

2nd CARIBE WAVE/LANTEX 2015 Webinar English

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ICG CARIBE EWS Chair
February 24, 2015**

WELCOME!!!!

CARIBE WAVE 2015 Webinar Series

- ✓ 20 January in English
- ✓ 21 de enero en Español
- ✓ 22 janvier à Français
- ✓ 24 February in English
- 25 de febrero en Español
- 26 février à Français

Institutional Reference Frame for the Exercise

- The United National Educational, Scientific, and Cultural Organization's (UNESCO) Intergovernmental Coordination Group for Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (**ICG/CARIBE EWS**) and its newly established Caribbean Tsunami Information Center (**CTIC**)
- Caribbean Disaster and Emergency Management Agency (**CDEMA**)
- Centro de Coordinación para la Prevención de los Desastres Naturales en América Central (**CEPRENAC**)
- The US NWS National Tsunami Hazard Mitigation Program (**NTHMP**), Tsunami Warning Centers (**TWC**) and Caribbean Tsunami Warning Program (**CTWP**)
- Etat-major interministériel de zone Antilles (**EMIZ Antilles**)

Goals/Metrics

Goal	Result for 2013	Metric 2014	Result 2014	Metric 2015
Participation of Member States of ICG CARIBE EWS - With designated focal warning point	94%	95%	98% (including two MS/Territory unofficial)	95% <i>(currently 46%)</i> 100%
Compliance with the time line	Close to 100%	100%	Almost 100%, little later than planned getting out handbook	100%
Community involvement (beyond TWFP)	69%	75%	75%	80%
Number people registered			191,000	+10% <i>(currently 8,324)</i>
TWFP receive the dummy message	98%	100%	94%	100%
Countries who participate submit exercise questionnaire	90%	100%	100%	100%

Exercise Manuals

- The exercise manuals are available at:
www.caribewave.info
- UNESCO IOC CARIBE EWS Handbook for Panama Scenario, only English
- PTWC supplement for Florida Scenario, only English
- PTWC supplement for Enhanced Products (in progress)
- Manuals include suggested actions as well as a description of the scenario, the time table, travel times and expected wave heights, figures and samples of the messages that would be issued for such events and the website link to evaluation questionnaire.

CARIBE WAVE/LANTEX 2015

- This exercise provides simulated tsunami messages from the PTWC and NTWC triggered by a hypothetical earthquake located offshore Panama and a submarine landslide off the coast of Florida.
- The Panama event was modeled off the September 7, 1882 earthquake and tsunami.
- The tsunami generated by the 1882 Panama earthquake affected the coasts of countries and territories within the Caribbean.
- The maximum reported tsunami wave height resulting from the 1882 earthquake was 3.0 meters.

CARIBE WAVE/LANTEX 2015

Tsunami Travel Times

Tsunami travel time contours in hours, beginning from the earthquake origin time.

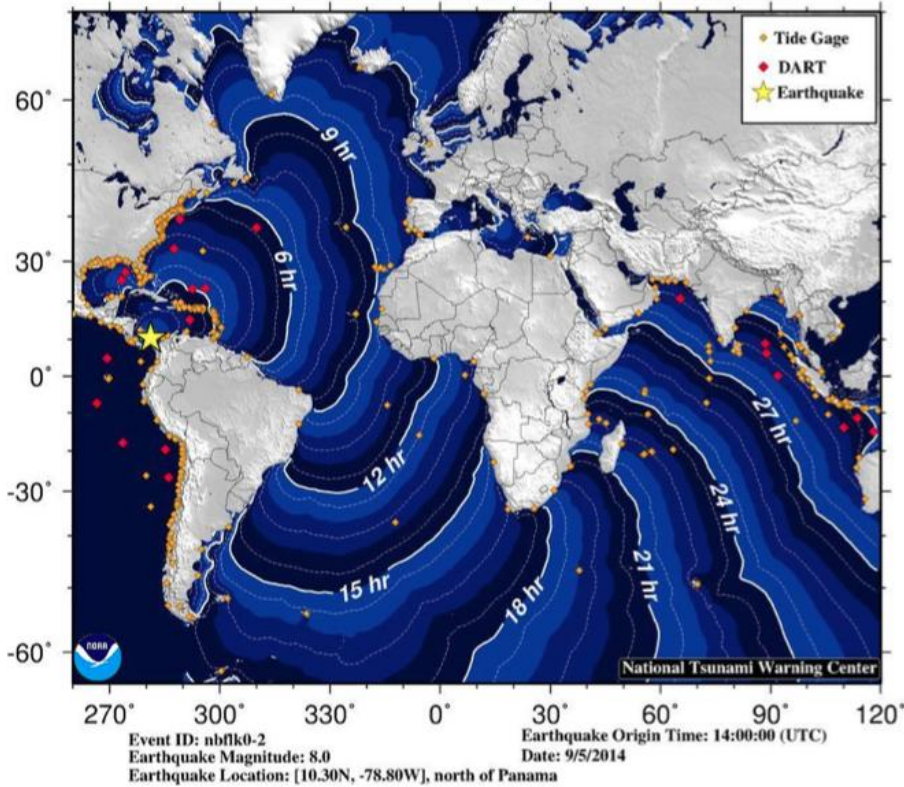


Figure A: Travel times for Panama tsunami scenario

Tsunami Travel Times

Tsunami travel time contours in hours, beginning from the earthquake origin time.

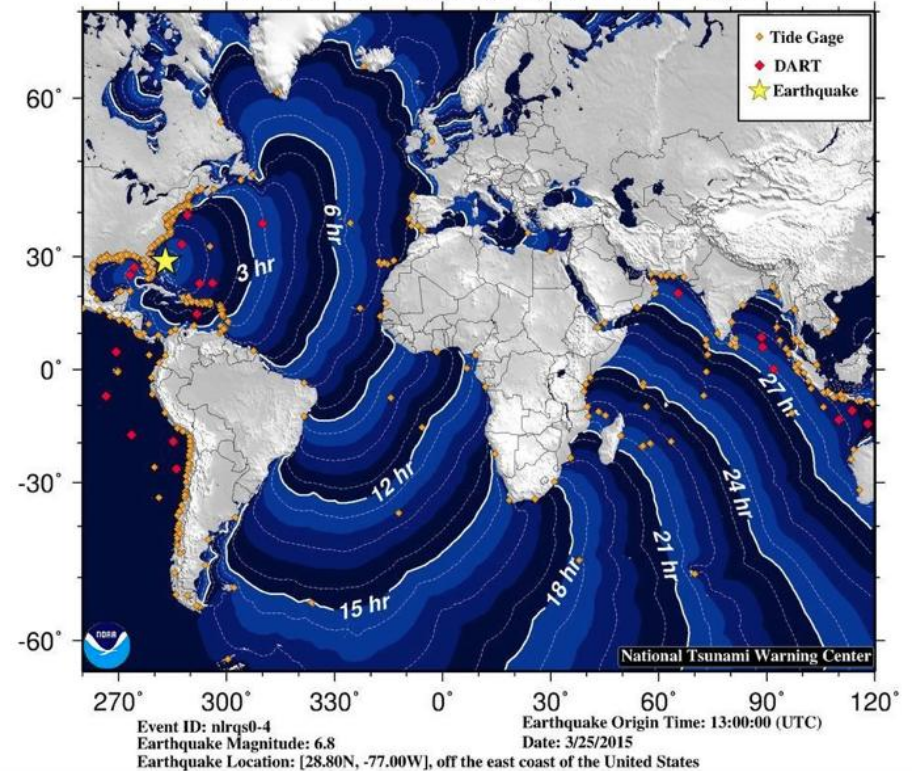
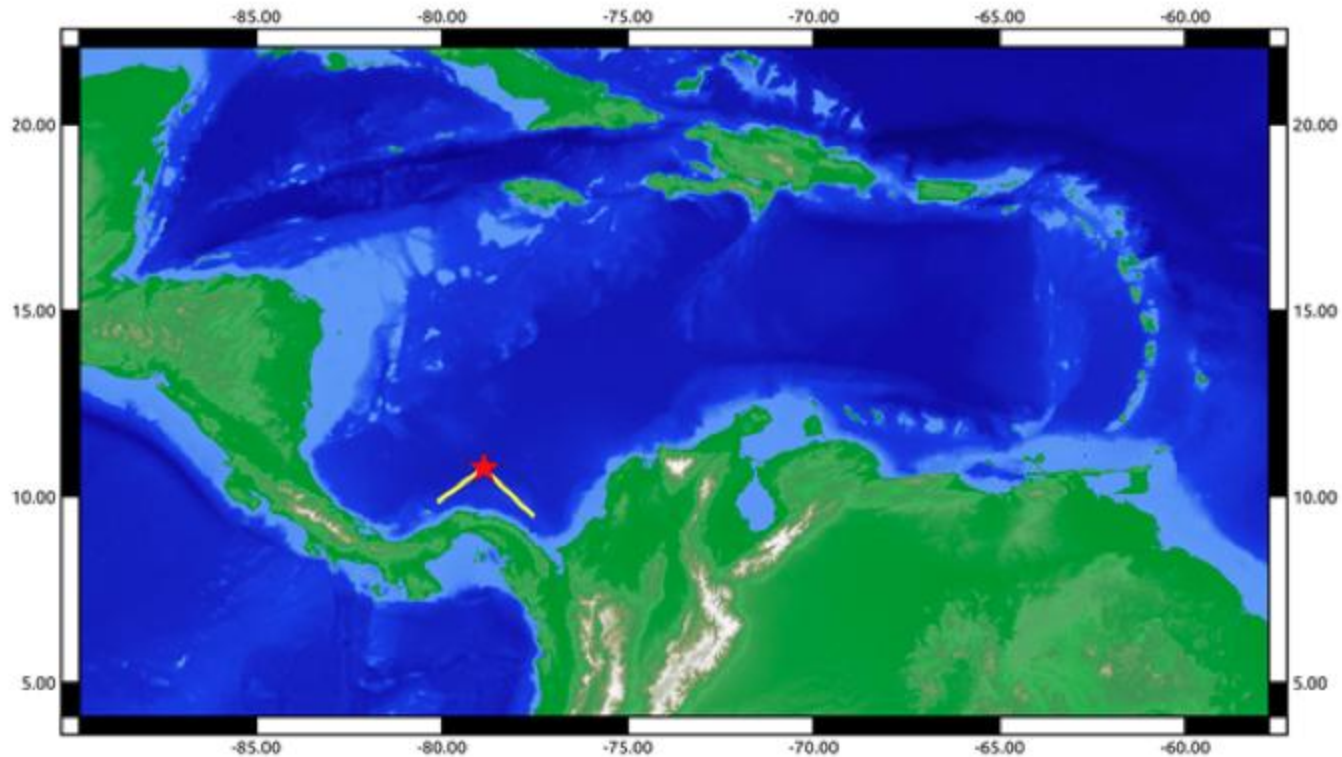


Figure B. Travel times for the Florida submarine landslide tsunami scenario

CARIBE WAVE/LANTEX 2015

Panama Scenario

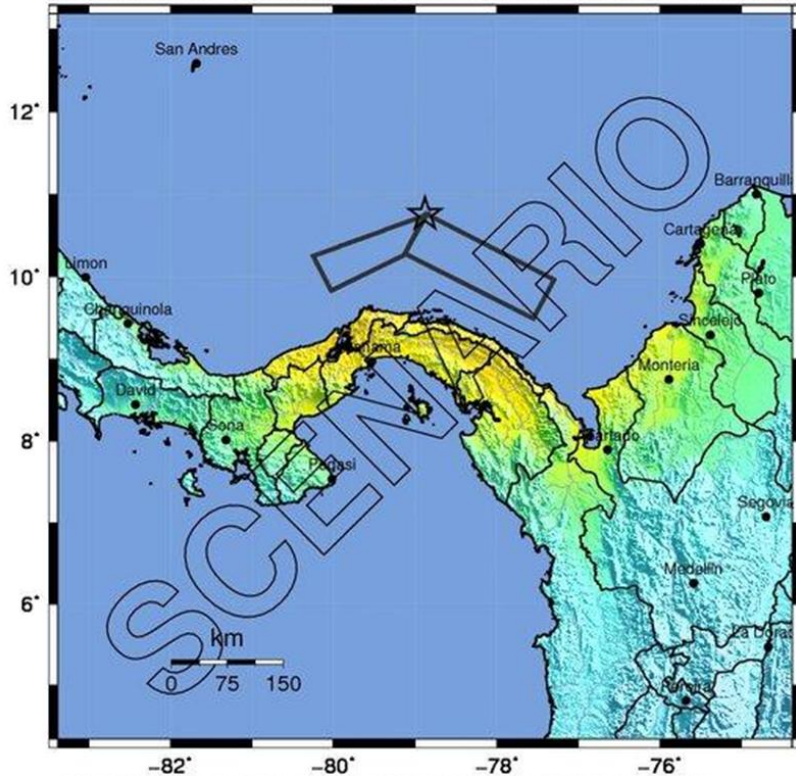


- March 25, 2015, 14h00 UTC
- M 8.5, north of Panama on the Northern Panama Deformed Belt
- Kick off (Dummy) messages will be issued by PTWC and NTWC. Other warning monitoring centers may also be issuing products.

Earthquake Impact Scenario

--- Earthquake Planning Scenario --- ShakeMap for Caribe_Wave2015 Scenario

Scenario Date: Mar 25, 2015 02:00:00 PM UTC M 8.5 N10.76 W78.88 Depth: 15.0km



PLANNING SCENARIO ONLY --- Map Version 1 Processed 2014-09-24 06:14:13 PM UTC

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

Scale based upon Worden et al. (2012)



M 8.5, Caribe Wave

Origin Time: Wed 2015-03-25 14:00:00 UTC (09:00:00 local)
Location: 10.76°N 78.88°W Depth: 15 km

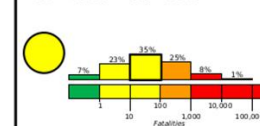
FOR TSUNAMI INFORMATION, SEE: tsunami.gov



PAGER
Version 1

Created: -15707027 seconds after earthquake

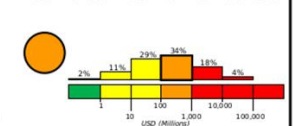
Estimated Fatalities



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

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

Estimated Economic Losses

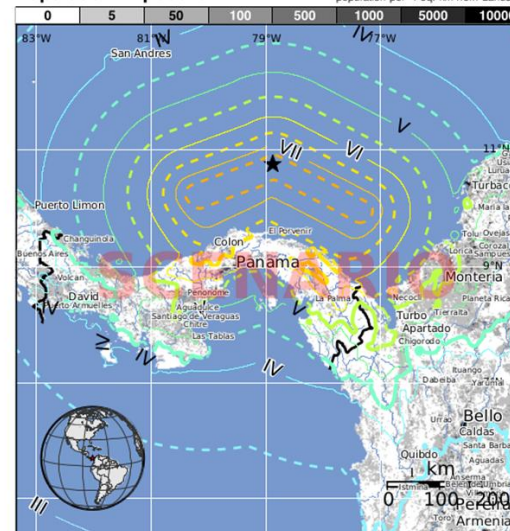


Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k = x1000)	0	1	2	3	4	5	6	7	8	9	10
ESTIMATED MODIFIED MERCALLI INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+		
PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme		
POTENTIAL DAMAGE	Resistant Structures: none	Vulnerable Structures: none	Resistant Structures: none	Vulnerable Structures: none	Resistant Structures: V. Light	Vulnerable Structures: Light	Resistant Structures: Moderate	Vulnerable Structures: Moderate/Heavy	Resistant Structures: Moderate/Heavy	Vulnerable Structures: Heavy	Resistant Structures: V. Heavy

*Estimated exposure only includes population within the map area

Population Exposure



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

Historical Earthquakes (with MMI levels):

Date (UTC)	Dist. (km)	Mag.	Max Shaking (MMI#)	Deaths
1985-04-20	254	6.3	VII(7k)	0
1976-07-11	386	7.3	IX(87k)	11
1974-07-13	362	7.3	IX(6k)	11

Selected City Exposure

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

bold cities appear on map (k = x1000)

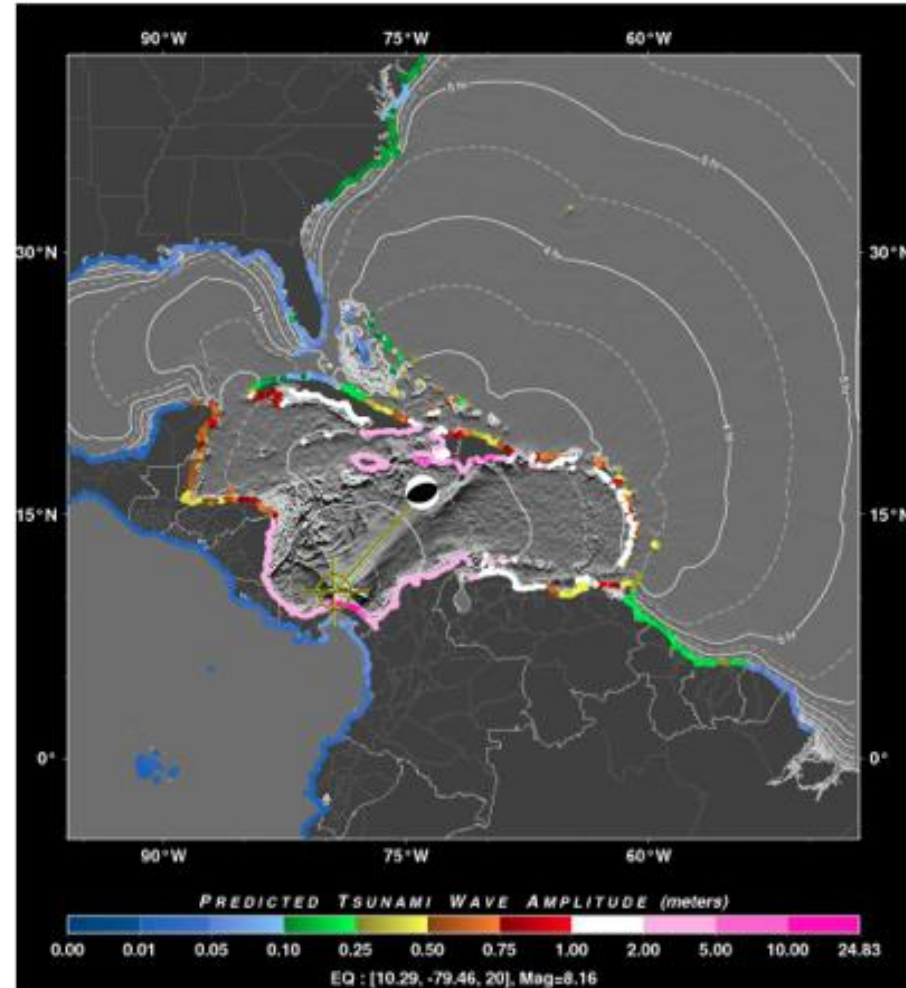
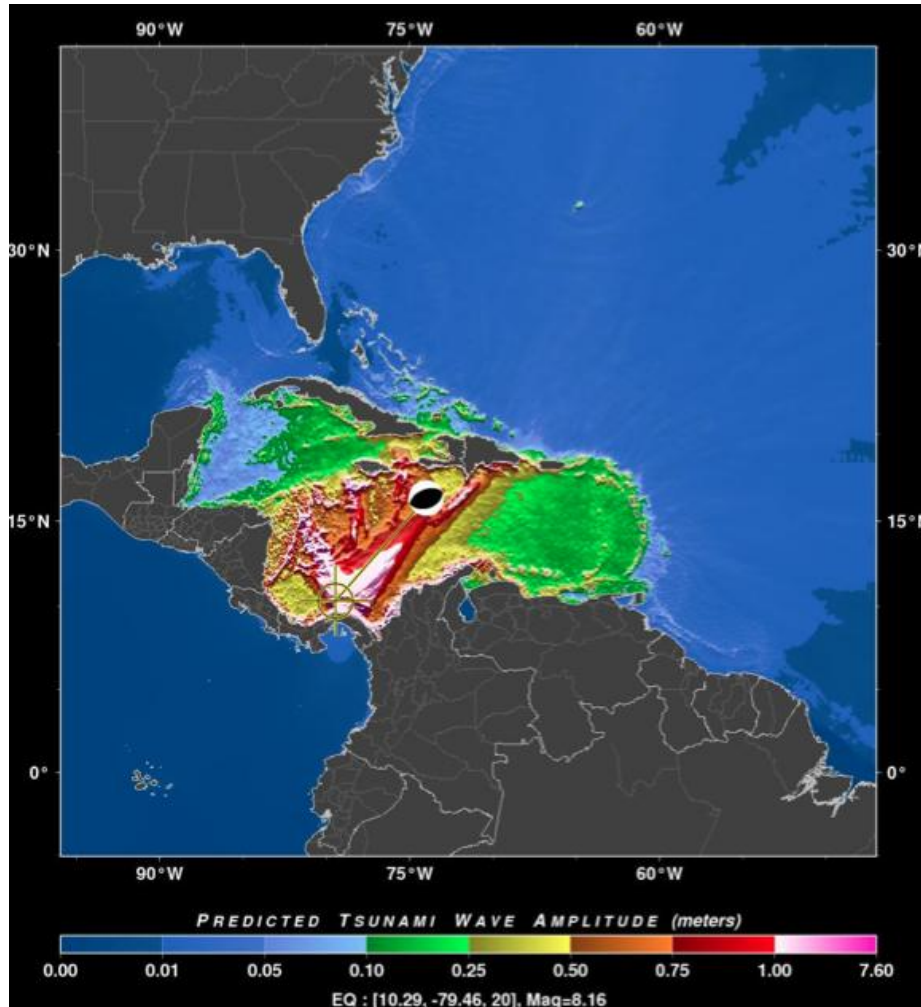
PAGER content is automatically generated, and only considers losses due to structural damage. Limitations of input data, shaking estimates, and loss models may add uncertainty.

<http://earthquake.usgs.gov/pager>

Event ID: usCaribe.Wave2015.se

CARIBE WAVE/LANTEX 2015

Forecasted Tsunami Wave Amplitudes



Forecasted Tsunami Wave Amplitudes for Panama Tsunami Scenario

Forecasted Maximum Wave Heights*

CARIBE WAVE/LANTEX 2015 Panama Scenario

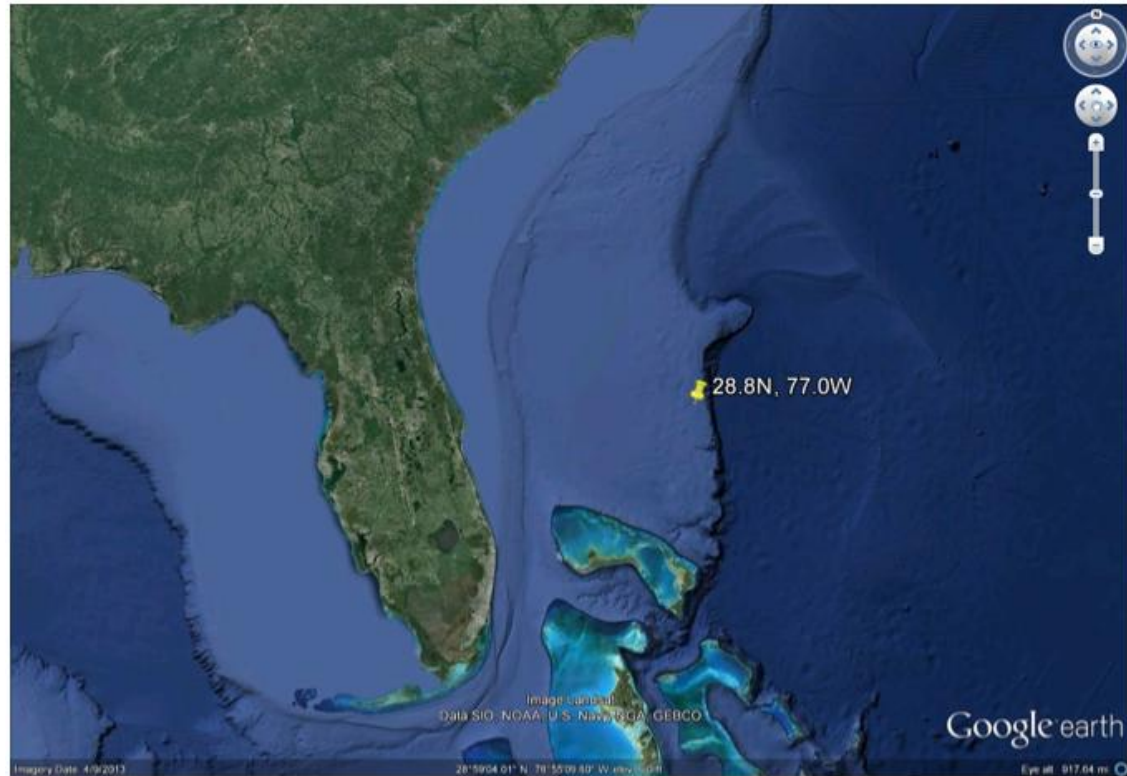
US NTWC and PTWC

El Porvenir, PA	2.4m/7.8ft	Limetree, USVI	0.6m/2.1ft
Limon, CR	0.6m/1.9ft	St. Croix, USVI	0.5m/1.8ft
Santa Marta, CO	2.6m/8.6ft	Esperanza, Vieques, PR	1.1m/3.5ft
San Andres, CO	1.9m/6.2ft	Charlottle Amali USVI	1.1m/3.6ft
Port au Prince, HT	0.6m/2.1ft	Lameshur Bay, USVI	1.3m/4.2ft
Santo Domingo, DO	3.0m/9.8ft	Puerto Plata, DO	0.2m/0.5ft
Bullen Bay, Curacao	0.7m/2.4ft	Basseterre, KN	0.6m/1.9ft
Mona Island, PR	1.7m/5.6ft	Barbuda, AG	0.5m/1.8ft
Mayaguez, PR	0.9m/3.0ft	Desirade, GP	0.5m/1.7ft
Magueyes Island, PR	0.9m/2.9ft	Roseau, DM	0.2m/0.7ft
Yabucoa, PR	0.7m/4.2ft	Calliaqua, VC	0.4m/1.4ft
San Juan, PR	0.1m/0.4ft	Prickly Bay, GD	0.2m/0.7ft

*Maximum tsunami height is measured as water level above tide level at time of measurement,
runup can be double this value

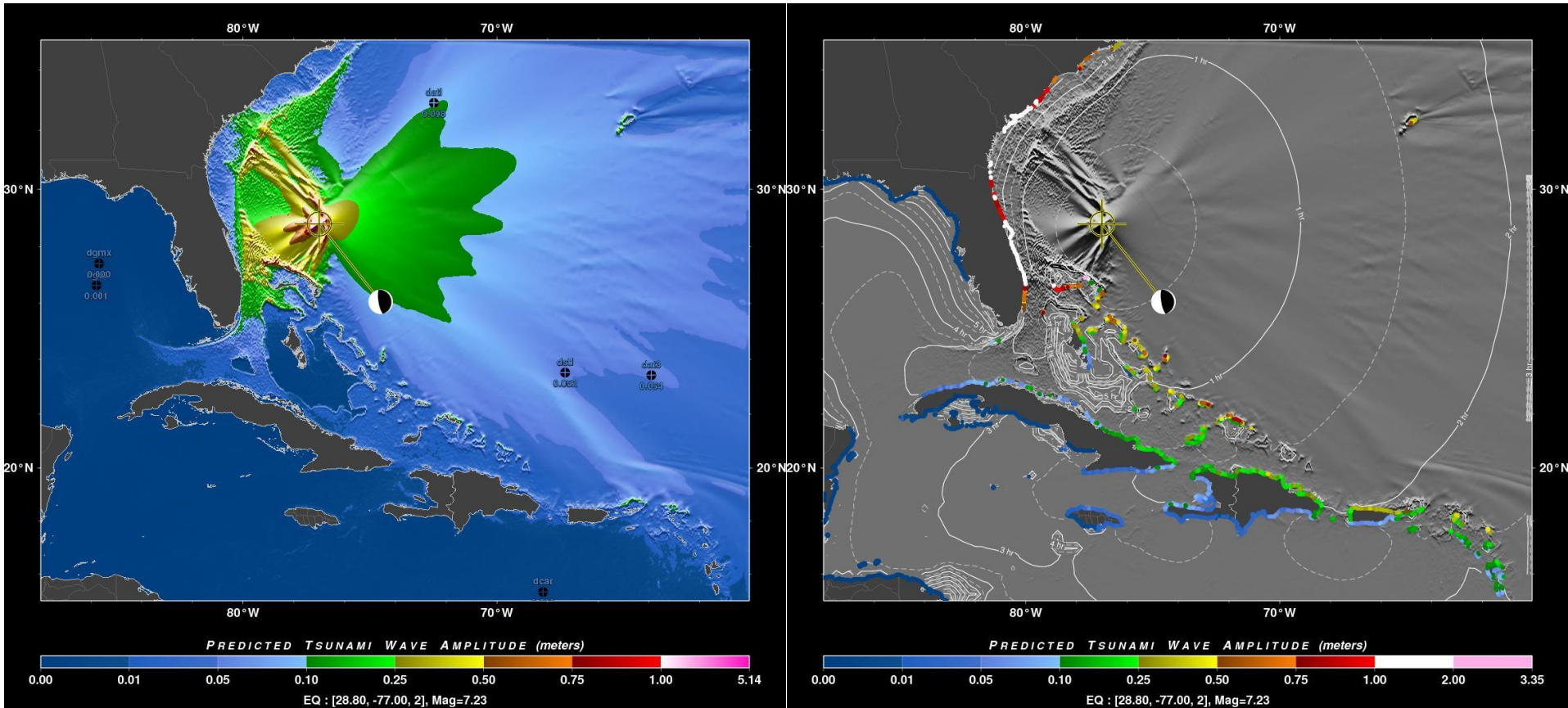
LANTEX 2015 Florida Scenario

- March 25, 2015
- 13h00 UTC
- Submarine landslide generated by M 6.8 earthquake
- 215 miles east of Port Canaveral, Florida
- Kick off (Dummy) messages will be issued by PTWC and NTWC.



LANTEX 2015 (Florida Scenario)

Forecasted Tsunami Wave Amplitudes



Forecasted Tsunami Wave Amplitudes for Florida Tsunami Scenario

Forecasted Maximum Wave Heights*

LANTEX 2015 Florida Scenario

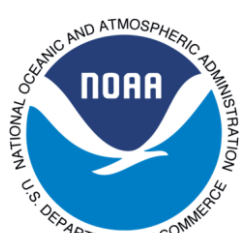
US NTWC		PTWC	
Bermuda	2.92 ft	Settlement Point, BS	0.5 m
Oregon Inlet, NC, USA	0.30 ft	Cap Haitien, HT	0.3m
Wrightsville, NC, USA	1.90 ft	Puerto Plata, DO	0.6 m
Ocean City, MD, USA	0.56 ft	Bermuda, BM	0.9 m
Charleston, SC, USA	0.52 ft	Arecibo, PR	0.9 m
Springmaid Pier, SC, USA	1.64 ft	Lameshur Bay, VI	0.6 m
Key West, FL, USA	0.03 ft	Fernandina Beach, FL, USA	0.1 m
Fernandina Beach, FL, USA	0.46 ft	Charleston, SC, USA	0.2 m
Chesapeake Bridge, VA, USA	0.20 ft	Hatteras, NC, USA	0.5 m
Lewes, DE, USA	0.26 ft	Duck Pier, NC, USA	0.4 m
Atlantic City, NJ, USA	3.22 ft	Beaufort, NC, USA	0.2 m
Cape May, NJ, USA	0.62 ft	Cape May, NJ, USA	0.2 m
Montauk, NY, USA	0.75 ft	Atlantic City, NJ, USA	1.0 m
Nantucket, MA, USA	0.13 ft	Montauk, NY, USA	0.2 m
Bar Harbor, ME, USA	0.72 ft	Bar Harbor, ME, USA	0.1 m

*Maximum tsunami height is measured as water level above tide level at time of measurement,
runups could be double these values



Caribe Wave/LANTEX 2015

Panama Tsunami Scenario



M_w 8.5, 10.3°N 78.8°W, March 25, 2015, 14:00 UTC

This tsunami model was generated in Tweb, a NOAA real time forecast tsunami tool (experimental phase).

Registration URL: <https://attendee.gotowebinar.com/register/901690059478404610>

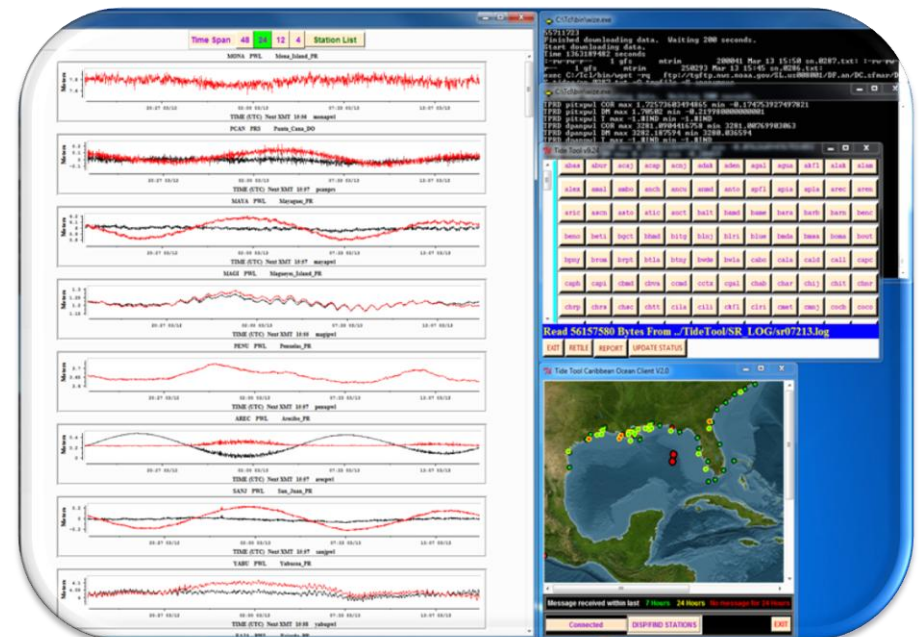
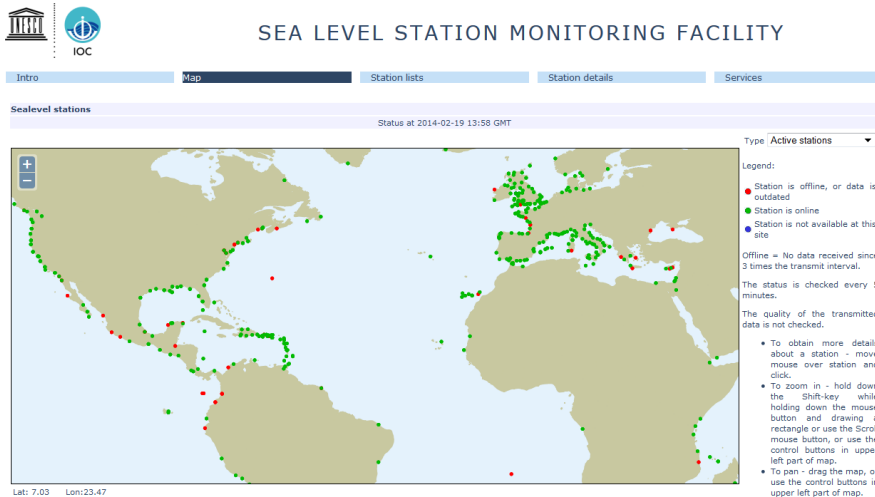
Webinar ID: 101-503-771

Sea Level Monitoring

As good practice during the exercise, participants should check out sea level readings in real time using the IOC Sea Level Monitoring Facility or Tide Tool

IOC Sea Level Monitoring Facility
(<http://www.ioc-sealevelmonitoring.org/>)

Tide Tool stuart.weinstein@noaa.gov



Product Types Issued for Dummy Message with Transmission Methods for Panama (1405h UTC) and Florida (1302h UTC) Scenarios

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
PTWC	WECA41 PHEB	TSUCAX	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

NEW: Start of Exercise messages will also be sent out by PTWC and US NTWC twitter accounts. Can be received by text: “Follow NWS_NTWC” or “Follow NWS_PTWC” to 40404

NWS_NTWC:

“This is a test message for the LANTEX 15 Florida tsunami exercise.”
(issued at 13h02 UTC)

“This is a test message for the CaribeWave/LANTEX 15 Panama tsunami exercise.” (issued at 14h05 UTC)

NWS_PTWC

“This is a test message for the LANTEX 15 Florida tsunami exercise.”
(issued at 13h02 UTC)

“This is a test message for the CaribeWave/LANTEX 15 Panama tsunami exercise.” (issued at 14h05 UTC)

Tsunami Messages

National Tsunami Warning Center
<http://ntwc.orh.noaa.gov>
Puerto Rico Seismic Network
<http://redsismica.uprm.edu> Telephone: 787-833-8433
TSUNAMI MESSAGES FOR PUERTO RICO AND THE VIRGIN ISLANDS







- Danger!
- Run for high ground!
- Follow emergency instructions.

Warning

Advisory


- Possible strong and dangerous local currents.
- Get out of the water and off the beach.
- Stay tuned for local emergency guidance.



- Potential danger.
- Stayed tuned for more information.


Watch








- No Warning, Advisory or Watch issued.
- A distant ocean basin may be in danger.

Information Statement

NATIONAL TSUNAMI WARNING CENTER 


Pacific Tsunami Warning Center
<http://www.weather.gov/ptwc/index.php>
Caribbean Tsunami Warning Program
<http://www.srh.noaa.gov/srh/ctwp>
TSUNAMI MESSAGES FOR THE CARIBBEAN EXCEPT FOR PUERTO RICO AND THE US VIRGIN ISLANDS




- Danger for all coasts within the Caribbean Region!
- Run for High Ground!
- Follow the instructions of the emergency management officials.

CARIBBEAN SEA-WIDE TSUNAMI WATCH




- Danger for coasts within a thousand kilometers from Earthquake!
- Run for High Ground!
- Follow the instructions of the emergency management officials.

REGIONAL TSUNAMI WATCH



- Danger for coasts within a hundred kilometers from Earthquake!
- Run for High Ground!
- Follow the instructions of the emergency management officials.

LOCAL TSUNAMI WATCH



- Relax.
- No Danger.
- A more distant place may be in danger.

INFORMATION STATEMENT

Message Chronology

CARIBE WAVE/LANTEX 2015

Panama Scenario

Date (UTC)	Time (UTC)	NTWC Message (for PR and VI)				PTWC Message				
		#	Type	Dummy	Email	#	Type	Dummy	Email	
03/25/2015	1400		----- Earthquake Occurs -----							
03/25/2015	1405	01	Adv	Yes	Yes	01	Watch	Yes	Yes	
03/25/2015	1430					02	Watch	No	Yes	
03/25/2015	1500	02	Warn	No	Yes	03	Watch	No	Yes	
03/25/2015	1602	03	Warn	No	Yes	04	Watch	No	Yes	
03/25/2015	1701	04	Warn	No	Yes	05	Watch	No	Yes	
03/25/2015	1800	05	Warn	No	Yes	06	Watch	No	Yes	
03/25/2015	1901	06	Adv	No	Yes	07	Watch	No	Yes	
03/25/2015	1945	07	Can	No	Yes	08	Can	No	Yes	

PTWC Message Chronology

LANTEX 2015 Florida Scenario

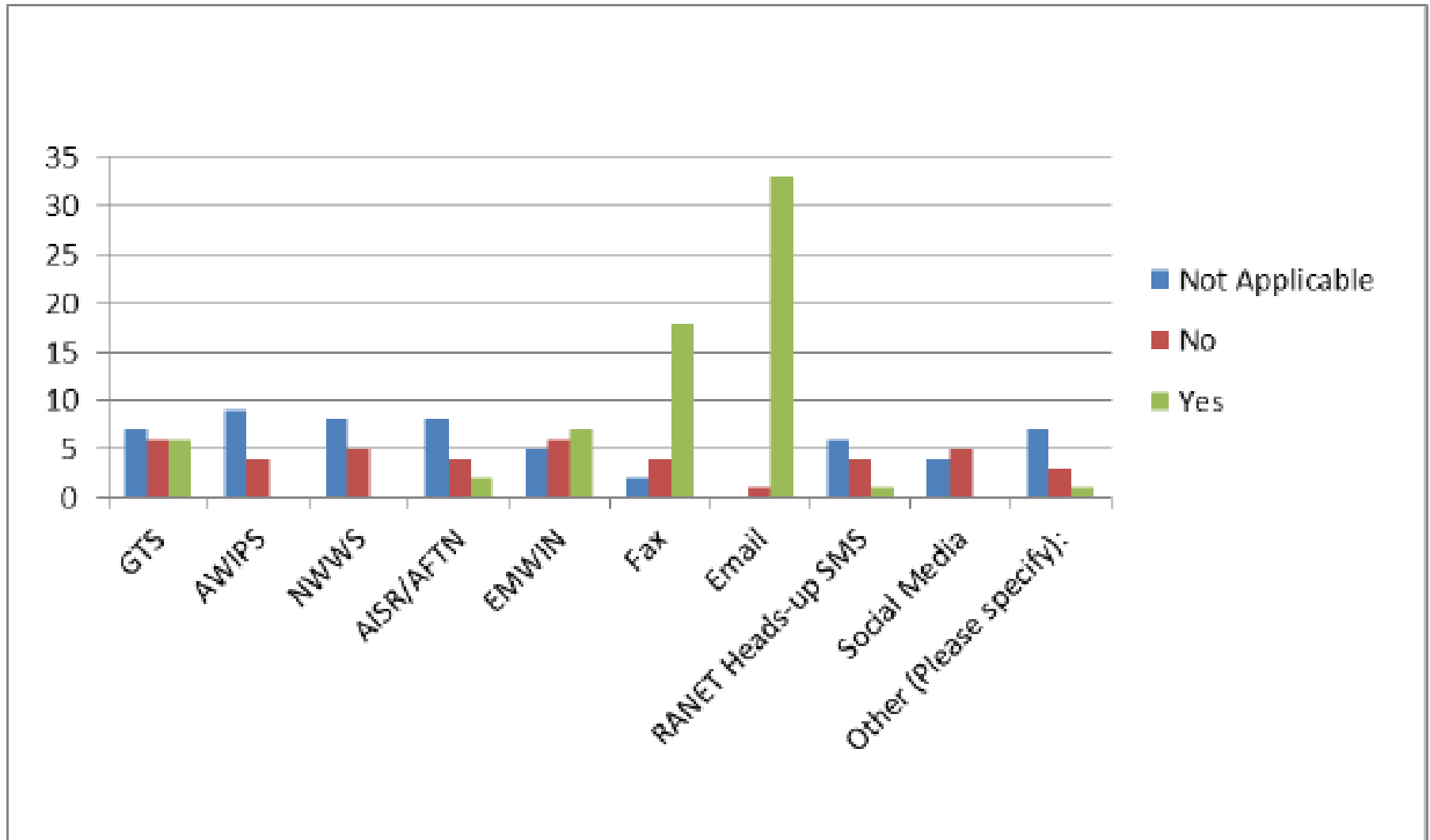
Date (UTC)	Time (UTC)	PTWC Message		
		#	Type*	Email
03/25/2015	1300	---- Earthquake Occurs ---		
03/25/2015	1302	--	Dummy	ALL
03/25/2015	1302	01	Statement	CARIBE EWS TWFP
03/25/2015	1354	02	Watch	CARIBE EWS TWFP
03/25/2015	1423	03	Watch	CARIBE EWS TWFP
03/25/2015	1501	04	Watch	CARIBE EWS TWFP
03/25/2015	1559	05	Watch	CARIBE EWS TWFP
03/25/2015	1658	06	Watch	CARIBE EWS TWFP
03/25/2015	1800	07	Watch	CARIBE EWS TWFP
03/25/2015	1900	08	Cancel	CARIBE EWS TWFP

US NTWC Message Chronology

LANTEX 2015 Florida Scenario

Date (UTC)	Time (UTC)	NTWC Message		
		#	Type*	Email
03/25/2015	1300	---- Earthquake Occurs ----		
03/25/2015	1302	--	Dummy	ALL
03/25/2015	1302	01	Warn	Registered Participants
03/25/2015	1339	02	Warn	Registered Participants
03/25/2015	1408	03	<u>Adv/Warn</u>	Registered Participants
03/25/2015	1434	04	<u>Adv/Warn</u>	Registered Participants
03/25/2015	1501	05	<u>Adv/Warn</u>	Registered Participants
03/25/2015	1604	06	<u>Adv/Warn</u>	Registered Participants
03/25/2015	1703	07	<u>Adv/Warn</u>	Registered Participants
03/25/2015	1801	08	<u>Adv/Warn</u>	Registered Participants
03/25/2015	1900	09	<u>Adv</u>	Registered Participants
03/25/2015	2000	10	<u>Adv</u>	Registered Participants
03/25/2015	2100	11	Cancel	Registered Participants

The PTWC and/or US NTWC CARIBE WAVE/LANTEX 2014 initial dummy messages were received by National Tsunami Warning Focal Points by the following methods:



Changes to Registration for 2015

- Focus is on keeping track of participants
- TWFP of CARIBE EWS will receive emails with the tsunami products during exercise, no registration necessary, but encouraged so as to know they are cognizant of exercise.
- Participants under the jurisdiction of the NTWC (United States, Puerto Rico, US Virgin Islands, British Virgin Islands) will have the option to receive e-mails directly from the NTWC, but must register
- TWFPs and TNCs are in charge of disseminating information and dummy messages to participants. The TWFPs/TNCs will be informed of registrants within their jurisdiction.
- Participants are encouraged to contact their TWFPs/TNCs for more information.
- [TWFP Link](#)
- [TNC Link](#)

REGISTRATION OPEN AS OF JAN. 20, 2015

US, PR, USVI, and BVI have the option to receive tsunami products by e-mail from the US NTWC (Panama and/or Florida Scenario)

PR/USVI/BVI have the option to receive e-mails from PRSN (for Panama scenario)

BUT MUST REQUEST THE EMAIL SERVICE

DEADLINE FOR REGISTRATION for email subscription

Friday MARCH 20, 2015

ALL OTHER REGISTRATION WILL REMAIN OPEN, BUT UPDATES TO TWFP/TNC WILL BE WITH INFO AS OF:

Monday MARCH 23, 2015

Schedule of CTWP for sending out Registration Reports

- February 26, 2015
- March 12, 2015
- March 18, 2015 (reminder for registration)
- March 23, 2015 – final pre event summary

Registration as of February 22, 2015

Type of Participant	CARIBE WAVE/LANTEX 2015 (Panama Scenario)		LANTEX 2015 (Florida Scenario)	
	# Registrants	# Participants	# Registrants	# Participants
State Agency	18	597	5	23
National Agency	16	4195	1	6
International Agency	2	13	3	18
Private Business	2	35	-	-
Press	1	1	-	-
Educational Institution	9	1947	3	221
Health Facility	2	42	-	-
Community	2	51	4	8
Individual	32	116	10	24
Other*	19	671	4	336
Total:	103	7688	30	636

* This includes TWFPs and TNCs

Country	Number of Registrants	Number of Participants
Anguilla	3	3
Aruba	1	12
Barbados	1	1
British Virgin Islands	1	12
Cayman Islands	2	14
Colombia	1	3
Costa Rica	3	8
Dominica	1	100
Dominican Republic	5	26
Grenada	1	6
Guyana	2	10
Honduras	1	1
Martinique	1	3
Mexico	4	24
Nicaragua	1	1
Panama	2	2
Puerto Rico	55	3163
Saint Lucia	1	1
Turks and Caicos	2	8
United States	31	651
US Virgin Islands	3	89
Venezuela	8	4169

Appendix E. TWC Dummy (Start of Exercise) Messages

US NTWC

WXXX20 PAAQ 251405
TSUNTI

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

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

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

THIS IS ONLY AN EXERCISE.

##

WXXX30 PAAQ 251405
TSUATE

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

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

THIS MESSAGE IS BEING USED TO START THE CARIBBEWAVE 15 CARIBBEAN TSUNAMI
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EXERCISE PURPOSE IS TO PROVIDE EMERGENCY MANAGEMENT A REALISTIC SCENARIO TO TEST
TSUNAMI RESPONSE PLANS.

THIS IS ONLY AN EXERCISE.

##

WXXX40 PAAQ 251405
TSUSIV

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

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

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

ESTE ES SOLO UN EJERCICIO.

\$\$

PTWC

WSCA1 PHB 251405
TSUCAM

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

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

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

THIS IS ONLY AN EXERCISE.

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Appendix F. TWC Exercise Messages

The following messages created for the CARIBE WAVE/LANTEX15 tsunami exercise are representative of the official standard products issued by the US NTWC and PTWC during a large magnitude 8.5 earthquake and tsunami originating just north of Panama. During a real event, the TWCs would also issue graphical and html-based products to their web sites and via RSS. The alerts would persist longer during a real event than is depicted in this exercise. NTWC also issues a product under the header WEXX20 PAAQ/TSUAT1 which is designed to drive automated alert systems.

US NTWC Message #1

WEXX20 PAAQ 251405
TSUATE

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

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

WARNINGS/ADVISORIES/WATCHES

TSUNAMI ADVISORY IN EFFECT FOR...

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

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

PRELIMINARY EARTHQUAKE PARAMETERS

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

IMPACTS FOR TSUNAMI ADVISORY AREAS

-
- * A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PERSONS IN OR VERY NEAR THE WATER IS EXPECTED.
 - * CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR MANY HOURS AFTER THE TSUNAMI ARRIVAL.
 - * THE FIRST WAVE MAY NOT BE THE LARGEST.

US NTWC Message #7

WXXX30 PAAQ 251945
TSUNAMI

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

...THE TSUNAMI ADVISORY IS CANCELLED...

CANCELLATIONS

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

IMPACTS - UPDATED

- * TSUNAMI ACTIVITY HAS SUBSIDED ALONG THE COASTS OF PUERTO RICO... U.S. VIRGIN ISLANDS... BRITISH VIRGIN ISLANDS... AND U.S. AND CANADIAN COASTS IN THE ATLANTIC.
- * ONGOING ACTIVITY MAY PERSIST IN SOME AREAS CAUSING STRONG CURRENTS DANGEROUS TO SWIMMERS AND BOATS.
- * THE DETERMINATION TO RE-OCCUPY HAZARD ZONES MUST BE MADE BY LOCAL OFFICIALS.

RECOMMENDED ACTIONS - UPDATED

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

OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

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

US NTWC Spanish Bulletin #1

NEOO40 PAAQ 251405
1905PM

BULLETIN

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

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

AVISOS/ADVERTENCIAS/VIGILANCIAS

ADVERTENCIA DE TSUNAMI EN EFECTO PARA...

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

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

PARAMETROS PRELIMINARES DEL TERREMOTO

- * MAGNITUD 8.0
- * TIEMPO DE ORIGEN 1200 EDT MAR 25 2015
1200 AST MAR 25 2015
0900 CDT MAR 25 2015
1400 UTC MAR 25 2015
- * COORDENADAS 15.3 NORTE 78.8 OESTE
- * PROFUNDIDAD 9 MILEAS
- * LOCALIZACION NORTH OF PANAMA

IMPACTOS PARA AREAS BAJO ADVERTENCIA DE TSUNAMI

- * UN TSUNAMI CAPAZ DE PRODUCIR FUERTES CORRIENTES U OLAS PELIGROSAS A PERSONAS EN O MUY CERCA DEL AGUA ES ESPERADO.
- * **CORRIENTES PUEDEN SER PELIGROSAS PARA NADADORES, EMBARCACIONES Y ESTRUCTURAS COSTERAS Y PUEDEN CONTINUAR POR MUCHAS HORAS DESPUES DE LA LLEGADA DEL TSUNAMI.**
- * LA PRIMERA OLA PUEDE NO SER LA MAS GRANDE.

ACCIONES RECOMENDADAS

- * SI SE ENCUENTRA EN UN AREA BAJO ADVERTENCIA - SALGASE DE LA PLAYA BAHIAS Y MARINAS. NO SE ESPERAN INUNDACIONES GENERALIZADAS PARA AREAS BAJO ADVERTENCIA
- * ESTE ALERTA A INSTRUCCIONES DE SUS AUTORIDADES DE MANEJO DE EMERGENCIA.
- * NO VAYA A LA COSTA PARA OBSERVAR EL TSUNAMI.
- * NO REGRESE A LA COSTA HASTA QUE LAS AUTORIDADES LOCALES DE MANEJO DE EMERGENCIA INDIQUEN QUE ES SEGURO HACERLO.

PTWC Message #7

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

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

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

A TSUNAMI WATCH IS IN EFFECT FOR

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

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

AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS

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

MEASUREMENTS OR REPORTS OF TSUNAMI WAVE ACTIVITY

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LOE			
EL PORVENIR PA	9.5N	78.9W	1505	2.4M/07.8FT	15
LIMON CR	10.0N	83.0W	1544	0.6M/01.9FT	12
SANTA MARTA CO	11.2N	74.2W	1634	2.6M/08.6FT	13
SAN ANDRES CO	12.6N	81.7W	1623	1.9M/06.2FT	13
PORT AU PRINCE HT	18.5N	72.4W	1722	0.6M/02.1FT	14
SANTO DOMINGO DO	18.4N	69.6W	1734	3.0M/09.8FT	12
BULLEN BAY CURACAO	12.2N	69.0W	1715	0.7M/02.4FT	15
MONA ISLAND PR	18.1N	67.9W	1745	1.7M/05.6FT	15
MAYAGUEZ PR	18.2N	67.2W	1732	0.9M/03.0FT	15
MAGUIYES IS PR	18.0N	67.0W	1746	0.9M/02.9FT	14
YABOCCA PR	18.1N	65.8W	1735	0.7M/04.2FT	14
SAN JUAN PR	18.5N	66.1W	1721	0.1M/00.4FT	20
LIMESTREE USVI	17.7N	64.7W	1756	0.6M/02.1FT	15
ST CROIX USVI	17.7N	64.6W	1731	0.5M/01.8FT	18
ESPERANZA VIRGUES PR	18.1N	65.5W	1751	1.1M/03.5FT	13
FALJARDO PR	18.3N	65.6W	1755	0.5M/01.7FT	14
CHARLOTTE ANGLI USVI	18.3N	64.9W	1748	1.1M/03.6FT	17
LAMESHUR BAY USVI	18.3N	64.7W	1744	1.3M/04.2FT	16
PUERTO PLATA DO	19.8N	70.7W	1823	0.2M/00.5FT	20
BASSETERRE KN	17.3N	62.7W	1845	0.6M/01.9FT	19
BARBUDA AG	17.6N	61.8W	1812	0.5M/01.8FT	14
DESINADE GP	16.3N	61.1W	1845	0.5M/01.7FT	12
ROSEAU DM	15.3N	61.4W	1822	0.2M/00.7FT	12
CALLAQUA VC	13.1N	61.2W	1847	0.4M/01.4FT	15
PRICKLY BAY GD	12.0N	61.8W	1821	0.2M/00.7FT	18

EVALUATION

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

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

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

LOCATION	FORECAST POINT	COORDINATES	ARRIVAL TIME
PANAMA	ALIGANDI	9.2N 78.0W	1425Z 25 MAR
	PUERTO_CARRISTO	8.8N 77.6W	1439Z 25 MAR
	COLON	9.4N 79.9W	1451Z 25 MAR
	PUERTO_OBALDIA	8.7N 77.4W	1453Z 25 MAR
COLOMBIA	BOCAS DEL TORO	9.4N 82.2W	1506Z 25 MAR
	CARTAGENA	10.4N 75.6W	1442Z 25 MAR
	PUNTA_CARIBANA	8.6N 76.9W	1459Z 25 MAR
	SANTA MARCA	11.2N 74.2W	1502Z 25 MAR
COSTA RICA	BARRANQUILLA	11.1N 74.9W	1516Z 25 MAR
	RIONAGUA	11.6N 72.9W	1522Z 25 MAR
	PUERTO_LINON	10.0N 83.0W	1454Z 25 MAR
	HAITI	18.1N 72.5W	1532Z 25 MAR
JEROME	JEROME	18.6N 74.1W	1551Z 25 MAR
	CAP HAITEEN	19.8N 72.2W	1626Z 25 MAR
	PORT AU PRINCE	18.3N 72.4W	1655Z 25 MAR
	ONANJESTAD	12.5N 70.0W	1547Z 25 MAR
NICARAGUA	PUNTA GONDA	11.4N 83.8W	1548Z 25 MAR
	PUERTO CABEZAS	14.0N 83.4W	1936Z 25 MAR
CAYMAN ISLANDS	CAYMAN BRAC	19.7N 79.9W	1551Z 25 MAR
	GRAND CAYMAN	19.3N 81.3W	1600Z 25 MAR
JAMAICA	KINGSTON	17.9N 76.9W	1553Z 25 MAR
	MONTEGO BAY	18.5N 77.9W	1615Z 25 MAR
CUBA	SANTIAGO_D_CUBA	19.9N 75.8W	1554Z 25 MAR
	BARACOA	20.4N 74.5W	1614Z 25 MAR
	CIENFUEGOS	22.0N 80.5W	1620Z 25 MAR
	GINAMA	21.1N 76.1W	1634Z 25 MAR
	LA HABANA	23.2N 82.4W	1721Z 25 MAR
	SANTA_CREZ_D_SUR	20.7N 78.0W	1854Z 25 MAR
DOMAIRE	NEUVA GERONA	21.9N 82.8W	2010Z 25 MAR
	OKIMA	12.3N 68.3W	1557Z 25 MAR
DOMINICAN REP	SANTO DOMINGO	18.5N 69.9W	1604Z 25 MAR
	CABO ENGANO	18.6N 68.3W	1628Z 25 MAR
BAHAMAS	PUERTO PLATA	19.8N 70.7W	1637Z 25 MAR
	GREAT INAGUA	20.9N 73.7W	1620Z 25 MAR
	MAYAGUANA	22.3N 73.0W	1634Z 25 MAR
	LONG ISLAND	23.3N 75.1W	1654Z 25 MAR
	SAN SALVADOR	24.1N 74.5W	1654Z 25 MAR
	EXUMA	23.6N 75.9W	1704Z 25 MAR
	CROOKED ISLAND	22.7N 74.1W	1709Z 25 MAR
	CAT ISLAND	24.4N 75.5W	1713Z 25 MAR
	BLEUHERA ISLAND	25.2N 76.1W	1721Z 25 MAR
	ANDROS ISLAND	25.0N 77.9W	1730Z 25 MAR
NASSAU	25.1N 77.4W	1742Z 25 MAR	

	FRESHPORT	26.5N 78.8W	1754Z 25 MAR
	ABADO ISLAND	26.6N 77.1W	1759Z 25 MAR
	BIMINI	25.8N 79.3W	1807Z 25 MAR
	WILLEMSTAD	12.1N 68.9W	1621Z 25 MAR
CURACAO	WEST CAICOS	21.7N 72.5W	1630Z 25 MAR
	GRAND TURK	21.5N 71.1W	1645Z 25 MAR
TURKS N CAICOS	MALIBERTIA	10.6N 67.5W	1634Z 25 MAR
	CUMANA	10.5N 64.2W	1707Z 25 MAR
VENEZUELA	PUNTO FIJO	11.7N 70.2W	1807Z 25 MAR
	GOLFO VENEZUELA	11.4N 71.2W	1906Z 25 MAR
	FORLAMAR	10.9N 63.8W	2031Z 25 MAR
SABA	SABA	17.6N 63.2W	1650Z 25 MAR
SAINTE KITTS	BASSETTERRE	17.3N 62.7W	1632Z 25 MAR
MONTSERRAT	PLYMOUTH	16.7N 62.2W	1632Z 25 MAR
MEXICO	COZUMEL	20.5N 87.5W	1655Z 25 MAR
	MADRID	22.3N 97.8W	1936Z 25 MAR
	VERACRUZ	19.2N 96.1W	1941Z 25 MAR
	TEXAS BORDER	26.0N 97.1W	1951Z 25 MAR
	PROGRESO	21.3N 89.7W	2042Z 25 MAR
	CAMPECHE	19.9N 90.5W	2338Z 25 MAR
HONDURAS	PUERTO CORTES	15.9N 88.5W	1655Z 25 MAR
	TROJILLO	15.9N 86.5W	1741Z 25 MAR
SINT EUSTATIUS	SINT EUSTATIUS	17.5N 63.0W	1656Z 25 MAR
GUADELOUPE	BASSE TERRE	16.0N 61.7W	1656Z 25 MAR
DOMINICA	ROSSAU	15.3N 61.4W	1657Z 25 MAR
SAINTE LUCIA	CASTRIES	14.0N 61.0W	1659Z 25 MAR
SINT MAARTEN	SIMPSON MAAL	18.0N 63.1W	1700Z 25 MAR
SAINTE VINCENT	KINGSTON	13.1N 61.2W	1701Z 25 MAR
MARTINIQUE	FORT DE FRANCE	14.6N 61.1W	1704Z 25 MAR
ANGUILLA	THE VALLEY	18.3N 63.1W	1708Z 25 MAR
GRENADA	SAINTE GEORGES	12.0N 61.8W	1710Z 25 MAR
BARBADOS	BRIDGETOWN	13.1N 59.6W	1726Z 25 MAR
SAINTE BARTHELEMY	SAINTE BARTHELEMY	17.9N 62.8W	1727Z 25 MAR
ANTIGUA	SAINTE JOHNS	17.1N 61.9W	1732Z 25 MAR
BARBUDA	PALMETTO POINT	17.6N 61.9W	1735Z 25 MAR
SAINTE MARTIN	BALE BLANCHE	18.1N 63.0W	1738Z 25 MAR
TRINIDAD TOBAGO	FINANCES BAY	11.3N 60.6W	1753Z 25 MAR
	PORT OF SPAIN	10.6N 61.5W	1824Z 25 MAR
BELIZE	BELIZE CITY	17.5N 88.2W	1805Z 25 MAR
BERMUDA	RUTHS BAY	32.4N 64.6W	1819Z 25 MAR
GUATEMALA	PUERTO MARRIOS	15.7N 88.6W	1847Z 25 MAR
FRENCH GUIANA	CAYENNE	4.9N 52.3W	2103Z 25 MAR
GUYANA	GEORGETOWN	6.8N 58.2W	2142Z 25 MAR
SURINAME	PARAMARIBO	5.9N 55.2W	2203Z 25 MAR
BRAZIL	FORTALEZA	3.7S 38.5W	2244Z 25 MAR
	SAO LUIS	2.5S 44.3W	0044Z 26 MAR
	ILHA DE MARACA	2.2N 50.5W	0049Z 26 MAR

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

PTWC Enhanced Products

ZCZC
WECA41 PHEB 251405
TSUCAX

EXPERIMENTAL TSUNAMI MESSAGE NUMBER 1
NOT FOR DISTRIBUTION
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1405 UCT WED MAR 25 2015

...TSUNAMI THREAT MESSAGE...

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE
UNESCO/IOC TSUNAMI AND OTHER COASTAL HAZARDS WARNING SYSTEM FOR
THE CARIBBEAN AND ADJACENT REGIONS AND IS MEANT FOR NATIONAL
AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

NATIONAL AUTHORITIES WILL DETERMINE THE TSUNAMI THREAT AND
APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY.

**** NOTICE **** NOTICE **** NOTICE **** NOTICE **** NOTICE ****

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE 8.2
* ORIGIN TIME 1400 UTC MAR 25 2015
* COORDINATES 10.3 NORTH 78.8 WEST
* DEPTH 15 KM / 9 MILES
* LOCATION NORTH OF PANAMA

EVALUATION

-
- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.2 OCCURRED NORTH OF PANAMA AT 1400 UTC ON WEDNESDAY MARCH 25 2015.
 - * BASED ON THE PRELIMINARY EARTHQUAKE PARAMETERS... HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TSUNAMI THREAT FORECAST...UPDATED

-
- * TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

PANAMA.

- * TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

COLOMBIA... COSTA RICA... CUBA... DOMINICAN REPUBLIC...
HAITI... NICARAGUA... AND JAMAICA.

- * TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

ARUBA... HONDURAS... MEXICO... PUERTO RICO... ANGUILLA...
ANTIGUA AND BARBUDA... BAHAMAS... CAYMAN ISLANDS... DOMINICA...
GRENADA... GUADELOUPE... MARTINIQUE... MONTSERAT... CURACAO...
BONAIRE... SAINT KITTS AND NEVIS... SAINT LUCIA... SAINT VINCENT
AND THE GRENADINES... US VIRGIN ISLANDS... AND VENEZUELA.

- * TSUNAMI WAVES LESS THAN 0.3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

GUAYANA... GUATEMALA... SURINAME... BARBADOS... BELIZE...
BERMUDA... FRENCH GUIANA... SINT MAARTEN... SAINT BARTHELEMY...
SAINT MARTIN... TRINIDAD AND TOBAGO... AND TURKS AND CAICOS
ISLANDS.

- * ACTUAL AMPLITUDES AT THE COAST MAY VARY FROM FORECAST AMPLITUDES DUE TO UNCERTAINTIES IN THE FORECAST AND LOCAL FEATURES. IN PARTICULAR MAXIMUM TSUNAMI AMPLITUDES ON ATOLLS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

- * FOR OTHER AREAS COVERED BY THIS PRODUCT A FORECAST HAS NOT YET BEEN COMPUTED. THE FORECAST WILL BE EXPANDED AS NECESSARY IN SUBSEQUENT PRODUCTS.

RECOMMENDED ACTIONS

-
- * GOVERNMENT AGENCIES RESPONSIBLE FOR THREATENED COASTAL AREAS SHOULD TAKE ACTION TO INFORM AND INSTRUCT ANY COASTAL POPULATIONS AT RISK IN ACCORDANCE WITH THEIR OWN EVALUATION... PROCEDURES AND THE LEVEL OF THREAT.
 - * PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

ESTIMATED TIMES OF ARRIVAL

-
- * ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR POINTS WITHIN THREATENED REGIONS ARE GIVEN BELOW. ACTUAL

PTWC Enhanced Products

ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES	ETA (UTC)
ALIGANDI	PANAMA	9.2N 78.0W	1421 03/25
PUERTO CARRETO	PANAMA	8.8N 77.6W	1437 03/25
CARTAGENA	COLOMBIA	10.4N 75.6W	1442 03/25
PUNTA CARIBANA	COLOMBIA	8.6N 76.9W	1453 03/25
BARRANQUILLA	COLOMBIA	11.1N 74.9W	1453 03/25
PUERTO LIMON	COSTA RICA	10.0N 83.0W	1456 03/25
PUERTO OBALDIA	PANAMA	8.7N 77.4W	1502 03/25
COLON	PANAMA	9.4N 79.9W	1512 03/25
RIOHACHA	COLOMBIA	11.6N 72.9W	1518 03/25
BOCAS DEL TORO	PANAMA	9.4N 82.2W	1528 03/25
KINGSTON	JAMAICA	17.9N 76.9W	1528 03/25
JACAMEL	HAITI	18.1N 72.5W	1536 03/25
PUNTA GORDA	NICARAGUA	11.4N 83.8W	1544 03/25
SANTA MARTA	COLOMBIA	11.2N 74.2W	1546 03/25
ORANJESTAD	ARUBA	12.5N 70.0W	1548 03/25
CAYMAN BRAC	CAYMAN ISLANDS	19.7N 79.9W	1552 03/25
MONTEGO BAY	JAMAICA	18.5N 77.9W	1553 03/25
SANTIAGO D CUBA	CUBA	19.9N 75.8W	1553 03/25
WILLEMSTAD	CURACAO	12.1N 68.9W	1557 03/25
ONIMA	BONAIRE	12.3N 68.3W	1559 03/25
SANTO DOMINGO	DOMINICAN REP	18.5N 69.9W	1603 03/25
GRAND CAYMAN	CAYMAN ISLANDS	19.3N 81.3W	1611 03/25
BARACOA	CUBA	20.4N 74.5W	1615 03/25
GREAT INAGUA	BAHAMAS	20.9N 73.7W	1616 03/25
CIENFUEGOS	CUBA	22.0N 80.5W	1620 03/25
CABO ENGANO	DOMINICAN REP	18.6N 68.3W	1623 03/25
CAP HAITEN	HAITI	19.8N 72.2W	1628 03/25
MAIQUETIA	VENEZUELA	10.6N 67.0W	1636 03/25
MAYAGUANA	BAHAMAS	22.3N 73.0W	1637 03/25
PUERTO PLATA	DOMINICAN REP	19.8N 70.7W	1640 03/25
JEREMIE	HAITI	18.6N 74.1W	1641 03/25
CROOKED ISLAND	BAHAMAS	22.7N 74.1W	1645 03/25
LONG ISLAND	BAHAMAS	23.3N 75.1W	1648 03/25
COZUMEL	MEXICO	20.5N 87.0W	1651 03/25
BASSE TERRE	GUADELOUPE	16.0N 61.7W	1654 03/25
ROSEAU	DOMINICA	15.3N 61.4W	1655 03/25
PUERTO CORTES	HONDURAS	15.9N 88.0W	1655 03/25
FORT DE FRANCE	MARTINIQUE	14.6N 61.1W	1658 03/25
SAN SALVADOR	BAHAMAS	24.1N 74.5W	1658 03/25
KINGSTOWN	SAINTE VINCENT	13.1N 61.2W	1658 03/25
CASTRIES	SAINTE LUCIA	14.0N 61.0W	1658 03/25
SAINTE GEORGES	GRENADA	12.0N 61.8W	1659 03/25
BASSETERRE	SAINTE KITTS	17.3N 62.7W	1659 03/25
PLYMOUTH	MONTSERRAT	16.7N 62.2W	1700 03/25
CUMANA	VENEZUELA	10.5N 64.2W	1701 03/25
EKUMA	BAHAMAS	23.6N 75.9W	1704 03/25
TRUJILLO	HONDURAS	15.9N 86.0W	1714 03/25
CAT ISLAND	BAHAMAS	24.4N 75.5W	1714 03/25

THE VALLEY	ANGUILLA	18.3N 63.1W	1722 03/25
GIBARA	CUBA	21.1N 76.1W	1722 03/25
LA HABANA	CUBA	23.2N 82.4W	1724 03/25
ABACO ISLAND	BAHAMAS	26.6N 77.1W	1726 03/25
ANDROS ISLAND	BAHAMAS	25.0N 77.9W	1730 03/25
SAINT JOHNS	ANTIGUA	17.1N 61.9W	1735 03/25
PALMETTO POINT	BARBUDA	17.6N 61.9W	1735 03/25
PUNTO FIJO	VENEZUELA	11.7N 70.2W	1737 03/25
ELEUTHERA ISLAND	BAHAMAS	25.2N 76.1W	1743 03/25
PORT AU PRINCE	HAITI	18.5N 72.4W	1744 03/25
NASSAU	BAHAMAS	25.1N 77.4W	1747 03/25
FREEPORT	BAHAMAS	26.5N 78.8W	1750 03/25
BIMINI	BAHAMAS	25.8N 79.3W	1822 03/25
SANTA CRUZ D SUR	CUBA	20.7N 78.0W	1837 03/25
GOLFO VENEZUELA	VENEZUELA	11.4N 71.2W	1914 03/25
NUEVA GERONA	CUBA	21.9N 82.8W	1937 03/25
PUERTO CABEZAS	NICARAGUA	14.0N 83.4W	1939 03/25
PORLAMAR	VENEZUELA	10.9N 63.8W	2124 03/25

POTENTIAL IMPACTS

* A TSUNAMI IS A SERIES OF WAVES. THE TIME BETWEEN WAVE CRESTS CAN VARY FROM 5 MINUTES TO AN HOUR. THE HAZARD MAY PERSIST FOR MANY HOURS OR LONGER AFTER THE INITIAL WAVE.

* IMPACTS CAN VARY SIGNIFICANTLY FROM ONE SECTION OF COAST TO THE NEXT DUE TO LOCAL BATHYMETRY AND THE SHAPE AND ELEVATION OF THE SHORELINE.

* IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.

* PERSONS CAUGHT IN THE WATER OF A TSUNAMI MAY DROWN... BE CRUSHED BY DEBRIS IN THE WATER... OR BE SWEEPED OUT TO SEA.

NEXT UPDATE AND ADDITIONAL INFORMATION

* THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.

* AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN SMALL LETTERS-.

* FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.

* COASTAL REGIONS OF PUERTO RICO... THE U.S. VIRGIN ISLANDS AND THE BRITISH VIRGIN ISLANDS SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT

Member State Participation

- Member States to establish their own national task teams to determine the scope of their national participation and testing.
- New: US Dept. of State sending a Cable to all their CARIBE EWS missions on the exercise
- USVI has requested Proclamation for March as Tsunami Preparedness Month



Media Arrangements

- Sample press release in Handbook which can be adapted as necessary.
- PRSN Tsunami Media Guide (English and Spanish) (<http://www.prsn.uprm.edu/mediakit/>)
- Seismic Research Center Tsunami and other Coastal Hazards WS Media Information Kit (English) (<http://www.uwiseismic.com/Downloads/TCHWS Final Media Kit.pdf>).

Media Arrangements-Updates

- VITEMA has already published a press release
- PRSEMA will host a press conference
- NOAA with CTWP will also issue a press release
- UNESCO press release pending
- The more media coverage the better!

In Case of a Real Event or False Alarm

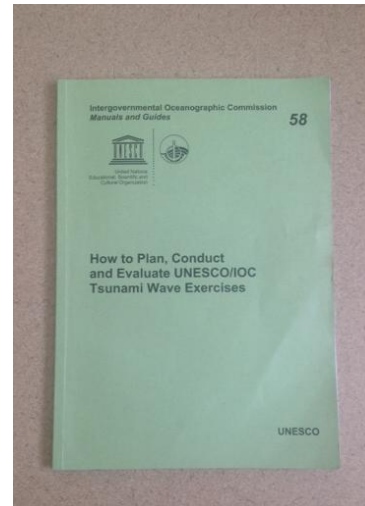
- In the case of a real event occurring during the exercise, the TWCs will issue their normal messages for the event with full priority over the CARIBE WAVE/LANTEX exercise.
- All documentation and correspondence relating to this exercise is to be clearly identified as “**CARIBE WAVE/LANTEX 2015**” and “**Exercise.**”
- All participating entities should set up procedures to address public concern in case of misinterpretation of the exercise.

Post-Exercise Evaluation Form

- All participating agencies are requested to provide brief feedback on the exercise to assist in the development of subsequent exercises (1 TWFP/TNC per member state; general public can also complete shorter version of survey).
- 81 questions, should take no more than 20 minutes.
- The deadline for completing the evaluation is **April 9, 2015.**
- Survey Monkey:
www.surveymonkey.com/s/CaribeWave15

Resources

- IOC Manual “How to plan, conduct and evaluate tsunami exercises” which will also be a useful resource.
- CARIBE WAVE 2011, 2013, 2014 Manuals
- CARIBE WAVE 2013, 2014 Final and Media Reports
- PTWC Communications Plan for the Caribbean
- Available at www.caribewave.info



Additional Info

- Additional materials will be added to CTWP (www.caribewave.info) and PRSN (www.redsismica.uprm.edu) websites.
- Send links of other national pages to christa.vonh@noaa.gov to include on CTWP and PRSN websites
- This presentation is available on CTWP website

CARIBE WAVE/LANTEX 2015

- [UNESCO IOC Circular Letter](#) Announcing CARIBE WAVE/LANTEX 2015
- [CaribeWave 2015 Task Team Meeting Presentation](#)
- The participants **HANDBOOKS** are available for
 - [SW Caribbean Scenario \(UNESCO Format\)](#)
 - [SW Caribbean Scenario \(NOAA Format\)](#)
 - [Florida Scenario](#)

Webinar 1 for CARIBE WAVE/LANTEX 2015:

- [English](#): 18h00 UTC, Tuesday, January 20, 2015 - [Presentation](#)
- [Español](#): 18h00 UTC, miércoles, 21 de enero de 2015
- [Français](#): 18h00 UTC, jeudi, 22 janvier de 2015

Webinar 2 for CARIBE WAVE/LANTEX 2015:

- [English](#): 18h00 UTC, Tuesday, February 24, 2015
- [Español](#): 18h00 UTC, miércoles, 25 de Febrero de 2015
- [Français](#): 18h00 UTC, jeudi, 26 février de 2015

Additional Websites for CARIBE WAVE/LANTEX 2015

- [US National Tsunami Warning Center](#)
- [UNESCO IOC](#)
- [Puerto Rico Seismic Network](#)
- [NOAA Tsunami Program](#)

Thanks and PLEASE contact me with any questions.

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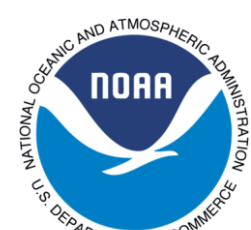
Magnitude	Agency	Local Time (GMT-4)	Latitude	Longitude	Depth (Km)	Region
3.74 Md	RSFR	2015-01-21 01:48:57	18.417	-67.7213	123	MONA PASSAGE
3.81 Md	RSFR	2015-01-18 21:07:27	17.8971	-63.6395	129	LEeward ISLANDS
3.61 Md	RSFR	2015-01-02 16:55:02	17.9231	-68.5055	101	EASTERN DOMINICAN REPUBLIC
3.63 Md	RSFR	2014-12-31 10:05:16	18.5448	-68.8981	183	EASTERN DOMINICAN REPUBLIC
3.79 Md	RSFR	2014-12-28 22:04:21	16.2135	-64.3338	32	SOMBREIRO SEISMIC ZONE
3.89 Md	RSFR	2014-12-21 18:14:46	19.0165	-65.1793	24	SOMBREIRO SEISMIC ZONE

CARIBE WAVE/LANTEX 2015 Task Team

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Timeline

Action	Due Date
Draft handbook among ICG CARIBE EWS TNC/TWFP	August 15, 2014
Deadline for Comments	September 12, 2014
Final Exercise handbook Available on Line	November 10, 2014
Circular Letter Issued by IOC to MS	December 5, 2014
1 st Webinar	January 20, 21, 22, 2015, 14h00 AST (18h00 UTC); E,S,F
2 nd Webinar	February 24, 25, 26, 2015 14h00 AST (18h00 UTC); E,S,F
Exercise	March 25, 2015 (Wednesday)
Exercise Evaluation Questionnaire Due	April 9, 2015 (Thursday)
Draft Final CARIBE WAVE 2015 Report	ICG CARIBE EWS X (May 19-21, 2015 – Sint Maarten)



Caribe Wave/LANTEX 2015

Panama Tsunami Scenario



Tweb Webinar
March 10, 2015
18:00 UTC

M_w 8.5, 10.3°N 78.8°W, March 25, 2015, 14:00 UTC

This tsunami model was generated in Tweb, a NOAA real time forecast tsunami tool (experimental phase).

Registration URL: <https://attendee.gotowebinar.com/register/901690059478404610>

Webinar ID: 101-503-771

Questions, Comments

Thank you for participating

christa.vonh@noaa.gov