



CARIBE WAVE 19

1st Webinar

Christa G. von Hillebrandt-Andrade
NOAA NWS Caribbean Tsunami Warning Program- Manager
ICG CARIBE EWS Chair
January 15, 2019

CARIBE WAVE 2018

In the Caribbean and Adjacent Regions, 31 nations and 15 territories participated in this exercise with a total of 643,403 people engaged.

- This represented a MS participation rate of 97% (up from 93% in 2016 and close to the reported numbers for 2017).



Objectives Caribe Wave 19

1. Exercise and evaluate communications between Regional Tsunami Service Provider and Members States/Territories.

- A. Validate the **issuance** of tsunami products from the PTWC.
- B. Validate the **receipt** of tsunami products by CARIBE EWS Tsunami Warning Focal Points (TWFPs) and/or National Tsunami Warning Centers (NTWCs).

2. To evaluate the tsunami procedures and programs within Members States/Territories.

- A. Validate readiness to respond to a tsunami.
- B. Validate the operational readiness of the TWFPs/NTWCs and/or The National Disaster Management Office (NDMO).
- C. Improve operational readiness. Before the exercise, ensure appropriate tools and response plan(s) have been developed, including public education materials.
- D. Validate that the dissemination of warnings and information/advice by TWFPs and NTWCs, to relevant in-country agencies and the public is accurate and timely.
- E. Evaluate the status of the implementation of the pilot CARIBE EWS TsunamiReady recognition program.

3. To evaluate volcanic products

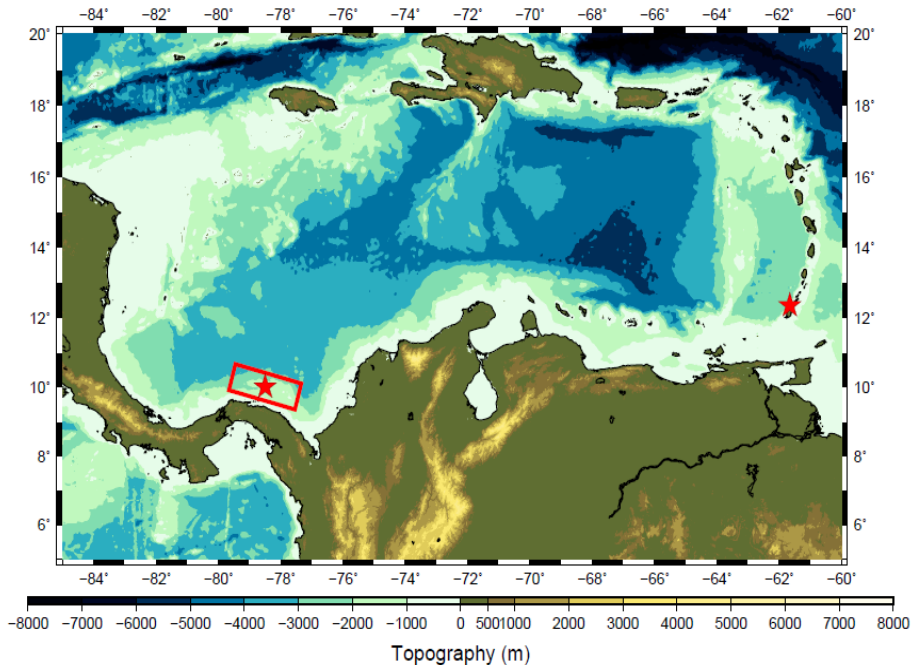
- A. Evaluate PTWC CARIBE WAVE EWS products for volcanic events.
- B. Evaluate input from SRC (Seismic Research Centre).
- C. Evaluate MS and Territories response plans for tsunamis from volcanoes.

Exercise Handbook

- The exercise Handbook is available at, www.caribewave.info
- The manual includes:
 - Tsunami and earthquake scenarios description
 - Timelines
 - PTWC dummy message and simulated exercise threat messages
 - Travel times and expected wave heights
 - The website link to post-exercise evaluation questionnaire

CARIBE WAVE 19

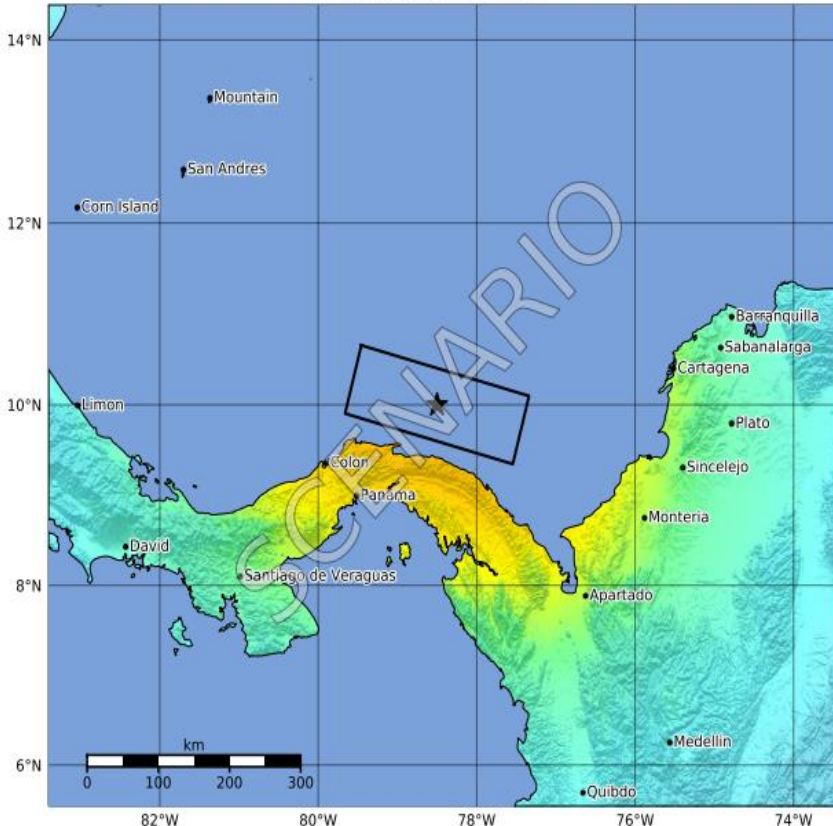
Earthquake and Tsunami Scenarios



Scenario	Origin Time	Mw	Epicenter
Panama	14:00:00 UTC March 14, 2019	8.5	10.00°, -78.50°
Kick 'em Jenny		6.0	12.34°, -61.65°

Earthquake Impact Scenario Panama

Macroseismic Intensity Map
USGS ShakeMap: Caribe Wave 19 Panama Scenario
Mar 14, 2019 14:00:00 UTC M8.5 N10.00 W78.50 Depth: 25.1km
ID:caribewave_19_panama_se



SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
DAMAGE	None	None	None	Very light	Light	Moderate	Moderate/heavy	Heavy	Very heavy
PGA(%g)	<0.05	0.3	2.76	6.2	11.5	21.5	40.1	74.7	>139
PGV(cm/s)	<0.02	0.13	1.41	4.65	9.64	20	41.4	85.8	>178
INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+



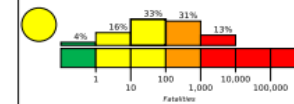
Earthquake Shaking **Red Alert**



M 8.5, Caribe Wave 19 Panama Scenario

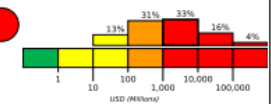
Origin Time: 2019-03-14 14:00:00 UTC (Thu 09:00:00 local)
Location: 10.0000° N 78.5000° W Depth: 25.1 km
FOR TSUNAMI INFORMATION, SEE: tsunami.gov

Estimated Fatalities



Red alert for economic losses. Extensive damage is probable and the disaster is likely widespread. Estimated economic losses are 0-8% GDP of Panama. Past events with this alert level have required a national or international level response.
Yellow alert for shaking-related fatalities. Some casualties are possible.

Estimated Economic Losses

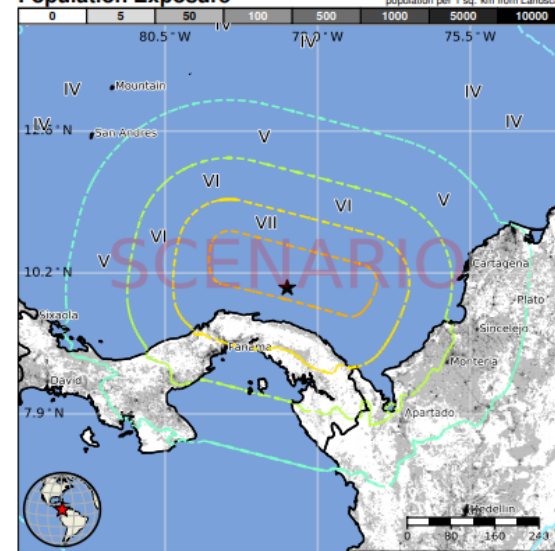


Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)	-*	400k*	9,562k*	7,700k	1,903k	1,303k	0	0	0	
ESTIMATED MODIFIED MERCALLI INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+	
PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme	
POTENTIAL DAMAGE	Resistant Structures	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy	V. Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy	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 a mix of vulnerable and earthquake resistant construction. The predominant vulnerable building types are mud wall and informal (metal, timber, GI etc.) construction.

Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
2000-11-08	332	6.5	VII(3k)	0
1977-08-31	391	6.5	IX(4k)	3
1974-07-13	269	7.3	IX(2k)	11

Recent earthquakes in this area have caused secondary hazards such as landslides and liquefaction that might have contributed to losses.

Selected City Exposure

MMI	City	Population
VII	Nargana	1k
VII	El Porvenir	0
VII	Playa Chiquita	<1k
VII	Santa Isabel	<1k
VII	Viento Frio	<1k
VII	Palмира	<1k
VI	Panama	408k
V	Cartagena	952k
IV	Barranquilla	1,380k
IV	Santa Marta	432k
IV	Medellin	2,000k

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/data/pager/>

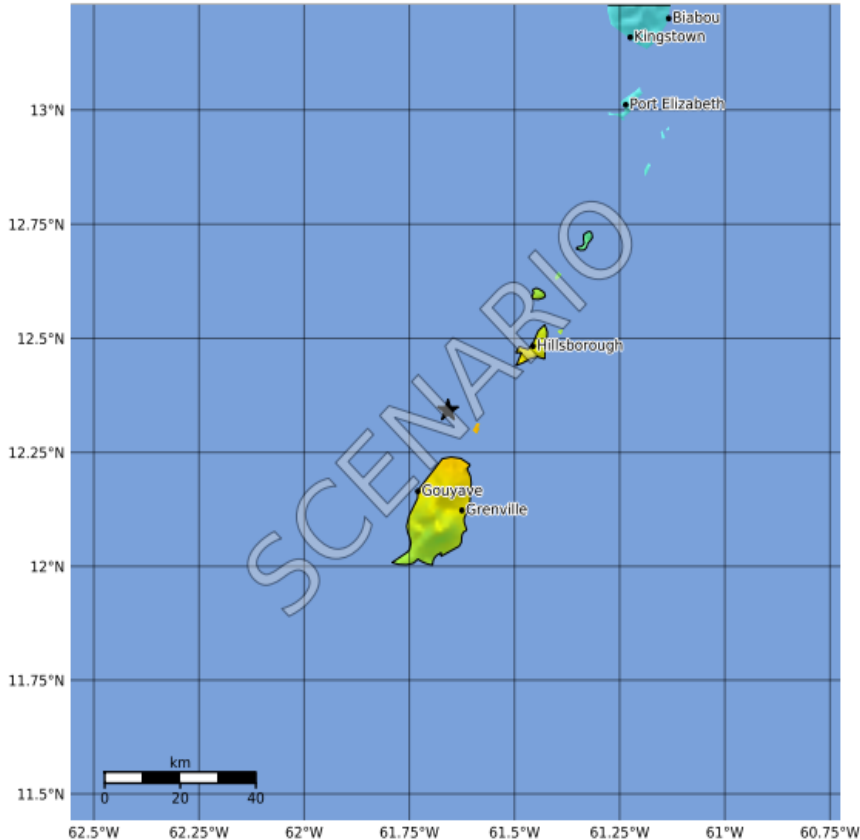
bold cities appear on map. (k = x1000)

Event ID: caribewave_19_panama_se

Earthquake Impact Scenario

Kick 'em Jenny

Macroseismic Intensity Map
 USGS ShakeMap: Caribe Wave 19 Kick 'Em Jenny Scenario
 Mar 14, 2019 14:00:00 UTC M6.0 N12.34 W61.66 Depth: 12.0km
 ID:caribewave_19_KEJ_se



	62.5°W	62.25°W	62°W	61.75°W	61.5°W	61.25°W	61°W	60.75°W	
SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
DAMAGE	None	None	None	Very light	Light	Moderate	Moderate/heavy	Heavy	Very heavy
PGA(%g)	<0.05	0.3	2.76	6.2	11.5	21.5	40.1	74.7	>139
PGV(cm/s)	<0.02	0.13	1.41	4.65	9.64	20	41.4	85.8	>178
INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+

▲ Seismic Instrument ○ Macroseismic Observation
 Scale based upon Worden et al. (2012)

Map Version 1: Processed 2018-10-17T17:17:14Z



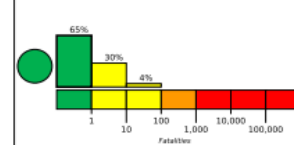
Earthquake Shaking **Yellow Alert**



M 6.0, Caribe Wave 19 Kick 'Em Jenny Scenario

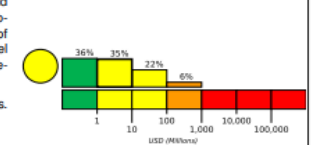
Origin Time: 2019-03-14 14:00:00 UTC (Thu 10:00:00 local)
 Location: 12.3420° N 61.6580° W Depth: 12.0 km

Estimated Fatalities



Yellow alert for economic losses. Some damage is possible and the impact should be relatively localized. Estimated economic losses are less than 1% of GDP of Grenada. Past events with this alert level have required a local or regional level response.
 Green alert for shaking-related fatalities. There is a low likelihood of casualties.

Estimated Economic Losses

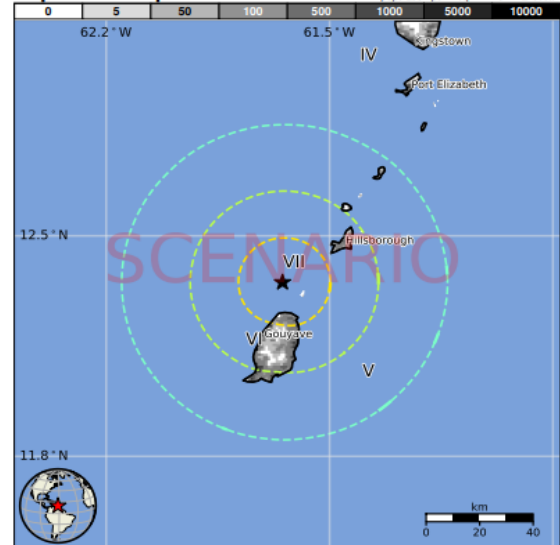


Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)	--	--	73k	13k	91k	11k	0	0	0	
ESTIMATED MODIFIED MERCALLI INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+	
PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme	
POTENTIAL DAMAGE	Resistant Structures	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy	V. Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy	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 resistant structures exist. The predominant vulnerable building types are rubble/field stone masonry and unknown/miscellaneous types construction.

Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
2004-11-21	370	6.3	VII(3k)	1
1986-06-11	239	6.2	IX(6k)	2
1997-07-09	292	6.9	VIII(8k)	81

Recent earthquakes in this area have caused secondary hazards such as landslides that might have contributed to losses.

Selected City Exposure

MMI	City	Population
VII	Sauteurs	1k
VI	Victoria	2k
VI	Gouyave	3k
VI	Grenville	2k
VI	Hillsborough	1k
VI	Saint George's	8k
VI	Saint David's	1k
IV	Port Elizabeth	1k
IV	Kingstown	25k
IV	Layou	0
IV	Kingstown Park	18k

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/data/pager/>

bold cities appear on map. (k=x1000)

Event ID: uscaribewave_19_KEJ_se

PTWC PRODUCTS

For Caribe Wave 19 PTWC will issue the following products:

- The initial dummy message for the two scenarios will be issued on March 14, 2019 at 1400 UTC and disseminated over all its standard broadcast channels.
- PTWC will issue a start of exercise message through its Twitter account at 1400 UTC.
- As of 1405 UTC, PTWC emails will be sent with all the simulated enhanced products (text and graphical) to the designated CARIBE EWS, TWFP and NTWC for one of the scenarios.
 - By **February 28, 2019**, each Member State needs to select one scenario and must inform its selection to PTWC (charles.mccreery@noaa.gov and cindi.preller@noaa.gov) with a copy to the Caribbean Tsunami Warning Program (christa.vonh@noaa.gov). If the Member State does not inform the PTWC and CTWP, the organizers will decide for which scenario the PTWC will send the products.
 - Each country and territory will choose one scenario and decide if and how to disseminate messages within its area of responsibility.
 - To verify the current list of officially designated UNESCO IOC CARIBE EWS TWFP and NTWC check out:

http://www.ioc-tsunami.org/index.php?option=com_content&view=article&id=6&Itemid=22&lang=en

Username: tsunami pwd: bigwave

CARIBE WAVE 19 Scenarios by Member State/Territory

*scenarios decided by Caribe Wave organizers per Exercise Handbook

Panama	Kick 'em Jenny
Haiti	United Kingdom British Virgin Islands
	United States of America Puerto Rico US Virgin Islands
	Venezuela

Appendix E. TWC Dummy (Start of Exercise) Messages

PTWC ← **Center**
WECA41 PHEB 141400 ← **WMO ID**
TSUCAX ← **AWIPS ID**

TEST...INITIAL DUMMY START OF EXERCISE MESSAGE...TEST
NWS PACIFIC TSUNAMI WARNING CENTER/NOAA/NWS
ISSUED AT 1400Z 14 MAR 2019

...TEST...CARIBE WAVE 19 TSUNAMI EXERCISE DUMMY MESSAGE. REFER TO THE EXERCISE HANDBOOK. THIS IS AN EXERCISE ONLY...TEST...

THIS MESSAGE IS BEING USED TO START THE CARIBE WAVE 19 TSUNAMI EXERCISE AND TEST COMMUNICATIONS WITH UNESCO IOC CARIBE EWS NTWCS AND TWFPS. 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 CARIBEWAVE.INFO. THE EXERCISE PURPOSE IS TO EXERCISE AND EVALUATE THE CARIBE EWS TSUNAMI WARNING SYSTEM.

THIS IS ONLY AN EXERCISE.

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Start of Exercise messages will also be sent out by PTWC twitter accounts

Users with US Cellphone providers can receive Tweets as text messages, sending as body message:

“Follow NWS_PTWC” to 40404

(this account is for all PTWC products)

and

“Follow NWS_CTWP” to 40404

(this account is only for PTWC products for the Caribbean and Adjacent Regions)

“This is a test message for the CARIBEWAVE19 tsunami exercise #CaribeWave”
(Will be issued at 14h00 UTC to NWS_PTWC and NWS_CTWP
accounts/subscribers)

Panama Scenario

Message Chronology issued by the PTWC Panama

Date	Time (UTC)	PTWC	
		Type of Product	Transmission Method
3/14/19	1400	----- Earthquake Occurs -----	
3/14/19	1400	Dummy	NWWS, GTS, EMWIN, AISR, Fax, Email
3/14/19	1406	Tsunami Threat Message #1	Email
3/14/19	1425	Tsunami Threat Message # 2 and Graphic Enhanced Products	Email
3/14/19	1440	Tsunami Threat Message #3	Email
3/14/19	1500	Tsunami Threat Message #4	Email
3/14/19	1600	Tsunami Threat Message #5	Email
3/14/19	1700	Tsunami Threat Message #6	Email
3/14/19	1800	Tsunami Threat Message #7	Email
3/14/19	1900	Tsunami Threat Message #8	Email
3/14/19	2000	Tsunami Threat Message #9	Email
3/14/19	2100	Tsunami Threat Message #10	Email
3/14/19	2200	Tsunami Threat Message #11	Email
3/14/19	2300	Final Tsunami Threat Message #12	Email

PTWC Message #1

ZCZC

WECA41 PHEB 141406

WMO ID

TSUCAX

AWIPS ID

TEST...TSUNAMI MESSAGE NUMBER 1...TEST

NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI

1406 UTC THU MAR 14 2019

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...

...TEST TSUNAMI THREAT MESSAGE TEST...

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

THIS IS A TEST MESSAGE. 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.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

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

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

- * MAGNITUDE 8.3
- * ORIGIN TIME 1400 UTC MAR 14 2019
- * COORDINATES 10.0 NORTH 78.5 WEST
- * DEPTH 25 KM / 16 MILES
- * LOCATION NORTH OF PANAMA

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.3 OCCURRED NORTH OF PANAMA AT 1400 UTC ON THURSDAY MARCH 14 2019.

* THIS IS A TEST MESSAGE. BASED ON THE PRELIMINARY EARTHQUAKE PARAMETERS... WIDESPREAD HAZARDOUS TSUNAMI WAVES ARE POSSIBLE.

TEST... TSUNAMI THREAT FORECAST ...TEST

* THIS IS A TEST MESSAGE. HAZARDOUS TSUNAMI WAVES FROM THIS EARTHQUAKE ARE POSSIBLE WITHIN THE NEXT THREE HOURS ALONG SOME COASTS OF

- PANAMA... COLOMBIA... SAN ANDRES PROVID... COSTA RICA...
- HAITI... ARUBA... NICARAGUA... CAYMAN ISLANDS...
- JAMAICA... CUBA... BONAIRE... DOMINICAN REP... CURACAO...
- BAHAMAS... PUERTO RICO... US VIRGIN IS... TURKS N
- CAICOS... VENEZUELA... SABA... SAINT KITTS...
- MONTERRAT... SINT EUSTATIUS... GUADELOUPE... DOMINICA...
- MEXICO... HONDURAS... BR VIRGIN IS... SAINT LUCIA... SINT
- MAARTEN... SAINT VINCENT AND MARTINIQUE

TEST... RECOMMENDED ACTIONS ...TEST

* THIS IS A TEST MESSAGE. 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.

* THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

* THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THE REGION IDENTIFIED WITH A POTENTIAL TSUNAMI THREAT. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES		ETA (UTC)	
ALIGANDI	PANAMA	9.2N	78.0W	1419	03/14
PUERTO CARRETO	PANAMA	8.8N	77.6W	1434	03/14
CARTAGENA	COLOMBIA	10.4N	75.6W	1440	03/14
PUERTO OBALDIA	PANAMA	8.7N	77.4W	1448	03/14
PROVIDENCIA	SAN ANDRES PROVI	12.6N	81.7W	1449	03/14
SAN ANDRES	SAN ANDRES PROVI	13.4N	81.4W	1452	03/14
COLON	PANAMA	9.4N	79.9W	1454	03/14
PUNTA CARIBANA	COLOMBIA	8.6N	76.9W	1456	03/14
PUERTO LIMON	COSTA RICA	10.0N	83.0W	1500	03/14
SANTA MARTA	COLOMBIA	11.2N	74.2W	1501	03/14
BOCAS DEL TORO	PANAMA	9.4N	82.2W	1512	03/14
BARRANQUILLA	COLOMBIA	11.1N	74.9W	1515	03/14
JACAMEL	HAITI	18.1N	72.5W	1536	03/14
ORANJESTAD	ARUBA	12.5N	70.0W	1548	03/14
RIOHACHA	COLOMBIA	11.6N	72.9W	1553	03/14
JEREMIE	HAITI	18.6N	74.1W	1554	03/14
PUNTA GORDA	NICARAGUA	11.4N	83.8W	1554	03/14
CAYMAN BRAC	CAYMAN ISLANDS	19.7N	79.9W	1556	03/14
KINGSTON	JAMAICA	17.9N	76.9W	1556	03/14
SANTIAGO D CUBA	CUBA	19.9N	75.8W	1557	03/14
ONIMA	BONAIRE	12.3N	68.3W	1558	03/14
GRAND CAYMAN	CAYMAN ISLANDS	19.3N	81.3W	1604	03/14
SANTO DOMINGO	DOMINICAN REP	18.5N	69.9W	1606	03/14
BARACOA	CUBA	20.4N	74.5W	1616	03/14
MONTEGO BAY	JAMAICA	18.5N	77.9W	1620	03/14
WILLEMSTAD	CURACAO	12.1N	68.9W	1622	03/14
GREAT INAGUA	BAHAMAS	20.9N	73.7W	1623	03/14
MAYAGUEZ	PUERTO RICO	18.2N	67.2W	1623	03/14
CIENFUEGOS	CUBA	22.0N	80.5W	1624	03/14
CAP HAITEN	HAITI	19.8N	72.2W	1628	03/14
CABO ENGANO	DOMINICAN REP	18.6N	68.3W	1629	03/14
CHRISTIANSTED	US VIRGIN IS	17.7N	64.7W	1630	03/14
WEST CAICOS	TURKS N CAICOS	21.7N	72.5W	1632	03/14
MAIQUETIA	VENEZUELA	10.6N	67.0W	1635	03/14
GIBARA	CUBA	21.1N	76.1W	1636	03/14
MAYAGUANA	BAHAMAS	22.3N	73.0W	1636	03/14
PUERTO PLATA	DOMINICAN REP	19.8N	70.7W	1639	03/14
SAN JUAN	PUERTO RICO	18.5N	66.1W	1643	03/14
GRAND TURK	TURKS N CAICOS	21.5N	71.1W	1647	03/14
SABA	SABA	17.6N	63.2W	1651	03/14
BASSETERRE	SAINT KITTS	17.3N	62.7W	1653	03/14
PLYMOUTH	MONTSERRAT	16.7N	62.2W	1654	03/14
LONG ISLAND	BAHAMAS	23.3N	75.1W	1656	03/14
SINT EUSTATIUS	SINT EUSTATIUS	17.5N	63.0W	1656	03/14
BASSE TERRE	GUADELOUPE	16.0N	61.7W	1656	03/14
SAN SALVADOR	BAHAMAS	24.1N	74.5W	1656	03/14
CHARLOTTE AMALI	US VIRGIN IS	18.3N	64.9W	1657	03/14
PORT AU PRINCE	HAITI	18.5N	72.4W	1657	03/14
ROSEAU	DOMINICA	15.3N	61.4W	1658	03/14
COZUMEL	MEXICO	20.5N	87.0W	1659	03/14
PUERTO CORTES	HONDURAS	15.9N	88.0W	1659	03/14
ROADTOWN	BR VIRGIN IS	18.4N	64.6W	1700	03/14
CASTRIES	SAINT LUCIA	14.0N	61.0W	1700	03/14
SIMPSON BAAI	SINT MAARTEN	18.0N	63.1W	1701	03/14
KINGSTOWN	SAINT VINCENT	13.1N	61.2W	1701	03/14
FORT DE FRANCE	MARTINIQUE	14.6N	61.1W	1705	03/14
ANEGADA	BR VIRGIN IS	18.8N	64.3W	1705	03/14

TEST... POTENTIAL IMPACTS ...TEST

* THIS IS A TEST MESSAGE. 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.

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

* THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.

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

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

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

* THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.

* THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.

* THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

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NNNN

PTWC Message #2

ZCZC
WECA41 PHEB 141425
TSUCAX

← WMO ID

← AWIPS ID

TEST...TSUNAMI MESSAGE NUMBER 2...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1425 UTC THU MAR 14 2019

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...

...TEST TSUNAMI THREAT MESSAGE TEST...

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

THIS IS A TEST MESSAGE. 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.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

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

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE 8.5
* ORIGIN TIME 1400 UTC MAR 14 2019
* COORDINATES 10.0 NORTH 78.5 WEST
* DEPTH 25 KM / 16 MILES
* LOCATION NORTH OF PANAMA

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.5 OCCURRED NORTH OF PANAMA AT 1400 UTC ON THURSDAY MARCH 14 2019.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA... HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TEST... TSUNAMI THREAT FORECAST...UPDATED ...TEST

* THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF COLOMBIA... CUBA... DOMINICAN REPUBLIC... HAITI... PANAMA... AND JAMAICA.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

COSTA RICA... NICARAGUA... VENEZUELA... ARUBA... BAHAMAS... BONAIRE... CAYMAN ISLANDS... CURACAO... MARTINIQUE... PUERTO RICO AND VIRGIN ISLANDS... SAINT KITTS AND NEVIS... SAINT LUCIA... SAINT VINCENT AND THE GRENADINES... AND SAN ANDRES AND PROVIDENCIA.

* THIS IS A TEST MESSAGE. TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

BELIZE... GUATEMALA... HONDURAS... MEXICO... ANGUILLA... ANTIGUA AND BARBUDA... BARBADOS... DOMINICA... GRENADA... GUADELOUPE... MONTserrat... SABA AND SAINT EUSTATIUS... SAINT BARTHELEMY... SINT MAARTEN... SAINT MARTIN... TRINIDAD AND TOBAGO... AND TURKS AND CAICOS ISLANDS.

* THIS IS A TEST MESSAGE. 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 OR SMALL ISLANDS AND AT LOCATIONS WITH FRINGING OR BARRIER REEFS WILL LIKELY BE MUCH SMALLER THAN THE FORECAST INDICATES.

* THIS IS A TEST MESSAGE. FOR ALL OTHER AREAS COVERED BY THIS MESSAGE... THERE IS NO TSUNAMI THREAT ALTHOUGH SMALL SEA LEVEL CHANGES MAY OCCUR.

TEST... RECOMMENDED ACTIONS ...TEST

* THIS IS A TEST MESSAGE. 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.

* THIS IS A TEST MESSAGE. PERSONS LOCATED IN THREATENED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM NATIONAL AND LOCAL AUTHORITIES.

TEST... ESTIMATED TIMES OF ARRIVAL ...TEST

* THIS IS A TEST MESSAGE. ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN THREATENED REGIONS ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES	ETA (UTC)
ALIGANDI	PANAMA	9.2N 78.0W	1419 03/14
PUERTO CARRETO	PANAMA	8.8N 77.6W	1434 03/14
CARTAGENA	COLOMBIA	10.4N 75.6W	1440 03/14
PUERTO OBALDIA	PANAMA	8.7N 77.4W	1448 03/14
PROVIDENCIA	SAN ANDRES PROVI	12.6N 81.7W	1449 03/14
SAN ANDRES	SAN ANDRES PROVI	13.4N 81.4W	1452 03/14
COLON	PANAMA	9.4N 79.9W	1454 03/14
PUNTA CARIBANA	COLOMBIA	8.6N 76.9W	1456 03/14
PUERTO LIMON	COSTA RICA	10.0N 83.0W	1500 03/14
SANTA MARTA	COLOMBIA	11.2N 74.2W	1501 03/14
BOCAS DEL TORO	PANAMA	9.4N 82.2W	1512 03/14
BARRANQUILLA	COLOMBIA	11.1N 74.9W	1515 03/14
JACAMEL	HAITI	18.1N 72.5W	1536 03/14
ORANJESTAD	ARUBA	12.5N 70.0W	1548 03/14
RIOHACHA	COLOMBIA	11.6N 72.9W	1553 03/14
JEREMIE	HAITI	18.6N 74.1W	1554 03/14
PUNTA GORDA	NICARAGUA	11.4N 83.8W	1554 03/14
CAYMAN BRAC	CAYMAN ISLANDS	19.7N 79.9W	1556 03/14
KINGSTON	JAMAICA	17.9N 76.9W	1556 03/14
SANTIAGO D CUBA	CUBA	19.9N 75.8W	1557 03/14
ONIMA	BONAIRE	12.3N 68.3W	1558 03/14
GRAND CAYMAN	CAYMAN ISLANDS	19.3N 81.3W	1604 03/14
SANTO DOMINGO	DOMINICAN REP	18.5N 69.9W	1606 03/14
BARACOA	CUBA	20.4N 74.5W	1616 03/14
MONTEGO BAY	JAMAICA	18.5N 77.9W	1620 03/14
WILLEMSTAD	CURACAO	12.1N 68.9W	1622 03/14
GREAT INAGUA	BAHAMAS	20.9N 73.7W	1623 03/14
MAYAGUEZ	PUERTO RICO	18.2N 67.2W	1623 03/14
CIENFUEGOS	CUBA	22.0N 80.5W	1624 03/14
CAP HAITEN	HAITI	19.8N 72.2W	1628 03/14
CABO ENGANO	DOMINICAN REP	18.6N 68.3W	1629 03/14
CHRISTIANSTED	US VIRGIN IS	17.7N 64.7W	1630 03/14
WEST CAICOS	TURKS N CAICOS	21.7N 72.5W	1632 03/14
MAIQUETIA	VENEZUELA	10.6N 67.0W	1635 03/14
GIBARA	CUBA	21.1N 76.1W	1636 03/14
MAYAGUANA	BAHAMAS	22.3N 73.0W	1636 03/14
PUERTO PLATA	DOMINICAN REP	19.8N 70.7W	1639 03/14
SAN JUAN	PUERTO RICO	18.5N 66.1W	1643 03/14
GRAND TURK	TURKS N CAICOS	21.5N 71.1W	1647 03/14
SABA	SABA	17.6N 63.2W	1651 03/14
BASSETERRE	SAINT KITTS	17.3N 62.7W	1653 03/14
PLYMOUTH	MONTserrat	16.7N 62.2W	1654 03/14
LONG ISLAND	BAHAMAS	23.3N 75.1W	1656 03/14
SINT EUSTATIUS	SINT EUSTATIUS	17.5N 63.0W	1656 03/14
BASSE TERRE	GUADELOUPE	16.0N 61.7W	1656 03/14
SAN SALVADOR	BAHAMAS	24.1N 74.5W	1656 03/14
CHARLOTTE AMALI	US VIRGIN IS	18.3N 64.9W	1657 03/14
PORT AU PRINCE	HAITI	18.5N 72.4W	1657 03/14
ROSEAU	DOMINICA	15.3N 61.4W	1658 03/14

COZUMEL	MEXICO	20.5N	87.0W	1659	03/14
PUERTO CORTES	HONDURAS	15.9N	88.0W	1659	03/14
ROADTOWN	BR VIRGIN IS	18.4N	64.6W	1700	03/14
CASTRIES	SAINT LUCIA	14.0N	61.0W	1700	03/14
SIMPSON BAAI	SINT MAARTEN	18.0N	63.1W	1701	03/14
KINGSTOWN	SAINT VINCENT	13.1N	61.2W	1701	03/14
FORT DE FRANCE	MARTINIQUE	14.6N	61.1W	1705	03/14
ANEGADA	BR VIRGIN IS	18.8N	64.3W	1705	03/14
EXUMA	BAHAMAS	23.6N	75.9W	1706	03/14
CUMANA	VENEZUELA	10.5N	64.2W	1707	03/14
THE VALLEY	ANGUILLA	18.3N	63.1W	1709	03/14
SAINT GEORGES	GRENADA	12.0N	61.8W	1711	03/14
CROOKED ISLAND	BAHAMAS	22.7N	74.1W	1711	03/14
CAT ISLAND	BAHAMAS	24.4N	75.5W	1715	03/14
BAIE LUCAS	SAINT MARTIN	18.1N	63.0W	1723	03/14
ELEUTHERA ISLAN	BAHAMAS	25.2N	76.1W	1723	03/14
LA HABANA	CUBA	23.2N	82.4W	1725	03/14
BAIE GRAND CASE	SAINT MARTIN	18.1N	63.1W	1726	03/14
BRIDGETOWN	BARBADOS	13.1N	59.6W	1727	03/14
SAINT BARTHELEM	SAINT BARTHELEMY	17.9N	62.8W	1728	03/14
ANDROS ISLAND	BAHAMAS	25.0N	77.9W	1732	03/14
SAINT JOHNS	ANTIGUA	17.1N	61.9W	1733	03/14
PALMETTO POINT	BARBUDA	17.6N	61.9W	1736	03/14
BAIE BLANCHE	SAINT MARTIN	18.1N	63.0W	1742	03/14
NASSAU	BAHAMAS	25.1N	77.4W	1744	03/14
TRUJILLO	HONDURAS	15.9N	86.0W	1745	03/14
PIRATES BAY	TRINIDAD TOBAGO	11.3N	60.6W	1753	03/14
FREEPORT	BAHAMAS	26.5N	78.8W	1756	03/14
ABACO ISLAND	BAHAMAS	26.6N	77.1W	1801	03/14
PUNTO FIJO	VENEZUELA	11.7N	70.2W	1808	03/14
BELIZE CITY	BELIZE	17.5N	88.2W	1809	03/14
BIMINI	BAHAMAS	25.8N	79.3W	1809	03/14
PORT OF SPAIN	TRINIDAD TOBAGO	10.6N	61.5W	1825	03/14
PUERTO BARRIOS	GUATEMALA	15.7N	88.6W	1852	03/14
SANTA CRZ D SUR	CUBA	20.7N	78.0W	1858	03/14
GOLFO VENEZUELA	VENEZUELA	11.4N	71.2W	1907	03/14
PUERTO CABEZAS	NICARAGUA	14.0N	83.4W	1942	03/14
NUEVA GERONA	CUBA	21.9N	82.8W	2015	03/14
PORLAMAR	VENEZUELA	10.9N	63.8W	2031	03/14

TEST... POTENTIAL IMPACTS ...TEST

* THIS IS A TEST MESSAGE. 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.

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

* THIS IS A TEST MESSAGE. IMPACTS CAN ALSO VARY DEPENDING UPON THE STATE OF THE TIDE AT THE TIME OF THE MAXIMUM TSUNAMI WAVES.

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

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

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

* THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.

* THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.

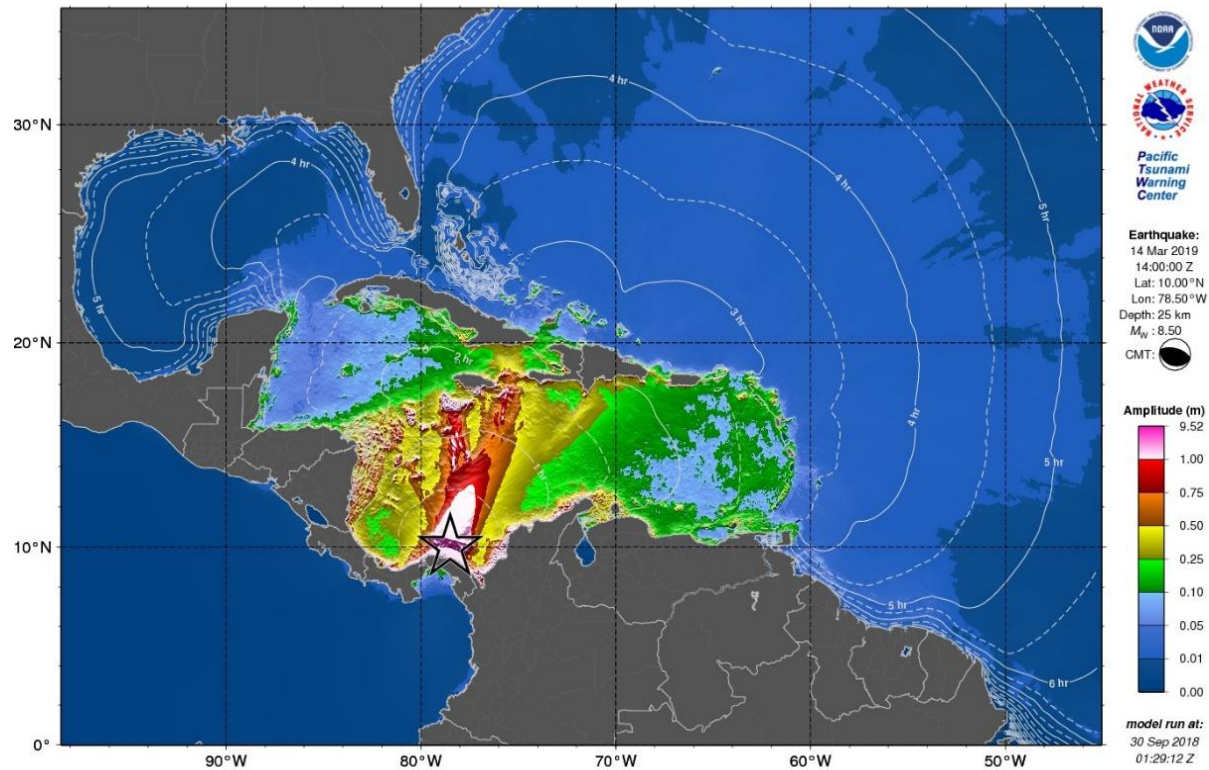
* THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

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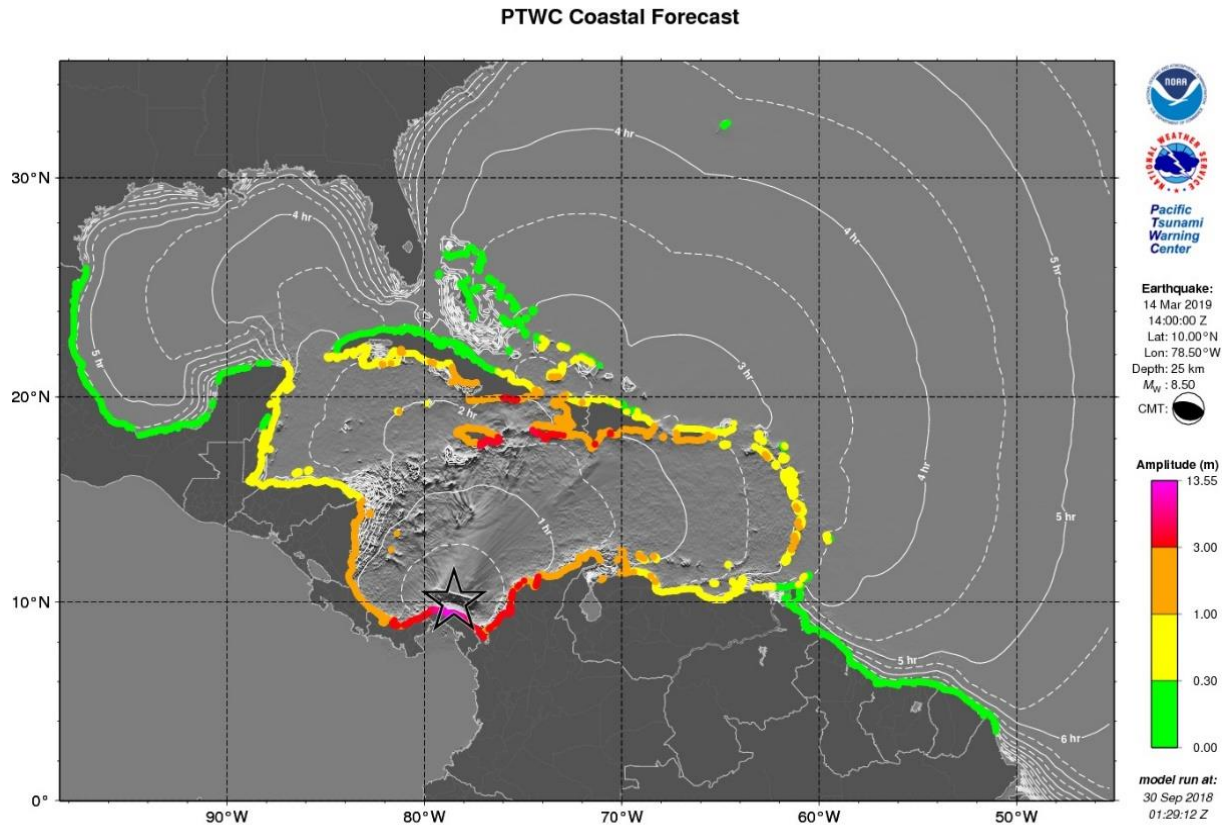
Energy Forecast for Tsunami Wave Heights Panama



RIFT maximum amplitude map based on the scenario for Panama.

During a real event this product will only be made available to officially designated Tsunami Warning Focal Points and National Tsunami Warning Centers.

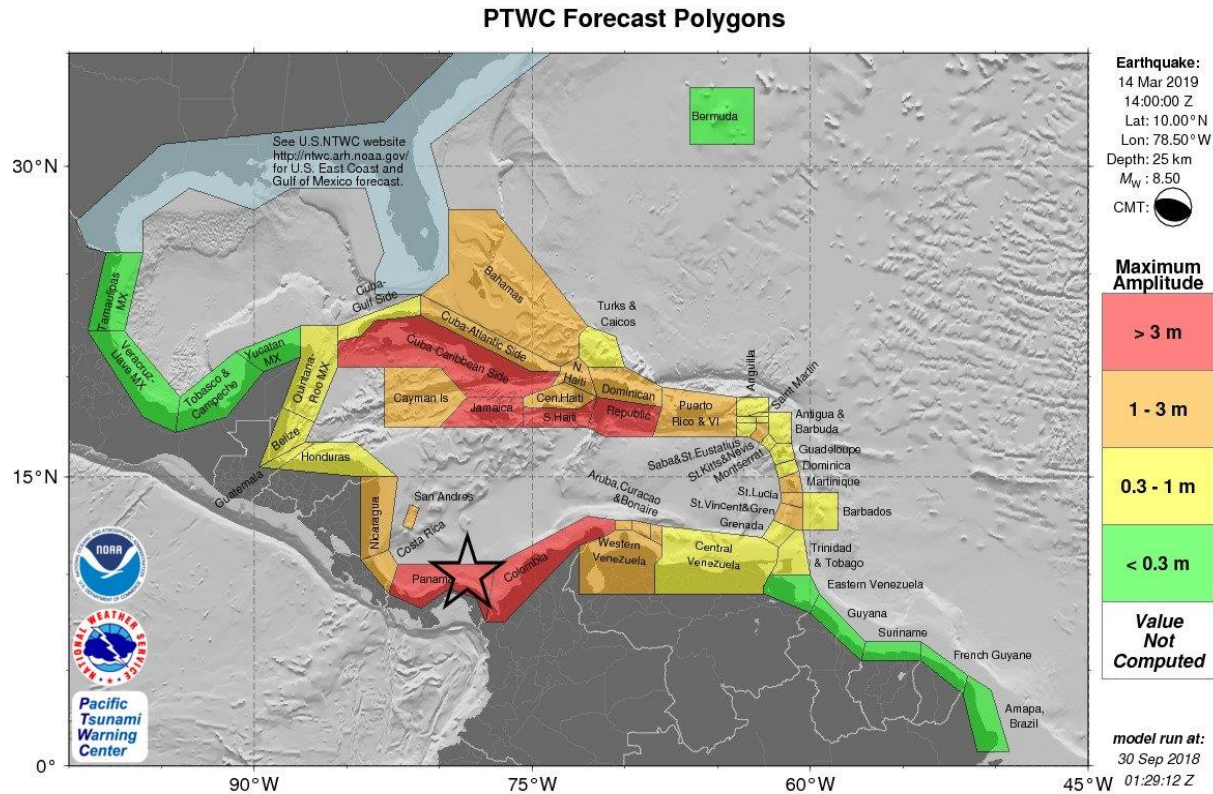
Coastal Forecast for Tsunami Wave Heights Panama



RIFT coastal tsunami amplitude map based on the scenario for Panama.

During a real event this product will only be made available to officially designated Tsunami Warning Focal Points and National Tsunami Warning Centers.

Polygons Forecast for Tsunami Wave Heights Panama

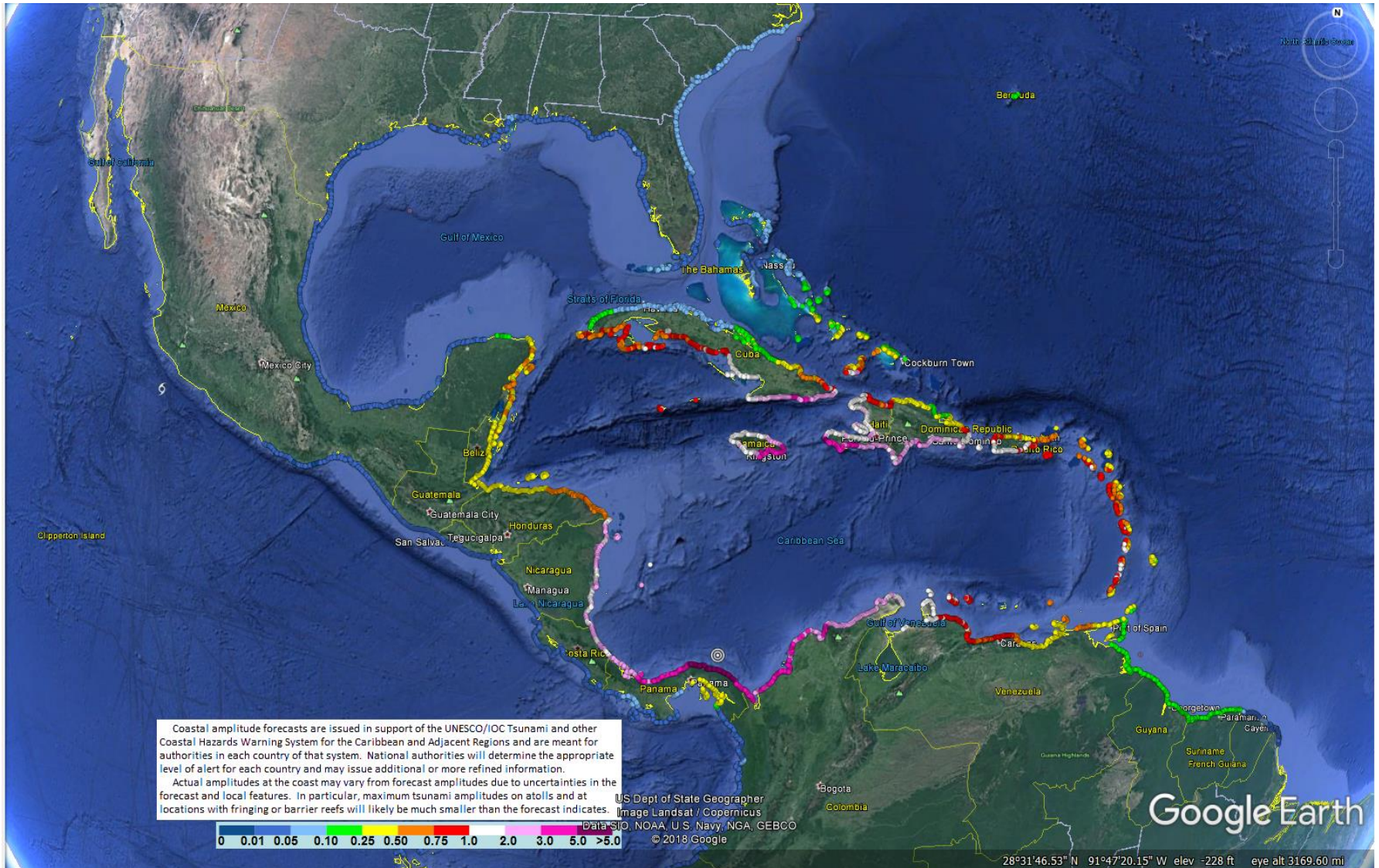


RIFT forecast polygons for the Caribbean region on the Panama scenario.

During a real event this product will only be made available to officially designated Tsunami Warning Focal Points and National Tsunami Warning Centers.

KMZ

Panama



Forecast Statistics for Regional Polygons*

Panama

Region Name	Coastal Forecast (meters)				Offshore Forecast (meters)				Total Points
	Maximum	Mean	Median	STD	Maximum	Mean	Median	STD	
Caribbean Coast of Panama	14.0	5.10	3.50	3.30	9.5	2.70	2.10	1.70	179
Caribbean Coast of Haiti	5.6	3.10	3.00	0.78	2.3	0.98	0.89	0.38	89
Jamaica	5.3	2.50	2.00	1.10	3.6	0.99	0.88	0.51	146
Caribbean Coast of Colombia	4.0	2.70	2.70	0.57	3.4	1.60	1.60	0.57	255
Caribbean Coast of Cuba	3.9	1.30	0.97	0.80	2.3	0.37	0.29	0.26	422
Caribbean Coast of Dominican Republic	3.3	2.20	2.20	0.43	3.3	1.10	0.93	0.60	148
Caribbean Coast of Costa Rica	2.7	2.20	2.20	0.24	2.0	1.20	1.20	0.32	48
Gulf of Gonave Coast of Haiti	2.6	1.70	1.70	0.31	2.0	0.63	0.52	0.33	140
Caribbean Coast of Nicaragua	2.4	2.00	2.10	0.20	1.7	0.84	0.81	0.22	139
Bahamas	2.3	0.20	0.08	0.34	1.3	0.10	0.03	0.17	443
San Andres and Providencia	2.1	2.00	2.00	0.05	0.84	0.82	0.82	0.02	4
Atlantic Coast of Haiti	1.9	1.00	0.94	0.31	1.2	0.38	0.35	0.17	66
Puerto Rico and Virgin Islands	1.8	0.85	0.81	0.34	1.4	0.43	0.32	0.30	190
Western Coast of Venezuela	1.8	1.10	1.00	0.29	1.0	0.58	0.58	0.19	100
Curacao	1.6	1.10	0.94	0.25	0.56	0.34	0.33	0.07	27
Aruba	1.6	1.30	1.30	0.17	0.68	0.47	0.43	0.14	8
Saint Lucia	1.4	0.77	0.84	0.32	0.38	0.25	0.26	0.08	26
Saint Vincent and the Grenadines	1.3	0.95	1.00	0.18	0.54	0.30	0.31	0.08	33
Cayman Islands	1.2	0.87	0.89	0.12	0.50	0.37	0.33	0.09	9
Bonaire	1.2	0.92	0.90	0.11	0.73	0.41	0.38	0.12	15
Atlantic Coast of Cuba	1.1	0.25	0.20	0.24	0.48	0.09	0.05	0.10	259
Atlantic Coast of Dominican Republic	1.1	0.38	0.34	0.18	1.9	0.23	0.16	0.26	129
Saint Kitts and Nevis	1.1	0.81	0.73	0.18	0.52	0.29	0.24	0.12	29
Martinique	1.1	0.72	0.76	0.23	0.50	0.27	0.26	0.09	41
Saba and Saint Eustatius	0.98	0.70	0.64	0.12	0.26	0.18	0.16	0.04	8
Central Coast of Venezuela	0.96	0.54	0.49	0.18	0.86	0.22	0.19	0.12	238
Grenada	0.94	0.63	0.73	0.25	0.76	0.27	0.23	0.16	29
Guadeloupe	0.92	0.61	0.60	0.17	0.55	0.24	0.20	0.10	73
Montserrat	0.92	0.79	0.77	0.08	0.35	0.25	0.23	0.06	11
Dominica	0.89	0.71	0.74	0.13	0.72	0.21	0.19	0.11	31
Antigua and Barbuda	0.79	0.45	0.32	0.19	0.62	0.29	0.25	0.16	28
Caribbean Coast of Honduras	0.75	0.51	0.45	0.13	1.7	0.31	0.27	0.21	185
Sint Maarten	0.73	0.70	0.69	0.03	0.49	0.33	0.32	0.12	6
Anguilla	0.71	0.57	0.64	0.15	0.73	0.44	0.39	0.14	8
Saint Martin	0.66	0.66	0.66	0.00	0.52	0.46	0.45	0.05	3
Gulf of Mexico Coast of Cuba	0.63	0.12	0.09	0.08	0.10	0.03	0.03	0.02	121
Quintana Roo Mexico	0.62	0.40	0.47	0.19	1.1	0.17	0.17	0.13	165
Belize	0.57	0.39	0.37	0.05	0.43	0.15	0.14	0.06	90
Turks and Caicos Islands	0.56	0.30	0.27	0.12	0.37	0.14	0.14	0.07	46
Saint Barthelemy	0.56	0.43	0.45	0.13	0.37	0.27	0.26	0.06	4
Barbados	0.53	0.35	0.34	0.08	0.17	0.12	0.13	0.03	21
Caribbean Coast of Guatemala	0.42	0.41	0.41	0.00	0.34	0.15	0.14	0.06	13
Trinidad and Tobago	0.31	0.23	0.25	0.06	0.33	0.15	0.15	0.07	77
Atlantic Coast of Venezuela	0.24	0.20	0.21	0.03	0.11	0.06	0.06	0.02	82
Guyana	0.22	0.16	0.16	0.02	0.13	0.05	0.04	0.02	101
Yucatan Mexico	0.21	0.06	0.03	0.07	0.08	0.02	0.01	0.02	59
Bermuda	0.20	0.18	0.18	0.01	0.18	0.09	0.08	0.04	8
Suriname	0.18	0.15	0.15	0.02	0.05	0.03	0.03	0.01	108
French Guyane	0.11	0.05	0.05	0.01	0.05	0.02	0.02	0.01	84
Veracruz Mexico	0.04	0.03	0.03	0.00	0.01	0.01	0.01	0.00	152
Amapa Brazil	0.04	0.04	0.04	0.00	0.02	0.01	0.01	0.00	37
Tabasco and Campeche Mexico	0.03	0.03	0.03	0.00	0.01	0.01	0.01	0.00	115
Tamaulipas Mexico	0.03	0.03	0.03	0.00	0.01	0.01	0.01	0.00	126

*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 small islands will likely be much smaller than the forecast indicates.

PTWC Message #12

ZCZC
WECA41 PHEB 142300
TSUCAX

← WMO ID

← AWIPS ID

TEST...TSUNAMI MESSAGE NUMBER 12...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
2300 UTC THU MAR 14 2019

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST FINAL TSUNAMI THREAT MESSAGE TEST...

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

THIS IS A TEST MESSAGE. 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.

THIS IS A TEST MESSAGE. NATIONAL AUTHORITIES WILL DETERMINE THE APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

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

TEST... PRELIMINARY EARTHQUAKE PARAMETERS ...TEST

* MAGNITUDE 8.5
* ORIGIN TIME 1400 UTC MAR 14 2019
* COORDINATES 10.0 NORTH 78.5 WEST
* DEPTH 25 KM / 16 MILES
* LOCATION NORTH OF PANAMA

TEST... EVALUATION ...TEST

* THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.5 OCCURRED NORTH OF PANAMA AT 1400 UTC ON THURSDAY MARCH 14 2019.

* THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA... THE TSUNAMI THREAT FROM THIS EARTHQUAKE HAS PASSED AND THERE IS NO FURTHER THREAT.

TEST... TSUNAMI THREAT FORECAST...UPDATED ...TEST

* THIS IS A TEST MESSAGE. THE TSUNAMI THREAT HAS NOW LARGELY PASSED.

TEST... RECOMMENDED ACTIONS ...TEST

* THIS IS A TEST MESSAGE. GOVERNMENT AGENCIES RESPONSIBLE FOR ANY IMPACTED COASTAL AREAS SHOULD MONITOR CONDITIONS AT THE COAST TO DETERMINE IF AND WHEN IT IS SAFE TO RESUME NORMAL ACTIVITIES.

* THIS IS A TEST MESSAGE. PERSONS LOCATED NEAR IMPACTED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM LOCAL AUTHORITIES.

* THIS IS A TEST MESSAGE. REMAIN OBSERVANT AND EXERCISE NORMAL CAUTION NEAR THE SEA.

TEST... POTENTIAL IMPACTS ...TEST

* THIS IS A TEST MESSAGE. MINOR SEA LEVEL FLUCTUATIONS UP TO 30 CM ABOVE AND BELOW THE NORMAL TIDE MAY OCCUR IN COASTAL AREAS NEAR THE EARTHQUAKE OVER THE NEXT FEW HOURS.... AND CONTINUING FOR UP TO SEVERAL HOURS.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)	
	LAT	LOX				
DAUPHIN ISLAND AL	30.3N	88.1W	2017	0.03M/	0.1FT	16
BERMUDA UK	32.4N	64.7W	1830	0.18M/	0.6FT	26
TELA HN	15.8N	87.5W	1812	0.35M/	1.1FT	20
CHARLOTTEVILLE TT	11.3N	60.5W	1807	0.29M/	1.0FT	16
ISLA MUJERES MX	21.3N	86.7W	1742	0.53M/	1.7FT	20
BRIDGEPORT BB	13.1N	59.6W	1741	0.45M/	1.5FT	20
GANTERS BAY ST LUCI	14.0N	61.0W	1733	0.98M/	3.2FT	18
PARHAM AT	17.1N	61.8W	1737	0.37M/	1.2FT	18
BLOWING POINT AI	18.2N	63.1W	1729	0.71M/	2.3FT	24
LE ROBERT MARTINIQU	14.7N	60.9W	1728	0.41M/	1.3FT	18
SAINTE MARTIN FR	18.1N	63.1W	1727	0.66M/	2.2FT	28
DESIRADE GUADELOUPE	16.3N	61.1W	1727	0.31M/	1.0FT	18
PRICKLEY BAY GD	12.0N	61.8W	1726	0.91M/	3.0FT	20
CEIBA CABOTAGE HN	15.9N	86.8W	1725	0.42M/	1.4FT	22
POINT A PITRE GP	16.2N	61.5W	1721	0.50M/	1.7FT	26
LAMESHURBAYSTJOHNVI	18.3N	64.7W	1718	0.75M/	2.5FT	22
CALLIAQUA VC	13.1N	61.2W	1712	1.27M/	4.2FT	24
FORT DE FRANCE MQ	14.6N	61.1W	1713	1.13M/	3.7FT	28
MARIGOT DM	15.5N	61.3W	1718	0.51M/	1.7FT	18
CARRIE BOW CAY BZ	16.8N	88.1W	1708	0.36M/	1.2FT	14
PUERTO CORTES HN	15.6N	88.0W	1705	0.39M/	1.3FT	18
ROSEAU DM	15.3N	61.4W	1705	0.76M/	2.5FT	24
LE PRECHEUR MARTINI	14.8N	61.2W	1709	0.77M/	2.5FT	26
PORTSMOUTH DM	15.6N	61.5W	1710	0.81M/	2.6FT	22
DESHAIES GUADELOUPE	16.3N	61.8W	1708	0.92M/	3.0FT	22
SIAN KAN MX	19.3N	87.4W	1707	0.52M/	1.7FT	26
PUERTO MORELOS MX	20.9N	86.9W	1702	0.40M/	1.3FT	16
PUERTO MORELOS MX	20.9N	86.9W	1704	0.40M/	1.3FT	22
BASSETERRE KN	17.3N	62.7W	1702	0.71M/	2.3FT	26
UTILA ISLAND HN	16.1N	86.9W	1658	0.46M/	1.5FT	22
GRAND TURK ISLAND T	21.4N	71.1W	1652	0.20M/	0.7FT	18
SAN JUAN PR	18.5N	66.1W	1655	0.53M/	1.7FT	28
PUERTO PLATA DO	19.8N	70.7W	1653	0.32M/	1.0FT	24
ARECIBO PR	18.5N	66.7W	1645	0.47M/	1.6FT	14
ROATAN ISLAND HN	16.3N	86.5W	1648	0.41M/	1.3FT	26
ESPERANZA VIEQUES P	18.1N	65.5W	1643	1.01M/	3.3FT	28
LIMETREE VI	17.7N	64.8W	1638	0.79M/	2.6FT	28
AGUADILLA PR	18.5N	67.2W	1636	0.89M/	2.9FT	22
ST CROIX VI	17.7N	64.7W	1638	0.83M/	2.7FT	16
PORT SAN ANDRES DO	18.4N	69.6W	1638	2.65M/	8.7FT	28
CAP HAITIEN HT	19.8N	72.2W	1642	0.56M/	1.8FT	22
CAJA DE MUERTOS PR	17.9N	66.5W	1642	1.06M/	3.5FT	28
YABUCOA PR	18.1N	65.8W	1634	1.07M/	3.5FT	16
MAGUEYES ISLAND PR	18.0N	67.0W	1635	1.18M/	3.9FT	18
MAYAGUEZ PR	18.2N	67.2W	1631	1.21M/	4.0FT	20
PUNTA CANA DO	18.5N	68.4W	1623	1.44M/	4.7FT	24
MONA ISLAND PR	18.1N	67.9W	1621	1.21M/	4.0FT	26

GEORGE TOWN CY	19.3N	81.4W	1610	0.73M/	2.4FT	18
BARAHONA DO	18.2N	71.1W	1609	2.53M/	8.3FT	26
PORT ROYAL JM	17.9N	76.8W	1602	4.51M/	14.8FT	26
BULLEN BAY CURACAO	12.2N	69.0W	1610	1.41M/	4.6FT	26
DART 42407	15.3N	68.2W	1602	0.12M/	0.4FT	20
PUERTO ESTRELLA CO	12.4N	71.3W	1602	1.99M/	6.5FT	22
JACMEL HT	18.2N	72.5W	1550	2.58M/	8.5FT	22
SANTA MARTA CO	11.2N	74.2W	1510	3.15M/	10.3FT	16
LIMON CR	10.0N	83.0W	1510	2.49M/	8.2FT	24
SAN ANDRES CO	12.6N	81.7W	1503	2.50M/	8.2FT	14
COVENAS CO	9.4N	76.2W	1503	3.54M/	11.6FT	20
SAPZURRO CO	8.7N	77.4W	1453	3.64M/	11.9FT	24
ISLA NAVAL CO	10.2N	75.8W	1451	2.98M/	9.8FT	22
EL PORVENIR PA	9.6N	78.9W	1427	11.04M/	36.2FT	16

TEST... NEXT UPDATE AND ADDITIONAL INFORMATION ...TEST

* THIS IS A TEST MESSAGE. THIS WILL BE THE FINAL STATEMENT ISSUED FOR THIS EVENT UNLESS NEW INFORMATION IS RECEIVED OR THE SITUATION CHANGES.

* THIS IS A TEST MESSAGE. AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.

* THIS IS A TEST MESSAGE. FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.

* THIS IS A TEST MESSAGE. COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.

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NNNN

Kick 'em Jenny Scenario

Message Chronology issued by the PTWC

Kick 'em Jenny

Date	Time (UTC)	PTWC	
		Type of Product	Transmission Method
3/14/19	1400	----- Earthquake Occurs -----	
3/14/19	1400	Dummy	NWWS, GTS, EMWIN, AISR, Fax, Email
3/14/19	1405	Tsunami Information Statement #1	Email
3/14/19	1430	Tsunami Threat Message #2	Email
3/14/19	1500	Tsunami Threat Message #3	Email
3/14/19	1530	Tsunami Threat Message #4	Email
3/14/19	1600	Tsunami Threat Message #5	Email
3/14/19	1630	Final Tsunami Threat Message #6	Email

PTWC Message #1

ZCZC
WECA43 PHEB 141405 **WMO ID**
TIBCAX **AWIPS ID**

TEST...TSUNAMI INFORMATION STATEMENT NUMBER 1...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1405 UTC THU MAR 14 2019

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI INFORMATION STATEMENT TEST...

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

THIS STATEMENT 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 APPROPRIATE LEVEL OF
ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED
INFORMATION.

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

TEST...PRELIMINARY EARTHQUAKE PARAMETERS...TEST

- * MAGNITUDE 6.0
- * ORIGIN TIME 1400 UTC MAR 14 2019
- * COORDINATES 12.3 NORTH 61.6 WEST
- * DEPTH 10 KM / 6 MILES
- * LOCATION WINDWARD ISLANDS

TEST...EVALUATION...TEST

* THIS IS A TEST MESSAGE.
AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 6.0 OCCURRED IN
THE LEEWARD ISLANDS AT 1400 UTC ON THURSDAY MARCH 14 2019.

* THIS IS A TEST MESSAGE.
THE PRELIMINARY LOCATION OF THIS EARTHQUAKE IS NEAR
KICK-EM-JENNY VOLCANO. THE SEISMIC RESEARCH CENTER OF THE
UNIVERSITY OF THE WEST INDIES HAS RECENTLY BEEN REPORTING THAT
THIS VOLCANO IS EXHIBITING ELEVATED SIGNS OF UNREST.

* THIS IS A TEST MESSAGE.
BASED ON ALL AVAILABLE DATA... THERE IS NO SIGNIFICANT
TSUNAMI THREAT FROM THE EARTHQUAKE. HOWEVER... THERE IS A
SMALL POSSIBILITY OF TSUNAMI WAVES ALONG CARIBBEAN COASTS
LOCATED NEAREST THE EPICENTER... PARTICULARLY IF THE
EARTHQUAKE IS ASSOCIATED WITH AN ERUPTION OF THE VOLCANO.

TEST...RECOMMENDED ACTIONS...TEST

* THIS IS A TEST MESSAGE.
NO ACTION IS REQUIRED.

TEST...NEXT UPDATE AND ADDITIONAL INFORMATION...TEST

* THIS IS A TEST MESSAGE.
THIS WILL BE THE ONLY STATEMENT ISSUED FOR THIS EVENT UNLESS
ADDITIONAL DATA ARE RECEIVED OR THE SITUATION CHANGES.

* THIS IS A TEST MESSAGE.
AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S.
GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT
EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.

* THIS IS A TEST MESSAGE.
FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT
WWW.TSUNAMI.GOV.

* THIS IS A TEST MESSAGE.
COASTAL REGIONS OF PUERTO RICO... THE U.S. VIRGIN ISLANDS...
AND THE BRITISH VIRGIN ISLANDS SHOULD REFER TO PACIFIC
TSUNAMI WARNING CENTER MESSAGES SPECIFICALLY FOR THOSE
PLACES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

* THIS IS A TEST MESSAGE.
COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND
THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S.
NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND
AT WWW.TSUNAMI.GOV.

PTWC Message #2

ZCZC
WECA41 PHEB 141430
TSUCAX

← **WMO ID**

← **AWIPS ID**

TEST...TSUNAMI MESSAGE NUMBER 2...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1430 UTC THU MAR 14 2019

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST TSUNAMI THREAT MESSAGE TEST...

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

THIS STATEMENT 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 APPROPRIATE LEVEL OF
ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED
INFORMATION.

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

TEST...PRELIMINARY EARTHQUAKE PARAMETERS...TEST

* MAGNITUDE 6.0
* ORIGIN TIME 1400 UTC MAR 14 2019
* COORDINATES 12.3 NORTH 61.6 WEST
* DEPTH 10 KM / 6 MILES
* LOCATION WINDWARD ISLANDS

TEST...EVALUATION...TEST

* THIS IS A TEST MESSAGE.
AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 6.0 OCCURRED IN
THE LEEWARD ISLANDS AT 1400 UTC ON THURSDAY MARCH 14 2019.

* THIS IS A TEST MESSAGE.
TSUNAMI WAVES HAVE BEEN OBSERVED.

* THIS IS A TEST MESSAGE.
ASSOCIATED WITH THIS EARTHQUAKE... THE UWI SEISMIC RESEARCH
CENTRE REPORTS A SIGNIFICANT ERUPTION OF KICK-EM-JENNY
VOLCANO THAT BEGAN AROUND 1400 UTC ON MAR 14 2019 AND IS
CONTINUING.

* THIS IS A TEST MESSAGE.
THIS ERUPTION MAY PRODUCE HAZARDOUS TSUNAMI WAVES ALONG SOME
COASTAL AREAS LOCATED NEAR KICK-EM-JENNY VOLCANO. IT IS NOT
POSSIBLE HOWEVER... TO FORECAST THE AFFECTED COASTS NOR THE
TSUNAMI AMPLITUDES.

* THIS IS A TEST MESSAGE.
THE TSUNAMI THREAT WILL CONTINUE UNTIL THE VOLCANIC ACTIVITY
HAS ENDED OR IS SUFFICIENTLY DIMINISHED... AND SEA LEVEL
READINGS ARE BELOW THREAT LEVELS.

TEST...RECOMMENDED ACTIONS...TEST

* THIS IS A TEST MESSAGE.
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.

TEST...ESTIMATED TIMES OF ARRIVAL...TEST

* THIS IS A TEST MESSAGE.
ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI
WAVE FOR PLACES WITHIN THREE HOURS TSUNAMI TRAVEL TIME.
ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT
BE THE LARGEST. A TSUNAMI IS A SERIES OF WAVES AND THE TIME
BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES		ETA (UTC)
KINGSTOWN	SAINT VINCENT	13.1N	61.2W	1413 03/14
SAINT GEORGES	GRENADA	12.0N	61.8W	1414 03/14
CASTRIES	SAINT LUCIA	14.0N	61.0W	1422 03/14
FORT DE FRANCE	MARTINIQUE	14.6N	61.1W	1427 03/14
ROSEAU	DOMINICA	15.3N	61.4W	1436 03/14
PIRATES BAY	TRINIDAD TOBAGO	11.3N	60.6W	1439 03/14
BRIDGETOWN	BARBADOS	13.1N	59.6W	1444 03/14
BASSE TERRE	GUADELOUPE	16.0N	61.7W	1445 03/14
PLYMOUTH	MONTSERRAT	16.7N	62.2W	1503 03/14
BASSETERRE	SAINT KITTS	17.3N	62.7W	1513 03/14
ONIMA	BONAIRE	12.3N	68.3W	1514 03/14
CHRISTIANSTED	US VIRGIN IS	17.7N	64.7W	1516 03/14
SINT EUSTATIUS	SINT EUSTATIUS	17.5N	63.0W	1517 03/14
SABA	SABA	17.6N	63.2W	1518 03/14
WILLEMSTAD	CURACAO	12.1N	68.9W	1521 03/14
CUMANA	VENEZUELA	10.5N	64.2W	1527 03/14
MAIQUETIA	VENEZUELA	10.6N	67.0W	1530 03/14
PALMETTO POINT	BARBUDA	17.6N	61.9W	1537 03/14
MAYAGUEZ	PUERTO RICO	18.2N	67.2W	1537 03/14
SIMPSON BAAI	SINT MAARTEN	18.0N	63.1W	1537 03/14
ORANJESTAD	ARUBA	12.5N	70.0W	1538 03/14
SAINT JOHNS	ANTIGUA	17.1N	61.9W	1539 03/14
SANTO DOMINGO	DOMINICAN REP	18.5N	69.9W	1547 03/14
CABO ENGANO	DOMINICAN REP	18.6N	68.3W	1550 03/14
PORT OF SPAIN	TRINIDAD TOBAGO	10.6N	61.5W	1552 03/14
ANEGADA	BR VIRGIN IS	18.8N	64.3W	1552 03/14
THE VALLEY	ANGUILLA	18.3N	63.1W	1555 03/14
SAINT BARTHELEM	SAINT BARTHELEMY	17.9N	62.8W	1555 03/14
SAN JUAN	PUERTO RICO	18.5N	66.1W	1556 03/14
BAIE LUCAS	SAINT MARTIN	18.1N	63.0W	1557 03/14
BAIE GRAND CASE	SAINT MARTIN	18.1N	63.1W	1600 03/14
JACAMEL	HAITI	18.1N	72.5W	1605 03/14
CHARLOTTE AMALI	US VIRGIN IS	18.3N	64.9W	1612 03/14
BAIE BLANCHE	SAINT MARTIN	18.1N	63.0W	1615 03/14
ROADTOWN	BR VIRGIN IS	18.4N	64.6W	1617 03/14
PUERTO PLATA	DOMINICAN REP	19.8N	70.7W	1618 03/14
RIOHACHA	COLOMBIA	11.6N	72.9W	1621 03/14
BARRANQUILLA	COLOMBIA	11.1N	74.9W	1627 03/14
GRAND TURK	TURKS N CAICOS	21.5N	71.1W	1632 03/14
CAP HAITEN	HAITI	19.8N	72.2W	1634 03/14
WEST CAICOS	TURKS N CAICOS	21.7N	72.5W	1643 03/14
MAYAGUANA	BAHAMAS	22.3N	73.0W	1644 03/14
CARTAGENA	COLOMBIA	10.4N	75.6W	1644 03/14
SANTIAGO D CUBA	CUBA	19.9N	75.8W	1646 03/14
GREAT INAGUA	BAHAMAS	20.9N	73.7W	1647 03/14
KINGSTON	JAMAICA	17.9N	76.9W	1650 03/14
BARACOA	CUBA	20.4N	74.5W	1652 03/14
CROOKED ISLAND	BAHAMAS	22.7N	74.1W	1652 03/14
SAN SALVADOR	BAHAMAS	24.1N	74.5W	1657 03/14
LONG ISLAND	BAHAMAS	23.3N	75.1W	1700 03/14
ALIGANDI	PANAMA	9.2N	78.0W	1701 03/14
MONTEGO BAY	JAMAICA	18.5N	77.9W	1702 03/14

TEST...POTENTIAL IMPACTS...TEST

* THIS IS A TEST MESSAGE.

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.

* THIS IS A TEST MESSAGE.

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

* THIS IS A TEST MESSAGE.

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

* THIS IS A TEST MESSAGE.

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

TEST...TSUNAMI OBSERVATIONS...TEST

* THIS IS A TEST MESSAGE.

THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD
	LAT	LOE	(UTC)		(MIN)
CALLIAQUA VC	13.1N	61.2W	1424	0.86M/ 2.8FT	16

TEST...NEXT UPDATE AND ADDITIONAL INFORMATION...TEST

* THIS IS A TEST MESSAGE.

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

* THIS IS A TEST MESSAGE.

AUTHORITATIVE INFORMATION ABOUT THE ACTIVITY AT KICK-EM-JENNY VOLCANO CAN BE FOUND ON THE INTERNET AT UWISEISMIC.COM.

* THIS IS A TEST MESSAGE.
AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S.
GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT
EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL IN LOWERCASE LETTERS-.

* THIS IS A TEST MESSAGE.
FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT
WWW.TSUNAMI.GOV.

* THIS IS A TEST MESSAGE.
COASTAL REGIONS OF PUERTO RICO... THE U.S. VIRGIN ISLANDS...
AND THE BRITISH VIRGIN ISLANDS SHOULD REFER TO PACIFIC
TSUNAMI WARNING CENTER MESSAGES SPECIFICALLY FOR THOSE
PLACES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

* THIS IS A TEST MESSAGE.
COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND
THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S.
NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND
AT WWW.TSUNAMI.GOV.

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PTWC Message #6

ZCZC
WECA41 PHEB 141630
TSUCAX

← **WMO ID**

← **AWIPS ID**

TEST...TSUNAMI MESSAGE NUMBER 6...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1630 UTC THU MAR 14 2019

...THIS MESSAGE IS FOR TEST PURPOSES ONLY...
...TEST FINAL TSUNAMI THREAT MESSAGE TEST...

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

THIS STATEMENT 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 APPROPRIATE LEVEL OF ALERT FOR EACH COUNTRY AND MAY ISSUE ADDITIONAL OR MORE REFINED INFORMATION.

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

TEST...PRELIMINARY EARTHQUAKE PARAMETERS...TEST

* MAGNITUDE 6.0
* ORIGIN TIME 1400 UTC MAR 14 2019
* COORDINATES 12.3 NORTH 61.6 WEST
* DEPTH 10 KM / 6 MILES
* LOCATION WINDWARD ISLANDS

TEST...EVALUATION...TEST

* THIS IS A TEST MESSAGE.
AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 6.0 OCCURRED IN THE LEEWARD ISLANDS AT 1400 UTC ON THURSDAY MAR 14 2019.

* THIS IS A TEST MESSAGE.
BASED ON ALL AVAILABLE DATA... THE TSUNAMI THREAT FROM THIS EARTHQUAKE AND THE ACTIVITY OF THE KICK EM JENNY VOLCANO HAS PASSED AND THERE IS NO FURTHER THREAT.

TEST...RECOMMENDED ACTIONS...TEST

* THIS IS A TEST MESSAGE.
GOVERNMENT AGENCIES RESPONSIBLE FOR ANY IMPACTED COASTAL AREAS SHOULD MONITOR CONDITIONS AT THE COAST TO DETERMINE IF AND WHEN IT IS SAFE TO RESUME NORMAL ACTIVITIES.

* THIS IS A TEST MESSAGE.
PERSONS LOCATED NEAR IMPACTED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM LOCAL AUTHORITIES.

* THIS IS A TEST MESSAGE.
REMAIN OBSERVANT AND EXERCISE NORMAL CAUTION NEAR THE SEA.

TEST...POTENTIAL IMPACTS...TEST

* THIS IS A TEST MESSAGE.
MINOR SEA LEVEL FLUCTUATIONS OF UP TO 0.3 METERS ABOVE AND BELOW THE NORMAL TIDE MAY CONTINUE OVER THE NEXT FEW HOURS.

TEST...TSUNAMI OBSERVATIONS...TEST

* THIS IS A TEST MESSAGE.
THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS. THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE NORMAL TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
PUERTO PLATA DO	19.8N	70.7W	1624	0.03M/ 0.1FT	18
PORT SAN ANDRES DO	18.4N	69.6W	1622	0.25M/ 0.8FT	28
ARECIBO PR	18.5N	66.7W	1610	0.08M/ 0.3FT	24
LAMESHURBAYSTJOHNVI	18.3N	64.7W	1602	0.28M/ 0.9FT	14
BARBUDA AG	17.6N	61.8W	1601	0.04M/ 0.1FT	26
AGUADILLA PR	18.5N	67.2W	1557	0.15M/ 0.5FT	28
PUNTA CANA DO	18.5N	68.4W	1551	0.28M/ 0.9FT	28
ORANGESTAD AW	12.5N	70.0W	1542	0.12M/ 0.4FT	22
MONA ISLAND PR	18.1N	67.9W	1540	0.44M/ 1.4FT	16
ESPERANZA VIEQUES P	18.1N	65.5W	1535	0.75M/ 2.5FT	28
BULLEN BAY <u>CURACAO</u>	12.2N	69.0W	1540	0.20M/ 0.7FT	22
YABUCOA PR	18.1N	65.8W	1536	0.58M/ 1.9FT	28
PARHAM AT	17.1N	61.8W	1528	0.13M/ 0.4FT	16
LIMETREE VI	17.7N	64.8W	1524	0.58M/ 1.9FT	18
DART 42407	15.3N	68.2W	1521	0.03M/ 0.1FT	20
ST CROIX VI	17.7N	64.7W	1519	0.36M/ 1.2FT	24
BASSETERRE KN	17.3N	62.7W	1518	0.39M/ 1.3FT	26
CHARLOTTEVILLE TT	11.3N	60.5W	1513	0.25M/ 0.8FT	18
SCARBOROUGH TT	11.2N	60.7W	1512	0.10M/ 0.3FT	26
DESIRADE GUADELOUPE	16.3N	61.1W	1503	0.26M/ 0.9FT	26
POINT A PITRE GP	16.2N	61.5W	1511	0.22M/ 0.7FT	26
<u>GANTERS BAY ST LUCI</u>	14.0N	61.0W	1459	0.47M/ 1.5FT	20
MARIGOT DM	15.5N	61.3W	1457	0.16M/ 0.5FT	22
BRIDGEPORT BB	13.1N	59.6W	1455	0.18M/ 0.6FT	22
PORT ST CHARLES BB	13.3N	59.6W	1452	0.21M/ 0.7FT	16
PORTSMOUTH DM	15.6N	61.5W	1451	0.45M/ 1.5FT	24
ROSEAU DM	15.3N	61.4W	1451	0.48M/ 1.6FT	14
FORT DE FRANCE MQ	14.6N	61.1W	1448	0.31M/ 1.0FT	20
LE PRECHEUR MARTINI	14.8N	61.2W	1436	0.70M/ 2.3FT	24
<u>PRICKLEY BAY GD</u>	12.0N	61.8W	1435	1.38M/ 4.5FT	22
CALLIAQUA VC	13.1N	61.2W	1424	0.86M/ 2.8FT	16

TEST...NEXT UPDATE AND ADDITIONAL INFORMATION...TEST

* THIS IS A TEST MESSAGE.

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

* THIS IS A TEST MESSAGE.

AUTHORITATIVE INFORMATION ABOUT THE ACTIVITY AT KICK-EM-JENNY VOLCANO CAN BE FOUND ON THE INTERNET AT UWISEISMIC.COM.

* THIS IS A TEST MESSAGE.

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

* THIS IS A TEST MESSAGE.

FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT WWW.TSUNAMI.GOV.

* THIS IS A TEST MESSAGE.

COASTAL REGIONS OF PUERTO RICO... THE U.S. VIRGIN ISLANDS... AND THE BRITISH VIRGIN ISLANDS SHOULD REFER TO PACIFIC TSUNAMI WARNING CENTER MESSAGES SPECIFICALLY FOR THOSE PLACES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

* THIS IS A TEST MESSAGE.

COASTAL REGIONS OF THE US GULF COAST... US EAST COAST... AND THE MARITIME PROVINCES OF CANADA SHOULD REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT WWW.TSUNAMI.GOV.

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Member State Participation The *TsunamiZone* Registration

Tsunami Zone Registration is used to track the number of people and organizations participating in the exercise.

The screenshot shows the homepage of the TsunamiZone website. At the top is a navigation bar with links for Home, TsunamiZone Regions, Other Languages, Contact Us, Search, and Login. Below the navigation bar is a large banner image of a beach at night with a white silhouette of a person running. The banner includes the text "The TsunamiZone" and a "Register Here!" button. Below the banner is a secondary navigation bar with links for Know Your Zone, Who is Participating?, How to Participate, Resources, News & Events, and Partners & Sponsors. The main content area is divided into two columns. The left column features a "WELCOME TO THE TSUNAMIZONE!" section with links for "ESPAÑOL" and "FRANÇAIS". It contains a paragraph about preparedness, a video player titled "Staying Safe Where th...", and a call to action to register. The right column features a "2019 OFFICIAL ACTIVITIES" section listing events: March 10-16 (Puerto Rico, U.S. Virgin Islands, CARIBE WAVE 2019), March 20 (PACIFEX19), March 25-30 (Alaska), March 25-29 (California), March 26 (LANTEX19), April (Hawaii & Washington), April 8-12 (Washington Road Show), and November 5 (World Tsunami Awareness Day). At the bottom of the page is a banner that says "Are You in the Zone? Find Out: TsunamiZone.org" with a small icon of a person running.

TWFP and NTWC should register on Tsunami Zone to be part of the statistical count. Independent of registering, they will receive the simulated bulletins from PTWC. Each member state needs to decide.

The TsunamiZone

[Register Here!](#)[Know Your Zone](#)[Who is Participating?](#)[How to Participate](#)[Resources](#)[News & Events](#)[Partners & Sponsors](#)

WELCOME TO THE TSUNAMIZONE!

[ESPAÑOL](#) | [FRANÇAIS](#)

Everyone, everywhere should know how to be prepared for tsunamis and what to do to be safe. This is true for people who live or work near the ocean, but also for anyone who may visit someday. Are you in the Zone?

TsunamiZone.org provides [suggestions](#) and [resources](#) for your family or organization to "[know your zone](#)" and to [learn](#) how to be safe.

Be counted among people and organizations worldwide by [registering](#) your 2019 tsunami preparedness activities!



Are You

in the Zone?

Find Out:
[TsunamiZone.org](#)

2019 OFFICIAL ACTIVITIES

March 10-16
[Puerto Rico, U.S. Virgin Islands, CARIBE WAVE 2019](#) (March 14)

March 20
[PACIFEX19](#)

March 25-30
Alaska

March 25-29
[California](#)

March 26
[LANTEX19](#)

April
Hawaii & Washington

April 8-12
Washington (Road Show)

November 5
World Tsunami Awareness Day

<https://www.tsunamizone.org/>

Countries can keep track of registration by clicking on « Who is Participating »

PARTICIPATION TOTALS

Click on a category name to see a list of who is participating. Click on a region name to see details of participation totals by area.

These totals are current as of 01/30/2019 11:25 AM PST.

Category	Participants	Participation totals for each area	Total
Total:	1,199	California	424
Individuals/Families	106	North Coast	26
Childcare and Pre-Schools	21	Shasta Cascade	0
K-12 Schools and Districts	26	Bay Area	33
Colleges and Universities	18	Delta Sierra	2
Local Government	261	Inyo-Mono	0
State Government	305	Central Valley South	21
Federal Government (Including Military)	50	Central Coast	1
Tribes	0	Southern California Coast	109
Businesses	0	Inland Southern California	5
Hotels and Other Lodgings	0	San Diego	0
Healthcare	240	Other Areas	227
Senior Facilities/Communities	0	Caribbean	715
Disability/AFN Organizations	50	Anguilla	0
Non-Profit Organizations	6	Antigua and Barbuda	0
Neighborhood Groups	0	Aruba	0
Preparedness Organizations	0	Bahamas	0
Faith-based Organizations	0	Barbados	10
Museums, Libraries, Parks, etc.	0	Belize	0
Volunteer/Service Clubs	0	Bermuda	0
Youth Organizations	0	Bonaire	0
Animal Shelter/Service Providers	0	Brazil	0
Agriculture/Livestock	0	British Virgin Islands	14
Volunteer Radio Groups	86	Cayman Islands	50
Science/Engineering Organizations	0	Colombia	0
Media Organizations	0	Costa Rica	0
Other	30	Cuba	0
		Curacao	0
		Dominica	0
		Dominican Republic	0
		France	0
		Grenada	32
		Guadeloupe	0
		Guatemala	0
		Guyana	0
		Guyane	0
		Haiti	0
		Honduras	0
		Jamaica	0
		Martinique	0
		Mexico	0
		Montserrat	0
		Netherlands	0
		Nicaragua	0
		Panama	0

WHO IS PARTICIPATING? (CARIBBEAN)

Click on a category name to see a list of who is participating. Click on a region name to see details of participation totals by area.

These totals are current as of 01/30/2019 11:25 AM PST.

Category	Participants	Participation totals for each area	Total
Total:	715		
Individuals/Families	44	Anguilla	0
Childcare and Pre-Schools	21	Antigua and Barbuda	0
K-12 Schools and Districts	0	Aruba	0
Colleges and Universities	0	Bahamas	0
Local Government	49	Barbados	10
State Government	305	Belize	0
Federal Government (Including Military)	50	Bermuda	0
Tribes	0	Bonaire	0
Businesses	0	Brazil	0
Hotels and Other Lodgings	0	British Virgin Islands	14
Healthcare	150	Cayman Islands	50
Senior Facilities/Communities	0	Colombia	0
Disability/AFN Organizations	0	Costa Rica	0
Non-Profit Organizations	0	Cuba	0
Neighborhood Groups	0	Curacao	0
Preparedness Organizations	0	Dominica	0
Faith-based Organizations	0	Dominican Republic	0
Museums, Libraries, Parks, etc.	0	France	0
Volunteer/Service Clubs	0	Grenada	32
Youth Organizations	0	Guadeloupe	0
Animal Shelter/Service Providers	0	Guatemala	0
Agriculture/Livestock	0	Guyana	0
Volunteer Radio Groups	86	Guyane	0
Science/Engineering Organizations	0	Haiti	0
Media Organizations	0	Honduras	0
Other	10	Jamaica	0
		Martinique	0
		Mexico	0
		Montserrat	0
		Netherlands	0



WHO IS PARTICIPATING? (GRENADA)

Click on a category name to see a list of who is participating. Click on a region name to see details of participation totals by area.

Participation totals for each county are [listed below](#).

These totals are current as of 01/30/2019 11:25 AM PST.

Category	Participants
Total:	32
Individuals/Families	32
Childcare and Pre-Schools	0
K-12 Schools and Districts	0
Colleges and Universities	0
Local Government	0
State Government	0
Federal Government (Including Military)	0
Tribes	0
Businesses	0
Hotels and Other Lodgings	0
Healthcare	0
Senior Facilities/Communities	0
Disability/AFN Organizations	0
Non-Profit Organizations	0
Neighborhood Groups	0
Preparedness Organizations	0
Faith-based Organizations	0
Museums, Libraries, Parks, etc.	0
Volunteer/Service Clubs	0
Youth Organizations	0
Animal Shelter/Service Providers	0
Agriculture/Livestock	0
Volunteer Radio Groups	0
Science/Engineering Organizations	0
Media Organizations	0
Other	0

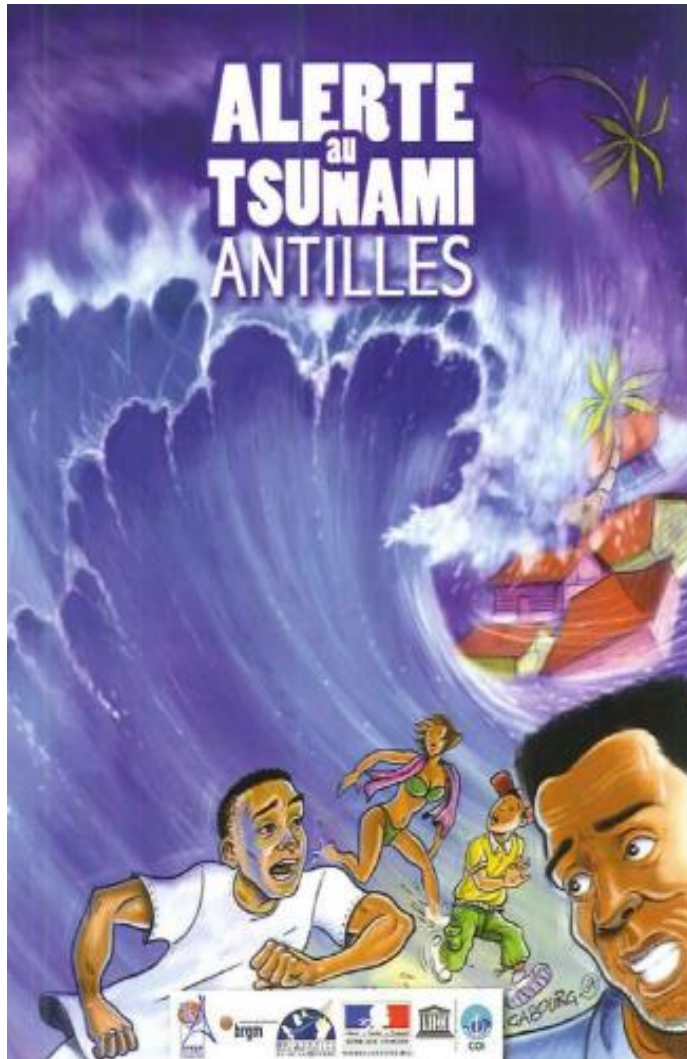
Resources

- IOC Manuals “[How to plan, conduct and evaluate tsunami exercises](#)” and “[Module on Tsunami Exercise](#)” which will also be useful resources.
- CARIBE WAVE 2011, 2013, 2014, 2015, 2016, 2017, 2018 and 2019 Handbooks.
- CARIBE WAVE 2013, 2014, 2015, 2016, 2017 and 2018 Final and Media Report.
- PTWC Communications Plan for the Caribbean.
- Available at www.caribewave.info
- Questions on the exercise can be addressed to the members of the CARIBE WAVE 19 Task Team.

Additional Info

- Additional materials will be added to CTWP (www.caribewave.info) and PRSN 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 (<https://www.weather.gov/ctwp/caribewave19>).

Methodological Guidelines: How to prepare, conduct and evaluate a community-based tsunami response exercise



- This guide is recommended for Member States to consider Caribe Wave Exercises.
- Provides community leaders to conduct and evaluate a tsunami evacuation exercise with a methodology and tools.
- It is particularly relevant for bodies that would be directly exposed to the effects of a tsunami such as local government, schools, associations, and businesses.
- This guide aims to encourage a shared culture of exercises to develop between the municipal authorities tasked with ensuring the safety of those living in their area and community leaders – stakeholders in the social and economic life of the area.
- Guide available in English and French http://www.ioc-tsunami.org/index.php?option=com_oe&task=viewDocumentRecord&docID=19139

CARIBE WAVE 19 Task Team

Person	Telephone #	Email
Elizabeth Vanacore, PRSN CARIBE WAVE Chair	1-787-833-8433	elizabeth.vanacore@upr.edu
Silvia Chacón-Barrantes, CARIBE EWS Chair; SINAMOT Costa Rica	506-830-96690	silviach@una.ac.cr
Nestor Luque Chair WG 1 Monitoring and Detection Systems	507-523-5560	barcelona010104@yahoo.com
Nicolas Arcos Chair WG 2 Hazard Assessment	1-303-497-3158	nicolas.arcos@noaa.gov
Emilio Talavera Chair WG 3 Tsunami Related Services	505-224-92761 ext 102	emilio.talavera@gf.ineter.gob.ni
Christa von Hillebrandt-Andrade Chair WG 4 Preparedness, Readiness and Resilience Manager NOAA/CTWP	1-787-249-8307	christa.vonh@noaa.gov
Richard Robertson, SRC Joan L. Latchman, SRC Frederic Dondin, SRC Valerie Clouard, IPGP Scientific Experts – Kick-‘em-Jenny Scenario		richard.robertson@sta.uwi.edu j_latchman@uwiseismic.com fredericdondin@gmail.com clouard@ipgp.fr
Eduardo Camacho, U of Panama Mary Rengifo, Dirección General Marítima Diana Patricia Mendoza, OSSO Alberto López, UPRM Scientific Expert – Panama Scenario		ecamacho507@hotmail.com mrengifo@dimar.mil.co alberto.lopez3@upr.edu
Ronald Jackson Director CDEMA	246-425-0386	ronald.Jackson@cdema.org
Executive Secretary CEPREDENAC	502-2390-0200	iajche@cepredenac.org memendez@cepredenac.org
Major Roselly Pepin Deputy Chief EMIZ Antilles	596-59-05-81	roselly.pepin@martinique.pref.gouv.fr
Bernardo Aliaga Technical Secretary UNESCO	33-1-45683980	b.aliaga@unesco.org
Charles McCreery Director PTWC	1-808-689-8207	charles.mccreery@noaa.gov
David Wald, USGS Scientific Expert – Earthquake Impact Products	1-303-273-8441	wald@usgs.gov
Alison Brome Director CTIC	246-243-7626	a.brome@unesco.org

Timeline

ACTION	DUE DATE
Circular Letter Issued by IOC to MS	✓ Aug 2018
Handbook Draft Circulated among ICG CARIBE EWS TNC/TWFP and TT CARIBE WAVE 19	✓ Aug 2018
Deadline for Comments	✓ Sept 2018
Exercise Handbook Available Online	✓ Nov 2018
1 st Webinar CW	15 - Jan - 2019 - English 16 - Jan - 2019 - Spanish 17 - Jan - 2019 - French
2 nd Webinar CW	12 - Feb - 2019 - English 13 - Feb - 2019 - Spanish 14 - Feb - 2019 - French
Countries Indicate Selected Scenario	February 28, 2019
Exercise	March 14, 2019
Exercise Evaluation Due	March 29, 2019
Draft Final CARIBE WAVE Caribe 19 Report 5 April 2019	

Questions, Comments

Thank you for participating

christa.vonh@noaa.gov