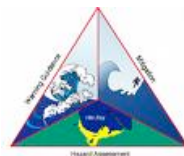


Exercise LANTEX21

Participant Handbook

An Eastern Atlantic Tsunami Warning Exercise
March 17, 2021

US National Tsunami Hazard Mitigation Program
Warning Coordination Subcommittee



NOTE: The contents of this handbook are patterned after previous LANTEX and CARIBE WAVE Exercises (e.g., Commission Océanographique Intergouvernementale. *Exercice Caribe Wave 11. A Caribbean Tsunami Warning Exercise, 23 March 2011*, IOC Technical Series No. 93. Paris, UNESCO, 2011 (English/ French/ Spanish), Intergovernmental Oceanographic Commission *Exercice Caribe Wave/Lantex 13, A Caribbean Tsunami Warning Exercise, 20 March 2013, Volume 1: Participant Handbook*, IOC Technical Series No. 101, Paris, UNESCO, 2012 and Intergovernmental Oceanographic commission. 2013. *Exercice Caribe Wave/Lantex 14. A Caribbean and Northwestern Atlantic Tsunami Warning Exercise, 26 Marc 2014. Volume 1: Participant Handbook*. IOC Technical Series, 109 vol. 1. Paris: UNESCO. (English and Spanish)). These CARIBE WAVE handbooks followed the Pacific Wave 08 manual published by the Intergovernmental Oceanographic Commission (*Exercice Pacific Wave 08, A Pacific-wide Tsunami Warning and Communication Exercise, 28-30 October 2008*, IOC Technical Series No. 82, Paris, UNESCO, 2008). The UNESCO How to Plan, Conduct and Evaluate Tsunami Wave Exercises. IOC Manuals and Guides No. 58 rev., Paris: UNESCO, 2013 (English, Spanish) is another important reference.

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1. Background

NOAA and the U.S. National Tsunami Hazard Mitigation Program (NTHMP) are providing the framework for the LANTEX21 tsunami exercise, which is being conducted to assist tsunami preparedness efforts throughout the Atlantic region. Recent earthquakes and their associated tsunamis, such as those in Samoa-2009, Haiti-2010, Chile-2010, Japan-2011, and Chile-2015, attest to the importance of proper planning for tsunami response. Similar recent exercises in the Pacific and Caribbean Basins have proven effective in strengthening preparedness levels of emergency management organizations.

Scenario

This exercise will provide simulated tsunami alert messages from the NOAA/NWS National Tsunami Warning Center (NTWC) for the eastern coasts of Canada and the United States as well as Puerto Rico and the US/British Virgin Islands. The alert is based on a tsunami which is generated by a magnitude 8.8 earthquake located approximately 345 miles west southwest from Lisbon, Portugal and 510 miles west of the Straits of Gibraltar at 36.0°N , 15.0°W and a depth of 15 km (Figure 1). This source was originally intended to be used for a LANTEX20 exercise, but that exercise was cancelled to the emergence of the Covid-19 pandemic.



Figure 1. LANTEX21 source location.

The fault system offshore of Portugal is responsible for the 1755 Lisbon earthquake. At estimated magnitude 8.5 to 9, it is the largest known historic earthquake to impact Europe and northern Africa. Various studies have located the epicenter at about 300-

400 km southwest of Lisbon in the Gorringe Bank, along the Africa-Eurasia plate boundary (Figure 2), but the exact source details are not well agreed upon. Local tsunami run-ups were between 5 and 15 meters, and the waves caused devastating regional impacts. The combined earthquake and tsunami killed an estimated 70,000 people. Distant tsunami observations were made across the Atlantic in Newfoundland and Bermuda, and there was recorded runup of 3-5 m at Antigua.

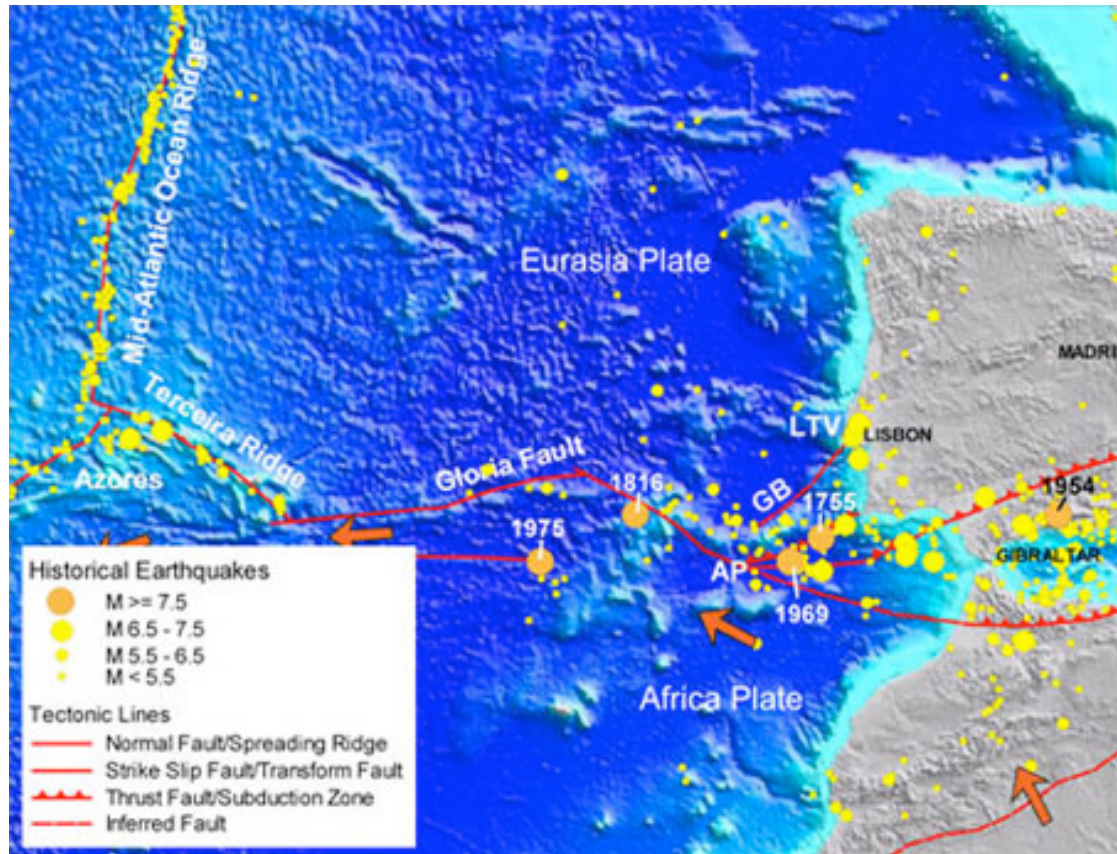


Figure 2. Active tectonics and historic seismicity in the 1755 Lisbon earthquake source zone (GB = Gorringe Bank, AP = Abyssal Plain, LTV = Lower Tagus Valley; the arrows indicate the rotation of the Africa Plate). Source: AIR

The Africa-Eurasia plate boundary extends from the Mid-Atlantic Ridge triple junction, near the Azores, eastward to the Strait of Gibraltar. In this area the African plate rotates counterclockwise relative to the Eurasian plate at a rate of about 4 mm/yr, relatively slow compared to other active plate boundaries. Nevertheless, multiple large magnitude offshore earthquakes have occurred in the region and been seen to generate tsunamis. In addition to the 1755 event, these include a M7.6 earthquake in 1816, and a M7.9 earthquake in 1969. The 1969 event produced a tsunami runup of 0.9 m in Morocco.

This plate movement has caused various types of deformation: extension along the Terceira Ridge around the Azores Islands in the west; strike-slip motion along the Gloria Fault in the central segment; and convergence and collision in the Gorringe Bank and the Strait of Gibraltar to the east. In the west and central segments, the Africa-Eurasia plate boundary is a well defined narrow fault zone. East of the Gloria

Fault, it becomes a diffuse collision zone. The actively deforming belt is about 200 km wide in the Goringe Bank, and widens to more than 500 km east of Gibraltar.

The collisional stress not only loads major structures within the collision zone, where great earthquakes like the 1755 Lisbon quake originated, but also many onshore crustal faults at the Iberia and Africa continent margins. The most notable is the active fault zone in the Lower Tagus Valley (LTV). Several large historical earthquakes, including a 1531 quake estimated at M7+ and a 1909 M6.3, occurred on the LTV. The 1531 event caused a local tsunami. One study also proposes that the offshore 1755 earthquake triggered an onshore rupture on the LTV fault. The possibility of cascading rupture across multiple faults increases the potential for very large earthquake ruptures in the region, and therefore also increases the tsunami hazard.

Contributing sources to this summary:

Franco, G. and B. Shen-Tu, "From 1755 to today—Reassessing Lisbon's earthquake risk," AIR Currents, <http://www.air-worldwide.com/Publications/AIR-Currents/From-1755-to-Today%E2%80%94Reassessing-Lisbon%E2%80%99s-Earthquake-Risk/>

Joel, L., "Benchmarks: November 1, 1755: Earthquake destroys Lisbon," Earth Magazine, <https://www.earthmagazine.org/article/benchmarks-november-1-1755-earthquake-destroys-lisbon>

NOAA National Centers for Environmental Information, NCEI/WDS Global Historical Tsunami Database, 2100 BC to Present, doi:10.7289/V5PN93H7

Tsunami Warning System

Tsunami warning services for the continental United States and Canada are provided by the NTWC in Palmer, Alaska, while the Pacific Tsunami Warning Center (PTWC) in Pearl Harbor, Hawaii provides services for locations within the Caribbean region. These Centers issue messages to the region approximately two to six minutes after an earthquake's occurrence. The NTWC products include warnings, advisories, watches, and information statements.

Primary recipients of Tsunami Warning Center messages include national tsunami warning focal points, Weather Forecast Offices (WFO), state/territory emergency operation centers, national Coast Guards, and military contacts. These agencies disseminate the messages to people potentially impacted by a tsunami.

2. Exercise Concept

2.1 Purpose

The purpose of the exercise is to improve Tsunami Warning System effectiveness along the U.S. and Canadian Atlantic coasts. It 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.

- Ensure message transmission from the NTWC to primary customers.
- Test tsunami response plans for EMOs that have developed plans, and provide a catalyst for EMOs that have not developed plans.
- EMOs review, discuss, and evaluate the various communication alternatives for receiving and disseminating tsunami messages.
- EMOs review, discuss, and evaluate potential response actions and challenges.

2.3 Type of Exercise

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

Exercises stimulate the development, training, testing, and evaluation of Disaster Plans and Standard Operating Procedures (SOPs). Exercise participants may use their own past multi-hazard drills (e.g. flood, hurricane, tsunami, earthquake, etc.) as a framework to conduct LANTEX21.

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

1. **Orientation Exercise (Seminar):** An Orientation Exercise lays the groundwork for a comprehensive exercise program. It is a planned event, developed to bring together individuals and officials with a role or interest in multi-hazard response planning, problem solving, development of standard operational procedures

(SOPs), and resource integration and coordination. An Orientation Exercise will have a specific goal and written objectives and result in an agreed upon Plan of Action.

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

Example Time Frames for Different Exercise Types

Style	Planning Period	Duration	Comments
Orientation Exercise	2 wks	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

3. Exercise Outline

3.1 General

Tsunami Warning and Advisory messages for this exercise are issued by the NTWC based on a hypothetical earthquake with the following hypocenter parameters which in turn generates a tsunami:

- Origin Time 12:00:00 UTC March 17, 2021
- Latitude 36.0°N
- Longitude 15.0°W
- Magnitude 8.8 – Mw
- Depth 15km

Expected impact for this event is determined from tsunami forecast models. The model indicated a significant tsunami along the Canadian and Caribbean coasts, but with less impact elsewhere.

Initially, NTWC issues Tsunami Information Statements informing the public that an event has occurred which is of concern. The alert level is later raised to a Warning for the Canadian and Puerto Rico/Virgin Islands regions, and to an Advisory elsewhere along the U.S. east coast. To help condense the exercise timeline, the exercise may be started with Bulletin #4. Definitions of the products that will be issued by the TWC during this exercise are provided below.

Tsunami Warning - A tsunami warning is issued when a tsunami with the potential to generate widespread inundation is imminent, expected, or occurring. Warnings alert the public that dangerous coastal flooding accompanied by powerful currents is possible and may continue for several hours after initial arrival. Warnings alert emergency management officials to take action for the entire tsunami hazard zone. Appropriate actions to be taken by local officials may include the evacuation of low-

lying coastal areas, and the repositioning of ships to deep waters when there is time to safely do so. Warnings may be updated, adjusted geographically, downgraded, or canceled. To provide the earliest possible alert, initial warnings are normally based only on seismic information.

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

NTWC will not issue live messages over broadcast dissemination channels other than to issue an initial dummy message to start the exercise at 1205 UTC on March 17, 2021. The content of the dummy message is given in Appendix B. The dummy message will 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. Table 1 is the timeline for when messages would be issued by the NTWC if this were a real event, and can be used by EMOs to drive the exercise timing. The messages (as shown in Appendix C) cover a 9 1/2-hour period, though in an actual event they would likely continue longer. World Meteorological Organization (WMO) and Advanced Weather Interactive Processing System (AWIPS) headers used in the dummy message are listed in Table 2.

NTWC issues three official products each time a message is issued. The ones provided in Appendix C 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 other message not shown in Appendix C is the segmented message. This message includes encoded NWS zones, Valid Time Event Codes (VTEC), and their level of threat. The segmentation is used for automated processing systems which parse NWS products. NTWC also issues additional graphical and web-based products to its web site.

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

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

3.2 Master Schedule (Exercise Script)

Table 1: Scenario Timeline

Tsunami triggered by a magnitude 8.8 earthquake with epicenter at 36.0°N, 15.0°W occurring on March 17, 2021 at 1200 UTC. The initial dummy message is being disseminated at 1205 UTC.

Date (UTC)	Time (UTC)	NTWC Message		
		#	Type	Dummy
03/17/2021	1200		--- Earthquake Occurs ---	
03/17/2021	1205	01	TIS	Yes
03/17/2021	1301	02	TIS	No
03/17/2021	1401	03	TIS	No
03/17/2021	1500	04	TIS	No
03/17/2021	1600	05	Adv/Warn	No
03/17/2021	1703	06	Adv/Warn	No
03/17/2021	1808	07	Adv/Warn	No
03/17/2021	1836	08	Adv/Warn	No
03/17/2021	1903	09	Adv/Warn	No
03/17/2021	1931	10	Adv/Warn	No
03/17/2021	2000	11	Adv/Warn	No
03/17/2021	2031	12	Adv/Warn	No
03/17/2021	2101	13	Adv	No
03/17/2021	2132	14	Can	No

TWC Message Types:

- Warn Tsunami Warning
- Adv Tsunami Advisory
- Can Cancellation

Dummy:

- Yes Dummy Issued
- No Dummy Not Issued

The initial dummy message will be disseminated over all standard TWC broadcast channels as listed in Table 2. This is being issued to test communications with EMOs, and to start the exercise.

Table 2: Product Types

Product Types Issued for Dummy Message with Transmission Methods

Center	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

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

3.3 Actions in Case of a Real Event

In the case of a real event occurring during the exercise, the NTWC will issue their normal messages for the event. Such messages will be given full priority and a decision will be made by the NTWC whether to issue the dummy message. 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 “**LANTEX21**” 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
James Gridley, NTWC Director	907-745-4212	james.gridley@noaa.gov
Summer Ohlendorf, NTWC SO	907-745-4212	summer.ohlendorf@noaa.gov
Christa von Hillebrandt, NWS CTWP Manager	787-833-8433	christa.vonh@noaa.gov
Melinda Bailey, NWS Southern Region	682-703-3770	melinda.bailey@noaa.gov
Charles McCreery, PTWC Director	808-725-6380	charles.mccreery@noaa.gov
Chris Birchfield, NWS Eastern Region	956-504-1432	chris.birchfield@noaa.gov
Ed Fratto, NTHMP East Coast Rep.	781-224-9876	efratto@nesec.org
John Parker, Environment Canada	902-426-3836	john.k.parker@ec.gc.ca

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 Atlantic 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 of exercising but especially for those countries 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. Appendix D contains a sample press release which can be adapted as necessary.

4 Post-Exercise Evaluation

All participating agencies are requested to provide brief feedback on the exercise. This feedback will assist NTHMP and NOAA in the development of subsequent exercises. Comments on the exercise, proposed improvements to the messages, or any other items related to the tsunami warning system can be addressed to the persons listed in section 3.5.

LANTEX21 Exercise

Appendix A. Example Table Top Exercise

Tabletop Exercise Development Steps

Source: California Office of Emergency Services

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

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

1. Vulnerability Analysis: Problem Statement

An example for a hurricane might be:

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

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

An example for a hurricane might be:

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

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

An example might be:

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

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

4. Goals and Objectives:

Criteria for good objectives: Think SMART

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

An example might be:

Comprehensive Exercise Program (CEP) Objectives

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

5. Narrative:

The Narrative should describe the following:

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

6. Evaluation:

The Evaluation should describe the following:

- Objectives Based
- Train Evaluation Teams
- Develop Evaluation Forms

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

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

Appendix B. NTWC Dummy Messages

WEXX20 PAAQ 241205
TSUAT1

TEST...TSUNAMI EXERCISE MESSAGE NUMBER 1...TEST
NWS NATIONAL TSUNAMI WARNING CENTER PALMER AK
0805 AM EDT WED MAR 17 2021

... LANTEX21 TSUNAMI EXERCISE MESSAGE. REFER TO MESSAGE 1 IN THE
EXERCISE HANDBOOK. THIS IS AN EXERCISE ONLY...

THIS MESSAGE IS BEING USED TO START THE LANTEX21 ATLANTIC TSUNAMI
EXERCISE. THIS WILL BE THE ONLY EXERCISE MESSAGE BROADCAST FROM
THE NATIONAL TSUNAMI WARNING CENTER. THE EXERCISE HANDBOOK IS
AVAILABLE AT THE WEB SITE TSUNAMI.GOV. THE EXERCISE PURPOSE
IS TO PROVIDE EMERGENCY MANAGEMENT A REALISTIC SCENARIO TO TEST
TSUNAMI RESPONSE PLANS.

THIS IS ONLY AN EXERCISE.
\$\$

WEXX30 PAAQ 241205
TSUATE

TEST...PUBLIC TSUNAMI EXERCISE MESSAGE NUMBER 1...TEST
NWS NATIONAL TSUNAMI WARNING CENTER PALMER AK
0805 AM EDT WED MAR 17 2021

... LANTEX21 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 LANTEX21 ATLANTIC TSUNAMI
EXERCISE. THIS WILL BE THE ONLY EXERCISE MESSAGE BROADCAST FROM
THE NATIONAL TSUNAMI WARNING CENTER. THE EXERCISE HANDBOOK IS
AVAILABLE AT THE WEB SITE TSUNAMI.GOV. THE EXERCISE PURPOSE
IS TO PROVIDE EMERGENCY MANAGEMENT A REALISTIC SCENARIO TO TEST
TSUNAMI RESPONSE PLANS.

THIS IS ONLY AN EXERCISE.
\$\$

WEXX40 PAAQ 241205
TSUSPN

TEST...MENSAJE DE EJERCICIO DE TSUNAMI NUMERO 1...TEST
NWS CENTRO NACIONAL DE ALERTA DE TSUNAMI PALMER AK
0805 AM EDT WED MAR 17 2021

...MENSAJE PARA DAR COMIENZO AL EJERCICIO DE TSUNAMI LANTEX21.
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 LANTEX21. ESTE SERA EL UNICO MENSAJE QUE SERA EMITIDO
DESDE EL CENTRO NACIONAL DE ALERTA DE TSUNAMI EXCLUYENDO LOS MENSAJES.
EL MANUAL ESTA DISPONIBLE EN LA PAGINA TSUNAMI.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.
\$\$

Appendix C. NTWC Exercise Messages

The following messages, created for the LANTEX21 tsunami exercise, are representative of the official standard products issued by the NTWC during a tsunami which is generated by a magnitude 8.8 earthquake located approximately 345 miles west southwest from Lisbon, Portugal and 510 miles west of the Straits of Gibraltar at 36.0°N, 15.0°W. During a real event, the NTWC would also issue graphical and html-based products to the web site and via RSS.



Figure C1: Event location.

NTWC Bulletin #1

WEXX32 PAAQ 241205
TIBATE

Tsunami Information Statement Number 1
NWS National Tsunami Warning Center Palmer AK
805 AM EDT Wed Mar 17 2021

...THIS IS A TSUNAMI INFORMATION STATEMENT FOR THE U.S. EAST COAST,
GULF OF MEXICO STATES, AND EASTERN CANADA...

EVALUATION

* Earthquakes of this size are known to generate tsunamis
potentially dangerous to coasts outside the source region.

LANTEX21 Exercise Handbook

- * The U.S. National Tsunami Warning Center is analyzing the event to determine the level of danger.
- * More information will be issued as it becomes available.
- * This earthquake has the potential to generate a destructive tsunami in the source region.

PRELIMINARY EARTHQUAKE PARAMETERS

- * The following parameters are based on a rapid preliminary assessment of the earthquake and changes may occur.

- * Magnitude 7.9
- * Origin Time 0800 EDT Mar 17 2021
 0700 CDT Mar 17 2021
 0800 AST Mar 17 2021
 1200 UTC Mar 17 2021
- * Coordinates 36.0 North 15.0 West
- * Depth 9 miles
- * Location in the North Atlantic Ocean

ADDITIONAL INFORMATION AND NEXT UPDATE

- * Refer to the internet site tsunami.gov for more information.
- * Caribbean coastal regions should refer to the Pacific Tsunami Warning Center messages at tsunami.gov.
- * Messages will be issued hourly to keep you informed of the progress of this event.

\$\$

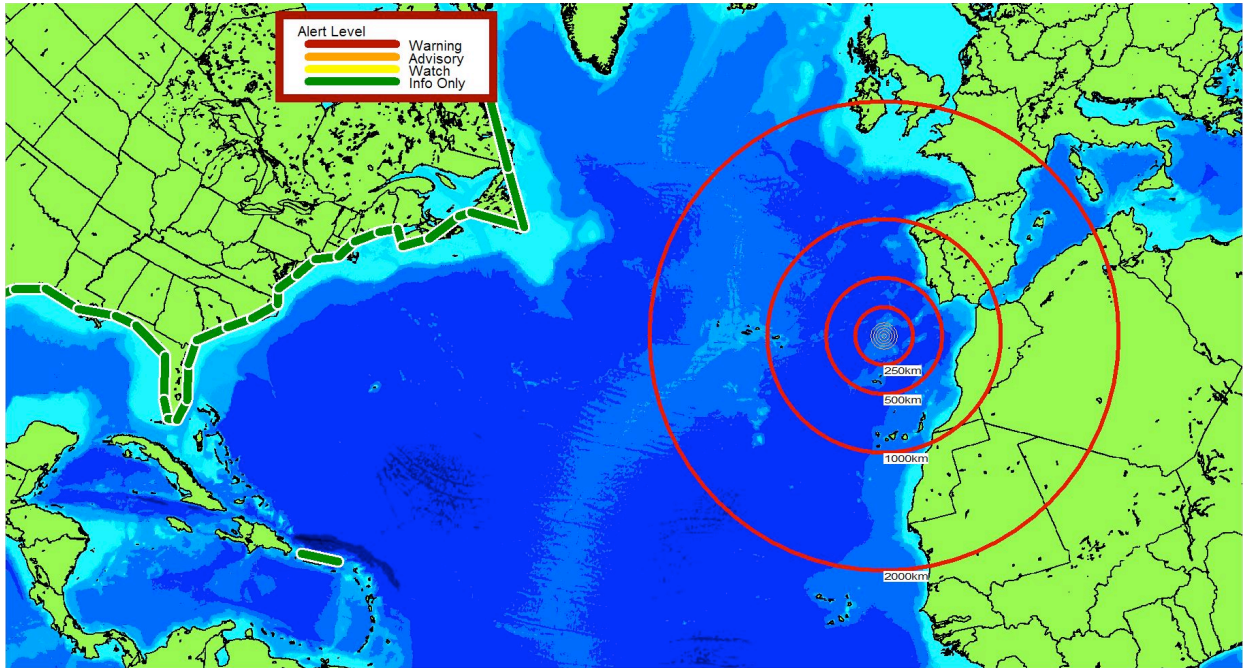


Figure C2: Alert area just after first TIS.

NTWC Bulletin #2

WEXX32 PAAQ 241301
TIBATE

Tsunami Information Statement Number 2
NWS National Tsunami Warning Center Palmer AK
901 AM EDT Wed Mar 17 2021

UPDATES

- * Revised magnitude

...THIS IS A TSUNAMI INFORMATION STATEMENT FOR THE U.S. EAST COAST,
GULF OF MEXICO STATES, AND EASTERN CANADA...

EVALUATION

- * There is no tsunami danger for the U.S. east coast, the Gulf of Mexico states, or the eastern coast of Canada.
- * Some of the areas listed above may experience non-damaging sea level changes.

PRELIMINARY EARTHQUAKE PARAMETERS - UPDATED

- * The following parameters are based on a rapid preliminary assessment of the earthquake and changes may occur.

- * Magnitude 8.8
- * Origin Time 0800 EDT Mar 17 2021

LANTEX21 Exercise Handbook

0700 CDT Mar 17 2021
0800 AST Mar 17 2021
1200 UTC Mar 17 2021
* Coordinates 36.0 North 15.0 West
* Depth 9 miles
* Location in the North Atlantic Ocean

ADDITIONAL INFORMATION AND NEXT UPDATE

- * Refer to the internet site tsunami.gov for more information.
- * Caribbean coastal regions should refer to the Pacific Tsunami Warning Center messages at tsunami.gov.
- * This will be the final U.S. National Tsunami Warning Center message issued for this event unless additional information becomes available.

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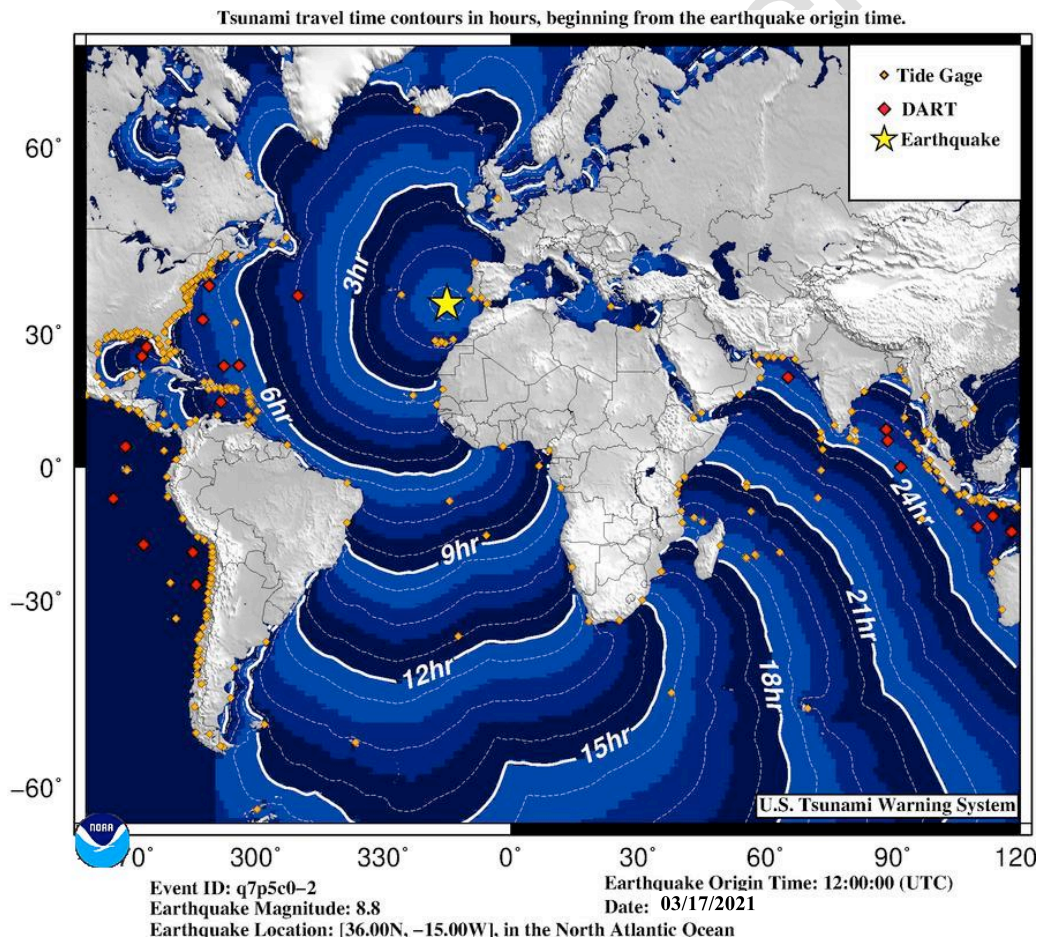


Figure C3: Travel time map generated after second TIS was issued.

NTWC Bulletin #3

WEXX32 PAAQ 241401
TIBATE

LANTEX21 Exercise Handbook

Tsunami Information Statement Number 3
NWS National Tsunami Warning Center Palmer AK
1001 AM EDT Wed Mar 17 2021

UPDATES

- * There are no updates in this message

...THIS IS A TSUNAMI INFORMATION STATEMENT FOR THE U.S. EAST COAST,
GULF OF MEXICO STATES, AND EASTERN CANADA...

EVALUATION

- * There is no tsunami danger for the U.S. east coast, the Gulf of Mexico states, or the eastern coast of Canada.
- * Some of the areas listed above may experience non-damaging sea level changes.

PRELIMINARY EARTHQUAKE PARAMETERS

- * Magnitude 8.8
- * Origin Time 0800 EDT Mar 17 2021
0700 CDT Mar 17 2021
0800 AST Mar 17 2021
1200 UTC Mar 17 2021
- * Coordinates 36.0 North 15.0 West
- * Depth 9 miles
- * Location in the North Atlantic Ocean

ADDITIONAL INFORMATION AND NEXT UPDATE

- * Refer to the internet site tsunami.gov for more information.
- * Caribbean coastal regions should refer to the Pacific Tsunami Warning Center messages at tsunami.gov.
- * This will be the final U.S. National Tsunami Warning Center message issued for this event unless additional information becomes available.

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NTWC Bulletin #4

WEXX32 PAAQ 241500
TIBATE

Tsunami Information Statement Number 4
NWS National Tsunami Warning Center Palmer AK
1100 AM EDT Wed Mar 17 2021

UPDATES

LANTEX21 Exercise Handbook

* There are no updates in this message

...THIS IS A TSUNAMI INFORMATION STATEMENT FOR THE U.S. EAST COAST,
GULF OF MEXICO STATES, AND EASTERN CANADA...

EVALUATION

-
- * There is no tsunami danger for the U.S. east coast, the Gulf of Mexico states, or the eastern coast of Canada.
 - * Some of the areas listed above may experience non-damaging sea level changes.

PRELIMINARY EARTHQUAKE PARAMETERS

- * Magnitude 8.8
- * Origin Time 0800 EDT Mar 17 2021
0700 CDT Mar 17 2021
0800 AST Mar 17 2021
1200 UTC Mar 17 2021
- * Coordinates 36.0 North 15.0 West
- * Depth 9 miles
- * Location in the North Atlantic Ocean

ADDITIONAL INFORMATION AND NEXT UPDATE

-
- * Refer to the internet site tsunami.gov for more information.
 - * Caribbean coastal regions should refer to the Pacific Tsunami Warning Center messages at tsunami.gov.
 - * This will be the final U.S. National Tsunami Warning Center message issued for this event unless additional information becomes available.

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NTWC Bulletin #5

WEXX30 PAAQ 241600
TSUATE

BULLETIN

Public Tsunami Message Number 5
NWS National Tsunami Warning Center Palmer AK
1200 PM EDT Wed Mar 17 2021

UPDATES

-
- * A tsunami has been confirmed and some impacts are expected
 - * Revised alert areas

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

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

Tsunami Warning in Effect for;

- * The coastal areas of Newfoundland and Labrador from Cape Ray, Newfoundland to Cape Chidley, Labrador

Tsunami Advisory in Effect for;

- * The coastal areas of Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine, New Brunswick, Nova Scotia and Newfoundland from Flamingo, Florida to Cape Ray, Newfoundland

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.

FORECASTS OF TSUNAMI ACTIVITY

- * Tsunami activity is forecasted to start at the following locations at the specified times.

SITE	FORECAST START OF TSUNAMI		
* Newfoundland			
Bonavista	1525	NDT	Mar 17
Saint Lawrence	1610	NDT	Mar 17
* Labrador			
Cape Makkovik	1500	ADT	Mar 17
Battle Harbour	1530	NDT	Mar 17
* Nova Scotia			
Scatarie Island	1545	ADT	Mar 17
Lockeport	1555	ADT	Mar 17
* North Carolina			
Cape Hatteras	1535	EDT	Mar 17
* New York			
Montauk	1605	EDT	Mar 17
Manhattan	1740	EDT	Mar 17

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* New Brunswick
Grand Manan Isla 1720 ADT Mar 17

* New Jersey
Atlantic City 1635 EDT Mar 17

* Massachusetts
Nantucket 1635 EDT Mar 17
Boston 1720 EDT Mar 17

* Virginia
Virginia Beach 1650 EDT Mar 17

* Florida
Miami 1655 EDT Mar 17
Key West 1740 EDT Mar 17
Daytona 1745 EDT Mar 17
Melbourne Beach 1755 EDT Mar 17
Jacksonville Bea 1810 EDT Mar 17

* Maine
Portland 1655 EDT Mar 17

* South Carolina
Myrtle Beach 1755 EDT Mar 17
Charleston 1815 EDT Mar 17

* Georgia
Savannah 1825 EDT Mar 17

OBSERVATIONS OF TSUNAMI ACTIVITY

* No tsunami observations are available to report.

PRELIMINARY EARTHQUAKE PARAMETERS

* Magnitude 8.8
* Origin Time 0800 EDT Mar 17 2021
0700 CDT Mar 17 2021
0800 AST Mar 17 2021
1200 UTC Mar 17 2021
* Coordinates 36.0 North 15.0 West
* Depth 9 miles
* Location in the North Atlantic Ocean

RECOMMENDED ACTIONS - UPDATED

Actions to protect human life and property will vary within tsunami warning areas and within tsunami advisory areas.

If you are in a tsunami warning area;

* Evacuate inland or to higher ground above and beyond

LANTEX21 Exercise Handbook

designated tsunami hazard zones or move to an upper floor of a multi-story building depending on your situation.

If you are in a tsunami warning or advisory area;

- * Move out of the water, off the beach, and away from harbors, marinas, breakwaters, bays and inlets.
- * Be alert to and follow instructions from your local emergency officials because they may have more detailed or specific information for your location.
- * If you feel a strong earthquake or extended ground rolling take immediate protective actions such as moving inland and/or uphill preferably by foot.
- * Boat operators,
 - * Where time and conditions permit, move your boat out to sea to a depth of at least 180 feet.
 - * If at sea avoid entering shallow water, harbors, marinas, bays, and inlets to avoid floating and submerged debris and strong currents.
- * Do not go to the shore to observe the tsunami.
- * Do not return to the coast until local emergency officials indicate it is safe to do so.

IMPACTS

Impacts will vary at different locations in the warning and in the advisory areas.

If you are in a tsunami warning area;

- * A tsunami with damaging waves and powerful currents is possible.
- * Repeated coastal flooding is possible as waves arrive onshore, move inland, and drain back into the ocean.
- * Strong and unusual waves, currents and inland flooding can drown or injure people and weaken or destroy structures on land and in water.
- * Water filled with floating or submerged debris that can injure or kill people and weaken or destroy buildings and bridges is possible.
- * Strong and unusual currents and waves in harbors, marinas, bays, and inlets may be especially destructive.

If you are in a tsunami advisory area;

- * A tsunami with strong waves and currents is possible.

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- * Waves and currents can drown or injure people who are in the water.
- * Currents at beaches and in harbors, marinas, bays, and inlets may be especially dangerous.

If you are in a tsunami warning or advisory area;

- * Some impacts may continue for many hours to days after arrival of the first wave.
- * The first wave may not be the largest so later waves may be larger.
- * Each wave may last 5 to 45 minutes as a wave encroaches and recedes.
- * Coasts facing all directions are threatened because the waves can wrap around islands and headlands and into bays.
- * Strong shaking or rolling of the ground indicates an earthquake has occurred and a tsunami may be imminent.
- * A rapidly receding or receded shoreline, unusual waves and sounds, and strong currents are signs of a tsunami.
- * The tsunami may appear as water moving rapidly out to sea, a gentle rising tide like flood with no breaking wave, as a series of breaking waves, or a frothy wall of water.

ADDITIONAL INFORMATION AND NEXT UPDATE

- * Refer to the internet site tsunami.gov for more information.
- * Caribbean coastal regions should refer to the Pacific Tsunami Warning Center messages at tsunami.gov.
- * This message will be updated within 60 minutes.

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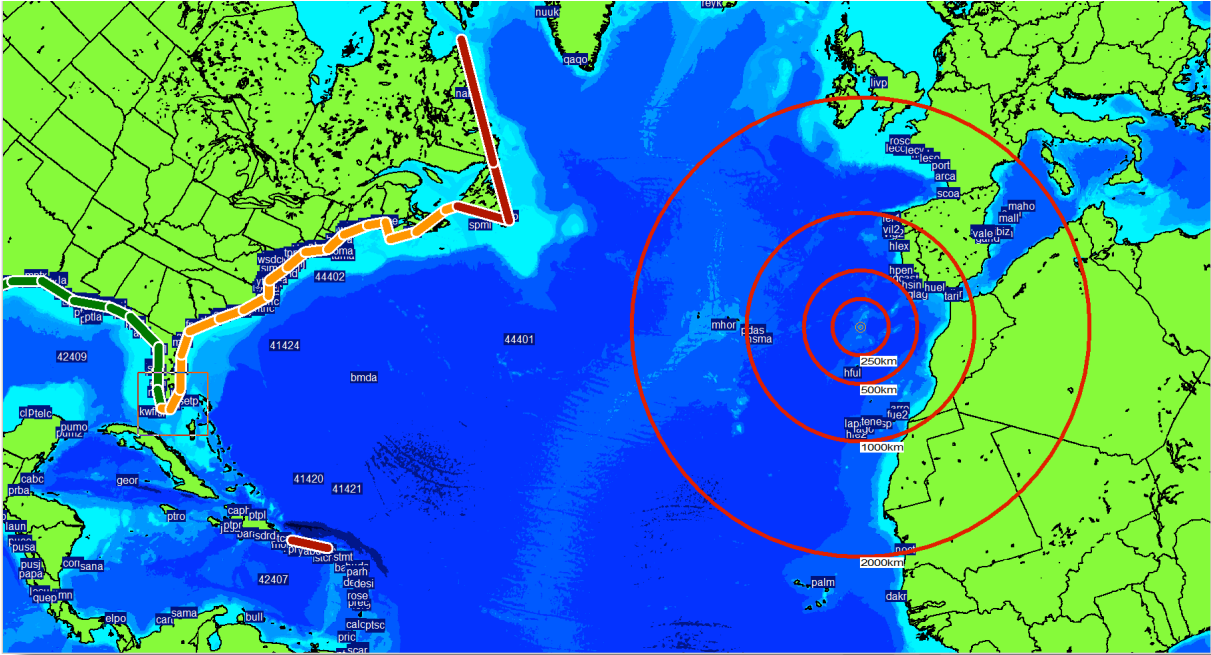


Figure C4: Alert area just after initial Warning-Advisory.

NTWC Bulletin #6

WEXX30 PAAQ 241703
TSUATE

BULLETIN
Public Tsunami Message Number 6
NWS National Tsunami Warning Center Palmer AK
103 PM EDT Wed Mar 17 2021

UPDATES

- * Updated observations

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

...THE TSUNAMI ADVISORY REMAINS IN EFFECT...

Tsunami Warning in Effect for;

- * The coastal areas of Newfoundland and Labrador from Cape Ray, Newfoundland to Cape Chidley, Labrador

Tsunami Advisory in Effect for;

- * The coastal areas of Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine, New Brunswick, Nova Scotia and Newfoundland from Flamingo, Florida to Cape Ray,

LANTEX21 Exercise Handbook

Newfoundland

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.

FORECASTS OF TSUNAMI ACTIVITY

- * A tsunami has been generated. The first waves are forecasted to arrive at the following locations and specified times.
- * Forecast tsunami duration is the approximate length of time which the tsunami may produce dangerous currents and waves.
- * Forecast max tsunami height is the highest expected water level above the tide.
- * Forecasts are not provided for sites which have been impacted more than an hour prior to the time of this message.

SITE	FORECAST START OF TSUNAMI	FORECAST TSUNAMI DURATION	FORECAST MAX TSUNAMI HEIGHT
----	-----	-----	-----
* Newfoundland			
Bonavista	1525 NDT Mar 17	15 hrs	1.1- 2.0 ft
Saint Lawrence	1610 NDT Mar 17	15 hrs	1.1- 2.1 ft
* Labrador			
Cape Makkovik	1500 ADT Mar 17		
Battle Harbour	1530 NDT Mar 17	9 hrs	0.7- 1.3 ft
* Nova Scotia			
Scatarie Island	1545 ADT Mar 17	24 hrs	1.9- 3.5 ft
Lockeport	1555 ADT Mar 17		less than 1ft
* North Carolina			
Cape Hatteras	1535 EDT Mar 17	15 hrs	0.9- 1.7 ft
* New York			
Montauk	1605 EDT Mar 17		less than 1ft
Manhattan	1740 EDT Mar 17		less than 1ft
* New Brunswick			
Grand Manan Isla	1720 ADT Mar 17		less than 1ft
* New Jersey			
Atlantic City	1635 EDT Mar 17	15 hrs	1.4- 2.5 ft
* Massachusetts			
Nantucket	1635 EDT Mar 17		less than 1ft
Boston	1720 EDT Mar 17		less than 1ft
* Virginia			

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Virginia Beach 1650 EDT Mar 17

* Florida

Miami	1655	EDT Mar 17		less than 1ft
Key West	1740	EDT Mar 17		less than 1ft
Daytona	1745	EDT Mar 17	24 hrs	2.3- 4.2 ft
Melbourne Beach	1755	EDT Mar 17		
Jacksonville Bea	1810	EDT Mar 17		less than 1ft

* Maine

Portland	1655	EDT Mar 17		less than 1ft
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* South Carolina

Myrtle Beach	1755	EDT Mar 17	15 hrs	0.9- 1.7 ft
Charleston	1815	EDT Mar 17		less than 1ft

* Georgia

Savannah	1825	EDT Mar 17		less than 1ft
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OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

* Observed max tsunami height is the highest recorded water level above the tide level up to the time of this message.

SITE	TIME OF MEASUREMENT	OBSERVED MAX TSUNAMI HEIGHT
DART 44401 US	1236 EDT Mar 17	0.8ft

PRELIMINARY EARTHQUAKE PARAMETERS

* Magnitude 8.8
* Origin Time 0800 EDT Mar 17 2021
0700 CDT Mar 17 2021
0800 AST Mar 17 2021
1200 UTC Mar 17 2021
* Coordinates 36.0 North 15.0 West
* Depth 9 miles
* Location in the North Atlantic Ocean

RECOMMENDED ACTIONS

* See message number 5 for recommended actions.

IMPACTS

* See message number 5 for possible impacts.

ADDITIONAL INFORMATION AND NEXT UPDATE

* Refer to the internet site tsunami.gov for more information.

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- * Caribbean coastal regions should refer to the Pacific Tsunami Warning Center messages at tsunami.gov.
- * This message will be updated within 60 minutes.

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NTWC Bulletin #7

WEXX30 PAAQ 241808
TSUATE

BULLETIN

Public Tsunami Message Number 7
NWS National Tsunami Warning Center Palmer AK
208 PM EDT Wed Mar 17 2021

UPDATES

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

...THE TSUNAMI ADVISORY REMAINS IN EFFECT...

Tsunami Warning in Effect for;

- * The coastal areas of Newfoundland and Labrador from Cape Ray, Newfoundland to Cape Chidley, Labrador

Tsunami Advisory in Effect for;

- * The coastal areas of Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine, New Brunswick, Nova Scotia and Newfoundland from Flamingo, Florida to Cape Ray, Newfoundland

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.

FORECASTS OF TSUNAMI ACTIVITY

- * A tsunami has been generated. The first waves are forecasted to arrive at the following locations and specified times.
- * Forecast tsunami duration is the approximate length of time which the tsunami may produce dangerous currents and waves.
- * Forecast max tsunami height is the highest expected water level

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above the tide.

* Forecasts are not provided for sites which have been impacted more than an hour prior to the time of this message.

SITE ----	FORECAST START OF TSUNAMI -----	FORECAST TSUNAMI DURATION -----	FORECAST MAX TSUNAMI HEIGHT -----
* Newfoundland			
Bonavista	1525 NDT Mar 17	15 hrs	1.1- 2.0 ft
Saint Lawrence	1610 NDT Mar 17	15 hrs	1.1- 2.1 ft
* Labrador			
Cape Makkovik	1500 ADT Mar 17		
Battle Harbour	1530 NDT Mar 17	9 hrs	0.7- 1.3 ft
* Nova Scotia			
Scatarie Island	1545 ADT Mar 17	24 hrs	1.9- 3.5 ft
Lockeport	1555 ADT Mar 17		less than 1ft
* North Carolina			
Cape Hatteras	1535 EDT Mar 17	15 hrs	0.9- 1.7 ft
* New York			
Montauk	1605 EDT Mar 17		less than 1ft
Manhattan	1740 EDT Mar 17		less than 1ft
* New Brunswick			
Grand Manan Isla	1720 ADT Mar 17		less than 1ft
* New Jersey			
Atlantic City	1635 EDT Mar 17	15 hrs	1.4- 2.5 ft
* Massachusetts			
Nantucket	1635 EDT Mar 17		less than 1ft
Boston	1720 EDT Mar 17		less than 1ft
* Virginia			
Virginia Beach	1650 EDT Mar 17		
* Florida			
Miami	1655 EDT Mar 17		less than 1ft
Key West	1740 EDT Mar 17		less than 1ft
Daytona	1745 EDT Mar 17	24 hrs	2.3- 4.2 ft
Melbourne Beach	1755 EDT Mar 17		
Jacksonville Bea	1810 EDT Mar 17		less than 1ft
* Maine			
Portland	1655 EDT Mar 17		less than 1ft
* South Carolina			
Myrtle Beach	1755 EDT Mar 17	15 hrs	0.9- 1.7 ft
Charleston	1815 EDT Mar 17		less than 1ft
* Georgia			
Savannah	1825 EDT Mar 17		less than 1ft

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OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

- * Observed max tsunami height is the highest recorded water level above the tide level up to the time of this message.

SITE	TIME OF MEASUREMENT	OBSERVED MAX TSUNAMI HEIGHT
DART 44401 US	1236 EDT Mar 17	0.8ft

PRELIMINARY EARTHQUAKE PARAMETERS

- * Magnitude 8.8
- * Origin Time 0800 EDT Mar 17 2021
0700 CDT Mar 17 2021
0800 AST Mar 17 2021
1200 UTC Mar 17 2021
- * Coordinates 36.0 North 15.0 West
- * Depth 9 miles
- * Location in the North Atlantic Ocean

RECOMMENDED ACTIONS

- * See message number 5 for recommended actions.

IMPACTS

- * See message number 5 for possible impacts.

ADDITIONAL INFORMATION AND NEXT UPDATE

- * Refer to the internet site tsunami.gov for more information.
- * Caribbean coastal regions should refer to the Pacific Tsunami Warning Center messages at tsunami.gov.
- * This message will be updated within 30 minutes.

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NTWC Bulletin #8

WEXX30 PAAQ 241836
TSUATE

BULLETIN
Public Tsunami Message Number 8
NWS National Tsunami Warning Center Palmer AK
236 PM EDT Wed Mar 17 2021

UPDATES

LANTEX21 Exercise Handbook

- * Updated observations

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

...THE TSUNAMI ADVISORY REMAINS IN EFFECT...

Tsunami Warning in Effect for;

- * The coastal areas of Newfoundland and Labrador from Cape Ray, Newfoundland to Cape Chidley, Labrador

Tsunami Advisory in Effect for;

- * The coastal areas of Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine, New Brunswick, Nova Scotia and Newfoundland from Flamingo, Florida to Cape Ray, Newfoundland

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.

FORECASTS OF TSUNAMI ACTIVITY

- * A tsunami has been generated. The first waves are forecasted to arrive at the following locations and specified times.
- * Forecast tsunami duration is the approximate length of time which the tsunami may produce dangerous currents and waves.
- * Forecast max tsunami height is the highest expected water level above the tide.
- * Forecasts are not provided for sites which have been impacted more than an hour prior to the time of this message.

SITE	FORECAST START OF TSUNAMI	FORECAST TSUNAMI DURATION	FORECAST MAX TSUNAMI HEIGHT
----	-----	-----	-----

- * Newfoundland

Bonavista	1525 NDT Mar 17	15 hrs	1.1- 2.0 ft
Saint Lawrence	1610 NDT Mar 17	15 hrs	1.1- 2.1 ft

- * Labrador

Cape Makkovik	1500 ADT Mar 17		
Battle Harbour	1530 NDT Mar 17	9 hrs	0.7- 1.3 ft

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* Nova Scotia
 Scatarie Island 1545 ADT Mar 17 24 hrs 1.9- 3.5 ft
 Lockeport 1555 ADT Mar 17 less than 1ft

* North Carolina
 Cape Hatteras 1535 EDT Mar 17 15 hrs 0.9- 1.7 ft

* New York
 Montauk 1605 EDT Mar 17 less than 1ft
 Manhattan 1740 EDT Mar 17 less than 1ft

* New Brunswick
 Grand Manan Isla 1720 ADT Mar 17 less than 1ft

* New Jersey
 Atlantic City 1635 EDT Mar 17 15 hrs 1.4- 2.6 ft

* Massachusetts
 Nantucket 1635 EDT Mar 17 less than 1ft
 Boston 1720 EDT Mar 17 less than 1ft

* Virginia
 Virginia Beach 1650 EDT Mar 17

* Florida
 Miami 1655 EDT Mar 17 less than 1ft
 Key West 1740 EDT Mar 17 less than 1ft
 Daytona 1745 EDT Mar 17 24 hrs 2.3- 4.2 ft
 Melbourne Beach 1755 EDT Mar 17 less than 1ft
 Jacksonville Bea 1810 EDT Mar 17 less than 1ft

* Maine
 Portland 1655 EDT Mar 17 less than 1ft

* South Carolina
 Myrtle Beach 1755 EDT Mar 17 15 hrs 0.9- 1.8 ft
 Charleston 1815 EDT Mar 17 less than 1ft

* Georgia
 Savannah 1825 EDT Mar 17 less than 1ft

OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

* Observed max tsunami height is the highest recorded water level above the tide level up to the time of this message.

SITE	TIME OF MEASUREMENT	OBSERVED MAX TSUNAMI HEIGHT
DART 44401 US	1236 EDT Mar 17	0.8ft
DART 41421 US	1433 EDT Mar 17	1.0ft

PRELIMINARY EARTHQUAKE PARAMETERS

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* Magnitude 8.8
* Origin Time 0800 EDT Mar 17 2021
0700 CDT Mar 17 2021
0800 AST Mar 17 2021
1200 UTC Mar 17 2021
* Coordinates 36.0 North 15.0 West
* Depth 9 miles
* Location in the North Atlantic Ocean

RECOMMENDED ACTIONS

* See message number 5 for recommended actions.

IMPACTS

* See message number 5 for possible impacts.

ADDITIONAL INFORMATION AND NEXT UPDATE

- * Refer to the internet site tsunami.gov for more information.
- * Caribbean coastal regions should refer to the Pacific Tsunami Warning Center messages at tsunami.gov.
- * This message will be updated within 30 minutes.

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NTWC Bulletin #9

WEXX30 PAAQ 241903
TSUATE

BULLETIN

Public Tsunami Message Number 9
NWS National Tsunami Warning Center Palmer AK
303 PM EDT Wed Mar 17 2021

UPDATES

* Updated observations

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

...THE TSUNAMI ADVISORY REMAINS IN EFFECT...

Tsunami Warning in Effect for;

- * The coastal areas of Newfoundland and Labrador from Cape Ray, Newfoundland to Cape Chidley, Labrador

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Tsunami Advisory in Effect for;

- * The coastal areas of Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine, New Brunswick, Nova Scotia and Newfoundland from Flamingo, Florida to Cape Ray, Newfoundland

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.

FORECASTS OF TSUNAMI ACTIVITY

- * A tsunami has been generated. The first waves are forecasted to arrive at the following locations and specified times.
- * Forecast tsunami duration is the approximate length of time which the tsunami may produce dangerous currents and waves.
- * Forecast max tsunami height is the highest expected water level above the tide.
- * Forecasts are not provided for sites which have been impacted more than an hour prior to the time of this message.

SITE	FORECAST START OF TSUNAMI	FORECAST TSUNAMI DURATION	FORECAST MAX TSUNAMI HEIGHT
* Newfoundland			
Saint Lawrence	1610 NDT Mar 17	9 hrs	0.8- 1.5 ft
* Nova Scotia			
Scatarie Island	1545 ADT Mar 17	15 hrs	1.4- 2.5 ft
Lockeport	1555 ADT Mar 17		less than 1ft
* North Carolina			
Cape Hatteras	1535 EDT Mar 17		less than 1ft
* New York			
Montauk	1605 EDT Mar 17		less than 1ft
Manhattan	1740 EDT Mar 17		less than 1ft
* New Brunswick			
Grand Manan Isla	1720 ADT Mar 17		less than 1ft
* New Jersey			
Atlantic City	1635 EDT Mar 17	15 hrs	1.0- 1.8 ft
* Massachusetts			
Nantucket	1635 EDT Mar 17		less than 1ft
Boston	1720 EDT Mar 17		less than 1ft

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* Virginia
Virginia Beach 1650 EDT Mar 17

* Florida
Miami 1655 EDT Mar 17 less than 1ft
Key West 1740 EDT Mar 17 less than 1ft
Daytona 1745 EDT Mar 17 20 hrs 1.6- 3.1 ft
Melbourne Beach 1755 EDT Mar 17
Jacksonville Bea 1810 EDT Mar 17 less than 1ft

* Maine
Portland 1655 EDT Mar 17 less than 1ft

* South Carolina
Myrtle Beach 1755 EDT Mar 17 less than 1ft
Charleston 1815 EDT Mar 17 less than 1ft

* Georgia
Savannah 1825 EDT Mar 17 less than 1ft

OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

* Observed max tsunami height is the highest recorded water level above the tide level up to the time of this message.

SITE	TIME OF MEASUREMENT	OBSERVED MAX TSUNAMI HEIGHT
DART 44401 US	1236 EDT Mar 17	0.8ft
Bermuda Bermuda	1441 EDT Mar 17	1.2ft
DART 41421 US	1433 EDT Mar 17	1.0ft
DART 44402 US	1500 EDT Mar 17	0.3ft
DART 41420 US	1459 EDT Mar 17	1.0ft

PRELIMINARY EARTHQUAKE PARAMETERS

* Magnitude 8.8
* Origin Time 0800 EDT Mar 17 2021
0700 CDT Mar 17 2021
0800 AST Mar 17 2021
1200 UTC Mar 17 2021
* Coordinates 36.0 North 15.0 West
* Depth 9 miles
* Location in the North Atlantic Ocean

RECOMMENDED ACTIONS

* See message number 5 for recommended actions.

IMPACTS

* See message number 5 for possible impacts.

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ADDITIONAL INFORMATION AND NEXT UPDATE

- * Refer to the internet site tsunami.gov for more information.
- * Caribbean coastal regions should refer to the Pacific Tsunami Warning Center messages at tsunami.gov.
- * This message will be updated within 30 minutes.

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NTWC Bulletin #10

WEXX30 PAAQ 241931
TSUATE

BULLETIN

Public Tsunami Message Number 10
NWS National Tsunami Warning Center Palmer AK
331 PM EDT Wed Mar 17 2021

UPDATES

- * Updated observations

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

...THE TSUNAMI ADVISORY REMAINS IN EFFECT...

Tsunami Warning in Effect for;

- * The coastal areas of Newfoundland and Labrador from Cape Ray, Newfoundland to Cape Chidley, Labrador

Tsunami Advisory in Effect for;

- * The coastal areas of Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine, New Brunswick, Nova Scotia and Newfoundland from Flamingo, Florida to Cape Ray, Newfoundland

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.

FORECASTS OF TSUNAMI ACTIVITY

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- * A tsunami has been generated. The first waves are forecasted to arrive at the following locations and specified times.
- * Forecast tsunami duration is the approximate length of time which the tsunami may produce dangerous currents and waves.
- * Forecast max tsunami height is the highest expected water level above the tide.
- * Forecasts are not provided for sites which have been impacted more than an hour prior to the time of this message.

SITE ----	FORECAST START OF TSUNAMI -----	FORECAST TSUNAMI DURATION -----	FORECAST MAX TSUNAMI HEIGHT -----
* Newfoundland			
Saint Lawrence	1610 NDT Mar 17	9 hrs	0.8- 1.4 ft
* Nova Scotia			
Scatarie Island	1545 ADT Mar 17	15 hrs	1.3- 2.3 ft
Lockeport	1555 ADT Mar 17		less than 1ft
* North Carolina			
Cape Hatteras	1535 EDT Mar 17		less than 1ft
* New York			
Montauk	1605 EDT Mar 17		less than 1ft
Manhattan	1740 EDT Mar 17		less than 1ft
* New Brunswick			
Grand Manan Isla	1720 ADT Mar 17		less than 1ft
* New Jersey			
Atlantic City	1635 EDT Mar 17	15 hrs	0.9- 1.7 ft
* Massachusetts			
Nantucket	1635 EDT Mar 17		less than 1ft
Boston	1720 EDT Mar 17		less than 1ft
* Virginia			
Virginia Beach	1650 EDT Mar 17		
* Florida			
Miami	1655 EDT Mar 17		less than 1ft
Key West	1740 EDT Mar 17		less than 1ft
Daytona	1745 EDT Mar 17	20 hrs	1.5- 2.8 ft
Melbourne Beach	1755 EDT Mar 17		
Jacksonville Bea	1810 EDT Mar 17		less than 1ft
* Maine			
Portland	1655 EDT Mar 17		less than 1ft
* South Carolina			
Myrtle Beach	1755 EDT Mar 17		less than 1ft
Charleston	1815 EDT Mar 17		less than 1ft

LANTEX21 Exercise Handbook

* Georgia
Savannah 1825 EDT Mar 17 less than 1ft

OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

* Observed max tsunami height is the highest recorded water level above the tide level up to the time of this message.

SITE	TIME OF MEASUREMENT	OBSERVED MAX TSUNAMI HEIGHT
DART 44401 US	1236 EDT Mar 17	0.8ft
Bermuda Bermuda	1441 EDT Mar 17	1.2ft
DART 41421 US	1433 EDT Mar 17	1.0ft
DART 44402 US	1500 EDT Mar 17	0.3ft
DART 41420 US	1459 EDT Mar 17	1.0ft
Christiansted VI	1507 EDT Mar 17	1.1ft
DART 41424 US	1512 EDT Mar 17	0.5ft
San Juan TG Puerto Rico	1514 EDT Mar 17	0.7ft
Arecibo Puerto Rico	1511 EDT Mar 17	2.6ft
Lameshur Bay VI	1513 EDT Mar 17	0.5ft
Yabucoa Puerto Rico	1520 EDT Mar 17	0.8ft
Aguadilla Puerto Rico	1515 EDT Mar 17	1.2ft
Mayaguez Puerto Rico	1530 EDT Mar 17	1.9ft
Culebra Puerto Rico	1528 EDT Mar 17	1.6ft
Charlotte Amalie VI	1523 EDT Mar 17	1.4ft
Fajardo Puerto Rico	1524 EDT Mar 17	2.4ft

PRELIMINARY EARTHQUAKE PARAMETERS

* Magnitude 8.8
* Origin Time 0800 EDT Mar 17 2021
0700 CDT Mar 17 2021
0800 AST Mar 17 2021
1200 UTC Mar 17 2021
* Coordinates 36.0 North 15.0 West
* Depth 9 miles
* Location in the North Atlantic Ocean

RECOMMENDED ACTIONS

* See message number 5 for recommended actions.

IMPACTS

* See message number 5 for possible impacts.

ADDITIONAL INFORMATION AND NEXT UPDATE

* Refer to the internet site tsunami.gov for more information.

* Caribbean coastal regions should refer to the Pacific

LANTEX21 Exercise Handbook

Tsunami Warning Center messages at tsunami.gov.

* This message will be updated within 30 minutes.

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NTWC Bulletin #11

WEXX30 PAAQ 242000
TSUATE

BULLETIN

Public National Tsunami Message Number 11
NWS National Tsunami Warning Center Palmer AK
400 PM EDT Wed Mar 17 2021

UPDATES

* Updated observations

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

...THE TSUNAMI ADVISORY REMAINS IN EFFECT...

Tsunami Warning in Effect for;

* The coastal areas of Newfoundland and Labrador from Cape Ray, Newfoundland to Cape Chidley, Labrador

Tsunami Advisory in Effect for;

* The coastal areas of Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine, New Brunswick, Nova Scotia and Newfoundland from Flamingo, Florida to Cape Ray, Newfoundland

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.

FORECASTS OF TSUNAMI ACTIVITY

- * A tsunami has been generated. The first waves are forecasted to arrive at the following locations and specified times.
- * Forecast tsunami duration is the approximate length of time which the tsunami may produce dangerous currents and waves.
- * Forecast max tsunami height is the highest expected water level

LANTEX21 Exercise Handbook

above the tide.

* Forecasts are not provided for sites which have been impacted more than an hour prior to the time of this message.

SITE -----	FORECAST START OF TSUNAMI -----	FORECAST TSUNAMI DURATION -----	FORECAST MAX TSUNAMI HEIGHT -----
* North Carolina			
Cape Hatteras	1535 EDT Mar 17	9 hrs	0.8- 1.5 ft
* New York			
Montauk	1605 EDT Mar 17		less than 1ft
Manhattan	1740 EDT Mar 17		less than 1ft
* New Brunswick			
Grand Manan Isla	1720 ADT Mar 17		less than 1ft
* New Jersey			
Atlantic City	1635 EDT Mar 17	15 hrs	1.2- 2.2 ft
* Massachusetts			
Nantucket	1635 EDT Mar 17		less than 1ft
Boston	1720 EDT Mar 17		less than 1ft
* Virginia			
Virginia Beach	1650 EDT Mar 17		
* Florida			
Miami	1655 EDT Mar 17		less than 1ft
Key West	1740 EDT Mar 17		less than 1ft
Daytona	1745 EDT Mar 17	24 hrs	2.0- 3.7 ft
Melbourne Beach	1755 EDT Mar 17		
Jacksonville Bea	1810 EDT Mar 17		less than 1ft
* Maine			
Portland	1655 EDT Mar 17		less than 1ft
* South Carolina			
Myrtle Beach	1755 EDT Mar 17	9 hrs	0.8- 1.5 ft
Charleston	1815 EDT Mar 17		less than 1ft
* Georgia			
Savannah	1825 EDT Mar 17		less than 1ft

OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

* Observed max tsunami height is the highest recorded water level above the tide level up to the time of this message.

SITE -----	TIME OF MEASUREMENT -----	OBSERVED MAX TSUNAMI HEIGHT -----
DART 44401 US	1236 EDT Mar 17	0.8ft
Bermuda Bermuda	1543 EDT Mar 17	1.6ft

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DART 41421 US	1433	EDT Mar 17	1.0ft
DART 44402 US	1500	EDT Mar 17	0.3ft
DART 41420 US	1459	EDT Mar 17	1.0ft
Christiansted VI	1507	EDT Mar 17	1.1ft
DART 41424 US	1512	EDT Mar 17	0.5ft
San Juan TG Puerto Rico	1514	EDT Mar 17	0.7ft
Arecibo Puerto Rico	1542	EDT Mar 17	4.9ft
Lameshur Bay VI	1549	EDT Mar 17	0.6ft
Vieques Is. north PR	1540	EDT Mar 17	2.8ft
Yabucoa Puerto Rico	1557	EDT Mar 17	1.2ft
Aguadilla Puerto Rico	1515	EDT Mar 17	1.2ft
Mayaguez Puerto Rico	1530	EDT Mar 17	1.9ft
Culebra Puerto Rico	1528	EDT Mar 17	1.6ft
Charlotte Amalie VI	1541	EDT Mar 17	1.5ft
Penuelas Puerto Rico	1541	EDT Mar 17	0.5ft
Fajardo Puerto Rico	1524	EDT Mar 17	2.4ft
Magueyes Island PR	1546	EDT Mar 17	0.5ft
Halifax Nova Scotia	1547	EDT Mar 17	1.0ft

PRELIMINARY EARTHQUAKE PARAMETERS

* Magnitude 8.8
* Origin Time 0800 EDT Mar 17 2021
0700 CDT Mar 17 2021
0800 AST Mar 17 2021
1200 UTC Mar 17 2021
* Coordinates 36.0 North 15.0 West
* Depth 9 miles
* Location in the North Atlantic Ocean

RECOMMENDED ACTIONS

* See message number 5 for recommended actions.

IMPACTS

* See message number 5 for possible impacts.

ADDITIONAL INFORMATION AND NEXT UPDATE

- * Refer to the internet site tsunami.gov for more information.
- * Caribbean coastal regions should refer to the Pacific Tsunami Warning Center messages at tsunami.gov.
- * This message will be updated within 30 minutes.

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NTWC Bulletin #12

WEXX30 PAAQ 242031

LANTEX21 Exercise Handbook

TSUATE

BULLETIN

Public Tsunami Message Number 12
NWS National Tsunami Warning Center Palmer AK
431 PM EDT Wed Mar 17 2021

UPDATES

- * Updated observations

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

...THE TSUNAMI ADVISORY REMAINS IN EFFECT...

Tsunami Warning in Effect for;

- * The coastal areas of Newfoundland and Labrador from Cape Ray, Newfoundland to Cape Chidley, Labrador

Tsunami Advisory in Effect for;

- * The coastal areas of Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine, New Brunswick, Nova Scotia and Newfoundland from Flamingo, Florida to Cape Ray, Newfoundland

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.

FORECASTS OF TSUNAMI ACTIVITY

- * A tsunami has been generated. The first waves are forecasted to arrive at the following locations and specified times.
- * Forecast tsunami duration is the approximate length of time which the tsunami may produce dangerous currents and waves.
- * Forecast max tsunami height is the highest expected water level above the tide.
- * Forecasts are not provided for sites which have been impacted more than an hour prior to the time of this message.

SITE	FORECAST START OF TSUNAMI	FORECAST DURATION	FORECAST MAX TSUNAMI HEIGHT
----	-----	-----	-----

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* North Carolina
 Cape Hatteras 1535 EDT Mar 17 9 hrs 0.9- 1.7 ft

* New York
 Montauk 1605 EDT Mar 17 less than 1ft
 Manhattan 1740 EDT Mar 17 less than 1ft

* New Brunswick
 Grand Manan Isla 1720 ADT Mar 17 less than 1ft

* New Jersey
 Atlantic City 1635 EDT Mar 17 15 hrs 1.3- 2.4 ft

* Massachusetts
 Nantucket 1635 EDT Mar 17 less than 1ft
 Boston 1720 EDT Mar 17 less than 1ft

* Virginia
 Virginia Beach 1650 EDT Mar 17

* Florida
 Miami 1655 EDT Mar 17 less than 1ft
 Key West 1740 EDT Mar 17 less than 1ft
 Daytona 1745 EDT Mar 17 24 hrs 2.2- 4.0 ft
 Melbourne Beach 1755 EDT Mar 17
 Jacksonville Bea 1810 EDT Mar 17 less than 1ft

* Maine
 Portland 1655 EDT Mar 17 less than 1ft

* South Carolina
 Myrtle Beach 1755 EDT Mar 17 9 hrs 0.9- 1.7 ft
 Charleston 1815 EDT Mar 17 less than 1ft

* Georgia
 Savannah 1825 EDT Mar 17 less than 1ft

OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

* Observed max tsunami height is the highest recorded water level above the tide level up to the time of this message.

SITE	TIME OF MEASUREMENT	OBSERVED MAX TSUNAMI HEIGHT
DART 44401 US	1236 EDT Mar 17	0.8ft
Bermuda Bermuda	1543 EDT Mar 17	1.6ft
DART 41421 US	1433 EDT Mar 17	1.0ft
DART 44402 US	1500 EDT Mar 17	0.3ft
DART 41420 US	1459 EDT Mar 17	1.0ft
Christiansted VI	1626 EDT Mar 17	1.4ft
DART 41424 US	1512 EDT Mar 17	0.5ft
San Juan TG Puerto Rico	1514 EDT Mar 17	0.7ft
Arecibo Puerto Rico	1542 EDT Mar 17	4.9ft
Lameshur Bay VI	1613 EDT Mar 17	0.8ft
Vieques Is. north PR	1540 EDT Mar 17	2.8ft

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Yabucoa Puerto Rico	1557	EDT Mar 17	1.2ft
Aguadilla Puerto Rico	1630	EDT Mar 17	1.5ft
Mayaguez Puerto Rico	1607	EDT Mar 17	2.7ft
Culebra Puerto Rico	1618	EDT Mar 17	1.8ft
Charlotte Amalie VI	1613	EDT Mar 17	1.9ft
Penuelas Puerto Rico	1613	EDT Mar 17	0.9ft
Fajardo Puerto Rico	1524	EDT Mar 17	2.4ft
Magueyes Island PR	1617	EDT Mar 17	0.6ft
Halifax Nova Scotia	1547	EDT Mar 17	1.0ft

PRELIMINARY EARTHQUAKE PARAMETERS

* Magnitude 8.8
* Origin Time 0800 EDT Mar 17 2021
0700 CDT Mar 17 2021
0800 AST Mar 17 2021
1200 UTC Mar 17 2021
* Coordinates 36.0 North 15.0 West
* Depth 9 miles
* Location in the North Atlantic Ocean

RECOMMENDED ACTIONS

* See message number 5 for recommended actions.

IMPACTS

* See message number 5 for possible impacts.

ADDITIONAL INFORMATION AND NEXT UPDATE

* Refer to the internet site tsunami.gov for more information.
* Caribbean coastal regions should refer to the Pacific Tsunami Warning Center messages at tsunami.gov.
* This message will be updated within 30 minutes.

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NTWC Bulletin #13

WEXX30 PAAQ 242101
TSUATE

BULLETIN

Public Tsunami Message Number 13
NWS National Tsunami Warning Center Palmer AK
501 PM EDT Wed Mar 17 2021

UPDATES

LANTEX21 Exercise Handbook

- * Updated observations
- * Revised alert areas
- * All warning areas have been reduced to advisory

...THE TSUNAMI ADVISORY REMAINS IN EFFECT...

Tsunami Advisory in Effect for;

- * The coastal areas of Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine, New Brunswick, Nova Scotia and Newfoundland from Flamingo, Florida to Cape Ray, Newfoundland
- * The coastal areas of Newfoundland and Labrador from Cape Ray, Newfoundland to Cape Chidley, Labrador

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.

FORECASTS OF TSUNAMI ACTIVITY

- * A tsunami has been generated. The first waves are forecasted to arrive at the following locations and specified times.
- * Forecast tsunami duration is the approximate length of time which the tsunami may produce dangerous currents and waves.
- * Forecast max tsunami height is the highest expected water level above the tide.
- * Forecasts are not provided for sites which have been impacted more than an hour prior to the time of this message.

SITE	FORECAST START OF TSUNAMI	FORECAST TSUNAMI DURATION	FORECAST MAX TSUNAMI HEIGHT
* New York			
Montauk	1605 EDT Mar 17		less than 1ft
Manhattan	1740 EDT Mar 17		less than 1ft
* New Brunswick			
Grand Manan Isla	1720 ADT Mar 17		less than 1ft
* New Jersey			
Atlantic City	1635 EDT Mar 17	15 hrs	1.3- 2.5 ft

- * Massachusetts

LANTEX21 Exercise Handbook

Nantucket	1635	EDT Mar 17		less than 1ft
Boston	1720	EDT Mar 17		less than 1ft
* Virginia				
Virginia Beach	1650	EDT Mar 17		
* Florida				
Miami	1655	EDT Mar 17		less than 1ft
Key West	1740	EDT Mar 17		less than 1ft
Daytona	1745	EDT Mar 17	24 hrs	2.2- 4.1 ft
Melbourne Beach	1755	EDT Mar 17		
Jacksonville Bea	1810	EDT Mar 17		less than 1ft
* Maine				
Portland	1655	EDT Mar 17		less than 1ft
* South Carolina				
Myrtle Beach	1755	EDT Mar 17	9 hrs	0.9- 1.7 ft
Charleston	1815	EDT Mar 17		less than 1ft
* Georgia				
Savannah	1825	EDT Mar 17		less than 1ft

OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

* Observed max tsunami height is the highest recorded water level above the tide level up to the time of this message.

SITE	TIME OF MEASUREMENT	OBSERVED MAX TSUNAMI HEIGHT
DART 44401 US	1236 EDT Mar 17	0.8ft
Bermuda Bermuda	1543 EDT Mar 17	1.6ft
DART 41421 US	1433 EDT Mar 17	1.0ft
DART 44402 US	1500 EDT Mar 17	0.3ft
DART 41420 US	1459 EDT Mar 17	1.0ft
Christiansted VI	1626 EDT Mar 17	1.4ft
DART 41424 US	1512 EDT Mar 17	0.5ft
San Juan TG Puerto Rico	1514 EDT Mar 17	0.7ft
Arecibo Puerto Rico	1542 EDT Mar 17	4.9ft
Lameshur Bay VI	1613 EDT Mar 17	0.8ft
Vieques Is. north PR	1540 EDT Mar 17	2.8ft
Yabucoa Puerto Rico	1650 EDT Mar 17	1.6ft
Aguadilla Puerto Rico	1630 EDT Mar 17	1.5ft
Mayaguez Puerto Rico	1607 EDT Mar 17	2.7ft
Culebra Puerto Rico	1618 EDT Mar 17	1.8ft
Charlotte Amalie VI	1649 EDT Mar 17	2.9ft
Penuelas Puerto Rico	1645 EDT Mar 17	1.0ft
Fajardo Puerto Rico	1524 EDT Mar 17	2.4ft
Magueyes Island PR	1617 EDT Mar 17	0.6ft
Halifax Nova Scotia	1656 EDT Mar 17	1.2ft
Oregon Inlet NC	1635 EDT Mar 17	0.3ft
Montauk New York	1650 EDT Mar 17	0.1ft
Cutler NAS Maine	1652 EDT Mar 17	0.4ft
Bar Harbor Maine	1647 EDT Mar 17	0.2ft
Ocean City Maryland	1700 EDT Mar 17	1.0ft
Duck North Carolina	1650 EDT Mar 17	1.1ft

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Atlantic City NJ

1700 EDT Mar 17

0.8ft

PRELIMINARY EARTHQUAKE PARAMETERS

* Magnitude 8.8
* Origin Time 0800 EDT Mar 17 2021
0700 CDT Mar 17 2021
0800 AST Mar 17 2021
1200 UTC Mar 17 2021
* Coordinates 36.0 North 15.0 West
* Depth 9 miles
* Location in the North Atlantic Ocean

RECOMMENDED ACTIONS - UPDATED

Actions to protect human life and property will vary within tsunami advisory areas.

If you are in a tsunami advisory area;

- * Move out of the water, off the beach, and away from harbors, marinas, breakwaters, bays and inlets.
- * Be alert to and follow instructions from your local emergency officials because they may have more detailed or specific information for your location.
- * If you feel a strong earthquake or extended ground rolling take immediate protective actions such as moving inland and/or uphill preferably by foot.
- * Boat operators,
 - * Where time and conditions permit, move your boat out to sea to a depth of at least 180 feet.
 - * If at sea avoid entering shallow water, harbors, marinas, bays, and inlets to avoid floating and submerged debris and strong currents.
- * Do not go to the shore to observe the tsunami.
- * Do not return to the coast until local emergency officials indicate it is safe to do so.

IMPACTS

Impacts will vary at different locations in the advisory areas.

If you are in a tsunami advisory area;

- * A tsunami with strong waves and currents is possible.
- * Waves and currents can drown or injure people who are

LANTEX21 Exercise Handbook

in the water.

- * Currents at beaches and in harbors, marinas, bays, and inlets may be especially dangerous.
- * Some impacts may continue for many hours to days after arrival of the first wave.
- * The first wave may not be the largest so later waves may be larger.
- * Each wave may last 5 to 45 minutes as a wave encroaches and recedes.
- * Coasts facing all directions are threatened because the waves can wrap around islands and headlands and into bays.
- * Strong shaking or rolling of the ground indicates an earthquake has occurred and a tsunami may be imminent.
- * A rapidly receding or receded shoreline, unusual waves and sounds, and strong currents are signs of a tsunami.
- * The tsunami may appear as water moving rapidly out to sea, a gentle rising tide like flood with no breaking wave, as a series of breaking waves, or a frothy wall of water.

ADDITIONAL INFORMATION AND NEXT UPDATE

- * Refer to the internet site tsunami.gov for more information.
- * Caribbean coastal regions should refer to the Pacific Tsunami Warning Center messages at tsunami.gov.
- * This message will be updated within 30 minutes.

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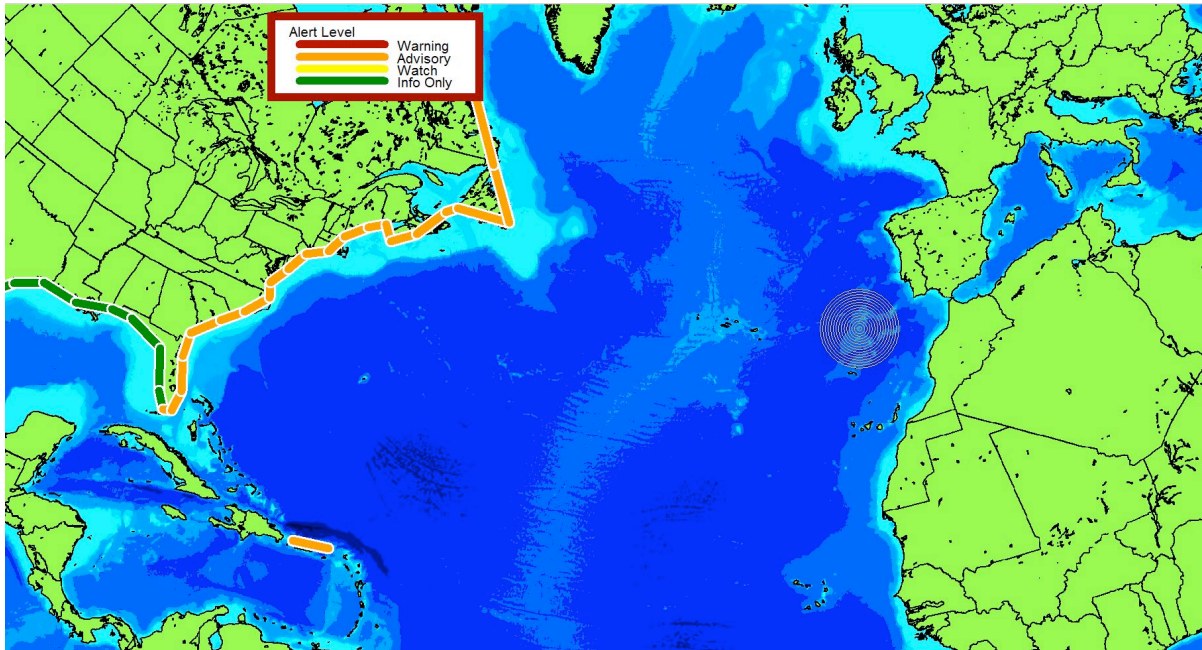


Figure C5: Alert area reduced to advisory.

NTWC Bulletin #14

WEXX30 PAAQ 242132
TSUATE

BULLETIN

Public Tsunami Message Number 14
NWS National Tsunami Warning Center Palmer AK
532 PM EDT Wed Mar 17 2021

...THE TSUNAMI ADVISORY IS CANCELLED...

- * The Tsunami Advisory is canceled for the coastal areas of Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine, New Brunswick, Nova Scotia, Newfoundland and Labrador

OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

- * Observed max tsunami height is the highest recorded water level above the tide level up to the time of this message.

SITE	TIME OF MEASUREMENT	OBSERVED MAX TSUNAMI HEIGHT
DART 44401 US	1236 EDT Mar 17	0.8ft
Bermuda Bermuda	1543 EDT Mar 17	1.6ft
DART 41421 US	1433 EDT Mar 17	1.0ft
DART 44402 US	1500 EDT Mar 17	0.3ft
DART 41420 US	1459 EDT Mar 17	1.0ft
Christiansted VI	1626 EDT Mar 17	1.4ft
DART 41424 US	1512 EDT Mar 17	0.5ft

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San Juan TG Puerto Rico	1514	EDT Mar 17	0.7ft
Arecibo Puerto Rico	1542	EDT Mar 17	4.9ft
Lameshur Bay VI	1613	EDT Mar 17	0.8ft
Vieques Is. north PR	1540	EDT Mar 17	2.8ft
Yabucoa Puerto Rico	1650	EDT Mar 17	1.6ft
Aguadilla Puerto Rico	1630	EDT Mar 17	1.5ft
Mayaguez Puerto Rico	1607	EDT Mar 17	2.7ft
Culebra Puerto Rico	1618	EDT Mar 17	1.8ft
Charlotte Amalie VI	1649	EDT Mar 17	2.9ft
Penuelas Puerto Rico	1645	EDT Mar 17	1.0ft
Fajardo Puerto Rico	1524	EDT Mar 17	2.4ft
Magueyes Island PR	1705	EDT Mar 17	0.7ft
Halifax Nova Scotia	1709	EDT Mar 17	1.3ft
Oregon Inlet NC	1635	EDT Mar 17	0.3ft
Montauk New York	1718	EDT Mar 17	0.3ft
Cutler NAS Maine	1652	EDT Mar 17	0.4ft
The US/Canada Border US	1726	EDT Mar 17	0.2ft
Bar Harbor Maine	1708	EDT Mar 17	0.3ft
Ocean City Maryland	1700	EDT Mar 17	1.0ft
Duck North Carolina	1712	EDT Mar 17	1.5ft
Woods Hole MA	1715	EDT Mar 17	0.3ft
Newport Rhode Island	1704	EDT Mar 17	0.4ft
Beaufort North Carolina	1719	EDT Mar 17	0.6ft
Atlantic City NJ	1717	EDT Mar 17	1.5ft
Fort Point NH	1723	EDT Mar 17	0.2ft
Virginia Key Florida	1725	EDT Mar 17	0.4ft
Wells Maine	1717	EDT Mar 17	0.2ft
Lewes Delaware	1729	EDT Mar 17	0.4ft
Quonset Point RI	1727	EDT Mar 17	0.5ft

RECOMMENDED ACTIONS - UPDATED

- * Do not re-occupy hazard zones until local emergency officials indicate it is safe to do so.

IMPACTS - UPDATED

- * A tsunami was generated by this event, but no longer poses a threat.
- * Some areas may continue to see small sea level changes.
- * The determination to re-occupy hazard zones must be made by local officials.

ADDITIONAL INFORMATION AND NEXT UPDATE

- * Refer to the internet site tsunami.gov for more information.
- * Caribbean coastal regions should refer to the Pacific Tsunami Warning Center messages at tsunami.gov.
- * This will be the final U.S. National Tsunami Warning Center message issued for this event.

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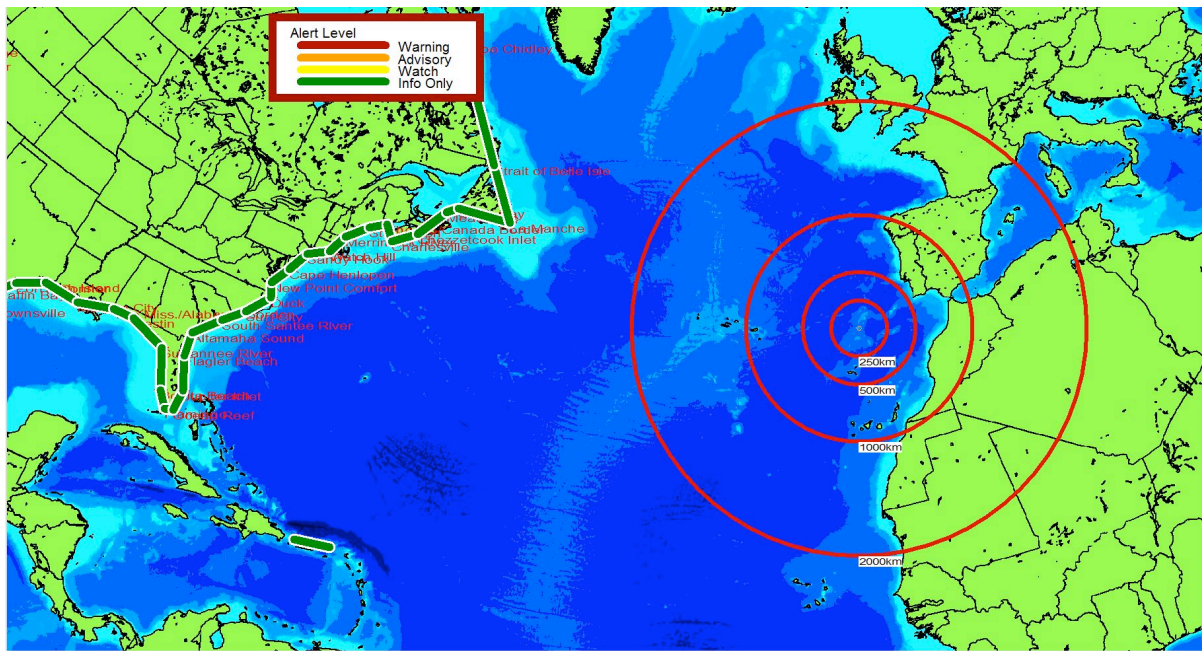


Figure C6: Alert area just after cancellation.

NTWC Spanish Bulletin #1

WEXX42 PAAQ 241205
TIBSPA

Boletín Informativo de Tsunami Numero 1
NWS Centro Nacional de Alerta de Tsunami Palmer AK
805 AM EDT Wed Mar 17 2021

...BOLETIN INFORMATIVO ACERCA DEL PELIGRO DE TSUNAMI PARA LAS COSTAS DEL ESTE DE LOS ESTADOS UNIDOS Y CANADA, Y GOLFO DE MEXICO...

EVALUACION

- * Se conoce que terremotos de este tamaño pueden generar tsunamis potencialmente peligrosos para costas fuera del lugar de origen.
- * El Centro Nacional de Alerta de Tsunamis está analizando el evento para determinar el nivel de peligrosidad.
- * Información adicional será emitida cuando esté disponible.
- * Este terremoto tiene el potencial de generar un tsunami destructivo en el lugar de origen.

PARAMETROS PRELIMINARES DEL TERREMOTO

- * LOS SIGUIENTES PARAMETROS ESTAN BASADOS EN UNA EVALUACION PRELIMINAR RAPIDA Y PUEDEN VARIAR.

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* Magnitud 7.9
* Tiempo de Origen 0800 EDT Marzo 17 2021
0700 CDT Marzo 17 2021
0800 AST Marzo 17 2021
1200 UTC Marzo 17 2021
* Coordenadas 36.0 Norte 15.0 Oeste
* Profundidad 9 millas
* Localizacion en el Oceano Atlantico Norte

INFORMACION ADICIONAL Y PROXIMA ACTUALIZACION

- * Para acceder a informacion adicional consulte el sitio de internet tsunami.gov.
- * Regiones costeras del Caribe deben consultar los mensajes emitidos por el Centro de Alerta de Tsunami del Pacifico en su sitio de internet tsunami.gov.
- * Se emitiran mensajes cada hora para informar sobre la evolucion del evento.

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NTWC Spanish Bulletin #2

WEXX42 PAAQ 241301
TIBSPA

Boletin Informativo de Tsunami Numero 2
NWS Centro Nacional de Alerta de Tsunami Palmer AK
901 AM EDT Wed Mar 17 2021

ACTUALIZACIONES

- * Magnitud revisada

...BOLETIN INFORMATIVO ACERCA DEL PELIGRO DE TSUNAMI PARA LAS COSTAS DEL ESTE DE LOS ESTADOS UNIDOS Y CANADA, Y GOLFO DE MEXICO...

EVALUACION

- * No existe peligro de tsunami para las areas indicadas arriba.
- * Algunas de las areas indicadas arriba pueden experimentar cambios de nivel de mar no destructivos.

PARAMETROS PRELIMINARES DEL TERREMOTO - ACTUALIZADOS

- * LOS SIGUIENTES PARAMETROS ESTAN BASADOS EN UNA EVALUACION PRELIMINAR RAPIDA Y PUEDEN VARIAR.
- * Magnitud 8.8

LANTEX21 Exercise Handbook

* Tiempo de Origen 0800 EDT Marzo 17 2021
0700 CDT Marzo 17 2021
0800 AST Marzo 17 2021
1200 UTC Marzo 17 2021
* Coordenadas 36.0 Norte 15.0 Oeste
* Profundidad 9 millas
* Localizacion en el Oceano Atlantico Norte

INFORMACION ADICIONAL Y PROXIMA ACTUALIZACION

- * Para acceder a informacion adicional consulte el sitio de internet tsunami.gov.
- * Regiones costeras del Caribe deben consultar los mensajes emitidos por el Centro de Alerta de Tsunami del Pacifico en su sitio de internet tsunami.gov.
- * Este sera el ultimo boletin proveniente del Centro Nacional de Alerta de Tsunami de los Estados Unidos para este evento a menos que se disponga de informacion adicional.

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NTWC Spanish Bulletin #3

WEXX42 PAAQ 241401
TIBSPA

Boletin Informativo de Tsunami Numero 3
NWS Centro Nacional de Alerta de Tsunami Palmer AK
1001 AM EDT Wed Mar 17 2021

ACTUALIZACIONES

- * No hay actualizaciones en este mensaje

...BOLETIN INFORMATIVO ACERCA DEL PELIGRO DE TSUNAMI PARA LAS COSTAS DEL ESTE DE LOS ESTADOS UNIDOS Y CANADA, Y GOLFO DE MEXICO...

EVALUACION

- * No existe peligro de tsunami para las areas indicadas arriba.
- * Algunas de las areas indicadas arriba pueden experimentar cambios de nivel de mar no destructivos.

PARAMETROS PRELIMINARES DEL TERREMOTO

* Magnitud 8.8
* Tiempo de Origen 0800 EDT Marzo 17 2021
0700 CDT Marzo 17 2021
0800 AST Marzo 17 2021
1200 UTC Marzo 17 2021

LANTEX21 Exercise Handbook

* Coordenadas 36.0 Norte 15.0 Oeste
* Profundidad 9 millas
* Localizacion en el Oceano Atlantico Norte

INFORMACION ADICIONAL Y PROXIMA ACTUALIZACION

- * Para acceder a informacion adicional consulte el sitio de internet tsunami.gov.
- * Regiones costeras del Caribe deben consultar los mensajes emitidos por el Centro de Alerta de Tsunami del Pacifico en su sitio de internet tsunami.gov.
- * Este sera el ultimo boletin proveniente del Centro Nacional de Alerta de Tsunami de los Estados Unidos para este evento a menos que se disponga de informacion adicional.

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NTWC Spanish Bulletin #4

WEXX42 PAAQ 241500
TIBSPA

Boletin Informativo de Tsunami Numero 4
NWS Centro Nacional de Alerta de Tsunami Palmer AK
1100 AM EDT Wed Mar 17 2021

ACTUALIZACIONES

- * No hay actualizaciones en este mensaje

...BOLETIN INFORMATIVO ACERCA DEL PELIGRO DE TSUNAMI PARA LAS COSTAS DEL ESTE DE LOS ESTADOS UNIDOS Y CANADA, Y GOLFO DE MEXICO...

EVALUACION

- * No existe peligro de tsunami para las areas indicadas arriba.
- * Algunas de las areas indicadas arriba pueden experimentar cambios de nivel de mar no destructivos.

PARAMETROS PRELIMINARES DEL TERREMOTO

* Magnitud 8.8
* Tiempo de Origen 0800 EDT Marzo 17 2021
0700 CDT Marzo 17 2021
0800 AST Marzo 17 2021
1200 UTC Marzo 17 2021
* Coordenadas 36.0 Norte 15.0 Oeste
* Profundidad 9 millas
* Localizacion en el Oceano Atlantico Norte

LANTEX21 Exercise Handbook

INFORMACION ADICIONAL Y PROXIMA ACTUALIZACION

- * Para acceder a informacion adicional consulte el sitio de internet tsunami.gov.
- * Regiones costeras del Caribe deben consultar los mensajes emitidos por el Centro de Alerta de Tsunami del Pacifico en su sitio de internet tsunami.gov.
- * Este sera el ultimo boletin proveniente del Centro Nacional de Alerta de Tsunami de los Estados Unidos para este evento a menos que se disponga de informacion adicional.

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NTWC Spanish Bulletin #5

WEXX40 PAAQ 241600
TSUSPA

BULLETIN

Mensaje de Tsunami numero 5
NWS Centro Nacional de Alerta de Tsunami Palmer AK
1200 PM EDT Wed Mar 17 2021

ACTUALIZACIONES

- * Un tsunami ha sido confirmado y se esperan algunas impactos
- * Modifica las regiones bajo alerta

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

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

Aviso de Tsunami en Efecto para;

- * Areas costeras de Newfoundland y Labrador desde Cape Ray, Newfoundland hasta Cape Chidley, Labrador

Advertencia de Tsunami en Efecto para;

- * Areas costeras de Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine, New Brunswick, Nova Scotia y Newfoundland desde Flamingo, Florida hasta Cape Ray, Newfoundland

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.

LANTEX21 Exercise Handbook

PRONOSTICOS DEL TSUNAMI

* Se pronostica que la actividad del tsunami comience en los siguientes puntos a las horas indicadas.

LUGAR	LLEGADA PRONOSTICADA DEL TSUNAMI		
-----	-----		
* Newfoundland			
Bonavista	1525	NDT	Mar 17
Saint Lawrence	1610	NDT	Mar 17
* Labrador			
Cape Makkovik	1500	ADT	Mar 17
Battle Harbour	1530	NDT	Mar 17
* Nova Scotia			
Scatarie Island	1545	ADT	Mar 17
Lockeport	1555	ADT	Mar 17
* North Carolina			
Cape Hatteras	1535	EDT	Mar 17
* New York			
Montauk	1605	EDT	Mar 17
Manhattan	1740	EDT	Mar 17
* New Brunswick			
Grand Manan Isla	1720	ADT	Mar 17
* New Jersey			
Atlantic City	1635	EDT	Mar 17
* Massachusetts			
Nantucket	1635	EDT	Mar 17
Boston	1720	EDT	Mar 17
* Virginia			
Virginia Beach	1650	EDT	Mar 17
* Florida			
Miami	1655	EDT	Mar 17
Key West	1740	EDT	Mar 17
Daytona	1745	EDT	Mar 17
Melbourne Beach	1755	EDT	Mar 17
Jacksonville Bea	1810	EDT	Mar 17
* Maine			
Portland	1655	EDT	Mar 17
* South Carolina			
Myrtle Beach	1755	EDT	Mar 17
Charleston	1815	EDT	Mar 17
* Georgia			

LANTEX21 Exercise Handbook

Savannah 1825 EDT Mar 17

OBSERVACIONES DEL TSUNAMI

- * No hay observaciones del tsunami disponibles para reportar.

PARAMETROS PRELIMINARES DEL TERREMOTO

- * Magnitud 8.8
- * Tiempo de Origen 0800 EDT Marzo 17 2021
0700 CDT Marzo 17 2021
0800 AST Marzo 17 2021
1200 UTC Marzo 17 2021
- * Coordenadas 36.0 Norte 15.0 Oeste
- * Profundidad 9 millas
- * Localizacion en el Oceano Atlantico Norte

ACCIONES RECOMENDADAS - ACTUALIZADAS

Las acciones para proteger la vida y propiedad pueden variar dentro de las areas de aviso y las areas de advertencia de tsunami.

Si usted esta en un area de aviso;

- * Desaloje tierra adentro o a un lugar alto fuera de la zona de inundacion por tsunami o muevase a un piso alto de un edificio multipiso segun sea su situacion.

Si usted esta en un area de aviso o advertencia;

- * Salgase del agua, de la playa y alejese de puertos, marinas, bahias, ensenadas y rompeolas.
- * Este alerta y siga las instrucciones de los oficiales locales de manejo de emergencia ya que ellos pueden tener informacion mas detallada o especifica para su ubicacion.
- * Si siente un terremoto fuerte y/o prolongado tome inmediatamente acciones de seguridad como moverse tierra adentro y/o hacia un lugar alto preferiblemente a pie.
- * Operadores de botes,
 - * Cuando el tiempo y las condiciones lo permitan mueva su bote mar adentro a una profundidad de al menos 180 pies.
 - * Si esta navegando evite entrar a aguas someras/llanas, puertos, marinas, bahias, y ensenadas para evitar corrientes fuertes y objetos flotantes o sumergidos.

- * No vaya a la costa para observar el tsunami.

- * No regrese a la costa hasta que los oficiales locales de

LANTEX21 Exercise Handbook

manejo de emergencia local indiquen que es seguro hacerlo.

IMPACTOS

Los impactos pueden variar en diferentes lugares dentro de las áreas de aviso y las áreas de advertencia.

Si usted esta en un area de aviso;

- * Es posible un tsunami con olas destructivas y corrientes fuertes.
- * Posibles inundaciones costeras repetidas cuando las olas lleguen a la costa, se mueven tierra adentro, y retroceden al oceano.
- * Olas fuertes e inusuales, corrientes e inundaciones pueden ahogar o herir personas y debilitar o destruir estructuras en tierra y dentro del agua.
- * Agua con objetos flotantes o sumergidos pueden herir o causar la muerte a personas o destruir edificios y puentes.
- * Corrientes y olas fuertes e inusuales en puertos, marinas, bahias, y ensenadas pueden ser especialmente destructivas.

Si usted esta en un area de advertencia;

- * Un tsunami con olas y corrientes fuertes puede ser posible.
- * Olas y corrientes pueden ahogar o herir personas que se encuentran en el agua.
- * Corrientes en playas y puertos, marinas, bahias, y ensenadas pueden ser especialmente peligrosas.

Si usted esta en un area de aviso o advertencia;

- * Algunos impactos pueden continuar por muchas horas hasta dias luego de la llegada de la primera ola.
- * La primera ola puede no ser la mas grande las olas posteriores si.
- * Cada ola puede durar de 5 a 45 minutos entre su embate y retroceso.
- * Costas con frente en todas las direcciones pueden estar en peligro porque las olas pueden dar la vuelta a islas y entrar a bahias.
- * Movimiento fuerte y/o prolongado del suelo indica que un terremoto ha ocurrido un tsunami puede haber sido generado y su llegada inminente.
- * Un rapido retroceso de la linea de costa, olas y sonidos

LANTEX21 Exercise Handbook

inusuales, y fuertes corrientes son senales de un tsunami.

- * El tsunami puede aparecer como agua moviendose rapidamente hacia mar adentro, una marea suave que se eleva rapidamente sin olas rompientes, como una serie de olas rompientes, o una pared de agua espumosa.

INFORMACION ADICIONAL Y PROXIMA ACTUALIZACION

- * Para acceder a informacion adicional consulte el sitio de internet tsunami.gov.
- * Regiones costeras del Caribe deben consultar los mensajes emitidos por el Centro de Alerta de Tsunami del Pacifico en su sitio de internet tsunami.gov.
- * Este mensaje sera actualizado en 60 minutos.

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NTWC Spanish Bulletin #6

WEXX40 PAAQ 241703
TSUSPA

BULLETIN

Mensaje de Tsunami numero 6
NWS Centro Nacional de Alerta de Tsunami Palmer AK
103 PM EDT Wed Mar 17 2021

ACTUALIZACIONES

- * Nuevas observaciones

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

...LA ADVERTENCIA DE TSUNAMI PERMANECE EN EFECTO...

Aviso de Tsunami en Efecto para;

- * Areas costeras de Newfoundland y Labrador desde Cape Ray, Newfoundland hasta Cape Chidley, Labrador

Advertencia de Tsunami en Efecto para;

- * Areas costeras de Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine, New Brunswick, Nova Scotia y Newfoundland desde Flamingo, Florida hasta Cape Ray, Newfoundland

Para otras costas del Pacifico de los Estados Unidos y Canada

LANTEX21 Exercise Handbook

en Norte America, el nivel de amenaza de tsunami esta siendo evaluado. Se proveera informacion adicional en mensajes suplementarios.

PRONOSTICOS DEL TSUNAMI

- * Se ha generado un tsunami. las primeras olas del tsunami estan pronosticadas para llegar a los siguientes puntos a las horas indicadas.
- * La duracion pronosticada del tsunami es el periodo aproximado de tiempo que se espera que el tsunami puede producir corrientes y olas peligrosas.
- * La altura maxima de ola pronosticada es el nivel de agua mas alto esperado sobre el nivel de la marea.
- * No se dan pronosticos para puntos que han sido impactados a mas de una hora antes de la emision de este mensaje.

LUGAR	LLEGADA PRONOSTICADA DEL TSUNAMI		PRONOSTICO DE DURACION DEL TSUNAMI	ALTURA MAX PRONOSTICADA DEL TSUNAMI
-----	-----		-----	-----
* Newfoundland				
Bonavista	1525	NDT Mar 17	15 hrs	1.1- 2.0 pie
Saint Lawrence	1610	NDT Mar 17	15 hrs	1.1- 2.1 pie
* Labrador				
Cape Makkovik	1500	ADT Mar 17		
Battle Harbour	1530	NDT Mar 17	9 hrs	0.7- 1.3 pie
* Nova Scotia				
Scatarie Island	1545	ADT Mar 17	24 hrs	1.9- 3.5 pie
Lockeport	1555	ADT Mar 17		menos de 1pie
* North Carolina				
Cape Hatteras	1535	EDT Mar 17	15 hrs	0.9- 1.7 pie
* New York				
Montauk	1605	EDT Mar 17		menos de 1pie
Manhattan	1740	EDT Mar 17		menos de 1pie
* New Brunswick				
Grand Manan Isla	1720	ADT Mar 17		menos de 1pie
* New Jersey				
Atlantic City	1635	EDT Mar 17	15 hrs	1.4- 2.5 pie
* Massachusetts				
Nantucket	1635	EDT Mar 17		menos de 1pie
Boston	1720	EDT Mar 17		menos de 1pie
* Virginia				
Virginia Beach	1650	EDT Mar 17		

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* Florida

Miami	1655	EDT Mar 17		menos de 1pie
Key West	1740	EDT Mar 17		menos de 1pie
Daytona	1745	EDT Mar 17	24 hrs	2.3- 4.2 pie
Melbourne Beach	1755	EDT Mar 17		
Jacksonville Bea	1810	EDT Mar 17		menos de 1pie

* Maine

Portland	1655	EDT Mar 17		menos de 1pie
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* South Carolina

Myrtle Beach	1755	EDT Mar 17	15 hrs	0.9- 1.7 pie
Charleston	1815	EDT Mar 17		menos de 1pie

* Georgia

Savannah	1825	EDT Mar 17		menos de 1pie
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OBSERVACIONES DEL TSUNAMI - ACTUALIZADAS

* La altura maxima observada del tsunami es el nivel de agua mas alto registrado sobre el nivel de la marea hasta la emision de este mensaje.

LUGAR	HORA DE LA MEDICION	ALTURA MAX OBSERVADA DEL TSUNAMI
DART 44401 US	1236 EDT Mar 17	0.8ft

PARAMETROS PRELIMINARES DEL TERREMOTO

* Magnitud 8.8

* Tiempo de Origen 0800 EDT Marzo 17 2021
0700 CDT Marzo 17 2021
0800 AST Marzo 17 2021
1200 UTC Marzo 17 2021

* Coordenadas 36.0 Norte 15.0 Oeste

* Profundidad 9 millas

* Localizacion en el Oceano Atlantico Norte

ACCIONES RECOMENDADAS

* Ver mensaje numero 5 para acciones recomendadas.

IMPACTOS

* Ver mensaje numero 5 para posibles impactos.

INFORMACION ADICIONAL Y PROXIMA ACTUALIZACION

* Para acceder a informacion adicional consulte el sitio de internet tsunami.gov.

LANTEX21 Exercise Handbook

- * Regiones costeras del Caribe deben consultar los mensajes emitidos por el Centro de Alerta de Tsunami del Pacifico en su sitio de internet tsunami.gov.
- * Este mensaje sera actualizado en 60 minutos.

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NTWC Spanish Bulletin #7

WEXX40 PAAQ 241808
TSUSPA

BULLETIN

Mensaje de Tsunami numero 7
NWS Centro Nacional de Alerta de Tsunami Palmer AK
208 PM EDT Wed Mar 17 2021

ACTUALIZACIONES

- * Nuevas observaciones

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

...LA ADVERTENCIA DE TSUNAMI PERMANECE EN EFECTO...

Aviso de Tsunami en Efecto para;

- * Areas costeras de Newfoundland y Labrador desde Cape Ray, Newfoundland hasta Cape Chidley, Labrador

Advertencia de Tsunami en Efecto para;

- * Areas costeras de Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine, New Brunswick, Nova Scotia y Newfoundland desde Flamingo, Florida hasta Cape Ray, Newfoundland

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.

PRONOSTICOS DEL TSUNAMI

- * Se ha generado un tsunami. las primeras olas del tsunami estan pronosticadas para llegar a los siguientes puntos a las horas indicadas.
- * La duracion pronosticada del tsunami es el periodo aproximado de tiempo que se espera que el tsunami puede producir

LANTEX21 Exercise Handbook

corrientes y olas peligrosas.

- * La altura maxima de ola pronosticada es el nivel de agua mas alto esperado sobre el nivel de la marea.
- * No se dan pronosticos para puntos que han sido impactados a mas de una hora antes de la emision de este mensaje.

LUGAR	LLEGADA PRONOSTICADA DEL TSUNAMI	PRONOSTICO DE DURACION DEL TSUNAMI	ALTURA MAX PRONOSTICADA DEL TSUNAMI
-----	-----	-----	-----
* Newfoundland			
Bonavista	1525 NDT Mar 17	15 hrs	1.1- 2.0 pie
Saint Lawrence	1610 NDT Mar 17	15 hrs	1.1- 2.1 pie
* Labrador			
Cape Makkovik	1500 ADT Mar 17		
Battle Harbour	1530 NDT Mar 17	9 hrs	0.7- 1.3 pie
* Nova Scotia			
Scatarie Island	1545 ADT Mar 17	24 hrs	1.9- 3.5 pie
Lockeport	1555 ADT Mar 17		menos de 1pie
* North Carolina			
Cape Hatteras	1535 EDT Mar 17	15 hrs	0.9- 1.7 pie
* New York			
Montauk	1605 EDT Mar 17		menos de 1pie
Manhattan	1740 EDT Mar 17		menos de 1pie
* New Brunswick			
Grand Manan Isla	1720 ADT Mar 17		menos de 1pie
* New Jersey			
Atlantic City	1635 EDT Mar 17	15 hrs	1.4- 2.5 pie
* Massachusetts			
Nantucket	1635 EDT Mar 17		menos de 1pie
Boston	1720 EDT Mar 17		menos de 1pie
* Virginia			
Virginia Beach	1650 EDT Mar 17		
* Florida			
Miami	1655 EDT Mar 17		menos de 1pie
Key West	1740 EDT Mar 17		menos de 1pie
Daytona	1745 EDT Mar 17	24 hrs	2.3- 4.2 pie
Melbourne Beach	1755 EDT Mar 17		
Jacksonville Bea	1810 EDT Mar 17		menos de 1pie
* Maine			
Portland	1655 EDT Mar 17		menos de 1pie
* South Carolina			
Myrtle Beach	1755 EDT Mar 17	15 hrs	0.9- 1.7 pie
Charleston	1815 EDT Mar 17		menos de 1pie

LANTEX21 Exercise Handbook

* Georgia
Savannah 1825 EDT Mar 17 menos de 1pie

OBSERVACIONES DEL TSUNAMI - ACTUALIZADAS

- * La altura maxima observada del tsunami es el nivel de agua mas alto registrado sobre el nivel de la marea hasta la emision de este mensaje.

LUGAR	HORA DE LA MEDICION	ALTURA MAX OBSERVADA DEL TSUNAMI
-----	-----	-----
DART 44401 US	1236 EDT Mar 17	0.8ft

PARAMETROS PRELIMINARES DEL TERREMOTO

- * Magnitud 8.8
- * Tiempo de Origen 0800 EDT Marzo 17 2021
0700 CDT Marzo 17 2021
0800 AST Marzo 17 2021
1200 UTC Marzo 17 2021
- * Coordenadas 36.0 Norte 15.0 Oeste
- * Profundidad 9 millas
- * Localizacion en el Oceano Atlantico Norte

ACCIONES RECOMENDADAS

- * Ver mensaje numero 5 para acciones recomendadas.

IMPACTOS

- * Ver mensaje numero 5 para posibles impactos.

INFORMACION ADICIONAL Y PROXIMA ACTUALIZACION

- * Para acceder a informacion adicional consulte el sitio de internet tsunami.gov.
- * Regiones costeras del Caribe deben consultar los mensajes emitidos por el Centro de Alerta de Tsunami del Pacifico en su sitio de internet tsunami.gov.
- * Este mensaje sera actualizado en 30 minutos.

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NTWC Spanish Bulletin #8

WEXX40 PAAQ 241836
TSUSPA

LANTEX21 Exercise Handbook

BULLETIN

Mensaje de Tsunami numero 8
NWS Centro Nacional de Alerta de Tsunami Palmer AK
236 PM EDT Wed Mar 17 2021

ACTUALIZACIONES

- * Nuevas observaciones

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

...LA ADVERTENCIA DE TSUNAMI PERMANECE EN EFECTO...

Aviso de Tsunami en Efecto para;

- * Areas costeras de Newfoundland y Labrador desde Cape Ray, Newfoundland hasta Cape Chidley, Labrador

Advertencia de Tsunami en Efecto para;

- * Areas costeras de Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine, New Brunswick, Nova Scotia y Newfoundland desde Flamingo, Florida hasta Cape Ray, Newfoundland

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.

PRONOSTICOS DEL TSUNAMI

-
- * Se ha generado un tsunami. las primeras olas del tsunami estan pronosticadas para llegar a los siguientes puntos a las horas indicadas.
 - * La duracion pronosticada del tsunami es el periodo aproximado de tiempo que se espera que el tsunami puede producir corrientes y olas peligrosas.
 - * La altura maxima de ola pronosticada es el nivel de agua mas alto esperado sobre el nivel de la marea.
 - * No se dan pronosticos para puntos que han sido impactados a mas de una hora antes de la emision de este mensaje.

LUGAR	LLEGADA PRONOSTICADA DEL TSUNAMI	PRONOSTICO DE DURACION DEL TSUNAMI	ALTURA MAX PRONOSTICADA DEL TSUNAMI
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* Newfoundland					
Bonavista	1525	NDT	Mar 17	15 hrs	1.1- 2.0 pie
Saint Lawrence	1610	NDT	Mar 17	15 hrs	1.1- 2.1 pie
* Labrador					
Cape Makkovik	1500	ADT	Mar 17		
Battle Harbour	1530	NDT	Mar 17	9 hrs	0.7- 1.3 pie
* Nova Scotia					
Scatarie Island	1545	ADT	Mar 17	24 hrs	1.9- 3.5 pie
Lockeport	1555	ADT	Mar 17		menos de 1pie
* North Carolina					
Cape Hatteras	1535	EDT	Mar 17	15 hrs	0.9- 1.7 pie
* New York					
Montauk	1605	EDT	Mar 17		menos de 1pie
Manhattan	1740	EDT	Mar 17		menos de 1pie
* New Brunswick					
Grand Manan Isla	1720	ADT	Mar 17		menos de 1pie
* New Jersey					
Atlantic City	1635	EDT	Mar 17	15 hrs	1.4- 2.6 pie
* Massachusetts					
Nantucket	1635	EDT	Mar 17		menos de 1pie
Boston	1720	EDT	Mar 17		menos de 1pie
* Virginia					
Virginia Beach	1650	EDT	Mar 17		
* Florida					
Miami	1655	EDT	Mar 17		menos de 1pie
Key West	1740	EDT	Mar 17		menos de 1pie
Daytona	1745	EDT	Mar 17	24 hrs	2.3- 4.2 pie
Melbourne Beach	1755	EDT	Mar 17		
Jacksonville Bea	1810	EDT	Mar 17		menos de 1pie
* Maine					
Portland	1655	EDT	Mar 17		menos de 1pie
* South Carolina					
Myrtle Beach	1755	EDT	Mar 17	15 hrs	0.9- 1.8 pie
Charleston	1815	EDT	Mar 17		menos de 1pie
* Georgia					
Savannah	1825	EDT	Mar 17		menos de 1pie

OBSERVACIONES DEL TSUNAMI - ACTUALIZADAS

* La altura maxima observada del tsunami es el nivel de agua mas alto registrado sobre el nivel de la marea hasta la emision de este mensaje.

	HORA	ALTURA MAX OBSERVADA
LUGAR	DE LA MEDICION	DEL TSUNAMI

LANTEX21 Exercise Handbook

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DART 44401 US 1236 EDT Mar 17 0.8ft  
DART 41421 US 1433 EDT Mar 17 1.0ft
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PARAMETROS PRELIMINARES DEL TERREMOTO

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* Magnitud 8.8  
* Tiempo de Origen 0800 EDT Marzo 17 2021  
0700 CDT Marzo 17 2021  
0800 AST Marzo 17 2021  
1200 UTC Marzo 17 2021  
* Coordenadas 36.0 Norte 15.0 Oeste  
* Profundidad 9 millas  
* Localizacion en el Oceano Atlantico Norte
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ACCIONES RECOMENDADAS

* Ver mensaje numero 5 para acciones recomendadas.

IMPACTOS

* Ver mensaje numero 5 para posibles impactos.

INFORMACION ADICIONAL Y PROXIMA ACTUALIZACION

- * Para acceder a informacion adicional consulte el sitio de internet tsunami.gov.
- * Regiones costeras del Caribe deben consultar los mensajes emitidos por el Centro de Alerta de Tsunami del Pacifico en su sitio de internet tsunami.gov.
- * Este mensaje sera actualizado en 30 minutos.

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NTWC Spanish Bulletin #9

WEXX40 PAAQ 241903
TSUSPA

BULLETIN

Mensaje de Tsunami numero 9
NWS Centro Nacional de Alerta de Tsunami Palmer AK
303 PM EDT Wed Mar 17 2021

ACTUALIZACIONES

* Nuevas observaciones

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

LANTEX21 Exercise Handbook

...LA ADVERTENCIA DE TSUNAMI PERMANECE EN EFECTO...

Aviso de Tsunami en Efecto para;

- * Areas costeras de Newfoundland y Labrador desde Cape Ray, Newfoundland hasta Cape Chidley, Labrador

Advertencia de Tsunami en Efecto para;

- * Areas costeras de Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine, New Brunswick, Nova Scotia y Newfoundland desde Flamingo, Florida hasta Cape Ray, Newfoundland

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.

PRONOSTICOS DEL TSUNAMI

- * Se ha generado un tsunami. las primeras olas del tsunami estan pronosticadas para llegar a los siguientes puntos a las horas indicadas.
- * La duracion pronosticada del tsunami es el periodo aproximado de tiempo que se espera que el tsunami puede producir corrientes y olas peligrosas.
- * La altura maxima de ola pronosticada es el nivel de agua mas alto esperado sobre el nivel de la marea.
- * No se dan pronosticos para puntos que han sido impactados a mas de una hora antes de la emision de este mensaje.

LUGAR	LLEGADA PRONOSTICADA DEL TSUNAMI	PRONOSTICO DE DURACION DEL TSUNAMI	ALTURA MAX PRONOSTICADA DEL TSUNAMI
* Newfoundland			
Saint Lawrence	1610 NDT Mar 17	9 hrs	0.8- 1.5 pie
* Nova Scotia			
Scatarie Island	1545 ADT Mar 17	15 hrs	1.4- 2.5 pie
Lockeport	1555 ADT Mar 17		menos de 1pie
* North Carolina			
Cape Hatteras	1535 EDT Mar 17		menos de 1pie
* New York			
Montauk	1605 EDT Mar 17		menos de 1pie

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Manhattan	1740	EDT Mar 17		menos de 1pie
* New Brunswick				
Grand Manan Isla	1720	ADT Mar 17		menos de 1pie
* New Jersey				
Atlantic City	1635	EDT Mar 17	15 hrs	1.0- 1.8 pie
* Massachusetts				
Nantucket	1635	EDT Mar 17		menos de 1pie
Boston	1720	EDT Mar 17		menos de 1pie
* Virginia				
Virginia Beach	1650	EDT Mar 17		
* Florida				
Miami	1655	EDT Mar 17		menos de 1pie
Key West	1740	EDT Mar 17		menos de 1pie
Daytona	1745	EDT Mar 17	20 hrs	1.6- 3.1 pie
Melbourne Beach	1755	EDT Mar 17		
Jacksonville Bea	1810	EDT Mar 17		menos de 1pie
* Maine				
Portland	1655	EDT Mar 17		menos de 1pie
* South Carolina				
Myrtle Beach	1755	EDT Mar 17		menos de 1pie
Charleston	1815	EDT Mar 17		menos de 1pie
* Georgia				
Savannah	1825	EDT Mar 17		menos de 1pie

OBSERVACIONES DEL TSUNAMI - ACTUALIZADAS

* La altura maxima observada del tsunami es el nivel de agua mas alto registrado sobre el nivel de la marea hasta la emision de este mensaje.

LUGAR	HORA DE LA MEDICION	ALTURA MAX OBSERVADA DEL TSUNAMI
DART 44401 US	1236 EDT Mar 17	0.8ft
Bermuda Bermuda	1441 EDT Mar 17	1.2ft
DART 41421 US	1433 EDT Mar 17	1.0ft
DART 44402 US	1500 EDT Mar 17	0.3ft
DART 41420 US	1459 EDT Mar 17	1.0ft

PARAMETROS PRELIMINARES DEL TERREMOTO

* Magnitud 8.8

* Tiempo de Origen 0800 EDT Marzo 17 2021
0700 CDT Marzo 17 2021
0800 AST Marzo 17 2021
1200 UTC Marzo 17 2021

* Coordenadas 36.0 Norte 15.0 Oeste

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- * Profundidad 9 millas
- * Localizacion en el Oceano Atlantico Norte

ACCIONES RECOMENDADAS

- * Ver mensaje numero 5 para acciones recomendadas.

IMPACTOS

- * Ver mensaje numero 5 para posibles impactos.

INFORMACION ADICIONAL Y PROXIMA ACTUALIZACION

- * Para acceder a informacion adicional consulte el sitio de internet tsunami.gov.
- * Regiones costeras del Caribe deben consultar los mensajes emitidos por el Centro de Alerta de Tsunami del Pacifico en su sitio de internet tsunami.gov.
- * Este mensaje sera actualizado en 30 minutos.

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NTWC Spanish Bulletin #10

WEXX40 PAAQ 241931
TSUSPA

BULLETIN

Mensaje de Tsunami numero 10
NWS Centro Nacional de Alerta de Tsunami Palmer AK
331 PM EDT Wed Mar 17 2021

ACTUALIZACIONES

- * Nuevas observaciones

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

...LA ADVERTENCIA DE TSUNAMI PERMANECE EN EFECTO...

Aviso de Tsunami en Efecto para;

- * Areas costeras de Newfoundland y Labrador desde Cape Ray, Newfoundland hasta Cape Chidley, Labrador

Advertencia de Tsunami en Efecto para;

- * Areas costeras de Florida, Georgia, South Carolina, North

LANTEX21 Exercise Handbook

Carolina, Virginia, Maryland, Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine, New Brunswick, Nova Scotia y Newfoundland desde Flamingo, Florida hasta Cape Ray, Newfoundland

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.

PRONOSTICOS DEL TSUNAMI

- * Se ha generado un tsunami. las primeras olas del tsunami estan pronosticadas para llegar a los siguientes puntos a las horas indicadas.
- * La duracion pronosticada del tsunami es el periodo aproximado de tiempo que se espera que el tsunami puede producir corrientes y olas peligrosas.
- * La altura maxima de ola pronosticada es el nivel de agua mas alto esperado sobre el nivel de la marea.
- * No se dan pronosticos para puntos que han sido impactados a mas de una hora antes de la emision de este mensaje.

LUGAR	LLEGADA PRONOSTICADA DEL TSUNAMI		PRONOSTICO DE DURACION DEL TSUNAMI		ALTURA MAX PRONOSTICADA DEL TSUNAMI
-----	-----	-----	-----	-----	-----
* Newfoundland					
Saint Lawrence	1610	NDT Mar 17	9 hrs		0.8- 1.4 pie
* Nova Scotia					
Scatarie Island	1545	ADT Mar 17	15 hrs		1.3- 2.3 pie
Lockeport	1555	ADT Mar 17			menos de 1pie
* North Carolina					
Cape Hatteras	1535	EDT Mar 17			menos de 1pie
* New York					
Montauk	1605	EDT Mar 17			menos de 1pie
Manhattan	1740	EDT Mar 17			menos de 1pie
* New Brunswick					
Grand Manan Isla	1720	ADT Mar 17			menos de 1pie
* New Jersey					
Atlantic City	1635	EDT Mar 17	15 hrs		0.9- 1.7 pie
* Massachusetts					
Nantucket	1635	EDT Mar 17			menos de 1pie
Boston	1720	EDT Mar 17			menos de 1pie
* Virginia					

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Virginia Beach 1650 EDT Mar 17

* Florida

Miami 1655 EDT Mar 17 menos de 1pie
 Key West 1740 EDT Mar 17 menos de 1pie
 Daytona 1745 EDT Mar 17 20 hrs 1.5- 2.8 pie
 Melbourne Beach 1755 EDT Mar 17
 Jacksonville Bea 1810 EDT Mar 17 menos de 1pie

* Maine

Portland 1655 EDT Mar 17 menos de 1pie

* South Carolina

Myrtle Beach 1755 EDT Mar 17 menos de 1pie
 Charleston 1815 EDT Mar 17 menos de 1pie

* Georgia

Savannah 1825 EDT Mar 17 menos de 1pie

OBSERVACIONES DEL TSUNAMI - ACTUALIZADAS

* La altura maxima observada del tsunami es el nivel de agua mas alto registrado sobre el nivel de la marea hasta la emision de este mensaje.

LUGAR	HORA DE LA MEDICION	ALTURA MAX OBSERVADA DEL TSUNAMI
-----		-----
DART 44401 US	1236 EDT Mar 17	0.8ft
Bermuda Bermuda	1441 EDT Mar 17	1.2ft
DART 41421 US	1433 EDT Mar 17	1.0ft
DART 44402 US	1500 EDT Mar 17	0.3ft
DART 41420 US	1459 EDT Mar 17	1.0ft
Christiansted VI	1507 EDT Mar 17	1.1ft
DART 41424 US	1512 EDT Mar 17	0.5ft
San Juan TG Puerto Rico	1514 EDT Mar 17	0.7ft
Arecibo Puerto Rico	1511 EDT Mar 17	2.6ft
Lameshur Bay VI	1513 EDT Mar 17	0.5ft
Yabucoa Puerto Rico	1520 EDT Mar 17	0.8ft
Aguadilla Puerto Rico	1515 EDT Mar 17	1.2ft
Mayaguez Puerto Rico	1530 EDT Mar 17	1.9ft
Culebra Puerto Rico	1528 EDT Mar 17	1.6ft
Charlotte Amalie VI	1523 EDT Mar 17	1.4ft
Fajardo Puerto Rico	1524 EDT Mar 17	2.4ft

PARAMETROS PRELIMINARES DEL TERREMOTO

* Magnitud 8.8

* Tiempo de Origen 0800 EDT Marzo 17 2021
 0700 CDT Marzo 17 2021
 0800 AST Marzo 17 2021
 1200 UTC Marzo 17 2021

* Coordenadas 36.0 Norte 15.0 Oeste

* Profundidad 9 millas

* Localizacion en el Oceano Atlantico Norte

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ACCIONES RECOMENDADAS

- * Ver mensaje numero 5 para acciones recomendadas.

IMPACTOS

- * Ver mensaje numero 5 para posibles impactos.

INFORMACION ADICIONAL Y PROXIMA ACTUALIZACION

- * Para acceder a informacion adicional consulte el sitio de internet tsunami.gov.
- * Regiones costeras del Caribe deben consultar los mensajes emitidos por el Centro de Alerta de Tsunami del Pacifico en su sitio de internet tsunami.gov.
- * Este mensaje sera actualizado en 30 minutos.

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NTWC Spanish Bulletin #11

WEXX40 PAAQ 242000
TSUSPA

BULLETIN

Mensaje de Tsunami numero 11
NWS Centro Nacional de Alerta de Tsunami Palmer AK
400 PM EDT Wed Mar 17 2021

ACTUALIZACIONES

- * Nuevas observaciones

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

...LA ADVERTENCIA DE TSUNAMI PERMANECE EN EFECTO...

Aviso de Tsunami en Efecto para;

- * Areas costeras de Newfoundland y Labrador desde Cape Ray, Newfoundland hasta Cape Chidley, Labrador

Advertencia de Tsunami en Efecto para;

- * Areas costeras de Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine, New Brunswick, Nova Scotia y Newfoundland

LANTEX21 Exercise Handbook

desde Flamingo, Florida hasta Cape Ray, Newfoundland

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.

PRONOSTICOS DEL TSUNAMI

- * Se ha generado un tsunami. las primeras olas del tsunami estan pronosticadas para llegar a los siguientes puntos a las horas indicadas.
- * La duracion pronosticada del tsunami es el periodo aproximado de tiempo que se espera que el tsunami puede producir corrientes y olas peligrosas.
- * La altura maxima de ola pronosticada es el nivel de agua mas alto esperado sobre el nivel de la marea.
- * No se dan pronosticos para puntos que han sido impactados a mas de una hora antes de la emision de este mensaje.

LUGAR	LLEGADA PRONOSTICADA DEL TSUNAMI	PRONOSTICO DE DURACION DEL TSUNAMI	ALTURA MAX PRONOSTICADA DEL TSUNAMI
-----	-----	-----	-----
* North Carolina			
Cape Hatteras	1535 EDT Mar 17	9 hrs	0.8- 1.5 pie
* New York			
Montauk	1605 EDT Mar 17		menos de 1pie
Manhattan	1740 EDT Mar 17		menos de 1pie
* New Brunswick			
Grand Manan Isla	1720 ADT Mar 17		menos de 1pie
* New Jersey			
Atlantic City	1635 EDT Mar 17	15 hrs	1.2- 2.2 pie
* Massachusetts			
Nantucket	1635 EDT Mar 17		menos de 1pie
Boston	1720 EDT Mar 17		menos de 1pie
* Virginia			
Virginia Beach	1650 EDT Mar 17		
* Florida			
Miami	1655 EDT Mar 17		menos de 1pie
Key West	1740 EDT Mar 17		menos de 1pie
Daytona	1745 EDT Mar 17	24 hrs	2.0- 3.7 pie
Melbourne Beach	1755 EDT Mar 17		
Jacksonville Bea	1810 EDT Mar 17		menos de 1pie
* Maine			

LANTEX21 Exercise Handbook

Portland 1655 EDT Mar 17 menos de 1pie

 * South Carolina

Myrtle Beach 1755 EDT Mar 17 9 hrs 0.8- 1.5 pie

Charleston 1815 EDT Mar 17 menos de 1pie

 * Georgia

Savannah 1825 EDT Mar 17 menos de 1pie

OBSERVACIONES DEL TSUNAMI - ACTUALIZADAS

* La altura maxima observada del tsunami es el nivel de agua mas alto registrado sobre el nivel de la marea hasta la emision de este mensaje.

LUGAR	HORA DE LA MEDICION	ALTURA MAX OBSERVADA DEL TSUNAMI
-----	-----	-----
DART 44401 US	1236 EDT Mar 17	0.8ft
Bermuda Bermuda	1543 EDT Mar 17	1.6ft
DART 41421 US	1433 EDT Mar 17	1.0ft
DART 44402 US	1500 EDT Mar 17	0.3ft
DART 41420 US	1459 EDT Mar 17	1.0ft
Christiansted VI	1507 EDT Mar 17	1.1ft
DART 41424 US	1512 EDT Mar 17	0.5ft
San Juan TG Puerto Rico	1514 EDT Mar 17	0.7ft
Arecibo Puerto Rico	1542 EDT Mar 17	4.9ft
Lameshur Bay VI	1549 EDT Mar 17	0.6ft
Vieques Is. north PR	1540 EDT Mar 17	2.8ft
Yabucoa Puerto Rico	1557 EDT Mar 17	1.2ft
Aguadilla Puerto Rico	1515 EDT Mar 17	1.2ft
Mayaguez Puerto Rico	1530 EDT Mar 17	1.9ft
Culebra Puerto Rico	1528 EDT Mar 17	1.6ft
Charlotte Amalie VI	1541 EDT Mar 17	1.5ft
Penuelas Puerto Rico	1541 EDT Mar 17	0.5ft
Fajardo Puerto Rico	1524 EDT Mar 17	2.4ft
Magueyes Island PR	1546 EDT Mar 17	0.5ft
Halifax Nova Scotia	1547 EDT Mar 17	1.0ft

PARAMETROS PRELIMINARES DEL TERREMOTO

* Magnitud 8.8

* Tiempo de Origen 0800 EDT Marzo 17 2021
 0700 CDT Marzo 17 2021
 0800 AST Marzo 17 2021
 1200 UTC Marzo 17 2021

* Coordenadas 36.0 Norte 15.0 Oeste

* Profundidad 9 millas

* Localizacion en el Oceano Atlantico Norte

ACCIONES RECOMENDADAS

* Ver mensaje numero 5 para acciones recomendadas.

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IMPACTOS

- * Ver mensaje numero 5 para posibles impactos.

INFORMACION ADICIONAL Y PROXIMA ACTUALIZACION

- * Para acceder a informacion adicional consulte el sitio de internet tsunami.gov.
- * Regiones costeras del Caribe deben consultar los mensajes emitidos por el Centro de Alerta de Tsunami del Pacifico en su sitio de internet tsunami.gov.
- * Este mensaje sera actualizado en 30 minutos.

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NTWC Spanish Bulletin #12

WEXX40 PAAQ 242031
TSUSPA

BULLETIN

Mensaje de Tsunami numero 12
NWS Centro Nacional de Alerta de Tsunami Palmer AK
431 PM EDT Wed Mar 17 2021

ACTUALIZACIONES

- * Nuevas observaciones

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

...LA ADVERTENCIA DE TSUNAMI PERMANECE EN EFECTO...

Aviso de Tsunami en Efecto para;

- * Areas costeras de Newfoundland y Labrador desde Cape Ray, Newfoundland hasta Cape Chidley, Labrador

Advertencia de Tsunami en Efecto para;

- * Areas costeras de Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine, New Brunswick, Nova Scotia y Newfoundland desde Flamingo, Florida hasta Cape Ray, Newfoundland

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

LANTEX21 Exercise Handbook

suplementarios.

PRONOSTICOS DEL TSUNAMI

- * Se ha generado un tsunami. las primeras olas del tsunami estan pronosticadas para llegar a los siguientes puntos a las horas indicadas.
- * La duracion pronosticada del tsunami es el periodo aproximado de tiempo que se espera que el tsunami puede producir corrientes y olas peligrosas.
- * La altura maxima de ola pronosticada es el nivel de agua mas alto esperado sobre el nivel de la marea.
- * No se dan pronosticos para puntos que han sido impactados a mas de una hora antes de la emision de este mensaje.

LUGAR	LLEGADA PRONOSTICADA DEL TSUNAMI	PRONOSTICO DE DURACION DEL TSUNAMI	ALTURA MAX PRONOSTICADA DEL TSUNAMI
-----	-----	-----	-----
* North Carolina			
Cape Hatteras	1535 EDT Mar 17	9 hrs	0.9- 1.7 pie
* New York			
Montauk	1605 EDT Mar 17		menos de 1pie
Manhattan	1740 EDT Mar 17		menos de 1pie
* New Brunswick			
Grand Manan Isla	1720 ADT Mar 17		menos de 1pie
* New Jersey			
Atlantic City	1635 EDT Mar 17	15 hrs	1.3- 2.4 pie
* Massachusetts			
Nantucket	1635 EDT Mar 17		menos de 1pie
Boston	1720 EDT Mar 17		menos de 1pie
* Virginia			
Virginia Beach	1650 EDT Mar 17		
* Florida			
Miami	1655 EDT Mar 17		menos de 1pie
Key West	1740 EDT Mar 17		menos de 1pie
Daytona	1745 EDT Mar 17	24 hrs	2.2- 4.0 pie
Melbourne Beach	1755 EDT Mar 17		
Jacksonville Bea	1810 EDT Mar 17		menos de 1pie
* Maine			
Portland	1655 EDT Mar 17		menos de 1pie
* South Carolina			
Myrtle Beach	1755 EDT Mar 17	9 hrs	0.9- 1.7 pie
Charleston	1815 EDT Mar 17		menos de 1pie

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* Georgia
Savannah 1825 EDT Mar 17 menos de 1pie

OBSERVACIONES DEL TSUNAMI - ACTUALIZADAS

* La altura maxima observada del tsunami es el nivel de agua mas alto registrado sobre el nivel de la marea hasta la emision de este mensaje.

LUGAR	HORA DE LA MEDICION	ALTURA MAX OBSERVADA DEL TSUNAMI
-----	-----	-----
DART 44401 US	1236 EDT Mar 17	0.8ft
Bermuda Bermuda	1543 EDT Mar 17	1.6ft
DART 41421 US	1433 EDT Mar 17	1.0ft
DART 44402 US	1500 EDT Mar 17	0.3ft
DART 41420 US	1459 EDT Mar 17	1.0ft
Christiansted VI	1626 EDT Mar 17	1.4ft
DART 41424 US	1512 EDT Mar 17	0.5ft
San Juan TG Puerto Rico	1514 EDT Mar 17	0.7ft
Arecibo Puerto Rico	1542 EDT Mar 17	4.9ft
Lameshur Bay VI	1613 EDT Mar 17	0.8ft
Vieques Is. north PR	1540 EDT Mar 17	2.8ft
Yabucoa Puerto Rico	1557 EDT Mar 17	1.2ft
Aguadilla Puerto Rico	1630 EDT Mar 17	1.5ft
Mayaguez Puerto Rico	1607 EDT Mar 17	2.7ft
Culebra Puerto Rico	1618 EDT Mar 17	1.8ft
Charlotte Amalie VI	1613 EDT Mar 17	1.9ft
Penuelas Puerto Rico	1613 EDT Mar 17	0.9ft
Fajardo Puerto Rico	1524 EDT Mar 17	2.4ft
Magueyes Island PR	1617 EDT Mar 17	0.6ft
Halifax Nova Scotia	1547 EDT Mar 17	1.0ft

PARAMETROS PRELIMINARES DEL TERREMOTO

* Magnitud 8.8
* Tiempo de Origen 0800 EDT Marzo 17 2021
0700 CDT Marzo 17 2021
0800 AST Marzo 17 2021
1200 UTC Marzo 17 2021
* Coordenadas 36.0 Norte 15.0 Oeste
* Profundidad 9 millas
* Localizacion en el Oceano Atlantico Norte

ACCIONES RECOMENDADAS

* Ver mensaje numero 5 para acciones recomendadas.

IMPACTOS

* Ver mensaje numero 5 para posibles impactos.

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INFORMACION ADICIONAL Y PROXIMA ACTUALIZACION

- * Para acceder a informacion adicional consulte el sitio de internet tsunami.gov.
- * Regiones costeras del Caribe deben consultar los mensajes emitidos por el Centro de Alerta de Tsunami del Pacifico en su sitio de internet tsunami.gov.
- * Este mensaje sera actualizado en 30 minutos.

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NTWC Spanish Bulletin #13

WEXX40 PAAQ 242101
TSUSPA

BULLETIN

Mensaje de Tsunami numero 13
NWS Centro Nacional de Alerta de Tsunami Palmer AK
501 PM EDT Wed Mar 17 2021

ACTUALIZACIONES

- * Nuevas observaciones
- * Modifica las regiones bajo alerta
- * Todas las áreas de advertencia se han reducido a asesoramiento

...LA ADVERTENCIA DE TSUNAMI PERMANECE EN EFECTO...

Advertencia de Tsunami en Efecto para;

- * Areas costeras de Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine, New Brunswick, Nova Scotia y Newfoundland desde Flamingo, Florida hasta Cape Ray, Newfoundland
- * Areas costeras de Newfoundland y Labrador desde Cape Ray, Newfoundland hasta Cape Chidley, Labrador

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.

PRONOSTICOS DEL TSUNAMI

- * Se ha generado un tsunami. las primeras olas del tsunami estan pronosticadas para llegar a los siguientes puntos a las horas

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indicadas.

- * La duracion pronosticada del tsunami es el periodo aproximado de tiempo que se espera que el tsunami puede producir corrientes y olas peligrosas.
- * La altura maxima de ola pronosticada es el nivel de agua mas alto esperado sobre el nivel de la marea.
- * No se dan pronosticos para puntos que han sido impactados a mas de una hora antes de la emision de este mensaje.

LUGAR -----	LLEGADA PRONOSTICADA DEL TSUNAMI -----	PRONOSTICO DE DURACION DEL TSUNAMI -----	ALTURA MAX PRONOSTICADA DEL TSUNAMI -----
* New York			
Montauk	1605 EDT Mar 17		menos de 1pie
Manhattan	1740 EDT Mar 17		menos de 1pie
* New Brunswick			
Grand Manan Isla	1720 ADT Mar 17		menos de 1pie
* New Jersey			
Atlantic City	1635 EDT Mar 17	15 hrs	1.3- 2.5 pie
* Massachusetts			
Nantucket	1635 EDT Mar 17		menos de 1pie
Boston	1720 EDT Mar 17		menos de 1pie
* Virginia			
Virginia Beach	1650 EDT Mar 17		
* Florida			
Miami	1655 EDT Mar 17		menos de 1pie
Key West	1740 EDT Mar 17		menos de 1pie
Daytona	1745 EDT Mar 17	24 hrs	2.2- 4.1 pie
Melbourne Beach	1755 EDT Mar 17		
Jacksonville Bea	1810 EDT Mar 17		menos de 1pie
* Maine			
Portland	1655 EDT Mar 17		menos de 1pie
* South Carolina			
Myrtle Beach	1755 EDT Mar 17	9 hrs	0.9- 1.7 pie
Charleston	1815 EDT Mar 17		menos de 1pie
* Georgia			
Savannah	1825 EDT Mar 17		menos de 1pie

OBSERVACIONES DEL TSUNAMI - ACTUALIZADAS

- * La altura maxima observada del tsunami es el nivel de agua mas alto registrado sobre el nivel de la marea hasta la emision de este mensaje.

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LUGAR	HORA DE LA MEDICION	ALTURA MAX OBSERVADA DEL TSUNAMI
DART 44401 US	1236 EDT Mar 17	0.8ft
Bermuda Bermuda	1543 EDT Mar 17	1.6ft
DART 41421 US	1433 EDT Mar 17	1.0ft
DART 44402 US	1500 EDT Mar 17	0.3ft
DART 41420 US	1459 EDT Mar 17	1.0ft
Christiansted VI	1626 EDT Mar 17	1.4ft
DART 41424 US	1512 EDT Mar 17	0.5ft
San Juan TG Puerto Rico	1514 EDT Mar 17	0.7ft
Arecibo Puerto Rico	1542 EDT Mar 17	4.9ft
Lameshur Bay VI	1613 EDT Mar 17	0.8ft
Vieques Is. north PR	1540 EDT Mar 17	2.8ft
Yabucoa Puerto Rico	1650 EDT Mar 17	1.6ft
Aguadilla Puerto Rico	1630 EDT Mar 17	1.5ft
Mayaguez Puerto Rico	1607 EDT Mar 17	2.7ft
Culebra Puerto Rico	1618 EDT Mar 17	1.8ft
Charlotte Amalie VI	1649 EDT Mar 17	2.9ft
Penuelas Puerto Rico	1645 EDT Mar 17	1.0ft
Fajardo Puerto Rico	1524 EDT Mar 17	2.4ft
Magueyes Island PR	1617 EDT Mar 17	0.6ft
Halifax Nova Scotia	1656 EDT Mar 17	1.2ft
Oregon Inlet NC	1635 EDT Mar 17	0.3ft
Montauk New York	1650 EDT Mar 17	0.1ft
Cutler NAS Maine	1652 EDT Mar 17	0.4ft
Bar Harbor Maine	1647 EDT Mar 17	0.2ft
Ocean City Maryland	1700 EDT Mar 17	1.0ft
Duck North Carolina	1650 EDT Mar 17	1.1ft
Atlantic City NJ	1700 EDT Mar 17	0.8ft

PARAMETROS PRELIMINARES DEL TERREMOTO

- * Magnitud 8.8
- * Tiempo de Origen 0800 EDT Marzo 17 2021
0700 CDT Marzo 17 2021
0800 AST Marzo 17 2021
1200 UTC Marzo 17 2021
- * Coordenadas 36.0 Norte 15.0 Oeste
- * Profundidad 9 millas
- * Localizacion en el Oceano Atlantico Norte

ACCIONES RECOMENDADAS - ACTUALIZADAS

Las acciones para proteger la vida y propiedad pueden variar dentro de las areas de advertencia de tsunami.

Si usted esta en un area de advertencia;

- * Salgase del agua, de la playa y alejese de puertos, marinas, bahias, ensenadas y rompeolas.
- * Este alerta y siga las instrucciones de los oficiales locales de manejo de emergencia ya que ellos pueden tener informacion mas detallada o especifica para su ubicacion.

LANTEX21 Exercise Handbook

- * Si siente un terremoto fuerte y/o prolongado tome inmediatamente acciones de seguridad como moverse tierra adentro y/o hacia un lugar alto preferiblemente a pie.
- * Operadores de botes,
 - * Cuando el tiempo y las condiciones lo permitan mueva su bote mar adentro a una profundidad de al menos 180 pies.
 - * Si esta navegando evite entrar a aguas someras/llanas, puertos, marinas, bahias, y ensenadas para evitar corrientes fuertes y objetos flotantes o sumergidos.
- * No vaya a la costa para observar el tsunami.
- * No regrese a la costa hasta que los oficiales locales de manejo de emergencia local indiquen que es seguro hacerlo.

IMPACTOS

Los impactos pueden variar en diferentes lugares dentro de las areas de advertencia.

Si usted esta en un area de advertencia;

- * Un tsunami con olas y corrientes fuertes puede ser posible.
- * Olas y corrientes pueden ahogar o herir personas que se encuentran en el agua.
- * Corrientes en playas y puertos, marinas, bahias, y ensenadas pueden ser especialmente peligrosas.
- * Algunos impactos pueden continuar por muchas horas hasta dias luego de la llegada de la primera ola.
- * La primera ola puede no ser la mas grande las olas posteriores si.
- * Cada ola puede durar de 5 a 45 minutos entre su embate y retroceso.
- * Costas con frente en todas las direcciones pueden estar en peligro porque las olas pueden dar la vuelta a islas y entrar a bahias.
- * Movimiento fuerte y/o prolongado del suelo indica que un terremoto ha ocurrido un tsunami puede haber sido generado y su llegada inminente.
- * Un rapido retroceso de la linea de costa, olas y sonidos inusuales, y fuertes corrientes son senales de un tsunami.
- * El tsunami puede aparecer como agua moviendose rapidamente hacia mar adentro, una marea suave que se eleva rapidamente sin olas rompientes, como una serie de olas rompientes,

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o una pared de agua espumosa.

INFORMACION ADICIONAL Y PROXIMA ACTUALIZACION

- * Para acceder a informacion adicional consulte el sitio de internet tsunami.gov.
- * Regiones costeras del Caribe deben consultar los mensajes emitidos por el Centro de Alerta de Tsunami del Pacifico en su sitio de internet tsunami.gov.
- * Este mensaje sera actualizado en 30 minutos.

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NTWC Spanish Bulletin #14

WEXX40 PAAQ 242132
TSUSPA

BULLETIN

Mensaje de Tsunami numero 14
NWS Centro Nacional de Alerta de Tsunami Palmer AK
532 PM EDT Wed Mar 17 2021

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

- * Advisory de Tsunami ha sido Cancelado para areas costeras de Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine, New Brunswick, Nova Scotia, Newfoundland y Labrador

OBSERVACIONES DEL TSUNAMI - ACTUALIZADAS

- * La altura maxima observada del tsunami es el nivel de agua mas alto registrado sobre el nivel de la marea hasta la emision de este mensaje.

LUGAR	HORA DE LA MEDICION	ALTURA MAX OBSERVADA DEL TSUNAMI
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DART 44401 US	1236 EDT Mar 17	0.8ft
Bermuda Bermuda	1543 EDT Mar 17	1.6ft
DART 41421 US	1433 EDT Mar 17	1.0ft
DART 44402 US	1500 EDT Mar 17	0.3ft
DART 41420 US	1459 EDT Mar 17	1.0ft
Christiansted VI	1626 EDT Mar 17	1.4ft
DART 41424 US	1512 EDT Mar 17	0.5ft
San Juan TG Puerto Rico	1514 EDT Mar 17	0.7ft
Arecibo Puerto Rico	1542 EDT Mar 17	4.9ft
Lameshur Bay VI	1613 EDT Mar 17	0.8ft
Vieques Is. north PR	1540 EDT Mar 17	2.8ft
Yabucoa Puerto Rico	1650 EDT Mar 17	1.6ft
Aguadilla Puerto Rico	1630 EDT Mar 17	1.5ft

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Mayaguez Puerto Rico	1607	EDT Mar 17	2.7ft
Culebra Puerto Rico	1618	EDT Mar 17	1.8ft
Charlotte Amalie VI	1649	EDT Mar 17	2.9ft
Penuelas Puerto Rico	1645	EDT Mar 17	1.0ft
Fajardo Puerto Rico	1524	EDT Mar 17	2.4ft
Magueyes Island PR	1705	EDT Mar 17	0.7ft
Halifax Nova Scotia	1709	EDT Mar 17	1.3ft
Oregon Inlet NC	1635	EDT Mar 17	0.3ft
Montauk New York	1718	EDT Mar 17	0.3ft
Cutler NAS Maine	1652	EDT Mar 17	0.4ft
The US/Canada Border US	1726	EDT Mar 17	0.2ft
Bar Harbor Maine	1708	EDT Mar 17	0.3ft
Ocean City Maryland	1700	EDT Mar 17	1.0ft
Duck North Carolina	1712	EDT Mar 17	1.5ft
Woods Hole MA	1715	EDT Mar 17	0.3ft
Newport Rhode Island	1704	EDT Mar 17	0.4ft
Beaufort North Carolina	1719	EDT Mar 17	0.6ft
Atlantic City NJ	1717	EDT Mar 17	1.5ft
Fort Point NH	1723	EDT Mar 17	0.2ft
Virginia Key Florida	1725	EDT Mar 17	0.4ft
Wells Maine	1717	EDT Mar 17	0.2ft
Lewes Delaware	1729	EDT Mar 17	0.4ft
Quonset Point RI	1727	EDT Mar 17	0.5ft

ACCIONES RECOMENDADAS - ACTUALIZADAS

- * No regresen a zonas desalojadas hasta que las autoridades locales de manejo de emergencia indiquen que es seguro hacerlo.

IMPACTOS - ACTUALIZADOS

- * Un tsunami fue generado durante este evento pero ya no representa un peligro.
- * Algunas areas podran seguir viendo pequenos cambios del nivel del mar.
- * La determinacion para volver a ocupar zonas de peligro debe ser hecha por autoridades locales.

INFORMACION ADICIONAL Y PROXIMA ACTUALIZACION

- * Para acceder a informacion adicional consulte el sitio de internet tsunami.gov.
- * Regiones consteras del Caribe deben consultar los mensajes emitidos por el Centro de Alerta de Tsunami del Pacifico en su sitio de internet tsunami.gov.
- * Este sera el ultimo boletin proveniente del Centro Nacional de Alerta de Tsunami de los Estados Unidos para este evento.

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Appendix D. Sample Press Release for Local Media

TEMPLATE FOR NEWS RELEASE

USE AGENCY MASTHEAD

Contact: (insert name)
(insert phone number)
(insert email address)

FOR IMMEDIATE RELEASE
(insert date)

ATLANTIC TSUNAMI EXERCISE TO BE CONDUCTED March 17, 2021

(*insert community/county/state name*) will join other localities in the Atlantic as a participant in a tsunami response exercise on March 17, 2021. 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 2011 Japan earthquake 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 LANTEX21, will simulate a widespread Tsunami Warning and Advisory situation throughout the Atlantic 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 approximately 345 miles west southwest from Lisbon, Portugal and 510 miles west of the Straits of Gibraltar at 36.0°N, 15.0°W at 8:00 am Eastern Daylight Time (*or appropriate local time*) on March 17, 2021. Exercise participants will be provided with a handbook which describes the scenario and contains tsunami messages from the U.S. National Tsunami Warning Center (NTWC). The NTWC is responsible for providing tsunami information to the Atlantic coasts of U.S. and Canada as well as the Gulf of Mexico coast.

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 U.S. National Tsunami Hazard Mitigation Program (NTHMP – a partnership of 29 states and territories and three federal

agencies). For more information on the U.S. tsunami warning system, see www.tsunami.gov. For more information on the NTHMP, see nthmp.tsunami.gov.

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On the Web:

National Tsunami Warning Center,
Pacific Tsunami Warning Center,
NOAA Tsunami Program

NTHMP:

Insert state/local emergency response URLs

<http://www.tsunami.gov>

<https://nws.weather.gov/nthmp/>

LANTEX21 Exercise