
 IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.
 VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

CLEARWATER FL AND BROWNSVILLE TX BOTH REPORT WAVES APPROXIMATELY 02.00FT/00.61M IN HEIGHT. BROWNSVILLE TX REPORTED SOME FLOODING ON SOUTH PADRE ISLAND ALONG GULF BLVD, WHILE MOST OF CLEARWATER FL FLOODING OCCURED ON SAND KEY ALONG COUNTY ROAD 183.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 6.7
 TIME - 0900 EDT MAR 28 2012
 0800 CDT MAR 28 2012
 0900 AST MAR 28 2012
 1300 UTC MAR 28 2012
 LOCATION - 25.6 NORTH 84.6 WEST
 190 MILES/306 KM NW OF KEY WEST FLORIDA
 210 MILES/338 KM SW OF TAMPA FLORIDA
 DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ130-150-155-230-235-250-255-330-335-350-355-TXZ251-256-257-242>247-213-214-236>238-281735- /T.CON.PAAQ.TS.W.0140.120328T1635Z-120328T1735Z/ COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS

1235 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

CORPUS CHRISTI-TX 1120 CDT MAR 28 GALVESTON-TX 1236 CDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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GMZ630-650-655-730-750-755-765-830-850-853-856-656-657-031-032-034-052>055-ALZ061>064-FLZ002-004-006-008-012-014-015-018-027-028-034-039-042-048>051-055-060-062-065-069-070-075-076>078-174-281735- /T.CON.PAAQ.TS.W.0140.120328T1635Z-120328T1735Z/ COASTAL AREAS BETWEEN AND INCLUDING THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA 1235 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

ST PETERSBURG-FL 1319 EDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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GMZ450-452-455-532-534-536-538-550-552-555-TXZ215-216-LAZ052>054-073-074-040-062-064-066>070-MSZ080>082-281735- /T.CON.PAAQ.TS.Y.0140.120328T1635Z-120328T1735Z/ COASTAL AREAS BETWEEN AND INCLUDING HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER 1235 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE ADVISORY ARE PROVIDED BELOW.

BILOXI-MS 1225 CDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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Scenario 1: WCATWC Message #9

WEXX20 PAAQ 281705
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 9
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
105 PM EDT WED MAR 28 2012

TSUNAMI OBSERVATIONS ADDED BELOW.
NO CHANGE TO WARNING OR ADVISORY REGIONS.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA - NEWFOUNDLAND AND LABRADOR FROM OCEAN REEF FLORIDA TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE. PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.
- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
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VACA KEY FL	24.7N	81.1W	1444UTC	03.28FT/01.00M
GRAND ISLE LA	29.2N	90.0W	1510UTC	02.95FT/00.90M
PANAMA CITY FL	30.2N	85.7W	1527UTC	03.93FT/01.20M
KEY WEST FL	24.6N	81.8W	1534UTC	06.89FT/02.10M
APALACHICOLA FL	29.7N	85.0W	1550UTC	02.95FT/00.90M
BROWNSVILLE TX	25.9N	97.5W	1559UTC	01.97FT/00.60M
CLEARWATER FL	28.0N	82.8W	1614UTC	01.97FT/00.60M
CORPUS CHRISTI TX	27.8N	97.4W	1620UTC	03.94FT/01.20M
WAVELAND MS	30.3N	89.4W	1645UTC	00.98FT/00.30M
PORT OCONNOR TX	28.4N	96.4W	1656UTC	03.28FT/01.00M

TIME - TIME OF MEASUREMENT

AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL.
IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.
VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

CORPUS CHRISTI TX REPORTED A WAVE APPROXIMATELY 04.00FT/01.22M IN HEIGHT WHICH DID MOST OF ITS FLOODING AROUND PORT ARANSAS TX. AREAS EFFECTED INCLUDED NUECES CO PARK AND PORT ARANSAS BEACH ROAD. PORTIONS OF PARK ROAD 22 LOCATED SOUTH OF PORT ARANSAS TX WERE ALSO REPORTED AS FLOODED. NO INJURIES WERE REPORTED THOUGH POTENTIAL MONETARY DAMAGE TO THE TOUR INDUSTRY IS CURRENTLY BEING EVALUATED.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 6.7

TIME - 0900 EDT MAR 28 2012
0800 CDT MAR 28 2012
0900 AST MAR 28 2012
1300 UTC MAR 28 2012

LOCATION - 25.6 NORTH 84.6 WEST
190 MILES/306 KM NW OF KEY WEST FLORIDA
210 MILES/338 KM SW OF TAMPA FLORIDA

DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ130-150-155-230-235-250-255-330-335-350-355-TXZ251-256-257-242>247-213-214-236>238-281805-
/T.CON.PAAQ.TS.W.0140.120328T1705Z-120328T1805Z/
COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS
105 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

CORPUS CHRISTI-TX 1120 CDT MAR 28 GALVESTON-TX 1236 CDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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GMZ630-650-655-730-750-755-765-830-850-853-856-656-657-031-032-034-052>055-ALZ061>064-FLZ002-004-006-008-012-014-015-018-027-028-034-039-042-048>051-055-060-062-065-069-070-075-076>078-174-281805-
/T.CON.PAAQ.TS.W.0140.120328T1705Z-120328T1805Z/
COASTAL AREAS BETWEEN AND INCLUDING THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA
105 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

ST PETERSBURG-FL 1319 EDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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GMZ450-452-455-532-534-536-538-550-552-555-TXZ215-216-LAZ052>054-073-074-040-062-064-066>070-MSZ080>082-281805-
/T.CON.PAAQ.TS.Y.0140.120328T1705Z-120328T1805Z/
COASTAL AREAS BETWEEN AND INCLUDING HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER
105 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL

ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE ADVISORY ARE PROVIDED BELOW.

BILOXI-MS 1225 CDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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Scenario 1: WCATWC Message #10

WEXX20 PAAQ 281734
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 10
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
134 PM EDT WED MAR 28 2012

TSUNAMI OBSERVATIONS ADDED BELOW.
NO CHANGE TO WARNING OR ADVISORY REGIONS.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA - NEWFOUNDLAND AND LABRADOR FROM OCEAN REEF FLORIDA TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE. PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.

- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
VACA KEY FL	24.7N	81.1W	1444UTC	03.28FT/01.00M
GRAND ISLE LA	29.2N	90.0W	1510UTC	02.95FT/00.90M
PANAMA CITY FL	30.2N	85.7W	1527UTC	03.93FT/01.20M
KEY WEST FL	24.6N	81.8W	1534UTC	06.89FT/02.10M
APALACHICOLA FL	29.7N	85.0W	1550UTC	02.95FT/00.90M

BROWNSVILLE TX	25.9N	97.5W	1559UTC	01.97FT/00.60M
CLEARWATER FL	28.0N	82.8W	1614UTC	01.97FT/00.60M
CORPUS CHRISTI TX	27.8N	97.4W	1620UTC	03.94FT/01.20M
WAVELAND MS	30.3N	89.4W	1645UTC	00.98FT/00.30M
PORT OCONNOR TX	28.4N	96.4W	1656UTC	03.28FT/01.00M
NAPLES FL	26.1N	81.8W	1701UTC	01.97FT/00.60M
BILOXI MS	30.4N	88.9W	1725UTC	00.98FT/00.30M

TIME - TIME OF MEASUREMENT

AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL.
IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.
VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

PORT OCONNOR TX REPORTED A 03.28FT/01.00M WAVE. OFFICIALS THERE BELIEVE THE WAVE WAS HIGHER ON THE SHORES OF THE BARRIER ISLAND PROTECTING PORT OCONNOR. SOME FLOODING WAS NOTED ALONG KING FISHER BEACH AND PARK STREET. NAPLES FL IS REPORTING A 02.00FT/00.61M WAVE WHICH CAUSED MINIMAL FLOODING SEAWARD OF GULF SHORE BLVD N. ONE PERSON DIED WHEN THIS WAVE CAUSED THEM TO SLIP AND FALL AGAINST A ROCK.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 6.7
TIME - 0900 EDT MAR 28 2012
0800 CDT MAR 28 2012
0900 AST MAR 28 2012
1300 UTC MAR 28 2012
LOCATION - 25.6 NORTH 84.6 WEST
190 MILES/306 KM NW OF KEY WEST FLORIDA
210 MILES/338 KM SW OF TAMPA FLORIDA
DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ130-150-155-230-235-250-255-330-335-350-355-TXZ251-256-257-242>247-213-214-236>238-281834-
/T.CON.PAAQ.TS.W.0140.120328T1734Z-120328T1834Z/
COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS
134 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD

INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

GALVESTON-TX 1236 CDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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GMZ630-650-655-730-750-755-765-830-850-853-856-656-657-031-032-034-052>055-ALZ061>064-FLZ002-004-006-008-012-014-015-018-027-028-034-039-042-048>051-055-060-062-065-069-070-075-076>078-174-281834-
/T.CON.PAAQ.TS.W.0140.120328T1734Z-120328T1834Z/
COASTAL AREAS BETWEEN AND INCLUDING THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA
134 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

ST PETERSBURG-FL 1319 EDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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GMZ450-452-455-532-534-536-538-550-552-555-TXZ215-216-LAZ052>054-073-074-040-062-064-066>070-MSZ080>082-281834-
/T.CON.PAAQ.TS.Y.0140.120328T1734Z-120328T1834Z/
COASTAL AREAS BETWEEN AND INCLUDING HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER
134 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE ADVISORY ARE PROVIDED BELOW.

BILOXI-MS 1225 CDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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Scenario 1: WCATWC Message #11

WEXX20 PAAQ 281804
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 11
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
204 PM EDT WED MAR 28 2012

TSUNAMI OBSERVATIONS ADDED BELOW.
NO CHANGE TO WARNING OR ADVISORY REGIONS.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND
TEXAS...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA
BORDER TO OCEAN REEF FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM
HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF
FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA -
VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK -
CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE
- MAINE - NEW BRUNSWICK - NOVA SCOTIA - NEWFOUNDLAND AND
LABRADOR FROM OCEAN REEF FLORIDA TO CAPE CHIDLEY
LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF
PUERTO RICO AND THE VIRGIN ISLANDS...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE
TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE.
PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO
INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS
ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO
HIGHER GROUND.

- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF
THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
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GRAND ISLE LA	29.2N	90.0W	1510UTC	02.95FT/00.90M
PANAMA CITY FL	30.2N	85.7W	1527UTC	03.93FT/01.20M
KEY WEST FL	24.6N	81.8W	1534UTC	06.89FT/02.10M
APALACHICOLA FL	29.7N	85.0W	1550UTC	02.95FT/00.90M
BROWNSVILLE TX	25.9N	97.5W	1559UTC	01.97FT/00.60M
CLEARWATER FL	28.0N	82.8W	1614UTC	01.97FT/00.60M
CORPUS CHRISTI TX	27.8N	97.4W	1620UTC	03.94FT/01.20M

WAVELAND MS	30.3N	89.4W	1645UTC	00.98FT/00.30M
PORT OCONNOR TX	28.4N	96.4W	1656UTC	03.28FT/01.00M
NAPLES FL	26.1N	81.8W	1701UTC	01.97FT/00.60M
BILOXI MS	30.4N	88.9W	1725UTC	00.98FT/00.30M
GALVESTON TX	29.3N	94.8W	1736UTC	00.98FT/00.30M
MORGAN CITY LA	29.7N	91.2W	1753UTC	02.95FT/00.90M

TIME - TIME OF MEASUREMENT

AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL.
IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.
VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

MORGAN CITY LA HAS REPORTED A WAVE APPROXIMATELY 03.00FT/00.91M IN HEIGHT. FLOODING FROM THIS WAVE WAS REPORTED ON ATCHAFALAYA DELTA STATE WILDLIFE MANAGEMENT AREA AND ON LEVEE ROAD NEAR BATEMAN ISLAND.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 6.7
TIME - 0900 EDT MAR 28 2012
0800 CDT MAR 28 2012
0900 AST MAR 28 2012
1300 UTC MAR 28 2012
LOCATION - 25.6 NORTH 84.6 WEST
190 MILES/306 KM NW OF KEY WEST FLORIDA
210 MILES/338 KM SW OF TAMPA FLORIDA
DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ130-150-155-230-235-250-255-330-335-350-355-TXZ251-256-257-242>247-213-214-236>238-281904-
/T.CON.PAAQ.TS.W.0140.120328T1804Z-120328T1904Z/
COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS
204 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

GALVESTON-TX 1236 CDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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GMZ630-650-655-730-750-755-765-830-850-853-856-656-657-031-032-034-052>055-ALZ061>064-FLZ002-004-006-008-012-014-015-018-027-028-034-039-042-048>051-055-060-062-065-069-070-075-076>078-174-281904-
/T.CON.PAAQ.TS.W.0140.120328T1804Z-120328T1904Z/
COASTAL AREAS BETWEEN AND INCLUDING THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA
204 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

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ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

ST PETERSBURG-FL 1319 EDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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GMZ450-452-455-532-534-536-538-550-552-555-TXZ215-216-LAZ052>054-073-074-040-062-064-066>070-MSZ080>082-281904-
/T.CON.PAAQ.TS.Y.0140.120328T1804Z-120328T1904Z/
COASTAL AREAS BETWEEN AND INCLUDING HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER
204 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE ADVISORY ARE PROVIDED BELOW.

BILOXI-MS 1225 CDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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Scenario 1: WCATWC Message #12

WEXX20 PAAQ 281834
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 12
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
234 PM EDT WED MAR 28 2012

TSUNAMI OBSERVATIONS ADDED BELOW.
NO CHANGE TO WARNING OR ADVISORY REGIONS.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND
TEXAS...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA
BORDER TO OCEAN REEF FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM
HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF
FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA -
VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK -
CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE
- MAINE - NEW BRUNSWICK - NOVA SCOTIA - NEWFOUNDLAND AND
LABRADOR FROM OCEAN REEF FLORIDA TO CAPE CHIDLEY
LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF
PUERTO RICO AND THE VIRGIN ISLANDS...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE
TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE.
PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO
INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS
ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.
- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO
HIGHER GROUND.

- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF
THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
KEY WEST FL	24.6N	81.8W	1534UTC	06.89FT/02.10M
APALACHICOLA FL	29.7N	85.0W	1550UTC	02.95FT/00.90M
BROWNSVILLE TX	25.9N	97.5W	1559UTC	01.97FT/00.60M
CLEARWATER FL	28.0N	82.8W	1614UTC	01.97FT/00.60M
CORPUS CHRISTI TX	27.8N	97.4W	1620UTC	03.94FT/01.20M
WAVELAND MS	30.3N	89.4W	1645UTC	00.98FT/00.30M
PORT OCONNOR TX	28.4N	96.4W	1656UTC	03.28FT/01.00M

NAPLES FL	26.1N	81.8W	1701UTC	01.97FT/00.60M
BILOXI MS	30.4N	88.9W	1725UTC	00.98FT/00.30M
GALVESTON TX	29.3N	94.8W	1736UTC	00.98FT/00.30M
MORGAN CITY LA	29.7N	91.2W	1753UTC	02.95FT/00.90M
CEDAR KEY FL	29.1N	83.0W	1801UTC	03.28FT/01.00M
SABINE PASS TX	29.7N	93.9W	1820UTC	02.96FT/00.90M

TIME - TIME OF MEASUREMENT

AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL.
IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.
VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

CEDAR KEY FL REPORTS A 03.00FT/00.91M WAVE THAT CAUSED SOME DAMAGE TO SMALL BOATS MOORED ALONG DOCK ST. THE INITIAL COST OF DAMAGE TO THE SMALL BOATS IS \$50,000. SABINE PASS TX HAS REPORTED DAMAGE CAUSED BY AN APPROXIMATELY 03.00FT/00.91M WAVE. INITIAL DAMAGE COSTS ARE BELIEVED TO BE AROUND \$150,000.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 6.7
TIME - 0900 EDT MAR 28 2012
0800 CDT MAR 28 2012
0900 AST MAR 28 2012
1300 UTC MAR 28 2012
LOCATION - 25.6 NORTH 84.6 WEST
190 MILES/306 KM NW OF KEY WEST FLORIDA
210 MILES/338 KM SW OF TAMPA FLORIDA
DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ130-150-155-230-235-250-255-330-335-350-355-TXZ251-256-257-242>247-213-214-236>238-281934-
/T.CON.PAAQ.TS.W.0140.120328T1834Z-120328T1934Z/
COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS
234 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

GALVESTON-TX 1236 CDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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GMZ630-650-655-730-750-755-765-830-850-853-856-656-657-031-032-034-052>055-ALZ061>064-FLZ002-004-006-008-012-014-015-018-027-028-034-039-042-048>051-055-060-062-065-069-070-075-076>078-174-281934-
/T.CON.PAAQ.TS.W.0140.120328T1834Z-120328T1934Z/
COASTAL AREAS BETWEEN AND INCLUDING THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA
234 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

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GMZ450-452-455-532-534-536-538-550-552-555-TXZ215-216-LAZ052>054-073-074-040-062-064-066>070-MSZ080>082-281934-
/T.CON.PAAQ.TS.Y.0140.120328T1834Z-120328T1934Z/
COASTAL AREAS BETWEEN AND INCLUDING HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER
234 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

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Scenario 1: WCATWC Message #13

WEXX20 PAAQ 281904
TSUAT1

BULLETIN

TSUNAMI MESSAGE NUMBER 13
 NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
 304 PM EDT WED MAR 28 2012

TSUNAMI OBSERVATIONS ADDED BELOW.
 NO CHANGE TO WARNING OR ADVISORY REGIONS.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL
 AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND
 TEXAS...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL
 AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA
 BORDER TO OCEAN REEF FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
 AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM
 HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF
 FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA -
 VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK -
 CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE
 - MAINE - NEW BRUNSWICK - NOVA SCOTIA - NEWFOUNDLAND AND
 LABRADOR FROM OCEAN REEF FLORIDA TO CAPE CHIDLEY
 LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF
 PUERTO RICO AND THE VIRGIN ISLANDS...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE
 TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE.
 PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO
 INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS
 ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO
 HIGHER GROUND.
- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF
 THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
CLEARWATER FL	28.0N	82.8W	1614UTC	01.97FT/00.60M
CORPUS CHRISTI TX	27.8N	97.4W	1620UTC	03.94FT/01.20M
WAVELAND MS	30.3N	89.4W	1645UTC	00.98FT/00.30M
PORT OCONNOR TX	28.4N	96.4W	1656UTC	03.28FT/01.00M
NAPLES FL	26.1N	81.8W	1701UTC	01.97FT/00.60M
BILOXI MS	30.4N	88.9W	1725UTC	00.98FT/00.30M
GALVESTON TX	29.3N	94.8W	1736UTC	00.98FT/00.30M
MORGAN CITY LA	29.7N	91.2W	1753UTC	02.95FT/00.90M
CEDAR KEY FL	29.1N	83.0W	1801UTC	03.28FT/01.00M
SABINE PASS TX	29.7N	93.9W	1820UTC	02.96FT/00.90M

TIME - TIME OF MEASUREMENT
 AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL.
 IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.
 VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

WAVES ARE REPORTED TO BE DIMINISHING THROUGHOUT THE GULF OF MEXICO.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 6.7
 TIME - 0900 EDT MAR 28 2012
 0800 CDT MAR 28 2012

0900 AST MAR 28 2012
 1300 UTC MAR 28 2012
 LOCATION - 25.6 NORTH 84.6 WEST
 190 MILES/306 KM NW OF KEY WEST FLORIDA
 210 MILES/338 KM SW OF TAMPA FLORIDA
 DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ130-150-155-230-235-250-255-330-335-350-355-TXZ251-256-257-242>247-213-214-236>238-282004-
 /T.CON.PAAQ.TS.W.0140.120328T1904Z-120328T2004Z/
 COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS
 304 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

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GMZ630-650-655-730-750-755-765-830-850-853-856-656-657-031-032-034-052>055-ALZ061>064-FLZ002-004-006-008-012-014-015-018-027-028-034-039-042-048>051-055-060-062-065-069-070-075-076>078-174-282004-
 /T.CON.PAAQ.TS.W.0140.120328T1904Z-120328T2004Z/
 COASTAL AREAS BETWEEN AND INCLUDING THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA
 304 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A

SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

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GMZ450-452-455-532-534-536-538-550-552-555-TXZ215-216-LAZ052>054-073-074-040-062-064-066>070-MSZ080>082-282004- /T.CON.PAAQ.TS.Y.0140.120328T1904Z-120328T2004Z/ COASTAL AREAS BETWEEN AND INCLUDING HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER 304 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

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Scenario 1: WCATWC Message #14

WEXX20 PAAQ 281934
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 14
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
334 PM EDT WED MAR 28 2012

TSUNAMI OBSERVATIONS ADDED BELOW.
NO CHANGE TO WARNING OR ADVISORY REGIONS.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA - NEWFOUNDLAND AND LABRADOR FROM OCEAN REEF FLORIDA TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS...

RECOMMENDED ACTIONS
A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE

TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE.
 PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO
 INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS
 ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO
 HIGHER GROUND.
- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF
 THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
WAVELAND MS	30.3N	89.4W	1645UTC	00.98FT/00.30M
PORT OCONNOR TX	28.4N	96.4W	1656UTC	03.28FT/01.00M
NAPLES FL	26.1N	81.8W	1701UTC	01.97FT/00.60M
BILOXI MS	30.4N	88.9W	1725UTC	00.98FT/00.30M
GALVESTON TX	29.3N	94.8W	1736UTC	00.98FT/00.30M
MORGAN CITY LA	29.7N	91.2W	1753UTC	02.95FT/00.90M
CEDAR KEY FL	29.1N	83.0W	1801UTC	03.28FT/01.00M
SABINE PASS TX	29.7N	93.9W	1820UTC	02.96FT/00.90M

TIME - TIME OF MEASUREMENT
 AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL.
 IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.
 VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

WAVES THROUGHOUT THE GULF OF MEXICO ARE REPORTED TO BE LESS THAN
 01.31FT/00.40M IN HEIGHT.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 6.7
 TIME - 0900 EDT MAR 28 2012
 0800 CDT MAR 28 2012
 0900 AST MAR 28 2012
 1300 UTC MAR 28 2012
 LOCATION - 25.6 NORTH 84.6 WEST
 190 MILES/306 KM NW OF KEY WEST FLORIDA
 210 MILES/338 KM SW OF TAMPA FLORIDA
 DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD
 INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE
 THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL
 CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE
 INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING
 STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE
 WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION
 IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE
 HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY
 CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN
 ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES
 FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF
 THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT
 UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE
WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ130-150-155-230-235-250-255-330-335-350-355-TXZ251-256-
 257-242>247-213-214-236>238-282034-
 /T.CON.PAAQ.TS.W.0140.120328T1934Z-120328T2034Z/
 COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO

HIGH ISLAND TEXAS
334 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND
TEXAS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO
HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD
INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A
SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME.

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GMZ630-650-655-730-750-755-765-830-850-853-856-656-657-031-
032-034-052>055-ALZ061>064-FLZ002-004-006-008-012-014-015-
018-027-028-034-039-042-048>051-055-060-062-065-069-070-075-
076>078-174-282034-
/T.CON.PAAQ.TS.W.0140.120328T1934Z-120328T2034Z/
COASTAL AREAS BETWEEN AND INCLUDING THE MISSISSIPPI-ALABAMA
BORDER TO OCEAN REEF FLORIDA
334 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA
BORDER TO OCEAN REEF FLORIDA...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO
HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD
INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A
SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME.

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GMZ450-452-455-532-534-536-538-550-552-555-TXZ215-216-LAZ052>054-
073-074-040-062-064-066>070-MSZ080>082-282034-
/T.CON.PAAQ.TS.Y.0140.120328T1934Z-120328T2034Z/
COASTAL AREAS BETWEEN AND INCLUDING HIGH ISLAND TEXAS TO
THE MISSISSIPPI-ALABAMA BORDER
334 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM
HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF
THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING
STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR
WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD
INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE
A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME.

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Scenario 1: WCATWC Message #15

WEXX20 PAAQ 282005
TSUAT1

BULLETIN

TSUNAMI MESSAGE NUMBER 15
 NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
 405 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING IS CANCELED FOR THE COASTAL AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS...

...THE TSUNAMI ADVISORY IS CANCELED FOR THE COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

...THE TSUNAMI WARNING IS CANCELED FOR THE COASTAL AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA...

EVALUATION

TSUNAMI AMPLITUDES HAVE DROPPED BELOW DANGEROUS LEVELS AT MOST LOCATIONS ALONG THE ATLANTIC COASTS OF THE U.S. AND CANADA. DAMAGING TSUNAMIS ARE NO LONGER EXPECTED. AS LOCAL CONDITIONS CAN CAUSE A WIDE VARIATION IN TSUNAMI WAVE ACTION THE ALL CLEAR DETERMINATIONS MUST BE MADE BY LOCAL AUTHORITIES.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
NAPLES FL	26.1N	81.8W	1701UTC	01.97FT/00.60M
BILOXI MS	30.4N	88.9W	1725UTC	00.98FT/00.30M
GALVESTON TX	29.3N	94.8W	1736UTC	00.98FT/00.30M
MORGAN CITY LA	29.7N	91.2W	1753UTC	02.95FT/00.90M
CEDAR KEY FL	29.1N	83.0W	1801UTC	03.28FT/01.00M
SABINE PASS TX	29.7N	93.9W	1820UTC	02.96FT/00.90M

TIME - TIME OF MEASUREMENT

AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL. IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT. VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

DEEP OCEAN PRESSURE SENSOR DATA INDICATES A TSUNAMI WAS GENERATED. WAVES THROUGHOUT THE GULF OF MEXICO ARE REPORTED TO BE LESS THAN 00.98FT/00.30M IN HEIGHT.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 6.7
 TIME - 0900 EDT MAR 28 2012
 0800 CDT MAR 28 2012
 0900 AST MAR 28 2012
 1300 UTC MAR 28 2012
 LOCATION - 25.6 NORTH 84.6 WEST
 190 MILES/306 KM NW OF KEY WEST FLORIDA
 210 MILES/338 KM SW OF TAMPA FLORIDA
 DEPTH - 6 MILES/10 KM

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS WILL BE THE LAST WEST COAST/ALASKA TSUNAMI WARNING CENTER MESSAGE ISSUED FOR THIS EVENT. THIS INFORMATION IS ALSO POSTED AT WCATWC.ARH.NOAA.GOV.

GMZ130-150-155-230-235-250-255-330-335-350-355-TXZ251-256-257-242>247-213-214-236>238-282205- /T.CAN.PAAQ.TS.W.0140.120328T2005Z-120328T2205Z/ COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS

405 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING IS CANCELED FOR THE COASTAL AREAS OF TEXAS FROM BROWNSVILLE TEXAS TO HIGH ISLAND TEXAS...

DAMAGING TSUNAMIS ARE NO LONGER EXPECTED. AS LOCAL CONDITIONS CAN CAUSE A WIDE VARIATION IN TSUNAMI WAVE ACTION THE ALL CLEAR DETERMINATIONS MUST BE MADE BY LOCAL AUTHORITIES.

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GMZ450-452-455-532-534-536-538-550-552-555-TXZ215-216-LAZ052>054-073-074-040-062-064-066>070-MSZ080>082-282205- /T.CAN.PAAQ.TS.Y.0140.120328T2005Z-120328T2205Z/ COASTAL AREAS BETWEEN AND INCLUDING HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER
405 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY IS CANCELED FOR THE COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI AND ALABAMA FROM HIGH ISLAND TEXAS TO THE MISSISSIPPI-ALABAMA BORDER...

DAMAGING TSUNAMIS ARE NO LONGER EXPECTED. AS LOCAL CONDITIONS CAN CAUSE A WIDE VARIATION IN TSUNAMI WAVE ACTION THE ALL CLEAR DETERMINATIONS MUST BE MADE BY LOCAL AUTHORITIES.

\$\$

GMZ630-650-655-730-750-755-765-830-850-853-856-656-657-031-032-034-052>055-ALZ061>064-FLZ002-004-006-008-012-014-015-018-027-028-034-039-042-048>051-055-060-062-065-069-070-075-076>078-174-282205- /T.CAN.PAAQ.TS.W.0140.120328T2005Z-120328T2205Z/ COASTAL AREAS BETWEEN AND INCLUDING THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA
405 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING IS CANCELED FOR THE COASTAL AREAS OF ALABAMA AND FLORIDA FROM THE MISSISSIPPI-ALABAMA BORDER TO OCEAN REEF FLORIDA...

DAMAGING TSUNAMIS ARE NO LONGER EXPECTED. AS LOCAL CONDITIONS CAN CAUSE A WIDE VARIATION IN TSUNAMI WAVE ACTION THE ALL CLEAR DETERMINATIONS MUST BE MADE BY LOCAL AUTHORITIES.

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Scenario 2: U.S. Atlantic coast

The following messages, created for the LANTEX 12 Atlantic coast tsunami exercise (Scenario 2), are representative of the official standard products issued by the WCATWC during a magnitude 7.7 earthquake and tsunami originating approximately 125 miles southeast of Myrtle Beach, South Carolina on the Atlantic continental margin at 32.0°N, 78.0°W. During a real event, WCATWC would also issue graphical and html-based products to their web sites and via RSS.

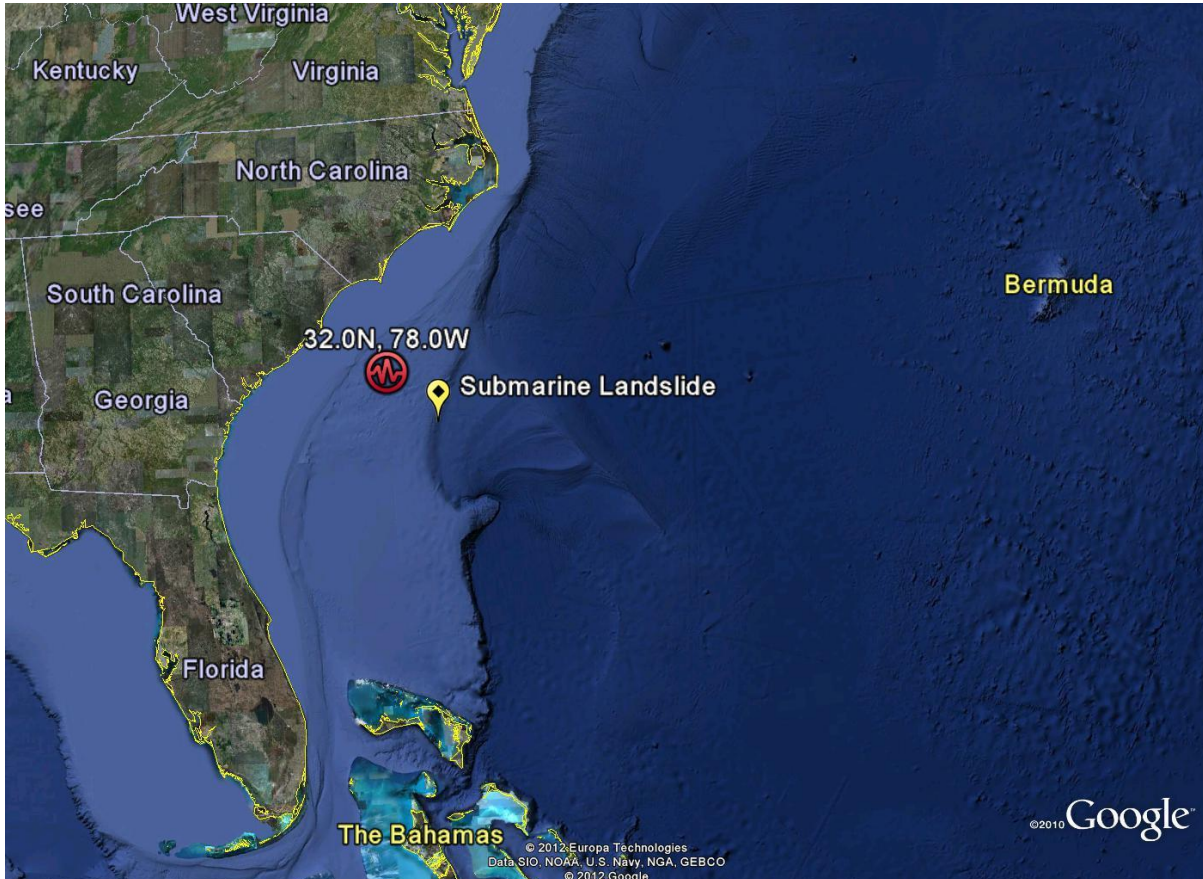


Figure D2: Scenario 2 tsunami source at zero minutes.

Scenario 2: WCATWC Message #1

WEXX20 PAAQ 281304
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 1
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
904 AM EDT WED MAR 28 2012

...A TSUNAMI WARNING IS NOW IN EFFECT WHICH INCLUDES THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA AND NORTH CAROLINA FROM JUPITER INLET FLORIDA TO DUCK NORTH CAROLINA...

...A TSUNAMI ADVISORY IS NOW IN EFFECT WHICH INCLUDES THE COASTAL AREAS OF FLORIDA FROM FLAMINGO FLORIDA TO JUPITER INLET FLORIDA...

...A TSUNAMI ADVISORY IS NOW IN EFFECT WHICH INCLUDES THE

COASTAL AREAS OF NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE AND NEW JERSEY FROM DUCK NORTH CAROLINA TO SANDY HOOK NEW JERSEY...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM BROWNSVILLE TEXAS TO FLAMINGO FLORIDA...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA - NEWFOUNDLAND AND LABRADOR FROM SANDY HOOK NEW JERSEY TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS...

RECOMMENDED ACTIONS

PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.

- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.7

TIME - 0900 EDT MAR 28 2012
0800 CDT MAR 28 2012
0900 AST MAR 28 2012
1300 UTC MAR 28 2012

LOCATION - 32.0 NORTH 78.0 WEST
125 MILES/201 KM SE OF MYRTLE BEACH SOUTH CAROLINA
125 MILES/201 KM SE OF CHARLESTON SOUTH CAROLINA

DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

AMZ550-552-555-450-452-454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-158-FLZ047-054-059-064-141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>052-054-056-NCZ106-108-110-045>047-080-081-094-095-098-103-104-281404-/T.NEW.PAAQ.TS.W.0011.120328T1304Z-120328T1404Z/
COASTAL AREAS BETWEEN AND INCLUDING JUPITER INLET FLORIDA TO DUCK NORTH CAROLINA
904 AM EDT WED MAR 28 2012

...A TSUNAMI WARNING IS NOW IN EFFECT WHICH INCLUDES THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA AND NORTH CAROLINA FROM JUPITER INLET FLORIDA TO DUCK NORTH CAROLINA...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

CAPE HATTERAS-NC	1038	EDT MAR 28	JACKSONVILL B-FL	1153	EDT MAR 28
MYRTLE BCH-SC	1136	EDT MAR 28	SAVANNAH-GA	1157	EDT MAR 28
CHARLESTON-SC	1140	EDT MAR 28	MELBOURNE-FL	1208	EDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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GMZ031-032-034-052>055-AMZ630-650-651-FLZ076>078-174-168-172-173-281404-
/T.NEW.PAAQ.TS.Y.0011.120328T1304Z-120328T1404Z/
COASTAL AREAS BETWEEN AND INCLUDING FLAMINGO FLORIDA TO JUPITER INLET FLORIDA
904 AM EDT WED MAR 28 2012

...A TSUNAMI ADVISORY IS NOW IN EFFECT WHICH INCLUDES THE COASTAL AREAS OF FLORIDA FROM FLAMINGO FLORIDA TO JUPITER INLET FLORIDA...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE ADVISORY ARE PROVIDED BELOW.

MIAMI-FL 1136 EDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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ANZ631>634-656-658-650-652-654-430-431-450>455-NCZ015>017-030>032-102-VAZ084-086-091-094-095-098-099-100-MDZ025-DEZ002>004-
NJZ006-012>014-021-023>026-106-108-281404-
/T.NEW.PAAQ.TS.Y.0011.120328T1304Z-120328T1404Z/
COASTAL AREAS BETWEEN AND INCLUDING DUCK NORTH CAROLINA TO SANDY HOOK NEW JERSEY
904 AM EDT WED MAR 28 2012

...A TSUNAMI ADVISORY IS NOW IN EFFECT WHICH INCLUDES THE COASTAL AREAS OF NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE AND NEW JERSEY FROM DUCK NORTH CAROLINA TO SANDY HOOK NEW JERSEY...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE ADVISORY ARE PROVIDED BELOW.

VIRGINIA BCH-VA 1222 EDT MAR 28 ATLANTIC CITY-NJ 1234 EDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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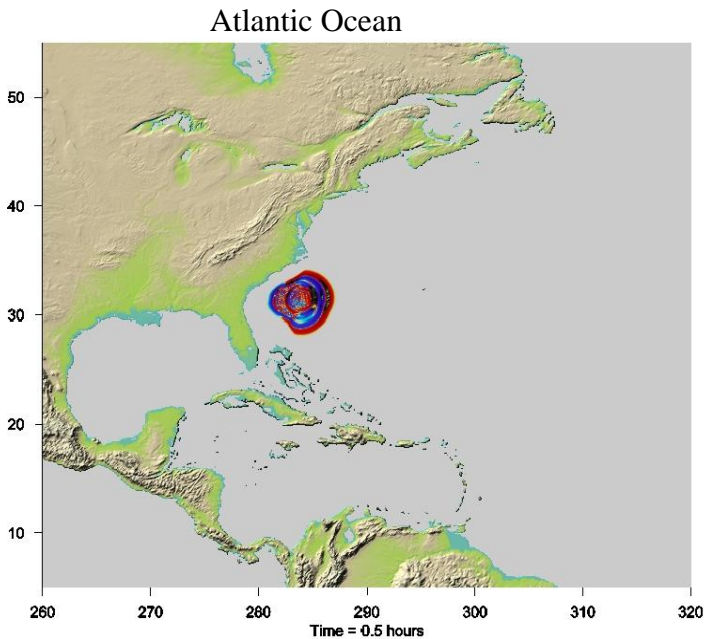


Figure D3: Scenario 2 tsunami at 30 minutes (provided to indicate wave front at time of message).

Scenario 2: WCATWC Message #2

WEXX20 PAAQ 281331
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 2
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
931 AM EDT WED MAR 28 2012

NO NEW UPDATES SINCE LAST MESSAGE.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA AND NORTH CAROLINA FROM JUPITER INLET FLORIDA TO DUCK NORTH CAROLINA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA FROM FLAMINGO FLORIDA TO JUPITER INLET FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE

AND NEW JERSEY FROM DUCK NORTH CAROLINA TO SANDY HOOK NEW JERSEY...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM BROWNSVILLE TEXAS TO FLAMINGO FLORIDA...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA - NEWFOUNDLAND AND LABRADOR FROM SANDY HOOK NEW JERSEY TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS...

RECOMMENDED ACTIONS

PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.
- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.7
TIME - 0900 EDT MAR 28 2012
 0800 CDT MAR 28 2012
 0900 AST MAR 28 2012
 1300 UTC MAR 28 2012
LOCATION - 32.0 NORTH 78.0 WEST
 125 MILES/201 KM SE OF MYRTLE BEACH SOUTH CAROLINA
 125 MILES/201 KM SE OF CHARLESTON SOUTH CAROLINA
DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

AMZ550-552-555-450-452-454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-158-FLZ047-054-059-064-141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>052-054-056-NCZ106-108-110-045>047-080-081-094-095-098-103-104-281431-/T.CON.PAAQ.TS.W.0011.120328T1331Z-120328T1431Z/
COASTAL AREAS BETWEEN AND INCLUDING JUPITER INLET FLORIDA TO DUCK NORTH CAROLINA
931 AM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA AND NORTH CAROLINA FROM JUPITER INLET FLORIDA TO DUCK NORTH CAROLINA...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

CAPE HATTERAS-NC	1038	EDT	MAR 28	JACKSONVILL B-FL	1153	EDT	MAR 28
MYRTLE BCH-SC	1136	EDT	MAR 28	SAVANNAH-GA	1157	EDT	MAR 28
CHARLESTON-SC	1140	EDT	MAR 28	MELBOURNE-FL	1208	EDT	MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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GMZ031-032-034-052>055-AMZ630-650-651-FLZ076>078-174-168-172-173-281431-
/T.CON.PAAQ.TS.Y.0011.120328T1331Z-120328T1431Z/
COASTAL AREAS BETWEEN AND INCLUDING FLAMINGO FLORIDA TO JUPITER INLET FLORIDA
931 AM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA FROM FLAMINGO FLORIDA TO JUPTER INLET FLORIDA...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE ADVISORY ARE PROVIDED BELOW.

MIAMI-FL 1136 EDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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ANZ631>634-656-658-650-652-654-430-431-450>455-NCZ015>017-030>032-102-VAZ084-086-091-094-095-098-099-100-MDZ025-DEZ002>004-NJZ006-012>014-021-023>026-106-108-281431-
/T.CON.PAAQ.TS.Y.0011.120328T1331Z-120328T1431Z/
COASTAL AREAS BETWEEN AND INCLUDING DUCK NORTH CAROLINA TO SANDY HOOK NEW JERSEY
931 AM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE AND NEW JERSEY FROM DUCK NORTH CAROLINA TO SANDY HOOK NEW JERSEY...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF

THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE ADVISORY ARE PROVIDED BELOW.

VIRGINIA BCH-VA 1222 EDT MAR 28 ATLANTIC CITY-NJ 1234 EDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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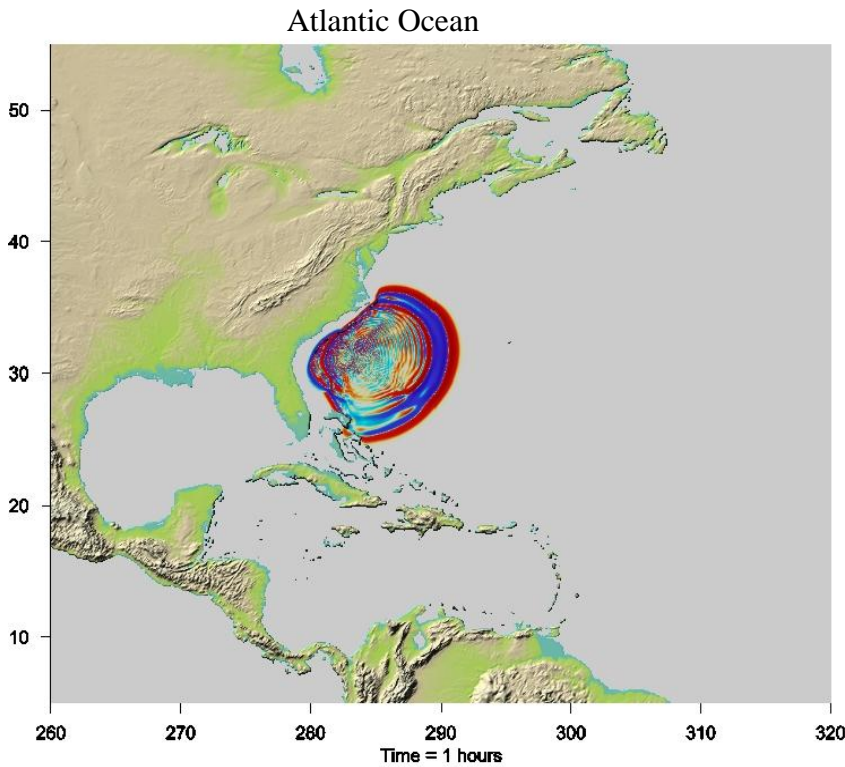


Figure D4: Scenario 2 tsunami at 60 minutes (provided to indicate wave front at time of message).

Scenario 2: WCATWC Message #3

WEXX20 PAAQ 281408
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 3
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
1008 AM EDT WED MAR 28 2012

DEEP OCEAN PRESSURE SENSOR DATA INDICATES A TSUNAMI WAS GENERATED.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA AND NORTH CAROLINA FROM JUPITER INLET FLORIDA TO DUCK NORTH CAROLINA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA FROM FLAMINGO FLORIDA TO JUPITER INLET

FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE AND NEW JERSEY FROM DUCK NORTH CAROLINA TO SANDY HOOK NEW JERSEY...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM BROWNSVILLE TEXAS TO FLAMINGO FLORIDA...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA - NEWFOUNDLAND AND LABRADOR FROM SANDY HOOK NEW JERSEY TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE. PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.
- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

DEEP OCEAN PRESSURE SENSOR DATA INDICATES A TSUNAMI WAS GENERATED.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.7
 TIME - 0900 EDT MAR 28 2012
 0800 CDT MAR 28 2012
 0900 AST MAR 28 2012
 1300 UTC MAR 28 2012
 LOCATION - 32.0 NORTH 78.0 WEST
 125 MILES/201 KM SE OF MYRTLE BEACH SOUTH CAROLINA
 125 MILES/201 KM SE OF CHARLESTON SOUTH CAROLINA
 DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

AMZ550-552-555-450-452-454-330-350-352-354-250-252-254-256-
 130-135-150-152-154-156-158-FLZ047-054-059-064-141-147-024-
 025-033-038-GAZ154-166-117-119-139-141-SCZ048>052-054-056-
 NCZ106-108-110-045>047-080-081-094-095-098-103-104-281508-
 /T.CON.PAAQ.TS.W.0011.120328T1408Z-120328T1508Z/
 COASTAL AREAS BETWEEN AND INCLUDING JUPITER INLET FLORIDA
 TO DUCK NORTH CAROLINA
 1008 AM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL
 AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA AND NORTH
 CAROLINA FROM JUPITER INLET FLORIDA TO DUCK NORTH
 CAROLINA...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO
 HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD
 INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A
 SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
 ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED
 SITES IN THE WARNING ARE PROVIDED BELOW.

CAPE HATTERAS-NC	1038	EDT MAR 28	JACKSONVILL B-FL	1153	EDT MAR 28
MYRTLE BCH-SC	1136	EDT MAR 28	SAVANNAH-GA	1157	EDT MAR 28
CHARLESTON-SC	1140	EDT MAR 28	MELBOURNE-FL	1208	EDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
 WCATWC.ARH.NOAA.GOV

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GMZ031-032-034-052>055-AMZ630-650-651-FLZ076>078-174-168-172-
 173-281508-
 /T.CON.PAAQ.TS.Y.0011.120328T1408Z-120328T1508Z/
 COASTAL AREAS BETWEEN AND INCLUDING FLAMINGO FLORIDA TO
 JUPITER INLET FLORIDA
 1008 AM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
 AREAS OF FLORIDA FROM FLAMINGO FLORIDA TO JUPITER INLET
 FLORIDA...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF
 THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING
 STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR
 WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD
 INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE
 A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
 ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED
 SITES IN THE ADVISORY ARE PROVIDED BELOW.

MIAMI-FL 1136 EDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
 WCATWC.ARH.NOAA.GOV

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ANZ631>634-656-658-650-652-654-430-431-450>455-NCZ015>017-
 030>032-102-VAZ084-086-091-094-095-098-099-100-MDZ025-DEZ002>004-
 NJZ006-012>014-021-023>026-106-108-281508-
 /T.CON.PAAQ.TS.Y.0011.120328T1408Z-120328T1508Z/

COASTAL AREAS BETWEEN AND INCLUDING DUCK NORTH CAROLINA TO SANDY HOOK NEW JERSEY
1008 AM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE AND NEW JERSEY FROM DUCK NORTH CAROLINA TO SANDY HOOK NEW JERSEY...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE ADVISORY ARE PROVIDED BELOW.

VIRGINIA BCH-VA 1222 EDT MAR 28 ATLANTIC CITY-NJ 1234 EDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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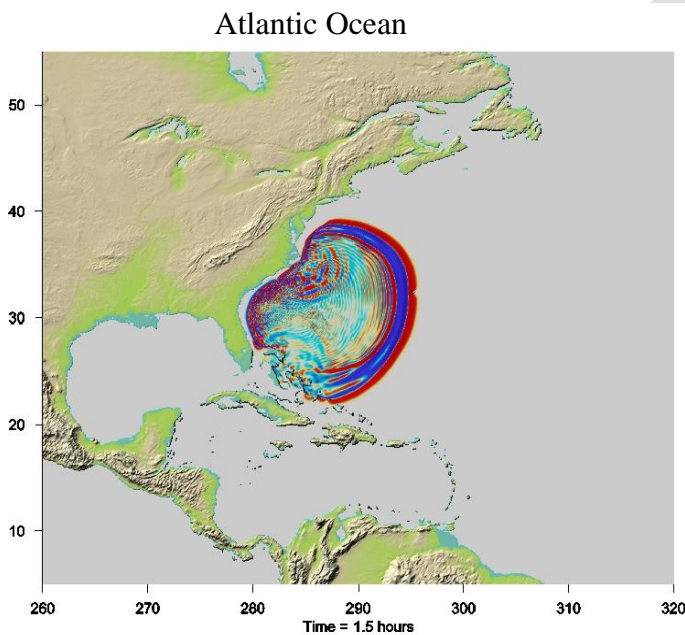


Figure D5: Scenario 2 tsunami at 90 minutes (provided to indicate wave front at time of message).

Scenario 2: WCATWC Message #4

WEXX20 PAAQ 281436
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 4
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
1036 AM EDT WED MAR 28 2012

WARNING HAS BEEN EXTENDED FROM FLAMINGO FL TO SANDY HOOK NJ.
ADVISORY HAS BEEN MODIFIED TO INCLUDE SANDY HOOK NJ TO CAPE CHIDLEY NL. PUERTO RICO - BVI - VI ARE IN A WARNING.

...THE TSUNAMI WARNING IS MODIFIED TO INCLUDE THE COASTAL AREAS OF FLORIDA FROM FLAMINGO FLORIDA TO JUPITER INLET FLORIDA...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA AND NORTH CAROLINA FROM JUPITER INLET FLORIDA TO DUCK NORTH CAROLINA...

...THE TSUNAMI WARNING IS MODIFIED TO INCLUDE THE COASTAL AREAS OF NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE AND NEW JERSEY FROM DUCK NORTH CAROLINA TO SANDY HOOK NEW JERSEY...

...THE TSUNAMI WARNING IS MODIFIED TO INCLUDE PUERTO RICO AND THE VIRGIN ISLANDS...

...THE TSUNAMI ADVISORY IS MODIFIED TO INCLUDE THE COASTAL AREAS OF NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA - NEWFOUNDLAND AND LABRADOR FROM SANDY HOOK NEW JERSEY TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM BROWNSVILLE TEXAS TO FLAMINGO FLORIDA...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE. PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.
- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

DEEP OCEAN PRESSURE SENSOR DATA INDICATES A TSUNAMI WAS GENERATED.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.7
TIME - 0900 EDT MAR 28 2012
 0800 CDT MAR 28 2012
 0900 AST MAR 28 2012
 1300 UTC MAR 28 2012
LOCATION - 32.0 NORTH 78.0 WEST
 125 MILES/201 KM SE OF MYRTLE BEACH SOUTH CAROLINA
 125 MILES/201 KM SE OF CHARLESTON SOUTH CAROLINA
DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN

ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ031-032-034-052>055-AMZ630-650-651-FLZ076>078-174-168-172-173-281536-
/T.CAN.PAAQ.TS.Y.0011.120328T1436Z-120328T1536Z/
/T.EXA.PAAQ.TS.W.0011.120328T1436Z-120328T1536Z/
COASTAL AREAS BETWEEN AND INCLUDING FLAMINGO FLORIDA TO JUPITER INLET FLORIDA
1036 AM EDT WED MAR 28 2012

...THE TSUNAMI WARNING IS MODIFIED TO INCLUDE THE COASTAL AREAS OF FLORIDA FROM FLAMINGO FLORIDA TO JUPITER INLET FLORIDA...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

MIAMI-FL 1136 EDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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AMZ550-552-555-450-452-454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-158-FLZ047-054-059-064-141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>052-054-056-NCZ106-108-110-045>047-080-081-094-095-098-103-104-281536-
/T.CON.PAAQ.TS.W.0011.120328T1436Z-120328T1536Z/
COASTAL AREAS BETWEEN AND INCLUDING JUPITER INLET FLORIDA TO DUCK NORTH CAROLINA
1036 AM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA AND NORTH CAROLINA FROM JUPITER INLET FLORIDA TO DUCK NORTH CAROLINA...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

CAPE HATTERAS-NC 1038 EDT MAR 28 JACKSONVILL B-FL 1153 EDT MAR 28
MYRTLE BCH-SC 1136 EDT MAR 28 SAVANNAH-GA 1157 EDT MAR 28
CHARLESTON-SC 1140 EDT MAR 28 MELBOURNE-FL 1208 EDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE

WCATWC.ARH.NOAA.GOV

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ANZ631>634-656-658-650-652-654-430-431-450>455-NCZ015>017-030>032-102-VAZ084-086-091-094-095-098-099-100-MDZ025-DEZ002>004-NJZ006-012>014-021-023>026-106-108-281536- /T.CAN.PAAQ.TS.Y.0011.120328T1436Z-120328T1536Z/ /T.EXA.PAAQ.TS.W.0011.120328T1436Z-120328T1536Z/ COASTAL AREAS BETWEEN AND INCLUDING DUCK NORTH CAROLINA TO SANDY HOOK NEW JERSEY 1036 AM EDT WED MAR 28 2012

...THE TSUNAMI WARNING IS MODIFIED TO INCLUDE THE COASTAL AREAS OF NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE AND NEW JERSEY FROM DUCK NORTH CAROLINA TO SANDY HOOK NEW JERSEY...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

VIRGINIA BCH-VA 1222 EDT MAR 28 ATLANTIC CITY-NJ 1234 EDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-VIZ001-002-281536- /T.EXA.PAAQ.TS.W.0011.120328T1436Z-120328T1536Z/ COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS. 1036 AM EDT WED MAR 28 2012

...THE TSUNAMI WARNING IS MIDOFIED TO INCLUDE PUERTO RICO AND THE VIRGIN ISLANDS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

SAN JUAN-PR 1140 AST MAR 28 CHRISTIANSTED-VI 1157 AST MAR 28 MAYAGUEZ-PR 1145 AST MAR 28 CHARLOT AMALI-VI 1218 AST MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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ANZ330-335-338-340-345-350-353-355-230>237-250-254-255-256-150-050>052-NYZ071>075-078>081-176>179-CTZ009>012-RIZ002-004>008-MAZ007-016-019>024-NHZ014-MEZ022>028-029-030-NBZ570-550-660-641-NSZ210-230-260-250-110-120-130-170-160-150-140-270-280-

320-410-450-440-430-QCZ670-680-NLZ340-220-230-210-120-110-
 130-540-530-570-520-510-560-610-720-710-730-281536-
 /T.EXA.PAAQ.TS.Y.0011.120328T1436Z-120328T1536Z/
 COASTAL AREAS BETWEEN AND INCLUDING SANDY HOOK NEW JERSEY
 TO CAPE CHIDLEY LABRADOR
 1036 AM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY IS MODIFIED TO INCLUDE THE COASTAL
 AREAS OF NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND
 - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK -
 NOVA SCOTIA - NEWFOUNDLAND AND LABRADOR FROM SANDY HOOK NEW
 JERSEY TO CAPE CHIDLEY LABRADOR...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF
 THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING
 STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR
 WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD
 INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE
 A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
 ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED
 SITES IN THE ADVISORY ARE PROVIDED BELOW.

MONTAUK-NY	1234	EDT	MAR 28	ST LAWRENCE-NL	1542	NDT	MAR 28
LOCKEPORT-NS	1350	ADT	MAR 28	PORTLAND-ME	1430	EDT	MAR 28
NANTUCKET IS-MA	1313	EDT	MAR 28	BOSTON-MA	1442	EDT	MAR 28
MANHATTAN-NY	1357	EDT	MAR 28	BONAVISTA-NL	1748	NDT	MAR 28
SCATARIE IS-NS	1501	ADT	MAR 28	BATTLE HARBOR-NL	1815	NDT	MAR 28
GRAND MANAN-NB	1503	ADT	MAR 28				

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
 WCATWC.ARH.NOAA.GOV

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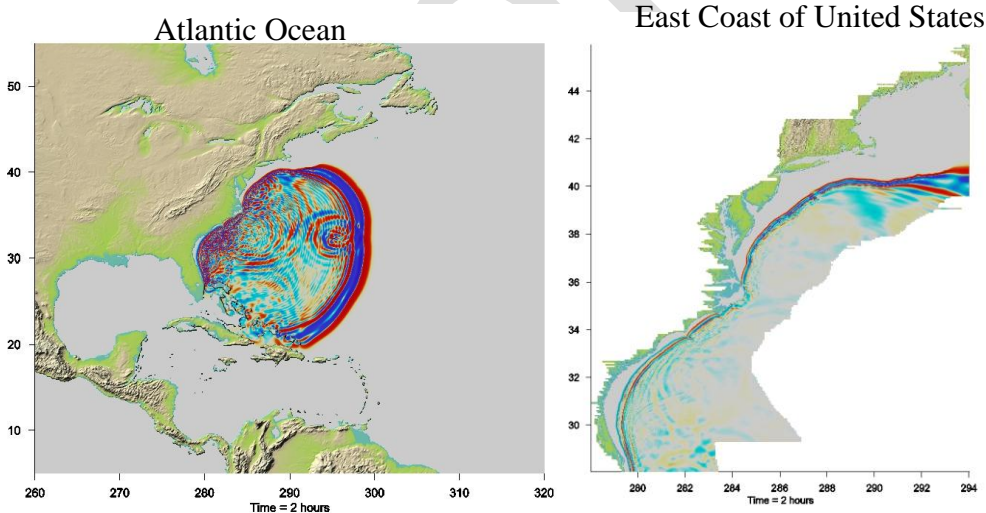


Figure D6: Scenario 2 tsunami at 2 hours (provided to indicate wave front at time of message).

Scenario 2: WCATWC Message #5

WEXX20 PAAQ 281506
 TSUAT1

BULLETIN
 TSUNAMI MESSAGE NUMBER 5
 NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
 1106 AM EDT WED MAR 28 2012

WARNING IS EXTENDED TO INCLUDE THE COAST FROM SANDY HOOK NJ TO LA MANCHE NF. NEW OBSERVATIONS ARE ADDED BELOW.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE AND NEW JERSEY FROM FLAMINGO FLORIDA TO SANDY HOOK NEW JERSEY...

...THE TSUNAMI WARNING IS MODIFIED TO INCLUDE THE COASTAL AREAS OF NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM SANDY HOOK NEW JERSEY TO LA MANCHE NEWFOUNDLAND...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO AND THE VIRGIN ISLANDS...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM BROWNSVILLE TEXAS TO FLAMINGO FLORIDA...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE. PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.
- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
CAPE HATTERAS NC	35.3N	75.5W	1438UTC	06.89FT/02.10M
BERMUDA	32.3N	64.8W	1501UTC	09.84FT/03.00M

TIME - TIME OF MEASUREMENT

AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL. IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT. VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

CAPE HATTERAS NC REPORTS TOTAL INNUNDATION OF CAPE POINT CAMPGROUND AND LIGHTHOUSE RD. HWY 12 HAS BEEN WASHED OUT IN SEVERAL AREAS MAKING IT IMPOSSIBLE FOR THOSE ON HATTERAS BIGHT TO LEAVE. FOUR PEOPLE WERE SEEN BEING SWEPTED OUT TO SEA. BERMUDA REPORTS THAT THE COMMISSIONERS HOUSE ON BERMUDA'S IRELAND ISLAND HAS BEEN SWEEP AWAY, AS WELL AS AN ARM LEADING TO THE VISITORS SERVICE BUREAU. BERMUDA'S SPANISH POINT ROAD AND N SHORE ROAD ARE FLOODED. BERMUDA'S LF WADE INTERNATIONAL AIRPORT IS CURRENTLY CLOSED.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.7
 TIME - 0900 EDT MAR 28 2012
 0800 CDT MAR 28 2012
 0900 AST MAR 28 2012
 1300 UTC MAR 28 2012
 LOCATION - 32.0 NORTH 78.0 WEST
 125 MILES/201 KM SE OF MYRTLE BEACH SOUTH CAROLINA
 125 MILES/201 KM SE OF CHARLESTON SOUTH CAROLINA
 DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ031-032-034-052>055-AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-158-ANZ631>634-656-658-650-652-654-430-431-450>455-FLZ076>078-174-168-172-173-047-054-059-064-141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>052-054-056-NCZ106-108-110-045>047-080-081-094-095-098-103-104-015>017-030>032-102-VAZ084-086-091-094-095-098-099-100-MDZ025-DEZ002>004-NJZ006-012>014-021-023>026-106-108-281606-
/T.CON.PAAQ.TS.W.0011.120328T1506Z-120328T1606Z/
COASTAL AREAS BETWEEN AND INCLUDING FLAMINGO FLORIDA TO SANDY HOOK NEW JERSEY
1106 AM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE AND NEW JERSEY FROM FLAMINGO FLORIDA TO SANDY HOOK NEW JERSEY...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

CAPE HATTERAS-NC	1038	EDT	MAR 28	SAVANNAH-GA	1157	EDT	MAR 28
MIAMI-FL	1136	EDT	MAR 28	MELBOURNE-FL	1208	EDT	MAR 28
MYRTLE BCH-SC	1136	EDT	MAR 28	VIRGINIA BCH-VA	1222	EDT	MAR 28
CHARLESTON-SC	1140	EDT	MAR 28	ATLANTIC CITY-NJ	1234	EDT	MAR 28
JACKSONVILL B-FL	1153	EDT	MAR 28				

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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ANZ330-335-338-340-345-350-353-355-230>237-250-254-255-256-150-050>052-NYZ071>075-078>081-176>179-CTZ009>012-RIZ002-004>008-MAZ007-016-019>024-NHZ014-MEZ022>028-029-030-NBZ570-550-660-641-NSZ210-230-260-250-110-120-130-170-160-150-140-270-280-320-410-450-440-430-QCZ670-680-NLZ340-220-230-210-120-281606-

/T.CAN.PAAQ.TS.Y.0011.120328T1506Z-120328T1606Z/
 /T.EXA.PAAQ.TS.W.0011.120328T1506Z-120328T1606Z/
 COASTAL AREAS BETWEEN AND INCLUDING SANDY HOOK NEW JERSEY
 TO LA MANCHE NEWFOUNDLAND
 1106 AM EDT WED MAR 28 2012

...THE TSUNAMI WARNING IS MODIFIED TO INCLUDE THE COASTAL
 AREAS OF NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND
 - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK -
 NOVA SCOTIA AND NEWFOUNDLAND FROM SANDY HOOK NEW JERSEY TO
 LA MANCHE NEWFOUNDLAND...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO
 HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD
 INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A
 SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
 ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED
 SITES IN THE WARNING ARE PROVIDED BELOW.

MONTAUK-NY	1234	EDT	MAR 28	GRAND MANAN-NB	1503	ADT	MAR 28
LOCKEPORT-NS	1350	ADT	MAR 28	ST LAWRENCE-NL	1542	NDT	MAR 28
NANTUCKET IS-MA	1313	EDT	MAR 28	PORTLAND-ME	1430	EDT	MAR 28
MANHATTAN-NY	1357	EDT	MAR 28	BOSTON-MA	1442	EDT	MAR 28
SCATARIE IS-NS	1501	ADT	MAR 28				

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
 WCATWC.ARH.NOAA.GOV

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-
 VIZ001-002-281606-
 /T.CON.PAAQ.TS.W.0011.120328T1506Z-120328T1606Z/
 COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.
 1106 AM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO
 AND THE VIRGIN ISLANDS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO
 HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD
 INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A
 SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
 ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED
 SITES IN THE WARNING ARE PROVIDED BELOW.

SAN JUAN-PR	1140	AST	MAR 28	CHRISTIANSTED-VI	1157	AST	MAR 28
MAYAGUEZ-PR	1145	AST	MAR 28	CHARLOT AMALI-VI	1218	AST	MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
 WCATWC.ARH.NOAA.GOV

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NLZ110-130-540-530-570-520-510-560-610-720-710-730-281606-
 /T.CON.PAAQ.TS.Y.0011.120328T1506Z-120328T1606Z/
 COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND
 TO CAPE CHIDLEY LABRADOR
 1106 AM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE ADVISORY ARE PROVIDED BELOW.

BONAVISTA-NL 1748 NDT MAR 28 BATTLE HARBOR-NL 1815 NDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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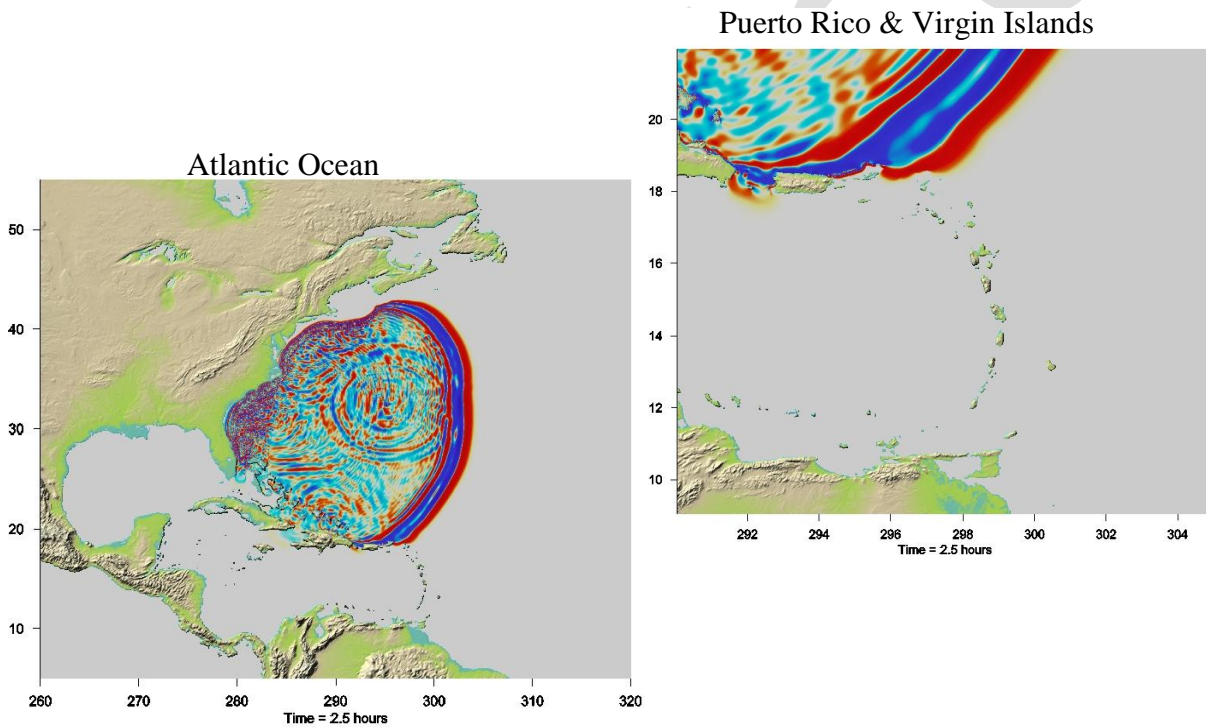


Figure D7: Scenario 2 tsunami at 2.5 hours (provided to indicate wave front at time of message).

Scenario 2: WCATWC Message #6

WEXX20 PAAQ 281536
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 6
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
1136 AM EDT WED MAR 28 2012

ADVISORY HAS BEEN EXPANDED TO INCLUDE FLAMINGO FL TO BONITA BEACH FL. NEW OBSERVATIONS ARE ADDED BELOW.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL

AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO AND THE VIRGIN ISLANDS...

...THE TSUNAMI ADVISORY IS MODIFIED TO INCLUDE THE COASTAL AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM BROWNSVILLE TEXAS TO BONITA BEACH FLORIDA...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE. PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.
- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
CAPE HATTERAS NC	35.3N	75.5W	1438UTC	06.89FT/02.10M
OREGON INLET NC	35.8N	75.5W	1507UTC	07.87FT/02.40M
JUPITER INLET FL	26.9N	80.1W	1511UTC	05.91FT/01.80M
BEAUFORT NC	34.7N	76.7W	1517UTC	02.30FT/00.70M
BERMUDA	32.3N	64.8W	1520UTC	11.81FT/03.60M
VIRGINIA KEY FL	25.7N	80.2W	1521UTC	03.61FT/01.10M
WRIGHTSVILLE NC	34.2N	77.8W	1523UTC	07.55FT/02.30M
SAN JUAN PR	18.5N	66.1W	1529UTC	05.91FT/01.80M

TIME - TIME OF MEASUREMENT

AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL. IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT. VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

OREGON INLET NC REPORTS FLOODING AT PEA ISLAND NATIONAL WILDLIFE REFUGE. A TUG AND BARGE WERE REPORTED TO HAVE BEEN SWEEP INTO THE OREGON INLET BRIDGE'S SUPPORT, THUS CLOSING THE BRIDGE TO TRAFFIC. JUPITER INLET FL REPORTS S BEACH RD AND OCEAN DR AS FLOODED. THE ENTIRE COMMUNITY BETWEEN OCEAN DR AND LIGHTHOUSE DR IS BEING EVACUATED.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.7
 TIME - 0900 EDT MAR 28 2012
 0800 CDT MAR 28 2012
 0900 AST MAR 28 2012
 1300 UTC MAR 28 2012
 LOCATION - 32.0 NORTH 78.0 WEST
 125 MILES/201 KM SE OF MYRTLE BEACH SOUTH CAROLINA
 125 MILES/201 KM SE OF CHARLESTON SOUTH CAROLINA

DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ031-032-034-052>055-AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-158-ANZ631>634-656-658-650-652-654-430-431-450>455-330-335-338-340-345-350-353-355-230>237-250-254-255-256-150-050>052-FLZ076>078-174-168-172-173-047-054-059-064-141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>052-054-056-NCZ106-108-110-045>047-080-081-094-095-098-103-104-015>017-030>032-102-VAZ084-086-091-094-095-098-099-100-MDZ025-DEZ002>004-NJZ006-012>014-021-023>026-106-108-NYZ071>075-078>081-176>179-CTZ009>012-RIZ002-004>008-MAZ007-016-019>024-NHZ014-MEZ022>028-029-030-NBZ570-550-660-641-NSZ210-230-260-250-110-120-130-170-160-150-140-270-280-320-410-450-440-430-QCZ670-680-NLZ340-220-230-210-120-281636-
/T.CON.PAAQ.TS.W.0011.120328T1536Z-120328T1636Z/
COASTAL AREAS BETWEEN AND INCLUDING FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND
1136 AM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

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ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

CAPE HATTERAS-NC	1038	EDT	MAR 28	ATLANTIC CITY-NJ	1234	EDT	MAR 28
MIAMI-FL	1136	EDT	MAR 28	LOCKEPORT-NS	1350	ADT	MAR 28
MYRTLE BCH-SC	1136	EDT	MAR 28	NANTUCKET IS-MA	1313	EDT	MAR 28
CHARLESTON-SC	1140	EDT	MAR 28	MANHATTAN-NY	1357	EDT	MAR 28
JACKSONVILL B-FL	1153	EDT	MAR 28	SCATARIE IS-NS	1501	ADT	MAR 28
SAVANNAH-GA	1157	EDT	MAR 28	GRAND MANAN-NB	1503	ADT	MAR 28
MELBOURNE-FL	1208	EDT	MAR 28	ST LAWRENCE-NL	1542	NDT	MAR 28

VIRGINIA BCH-VA 1222 EDT MAR 28 PORTLAND-ME 1430 EDT MAR 28
 MONTAUK-NY 1234 EDT MAR 28 BOSTON-MA 1442 EDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
 WCATWC.ARH.NOAA.GOV

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-
 VIZ001-002-281636-
 /T.CON.PAAQ.TS.W.0011.120328T1536Z-120328T1636Z/
 COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.
 1136 AM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO
 AND THE VIRGIN ISLANDS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO
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 ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED
 SITES IN THE WARNING ARE PROVIDED BELOW.

SAN JUAN-PR 1140 AST MAR 28 CHRISTIANSTED-VI 1157 AST MAR 28
 MAYAGUEZ-PR 1145 AST MAR 28 CHARLOT AMALI-VI 1218 AST MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
 WCATWC.ARH.NOAA.GOV

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GMZ656-657-FLZ069-070-075-281636-
 /T.EXA.PAAQ.TS.Y.0011.120328T1536Z-120328T1636Z/
 COASTAL AREAS BETWEEN AND INCLUDING BONITA BEACH FLORIDA TO
 FLAMINGO FLORIDA
 1136 AM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY IS MODIFIED TO INCLUDE THE COASTAL
 AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO
 FLORIDA...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF
 THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

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 STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR
 WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD
 INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE
 A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
 ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED
 SITES IN THE ADVISORY ARE PROVIDED BELOW.

KEY WEST-FL 1219 EDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
 WCATWC.ARH.NOAA.GOV

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NLZ110-130-540-530-570-520-510-560-610-720-710-730-281636-
 /T.CON.PAAQ.TS.Y.0011.120328T1536Z-120328T1636Z/
 COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND
 TO CAPE CHIDLEY LABRADOR

1136 AM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

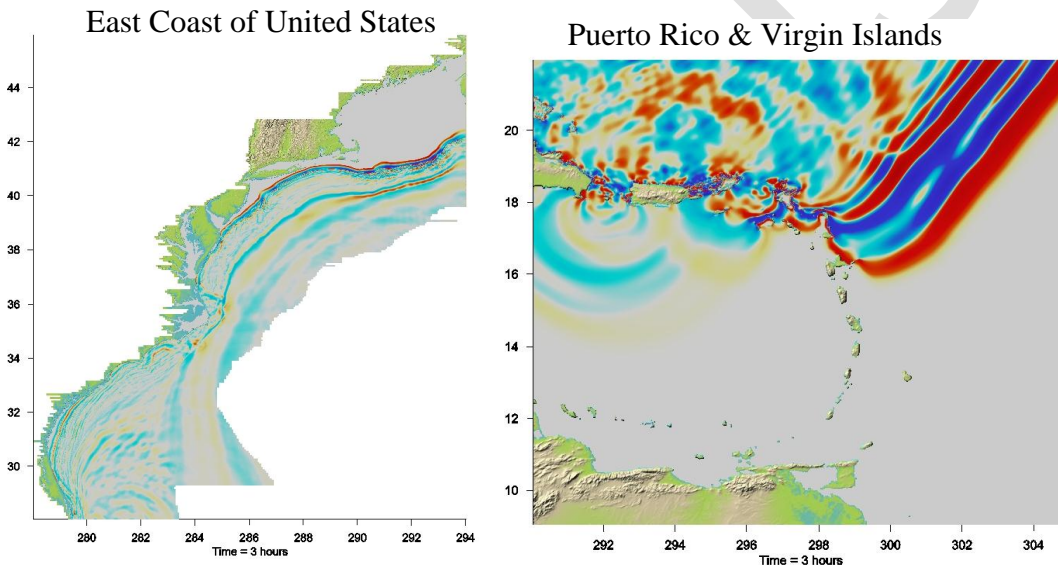
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BONAVISTA-NL 1748 NDT MAR 28 BATTLE HARBOR-NL 1815 NDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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Figure D8: Scenario 2 tsunami at 3 hours (provided to indicate wave front at time of message).



Scenario 2: WCATWC Message #7

WEXX20 PAAQ 281604
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 7
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
1204 PM EDT WED MAR 28 2012

NEW OBSERVATIONS ARE ADDED BELOW.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO AND THE VIRGIN ISLANDS...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM BROWNSVILLE TEXAS TO BONITA BEACH FLORIDA...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE. PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

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- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
CAPE HATTERAS NC	35.3N	75.5W	1438UTC	06.89FT/02.10M
OREGON INLET NC	35.8N	75.5W	1507UTC	07.87FT/02.40M
JUPITER INLET FL	26.9N	80.1W	1511UTC	05.91FT/01.80M
BEAUFORT NC	34.7N	76.7W	1517UTC	02.30FT/00.70M
BERMUDA	32.3N	64.8W	1520UTC	11.81FT/03.60M
VIRGINIA KEY FL	25.7N	80.2W	1521UTC	03.61FT/01.10M
WRIGHTSVILLE NC	34.2N	77.8W	1523UTC	07.55FT/02.30M
AQUADILLA PR	18.5N	67.1W	1535UTC	04.27FT/01.30M
SPRINGMAID PIER SC	33.7N	78.9W	1537UTC	06.23FT/01.90M
DUCK NC	36.2N	75.8W	1538UTC	07.87FT/02.40M
SAN JUAN PR	18.5N	66.1W	1540UTC	09.51FT/02.90M
MONA ISLAND PR	18.1N	67.9W	1543UTC	03.61FT/01.10M
MAYAGUEZ PR	18.2N	67.1W	1545UTC	03.28FT/01.00M
OCEAN CITY MD	38.3N	75.1W	1547UTC	06.89FT/02.10M
CULEBRA PR	18.3N	65.3W	1553UTC	06.89FT/02.10M
VIRGIN GORDA BVI	18.5N	64.4W	1556UTC	02.95FT/00.90M
CHRISTIANSTED VI	17.8N	64.7W	1557UTC	00.98FT/00.30M
FLAGLER BEACH FL	29.5N	81.1W	1558UTC	10.17FT/03.10M

TIME - TIME OF MEASUREMENT

AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL. IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT. VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

SAN JUAN PR REPORTS INUNDATION ALONG THE PUERTO RICO NORTH COAST. THE LOW LYING AREA OF PUERTA DE TIERRA HAS BEEN FLOODED BY WAVES ENTERING THE HARBOR. MANY BOATS AND SHIPS ARE REPORTED TO BE DAMAGED. OCEAN CITY MD REPORTS THAT A WAVE APPROXIMATELY 06.00FT/01.83M IN HEIGHT SURGED INTO THE OCEAN CITY INLET AND INUNDATED THE LAND UP TO STEPHEN DECATUR HWY. MANY CARS ARE REPORTED TO HAVE BEEN SWEEPED BACK INTO THE OCEAN. MANY PEOPLE ARE MISSING AND NOT ACCOUNTED FOR. BERMUDA REPORTS AT LEAST 25 PEOPLE WERE KILLED AND \$30 MILLION IN DAMAGE. CAPE HATTERAS NC REPORTS 15 PEOPLE MISSING AND PRESUMED DROWN, AND AT LEAST \$17 MILLION IN DAMAGE.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.7

TIME - 0900 EDT MAR 28 2012
 0800 CDT MAR 28 2012
 0900 AST MAR 28 2012
 1300 UTC MAR 28 2012
 LOCATION - 32.0 NORTH 78.0 WEST
 125 MILES/201 KM SE OF MYRTLE BEACH SOUTH CAROLINA
 125 MILES/201 KM SE OF CHARLESTON SOUTH CAROLINA
 DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

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CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ031-032-034-052>055-AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-158-ANZ631>634-656-658-650-652-654-430-431-450>455-330-335-338-340-345-350-353-355-230>237-250-254-255-256-150-050>052-FLZ076>078-174-168-172-173-047-054-059-064-141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>052-054-056-NCZ106-108-110-045>047-080-081-094-095-098-103-104-015>017-030>032-102-VAZ084-086-091-094-095-098-099-100-MDZ025-DEZ002>004-NJZ006-012>014-021-023>026-106-108-NYZ071>075-078>081-176>179-CTZ009>012-RIZ002-004>008-MAZ007-016-019>024-NHZ014-MEZ022>028-029-030-NBZ570-550-660-641-NSZ210-230-260-250-110-120-130-170-160-150-140-270-280-320-410-450-440-430-QCZ670-680-NLZ340-220-230-210-120-281704-
 /T.CON.PAAQ.TS.W.0011.120328T1604Z-120328T1704Z/
 COASTAL AREAS BETWEEN AND INCLUDING FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND
 1204 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

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ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

MIAMI-FL	1136	EDT	MAR 28	LOCKEPORT-NS	1350	ADT	MAR 28
MYRTLE BCH-SC	1136	EDT	MAR 28	NANTUCKET IS-MA	1313	EDT	MAR 28
CHARLESTON-SC	1140	EDT	MAR 28	MANHATTAN-NY	1357	EDT	MAR 28
JACKSONVILL B-FL	1153	EDT	MAR 28	SCATARIE IS-NS	1501	ADT	MAR 28
SAVANNAH-GA	1157	EDT	MAR 28	GRAND MANAN-NB	1503	ADT	MAR 28
MELBOURNE-FL	1208	EDT	MAR 28	ST LAWRENCE-NL	1542	NDT	MAR 28
VIRGINIA BCH-VA	1222	EDT	MAR 28	PORTLAND-ME	1430	EDT	MAR 28
MONTAUK-NY	1234	EDT	MAR 28	BOSTON-MA	1442	EDT	MAR 28
ATLANTIC CITY-NJ	1234	EDT	MAR 28				

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-
VIZ001-002-281704-
/T.CON.PAAQ.TS.W.0011.120328T1604Z-120328T1704Z/
COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.
1204 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO
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ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED
SITES IN THE WARNING ARE PROVIDED BELOW.

SAN JUAN-PR	1140	AST	MAR 28	CHRISTIANSTED-VI	1157	AST	MAR 28
MAYAGUEZ-PR	1145	AST	MAR 28	CHARLOT AMALI-VI	1218	AST	MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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GMZ656-657-FLZ069-070-075-281704-
/T.CON.PAAQ.TS.Y.0011.120328T1604Z-120328T1704Z/
COASTAL AREAS BETWEEN AND INCLUDING BONITA BEACH FLORIDA TO
FLAMINGO FLORIDA
1204 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO
FLORIDA...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF
THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING
STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR
WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD
INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE
A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED
SITES IN THE ADVISORY ARE PROVIDED BELOW.

KEY WEST-FL	1219	EDT	MAR 28				
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FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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NLZ110-130-540-530-570-520-510-560-610-720-710-730-281704-
/T.CON.PAAQ.TS.Y.0011.120328T1604Z-120328T1704Z/
COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND
TO CAPE CHIDLEY LABRADOR
1204 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF
THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING
STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR
WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD
INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE
A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED
SITES IN THE ADVISORY ARE PROVIDED BELOW.

BONAVISTA-NL 1748 NDT MAR 28 BATTLE HARBOR-NL 1815 NDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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Scenario 2: WCATWC Message #8

WEXX20 PAAQ 281633
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 8
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
1233 PM EDT WED MAR 28 2012

NEW OBSERVATIONS ARE ADDED BELOW.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -
NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW
HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND
NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE
NEWFOUNDLAND...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO
AND THE VIRGIN ISLANDS...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO
FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF
TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM
BROWNSVILLE TEXAS TO BONITA BEACH FLORIDA...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE. PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.
- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
CAPE HATTERAS NC	35.3N	75.5W	1438UTC	06.89FT/02.10M
OREGON INLET NC	35.8N	75.5W	1507UTC	07.87FT/02.40M
JUPITER INLET FL	26.9N	80.1W	1511UTC	05.91FT/01.80M
BEAUFORT NC	34.7N	76.7W	1517UTC	02.30FT/00.70M
BERMUDA	32.3N	64.8W	1520UTC	11.81FT/03.60M
VIRGINIA KEY FL	25.7N	80.2W	1521UTC	03.61FT/01.10M
WRIGHTSVILLE NC	34.2N	77.8W	1523UTC	07.55FT/02.30M
AQUADILLA PR	18.5N	67.1W	1535UTC	04.27FT/01.30M
SPRINGMAID PIER SC	33.7N	78.9W	1537UTC	06.23FT/01.90M
DUCK NC	36.2N	75.8W	1538UTC	07.87FT/02.40M
SAN JUAN PR	18.5N	66.1W	1540UTC	09.51FT/02.90M
MONA ISLAND PR	18.1N	67.9W	1543UTC	03.61FT/01.10M
MAYAGUEZ PR	18.2N	67.1W	1545UTC	03.28FT/01.00M
OCEAN CITY MD	38.3N	75.1W	1547UTC	06.89FT/02.10M
CULEBRA PR	18.3N	65.3W	1553UTC	06.89FT/02.10M
VIRGIN GORDA BVI	18.5N	64.4W	1556UTC	02.95FT/00.90M
FLAGLER BEACH FL	29.5N	81.1W	1558UTC	10.17FT/03.10M
VIEQUES IS PR	18.1N	65.4W	1601UTC	02.62FT/00.80M
LIMETREE BAY VI	17.7N	64.8W	1603UTC	01.31FT/00.40M
LAMESHUR BAY VI	18.3N	64.7W	1605UTC	03.94FT/01.20M
CHARLESTON SC	32.8N	79.9W	1606UTC	01.64FT/00.50M
SUNSET BEACH SC	33.9N	78.5W	1607UTC	03.28FT/01.00M
KEY WEST FL	24.6N	81.8W	1619UTC	00.33FT/00.10M
LEWES DE	38.8N	75.1W	1628UTC	01.31FT/00.40M
CHRISTIANSTED VI	17.8N	64.7W	1628UTC	01.64FT/00.50M

TIME - TIME OF MEASUREMENT

AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL. IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT. VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

SAN JUAN PR REPORTS EIGHT PEOPLE KILLED AND AT LEAST \$53 MILLION IN DAMAGE. FLAGLER BEACH FL REPORTS A WAVE APPROXIMATELY 10.00FT/03.05M FLOODED ALL OF FLAGLER AND DAYTONA BEACHES. CAPE CANAVERAL, JUST SOUTH OF FLAGLER BEACH, REPORTS HEAVY FLOODING TO THE ENTIRE FACILITY, AND DAMAGE TO TWO OF ITS LAUNCH SUPPORT TOWERS. CAPE CANAVERAL ESTIMATES DAMAGE TO BE \$60 MILLION TO \$100 MILLION. ALL OF FLORIDA'S HWY 1A FROM FERNANDINA BEACH TO DAYTONA BEACH SHORES IS REPORTED TO BE HEAVILY DAMAGED AND UNUSABLE.

PRELIMINARY EARTHQUAKE PARAMETERS

- MAGNITUDE - 7.7
- TIME - 0900 EDT MAR 28 2012
- 0800 CDT MAR 28 2012
- 0900 AST MAR 28 2012
- 1300 UTC MAR 28 2012
- LOCATION - 32.0 NORTH 78.0 WEST
- 125 MILES/201 KM SE OF MYRTLE BEACH SOUTH CAROLINA
- 125 MILES/201 KM SE OF CHARLESTON SOUTH CAROLINA
- DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE

THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ031-032-034-052>055-AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-158-ANZ631>634-656-658-650-652-654-430-431-450>455-330-335-338-340-345-350-353-355-230>237-250-254-255-256-150-050>052-FLZ076>078-174-168-172-173-047-054-059-064-141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>052-054-056-NCZ106-108-110-045>047-080-081-094-095-098-103-104-015>017-030>032-102-VAZ084-086-091-094-095-098-099-100-MDZ025-DEZ002>004-NJZ006-012>014-021-023>026-106-108-NYZ071>075-078>081-176>179-CTZ009>012-RIZ002-004>008-MAZ007-016-019>024-NHZ014-MEZ022>028-029-030-NBZ570-550-660-641-NSZ210-230-260-250-110-120-130-170-160-150-140-270-280-320-410-450-440-430-QCZ670-680-NLZ340-220-230-210-120-281733-
/T.CON.PAAQ.TS.W.0011.120328T1633Z-120328T1733Z/
COASTAL AREAS BETWEEN AND INCLUDING FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND
1233 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

MIAMI-FL	1136	EDT	MAR 28	LOCKEPORT-NS	1350	ADT	MAR 28
MYRTLE BCH-SC	1136	EDT	MAR 28	NANTUCKET IS-MA	1313	EDT	MAR 28
CHARLESTON-SC	1140	EDT	MAR 28	MANHATTAN-NY	1357	EDT	MAR 28
JACKSONVILL B-FL	1153	EDT	MAR 28	SCATARIE IS-NS	1501	ADT	MAR 28
SAVANNAH-GA	1157	EDT	MAR 28	GRAND MANAN-NB	1503	ADT	MAR 28
MELBOURNE-FL	1208	EDT	MAR 28	ST LAWRENCE-NL	1542	NDT	MAR 28
VIRGINIA BCH-VA	1222	EDT	MAR 28	PORTLAND-ME	1430	EDT	MAR 28
MONTAUK-NY	1234	EDT	MAR 28	BOSTON-MA	1442	EDT	MAR 28
ATLANTIC CITY-NJ	1234	EDT	MAR 28				

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE

WCATWC.ARH.NOAA.GOV

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-
VIZ001-002-281733-
/T.CON.PAAQ.TS.W.0011.120328T1633Z-120328T1733Z/
COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.
1233 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO
AND THE VIRGIN ISLANDS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO
HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD
INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A
SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED
SITES IN THE WARNING ARE PROVIDED BELOW.

SAN JUAN-PR	1140	AST	MAR 28	CHRISTIANSTED-VI	1157	AST	MAR 28
MAYAGUEZ-PR	1145	AST	MAR 28	CHARLOT AMALI-VI	1218	AST	MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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GMZ656-657-FLZ069-070-075-281733-
/T.CON.PAAQ.TS.Y.0011.120328T1633Z-120328T1733Z/
COASTAL AREAS BETWEEN AND INCLUDING BONITA BEACH FLORIDA TO
FLAMINGO FLORIDA
1233 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO
FLORIDA...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF
THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING
STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR
WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD
INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE
A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED
SITES IN THE ADVISORY ARE PROVIDED BELOW.

KEY WEST-FL	1219	EDT	MAR 28
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FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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NLZ110-130-540-530-570-520-510-560-610-720-710-730-281733-
/T.CON.PAAQ.TS.Y.0011.120328T1633Z-120328T1733Z/
COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND
TO CAPE CHIDLEY LABRADOR
1233 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE

NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE ADVISORY ARE PROVIDED BELOW.

BONAVISTA-NL 1748 NDT MAR 28 BATTLE HARBOR-NL 1815 NDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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Scenario 2: WCATWC Message #9

WEXX20 PAAQ 281705
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 9
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
105 PM EDT WED MAR 28 2012

NEW OBSERVATIONS ARE ADDED BELOW.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO AND THE VIRGIN ISLANDS...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM BROWNSVILLE TEXAS TO BONITA BEACH FLORIDA...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE. PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.
- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
CAPE HATTERAS NC	35.3N	75.5W	1438UTC	06.89FT/02.10M
OREGON INLET NC	35.8N	75.5W	1507UTC	07.87FT/02.40M
JUPITER INLET FL	26.9N	80.1W	1511UTC	05.91FT/01.80M
BEAUFORT NC	34.7N	76.7W	1517UTC	02.30FT/00.70M
BERMUDA	32.3N	64.8W	1520UTC	11.81FT/03.60M
VIRGINIA KEY FL	25.7N	80.2W	1521UTC	03.61FT/01.10M
WRIGHTSVILLE NC	34.2N	77.8W	1523UTC	07.55FT/02.30M
AQUADILLA PR	18.5N	67.1W	1535UTC	04.27FT/01.30M
SPRINGMAID PIER SC	33.7N	78.9W	1537UTC	06.23FT/01.90M
DUCK NC	36.2N	75.8W	1538UTC	07.87FT/02.40M
SAN JUAN PR	18.5N	66.1W	1540UTC	09.51FT/02.90M
MONA ISLAND PR	18.1N	67.9W	1543UTC	03.61FT/01.10M
OCEAN CITY MD	38.3N	75.1W	1547UTC	06.89FT/02.10M
CULEBRA PR	18.3N	65.3W	1553UTC	06.89FT/02.10M
VIRGIN GORDA BVI	18.5N	64.4W	1556UTC	02.95FT/00.90M
FLAGLER BEACH FL	29.5N	81.1W	1558UTC	10.17FT/03.10M
VIEQUES IS PR	18.1N	65.4W	1601UTC	02.62FT/00.80M
LIMETREE BAY VI	17.7N	64.8W	1603UTC	01.31FT/00.40M
LAMESHUR BAY VI	18.3N	64.7W	1605UTC	03.94FT/01.20M
CHARLESTON SC	32.8N	79.9W	1606UTC	01.64FT/00.50M
SUNSET BEACH SC	33.9N	78.5W	1607UTC	03.28FT/01.00M
KEY WEST FL	24.6N	81.8W	1619UTC	00.33FT/00.10M
LEWES DE	38.8N	75.1W	1628UTC	01.31FT/00.40M
CHRISTIANSTED VI	17.8N	64.7W	1628UTC	01.64FT/00.50M
MONTAUK NY	41.0N	71.9W	1634UTC	03.94FT/01.20M
ATLANTIC CITY NJ	39.4N	74.4W	1634UTC	08.86FT/02.70M
CAPE MAY NJ	38.9N	74.9W	1638UTC	02.30FT/00.70M
CHESAPEAKE BRIDGE VA	36.9N	76.4W	1642UTC	01.31FT/00.40M
ST SIMMONS IS GA	31.2N	81.4W	1653UTC	00.98FT/00.30M
WOODS HOLE MA	41.5N	70.7W	1657UTC	02.95FT/00.90M
NEWPORT RI	41.5N	71.3W	1658UTC	03.61FT/01.10M
MAYAGUEZ PR	18.2N	67.1W	1658UTC	04.59FT/01.40M

TIME - TIME OF MEASUREMENT

AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL.
IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.
VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

ATLANTIC CITY NJ REPORTS FLOODING INLAND TO ATLANTIC AVE. TROPICANA ATLANTIC CITY, TRUMP PLAZA HOTEL AND CASINO, AND TRUMP TAJ MAHAL REPORT HEAVY DAMAGE WITH FLOODING THROUGHOUT THE GROUND FLOOR AREA. THIRTY-FIVE PEOPLE WERE REPORTED INJURED WHILE TRYING TO EXIT THESE CASINOS. MANY BOATS IN THE AREA WERE DAMAGED AND WASHED ASHORE, SOME AS FAR INLAND AS ATLANTIC AVE. OFFICIALS ESTIMATE DAMAGE TO BE AROUND \$25 MILLION.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.7

TIME - 0900 EDT MAR 28 2012
0800 CDT MAR 28 2012
0900 AST MAR 28 2012
1300 UTC MAR 28 2012

LOCATION - 32.0 NORTH 78.0 WEST
125 MILES/201 KM SE OF MYRTLE BEACH SOUTH CAROLINA
125 MILES/201 KM SE OF CHARLESTON SOUTH CAROLINA

DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE

WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ031-032-034-052>055-AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-158-ANZ631>634-656-658-650-652-654-430-431-450>455-330-335-338-340-345-350-353-355-230>237-250-254-255-256-150-050>052-FLZ076>078-174-168-172-173-047-054-059-064-141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>052-054-056-NCZ106-108-110-045>047-080-081-094-095-098-103-104-015>017-030>032-102-VAZ084-086-091-094-095-098-099-100-MDZ025-DEZ002>004-NJZ006-012>014-021-023>026-106-108-NYZ071>075-078>081-176>179-CTZ009>012-RIZ002-004>008-MAZ007-016-019>024-NHZ014-MEZ022>028-029-030-NBZ570-550-660-641-NSZ210-230-260-250-110-120-130-170-160-150-140-270-280-320-410-450-440-430-QCZ670-680-NLZ340-220-230-210-120-281805-
/T.CON.PAAQ.TS.W.0011.120328T1705Z-120328T1805Z/
COASTAL AREAS BETWEEN AND INCLUDING FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND
105 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

MELBOURNE-FL	1208	EDT	MAR 28	MANHATTAN-NY	1357	EDT	MAR 28
VIRGINIA BCH-VA	1222	EDT	MAR 28	SCATARIE IS-NS	1501	ADT	MAR 28
MONTAUK-NY	1234	EDT	MAR 28	GRAND MANAN-NB	1503	ADT	MAR 28
ATLANTIC CITY-NJ	1234	EDT	MAR 28	ST LAWRENCE-NL	1542	NDT	MAR 28
LOCKEPORT-NS	1350	ADT	MAR 28	PORTLAND-ME	1430	EDT	MAR 28
NANTUCKET IS-MA	1313	EDT	MAR 28	BOSTON-MA	1442	EDT	MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-VIZ001-002-281805-
/T.CON.PAAQ.TS.W.0011.120328T1705Z-120328T1805Z/
COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.
105 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO AND THE VIRGIN ISLANDS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

CHARLOT AMALI-VI 1218 AST MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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GMZ656-657-FLZ069-070-075-281805-
/T.CON.PAAQ.TS.Y.0011.120328T1705Z-120328T1805Z/
COASTAL AREAS BETWEEN AND INCLUDING BONITA BEACH FLORIDA TO
FLAMINGO FLORIDA
105 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO FLORIDA...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE ADVISORY ARE PROVIDED BELOW.

KEY WEST-FL 1219 EDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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NLZ110-130-540-530-570-520-510-560-610-720-710-730-281805-
/T.CON.PAAQ.TS.Y.0011.120328T1705Z-120328T1805Z/
COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND
TO CAPE CHIDLEY LABRADOR
105 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL

ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE ADVISORY ARE PROVIDED BELOW.

BONAVISTA-NL 1748 NDT MAR 28 BATTLE HARBOR-NL 1815 NDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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Scenario 2: WCATWC Message #10

WEXX20 PAAQ 281733
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 10
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
133 PM EDT WED MAR 28 2012

NEW OBSERVATIONS ARE ADDED BELOW.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO AND THE VIRGIN ISLANDS...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM BROWNSVILLE TEXAS TO BONITA BEACH FLORIDA...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE. PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.
- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
CAPE HATTERAS NC	35.3N	75.5W	1438UTC	06.89FT/02.10M
OREGON INLET NC	35.8N	75.5W	1507UTC	07.87FT/02.40M
JUPITER INLET FL	26.9N	80.1W	1511UTC	05.91FT/01.80M
BEAUFORT NC	34.7N	76.7W	1517UTC	02.30FT/00.70M
BERMUDA	32.3N	64.8W	1520UTC	11.81FT/03.60M
VIRGINIA KEY FL	25.7N	80.2W	1521UTC	03.61FT/01.10M

WRIGHTSVILLE NC	34.2N	77.8W	1523UTC	07.55FT/02.30M
AQUADILLA PR	18.5N	67.1W	1535UTC	04.27FT/01.30M
SPRINGMAID PIER SC	33.7N	78.9W	1537UTC	06.23FT/01.90M
DUCK NC	36.2N	75.8W	1538UTC	07.87FT/02.40M
SAN JUAN PR	18.5N	66.1W	1540UTC	09.51FT/02.90M
MONA ISLAND PR	18.1N	67.9W	1543UTC	03.61FT/01.10M
OCEAN CITY MD	38.3N	75.1W	1547UTC	06.89FT/02.10M
CULEBRA PR	18.3N	65.3W	1553UTC	06.89FT/02.10M
VIRGIN GORDA BVI	18.5N	64.4W	1556UTC	02.95FT/00.90M
FLAGLER BEACH FL	29.5N	81.1W	1558UTC	10.17FT/03.10M
VIEQUES IS PR	18.1N	65.4W	1601UTC	02.62FT/00.80M
LIMETREE BAY VI	17.7N	64.8W	1603UTC	01.31FT/00.40M
LAMESHUR BAY VI	18.3N	64.7W	1605UTC	03.94FT/01.20M
CHARLESTON SC	32.8N	79.9W	1606UTC	01.64FT/00.50M
SUNSET BEACH SC	33.9N	78.5W	1607UTC	03.28FT/01.00M
KEY WEST FL	24.6N	81.8W	1619UTC	00.33FT/00.10M
LEWES DE	38.8N	75.1W	1628UTC	01.31FT/00.40M
CHRISTIANSTED VI	17.8N	64.7W	1628UTC	01.64FT/00.50M
MONTAUK NY	41.0N	71.9W	1634UTC	03.94FT/01.20M
ATLANTIC CITY NJ	39.4N	74.4W	1634UTC	08.86FT/02.70M
CAPE MAY NJ	38.9N	74.9W	1638UTC	02.30FT/00.70M
CHESAPEAKE BRIDGE VA	36.9N	76.4W	1642UTC	01.31FT/00.40M
ST SIMMONS IS GA	31.2N	81.4W	1653UTC	00.98FT/00.30M
WOODS HOLE MA	41.5N	70.7W	1657UTC	02.95FT/00.90M
NEWPORT RI	41.5N	71.3W	1658UTC	03.61FT/01.10M
MAYAGUEZ PR	18.2N	67.1W	1658UTC	04.59FT/01.40M
SANDY HOOK NJ	40.5N	74.0W	1702UTC	01.31FT/00.40M
NEW LONDON CT	41.4N	72.1W	1709UTC	01.97FT/00.60M
NANTUCKET IS MA	41.3N	70.1W	1713UTC	01.31FT/00.40M
QUONSET POINT RI	41.6N	71.4W	1730UTC	02.30FT/00.70M

TIME - TIME OF MEASUREMENT

AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL.
IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.

VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

CULEBRA PR REPORTS THAT THE CULEBRA NATURE RESERVE, PLAYA RESACA, AND PLAYA BRAVA HAVE BEEN HEAVILY DAMAGED AND WILL TAKE YEARS TO REGAIN ITS ORIGINAL APPEARANCE. MONTAUK NY REPORTS FLOODING ALONG HWY 27. THREE BEACH COMBERS ARE MISSING AND PRESUMED DROWN.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.7

TIME - 0900 EDT MAR 28 2012
0800 CDT MAR 28 2012
0900 AST MAR 28 2012
1300 UTC MAR 28 2012

LOCATION - 32.0 NORTH 78.0 WEST

125 MILES/201 KM SE OF MYRTLE BEACH SOUTH CAROLINA

125 MILES/201 KM SE OF CHARLESTON SOUTH CAROLINA

DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ031-032-034-052>055-AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-158-ANZ631>634-656-658-650-652-654-430-431-450>455-330-335-338-340-345-350-353-355-230>237-250-254-255-256-150-050>052-FLZ076>078-174-168-172-173-047-054-059-064-141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>052-054-056-NCZ106-108-110-045>047-080-081-094-095-098-103-104-015>017-030>032-102-VAZ084-086-091-094-095-098-099-100-MDZ025-DEZ002>004-NJZ006-012>014-021-023>026-106-108-NYZ071>075-078>081-176>179-CTZ009>012-RIZ002-004>008-MAZ007-016-019>024-NHZ014-MEZ022>028-029-030-NBZ570-550-660-641-NSZ210-230-260-250-110-120-130-170-160-150-140-270-280-320-410-450-440-430-QCZ670-680-NLZ340-220-230-210-120-281833-
/T.CON.PAAQ.TS.W.0011.120328T1733Z-120328T1833Z/
COASTAL AREAS BETWEEN AND INCLUDING FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND
133 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

MONTAUK-NY	1234	EDT	MAR 28	SCATARIE IS-NS	1501	ADT	MAR 28
ATLANTIC CITY-NJ	1234	EDT	MAR 28	GRAND MANAN-NB	1503	ADT	MAR 28
LOCKEPORT-NS	1350	ADT	MAR 28	ST LAWRENCE-NL	1542	NDT	MAR 28
NANTUCKET IS-MA	1313	EDT	MAR 28	PORTLAND-ME	1430	EDT	MAR 28
MANHATTAN-NY	1357	EDT	MAR 28	BOSTON-MA	1442	EDT	MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-VIZ001-002-281833-
/T.CON.PAAQ.TS.W.0011.120328T1733Z-120328T1833Z/
COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.
133 PM EDT WED MAR 28 2012

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SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

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GMZ656-657-FLZ069-070-075-281833-
/T.CON.PAAQ.TS.Y.0011.120328T1733Z-120328T1833Z/
COASTAL AREAS BETWEEN AND INCLUDING BONITA BEACH FLORIDA TO
FLAMINGO FLORIDA
133 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO
FLORIDA...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF
THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING
STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR
WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD
INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE
A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME.

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NLZ110-130-540-530-570-520-510-560-610-720-710-730-281833-
/T.CON.PAAQ.TS.Y.0011.120328T1733Z-120328T1833Z/
COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND
TO CAPE CHIDLEY LABRADOR
133 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

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THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

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STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR
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INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE
A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED
SITES IN THE ADVISORY ARE PROVIDED BELOW.

BONAVISTA-NL 1748 NDT MAR 28 BATTLE HARBOR-NL 1815 NDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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Scenario 2: WCATWC Message #11

WEXX20 PAAQ 281802
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 11
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
202 PM EDT WED MAR 28 2012

NEW OBSERVATIONS ARE ADDED BELOW.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND...

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...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM BROWNSVILLE TEXAS TO BONITA BEACH FLORIDA...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE. PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.
- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
OREGON INLET NC	35.8N	75.5W	1507UTC	07.87FT/02.40M
JUPITER INLET FL	26.9N	80.1W	1511UTC	05.91FT/01.80M
BEAUFORT NC	34.7N	76.7W	1517UTC	02.30FT/00.70M
BERMUDA	32.3N	64.8W	1520UTC	11.81FT/03.60M
VIRGINIA KEY FL	25.7N	80.2W	1521UTC	03.61FT/01.10M
WRIGHTSVILLE NC	34.2N	77.8W	1523UTC	07.55FT/02.30M
AQUADILLA PR	18.5N	67.1W	1535UTC	04.27FT/01.30M
SPRINGMAID PIER SC	33.7N	78.9W	1537UTC	06.23FT/01.90M
DUCK NC	36.2N	75.8W	1538UTC	07.87FT/02.40M
SAN JUAN PR	18.5N	66.1W	1540UTC	09.51FT/02.90M
MONA ISLAND PR	18.1N	67.9W	1543UTC	03.61FT/01.10M
OCEAN CITY MD	38.3N	75.1W	1547UTC	06.89FT/02.10M
CULEBRA PR	18.3N	65.3W	1553UTC	06.89FT/02.10M
VIRGIN GORDA BVI	18.5N	64.4W	1556UTC	02.95FT/00.90M
FLAGLER BEACH FL	29.5N	81.1W	1558UTC	10.17FT/03.10M
VIEQUES IS PR	18.1N	65.4W	1601UTC	02.62FT/00.80M
LIMETREE BAY VI	17.7N	64.8W	1603UTC	01.31FT/00.40M
LAMESHUR BAY VI	18.3N	64.7W	1605UTC	03.94FT/01.20M
CHARLESTON SC	32.8N	79.9W	1606UTC	01.64FT/00.50M
SUNSET BEACH SC	33.9N	78.5W	1607UTC	03.28FT/01.00M
KEY WEST FL	24.6N	81.8W	1619UTC	00.33FT/00.10M
LEWES DE	38.8N	75.1W	1628UTC	01.31FT/00.40M
CHRISTIANSTED VI	17.8N	64.7W	1628UTC	01.64FT/00.50M
MONTAUK NY	41.0N	71.9W	1634UTC	03.94FT/01.20M
ATLANTIC CITY NJ	39.4N	74.4W	1634UTC	08.86FT/02.70M
CAPE MAY NJ	38.9N	74.9W	1638UTC	02.30FT/00.70M
CHESAPEAKE BRIDGE VA	36.9N	76.4W	1642UTC	01.31FT/00.40M
ST SIMMONS IS GA	31.2N	81.4W	1653UTC	00.98FT/00.30M
WOODS HOLE MA	41.5N	70.7W	1657UTC	02.95FT/00.90M

NEWPORT RI	41.5N	71.3W	1658UTC	03.61FT/01.10M
MAYAGUEZ PR	18.2N	67.1W	1658UTC	04.59FT/01.40M
SANDY HOOK NJ	40.5N	74.0W	1702UTC	01.31FT/00.40M
NEW LONDON CT	41.4N	72.1W	1709UTC	01.97FT/00.60M
NANTUCKET IS MA	41.3N	70.1W	1713UTC	01.31FT/00.40M
QUONSET POINT RI	41.6N	71.4W	1730UTC	02.30FT/00.70M
CHEZZETCOOK NS	44.8N	63.2W	1740UTC	01.64FT/00.50M
FLAMINGO FL	25.8N	80.1W	1750UTC	01.31FT/00.40M
BRIDGEPORT CT	41.2N	73.2W	1753UTC	00.33FT/00.10M
PROVIDENCE RI	41.8N	71.4W	1754UTC	00.98FT/00.30M
BAR HARBOR ME	44.4N	68.2W	1758UTC	02.95FT/00.90M
FORT POINT NH	43.1N	70.7W	1758UTC	03.61FT/01.10M

TIME - TIME OF MEASUREMENT

AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL.
IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.
VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

WRIGHTSVILLE NC REPORTS FLOODING ALONG ITS ENTIRE SPIT FROM THE US COAST GUARD STATION UP TO THE NORTHERN EXTENT OF N LUMINA AVE. THEY REPORT THAT THE APPROXIMATELY 07.50FT/02.28FT TSUNAMI CAME ASHORE WITH SUCH FORCE THAT IT WASHED OVER THE ENTIRE WIDTH OF THE BARRIER ISLAND. TWELVE PEOPLE ARE REPORTED MISSING AND PRESUMED DROWNED.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.7
TIME - 0900 EDT MAR 28 2012
0800 CDT MAR 28 2012
0900 AST MAR 28 2012
1300 UTC MAR 28 2012
LOCATION - 32.0 NORTH 78.0 WEST
125 MILES/201 KM SE OF MYRTLE BEACH SOUTH CAROLINA
125 MILES/201 KM SE OF CHARLESTON SOUTH CAROLINA
DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ031-032-034-052>055-AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-158-ANZ631>634-656-658-650-652-654-430-431-450>455-330-335-338-340-345-350-353-355-230>237-250-254-255-256-150-050>052-FLZ076>078-174-168-172-173-047-054-059-064-141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>052-054-056-NCZ106-108-110-045>047-080-081-094-095-098-103-104-015>017-030>032-102-VAZ084-086-091-094-095-098-099-100-MDZ025-DEZ002>004-NJZ006-012>014-021-023>026-106-108-NYZ071>075-078>081-176>179-CTZ009>012-RIZ002-004>008-MAZ007-016-019>024-NHZ014-MEZ022>028-029-030-NBZ570-550-660-641-NSZ210-230-260-250-110-120-130-170-160-

150-140-270-280-320-410-450-440-430-QCZ670-680-NLZ340-220-
 230-210-120-281902-
 /T.CON.PAAQ.TS.W.0011.120328T1802Z-120328T1902Z/
 COASTAL AREAS BETWEEN AND INCLUDING FLAMINGO FLORIDA TO LA
 MANCHE NEWFOUNDLAND
 202 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL
 AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH
 CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -
 NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW
 HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND
 NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE
 NEWFOUNDLAND...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO
 HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD
 INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A
 SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
 ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED
 SITES IN THE WARNING ARE PROVIDED BELOW.

NANTUCKET IS-MA	1313	EDT	MAR 28	ST LAWRENCE-NL	1542	NDT	MAR 28
MANHATTAN-NY	1357	EDT	MAR 28	PORTLAND-ME	1430	EDT	MAR 28
SCATARIE IS-NS	1501	ADT	MAR 28	BOSTON-MA	1442	EDT	MAR 28
GRAND MANAN-NB	1503	ADT	MAR 28				

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
 WCATWC.ARH.NOAA.GOV

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-
 VIZ001-002-281902-
 /T.CON.PAAQ.TS.W.0011.120328T1802Z-120328T1902Z/
 COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.
 202 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO
 AND THE VIRGIN ISLANDS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO
 HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD
 INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A
 SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
 ARRIVAL TIME.

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GMZ656-657-FLZ069-070-075-281902-
 /T.CON.PAAQ.TS.Y.0011.120328T1802Z-120328T1902Z/
 COASTAL AREAS BETWEEN AND INCLUDING BONITA BEACH FLORIDA TO
 FLAMINGO FLORIDA
 202 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
 AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO
 FLORIDA...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF
 THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

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NLZ110-130-540-530-570-520-510-560-610-720-710-730-281902-
/T.CON.PAAQ.TS.Y.0011.120328T1802Z-120328T1902Z/
COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND
TO CAPE CHIDLEY LABRADOR
202 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF
THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE ADVISORY ARE PROVIDED BELOW.

BONAVISTA-NL 1748 NDT MAR 28 BATTLE HARBOR-NL 1815 NDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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Scenario 2: WCATWC Message #12

WEXX20 PAAQ 281832
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 12
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
232 PM EDT WED MAR 28 2012

NEW OBSERVATIONS ARE ADDED BELOW.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -
NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW
HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND
NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE
NEWFOUNDLAND...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO
AND THE VIRGIN ISLANDS...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO
FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM BROWNSVILLE TEXAS TO BONITA BEACH FLORIDA...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE. PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.
- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	Lon	TIME	AMPL
AQUADILLA PR	18.5N	67.1W	1535UTC	04.27FT/01.30M
SPRINGMAID PIER SC	33.7N	78.9W	1537UTC	06.23FT/01.90M
DUCK NC	36.2N	75.8W	1538UTC	07.87FT/02.40M
SAN JUAN PR	18.5N	66.1W	1540UTC	09.51FT/02.90M
MONA ISLAND PR	18.1N	67.9W	1543UTC	03.61FT/01.10M
OCEAN CITY MD	38.3N	75.1W	1547UTC	06.89FT/02.10M
CULEBRA PR	18.3N	65.3W	1553UTC	06.89FT/02.10M
VIRGIN GORDA BVI	18.5N	64.4W	1556UTC	02.95FT/00.90M
FLAGLER BEACH FL	29.5N	81.1W	1558UTC	10.17FT/03.10M
VIEQUES IS PR	18.1N	65.4W	1601UTC	02.62FT/00.80M
LIMETREE BAY VI	17.7N	64.8W	1603UTC	01.31FT/00.40M
LAMESHUR BAY VI	18.3N	64.7W	1605UTC	03.94FT/01.20M
CHARLESTON SC	32.8N	79.9W	1606UTC	01.64FT/00.50M
SUNSET BEACH SC	33.9N	78.5W	1607UTC	03.28FT/01.00M
KEY WEST FL	24.6N	81.8W	1619UTC	00.33FT/00.10M
LEWES DE	38.8N	75.1W	1628UTC	01.31FT/00.40M
CHRISTIANSTED VI	17.8N	64.7W	1628UTC	01.64FT/00.50M
MONTAUK NY	41.0N	71.9W	1634UTC	03.94FT/01.20M
ATLANTIC CITY NJ	39.4N	74.4W	1634UTC	08.86FT/02.70M
CAPE MAY NJ	38.9N	74.9W	1638UTC	02.30FT/00.70M
CHESAPEAKE BRIDGE VA	36.9N	76.4W	1642UTC	01.31FT/00.40M
ST SIMMONS IS GA	31.2N	81.4W	1653UTC	00.98FT/00.30M
WOODS HOLE MA	41.5N	70.7W	1657UTC	02.95FT/00.90M
NEWPORT RI	41.5N	71.3W	1658UTC	03.61FT/01.10M
MAYAGUEZ PR	18.2N	67.1W	1658UTC	04.59FT/01.40M
SANDY HOOK NJ	40.5N	74.0W	1702UTC	01.31FT/00.40M
NEW LONDON CT	41.4N	72.1W	1709UTC	01.97FT/00.60M
NANTUCKET IS MA	41.3N	70.1W	1713UTC	01.31FT/00.40M
QUONSET POINT RI	41.6N	71.4W	1730UTC	02.30FT/00.70M
CHEZZETCOOK NS	44.8N	63.2W	1740UTC	01.64FT/00.50M
FLAMINGO FL	25.8N	80.1W	1750UTC	01.31FT/00.40M
BRIDGEPORT CT	41.2N	73.2W	1753UTC	00.33FT/00.10M
PROVIDENCE RI	41.8N	71.4W	1754UTC	00.98FT/00.30M
BAR HARBOR ME	44.4N	68.2W	1758UTC	02.95FT/00.90M
FORT POINT NH	43.1N	70.7W	1758UTC	03.61FT/01.10M
BOOTHBAY ME	43.9N	69.6W	1810UTC	02.62FT/00.80M
GRAND MANAN IS NB	44.7N	66.8W	1811UTC	01.31FT/00.40M
BOSTON MA	42.4N	71.1W	1819UTC	00.66FT/00.20M

TIME - TIME OF MEASUREMENT

AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL. IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.

VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

WOODS HOLE MA REPORTS THAT A WAVE APPROXIMATELY 03.00FT/00.91M CAME INTO GREAT HARBOR AND DAMAGED SOME SMALL BOATS. THE LARGER RESEARCH VESSELS WERE OUT AT SEA AT THE TIME. NEWPORT RI REPORTS FLOODING

ALONG ITS WATERFRONT. THE POWERFUL 03.50FT/01.07M SURGE IS REPORTED TO HAVE WASHED OVER SEAWALLS AND FLOODED PORTIONS OF SALVE REGINA UNIVERSITY. THE AREA SEAWARD OF MEMORIAL BLVE HAS BEEN EVACUATED.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.7
 TIME - 0900 EDT MAR 28 2012
 0800 CDT MAR 28 2012
 0900 AST MAR 28 2012
 1300 UTC MAR 28 2012
 LOCATION - 32.0 NORTH 78.0 WEST
 125 MILES/201 KM SE OF MYRTLE BEACH SOUTH CAROLINA
 125 MILES/201 KM SE OF CHARLESTON SOUTH CAROLINA
 DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ031-032-034-052>055-AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-158-ANZ631>634-656-658-650-652-654-430-431-450>455-330-335-338-340-345-350-353-355-230>237-250-254-255-256-150-050>052-FLZ076>078-174-168-172-173-047-054-059-064-141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>052-054-056-NCZ106-108-110-045>047-080-081-094-095-098-103-104-015>017-030>032-102-VAZ084-086-091-094-095-098-099-100-MDZ025-DEZ002>004-NJZ006-012>014-021-023>026-106-108-NYZ071>075-078>081-176>179-CTZ009>012-RIZ002-004>008-MAZ007-016-019>024-NHZ014-MEZ022>028-029-030-NBZ570-550-660-641-NSZ210-230-260-250-110-120-130-170-160-150-140-270-280-320-410-450-440-430-QCZ670-680-NLZ340-220-230-210-120-281932-
 /T.CON.PAAQ.TS.W.0011.120328T1832Z-120328T1932Z/
 COASTAL AREAS BETWEEN AND INCLUDING FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND
 232 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A

SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

MANHATTAN-NY	1357	EDT	MAR 28	ST LAWRENCE-NL	1542	NDT	MAR 28
SCATARIE IS-NS	1501	ADT	MAR 28	PORTLAND-ME	1430	EDT	MAR 28
GRAND MANAN-NB	1503	ADT	MAR 28	BOSTON-MA	1442	EDT	MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-VIZ001-002-281932-
/T.CON.PAAQ.TS.W.0011.120328T1832Z-120328T1932Z/
COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.
232 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO AND THE VIRGIN ISLANDS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

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GMZ656-657-FLZ069-070-075-281932-
/T.CON.PAAQ.TS.Y.0011.120328T1832Z-120328T1932Z/
COASTAL AREAS BETWEEN AND INCLUDING BONITA BEACH FLORIDA TO FLAMINGO FLORIDA
232 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO FLORIDA...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

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NLZ110-130-540-530-570-520-510-560-610-720-710-730-281932-
/T.CON.PAAQ.TS.Y.0011.120328T1832Z-120328T1932Z/
COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR
232 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE ADVISORY ARE PROVIDED BELOW.

BONAVISTA-NL 1748 NDT MAR 28 BATTLE HARBOR-NL 1815 NDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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Scenario 2: WCATWC Message #13

WEXX20 PAAQ 281903
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 13
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
303 PM EDT WED MAR 28 2012

NEW OBSERVATIONS ARE ADDED BELOW.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO AND THE VIRGIN ISLANDS...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM BROWNSVILLE TEXAS TO BONITA BEACH FLORIDA...

RECOMMENDED ACTIONS

- A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE. PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.
- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.
- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
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VIEQUES IS PR	18.1N	65.4W	1601UTC	02.62FT/00.80M
LIMETREE BAY VI	17.7N	64.8W	1603UTC	01.31FT/00.40M
LAMESHUR BAY VI	18.3N	64.7W	1605UTC	03.94FT/01.20M
CHARLESTON SC	32.8N	79.9W	1606UTC	01.64FT/00.50M
SUNSET BEACH SC	33.9N	78.5W	1607UTC	03.28FT/01.00M
KEY WEST FL	24.6N	81.8W	1619UTC	00.33FT/00.10M
LEWES DE	38.8N	75.1W	1628UTC	01.31FT/00.40M
CHRISTIANSTED VI	17.8N	64.7W	1628UTC	01.64FT/00.50M
MONTAUK NY	41.0N	71.9W	1634UTC	03.94FT/01.20M
ATLANTIC CITY NJ	39.4N	74.4W	1634UTC	08.86FT/02.70M
CAPE MAY NJ	38.9N	74.9W	1638UTC	02.30FT/00.70M
CHESAPEAKE BRIDGE VA	36.9N	76.4W	1642UTC	01.31FT/00.40M
ST SIMMONS IS GA	31.2N	81.4W	1653UTC	00.98FT/00.30M
WOODS HOLE MA	41.5N	70.7W	1657UTC	02.95FT/00.90M
NEWPORT RI	41.5N	71.3W	1658UTC	03.61FT/01.10M
MAYAGUEZ PR	18.2N	67.1W	1658UTC	04.59FT/01.40M
SANDY HOOK NJ	40.5N	74.0W	1702UTC	01.31FT/00.40M
NEW LONDON CT	41.4N	72.1W	1709UTC	01.97FT/00.60M
NANTUCKET IS MA	41.3N	70.1W	1713UTC	01.31FT/00.40M
QUONSET POINT RI	41.6N	71.4W	1730UTC	02.30FT/00.70M
CHEZZETCOOK NS	44.8N	63.2W	1740UTC	01.64FT/00.50M
FLAMINGO FL	25.8N	80.1W	1750UTC	01.31FT/00.40M
BRIDGEPORT CT	41.2N	73.2W	1753UTC	00.33FT/00.10M
PROVIDENCE RI	41.8N	71.4W	1754UTC	00.98FT/00.30M
BAR HARBOR ME	44.4N	68.2W	1758UTC	02.95FT/00.90M
FORT POINT NH	43.1N	70.7W	1758UTC	03.61FT/01.10M
BOOTHBAY ME	43.9N	69.6W	1810UTC	02.62FT/00.80M
GRAND MANAN IS NB	44.7N	66.8W	1811UTC	01.31FT/00.40M
BOSTON MA	42.4N	71.1W	1819UTC	00.66FT/00.20M
WELLS ME	43.3N	70.6W	1840UTC	03.94FT/01.20M

TIME - TIME OF MEASUREMENT

AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL.
IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.
VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

SUNSET BEACH SC REPORTS FLOODING ALONG OCEAN ISLE BLVD W AND MAIN ST E FROM A 03.28FT/01.00M SURGE THAT CAME ASHORE. HOMES SEAWARD OF MAIN ST W ARE REPORTED TO BE HEAVILY DAMAGED. FORT POINT NH REPORTS THAT A 03.50FT/01.07M SURGE CAUSED HEAVY DAMAGE TO FORT CONSTITUTION HISTORICAL SITE. MANY BUILDINGS AND SMALL BOATS WERE DAMAGED IN THE AREA. A DOLLAR VALUE HAS NOT BEEN ASSIGNED TO THE DAMAGE YET.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.7

TIME - 0900 EDT MAR 28 2012
0800 CDT MAR 28 2012
0900 AST MAR 28 2012
1300 UTC MAR 28 2012

LOCATION - 32.0 NORTH 78.0 WEST
125 MILES/201 KM SE OF MYRTLE BEACH SOUTH CAROLINA
125 MILES/201 KM SE OF CHARLESTON SOUTH CAROLINA

DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN

ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ031-032-034-052>055-AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-158-ANZ631>634-656-658-650-652-654-430-431-450>455-330-335-338-340-345-350-353-355-230>237-250-254-255-256-150-050>052-FLZ076>078-174-168-172-173-047-054-059-064-141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>052-054-056-NCZ106-108-110-045>047-080-081-094-095-098-103-104-015>017-030>032-102-VAZ084-086-091-094-095-098-099-100-MDZ025-DEZ002>004-NJZ006-012>014-021-023>026-106-108-NYZ071>075-078>081-176>179-CTZ009>012-RIZ002-004>008-MAZ007-016-019>024-NHZ014-MEZ022>028-029-030-NBZ570-550-660-641-NSZ210-230-260-250-110-120-130-170-160-150-140-270-280-320-410-450-440-430-QCZ670-680-NLZ340-220-230-210-120-282003-
/T.CON.PAAQ.TS.W.0011.120328T1903Z-120328T2003Z/
COASTAL AREAS BETWEEN AND INCLUDING FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND
303 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE WARNING ARE PROVIDED BELOW.

ST LAWRENCE-NL	1542	NDT MAR 28	BOSTON-MA	1442	EDT MAR 28
PORTLAND-ME	1430	EDT MAR 28			

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE WCATWC.ARH.NOAA.GOV

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-VIZ001-002-282003-
/T.CON.PAAQ.TS.W.0011.120328T1903Z-120328T2003Z/
COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.
303 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO AND THE VIRGIN ISLANDS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL

ARRIVAL TIME.

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GMZ656-657-FLZ069-070-075-282003-
/T.CON.PAAQ.TS.Y.0011.120328T1903Z-120328T2003Z/
COASTAL AREAS BETWEEN AND INCLUDING BONITA BEACH FLORIDA TO
FLAMINGO FLORIDA
303 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO
FLORIDA...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF
THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING
STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR
WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD
INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE
A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME.

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NLZ110-130-540-530-570-520-510-560-610-720-710-730-282003-
/T.CON.PAAQ.TS.Y.0011.120328T1903Z-120328T2003Z/
COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND
TO CAPE CHIDLEY LABRADOR
303 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF
THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING
STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR
WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD
INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE
A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED
SITES IN THE ADVISORY ARE PROVIDED BELOW.

BONAVISTA-NL 1748 NDT MAR 28 BATTLE HARBOR-NL 1815 NDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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Scenario 2: WCATWC Message #14

WEXX20 PAAQ 281933
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 14
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
333 PM EDT WED MAR 28 2012

NEW OBSERVATIONS ARE ADDED BELOW.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO AND THE VIRGIN ISLANDS...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM BROWNSVILLE TEXAS TO BONITA BEACH FLORIDA...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE. PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.
- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
VIEQUES IS PR	18.1N	65.4W	1601UTC	02.62FT/00.80M
LIMETREE BAY VI	17.7N	64.8W	1603UTC	01.31FT/00.40M
LAMESHUR BAY VI	18.3N	64.7W	1605UTC	03.94FT/01.20M
CHARLESTON SC	32.8N	79.9W	1606UTC	01.64FT/00.50M
SUNSET BEACH SC	33.9N	78.5W	1607UTC	03.28FT/01.00M
KEY WEST FL	24.6N	81.8W	1619UTC	00.33FT/00.10M
LEWES DE	38.8N	75.1W	1628UTC	01.31FT/00.40M
CHRISTIANSTED VI	17.8N	64.7W	1628UTC	01.64FT/00.50M
MONTAUK NY	41.0N	71.9W	1634UTC	03.94FT/01.20M
ATLANTIC CITY NJ	39.4N	74.4W	1634UTC	08.86FT/02.70M
CAPE MAY NJ	38.9N	74.9W	1638UTC	02.30FT/00.70M
CHESAPEAKE BRIDGE VA	36.9N	76.4W	1642UTC	01.31FT/00.40M
ST SIMMONS IS GA	31.2N	81.4W	1653UTC	00.98FT/00.30M
WOODS HOLE MA	41.5N	70.7W	1657UTC	02.95FT/00.90M
NEWPORT RI	41.5N	71.3W	1658UTC	03.61FT/01.10M
MAYAGUEZ PR	18.2N	67.1W	1658UTC	04.59FT/01.40M
SANDY HOOK NJ	40.5N	74.0W	1702UTC	01.31FT/00.40M
NEW LONDON CT	41.4N	72.1W	1709UTC	01.97FT/00.60M
NANTUCKET IS MA	41.3N	70.1W	1713UTC	01.31FT/00.40M
QUONSET POINT RI	41.6N	71.4W	1730UTC	02.30FT/00.70M
CHEZZETCOOK NS	44.8N	63.2W	1740UTC	01.64FT/00.50M
FLAMINGO FL	25.8N	80.1W	1750UTC	01.31FT/00.40M
BRIDGEPORT CT	41.2N	73.2W	1753UTC	00.33FT/00.10M
PROVIDENCE RI	41.8N	71.4W	1754UTC	00.98FT/00.30M
BAR HARBOR ME	44.4N	68.2W	1758UTC	02.95FT/00.90M
FORT POINT NH	43.1N	70.7W	1758UTC	03.61FT/01.10M
GRAND MANAN IS NB	44.7N	66.8W	1811UTC	01.31FT/00.40M
BOSTON MA	42.4N	71.1W	1819UTC	00.66FT/00.20M
WELLS ME	43.3N	70.6W	1840UTC	03.94FT/01.20M

BOOTHBAY ME 43.9N 69.6W 1905UTC 07.21FT/02.20M

TIME - TIME OF MEASUREMENT

AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL.
IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.
VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

WELLS ME REPORTS A 04.00FT/01.22M SURGE THAT HAS TOTALLY INUNDATED THE MARSH AREA SEAWARD OF POST RD. HEAVY DAMAGE IS REPORTED TO THE BUILDINGS IN THE VICINITY OF LAFAYETTE'S OCEANFRONT RESORT, AND TO THE HOMES ALONG ATLANTIC AVE. FOUR PEOPLE ARE REPORTED MISSING AND APPROXIMATE DAMAGE IS BELIEVED TO BE \$15 MILLION.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.7
TIME - 0900 EDT MAR 28 2012
0800 CDT MAR 28 2012
0900 AST MAR 28 2012
1300 UTC MAR 28 2012
LOCATION - 32.0 NORTH 78.0 WEST
125 MILES/201 KM SE OF MYRTLE BEACH SOUTH CAROLINA
125 MILES/201 KM SE OF CHARLESTON SOUTH CAROLINA
DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ031-032-034-052>055-AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-158-ANZ631>634-656-658-650-652-654-430-431-450>455-330-335-338-340-345-350-353-355-230>237-250-254-255-256-150-050>052-FLZ076>078-174-168-172-173-047-054-059-064-141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>052-054-056-NCZ106-108-110-045>047-080-081-094-095-098-103-104-015>017-030>032-102-VAZ084-086-091-094-095-098-099-100-MDZ025-DEZ002>004-NJZ006-012>014-021-023>026-106-108-NYZ071>075-078>081-176>179-CTZ009>012-RIZ002-004>008-MAZ007-016-019>024-NHZ014-MEZ022>028-029-030-NBZ570-550-660-641-NSZ210-230-260-250-110-120-130-170-160-150-140-270-280-320-410-450-440-430-QCZ670-680-NLZ340-220-230-210-120-282033-
/T.CON.PAAQ.TS.W.0011.120328T1933Z-120328T2033Z/
COASTAL AREAS BETWEEN AND INCLUDING FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND
333 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW

HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND
NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE
NEWFOUNDLAND...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO
HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD
INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A
SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME.

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED
SITES IN THE WARNING ARE PROVIDED BELOW.

BOSTON-MA 1442 EDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-
VIZ001-002-282033-
/T.CON.PAAQ.TS.W.0011.120328T1933Z-120328T2033Z/
COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.
333 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO
AND THE VIRGIN ISLANDS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO
HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD
INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A
SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME.

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GMZ656-657-FLZ069-070-075-282033-
/T.CON.PAAQ.TS.Y.0011.120328T1933Z-120328T2033Z/
COASTAL AREAS BETWEEN AND INCLUDING BONITA BEACH FLORIDA TO
FLAMINGO FLORIDA
333 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO
FLORIDA...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF
THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING
STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR
WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD
INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE
A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME.

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NLZ110-130-540-530-570-520-510-560-610-720-710-730-282033-
/T.CON.PAAQ.TS.Y.0011.120328T1933Z-120328T2033Z/
COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND
TO CAPE CHIDLEY LABRADOR
333 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED SITES IN THE ADVISORY ARE PROVIDED BELOW.

BONAVISTA-NL 1748 NDT MAR 28 BATTLE HARBOR-NL 1815 NDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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Scenario 2: WCATWC Message #15

WEXX20 PAAQ 282003
TSUAT1

BULLETIN

TSUNAMI MESSAGE NUMBER 15
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
403 PM EDT WED MAR 28 2012

NEW OBSERVATIONS ARE ADDED BELOW.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO AND THE VIRGIN ISLANDS...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM BROWNSVILLE TEXAS TO BONITA BEACH FLORIDA...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE. PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.

- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF

THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
VIEQUES IS PR	18.1N	65.4W	1601UTC	02.62FT/00.80M
LIMETREE BAY VI	17.7N	64.8W	1603UTC	01.31FT/00.40M
LAMESHUR BAY VI	18.3N	64.7W	1605UTC	03.94FT/01.20M
CHARLESTON SC	32.8N	79.9W	1606UTC	01.64FT/00.50M
SUNSET BEACH SC	33.9N	78.5W	1607UTC	03.28FT/01.00M
KEY WEST FL	24.6N	81.8W	1619UTC	00.33FT/00.10M
LEWES DE	38.8N	75.1W	1628UTC	01.31FT/00.40M
CHRISTIANSTED VI	17.8N	64.7W	1628UTC	01.64FT/00.50M
MONTAUK NY	41.0N	71.9W	1634UTC	03.94FT/01.20M
ATLANTIC CITY NJ	39.4N	74.4W	1634UTC	08.86FT/02.70M
CAPE MAY NJ	38.9N	74.9W	1638UTC	02.30FT/00.70M
CHESAPEAKE BRIDGE VA	36.9N	76.4W	1642UTC	01.31FT/00.40M
ST SIMMONS IS GA	31.2N	81.4W	1653UTC	00.98FT/00.30M
WOODS HOLE MA	41.5N	70.7W	1657UTC	02.95FT/00.90M
NEWPORT RI	41.5N	71.3W	1658UTC	03.61FT/01.10M
MAYAGUEZ PR	18.2N	67.1W	1658UTC	04.59FT/01.40M
SANDY HOOK NJ	40.5N	74.0W	1702UTC	01.31FT/00.40M
NEW LONDON CT	41.4N	72.1W	1709UTC	01.97FT/00.60M
NANTUCKET IS MA	41.3N	70.1W	1713UTC	01.31FT/00.40M
QUONSET POINT RI	41.6N	71.4W	1730UTC	02.30FT/00.70M
CHEZZETCOOK NS	44.8N	63.2W	1740UTC	01.64FT/00.50M
FLAMINGO FL	25.8N	80.1W	1750UTC	01.31FT/00.40M
BRIDGEPORT CT	41.2N	73.2W	1753UTC	00.33FT/00.10M
PROVIDENCE RI	41.8N	71.4W	1754UTC	00.98FT/00.30M
BAR HARBOR ME	44.4N	68.2W	1758UTC	02.95FT/00.90M
FORT POINT NH	43.1N	70.7W	1758UTC	03.61FT/01.10M
GRAND MANAN IS NB	44.7N	66.8W	1811UTC	01.31FT/00.40M
BOSTON MA	42.4N	71.1W	1819UTC	00.66FT/00.20M
WELLS ME	43.3N	70.6W	1840UTC	03.94FT/01.20M
BOOTHBAY ME	43.9N	69.6W	1905UTC	07.21FT/02.20M

TIME - TIME OF MEASUREMENT

AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL.
IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.

VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

REPORTS FROM MANY SITES NOTE THAT WAVES ARE STARTING TO LESSEN IN HEIGHT, THOUGH STRONG CURRENTS ARE STILL BEING REPORTED ALONG THE EAST COAST, PUERTO RICO, AND VIRGIN ISLANDS.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.7

TIME - 0900 EDT MAR 28 2012
0800 CDT MAR 28 2012
0900 AST MAR 28 2012
1300 UTC MAR 28 2012

LOCATION - 32.0 NORTH 78.0 WEST
125 MILES/201 KM SE OF MYRTLE BEACH SOUTH CAROLINA
125 MILES/201 KM SE OF CHARLESTON SOUTH CAROLINA

DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY

CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ031-032-034-052>055-AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-158-ANZ631>634-656-658-650-652-654-430-431-450>455-330-335-338-340-345-350-353-355-230>237-250-254-255-256-150-050>052-FLZ076>078-174-168-172-173-047-054-059-064-141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>052-054-056-NCZ106-108-110-045>047-080-081-094-095-098-103-104-015>017-030>032-102-VAZ084-086-091-094-095-098-099-100-MDZ025-DEZ002>004-NJZ006-012>014-021-023>026-106-108-NYZ071>075-078>081-176>179-CTZ009>012-RIZ002-004>008-MAZ007-016-019>024-NHZ014-MEZ022>028-029-030-NBZ570-550-660-641-NSZ210-230-260-250-110-120-130-170-160-150-140-270-280-320-410-450-440-430-QCZ670-680-NLZ340-220-230-210-120-282103-
/T.CON.PAAQ.TS.W.0011.120328T2003Z-120328T2103Z/
COASTAL AREAS BETWEEN AND INCLUDING FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND
403 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-VIZ001-002-282103-
/T.CON.PAAQ.TS.W.0011.120328T2003Z-120328T2103Z/
COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.
403 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO AND THE VIRGIN ISLANDS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

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GMZ656-657-FLZ069-070-075-282103-
/T.CON.PAAQ.TS.Y.0011.120328T2003Z-120328T2103Z/

COASTAL AREAS BETWEEN AND INCLUDING BONITA BEACH FLORIDA TO
FLAMINGO FLORIDA
403 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO
FLORIDA...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF
THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING
STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR
WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD
INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE
A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME.

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NLZ110-130-540-530-570-520-510-560-610-720-710-730-282103-
/T.CON.PAAQ.TS.Y.0011.120328T2003Z-120328T2103Z/
COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND
TO CAPE CHIDLEY LABRADOR
403 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF
THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING
STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR
WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD
INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE
A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED
SITES IN THE ADVISORY ARE PROVIDED BELOW.

BONAVISTA-NL 1748 NDT MAR 28 BATTLE HARBOR-NL 1815 NDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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Scenario 2: WCATWC Message #16

WEXX20 PAAQ 282032
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 16
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
432 PM EDT WED MAR 28 2012

NO NEW UPDATES SINCE LAST MESSAGE.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -
NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW
HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND
NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE
NEWFOUNDLAND...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO AND THE VIRGIN ISLANDS...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM BROWNSVILLE TEXAS TO BONITA BEACH FLORIDA...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE. PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.
- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
VIEQUES IS PR	18.1N	65.4W	1601UTC	02.62FT/00.80M
LIMETREE BAY VI	17.7N	64.8W	1603UTC	01.31FT/00.40M
LAMESHUR BAY VI	18.3N	64.7W	1605UTC	03.94FT/01.20M
CHARLESTON SC	32.8N	79.9W	1606UTC	01.64FT/00.50M
SUNSET BEACH SC	33.9N	78.5W	1607UTC	03.28FT/01.00M
KEY WEST FL	24.6N	81.8W	1619UTC	00.33FT/00.10M
LEWES DE	38.8N	75.1W	1628UTC	01.31FT/00.40M
CHRISTIANSTED VI	17.8N	64.7W	1628UTC	01.64FT/00.50M
MONTAUK NY	41.0N	71.9W	1634UTC	03.94FT/01.20M
ATLANTIC CITY NJ	39.4N	74.4W	1634UTC	08.86FT/02.70M
CAPE MAY NJ	38.9N	74.9W	1638UTC	02.30FT/00.70M
CHESAPEAKE BRIDGE VA	36.9N	76.4W	1642UTC	01.31FT/00.40M
ST SIMMONS IS GA	31.2N	81.4W	1653UTC	00.98FT/00.30M
WOODS HOLE MA	41.5N	70.7W	1657UTC	02.95FT/00.90M
NEWPORT RI	41.5N	71.3W	1658UTC	03.61FT/01.10M
MAYAGUEZ PR	18.2N	67.1W	1658UTC	04.59FT/01.40M
SANDY HOOK NJ	40.5N	74.0W	1702UTC	01.31FT/00.40M
NEW LONDON CT	41.4N	72.1W	1709UTC	01.97FT/00.60M
NANTUCKET IS MA	41.3N	70.1W	1713UTC	01.31FT/00.40M
QUONSET POINT RI	41.6N	71.4W	1730UTC	02.30FT/00.70M
CHEZZETCOOK NS	44.8N	63.2W	1740UTC	01.64FT/00.50M
FLAMINGO FL	25.8N	80.1W	1750UTC	01.31FT/00.40M
BRIDGEPORT CT	41.2N	73.2W	1753UTC	00.33FT/00.10M
PROVIDENCE RI	41.8N	71.4W	1754UTC	00.98FT/00.30M
FORT POINT NH	43.1N	70.7W	1758UTC	03.61FT/01.10M
GRAND MANAN IS NB	44.7N	66.8W	1811UTC	01.31FT/00.40M
WELLS ME	43.3N	70.6W	1840UTC	03.94FT/01.20M
BOOTHBAY ME	43.9N	69.6W	1905UTC	07.21FT/02.20M
BOSTON MA	42.4N	71.1W	2017UTC	01.31FT/00.40M
BAR HARBOR ME	44.4N	68.2W	2017UTC	06.23FT/01.90M

TIME - TIME OF MEASUREMENT

AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL. IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT. VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.7
 TIME - 0900 EDT MAR 28 2012
 0800 CDT MAR 28 2012
 0900 AST MAR 28 2012
 1300 UTC MAR 28 2012
 LOCATION - 32.0 NORTH 78.0 WEST
 125 MILES/201 KM SE OF MYRTLE BEACH SOUTH CAROLINA
 125 MILES/201 KM SE OF CHARLESTON SOUTH CAROLINA
 DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ031-032-034-052>055-AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-158-ANZ631>634-656-658-650-652-654-430-431-450>455-330-335-338-340-345-350-353-355-230>237-250-254-255-256-150-050>052-FLZ076>078-174-168-172-173-047-054-059-064-141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>052-054-056-NCZ106-108-110-045>047-080-081-094-095-098-103-104-015>017-030>032-102-VAZ084-086-091-094-095-098-099-100-MDZ025-DEZ002>004-NJZ006-012>014-021-023>026-106-108-NYZ071>075-078>081-176>179-CTZ009>012-RIZ002-004>008-MAZ007-016-019>024-NHZ014-MEZ022>028-029-030-NBZ570-550-660-641-NSZ210-230-260-250-110-120-130-170-160-150-140-270-280-320-410-450-440-430-QCZ670-680-NLZ340-220-230-210-120-282132-
 /T.CON.PAAQ.TS.W.0011.120328T2032Z-120328T2132Z/
 COASTAL AREAS BETWEEN AND INCLUDING FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND
 432 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-
VIZ001-002-282132-
/T.CON.PAAQ.TS.W.0011.120328T2032Z-120328T2132Z/
COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.
432 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO
AND THE VIRGIN ISLANDS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO
HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD
INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A
SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME.

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GMZ656-657-FLZ069-070-075-282132-
/T.CON.PAAQ.TS.Y.0011.120328T2032Z-120328T2132Z/
COASTAL AREAS BETWEEN AND INCLUDING BONITA BEACH FLORIDA TO
FLAMINGO FLORIDA
432 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO
FLORIDA...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF
THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING
STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR
WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD
INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE
A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME.

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NLZ110-130-540-530-570-520-510-560-610-720-710-730-282132-
/T.CON.PAAQ.TS.Y.0011.120328T2032Z-120328T2132Z/
COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND
TO CAPE CHIDLEY LABRADOR
432 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF
THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING
STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR
WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD
INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE
A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED
SITES IN THE ADVISORY ARE PROVIDED BELOW.

BONAVISTA-NL 1748 NDT MAR 28 BATTLE HARBOR-NL 1815 NDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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Scenario 2: WCATWC Message #17

WEXX20 PAAQ 282103
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 17
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
503 PM EDT WED MAR 28 2012

NO NEW UPDATES SINCE LAST MESSAGE.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -
NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW
HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND
NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE
NEWFOUNDLAND...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO
AND THE VIRGIN ISLANDS...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO
FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF
TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM
BROWNSVILLE TEXAS TO BONITA BEACH FLORIDA...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE
TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE.
PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO
INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS
ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO
HIGHER GROUND.
- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF
THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
VIEQUES IS PR	18.1N	65.4W	1601UTC	02.62FT/00.80M
LIMETREE BAY VI	17.7N	64.8W	1603UTC	01.31FT/00.40M
LAMESHUR BAY VI	18.3N	64.7W	1605UTC	03.94FT/01.20M
CHARLESTON SC	32.8N	79.9W	1606UTC	01.64FT/00.50M
SUNSET BEACH SC	33.9N	78.5W	1607UTC	03.28FT/01.00M
KEY WEST FL	24.6N	81.8W	1619UTC	00.33FT/00.10M
LEWES DE	38.8N	75.1W	1628UTC	01.31FT/00.40M
CHRISTIANSTED VI	17.8N	64.7W	1628UTC	01.64FT/00.50M

MONTAUK NY	41.0N	71.9W	1634UTC	03.94FT/01.20M
ATLANTIC CITY NJ	39.4N	74.4W	1634UTC	08.86FT/02.70M
CAPE MAY NJ	38.9N	74.9W	1638UTC	02.30FT/00.70M
CHESAPEAKE BRIDGE VA	36.9N	76.4W	1642UTC	01.31FT/00.40M
ST SIMMONS IS GA	31.2N	81.4W	1653UTC	00.98FT/00.30M
WOODS HOLE MA	41.5N	70.7W	1657UTC	02.95FT/00.90M
NEWPORT RI	41.5N	71.3W	1658UTC	03.61FT/01.10M
MAYAGUEZ PR	18.2N	67.1W	1658UTC	04.59FT/01.40M
SANDY HOOK NJ	40.5N	74.0W	1702UTC	01.31FT/00.40M
NEW LONDON CT	41.4N	72.1W	1709UTC	01.97FT/00.60M
NANTUCKET IS MA	41.3N	70.1W	1713UTC	01.31FT/00.40M
QUONSET POINT RI	41.6N	71.4W	1730UTC	02.30FT/00.70M
CHEZZETCOOK NS	44.8N	63.2W	1740UTC	01.64FT/00.50M
FLAMINGO FL	25.8N	80.1W	1750UTC	01.31FT/00.40M
BRIDGEPORT CT	41.2N	73.2W	1753UTC	00.33FT/00.10M
PROVIDENCE RI	41.8N	71.4W	1754UTC	00.98FT/00.30M
FORT POINT NH	43.1N	70.7W	1758UTC	03.61FT/01.10M
GRAND MANAN IS NB	44.7N	66.8W	1811UTC	01.31FT/00.40M
WELLS ME	43.3N	70.6W	1840UTC	03.94FT/01.20M
BOOTHBAY ME	43.9N	69.6W	1905UTC	07.21FT/02.20M
BOSTON MA	42.4N	71.1W	2017UTC	01.31FT/00.40M
BAR HARBOR ME	44.4N	68.2W	2017UTC	06.23FT/01.90M

TIME - TIME OF MEASUREMENT

AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL.
IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.
VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.7

TIME - 0900 EDT MAR 28 2012
0800 CDT MAR 28 2012
0900 AST MAR 28 2012
1300 UTC MAR 28 2012

LOCATION - 32.0 NORTH 78.0 WEST
125 MILES/201 KM SE OF MYRTLE BEACH SOUTH CAROLINA
125 MILES/201 KM SE OF CHARLESTON SOUTH CAROLINA

DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ031-032-034-052>055-AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-158-ANZ631>634-656-658-650-652-654-430-431-450>455-330-335-338-340-345-350-353-355-230>237-250-254-255-256-150-050>052-FLZ076>078-174-168-172-173-047-054-059-064-141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>052-054-056-NCZ106-

108-110-045>047-080-081-094-095-098-103-104-015>017-030>032-
102-VAZ084-086-091-094-095-098-099-100-MDZ025-DEZ002>004-NJZ006-
012>014-021-023>026-106-108-NYZ071>075-078>081-176>179-CTZ009>012-
RIZ002-004>008-MAZ007-016-019>024-NHZ014-MEZ022>028-029-030-
NBZ570-550-660-641-NSZ210-230-260-250-110-120-130-170-160-
150-140-270-280-320-410-450-440-430-QCZ670-680-NLZ340-220-
230-210-120-282203-
/T.CON.PAAQ.TS.W.0011.120328T2103Z-120328T2203Z/
COASTAL AREAS BETWEEN AND INCLUDING FLAMINGO FLORIDA TO LA
MANCHE NEWFOUNDLAND
503 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -
NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW
HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND
NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE
NEWFOUNDLAND...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO
HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD
INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A
SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME.

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-
VIZ001-002-282203-
/T.CON.PAAQ.TS.W.0011.120328T2103Z-120328T2203Z/
COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.
503 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO
AND THE VIRGIN ISLANDS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO
HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD
INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A
SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME.

\$\$

GMZ656-657-FLZ069-070-075-282203-
/T.CON.PAAQ.TS.Y.0011.120328T2103Z-120328T2203Z/
COASTAL AREAS BETWEEN AND INCLUDING BONITA BEACH FLORIDA TO
FLAMINGO FLORIDA
503 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO
FLORIDA...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF
THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING
STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR
WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD
INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE
A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME.

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NLZ110-130-540-530-570-520-510-560-610-720-710-730-282203-
/T.CON.PAAQ.TS.Y.0011.120328T2103Z-120328T2203Z/
COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND
TO CAPE CHIDLEY LABRADOR
503 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF
THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING
STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR
WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD
INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE
A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED
SITES IN THE ADVISORY ARE PROVIDED BELOW.

BONAVISTA-NL 1748 NDT MAR 28 BATTLE HARBOR-NL 1815 NDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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Scenario 2: WCATWC Message #18

WEXX20 PAAQ 282131
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 18
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
531 PM EDT WED MAR 28 2012

NO NEW UPDATES SINCE LAST MESSAGE.

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -
NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW
HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND
NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE
NEWFOUNDLAND...

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO
AND THE VIRGIN ISLANDS...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO
FLORIDA...

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF
TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM
BROWNSVILLE TEXAS TO BONITA BEACH FLORIDA...

RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH IS EXPECTED TO CAUSE DAMAGE TO THE WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE. PEOPLE IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE AGENCIES.

- IF IN A TSUNAMI WARNING COASTAL AREA MOVE INLAND TO HIGHER GROUND.
- IF IN A TSUNAMI ADVISORY COASTAL AREA MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	LON	TIME	AMPL
VIEQUES IS PR	18.1N	65.4W	1601UTC	02.62FT/00.80M
LIMETREE BAY VI	17.7N	64.8W	1603UTC	01.31FT/00.40M
LAMESHUR BAY VI	18.3N	64.7W	1605UTC	03.94FT/01.20M
CHARLESTON SC	32.8N	79.9W	1606UTC	01.64FT/00.50M
SUNSET BEACH SC	33.9N	78.5W	1607UTC	03.28FT/01.00M
KEY WEST FL	24.6N	81.8W	1619UTC	00.33FT/00.10M
LEWES DE	38.8N	75.1W	1628UTC	01.31FT/00.40M
CHRISTIANSTED VI	17.8N	64.7W	1628UTC	01.64FT/00.50M
MONTAUK NY	41.0N	71.9W	1634UTC	03.94FT/01.20M
ATLANTIC CITY NJ	39.4N	74.4W	1634UTC	08.86FT/02.70M
CAPE MAY NJ	38.9N	74.9W	1638UTC	02.30FT/00.70M
CHESAPEAKE BRIDGE VA	36.9N	76.4W	1642UTC	01.31FT/00.40M
ST SIMMONS IS GA	31.2N	81.4W	1653UTC	00.98FT/00.30M
WOODS HOLE MA	41.5N	70.7W	1657UTC	02.95FT/00.90M
NEWPORT RI	41.5N	71.3W	1658UTC	03.61FT/01.10M
MAYAGUEZ PR	18.2N	67.1W	1658UTC	04.59FT/01.40M
SANDY HOOK NJ	40.5N	74.0W	1702UTC	01.31FT/00.40M
NEW LONDON CT	41.4N	72.1W	1709UTC	01.97FT/00.60M
NANTUCKET IS MA	41.3N	70.1W	1713UTC	01.31FT/00.40M
QUONSET POINT RI	41.6N	71.4W	1730UTC	02.30FT/00.70M
CHEZZETCOOK NS	44.8N	63.2W	1740UTC	01.64FT/00.50M
FLAMINGO FL	25.8N	80.1W	1750UTC	01.31FT/00.40M
BRIDGEPORT CT	41.2N	73.2W	1753UTC	00.33FT/00.10M
PROVIDENCE RI	41.8N	71.4W	1754UTC	00.98FT/00.30M
FORT POINT NH	43.1N	70.7W	1758UTC	03.61FT/01.10M
GRAND MANAN IS NB	44.7N	66.8W	1811UTC	01.31FT/00.40M
WELLS ME	43.3N	70.6W	1840UTC	03.94FT/01.20M
BOOTHBAY ME	43.9N	69.6W	1905UTC	07.21FT/02.20M
BOSTON MA	42.4N	71.1W	2017UTC	01.31FT/00.40M
BAR HARBOR ME	44.4N	68.2W	2017UTC	06.23FT/01.90M

TIME - TIME OF MEASUREMENT

AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL.

IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.

VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

WAVE HEIGHTS ALONG THE EAST COAST, PUERTO RICO, AND VIRGIN ISLANDS ARE REPORTED TO BE 00.65FT/00.20M TO 00.98FT/00.30M IN HEIGHT.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.7

TIME - 0900 EDT MAR 28 2012
 0800 CDT MAR 28 2012
 0900 AST MAR 28 2012
 1300 UTC MAR 28 2012

LOCATION - 32.0 NORTH 78.0 WEST
 125 MILES/201 KM SE OF MYRTLE BEACH SOUTH CAROLINA
 125 MILES/201 KM SE OF CHARLESTON SOUTH CAROLINA

DEPTH - 6 MILES/10 KM

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. WARNINGS INDICATE THAT WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL

CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR THE WATER IS EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ031-032-034-052>055-AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-158-ANZ631>634-656-658-650-652-654-430-431-450>455-330-335-338-340-345-350-353-355-230>237-250-254-255-256-150-050>052-FLZ076>078-174-168-172-173-047-054-059-064-141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>052-054-056-NCZ106-108-110-045>047-080-081-094-095-098-103-104-015>017-030>032-102-VAZ084-086-091-094-095-098-099-100-MDZ025-DEZ002>004-NJZ006-012>014-021-023>026-106-108-NYZ071>075-078>081-176>179-CTZ009>012-RIZ002-004>008-MAZ007-016-019>024-NHZ014-MEZ022>028-029-030-NBZ570-550-660-641-NSZ210-230-260-250-110-120-130-170-160-150-140-270-280-320-410-450-440-430-QCZ670-680-NLZ340-220-230-210-120-282231-
/T.CON.PAAQ.TS.W.0011.120328T2131Z-120328T2231Z/
COASTAL AREAS BETWEEN AND INCLUDING FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND
531 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-VIZ001-002-282231-
/T.CON.PAAQ.TS.W.0011.120328T2131Z-120328T2231Z/
COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.
531 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING CONTINUES IN EFFECT FOR PUERTO RICO AND THE VIRGIN ISLANDS...

PEOPLE IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD

INUNDATION IS IMMINENT... EXPECTED OR OCCURRING. TSUNAMIS ARE A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL TIME.

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GMZ656-657-FLZ069-070-075-282231-
/T.CON.PAAQ.TS.Y.0011.120328T2131Z-120328T2231Z/
COASTAL AREAS BETWEEN AND INCLUDING BONITA BEACH FLORIDA TO
FLAMINGO FLORIDA
531 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO
FLORIDA...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF
THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING
STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR
WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD
INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE
A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME.

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NLZ110-130-540-530-570-520-510-560-610-720-710-730-282231-
/T.CON.PAAQ.TS.Y.0011.120328T2131Z-120328T2231Z/
COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND
TO CAPE CHIDLEY LABRADOR
531 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE COASTAL
AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

PEOPLE IN TSUNAMI ADVISORY COASTAL AREAS SHOULD MOVE OUT OF
THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING
STRONG CURRENTS OR WAVES DANGEROUS TO PEOPLE IN OR VERY NEAR
WATER IS IMMINENT... EXPECTED OR OCCURRING. SIGNIFICANT WIDESPREAD
INUNDATION IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE
A SERIES OF WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL
ARRIVAL TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED
SITES IN THE ADVISORY ARE PROVIDED BELOW.

BATTLE HARBOR-NL 1815 NDT MAR 28

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE
WCATWC.ARH.NOAA.GOV

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Scenario 2: WCATWC Message #19

WEXX20 PAAQ 282201
TSUAT1

BULLETIN
TSUNAMI MESSAGE NUMBER 19
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK
601 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY IS CANCELED FOR THE COASTAL AREAS OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO FLORIDA...

...THE TSUNAMI WARNING IS CANCELED FOR THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND...

...THE TSUNAMI ADVISORY IS CANCELED FOR THE COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

...THE TSUNAMI WARNING IS CANCELED FOR PUERTO RICO AND THE VIRGIN ISLANDS...

EVALUATION

TSUNAMI AMPLITUDES HAVE DROPPED BELOW DANGEROUS LEVELS AT MOST LOCATIONS ALONG THE ATLANTIC COASTS OF THE U.S. AND CANADA. DAMAGING TSUNAMIS ARE NO LONGER EXPECTED. AS LOCAL CONDITIONS CAN CAUSE A WIDE VARIATION IN TSUNAMI WAVE ACTION THE ALL CLEAR DETERMINATIONS MUST BE MADE BY LOCAL AUTHORITIES.

MEASUREMENTS OR REPORTS OF TSUNAMI ACTIVITY

LOCATION	LAT	Lon	TIME	AMPL
VIEQUES IS PR	18.1N	65.4W	1601UTC	02.62FT/00.80M
LIMETREE BAY VI	17.7N	64.8W	1603UTC	01.31FT/00.40M
LAMESHUR BAY VI	18.3N	64.7W	1605UTC	03.94FT/01.20M
CHARLESTON SC	32.8N	79.9W	1606UTC	01.64FT/00.50M
SUNSET BEACH SC	33.9N	78.5W	1607UTC	03.28FT/01.00M
KEY WEST FL	24.6N	81.8W	1619UTC	00.33FT/00.10M
LEWES DE	38.8N	75.1W	1628UTC	01.31FT/00.40M
CHRISTIANSTED VI	17.8N	64.7W	1628UTC	01.64FT/00.50M
MONTAUK NY	41.0N	71.9W	1634UTC	03.94FT/01.20M
ATLANTIC CITY NJ	39.4N	74.4W	1634UTC	08.86FT/02.70M
CAPE MAY NJ	38.9N	74.9W	1638UTC	02.30FT/00.70M
CHESAPEAKE BRIDGE VA	36.9N	76.4W	1642UTC	01.31FT/00.40M
ST SIMMONS IS GA	31.2N	81.4W	1653UTC	00.98FT/00.30M
WOODS HOLE MA	41.5N	70.7W	1657UTC	02.95FT/00.90M
NEWPORT RI	41.5N	71.3W	1658UTC	03.61FT/01.10M
MAYAGUEZ PR	18.2N	67.1W	1658UTC	04.59FT/01.40M
SANDY HOOK NJ	40.5N	74.0W	1702UTC	01.31FT/00.40M
NEW LONDON CT	41.4N	72.1W	1709UTC	01.97FT/00.60M
NANTUCKET IS MA	41.3N	70.1W	1713UTC	01.31FT/00.40M
QUONSET POINT RI	41.6N	71.4W	1730UTC	02.30FT/00.70M
CHEZZETCOOK NS	44.8N	63.2W	1740UTC	01.64FT/00.50M
FLAMINGO FL	25.8N	80.1W	1750UTC	01.31FT/00.40M
BRIDGEPORT CT	41.2N	73.2W	1753UTC	00.33FT/00.10M
PROVIDENCE RI	41.8N	71.4W	1754UTC	00.98FT/00.30M
FORT POINT NH	43.1N	70.7W	1758UTC	03.61FT/01.10M
GRAND MANAN IS NB	44.7N	66.8W	1811UTC	01.31FT/00.40M
WELLS ME	43.3N	70.6W	1840UTC	03.94FT/01.20M
BOOTHBAY ME	43.9N	69.6W	1905UTC	07.21FT/02.20M
BOSTON MA	42.4N	71.1W	2017UTC	01.31FT/00.40M
BAR HARBOR ME	44.4N	68.2W	2017UTC	06.23FT/01.90M

TIME - TIME OF MEASUREMENT

AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL. IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT. VALUES ARE GIVEN IN BOTH METERS/M/ AND FEET/FT/.

WAVES ALONG THE EAST COAST, PUERTO RICO, AND VIRGIN ISLANDS ARE REPORTED TO BE LESS THAN 00.98FT/00.30M IN HEIGHT. PRELIMIARY DAMAGE TOTALS NOTE \$483 MILLION IN PROPERTY DAMAGE AND 167 PEOPLE KILLED OR MISSING. THESE FIGURES ARE EXPECTED TO RISE SIGNIFICANTLY AS MORE DETAILED ASSESSMENTS

BECOME AVAILABLE.

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.7
 TIME - 0900 EDT MAR 28 2012
 0800 CDT MAR 28 2012
 0900 AST MAR 28 2012
 1300 UTC MAR 28 2012
 LOCATION - 32.0 NORTH 78.0 WEST
 125 MILES/201 KM SE OF MYRTLE BEACH SOUTH CAROLINA
 125 MILES/201 KM SE OF CHARLESTON SOUTH CAROLINA
 DEPTH - 6 MILES/10 KM

CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES FOR INFORMATION ON THIS EVENT AT PTWC.WEATHER.GOV.

THIS WILL BE THE LAST WEST COAST/ALASKA TSUNAMI WARNING CENTER MESSAGE ISSUED FOR THIS EVENT. THIS INFORMATION IS ALSO POSTED AT WCATWC.ARH.NOAA.GOV.

GMZ656-657-FLZ069-070-075-290001-
 /T.CAN.PAAQ.TS.Y.0011.120328T2201Z-120329T0001Z/
 COASTAL AREAS BETWEEN AND INCLUDING BONITA BEACH FLORIDA TO
 FLAMINGO FLORIDA
 601 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY IS CANCELED FOR THE COASTAL AREAS
 OF FLORIDA FROM BONITA BEACH FLORIDA TO FLAMINGO FLORIDA...

DAMAGING TSUNAMIS ARE NO LONGER EXPECTED. AS LOCAL CONDITIONS CAN CAUSE A WIDE VARIATION IN TSUNAMI WAVE ACTION THE ALL CLEAR DETERMINATIONS MUST BE MADE BY LOCAL AUTHORITIES.

\$\$

GMZ031-032-034-052>055-AMZ630-650-651-550-552-555-450-452-
 454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-
 158-ANZ631>634-656-658-650-652-654-430-431-450>455-330-335-
 338-340-345-350-353-355-230>237-250-254-255-256-150-050>052-
 FLZ076>078-174-168-172-173-047-054-059-064-141-147-024-025-
 033-038-GAZ154-166-117-119-139-141-SCZ048>052-054-056-NCZ106-
 108-110-045>047-080-081-094-095-098-103-104-015>017-030>032-
 102-VAZ084-086-091-094-095-098-099-100-MDZ025-DEZ002>004-NJZ006-
 012>014-021-023>026-106-108-NYZ071>075-078>081-176>179-CTZ009>012-
 RIZ002-004>008-MAZ007-016-019>024-NHZ014-MEZ022>028-029-030-
 NBZ570-550-660-641-NSZ210-230-260-250-110-120-130-170-160-
 150-140-270-280-320-410-450-440-430-QCZ670-680-NLZ340-220-
 230-210-120-290001-
 /T.CAN.PAAQ.TS.W.0011.120328T2201Z-120329T0001Z/
 COASTAL AREAS BETWEEN AND INCLUDING FLAMINGO FLORIDA TO LA
 MANCHE NEWFOUNDLAND
 601 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING IS CANCELED FOR THE COASTAL AREAS OF
 FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA -
 VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK -
 CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE
 - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM
 FLAMINGO FLORIDA TO LA MANCHE NEWFOUNDLAND...

DAMAGING TSUNAMIS ARE NO LONGER EXPECTED. AS LOCAL CONDITIONS CAN CAUSE A WIDE VARIATION IN TSUNAMI WAVE ACTION THE ALL CLEAR DETERMINATIONS MUST BE MADE BY LOCAL AUTHORITIES.

\$\$

NLZ110-130-540-530-570-520-510-560-610-720-710-730-290001-

/T.CAN.PAAQ.TS.Y.0011.120328T2201Z-120329T0001Z/
COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND
TO CAPE CHIDLEY LABRADOR
601 PM EDT WED MAR 28 2012

...THE TSUNAMI ADVISORY IS CANCELED FOR THE COASTAL AREAS
OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE NEWFOUNDLAND TO
CAPE CHIDLEY LABRADOR...

DAMAGING TSUNAMIS ARE NO LONGER EXPECTED. AS LOCAL CONDITIONS CAN
CAUSE A WIDE VARIATION IN TSUNAMI WAVE ACTION THE ALL CLEAR
DETERMINATIONS MUST BE MADE BY LOCAL AUTHORITIES.

\$\$

AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-
VIZ001-002-290001-
/T.CAN.PAAQ.TS.W.0011.120328T2201Z-120329T0001Z/
COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.
601 PM EDT WED MAR 28 2012

...THE TSUNAMI WARNING IS CANCELED FOR PUERTO RICO AND THE
VIRGIN ISLANDS...

DAMAGING TSUNAMIS ARE NO LONGER EXPECTED. AS LOCAL CONDITIONS CAN
CAUSE A WIDE VARIATION IN TSUNAMI WAVE ACTION THE ALL CLEAR
DETERMINATIONS MUST BE MADE BY LOCAL AUTHORITIES.

\$\$

Exercise

Appendix E. Web-based Products

Scenario 1: Gulf of Mexico

Graphical and web-based products are posted to the WCATWC web sites during an event. This Appendix contains examples of several. The first is the html-based text message with embedded links.

[Link to Standard Warning Message](#)

[Link to Public Warning Message](#)

[Link to XML/CAP Message](#)

[Link to Printable Message](#)

To: U.S. and Canadian Atlantic, and Gulf of Mexico coastal regions
From: [NOAA/NWS/West Coast and Alaska Tsunami Warning Center](#)
Subject: [Tsunami Warning](#) #1 issued 03/28/2012 at 9:04AM EDT

A [Tsunami Warning](#) is now in effect which includes the coastal areas of Texas, Louisiana, Mississippi, Alabama and Florida from Brownsville, Texas to Ocean Reef, Florida.

This message is for **Information Only** for coastal areas of Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine, New Brunswick, Nova Scotia, Newfoundland and Labrador from Ocean Reef, Florida to Cape Chidley, Labrador.

This message is for **Information Only** for coastal areas of Puerto Rico and the Virgin Islands.

A **Tsunami Warning** means that all coastal residents in the [warning area](#) who are near the beach or in low-lying regions should move immediately inland to higher ground and away from all harbors and inlets including those sheltered directly from the sea. Those feeling the earth shake, seeing unusual wave action, or the water level rising or receding may have only a few minutes before the tsunami arrival and should move immediately. Homes and small buildings are not designed to withstand tsunami impacts. Do not stay in these structures.

All residents within the warned area should be alert for instructions broadcast from their local civil authorities. Earthquakes of this magnitude are known to generate tsunamis.

At 9:00 AM Eastern Daylight Time on March 28, an [earthquake](#) with preliminary magnitude 6.7 [occurred 190 miles/306 Km northwest of Key West, Florida](#). (Refer to the [United States Geological Survey](#) for official earthquake parameters.) Earthquakes of this size are known to generate tsunamis. If a tsunami has been generated, the waves will first reach Key West, Florida at 10:12 AM EDT on March 28. Estimated [tsunami arrival times](#) and [maps](#) along with [safety rules](#) and [other information](#) can be found on the [WCATWC](#) web site.

[Tsunamis](#) can be dangerous waves that are not survivable. Wave heights are

amplified by irregular shoreline and are difficult to forecast. Tsunamis often appear as a strong surge and may be preceded by a receding water level. Mariners in water deeper than 600 feet should not be affected by a tsunami. Wave heights will increase rapidly as water shallows. Tsunamis are a series of ocean waves which can be dangerous for several hours after the initial wave arrival. DO NOT return to evacuated areas until an all clear is given by local civil authorities.

Caribbean coastal regions outside Puerto Rico and the Virgin Islands should refer to the [Pacific Tsunami Warning Center](#) messages for information on the event.

This message will be updated in 30 minutes or sooner if the situation warrants. The tsunami message will remain in effect until further notice. For further information stay tuned to NOAA Weather Radio, your local TV or radio stations, or see the [WCATWC](#) web site.

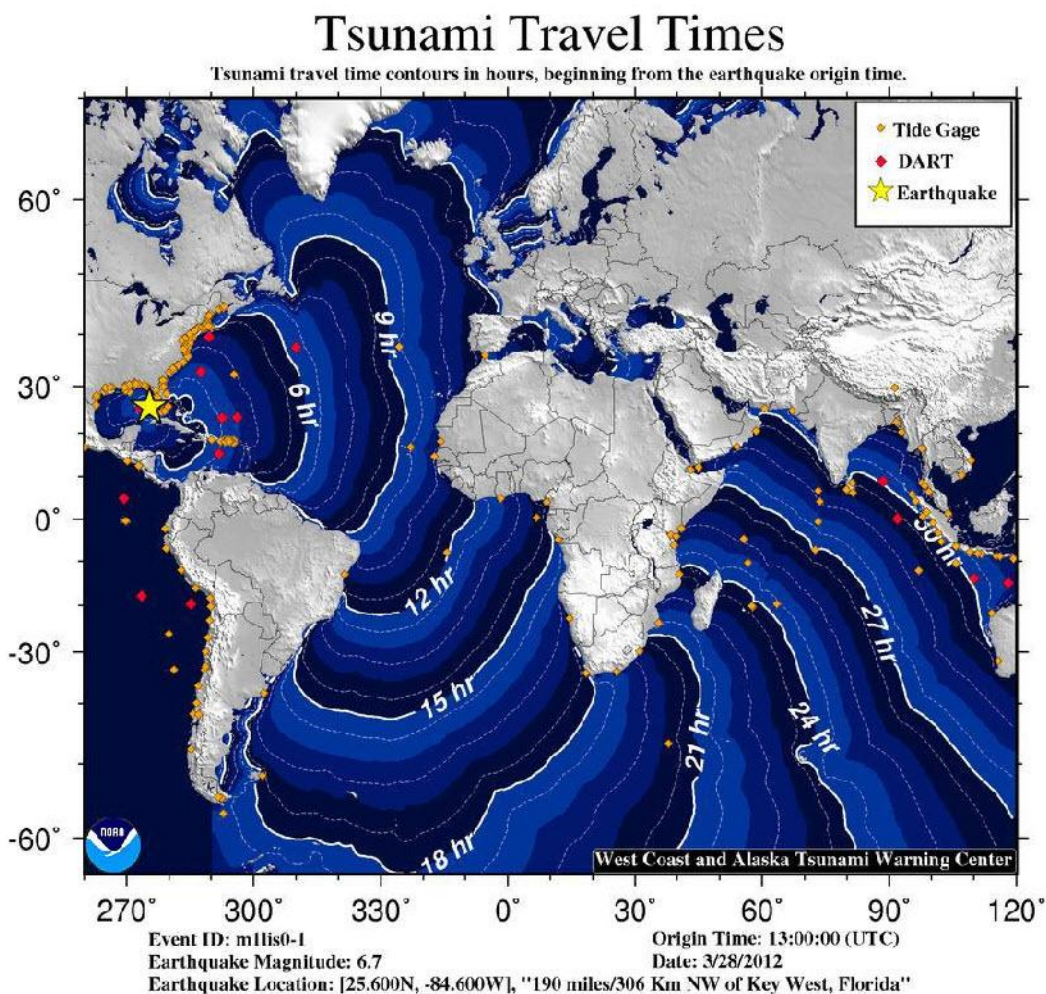


Figure E1: Example of a travel time map.

Tsunami travel time list example below.

The following list gives estimated times of arrival for locations along the U.S. and Canadian Atlantic coast from a tsunami generated at the given source location.

THE LISTING OF A TSUNAMI ARRIVAL TIME BELOW DOES NOT

INDICATE A WAVE IS IMMINENT. REFER TO THE WARNING BULLETIN TO DETERMINE WHICH AREAS ARE THREATENED.

The listed arrival time is the initial wave arrival.
Tsunamis can be dangerous for many hours after arrival,
and the initial wave is not necessarily the largest.
The list is ordered by arrival time starting with the earliest.

Source:

Lat: 25.6N
Lng: 84.6W
Mag: 6.7
O-time: 1300UTC
Date: MAR 28

Estimated times of initial tsunami arrival:

DART 42409	0953 EDT MAR 28	1353 UTC MAR 28
Key West, Florida	1012 EDT MAR 28	1412 UTC MAR 28
Pilots Station East, Louisiana	0915 CDT MAR 28	1415 UTC MAR 28
Cancun, Mexico	0924 CDT MAR 28	1424 UTC MAR 28
Vaca Key, Florida	1044 EDT MAR 28	1444 UTC MAR 28
Ocean Reef, Florida	1055 EDT MAR 28	1455 UTC MAR 28
Virginia Key, Florida	1059 EDT MAR 28	1459 UTC MAR 28
Grand Isle, Louisiana	1010 CDT MAR 28	1510 UTC MAR 28
Destin, Florida	1014 CDT MAR 28	1514 UTC MAR 28
Miami, Florida	1115 EDT MAR 28	1515 UTC MAR 28
Guantanamo Bay, Cuba	1115 EDT MAR 28	1515 UTC MAR 28
Settlement Point, Bahamas	1118 EDT MAR 28	1518 UTC MAR 28
Panama City, Florida	1027 CDT MAR 28	1527 UTC MAR 28
Port Fourchon, Louisiana	1028 CDT MAR 28	1528 UTC MAR 28
Jupiter Inlet, Florida	1136 EDT MAR 28	1536 UTC MAR 28
Alvarado, Mexico	1044 CDT MAR 28	1544 UTC MAR 28
Apalachicola, Florida	1050 CDT MAR 28	1550 UTC MAR 28
Tampico, Mexico	1058 CDT MAR 28	1558 UTC MAR 28
Brownsville, Texas	1059 CDT MAR 28	1559 UTC MAR 28
the Mississippi-Alabama border	1107 CDT MAR 28	1607 UTC MAR 28
Samana Cay, Bahamas	1208 EDT MAR 28	1608 UTC MAR 28
Clearwater Beach, Florida	1214 EDT MAR 28	1614 UTC MAR 28
Port Isabel, Texas	1114 CDT MAR 28	1614 UTC MAR 28
Corpus Christi, Texas	1120 CDT MAR 28	1620 UTC MAR 28
Flamingo, Florida	1231 EDT MAR 28	1631 UTC MAR 28
Baffin Bay, Texas	1132 CDT MAR 28	1632 UTC MAR 28
DART 41420	1233 EDT MAR 28	1633 UTC MAR 28
Aguadilla, Puerto Rico	1234 AST MAR 28	1634 UTC MAR 28
Mona Island, Puerto Rico	1237 AST MAR 28	1637 UTC MAR 28
San Juan, Puerto Rico	1240 AST MAR 28	1640 UTC MAR 28
Mayaguez, Puerto Rico	1244 AST MAR 28	1644 UTC MAR 28
Waveland, Mississippi	1145 CDT MAR 28	1645 UTC MAR 28
DART 41424	1247 EDT MAR 28	1647 UTC MAR 28
Magueyes Island, Puerto Rico	1252 AST MAR 28	1652 UTC MAR 28
DART 41421	1254 EDT MAR 28	1654 UTC MAR 28
Vieques Is., Puerto Rico	1255 AST MAR 28	1655 UTC MAR 28
Port O'connor, Texas	1156 CDT MAR 28	1656 UTC MAR 28
Limetree Bay, U.S. Virgin Is.	1259 AST MAR 28	1659 UTC MAR 28
Virgin Gorda, British Virgin Islands	1259 EDT MAR 28	1659 UTC MAR 28
Christiansted, U.S. Virgin Is	1259 AST MAR 28	1659 UTC MAR 28
Rock Port, Texas	1159 CDT MAR 28	1659 UTC MAR 28
Freeport, Texas	1201 CDT MAR 28	1701 UTC MAR 28
Naples, Florida	1301 EDT MAR 28	1701 UTC MAR 28

Bonita Beach, Florida	1309 EDT MAR 28	1709 UTC MAR 28
Port Canaveral, Florida	1310 EDT MAR 28	1710 UTC MAR 28
Lameshur Bay, U.S. Virgin Islands	1310 AST MAR 28	1710 UTC MAR 28
Tortola, British Virgin Islands	1210 CDT MAR 28	1710 UTC MAR 28
Culebra, Puerto Rico	1312 AST MAR 28	1712 UTC MAR 28
Fort Myers, Florida	1313 EDT MAR 28	1713 UTC MAR 28
Port Manatee, Florida	1313 EDT MAR 28	1713 UTC MAR 28
St. Petersburg, Florida	1319 EDT MAR 28	1719 UTC MAR 28
Charlotte Amalie, U.S. Virgin Is	1320 AST MAR 28	1720 UTC MAR 28
Suwannee River, Florida	1324 EDT MAR 28	1724 UTC MAR 28
Melbourne, Florida	1324 EDT MAR 28	1724 UTC MAR 28
Biloxi, Mississippi	1225 CDT MAR 28	1725 UTC MAR 28
Champton, Mexico	1229 CDT MAR 28	1729 UTC MAR 28
Bermuda	1334 EDT MAR 28	1734 UTC MAR 28
Galveston, Texas	1236 CDT MAR 28	1736 UTC MAR 28
Eugene Is., Louisiana	1241 CDT MAR 28	1741 UTC MAR 28
Cape Hatteras, North Carolina	1344 EDT MAR 28	1744 UTC MAR 28
DART 44402	1350 EDT MAR 28	1750 UTC MAR 28
Morgan City, Louisiana	1253 CDT MAR 28	1753 UTC MAR 28
Cedar Key, Florida	1401 EDT MAR 28	1801 UTC MAR 28
Flagler Beach, Florida	1406 EDT MAR 28	1806 UTC MAR 28
Oregon Inlet, North Carolina	1411 EDT MAR 28	1811 UTC MAR 28
Sabine Pass, Texas	1320 CDT MAR 28	1820 UTC MAR 28
High Island, Texas	1321 CDT MAR 28	1821 UTC MAR 28
Jacksonville Beach, Florida	1423 EDT MAR 28	1823 UTC MAR 28
Beaufort, North Carolina	1425 EDT MAR 28	1825 UTC MAR 28
Duck, North Carolina	1442 EDT MAR 28	1842 UTC MAR 28
Fernandina Beach, Florida	1446 EDT MAR 28	1846 UTC MAR 28
Currituck Beach Lighthouse, North Carolina	1448 EDT MAR 28	1848 UTC MAR 28
South Santee River, South Carolina	1454 EDT MAR 28	1854 UTC MAR 28
Wrightsville Beach, North Carolina	1457 EDT MAR 28	1857 UTC MAR 28
Surf City, North Carolina	1459 EDT MAR 28	1859 UTC MAR 28
Ocean City, Maryland	1505 EDT MAR 28	1905 UTC MAR 28
Savannah, Georgia	1505 EDT MAR 28	1905 UTC MAR 28
Altamaha Sound, Georgia	1511 EDT MAR 28	1911 UTC MAR 28
DART 44401	1513 EDT MAR 28	1913 UTC MAR 28
St. Simons Is., Georgia	1516 EDT MAR 28	1916 UTC MAR 28
Myrtle Beach, South Carolina	1522 EDT MAR 28	1922 UTC MAR 28
Virginia Beach, Virginia	1524 EDT MAR 28	1924 UTC MAR 28
Springmaid Pier, South Carolina	1524 EDT MAR 28	1924 UTC MAR 28
Charleston, South Carolina	1526 EDT MAR 28	1926 UTC MAR 28
Montauk Point, New York	1531 EDT MAR 28	1931 UTC MAR 28
Cape Henlopen, Delaware	1532 EDT MAR 28	1932 UTC MAR 28
Atlantic City, New Jersey	1533 EDT MAR 28	1933 UTC MAR 28
Lewes, Delaware	1535 EDT MAR 28	1935 UTC MAR 28
Fire Island Light, New York	1539 EDT MAR 28	1939 UTC MAR 28
Lockeport, Nova Scotia	1641 ADT MAR 28	1941 UTC MAR 28
Chesapeake Bridge, Virginia	1543 EDT MAR 28	1943 UTC MAR 28
Watch Hill, Rhode Island	1543 EDT MAR 28	1943 UTC MAR 28
Newport, Rhode Island	1555 EDT MAR 28	1955 UTC MAR 28
Woods Hole, Massachusetts	1557 EDT MAR 28	1957 UTC MAR 28
Sandy Hook, New Jersey	1600 EDT MAR 28	2000 UTC MAR 28
Cape May, New Jersey	1603 EDT MAR 28	2003 UTC MAR 28
New London, Connecticut	1605 EDT MAR 28	2005 UTC MAR 28
Kiptopeke, Virginia	1606 EDT MAR 28	2006 UTC MAR 28
Nantucket Island, Massachusetts	1609 EDT MAR 28	2009 UTC MAR 28
Money Point, Virginia	1613 EDT MAR 28	2013 UTC MAR 28
Charlesville, Nova Scotia	1721 ADT MAR 28	2021 UTC MAR 28
Windmill Point, Virginia	1623 EDT MAR 28	2023 UTC MAR 28
Yarmouth, Nova Scotia	1726 ADT MAR 28	2026 UTC MAR 28

Quonset Point, Rhode Island	1626 EDT MAR 28	2026 UTC MAR 28
Chezzetcook, Nova Scotia	1730 ADT MAR 28	2030 UTC MAR 28
Halifax, Nova Scotia	1732 ADT MAR 28	2032 UTC MAR 28
New Point Comfort, Virginia	1634 EDT MAR 28	2034 UTC MAR 28
Cutler NAS, Maine	1638 EDT MAR 28	2038 UTC MAR 28
Port Aux Basque, Newfoundland	1820 NDT MAR 28	2050 UTC MAR 28
Scatarie Island, Nova Scotia	1751 ADT MAR 28	2051 UTC MAR 28
Ship John Shoal, New Jersey	1653 EDT MAR 28	2053 UTC MAR 28
Grand Manan Is., New Brunswick	1753 ADT MAR 28	2053 UTC MAR 28
Bar Harbor, Maine	1653 EDT MAR 28	2053 UTC MAR 28
Cape Ray, Newfoundland	1824 NDT MAR 28	2054 UTC MAR 28
Manhattan, New York	1655 EDT MAR 28	2055 UTC MAR 28
the U.S.-Canada border	1656 EDT MAR 28	2056 UTC MAR 28
Fort Point, New Hampshire	1657 EDT MAR 28	2057 UTC MAR 28
Bergen Point, New Jersey	1659 EDT MAR 28	2059 UTC MAR 28
St Lawrence, Newfoundland	1831 NDT MAR 28	2101 UTC MAR 28
Merrimack River, Massachusetts	1701 EDT MAR 28	2101 UTC MAR 28
Saint Pierre/Miquelon	1833 NDT MAR 28	2103 UTC MAR 28
New Haven, Connecticut	1704 EDT MAR 28	2104 UTC MAR 28
Meat Cove, Nova Scotia	1808 ADT MAR 28	2108 UTC MAR 28
Yorktown, Virginia	1709 EDT MAR 28	2109 UTC MAR 28
Stonington, Maine	1710 EDT MAR 28	2110 UTC MAR 28
Saint John, New Brunswick	1816 ADT MAR 28	2116 UTC MAR 28
Lewisetta, Virginia	1719 EDT MAR 28	2119 UTC MAR 28
Argentia, Newfoundland	1850 NDT MAR 28	2120 UTC MAR 28
North Sydney, Nova Scotia	1823 ADT MAR 28	2123 UTC MAR 28
Portland, Maine	1724 EDT MAR 28	2124 UTC MAR 28
Bridgeport, Connecticut	1726 EDT MAR 28	2126 UTC MAR 28
La Manche, Newfoundland	1906 NDT MAR 28	2136 UTC MAR 28
Boston, Massachusetts	1736 EDT MAR 28	2136 UTC MAR 28
Providence, Rhode Island	1746 EDT MAR 28	2146 UTC MAR 28
Saint Johns, Newfoundland	1925 NDT MAR 28	2155 UTC MAR 28
Kings Point, New York	1821 EDT MAR 28	2221 UTC MAR 28
Harrington Harbour, Quebec	1943 ADT MAR 28	2243 UTC MAR 28
Pointe Saint Pierre, Quebec	1949 ADT MAR 28	2249 UTC MAR 28
Bonavista, Newfoundland	2035 NDT MAR 28	2305 UTC MAR 28
Battle Harbour, Labrador	2100 NDT MAR 28	2330 UTC MAR 28
Lanse au Clair, Newfoundland	2115 NDT MAR 28	2345 UTC MAR 28
Wood Islands, Prince Edward Is.	2046 ADT MAR 28	2346 UTC MAR 28
Sept Iles, Quebec	2047 ADT MAR 28	2347 UTC MAR 28
Holton Harbour, Newfoundland	2119 NDT MAR 28	2349 UTC MAR 28
Boat Harbour, Newfoundland	2137 NDT MAR 28	0007 UTC MAR 29
Escuminac, New Brunswick	2124 ADT MAR 28	0024 UTC MAR 29
Cape Chidley, Labrador	2028 AST MAR 28	0028 UTC MAR 29
Charlottetown, Prince Edward Is.	2128 ADT MAR 28	0028 UTC MAR 29
Belledune, New Brunswick	2133 ADT MAR 28	0033 UTC MAR 29
Nuuk, Greenland	2036 EDT MAR 28	0036 UTC MAR 29
Hebron, Newfoundland	2153 ADT MAR 28	0053 UTC MAR 29
Nain, Newfoundland	2206 ADT MAR 28	0106 UTC MAR 29
Brevoort Harbour, Nunavut	2106 EDT MAR 28	0106 UTC MAR 29
Cape Dyer, Nunavut	2116 EDT MAR 28	0116 UTC MAR 29
Shediac, New Brunswick	2241 ADT MAR 28	0141 UTC MAR 29
Clyde River, Nunavut	2239 EDT MAR 28	0239 UTC MAR 29
Thule AFB, Greenland	2347 EDT MAR 28	0347 UTC MAR 29
Dundas Harbor, Nunavut	2355 EDT MAR 28	0355 UTC MAR 29

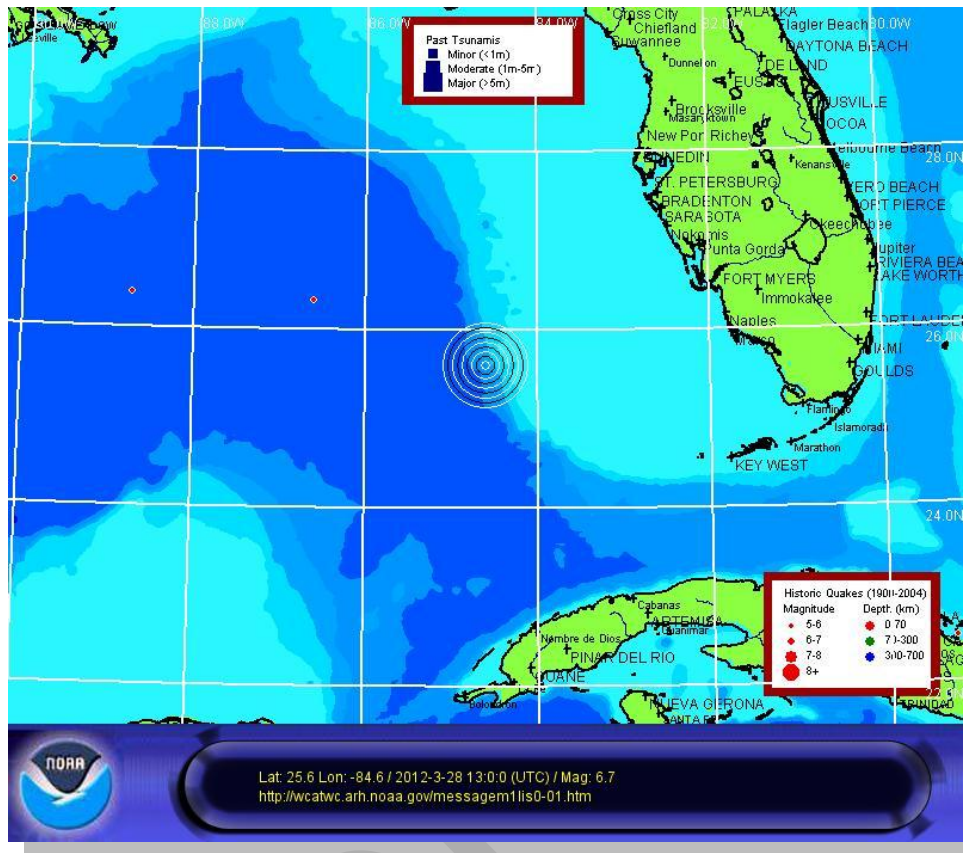


Figure E2: Example of large scale map that would be issued with bulletin 1.

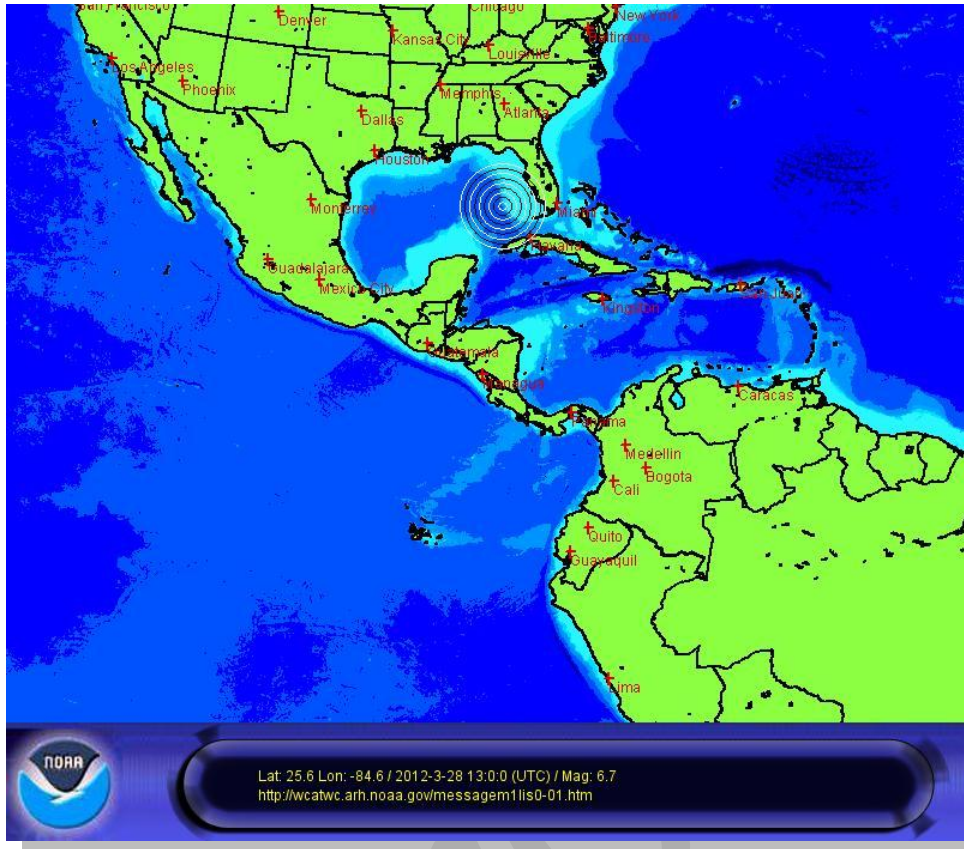


Figure E3: Example of an event location map issued with bulletin 1.



Figure E4: Example of an alert status map issued with bulletin 1.

Scenario 2: U.S. Atlantic coast

[Link to Standard Warning Message](#)

[Link to Public Warning Message](#)

[Link to XML/CAP Message](#)

[Link to Printable Message](#)

To: U.S. and Canadian Atlantic, and Gulf of Mexico coastal regions

From: [NOAA/NWS/West Coast and Alaska Tsunami Warning Center](#)

Subject: [Tsunami Warning and Advisory](#) #1 issued 03/28/2012 at 9:04AM EDT

A [Tsunami Warning](#) is now in effect which includes the coastal areas of Florida, Georgia, South Carolina and North Carolina from Jupiter Inlet, Florida to Duck, North Carolina.

A [Tsunami Advisory](#) is now in effect which includes the coastal areas of Florida from Flamingo, Florida to Jupiter Inlet, Florida.

A [Tsunami Advisory](#) is now in effect which includes the coastal areas of North Carolina, Virginia, Maryland, Delaware and New Jersey from Duck, North Carolina to Sandy Hook, New Jersey.

This message is for **Information Only** for coastal areas of Texas, Louisiana, Mississippi, Alabama and Florida from Brownsville, Texas to Flamingo, Florida.

This message is for **Information Only** for coastal areas of New Jersey, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine, New Brunswick, Nova Scotia, Newfoundland and Labrador from Sandy Hook, New Jersey to Cape Chidley, Labrador.

This message is for **Information Only** for coastal areas of Puerto Rico and the Virgin Islands.

A **Tsunami Warning** means that all coastal residents in the [warning area](#) who are near the beach or in low-lying regions should move immediately inland to higher ground and away from all harbors and inlets including those sheltered directly from the sea. Those feeling the earth shake, seeing unusual wave action, or the water level rising or receding may have only a few minutes before the tsunami arrival and should move immediately. Homes and small buildings are not designed to withstand tsunami impacts. Do not stay in these structures.

All residents within the warned area should be alert for instructions broadcast from their local civil authorities. Earthquakes of this magnitude are known to generate tsunamis.

A **Tsunami Advisory** means that a tsunami capable of producing strong currents or waves dangerous to people in or very near the water is expected. Significant, widespread inundation is not expected for [areas under an advisory](#). Currents may be

hazardous to swimmers, boats, and coastal structures and may continue for several hours after the initial wave arrival.

At 9:00 AM Eastern Daylight Time on March 28, an [earthquake](#) with preliminary magnitude 7.7 [occurred 125 miles/201 Km southeast of Myrtle Beach, South Carolina](#). (Refer to the [United States Geological Survey](#) for official earthquake parameters.) Earthquakes of this size are known to generate tsunamis. If a tsunami has been generated, the waves will first reach Cape Hatteras, North Carolina at 10:38 AM EDT on March 28. Estimated [tsunami arrival times](#) and [maps](#) along with [safety rules](#) and [other information](#) can be found on the [WCATWC](#) web site.

[Tsunamis](#) can be dangerous waves that are not survivable. Wave heights are amplified by irregular shoreline and are difficult to forecast. Tsunamis often appear as a strong surge and may be preceded by a receding water level. Mariners in water deeper than 600 feet should not be affected by a tsunami. Wave heights will increase rapidly as water shallows. Tsunamis are a series of ocean waves which can be dangerous for several hours after the initial wave arrival. DO NOT return to evacuated areas until an all clear is given by local civil authorities.

Caribbean coastal regions outside Puerto Rico and the Virgin Islands should refer to the [Pacific Tsunami Warning Center](#) messages for information on the event.

This message will be updated in 30 minutes or sooner if the situation warrants. The tsunami message will remain in effect until further notice. For further information stay tuned to NOAA Weather Radio, your local TV or radio stations, or see the [WCATWC](#) web site.

Tsunami Travel Times

Tsunami travel time contours in hours, beginning from the earthquake origin time.

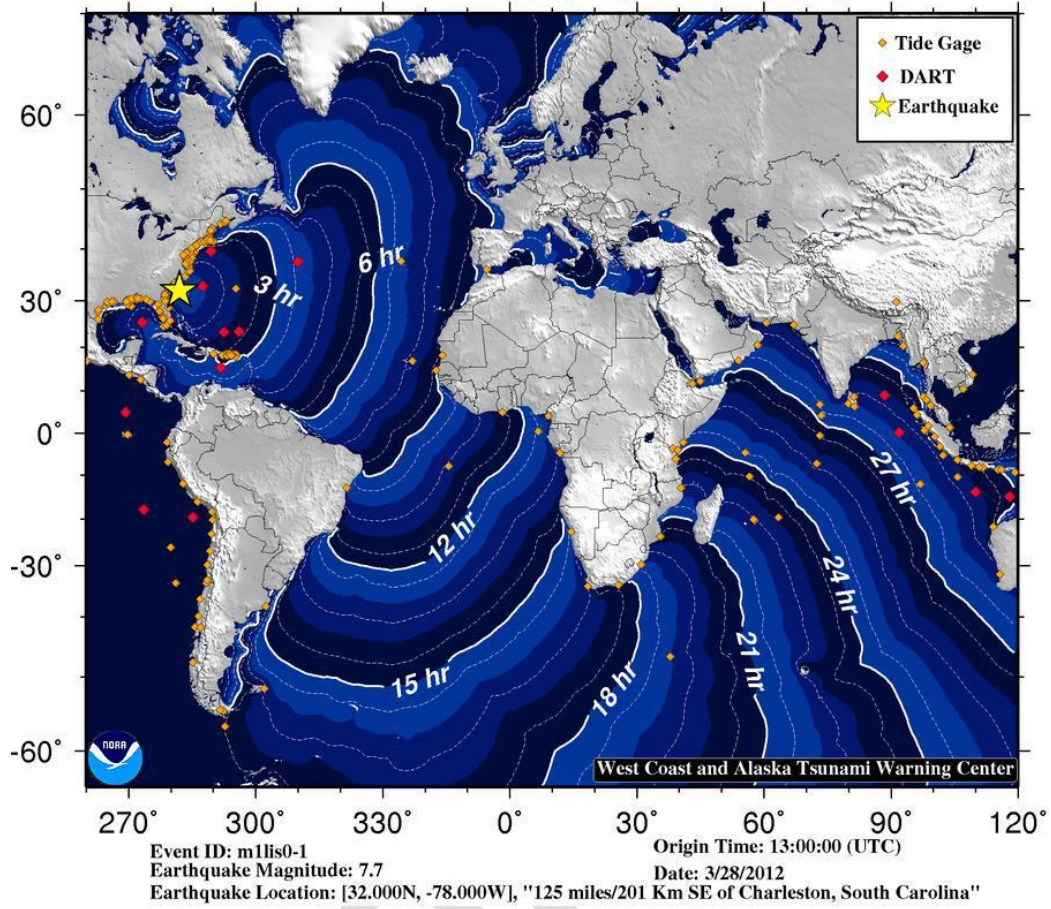


Figure E5: Example of travel time map.

Tsunami travel time list example below.

The following list gives estimated times of arrival for locations along the U.S. and Canadian Atlantic coast from a tsunami generated at the given source location.

THE LISTING OF A TSUNAMI ARRIVAL TIME BELOW DOES NOT INDICATE A WAVE IS IMMINENT. REFER TO THE WARNING BULLETIN TO DETERMINE WHICH AREAS ARE THREATENED.

The listed arrival time is the initial wave arrival.

Tsunamis can be dangerous for many hours after arrival, and the initial wave is not necessarily the largest.

The list is ordered by arrival time starting with the earliest.

Source:

Lat: 32.0N

Lon: 78.0W

Mag: 7.7

O-time: 1300UTC

Date: MAR 28

Estimated times of initial tsunami arrival:

DART 41424	0956 EDT MAR 28	1356 UTC MAR 28
Cape Hatteras, North Carolina	1038 EDT MAR 28	1438 UTC MAR 28
Samana Cay, Bahamas	1043 EDT MAR 28	1443 UTC MAR 28
Settlement Point, Bahamas	1054 EDT MAR 28	1454 UTC MAR 28
DART 44402	1054 EDT MAR 28	1454 UTC MAR 28
DART 41420	1100 EDT MAR 28	1500 UTC MAR 28
Bermuda	1101 EDT MAR 28	1501 UTC MAR 28
South Santee River, South Carolina	1102 EDT MAR 28	1502 UTC MAR 28
Oregon Inlet, North Carolina	1107 EDT MAR 28	1507 UTC MAR 28
Jupiter Inlet, Florida	1111 EDT MAR 28	1511 UTC MAR 28
Beaufort, North Carolina	1117 EDT MAR 28	1517 UTC MAR 28
DART 41421	1119 EDT MAR 28	1519 UTC MAR 28
Virginia Key, Florida	1121 EDT MAR 28	1521 UTC MAR 28
Guantanamo Bay, Cuba	1131 EDT MAR 28	1531 UTC MAR 28
Ocean Reef, Florida	1133 EDT MAR 28	1533 UTC MAR 28
Aguadilla, Puerto Rico	1135 AST MAR 28	1535 UTC MAR 28
Miami, Florida	1136 EDT MAR 28	1536 UTC MAR 28
Myrtle Beach, South Carolina	1136 EDT MAR 28	1536 UTC MAR 28
Wrightsville Beach, North Carolina	1137 EDT MAR 28	1537 UTC MAR 28
Springmaid Pier, South Carolina	1137 EDT MAR 28	1537 UTC MAR 28
Duck, North Carolina	1138 EDT MAR 28	1538 UTC MAR 28
Charleston, South Carolina	1140 EDT MAR 28	1540 UTC MAR 28
San Juan, Puerto Rico	1140 AST MAR 28	1540 UTC MAR 28

Mona Island, Puerto Rico	1143 AST MAR 28	1543 UTC MAR 28
Currituck Beach Lighthouse, North Carolina	1145 EDT MAR 28	1545 UTC MAR 28
Mayaguez, Puerto Rico	1145 AST MAR 28	1545 UTC MAR 28
Port Canaveral, Florida	1145 EDT MAR 28	1545 UTC MAR 28
Surf City, North Carolina	1146 EDT MAR 28	1546 UTC MAR 28
Jacksonville Beach, Florida	1153 EDT MAR 28	1553 UTC MAR 28
Virgin Gorda, British Virgin Islands	1156 EDT MAR 28	1556 UTC MAR 28
Savannah, Georgia	1157 EDT MAR 28	1557 UTC MAR 28
Christiansted, U.S. Virgin Is	1157 AST MAR 28	1557 UTC MAR 28
Flagler Beach, Florida	1158 EDT MAR 28	1558 UTC MAR 28
Magueyes Island, Puerto Rico	1201 AST MAR 28	1601 UTC MAR 28
Vieques Is., Puerto Rico	1201 AST MAR 28	1601 UTC MAR 28
Limetree Bay, U.S. Virgin Is.	1203 AST MAR 28	1603 UTC MAR 28
Ocean City, Maryland	1204 EDT MAR 28	1604 UTC MAR 28
Lameshur Bay, U.S. Virgin Islands	1205 AST MAR 28	1605 UTC MAR 28
Tortola, British Virgin Islands	1105 CDT MAR 28	1605 UTC MAR 28
Fernandina Beach, Florida	1208 EDT MAR 28	1608 UTC MAR 28
Melbourne, Florida	1208 EDT MAR 28	1608 UTC MAR 28
Culebra, Puerto Rico	1211 AST MAR 28	1611 UTC MAR 28
Charlotte Amalie, U.S. Virgin Is	1218 AST MAR 28	1618 UTC MAR 28
Key West, Florida	1219 EDT MAR 28	1619 UTC MAR 28
Altamaha Sound, Georgia	1221 EDT MAR 28	1621 UTC MAR 28
Virginia Beach, Virginia	1222 EDT MAR 28	1622 UTC MAR 28
Vaca Key, Florida	1226 EDT MAR 28	1626 UTC MAR 28
St. Simons Is., Georgia	1229 EDT MAR 28	1629 UTC MAR 28
Cape Henlopen, Delaware	1232 EDT MAR 28	1632 UTC MAR 28
DART 44401	1232 EDT MAR 28	1632 UTC MAR 28
Montauk Point, New York	1234 EDT MAR 28	1634 UTC MAR 28
Atlantic City, New Jersey	1234 EDT MAR 28	1634 UTC MAR 28
Lewes, Delaware	1235 EDT MAR 28	1635 UTC MAR 28
Fire Island Light, New York	1241 EDT MAR 28	1641 UTC MAR 28
Chesapeake Bridge, Virginia	1242 EDT MAR 28	1642 UTC MAR 28
Watch Hill, Rhode Island	1247 EDT MAR 28	1647 UTC MAR 28
Lockeport, Nova Scotia	1350 ADT MAR 28	1650 UTC MAR 28
Newport, Rhode Island	1258 EDT MAR 28	1658 UTC MAR 28
Woods Hole, Massachusetts	1300 EDT MAR 28	1700 UTC MAR 28
Sandy Hook, New Jersey	1302 EDT MAR 28	1702 UTC MAR 28
Cape May, New Jersey	1303 EDT MAR 28	1703 UTC MAR 28
Kiptopeke, Virginia	1304 EDT MAR 28	1704 UTC MAR 28
New London, Connecticut	1309 EDT MAR 28	1709 UTC MAR 28
Money Point, Virginia	1311 EDT MAR 28	1711 UTC MAR 28
Nantucket Island, Massachusetts	1313 EDT MAR 28	1713 UTC MAR 28
Windmill Point, Virginia	1321 EDT MAR 28	1721 UTC MAR 28
Cancun, Mexico	1224 CDT MAR 28	1724 UTC MAR 28
Quonset Point, Rhode Island	1330 EDT MAR 28	1730 UTC MAR 28
New Point Comfort, Virginia	1331 EDT MAR 28	1731 UTC MAR 28
Charlesville, Nova Scotia	1431 ADT MAR 28	1731 UTC MAR 28
DART 42409	1333 EDT MAR 28	1733 UTC MAR 28

Yarmouth, Nova Scotia	1436 ADT MAR 28	1736 UTC MAR 28
Chezetcook, Nova Scotia	1440 ADT MAR 28	1740 UTC MAR 28
Halifax, Nova Scotia	1442 ADT MAR 28	1742 UTC MAR 28
Cutler NAS, Maine	1348 EDT MAR 28	1748 UTC MAR 28
Flamingo, Florida	1350 EDT MAR 28	1750 UTC MAR 28
Ship John Shoal, New Jersey	1353 EDT MAR 28	1753 UTC MAR 28
Manhattan, New York	1357 EDT MAR 28	1757 UTC MAR 28
Pilots Station East, Louisiana	1300 CDT MAR 28	1800 UTC MAR 28
Port Aux Basque, Newfoundland	1530 NDT MAR 28	1800 UTC MAR 28
Bergen Point, New Jersey	1401 EDT MAR 28	1801 UTC MAR 28
Scatarie Island, Nova Scotia	1501 ADT MAR 28	1801 UTC MAR 28
Fort Point, New Hampshire	1402 EDT MAR 28	1802 UTC MAR 28
Bar Harbor, Maine	1403 EDT MAR 28	1803 UTC MAR 28
Grand Manan Is., New Brunswick	1503 ADT MAR 28	1803 UTC MAR 28
Cape Ray, Newfoundland	1535 NDT MAR 28	1805 UTC MAR 28
the U.S.-Canada border	1406 EDT MAR 28	1806 UTC MAR 28
Yorktown, Virginia	1406 EDT MAR 28	1806 UTC MAR 28
Merrimack River, Massachusetts	1407 EDT MAR 28	1807 UTC MAR 28
New Haven, Connecticut	1407 EDT MAR 28	1807 UTC MAR 28
St Lawrence, Newfoundland	1542 NDT MAR 28	1812 UTC MAR 28
Saint Pierre/Miquelon	1544 NDT MAR 28	1814 UTC MAR 28
Lewisetta, Virginia	1415 EDT MAR 28	1815 UTC MAR 28
Meat Cove, Nova Scotia	1519 ADT MAR 28	1819 UTC MAR 28
Stonington, Maine	1420 EDT MAR 28	1820 UTC MAR 28
Saint John, New Brunswick	1526 ADT MAR 28	1826 UTC MAR 28
Bridgeport, Connecticut	1430 EDT MAR 28	1830 UTC MAR 28
Portland, Maine	1430 EDT MAR 28	1830 UTC MAR 28
Argentia, Newfoundland	1601 NDT MAR 28	1831 UTC MAR 28
North Sydney, Nova Scotia	1534 ADT MAR 28	1834 UTC MAR 28
Boston, Massachusetts	1442 EDT MAR 28	1842 UTC MAR 28
La Manche, Newfoundland	1617 NDT MAR 28	1847 UTC MAR 28
Providence, Rhode Island	1449 EDT MAR 28	1849 UTC MAR 28
Grand Isle, Louisiana	1354 CDT MAR 28	1854 UTC MAR 28
Destin, Florida	1400 CDT MAR 28	1900 UTC MAR 28
Saint Johns, Newfoundland	1636 NDT MAR 28	1906 UTC MAR 28
Panama City, Florida	1413 CDT MAR 28	1913 UTC MAR 28
Port Fourchon, Louisiana	1413 CDT MAR 28	1913 UTC MAR 28
Alvarado, Mexico	1420 CDT MAR 28	1920 UTC MAR 28
Kings Point, New York	1525 EDT MAR 28	1925 UTC MAR 28
Tampico, Mexico	1434 CDT MAR 28	1934 UTC MAR 28
Apalachicola, Florida	1436 CDT MAR 28	1936 UTC MAR 28
Brownsville, Texas	1436 CDT MAR 28	1936 UTC MAR 28
Port Isabel, Texas	1450 CDT MAR 28	1950 UTC MAR 28
the Mississippi-Alabama border	1453 CDT MAR 28	1953 UTC MAR 28
Harrington Harbour, Quebec	1653 ADT MAR 28	1953 UTC MAR 28
Corpus Christi, Texas	1458 CDT MAR 28	1958 UTC MAR 28
Pointe Saint Pierre, Quebec	1659 ADT MAR 28	1959 UTC MAR 28
Clearwater Beach, Florida	1600 EDT MAR 28	2000 UTC MAR 28

Baffin Bay, Texas	1509 CDT MAR 28	2009 UTC MAR 28
Bonavista, Newfoundland	1748 NDT MAR 28	2018 UTC MAR 28
Naples, Florida	1626 EDT MAR 28	2026 UTC MAR 28
Waveland, Mississippi	1531 CDT MAR 28	2031 UTC MAR 28
Port O'connor, Texas	1534 CDT MAR 28	2034 UTC MAR 28
Rock Port, Texas	1536 CDT MAR 28	2036 UTC MAR 28
Freeport, Texas	1538 CDT MAR 28	2038 UTC MAR 28
Battle Harbour, Labrador	1815 NDT MAR 28	2045 UTC MAR 28
Lanse au Clair, Newfoundland	1826 NDT MAR 28	2056 UTC MAR 28
Wood Islands, Prince Edward Is.	1756 ADT MAR 28	2056 UTC MAR 28
Sept Iles, Quebec	1757 ADT MAR 28	2057 UTC MAR 28
Bonita Beach, Florida	1700 EDT MAR 28	2100 UTC MAR 28
Port Manatee, Florida	1700 EDT MAR 28	2100 UTC MAR 28
Holton Harbour, Newfoundland	1832 NDT MAR 28	2102 UTC MAR 28
Fort Myers, Florida	1704 EDT MAR 28	2104 UTC MAR 28
Champton, Mexico	1606 CDT MAR 28	2106 UTC MAR 28
St. Petersburg, Florida	1706 EDT MAR 28	2106 UTC MAR 28
Suwannee River, Florida	1711 EDT MAR 28	2111 UTC MAR 28
Biloxi, Mississippi	1611 CDT MAR 28	2111 UTC MAR 28
Galveston, Texas	1613 CDT MAR 28	2113 UTC MAR 28
Boat Harbour, Newfoundland	1848 NDT MAR 28	2118 UTC MAR 28
Eugene Is., Louisiana	1621 CDT MAR 28	2121 UTC MAR 28
Morgan City, Louisiana	1633 CDT MAR 28	2133 UTC MAR 28
Escuminac, New Brunswick	1835 ADT MAR 28	2135 UTC MAR 28
Charlottetown, Prince Edward Is.	1839 ADT MAR 28	2139 UTC MAR 28
Cape Chidley, Labrador	1740 AST MAR 28	2140 UTC MAR 28
Belledune, New Brunswick	1844 ADT MAR 28	2144 UTC MAR 28
Cedar Key, Florida	1748 EDT MAR 28	2148 UTC MAR 28
Nuuk, Greenland	1750 EDT MAR 28	2150 UTC MAR 28
Sabine Pass, Texas	1658 CDT MAR 28	2158 UTC MAR 28
High Island, Texas	1659 CDT MAR 28	2159 UTC MAR 28
Hebron, Newfoundland	1906 ADT MAR 28	2206 UTC MAR 28
Nain, Newfoundland	1919 ADT MAR 28	2219 UTC MAR 28
Brevoort Harbour, Nunavut	1820 EDT MAR 28	2220 UTC MAR 28
Cape Dyer, Nunavut	1830 EDT MAR 28	2230 UTC MAR 28
Shediac, New Brunswick	1952 ADT MAR 28	2252 UTC MAR 28
Clyde River, Nunavut	1953 EDT MAR 28	2353 UTC MAR 28
Thule AFB, Greenland	2100 EDT MAR 28	0100 UTC MAR 29
Dundas Harbor, Nunavut	2109 EDT MAR 28	0109 UTC MAR 29

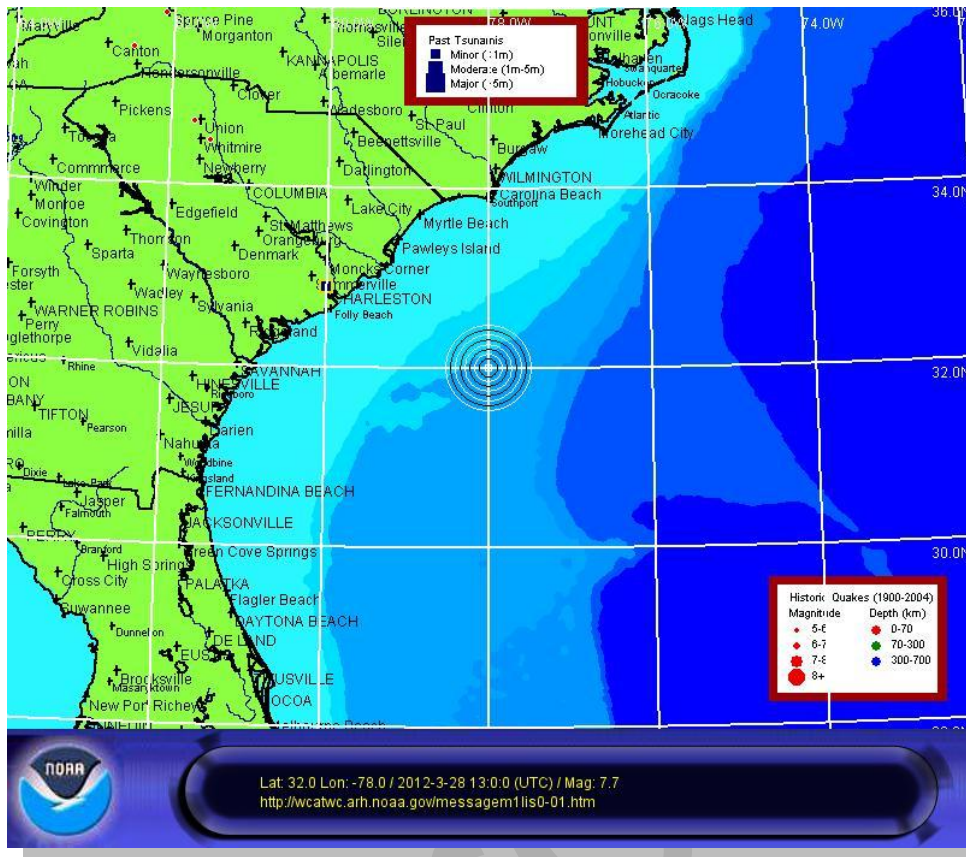


Figure E6: Example of large scale map that would be issued with bulletin 1.

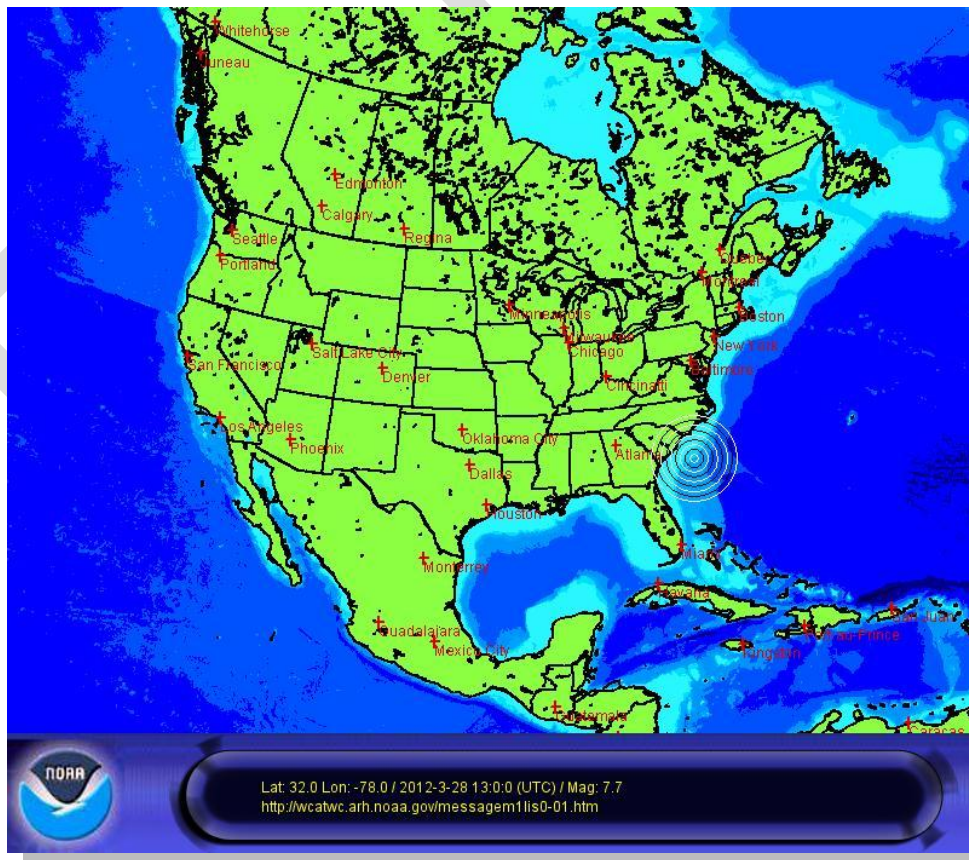


Figure E7: Example of an event location map issued with bulletin 1.

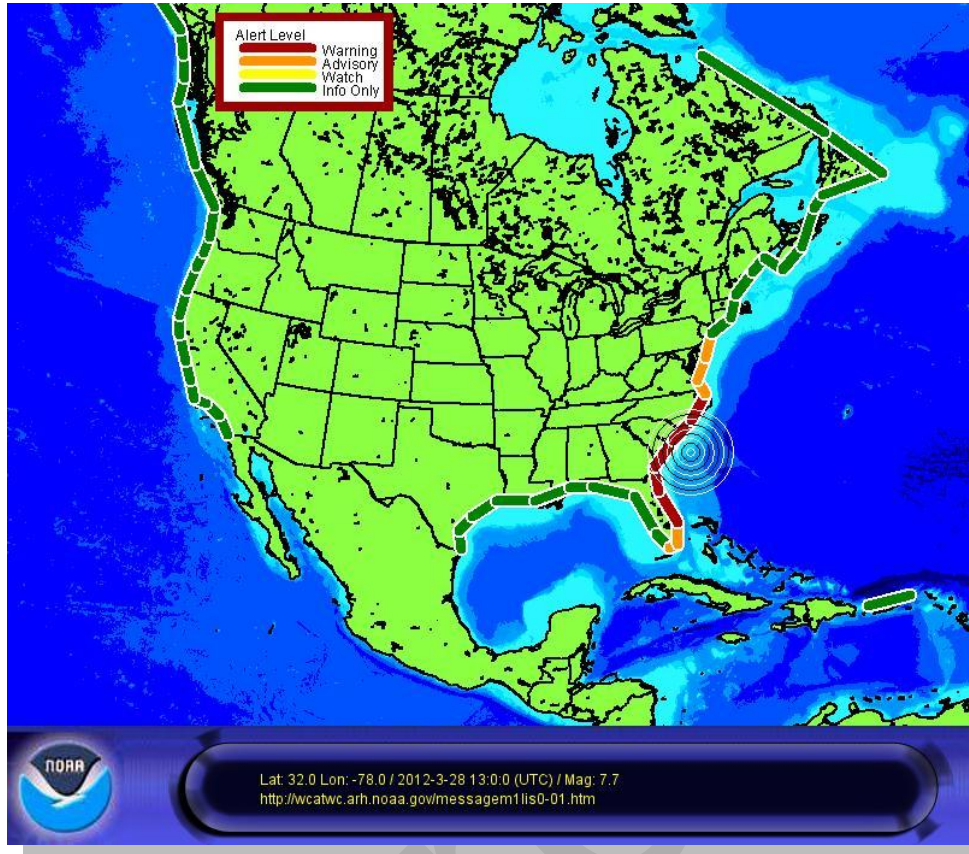


Figure E8: Example of an alert status map issued with bulletin 1.

Appendix F. Sample Press Release for Local Media

TEMPLATE FOR NEWS RELEASE

USE AGENCY MASTHEAD

Contact: (insert name)
(insert phone number)
(insert email address)

FOR IMMEDIATE RELEASE
(insert date)

TSUNAMI EXERCISE TO BE CONDUCTED March 28, 2012

(insert community/county/state name) will join other localities in the Gulf of Mexico, eastern U.S., Puerto Rico, and the Virgin Islands as a participant in a tsunami response exercise on March 28, 2012. The purpose of this exercise is to evaluate local tsunami response plans, increase tsunami preparedness, and improve coordination throughout the region.

(insert a promotional comment from a local official, such as “The 2010 Haiti and Chile earthquakes and tsunamis have reminded the world again of the urgent need to be more prepared for such events,” said (insert name of appropriate official). “This important exercise will test the current procedures of the Tsunami Warning System and help identify operational strengths and weaknesses in each community.” (Please modify for uniqueness.)

The exercise, titled LANTEX 12, will simulate a widespread Tsunami Warning and Advisory situation throughout the Atlantic and Gulf of Mexico which requires implementation of local tsunami response plans. The exercise will *(insert “include” or “not include”)* public notification.

Scenario 1 of the exercise will simulate both a major earthquake and tsunami generated 190 miles northwest of Key West, Florida and 210 miles southwest of Tampa, Florida at 9:00am Atlantic Standard Time *(or appropriate local time)* on March 28, 2012. Scenario 2 of the exercise will simulate both a major earthquake and tsunami generated 125 miles southeast of Myrtle Beach, South Carolina. Exercise participants will be provided with a handbook which describes the scenario and contains tsunami messages from the West Coast/Alaska Tsunami Warning Center (WCATWC). The WCATWC is currently responsible for providing tsunami information to the Atlantic coasts of U.S. and Canada, the Gulf of Mexico coast, Puerto Rico, and the Virgin Islands.

Insert paragraph tailored for specific community. Could identify participating agencies and specific plans. Could describe current early warning program, past tsunami exercises (if any), ongoing mitigation and public education programs, etc. Could describe tsunami threat, history of tsunami hazards, if any.

If any real tsunami threat occurs during the time period of the exercise, the exercise will be terminated.

The exercise is sponsored the U.S. National Oceanic and Atmospheric Administration (NOAA) and by the U.S. National Tsunami Hazard Mitigation Program (NTHMP – a partnership of 29 states and territories and three federal agencies). For more information on the U.S. tsunami warning system, see www.tsunami.gov. For more information on the NTHMP, see nthmp.tsunami.gov.

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On the Web:

West Coast/Alaska Tsunami Warning Center

<http://wcatwc.arh.noaa.gov>

NOAA Tsunami Program

<http://www.tsunami.gov>

NTHMP:

<http://nthmp.tsunami.gov>

Insert state/local emergency response URLs

Exercise