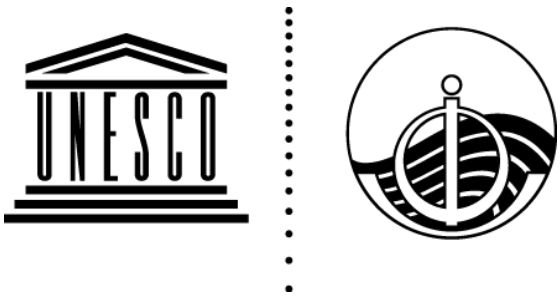
Intergovernmental Oceanographic Commission technical series

118



EXERCISE CARIBE WAVE/LANTEX 15

A Caribbean and Northwestern Atlantic Tsunami Warning Exercise

SW Caribbean Scenario

25 March 2015

Volume 1 Participant Handbook

UNESCO

Intergovernmental Oceanographic Commission technical series

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A Caribbean and Northwestern Atlantic Tsunami Warning Exercise

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UNESCO 2014

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English only

NOTE: The contents of this handbook are patterned after the Exercise Caribe Wave 11 (*Exercise Caribe Wave 11: A Caribbean tsunami warning exercise, 23 March 2011*. IOC Technical Series, 93. Paris, UNESCO, 2011 [IOC/2010/TS/93 Rev.], Exercise Caribe Wave/Lantex 13 (*Exercise Caribe Wave/Lantex 13: A Caribbean tsunami warning exercise, 20 March 2013*; *Volume 1: Participant handbook*. IOC Technical Series, 101, Paris, UNESCO, 2012 [IOC/2012/TS/101 VOL.1] [English/French/Spanish]), and Exercise Caribe Wave/Lantex 14 (*Exercise Caribe Wave/Lantex 14: A Caribbean and Northwestern Atlantic Tsunami Warning Exercise, Portugal Scenario, 26 March 2014*, volume 1: *Participant handbook* [IOC/2013/TS/109VOL.1]). These Caribe Wave handbooks followed the Exercise Pacific Wave 08 manual published by the Intergovernmental Oceanographic Commission (*Exercise Pacific Wave 08: A Pacific-wide Tsunami Warning and Communication Exercise*, 28−30 October 2008. IOC Technical Series, 82. Paris, UNESCO, 2008 [IOC/2008/TS/82]). Another important reference is the document *How to plan, conduct and evaluate UNESCO/IOC tsunami wave exercises*. IOC Manuals and Guides, 58 rev., Paris: UNESCO, 2013 (IOC/2012/MG/58 Rev) (English, Spanish).

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Report prepared by: Intergovernmental Coordination Group for the Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS)
US National Tsunami Hazard Mitigation Program (NTHMP) Warning Coordination Subcommittee

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(IOC/2014/TS/118Vol.1)

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SUMMARY

The Intergovernmental Coordination Group for the Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS) of the Intergovernmental Oceanographic Commission (IOC) of United Nations Educational, Scientific and Cultural Organization (UNESCO), the US National Oceanic and Atmospheric Administration (NOAA), and the US National Tsunami Hazard Mitigation Program (NTHMP) will be conducting a tsunami exercise on 25 March 2015. The purpose of this exercise is to assist tsunami preparedness efforts in the Caribbean and adjacent regions, including U.S. and Canadian Gulf and east coasts.

Two exercise scenarios are planned. The scenario described in this handbook simulates a tsunami generated by a magnitude 8.5 earthquake located just north of Panama in the southwest Caribbean Sea. The initial dummy messages will be issued by the US Pacific and National Tsunami Warning Centers (PTWC/NTWC) on 25 March 2015 at 14:05 UTC (Universal Time Coordinated) and disseminated over all their standard broadcast channels. The dummy messages are issued to test communications with Tsunami Warning Focal Points (TWFPs) and Emergency Management Organizations (EMOs), and to start the exercise. It will be the only exercise message broadcast from the PTWC/NTWC, excluding special email messages.

The manual includes the tsunami and earthquake scenario information, time lines, the PTWC/NTWC exercise messages, and a model press release. High levels of vulnerability and risk to life and livelihoods from tsunamis along the Caribbean coast should provide a strong incentive for countries and local jurisdictions to prepare for a tsunami and participate in this exercise.

At 1300 UTC on 25 March 2015, a western Atlantic tsunami exercise will also take place. The scenario will be a landslide offshore Florida which generates a tsunami. This exercise, organized under the framework of the US NTHMP, is open to CARIBE-EWS countries (more information is available at www.caribewave.info).

1. BACKGROUND

1.1 EXERCISE JUSTIFICATION AND FRAMEWORK

This tsunami exercise is being conducted to assist tsunami preparedness efforts throughout the Caribbean region. Recent tsunamis, such as those in the Indian Ocean (2004), Samoa (2009), Haiti and Chile (2010), and Japan (2011), attest to the importance of proper planning for tsunami response.

Historical tsunami records from sources such as the NOAA National Geophysical Data Center (NGDC) show that over 75 tsunamis with high validity have been observed in the Caribbean over the past 500 years (Figure 1. Map of tsunami run-ups in the Caribbean 1493-2013 (National Geophysical Data Center, http://www.ngdc.noaa.gov/hazards/tsu.shtml). Artist: Jessee Varner; originally published in von Hillebrandt-Andrade, 2013.). These represent approximately 7–10 % of the world's oceanic tsunamis. Earthquake, landslide, and volcanic tsunami sources have all impacted the region. Since 1842, almost 3,500 people have lost their lives as a result of tsunamis in the Caribbean. In recent years, there has been an explosive population growth and influx of tourists along the Caribbean and western Atlantic coasts increasing the tsunami vulnerability of the region (von Hillebrandt, 2013). In addition to tsunamis, the region also has a long history of destructive earthquakes. Historical records show that major earthquakes have struck the Caribbean region many times during the past 500 years. Within the region, there are multiple fault segments and submarine features that could be the source of earthquake and landslide generated tsunamis (Figure 2. Tectonic features in the

Caribbean (ten Brink et al., 2008)). The perimeter of the Caribbean plate is bordered by no fewer than four major plates (North America, South America, Nazca, and Cocos). Subduction occurs along the eastern and north-eastern Atlantic margins of the Caribbean plate. Normal, transform and strike slip faulting characterize northern South America, eastern Central America, the Cayman Ridge and Trench, and the northern plate boundary (Benz et al, 2011). In addition to the local and regional sources, the region is also threatened by tele tsunamis/trans-Atlantic tsunamis like that of 1755. With nearly 160 million people (Caribbean, Central America and Northern South America) now living in this region and a major earthquake occurring about every 50 years, the question is not if another major tsunami will happen but when it happens, will the region be prepared for the tsunami impact. The risks of major earthquakes in the Caribbean, and the possibility of a resulting tsunami, are real and should be taken seriously.

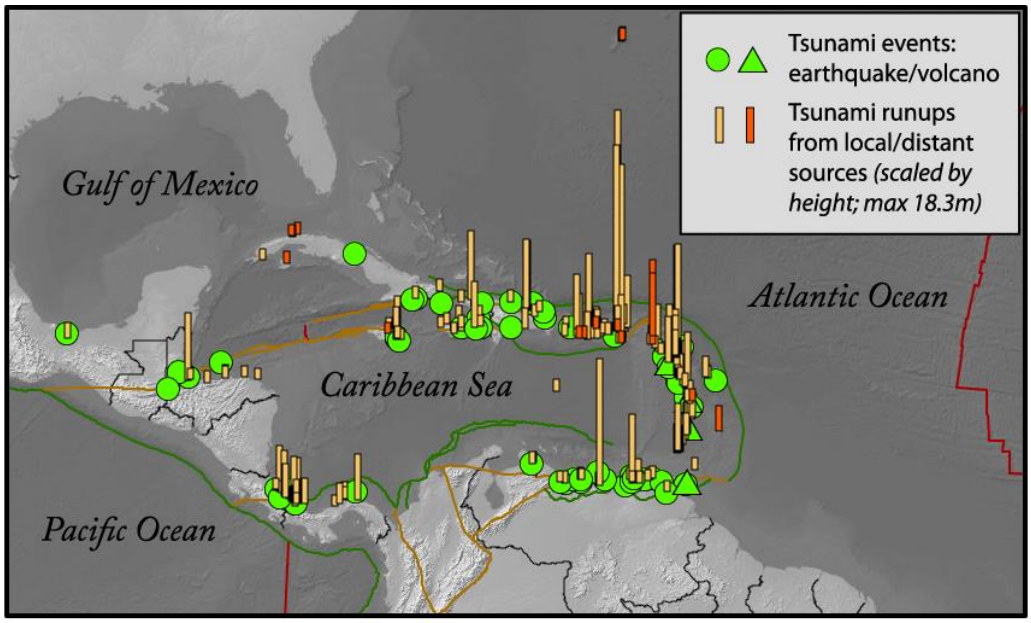

Figure 1. Map of tsunami run-ups in the Caribbean 1493-2013 (National Geophysical Data Center, http://www.ngdc.noaa.gov/hazards/tsu.shtml). Artist: Jessee Varner; originally published in von Hillebrandt-Andrade, 2013.

Tsunami warning services for the international Caribbean are currently provided by the U.S. NWS Pacific Tsunami Warning Center (PTWC) in Ewa Beach, Hawaii, while the U.S. NWS National Tsunami Warning Center (NTWC) in Palmer, Alaska, provides services for Puerto Rico, the US Virgin Islands, the British Virgin Islands, the east and Gulf coasts of the U.S., and east coast of Canada. These Centres issue tsunami products to the region approximately two to ten minutes after an earthquake's occurrence. The NTWC products include warnings, advisories, watches, and information statements; while the PTWC products include tsunami watch and information messages. Primary recipients of Tsunami Warning Center (TWC) messages include national Tsunami Warning Focal Points (TWFPs), Weather Forecast Offices (WFOs), state/territory warning points/emergency operation centres, national Coast Guards, and military contacts. These agencies disseminate the messages to people potentially impacted by a tsunami. The Puerto Rico Seismic Network (PRSN) of the University of Puerto Rico at Mayagüez, the Instituto Nicaraguense de Estudios Territoriales (INETER) in Nicaragua, La Fundación Venezolana de Investigaciones Sismológicas (FUNVISIS) in Venezuela, and other national and regional institutions also provide earthquake and tsunami information for their areas of responsibility (AoR).

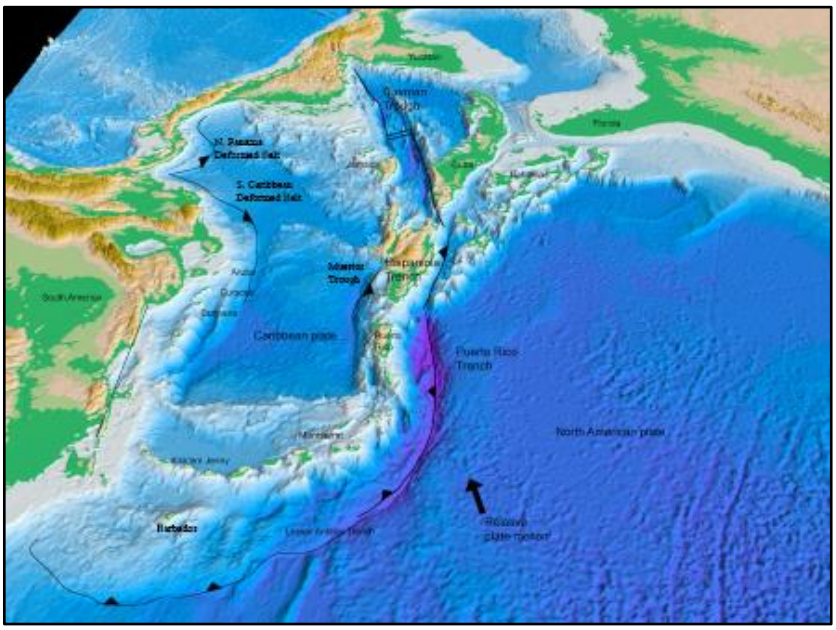

Figure 2. Tectonic features in the Caribbean (ten Brink et al., 2008)

1.2 EXERCISE EARTHQUAKE AND TSUNAMI SCENARIO

The North Panama Deformed Belt (9-12ºN, 83ºW-77ºW) has been the cause of several earthquakes that have generated tsunamis in the Caribbean (ten Brink, et al, 2008). On 7 September 1882, 75–100 people were drowned in a tsunami that submerged the islands of the San Blas Archipelago and the northern coast of Panama; the maximum reported wave height was 3 metres (National Geophysical Database, 2014). This tsunami was caused by an offshore earthquake with an estimated magnitude of 8 located at 10°N, 78°W (Mendoza and Nishenko, 1989). On 22 April 1991, a Mw 7.6 earthquake, 15 km deep, occurred at 10.10N, 82.77W offshore Costa Rica (Plafker and Ward, 1992). This earthquake generated a tsunami that affected the coast of Central America from north of Limón, Costa Rica to Panama. Maximum wave heights of 3 metres were observed in both Panama and Costa Rica, while oscillations of 7 cm were observed on tide gauges as far away as Puerto Rico and St. Croix (Lander, et al., 2002; National Geophysical Database, 2014).

This exercise will provide simulated tsunami warning and watch messages from the TWCs based on a hypothetical magnitude 8.5 earthquake located north of Panama (Figure 3. Map indicating the epicenter and the two fault segments used for CARIBE WAVE/LANTEX 15 southwestern Caribbean scenario. The bathymetry data was obtained from the General Bathymetric Chart of the Oceans (GEBCO) and the image was developed in QGIS, a free and open source Geographic Information System.). Due to the tectonic complexity of the North Panama Deformed Belt (NPDB), this event will trigger motion in two separate faults lines. According to GPS studies, the easternmost fault segment presents a frontal thrust component, while the westernmost segment has mainly strike-slip motion (Bennett, et al., 2014). For the purpose of the exercise, the western segment will have a similar thrust component to the eastern segment, generating a tsunami event that will have an impact on the entire Caribbean basin.

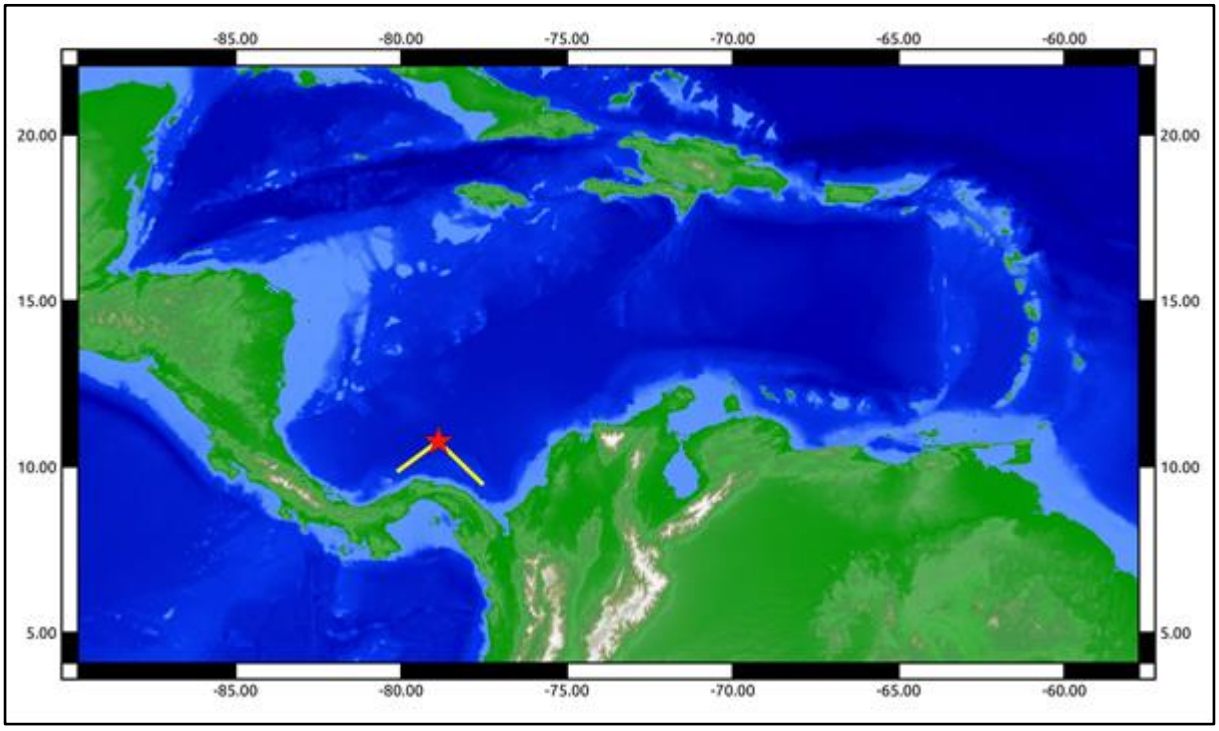

Figure 3. Map indicating the epicenter and the two fault segments used for CARIBE WAVE/LANTEX 15 southwestern Caribbean scenario. The bathymetry data was obtained from the General Bathymetric Chart of the Oceans (GEBCO) and the image was developed in QGIS, a free and open source Geographic Information System.

For many countries, in addition to knowing the potential impact from the tsunami, it is also important to consider the potential earthquake impact. This is especially important for those in the near field. In consideration of this, the United States Geological Survey (USGS) provided for Caribe Wave/Lantex 15 the scenario outputs of their ShakeMaps and the Prompt Assessment of Global Earthquakes for Response (PAGER) products. These results provide emergency responders, government, aid agencies, and the media the scope of the potential earthquake related disaster. ShakeMap illustrates the ground shaking levels close to the earthquake source depending on a set of parameters such as distance to the source, rock and soil behaviour, and seismic wave propagation through the crust (http://earthquake.usgs.gov/research/shakemap/). PAGER is based on the earthquake shaking (via ShakeMap) and analyses of the population exposed to each level of shaking intensity with models of economic and fatality losses based on past earthquakes in each country or region of the world (http://earthquake.usgs.gov/research/pager/). For the Caribe Wave/Lantex 15 scenario, the USGS estimated that significant casualties and damage are likely from the earthquake itself which in themselves would require regional or national level response. According to the PAGER results, the countries that are going to receive the greatest impact from the earthquake are Panama and Colombia. Complete information about the PAGER output for the exercise scenario is available in the ANNEX IV of the manual.

Exercises like this will help ensure that Caribbean and Atlantic coasts are ready to respond in the event of a dangerous tsunami. Similar recent exercises in the Caribbean and adjacent regions (Exercise Caribe Wave 11 [IOC/2010/TS/93 Rev], Exercise Caribe Wave/Lantex 13 [IOC/2012/TS/101 VOL.1], Exercise Caribe Wave/Lantex 14 [IOC/2013/TS/109VOL.1]), as well as the Pacific (Exercise Pacific Wave 06 [IOC/INF-1244], Exercise Pacific Wave 08 [IOC/2008/TS/82], Exercise Pacific Wave 11 [IOC/2011/TS/97Vol.1,Vol.2], Exercise Pacific Wave 13 [IOC/2013/TS/106 Vol.1,Vol.2]) and northeast Atlantic and Mediterranean basins (Exercise NEAMWave 12 [IOC/2012/TS/103 Vol.1, Vol.2.], Exercise NEAMWave 14

[IOC/2014/TS/114Vol.1.]) have proven effective in strengthening preparedness levels of emergency management organizations.

2. EXERCISE CONCEPT

2.1 PURPOSE

The purpose of the exercise is to improve Tsunami Warning System effectiveness along the Caribbean coasts. The exercise provides an opportunity for emergency management organizations throughout the region 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 impacted 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.

1. **To exercise and evaluate operations of the CARIBE-EWS Tsunami Warning System.**
   - Validate the **issuance** of tsunami products from the PTWC and NTWC.
   - Validate the **receipt and dissemination** of tsunami products by CARIBE-EWS Tsunami Warning Focal Points (TWFPs).

2. **To continue the process of exposure to PTWC CARIBE-EWS Enhanced products.**
   - Review and evaluate enhanced PTWC products.
   - Provide further feedback on the staging, format and content of the products.

3. **To validate the readiness to respond to a local or distant tsunami.**
   - Validate the operational readiness of the TWFP (or like function) and/or the National Disaster Management Office (NDMO).
   - To improve operational readiness. Before the exercise, ensure appropriate tools and response plan(s) have been developed, including public education materials.
   - Validate that the dissemination of warnings and information/advice by Tsunami Warning Focal Points to relevant in-country agencies and the public is accurate and timely.
   - Validate the organizational decision-making process (tsunami response plans) about public warnings and evacuations.
   - Validate that the methods used to notify and instruct the public are accurate and timely.

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 choose 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 (SOP). Most countries in the region have participated in SOP workshops in 2013 and should use the materials and expertise acquired to help guide exercise preparation and conduct. ANNEX I gives an overview of SOP. Exercise participants may as well use their own past multi-hazard drills (e.g. flood, hurricane, tsunami, earthquake, etc.) as a framework to conduct Caribe Wave/Lantex 15.

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

- 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.

- 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.

- 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 ANNEX II for a Sample Tabletop Exercise Outline).

- 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 centre, emergency command centre, command post, master control centre, etc.) and involve 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.

- 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. The Emergency Operation Centres (EOCs) and other command centres 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.

STYLE	PLANNING PERIOD	DURATION	COMMENTS
Orientation Exercise	2 weeks	Hours	Individual or mixed groups
Drill	2 months	1 day	Individual technical groups generally
Tabletop Exercise	1 month	1-3 days	Single or multiple agency
Functional Exercise	> 3 months	1-5 days	Multiple Agency participation
Full-scale Exercise	>6 months	1 day/ week	Multiple Agency participation

Table 1. Example time frames for different exercise types

3. EXERCISE OUTLINE

3.1 GENERAL

Tsunami messages for this exercise are issued by the US NTWC and PTWC based on a hypothetical earthquake with the following hypocentre parameters:

- Origin Time 14:00:00 UTC, 25 March 2015
- Latitude 10.3oN
- Longitude 78.8oW
- Magnitude 8.5 – Mw
- Depth 15km

Note that bulletin #1 is issued with a magnitude 8.0. For very large earthquakes, the initial magnitude determination at the TWCs is commonly low. Expected impact for this event is determined from precomputed tsunami forecast models. The models indicated a significant tsunami along many coasts in the Caribbean Sea, but with less impact outside the Caribbean Sea. Based on the models, the exercise alert areas are limited to the Caribbean region, and do not include other TWC areas-of-responsibility in the Gulf of Mexico and Atlantic. ANNEX III provides model results.

Initially, PTWC issues a Caribbean-Wide Tsunami Watch, while NTWC issues a bulletin which places Puerto Rico and the Virgin Islands in an Advisory (which is upgraded in message #2 to a Warning). Definitions of the products that will be issued by the TWCs during this exercise are provided below (Note that PTWC products differ from NTWC products due to requirements set forth by the ICG/CARIBE-EWS):

US National Tsunami Warning Center

- 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 cancelled. To provide the earliest possible alert, initial warnings are normally based only on seismic information.

- Tsunami Advisory: A tsunami advisory is issued due to the threat of a potential tsunami which may produce strong currents or waves dangerous to those in or near the water. Coastal regions historically prone to damage due to strong currents induced by tsunamis are at the greatest risk. The threat may continue for several hours after the arrival of the initial wave, but significant widespread inundation is not expected for areas under an advisory. Appropriate actions to be taken by local officials may include closing beaches, evacuating harbours 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.

Pacific Tsunami Warning Center

- Tsunami Watch: Watches are issued by the TWCs based on seismic information without confirmation that a destructive tsunami is underway. It is issued as a means of providing an advance alert to areas that could be impacted by destructive tsunami waves. Watches are updated at least hourly to continue them, expand their coverage, upgrade them to a Warning, or end the alert. A Watch for a particular area may be included in the text of the message that disseminates a Warning for another area.

The TWCs will not issue live messages over broadcast dissemination channels other than to issue initial dummy messages to start the exercise at 1405 UTC on 25 March 2015. However, all messages will be disseminated thru email to TWFP and NWS Forecast Offices requesting this service thru the online registration site http://www.prsn.uprm.edu/caribewave-lantex2015/registro. Further dissemination will be the responsibility of the corresponding national and local authorities. The content of the dummy messages is given in ANNEX V. Dummy messages indicate that exercise participants should refer to the first message provided in this handbook. From then on, participants should follow the schedule in Table 1 to look at new messages if they do not have systems established to disperse them via email or fax. Table 2. Scenario timeline is the timeline for when messages would be issued by the TWCs if this were a real event, and can be used by EMOs to drive the exercise timing. The messages (as shown in ANNEX VI) cover a 6-hour period, though in an actual event they would likely continue much longer. The World Meteorological Organization (WMO) and Advanced Weather Interactive Processing System (AWIPS) headers used in the dummy messages are listed in Table 3. Product types.

The US NTWC issues three official products each time a message is issued. The ones provided in ANNEX VI are known as the public message and do not contain codes or text intended for automated systems. English and Spanish versions of each message are provided for this exercise. The TWCs also issue additional map- and web-based products to their web sites. PTWC issues one official product for this exercise.

In addition CARIBE-EWS Member States have an opportunity to view and exercise with the ICG/CARIBE-EWS PTWC enhanced products if they choose to do so. They will be made available along with a more detailed description of their content and how they should be used at least a month before the exercise on the following website: http://www.caribewave.info

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 ANNEX VI, 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)

Scenario Timeline

Tsunami generated by a magnitude 8.5 earthquake with epicentre at 10.3ºN, 78.8ºW occurring on 25 March 2015 at 1400 UTC. The initial alert is disseminated at 1405 UTC.

DATE (UTC)	TIME (UTC)	NTWC MESSAGE (FOR PR AND VI)				PTWC MESSAGE			
		#	TYPE	DUMMY	EMAIL	#	TYPE	DUMMY	EMAIL
03/25/2015	1400		------Earthquake Occurs------						
03/25/2015	1405	01	Adv	Yes	Yes	01	Watch	Yes	Yes
03/25/2015	1430					02	Watch	No	Yes
03/25/2015	1500	02	Warn	No	Yes	03	Watch	No	Yes
03/25/2015	1602	03	Warn	No	Yes	04	Watch	No	Yes
03/25/2015	1701	04	Warn	No	Yes	05	Watch	No	Yes
03/25/2015	1800	05	Warn	No	Yes	06	Watch	No	Yes
03/25/2015	1901	06	Adv	No	Yes	07	Watch	No	Yes
03/25/2015	1945	07	Can	No	Yes	08	Can	No	Yes

Table 2. Scenario timeline

The initial dummy messages will be disseminated over all standard TWC broadcast channels as listed in Table 3. These are being issued to test communications with EMOs and Tsunami Warning Focal Points (TWFPS), and to start the exercise. All messages will be disseminated thru email to TWFP and NWS Forecast Offices requesting this service thru the online registration site http://www.prsn.uprm.edu/caribewave-lantex2015/registro. Further dissemination will be the responsibility of the corresponding national and local authorities. *Please note that the NTWC Dummy messages are being issued with the WMO/AWIPS IDs WEXX20 PAAQ/TSUAT1, WEXX30 PAAQ/TSUATE, and WEXX40 TSUSPN, and the* PTWC *dummy message with WECA41 PHEB/TSUCAX.*

A real tsunami warning/watch/advisory issued for an event as described would likely last many hours longer than this exercise. The exercise is being tailored to complete within a compressed time frame.

- TWC Message Types
  - Warn Tsunami Warning
  - Watch Tsunami Watch
  - Adv Tsunami Advisory
  - Can Cancellation
- Dummy
  - Yes Dummy Message Issued
  - No Dummy Message Not Issued
- Email
  - Yes Message disseminated via special email list
  - No Message not disseminated via special email list
- Product Types

Product Types Issued for Dummy Message with Transmission Methods.

CENTRE	WMO ID	AWIPS ID	NWWS	GTS	EMWIN	AISR	FAX	EMAIL
NTWC	WEXX20 PAAQ	TSUAT1	Yes	Yes	Yes	Yes	No	No
NTWC	WEXX30 PAAQ	TSUATE	Yes	Yes	Yes	Yes	Yes	Yes
NTWC	WEXX40 PAAQ	TSUSPN	Yes	Yes	Yes	Yes	Yes	Yes
PTWC	WECA41 PHEB	TSUCAX	Yes	Yes	Yes	Yes	Yes	Yes

Table 3. Product types for dummy messages

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

At 1300 UTC on 25 March 2015, a separate western Atlantic tsunami exercise (Lantex 15) will also take place. The scenario will be a landslide offshore Florida which generates a tsunami. This exercise, organized under the framework of the US NTHMP, is open to CARIBE-EWS countries (more information is available at www.caribewave.info).

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 the TWCs 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 "**Caribe Wave /Lantex 15"** 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:

PERSON	TELEPHONE #	EMAIL
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Table 4. List of persons to addressed questions on the exercise

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 Caribbean coast 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. For all levels participating countries, especially those executing full-scale and functional exercises, the media can also provide support in building awareness leading up to the exercise. The media should be provided with available informational brochures prepared by the local, regional and international agencies. It is also a good opportunity to distribute the PRSN Tsunami Media Guide (http://www.prsn.uprm.edu/mediakit/), as well as the Seismic Research Unit Tsunami and other Coastal Hazards *Information Kit for the Caribbean Media* (http://www.uwiseismic.com) as additional guidance. ANNEX VII 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 the ICG/CARIBE-EWS, NTHMP, and NOAA in the evaluation of Caribe Wave/Lantex 15 and the development of subsequent exercises, and help response agencies document lessons learned.

The deadline for completing the evaluation is **9 April 2015** at Survey Monkey through the following link: https://www.surveymonkey.com/s/CaribeWave15.

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ANNEX I

STANDARD OPERATING PROCEDURES

End-To-End Tsunami Warning for Tsunami Warning Focal Points
and Tsunami Emergency Response Operations

AN OVERVIEW

September 2008 (updated 2012)
UNESCO/IOC Tsunami Unit (Paris) with ITIC (Hawaii)

This overview summarizes end-to-end tsunami warning. In event time, it covers activities for event monitoring, detection, threat evaluation and warning, alert dissemination, emergency response, and public action. An effective tsunami warning system is achieved when all people in vulnerable coastal communities are prepared to respond appropriately and in a timely manner upon recognizing that a potential destructive tsunami may be approaching. Meeting this challenge requires round the-clock monitoring with real-time data streams and rapid alerting, as well as prepared communities, a strong emergency management system, and close and effective cooperation and coordination between all stakeholders. To warn without preparing, and further, to warn without providing a public safety message that is understandable to every person about what to do and where to go, is clearly useless. While alerts are the technical trigger for warning, any system will ultimately be judged by its ability to save lives, and by whether people move out of harm's way before a big tsunami hits. Towards these ends, education and awareness are clearly essential activities for successful early warning.

End-to-end tsunami warning involves a number of stakeholders who must be able to work in coordination and with good understanding of each other's roles, responsibilities, authorities, and action during a tsunami event. Planning and preparedness, and practicing in advance of the real event, helps to familiarize agencies and their staff with the steps and decision-making that need to be carried out without hesitation in a real emergency. Tsunami resilience is built upon a community's preparedness in tsunami knowledge, planning, warning, and awareness. All responding stakeholders should have a basic understanding of earthquake and tsunami science, and be familiar with warning concepts, detection, threat evaluation, and alerting methods, and emergency response and evacuation operations. The key components, requirements, and operations to enable an effective and timely warning and evacuation are covered in the following topics of end to-end tsunami warning:

- Tsunami Science and Hazard Assessment.
- Tsunami Disaster Reduction Strategy and community-based disaster risk management.
- Stakeholders, Roles & Responsibilities, and Standard Operating Procedures (SOPs) and their Linkages.
- End-to-end Tsunami Response and SOPs.
- Tsunami Warning Focal Point (TWFP) and Tsunami Warning Centre (TWC) operations.
- Tsunami Emergency Response (TER) operations.
- Public Alerting.
- The Role of Media.
- Evacuation and Signage.

- Use of Exercises to Build Preparedness.
- Awareness and Education.

To ensure the long-term sustainability of a tsunami warning system, it should be noted that:

- Tsunamis should be part of an all-hazards (natural and man-made) strategy.
- System redundancy is required to ensure reliability.
- Clearly understood TWFP/TWC and TER public safety messages are essential. Media partnerships for warning, as well as preparedness, are important.
- Awareness must be continuous forever. Tsunamis are low frequency, high impact natural disasters that are also unpredictable.
- National, provincial, and local Tsunami Coordination Committees ensure stakeholder coordination and implementation of the end-to-end tsunami warning.

For specific details and algorithms and for actual descriptions of tsunami warning and emergency response operations, including data networks and data collection, methods of evaluation and criteria for action, products issued and methods of communication of alerts, and evacuation, original source references or plans should be consulted. These are the high-level system descriptions or concepts of operation, agency operations manuals, and user's guides of each regional and national system.

Basic references providing a comprehensive summary on tsunami warning centre and emergency response operations considerations are:

- ITIC IOC Manual on Tsunami Warning Centre Standard Operating Procedures (Guidance and Samples), version 2010 (distributed as part of 2013 SOP capacity building).

- ITIC IOC Manual on Tsunami Emergency Response Standard Operating Procedures (Guidance and Samples), version 2010 (distributed as part of 2013 SOP capacity building)

For a description of the Caribbean Tsunami Warning System, as provided by the Pacific Tsunami Warning Center and the US National Tsunami Warning Center, consult the IOC Technical Series *Communication Plan for the Interim Tsunami Advisory Information Service to the Caribbean Sea and Adjacent Regions* (version December 2007). General information of the IOC global tsunami warning systems and on tsunami mitigation and preparedness can be accessed at: IOC: http://www.ioc-tsunami.org IOC/ITIC http://www.tsunamiwave.org and NWS/CTWP http://caribewave.info.

Training

In order to assist countries in strengthening their warning systems, the IOC has compiled and developed a Training Manual containing reference, best practice, decision support tools, and guidance materials summarizing key components, requirements, and operations to enable an effective and timely warning and evacuation against tsunamis. The materials were developed under the lead of ITIC and in close partnership with experienced practitioners in tsunami warning and emergency response, and have been used in numerous training courses since the 2004 Indian Ocean tsunami.

The Manual includes session plans, lectures (in PowerPoint), exercises, and multi-media materials. Together, they represent part of the IOC's collaborative contribution to national capacity building and training on end-to-end tsunami warning and tsunami standard

operating procedures to countries of the Indian Ocean, Pacific, Southeast Asia, and the Caribbean. For more information, please contact Laura Kong, Director, ITIC (laura.kong@noaa.gov), Bernardo Aliaga, IOC, (b.aliaga@unesco.org), Christa von Hillebrandt, US NWS Caribbean Tsunami Warning Program (christa.vonh@noaa.gov), or Alison Brome, Caribbean Tsunami Information Centre (a.brome@unesco.org). The tables presented below can be used as a guide for preparing the timeline for the exercise.

TSUNAMI EVACUATION RESPONSIBILITIES CHECKLIST FOR GOVERNMENT DISASTER RESPONSE AGENCIES		
This is a simple checklist to use when doing an evacuation. List the agency (ies) / department(s) responsible for actions and recommended number of minutes (e.g. +10 minutes) after earthquake origin time.	Earthquake Origin Time: 0000	
	Agency(ies) / Department(s):	Time (mins):
Strong and/or long duration earthquake is felt (vary depending distance from source)	_____	+1
Tsunami message received	_____ _____	+10
Call in staff	_____ _____	+__
Activate emergency centers / Notify public safety agencies	_____ _____	+__
Coordinate sounding of public sirens and alarm notifications	_____ _____	+__
Initiate media notifications and evacuation announcements	_____ _____	+__
Initiate evacuation of people away from coast (Tsunami Evacuation Maps)	_____ _____	+__
Put boats/ships out to sea if wave impact time permits	_____ _____	+__
Setup road-blocks and evacuation routes	_____ _____	+__
Guide people through traffic points to shelter	_____ _____	+__
Initiate recall of disaster response workers	_____ _____	+__
Open and operate refuge centres	_____ _____	+__

TSUNAMI EVACUATION RESPONSIBILITIES CHECKLIST FOR GOVERNMENT DISASTER RESPONSE AGENCIES		
This is a simple checklist to use when doing an evacuation. List the agency (ies) / department(s) responsible for actions and recommended number of minutes (e.g. +10 minutes) after earthquake origin time.	Earthquake Origin Time: 0000	
	Agency(ies) / Department(s):	Time (mins):
Prepare to start electrical generators	_____ _____	+ __
If your facility is located in a tsunami evacuation zone: -Prepare to shutoff utilities (e.g. electrical, gas, water) -Protect key equipment (e.g. computers) -Remove key documents (e.g. financial, personal information)	_____ _____	+ __
Determine if tsunami has caused coastal damage / injuries and the need to initiate search and rescue operations	_____ _____	+ __

Table I-1. Tsunami evacuation responsibilities checklist for government disaster response agencies.

EVENT	TIME (WHEN)	ACTIVITY (WHAT INFO)	AUTHORITY (WHO)	MEDIUM (HOW)	TO (TARGET)
EQ Occurs					
Tsunami might come					
Evacuate					
Tsunami comes					
Safe to return					

Table I-2. Table to be used as a guide the timing, actions, authority, communication means and target audiences for a tsunami event.

ANNEX II

EXAMPLE TABLE TOP EXERCISE

Tabletop Exercise Development Steps

Original 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 centres;*
- *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.

ANNEX III

**TSUNAMI SOURCE
SCENARIO DESCRIPTION**

The scenario consists of a rupture of two fault segments in the south western Caribbean Sea with hypocentre at:

- Origin Time: 14:00:00 UTC March 25, 2015
- Latitude: 10.3°N
- Longitude: 78.8°W
- Depth: 15km
- Magnitude: 8.5 – Mw (total for two segments)

Southeast Segment (Alberto):

- Latitude: 9°28'54.84"N (Southeast end)
- Longitude: 77°33'38.11"W (Southeast end)
- Depth: 5 km (to up dip fault edge)
- Strike: 120°
- Dip: 40°
- Rake: 90°
- Length: 182 km
- Width: 60 km
- Shear modulus: 3E11 dyne/cm^2
- Seismic Moment: 4.87E28 dyne-cm

Southwest Segment (Eduardo)

- Latitude: 9°52'27.15"N (Southwest end)
- Longitude: 80° 4'27.56"W (Southwest end)
- Depth: 5 km (to up dip fault edge)
- Strike: 71°
- Dip: 40°
- Rake: 90°
- Length: 120 km
- Width: 40 km
- Shear modulus: 3E11 dyne/cm^2
- Seismic Moment: 1.43E28 dyne-cm

Tsunami models were computed using the Short-term Inundation Forecasting of Tsunamis (SIFT), Alaska Tsunami Forecast Model (ATFM), and Rapid Inundation Forecasting of Tsunamis (RIFT) model to generate expected impacts throughout the region. The models indicate a tsunami several meters high in the epicentral region and from one to two meters high at some locations in Puerto Rico and the U.S. Virgin Islands. Little tsunami energy

escapes the Caribbean region and the tsunami poses no threat to other U.S. and Canadian coasts.

A tsunami travel time map for this source is shown in Figure III-1.

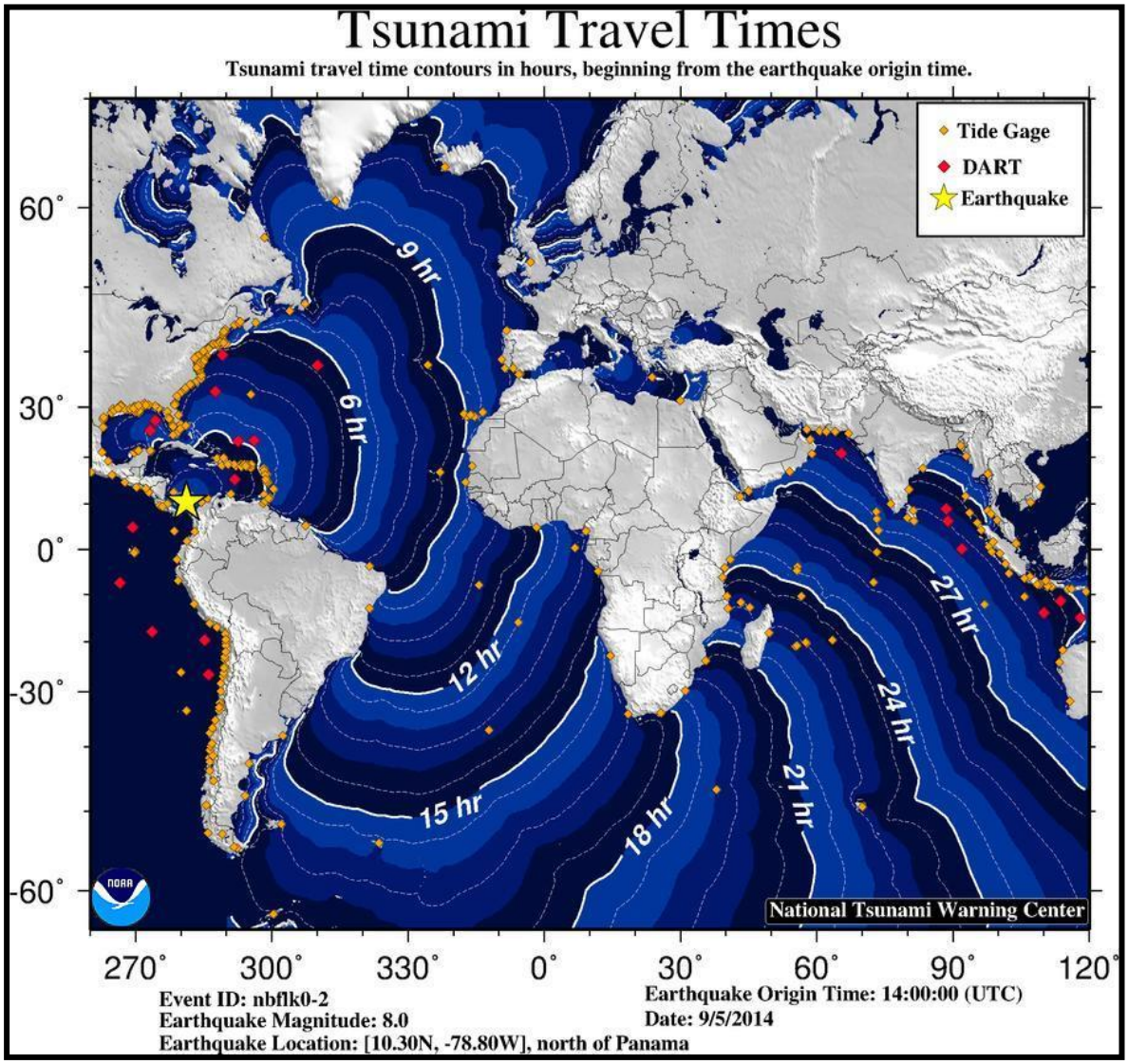


Figure III-1.Tsunami travel times for the SW Caribbean scenario.

Dislocation formulae were used to compute the sea-floor displacement which drives the ATFM and RIFT models (Figure III–2). SIFT unit sources, as shown in Figure III–3, were used to simulate the source in SIFT. Maximum tsunami amplitudes over the full Atlantic grid based on ATFM and RIFT are shown in Figures III–4 and III–5. These Figures show that the tsunami is mostly contained to the Caribbean Sea.

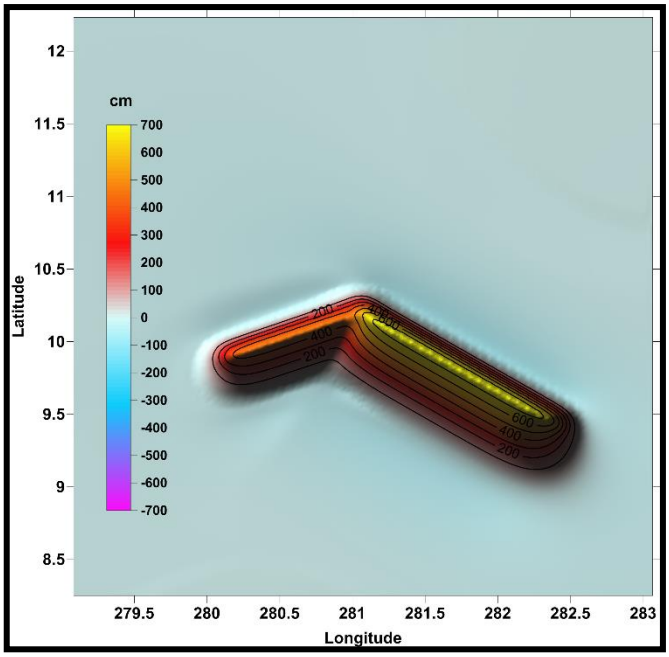


Figure III-2. Combined source dislocation
from the two faults used in this scenario in ATFM and RIFT.

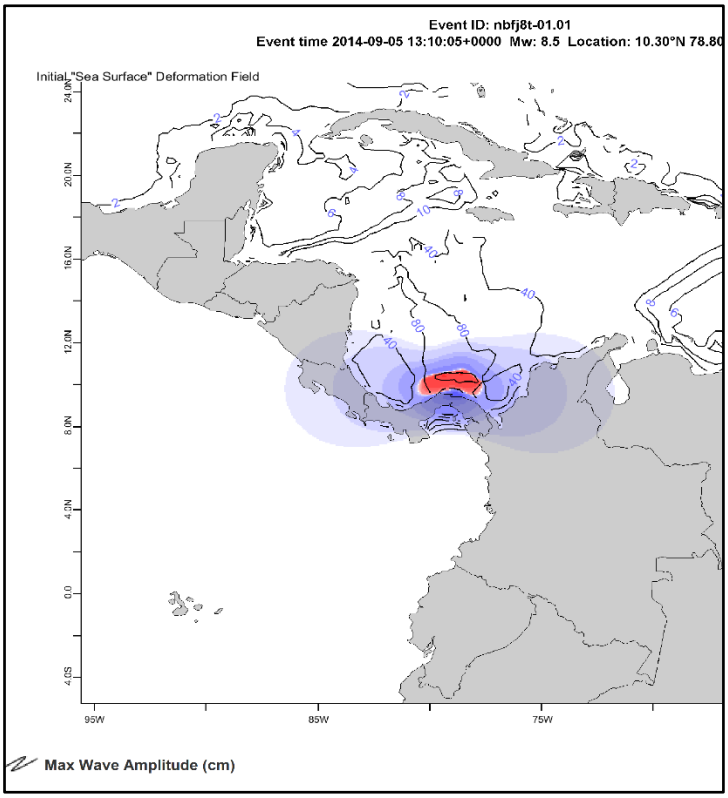


Figure III-3. SIFT source dislocation for this scenario

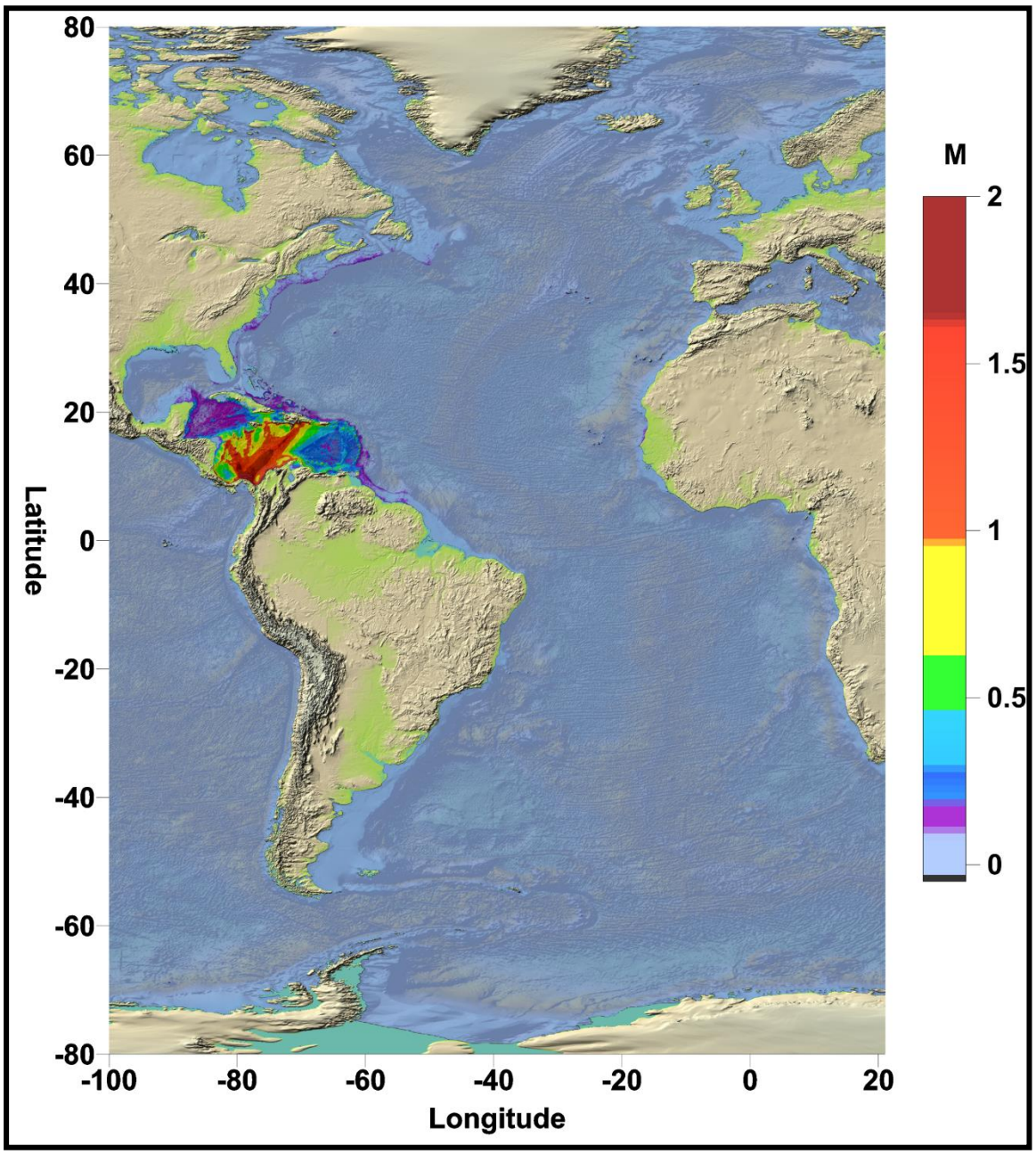


Figure III-4. ATFM maximum amplitude map for the Atlantic basin based on the SW Caribbean scenario. Note that little tsunami impact is seen outside the Caribbean Sea. The model is computed over the wider Atlantic with a 4 arc-minute grid increment.

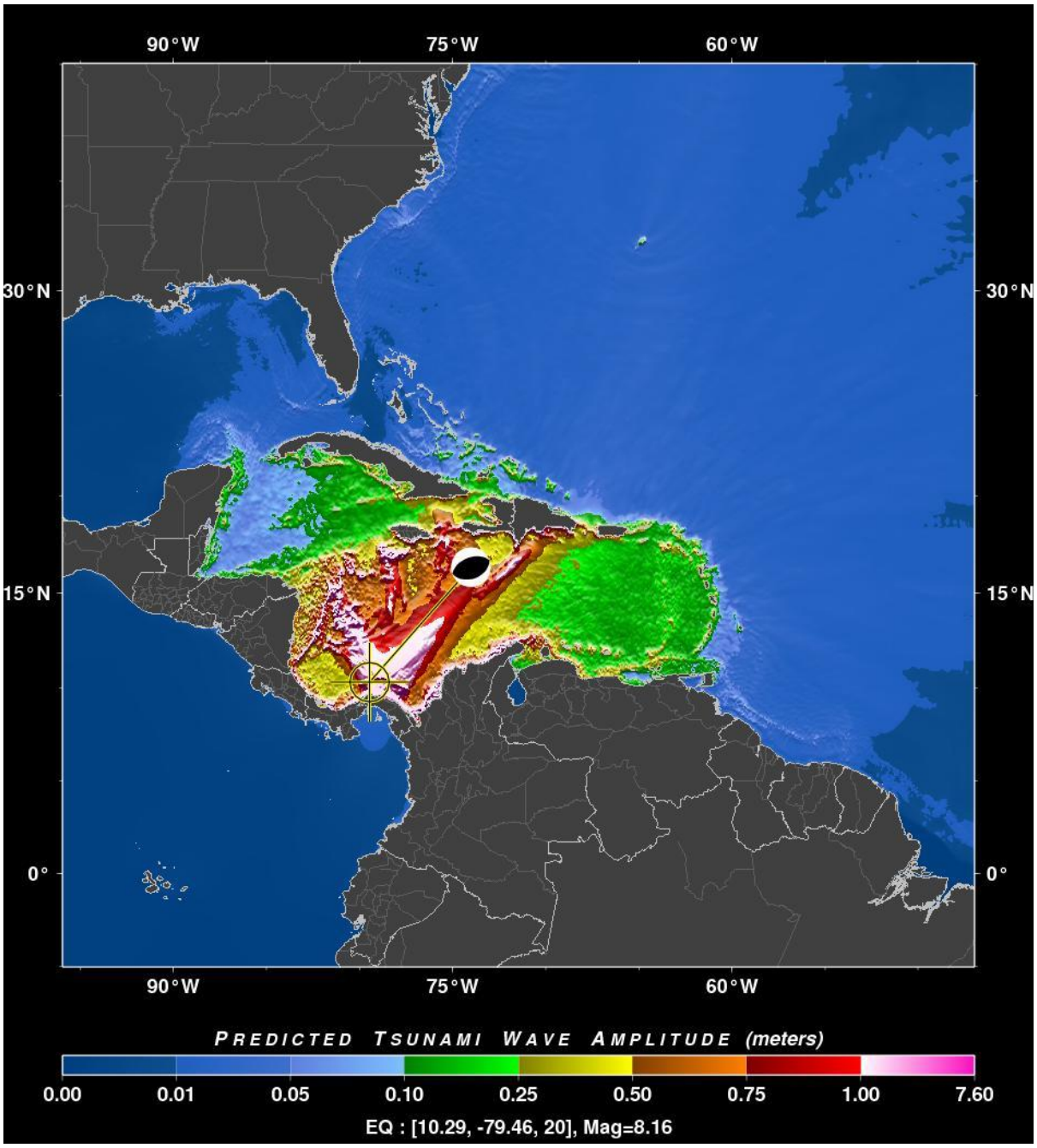


Figure III-5. RIFT maximum amplitude map for the western Atlantic basin based on the SW Caribbean scenario. Again, little tsunami impact is seen outside the Caribbean Sea.

Figures III–6 (ATFM) and III–7 (RIFT) display the maximum tsunami amplitude in detail for the Caribbean Sea. Note that this source induces directivity to the northeast and has a strong impact on the south side of Hispaniola. Figure III–8 is a more detailed image of the impact in the greater Puerto Rico and Virgin Islands region (derived from the 30 arc-second ATFM model).

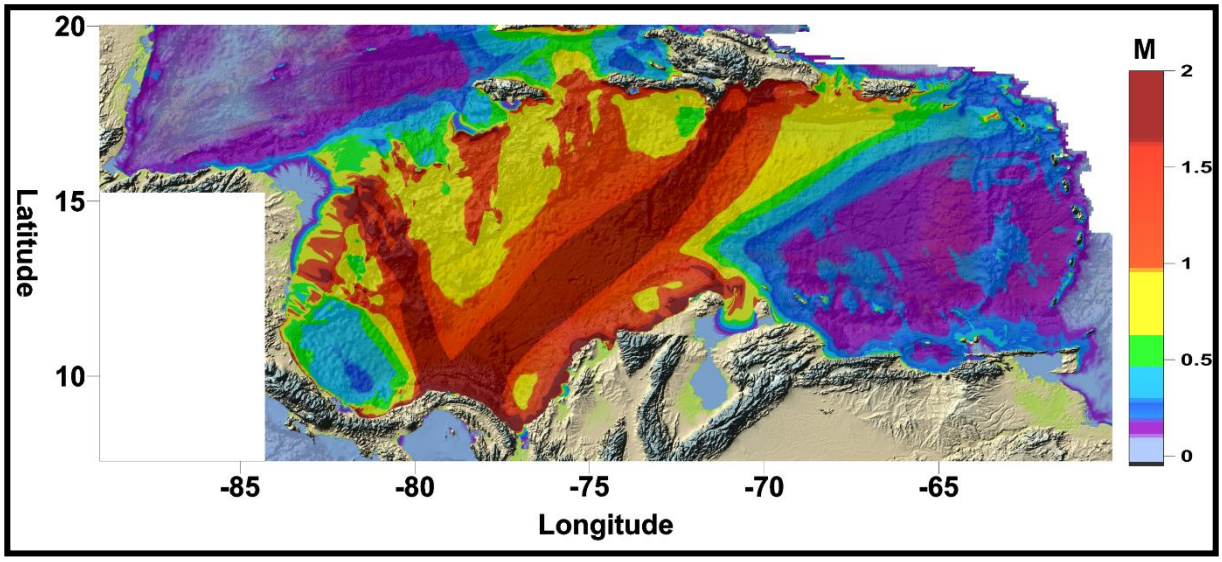


Figure III-6. ATFM maximum amplitude map for the Caribbean Sea based on the SW Caribbean scenario. The model is computed with a 30 arc-second grid increment.

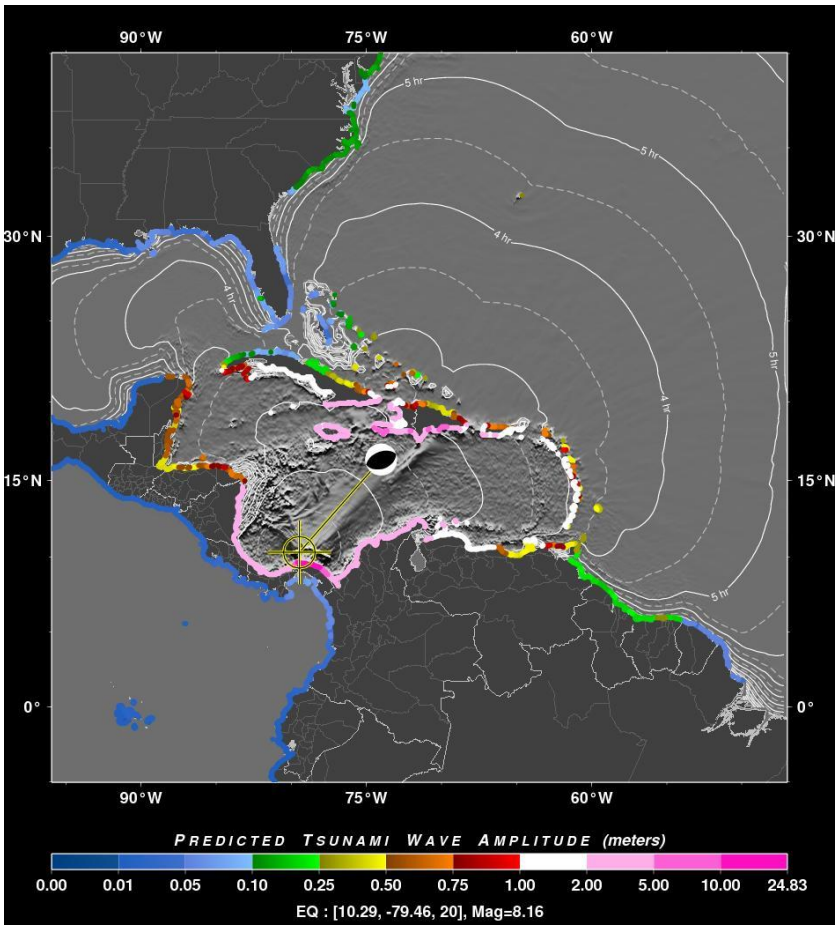


Figure III-7. RIFT coastal tsunami amplitude map for the Caribbean Sea based on the SW Caribbean scenario.

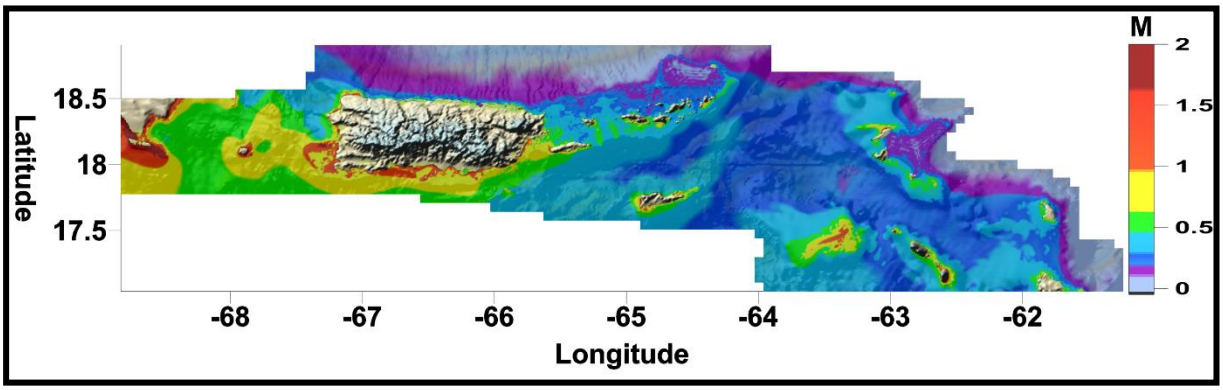


Figure III-8. ATFM maximum amplitude map for the greater Puerto Rico/ Virgin Islands region based on the SW Caribbean scenario. The model is computed with a 30 arc-second grid increment.

Figure III–9 shows forecast zones based on the RIFT model of PTWC, whereby the maximum positive amplitude is calculated at 1 meter water depth. This is one of the new products being proposed by the PTWC for CARIBE-EWS and is still under evaluation. The colour of each zone is based on the maximum tsunami amplitudes within that polygon.

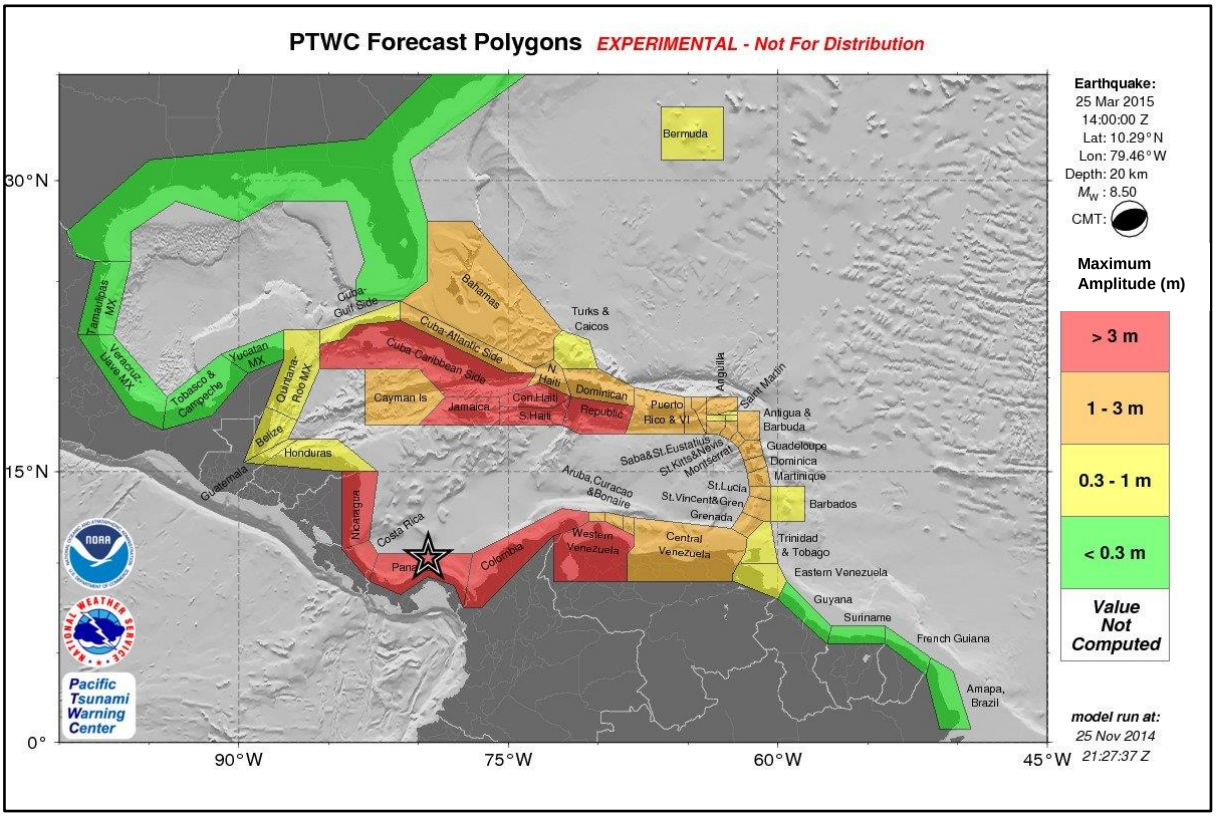


Figure III-9. RIFT forecast polygons for the Caribbean region.

Figure III–10 through Figure III–13 show maximum tsunami amplitudes (maximum rise above ambient sea level) at greater detail in Puerto Rico and the Virgin Islands. These ATFM models are computed with grid increments ranging from 1 arc-second to 6 arc-seconds.

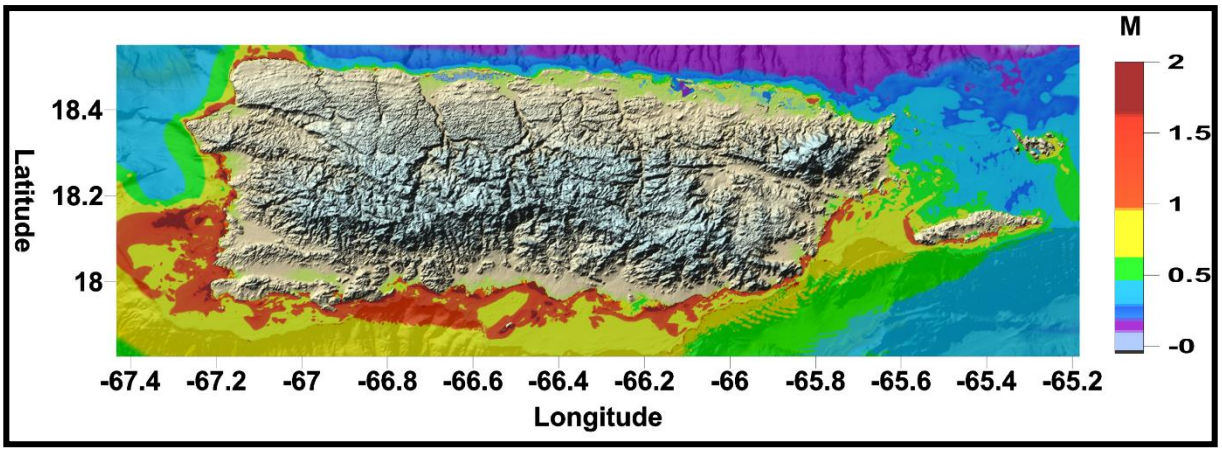


Figure III-10. ATFM maximum amplitude map for Puerto Rico based on the SW Caribbean scenario. The model is computed with a 6 arc-second grid increment.

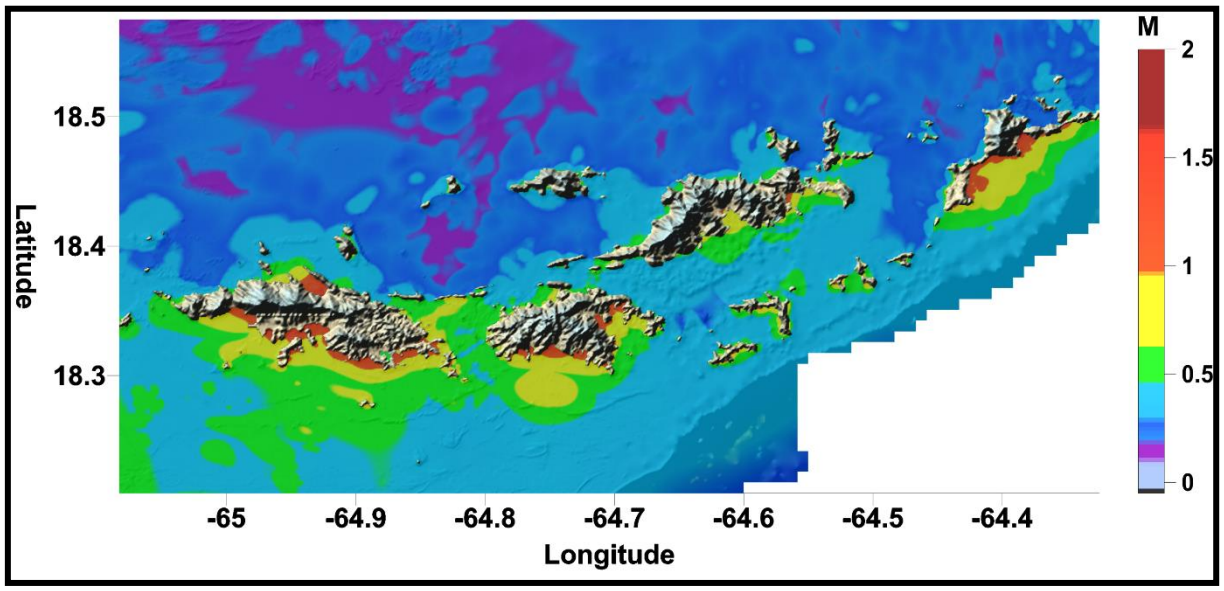


Figure III-11. ATFM maximum amplitude map for the US and British Virgin Islands based on the SW Caribbean scenario. The model is computed with a 3 arc-second grid increment.

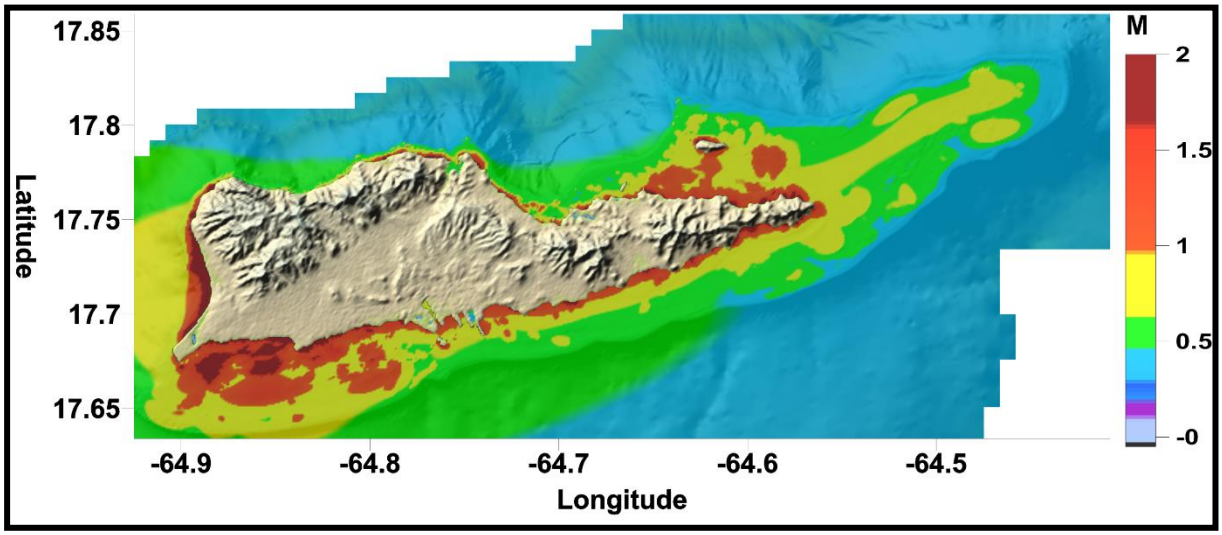


Figure III-12. ATFM maximum amplitude map for St. Croix in the USVI based on the SW Caribbean scenario. The model is computed with a 3 arc-second grid increment.

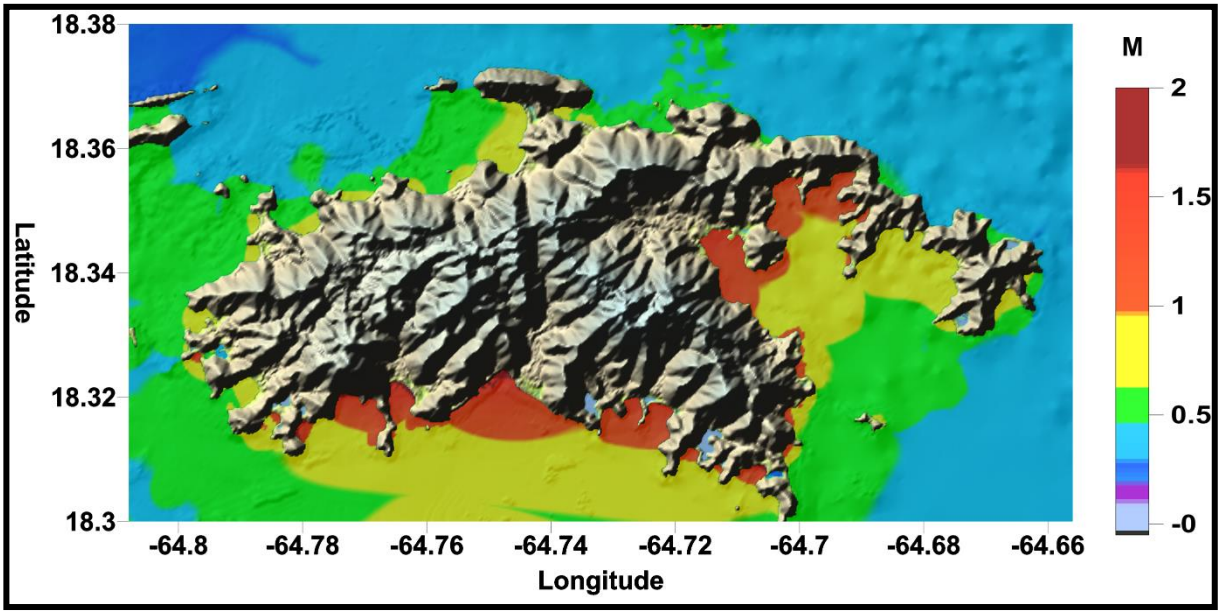


Figure III-13. ATFM maximum amplitude map for St. John in the USVI based on the SW Caribbean scenario. The model is computed with a 1 arc-second grid increment.

Figure III–14 through Figure III–22 show detailed tsunami impact at specific communities in Puerto Rico and the US Virgin Islands. These ATFM models are computed with grid increments ranging from 1 arc-second to 3 arc-seconds.

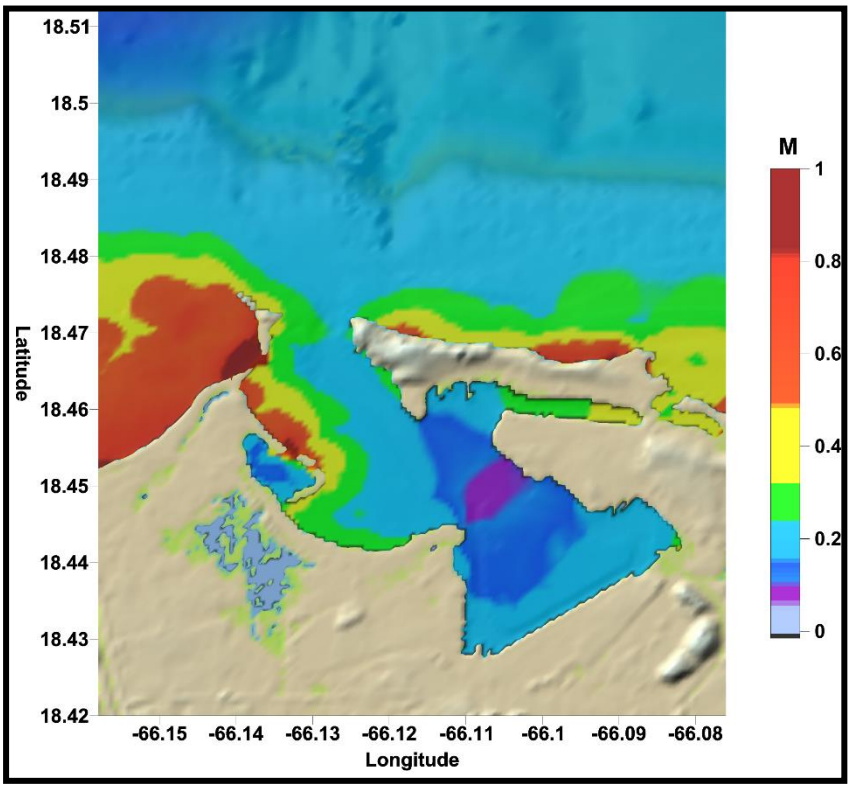


Figure III-14. ATFM maximum amplitude map for San Juan, Puerto Rico based on the SW Caribbean scenario. The model is computed with a 2 arc-second grid increment.

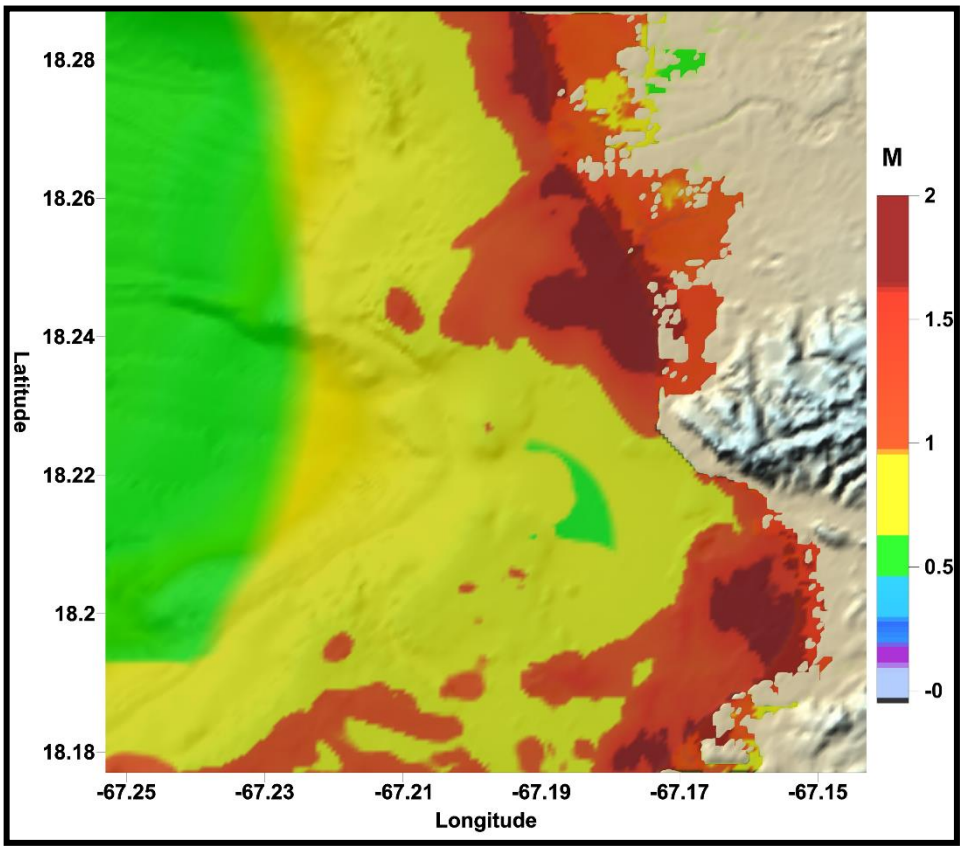


Figure III-15. ATFM maximum amplitude map for Mayaguez, Puerto Rico based on the SW Caribbean scenario. The model is computed with a 2 arc-second grid increment.

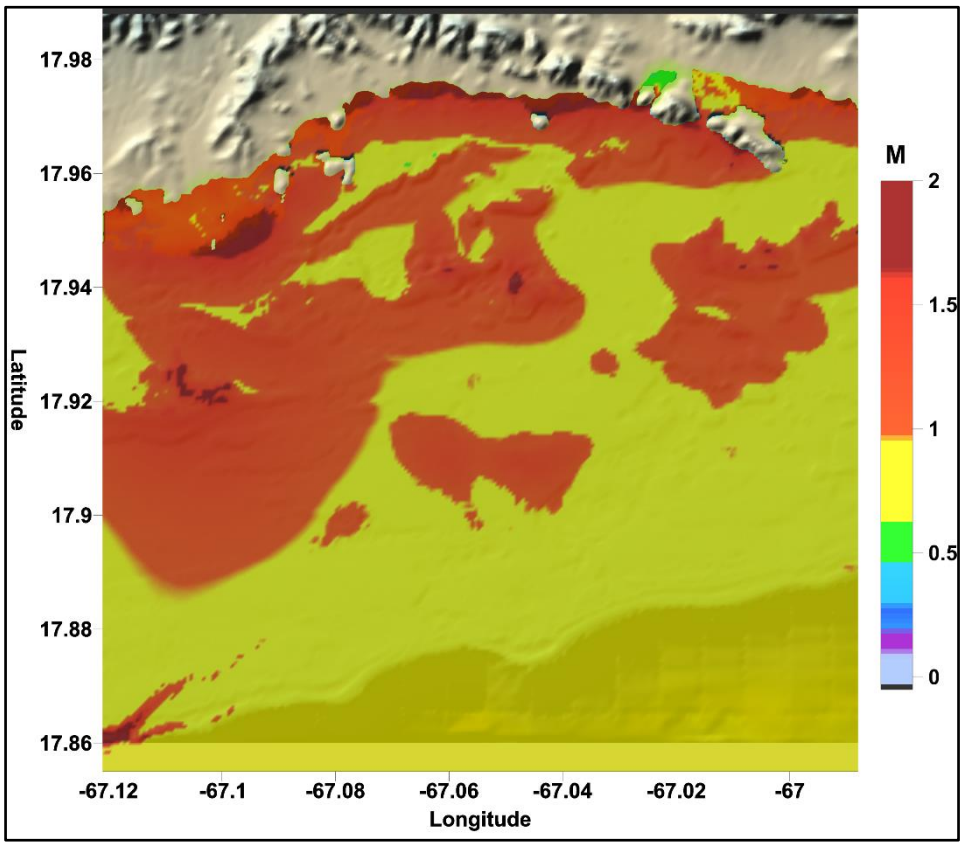


Figure III-16. ATFM maximum amplitude map for Parguera, Puerto Rico based on the SW Caribbean scenario. The model is computed with a 2 arc-second grid increment.

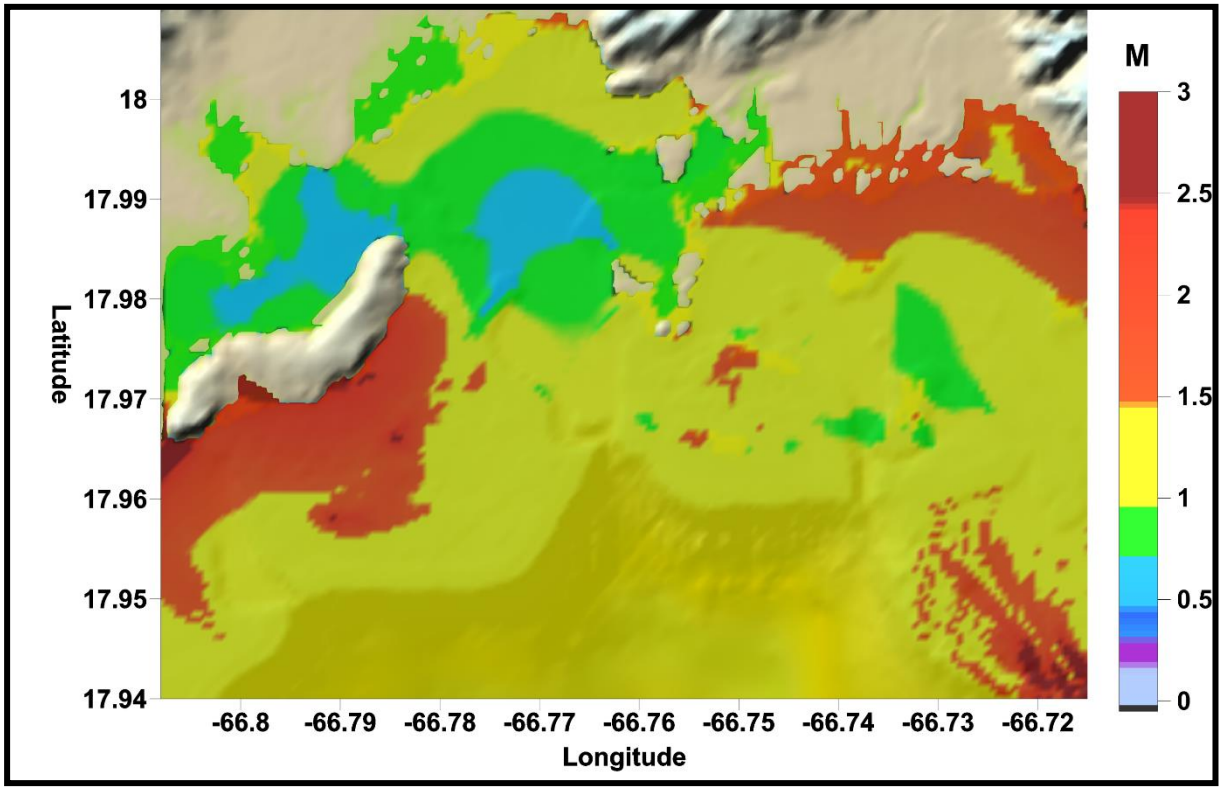


Figure III-17. ATFM maximum amplitude map for the Peñuelas, Puerto Rico region based on the SW Caribbean scenario. The model is computed with a 2 arc-second grid increment.

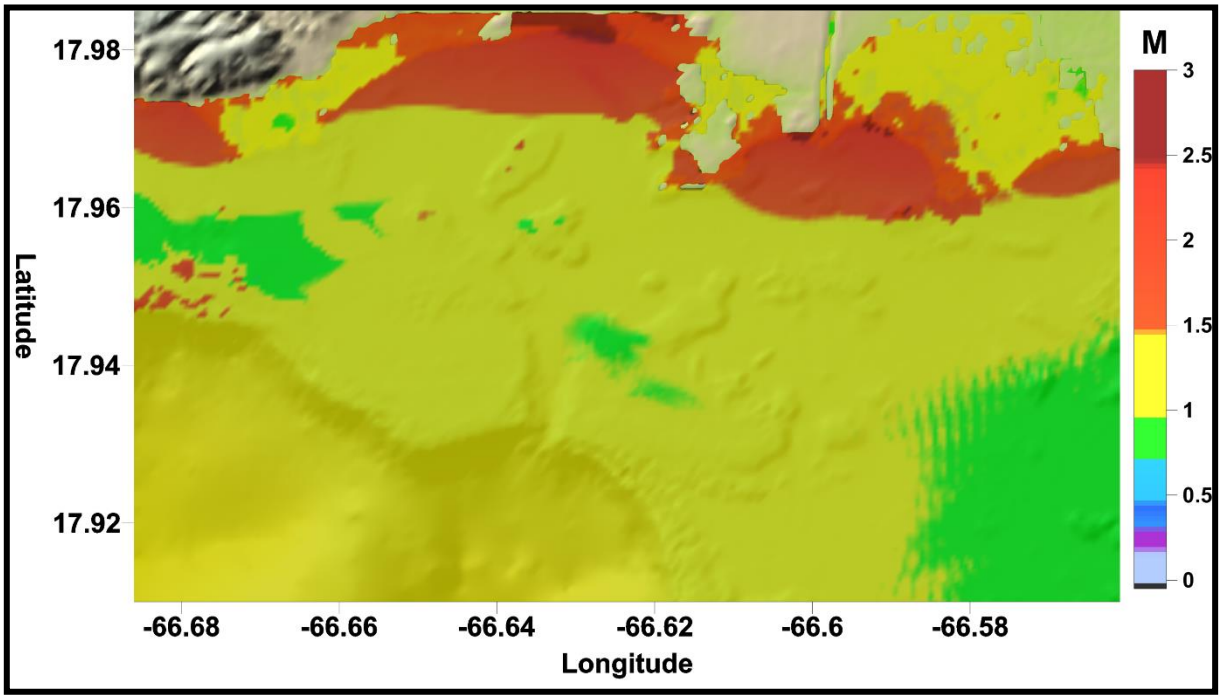


Figure III-18. ATFM maximum amplitude map for the Ponce, Puerto Rico region based on the SW Caribbean scenario. The model is computed with a 2 arc-second grid increment.

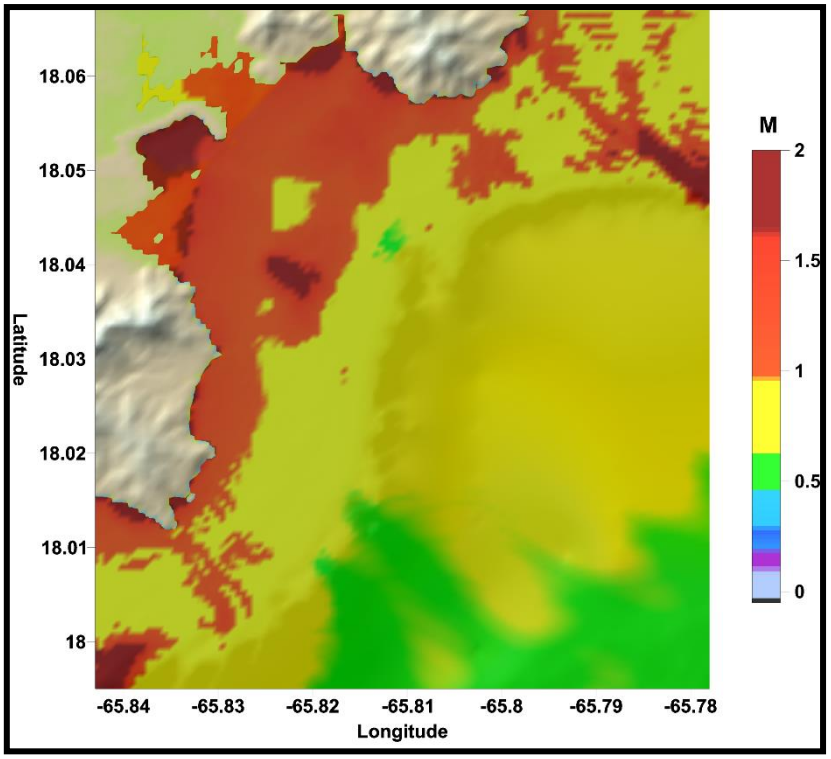


Figure III-19. ATFM maximum amplitude map for the Yabucoa, Puerto Rico region based on the SW Caribbean scenario. The model is computed with a 2 arc-second grid increment.

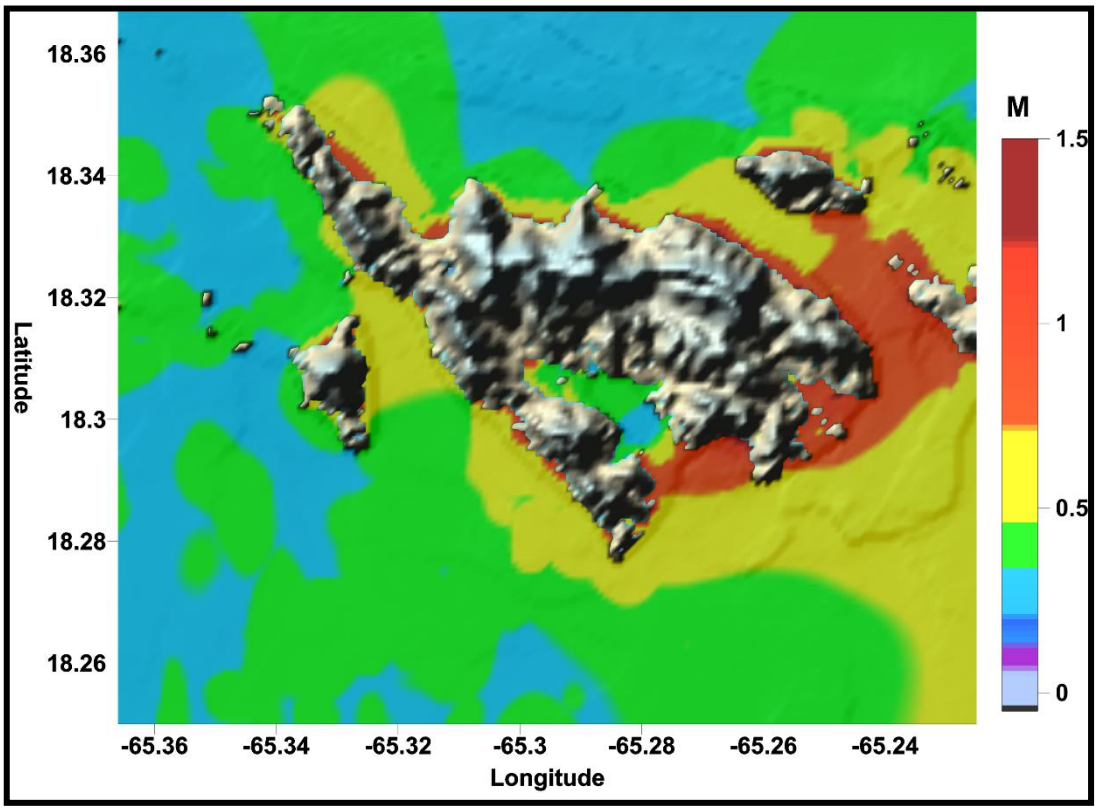


Figure III-20. ATFM maximum amplitude map for the Culebra, Puerto Rico region based on the SW Caribbean scenario. The model is computed with a 3 arc-second grid increment.

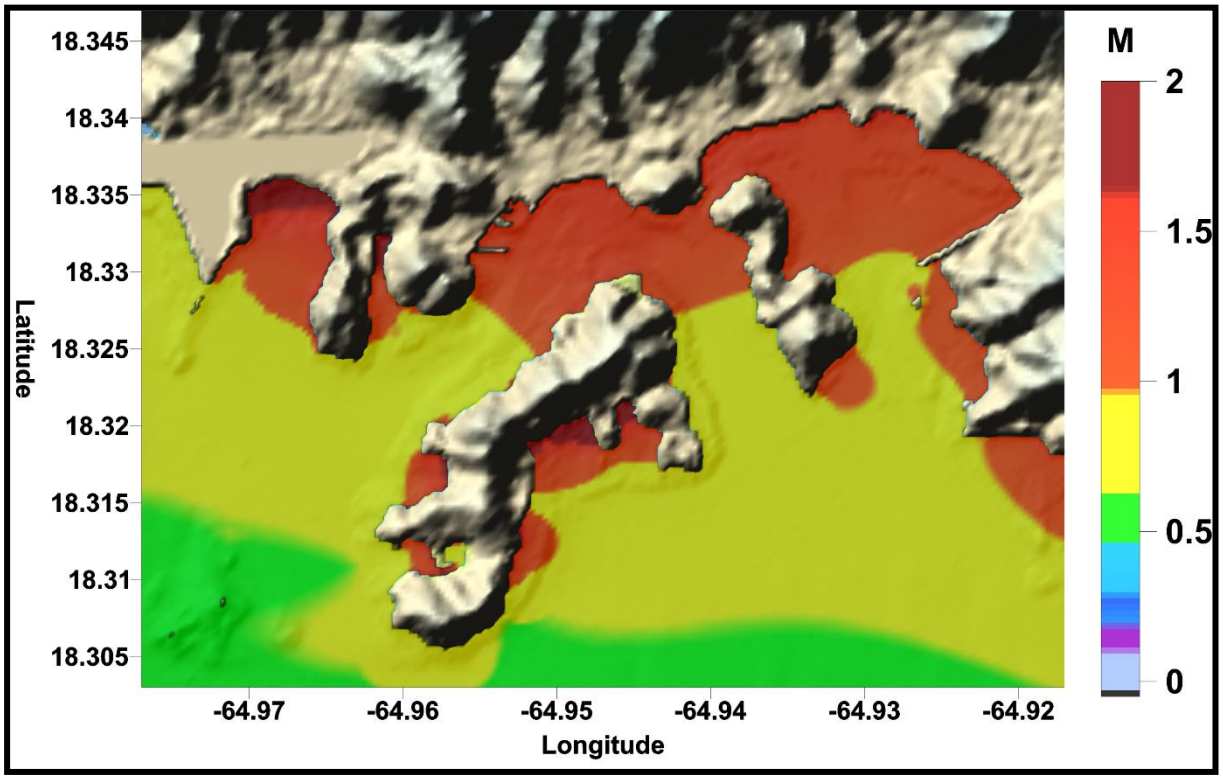


Figure III-21. ATFM maximum amplitude map for the Charlotte Amalie, USVI region based on the SW Caribbean scenario. The model is computed with a 1 arc-second grid increment.

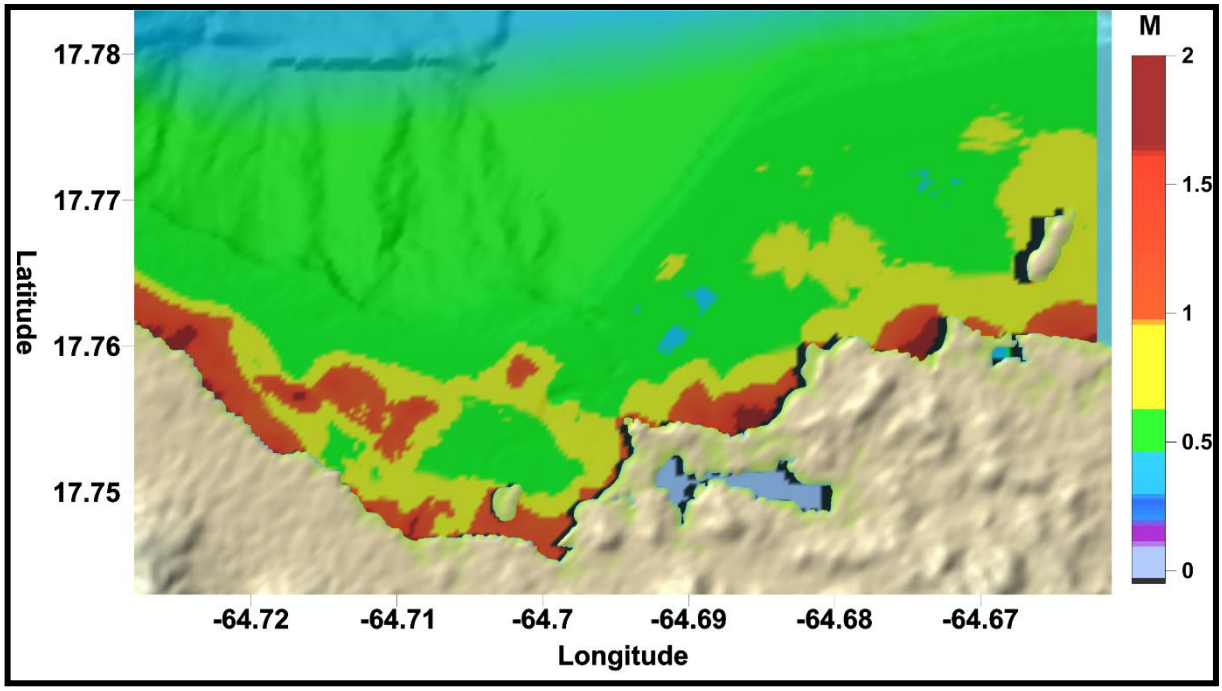


Figure III-22. ATFM maximum amplitude map for the Christiansted, USVI region based on the SW Caribbean scenario. The model is computed with a 1 arc-second grid increment.

Figure III–23 shows the maximum tsunami amplitude along the northern Gulf Coast. This ATFM model is computed with a grid increment of 60 arc-seconds. Note that the amplitudes are very low in this region.

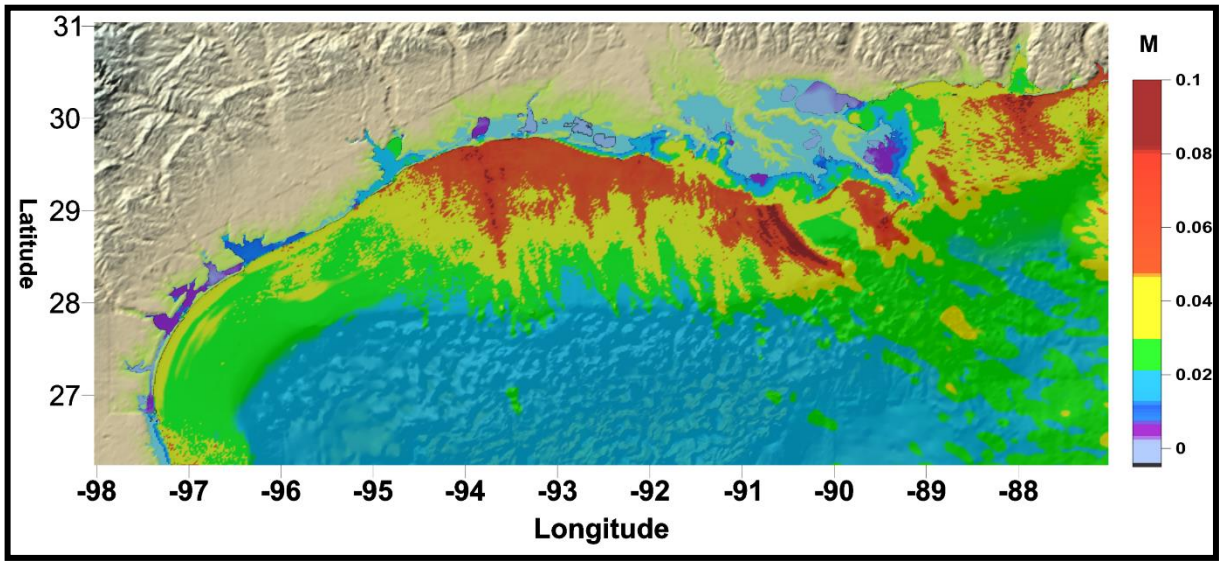


Figure III-23. ATFM maximum amplitude map for the northern Gulf of Mexico based on the SW Caribbean scenario. The model is computed with a 60 arc-second grid increment.

Forecast maximum wave heights above sea level are provided in the Tables III–1 and III–2. Note that the highest tsunami run-up elevation on the shore could be double that of the model outputs since model outputs are determined at the coast.

LOCATION	TSUNAMI TRAVEL TIME TO LISTED LOCATION (HOURS)	MAXIMUM TSUNAMI AMPLITUDE (M)
Ponce, PR	2.28	1.00
Mayaguez, PR	2.38	0.93
Aguadilla, PR	2.3	1.07
Magueyes Is., PR	2.3	0.94
Roadtown, BVI	2.72	0.76
San Juan TG, PR	2.67	0.14
San Juan (outer coast), PR	2.57	0.43
Fajardo, PR	3.02	0.66
Yabucoa, PR	2.33	1.11
Penuelas, PR	2.27	1.29
Arecibo, PR	2.53	0.8
Vieques Is. (north), PR	2.9	0.78
Vieques Is. (south), PR	2.33	1.11
Culebra, PR	2.67	0.61
Charlotte-Amalie, USVI	2.67	1.18
Limetree Bay, USVI	2.37	0.7
Lameshur Bay, USVI	2.57	1.32
Christiansted, USVI	2.42	0.64
Virgin Gorda, BVI	2.67	1.07
Guantanamo Bay	1.92	1.02
Mona Island	2.13	1.72
Oranjestad	1.8	0.47
Montego Bay	1.93	0.85
Kingston	1.38	1.66
Jeremie	1.77	0.6
Cap Haiten	2.33	0.24
Port-Au-Prince	2.57	0.65
Puerto Plata	2.53	0.16
Santo Domingo	1.92	4.75
Cabo Engano	2.18	0.64
Tortola	2.82	0.4
the Valley	2.95	0.53
Baie Blanche	2.73	0.34
Simpson Baai	2.77	0.39
Basseterra	2.73	0.68
Palmetto Point	3.25	0.43
Saint Johns	3.07	0.51
Plymouth	2.73	0.37
Basse-Terra	2.93	0.51
Roseau	2.78	0.28
Fort-de-France	2.92	0.29
Castries	3.0	0.42
Bridgetown	3.38	0.11
Kingstown	2.92	0.76
Saint Georges	2.78	0.31
Pirates Bay	3.45	0.11
Port-of-Spain	3.58	0.28
Onima	1.8	0.33
Willemstad	1.88	0.31
Cozumel	3.03	0.25

LOCATION	TSUNAMI TRAVEL TIME TO LISTED LOCATION (HOURS)	MAXIMUM TSUNAMI AMPLITUDE (M)
Belize City	2.87	0.12
Puerto Barrios	3.12	0.16
Puerto Cortes	2.98	0.15
Trujillo	2.58	0.18
Puerto Cabezas	5.68	0.12
Punta Gorda	1.2	0.7
Puerto Limon	0.7	0.63
Bocas Del Toro	0.37	0.57
Colon	0.12	2.27
Puerto Carreto	0	3.1
Punta Caribana	0.37	2.55
Cartegena	0.4	2.84
Barranquilla	0.63	2.44
Santa Marta	0.8	3.75
Riohacha	1.25	2.72
Golfo Venezuela	2.73	0.83
Punto Fijo	2.23	0.85
Maiquetia	2.67	0.49
Cumana	3.08	0.28
Porlamar	3.02	0.39

Table III-1. Maximum Amplitude and travel time forecasts based on ATFM model. Amplitude is the highest rise above normal sea level at the coast. Forecasts in Puerto Rico and US Virgin Islands are based on grids with a maximum increment of 6 arc-seconds. Elsewhere the forecasts are on grids with an grid increment of 30 arc-seconds.

Alaska (0)	Caribbean (0)	East/Gulf (0)	Hawaii (0)	West Coast (0)	Oceania (0)	Experimental (0)

Model	Region	Arrival Time (UTC) ▲	C Grid Max (cm)	C Grid Min (cm)	Gauge Max (cm)	Gauge Min (cm)	Flooding	Flooded Area (km^2)	Model Ended (UTC)
Ponce, PR	Caribbean	15:25 2014-09-05	140.2	-144.7	88.8	-88.5	Yes	0.973	14:05 2014-09-05
Christiansted, VI	Caribbean	15:30 2014-09-05	18.8	-10.1	14.7	-6.8	No	0.000	13:54 2014-09-05
Mayaguez, PR	Caribbean	15:32 2014-09-05	77.2	-59.7	36.1	-25.3	Yes	0.221	13:46 2014-09-05
Arecibo, PR	Caribbean	15:40 2014-09-05	19.4	-18.9	16.3	-17.6	No	0.000	13:56 2014-09-05
Charlotte Amalie...	Caribbean	15:50 2014-09-05	107.2	-126.3	77.7	-70.0	No	0.011	13:42 2014-09-05
San Juan, PR	Caribbean	15:50 2014-09-05	36.8	-35.8	4.7	-4.0	Yes	0.044	14:15 2014-09-05
Fajardo, PR	Caribbean	16:11 2014-09-05	57.7	-53.9	37.0	-23.9	Yes	0.417	13:56 2014-09-05

Table III-2. Maximum Amplitude and travel time forecasts based on SIFT model for Puerto Rico and US Virgin Island sites.

ANNEX IV

EARTHQUAKE IMPACT SCENARIO

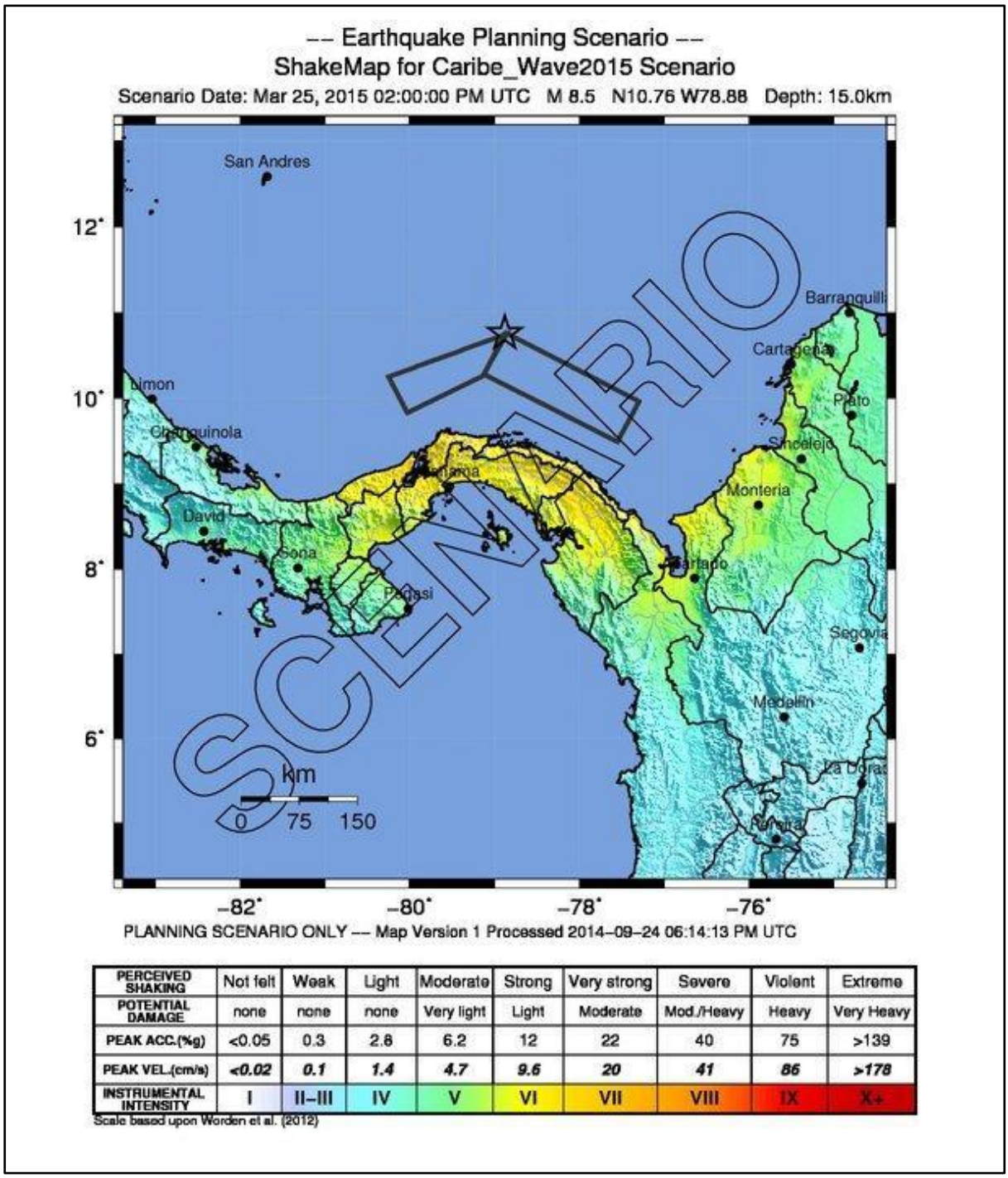
When planning for a tsunami it is important to also take into consideration the potential earthquake impact in areas close to the source, as these impacts can affect tsunami response and increase the tsunami impact by hindering evacuation and contributing debris to be carried by the waves. For earthquake impact, the United States Geological Survey has developed ShakeMap and the Prompt Assessment of Global Earthquakes for Response (PAGER). The main purpose of ShakeMap is to display the levels of ground shaking produced by the earthquake. The ground shaking events levels in the region are studied depending on the magnitude of the earthquake, distance from the earthquake source, rock and soil behaviour in the region, and propagation of the seismic waves through the Earth's crust. Based on the output of ShakeMap, PAGER estimates the population exposed to earthquake shaking, fatalities and economic losses.

Earthquake Event

The input information for ShakeMap and PAGER are the four corners of the two boxes of the fault plane and the depths at each of these four corners. For the case of Caribe Wave/Lantex 15, the fault plane is divided in two segments: (1) the Southeast segment, which is 182 Km long and 60 Km wide; and (2) the Southwest segment, which is 120 Km long and 40 Km wide. The depth of the earthquake hypocentre is 15 Km at the top corner of this two boxes (Figure IV–1).

According to ShakeMap (Figure IV–1), intensities of up to VIII on the Mercalli Modified Scale could be observed. The strongest ground shaking is predicted for Panama and Colombia, while to the west on Costa Rica, the ground shaking is moderate.

According to PAGER, (Figure IV–2), an earthquake such as that used for Caribe Wave/Lantex 15 would produce an orange alert for Panama and Colombia. This means that significant casualties and damage from the earthquake alone are likely. According to the PAGER results, the countries that are going to receive the greatest impact from the earthquake are Panama and Colombia. In terms of population exposed to earthquake shaking, it is estimated that almost 525,000 people will be exposed to Modified Mercalli intensities up to VII in Panama and Colombia, and IV–V in Costa Rica. Figures IV–1 and IV–2 show ShakeMap and PAGER outputs for the Caribe Wave/Lantex 15 earthquake scenario.



PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	none	none	none	Very light	Light	Moderate	Mod./Heavy	Heavy	Very Heavy
PEAK ACC.(%g)	<0.05	0.3	2.8	6.2	12	22	40	75	>139
PEAK VEL.(cm/s)	*<0.02*	*0.1*	*1.4*	*4.7*	*9.6*	*20*	*41*	*86*	*>178*
INSTRUMENTAL INTENSITY	I	II–III	IV	V	VI	VII	VIII	IX	X+

Scale based upon Worden et al. (2012)

Figure IV-1. Shake map for the Caribe Wave/Lantex 15 scenario

USGS science for a changing world

Earthquake Shaking: Orange Alert

USAID FROM THE AMERICAN PEOPLE

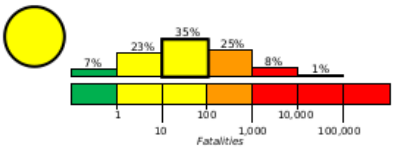
M 8.5, Caribe Wave

Origin Time: Wed 2015-03-25 14:00:00 UTC (09:00:00 local)
Location: 10.76 °N 78.88 °W Depth: 15 km
FOR TSUNAMI INFORMATION, SEE: tsunami.gov

PAGER Version 1

Created: -15707027 seconds after earthquake

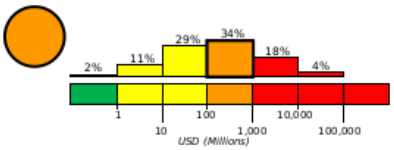
Estimated Fatalities



Orange alert level for economic losses. Significant damage is likely and the disaster is potentially widespread. Estimated economic losses are 0-1% GDP of Panama. Past events with this alert level have required a regional or national level response.

Yellow alert level for shaking-related fatalities. Some casualties are possible.

Estimated Economic Losses



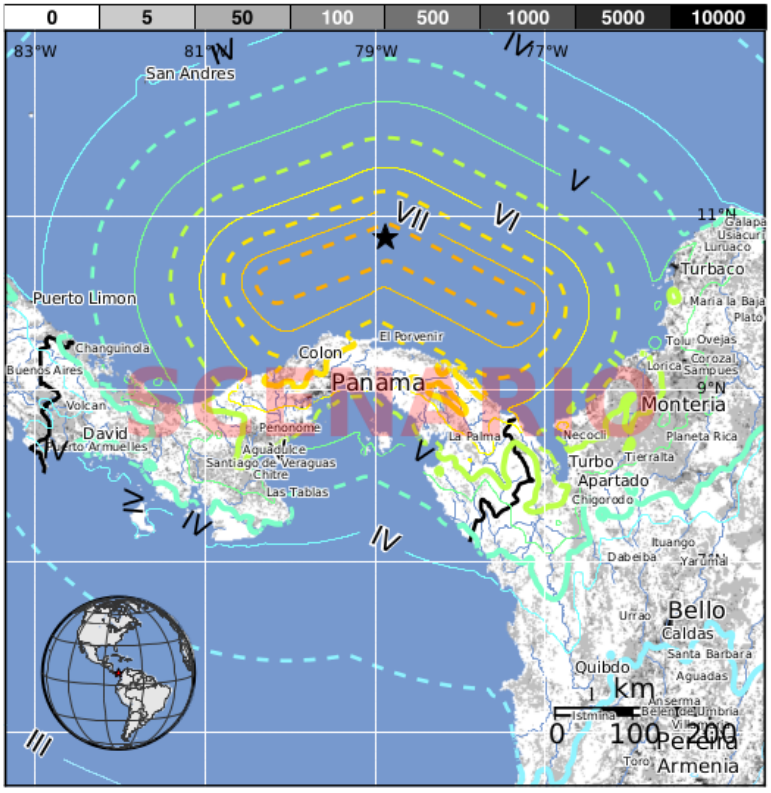
Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k = x1000)		- -*	4,874k*	6,895k*	6,798k	3,256k	282k	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		I	II-III	IV	V	VI	VII	VIII	IX	X+
PERCEIVED SHAKING		Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	Resistant Structures	none	none	none	V. Light	Light	Moderate	Moderate/Heavy	Heavy	V. Heavy
	Vulnerable Structures	none	none	none	Light	Moderate	Moderate/Heavy	Heavy	V. Heavy	V. Heavy

*Estimated exposure only includes population within the map area

Population Exposure

population per 1 sq. km from Landscan



Structures:
Overall, the population in this region resides in structures that are vulnerable to earthquake shaking, though some resistant structures exist. The predominant vulnerable building types are unreinforced brick masonry and mud wall construction.

Historical Earthquakes (with MMI levels):

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
1985-04-20	254	6.3	VII(7k)	0
1976-07-11	386	7.3	IX(874)	0
1974-07-13	362	7.3	IX(2k)	11

Selected City Exposure

from GeoNames.org

MMI	City	Population
VII	**Colon**	**77k**
VII	Ustupo	3k
VII	Carti Suitupo	1k
VII	San Ignacio de T.	1k
VII	Cativa	30k
VII	Margarita	3k
VI	**Panama**	**408k**
V	Barranquilla	1,380k
III	Medellin	2,000k
III	**Pereira**	**440k**
III	Ibague	422k

bold cities appear on map (k = x1000)

PAGER content is automatically generated, and only considers losses due to structural damage. Limitations of input data, shaking estimates, and loss models may add uncertainty.

http://earthquake.usgs.gov/pager

Event ID: usCaribe_Wave2015_se

Figure IV-2. USGS Pager for Caribe Wave/Lantex 15 earthquake scenario

ANNEX V

TWC DUMMY (START OF EXERCISE) MESSAGES

US NTWC

WEXX20 PAAQ 251405
TSUAT1

TEST...TSUNAMI EXERCISE MESSAGE NUMBER 1...TEST
NWS NATIONAL TSUNAMI WARNING CENTER PALMER AK
1005 AM AST WED MAR 25 2015

...CARIBEWAVE 15 TSUNAMI EXERCISE MESSAGE. REFER TO NTWC MESSAGE 1 IN THE EXERCISE HANDBOOK. THIS IS AN EXERCISE ONLY...

THIS MESSAGE IS BEING USED TO START THE CARIBEWAVE 15 CARIBBEAN TSUNAMI EXERCISE. THIS WILL BE THE ONLY EXERCISE MESSAGE BROADCAST FROM THE NATIONAL TSUNAMI WARNING CENTER EXCLUDING SPECIAL EMAIL MESSAGES DISCUSSED IN THE HANDBOOK. THE HANDBOOK IS AVAILABLE AT THE WEB SITE NTWC.ARH.NOAA.GOV. THE EXERCISE PURPOSE IS TO PROVIDE EMERGENCY MANAGEMENT A REALISTIC SCENARIO TO TEST TSUNAMI RESPONSE PLANS.

THIS IS ONLY AN EXERCISE.

$$

WEXX30 PAAQ 251405
TSUATE

TEST...PUBLIC TSUNAMI EXERCISE MESSAGE NUMBER 1...TEST
NWS NATIONAL TSUNAMI WARNING CENTER PALMER AK
1005 AM AST WED MAR 25 2015

...CARIBEWAVE 15 TSUNAMI EXERCISE MESSAGE. REFER TO NTWC MESSAGE 1 IN THE EXERCISE HANDBOOK. THIS IS AN EXERCISE ONLY...

THIS MESSAGE IS BEING USED TO START THE CARIBEWAVE 15 CARIBBEAN TSUNAMI EXERCISE. THIS WILL BE THE ONLY EXERCISE MESSAGE BROADCAST FROM THE NATIONAL TSUNAMI WARNING CENTER EXCLUDING SPECIAL EMAIL MESSAGES DISCUSSED IN THE HANDBOOK. THE HANDBOOK IS AVAILABLE AT THE WEB SITE NTWC.ARH.NOAA.GOV. THE EXERCISE PURPOSE IS TO PROVIDE EMERGENCY MANAGEMENT A REALISTIC SCENARIO TO TEST TSUNAMI RESPONSE PLANS.

THIS IS ONLY AN EXERCISE.

$$

WEXX40 PAAQ 251405
TSUSPN

TEST...MENSAJE DE EJERCICIO DE TSUNAMI NUMERO 1...TEST
NWS CENTRO NACIONAL DE ALERTA DE TSUNAMI PALMER AK
1005 AM AST WED MAR 25 2015

...MENSAJE PARA DAR COMIENZO AL EJERCICIO DE TSUNAMI CARIBEWAVE 15. REFERIRSE AL MENSAJE 1 DE NTWC EN EL MANUAL PARA EL EJERCICIO. ESTO ES UN EJERCICIO SOLAMENTE...

ESTE MENSAJE ESTA SIENDO USADO PARA DAR COMIENZO AL EJERCICIO DE TSUNAMI CARIBE WAVE 15. ESTE SERA EL UNICO MENSAJE QUE SERA EMITIDO DESDE EL CENTRO NACIONAL DE ALERTA DE TSUNAMI EXCLUYENDO LOS MENSAJES ESPECIALES DE CORREO ELECTRONICO DISCUTIDOS EN EL MANUAL. EL MANUAL ESTA DISPONIBLE EN LA PAGINA NTWC.ARH.NOAA.GOV. EL PROPOSITO DEL EJERCICIO ES PROVEER A LAS AUTORIDADES DE MANEJO DE EMERGENCIA UN ESCENARIO REALISTICO PARA PROBAR LOS PLANES DE RESPUESTA A TSUNAMIS.

ESTE ES SOLO UN EJERCICIO.

$$

PTWC

WECA41 PHEB 251405
TSUCAX

TEST...TSUNAMI EXERCISE MESSAGE NUMBER 1...TEST
NWS PACIFIC TSUNAMI WARNING CENTER/NOAA/NWS
ISSUED AT 1405Z 25 MAR 2015

...CARIBEWAVE 15 TSUNAMI EXERCISE MESSAGE. REFER TO PTWC MESSAGE 1 IN THE EXERCISE HANDBOOK. THIS IS AN EXERCISE ONLY...

THIS MESSAGE IS BEING USED TO START THE CARIBEWAVE 15 CARIBBEAN TSUNAMI EXERCISE. THIS WILL BE THE ONLY EXERCISE MESSAGE BROADCAST FROM THE PACIFIC TSUNAMI WARNING CENTER EXCLUDING SPECIAL EMAIL MESSAGES DISCUSSED IN THE HANDBOOK. THE HANDBOOK IS AVAILABLE AT THE WEB SITE NTWC.ARH.NOAA.GOV. THE EXERCISE PURPOSE IS TO PROVIDE EMERGENCY MANAGEMENT A REALISTIC SCENARIO TO TEST TSUNAMI RESPONSE PLANS.

THIS IS ONLY AN EXERCISE.

$$

ANNEX VI

TWC EXERCISE MESSAGES

The following messages created for the Caribe Wave/Lantex 15 tsunami exercise are representative of the official standard products issued by the US NTWC and PTWC during a large magnitude 8.5 earthquake and tsunami originating just north of Panama. During a real event, the TWCs would also issue graphical and html-based products to their web sites and via RSS. The alerts would persist longer during a real event than is depicted in this exercise. NTWC also issues a product under the header WEXX20 PAAQ/TSUAT1 which is designed to drive automated alert systems.

US NTWC Message #1

WEXX30 PAAQ 251405
TSUATE

BULLETIN
PUBLIC TSUNAMI MESSAGE NUMBER 1
NWS NATIONAL TSUNAMI WARNING CENTER PALMER AK
1005 AM AST WED MAR 25 2015

...A TSUNAMI ADVISORY IS NOW IN EFFECT...

WARNINGS/ADVISORIES/WATCHES

TSUNAMI ADVISORY IN EFFECT FOR...

* COASTAL AREAS OF PUERTO RICO - THE U.S. VIRGIN ISLANDS AND THE BRITISH VIRGIN ISLANDS.

FOR OTHER US AND CANADIAN COASTS IN THE ATLANTIC AND GULF OF MEXICO - THE LEVEL OF TSUNAMI DANGER IS BEING EVALUATED. FURTHER INFORMATION WILL BE PROVIDED IN SUPPLEMENTARY MESSAGES.

PRELIMINARY EARTHQUAKE PARAMETERS
---

* MAGNITUDE	8.0
* ORIGIN TIME	1000 EDT MAR 25 2015
	1000 AST MAR 25 2015
	0900 CDT MAR 25 2015
	1400 UTC MAR 25 2015
* COORDINATES	10.3 NORTH 78.8 WEST
* DEPTH	9 MILES
* LOCATION	NORTH OF PANAMA

IMPACTS FOR TSUNAMI ADVISORY AREAS
---

* A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS
  TO PERSONS IN OR VERY NEAR THE WATER IS EXPECTED.

* CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR MANY HOURS AFTER THE TSUNAMI ARRIVAL.

* THE FIRST WAVE MAY NOT BE THE LARGEST.

RECOMMENDED ACTIONS
---

* IF YOU ARE IN AN ADVISORY AREA - MOVE OFF THE BEACH AND OUT OF HARBORS AND MARINAS. WIDESPREAD INUNDATION OF LAND IS NOT EXPECTED FOR ADVISORY AREAS.

* BE ALERT TO INSTRUCTIONS FROM YOUR LOCAL EMERGENCY OFFICIALS.

* DO NOT GO TO THE COAST TO OBSERVE THE TSUNAMI.

* DO NOT RETURN TO THE COAST UNTIL LOCAL EMERGENCY OFFICIALS INDICATE IT IS SAFE TO DO SO.

FORECASTS AND/OR OBSERVATIONS OF TSUNAMI ACTIVITY

SITE	FORECAST START OF OF TSUNAMI
* PUERTO RICO	
AGUADILLA	1217 AST MAR 25
MAYAGUEZ	1220 AST MAR 25
SAN JUAN TG	1234 AST MAR 25
CULEBRA	1242 AST MAR 25
* US VIRGIN ISLANDS	
CHRISTIANSTED	1224 AST MAR 25
LAMESHUR BAY	1235 AST MAR 25
CHARLOTTE AMALIE	1310 AST MAR 25
* BRITISH VIRGIN IS.	
ROADTOWN	1237 AST MAR 25

NEXT UPDATE AND ADDITIONAL INFORMATION
---

* THIS MESSAGE WILL BE UPDATED WITHIN 60 MINUTES.

* REFER TO THE INTERNET SITE NTWC.ARH.NOAA.GOV FOR MORE INFORMATION.

* CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO... U.S. VIRGIN

ISLANDS AND BRITISH VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES AT PTWC.WEATHER.GOV.

$$

US NTWC Message #2

WEXX30 PAAQ 251500
TSUATE

BULLETIN
PUBLIC TSUNAMI MESSAGE NUMBER 2
NWS NATIONAL TSUNAMI WARNING CENTER PALMER AK
1100 AM AST WED MAR 25 2015

UPDATES

THIS MESSAGE CONTAINS A REVISED MAGNITUDE.
THIS MESSAGE CONTAINS NEW OBSERVATIONS.
THIS MESSAGE MODIFIES THE ALERT AREAS.
THE ALERT LEVEL FOR PUERTO RICO... US VIRGIN ISLANDS AND BRITISH VIRGIN ISLANDS HAS BEEN UPGRADED FROM ADVISORY TO WARNING.
TZHE UPGRADE IS BASED ON FORECAST MODEL RESULTS.
TSUNAMI HEIGHT FORECAST FOR PR/VI RANGE UP TO 6 FT.

...A TSUNAMI WARNING IS NOW IN EFFECT...

WARNINGS/ADVISORIES/WATCHES - UPDATED

TSUNAMI WARNING IN EFFECT FOR...

* COASTAL AREAS OF PUERTO RICO - THE U.S. VIRGIN ISLANDS AND THE BRITISH VIRGIN ISLANDS.

FOR OTHER US AND CANADIAN COASTS IN THE ATLANTIC
AND GULF OF MEXICO - THERE IS NO TSUNAMI THREAT.

IMPACTS FOR TSUNAMI WARNING AREAS
---
* WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS ARE POSSIBLE AND MAY CONTINUE FOR MANY HOURS AFTER TSUNAMI ARRIVAL.

* THE FIRST WAVE MAY NOT BE THE LARGEST.

RECOMMENDED ACTIONS - UPDATED
---
* IF YOU ARE IN A WARNING AREA - MOVE INLAND TO HIGHER GROUND.

* BE ALERT TO INSTRUCTIONS FROM YOUR LOCAL EMERGENCY OFFICIALS.

* DO NOT GO TO THE COAST TO OBSERVE THE TSUNAMI.

* DO NOT RETURN TO THE COAST UNTIL LOCAL EMERGENCY OFFICIALS INDICATE IT IS SAFE TO DO SO.

FORECASTS AND/OR OBSERVATIONS OF TSUNAMI ACTIVITY

SITE	FORECAST START OF OF TSUNAMI
* PUERTO RICO	
AGUADILLA	1212 AST MAR 25
MAYAGUEZ	1215 AST MAR 25
SAN JUAN TG	1229 AST MAR 25
CULEBRA	1237 AST MAR 25
* US VIRGIN ISLANDS	
CHRISTIANSTED	1219 AST MAR 25
LAMESHUR BAY	1230 AST MAR 25
CHARLOTTE AMALIE	1305 AST MAR 25
* BRITISH VIRGIN IS.	
ROADTOWN	1232 AST MAR 25

ADDITIONAL OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

SITE	TIME OF MEASUREMENT	OBSERVED MAX TSUNAMI HEIGHT
EL PORVENIR PANAMA	1455 UTC 03-25	07.8FT

HEIGHT - OBSERVED MAX TSUNAMI HEIGHT IS THE WATER LEVEL ABOVE THE TIDE LEVEL AT THE TIME OF MEASUREMENT.

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE	8.5
* ORIGIN TIME	1000 EDT MAR 25 2015
	1000 AST MAR 25 2015
	0900 CDT MAR 25 2015
	1400 UTC MAR 25 2015
* COORDINATES	10.3 NORTH 78.8 WEST
* DEPTH	9 MILES
* LOCATION	NORTH OF PANAMA

NEXT UPDATE AND ADDITIONAL INFORMATION

---

* THIS MESSAGE WILL BE UPDATED WITHIN 60 MINUTES.

* REFER TO THE INTERNET SITE NTWC.ARH.NOAA.GOV FOR MORE INFORMATION.

* CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO... U.S. VIRGIN ISLANDS AND BRITISH VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES AT PTWC.WEATHER.GOV.

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US NTWC Message #3

WEXX30 PAAQ 251602
TSUATE

BULLETIN
PUBLIC TSUNAMI MESSAGE NUMBER 3
NWS NATIONAL TSUNAMI WARNING CENTER PALMER AK
1202 PM AST WED MAR 25 2015

UPDATES

THIS MESSAGE CONTAINS NEW OBSERVATIONS.
THIS MESSAGE CONTAINS REVISED FORECAST INFORMATION.

...THE TSUNAMI WARNING REMAINS IN EFFECT...

WARNINGS/ADVISORIES/WATCHES

TSUNAMI WARNING IN EFFECT FOR...

* COASTAL AREAS OF PUERTO RICO - THE U.S. VIRGIN ISLANDS AND THE BRITISH VIRGIN ISLANDS.

FOR OTHER US AND CANADIAN COASTS IN THE ATLANTIC
AND GULF OF MEXICO - THERE IS NO TSUNAMI THREAT.

IMPACTS FOR TSUNAMI WARNING AREAS
---
* WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS ARE POSSIBLE AND MAY CONTINUE FOR MANY HOURS AFTER TSUNAMI ARRIVAL.

* THE FIRST WAVE MAY NOT BE THE LARGEST.

RECOMMENDED ACTIONS

---

* IF YOU ARE IN A WARNING AREA - MOVE INLAND TO HIGHER GROUND.

* BE ALERT TO INSTRUCTIONS FROM YOUR LOCAL EMERGENCY OFFICIALS.

* DO NOT GO TO THE COAST TO OBSERVE THE TSUNAMI.

* DO NOT RETURN TO THE COAST UNTIL LOCAL EMERGENCY OFFICIALS INDICATE IT IS SAFE TO DO SO.

FORECASTS AND/OR OBSERVATIONS OF TSUNAMI ACTIVITY

SITE	FORECAST START OF OF TSUNAMI	FORECAST TSUNAMI DURATION	FORECAST MAX TSUNAMI HEIGHT
* PUERTO RICO			
AGUADILLA	1212 AST MAR 25	30 HRS	2.6- 4.8FT
MAYAGUEZ	1215 AST MAR 25	30 HRS	2.4- 4.4FT
SAN JUAN TG	1229 AST MAR 25		LESS THAN 1FT
CULEBRA	1237 AST MAR 25		9 HRS 1.1- 2.1FT
* US VIRGIN ISLANDS			
CHRISTIANSTED	1219 AST MAR 25	20 HRS	1.5- 2.9FT
LAMESHUR BAY	1230 AST MAR 25	36 HRS	3.2- 5.8FT
CHARLOTTE AMALIE	1305 AST MAR 25	30 HRS	2.7- 5.1FT
* BRITISH VIRGIN IS.			
ROADTOWN	1232 AST MAR 25	24 HRS	1.8- 3.4FT

FORECAST MAX TSUNAMI HEIGHT IS THE HIGHEST EXPECTED WATER LEVEL ABOVE THE TIDE.

FORECAST TSUNAMI DURATION IS THE APPROXIMATE LENGTH OF TIME WHICH THE TSUNAMI MAY PRODUCE DANGEROUS CURRENTS AND WAVE ACTIVITY.

ADDITIONAL OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

SITE	TIME OF MEASUREMENT	OBSERVED MAX TSUNAMI HEIGHT
EL PORVENIR PANAMA	1455 UTC 03-25	07.8FT
SANTA MARTA COLOMBIA	1547 UTC 03-25	04.8FT
LIMON COSTA RICA	1544 UTC 03-25	01.9FT
SAN ANDRES COLOMBIA	1555 UTC 03-25	03.3FT

HEIGHT - OBSERVED MAX TSUNAMI HEIGHT IS THE WATER LEVEL ABOVE THE TIDE LEVEL AT THE TIME OF MEASUREMENT.

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE 8.5

* ORIGIN TIME	1000 EDT MAR 25 2015
	1000 AST MAR 25 2015
	0900 CDT MAR 25 2015
	1400 UTC MAR 25 2015
* COORDINATES	10.3 NORTH 78.8 WEST
* DEPTH	9 MILES
* LOCATION	NORTH OF PANAMA

NEXT UPDATE AND ADDITIONAL INFORMATION
---

* THIS MESSAGE WILL BE UPDATED WITHIN 60 MINUTES.

* REFER TO THE INTERNET SITE NTWC.ARH.NOAA.GOV FOR MORE INFORMATION.

* CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO... U.S. VIRGIN ISLANDS AND BRITISH VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES AT PTWC.WEATHER.GOV.

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US NTWC Message #4

WEXX30 PAAQ 251701
TSUATE

BULLETIN
PUBLIC TSUNAMI MESSAGE NUMBER 4
NWS NATIONAL TSUNAMI WARNING CENTER PALMER AK
101 PM AST WED MAR 25 2015

UPDATES

THIS MESSAGE CONTAINS NEW OBSERVATIONS.

...THE TSUNAMI WARNING REMAINS IN EFFECT...

WARNINGS/ADVISORIES/WATCHES

TSUNAMI WARNING IN EFFECT FOR...

* COASTAL AREAS OF PUERTO RICO - THE U.S. VIRGIN ISLANDS AND THE BRITISH VIRGIN ISLANDS.

FOR OTHER US AND CANADIAN COASTS IN THE ATLANTIC
AND GULF OF MEXICO - THERE IS NO TSUNAMI THREAT.

IMPACTS FOR TSUNAMI WARNING AREAS

---

* WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS ARE POSSIBLE AND MAY CONTINUE FOR MANY HOURS AFTER TSUNAMI ARRIVAL.

* THE FIRST WAVE MAY NOT BE THE LARGEST.

RECOMMENDED ACTIONS

---

* IF YOU ARE IN A WARNING AREA - MOVE INLAND TO HIGHER GROUND.

* BE ALERT TO INSTRUCTIONS FROM YOUR LOCAL EMERGENCY OFFICIALS.

* DO NOT GO TO THE COAST TO OBSERVE THE TSUNAMI.

* DO NOT RETURN TO THE COAST UNTIL LOCAL EMERGENCY OFFICIALS INDICATE IT IS SAFE TO DO SO.

FORECASTS AND/OR OBSERVATIONS OF TSUNAMI ACTIVITY

SITE	FORECAST START OF OF TSUNAMI	FORECAST TSUNAMI DURATION	FORECAST MAX TSUNAMI HEIGHT
* PUERTO RICO			
AGUADILLA	1212 AST MAR 25	30 HRS	2.6- 4.8FT
MAYAGUEZ	1215 AST MAR 25	30 HRS	2.4- 4.4FT
SAN JUAN TG	1229 AST MAR 25		LESS THAN 1FT
CULEBRA	1237 AST MAR 25	9 HRS	1.1- 2.1FT
* US VIRGIN ISLANDS			
CHRISTIANSTED	1219 AST MAR 25	20 HRS	1.5- 2.9FT
LAMESHUR BAY	1230 AST MAR 25	36 HRS	3.2- 5.8FT
CHARLOTTE AMALIE	1305 AST MAR 25	30 HRS	2.7- 5.1FT
* BRITISH VIRGIN IS.			
ROADTOWN	1232 AST MAR 25	24 HRS	1.8- 3.4FT

FORECAST MAX TSUNAMI HEIGHT IS THE HIGHEST EXPECTED WATER LEVEL ABOVE THE TIDE.

FORECAST TSUNAMI DURATION IS THE APPROXIMATE LENGTH OF TIME WHICH THE TSUNAMI MAY PRODUCE DANGEROUS CURRENTS AND WAVE ACTIVITY.

ADDITIONAL OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

SITE	TIME OF MEASUREMENT	OBSERVED MAX TSUNAMI HEIGHT
EL PORVENIR PANAMA	1505 UTC 03-25	07.8FT
SANTA MARTA COLOMBIA	1634 UTC 03-25	08.6FT
LIMON COSTA RICA	1544 UTC 03-25	01.9FT

SAN ANDRES COLOMBIA	1623 UTC 03-25	06.2FT
PORT AU PRINCE HAITI	1631 UTC 03-25	01.3FT
SANTO DOMINGO DR	1634 UTC 03-25	02.9FT
BULLEN BAY CURACAO	1645 UTC 03-25	01.7FT
MONA ISLAND PR	1636 UTC 03-25	02.8FT
MAYAGUEZ PR	1647 UTC 03-25	01.6FT
MAGUEYES ISLAND PR	1642 UTC 03-25	00.6FT
YABUCOA PR	1641 UTC 03-25	01.9FT
SAN JUAN PR	1640 UTC 03-25	00.4FT
LIME TREE BAY US VIRGI	1642 UTC 03-25	01.1FT
CHRISTIANSTED HARBOR U	1650 UTC 03-25	00.8FT
ESPERANZA VIEQUES ISLA	1652 UTC 03-25	01.2FT
FAJARDO PR	1653 UTC 03-25	01.1FT
CHARLOTTE AMALIE US VI	1655 UTC 03-25	01.9FT
LAMESHUR BAY ST JOHNS	1655 UTC 03-25	01.7FT

HEIGHT - OBSERVED MAX TSUNAMI HEIGHT IS THE WATER LEVEL ABOVE THE TIDE LEVEL AT THE TIME OF MEASUREMENT.

PRELIMINARY EARTHQUAKE PARAMETERS - UPDATED

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* MAGNITUDE	8.5
* ORIGIN TIME	1000 EDT MAR 25 2015 1000 AST MAR 25 2015 0900 CDT MAR 25 2015 1400 UTC MAR 25 2015
* COORDINATES	10.3 NORTH 78.8 WEST
* DEPTH	9 MILES
* LOCATION	NORTH OF PANAMA

NEXT UPDATE AND ADDITIONAL INFORMATION

---

* THIS MESSAGE WILL BE UPDATED WITHIN 60 MINUTES.

* REFER TO THE INTERNET SITE NTWC.ARH.NOAA.GOV FOR MORE INFORMATION.

* CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO... U.S. VIRGIN ISLANDS AND BRITISH VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES AT PTWC.WEATHER.GOV.

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US NTWC Message #5

WEXX30 PAAQ 251800
TSUATE

BULLETIN
PUBLIC TSUNAMI MESSAGE NUMBER 5
NWS NATIONAL TSUNAMI WARNING CENTER PALMER AK

200 PM AST WED MAR 25 2015

UPDATES

THIS MESSAGE CONTAINS NEW OBSERVATIONS.

...THE TSUNAMI WARNING REMAINS IN EFFECT...

WARNINGS/ADVISORIES/WATCHES

TSUNAMI WARNING IN EFFECT FOR...

* COASTAL AREAS OF PUERTO RICO - THE U.S. VIRGIN ISLANDS AND THE BRITISH VIRGIN ISLANDS.

FOR OTHER US AND CANADIAN COASTS IN THE ATLANTIC AND GULF OF MEXICO - THERE IS NO TSUNAMI THREAT.

IMPACTS FOR TSUNAMI WARNING AREAS
---
* WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS ARE POSSIBLE AND MAY CONTINUE FOR MANY HOURS AFTER TSUNAMI ARRIVAL.

* THE FIRST WAVE MAY NOT BE THE LARGEST.

RECOMMENDED ACTIONS
---
* IF YOU ARE IN A WARNING AREA - MOVE INLAND TO HIGHER GROUND.

* BE ALERT TO INSTRUCTIONS FROM YOUR LOCAL EMERGENCY OFFICIALS.

* DO NOT GO TO THE COAST TO OBSERVE THE TSUNAMI.

* DO NOT RETURN TO THE COAST UNTIL LOCAL EMERGENCY OFFICIALS INDICATE IT IS SAFE TO DO SO.

FORECASTS AND/OR OBSERVATIONS OF TSUNAMI ACTIVITY

SITE	FORECAST START OF OF TSUNAMI	FORECAST TSUNAMI DURATION	FORECAST MAX TSUNAMI HEIGHT
* US VIRGIN ISLANDS			
CHARLOTTE AMALIE	1305 AST MAR 25	30 HRS	2.7- 5.1FT

FORECAST MAX TSUNAMI HEIGHT IS THE HIGHEST EXPECTED WATER LEVEL ABOVE THE TIDE.

FORECAST TSUNAMI DURATION IS THE APPROXIMATE LENGTH OF TIME WHICH THE TSUNAMI MAY PRODUCE DANGEROUS CURRENTS AND WAVE ACTIVITY.

ADDITIONAL OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

SITE	TIME OF MEASUREMENT	OBSERVED MAX TSUNAMI HEIGHT
EL PORVENIR PANAMA	1505 UTC 03-25	07.8FT
SANTA MARTA COLOMBIA	1634 UTC 03-25	08.6FT
LIMON COSTA RICA	1544 UTC 03-25	01.9FT
SAN ANDRES COLOMBIA	1623 UTC 03-25	06.2FT
PORT AU PRINCE HAITI	1722 UTC 03-25	02.1FT
SANTO DOMINGO DR	1734 UTC 03-25	09.8FT
BULLEN BAY CURACAO	1715 UTC 03-25	02.4FT
MONA ISLAND PR	1745 UTC 03-25	05.6FT
MAYAGUEZ PR	1732 UTC 03-25	03.0FT
MAGUEYES ISLAND PR	1746 UTC 03-25	02.9FT
YABUCOA PR	1735 UTC 03-25	04.2FT
SAN JUAN PR	1721 UTC 03-25	00.4FT
LIME TREE BAY US VIRGI	1756 UTC 03-25	02.1FT
CHRISTIANSTED HARBOR U	1731 UTC 03-25	01.8FT
ESPERANZA VIEQUES ISLA	1751 UTC 03-25	03.5FT
FAJARDO PR	1755 UTC 03-25	01.7FT
CHARLOTTE AMALIE US VI	1748 UTC 03-25	03.6FT
LAMESHUR BAY ST JOHNS	1744 UTC 03-25	04.2FT
PUERTO PLATA DR	1744 UTC 09-06	00.4FT
BASSETERRE CG BASE ST.	1734 UTC 09-06	01.6FT
BARBUDA	1745 UTC 09-06	01.3FT
DESIRADE GUADELOUPE	1739 UTC 09-06	01.1FT
ROSEAU DOMINICA	1751 UTC 09-06	00.5FT
CALLIAQUA CG BASE ST.	1734 UTC 09-06	01.0FT
PRICKLY BAY GRENADA	1745 UTC 09-06	00.6FT

HEIGHT - OBSERVED MAX TSUNAMI HEIGHT IS THE WATER LEVEL ABOVE THE TIDE LEVEL AT THE TIME OF MEASUREMENT.

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE	8.5
* ORIGIN TIME	1000 EDT MAR 25 2015
	1000 AST MAR 25 2015
	0900 CDT MAR 25 2015
	1400 UTC MAR 25 2015
* COORDINATES	10.3 NORTH 78.8 WEST
* DEPTH	9 MILES
* LOCATION	NORTH OF PANAMA

NEXT UPDATE AND ADDITIONAL INFORMATION

* THIS MESSAGE WILL BE UPDATED WITHIN 60 MINUTES.

* REFER TO THE INTERNET SITE NTWC.ARH.NOAA.GOV FOR MORE INFORMATION.

* CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO... U.S. VIRGIN ISLANDS AND BRITISH VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES AT PTWC.WEATHER.GOV.

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US NTWC Message #6

WEXX30 PAAQ 251901
TSUATE

BULLETIN
PUBLIC TSUNAMI MESSAGE NUMBER 6
NWS NATIONAL TSUNAMI WARNING CENTER PALMER AK
301 PM AST WED MAR 25 2015

UPDATES

THIS MESSAGE CONTAINS NEW OBSERVATIONS.
THIS MESSAGE MODIFIES THE ALERT AREAS.

...A TSUNAMI ADVISORY IS NOW IN EFFECT...

WARNINGS/ADVISORIES/WATCHES - UPDATED

TSUNAMI ADVISORY IN EFFECT FOR...

* COASTAL AREAS OF PUERTO RICO - THE U.S. VIRGIN ISLANDS AND THE BRITISH VIRGIN ISLANDS.

FOR OTHER US AND CANADIAN COASTS IN THE ATLANTIC
AND GULF OF MEXICO - THERE IS NO TSUNAMI THREAT.

IMPACTS FOR TSUNAMI ADVISORY AREAS
---
* A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS
TO PERSONS IN OR VERY NEAR THE WATER IS EXPECTED.

* CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR MANY HOURS AFTER THE TSUNAMI ARRIVAL.

* THE FIRST WAVE MAY NOT BE THE LARGEST.

RECOMMENDED ACTIONS - UPDATED

* IF YOU ARE IN AN ADVISORY AREA - MOVE OFF THE BEACH AND OUT OF HARBORS AND MARINAS. WIDESPREAD INUNDATION OF LAND IS NOT EXPECTED FOR ADVISORY AREAS.

* BE ALERT TO INSTRUCTIONS FROM YOUR LOCAL EMERGENCY OFFICIALS.

* DO NOT GO TO THE COAST TO OBSERVE THE TSUNAMI.

* DO NOT RETURN TO THE COAST UNTIL LOCAL EMERGENCY OFFICIALS INDICATE IT IS SAFE TO DO SO.

ADDITIONAL OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

SITE	TIME OF MEASUREMENT	OBSERVED MAX TSUNAMI HEIGHT
EL PORVENIR PANAMA	1505 UTC 03-25	07.8FT
SANTA MARTA COLOMBIA	1634 UTC 03-25	08.6FT
LIMON COSTA RICA	1544 UTC 03-25	01.9FT
SAN ANDRES COLOMBIA	1623 UTC 03-25	06.2FT
PORT AU PRINCE HAITI	1722 UTC 03-25	02.1FT
SANTO DOMINGO DR	1734 UTC 03-25	09.8FT
BULLEN BAY CURACAO	1715 UTC 03-25	02.4FT
MONA ISLAND PR	1745 UTC 03-25	05.6FT
MAYAGUEZ PR	1732 UTC 03-25	03.0FT
MAGUEYES ISLAND PR	1746 UTC 03-25	02.9FT
YABUCOA PR	1735 UTC 03-25	04.2FT
SAN JUAN PR	1721 UTC 03-25	00.4FT
LIME TREE BAY US VIRGI	1756 UTC 03-25	02.1FT
CHRISTIANSTED HARBOR U	1731 UTC 03-25	01.8FT
ESPERANZA VIEQUES ISLA	1751 UTC 03-25	03.5FT
FAJARDO PR	1755 UTC 03-25	01.7FT
CHARLOTTE AMALIE US VI	1748 UTC 03-25	03.6FT
LAMESHUR BAY ST JOHNS	1744 UTC 03-25	04.2FT
PUERTO PLATA DR	1823 UTC 09-06	00.5FT
BASSETERRE CG BASE ST.	1845 UTC 09-06	01.9FT
BARBUDA	1812 UTC 09-06	01.8FT
DESIRADE GUADELOUPE	1845 UTC 09-06	01.7FT
ROSEAU DOMINICA	1822 UTC 09-06	00.7FT
CALLIAQUA CG BASE ST.	1847 UTC 09-06	01.4FT
PRICKLY BAY GRENADA	1821 UTC 09-06	00.7FT

HEIGHT - OBSERVED MAX TSUNAMI HEIGHT IS THE WATER LEVEL ABOVE THE TIDE LEVEL AT THE TIME OF MEASUREMENT.

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE	8.5
* ORIGIN TIME	1000 EDT MAR 25 2015
	1000 AST MAR 25 2015

	0900 CDT MAR 25 2015
	1400 UTC MAR 25 2015
* COORDINATES	10.3 NORTH 78.8 WEST
* DEPTH	9 MILES
* LOCATION	NORTH OF PANAMA

NEXT UPDATE AND ADDITIONAL INFORMATION
---
* THIS MESSAGE WILL BE UPDATED WITHIN 60 MINUTES.

* REFER TO THE INTERNET SITE NTWC.ARH.NOAA.GOV FOR MORE INFORMATION.

* CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO... U.S. VIRGIN ISLANDS AND BRITISH VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES AT PTWC.WEATHER.GOV.

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US NTWC Message #7

WEXX30 PAAQ 251945
TSUATE

BULLETIN
PUBLIC TSUNAMI MESSAGE NUMBER 7
NWS NATIONAL TSUNAMI WARNING CENTER PALMER AK
345 PM AST WED MAR 25 2015

...THE TSUNAMI ADVISORY IS CANCELLED...

CANCELLATIONS
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* THE TSUNAMI ADVISORY IS CANCELED FOR PUERTO RICO - THE U.S. VIRGIN ISLANDS AND THE BRITISH VIRGIN ISLANDS

IMPACTS - UPDATED
---
* TSUNAMI ACTIVITY HAS SUBSIDED ALONG THE COASTS OF PUERTO RICO... U.S. VIRGIN ISLANDS... BRITISH VIRGIN ISLANDS... AND U.S. AND CANADIAN COASTS IN THE ATLANTIC.

* ONGOING ACTIVITY MAY PERSIST IN SOME AREAS CAUSING STRONG CURRENTS DANGEROUS TO SWIMMERS AND BOATS.

* THE DETERMINATION TO RE-OCCUPY HAZARD ZONES MUST BE MADE BY LOCAL OFFICIALS.

RECOMMENDED ACTIONS - UPDATED

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* DO NOT RE-OCCUPY HAZARD ZONES UNTIL LOCAL EMERGENCY OFFICIALS INDICATE IT IS SAFE TO DO SO.

OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

SITE	TIME OF MEASUREMENT	OBSERVED MAX TSUNAMI HEIGHT
EL PORVENIR PANAMA	1505 UTC 03-25	07.8FT
SANTA MARTA COLOMBIA	1634 UTC 03-25	08.6FT
LIMON COSTA RICA	1544 UTC 03-25	01.9FT
SAN ANDRES COLOMBIA	1623 UTC 03-25	06.2FT
PORT AU PRINCE HAITI	1722 UTC 03-25	02.1FT
SANTO DOMINGO DR	1734 UTC 03-25	09.8FT
BULLEN BAY CURACAO	1715 UTC 03-25	02.4FT
MONA ISLAND PR	1745 UTC 03-25	05.6FT
MAYAGUEZ PR	1732 UTC 03-25	03.0FT
MAGUEYES ISLAND PR	1746 UTC 03-25	02.9FT
YABUCOA PR	1735 UTC 03-25	04.2FT
SAN JUAN PR	1721 UTC 03-25	00.4FT
LIME TREE BAY US VIRGI	1756 UTC 03-25	02.1FT
CHRISTIANSTED HARBOR U	1731 UTC 03-25	01.8FT
ESPERANZA VIEQUES ISLA	1751 UTC 03-25	03.5FT
FAJARDO PR	1755 UTC 03-25	01.7FT
CHARLOTTE AMALIE US VI	1748 UTC 03-25	03.6FT
LAMESHUR BAY ST JOHNS	1744 UTC 03-25	04.2FT
PUERTO PLATA DR	1823 UTC 09-06	00.5FT
BASSETERRE CG BASE ST.	1845 UTC 09-06	01.9FT
BARBUDA	1812 UTC 09-06	01.8FT
DESIRADE GUADELOUPE	1845 UTC 09-06	01.7FT
ROSEAU DOMINICA	1822 UTC 09-06	00.7FT
CALLIAQUA CG BASE ST.	1847 UTC 09-06	01.4FT
PRICKLY BAY GRENADA	1922 UTC 09-06	00.8FT

HEIGHT - OBSERVED MAX TSUNAMI HEIGHT IS THE WATER LEVEL ABOVE THE TIDE LEVEL AT THE TIME OF MEASUREMENT.

NEXT UPDATE AND ADDITIONAL INFORMATION

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* THIS WILL BE THE FINAL U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGE ISSUED FOR THIS EVENT.

* REFER TO THE INTERNET SITE NTWC.ARH.NOAA.GOV FOR MORE INFORMATION.

* CARIBBEAN COASTAL REGIONS OUTSIDE PUERTO RICO... U.S. VIRGIN ISLANDS AND BRITISH VIRGIN ISLANDS SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES AT PTWC.WEATHER.GOV.

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US NTWC Spanish Bulletin #1

WEXX40 PAAQ 251405
TSUSPN

BULLETIN
MENSAJE DE TSUNAMI NUMERO 1
NWS CENTRO NACIONAL DE ALERTA DE TSUNAMI PALMER AK
1005 AM AST WED MAR 25 2015

...UNA ADVERTENCIA DE TSUNAMI ESTA AHORA EN EFECTO...

AVISOS/ADVERTENCIAS/VIGILANCIAS

ADVERTENCIA DE TSUNAMI EN EFECTO PARA...

* AREAS COSTERAS DE PUERTO RICO - ISLAS VIRGENES DE LOS ESTADOS UNIDOS E ISLAS VIRGENES BRITANICAS.

PARA OTRAS COSTAS DEL PACIFICO DE LOS ESTADOS UNIDOS Y CANADA EN NORTE AMERICA - EL NIVEL DE AMENAZA DE TSUNAMI ESTA SIENDO EVALUADO. SE PROVEERA INFORMACION ADICIONAL EN MENSAJES SUPLEMENTARIOS.

PARAMETROS PRELIMINARES DEL TERREMOTO
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* MAGNITUD	8.0
* TIEMPO DE ORIGEN	1000 EDT MAR 25 2015 1000 AST MAR 25 2015 0900 CDT MAR 25 2015 1400 UTC MAR 25 2015
* COORDENADAS	10.3 NORTE 78.8 OESTE
* PROFUNDIDAD	9 MILLAS
* LOCALIZACION	NORTH OF PANAMA

IMPACTOS PARA AREAS BAJO ADVERTENCIA DE TSUNAMI
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* UN TSUNAMI CAPAZ DE PRODUCIR FUERTES CORRIENTES U OLAS PELIGROSAS A PERSONAS EN O MUY CERCA DEL AGUA ES ESPERADO.

* CORRIENTES PUEDEN SER PELIGROSAS PARA NADADORES…EMBARCACIONES Y ESTRUCTURAS COSTERAS Y PUEDEN CONTINUAR POR MUCHAS HORAS DESPUES DE LA LLEGADA DEL TSUNAMI.

* LA PRIMERA OLA PUEDE NO SER LA MAS GRANDE.

ACCIONES RECOMENDADAS
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* SI SE ENCUENTRA EN UN AREA BAJO ADVERTENCIA - SALGASE DE LA PLAYA BAHIAS Y MARINAS. NO SE ESPERAN INUNDACIONES GENERALIZADAS PARA AREAS BAJO ADVERTENCIA

* ESTE ALERTA A INSTRUCCIONES DE SUS AUTORIDADES DE MANEJO DE EMERGENCIA.

* NO VAYA A LA COSTA PARA OBSERVAR EL TSUNAMI.

* NO REGRESE A LA COSTA HASTA QUE LAS AUTORIDADES LOCALES DE MANEJO DE EMERGENCIA INDIQUEN QUE ES SEGURO HACERLO.

OBSERVACIONES Y/O PRONOSTICOS DEL TSUNAMI

LUGAR	LLEGADA PRONOSTICADA DEL TSUNAMI
* PUERTO RICO	
AGUADILLA	1217 AST MAR 25
MAYAGUEZ	1220 AST MAR 25
SAN JUAN TG	1234 AST MAR 25
CULEBRA	1242 AST MAR 25
* US VIRGIN ISLANDS	
CHRISTIANSTED	1224 AST MAR 25
LAMESHUR BAY	1235 AST MAR 25
CHARLOTTE AMALIE	1310 AST MAR 25
* BRITISH VIRGIN IS.	
ROADTOWN	1237 AST MAR 25

PROXIMA ACTUALIZACION E INFORMACION ADICIONAL

* ESTE MENSAJE SERA ACTUALIZADO EN 60 MINUTOS.

* PARA ACCEDER A INFORMACION ADICIONAL CONSULTE EL SITIO DE INTERNET NTWC.ARH.NOAA.GOV.

* REGIONES COSTERAS DEL CARIBE FUERA DE PUERTO RICO... ISLAS VIRGENES DE LOS ESTADOS UNIDOS E ISLAS VIRGENES BRITANICAS DEBEN CONSULTAR LOS MENSAJES EMITIDOS POR EL CENTRO DE ALERTA DE TSUNAMI DEL PACIFICO EN SU SITIO DE INTERNET PTWC.WEATHER.GOV.

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US NTWC Spanish Bulletin #2

WEXX40 PAAQ 251500
TSUSPN

BULLETIN
MENSAJE DE TSUNAMI NUMERO 2
NWS CENTRO NACIONAL DE ALERTA DE TSUNAMI PALMER AK
1100 AM AST WED MAR 25 2015

ACTUALIZACIONES

ESTE MENSAJE INCLUYE UNA MAGNITUD REVISADA.
ESTE MENSAJE INCLUYE NUEVAS OBSERVACIONES.
ESTE MENSAJE MODIFICA LAS REGIONES BAJO ALERTA.
THE ALERT LEVEL FOR PUERTO RICO, US VIRGIN ISLANDS, AND BRITISH VIRGIN ISLANDS HAS BEEN UPGRADED FROM ADVISORY TO WARNING.
TZHE UPGRADE IS BASED ON FORECAST MODEL RESULTS.
TSUNAMI HEIGHT FORECAST FOR PR/VI RANGE UP TO 6 FT.

...UN AVISO DE TSUNAMI ESTA AHORA EN EFECTO...

AVISOS/ADVERTENCIAS/VIGILANCIAS - ACTUALIZADOS

AVISO DE TSUNAMI EN EFECTO PARA...

* AREAS COSTERAS DE PUERTO RICO - ISLAS VIRGENES DE LOS ESTADOS UNIDOS E ISLAS VIRGENES BRITANICAS.

PARA OTRAS COSTAS DE ESTADOS UNIDOS Y CANADA EN EL ATLANTICO Y GOLFO DE MEXICO - NO EXISTE AMENAZA DE TSUNAMI.

IMPACTOS PARA AREAS BAJO AVISO DE TSUNAMI
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* AMPLIAS INUNDACIONES COSTERAS PELIGROSAS ACOMPANADAS POR FUERTES CORRIENTES SON POSIBLES Y PUEDEN CONTINUAR POR MUCHAS HORAS DESPUES DE LA LLEGADA DEL TSUNAMI.

* LA PRIMERA OLA PUEDE NO SER LA MAS GRANDE.

ACCIONES RECOMENDADAS - ACTUALIZADAS
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* SI SE ENCUENTRA EN UN AREA BAJO AVISO - MUEVASE TIERRA ADENTRO A LUGARES ELEVADOS.

* ESTE ALERTA A INSTRUCCIONES DE SUS AUTORIDADES DE MANEJO DE EMERGENCIA.

* NO VAYA A LA COSTA PARA OBSERVAR EL TSUNAMI.

* NO REGRESE A LA COSTA HASTA QUE LAS AUTORIDADES LOCALES DE MANEJO DE EMERGENCIA INDIQUEN QUE ES SEGURO HACERLO.

OBSERVACIONES Y/O PRONOSTICOS DEL TSUNAMI

LUGAR	LLEGADA PRONOSTICADA DEL TSUNAMI
* PUERTO RICO	
AGUADILLA	1212 AST MAR 25
MAYAGUEZ	1215 AST MAR 25
SAN JUAN TG	1229 AST MAR 25
CULEBRA	1237 AST MAR 25
* US VIRGIN ISLANDS	
CHRISTIANSTED	1219 AST MAR 25
LAMESHUR BAY	1230 AST MAR 25
CHARLOTTE AMALIE	1305 AST MAR 25
* BRITISH VIRGIN IS.	
ROADTOWN	1232 AST MAR 25

OBSERVACIONES ADICIONALES DEL TSUNAMI - ACTUALIZADAS

LUGAR	HORA DE LA MEDICION	ALTURA MAX OBSERVADA DEL TSUNAMI
EL PORVENIR PANAMA	1455 UTC 03-25	07.8FT

ALTURA - ALTURA MAX OBSERVADA DEL TSUNAMI ES EL NIVEL DEL AGUA POR ENCIMA DE LA MAREA A LA HORA DE LA MEDICION.

PARAMETROS PRELIMINARES DEL TERREMOTO

* MAGNITUD	8.5
* TIEMPO DE ORIGEN	1000 EDT MAR 25 2015
	1000 AST MAR 25 2015
	0900 CDT MAR 25 2015
	1400 UTC MAR 25 2015
* COORDENADAS	10.3 NORTE 78.8 OESTE
* PROFUNDIDAD	9 MILLAS
* LOCALIZACION	NORTH OF PANAMA

PROXIMA ACTUALIZACION E INFORMACION ADICIONAL - ACTUALIZADAS

* ESTE MENSAJE SERA ACTUALIZADO EN 60 MINUTOS.

* PARA ACCEDER A INFORMACION ADICIONAL CONSULTE EL SITIO DE INTERNET NTWC.ARH.NOAA.GOV.

* REGIONES COSTERAS DEL CARIBE FUERA DE PUERTO RICO... ISLAS VIRGENES DE LOS ESTADOS UNIDOS E ISLAS VIRGENES BRITANICAS DEBEN CONSULTAR LOS MENSAJES EMITIDOS POR EL CENTRO DE ALERTA DE TSUNAMI DEL PACIFICO EN SU SITIO DE INTERNET PTWC.WEATHER.GOV.

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US NTWC Spanish Bulletin #3

WEXX40 PAAQ 251602
TSUSPN

BULLETIN
MENSAJE DE TSUNAMI NUMERO 3
NWS CENTRO NACIONAL DE ALERTA DE TSUNAMI PALMER AK
1202 PM AST WED MAR 25 2015

ACTUALIZACIONES

ESTE MENSAJE INCLUYE NUEVAS OBSERVACIONES.
ESTE MENSAJE INCLUYE INFORMACION DE PRONOSTICO REVISADA.

...EL AVISO DE TSUNAMI PERMANECE EN EFECTO...

AVISOS/ADVERTENCIAS/VIGILANCIAS

AVISO DE TSUNAMI EN EFECTO PARA...

* AREAS COSTERAS DE PUERTO RICO - ISLAS VIRGENES DE LOS ESTADOS UNIDOS E ISLAS VIRGENES BRITANICAS.

PARA OTRAS COSTAS DE ESTADOS UNIDOS Y CANADA EN EL ATLANTICO Y GOLFO DE MEXICO - NO EXISTE AMENAZA DE TSUNAMI.

IMPACTOS PARA AREAS BAJO AVISO DE TSUNAMI
---
* AMPLIAS INUNDACIONES COSTERAS PELIGROSAS ACOMPANADAS POR FUERTES CORRIENTES SON POSIBLES Y PUEDEN CONTINUAR POR MUCHAS HORAS DESPUES DE LA LLEGADA DEL TSUNAMI.

* LA PRIMERA OLA PUEDE NO SER LA MAS GRANDE.

ACCIONES RECOMENDADAS
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* SI SE ENCUENTRA EN UN AREA BAJO AVISO - MUEVASE TIERRA ADENTRO A LUGARES ELEVADOS.

* ESTE ALERTA A INSTRUCCIONES DE SUS AUTORIDADES DE MANEJO DE EMERGENCIA.

* NO VAYA A LA COSTA PARA OBSERVAR EL TSUNAMI.

* NO REGRESE A LA COSTA HASTA QUE LAS AUTORIDADES LOCALES DE MANEJO DE EMERGENCIA INDIQUEN QUE ES SEGURO HACERLO.

OBSERVACIONES Y/O PRONOSTICOS DEL TSUNAMI

LUGAR	LLEGADA PRONOSTICADA DEL TSUNAMI	PRONOSTICO DE DURACION DEL TSUNAMI	ALTURA MAX PRONOSTICADA DEL TSUNAMI
* PUERTO RICO			
AGUADILLA	1212 AST MAR 25	30 HRS	2.6- 4.8PIE
MAYAGUEZ	1215 AST MAR 25	30 HRS	2.4-4.4PIE
SAN JUAN TG	1229 AST MAR 25		LESS THAN 1PIE
CULEBRA	1237 AST MAR 25	9 HRS	1.1- 2.1PIE
* US VIRGIN ISLANDS			
CHRISTIANSTED	1219 AST MAR 25	20 HRS	1.5- 2.9PIE
LAMESHUR BAY	1230 AST MAR 25	36 HRS	3.2- 5.8PIE
CHARLOTTE AMALIE	1305 AST MAR 25	30 HRS	2.7- 5.1PIE
* BRITISH VIRGIN IS.			
ROADTOWN	1232 AST MAR 25	24 HRS	1.8- 3.4PIE

ALTURA MAX PRONOSTICADA DEL TSUNAMI ES EL NIVEL DE AGUA MAS ALTO ESPERADO POR ENCIMA DE LA MAREA.

LA DURACION MAXIMA DEL TSUNAMI ES EL TIEMPO APROXIMADO QUE SE ESPERA QUE EL TSUNAMI PRODUZCA CORRIENTES Y OLEAJE PELIGROSA.

OBSERVACIONES ADICIONALES DEL TSUNAMI - ACTUALIZADAS

LUGAR	HORA DE LA MEDICION	ALTURA MAX OBSERVADA DEL TSUNAMI
EL PORVENIR PANAMA	1455 UTC 03-25	07.8FT
SANTA MARTA COLOMBIA	1547 UTC 03-25	04.8FT
LIMON COSTA RICA	1544 UTC 03-25	01.9FT
SAN ANDRES COLOMBIA	1555 UTC 03-25	03.3FT

ALTURA - ALTURA MAX OBSERVADA DEL TSUNAMI ES EL NIVEL DEL AGUA POR ENCIMA DE LA MAREA A LA HORA DE LA MEDICION.

PARAMETROS PRELIMINARES DEL TERREMOTO

* MAGNITUD 8.5

* TIEMPO DE ORIGEN	1000 EDT MAR 25 2015
	1000 AST MAR 25 2015
	0900 CDT MAR 25 2015
	1400 UTC MAR 25 2015
* COORDENADAS	10.3 NORTE 78.8 OESTE
* PROFUNDIDAD	9 MILLAS
* LOCALIZACION	NORTH OF PANAMA

PROXIMA ACTUALIZACION E INFORMACION ADICIONAL
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* ESTE MENSAJE SERA ACTUALIZADO EN 60 MINUTOS.

* PARA ACCEDER A INFORMACION ADICIONAL CONSULTE EL SITIO DE INTERNET NTWC.ARH.NOAA.GOV.

* REGIONES COSTERAS DEL CARIBE FUERA DE PUERTO RICO... ISLAS VIRGENES DE LOS ESTADOS UNIDOS E ISLAS VIRGENES BRITANICAS DEBEN CONSULTAR LOS MENSAJES EMITIDOS POR EL CENTRO DE ALERTA DE TSUNAMI DEL PACIFICO EN SU SITIO DE INTERNET PTWC.WEATHER.GOV.

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US NTWC Spanish Bulletin #4

WEXX40 PAAQ 251701
TSUSPN

BULLETIN
MENSAJE DE TSUNAMI NUMERO 4
NWS CENTRO NACIONAL DE ALERTA DE TSUNAMI PALMER AK
101 PM AST WED MAR 25 2015

ACTUALIZACIONES

ESTE MENSAJE INCLUYE NUEVAS OBSERVACIONES.

...EL AVISO DE TSUNAMI PERMANECE EN EFECTO...

AVISOS/ADVERTENCIAS/VIGILANCIAS

AVISO DE TSUNAMI EN EFECTO PARA...

* AREAS COSTERAS DE PUERTO RICO - ISLAS VIRGENES DE LOS ESTADOS UNIDOS E ISLAS VIRGENES BRITANICAS.

PARA OTRAS COSTAS DE ESTADOS UNIDOS Y CANADA EN EL ATLANTICO Y GOLFO DE MEXICO - NO EXISTE AMENAZA DE TSUNAMI.

IMPACTOS PARA AREAS BAJO AVISO DE TSUNAMI

* AMPLIAS INUNDACIONES COSTERAS PELIGROSAS ACOMPANADAS POR FUERTES CORRIENTES SON POSIBLES Y PUEDEN CONTINUAR POR MUCHAS HORAS DESPUES DE LA LLEGADA DEL TSUNAMI.

* LA PRIMERA OLA PUEDE NO SER LA MAS GRANDE.

ACCIONES RECOMENDADAS

* SI SE ENCUENTRA EN UN AREA BAJO AVISO - MUEVASE TIERRA ADENTRO A LUGARES ELEVADOS.

* ESTE ALERTA A INSTRUCCIONES DE SUS AUTORIDADES DE MANEJO DE EMERGENCIA.

* NO VAYA A LA COSTA PARA OBSERVAR EL TSUNAMI.

* NO REGRESE A LA COSTA HASTA QUE LAS AUTORIDADES LOCALES DE MANEJO DE EMERGENCIA INDIQUEN QUE ES SEGURO HACERLO.

OBSERVACIONES Y/O PRONOSTICOS DEL TSUNAMI

LUGAR	LLEGADA PRONOSTICADA DEL TSUNAMI	PRONOSTICO DE DURACION DEL TSUNAMI	ALTURA MAX PRONOSTICADA DEL TSUNAMI
* PUERTO RICO			
AGUADILLA	1212 AST MAR 25	30 HRS	2.6- 4.8PIE
MAYAGUEZ	1215 AST MAR 25	30 HRS	2.4- 4.4PIE
SAN JUAN TG	1229 AST MAR 25		LESS THAN 1PIE
CULEBRA	1237 AST MAR 25		9 HRS 1.1- 2.1PIE
* US VIRGIN ISLANDS			
CHRISTIANSTED	1219 AST MAR 25	20 HRS	1.5- 2.9PIE
LAMESHUR BAY	1230 AST MAR 25	36 HRS	3.2- 5.8PIE
CHARLOTTE AMALIE	1305 AST MAR 25	30 HRS	2.7- 5.1PIE
* BRITISH VIRGIN IS.			
ROADTOWN	1232 AST MAR 25	24 HRS	1.8- 3.4PIE

ALTURA MAX PRONOSTICADA DEL TSUNAMI ES EL NIVEL DE AGUA MAS ALTO ESPERADO POR ENCIMA DE LA MAREA.

LA DURACION MAXIMA DEL TSUNAMI ES EL TIEMPO APROXIMADO QUE SE ESPERA QUE EL TSUNAMI PRODUZCA CORRIENTES Y OLEAJE PELIGROSA.

OBSERVACIONES ADICIONALES DEL TSUNAMI - ACTUALIZADAS

LUGAR	HORA DE LA MEDICION	ALTURA MAX OBSERVADA DEL TSUNAMI
EL PORVENIR PANAMA	1505 UTC 03-25	07.8FT
SANTA MARTA COLOMBIA	1634 UTC 03-25	08.6FT
LIMON COSTA RICA	1544 UTC 03-25	01.9FT
SAN ANDRES COLOMBIA	1623 UTC 03-25	06.2FT
PORT AU PRINCE HAITI	1631 UTC 03-25	01.3FT
SANTO DOMINGO DR	1634 UTC 03-25	02.9FT
BULLEN BAY CURACAO	1645 UTC 03-25	01.7FT
MONA ISLAND PR	1636 UTC 03-25	02.8FT
MAYAGUEZ PR	1647 UTC 03-25	01.6FT
MAGUEYES ISLAND PR	1642 UTC 03-25	00.6FT
YABUCOA PR	1641 UTC 03-25	01.9FT
SAN JUAN PR	1640 UTC 03-25	00.4FT
LIME TREE BAY US VIRGI	1642 UTC 03-25	01.1FT
CHRISTIANSTED HARBOR U	1650 UTC 03-25	00.8FT
ESPERANZA VIEQUES ISLA	1652 UTC 03-25	01.2FT
FAJARDO PR	1653 UTC 03-25	01.1FT
CHARLOTTE AMALIE US VI	1655 UTC 03-25	01.9FT
LAMESHUR BAY ST JOHNS	1655 UTC 03-25	01.7FT

ALTURA - ALTURA MAX OBSERVADA DEL TSUNAMI ES EL NIVEL DEL AGUA
POR ENCIMA DE LA MAREA A LA HORA DE LA MEDICION.

PARAMETROS PRELIMINARES DEL TERREMOTO - ACTUALIZADOS

* MAGNITUD	8.5
* TIEMPO DE ORIGEN	1000 EDT MAR 25 2015 1000 AST MAR 25 2015 0900 CDT MAR 25 2015 1400 UTC MAR 25 2015
* COORDENADAS	10.3 NORTE 78.8 OESTE
* PROFUNDIDAD	9 MILLAS
* LOCALIZACION	NORTH OF PANAMA

PROXIMA ACTUALIZACION E INFORMACION ADICIONAL

* ESTE MENSAJE SERA ACTUALIZADO EN 60 MINUTOS.

* PARA ACCEDER A INFORMACION ADICIONAL CONSULTE EL SITIO DE INTERNET NTWC.ARH.NOAA.GOV.

* REGIONES COSTERAS DEL CARIBE FUERA DE PUERTO RICO... ISLAS VIRGENES DE LOS ESTADOS UNIDOS E ISLAS VIRGENES BRITANICAS DEBEN CONSULTAR LOS MENSAJES EMITIDOS POR EL CENTRO DE ALERTA DE TSUNAMI DEL PACIFICO EN SU SITIO DE INTERNET PTWC.WEATHER.GOV.

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US NTWC Spanish Bulletin #5

WEXX40 PAAQ 251800
TSUSPN

BULLETIN
MENSAJE DE TSUNAMI NUMERO 5
NWS CENTRO NACIONAL DE ALERTA DE TSUNAMI PALMER AK
200 PM AST WED MAR 25 2015

ACTUALIZACIONES

ESTE MENSAJE INCLUYE NUEVAS OBSERVACIONES.

...EL AVISO DE TSUNAMI PERMANECE EN EFECTO...

AVISOS/ADVERTENCIAS/VIGILANCIAS

AVISO DE TSUNAMI EN EFECTO PARA...

* AREAS COSTERAS DE PUERTO RICO - ISLAS VIRGENES DE LOS ESTADOS UNIDOS E ISLAS VIRGENES BRITANICAS.

PARA OTRAS COSTAS DE ESTADOS UNIDOS Y CANADA EN EL ATLANTICO Y GOLFO DE MEXICO - NO EXISTE AMENAZA DE TSUNAMI.

IMPACTOS PARA AREAS BAJO AVISO DE TSUNAMI
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* AMPLIAS INUNDACIONES COSTERAS PELIGROSAS ACOMPANADAS POR FUERTES CORRIENTES SON POSIBLES Y PUEDEN CONTINUAR POR MUCHAS HORAS DESPUES DE LA LLEGADA DEL TSUNAMI.

* LA PRIMERA OLA PUEDE NO SER LA MAS GRANDE.

ACCIONES RECOMENDADAS
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* SI SE ENCUENTRA EN UN AREA BAJO AVISO - MUEVASE TIERRA ADENTRO A LUGARES ELEVADOS.

* ESTE ALERTA A INSTRUCCIONES DE SUS AUTORIDADES DE MANEJO DE EMERGENCIA.

* NO VAYA A LA COSTA PARA OBSERVAR EL TSUNAMI.

* NO REGRESE A LA COSTA HASTA QUE LAS AUTORIDADES LOCALES DE MANEJO DE EMERGENCIA INDIQUEN QUE ES SEGURO HACERLO.

OBSERVACIONES Y/O PRONOSTICOS DEL TSUNAMI

LUGAR	LLEGADA PRONOSTICADA DEL TSUNAMI	PRONOSTICO DE DURACION DEL TSUNAMI	ALTURA MAX PRONOSTICADA DEL TSUNAMI
* US VIRGIN ISLANDS			
CHARLOTTE AMALIE	1305 AST MAR 25	30 HRS	2.7- 5.1PIE

ALTURA MAX PRONOSTICADA DEL TSUNAMI ES EL NIVEL DE AGUA MAS ALTO ESPERADO POR ENCIMA DE LA MAREA.

LA DURACION MAXIMA DEL TSUNAMI ES EL TIEMPO APROXIMADO QUE SE ESPERA QUE EL TSUNAMI PRODUZCA CORRIENTES Y OLEAJE PELIGROSA.

OBSERVACIONES ADICIONALES DEL TSUNAMI - ACTUALIZADAS

LUGAR	HORA DE LA MEDICION	ALTURA MAX OBSERVADA DEL TSUNAMI
EL PORVENIR PANAMA	1505 UTC 03-25	07.8FT
SANTA MARTA COLOMBIA	1634 UTC 03-25	08.6FT
LIMON COSTA RICA	1544 UTC 03-25	01.9FT
SAN ANDRES COLOMBIA	1623 UTC 03-25	06.2FT
PORT AU PRINCE HAITI	1722 UTC 03-25	02.1FT
SANTO DOMINGO DR	1734 UTC 03-25	09.8FT
BULLEN BAY CURACAO	1715 UTC 03-25	02.4FT
MONA ISLAND PR	1745 UTC 03-25	05.6FT
MAYAGUEZ PR	1732 UTC 03-25	03.0FT
MAGUEYES ISLAND PR	1746 UTC 03-25	02.9FT
YABUCOA PR	1735 UTC 03-25	04.2FT
SAN JUAN PR	1721 UTC 03-25	00.4FT
LIME TREE BAY US VIRGI	1756 UTC 03-25	02.1FT
CHRISTIANSTED HARBOR U	1731 UTC 03-25	01.8FT
ESPERANZA VIEQUES ISLA	1751 UTC 03-25	03.5FT
FAJARDO PR	1755 UTC 03-25	01.7FT
CHARLOTTE AMALIE US VI	1748 UTC 03-25	03.6FT
LAMESHUR BAY ST JOHNS	1744 UTC 03-25	04.2FT
PUERTO PLATA DR	1744 UTC 09-06	00.4FT
BASSETERRE CG BASE ST.	1734 UTC 09-06	01.6FT
BARBUDA	1745 UTC 09-06	01.3FT
DESIRADE GUADELOUPE	1739 UTC 09-06	01.1FT
ROSEAU DOMINICA	1751 UTC 09-06	00.5FT
CALLIAQUA CG BASE ST.	1734 UTC 09-06	01.0FT
PRICKLY BAY GRENADA	1745 UTC 09-06	00.6FT

ALTURA - ALTURA MAX OBSERVADA DEL TSUNAMI ES EL NIVEL DEL AGUA POR ENCIMA DE LA MAREA A LA HORA DE LA MEDICION.

PARAMETROS PRELIMINARES DEL TERREMOTO

* MAGNITUD	8.5
* TIEMPO DE ORIGEN	1000 EDT MAR 25 2015
	1000 AST MAR 25 2015

0900 CDT MAR 25 2015
1400 UTC MAR 25 2015
* COORDENADAS 10.3 NORTE 78.8 OESTE
* PROFUNDIDAD 9 MILLAS
* LOCALIZACION NORTH OF PANAMA

PROXIMA ACTUALIZACION E INFORMACION ADICIONAL
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* ESTE MENSAJE SERA ACTUALIZADO EN 60 MINUTOS.

* PARA ACCEDER A INFORMACION ADICIONAL CONSULTE EL SITIO DE INTERNET NTWC.ARH.NOAA.GOV.

* REGIONES COSTERAS DEL CARIBE FUERA DE PUERTO RICO... ISLAS VIRGENES DE LOS ESTADOS UNIDOS E ISLAS VIRGENES BRITANICAS DEBEN CONSULTAR LOS MENSAJES EMITIDOS POR EL CENTRO DE ALERTA DE TSUNAMI DEL PACIFICO EN SU SITIO DE INTERNET PTWC.WEATHER.GOV.

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US NTWC Spanish Bulletin #6

WEXX40 PAAQ 251901
TSUSPN

BULLETIN
MENSAJE DE TSUNAMI NUMERO 6
NWS CENTRO NACIONAL DE ALERTA DE TSUNAMI PALMER AK
301 PM AST WED MAR 25 2015

ACTUALIZACIONES

ESTE MENSAJE INCLUYE NUEVAS OBSERVACIONES.
ESTE MENSAJE MODIFICA LAS REGIONES BAJO ALERTA.

...UNA ADVERTENCIA DE TSUNAMI ESTA AHORA EN EFECTO...

AVISOS/ADVERTENCIAS/VIGILANCIAS - ACTUALIZADOS

ADVERTENCIA DE TSUNAMI EN EFECTO PARA...

* AREAS COSTERAS DE PUERTO RICO - ISLAS VIRGENES DE LOS ESTADOS UNIDOS E ISLAS VIRGENES BRITANICAS.

PARA OTRAS COSTAS DE ESTADOS UNIDOS Y CANADA EN EL ATLANTICO Y GOLFO DE MEXICO - NO EXISTE AMENAZA DE TSUNAMI.

IMPACTOS PARA AREAS BAJO ADVERTENCIA DE TSUNAMI

* UN TSUNAMI CAPAZ DE PRODUCIR FUERTES CORRIENTES U OLAS PELIGROSAS A PERSONAS EN O MUY CERCA DEL AGUA ES ESPERADO.

* CORRIENTES PUEDEN SER PELIGROSAS PARA NADADORES…EMBARCACIONES Y ESTRUCTURAS COSTERAS Y PUEDEN CONTINUAR POR MUCHAS HORAS DESPUES DE LA LLEGADA DEL TSUNAMI.

* LA PRIMERA OLA PUEDE NO SER LA MAS GRANDE.

ACCIONES RECOMENDADAS - ACTUALIZADAS

* SI SE ENCUENTRA EN UN AREA BAJO ADVERTENCIA - SALGASE DE LA PLAYA BAHIAS Y MARINAS. NO SE ESPERAN INUNDACIONES GENERALIZADAS PARA AREAS BAJO ADVERTENCIA

* ESTE ALERTA A INSTRUCCIONES DE SUS AUTORIDADES DE MANEJO DE EMERGENCIA.

* NO VAYA A LA COSTA PARA OBSERVAR EL TSUNAMI.

* NO REGRESE A LA COSTA HASTA QUE LAS AUTORIDADES LOCALES DE MANEJO DE EMERGENCIA INDIQUEN QUE ES SEGURO HACERLO.

OBSERVACIONES ADICIONALES DEL TSUNAMI - ACTUALIZADAS

LUGAR	HORA DE LA MEDICION	ALTURA MAX OBSERVADA DEL TSUNAMI
EL PORVENIR PANAMA	1505 UTC 03-25	07.8FT
SANTA MARTA COLOMBIA	1634 UTC 03-25	08.6FT
LIMON COSTA RICA	1544 UTC 03-25	01.9FT
SAN ANDRES COLOMBIA	1623 UTC 03-25	06.2FT
PORT AU PRINCE HAITI	1722 UTC 03-25	02.1FT
SANTO DOMINGO DR	1734 UTC 03-25	09.8FT
BULLEN BAY CURACAO	1715 UTC 03-25	02.4FT
MONA ISLAND PR	1745 UTC 03-25	05.6FT
MAYAGUEZ PR	1732 UTC 03-25	03.0FT
MAGUEYES ISLAND PR	1746 UTC 03-25	02.9FT
YABUCOA PR	1735 UTC 03-25	04.2FT
SAN JUAN PR	1721 UTC 03-25	00.4FT
LIME TREE BAY US VIRGI	1756 UTC 03-25	02.1FT
CHRISTIANSTED HARBOR U	1731 UTC 03-25	01.8FT
ESPERANZA VIEQUES ISLA	1751 UTC 03-25	03.5FT
FAJARDO PR	1755 UTC 03-25	01.7FT
CHARLOTTE AMALIE US VI	1748 UTC 03-25	03.6FT
LAMESHUR BAY ST JOHNS	1744 UTC 03-25	04.2FT
PUERTO PLATA DR	1823 UTC 09-06	00.5FT
BASSETERRE CG BASE ST.	1845 UTC 09-06	01.9FT
BARBUDA	1812 UTC 09-06	01.8FT
DESIRADE GUADELOUPE	1845 UTC 09-06	01.7FT

ROSEAU DOMINICA	1822 UTC 09-06	00.7FT
CALLIAQUA CG BASE ST.	1847 UTC 09-06	01.4FT
PRICKLY BAY GRENADA	1821 UTC 09-06	00.7FT

ALTURA - ALTURA MAX OBSERVADA DEL TSUNAMI ES EL NIVEL DEL AGUA
POR ENCIMA DE LA MAREA A LA HORA DE LA MEDICION.

PARAMETROS PRELIMINARES DEL TERREMOTO

* MAGNITUD	8.5
* TIEMPO DE ORIGEN	1000 EDT MAR 25 2015 1000 AST MAR 25 2015 0900 CDT MAR 25 2015 1400 UTC MAR 25 2015
* COORDENADAS	10.3 NORTE 78.8 OESTE
* PROFUNDIDAD	9 MILLAS
* LOCALIZACION	NORTH OF PANAMA

PROXIMA ACTUALIZACION E INFORMACION ADICIONAL

* ESTE MENSAJE SERA ACTUALIZADO EN 60 MINUTOS.

* PARA ACCEDER A INFORMACION ADICIONAL CONSULTE EL SITIO DE INTERNET NTWC.ARH.NOAA.GOV.

* REGIONES COSTERAS DEL CARIBE FUERA DE PUERTO RICO... ISLAS VIRGENES DE LOS ESTADOS UNIDOS E ISLAS VIRGENES BRITANICAS DEBEN CONSULTAR LOS MENSAJES EMITIDOS POR EL CENTRO DE ALERTA DE TSUNAMI DEL PACIFICO EN SU SITIO DE INTERNET PTWC.WEATHER.GOV.

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US NTWC Spanish Bulletin #7

WEXX40 PAAQ 251945
TSUSPN

BULLETIN
MENSAJE DE TSUNAMI NUMERO 7
NWS CENTRO NACIONAL DE ALERTA DE TSUNAMI PALMER AK
345 PM AST WED MAR 25 2015

...LA ADVERTENCIA DE TSUNAMI HA SIDO CANCELADA...

CANCELACIONES

* LA ADVERTENCIA DE TSUNAMI HA SIDO CANCELADA PARA PUERTO RICO - ISLAS VIRGENES DE LOS ESTADOS UNIDOS E ISLAS VIRGENES BRITANICAS

IMPACTOS - ACTUALIZADOS

* LA ACTIVIDAD DE TSUNAMI HA DISMINUIDO A LO LARGO DE LAS COSTAS DE PUERTO RICO... ISLAS VIRGENES DE LOS ESTADOS UNIDOS... ISLAS VIRGENES BRITANICAS Y DE LAS COSTAS DEL ATLANTICO DE ESTADOS UNIDOS Y CANADA.

* ACTIVIDAD EN CURSO PUEDE SEGUIR EN ALGUNAS AREAS CAUSANDO FUERTES CORRIENTES PELIGROSOS PARA NADADORES Y EMBARCACIONES.

* LA DETERMINACION PARA VOLVER A OCUPAR ZONAS DE PELIGRO DEBE SER HECHA POR AUTORIDADES LOCALES.

ACCIONES RECOMENDADAS - ACTUALIZADAS

* NO REGRESEN A ZONAS DESALOJADAS HASTA QUE LAS AUTORIDADES LOCALES DE MANEJO DE EMERGENCIA INDIQUEN QUE ES SEGURO HACERLO.

OBSERVACIONES DEL TSUNAMI - ACTUALIZADAS

LUGAR	HORA DE LA MEDICION	ALTURA MAX OBSERVADA DEL TSUNAMI
EL PORVENIR PANAMA	1505 UTC 03-25	07.8FT
SANTA MARTA COLOMBIA	1634 UTC 03-25	08.6FT
LIMON COSTA RICA	1544 UTC 03-25	01.9FT
SAN ANDRES COLOMBIA	1623 UTC 03-25	06.2FT
PORT AU PRINCE HAITI	1722 UTC 03-25	02.1FT
SANTO DOMINGO DR	1734 UTC 03-25	09.8FT
BULLEN BAY CURACAO	1715 UTC 03-25	02.4FT
MONA ISLAND PR	1745 UTC 03-25	05.6FT
MAYAGUEZ PR	1732 UTC 03-25	03.0FT
MAGUEYES ISLAND PR	1746 UTC 03-25	02.9FT
YABUCOA PR	1735 UTC 03-25	04.2FT
SAN JUAN PR	1721 UTC 03-25	00.4FT
LIME TREE BAY US VIRGI	1756 UTC 03-25	02.1FT
CHRISTIANSTED HARBOR U	1731 UTC 03-25	01.8FT
ESPERANZA VIEQUES ISLA	1751 UTC 03-25	03.5FT
FAJARDO PR	1755 UTC 03-25	01.7FT
CHARLOTTE AMALIE US VI	1748 UTC 03-25	03.6FT
LAMESHUR BAY ST JOHNS	1744 UTC 03-25	04.2FT
PUERTO PLATA DR	1823 UTC 09-06	00.5FT
BASSETERRE CG BASE ST.	1845 UTC 09-06	01.9FT
BARBUDA	1812 UTC 09-06	01.8FT
DESIRADE GUADELOUPE	1845 UTC 09-06	01.7FT
ROSEAU DOMINICA	1822 UTC 09-06	00.7FT
CALLIAQUA CG BASE ST.	1847 UTC 09-06	01.4FT
PRICKLY BAY GRENADA	1922 UTC 09-06	00.8FT

ALTURA - ALTURA MAX OBSERVADA DEL TSUNAMI ES EL NIVEL DEL AGUA

POR ENCIMA DE LA MAREA A LA HORA DE LA MEDICION.

PROXIMA ACTUALIZACION E INFORMACION ADICIONAL
---
* ESTE SERA EL ULTIMO BOLETIN PROVENIENTE DEL CENTRO NACIONAL DE ALERTA DE TSUNAMI DE LOS ESTADOS UNIDOS PARA ESTE EVENTO.

* PARA ACCEDER A INFORMACION ADICIONAL CONSULTE EL SITIO DE INTERNET NTWC.ARH.NOAA.GOV.

* REGIONES COSTERAS DEL CARIBE FUERA DE PUERTO RICO... ISLAS VIRGENES DE LOS ESTADOS UNIDOS E ISLAS VIRGENES BRITANICAS DEBEN CONSULTAR LOS MENSAJES EMITIDOS POR EL CENTRO DE ALERTA DE TSUNAMI DEL PACIFICO EN SU SITIO DE INTERNET PTWC.WEATHER.GOV.

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PTWC Message #1

TEST...TSUNAMI MESSAGE NUMBER 1 ...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1406 UTC WED MAR 25 2015

THIS MESSAGE APPLIES TO COUNTRIES WITHIN AND BORDERING THE CARIBBEAN SEA...EXCEPT FOR PUERTO RICO...THE U.S. VIRGIN ISLANDS...AND THE BRITISH VIRGIN ISLANDS.

... A CARIBBEAN-WIDE TSUNAMI WATCH IS IN EFFECT ...

A TSUNAMI WATCH IS IN EFFECT FOR

PANAMA / COLOMBIA / COSTA RICA / HAITI / ARUBA / NICARAGUA / CAYMAN ISLANDS / JAMAICA / CUBA / BONAIRE / DOMINICAN REP / BAHAMAS / CURACAO / TURKS N CAICOS / VENEZUELA / SABA / SAINT KITTS / MONTSERRAT / MEXICO / HONDURAS / SINT EUSTATIUS / GUADELOUPE / DOMINICA / SAINT LUCIA / SINT MAARTEN / SAINT VINCENT / MARTINIQUE / ANGUILLA / GRENADA / BARBADOS / SAINT BARTHELEMY / ANTIGUA / BARBUDA / SAINT MARTIN / TRINIDAD TOBAGO / BELIZE / BERMUDA / GUATEMALA / FRENCH GUIANA / GUYANA / SURINAME / BRAZIL

THIS BULLETIN IS ISSUED AS ADVICE TO GOVERNMENT AGENCIES. ONLY NATIONAL AND LOCAL GOVERNMENT AGENCIES HAVE THE AUTHORITY TO MAKE DECISIONS REGARDING THE OFFICIAL STATE OF ALERT IN THEIR AREA AND ANY ACTIONS TO BE TAKEN IN RESPONSE.

AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS

ORIGIN TIME -	1400Z 25 MAR 2015
COORDINATES -	10.3 NORTH 78.8 WEST
LOCATION -	NORTH OF PANAMA

MAGNITUDE - 8.0

EVALUATION

EARTHQUAKES OF THIS SIZE HAVE THE POTENTIAL TO GENERATE A WIDESPREAD DESTRUCTIVE TSUNAMI THAT CAN AFFECT COASTLINES ACROSS THE ENTIRE CARIBBEAN REGION.

HOWEVER - IT IS NOT KNOWN THAT A TSUNAMI WAS GENERATED. THIS WATCH IS BASED ONLY ON THE EARTHQUAKE EVALUATION. AUTHORITIES IN THE REGION SHOULD TAKE APPROPRIATE ACTION IN RESPONSE TO THE POSSIBILITY OF A WIDESPREAD DESTRUCTIVE TSUNAMI.

ESTIMATED INITIAL TSUNAMI WAVE ARRIVAL TIMES AT FORECAST POINTS WITHIN THE WARNING AND WATCH AREAS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN SUCCESSIVE WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	FORECAST POINT	COORDINATES	ARRIVAL TIME
PANAMA	ALIGANDI	9.2N 78.0W	1425Z 25 MAR
	PUERTO_CARRETO	8.8N 77.6W	1439Z 25 MAR
	COLON	9.4N 79.9W	1451Z 25 MAR
	PUERTO_OBALDIA	8.7N 77.4W	1453Z 25 MAR
	BOCAS_DEL_TORO	9.4N 82.2W	1506Z 25 MAR
COLOMBIA	CARTAGENA	10.4N 75.6W	1442Z 25 MAR
	PUNTA_CARIBANA	8.6N 76.9W	1459Z 25 MAR
	SANTA_MARTA	11.2N 74.2W	1502Z 25 MAR
	BARRANQUILLA	11.1N 74.9W	1516Z 25 MAR
	RIOHACHA	11.6N 72.9W	1552Z 25 MAR
COSTA RICA	PUERTO_LIMON	10.0N 83.0W	1454Z 25 MAR
HAITI	JACMEL	18.1N 72.5W	1535Z 25 MAR
	JEREMIE	18.6N 74.1W	1551Z 25 MAR
	CAP_HAITEN	19.8N 72.2W	1626Z 25 MAR
	PORT_AU_PRINCE	18.5N 72.4W	1655Z 25 MAR
ARUBA	ORANJESTAD	12.5N 70.0W	1547Z 25 MAR
NICARAGUA	PUNTA_GORDA	11.4N 83.8W	1548Z 25 MAR
	PUERTO_CABEZAS	14.0N 83.4W	1936Z 25 MAR
CAYMAN ISLANDS	CAYMAN_BRAC	19.7N 79.9W	1551Z 25 MAR
	GRAND_CAYMAN	19.3N 81.3W	1600Z 25 MAR
JAMAICA	KINGSTON	17.9N 76.9W	1553Z 25 MAR
	MONTEGO_BAY	18.5N 77.9W	1615Z 25 MAR
CUBA	SANTIAGO_D_CUBA	19.9N 75.8W	1554Z 25 MAR
	BARACOA	20.4N 74.5W	1614Z 25 MAR
	CIENFUEGOS	22.0N 80.5W	1620Z 25 MAR
	GIBARA	21.1N 76.1W	1634Z 25 MAR
	LA_HABANA	23.2N 82.4W	1721Z 25 MAR
	SANTA_CRZ_D_SUR	20.7N 78.0W	1854Z 25 MAR
	NUEVA_GERONA	21.9N 82.8W	2010Z 25 MAR
BONAIRE	ONIMA	12.3N 68.3W	1557Z 25 MAR
DOMINICAN REP	SANTO_DOMINGO	18.5N 69.9W	1604Z 25 MAR
	CABO_ENGANO	18.6N 68.3W	1628Z 25 MAR
	PUERTO_PLATA	19.8N 70.7W	1637Z 25 MAR
BAHAMAS	GREAT_INAGUA	20.9N 73.7W	1620Z 25 MAR

	MAYAGUANA	22.3N	73.0W	1634Z 25 MAR
	LONG_ISLAND	23.3N	75.1W	1654Z 25 MAR
	SAN_SALVADOR	24.1N	74.5W	1654Z 25 MAR
	EXUMA	23.6N	75.9W	1704Z 25 MAR
	CROOKED_ISLAND	22.7N	74.1W	1709Z 25 MAR
	CAT_ISLAND	24.4N	75.5W	1713Z 25 MAR
	ELEUTHERA_ISLAN	25.2N	76.1W	1721Z 25 MAR
	ANDROS_ISLAND	25.0N	77.9W	1730Z 25 MAR
	NASSAU	25.1N	77.4W	1742Z 25 MAR
	FREEPORT	26.5N	78.8W	1754Z 25 MAR
	ABACO_ISLAND	26.6N	77.1W	1759Z 25 MAR
	BIMINI	25.8N	79.3W	1807Z 25 MAR
CURACAO	WILLEMSTAD	12.1N	68.9W	1621Z 25 MAR
TURKS N CAICOS	WEST_CAICOS	21.7N	72.5W	1630Z 25 MAR
	GRAND_TURK	21.5N	71.1W	1645Z 25 MAR
VENEZUELA	MAIQUETIA	10.6N	67.0W	1634Z 25 MAR
	CUMANA	10.5N	64.2W	1707Z 25 MAR
	PUNTO_FIJO	11.7N	70.2W	1807Z 25 MAR
	GOLFO_VENEZUELA	11.4N	71.2W	1906Z 25 MAR
	PORLAMAR	10.9N	63.8W	2031Z 25 MAR
SABA	SABA	17.6N	63.2W	1650Z 25 MAR
SAINT KITTS	BASSETERRE	17.3N	62.7W	1652Z 25 MAR
MONTSERRAT	PLYMOUTH	16.7N	62.2W	1653Z 25 MAR
MEXICO	COZUMEL	20.5N	87.0W	1655Z 25 MAR
	MADERO	22.3N	97.8W	1936Z 25 MAR
	VERACRUZ	19.2N	96.1W	1941Z 25 MAR
	TEXAS_BORDER	26.0N	97.1W	1951Z 25 MAR
	PROGRESO	21.3N	89.7W	2042Z 25 MAR
	CAMPECHE	19.9N	90.5W	2338Z 25 MAR
HONDURAS	PUERTO_CORTES	15.9N	88.0W	1655Z 25 MAR
	TRUJILLO	15.9N	86.0W	1741Z 25 MAR
SINT EUSTATIUS	SINT_EUSTATIUS	17.5N	63.0W	1656Z 25 MAR
GUADELOUPE	BASSE_TERRE	16.0N	61.7W	1656Z 25 MAR
DOMINICA	ROSEAU	15.3N	61.4W	1657Z 25 MAR
SAINT LUCIA	CASTRIES	14.0N	61.0W	1659Z 25 MAR
SINT MAARTEN	SIMPSON_BAAI	18.0N	63.1W	1700Z 25 MAR
SAINT VINCENT	KINGSTOWN	13.1N	61.2W	1701Z 25 MAR
MARTINIQUE	FORT_DE_FRANCE	14.6N	61.1W	1704Z 25 MAR
ANGUILLA	THE_VALLEY	18.3N	63.1W	1708Z 25 MAR
GRENADA	SAINT_GEORGES	12.0N	61.8W	1710Z 25 MAR
BARBADOS	BRIDGETOWN	13.1N	59.6W	1726Z 25 MAR
SAINT BARTHELEM	SAINT_BARTHELEM	17.9N	62.8W	1727Z 25 MAR
ANTIGUA	SAINT_JOHNS	17.1N	61.9W	1732Z 25 MAR
BARBUDA	PALMETTO_POINT	17.6N	61.9W	1735Z 25 MAR
SAINT MARTIN	BAIE_BLANCHE	18.1N	63.0W	1738Z 25 MAR
TRINIDAD TOBAGO	PIRATES_BAY	11.3N	60.6W	1753Z 25 MAR
	PORT_OF_SPAIN	10.6N	61.5W	1824Z 25 MAR
BELIZE	BELIZE_CITY	17.5N	88.2W	1805Z 25 MAR
BERMUDA	RUTHS_BAY	32.4N	64.6W	1819Z 25 MAR
GUATEMALA	PUERTO_BARRIOS	15.7N	88.6W	1847Z 25 MAR
FRENCH GUIANA	CAYENNE	4.9N	52.3W	2103Z 25 MAR
GUYANA	GEORGETOWN	6.8N	58.2W	2142Z 25 MAR
SURINAME	PARAMARIBO	5.9N	55.2W	2203Z 25 MAR
BRAZIL	FORTALEZA	3.7S	38.5W	2224Z 25 MAR
	SAO_LUIS	2.5S	44.3W	0044Z 26 MAR

ILHA_DE_MARACA 2.2N 50.5W 0049Z 26 MAR

ADDITIONAL BULLETINS WILL BE ISSUED BY THE PACIFIC TSUNAMI WARNING CENTER FOR THIS EVENT AS MORE INFORMATION BECOMES AVAILABLE.

PTWC Message #2

TEST...TSUNAMI MESSAGE NUMBER 2 ...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1430 UTC WED MAR 25 2015

THIS MESSAGE APPLIES TO COUNTRIES WITHIN AND BORDERING THE CARIBBEAN SEA...EXCEPT FOR PUERTO RICO...THE U.S. VIRGIN ISLANDS...AND THE BRITISH VIRGIN ISLANDS.

... A CARIBBEAN-WIDE TSUNAMI WATCH IS IN EFFECT ...

A TSUNAMI WATCH IS IN EFFECT FOR

PANAMA / COLOMBIA / COSTA RICA / HAITI / ARUBA / NICARAGUA / CAYMAN ISLANDS / JAMAICA / CUBA / BONAIRE / DOMINICAN REP / BAHAMAS / CURACAO / TURKS N CAICOS / VENEZUELA / SABA / SAINT KITTS / MONTSERRAT / MEXICO / HONDURAS / SINT EUSTATIUS / GUADELOUPE / DOMINICA / SAINT LUCIA / SINT MAARTEN / SAINT VINCENT / MARTINIQUE / ANGUILLA / GRENADA / BARBADOS / SAINT BARTHELEMY / ANTIGUA / BARBUDA / SAINT MARTIN / TRINIDAD TOBAGO / BELIZE / BERMUDA / GUATEMALA / FRENCH GUIANA / GUYANA / SURINAME / BRAZIL

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AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS
NOTE REVISED MAGNITUDE

ORIGIN TIME -	1400Z 25 MAR 2015
COORDINATES -	10.3 NORTH 78.8 WEST
LOCATION -	NORTH OF PANAMA
MAGNITUDE -	8.5

MEASUREMENTS OR REPORTS OF TSUNAMI WAVE ACTIVITY

GAUGE LOCATION	GAUGE COORDINATES LAT LON	TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
EL PORVENIR PA	9.5N 78.9W	1424	1.0M/03.3FT	-

EVALUATION

SEA LEVEL READINGS INDICATE A TSUNAMI WAS GENERATED. IT MAY HAVE ALREADY HAVE BEEN DESTRUCTIVE ALONG COASTS NEAR THE EARTHQUAKE EPICENTER.

BASED ON THESE DATA THE THREAT CONTINUES FOR ALL COASTAL AREAS OF THE CARIBBEAN. FOR THOSE AREAS - WHEN NO MAJOR WAVES HAVE OCCURRED FOR AT LEAST TWO HOURS AFTER THE ESTIMATED ARRIVAL TIME OR DAMAGING WAVES HAVE NOT OCCURRED FOR AT LEAST TWO HOURS THEN LOCAL AUTHORITIES CAN ASSUME THE THREAT IS PASSED. DANGER TO BOATS AND COASTAL STRUCTURES CAN CONTINUE FOR SEVERAL HOURS DUE TO RAPID CURRENTS. AS LOCAL CONDITIONS CAN CAUSE A WIDE VARIATION IN TSUNAMI WAVE ACTION THE ALL CLEAR DETERMINATION MUST BE MADE BY LOCAL AUTHORITIES.

ESTIMATED INITIAL TSUNAMI WAVE ARRIVAL TIMES AT FORECAST POINTS WITHIN THE WARNING AND WATCH AREAS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN SUCCESSIVE WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	FORECAST POINT	COORDINATES	ARRIVAL TIME
PANAMA	ALIGANDI	9.2N 78.0W	1425Z 25 MAR
	PUERTO_CARRETO	8.8N 77.6W	1439Z 25 MAR
	COLON	9.4N 79.9W	1451Z 25 MAR
	PUERTO_OBALDIA	8.7N 77.4W	1453Z 25 MAR
	BOCAS_DEL_TORO	9.4N 82.2W	1506Z 25 MAR
COLOMBIA	CARTAGENA	10.4N 75.6W	1442Z 25 MAR
	PUNTA_CARIBANA	8.6N 76.9W	1459Z 25 MAR
	SANTA_MARTA	11.2N 74.2W	1502Z 25 MAR
	BARRANQUILLA	11.1N 74.9W	1516Z 25 MAR
	RIOHACHA	11.6N 72.9W	1552Z 25 MAR
COSTA RICA	PUERTO_LIMON	10.0N 83.0W	1454Z 25 MAR
HAITI	JACMEL	18.1N 72.5W	1535Z 25 MAR
	JEREMIE	18.6N 74.1W	1551Z 25 MAR
	CAP_HAITEN	19.8N 72.2W	1626Z 25 MAR
	PORT_AU_PRINCE	18.5N 72.4W	1655Z 25 MAR
ARUBA	ORANJESTAD	12.5N 70.0W	1547Z 25 MAR
NICARAGUA	PUNTA_GORDA	11.4N 83.8W	1548Z 25 MAR
	PUERTO_CABEZAS	14.0N 83.4W	1936Z 25 MAR
CAYMAN ISLANDS	CAYMAN_BRAC	19.7N 79.9W	1551Z 25 MAR
	GRAND_CAYMAN	19.3N 81.3W	1600Z 25 MAR
JAMAICA	KINGSTON	17.9N 76.9W	1553Z 25 MAR
	MONTEGO_BAY	18.5N 77.9W	1615Z 25 MAR
CUBA	SANTIAGO_D_CUBA	19.9N 75.8W	1554Z 25 MAR
	BARACOA	20.4N 74.5W	1614Z 25 MAR
	CIENFUEGOS	22.0N 80.5W	1620Z 25 MAR
	GIBARA	21.1N 76.1W	1634Z 25 MAR
	LA_HABANA	23.2N 82.4W	1721Z 25 MAR
	SANTA_CRZ_D_SUR	20.7N 78.0W	1854Z 25 MAR
	NUEVA_GERONA	21.9N 82.8W	2010Z 25 MAR
BONAIRE	ONIMA	12.3N 68.3W	1557Z 25 MAR
DOMINICAN REP	SANTO_DOMINGO	18.5N 69.9W	1604Z 25 MAR
	CABO_ENGANO	18.6N 68.3W	1628Z 25 MAR
	PUERTO_PLATA	19.8N 70.7W	1637Z 25 MAR

BAHAMAS	GREAT_INAGUA	20.9N	73.7W	1620Z 25 MAR
	MAYAGUANA	22.3N	73.0W	1634Z 25 MAR
	LONG_ISLAND	23.3N	75.1W	1654Z 25 MAR
	SAN_SALVADOR	24.1N	74.5W	1654Z 25 MAR
	EXUMA	23.6N	75.9W	1704Z 25 MAR
	CROOKED_ISLAND	22.7N	74.1W	1709Z 25 MAR
	CAT_ISLAND	24.4N	75.5W	1713Z 25 MAR
	ELEUTHERA_ISLAN	25.2N	76.1W	1721Z 25 MAR
	ANDROS_ISLAND	25.0N	77.9W	1730Z 25 MAR
	NASSAU	25.1N	77.4W	1742Z 25 MAR
	FREEPORT	26.5N	78.8W	1754Z 25 MAR
	ABACO_ISLAND	26.6N	77.1W	1759Z 25 MAR
	BIMINI	25.8N	79.3W	1807Z 25 MAR
CURACAO	WILLEMSTAD	12.1N	68.9W	1621Z 25 MAR
TURKS N CAICOS	WEST_CAICOS	21.7N	72.5W	1630Z 25 MAR
	GRAND_TURK	21.5N	71.1W	1645Z 25 MAR
VENEZUELA	MAIQUETIA	10.6N	67.0W	1634Z 25 MAR
	CUMANA	10.5N	64.2W	1707Z 25 MAR
	PUNTO_FIJO	11.7N	70.2W	1807Z 25 MAR
	GOLFO_VENEZUELA	11.4N	71.2W	1906Z 25 MAR
	PORLAMAR	10.9N	63.8W	2031Z 25 MAR
SABA	SABA	17.6N	63.2W	1650Z 25 MAR
SAINT KITTS	BASSETERRE	17.3N	62.7W	1652Z 25 MAR
MONTSERRAT	PLYMOUTH	16.7N	62.2W	1653Z 25 MAR
MEXICO	COZUMEL	20.5N	87.0W	1655Z 25 MAR
	MADERO	22.3N	97.8W	1936Z 25 MAR
	VERACRUZ	19.2N	96.1W	1941Z 25 MAR
	TEXAS_BORDER	26.0N	97.1W	1951Z 25 MAR
	PROGRESO	21.3N	89.7W	2042Z 25 MAR
	CAMPECHE	19.9N	90.5W	2338Z 25 MAR
HONDURAS	PUERTO_CORTES	15.9N	88.0W	1655Z 25 MAR
	TRUJILLO	15.9N	86.0W	1741Z 25 MAR
SINT EUSTATIUS	SINT_EUSTATIUS	17.5N	63.0W	1656Z 25 MAR
GUADELOUPE	BASSE_TERRE	16.0N	61.7W	1656Z 25 MAR
DOMINICA	ROSEAU	15.3N	61.4W	1657Z 25 MAR
SAINT LUCIA	CASTRIES	14.0N	61.0W	1659Z 25 MAR
SINT MAARTEN	SIMPSON_BAAI	18.0N	63.1W	1700Z 25 MAR
SAINT VINCENT	KINGSTOWN	13.1N	61.2W	1701Z 25 MAR
MARTINIQUE	FORT_DE_FRANCE	14.6N	61.1W	1704Z 25 MAR
ANGUILLA	THE_VALLEY	18.3N	63.1W	1708Z 25 MAR
GRENADA	SAINT_GEORGES	12.0N	61.8W	1710Z 25 MAR
BARBADOS	BRIDGETOWN	13.1N	59.6W	1726Z 25 MAR
SAINT BARTHELEM	SAINT_BARTHELEM	17.9N	62.8W	1727Z 25 MAR
ANTIGUA	SAINT_JOHNS	17.1N	61.9W	1732Z 25 MAR
BARBUDA	PALMETTO_POINT	17.6N	61.9W	1735Z 25 MAR
SAINT MARTIN	BAIE_BLANCHE	18.1N	63.0W	1738Z 25 MAR
TRINIDAD TOBAGO	PIRATES_BAY	11.3N	60.6W	1753Z 25 MAR
	PORT_OF_SPAIN	10.6N	61.5W	1824Z 25 MAR
BELIZE	BELIZE_CITY	17.5N	88.2W	1805Z 25 MAR
BERMUDA	RUTHS_BAY	32.4N	64.6W	1819Z 25 MAR
GUATEMALA	PUERTO_BARRIOS	15.7N	88.6W	1847Z 25 MAR
FRENCH GUIANA	CAYENNE	4.9N	52.3W	2103Z 25 MAR
GUYANA	GEORGETOWN	6.8N	58.2W	2142Z 25 MAR
SURINAME	PARAMARIBO	5.9N	55.2W	2203Z 25 MAR
BRAZIL	FORTALEZA	3.7S	38.5W	2224Z 25 MAR

SAO_LUIS	2.5S 44.3W	0044Z 26 MAR
ILHA_DE_MARACA	2.2N 50.5W	0049Z 26 MAR

ADDITIONAL BULLETINS WILL BE ISSUED BY THE PACIFIC TSUNAMI WARNING CENTER FOR THIS EVENT AS MORE INFORMATION BECOMES AVAILABLE.

PTWC Message #3

TEST...TSUNAMI MESSAGE NUMBER 3 ...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1500 UTC WED MAR 25 2015

THIS MESSAGE APPLIES TO COUNTRIES WITHIN AND BORDERING THE CARIBBEAN SEA...EXCEPT FOR PUERTO RICO...THE U.S. VIRGIN ISLANDS...AND THE BRITISH VIRGIN ISLANDS.

... A CARIBBEAN-WIDE TSUNAMI WATCH IS IN EFFECT ...

A TSUNAMI WATCH IS IN EFFECT FOR

PANAMA / COLOMBIA / COSTA RICA / HAITI / ARUBA / NICARAGUA /
CAYMAN ISLANDS / JAMAICA / CUBA / BONAIRE / DOMINICAN REP /
BAHAMAS / CURACAO / TURKS N CAICOS / VENEZUELA / SABA /
SAINT KITTS / MONTSERRAT / MEXICO / HONDURAS / SINT EUSTATIUS /
GUADELOUPE / DOMINICA / SAINT LUCIA / SINT MAARTEN /
SAINT VINCENT / MARTINIQUE / ANGUILLA / GRENADA / BARBADOS /
SAINT BARTHELEMY / ANTIGUA / BARBUDA / SAINT MARTIN /
TRINIDAD TOBAGO / BELIZE / BERMUDA / GUATEMALA / FRENCH GUIANA /
GUYANA / SURINAME / BRAZIL

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AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS

ORIGIN TIME -	1400Z 25 MAR 2015
COORDINATES -	10.3 NORTH 78.8 WEST
LOCATION -	NORTH OF PANAMA
MAGNITUDE -	8.5

MEASUREMENTS OR REPORTS OF TSUNAMI WAVE ACTIVITY

GAUGE LOCATION	GAUGE COORDINATES LAT LON	TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
EL PORVENIR PA	9.5N 78.9W	1455	2.4M/07.8FT	15

EVALUATION

SEA LEVEL READINGS INDICATE A TSUNAMI WAS GENERATED. IT MAY HAVE ALREADY HAVE BEEN DESTRUCTIVE ALONG COASTS NEAR THE EARTHQUAKE EPICENTER.

BASED ON THESE DATA THE THREAT CONTINUES FOR ALL COASTAL AREAS OF THE CARIBBEAN. FOR THOSE AREAS - WHEN NO MAJOR WAVES HAVE OCCURRED FOR AT LEAST TWO HOURS AFTER THE ESTIMATED ARRIVAL TIME OR DAMAGING WAVES HAVE NOT OCCURRED FOR AT LEAST TWO HOURS THEN LOCAL AUTHORITIES CAN ASSUME THE THREAT IS PASSED. DANGER TO BOATS AND COASTAL STRUCTURES CAN CONTINUE FOR SEVERAL HOURS DUE TO RAPID CURRENTS. AS LOCAL CONDITIONS CAN CAUSE A WIDE VARIATION IN TSUNAMI WAVE ACTION THE ALL CLEAR DETERMINATION MUST BE MADE BY LOCAL AUTHORITIES.

ESTIMATED INITIAL TSUNAMI WAVE ARRIVAL TIMES AT FORECAST POINTS WITHIN THE WARNING AND WATCH AREAS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN SUCCESSIVE WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	FORECAST POINT	COORDINATES	ARRIVAL TIME
PANAMA	ALIGANDI	9.2N 78.0W	1425Z 25 MAR
	PUERTO_CARRETO	8.8N 77.6W	1439Z 25 MAR
	COLON	9.4N 79.9W	1451Z 25 MAR
	PUERTO_OBALDIA	8.7N 77.4W	1453Z 25 MAR
	BOCAS_DEL_TORO	9.4N 82.2W	1506Z 25 MAR
COLOMBIA	CARTAGENA	10.4N 75.6W	1442Z 25 MAR
	PUNTA_CARIBANA	8.6N 76.9W	1459Z 25 MAR
	SANTA_MARTA	11.2N 74.2W	1502Z 25 MAR
	BARRANQUILLA	11.1N 74.9W	1516Z 25 MAR
	RIOHACHA	11.6N 72.9W	1552Z 25 MAR
COSTA RICA	PUERTO_LIMON	10.0N 83.0W	1454Z 25 MAR
HAITI	JACMEL	18.1N 72.5W	1535Z 25 MAR
	JEREMIE	18.6N 74.1W	1551Z 25 MAR
	CAP_HAITEN	19.8N 72.2W	1626Z 25 MAR
	PORT_AU_PRINCE	18.5N 72.4W	1655Z 25 MAR
ARUBA	ORANJESTAD	12.5N 70.0W	1547Z 25 MAR
NICARAGUA	PUNTA_GORDA	11.4N 83.8W	1548Z 25 MAR
	PUERTO_CABEZAS	14.0N 83.4W	1936Z 25 MAR
CAYMAN ISLANDS	CAYMAN_BRAC	19.7N 79.9W	1551Z 25 MAR
	GRAND_CAYMAN	19.3N 81.3W	1600Z 25 MAR
JAMAICA	KINGSTON	17.9N 76.9W	1553Z 25 MAR
	MONTEGO_BAY	18.5N 77.9W	1615Z 25 MAR
CUBA	SANTIAGO_D_CUBA	19.9N 75.8W	1554Z 25 MAR
	BARACOA	20.4N 74.5W	1614Z 25 MAR
	CIENFUEGOS	22.0N 80.5W	1620Z 25 MAR
	GIBARA	21.1N 76.1W	1634Z 25 MAR
	LA_HABANA	23.2N 82.4W	1721Z 25 MAR
	SANTA_CRZ_D_SUR	20.7N 78.0W	1854Z 25 MAR
	NUEVA_GERONA	21.9N 82.8W	2010Z 25 MAR
BONAIRE	ONIMA	12.3N 68.3W	1557Z 25 MAR
DOMINICAN REP	SANTO_DOMINGO	18.5N 69.9W	1604Z 25 MAR
	CABO_ENGANO	18.6N 68.3W	1628Z 25 MAR
	PUERTO_PLATA	19.8N 70.7W	1637Z 25 MAR

BAHAMAS	GREAT_INAGUA	20.9N 73.7W	1620Z 25 MAR
	MAYAGUANA	22.3N 73.0W	1634Z 25 MAR
	LONG_ISLAND	23.3N 75.1W	1654Z 25 MAR
	SAN_SALVADOR	24.1N 74.5W	1654Z 25 MAR
	EXUMA	23.6N 75.9W	1704Z 25 MAR
	CROOKED_ISLAND	22.7N 74.1W	1709Z 25 MAR
	CAT_ISLAND	24.4N 75.5W	1713Z 25 MAR
	ELEUTHERA_ISLAN	25.2N 76.1W	1721Z 25 MAR
	ANDROS_ISLAND	25.0N 77.9W	1730Z 25 MAR
	NASSAU	25.1N 77.4W	1742Z 25 MAR
	FREEPORT	26.5N 78.8W	1754Z 25 MAR
	ABACO_ISLAND	26.6N 77.1W	1759Z 25 MAR
	BIMINI	25.8N 79.3W	1807Z 25 MAR
CURACAO	WILLEMSTAD	12.1N 68.9W	1621Z 25 MAR
TURKS N CAICOS	WEST_CAICOS	21.7N 72.5W	1630Z 25 MAR
	GRAND_TURK	21.5N 71.1W	1645Z 25 MAR
VENEZUELA	MAIQUETIA	10.6N 67.0W	1634Z 25 MAR
	CUMANA	10.5N 64.2W	1707Z 25 MAR
	PUNTO_FIJO	11.7N 70.2W	1807Z 25 MAR
	GOLFO_VENEZUELA	11.4N 71.2W	1906Z 25 MAR
	PORLAMAR	10.9N 63.8W	2031Z 25 MAR
SABA	SABA	17.6N 63.2W	1650Z 25 MAR
SAINT KITTS	BASSETERRE	17.3N 62.7W	1652Z 25 MAR
MONTSERRAT	PLYMOUTH	16.7N 62.2W	1653Z 25 MAR
MEXICO	COZUMEL	20.5N 87.0W	1655Z 25 MAR
	MADERO	22.3N 97.8W	1936Z 25 MAR
	VERACRUZ	19.2N 96.1W	1941Z 25 MAR
	TEXAS_BORDER	26.0N 97.1W	1951Z 25 MAR
	PROGRESO	21.3N 89.7W	2042Z 25 MAR
	CAMPECHE	19.9N 90.5W	2338Z 25 MAR
HONDURAS	PUERTO_CORTES	15.9N 88.0W	1655Z 25 MAR
	TRUJILLO	15.9N 86.0W	1741Z 25 MAR
SINT EUSTATIUS	SINT_EUSTATIUS	17.5N 63.0W	1656Z 25 MAR
GUADELOUPE	BASSE_TERRE	16.0N 61.7W	1656Z 25 MAR
DOMINICA	ROSEAU	15.3N 61.4W	1657Z 25 MAR
SAINT LUCIA	CASTRIES	14.0N 61.0W	1659Z 25 MAR
SINT MAARTEN	SIMPSON_BAAI	18.0N 63.1W	1700Z 25 MAR
SAINT VINCENT	KINGSTOWN	13.1N 61.2W	1701Z 25 MAR
MARTINIQUE	FORT_DE_FRANCE	14.6N 61.1W	1704Z 25 MAR
ANGUILLA	THE_VALLEY	18.3N 63.1W	1708Z 25 MAR
GRENADA	SAINT_GEORGES	12.0N 61.8W	1710Z 25 MAR
BARBADOS	BRIDGETOWN	13.1N 59.6W	1726Z 25 MAR
SAINT BARTHELEM	SAINT_BARTHELEM	17.9N 62.8W	1727Z 25 MAR
ANTIGUA	SAINT_JOHNS	17.1N 61.9W	1732Z 25 MAR
BARBUDA	PALMETTO_POINT	17.6N 61.9W	1735Z 25 MAR
SAINT MARTIN	BAIE_BLANCHE	18.1N 63.0W	1738Z 25 MAR
TRINIDAD TOBAGO	PIRATES_BAY	11.3N 60.6W	1753Z 25 MAR
	PORT_OF_SPAIN	10.6N 61.5W	1824Z 25 MAR
BELIZE	BELIZE_CITY	17.5N 88.2W	1805Z 25 MAR
BERMUDA	RUTHS_BAY	32.4N 64.6W	1819Z 25 MAR
GUATEMALA	PUERTO_BARRIOS	15.7N 88.6W	1847Z 25 MAR
FRENCH GUIANA	CAYENNE	4.9N 52.3W	2103Z 25 MAR
GUYANA	GEORGETOWN	6.8N 58.2W	2142Z 25 MAR
SURINAME	PARAMARIBO	5.9N 55.2W	2203Z 25 MAR
BRAZIL	FORTALEZA	3.7S 38.5W	2224Z 25 MAR

SAO_LUIS	2.5S 44.3W	0044Z 26 MAR
ILHA_DE_MARACA	2.2N 50.5W	0049Z 26 MAR

ADDITIONAL BULLETINS WILL BE ISSUED BY THE PACIFIC TSUNAMI WARNING CENTER FOR THIS EVENT AS MORE INFORMATION BECOMES AVAILABLE.

PTWC Message #4

TEST...TSUNAMI MESSAGE NUMBER 4 ...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1602 UTC WED MAR 25 2015

THIS MESSAGE APPLIES TO COUNTRIES WITHIN AND BORDERING THE CARIBBEAN SEA...EXCEPT FOR PUERTO RICO...THE U.S. VIRGIN ISLANDS...AND THE BRITISH VIRGIN ISLANDS.

... A CARIBBEAN-WIDE TSUNAMI WATCH IS IN EFFECT ...

A TSUNAMI WATCH IS IN EFFECT FOR

PANAMA / COLOMBIA / COSTA RICA / HAITI / ARUBA / NICARAGUA / CAYMAN ISLANDS / JAMAICA / CUBA / BONAIRE / DOMINICAN REP / BAHAMAS / CURACAO / TURKS N CAICOS / VENEZUELA / SABA / SAINT KITTS / MONTSERRAT / MEXICO / HONDURAS / SINT EUSTATIUS / GUADELOUPE / DOMINICA / SAINT LUCIA / SINT MAARTEN / SAINT VINCENT / MARTINIQUE / ANGUILLA / GRENADA / BARBADOS / SAINT BARTHELEMY / ANTIGUA / BARBUDA / SAINT MARTIN / TRINIDAD TOBAGO / BELIZE / BERMUDA / GUATEMALA / FRENCH GUIANA / GUYANA / SURINAME / BRAZIL

THIS BULLETIN IS ISSUED AS ADVICE TO GOVERNMENT AGENCIES. ONLY NATIONAL AND LOCAL GOVERNMENT AGENCIES HAVE THE AUTHORITY TO MAKE DECISIONS REGARDING THE OFFICIAL STATE OF ALERT IN THEIR AREA AND ANY ACTIONS TO BE TAKEN IN RESPONSE.

AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS

ORIGIN TIME -	1400Z 25 MAR 2015
COORDINATES -	10.3 NORTH 78.8 WEST
LOCATION -	NORTH OF PANAMA
MAGNITUDE -	8.5

MEASUREMENTS OR REPORTS OF TSUNAMI WAVE ACTIVITY

GAUGE LOCATION	GAUGE COORDINATES LAT LON	TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
EL PORVENIR PA	9.5N 78.9W	1455	2.4M/07.8FT	15
LIMON CR	10.0N 83.0W	1544	0.6M/01.9FT	-
SANTA MARTA CO	11.2N 74.2W	1547	1.4M/04.8FT	-
SAN ANDRES CO	12.6N 81.7W	1555	1.0M/03.3FT	-

EVALUATION

SEA LEVEL READINGS INDICATE A TSUNAMI WAS GENERATED. IT MAY HAVE ALREADY HAVE BEEN DESTRUCTIVE ALONG COASTS NEAR THE EARTHQUAKE EPICENTER.

BASED ON THESE DATA THE THREAT CONTINUES FOR ALL COASTAL AREAS OF THE CARIBBEAN. FOR THOSE AREAS - WHEN NO MAJOR WAVES HAVE OCCURRED FOR AT LEAST TWO HOURS AFTER THE ESTIMATED ARRIVAL TIME OR DAMAGING WAVES HAVE NOT OCCURRED FOR AT LEAST TWO HOURS THEN LOCAL AUTHORITIES CAN ASSUME THE THREAT IS PASSED. DANGER TO BOATS AND COASTAL STRUCTURES CAN CONTINUE FOR SEVERAL HOURS DUE TO RAPID CURRENTS. AS LOCAL CONDITIONS CAN CAUSE A WIDE VARIATION IN TSUNAMI WAVE ACTION THE ALL CLEAR DETERMINATION MUST BE MADE BY LOCAL AUTHORITIES.

ESTIMATED INITIAL TSUNAMI WAVE ARRIVAL TIMES AT FORECAST POINTS WITHIN THE WARNING AND WATCH AREAS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN SUCCESSIVE WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	FORECAST POINT	COORDINATES	ARRIVAL TIME
PANAMA	ALIGANDI	9.2N 78.0W	1425Z 25 MAR
	PUERTO_CARRETO	8.8N 77.6W	1439Z 25 MAR
	COLON	9.4N 79.9W	1451Z 25 MAR
	PUERTO_OBALDIA	8.7N 77.4W	1453Z 25 MAR
	BOCAS_DEL_TORO	9.4N 82.2W	1506Z 25 MAR
COLOMBIA	CARTAGENA	10.4N 75.6W	1442Z 25 MAR
	PUNTA_CARIBANA	8.6N 76.9W	1459Z 25 MAR
	SANTA_MARTA	11.2N 74.2W	1502Z 25 MAR
	BARRANQUILLA	11.1N 74.9W	1516Z 25 MAR
	RIOHACHA	11.6N 72.9W	1552Z 25 MAR
COSTA RICA	PUERTO_LIMON	10.0N 83.0W	1454Z 25 MAR
HAITI	JACMEL	18.1N 72.5W	1535Z 25 MAR
	JEREMIE	18.6N 74.1W	1551Z 25 MAR
	CAP_HAITEN	19.8N 72.2W	1626Z 25 MAR
	PORT_AU_PRINCE	18.5N 72.4W	1655Z 25 MAR
ARUBA	ORANJESTAD	12.5N 70.0W	1547Z 25 MAR
NICARAGUA	PUNTA_GORDA	11.4N 83.8W	1548Z 25 MAR
	PUERTO_CABEZAS	14.0N 83.4W	1936Z 25 MAR
CAYMAN ISLANDS	CAYMAN_BRAC	19.7N 79.9W	1551Z 25 MAR
	GRAND_CAYMAN	19.3N 81.3W	1600Z 25 MAR
JAMAICA	KINGSTON	17.9N 76.9W	1553Z 25 MAR
	MONTEGO_BAY	18.5N 77.9W	1615Z 25 MAR
CUBA	SANTIAGO_D_CUBA	19.9N 75.8W	1554Z 25 MAR
	BARACOA	20.4N 74.5W	1614Z 25 MAR
	CIENFUEGOS	22.0N 80.5W	1620Z 25 MAR
	GIBARA	21.1N 76.1W	1634Z 25 MAR
	LA_HABANA	23.2N 82.4W	1721Z 25 MAR
	SANTA_CRZ_D_SUR	20.7N 78.0W	1854Z 25 MAR
	NUEVA_GERONA	21.9N 82.8W	2010Z 25 MAR
BONAIRE	ONIMA	12.3N 68.3W	1557Z 25 MAR

DOMINICAN REP	SANTO_DOMINGO	18.5N 69.9W	1604Z 25 MAR
	CABO_ENGANO	18.6N 68.3W	1628Z 25 MAR
	PUERTO_PLATA	19.8N 70.7W	1637Z 25 MAR
BAHAMAS	GREAT_INAGUA	20.9N 73.7W	1620Z 25 MAR
	MAYAGUANA	22.3N 73.0W	1634Z 25 MAR
	LONG_ISLAND	23.3N 75.1W	1654Z 25 MAR
	SAN_SALVADOR	24.1N 74.5W	1654Z 25 MAR
	EXUMA	23.6N 75.9W	1704Z 25 MAR
	CROOKED_ISLAND	22.7N 74.1W	1709Z 25 MAR
	CAT_ISLAND	24.4N 75.5W	1713Z 25 MAR
	ELEUTHERA_ISLAN	25.2N 76.1W	1721Z 25 MAR
	ANDROS_ISLAND	25.0N 77.9W	1730Z 25 MAR
	NASSAU	25.1N 77.4W	1742Z 25 MAR
	FREEPORT	26.5N 78.8W	1754Z 25 MAR
	ABACO_ISLAND	26.6N 77.1W	1759Z 25 MAR
	BIMINI	25.8N 79.3W	1807Z 25 MAR
CURACAO	WILLEMSTAD	12.1N 68.9W	1621Z 25 MAR
TURKS N CAICOS	WEST_CAICOS	21.7N 72.5W	1630Z 25 MAR
	GRAND_TURK	21.5N 71.1W	1645Z 25 MAR
VENEZUELA	MAIQUETIA	10.6N 67.0W	1634Z 25 MAR
	CUMANA	10.5N 64.2W	1707Z 25 MAR
	PUNTO_FIJO	11.7N 70.2W	1807Z 25 MAR
	GOLFO_VENEZUELA	11.4N 71.2W	1906Z 25 MAR
	PORLAMAR	10.9N 63.8W	2031Z 25 MAR
SABA	SABA	17.6N 63.2W	1650Z 25 MAR
SAINT KITTS	BASSETERRE	17.3N 62.7W	1652Z 25 MAR
MONTSERRAT	PLYMOUTH	16.7N 62.2W	1653Z 25 MAR
MEXICO	COZUMEL	20.5N 87.0W	1655Z 25 MAR
	MADERO	22.3N 97.8W	1936Z 25 MAR
	VERACRUZ	19.2N 96.1W	1941Z 25 MAR
	TEXAS_BORDER	26.0N 97.1W	1951Z 25 MAR
	PROGRESO	21.3N 89.7W	2042Z 25 MAR
	CAMPECHE	19.9N 90.5W	2338Z 25 MAR
HONDURAS	PUERTO_CORTES	15.9N 88.0W	1655Z 25 MAR
	TRUJILLO	15.9N 86.0W	1741Z 25 MAR
SINT EUSTATIUS	SINT_EUSTATIUS	17.5N 63.0W	1656Z 25 MAR
GUADELOUPE	BASSE_TERRE	16.0N 61.7W	1656Z 25 MAR
DOMINICA	ROSEAU	15.3N 61.4W	1657Z 25 MAR
SAINT LUCIA	CASTRIES	14.0N 61.0W	1659Z 25 MAR
SINT MAARTEN	SIMPSON_BAAI	18.0N 63.1W	1700Z 25 MAR
SAINT VINCENT	KINGSTOWN	13.1N 61.2W	1701Z 25 MAR
MARTINIQUE	FORT_DE_FRANCE	14.6N 61.1W	1704Z 25 MAR
ANGUILLA	THE_VALLEY	18.3N 63.1W	1708Z 25 MAR
GRENADA	SAINT_GEORGES	12.0N 61.8W	1710Z 25 MAR
BARBADOS	BRIDGETOWN	13.1N 59.6W	1726Z 25 MAR
SAINT BARTHELEM	SAINT_BARTHELEM	17.9N 62.8W	1727Z 25 MAR
ANTIGUA	SAINT_JOHNS	17.1N 61.9W	1732Z 25 MAR
BARBUDA	PALMETTO_POINT	17.6N 61.9W	1735Z 25 MAR
SAINT MARTIN	BAIE_BLANCHE	18.1N 63.0W	1738Z 25 MAR
TRINIDAD TOBAGO	PIRATES_BAY	11.3N 60.6W	1753Z 25 MAR
	PORT_OF_SPAIN	10.6N 61.5W	1824Z 25 MAR
BELIZE	BELIZE_CITY	17.5N 88.2W	1805Z 25 MAR
BERMUDA	RUTHS_BAY	32.4N 64.6W	1819Z 25 MAR
GUATEMALA	PUERTO_BARRIOS	15.7N 88.6W	1847Z 25 MAR
FRENCH GUIANA	CAYENNE	4.9N 52.3W	2103Z 25 MAR

GUYANA	GEORGETOWN	6.8N 58.2W	2142Z 25 MAR
SURINAME	PARAMARIBO	5.9N 55.2W	2203Z 25 MAR
BRAZIL	FORTALEZA	3.7S 38.5W	2224Z 25 MAR
	SAO_LUIS	2.5S 44.3W	0044Z 26 MAR
	ILHA_DE_MARACA	2.2N 50.5W	0049Z 26 MAR

ADDITIONAL BULLETINS WILL BE ISSUED BY THE PACIFIC TSUNAMI WARNING CENTER FOR THIS EVENT AS MORE INFORMATION BECOMES AVAILABLE.

PTWC Message #5

TEST...TSUNAMI MESSAGE NUMBER 5 ...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1702 UTC WED MAR 25 2015

THIS MESSAGE APPLIES TO COUNTRIES WITHIN AND BORDERING THE CARIBBEAN SEA...EXCEPT FOR PUERTO RICO...THE U.S. VIRGIN ISLANDS...AND THE BRITISH VIRGIN ISLANDS.

... A CARIBBEAN-WIDE TSUNAMI WATCH IS IN EFFECT ...

A TSUNAMI WATCH IS IN EFFECT FOR

PANAMA / COLOMBIA / COSTA RICA / HAITI / ARUBA / NICARAGUA /
CAYMAN ISLANDS / JAMAICA / CUBA / BONAIRE / DOMINICAN REP /
BAHAMAS / CURACAO / TURKS N CAICOS / VENEZUELA / SABA /
SAINT KITTS / MONTSERRAT / MEXICO / HONDURAS / SINT EUSTATIUS /
GUADELOUPE / DOMINICA / SAINT LUCIA / SINT MAARTEN /
SAINT VINCENT / MARTINIQUE / ANGUILLA / GRENADA / BARBADOS /
SAINT BARTHELEMY / ANTIGUA / BARBUDA / SAINT MARTIN /
TRINIDAD TOBAGO / BELIZE / BERMUDA / GUATEMALA / FRENCH GUIANA /
GUYANA / SURINAME / BRAZIL

THIS BULLETIN IS ISSUED AS ADVICE TO GOVERNMENT AGENCIES. ONLY NATIONAL AND LOCAL GOVERNMENT AGENCIES HAVE THE AUTHORITY TO MAKE DECISIONS REGARDING THE OFFICIAL STATE OF ALERT IN THEIR AREA AND ANY ACTIONS TO BE TAKEN IN RESPONSE.

AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS

ORIGIN TIME -	1400Z 25 MAR 2015
COORDINATES -	10.3 NORTH 78.8 WEST
LOCATION -	NORTH OF PANAMA
MAGNITUDE -	8.5

MEASUREMENTS OR REPORTS OF TSUNAMI WAVE ACTIVITY

GAUGE LOCATION	GAUGE COORDINATES LAT LON	TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
EL PORVENIR PA	9.5N 78.9W	1455	2.4M/07.8FT	15

LIMON CR	10.0N 83.0W	1544	0.6M/01.9FT	12
SANTA MARTA CO	11.2N 74.2W	1634	2.6M/08.6FT	13
SAN ANDRES CO	12.6N 81.7W	1623	1.9M/06.2FT	13
PORT AU PRINCE HT	18.5N 72.4W	1631	0.4M/01.3FT	14
SANTO DOMINGO DO	18.4N 69.6W	1634	0.9M/02.9FT	12
BULLEN BAY CURACAO	12.2N 69.0W	1645	0.7M/01.7FT	15
MONA ISLAND PR	18.1N 67.9W	1636	0.8M/02.8FT	15
MAYAGUEZ PR	18.2N 67.2W	1647	0.5M/01.6FT	16
MAGUEYES IS PR	18.0N 67.0W	1642	0.2M/00.6FT	-
YABUCOA PR	18.1N 65.8W	1641	0.6M/01.9FT	10
SAN JUAN PR	18.5N 66.1W	1640	0.1M/00.4FT	20
LIMETREE USVI	17.7N 64.7W	1642	0.3M/01.1FT	13
ST CROIX USVI	17.7N 64.6W	1650	0.2M/00.8FT	-
ESPERANZA VIEQUES PR	18.1N 65.5W	1652	0.4M/01.2FT	-
FAJARDO PR	18.3N 65.6W	1653	0.3M/01.1FT	14
CHARLOTTE AMALI USVI	18.3N 64.9W	1655	0.6M/01.9FT	-
LAMESHUR BAY USVI	18.3N 64.7W	1655	0.5M/01.7FT	-

EVALUATION

SEA LEVEL READINGS INDICATE A TSUNAMI WAS GENERATED. IT MAY HAVE ALREADY HAVE BEEN DESTRUCTIVE ALONG COASTS NEAR THE EARTHQUAKE EPICENTER.

BASED ON THESE DATA THE THREAT CONTINUES FOR ALL COASTAL AREAS OF THE CARIBBEAN. FOR THOSE AREAS - WHEN NO MAJOR WAVES HAVE OCCURRED FOR AT LEAST TWO HOURS AFTER THE ESTIMATED ARRIVAL TIME OR DAMAGING WAVES HAVE NOT OCCURRED FOR AT LEAST TWO HOURS THEN LOCAL AUTHORITIES CAN ASSUME THE THREAT IS PASSED. DANGER TO BOATS AND COASTAL STRUCTURES CAN CONTINUE FOR SEVERAL HOURS DUE TO RAPID CURRENTS. AS LOCAL CONDITIONS CAN CAUSE A WIDE VARIATION IN TSUNAMI WAVE ACTION THE ALL CLEAR DETERMINATION MUST BE MADE BY LOCAL AUTHORITIES.

ESTIMATED INITIAL TSUNAMI WAVE ARRIVAL TIMES AT FORECAST POINTS WITHIN THE WARNING AND WATCH AREAS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN SUCCESSIVE WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	FORECAST POINT	COORDINATES	ARRIVAL TIME
PANAMA	ALIGANDI	9.2N 78.0W	1425Z 25 MAR
	PUERTO_CARRETO	8.8N 77.6W	1439Z 25 MAR
	COLON	9.4N 79.9W	1451Z 25 MAR
	PUERTO_OBALDIA	8.7N 77.4W	1453Z 25 MAR
	BOCAS_DEL_TORO	9.4N 82.2W	1506Z 25 MAR
COLOMBIA	CARTAGENA	10.4N 75.6W	1442Z 25 MAR
	PUNTA_CARIBANA	8.6N 76.9W	1459Z 25 MAR
	SANTA_MARTA	11.2N 74.2W	1502Z 25 MAR
	BARRANQUILLA	11.1N 74.9W	1516Z 25 MAR
	RIOHACHA	11.6N 72.9W	1552Z 25 MAR
COSTA RICA	PUERTO_LIMON	10.0N 83.0W	1454Z 25 MAR
HAITI	JACMEL	18.1N 72.5W	1535Z 25 MAR
	JEREMIE	18.6N 74.1W	1551Z 25 MAR

	CAP_HAITEN	19.8N	72.2W	1626Z 25 MAR
	PORT_AU_PRINCE	18.5N	72.4W	1655Z 25 MAR
ARUBA	ORANJESTAD	12.5N	70.0W	1547Z 25 MAR
NICARAGUA	PUNTA_GORDA	11.4N	83.8W	1548Z 25 MAR
	PUERTO_CABEZAS	14.0N	83.4W	1936Z 25 MAR
CAYMAN ISLANDS	CAYMAN_BRAC	19.7N	79.9W	1551Z 25 MAR
	GRAND_CAYMAN	19.3N	81.3W	1600Z 25 MAR
JAMAICA	KINGSTON	17.9N	76.9W	1553Z 25 MAR
	MONTEGO_BAY	18.5N	77.9W	1615Z 25 MAR
CUBA	SANTIAGO_D_CUBA	19.9N	75.8W	1554Z 25 MAR
	BARACOA	20.4N	74.5W	1614Z 25 MAR
	CIENFUEGOS	22.0N	80.5W	1620Z 25 MAR
	GIBARA	21.1N	76.1W	1634Z 25 MAR
	LA_HABANA	23.2N	82.4W	1721Z 25 MAR
	SANTA_CRZ_D_SUR	20.7N	78.0W	1854Z 25 MAR
	NUEVA_GERONA	21.9N	82.8W	2010Z 25 MAR
BONAIRE	ONIMA	12.3N	68.3W	1557Z 25 MAR
DOMINICAN REP	SANTO_DOMINGO	18.5N	69.9W	1604Z 25 MAR
	CABO_ENGANO	18.6N	68.3W	1628Z 25 MAR
	PUERTO_PLATA	19.8N	70.7W	1637Z 25 MAR
BAHAMAS	GREAT_INAGUA	20.9N	73.7W	1620Z 25 MAR
	MAYAGUANA	22.3N	73.0W	1634Z 25 MAR
	LONG_ISLAND	23.3N	75.1W	1654Z 25 MAR
	SAN_SALVADOR	24.1N	74.5W	1654Z 25 MAR
	EXUMA	23.6N	75.9W	1704Z 25 MAR
	CROOKED_ISLAND	22.7N	74.1W	1709Z 25 MAR
	CAT_ISLAND	24.4N	75.5W	1713Z 25 MAR
	ELEUTHERA_ISLAN	25.2N	76.1W	1721Z 25 MAR
	ANDROS_ISLAND	25.0N	77.9W	1730Z 25 MAR
	NASSAU	25.1N	77.4W	1742Z 25 MAR
	FREEPORT	26.5N	78.8W	1754Z 25 MAR
	ABACO_ISLAND	26.6N	77.1W	1759Z 25 MAR
	BIMINI	25.8N	79.3W	1807Z 25 MAR
CURACAO	WILLEMSTAD	12.1N	68.9W	1621Z 25 MAR
TURKS N CAICOS	WEST_CAICOS	21.7N	72.5W	1630Z 25 MAR
	GRAND_TURK	21.5N	71.1W	1645Z 25 MAR
VENEZUELA	MAIQUETIA	10.6N	67.0W	1634Z 25 MAR
	CUMANA	10.5N	64.2W	1707Z 25 MAR
	PUNTO_FIJO	11.7N	70.2W	1807Z 25 MAR
	GOLFO_VENEZUELA	11.4N	71.2W	1906Z 25 MAR
	PORLAMAR	10.9N	63.8W	2031Z 25 MAR
SABA	SABA	17.6N	63.2W	1650Z 25 MAR
SAINT KITTS	BASSETERRE	17.3N	62.7W	1652Z 25 MAR
MONTSERRAT	PLYMOUTH	16.7N	62.2W	1653Z 25 MAR
MEXICO	COZUMEL	20.5N	87.0W	1655Z 25 MAR
	MADERO	22.3N	97.8W	1936Z 25 MAR
	VERACRUZ	19.2N	96.1W	1941Z 25 MAR
	TEXAS_BORDER	26.0N	97.1W	1951Z 25 MAR
	PROGRESO	21.3N	89.7W	2042Z 25 MAR
	CAMPECHE	19.9N	90.5W	2338Z 25 MAR
HONDURAS	PUERTO_CORTES	15.9N	88.0W	1655Z 25 MAR
	TRUJILLO	15.9N	86.0W	1741Z 25 MAR
SINT EUSTATIUS	SINT_EUSTATIUS	17.5N	63.0W	1656Z 25 MAR
GUADELOUPE	BASSE_TERRE	16.0N	61.7W	1656Z 25 MAR
DOMINICA	ROSEAU	15.3N	61.4W	1657Z 25 MAR

SAINT LUCIA	CASTRIES	14.0N	61.0W	1659Z 25 MAR
SINT MAARTEN	SIMPSON_BAAI	18.0N	63.1W	1700Z 25 MAR
SAINT VINCENT	KINGSTOWN	13.1N	61.2W	1701Z 25 MAR
MARTINIQUE	FORT_DE_FRANCE	14.6N	61.1W	1704Z 25 MAR
ANGUILLA	THE_VALLEY	18.3N	63.1W	1708Z 25 MAR
GRENADA	SAINT_GEORGES	12.0N	61.8W	1710Z 25 MAR
BARBADOS	BRIDGETOWN	13.1N	59.6W	1726Z 25 MAR
SAINT BARTHELEM	SAINT_BARTHELEM	17.9N	62.8W	1727Z 25 MAR
ANTIGUA	SAINT_JOHNS	17.1N	61.9W	1732Z 25 MAR
BARBUDA	PALMETTO_POINT	17.6N	61.9W	1735Z 25 MAR
SAINT MARTIN	BAIE_BLANCHE	18.1N	63.0W	1738Z 25 MAR
TRINIDAD TOBAGO	PIRATES_BAY	11.3N	60.6W	1753Z 25 MAR
	PORT_OF_SPAIN	10.6N	61.5W	1824Z 25 MAR
BELIZE	BELIZE_CITY	17.5N	88.2W	1805Z 25 MAR
BERMUDA	RUTHS_BAY	32.4N	64.6W	1819Z 25 MAR
GUATEMALA	PUERTO_BARRIOS	15.7N	88.6W	1847Z 25 MAR
FRENCH GUIANA	CAYENNE	4.9N	52.3W	2103Z 25 MAR
GUYANA	GEORGETOWN	6.8N	58.2W	2142Z 25 MAR
SURINAME	PARAMARIBO	5.9N	55.2W	2203Z 25 MAR
BRAZIL	FORTALEZA	3.7S	38.5W	2224Z 25 MAR
	SAO_LUIS	2.5S	44.3W	0044Z 26 MAR
	ILHA_DE_MARACA	2.2N	50.5W	0049Z 26 MAR

ADDITIONAL BULLETINS WILL BE ISSUED BY THE PACIFIC TSUNAMI WARNING CENTER FOR THIS EVENT AS MORE INFORMATION BECOMES AVAILABLE.

PTWC Message #6

TEST...TSUNAMI MESSAGE NUMBER 6 ...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1800 UTC WED MAR 25 2015

THIS MESSAGE APPLIES TO COUNTRIES WITHIN AND BORDERING THE CARIBBEAN SEA...EXCEPT FOR PUERTO RICO...THE U.S. VIRGIN ISLANDS...AND THE BRITISH VIRGIN ISLANDS.

... A CARIBBEAN-WIDE TSUNAMI WATCH IS IN EFFECT ...

A TSUNAMI WATCH IS IN EFFECT FOR

PANAMA / COLOMBIA / COSTA RICA / HAITI / ARUBA / NICARAGUA /
CAYMAN ISLANDS / JAMAICA / CUBA / BONAIRE / DOMINICAN REP /
BAHAMAS / CURACAO / TURKS N CAICOS / VENEZUELA / SABA /
SAINT KITTS / MONTSERRAT / MEXICO / HONDURAS / SINT EUSTATIUS /
GUADELOUPE / DOMINICA / SAINT LUCIA / SINT MAARTEN /
SAINT VINCENT / MARTINIQUE / ANGUILLA / GRENADA / BARBADOS /
SAINT BARTHELEMY / ANTIGUA / BARBUDA / SAINT MARTIN /
TRINIDAD TOBAGO / BELIZE / BERMUDA / GUATEMALA / FRENCH GUIANA /
GUYANA / SURINAME / BRAZIL

THIS BULLETIN IS ISSUED AS ADVICE TO GOVERNMENT AGENCIES. ONLY NATIONAL AND LOCAL GOVERNMENT AGENCIES HAVE THE AUTHORITY TO MAKE

DECISIONS REGARDING THE OFFICIAL STATE OF ALERT IN THEIR AREA AND ANY ACTIONS TO BE TAKEN IN RESPONSE.

AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS

ORIGIN TIME -	1400Z 25 MAR 2015
COORDINATES -	10.3 NORTH 78.8 WEST
LOCATION -	NORTH OF PANAMA
MAGNITUDE -	8.5

MEASUREMENTS OR REPORTS OF TSUNAMI WAVE ACTIVITY

GAUGE LOCATION	GAUGE COORDINATES LAT LON	TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
EL PORVENIR PA	9.5N 78.9W	1505	2.4M/07.8FT	15
LIMON CR	10.0N 83.0W	1544	0.6M/01.9FT	12
SANTA MARTA CO	11.2N 74.2W	1634	2.6M/08.6FT	13
SAN ANDRES CO	12.6N 81.7W	1623	1.9M/06.2FT	13
PORT AU PRINCE HT	18.5N 72.4W	1722	0.6M/02.1FT	14
SANTO DOMINGO DO	18.4N 69.6W	1734	3.0M/09.8FT	12
BULLEN BAY CURACAO	12.2N 69.0W	1715	0.7M/02.4FT	15
MONA ISLAND PR	18.1N 67.9W	1745	1.7M/05.6FT	15
MAYAGUEZ PR	18.2N 67.2W	1732	0.9M/03.0FT	15
MAGUEYES IS PR	18.0N 67.0W	1746	0.9M/02.9FT	14
YABUCOA PR	18.1N 65.8W	1735	0.7M/04.2FT	14
SAN JUAN PR	18.5N 66.1W	1721	0.1M/00.4FT	20
LIMETREE USVI	17.7N 64.7W	1756	0.6M/02.1FT	-
ST CROIX USVI	17.7N 64.6W	1731	0.5M/01.8FT	18
ESPERANZA VIEQUES PR	18.1N 65.5W	1751	1.1M/03.5FT	13
FAJARDO PR	18.3N 65.6W	1755	0.5M/01.7FT	14
CHARLOTTE AMALI USVI	18.3N 64.9W	1748	1.1M/03.6FT	17
LAMESHUR BAY USVI	18.3N 64.7W	1744	1.3M/04.2FT	16
PUERTO PLATA DO	19.8N 70.7W	1744	0.1M/00.4FT	20
BASSETERRE KN	17.3N 62.7W	1734	0.5M/01.6FT	19
BARBUDA AG	17.6N 61.8W	1745	0.4M/01.3FT	14
DESIRADE GP	16.3N 61.1W	1739	0.3M/01.1FT	12
ROSEAU DM	15.3N 61.4W	1751	0.2M/00.5FT	12
CALLIAQUA VC	13.1N 61.2W	1734	0.3M/01.0FT	15
PRICKLY BAY GD	12.0N 61.8W	1745	0.2M/00.6FT	-

EVALUATION

SEA LEVEL READINGS INDICATE A TSUNAMI WAS GENERATED. IT MAY HAVE ALREADY HAVE BEEN DESTRUCTIVE ALONG COASTS NEAR THE EARTHQUAKE EPICENTER.

BASED ON THESE DATA THE THREAT CONTINUES FOR ALL COASTAL AREAS OF THE CARIBBEAN. FOR THOSE AREAS - WHEN NO MAJOR WAVES HAVE OCCURRED FOR AT LEAST TWO HOURS AFTER THE ESTIMATED ARRIVAL TIME OR DAMAGING WAVES HAVE NOT OCCURRED FOR AT LEAST TWO HOURS THEN LOCAL AUTHORITIES CAN ASSUME THE THREAT IS PASSED. DANGER TO BOATS AND COASTAL STRUCTURES CAN CONTINUE FOR SEVERAL HOURS DUE TO RAPID CURRENTS. AS LOCAL CONDITIONS CAN CAUSE A WIDE

VARIATION IN TSUNAMI WAVE ACTION THE ALL CLEAR DETERMINATION MUST BE MADE BY LOCAL AUTHORITIES.

ESTIMATED INITIAL TSUNAMI WAVE ARRIVAL TIMES AT FORECAST POINTS WITHIN THE WARNING AND WATCH AREAS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN SUCCESSIVE WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATIO	FORECAST POINT	COORDINATES	ARRIVAL TIME
PANAMA	ALIGANDI	9.2N 78.0W	1425Z 25 MAR
	PUERTO_CARRETO	8.8N 77.6W	1439Z 25 MAR
	COLON	9.4N 79.9W	1451Z 25 MAR
	PUERTO_OBALDIA	8.7N 77.4W	1453Z 25 MAR
	BOCAS_DEL_TORO	9.4N 82.2W	1506Z 25 MAR
COLOMBIA	CARTAGENA	10.4N 75.6W	1442Z 25 MAR
	PUNTA_CARIBANA	8.6N 76.9W	1459Z 25 MAR
	SANTA_MARTA	11.2N 74.2W	1502Z 25 MAR
	BARRANQUILLA	11.1N 74.9W	1516Z 25 MAR
	RIOHACHA	11.6N 72.9W	1552Z 25 MAR
COSTA RICA	PUERTO_LIMON	10.0N 83.0W	1454Z 25 MAR
HAITI	JACMEL	18.1N 72.5W	1535Z 25 MAR
	JEREMIE	18.6N 74.1W	1551Z 25 MAR
	CAP_HAITEN	19.8N 72.2W	1626Z 25 MAR
	PORT_AU_PRINCE	18.5N 72.4W	1655Z 25 MAR
ARUBA	ORANJESTAD	12.5N 70.0W	1547Z 25 MAR
NICARAGUA	PUNTA_GORDA	11.4N 83.8W	1548Z 25 MAR
	PUERTO_CABEZAS	14.0N 83.4W	1936Z 25 MAR
CAYMAN ISLANDS	CAYMAN_BRAC	19.7N 79.9W	1551Z 25 MAR
	GRAND_CAYMAN	19.3N 81.3W	1600Z 25 MAR
JAMAICA	KINGSTON	17.9N 76.9W	1553Z 25 MAR
	MONTEGO_BAY	18.5N 77.9W	1615Z 25 MAR
CUBA	SANTIAGO_D_CUBA	19.9N 75.8W	1554Z 25 MAR
	BARACOA	20.4N 74.5W	1614Z 25 MAR
	CIENFUEGOS	22.0N 80.5W	1620Z 25 MAR
	GIBARA	21.1N 76.1W	1634Z 25 MAR
	LA_HABANA	23.2N 82.4W	1721Z 25 MAR
	SANTA_CRZ_D_SUR	20.7N 78.0W	1854Z 25 MAR
	NUEVA_GERONA	21.9N 82.8W	2010Z 25 MAR
BONAIRE	ONIMA	12.3N 68.3W	1557Z 25 MAR
DOMINICAN REP	SANTO_DOMINGO	18.5N 69.9W	1604Z 25 MAR
	CABO_ENGANO	18.6N 68.3W	1628Z 25 MAR
	PUERTO_PLATA	19.8N 70.7W	1637Z 25 MAR
BAHAMAS	GREAT_INAGUA	20.9N 73.7W	1620Z 25 MAR
	MAYAGUANA	22.3N 73.0W	1634Z 25 MAR
	LONG_ISLAND	23.3N 75.1W	1654Z 25 MAR
	SAN_SALVADOR	24.1N 74.5W	1654Z 25 MAR
	EXUMA	23.6N 75.9W	1704Z 25 MAR
	CROOKED_ISLAND	22.7N 74.1W	1709Z 25 MAR
	CAT_ISLAND	24.4N 75.5W	1713Z 25 MAR
	ELEUTHERA_ISLAN	25.2N 76.1W	1721Z 25 MAR
	ANDROS_ISLAND	25.0N 77.9W	1730Z 25 MAR
	NASSAU	25.1N 77.4W	1742Z 25 MAR
	FREEPORT	26.5N 78.8W	1754Z 25 MAR

	ABACO_ISLAND	26.6N	77.1W	1759Z 25 MAR
	BIMINI	25.8N	79.3W	1807Z 25 MAR
CURACAO	WILLEMSTAD	12.1N	68.9W	1621Z 25 MAR
TURKS N CAICOS	WEST_CAICOS	21.7N	72.5W	1630Z 25 MAR
	GRAND_TURK	21.5N	71.1W	1645Z 25 MAR
VENEZUELA	MAIQUETIA	10.6N	67.0W	1634Z 25 MAR
	CUMANA	10.5N	64.2W	1707Z 25 MAR
	PUNTO_FIJO	11.7N	70.2W	1807Z 25 MAR
	GOLFO_VENEZUELA	11.4N	71.2W	1906Z 25 MAR
	PORLAMAR	10.9N	63.8W	2031Z 25 MAR
SABA	SABA	17.6N	63.2W	1650Z 25 MAR
SAINT KITTS	BASSETERRE	17.3N	62.7W	1652Z 25 MAR
MONTSERRAT	PLYMOUTH	16.7N	62.2W	1653Z 25 MAR
MEXICO	COZUMEL	20.5N	87.0W	1655Z 25 MAR
	MADERO	22.3N	97.8W	1936Z 25 MAR
	VERACRUZ	19.2N	96.1W	1941Z 25 MAR
	TEXAS_BORDER	26.0N	97.1W	1951Z 25 MAR
	PROGRESO	21.3N	89.7W	2042Z 25 MAR
	CAMPECHE	19.9N	90.5W	2338Z 25 MAR
HONDURAS	PUERTO_CORTES	15.9N	88.0W	1655Z 25 MAR
	TRUJILLO	15.9N	86.0W	1741Z 25 MAR
SINT EUSTATIUS	SINT_EUSTATIUS	17.5N	63.0W	1656Z 25 MAR
GUADELOUPE	BASSE_TERRE	16.0N	61.7W	1656Z 25 MAR
DOMINICA	ROSEAU	15.3N	61.4W	1657Z 25 MAR
SAINT LUCIA	CASTRIES	14.0N	61.0W	1659Z 25 MAR
SINT MAARTEN	SIMPSON_BAAI	18.0N	63.1W	1700Z 25 MAR
SAINT VINCENT	KINGSTOWN	13.1N	61.2W	1701Z 25 MAR
MARTINIQUE	FORT_DE_FRANCE	14.6N	61.1W	1704Z 25 MAR
ANGUILLA	THE_VALLEY	18.3N	63.1W	1708Z 25 MAR
GRENADA	SAINT_GEORGES	12.0N	61.8W	1710Z 25 MAR
BARBADOS	BRIDGETOWN	13.1N	59.6W	1726Z 25 MAR
SAINT BARTHELEM	SAINT_BARTHELEM	17.9N	62.8W	1727Z 25 MAR
ANTIGUA	SAINT_JOHNS	17.1N	61.9W	1732Z 25 MAR
BARBUDA	PALMETTO_POINT	17.6N	61.9W	1735Z 25 MAR
SAINT MARTIN	BAIE_BLANCHE	18.1N	63.0W	1738Z 25 MAR
TRINIDAD TOBAGO	PIRATES_BAY	11.3N	60.6W	1753Z 25 MAR
	PORT_OF_SPAIN	10.6N	61.5W	1824Z 25 MAR
BELIZE	BELIZE_CITY	17.5N	88.2W	1805Z 25 MAR
BERMUDA	RUTHS_BAY	32.4N	64.6W	1819Z 25 MAR
GUATEMALA	PUERTO_BARRIOS	15.7N	88.6W	1847Z 25 MAR
FRENCH GUIANA	CAYENNE	4.9N	52.3W	2103Z 25 MAR
GUYANA	GEORGETOWN	6.8N	58.2W	2142Z 25 MAR
SURINAME	PARAMARIBO	5.9N	55.2W	2203Z 25 MAR
BRAZIL	FORTALEZA	3.7S	38.5W	2224Z 25 MAR
	SAO_LUIS	2.5S	44.3W	0044Z 26 MAR
	ILHA_DE_MARACA	2.2N	50.5W	0049Z 26 MAR

ADDITIONAL BULLETINS WILL BE ISSUED BY THE PACIFIC TSUNAMI WARNING CENTER FOR THIS EVENT AS MORE INFORMATION BECOMES AVAILABLE.

PTWC Message #7

TEST...TSUNAMI MESSAGE NUMBER 7 ...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1900 UTC WED MAR 25 2015

THIS MESSAGE APPLIES TO COUNTRIES WITHIN AND BORDERING THE CARIBBEAN SEA...EXCEPT FOR PUERTO RICO...THE U.S. VIRGIN ISLANDS...AND THE BRITISH VIRGIN ISLANDS.

... A CARIBBEAN-WIDE TSUNAMI WATCH IS IN EFFECT ...

A TSUNAMI WATCH IS IN EFFECT FOR

PANAMA / COLOMBIA / COSTA RICA / HAITI / ARUBA / NICARAGUA / CAYMAN ISLANDS / JAMAICA / CUBA / BONAIRE / DOMINICAN REP / BAHAMAS / CURACAO / TURKS N CAICOS / VENEZUELA / SABA / SAINT KITTS / MONTSERRAT / MEXICO / HONDURAS / SINT EUSTATIUS / GUADELOUPE / DOMINICA / SAINT LUCIA / SINT MAARTEN / SAINT VINCENT / MARTINIQUE / ANGUILLA / GRENADA / BARBADOS / SAINT BARTHELEMY / ANTIGUA / BARBUDA / SAINT MARTIN / TRINIDAD TOBAGO / BELIZE / BERMUDA / GUATEMALA / FRENCH GUIANA / GUYANA / SURINAME / BRAZIL

THIS BULLETIN IS ISSUED AS ADVICE TO GOVERNMENT AGENCIES. ONLY NATIONAL AND LOCAL GOVERNMENT AGENCIES HAVE THE AUTHORITY TO MAKE DECISIONS REGARDING THE OFFICIAL STATE OF ALERT IN THEIR AREA AND ANY ACTIONS TO BE TAKEN IN RESPONSE.

AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS

ORIGIN TIME -	1400Z 25 MAR 2015
COORDINATES -	10.3 NORTH 78.8 WEST
LOCATION -	NORTH OF PANAMA
MAGNITUDE -	8.5

MEASUREMENTS OR REPORTS OF TSUNAMI WAVE ACTIVITY

GAUGE LOCATION	GAUGE COORDINATES LAT LON	TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
EL PORVENIR PA	9.5N 78.9W	1505	2.4M/07.8FT	15
LIMON CR	10.0N 83.0W	1544	0.6M/01.9FT	12
SANTA MARTA CO	11.2N 74.2W	1634	2.6M/08.6FT	13
SAN ANDRES CO	12.6N 81.7W	1623	1.9M/06.2FT	13
PORT AU PRINCE HT	18.5N 72.4W	1722	0.6M/02.1FT	14
SANTO DOMINGO DO	18.4N 69.6W	1734	3.0M/09.8FT	12
BULLEN BAY CURACAO	12.2N 69.0W	1715	0.7M/02.4FT	15
MONA ISLAND PR	18.1N 67.9W	1745	1.7M/05.6FT	15
MAYAGUEZ PR	18.2N 67.2W	1732	0.9M/03.0FT	15
MAGUEYES IS PR	18.0N 67.0W	1746	0.9M/02.9FT	14
YABUCOA PR	18.1N 65.8W	1735	0.7M/04.2FT	14
SAN JUAN PR	18.5N 66.1W	1721	0.1M/00.4FT	20
LIMETREE USVI	17.7N 64.7W	1756	0.6M/02.1FT	15

ST CROIX USVI	17.7N 64.6W	1731	0.5M/01.8FT 18
ESPERANZA VIEQUES PR	18.1N 65.5W	1751	1.1M/03.5FT 13
FAJARDO PR	18.3N 65.6W	1755	0.5M/01.7FT 14
CHARLOTTE AMALI USVI	18.3N 64.9W	1748	1.1M/03.6FT 17
LAMESHUR BAY USVI	18.3N 64.7W	1744	1.3M/04.2FT 16
PUERTO PLATA DO	19.8N 70.7W	1823	0.2M/00.5FT 20
BASSETERRE KN	17.3N 62.7W	1845	0.6M/01.9FT 19
BARBUDA AG	17.6N 61.8W	1812	0.5M/01.8FT 14
DESIRADE GP	16.3N 61.1W	1845	0.5M/01.7FT 12
ROSEAU DM	15.3N 61.4W	1822	0.2M/00.7FT 12
CALLIAQUA VC	13.1N 61.2W	1847	0.4M/01.4FT 15
PRICKLY BAY GD	12.0N 61.8W	1821	0.2M/00.7FT 18

EVALUATION

SEA LEVEL READINGS INDICATE A TSUNAMI WAS GENERATED. IT MAY HAVE ALREADY HAVE BEEN DESTRUCTIVE ALONG COASTS NEAR THE EARTHQUAKE EPICENTER.

BASED ON THESE DATA THE THREAT CONTINUES FOR ALL COASTAL AREAS OF THE CARIBBEAN. FOR THOSE AREAS - WHEN NO MAJOR WAVES HAVE OCCURRED FOR AT LEAST TWO HOURS AFTER THE ESTIMATED ARRIVAL TIME OR DAMAGING WAVES HAVE NOT OCCURRED FOR AT LEAST TWO HOURS THEN LOCAL AUTHORITIES CAN ASSUME THE THREAT IS PASSED. DANGER TO BOATS AND COASTAL STRUCTURES CAN CONTINUE FOR SEVERAL HOURS DUE TO RAPID CURRENTS. AS LOCAL CONDITIONS CAN CAUSE A WIDE VARIATION IN TSUNAMI WAVE ACTION THE ALL CLEAR DETERMINATION MUST BE MADE BY LOCAL AUTHORITIES.

ESTIMATED INITIAL TSUNAMI WAVE ARRIVAL TIMES AT FORECAST POINTS WITHIN THE WARNING AND WATCH AREAS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN SUCCESSIVE WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	FORECAST POINT	COORDINATES	ARRIVAL TIME
PANAMA	ALIGANDI	9.2N 78.0W	1425Z 25 MAR
	PUERTO_CARRETO	8.8N 77.6W	1439Z 25 MAR
	COLON	9.4N 79.9W	1451Z 25 MAR
	PUERTO_OBALDIA	8.7N 77.4W	1453Z 25 MAR
	BOCAS_DEL_TORO	9.4N 82.2W	1506Z 25 MAR
COLOMBIA	CARTAGENA	10.4N 75.6W	1442Z 25 MAR
	PUNTA_CARIBANA	8.6N 76.9W	1459Z 25 MAR
	SANTA_MARTA	11.2N 74.2W	1502Z 25 MAR
	BARRANQUILLA	11.1N 74.9W	1516Z 25 MAR
	RIOHACHA	11.6N 72.9W	1552Z 25 MAR
COSTA RICA	PUERTO_LIMON	10.0N 83.0W	1454Z 25 MAR
HAITI	JACMEL	18.1N 72.5W	1535Z 25 MAR
	JEREMIE	18.6N 74.1W	1551Z 25 MAR
	CAP_HAITEN	19.8N 72.2W	1626Z 25 MAR
	PORT_AU_PRINCE	18.5N 72.4W	1655Z 25 MAR
ARUBA	ORANJESTAD	12.5N 70.0W	1547Z 25 MAR
NICARAGUA	PUNTA_GORDA	11.4N 83.8W	1548Z 25 MAR
	PUERTO_CABEZAS	14.0N 83.4W	1936Z 25 MAR

CAYMAN ISLANDS	CAYMAN_BRAC	19.7N	79.9W	1551Z 25 MAR
	GRAND_CAYMAN	19.3N	81.3W	1600Z 25 MAR
JAMAICA	KINGSTON	17.9N	76.9W	1553Z 25 MAR
	MONTEGO_BAY	18.5N	77.9W	1615Z 25 MAR
CUBA	SANTIAGO_D_CUBA	19.9N	75.8W	1554Z 25 MAR
	BARACOA	20.4N	74.5W	1614Z 25 MAR
	CIENFUEGOS	22.0N	80.5W	1620Z 25 MAR
	GIBARA	21.1N	76.1W	1634Z 25 MAR
	LA_HABANA	23.2N	82.4W	1721Z 25 MAR
	SANTA_CRZ_D_SUR	20.7N	78.0W	1854Z 25 MAR
	NUEVA_GERONA	21.9N	82.8W	2010Z 25 MAR
BONAIRE	ONIMA	12.3N	68.3W	1557Z 25 MAR
DOMINICAN REP	SANTO_DOMINGO	18.5N	69.9W	1604Z 25 MAR
	CABO_ENGANO	18.6N	68.3W	1628Z 25 MAR
	PUERTO_PLATA	19.8N	70.7W	1637Z 25 MAR
BAHAMAS	GREAT_INAGUA	20.9N	73.7W	1620Z 25 MAR
	MAYAGUANA	22.3N	73.0W	1634Z 25 MAR
	LONG_ISLAND	23.3N	75.1W	1654Z 25 MAR
	SAN_SALVADOR	24.1N	74.5W	1654Z 25 MAR
	EXUMA	23.6N	75.9W	1704Z 25 MAR
	CROOKED_ISLAND	22.7N	74.1W	1709Z 25 MAR
	CAT_ISLAND	24.4N	75.5W	1713Z 25 MAR
	ELEUTHERA_ISLAN	25.2N	76.1W	1721Z 25 MAR
	ANDROS_ISLAND	25.0N	77.9W	1730Z 25 MAR
	NASSAU	25.1N	77.4W	1742Z 25 MAR
	FREEPORT	26.5N	78.8W	1754Z 25 MAR
	ABACO_ISLAND	26.6N	77.1W	1759Z 25 MAR
	BIMINI	25.8N	79.3W	1807Z 25 MAR
CURACAO	WILLEMSTAD	12.1N	68.9W	1621Z 25 MAR
TURKS N CAICOS	WEST_CAICOS	21.7N	72.5W	1630Z 25 MAR
	GRAND_TURK	21.5N	71.1W	1645Z 25 MAR
VENEZUELA	MAIQUETIA	10.6N	67.0W	1634Z 25 MAR
	CUMANA	10.5N	64.2W	1707Z 25 MAR
	PUNTO_FIJO	11.7N	70.2W	1807Z 25 MAR
	GOLFO_VENEZUELA	11.4N	71.2W	1906Z 25 MAR
	PORLAMAR	10.9N	63.8W	2031Z 25 MAR
SABA	SABA	17.6N	63.2W	1650Z 25 MAR
SAINT KITTS	BASSETERRE	17.3N	62.7W	1652Z 25 MAR
MONTSERRAT	PLYMOUTH	16.7N	62.2W	1653Z 25 MAR
MEXICO	COZUMEL	20.5N	87.0W	1655Z 25 MAR
	MADERO	22.3N	97.8W	1936Z 25 MAR
	VERACRUZ	19.2N	96.1W	1941Z 25 MAR
	TEXAS_BORDER	26.0N	97.1W	1951Z 25 MAR
	PROGRESO	21.3N	89.7W	2042Z 25 MAR
	CAMPECHE	19.9N	90.5W	2338Z 25 MAR
HONDURAS	PUERTO_CORTES	15.9N	88.0W	1655Z 25 MAR
	TRUJILLO	15.9N	86.0W	1741Z 25 MAR
SINT EUSTATIUS	SINT_EUSTATIUS	17.5N	63.0W	1656Z 25 MAR
GUADELOUPE	BASSE_TERRE	16.0N	61.7W	1656Z 25 MAR
DOMINICA	ROSEAU	15.3N	61.4W	1657Z 25 MAR
SAINT LUCIA	CASTRIES	14.0N	61.0W	1659Z 25 MAR
SINT MAARTEN	SIMPSON_BAAI	18.0N	63.1W	1700Z 25 MAR
SAINT VINCENT	KINGSTOWN	13.1N	61.2W	1701Z 25 MAR
MARTINIQUE	FORT_DE_FRANCE	14.6N	61.1W	1704Z 25 MAR
ANGUILLA	THE_VALLEY	18.3N	63.1W	1708Z 25 MAR

GRENADA	SAINT_GEORGES	12.0N 61.8W	1710Z 25 MAR
BARBADOS	BRIDGETOWN	13.1N 59.6W	1726Z 25 MAR
SAINT BARTHELEM	SAINT_BARTHELEM	17.9N 62.8W	1727Z 25 MAR
ANTIGUA	SAINT_JOHNS	17.1N 61.9W	1732Z 25 MAR
BARBUDA	PALMETTO_POINT	17.6N 61.9W	1735Z 25 MAR
SAINT MARTIN	BAIE_BLANCHE	18.1N 63.0W	1738Z 25 MAR
TRINIDAD TOBAGO	PIRATES_BAY	11.3N 60.6W	1753Z 25 MAR
	PORT_OF_SPAIN	10.6N 61.5W	1824Z 25 MAR
BELIZE	BELIZE_CITY	17.5N 88.2W	1805Z 25 MAR
BERMUDA	RUTHS_BAY	32.4N 64.6W	1819Z 25 MAR
GUATEMALA	PUERTO_BARRIOS	15.7N 88.6W	1847Z 25 MAR
FRENCH GUIANA	CAYENNE	4.9N 52.3W	2103Z 25 MAR
GUYANA	GEORGETOWN	6.8N 58.2W	2142Z 25 MAR
SURINAME	PARAMARIBO	5.9N 55.2W	2203Z 25 MAR
BRAZIL	FORTALEZA	3.7S 38.5W	2224Z 25 MAR
	SAO_LUIS	2.5S 44.3W	0044Z 26 MAR
	ILHA_DE_MARACA	2.2N 50.5W	0049Z 26 MAR

ADDITIONAL BULLETINS WILL BE ISSUED BY THE PACIFIC TSUNAMI WARNING CENTER FOR THIS EVENT AS MORE INFORMATION BECOMES AVAILABLE.

PTWC Message #8

TEST...TSUNAMI MESSAGE NUMBER 8 ...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1945 UTC THU MAR 05 2015

THIS MESSAGE APPLIES TO COUNTRIES WITHIN AND BORDERING THE CARIBBEAN SEA...EXCEPT FOR PUERTO RICO...THE U.S. VIRGIN ISLANDS...AND THE BRITISH VIRGIN ISLANDS.

... THE TSUNAMI WATCH IS CANCELLED ...

THIS BULLETIN IS ISSUED AS ADVICE TO GOVERNMENT AGENCIES. ONLY NATIONAL AND LOCAL GOVERNMENT AGENCIES HAVE THE AUTHORITY TO MAKE DECISIONS REGARDING THE OFFICIAL STATE OF ALERT IN THEIR AREA AND ANY ACTIONS TO BE TAKEN IN RESPONSE.

AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS

ORIGIN TIME -	1400Z 25 MAR 2015
COORDINATES -	10.3 NORTH 78.8 WEST
LOCATION -	NORTH OF PANAMA
MAGNITUDE -	8.5

MEASUREMENTS OR REPORTS OF TSUNAMI WAVE ACTIVITY

GAUGE LOCATION	GAUGE COORDINATES LAT LON	TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
EL PORVENIR PA	9.5N 78.9W	1505	2.4M/07.8FT	15
LIMON CR	10.0N 83.0W	1544	0.6M/01.9FT	12
SANTA MARTA CO	11.2N 74.2W	1634	2.6M/08.6FT	13
SAN ANDRES CO	12.6N 81.7W	1623	1.9M/06.2FT	13
PORT AU PRINCE HT	18.5N 72.4W	1722	0.6M/02.1FT	14
SANTO DOMINGO DO	18.4N 69.6W	1734	3.0M/09.8FT	12
BULLEN BAY CURACAO	12.2N 69.0W	1715	0.7M/02.4FT	15
MONA ISLAND PR	18.1N 67.9W	1745	1.7M/05.6FT	15
MAYAGUEZ PR	18.2N 67.2W	1732	0.9M/03.0FT	15
MAGUEYES IS PR	18.0N 67.0W	1746	0.9M/02.9FT	14
YABUCOA PR	18.1N 65.8W	1735	0.7M/04.2FT	14
SAN JUAN PR	18.5N 66.1W	1721	0.1M/00.4FT	20
LIMETREE USVI	17.7N 64.7W	1756	0.6M/02.1FT	13
ST CROIX USVI	17.7N 64.6W	1731	0.5M/01.8FT	18
ESPERANZA VIEQUES PR	18.1N 65.5W	1751	1.1M/03.5FT	13
FAJARDO PR	18.3N 65.6W	1755	0.5M/01.7FT	14
CHARLOTTE AMALI USVI	18.3N 64.9W	1748	1.1M/03.6FT	17
LAMESHUR BAY USVI	18.3N 64.7W	1744	1.3M/04.2FT	16
PUERTO PLATA DO	19.8N 70.7W	1823	0.2M/00.5FT	22
BASSETERRE KN	17.3N 62.7W	1845	0.6M/01.9FT	19
BARBUDA AG	17.6N 61.8W	1812	0.5M/01.8FT	14
DESIRADE GP	16.3N 61.1W	1845	0.5M/01.7FT	12
ROSEAU DM	15.3N 61.4W	1822	0.2M/00.7FT	12
CALLIAQUA VC	13.1N 61.2W	1847	0.4M/01.4FT	15
PRICKLY BAY GD	12.0N 61.8W	1922	0.2M/00.8FT	-

LAT - LATITUDE (N-NORTH, S-SOUTH)
LON - LONGITUDE (E-EAST, W-WEST)
TIME - TIME OF THE MEASUREMENT (Z IS UTC IS GREENWICH TIME)
AMPL - TSUNAMI AMPLITUDE MEASURED RELATIVE TO SEA LEVEL.
IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.
VALUES ARE GIVEN IN BOTH METERS(M) AND FEET(FT).
PER - PERIOD OF TIME IN MINUTES(MIN) FROM ONE WAVE TO THE NEXT.

EVALUATION

A SIGNIFICANT TSUNAMI WAS GENERATED BY THIS EARTHQUAKE. HOWEVER...SEA LEVEL READINGS NOW INDICATE THAT THE THREAT HAS DIMINISHED OR IS OVER FOR MOST AREAS. THEREFORE THE TSUNAMI WATCH ISSUED BY THIS CENTER IS NOW CANCELLED.

FOR ANY AFFECTED AREAS - WHEN NO MAJOR WAVES HAVE OCCURRED FOR AT LEAST TWO HOURS AFTER THE ESTIMATED ARRIVAL TIME OR DAMAGING WAVES HAVE NOT OCCURRED FOR AT LEAST TWO HOURS THEN LOCAL AUTHORITIES CAN ASSUME THE THREAT IS PASSED. DANGER TO BOATS AND COASTAL STRUCTURES CAN CONTINUE FOR SEVERAL HOURS DUE TO RAPID CURRENTS. AS LOCAL CONDITIONS CAN CAUSE A WIDE VARIATION IN TSUNAMI WAVE ACTION THE ALL CLEAR DETERMINATION MUST BE MADE BY LOCAL AUTHORITIES.

THIS WILL BE THE FINAL PRODUCT ISSUED BY THE PACIFIC TSUNAMI WARNING CENTER FOR THIS EVENT UNLESS ADDITIONAL INFORMATION BECOMES AVAILABLE.

ANNEX VII

SAMPLE PRESS RELEASE
FOR LOCAL MEDIA

TEMPLATE FOR NEWS RELEASE

USE AGENCY MASTHEAD

Contact: (Insert name) **FOR IMMEDIATE RELEASE**

(Insert phone number) (Insert date)

(Insert email address)

CARIBBEAN TSUNAMI EXERCISE TO BE CONDUCTED ON 25 March 2015

(*insert community/county/state name*) will join other localities in the Caribbean as a participant in a tsunami response exercise on 25 March 2015.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 Caribe Wave/Lantex 15, will simulate a widespread Tsunami Warning and Watch situation throughout the Caribbean which requires implementation of local tsunami response plans. The exercise will (*insert "include" or "not include")* public notification.

The exercise will simulate a major earthquake and tsunami generated just off the Caribbean coast of Panama at 10:00 am Atlantic Standard Time (*or appropriate local time*) on 25 March 2015. A handbook has been prepared which describes the scenario and contains tsunami messages from the National Tsunami Warning Center (NTWC) and the Pacific Tsunami Warning Center (PTWC). The US NTWC is currently responsible for providing tsunami alerts to the Atlantic coasts of U.S. and Canada, the Gulf of Mexico coast, Puerto Rico, and the Virgin Islands (US and British) while the PTWC is the interim Regional Tsunami Service Provider for the other countries in the Caribbean Sea and Adjacent Regions.

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 by the UNESCO/IOC Intergovernmental Coordination Group for Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS), the Caribbean Emergency Management Agency (CDEMA), the Centro de Coordinación para la Prevención de los Desastres Naturales en América Central (CEPREDENAC), 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. For more information on the ICG/CARIBE-EWS, see http://www.ioc-tsunami.org

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On the Web:

ICG/CARIBE-EWS	http://www.ioc-tsunami.org
US National Tsunami Warning Center	http://ntwc.arh.noaa.gov
Pacific Tsunami Warning Center	http://ptwc.weather.gov
NOAA Tsunami Program	http://www.tsunami.gov
NTHMP	http://nthmp.tsunami.gov
Caribbean Tsunami Warning Program	http://caribewave.info
Puerto Rico Seismic Network	http://prsn.uprm.edu

Insert state/local emergency response URLs

ANNEX VIII

LIST OF ACRONYMS

AISR	Aeronautical Information System Replacement
AoR	Areas of responsibility
AWIPS	Advanced Weather Interactive Processing System
EAS	Emergency Alert System
EMO	Emergency Management Organization
EOC	Emergency Operation Centre
EMWIN	Emergency Manager's Weather Information Network
EOP	Emergency Operations Plan
FUNVISIS	Fundación Venezolana de Investigaciones Sismológicas in Venezuela
GEBCO	General Bathymetric Chart of the Oceans
GTS	Global Telecommunications System
ICG/CARIBE-EWS	Intergovernmental Coordination Group for the Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions
INETER	the Instituto Nicaraguense de Estudios Territoriales in Nicaragua
IOC	Intergovernmental Oceanographic Commission
ITIC	International Tsunami Information Centre
NDGC	NOAA National Geophysical Data Center
NDMO	National Disaster Management Office
NOAA	US National Oceanic and Atmospheric Administration
NPDB	North Panama Deformed Belt
NTHMP	US National Tsunami Hazard Mitigation Program
NTWC	National Tsunami Warning Center
NWWS	NOAA Weather Wire Service
PAGER	Prompt Assessment of Global Earthquakes for Response
PRSN	Puerto Rico Seismic Network

PTWC	Pacific Tsunami Warning Center
SOP	Standard Operating Procedures
TWFP	Tsunami Warning Focal Points
UNESCO	United Nations Educational, Scientific and Cultural Organization
USGS	United States Geological Survey
UTC	Universal Time Coordinated
WFO	Weather Forecast Offices
WMO	World Meteorological Organization