

Exercise PACIFEX 15 Participant Handbook

A Pacific Tsunami Warning Exercise
March 25, 2015

US National Tsunami Hazard Mitigation Program
Warning Coordination Subcommittee



NOTE: The contents of this handbook are patterned after the Exercise Pacific Wave 08 manual published by the Intergovernmental Oceanographic Commission. Citation: *Exercise Pacific Wave 08. A Pacific-wide Tsunami Warning and Communication Exercise, 28-30 October 2008*. IOC Technical Series No. 82. Paris, UNESCO, 2008, and the PACIFEX14 handbooks.

Exercise

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1. Background

This tsunami exercise is being conducted to assist tsunami preparedness efforts along the U.S. and Canadian Pacific coasts. Historical tsunami records from the National Oceanic and Atmospheric Administration’s (NOAA) National Geophysical Data Center (NGDC) show that approximately 85% of the world’s oceanic tsunamis occur in the Pacific Basin and surrounding seas. Tsunamis have impacted U.S. and Canadian Pacific coasts several times in the past century with devastating results. Preparing and exercising emergency response plans throughout this region is an important part of tsunami preparedness.

Scenario

The Pacifex15 exercise simulates a tsunami generated by a magnitude 8.6 subduction zone earthquake located east of the Kamchatka peninsula at 53.5N 162.0E (Figure 1).

The tectonics (Figure 2) of the offshore Kamchatka region is dominated by the Kamchatka subduction zone which is expressed at the ocean floor by the Kuril-Kamchatka trench. Here, the Pacific plate is subducting beneath the North American plate at approximately 8 cm/year. This subduction is responsible for volcanic activity in Kamchatka as well as the long history of major earthquakes in the region (Table 1).

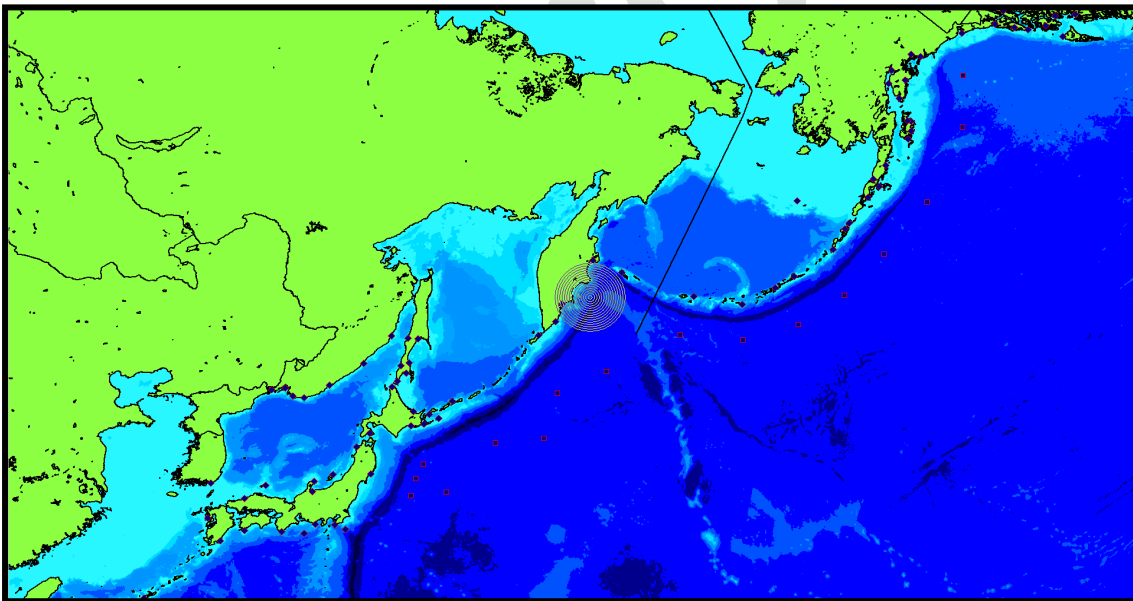


Figure 1. Pacifex15 source location.

Date	Location	Magnitude
February 3, 1923	Kamchatka	8.4
November 4, 1952	Kamchatka	9.0
November 6, 1958	Kuril Islands	8.4
October 13, 1963	Kuril Islands	8.5
October 4, 1994	Kuril Islands	8.3
November 15, 2006	Kuril Islands	8.3
May 24, 2013	Sea of Okhotsk	8.3

Table 1. Historical major earthquakes in the Kuril/Kamchatka region.

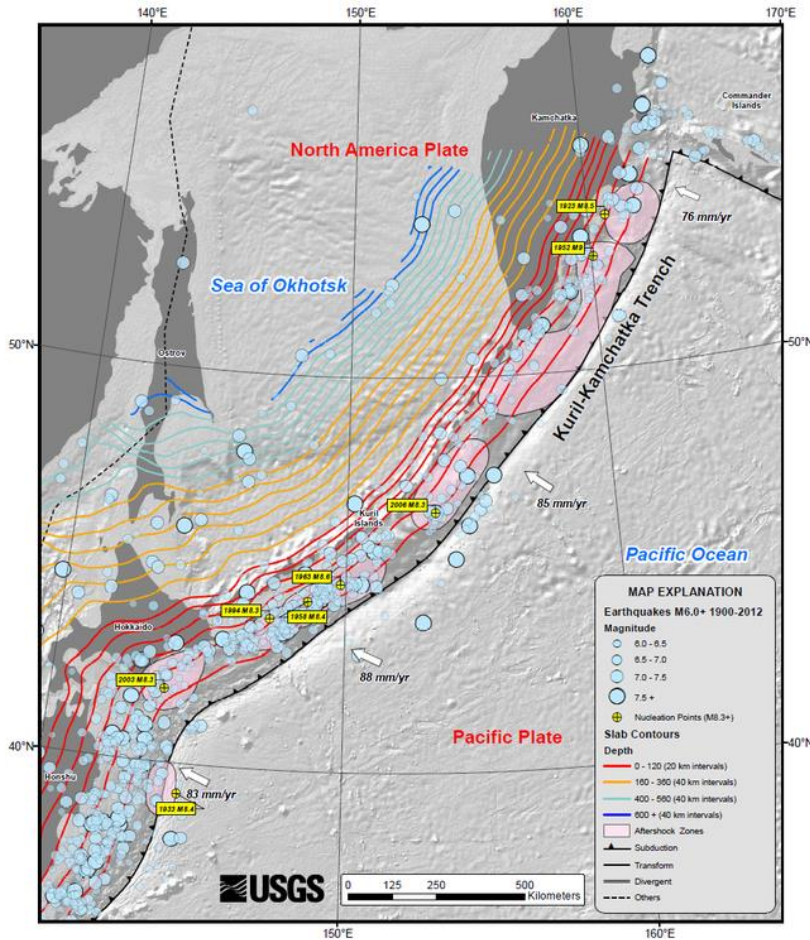


Figure 2. Tectonic regime of the Kuril/Kamchatka region in eastern Russia from the USGS.

Historic Tsunamis

The two best-known tsunamis generated in the Kamchatka region are the 1952 tsunami triggered by the magnitude Mw 9.0 earthquake and the 1923 tsunami to the north of that one triggered by an Mw 8.4 earthquake. The 1952 tsunami is thought to have killed approximately 4000 people in the Kuril Islands. From the NGDC tsunami catalog (1952):

“The magnitude 9.0 Mw earthquake off the east coast of Kamchatka generated a 13-meter wave locally. The waves struck the Hawaiian Islands at 1:00 pm. Property damage from these waves in the Hawaiian Islands was estimated at \$800,000 to \$1,000,000; however no lives were lost. It also caused damage on the west coast of the United States and was observed on tide gauges throughout the Pacific Basin.”

And

“The greatest destruction and suffering of 4-5 November were caused by the tsunami which arose as a result of the earthquake and which took in about 700 km of the east coasts of Kamchatka and the Kuril Is. On the average the height of the waves on the coast reached 6-7 m. In Kamchatka and on the Kuril Is. destructive sea waves appeared 30-40 minutes after the earthquake. At most points the beginning phase of the waves was accompanied by a lowering of the level of the ocean. Hence it follows that the actual moment of appearance of the waves on the coast occurred half a period earlier.”

From the NGDC tsunami catalog (1923):

“A series of strong shocks occurred on the coast of the Gulf of Kronotski, Kamchatka. It generated a tsunami with 6-8 meter runups in Kolgir Bay and Semljachik Kamchatka, and resulted in two deaths in Russia and one death and \$1.5 million damage in Hawaii.”

Tsunami Warning System

To help communities respond to tsunami hazards, NOAA operates a tsunami warning system for U.S. Pacific coasts and western Canada through its National Tsunami Warning Center (NTWC) in Alaska and the Pacific Tsunami Warning Center (PTWC) in Hawaii. These Centers provide rapid tsunami alerts after an earthquake's occurrence followed by impact estimates based on tsunami forecast models.

Primary recipients of Tsunami Warning Center (TWC) messages include National Weather Service (NWS) coastal Weather Forecast Offices (WFOs), state/territory warning points, national Coast Guards, Canada's Provincial Emergency Program, national tsunami warning focal points, and military organizations. These agencies transmit the message to people potentially impacted by a tsunami.

NOAA and the National Tsunami Hazard Mitigation Program (NTHMP) are providing the framework for this exercise as a means for emergency responders along Pacific coasts to test and update tsunami response plans. High levels of vulnerability along the Pacific coast and the well-known tsunami threat in the Pacific should provide a strong incentive for local jurisdictions to prepare for a tsunami.

2. Exercise Concept

2.1 Purpose

The purpose of this exercise is to improve the effectiveness of the tsunami warning system along the U.S. and Canadian Pacific coasts. The exercise provides an opportunity for emergency management organizations along these coasts to exercise their operational lines of communications, review their tsunami response procedures, and promote tsunami preparedness. Regular exercising of response plans is critical to maintain readiness for an emergency. This is particularly true for tsunamis which are infrequent, but high impact events. Every coastal U.S. and Canadian Pacific emergency management organization (EMO) is encouraged to participate.

2.2 Objectives

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

- Ensure message transmission from the TWC to Tsunami Warning Focal Points (TWFP) and from these primary contacts to the EMOs.

- Test tsunami response plans for Pacific EMOs that have developed plans, and provide a catalyst for countries and EMOs that have not developed plans.
- EMOs, Tsunami Warning Focal Points (TWFP) and Tsunami National Contacts review, discuss, and evaluate the various communication alternatives for receiving and disseminating tsunami messages.
- EMOs, Tsunami Warning Focal Points and Tsunami National Contacts review, discuss, and evaluate potential response actions and challenges.

2.3 Type of Exercise

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

Exercises stimulate the development, training, testing, and evaluation of Disaster Plans and Standard Operating Procedures. Exercise participants may use their own past multi-hazard drills (e.g. flood, hurricane, tsunami, earthquake, etc.) as a framework to conduct Pacifex15.

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

1. **Orientation Exercise (Seminar):** An Orientation Exercise lays the groundwork for a comprehensive exercise program. It is a planned event, developed to bring together individuals and officials with a role or interest in multi-hazard response planning, problem solving, development of standard operational procedures (SOPs), and resource integration and coordination. An Orientation Exercise will have a specific goal and written objectives and result in an agreed upon Plan of Action.
2. **Drill:** The Drill is a planned activity that tests, develops, and/or maintains skills in a single or limited emergency response procedure. Drills generally involve operational response of single departments or agencies. Drills can involve internal notifications and/or field activities.
3. **Tabletop Exercise:** The Tabletop Exercise is a planned activity in which local officials, key staff, and organizations with disaster management responsibilities are presented with simulated emergency situations. It is usually informal, in a conference room environment, and is designed to elicit constructive discussion from the participants. Participants will examine and attempt to resolve problems, based on plans and procedures, if they exist. Individuals are encouraged to discuss decisions in depth with emphasis on slow-paced problem solving, rather than rapid, real time decision-making. A Tabletop Exercise should have specific goals, objectives, and a scenario narrative (see Appendix A for a Sample Tabletop Exercise Outline).
4. **Functional Exercise:** A Functional Exercise is a planned activity designed to test and evaluate organizational capacities. It is also utilized to evaluate the

capability of a community’s emergency management system by testing the Emergency Operations Plan (EOP). It is based on a simulation of a realistic emergency situation that includes a description of the situation (narrative) with communications between players and simulators. The Functional Exercise gives the players (decision-makers) a fully simulated experience of being in a major disaster event. It should take place at the appropriate coordination location (i.e. emergency operations center, emergency command center, command post, master control center, etc.) and activate all the appropriate members designated by the plan. Both internal and external agencies (government, private sector, and volunteer agencies) should be involved. It requires players, controllers, simulators, and evaluators. Message traffic will be simulated and inserted by the control team for player response/actions, under real time constraints. It may or may not include public evacuations. A Functional Exercise should have specific goals, objectives, and a scenario narrative.

5. **Full-scale Exercise:** A Full-scale Exercise is the culmination of a progressive exercise program that has grown with the capacity of the community to conduct exercises. A Full-Scale exercise is a planned activity in a “challenging” environment that encompasses a majority of the emergency management functions. This type of exercise involves the actual mobilization and deployment of the appropriate personnel and resources needed to demonstrate operational capabilities. EOCs and other command centers are required to be activated. A Full-scale Exercise is the largest, costliest, and most complex exercise type. It may or may not include public evacuations.

Example Time Frames for Different Exercise Types

Style	Planning Period	Duration	Comments
Orientation Exercise	2 weeks	Hours	Individual or mixed groups
Drill	2 months	1 day	Individual technical groups generally
Tabletop Exercise	1 month	1-3 days	Single or multiple agency
Functional Exercise	>3 months	1-5 days	Multiple Agency participation
Full-scale Exercise	>6 months	1 day/ week	Multiple Agency participation

3. Exercise Outline

3.1 General

Tsunami messages for this exercise are issued by the TWCs based on a hypothetical earthquake with the following hypocenter parameters:

- Origin Time 15:00:00 UTC March 25, 2015
- Latitude 53.5°N
- Longitude 162.0°E
- Magnitude 8.6 – Mw
- Depth 30 km

Note that bulletin #1 is issued with a magnitude 8.1. For very large earthquakes, the initial magnitude determination at the TWCs is commonly low. Expected impact for this event is determined from tsunami forecast models. Appendix B provides model results.

Various levels of alert are issued by the TWCs throughout the event. PTWC international messages do not give a level of alert, but indicate whether or not there is a tsunami threat. Definitions of the U.S. domestic products that will be issued by the TWCs during this exercise are provided below.

U.S. Tsunami Warning Centers domestic alert definitions:

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

Tsunami Advisory - A tsunami advisory is issued due to the threat of a potential tsunami which may produce strong currents or waves dangerous to those in or near the water. Coastal regions historically prone to damage due to strong currents induced by tsunamis are at the greatest risk. The threat may continue for several hours after the arrival of the initial wave, but significant widespread inundation is not expected for areas under an advisory. Appropriate actions to be taken by local officials may include closing beaches, evacuating harbors and marinas, and the repositioning of ships to deep waters when there is time to safely do so. Advisories are normally updated to continue the advisory, expand/contract affected areas, upgrade to a warning, or cancel the advisory.

Tsunami Watch - A tsunami watch is issued to alert emergency management officials and the public of an event which may later impact the watch area. The watch area may be upgraded to a warning or advisory - or canceled - based on updated information and analysis. Therefore, emergency management officials and the public should prepare to take action. Watches are normally issued based on seismic information without confirmation that a destructive tsunami is underway.

Tsunami Information Statement (TIS) – A tsunami information statement is issued to inform emergency management officials and the public that an earthquake has

occurred, or that a tsunami warning, watch or advisory has been issued for another section of the ocean. In most cases, information statements are issued to indicate there is no threat of a destructive basin wide tsunami and to prevent unnecessary evacuations as the earthquake may have been felt in coastal areas. An information statement may, in appropriate situations, caution about the possibility of destructive local tsunamis. Information statements may be re-issued with additional information, though normally these messages are not updated. However, a watch, advisory or warning may be issued for the area, if necessary, after analysis and/or updated information becomes available.

The TWCs will not issue live messages over broadcast dissemination channels other than to issue initial dummy messages to start the exercise at 1505 UTC on March 25, 2015. The content of the dummy message is given in Appendix C. The dummy message will indicate that exercise participants should refer to the first message provided in this handbook. From then on, participants should follow the schedule in Table 2 to look at new messages. Table 2 is the message timeline and can be used by EMOs to drive the exercise timing. The messages (Appendix D) cover a 14-hour period, though in an actual event they would likely continue longer. World Meteorological Organization (WMO) and Advanced Weather Interactive Processing System (AWIPS) headers used in the dummy messages are listed in Table 3.

The U.S. NTWC issues three official products each time a message is issued. The messages provided in Appendix D are known as the public message and do not contain codes or text intended for automated systems. The other messages not shown in Appendix D are the segmented message and the Spanish message. The segmented message includes encoded NWS zones, Valid Time Event Codes (VTEC), and their level of threat. The segmentation is used for automated processing systems which parse NWS products. The Spanish message is a new product which mimics the English public message provided in Appendix D.

The U.S. PTWC also issues several official products each time a message is issued. The messages given in Appendix D include the international message and the messages directed at Hawaii, American Samoa, and Guam/CNMI. The TWCs also issue additional graphical and web-based products to their web sites.

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

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

3.2 Master Schedule (Exercise Script)

Table 2: Scenario Timeline

Tsunami generated by a magnitude 8.6 earthquake with epicenter at 53.5°N, 162.0°E occurring on March 25, 2015 at 1500 UTC. The initial alert is disseminated at 1505 UTC and is based on a magnitude of 8.1. In message 2 the magnitude is raised to 8.6.

Date (UTC)	Time (UTC)	NTWC Message			PTWC Message			
		#	Type	Dummy	Pacific	Hawaii	Guam/CNMI	American Samoa
03/25/2015	1500	***Earthquake Occurs***						
03/25/2015	1505	01	Adv	Yes	Threat	Wat	TIS	TIS
03/25/2015	1530	02	Warn/Adv/Wat	No	Threat	Wat	Wat	TIS
03/25/2015	1603	03	Warn/Adv/Wat	No	Threat	Warn	Adv	Adv
03/25/2015	1704	04	Warn/ Adv	No	Threat	Warn	Adv	Adv
03/25/2015	1804	05	Warn/ Adv	No	Threat	Warn	Adv	Adv
03/25/2015	1900	06	Warn/ Adv	No	Threat	Warn	Adv	Adv
03/25/2015	2003	07	Adv	No	Threat	Warn	Adv	Adv
03/25/2015	2100	08	Adv	No	Threat	Warn	Adv	Adv
03/25/2015	2201	09	Adv	No	Threat	Warn	Adv	Adv
03/25/2015	2300	10	Adv	No	Threat	Warn	Adv	Adv
03/26/2015	0005	11	Adv	No	Threat	Warn	Adv	Adv
03/26/2015	0100	12	Can	No	Threat	Adv	Can	Adv
03/26/2015	0200	13			Threat	Adv		Adv
03/26/2015	0300	14			No Threat	Can		Can

The initial dummy messages will be disseminated over all standard TWC broadcast channels as listed in Table 3. These are being issued to test communications with EMOs and Tsunami Warning Focal Points, and to start the exercise.

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

TWC Message Types:

- Warn Tsunami Warning
- Adv Tsunami Advisory
- Wat Tsunami Watch
- TIS Tsunami Information Statement
- Can Cancellation
- Threat PTWC International Message - Alert
- No Threat PTWC International Message - No Alert

Dummy:

- Yes Dummy Issued
- No Dummy Not Issued

Table 3: Product Types

Product Types Issued for Dummy Messages with Transmission Methods

Center	WMO ID	AWIPS ID	NWWS	GTS	EMWIN	AISR	Fax	Email
NTWC	WEPA41 PAAQ	TSUWCA	Yes	Yes	Yes	Yes	Yes	Yes
NTWC	WEAK51 PAAQ	TSUAK1	Yes	Yes	Yes	Yes	Yes	Yes
NTWC	WEPA40 PHEB	TSUSPN	Yes	Yes	Yes	Yes	Yes	Yes
PTWC	WEPA40 PHEB	TSUPAC	Yes	Yes	Yes	Yes	Yes	Yes
PTWC	WEHW40 PHEB	TSUHWX	Yes	Yes	Yes	Yes	Yes	Yes
PTWC	WEGM40 PHEB	TSUGUM	Yes	Yes	Yes	Yes	Yes	Yes
PTWC	WEZS40 PHEB	TSUPPG	Yes	Yes	Yes	Yes	Yes	Yes

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

3.3 Actions in Case of a Real Event

In the case of a real event occurring during the exercise, the TWC will issue their normal messages for the event. Such messages will be given full priority and a decision will be made by the TWC whether to issue the dummy message. Smaller earthquakes that only trigger a Tsunami Information Statement will not disrupt the exercise. All documentation and correspondence relating to this exercise is to be clearly identified as “**Pacifex15**” and “**Exercise.**”

3.4 Procedure for False Alarm

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

3.5 Resources

Although EMOs will have advance notice of the exercise and may elect to stand up a special dedicated shift to allow normal core business to continue uninterrupted, it is requested that realistic resource levels be deployed in order to reflect some of the issues that are likely to be faced in a real event.

Questions on the exercise can be addressed to:

Person	Telephone #	Email
Kevin Miller CA EMA, Tsunami PM	510-286-0817	kevin.miller@calema.ca.gov
Althea Turner OR OEM Tsunami PM	503-378-2911	Althea.Rizzo@state.or.us
John Schelling WA EMD Tsunami PM	253-512-7084	j.schelling@emd.wa.gov
Kelli Kryzanowski BC Tsunami PM	250-952-5834	teron.moore@gov.bc.ca
Kevin Richards HI CD Tsunami PM	808-733-4301	krichards@scd.hawaii.gov
Erv Petty AK DHS&EM Tsunami PM	907-428-7015	ervin.petty@alaska.gov
Paul Whitmore NTWC Director	907-745-4212	paul.whitmore@noaa.gov
James Waddell NTWC Rep.	907-745-4212	james.waddell@noaa.gov
Charles McCreery PTWC Director	808-689-8207	Charles.mccreery@noaa.gov
Gerard Fryer PTWC Rep.	808-689-8207	Gerard.fryer@noaa.gov

3.6 Media Arrangements

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

Appendix A. Example Tabletop Exercise

Tabletop Exercise Development Steps

Source: California Office of Emergency Services

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

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

1. Vulnerability Analysis: Problem Statement

An example for a hurricane might be:

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

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

An example for a hurricane might be:

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

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

An example might be:

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

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

4. Goals and Objectives:

Criteria for good objectives: Think SMART

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

An example might be:

Comprehensive Exercise Program (CEP) Objectives

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

5. Narrative:

The Narrative should describe the following:

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

6. Evaluation:

The Evaluation should describe the following:

- Objectives Based
- Train Evaluation Teams
- Develop Evaluation Forms

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

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

Appendix B. Scenario Description

Tsunami models were computed using the Short-term Inundation Forecasting of Tsunamis (SIFT), the Alaska Tsunami Forecast Model (ATFM), and the Rapid Inundation Forecasting of Tsunamis (RIFT) models to generate expected impacts throughout the region.

The earthquake hypocenter parameters used in ATFM and RIFT are:

- Origin Time 15:00:00 UTC March 25, 2015
- Latitude 53.5°N
- Longitude 161.6°E – location at center/updip edge of fault
- Magnitude 8.6 – Mw
- Depth 5 km at updip edge of fault
- Strike 212
- Dip 25
- Slip 90
- Length 347
- Width 109

The following graphics show some of the model output for a better understanding of the event. When using the forecast coastal amplitudes, note that the highest tsunami elevation reached on shore could be double that of the coastal forecast since these are determined at the coast.

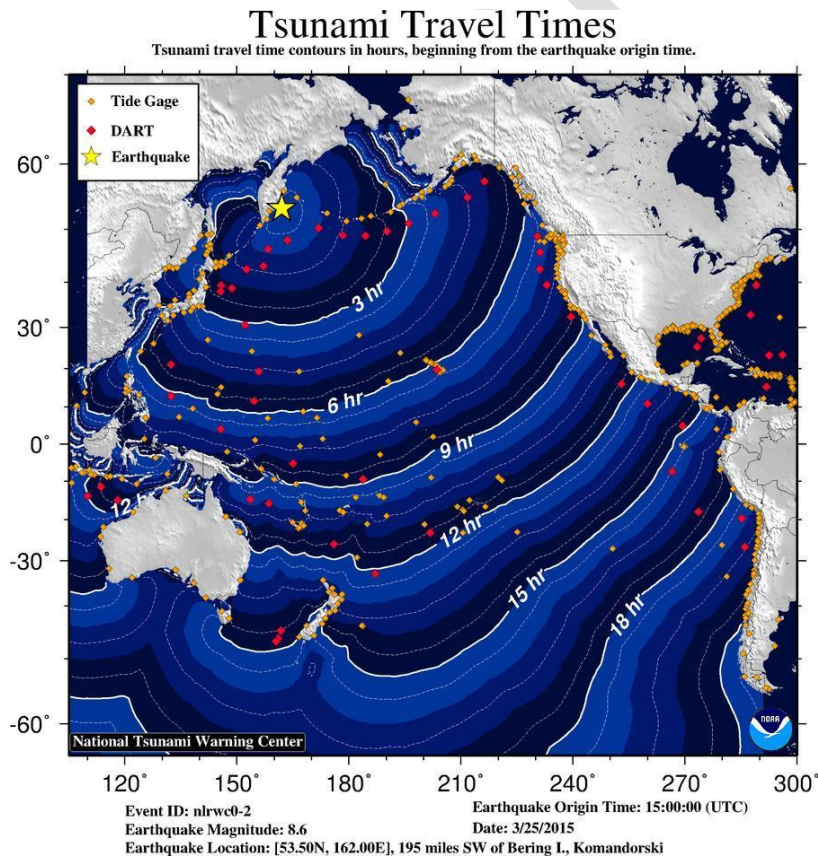


Figure C1. Tsunami travel time map for Pacifex15.

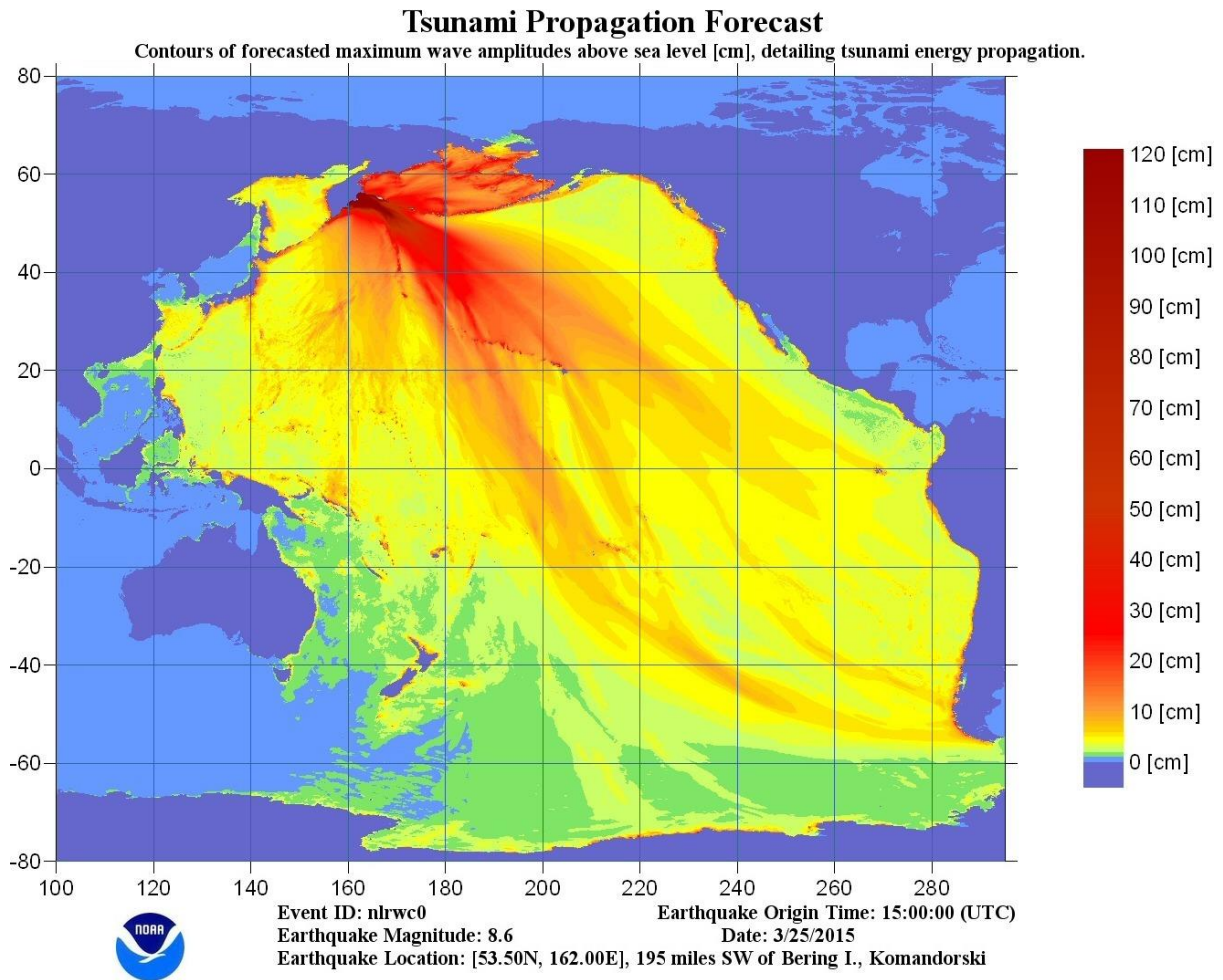


Figure C2. ATFM Maximum tsunami amplitude map for Pacifex15.

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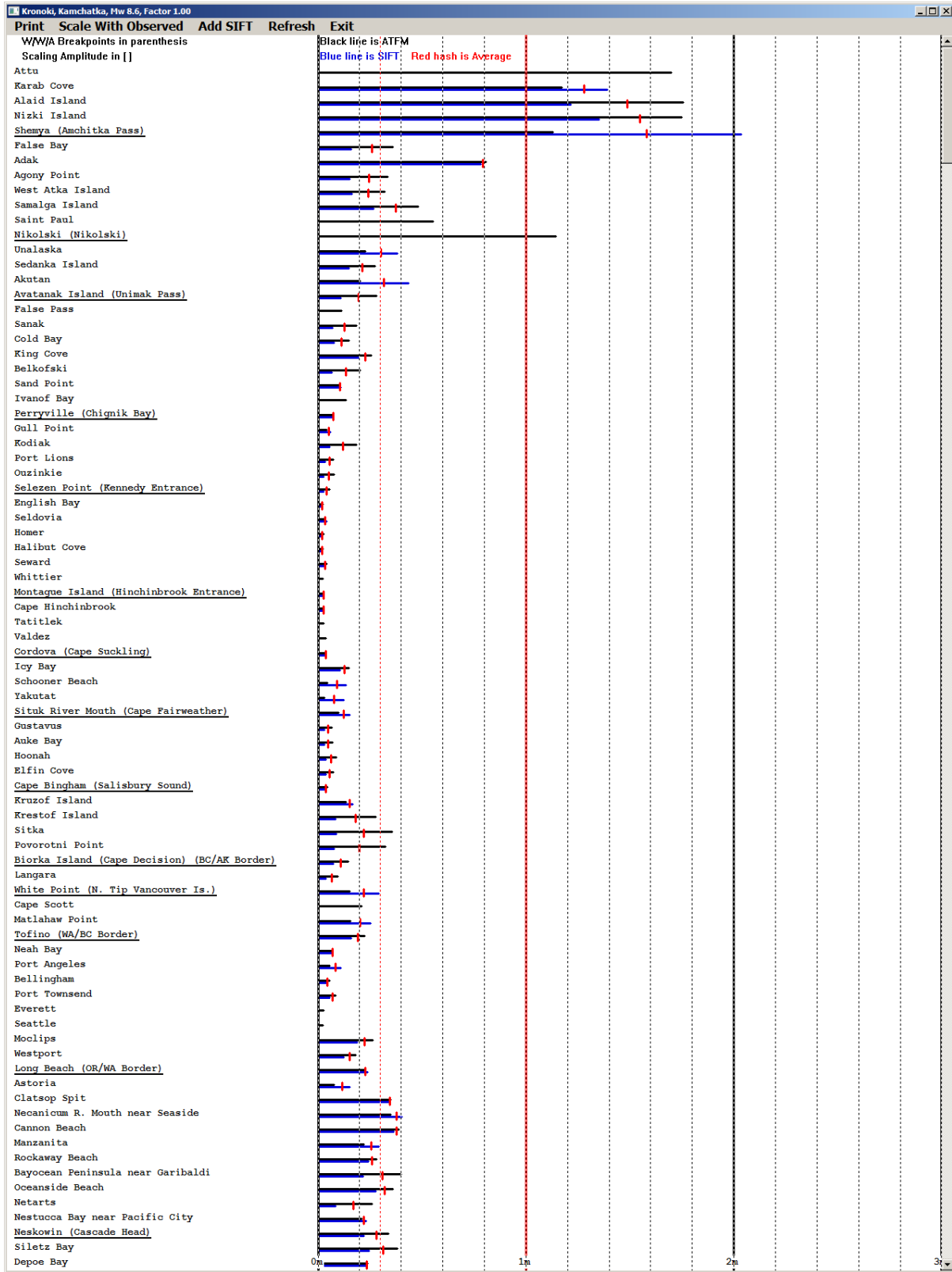


Figure C3. Bar chart showing expected coastal amplitudes from the Aleutian Islands through Depoe Bay, Oregon. The black line is the ATFM forecast; blue line is the SIFT forecast; red hash is the average of the two.

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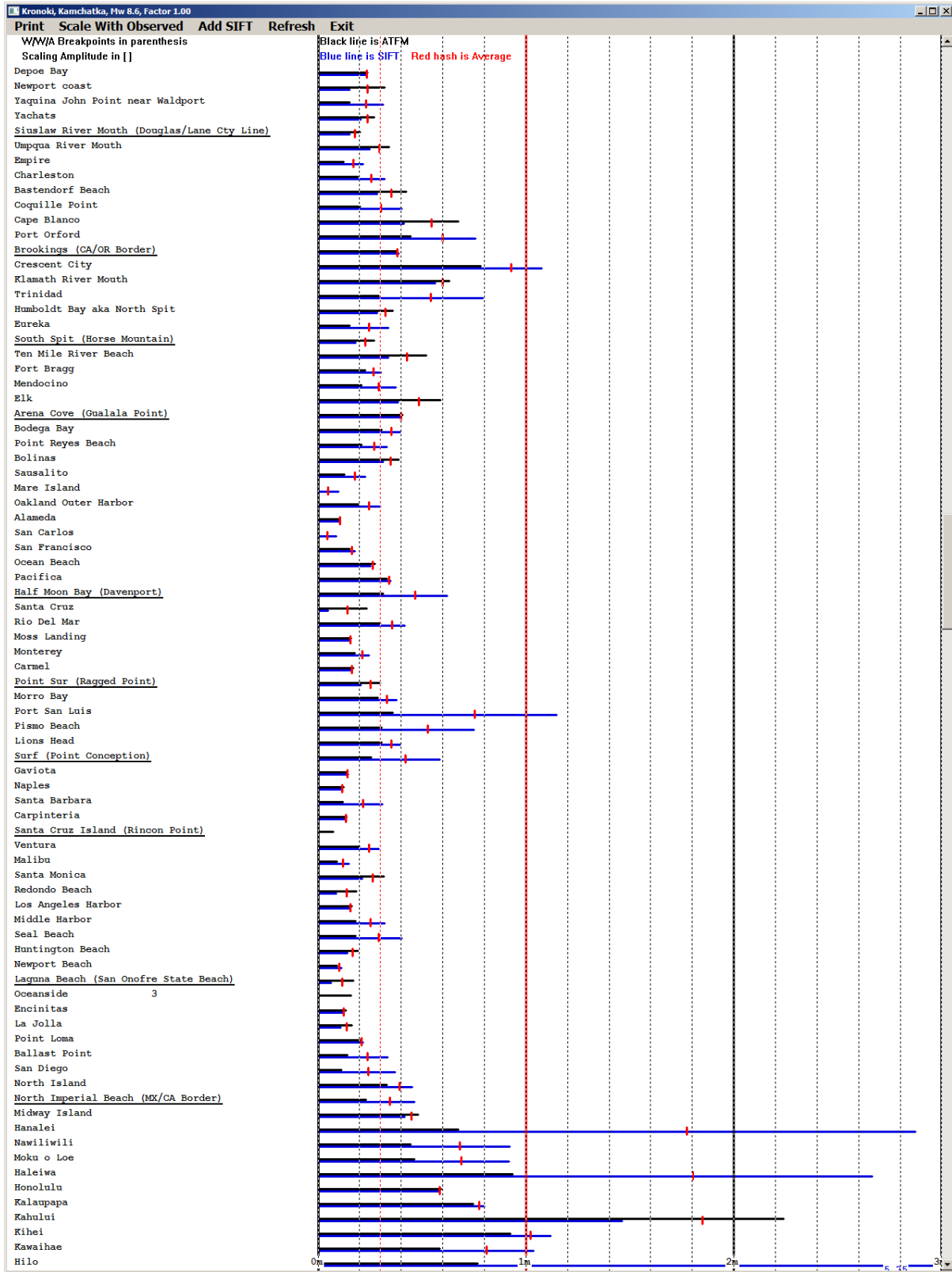


Figure C4. Bar chart showing expected coastal amplitudes from Depoe Bay, Oregon to the California/Mexico border, and Hawaii. The black line is the ATFM forecast; blue line is the SIFT forecast; red hash is the average of the two.

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Event ID: nbbz00-01.01

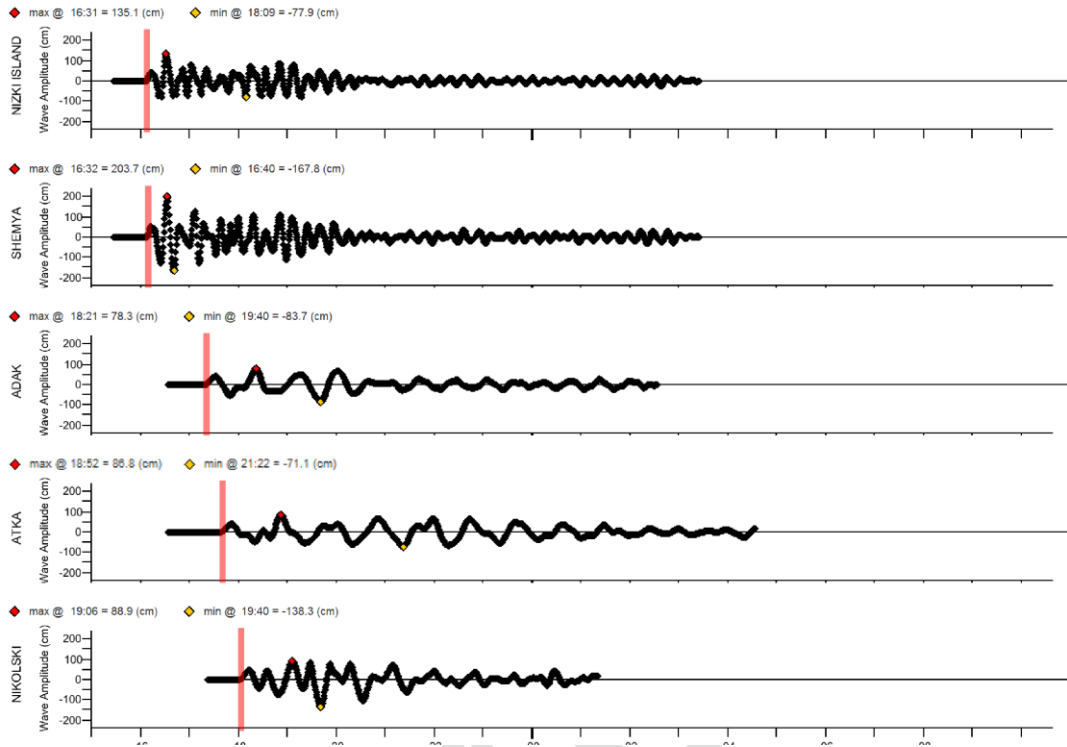


Figure C5. Tsunami time series for selected sites in the Aleutian Islands based on the SIFT forecast.

Event ID: nbbz00-01.01

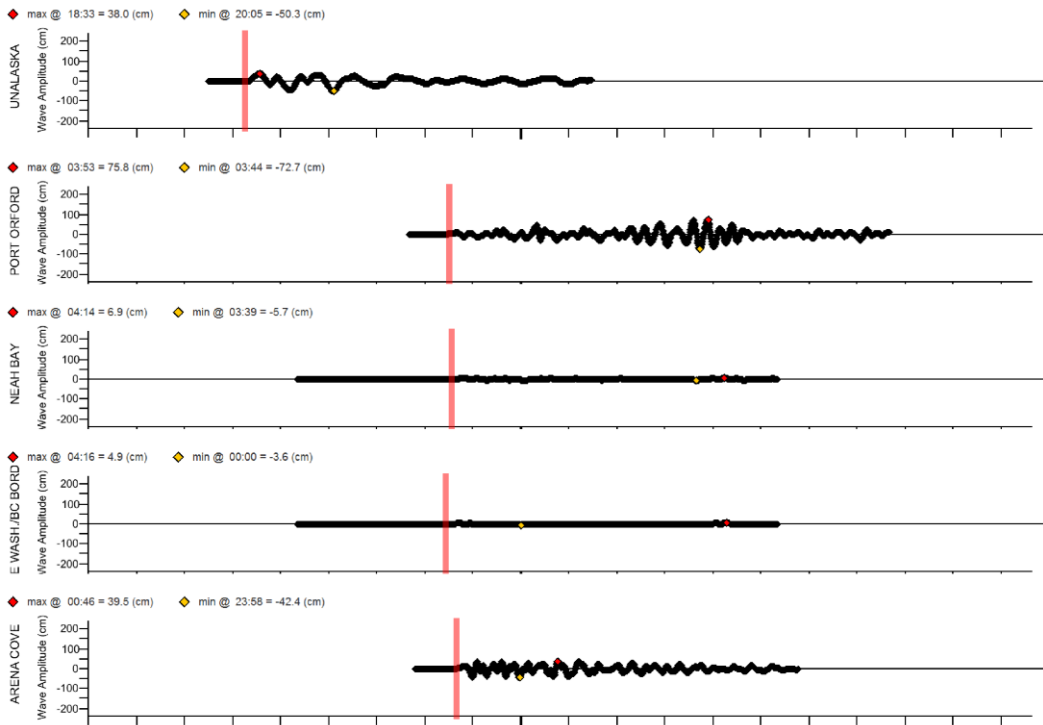


Figure C6. Tsunami time series for selected sites in the Aleutian Islands and Pacific Northwest coast based on the SIFT forecast.

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Event ID: nbbz00-01.01

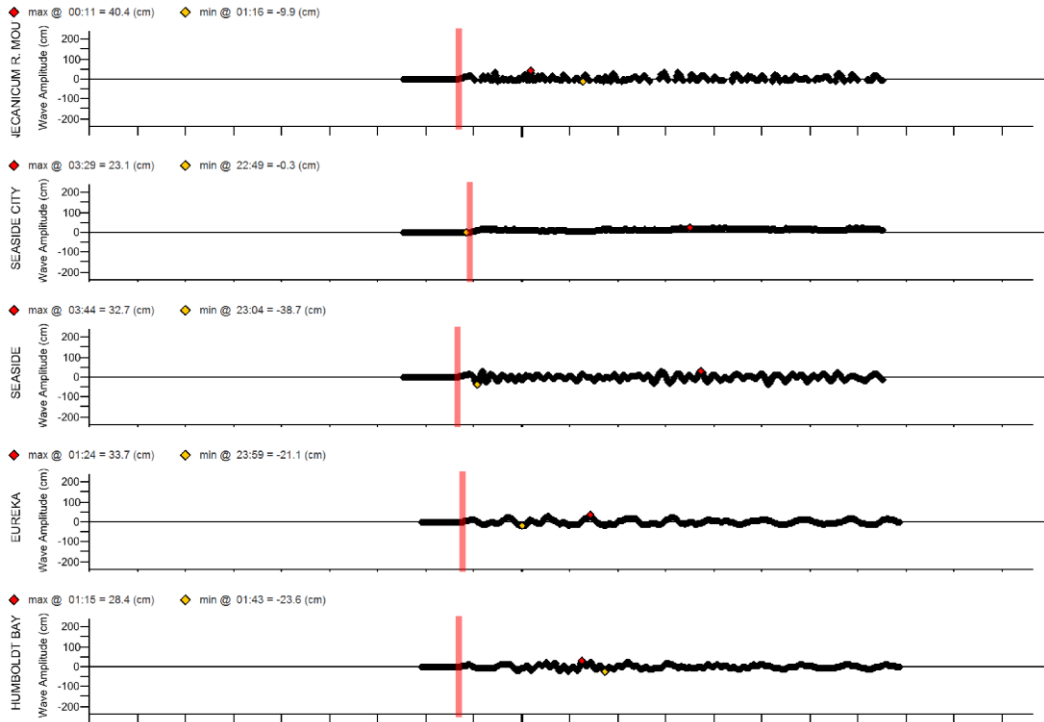


Figure C7. Tsunami time series for selected sites in the Pacific Northwest based on the SIFT forecast.

Event ID: nbbz00-01.01

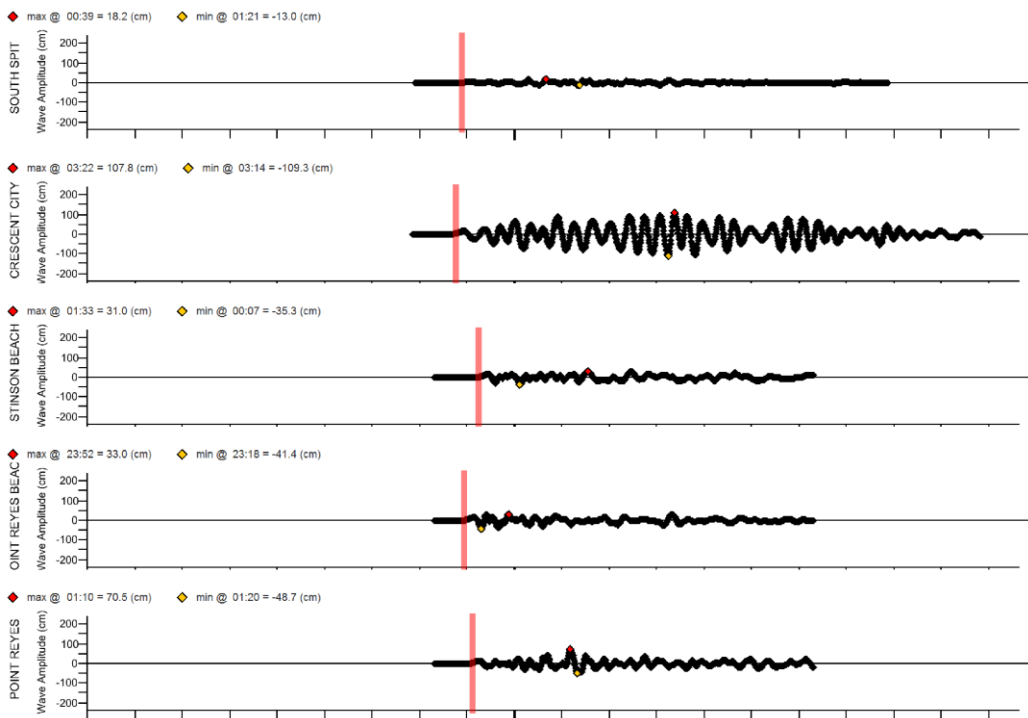


Figure C8. Tsunami time series for selected sites in California based on the SIFT forecast.

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Event ID: nbbz00-01.01

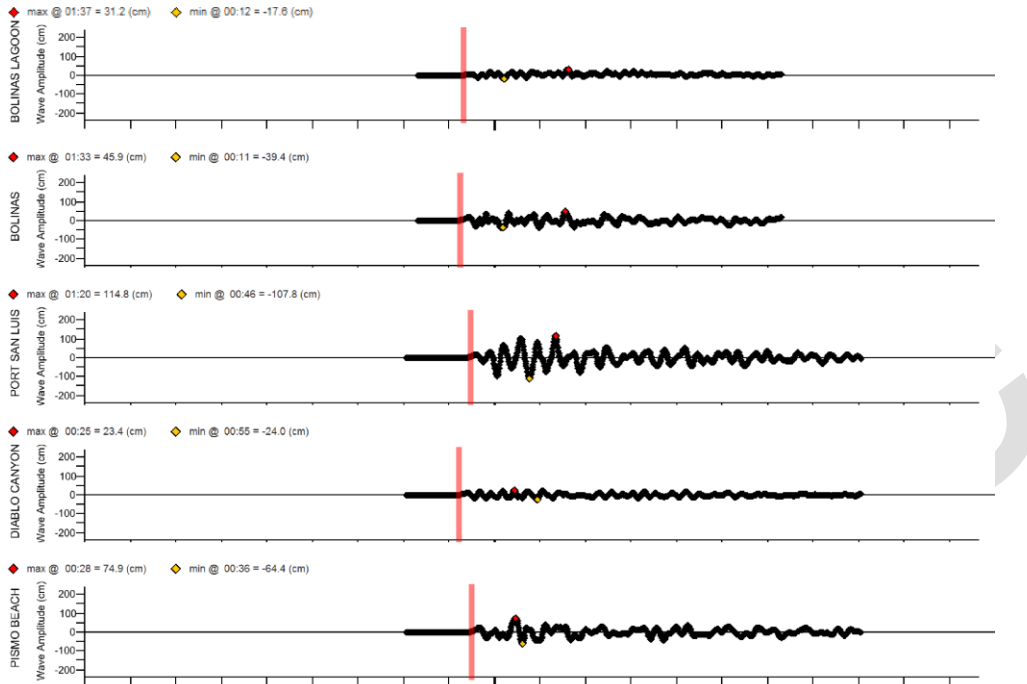


Figure C9. Tsunami time series for selected sites in California based on the SIFT forecast.

Event ID: nbbz00-01.01

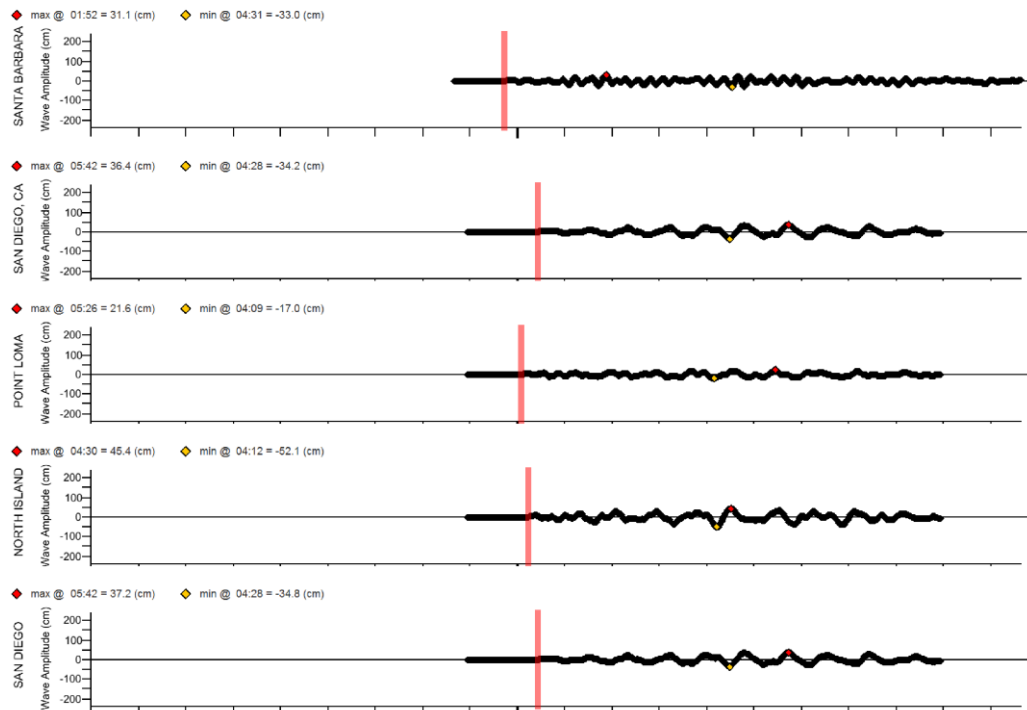
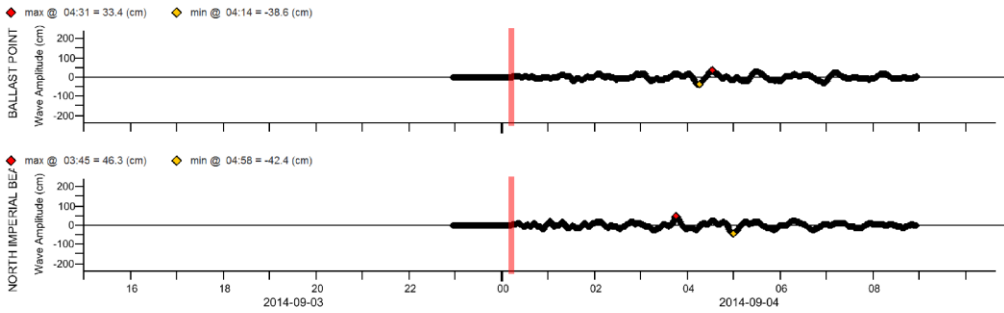


Figure C10. Tsunami time series for selected sites in California based on the SIFT forecast.

Event ID: nbbz00-01.01



SIFT version 3.2.0 (10363) Thu, 24 Jul 2014 Page-7

Figure C9. Tsunami time series for selected sites in California based on the SIFT forecast.

PTWC Coastal Tsunami Amplitude Forecast

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.

This message is issued for information only in support of the UNESCO/IOC Pacific Tsunami Warning and Mitigation System 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.

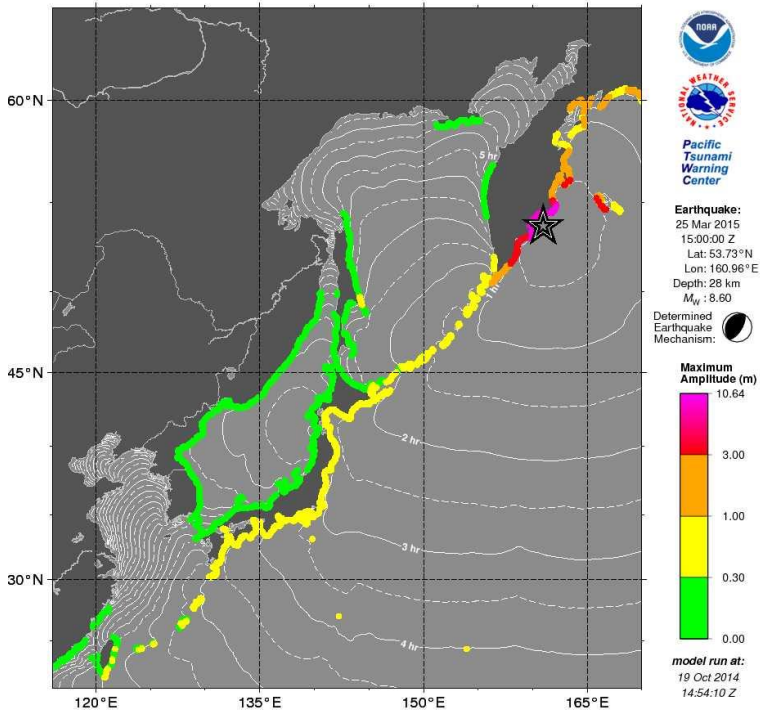


Figure C10. PTWC Coastal amplitude forecast for the northwest Pacific based on the RIFT forecast.

PTWC Coastal Tsunami Amplitude Forecast

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.

This message is issued for information only in support of the UNESCO/IOC Pacific Tsunami Warning and Mitigation System 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.

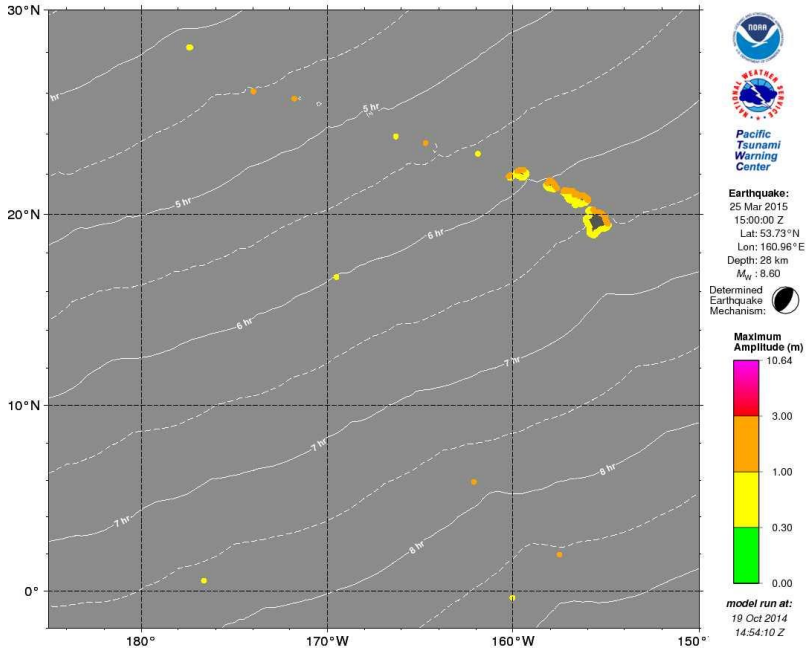


Figure C11. PTWC Coastal amplitude forecast for Hawaii based on the RIFT forecast.

PTWC Coastal Tsunami Amplitude Forecast

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.

This message is issued for information only in support of the UNESCO/IOC Pacific Tsunami Warning and Mitigation System 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.

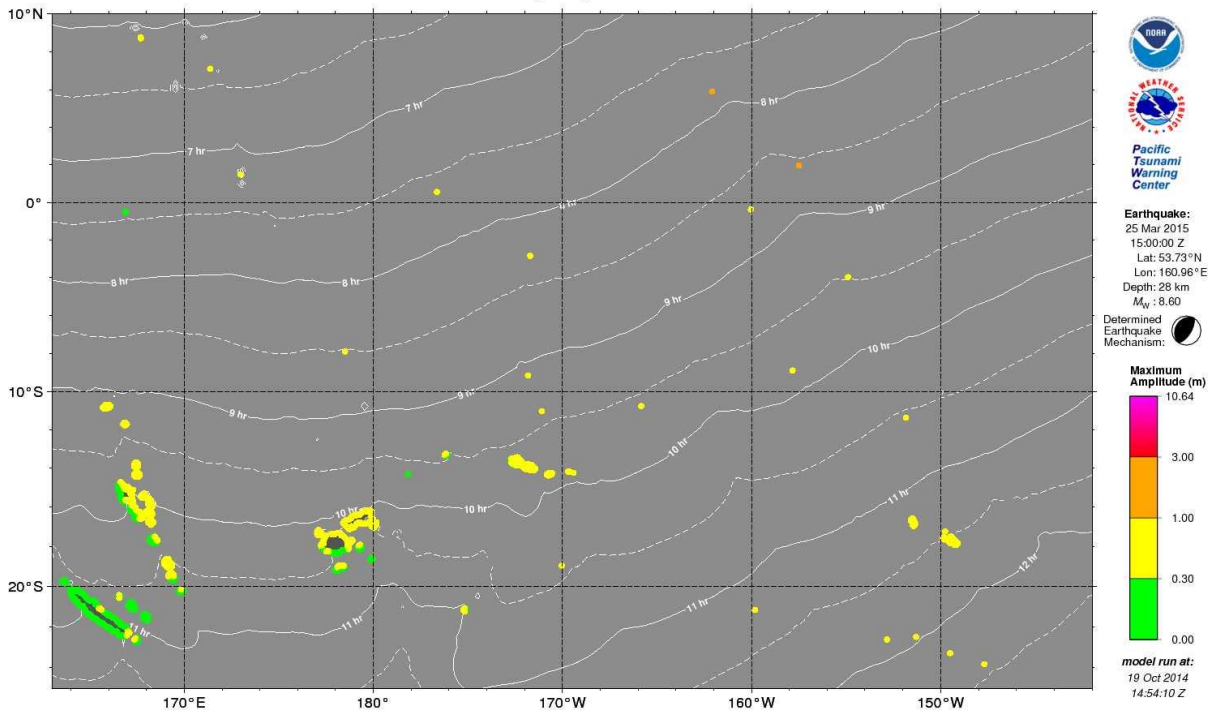


Figure C12. PTWC Coastal amplitude forecast for the south-central Pacific based on the RIFT forecast.

PTWC Coastal Tsunami Amplitude Forecast

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.

This message is issued for information only in support of the UNESCO/IOC Pacific Tsunami Warning and Mitigation System 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.

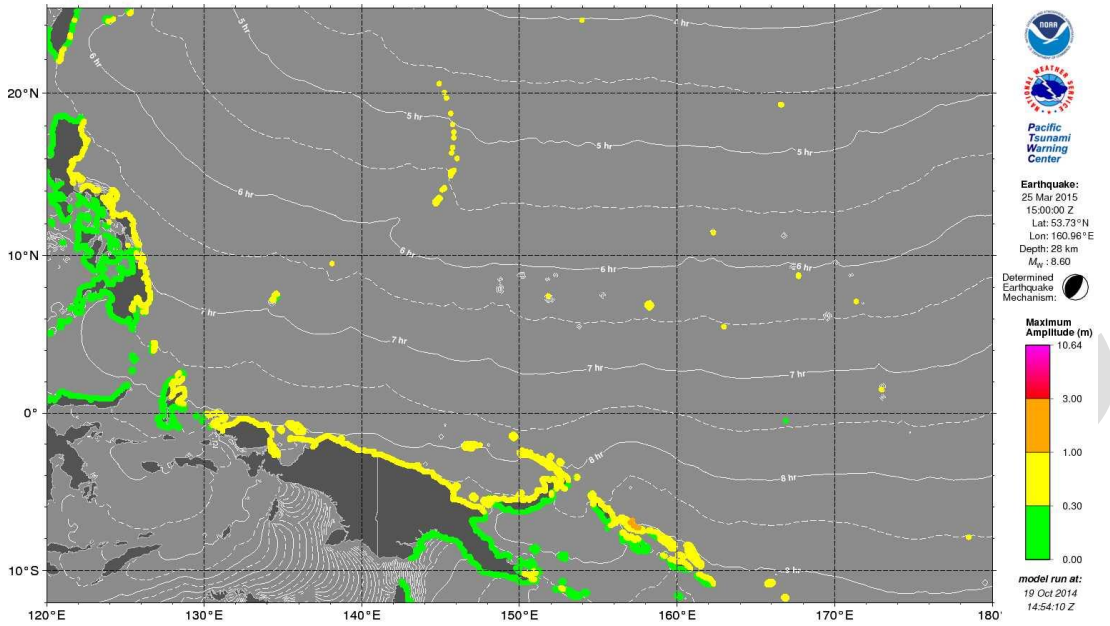


Figure C13. PTWC Coastal amplitude forecast for the west-central Pacific based on the RIFT forecast.

PTWC Coastal Tsunami Amplitude Forecast

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.

This message is issued for information only in support of the UNESCO/IOC Pacific Tsunami Warning and Mitigation System 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.

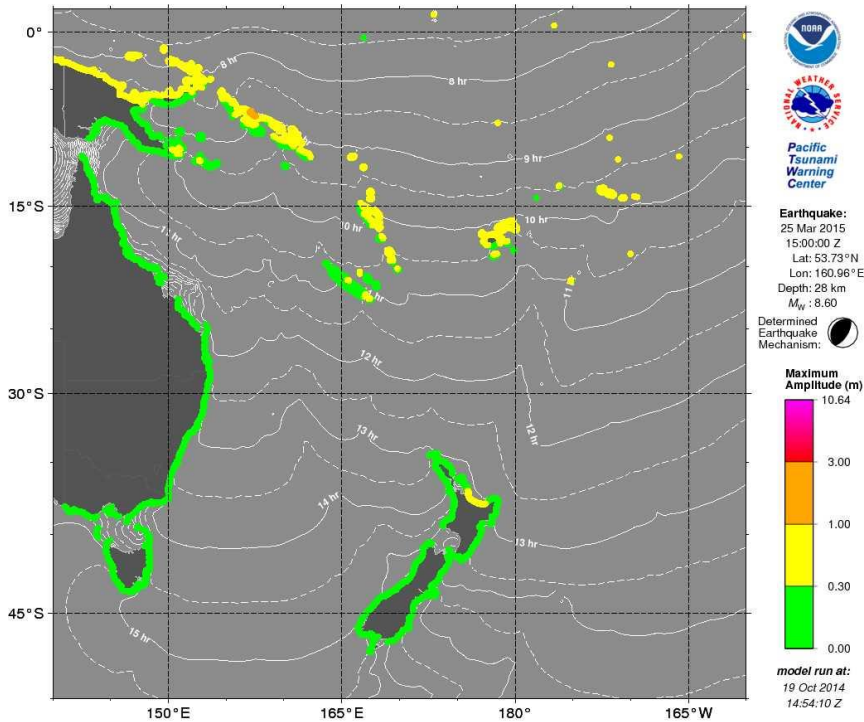


Figure C14. PTWC Coastal amplitude forecast for the south-west Pacific based on the RIFT forecast.

Appendix C. TWC Dummy Messages

NTWC

WEPA41 PAAQ 251505
TSUWCA

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

...PACIFEX 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 PACIFEX 15 PACIFIC TSUNAMI
EXERCISE. THIS WILL BE THE ONLY EXERCISE MESSAGE BROADCAST FROM THE
NATIONAL TSUNAMI WARNING CENTER. THE HANDBOOK IS AVAILABLE AT THE WEB
SITE NTWC.ARH.NOAA.GOV. THE EXERCISE PURPOSE IS TO PROVIDE EMERGENCY
MANAGEMENT A REALISTIC SCENARIO TO TEST TSUNAMI RESPONSE PLANS.

THIS IS ONLY AN EXERCISE.

\$\$

WEAK51 PAAQ 251505
TSUAK1

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

...PACIFEX 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 PACIFEX 15 PACIFIC TSUNAMI
EXERCISE. THIS WILL BE THE ONLY EXERCISE MESSAGE BROADCAST FROM THE
NATIONAL TSUNAMI WARNING CENTER. THE HANDBOOK IS AVAILABLE AT THE WEB
SITE NTWC.ARH.NOAA.GOV. THE EXERCISE PURPOSE IS TO PROVIDE EMERGENCY
MANAGEMENT A REALISTIC SCENARIO TO TEST TSUNAMI RESPONSE PLANS.

THIS IS ONLY AN EXERCISE.

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WEAK61 PAAQ 251505
TSUSPN

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

...MENSAJE PARA DAR COMIENZO AL EJERCICIO DE TSUNAMI PACIFEX 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
PACIFEX 15. ESTE SERA EL UNICO MENSAJE QUE SERA EMITIDO DESDE EL CENTRO
NACIONAL DE ALERTA DE TSUNAMI. EL MANUAL ESTA DISPONIBLE EN LA PAGINA

PACIFEX 15 Handbook

NTWC.ARH.NOAA.GOV. EL PROPOSITO DEL EJERCICIO ES PROVEER A LAS AUTORIDADES DE MANEJO DE EMERGENCIA UN ESCENARIO REALISTICO PARA PROBAR LOS PLANES DE RESPUESTA A TSUNAMIS.

ESTE ES SOLO UN EJERCICIO.

\$\$

PTWC

ZCZC
WEPA40 PHEB 251505
TSUPAC

TEST...TSUNAMI EXERCISE MESSAGE NUMBER 1...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1505 UTC WED MAR 25 2015

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

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

THIS IS ONLY AN EXERCISE.

\$\$

ZCZC
WEHW40 PHEB 251505
TSUHWX

TEST...TSUNAMI EXERCISE MESSAGE NUMBER 1...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1505 UTC WED MAR 25 2015

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

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

THIS IS ONLY AN EXERCISE.

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ZCZC
WEGM40 PHEB 251505

PACIFEX 15 Handbook

TSUGUM

TEST...TSUNAMI EXERCISE MESSAGE NUMBER 1...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1505 UTC WED MAR 25 2015

...PACIFEX 15 TSUNAMI EXERCISE MESSAGE. REFER TO PTWC MESSAGE 1 FOR
GUAM AND CNMI IN THE EXERCISE HANDBOOK. THIS IS AN EXERCISE ONLY...

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

THIS IS ONLY AN EXERCISE.

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ZCZC
WEZS42 PHEB 251505
TSUPPG

TEST...TSUNAMI EXERCISE MESSAGE NUMBER 1...TEST
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1505 UTC WED MAR 25 2015

...PACIFEX 15 TSUNAMI EXERCISE MESSAGE. REFER TO PTWC MESSAGE 1 FOR
AMERICAN SAMOA IN THE EXERCISE HANDBOOK. THIS IS AN EXERCISE ONLY...

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

THIS IS ONLY AN EXERCISE.

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Appendix D. TWC Exercise Messages

The following messages, created for the Pacifex15 tsunami exercise, are representative of the public messages issued by the U.S. TWCs during a magnitude 8.6 earthquake and tsunami originating at 53.5°N, 162.0°E. During a real event, the TWCs would also issue graphical and html-based products to their web sites and via RSS.

What follows are the NTWC messages for North American coasts, PTWC's International messages, and PTWC's separate messages for Hawaii, Guam/CNMI, and American Samoa. Since this is a US exercise, the international messages end with Message 14, after the tsunami has passed American Samoa. In a real event there would be at least ten further messages to track the tsunami hazard to South American coasts.

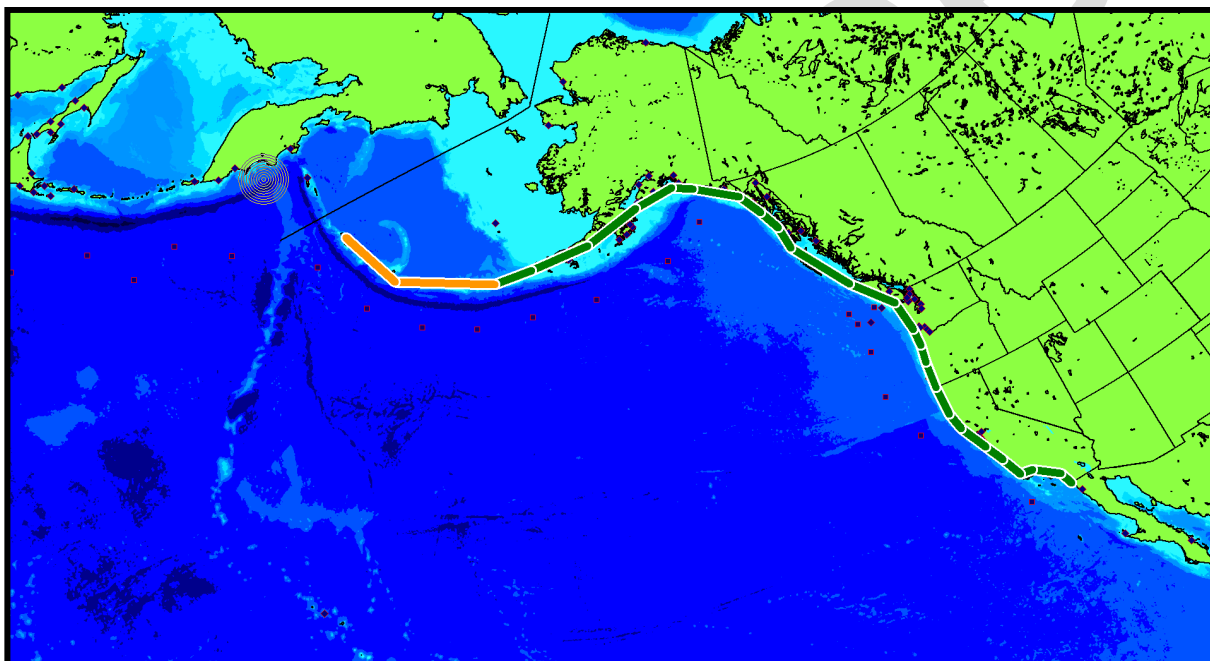


Figure D1: Advisory areas for NTWC Bulletin 1 (orange is advisory and green is information only).

NTWC Bulletin #1

WEAK51 PAAQ 251505
TSUAK1

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

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

WARNINGS/ADVISORIES/WATCHES

PACIFEX 15 Handbook

TSUNAMI ADVISORY IN EFFECT FOR...

- * THE COASTAL AREAS OF ALASKA FROM NIKOLSKI ALASKA TO ATTU ALASKA

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

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE 8.1
* ORIGIN TIME 0700 AKDT MAR 25 2015
 0800 PDT MAR 25 2015
 1500 UTC MAR 25 2015
* COORDINATES 53.5 NORTH 162.0 EAST
* DEPTH 19 MILES
* LOCATION 195 MILES SW OF BERING I. KOMANDORSKI
 145 MILES NE OF PETROPAVLOVSK KAMCHATKA

IMPACTS FOR TSUNAMI ADVISORY AREAS

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

RECOMMENDED ACTIONS

-
- * IF YOU ARE IN AN ADVISORY AREA - MOVE OFF THE BEACH AND OUT OF HARBORS AND MARINAS. WIDESPREAD INUNDATION OF LAND IS NOT EXPECTED FOR ADVISORY AREAS.
 - * BE ALERT TO INSTRUCTIONS FROM YOUR LOCAL EMERGENCY OFFICIALS.
 - * DO NOT GO TO THE COAST TO OBSERVE THE TSUNAMI.
 - * DO NOT RETURN TO THE COAST UNTIL LOCAL EMERGENCY OFFICIALS INDICATE IT IS SAFE TO DO SO.

FORECASTS AND/OR OBSERVATIONS OF TSUNAMI ACTIVITY

SITE	FORECAST START OF OF TSUNAMI
----	-----
* ALASKA	
SHEMYA	0812 AKDT MAR 25
ADAK	0913 AKDT MAR 25
SAINT PAUL	1028 AKDT MAR 25

PACIFEX 15 Handbook

NEXT UPDATE AND ADDITIONAL INFORMATION

- * THIS MESSAGE WILL BE UPDATED WITHIN 60 MINUTES.
- * REFER TO THE INTERNET SITE NTWC.ARH.NOAA.GOV FOR MORE INFORMATION.
- * PACIFIC COASTAL RESIDENTS OUTSIDE CALIFORNIA... OREGON... WASHINGTON... BRITISH COLUMBIA AND ALASKA SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES AT PTWC.WEATHER.GOV.

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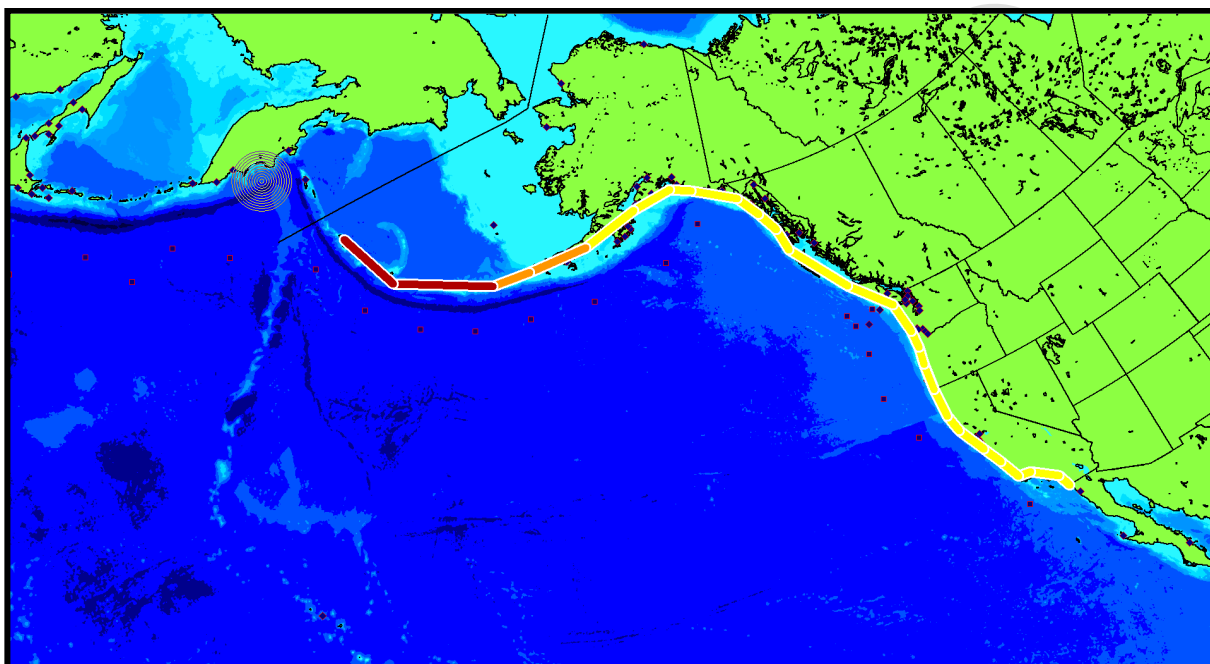


Figure D2: Watch/Warning/Advisory areas for Bulletin 2 (red is warning, orange is advisory, and yellow is watch).

NTWC Bulletin #2

WEAK51 PAAQ 251530
TSUAK1

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

UPDATES

THIS MESSAGE MODIFIES THE ALERT AREAS.
THIS MESSAGE CONTAINS A REVISED MAGNITUDE.

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

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

PACIFEX 15 Handbook

...A TSUNAMI WATCH IS NOW IN EFFECT...

WARNINGS/ADVISORIES/WATCHES - UPDATED

TSUNAMI WARNING IN EFFECT FOR...

- * THE COASTAL AREAS OF ALASKA FROM NIKOLSKI ALASKA TO ATTU ALASKA

TSUNAMI ADVISORY IN EFFECT FOR...

- * THE COASTAL AREAS OF ALASKA FROM CHIGNIK BAY ALASKA TO NIKOLSKI ALASKA

TSUNAMI WATCH IN EFFECT FOR...

- * THE COASTAL AREAS OF CALIFORNIA - OREGON - WASHINGTON - BRITISH COLUMBIA AND ALASKA FROM THE CAL./MEXICO BORDER TO CHIGNIK BAY ALASKA

IMPACTS FOR TSUNAMI WARNING AREAS

-
- * WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS ARE POSSIBLE AND MAY CONTINUE FOR MANY HOURS AFTER TSUNAMI ARRIVAL.
 - * THE FIRST WAVE MAY NOT BE THE LARGEST.

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.

IMPACTS FOR TSUNAMI WATCH AREAS

-
- * EXPECTED IMPACT IS UNKNOWN AT THIS TIME.
 - * THE WATCH WILL BE UPGRADED OR CANCELED AT LEAST TWO HOURS BEFORE EXPECTED IMPACT.

RECOMMENDED ACTIONS - UPDATED

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

PACIFEX 15 Handbook

- * IF YOU ARE IN A WATCH AREA - STAY ALERT FOR FURTHER INSTRUCTIONS.
- * BE ALERT TO INSTRUCTIONS FROM YOUR LOCAL EMERGENCY OFFICIALS.
- * DO NOT GO TO THE COAST TO OBSERVE THE TSUNAMI.

FORECASTS AND/OR OBSERVATIONS OF TSUNAMI ACTIVITY

SITE	FORECAST
-----	START OF
	OF TSUNAMI
-----	-----
* ALASKA	
SHEMYA	0809 AKDT MAR 25
ADAK	0910 AKDT MAR 25
UNALASKA	1014 AKDT MAR 25
SAINT PAUL	1025 AKDT MAR 25
SAND POINT	1057 AKDT MAR 25
COLD BAY	1129 AKDT MAR 25
KODIAK	1151 AKDT MAR 25
SEWARD	1216 AKDT MAR 25
ELFIN COVE	1217 AKDT MAR 25
YAKUTAT	1225 AKDT MAR 25
SITKA	1225 AKDT MAR 25
VALDEZ	1235 AKDT MAR 25
CORDOVA	1245 AKDT MAR 25
HOMER	1308 AKDT MAR 25
CRAIG	1326 AKDT MAR 25
* BRITISH COLUMBIA	
LANGARA	1335 PDT MAR 25
TOFINO	1458 PDT MAR 25
* OREGON	
PORT ORFORD	1508 PDT MAR 25
CHARLESTON	1515 PDT MAR 25
BROOKINGS	1519 PDT MAR 25
SEASIDE	1523 PDT MAR 25
NEWPORT	1525 PDT MAR 25
* WASHINGTON	
NEAH BAY	1510 PDT MAR 25
LONG BEACH	1514 PDT MAR 25
MOCLIPS	1519 PDT MAR 25
WESTPORT	1525 PDT MAR 25
PORT ANGELES	1548 PDT MAR 25
PORT TOWNSEND	1615 PDT MAR 25
* CALIFORNIA	
FORT BRAGG	1521 PDT MAR 25
CRESCENT CITY	1523 PDT MAR 25
MONTEREY	1544 PDT MAR 25
PORT SAN LUIS	1604 PDT MAR 25
SAN FRANCISCO	1608 PDT MAR 25
SANTA BARBARA	1617 PDT MAR 25
LOS ANGELES HARB	1633 PDT MAR 25
NEWPORT BEACH	1640 PDT MAR 25
OCEANSIDE	1643 PDT MAR 25

PACIFEX 15 Handbook

LA JOLLA 1643 PDT MAR 25

PRELIMINARY EARTHQUAKE PARAMETERS - UPDATED

* MAGNITUDE 8.6
* ORIGIN TIME 0700 AKDT MAR 25 2015
0800 PDT MAR 25 2015
1500 UTC MAR 25 2015
* COORDINATES 53.5 NORTH 162.0 EAST
* DEPTH 19 MILES
* LOCATION 195 MILES SW OF BERING I. KOMANDORSKI
145 MILES NE OF PETROPAVLOVSK KAMCHATKA

NEXT UPDATE AND ADDITIONAL INFORMATION

* THIS MESSAGE WILL BE UPDATED WITHIN 60 MINUTES.

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

* PACIFIC COASTAL RESIDENTS OUTSIDE CALIFORNIA... OREGON... WASHINGTON... BRITISH COLUMBIA AND ALASKA SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES AT PTWC.WEATHER.GOV.

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NTWC Bulletin #3

WEAK51 PAAQ 251603
TSUAK1

BULLETIN
PUBLIC TSUNAMI MESSAGE NUMBER 3
NWS NATIONAL TSUNAMI WARNING CENTER PALMER AK
903 AM PDT WED MAR 25 2015

UPDATES

THIS MESSAGE CONTAINS NEW OBSERVATIONS.

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

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

...THE TSUNAMI WATCH REMAINS IN EFFECT...

WARNINGS/ADVISORIES/WATCHES

TSUNAMI WARNING IN EFFECT FOR...

* THE COASTAL AREAS OF ALASKA FROM NIKOLSKI ALASKA TO ATTU ALASKA

PACIFEX 15 Handbook

TSUNAMI ADVISORY IN EFFECT FOR...

- * THE COASTAL AREAS OF ALASKA FROM CHIGNIK BAY ALASKA TO NIKOLSKI ALASKA

TSUNAMI WATCH IN EFFECT FOR...

- * THE COASTAL AREAS OF CALIFORNIA - OREGON - WASHINGTON - BRITISH COLUMBIA AND ALASKA FROM THE CAL./MEXICO BORDER TO CHIGNIK BAY ALASKA

IMPACTS FOR TSUNAMI WARNING AREAS

- * WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS ARE POSSIBLE AND MAY CONTINUE FOR MANY HOURS AFTER TSUNAMI ARRIVAL.
- * THE FIRST WAVE MAY NOT BE THE LARGEST.

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.

IMPACTS FOR TSUNAMI WATCH AREAS

- * EXPECTED IMPACT IS UNKNOWN AT THIS TIME.
- * THE WATCH WILL BE UPGRADED OR CANCELED AT LEAST TWO HOURS BEFORE EXPECTED IMPACT.

RECOMMENDED ACTIONS

- * IF YOU ARE IN A WARNING AREA - MOVE INLAND TO HIGHER GROUND.
- * IF YOU ARE IN AN ADVISORY AREA - MOVE OFF THE BEACH AND OUT OF HARBORS AND MARINAS. WIDESPREAD INUNDATION OF LAND IS NOT EXPECTED FOR ADVISORY AREAS.
- * IF YOU ARE IN A WATCH AREA - STAY ALERT FOR FURTHER INSTRUCTIONS.
- * BE ALERT TO INSTRUCTIONS FROM YOUR LOCAL EMERGENCY OFFICIALS.
- * DO NOT GO TO THE COAST TO OBSERVE THE TSUNAMI.

FORECASTS AND/OR OBSERVATIONS OF TSUNAMI ACTIVITY

FORECAST
START OF

PACIFEX 15 Handbook

SITE -----	OF TSUNAMI -----
* ALASKA	
SHEMYA	0809 AKDT MAR 25
ADAK	0910 AKDT MAR 25
UNALASKA	1014 AKDT MAR 25
SAINT PAUL	1025 AKDT MAR 25
SAND POINT	1057 AKDT MAR 25
COLD BAY	1129 AKDT MAR 25
KODIAK	1151 AKDT MAR 25
SEWARD	1216 AKDT MAR 25
ELFIN COVE	1217 AKDT MAR 25
YAKUTAT	1225 AKDT MAR 25
SITKA	1225 AKDT MAR 25
VALDEZ	1235 AKDT MAR 25
CORDOVA	1245 AKDT MAR 25
HOMER	1308 AKDT MAR 25
CRAIG	1326 AKDT MAR 25
* BRITISH COLUMBIA	
LANGARA	1335 PDT MAR 25
TOFINO	1458 PDT MAR 25
* OREGON	
PORT ORFORD	1508 PDT MAR 25
CHARLESTON	1515 PDT MAR 25
BROOKINGS	1519 PDT MAR 25
SEASIDE	1523 PDT MAR 25
NEWPORT	1525 PDT MAR 25
* WASHINGTON	
NEAH BAY	1510 PDT MAR 25
LONG BEACH	1514 PDT MAR 25
MOCLIPS	1519 PDT MAR 25
WESTPORT	1525 PDT MAR 25
PORT ANGELES	1548 PDT MAR 25
PORT TOWNSEND	1615 PDT MAR 25
* CALIFORNIA	
FORT BRAGG	1521 PDT MAR 25
CRESCENT CITY	1523 PDT MAR 25
MONTEREY	1544 PDT MAR 25
PORT SAN LUIS	1604 PDT MAR 25
SAN FRANCISCO	1608 PDT MAR 25
SANTA BARBARA	1617 PDT MAR 25
LOS ANGELES HARB	1633 PDT MAR 25
NEWPORT BEACH	1640 PDT MAR 25
OCEANSIDE	1643 PDT MAR 25
LA JOLLA	1643 PDT MAR 25

ADDITIONAL OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

SITE -----	TIME OF MEASUREMENT -----	OBSERVED MAX TSUNAMI HEIGHT -----
PETROPAVLOVSK RUSSIA	1551 UTC 03-25	03.5FT

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

PACIFEX 15 Handbook

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE 8.6
* ORIGIN TIME 0700 AKDT MAR 25 2015
0800 PDT MAR 25 2015
1500 UTC MAR 25 2015
* COORDINATES 53.5 NORTH 162.0 EAST
* DEPTH 19 MILES
* LOCATION 195 MILES SW OF BERING I. KOMANDORSKI
145 MILES NE OF PETROPAVLOVSK KAMCHATKA

NEXT UPDATE AND ADDITIONAL INFORMATION

* THIS MESSAGE WILL BE UPDATED WITHIN 60 MINUTES.

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

* PACIFIC COASTAL RESIDENTS OUTSIDE CALIFORNIA... OREGON... WASHINGTON... BRITISH COLUMBIA AND ALASKA SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES AT PTWC.WEATHER.GOV.

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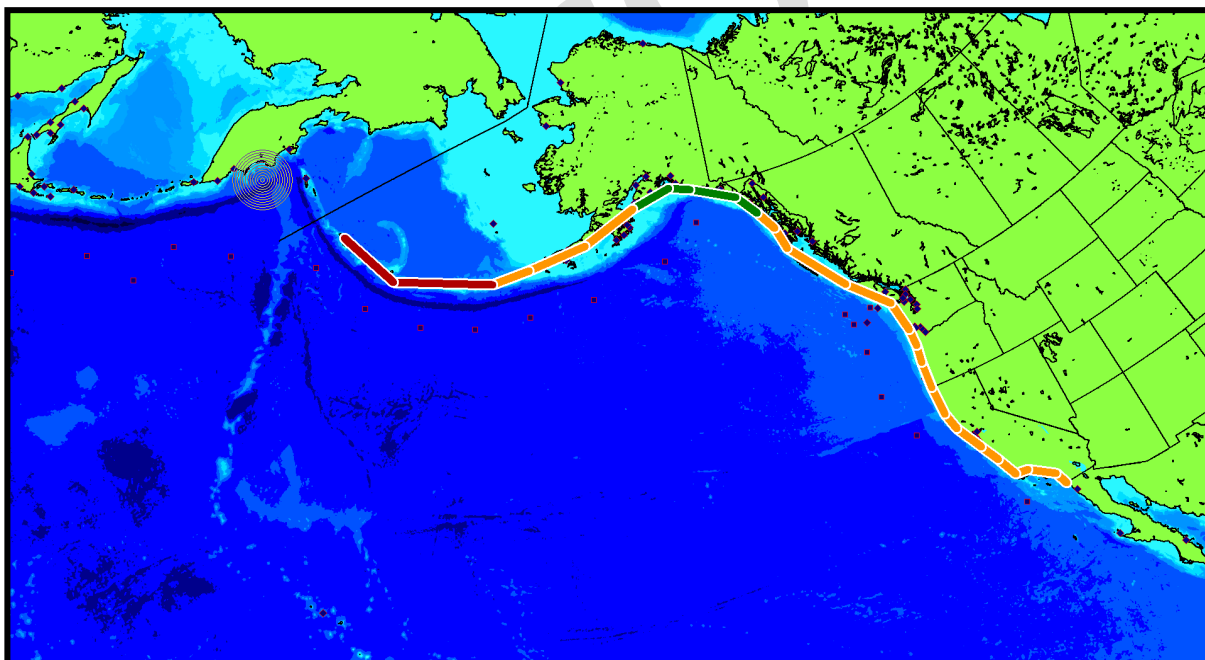


Figure D3: Warning/Advisory areas for Bulletin 4 (red is warning, orange is advisory, and green is no threat).

NTWC Bulletin #4

WEAK51 PAAQ 251704
TSUAK1

BULLETIN
PUBLIC TSUNAMI MESSAGE NUMBER 4
NWS NATIONAL TSUNAMI WARNING CENTER PALMER AK

PACIFEX 15 Handbook

1004 AM PDT WED MAR 25 2015

UPDATES

THIS MESSAGE CONTAINS NEW OBSERVATIONS.
THIS MESSAGE MODIFIES THE ALERT AREAS.
THIS MESSAGE CONTAINS REVISED FORECAST INFORMATION.

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

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

WARNINGS/ADVISORIES/WATCHES - UPDATED

TSUNAMI WARNING IN EFFECT FOR...

- * THE COASTAL AREAS OF ALASKA FROM NIKOLSKI ALASKA TO ATTU ALASKA

TSUNAMI ADVISORY IN EFFECT FOR...

- * THE COASTAL AREAS OF CALIFORNIA - OREGON - WASHINGTON - BRITISH COLUMBIA AND ALASKA FROM THE CAL./MEXICO BORDER TO SALISBURY SOUND ALASKA
- * THE COASTAL AREAS OF ALASKA FROM KENNEDY ENTRANCE ALASKA /WHICH IS LOCATED 40 MILES SW OF HOMER/ TO CHIGNIK BAY ALASKA
- * THE COASTAL AREAS OF ALASKA FROM CHIGNIK BAY ALASKA TO NIKOLSKI ALASKA

CANCELLATIONS

- * THE TSUNAMI WATCH IS CANCELED FOR THE COASTAL AREAS OF ALASKA FROM SALISBURY SOUND ALASKA TO KENNEDY ENTRANCE ALASKA /WHICH IS LOCATED 40 MILES SW OF HOMER/

FOR OTHER US AND CANADIAN PACIFIC COASTS IN NORTH AMERICA - THERE IS NO TSUNAMI THREAT.

IMPACTS FOR TSUNAMI WARNING AREAS

- * WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS ARE POSSIBLE AND MAY CONTINUE FOR MANY HOURS AFTER TSUNAMI ARRIVAL.
- * THE FIRST WAVE MAY NOT BE THE LARGEST.

IMPACTS FOR TSUNAMI ADVISORY AREAS

- * A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS

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TO PERSONS IN OR VERY NEAR THE WATER IS EXPECTED.

- * CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY CONTINUE FOR MANY HOURS AFTER THE TSUNAMI ARRIVAL.
- * THE FIRST WAVE MAY NOT BE THE LARGEST.

RECOMMENDED ACTIONS - UPDATED

- * IF YOU ARE IN A WARNING AREA - MOVE INLAND TO HIGHER GROUND.
- * IF YOU ARE IN AN ADVISORY AREA - MOVE OFF THE BEACH AND OUT OF HARBORS AND MARINAS. WIDESPREAD INUNDATION OF LAND IS NOT EXPECTED FOR ADVISORY AREAS.
- * BE ALERT TO INSTRUCTIONS FROM YOUR LOCAL EMERGENCY OFFICIALS.
- * DO NOT GO TO THE COAST TO OBSERVE THE TSUNAMI.
- * DO NOT RETURN TO THE COAST UNTIL LOCAL EMERGENCY OFFICIALS INDICATE IT IS SAFE TO DO SO.

FORECASTS AND/OR OBSERVATIONS OF TSUNAMI ACTIVITY

SITE	FORECAST START OF OF TSUNAMI	FORECAST TSUNAMI DURATION	FORECAST MAX TSUNAMI HEIGHT
* ALASKA			
SHEMYA	0809 AKDT MAR 25	36 HRS	3.7- 6.7FT
ADAK	0910 AKDT MAR 25	24 HRS	1.8- 3.4FT
UNALASKA	1014 AKDT MAR 25		0.7- 1.3FT
SAINT PAUL	1025 AKDT MAR 25	20 HRS	1.5- 2.8FT
SAND POINT	1057 AKDT MAR 25		LESS THAN 1FT
COLD BAY	1129 AKDT MAR 25		LESS THAN 1FT
KODIAK	1151 AKDT MAR 25		LESS THAN 1FT
SITKA	1225 AKDT MAR 25		LESS THAN 1FT
CRAIG	1326 AKDT MAR 25		
* BRITISH COLUMBIA			
LANGARA	1335 PDT MAR 25		LESS THAN 1FT
TOFINO	1458 PDT MAR 25		LESS THAN 1FT
* OREGON			
PORT ORFORD	1508 PDT MAR 25	15 HRS	1.4- 2.6FT
CHARLESTON	1515 PDT MAR 25		LESS THAN 1FT
BROOKINGS	1519 PDT MAR 25	15 HRS	0.8- 1.6FT
SEASIDE	1523 PDT MAR 25		
NEWPORT	1525 PDT MAR 25		
* WASHINGTON			
NEAH BAY	1510 PDT MAR 25		LESS THAN 1FT
LONG BEACH	1514 PDT MAR 25		LESS THAN 1FT
MOCLIPS	1519 PDT MAR 25		LESS THAN 1FT
WESTPORT	1525 PDT MAR 25		LESS THAN 1FT
PORT ANGELES	1548 PDT MAR 25		LESS THAN 1FT
PORT TOWNSEND	1615 PDT MAR 25		LESS THAN 1FT

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* CALIFORNIA

FORT BRAGG	1521	PDT	MAR 25		LESS THAN 1FT
CRESCENT CITY	1523	PDT	MAR 25	24 HRS	2.1- 4.0FT
MONTEREY	1544	PDT	MAR 25		LESS THAN 1FT
PORT SAN LUIS	1604	PDT	MAR 25	15 HRS	1.8- 3.7FT
SAN FRANCISCO	1608	PDT	MAR 25		LESS THAN 1FT
SANTA BARBARA	1617	PDT	MAR 25		LESS THAN 1FT
LOS ANGELES HARB	1633	PDT	MAR 25		LESS THAN 1FT
NEWPORT BEACH	1640	PDT	MAR 25		LESS THAN 1FT
OCEANSIDE	1643	PDT	MAR 25		LESS THAN 1FT
LA JOLLA	1643	PDT	MAR 25		LESS THAN 1FT

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

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

ADDITIONAL OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

SITE	TIME OF MEASUREMENT	OBSERVED MAX TSUNAMI HEIGHT
PETROPAVLOVSK RUSSIA	1551 UTC 03-25	03.5FT
SHEMYA AK	1635 UTC 03-25	02.9FT
ADAK AK	1645 UTC 03-25	01.6FT
ATKA AK	1652 UTC 03-25	02.3FT

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

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE 8.6

* ORIGIN TIME 0700 AKDT MAR 25 2015
0800 PDT MAR 25 2015
1500 UTC MAR 25 2015

* COORDINATES 53.5 NORTH 162.0 EAST

* DEPTH 19 MILES

* LOCATION 195 MILES SW OF BERING I. KOMANDORSKI
145 MILES NE OF PETROPAVLOVSK KAMCHATKA

NEXT UPDATE AND ADDITIONAL INFORMATION

- * THIS MESSAGE WILL BE UPDATED WITHIN 60 MINUTES.
- * REFER TO THE INTERNET SITE NTWC.ARH.NOAA.GOV FOR MORE INFORMATION.
- * PACIFIC COASTAL RESIDENTS OUTSIDE CALIFORNIA... OREGON... WASHINGTON... BRITISH COLUMBIA AND ALASKA SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES AT PTWC.WEATHER.GOV.

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NTWC Bulletin #5

PACIFEX 15 Handbook

WEAK51 PAAQ 251804
TSUAK1

BULLETIN
PUBLIC TSUNAMI MESSAGE NUMBER 5
NWS NATIONAL TSUNAMI WARNING CENTER PALMER AK
1104 AM PDT WED MAR 25 2015

UPDATES

THIS MESSAGE CONTAINS NEW OBSERVATIONS.

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

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

WARNINGS/ADVISORIES/WATCHES

TSUNAMI WARNING IN EFFECT FOR...

- * THE COASTAL AREAS OF ALASKA FROM NIKOLSKI ALASKA TO ATTU ALASKA

TSUNAMI ADVISORY IN EFFECT FOR...

- * THE COASTAL AREAS OF CALIFORNIA - OREGON - WASHINGTON - BRITISH COLUMBIA AND ALASKA FROM THE CAL./MEXICO BORDER TO SALISBURY SOUND ALASKA
- * THE COASTAL AREAS OF ALASKA FROM KENNEDY ENTRANCE ALASKA /WHICH IS LOCATED 40 MILES SW OF HOMER/ TO NIKOLSKI ALASKA

FOR OTHER US AND CANADIAN PACIFIC COASTS IN NORTH AMERICA - THERE IS NO TSUNAMI THREAT.

IMPACTS FOR TSUNAMI WARNING AREAS

- * WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS ARE POSSIBLE AND MAY CONTINUE FOR MANY HOURS AFTER TSUNAMI ARRIVAL.
- * THE FIRST WAVE MAY NOT BE THE LARGEST.

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.

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RECOMMENDED ACTIONS

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

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

- * BE ALERT TO INSTRUCTIONS FROM YOUR LOCAL EMERGENCY OFFICIALS.

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

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

FORECASTS AND/OR OBSERVATIONS OF TSUNAMI ACTIVITY

SITE	FORECAST START OF OF TSUNAMI	FORECAST TSUNAMI DURATION	FORECAST MAX TSUNAMI HEIGHT
* ALASKA			
ADAK	0910 AKDT MAR 25	24 HRS	1.8- 3.4FT
UNALASKA	1014 AKDT MAR 25		0.7- 1.3FT
SAINT PAUL	1025 AKDT MAR 25	20 HRS	1.5- 2.8FT
SAND POINT	1057 AKDT MAR 25		LESS THAN 1FT
COLD BAY	1129 AKDT MAR 25		LESS THAN 1FT
KODIAK	1151 AKDT MAR 25		LESS THAN 1FT
SITKA	1225 AKDT MAR 25		LESS THAN 1FT
CRAIG	1326 AKDT MAR 25		
* BRITISH COLUMBIA			
LANGARA	1335 PDT MAR 25		LESS THAN 1FT
TOFINO	1458 PDT MAR 25		LESS THAN 1FT
* OREGON			
PORT ORFORD	1508 PDT MAR 25	15 HRS	1.4- 2.6FT
CHARLESTON	1515 PDT MAR 25		LESS THAN 1FT
BROOKINGS	1519 PDT MAR 25	15 HRS	0.8- 1.6FT
SEASIDE	1523 PDT MAR 25		
NEWPORT	1525 PDT MAR 25		
* WASHINGTON			
NEAH BAY	1510 PDT MAR 25		LESS THAN 1FT
LONG BEACH	1514 PDT MAR 25		LESS THAN 1FT
MOCLIPS	1519 PDT MAR 25		LESS THAN 1FT
WESTPORT	1525 PDT MAR 25		LESS THAN 1FT
PORT ANGELES	1548 PDT MAR 25		LESS THAN 1FT
PORT TOWNSEND	1615 PDT MAR 25		LESS THAN 1FT
* CALIFORNIA			
FORT BRAGG	1521 PDT MAR 25		LESS THAN 1FT
CRESCENT CITY	1523 PDT MAR 25	24 HRS	2.1- 4.0FT
MONTEREY	1544 PDT MAR 25		LESS THAN 1FT
PORT SAN LUIS	1604 PDT MAR 25	15 HRS	1.8- 3.7FT
SAN FRANCISCO	1608 PDT MAR 25		LESS THAN 1FT
SANTA BARBARA	1617 PDT MAR 25		LESS THAN 1FT

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LOS ANGELES HARB	1633	PDT	MAR 25	LESS THAN 1FT
NEWPORT BEACH	1640	PDT	MAR 25	LESS THAN 1FT
OCEANSIDE	1643	PDT	MAR 25	LESS THAN 1FT
LA JOLLA	1643	PDT	MAR 25	LESS THAN 1FT

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

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

ADDITIONAL OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

SITE	TIME OF MEASUREMENT	OBSERVED MAX TSUNAMI HEIGHT
PETROPAVLOVSK RUSSIA	1733 UTC 03-25	05.2FT
SHEMYA AK	1725 UTC 03-25	04.2FT
ADAK AK	1715 UTC 03-25	02.8FT
ATKA AK	1734 UTC 03-25	02.7FT
NIKOLSKI AK	1758 UTC 03-25	02.5FT

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

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE 8.6
* ORIGIN TIME 0700 AKDT MAR 25 2015
0800 PDT MAR 25 2015
1500 UTC MAR 25 2015
* COORDINATES 53.5 NORTH 162.0 EAST
* DEPTH 19 MILES
* LOCATION 195 MILES SW OF BERING I. KOMANDORSKI
145 MILES NE OF PETROPAVLOVSK KAMCHATKA

NEXT UPDATE AND ADDITIONAL INFORMATION

- * THIS MESSAGE WILL BE UPDATED WITHIN 60 MINUTES.
- * REFER TO THE INTERNET SITE NTWC.ARH.NOAA.GOV FOR MORE INFORMATION.
- * PACIFIC COASTAL RESIDENTS OUTSIDE CALIFORNIA... OREGON... WASHINGTON... BRITISH COLUMBIA AND ALASKA SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES AT PTWC.WEATHER.GOV.

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NTWC Bulletin #6

WEAK51 PAAQ 251900
TSUAK1

BULLETIN
PUBLIC TSUNAMI MESSAGE NUMBER 6
NWS NATIONAL TSUNAMI WARNING CENTER PALMER AK
1200 PM PDT WED MAR 25 2015

PACIFEX 15 Handbook

UPDATES

THIS MESSAGE CONTAINS NEW OBSERVATIONS.

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

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

WARNINGS/ADVISORIES/WATCHES

TSUNAMI WARNING IN EFFECT FOR...

- * THE COASTAL AREAS OF ALASKA FROM NIKOLSKI ALASKA TO ATTU ALASKA

TSUNAMI ADVISORY IN EFFECT FOR...

- * THE COASTAL AREAS OF CALIFORNIA - OREGON - WASHINGTON - BRITISH COLUMBIA AND ALASKA FROM THE CAL./MEXICO BORDER TO SALISBURY SOUND ALASKA
- * THE COASTAL AREAS OF ALASKA FROM KENNEDY ENTRANCE ALASKA /WHICH IS LOCATED 40 MILES SW OF HOMER/ TO NIKOLSKI ALASKA

FOR OTHER US AND CANADIAN PACIFIC COASTS IN NORTH AMERICA - THERE IS NO TSUNAMI THREAT.

IMPACTS FOR TSUNAMI WARNING AREAS

- * WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL CURRENTS ARE POSSIBLE AND MAY CONTINUE FOR MANY HOURS AFTER TSUNAMI ARRIVAL.
- * THE FIRST WAVE MAY NOT BE THE LARGEST.

IMPACTS FOR TSUNAMI ADVISORY AREAS

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

RECOMMENDED ACTIONS

- * IF YOU ARE IN A WARNING AREA - MOVE INLAND TO HIGHER GROUND.
- * IF YOU ARE IN AN ADVISORY AREA - MOVE OFF THE BEACH AND OUT OF HARBORS AND MARINAS. WIDESPREAD INUNDATION OF LAND IS NOT

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EXPECTED FOR ADVISORY AREAS.

* BE ALERT TO INSTRUCTIONS FROM YOUR LOCAL EMERGENCY OFFICIALS.

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

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

FORECASTS AND/OR OBSERVATIONS OF TSUNAMI ACTIVITY

SITE	FORECAST START OF OF TSUNAMI	FORECAST TSUNAMI DURATION	FORECAST MAX TSUNAMI HEIGHT
* ALASKA			
UNALASKA	1014 AKDT MAR 25		0.7- 1.3FT
SAINT PAUL	1025 AKDT MAR 25	20 HRS	1.5- 2.8FT
SAND POINT	1057 AKDT MAR 25		LESS THAN 1FT
COLD BAY	1129 AKDT MAR 25		LESS THAN 1FT
KODIAK	1151 AKDT MAR 25		LESS THAN 1FT
SITKA	1225 AKDT MAR 25		LESS THAN 1FT
CRAIG	1326 AKDT MAR 25		
* BRITISH COLUMBIA			
LANGARA	1335 PDT MAR 25		LESS THAN 1FT
TOFINO	1458 PDT MAR 25		LESS THAN 1FT
* OREGON			
PORT ORFORD	1508 PDT MAR 25	15 HRS	1.4- 2.6FT
CHARLESTON	1515 PDT MAR 25		LESS THAN 1FT
BROOKINGS	1519 PDT MAR 25	15 HRS	0.8- 1.6FT
SEASIDE	1523 PDT MAR 25		
NEWPORT	1525 PDT MAR 25		
* WASHINGTON			
NEAH BAY	1510 PDT MAR 25		LESS THAN 1FT
LONG BEACH	1514 PDT MAR 25		LESS THAN 1FT
MOCLIPS	1519 PDT MAR 25		LESS THAN 1FT
WESTPORT	1525 PDT MAR 25		LESS THAN 1FT
PORT ANGELES	1548 PDT MAR 25		LESS THAN 1FT
PORT TOWNSEND	1615 PDT MAR 25		LESS THAN 1FT
* CALIFORNIA			
FORT BRAGG	1521 PDT MAR 25		LESS THAN 1FT
CRESCENT CITY	1523 PDT MAR 25	24 HRS	2.1- 4.0FT
MONTEREY	1544 PDT MAR 25		LESS THAN 1FT
PORT SAN LUIS	1604 PDT MAR 25	15 HRS	1.8- 3.7FT
SAN FRANCISCO	1608 PDT MAR 25		LESS THAN 1FT
SANTA BARBARA	1617 PDT MAR 25		LESS THAN 1FT
LOS ANGELES HARB	1633 PDT MAR 25		LESS THAN 1FT
NEWPORT BEACH	1640 PDT MAR 25		LESS THAN 1FT
OCEANSIDE	1643 PDT MAR 25		LESS THAN 1FT
LA JOLLA	1643 PDT MAR 25		LESS THAN 1FT

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

FORECAST TSUNAMI DURATION IS THE APPROXIMATE LENGTH OF TIME WHICH

PACIFEX 15 Handbook

THE TSUNAMI MAY PRODUCE DANGEROUS CURRENTS AND WAVE ACTIVITY.

ADDITIONAL OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

SITE	TIME OF MEASUREMENT	OBSERVED MAX TSUNAMI HEIGHT
PETROPAVLOVSK RUSSIA	1733 UTC 03-25	05.2FT
SHEMYA AK	1725 UTC 03-25	04.2FT
ADAK AK	1715 UTC 03-25	02.8FT
ATKA AK	1734 UTC 03-25	02.7FT
NIKOLSKI AK	1830 UTC 03-25	03.0FT
UNALASKA AK	1855 UTC 03-25	00.4FT

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

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE 8.6
* ORIGIN TIME 0700 AKDT MAR 25 2015
0800 PDT MAR 25 2015
1500 UTC MAR 25 2015
* COORDINATES 53.5 NORTH 162.0 EAST
* DEPTH 19 MILES
* LOCATION 195 MILES SW OF BERING I. KOMANDORSKI
145 MILES NE OF PETROPAVLOVSK KAMCHATKA

NEXT UPDATE AND ADDITIONAL INFORMATION

- * THIS MESSAGE WILL BE UPDATED WITHIN 60 MINUTES.
- * REFER TO THE INTERNET SITE NTWC.ARH.NOAA.GOV FOR MORE INFORMATION.
- * PACIFIC COASTAL RESIDENTS OUTSIDE CALIFORNIA... OREGON... WASHINGTON... BRITISH COLUMBIA AND ALASKA SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES AT PTWC.WEATHER.GOV.

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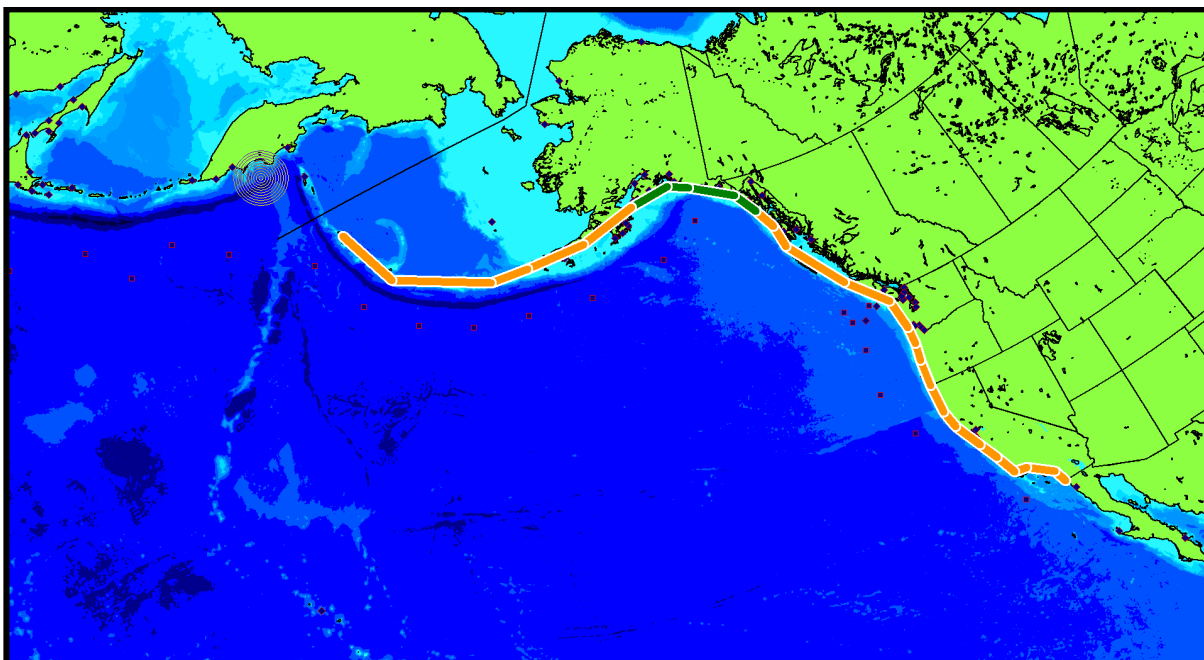


Figure D4: Warning/Advisory areas for Bulletin 7 (orange is advisory and green is no threat).

NTWC Bulletin #7

WEAK51 PAAQ 252003
TSUAK1

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

UPDATES

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

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

WARNINGS/ADVISORIES/WATCHES - UPDATED

TSUNAMI ADVISORY IN EFFECT FOR...

- * THE COASTAL AREAS OF CALIFORNIA - OREGON - WASHINGTON - BRITISH COLUMBIA AND ALASKA FROM THE CAL./MEXICO BORDER TO SALISBURY SOUND ALASKA
- * THE COASTAL AREAS OF ALASKA FROM KENNEDY ENTRANCE ALASKA /WHICH IS LOCATED 40 MILES SW OF HOMER/ TO NIKOLSKI ALASKA
- * THE COASTAL AREAS OF ALASKA FROM NIKOLSKI ALASKA TO ATTU ALASKA

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FOR OTHER US AND CANADIAN PACIFIC COASTS IN NORTH AMERICA -
THERE IS NO TSUNAMI THREAT.

IMPACTS FOR TSUNAMI ADVISORY AREAS

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

RECOMMENDED ACTIONS - UPDATED

- * IF YOU ARE IN AN ADVISORY AREA - MOVE OFF THE BEACH AND OUT OF HARBORS AND MARINAS. WIDESPREAD INUNDATION OF LAND IS NOT EXPECTED FOR ADVISORY AREAS.
- * BE ALERT TO INSTRUCTIONS FROM YOUR LOCAL EMERGENCY OFFICIALS.
- * DO NOT GO TO THE COAST TO OBSERVE THE TSUNAMI.
- * DO NOT RETURN TO THE COAST UNTIL LOCAL EMERGENCY OFFICIALS INDICATE IT IS SAFE TO DO SO.

FORECASTS AND/OR OBSERVATIONS OF TSUNAMI ACTIVITY

SITE	FORECAST START OF OF TSUNAMI	FORECAST TSUNAMI DURATION	FORECAST MAX TSUNAMI HEIGHT
* ALASKA			
COLD BAY	1129 AKDT MAR 25		LESS THAN 1FT
KODIAK	1151 AKDT MAR 25		LESS THAN 1FT
SITKA	1225 AKDT MAR 25		LESS THAN 1FT
CRAIG	1326 AKDT MAR 25		
* BRITISH COLUMBIA			
LANGARA	1335 PDT MAR 25		LESS THAN 1FT
TOFINO	1458 PDT MAR 25		LESS THAN 1FT
* OREGON			
PORT ORFORD	1508 PDT MAR 25	15 HRS	1.4- 2.6FT
CHARLESTON	1515 PDT MAR 25		LESS THAN 1FT
BROOKINGS	1519 PDT MAR 25	15 HRS	0.8- 1.6FT
SEASIDE	1523 PDT MAR 25		
NEWPORT	1525 PDT MAR 25		
* WASHINGTON			
NEAH BAY	1510 PDT MAR 25		LESS THAN 1FT
LONG BEACH	1514 PDT MAR 25		LESS THAN 1FT
MOCLIPS	1519 PDT MAR 25		LESS THAN 1FT
WESTPORT	1525 PDT MAR 25		LESS THAN 1FT
PORT ANGELES	1548 PDT MAR 25		LESS THAN 1FT
PORT TOWNSEND	1615 PDT MAR 25		LESS THAN 1FT

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* CALIFORNIA

FORT BRAGG	1521	PDT	MAR 25		LESS THAN 1FT
CRESCENT CITY	1523	PDT	MAR 25	24 HRS	2.1- 4.0FT
MONTEREY	1544	PDT	MAR 25		LESS THAN 1FT
PORT SAN LUIS	1604	PDT	MAR 25	15 HRS	1.8- 3.7FT
SAN FRANCISCO	1608	PDT	MAR 25		LESS THAN 1FT
SANTA BARBARA	1617	PDT	MAR 25		LESS THAN 1FT
LOS ANGELES HARB	1633	PDT	MAR 25		LESS THAN 1FT
NEWPORT BEACH	1640	PDT	MAR 25		LESS THAN 1FT
OCEANSIDE	1643	PDT	MAR 25		LESS THAN 1FT
LA JOLLA	1643	PDT	MAR 25		LESS THAN 1FT

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

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ADDITIONAL OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

SITE	TIME OF MEASUREMENT	OBSERVED MAX TSUNAMI HEIGHT
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SHEMYA AK	1725 UTC 03-25	04.2FT
ADAK AK	1715 UTC 03-25	02.8FT
ATKA AK	1814 UTC 03-25	02.8FT
NIKOLSKI AK	1928 UTC 03-25	03.7FT
UNALASKA AK	1935 UTC 03-25	01.0FT
SAINT PAUL AK	1958 UTC 03-25	02.1FT

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

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE 8.6

* ORIGIN TIME 0700 AKDT MAR 25 2015
0800 PDT MAR 25 2015
1500 UTC MAR 25 2015

* COORDINATES 53.5 NORTH 162.0 EAST

* DEPTH 19 MILES

* LOCATION 195 MILES SW OF BERING I. KOMANDORSKI
145 MILES NE OF PETROPAVLOVSK KAMCHATKA

NEXT UPDATE AND ADDITIONAL INFORMATION

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NTWC Bulletin #8

WEAK51 PAAQ 252100
TSUAK1

BULLETIN
PUBLIC TSUNAMI MESSAGE NUMBER 8
NWS NATIONAL TSUNAMI WARNING CENTER PALMER AK
200 PM PDT WED MAR 25 2015

UPDATES

THIS MESSAGE CONTAINS NEW OBSERVATIONS.

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

WARNINGS/ADVISORIES/WATCHES

TSUNAMI ADVISORY IN EFFECT FOR...

- * THE COASTAL AREAS OF CALIFORNIA - OREGON - WASHINGTON - BRITISH COLUMBIA AND ALASKA FROM THE CAL./MEXICO BORDER TO SALISBURY SOUND ALASKA
- * THE COASTAL AREAS OF ALASKA FROM KENNEDY ENTRANCE ALASKA /WHICH IS LOCATED 40 MILES SW OF HOMER/ TO ATTU ALASKA

FOR OTHER US AND CANADIAN PACIFIC COASTS IN NORTH AMERICA - THERE IS NO TSUNAMI THREAT.

IMPACTS FOR TSUNAMI ADVISORY AREAS

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

RECOMMENDED ACTIONS

- * IF YOU ARE IN AN ADVISORY AREA - MOVE OFF THE BEACH AND OUT OF HARBORS AND MARINAS. WIDESPREAD INUNDATION OF LAND IS NOT EXPECTED FOR ADVISORY AREAS.
- * BE ALERT TO INSTRUCTIONS FROM YOUR LOCAL EMERGENCY OFFICIALS.
- * DO NOT GO TO THE COAST TO OBSERVE THE TSUNAMI.
- * DO NOT RETURN TO THE COAST UNTIL LOCAL EMERGENCY OFFICIALS INDICATE IT IS SAFE TO DO SO.

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FORECASTS AND/OR OBSERVATIONS OF TSUNAMI ACTIVITY

SITE	FORECAST START OF OF TSUNAMI	FORECAST TSUNAMI DURATION	FORECAST MAX TSUNAMI HEIGHT
* ALASKA			
SITKA	1225 AKDT MAR 25		LESS THAN 1FT
CRAIG	1326 AKDT MAR 25		
* BRITISH COLUMBIA			
LANGARA	1335 PDT MAR 25		LESS THAN 1FT
TOFINO	1458 PDT MAR 25		LESS THAN 1FT
* OREGON			
PORT ORFORD	1508 PDT MAR 25	15 HRS	1.4- 2.6FT
CHARLESTON	1515 PDT MAR 25		LESS THAN 1FT
BROOKINGS	1519 PDT MAR 25	15 HRS	0.8- 1.6FT
SEASIDE	1523 PDT MAR 25		
NEWPORT	1525 PDT MAR 25		
* WASHINGTON			
NEAH BAY	1510 PDT MAR 25		LESS THAN 1FT
LONG BEACH	1514 PDT MAR 25		LESS THAN 1FT
MOCLIPS	1519 PDT MAR 25		LESS THAN 1FT
WESTPORT	1525 PDT MAR 25		LESS THAN 1FT
PORT ANGELES	1548 PDT MAR 25		LESS THAN 1FT
PORT TOWNSEND	1615 PDT MAR 25		LESS THAN 1FT
* CALIFORNIA			
FORT BRAGG	1521 PDT MAR 25		LESS THAN 1FT
CRESCENT CITY	1523 PDT MAR 25	24 HRS	2.1- 4.0FT
MONTEREY	1544 PDT MAR 25		LESS THAN 1FT
PORT SAN LUIS	1604 PDT MAR 25	15 HRS	1.8- 3.7FT
SAN FRANCISCO	1608 PDT MAR 25		LESS THAN 1FT
SANTA BARBARA	1617 PDT MAR 25		LESS THAN 1FT
LOS ANGELES HARB	1633 PDT MAR 25		LESS THAN 1FT
NEWPORT BEACH	1640 PDT MAR 25		LESS THAN 1FT
OCEANSIDE	1643 PDT MAR 25		LESS THAN 1FT
LA JOLLA	1643 PDT MAR 25		LESS THAN 1FT

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

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

ADDITIONAL OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

SITE	TIME OF MEASUREMENT	OBSERVED MAX TSUNAMI HEIGHT
PETROPAVLOVSK RUSSIA	1733 UTC 03-25	05.2FT
SHEMYA AK	1725 UTC 03-25	04.2FT
ADAK AK	1715 UTC 03-25	02.8FT
ATKA AK	1814 UTC 03-25	02.8FT
NIKOLSKI AK	1928 UTC 03-25	03.7FT

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UNALASKA AK	1935 UTC	03-25	01.0FT
SAINT PAUL AK	2055 UTC	03-25	02.3FT
SAND POINT AK	2030 UTC	03-25	00.5FT
KING COVE AK	2048 UTC	03-25	01.5FT
KODIAK AK	2052 UTC	03-25	00.4FT

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

PRELIMINARY EARTHQUAKE PARAMETERS

- * MAGNITUDE 8.6
- * ORIGIN TIME 0700 AKDT MAR 25 2015
0800 PDT MAR 25 2015
1500 UTC MAR 25 2015
- * COORDINATES 53.5 NORTH 162.0 EAST
- * DEPTH 19 MILES
- * LOCATION 195 MILES SW OF BERING I. KOMANDORSKI
145 MILES NE OF PETROPAVLOVSK KAMCHATKA

NEXT UPDATE AND ADDITIONAL INFORMATION

- * THIS MESSAGE WILL BE UPDATED WITHIN 60 MINUTES.
- * REFER TO THE INTERNET SITE NTWC.ARH.NOAA.GOV FOR MORE INFORMATION.
- * PACIFIC COASTAL RESIDENTS OUTSIDE CALIFORNIA... OREGON... WASHINGTON... BRITISH COLUMBIA AND ALASKA SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES AT PTWC.WEATHER.GOV.

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NTWC Bulletin #9

WEAK51 PAAQ 252201
TSUAK1

BULLETIN
PUBLIC TSUNAMI MESSAGE NUMBER 9
NWS NATIONAL TSUNAMI WARNING CENTER PALMER AK
301 PM PDT WED MAR 25 2015

UPDATES

THIS MESSAGE CONTAINS NEW OBSERVATIONS.

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

WARNINGS/ADVISORIES/WATCHES

TSUNAMI ADVISORY IN EFFECT FOR...

- * THE COASTAL AREAS OF CALIFORNIA - OREGON - WASHINGTON - BRITISH COLUMBIA AND ALASKA FROM THE CAL./MEXICO BORDER TO SALISBURY SOUND ALASKA

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- * THE COASTAL AREAS OF ALASKA FROM KENNEDY ENTRANCE ALASKA /WHICH IS LOCATED 40 MILES SW OF HOMER/ TO ATTU ALASKA

FOR OTHER US AND CANADIAN PACIFIC COASTS IN NORTH AMERICA - THERE IS NO TSUNAMI THREAT.

IMPACTS FOR TSUNAMI ADVISORY AREAS

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

RECOMMENDED ACTIONS

- * IF YOU ARE IN AN ADVISORY AREA - MOVE OFF THE BEACH AND OUT OF HARBORS AND MARINAS. WIDESPREAD INUNDATION OF LAND IS NOT EXPECTED FOR ADVISORY AREAS.
- * BE ALERT TO INSTRUCTIONS FROM YOUR LOCAL EMERGENCY OFFICIALS.
- * DO NOT GO TO THE COAST TO OBSERVE THE TSUNAMI.
- * DO NOT RETURN TO THE COAST UNTIL LOCAL EMERGENCY OFFICIALS INDICATE IT IS SAFE TO DO SO.

FORECASTS AND/OR OBSERVATIONS OF TSUNAMI ACTIVITY

SITE	FORECAST START OF OF TSUNAMI	FORECAST TSUNAMI DURATION	FORECAST MAX TSUNAMI HEIGHT
-----	-----	-----	-----
* ALASKA			
CRAIG	1326 AKDT MAR 25		
* BRITISH COLUMBIA			
LANGARA	1335 PDT MAR 25		LESS THAN 1FT
TOFINO	1458 PDT MAR 25		LESS THAN 1FT
* OREGON			
PORT ORFORD	1508 PDT MAR 25	15 HRS	1.4- 2.6FT
CHARLESTON	1515 PDT MAR 25		LESS THAN 1FT
BROOKINGS	1519 PDT MAR 25	15 HRS	0.8- 1.6FT
SEASIDE	1523 PDT MAR 25		
NEWPORT	1525 PDT MAR 25		
* WASHINGTON			
NEAH BAY	1510 PDT MAR 25		LESS THAN 1FT
LONG BEACH	1514 PDT MAR 25		LESS THAN 1FT
MOCLIPS	1519 PDT MAR 25		LESS THAN 1FT
WESTPORT	1525 PDT MAR 25		LESS THAN 1FT

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PORT ANGELES 1548 PDT MAR 25 LESS THAN 1FT
 PORT TOWNSEND 1615 PDT MAR 25 LESS THAN 1FT

* CALIFORNIA

FORT BRAGG 1521 PDT MAR 25 LESS THAN 1FT
 CRESCENT CITY 1523 PDT MAR 25 24 HRS 2.1- 4.0FT
 MONTEREY 1544 PDT MAR 25 LESS THAN 1FT
 PORT SAN LUIS 1604 PDT MAR 25 15 HRS 1.8- 3.7FT
 SAN FRANCISCO 1608 PDT MAR 25 LESS THAN 1FT
 SANTA BARBARA 1617 PDT MAR 25 LESS THAN 1FT
 LOS ANGELES HARB 1633 PDT MAR 25 LESS THAN 1FT
 NEWPORT BEACH 1640 PDT MAR 25 LESS THAN 1FT
 OCEANSIDE 1643 PDT MAR 25 LESS THAN 1FT
 LA JOLLA 1643 PDT MAR 25 LESS THAN 1FT

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

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

ADDITIONAL OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

SITE	TIME OF MEASUREMENT	OBSERVED MAX TSUNAMI HEIGHT
PETROPAVLOVSK RUSSIA	1733 UTC 03-25	05.2FT
SHEMYA AK	1725 UTC 03-25	04.2FT
ADAK AK	1715 UTC 03-25	02.8FT
ATKA AK	1814 UTC 03-25	02.8FT
NIKOLSKI AK	1928 UTC 03-25	03.7FT
UNALASKA AK	1935 UTC 03-25	01.0FT
SAINT PAUL AK	2055 UTC 03-25	02.3FT
SAND POINT AK	2110 UTC 03-25	00.9FT
KING COVE AK	2048 UTC 03-25	01.5FT
KODIAK AK	2052 UTC 03-25	00.4FT
SEWARD AK	2152 UTC 03-25	00.3FT
YAKUTAT AK	2130 UTC 03-25	00.4FT
SITKA AK	2145 UTC 03-25	00.7FT

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

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE 8.6
 * ORIGIN TIME 0700 AKDT MAR 25 2015
 0800 PDT MAR 25 2015
 1500 UTC MAR 25 2015
 * COORDINATES 53.5 NORTH 162.0 EAST
 * DEPTH 19 MILES
 * LOCATION 195 MILES SW OF BERING I. KOMANDORSKI
 145 MILES NE OF PETROPAVLOVSK KAMCHATKA

NEXT UPDATE AND ADDITIONAL INFORMATION

* THIS MESSAGE WILL BE UPDATED WITHIN 60 MINUTES.

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- * REFER TO THE INTERNET SITE NTWC.ARH.NOAA.GOV FOR MORE INFORMATION.
- * PACIFIC COASTAL RESIDENTS OUTSIDE CALIFORNIA... OREGON... WASHINGTON... BRITISH COLUMBIA AND ALASKA SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES AT PTWC.WEATHER.GOV.

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NTWC Bulletin #10

WEAK51 PAAQ 252300
TSUAK1

BULLETIN
PUBLIC TSUNAMI MESSAGE NUMBER 10
NWS NATIONAL TSUNAMI WARNING CENTER PALMER AK
400 PM PDT WED MAR 25 2015

UPDATES

THIS MESSAGE CONTAINS NEW OBSERVATIONS.

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

WARNINGS/ADVISORIES/WATCHES

TSUNAMI ADVISORY IN EFFECT FOR...

- * THE COASTAL AREAS OF CALIFORNIA - OREGON - WASHINGTON - BRITISH COLUMBIA AND ALASKA FROM THE CAL./MEXICO BORDER TO SALISBURY SOUND ALASKA
- * THE COASTAL AREAS OF ALASKA FROM KENNEDY ENTRANCE ALASKA /WHICH IS LOCATED 40 MILES SW OF HOMER/ TO ATTU ALASKA

FOR OTHER US AND CANADIAN PACIFIC COASTS IN NORTH AMERICA - THERE IS NO TSUNAMI THREAT.

IMPACTS FOR TSUNAMI ADVISORY AREAS

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

RECOMMENDED ACTIONS

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

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- * BE ALERT TO INSTRUCTIONS FROM YOUR LOCAL EMERGENCY OFFICIALS.
- * DO NOT GO TO THE COAST TO OBSERVE THE TSUNAMI.
- * DO NOT RETURN TO THE COAST UNTIL LOCAL EMERGENCY OFFICIALS INDICATE IT IS SAFE TO DO SO.

FORECASTS AND/OR OBSERVATIONS OF TSUNAMI ACTIVITY

SITE	FORECAST START OF OF TSUNAMI	FORECAST TSUNAMI DURATION	FORECAST MAX TSUNAMI HEIGHT
* OREGON			
PORT ORFORD	1508 PDT MAR 25	15 HRS	1.4- 2.6FT
CHARLESTON	1515 PDT MAR 25		LESS THAN 1FT
BROOKINGS	1519 PDT MAR 25	15 HRS	0.8- 1.6FT
SEASIDE	1523 PDT MAR 25		
NEWPORT	1525 PDT MAR 25		
* WASHINGTON			
NEAH BAY	1510 PDT MAR 25		LESS THAN 1FT
LONG BEACH	1514 PDT MAR 25		LESS THAN 1FT
MOCLIPS	1519 PDT MAR 25		LESS THAN 1FT
WESTPORT	1525 PDT MAR 25		LESS THAN 1FT
PORT ANGELES	1548 PDT MAR 25		LESS THAN 1FT
PORT TOWNSEND	1615 PDT MAR 25		LESS THAN 1FT
* CALIFORNIA			
FORT BRAGG	1521 PDT MAR 25		LESS THAN 1FT
CRESCENT CITY	1523 PDT MAR 25	24 HRS	2.1- 4.0FT
MONTEREY	1544 PDT MAR 25		LESS THAN 1FT
PORT SAN LUIS	1604 PDT MAR 25	15 HRS	1.8- 3.7FT
SAN FRANCISCO	1608 PDT MAR 25		LESS THAN 1FT
SANTA BARBARA	1617 PDT MAR 25		LESS THAN 1FT
LOS ANGELES HARB	1633 PDT MAR 25		LESS THAN 1FT
NEWPORT BEACH	1640 PDT MAR 25		LESS THAN 1FT
OCEANSIDE	1643 PDT MAR 25		LESS THAN 1FT
LA JOLLA	1643 PDT MAR 25		LESS THAN 1FT

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

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

ADDITIONAL OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

SITE	TIME OF MEASUREMENT	OBSERVED MAX TSUNAMI HEIGHT
PETROPAVLOVSK RUSSIA	1733 UTC 03-25	05.2FT
SHEMYA AK	1725 UTC 03-25	04.2FT
ADAK AK	1715 UTC 03-25	02.8FT
ATKA AK	1814 UTC 03-25	02.8FT
NIKOLSKI AK	1928 UTC 03-25	03.7FT
UNALASKA AK	1935 UTC 03-25	01.0FT

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SAINT PAUL AK	2055 UTC	03-25	02.3FT
SAND POINT AK	2110 UTC	03-25	00.9FT
KING COVE AK	2048 UTC	03-25	01.5FT
KODIAK AK	2052 UTC	03-25	00.4FT
SEWARD AK	2152 UTC	03-25	00.3FT
YAKUTAT AK	2130 UTC	03-25	00.4FT
SITKA AK	2145 UTC	03-25	00.7FT
LANGARA BC	2222 UTC	03-25	00.2FT
TOFINO BC	2234 UTC	03-25	00.9FT

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

PRELIMINARY EARTHQUAKE PARAMETERS

- * MAGNITUDE 8.6
- * ORIGIN TIME 0700 AKDT MAR 25 2015
0800 PDT MAR 25 2015
1500 UTC MAR 25 2015
- * COORDINATES 53.5 NORTH 162.0 EAST
- * DEPTH 19 MILES
- * LOCATION 195 MILES SW OF BERING I. KOMANDORSKI
145 MILES NE OF PETROPAVLOVSK KAMCHATKA

NEXT UPDATE AND ADDITIONAL INFORMATION

- * THIS MESSAGE WILL BE UPDATED WITHIN 60 MINUTES.
- * REFER TO THE INTERNET SITE NTWC.ARH.NOAA.GOV FOR MORE INFORMATION.
- * PACIFIC COASTAL RESIDENTS OUTSIDE CALIFORNIA... OREGON... WASHINGTON... BRITISH COLUMBIA AND ALASKA SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES AT PTWC.WEATHER.GOV.

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NTWC Bulletin #11

WEAK51 PAAQ 260005
TSUAK1

BULLETIN
PUBLIC TSUNAMI MESSAGE NUMBER 11
NWS NATIONAL TSUNAMI WARNING CENTER PALMER AK
505 PM PDT WED MAR 25 2015

UPDATES

THIS MESSAGE CONTAINS NEW OBSERVATIONS.

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

WARNINGS/ADVISORIES/WATCHES

TSUNAMI ADVISORY IN EFFECT FOR...

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- * THE COASTAL AREAS OF CALIFORNIA - OREGON - WASHINGTON - BRITISH COLUMBIA AND ALASKA FROM THE CAL./MEXICO BORDER TO SALISBURY SOUND ALASKA
- * THE COASTAL AREAS OF ALASKA FROM KENNEDY ENTRANCE ALASKA /WHICH IS LOCATED 40 MILES SW OF HOMER/ TO ATTU ALASKA

FOR OTHER US AND CANADIAN PACIFIC COASTS IN NORTH AMERICA - THERE IS NO TSUNAMI THREAT.

IMPACTS FOR TSUNAMI ADVISORY AREAS

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

RECOMMENDED ACTIONS

- * IF YOU ARE IN AN ADVISORY AREA - MOVE OFF THE BEACH AND OUT OF HARBORS AND MARINAS. WIDESPREAD INUNDATION OF LAND IS NOT EXPECTED FOR ADVISORY AREAS.
- * BE ALERT TO INSTRUCTIONS FROM YOUR LOCAL EMERGENCY OFFICIALS.
- * DO NOT GO TO THE COAST TO OBSERVE THE TSUNAMI.
- * DO NOT RETURN TO THE COAST UNTIL LOCAL EMERGENCY OFFICIALS INDICATE IT IS SAFE TO DO SO.

FORECASTS AND/OR OBSERVATIONS OF TSUNAMI ACTIVITY

SITE	FORECAST START OF OF TSUNAMI	FORECAST TSUNAMI DURATION	FORECAST MAX TSUNAMI HEIGHT
* WASHINGTON			
PORT TOWNSEND	1615 PDT MAR 25		LESS THAN 1FT
* CALIFORNIA			
PORT SAN LUIS	1604 PDT MAR 25	15 HRS	1.8- 3.7FT
SAN FRANCISCO	1608 PDT MAR 25		LESS THAN 1FT
SANTA BARBARA	1617 PDT MAR 25		LESS THAN 1FT
LOS ANGELES HARB	1633 PDT MAR 25		LESS THAN 1FT
NEWPORT BEACH	1640 PDT MAR 25		LESS THAN 1FT
OCEANSIDE	1643 PDT MAR 25		LESS THAN 1FT
LA JOLLA	1643 PDT MAR 25		LESS THAN 1FT

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

PACIFEX 15 Handbook

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

ADDITIONAL OBSERVATIONS OF TSUNAMI ACTIVITY - UPDATED

SITE	TIME OF MEASUREMENT	OBSERVED MAX TSUNAMI HEIGHT
PETROPAVLOVSK RUSSIA	1733 UTC 03-25	05.2FT
SHEMYA AK	1725 UTC 03-25	04.2FT
ADAK AK	1715 UTC 03-25	02.8FT
ATKA AK	1814 UTC 03-25	02.8FT
NIKOLSKI AK	1928 UTC 03-25	03.7FT
UNALASKA AK	1935 UTC 03-25	01.0FT
SAINT PAUL AK	2055 UTC 03-25	02.3FT
SAND POINT AK	2110 UTC 03-25	00.9FT
KING COVE AK	2048 UTC 03-25	01.5FT
KODIAK AK	2052 UTC 03-25	00.4FT
SEWARD AK	2152 UTC 03-25	00.3FT
YAKUTAT AK	2130 UTC 03-25	00.4FT
SITKA AK	2145 UTC 03-25	00.7FT
LANGARA BC	2222 UTC 03-25	00.2FT
TOFINO BC	2234 UTC 03-25	00.9FT
WESTPORT WA	2333 UTC 03-25	00.6FT
NEAH BAY WA	2347 UTC 03-25	00.2FT
CHARLESTON OR	2355 UTC 03-25	00.6FT
PORT ORFORD OR	2344 UTC 03-25	01.4FT
CRESCENT CITY CA	2356 UTC 03-25	02.3FT
HUMBOLDT BAY CA	2358 UTC 03-25	00.5FT
POINT ARENA CA	2345 UTC 03-25	01.2FT

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

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE 8.6
* ORIGIN TIME 0700 AKDT MAR 25 2015
0800 PDT MAR 25 2015
1500 UTC MAR 25 2015
* COORDINATES 53.5 NORTH 162.0 EAST
* DEPTH 19 MILES
* LOCATION 195 MILES SW OF BERING I. KOMANDORSKI
145 MILES NE OF PETROPAVLOVSK KAMCHATKA

NEXT UPDATE AND ADDITIONAL INFORMATION

- * THIS MESSAGE WILL BE UPDATED WITHIN 60 MINUTES.
- * REFER TO THE INTERNET SITE NTWC.ARH.NOAA.GOV FOR MORE INFORMATION.
- * PACIFIC COASTAL RESIDENTS OUTSIDE CALIFORNIA... OREGON... WASHINGTON... BRITISH COLUMBIA AND ALASKA SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES AT PTWC.WEATHER.GOV.

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NTWC Bulletin #12

WEAK51 PAAQ 260100
TSUAK1

BULLETIN
PUBLIC TSUNAMI MESSAGE NUMBER 12
NWS NATIONAL TSUNAMI WARNING CENTER PALMER AK
600 PM PDT WED MAR 25 2015

...THE TSUNAMI ADVISORY IS CANCELLED...

CANCELLATIONS

- * THE TSUNAMI ADVISORY IS CANCELED FOR THE COASTAL AREAS OF CALIFORNIA - OREGON - WASHINGTON - BRITISH COLUMBIA AND ALASKA FROM THE CAL./MEXICO BORDER TO SALISBURY SOUND ALASKA
- * THE TSUNAMI ADVISORY IS CANCELED FOR THE COASTAL AREAS OF ALASKA FROM KENNEDY ENTRANCE ALASKA /WHICH IS LOCATED 40 MILES SW OF HOMER/ TO ATTU ALASKA

IMPACTS - UPDATED

- * TSUNAMI ACTIVITY HAS SUBSIDED ALONG THE COASTS OF THE U.S. WEST COAST STATES... BRITISH COLUMBIA AND ALASKA.
- * 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

SITE	TIME OF MEASUREMENT	OBSERVED MAX TSUNAMI HEIGHT
PETROPAVLOVSK RUSSIA	1733 UTC 03-25	05.2FT
SHEMYA AK	1725 UTC 03-25	04.2FT
ADAK AK	1715 UTC 03-25	02.8FT
ATKA AK	1814 UTC 03-25	02.8FT
NIKOLSKI AK	1928 UTC 03-25	03.7FT
UNALASKA AK	1935 UTC 03-25	01.0FT
SAINT PAUL AK	2055 UTC 03-25	02.3FT
SAND POINT AK	2110 UTC 03-25	00.9FT
KING COVE AK	2048 UTC 03-25	01.5FT
KODIAK AK	2052 UTC 03-25	00.4FT
SEWARD AK	2152 UTC 03-25	00.3FT
YAKUTAT AK	2130 UTC 03-25	00.4FT
SITKA AK	2145 UTC 03-25	00.7FT

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LANGARA BC	2222 UTC	03-25	00.2FT
TOFINO BC	2234 UTC	03-25	00.9FT
WESTPORT WA	2333 UTC	03-25	00.6FT
NEAH BAY WA	2347 UTC	03-25	00.2FT
CHARLESTON OR	2355 UTC	03-25	00.6FT
PORT ORFORD OR	2344 UTC	03-25	01.4FT
CRESCENT CITY CA	0034 UTC	03-26	02.9FT
HUMBOLDT BAY CA	2358 UTC	03-25	00.5FT
POINT ARENA CA	0044 UTC	03-26	01.6FT
SAN FRANCISCO CA	0033 UTC	03-26	00.3FT
MONTEREY CA	0028 UTC	03-26	00.6FT
PORT SAN LUIS CA	0051 UTC	03-26	01.1FT
SANTA BARBARA CA	0058 UTC	03-26	01.0FT
SANTA MONICA CA	0052 UTC	03-26	00.9FT
LOS ANGELES CA	0054 UTC	03-26	00.6FT
LA JOLLA CA	0049 UTC	03-26	00.5FT
SAN DIEGO CA	0055 UTC	03-26	00.3FT

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

NEXT UPDATE AND ADDITIONAL INFORMATION

- * THIS WILL BE THE FINAL U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGE ISSUED FOR THIS EVENT.
- * REFER TO THE INTERNET SITE NTWC.ARH.NOAA.GOV FOR MORE INFORMATION.
- * PACIFIC COASTAL REGIONS OUTSIDE CALIFORNIA... OREGON... WASHINGTON... BRITISH COLUMBIA AND ALASKA SHOULD REFER TO THE PACIFIC TSUNAMI WARNING CENTER MESSAGES AT PTWC.WEATHER.GOV.

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PTWC International Message #1

ZCZC
WEPA40 PHEB 251505
TSUPAC

TSUNAMI MESSAGE NUMBER 1
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1505 UTC WED MAR 25 2015

...PTWC TSUNAMI THREAT MESSAGE...

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

THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE
UNESCO/IOC PACIFIC TSUNAMI WARNING AND MITIGATION SYSTEM 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 ****

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE 8.1
* ORIGIN TIME 1500 UTC MAR 25 2015
* COORDINATES 53.5 NORTH 162.0 EAST
* DEPTH 30 KM / 19 MILES
* LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.1 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 1500 UTC ON WEDNESDAY MARCH 25 2015.
- * BASED ON THE PRELIMINARY EARTHQUAKE PARAMETERS... WIDESPREAD HAZARDOUS TSUNAMI WAVES ARE POSSIBLE.

TSUNAMI THREAT FORECAST

- * HAZARDOUS TSUNAMI WAVES FROM THIS EARTHQUAKE ARE POSSIBLE WITHIN THE NEXT THREE HOURS ALONG SOME COASTS OF

RUSSIA AND JAPAN

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.

PACIFEX 15 Handbook

- * 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

- * ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITH AN ETA WITHIN THE NEXT SIX HOURS. 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)
UST KAMCHATSK	RUSSIA	56.1N 162.6E	1533 03/25
PETROPAVLOVSK	RUSSIA	53.2N 159.6E	1547 03/25
MEDNNY ISLAND	RUSSIA	54.7N 167.4E	1549 03/25
OSTROV KARAGINS	RUSSIA	58.8N 164.5E	1601 03/25
SIMUSHIR	RUSSIA	46.7N 151.8E	1619 03/25
SEVERO KURILSK	RUSSIA	50.8N 156.1E	1655 03/25
KUSHIRO	JAPAN	42.9N 144.3E	1713 03/25
HACHINOHE	JAPAN	40.5N 141.5E	1748 03/25
KATSUURA	JAPAN	35.1N 140.3E	1802 03/25
HACHIJO JIMA	JAPAN	33.1N 139.8E	1820 03/25
CHICHI JIMA	JAPAN	27.0N 142.3E	1846 03/25
MINAMITORISHIMA	JAPAN	24.3N 154.0E	1855 03/25
GASTELLO	RUSSIA	49.1N 143.0E	1901 03/25
MIDWAY ISLAND	MIDWAY ISLAND	28.2N 177.4W	1902 03/25
SHIMIZU	JAPAN	32.8N 133.0E	1929 03/25
SAPPORO	JAPAN	43.5N 141.0E	1930 03/25
WAKE ISLAND	WAKE ISLAND	19.3N 166.6E	1931 03/25
NOBEOKA	JAPAN	32.5N 131.8E	1933 03/25
NIIGATA	JAPAN	38.0N 139.0E	1950 03/25
VLADIVOSTOK	RUSSIA	42.8N 132.0E	2006 03/25
SAIPAN	NORTHERN MARIANA	15.3N 145.8E	2020 03/25
SINCHANG	DPR OF KOREA	40.1N 128.5E	2021 03/25
GUAM	GUAM	13.4N 144.7E	2042 03/25
UST KAHRYUZOVO	RUSSIA	57.1N 156.7E	2048 03/25
SHIMANE	JAPAN	35.8N 133.0E	2049 03/25
JOHNSTON ISLAND	JOHNSTON ISLAND	16.7N 169.5W	2055 03/25
VANINO	RUSSIA	49.0N 140.4E	2056 03/25
ENIWETOK	MARSHALL ISLANDS	11.4N 162.3E	2056 03/25
KWAJALEIN	MARSHALL ISLANDS	8.7N 167.7E	2103 03/25
OKINAWA	JAPAN	26.2N 127.8E	2104 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.

PACIFEX 15 Handbook

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 LOWER CASE-.
- * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.
- * COASTAL REGIONS OF HAWAII... AMERICAN SAMOA... GUAM... AND CNMI SHOULD REFER TO PACIFIC TSUNAMI WARNING CENTER MESSAGES SPECIFICALLY FOR THOSE PLACES THAT CAN BE FOUND AT PTWC.WEATHER.GOV.
- * COASTAL REGIONS OF CALIFORNIA... OREGON... WASHINGTON... BRITISH COLUMBIA AND ALASKA SHOULD ONLY REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT NTWC.ARH.NOAA.GOV.

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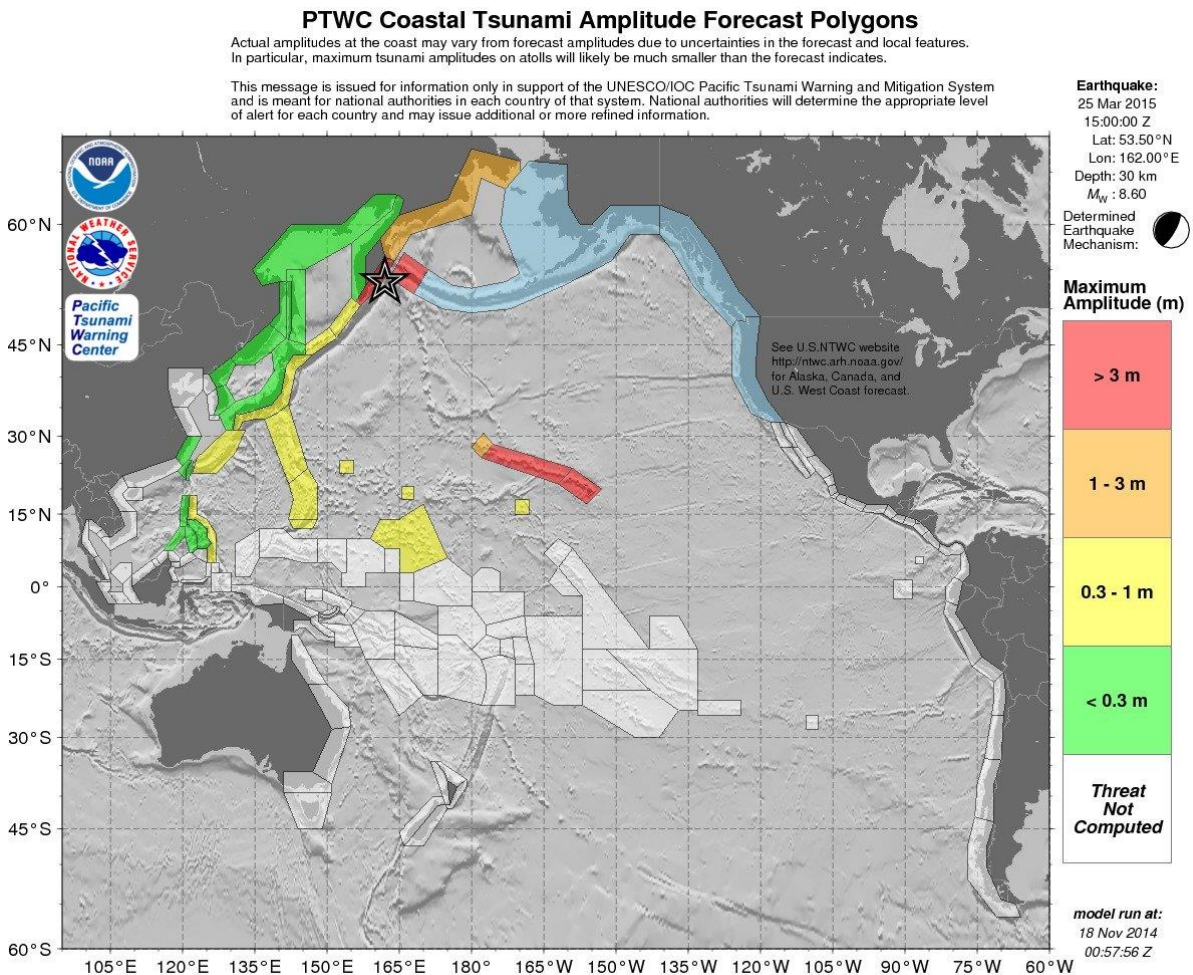


Figure D5: PTWC Threat polygons to accompany International Message #2.

PTWC Deep-Ocean Tsunami Amplitude Forecast

This map should not be used to estimate coastal tsunami amplitudes or impacts. Deep-ocean amplitudes are usually much smaller than coastal amplitudes.

This message is issued for information only in support of the UNESCO/IOC Pacific Tsunami Warning and Mitigation System 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.

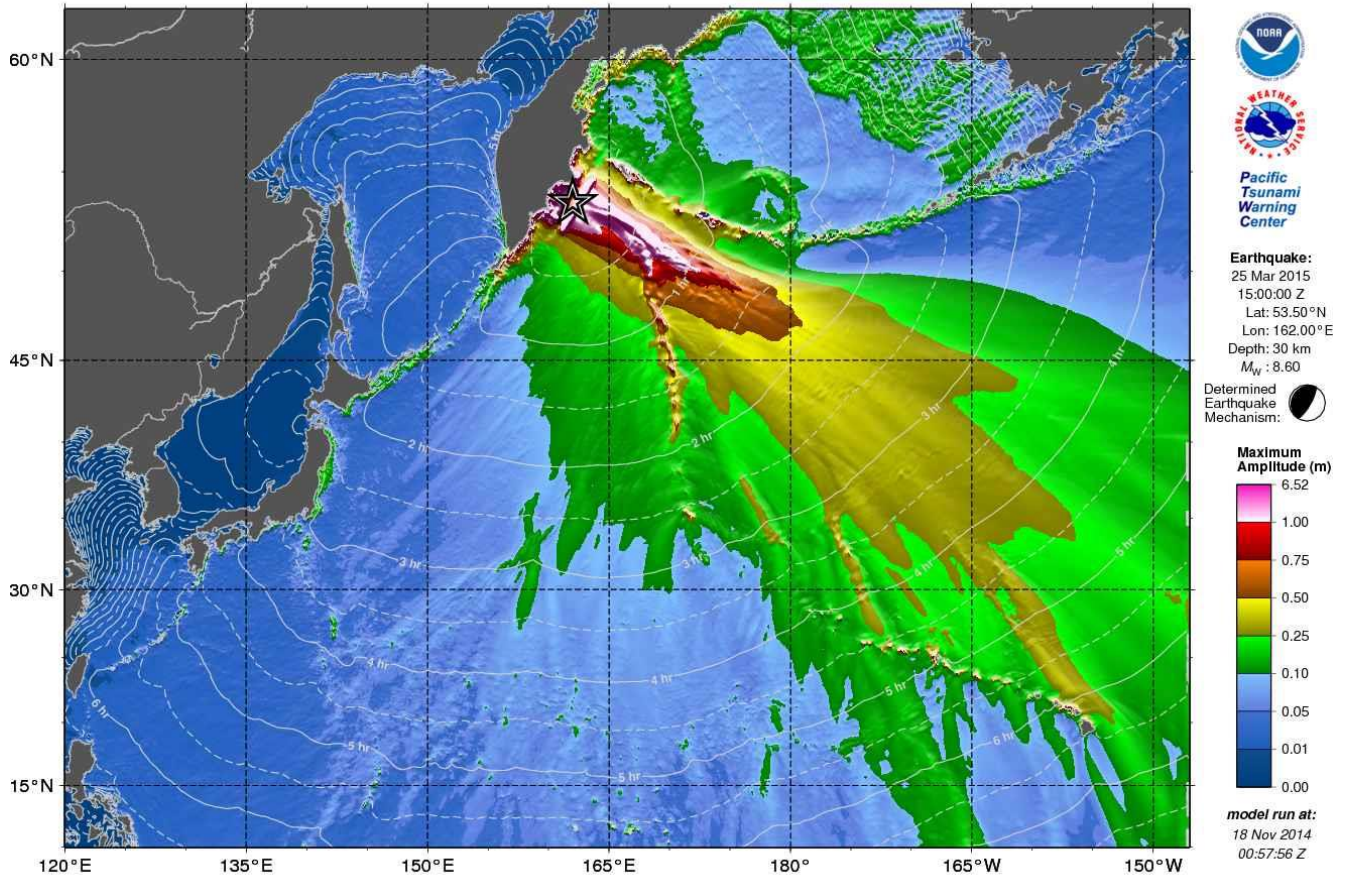


Figure D6: PTWC Deep-Ocean Forecast for the region close to the source. This figure accompanies International Message #2.

PTWC Coastal Tsunami Amplitude Forecast

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.

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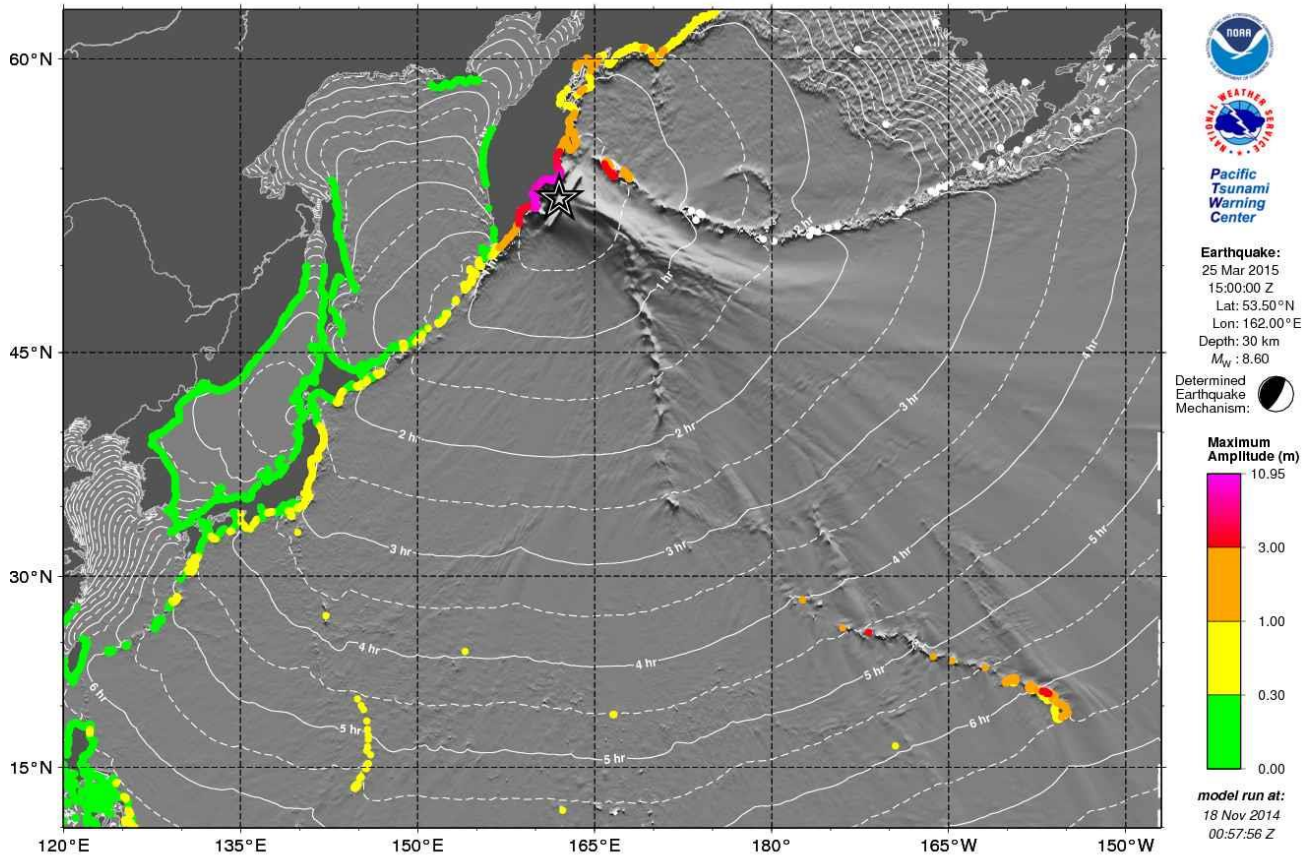


Figure D7: PTWC Coastal amplitude estimates for the region close to the source. This figure accompanies International Message #2.

PTWC International Message #2

ZCZC
 WEPA40 PHEB 251530
 TSUPAC

TSUNAMI MESSAGE NUMBER 2
 NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
 1530 UTC WED MAR 25 2015

...PTWC TSUNAMI THREAT MESSAGE...

THIS MESSAGE CONTAINS A REVISED MAGNITUDE
 THIS MESSAGE MODIFIES THE THREAT LEVELS

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

THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE
 UNESCO/IOC PACIFIC TSUNAMI WARNING AND MITIGATION SYSTEM 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

PACIFEX 15 Handbook

INFORMATION.

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

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE 8.6
* ORIGIN TIME 1500 UTC MAR 25 2015
* COORDINATES 53.5 NORTH 162.0 EAST
* DEPTH 30 KM / 19 MILES
* LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 1500 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

RUSSIA... HAWAII... AND NW HAWAIIAN ISLANDS.
- * TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

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

JAPAN... PHILIPPINES... NORTHERN MARIANAS... GUAM...
MARSHALL ISLANDS... WAKE ISLAND... AND JOHNSTON ISLAND.
- * TSUNAMI WAVES ARE FORECAST TO BE LESS THAN 0.3 METERS ABOVE THE TIDE LEVEL FOR THE COASTS OF

TAIWAN... AND CHINA.
- * 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

PACIFEX 15 Handbook

- * 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 PLACES WITHIN A REGION WITH FORECAST TSUNAMI AMPLITUDES OF 0.3 METERS AND GREATER 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)

UST KAMCHATSK	RUSSIA	56.1N 162.6E	1533 03/25
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KATSUURA	JAPAN	35.1N 140.3E	1802 03/25
HACHIJO JIMA	JAPAN	33.1N 139.8E	1820 03/25
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KWAJALEIN	MARSHALL ISLANDS	8.7N 167.7E	2103 03/25
OKINAWA	JAPAN	26.2N 127.8E	2104 03/25
MAJURO	MARSHALL ISLANDS	7.1N 171.4E	2116 03/25
PALANAN	PHILIPPINES	17.1N 122.6E	2128 03/25
LEGASPI	PHILIPPINES	13.2N 123.8E	2155 03/25
DAVAO	PHILIPPINES	6.8N 125.7E	2226 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.

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NEXT UPDATE AND ADDITIONAL INFORMATION

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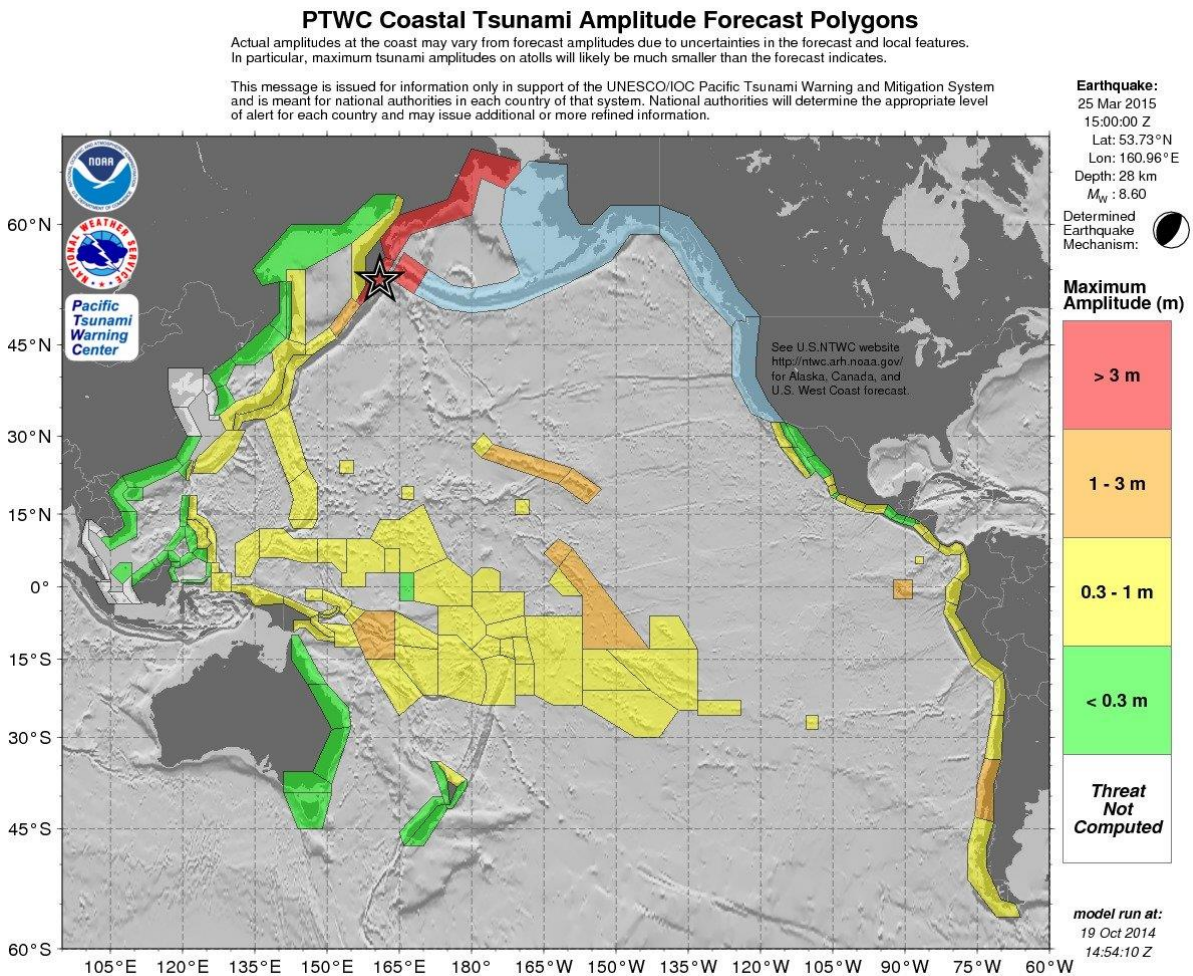


Figure D8: PTWC Tsunami Threat Level Polygons to accompany International Message #3.

PTWC Deep-Ocean Tsunami Amplitude Forecast

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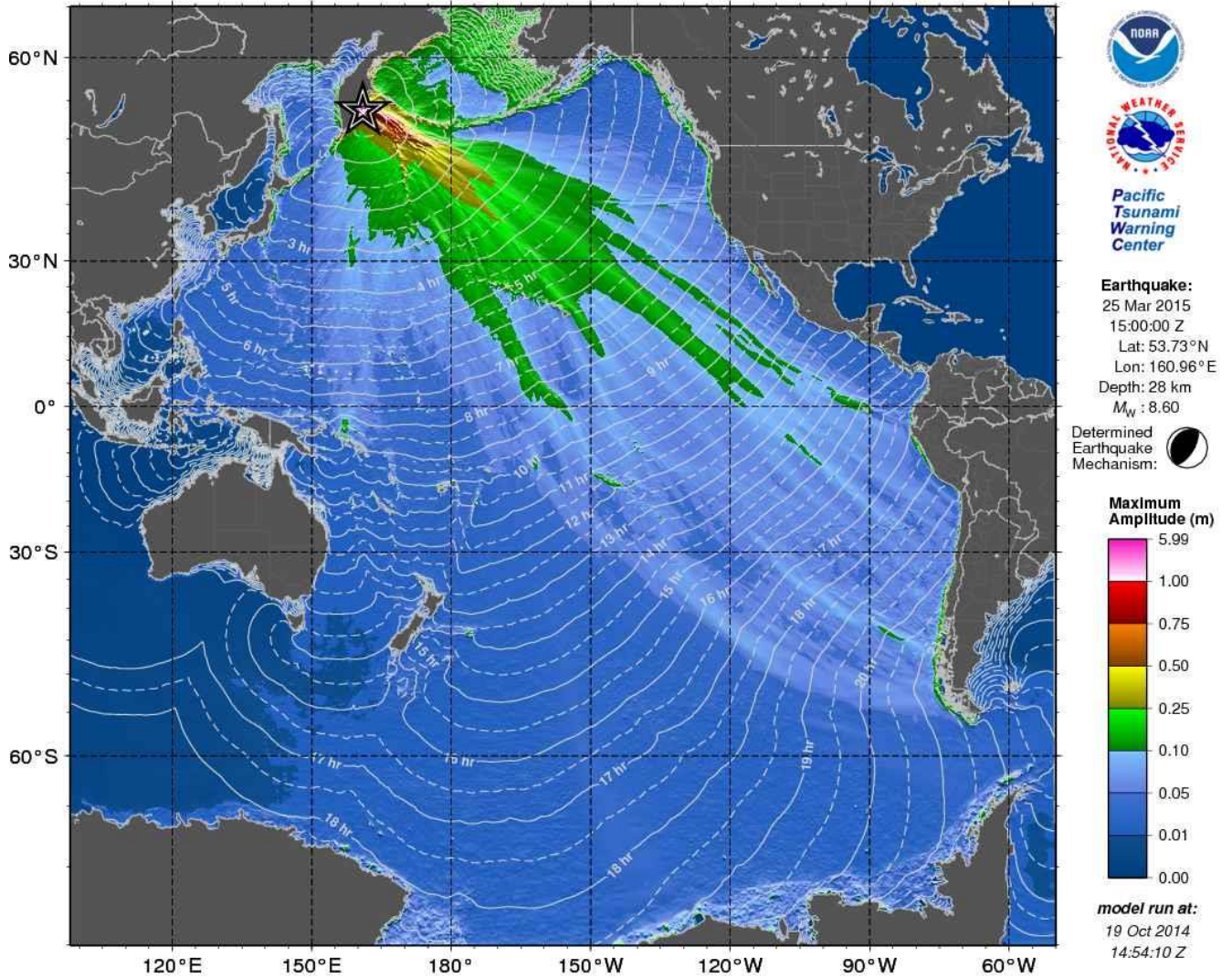


Figure D9: PTWC Deep-Ocean Forecast to accompany International Message #3

PTWC Coastal Tsunami Amplitude Forecast

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.

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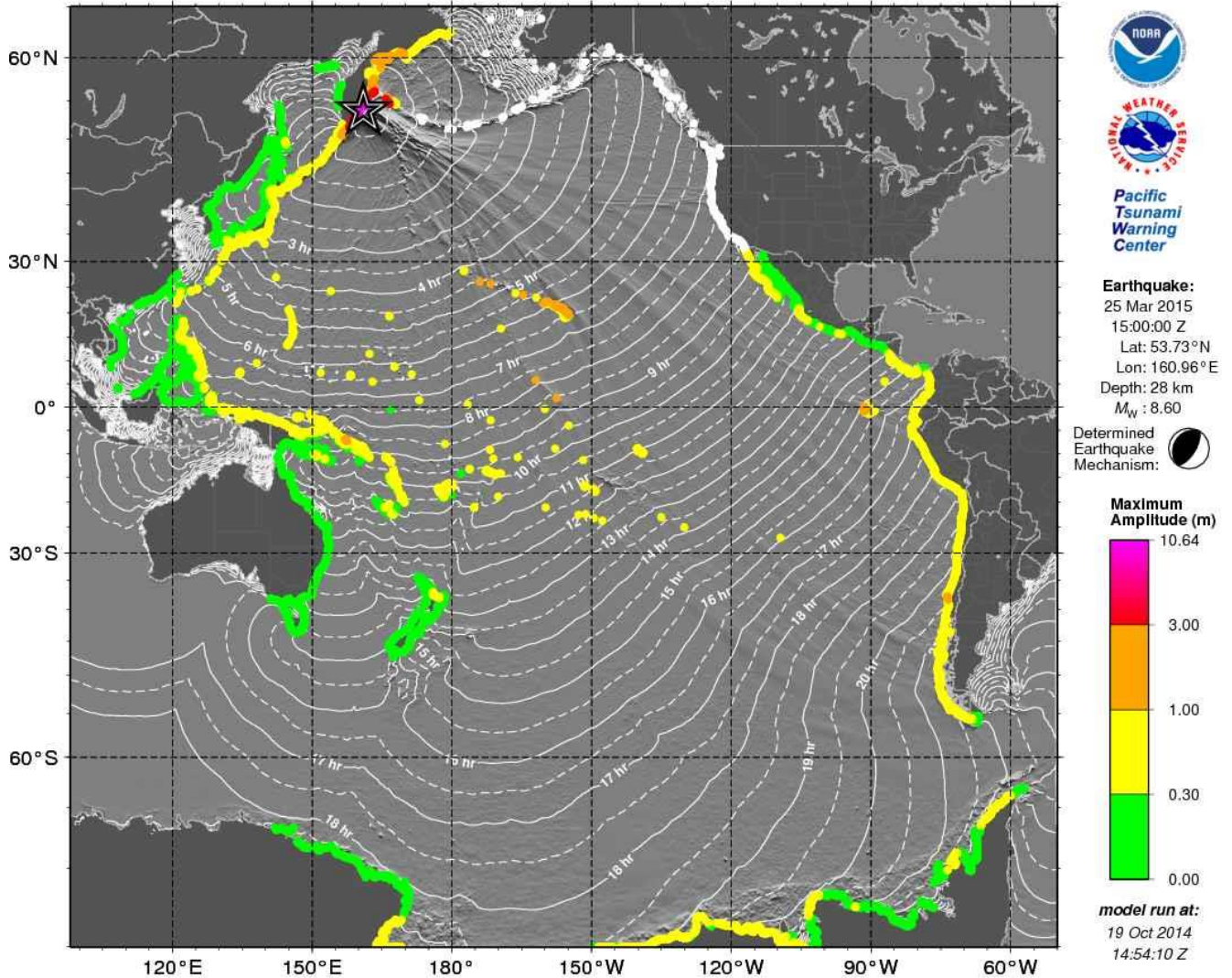


Figure D10: PTWC Coastal Amplitude Forecast to accompany International Message #3.

PTWC International Message #3

ZCZC
 WEP40 PHEB 251603
 TSUPAC

TSUNAMI MESSAGE NUMBER 3
 NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
 1603 UTC WED MAR 25 2015

...PTWC TSUNAMI THREAT MESSAGE...
 THIS MESSAGE MODIFIES THE THREAT LEVELS
 THIS MESSAGE LISTS TSUNAMI OBSERVATIONS

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

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

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE 8.6
* ORIGIN TIME 1500 UTC MAR 25 2015
* COORDINATES 53.5 NORTH 162.0 EAST
* DEPTH 30 KM / 19 MILES
* LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

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- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 1500 UTC ON WEDNESDAY MARCH 25 2015.
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TSUNAMI THREAT FORECAST...UPDATED

- * TSUNAMI WAVES REACHING MORE THAN 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF
RUSSIA.
- * TSUNAMI WAVES REACHING 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF
ECUADOR... CHILE... KIRIBATI... PALMYRA ISLAND... SOLOMON ISLANDS... HAWAII... AND NW HAWAIIAN ISLANDS.
- * TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF
MEXICO... COSTA RICA... NICARAGUA... PANAMA... COLOMBIA... PERU... ANTARCTICA... JAPAN... PHILIPPINES... NEW CALEDONIA... NEW ZEALAND... TAIWAN... NORTHERN MARIANAS... GUAM... PALAU... YAP... POHNPEI... CHUUK... KOSRAE... MARSHALL ISLANDS... FIJI... SAMOA... AMERICAN SAMOA... COOK ISLANDS... TOKELAU... VANUATU... FRENCH POLYNESIA... WAKE ISLAND... MIDWAY ISLAND... JOHNSTON ISLAND... JARVIS ISLAND... HOWLAND AND BAKER... TONGA... TUVALU... WALLIS AND FUTUNA... PITCAIRN ISLANDS... NIUE... PAPUA NEW GUINEA... AND INDONESIA.
- * TSUNAMI WAVES ARE FORECAST TO BE LESS THAN 0.3 METERS ABOVE

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THE TIDE LEVEL FOR THE COASTS OF

EL SALVADOR... GUATEMALA... HONDURAS... AUSTRALIA... CHINA...
 REPUBLIC OF KOREA... DPR OF KOREA... NAURU... VIETNAM...
 MALAYSIA... AND BRUNEI.

- * 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.
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RECOMMENDED ACTIONS

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- * 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 PLACES WITHIN A REGION WITH FORECAST TSUNAMI AMPLITUDES OF 0.3 METERS AND GREATER 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.

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PETROPAVLOVSK	RUSSIA	53.2N 159.6E	1547 03/25
MEDNNY ISLAND	RUSSIA	54.7N 167.4E	1549 03/25
OSTROV KARAGINS	RUSSIA	58.8N 164.5E	1601 03/25
SIMUSHIR	RUSSIA	46.7N 151.8E	1619 03/25
SEVERO KURILSK	RUSSIA	50.8N 156.1E	1655 03/25
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HACHINOHE	JAPAN	40.5N 141.5E	1748 03/25
KATSUURA	JAPAN	35.1N 140.3E	1802 03/25
HACHIJO JIMA	JAPAN	33.1N 139.8E	1820 03/25
CHICHI JIMA	JAPAN	27.0N 142.3E	1846 03/25
MINAMITORISHIMA	JAPAN	24.3N 154.0E	1855 03/25
GASTELLO	RUSSIA	49.1N 143.0E	1901 03/25
MIDWAY ISLAND	MIDWAY ISLAND	28.2N 177.4W	1902 03/25
SHIMIZU	JAPAN	32.8N 133.0E	1929 03/25
SAPPORO	JAPAN	43.5N 141.0E	1930 03/25
WAKE ISLAND	WAKE ISLAND	19.3N 166.6E	1931 03/25
NOBEOKA	JAPAN	32.5N 131.8E	1933 03/25
NIIGATA	JAPAN	38.0N 139.0E	1950 03/25
SAIPAN	NORTHERN MARIANA	15.3N 145.8E	2020 03/25
GUAM	GUAM	13.4N 144.7E	2042 03/25
UST KAHRYUZOVO	RUSSIA	57.1N 156.7E	2048 03/25
SHIMANE	JAPAN	35.8N 133.0E	2049 03/25
ENIWETOK	MARSHALL ISLANDS	11.4N 162.3E	2056 03/25

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KWAJALEIN	MARSHALL ISLANDS	8.7N	167.7E	2103	03/25
OKINAWA	JAPAN	26.2N	127.8E	2104	03/25
HUALIEN	TAIWAN	24.0N	121.7E	2106	03/25
TAITUNG	TAIWAN	22.7N	121.2E	2110	03/25
NAGASAKI	JAPAN	32.7N	129.7E	2113	03/25
MAJURO	MARSHALL ISLANDS	7.1N	171.4E	2116	03/25
POHNPEI ISLAND	POHNPEI	7.0N	158.2E	2118	03/25
YAP ISLAND	YAP	9.5N	138.1E	2119	03/25
KOSRAE ISLAND	KOSRAE	5.5N	163.0E	2126	03/25
PALANAN	PHILIPPINES	17.1N	122.6E	2128	03/25
CHILUNG	TAIWAN	25.2N	121.8E	2134	03/25
CHUUK ISLAND	CHUUK	7.4N	151.8E	2139	03/25
LEGASPI	PHILIPPINES	13.2N	123.8E	2155	03/25
MALAKAL	PALAU	7.3N	134.5E	2214	03/25
GEME	INDONESIA	4.6N	126.8E	2226	03/25
DAVAO	PHILIPPINES	6.8N	125.7E	2226	03/25
HOWLAND ISLAND	HOWLAND AND BAKE	0.6N	176.6W	2232	03/25
BEREBERE	INDONESIA	2.5N	128.7E	2235	03/25
PALMYRA ISLAND	PALMYRA ISLAND	5.9N	162.1W	2243	03/25
WARSA	INDONESIA	0.6S	135.8E	2245	03/25
MANUS ISLAND	PAPUA NEW GUINEA	2.0S	147.5E	2248	03/25
KAVIENG	PAPUA NEW GUINEA	2.5S	150.7E	2251	03/25
MANOKWARI	INDONESIA	0.8S	134.2E	2253	03/25
TARAWA ISLAND	KIRIBATI	1.5N	173.0E	2256	03/25
JAYAPURA	INDONESIA	2.4S	140.8E	2302	03/25
PATANI	INDONESIA	0.4N	128.8E	2303	03/25
VANIMO	PAPUA NEW GUINEA	2.6S	141.3E	2303	03/25
SORONG	INDONESIA	0.8S	131.1E	2309	03/25
KANTON ISLAND	KIRIBATI	2.8S	171.7W	2311	03/25
WEWAK	PAPUA NEW GUINEA	3.5S	143.6E	2315	03/25
RABAU	PAPUA NEW GUINEA	4.2S	152.3E	2316	03/25
FUNAFUTI ISLAND	TUVALU	7.9S	178.5E	2324	03/25
CHRISTMAS ISLAND	KIRIBATI	2.0N	157.5W	2327	03/25
ULAMONA	PAPUA NEW GUINEA	5.0S	151.3E	2328	03/25
KIETA	PAPUA NEW GUINEA	6.1S	155.6E	2331	03/25
AMUN	PAPUA NEW GUINEA	6.0S	154.7E	2335	03/25
JARVIS ISLAND	JARVIS ISLAND	0.4S	160.1W	2337	03/25
FALAMAE	SOLOMON ISLANDS	7.4S	155.6E	2341	03/25
PANGGOE	SOLOMON ISLANDS	6.9S	157.2E	2345	03/25
ENSENADA	MEXICO	31.8N	116.8W	2346	03/25
WOODLARK ISLAND	PAPUA NEW GUINEA	9.0S	152.9E	2348	03/25
MADANG	PAPUA NEW GUINEA	5.2S	145.8E	2349	03/25
GHATERE	SOLOMON ISLANDS	7.8S	159.2E	2359	03/25
NUKUNONU ISLAND	TOKELAU	9.2S	171.8W	0000	03/26
KIRAKIRA	SOLOMON ISLANDS	10.4S	161.9E	0003	03/26
AUKI	SOLOMON ISLANDS	8.8S	160.6E	0008	03/26
MUNDA	SOLOMON ISLANDS	8.4S	157.2E	0012	03/26
LAE	PAPUA NEW GUINEA	6.8S	147.0E	0016	03/26
WALLIS ISLAND	WALLIS AND FUTUN	13.3S	176.3W	0021	03/26
MALDEN ISLAND	KIRIBATI	3.9S	154.9W	0022	03/26
SANTA CRUZ ISLAND	SOLOMON ISLANDS	10.9S	165.9E	0027	03/26
PUNTA ABREOJOS	MEXICO	26.7N	113.6W	0028	03/26
PUKAPUKA ISLAND	COOK ISLANDS	10.8S	165.9W	0030	03/26
HONIARA	SOLOMON ISLANDS	9.3S	160.0E	0033	03/26
FUTUNA ISLAND	WALLIS AND FUTUN	14.3S	178.2W	0034	03/26
APIA	SAMOA	13.8S	171.8W	0037	03/26
PENRYN ISLAND	COOK ISLANDS	8.9S	157.8W	0045	03/26
PAGO PAGO	AMERICAN SAMOA	14.3S	170.7W	0045	03/26
ESPERITU SANTO	VANUATU	15.1S	167.3E	0051	03/26
NIUATOPUTAPU	TONGA	16.0S	173.5W	0058	03/26
PORT VILA	VANUATU	17.8S	168.2E	0113	03/26
CABO SAN LUCAS	MEXICO	22.8N	110.0W	0113	03/26
NIUE ISLAND	NIUE	19.0S	170.0W	0120	03/26
VAVAU	TONGA	18.7S	173.9W	0124	03/26
FLINT ISLAND	KIRIBATI	11.4S	151.8W	0127	03/26
ANATOM ISLAND	VANUATU	20.2S	169.9E	0136	03/26

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PORT MORESBY	PAPUA NEW GUINEA	9.3S	146.9E	0152	03/26
NUKUALOFA	TONGA	21.0S	175.2W	0153	03/26
SUVA	FIJI	18.1S	178.4E	0158	03/26
RAROTONGA	COOK ISLANDS	21.2S	159.8W	0209	03/26
HIVA OA	FRENCH POLYNESIA	10.0S	139.0W	0211	03/26
PUERTO VALLARTA	MEXICO	20.6N	105.3W	0220	03/26
PAPEETE	FRENCH POLYNESIA	17.5S	149.6W	0225	03/26
NOUMEA	NEW CALEDONIA	22.3S	166.5E	0229	03/26
SAN BLAS	MEXICO	21.5N	105.3W	0230	03/26
LAZARO CARDENAS	MEXICO	17.9N	102.2W	0246	03/26
ACAPULCO	MEXICO	16.9N	99.9W	0307	03/26
NORTH CAPE	NEW ZEALAND	34.4S	173.3E	0354	03/26
RIKITEA	FRENCH POLYNESIA	23.1S	135.0W	0415	03/26
SALINA CRUZ	MEXICO	16.5N	95.2W	0419	03/26
PITCAIRN ISLAND	PITCAIRN ISLANDS	25.1S	130.1W	0444	03/26
CABO SAN ELENA	COSTA RICA	10.9N	86.0W	0515	03/26
CORINTO	NICARAGUA	12.5N	87.2W	0527	03/26
PUERTO SANDINO	NICARAGUA	12.2N	86.8W	0527	03/26
AUCKLAND EAST	NEW ZEALAND	36.7S	175.0E	0531	03/26
SAN JUAN DL SUR	NICARAGUA	11.2N	85.9W	0536	03/26
PUERTO QUEPOS	COSTA RICA	9.4N	84.2W	0538	03/26
COCOS ISLAND	COSTA RICA	5.5N	87.1W	0539	03/26
CABO MATAPALO	COSTA RICA	8.4N	83.3W	0542	03/26
PUNTA BURICA	PANAMA	8.0N	82.9W	0550	03/26
BALTRA ISLAND	ECUADOR	0.5S	90.3W	0636	03/26
PUNTA MALA	PANAMA	7.5N	80.0W	0641	03/26
EASTER ISLAND	CHILE	27.1S	109.4W	0648	03/26
PUERTO PINA	PANAMA	7.4N	78.0W	0655	03/26
BAHIA SOLANO	COLOMBIA	6.3N	77.4W	0656	03/26
ESMERELDAS	ECUADOR	1.2N	79.8W	0711	03/26
TUMACO	COLOMBIA	1.8N	78.9W	0718	03/26
LA LIBERTAD	ECUADOR	2.2S	81.2W	0733	03/26
BUENAVENTURA	COLOMBIA	3.8N	77.2W	0736	03/26
TALARA	PERU	4.6S	81.5W	0750	03/26
CAPE ADARE	ANTARCTICA	71.0S	170.0E	0852	03/26
PIMENTAL	PERU	6.9S	80.0W	0852	03/26
LA PUNTA	PERU	12.1S	77.2W	0858	03/26
CHIMBOTE	PERU	9.0S	78.8W	0900	03/26
BALBOA HEIGHTS	PANAMA	9.0N	79.6W	0903	03/26
SAN JUAN	PERU	15.3S	75.2W	0913	03/26
MOLLENDO	PERU	17.1S	72.0W	0947	03/26
ARICA	CHILE	18.5S	70.3W	1003	03/26
IQUIQUE	CHILE	20.2S	70.1W	1004	03/26
ANTOFAGASTA	CHILE	23.3S	70.4W	1019	03/26
CALDERA	CHILE	27.1S	70.8W	1039	03/26
COQUIMBO	CHILE	29.9S	71.4W	1048	03/26
VALPARAISO	CHILE	33.0S	71.6W	1105	03/26
THURSTON ISLAND	ANTARCTICA	72.0S	100.0W	1112	03/26
TALCAHUANO	CHILE	36.7S	73.1W	1128	03/26
CORRAL	CHILE	39.8S	73.5W	1145	03/26
GOLFO DE PENAS	CHILE	47.1S	74.9W	1228	03/26
PUERTO MONTT	CHILE	41.5S	73.0W	1423	03/26

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

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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.

TSUNAMI OBSERVATIONS

- * 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 TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
DART 21416	48.0N	163.5E	1554	0.8M/02.6FT	14
UST KAMCHATSK RU	56.0N	163.0E	1550	3.1M/10.0FT	20
PETROPAVLOVSK RU	53.0N	158.6E	1551	1.1M/03.5FT	20

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 LOWER CASE-.
- * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.
- * COASTAL REGIONS OF HAWAII... AMERICAN SAMOA... GUAM... AND CNMI SHOULD REFER TO PACIFIC TSUNAMI WARNING CENTER MESSAGES SPECIFICALLY FOR THOSE PLACES THAT CAN BE FOUND AT PTWC.WEATHER.GOV.
- * COASTAL REGIONS OF CALIFORNIA... OREGON... WASHINGTON... BRITISH COLUMBIA AND ALASKA SHOULD ONLY REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT NTWC.ARH.NOAA.GOV.

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PTWC International Message #4

ZCZC
WEPA40 PHEB 251704
TSUPAC

TSUNAMI MESSAGE NUMBER 4
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1704 UTC WED MAR 25 2015

...PTWC TSUNAMI THREAT MESSAGE...
THIS MESSAGE LISTS MORE TSUNAMI OBSERVATIONS

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

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THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC PACIFIC TSUNAMI WARNING AND MITIGATION SYSTEM 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 ****

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE 8.6
* ORIGIN TIME 1500 UTC MAR 25 2015
* COORDINATES 53.5 NORTH 162.0 EAST
* DEPTH 30 KM / 19 MILES
* LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 1500 UTC ON WEDNESDAY MARCH 25 2015.
- * BASED ON THE PRELIMINARY EARTHQUAKE PARAMETERS... HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TSUNAMI THREAT FORECAST

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

RUSSIA.

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

ECUADOR... CHILE... KIRIBATI... PALMYRA ISLAND... SOLOMON ISLANDS... HAWAII... AND NW HAWAIIAN ISLANDS.

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

MEXICO... COSTA RICA... NICARAGUA... PANAMA... COLOMBIA... PERU... ANTARCTICA... JAPAN... PHILIPPINES... NEW CALEDONIA... NEW ZEALAND... TAIWAN... NORTHERN MARIANAS... GUAM... PALAU... YAP... POHNPEI... CHUUK... KOSRAE... MARSHALL ISLANDS... FIJI... SAMOA... AMERICAN SAMOA... COOK ISLANDS... TOKELAU... VANUATU... FRENCH POLYNESIA... WAKE ISLAND... MIDWAY ISLAND... JOHNSTON ISLAND... JARVIS ISLAND... HOWLAND AND BAKER... TONGA... TUVALU... WALLIS AND FUTUNA... PITCAIRN ISLANDS... NIUE... PAPUA NEW GUINEA... AND INDONESIA.

- * TSUNAMI WAVES ARE FORECAST TO BE LESS THAN 0.3 METERS ABOVE THE TIDE LEVEL FOR THE COASTS OF

EL SALVADOR... GUATEMALA... HONDURAS... AUSTRALIA... CHINA...

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REPUBLIC OF KOREA... DPR OF KOREA... NAURU... VIETNAM...
MALAYSIA... AND BRUNEI.

- * 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 PLACES WITHIN A REGION WITH FORECAST TSUNAMI AMPLITUDES OF 0.3 METERS AND GREATER 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)
SIMUSHIR	RUSSIA	46.7N 151.8E	1619 03/25
SEVERO KURILSK	RUSSIA	50.8N 156.1E	1655 03/25
KUSHIRO	JAPAN	42.9N 144.3E	1713 03/25
HACHINOHE	JAPAN	40.5N 141.5E	1748 03/25
KATSUURA	JAPAN	35.1N 140.3E	1802 03/25
HACHIJO JIMA	JAPAN	33.1N 139.8E	1820 03/25
CHICHI JIMA	JAPAN	27.0N 142.3E	1846 03/25
MINAMITORISHIMA	JAPAN	24.3N 154.0E	1855 03/25
GASTELLO	RUSSIA	49.1N 143.0E	1901 03/25
MIDWAY ISLAND	MIDWAY ISLAND	28.2N 177.4W	1902 03/25
SHIMIZU	JAPAN	32.8N 133.0E	1929 03/25
SAPPORO	JAPAN	43.5N 141.0E	1930 03/25
WAKE ISLAND	WAKE ISLAND	19.3N 166.6E	1931 03/25
NOBEOKA	JAPAN	32.5N 131.8E	1933 03/25
NIIGATA	JAPAN	38.0N 139.0E	1950 03/25
SAIPAN	NORTHERN MARIANA	15.3N 145.8E	2020 03/25
GUAM	GUAM	13.4N 144.7E	2042 03/25
UST KAHYRYUZOVO	RUSSIA	57.1N 156.7E	2048 03/25
SHIMANE	JAPAN	35.8N 133.0E	2049 03/25
ENIWETOK	MARSHALL ISLANDS	11.4N 162.3E	2056 03/25
KWAJALEIN	MARSHALL ISLANDS	8.7N 167.7E	2103 03/25
OKINAWA	JAPAN	26.2N 127.8E	2104 03/25
HUALIEN	TAIWAN	24.0N 121.7E	2106 03/25
TAITUNG	TAIWAN	22.7N 121.2E	2110 03/25
NAGASAKI	JAPAN	32.7N 129.7E	2113 03/25
MAJURO	MARSHALL ISLANDS	7.1N 171.4E	2116 03/25
POHNPEI ISLAND	POHNPEI	7.0N 158.2E	2118 03/25

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YAP ISLAND	YAP	9.5N	138.1E	2119	03/25
KOSRAE ISLAND	KOSRAE	5.5N	163.0E	2126	03/25
PALANAN	PHILIPPINES	17.1N	122.6E	2128	03/25
CHILUNG	TAIWAN	25.2N	121.8E	2134	03/25
CHUUK ISLAND	CHUUK	7.4N	151.8E	2139	03/25
LEGASPI	PHILIPPINES	13.2N	123.8E	2155	03/25
MALAKAL	PALAU	7.3N	134.5E	2214	03/25
GEME	INDONESIA	4.6N	126.8E	2226	03/25
DAVAO	PHILIPPINES	6.8N	125.7E	2226	03/25
HOWLAND ISLAND	HOWLAND AND BAKE	0.6N	176.6W	2232	03/25
BEREBERE	INDONESIA	2.5N	128.7E	2235	03/25
PALMYRA ISLAND	PALMYRA ISLAND	5.9N	162.1W	2243	03/25
WARSA	INDONESIA	0.6S	135.8E	2245	03/25
MANUS ISLAND	PAPUA NEW GUINEA	2.0S	147.5E	2248	03/25
KAVIENG	PAPUA NEW GUINEA	2.5S	150.7E	2251	03/25
MANOKWARI	INDONESIA	0.8S	134.2E	2253	03/25
TARAWA ISLAND	KIRIBATI	1.5N	173.0E	2256	03/25
JAYAPURA	INDONESIA	2.4S	140.8E	2302	03/25
PATANI	INDONESIA	0.4N	128.8E	2303	03/25
VANIMO	PAPUA NEW GUINEA	2.6S	141.3E	2303	03/25
SORONG	INDONESIA	0.8S	131.1E	2309	03/25
KANTON ISLAND	KIRIBATI	2.8S	171.7W	2311	03/25
WEWAK	PAPUA NEW GUINEA	3.5S	143.6E	2315	03/25
RABAUL	PAPUA NEW GUINEA	4.2S	152.3E	2316	03/25
FUNAFUTI ISLAND	TUVALU	7.9S	178.5E	2324	03/25
CHRISTMAS ISLAN	KIRIBATI	2.0N	157.5W	2327	03/25
ULAMONA	PAPUA NEW GUINEA	5.0S	151.3E	2328	03/25
KIETA	PAPUA NEW GUINEA	6.1S	155.6E	2331	03/25
AMUN	PAPUA NEW GUINEA	6.0S	154.7E	2335	03/25
JARVIS ISLAND	JARVIS ISLAND	0.4S	160.1W	2337	03/25
FALAMAE	SOLOMON ISLANDS	7.4S	155.6E	2341	03/25
PANGGOE	SOLOMON ISLANDS	6.9S	157.2E	2345	03/25
ENSENADA	MEXICO	31.8N	116.8W	2346	03/25
WOODLARK ISLAND	PAPUA NEW GUINEA	9.0S	152.9E	2348	03/25
MADANG	PAPUA NEW GUINEA	5.2S	145.8E	2349	03/25
GHATERE	SOLOMON ISLANDS	7.8S	159.2E	2359	03/25
NUKUNONU ISLAND	TOKELAU	9.2S	171.8W	0000	03/26
KIRAKIRA	SOLOMON ISLANDS	10.4S	161.9E	0003	03/26
AUKI	SOLOMON ISLANDS	8.8S	160.6E	0008	03/26
MUNDA	SOLOMON ISLANDS	8.4S	157.2E	0012	03/26
LAE	PAPUA NEW GUINEA	6.8S	147.0E	0016	03/26
WALLIS ISLAND	WALLIS AND FUTUN	13.3S	176.3W	0021	03/26
MALDEN ISLAND	KIRIBATI	3.9S	154.9W	0022	03/26
SANTA CRUZ ISLA	SOLOMON ISLANDS	10.9S	165.9E	0027	03/26
PUNTA ABREOJOS	MEXICO	26.7N	113.6W	0028	03/26
PUKAPUKA ISLAND	COOK ISLANDS	10.8S	165.9W	0030	03/26
HONIARA	SOLOMON ISLANDS	9.3S	160.0E	0033	03/26
FUTUNA ISLAND	WALLIS AND FUTUN	14.3S	178.2W	0034	03/26
APIA	SAMOA	13.8S	171.8W	0037	03/26
PENRYN ISLAND	COOK ISLANDS	8.9S	157.8W	0045	03/26
PAGO PAGO	AMERICAN SAMOA	14.3S	170.7W	0045	03/26
ESPERITU SANTO	VANUATU	15.1S	167.3E	0051	03/26
NIUATOPUTAPU	TONGA	16.0S	173.5W	0058	03/26
PORT VILA	VANUATU	17.8S	168.2E	0113	03/26
CABO SAN LUCAS	MEXICO	22.8N	110.0W	0113	03/26
NIUE ISLAND	NIUE	19.0S	170.0W	0120	03/26
VAVAU	TONGA	18.7S	173.9W	0124	03/26
FLINT ISLAND	KIRIBATI	11.4S	151.8W	0127	03/26
ANATOM ISLAND	VANUATU	20.2S	169.9E	0136	03/26
PORT MORESBY	PAPUA NEW GUINEA	9.3S	146.9E	0152	03/26
NUKUALOFA	TONGA	21.0S	175.2W	0153	03/26
SUVA	FIJI	18.1S	178.4E	0158	03/26
RAROTONGA	COOK ISLANDS	21.2S	159.8W	0209	03/26
HIVA OA	FRENCH POLYNESIA	10.0S	139.0W	0211	03/26
PUERTO VALLARTA	MEXICO	20.6N	105.3W	0220	03/26
PAPEETE	FRENCH POLYNESIA	17.5S	149.6W	0225	03/26

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NOUMEA	NEW CALEDONIA	22.3S	166.5E	0229	03/26
SAN BLAS	MEXICO	21.5N	105.3W	0230	03/26
LAZARO CARDENAS	MEXICO	17.9N	102.2W	0246	03/26
ACAPULCO	MEXICO	16.9N	99.9W	0307	03/26
NORTH CAPE	NEW ZEALAND	34.4S	173.3E	0354	03/26
RIKITEA	FRENCH POLYNESIA	23.1S	135.0W	0415	03/26
SALINA CRUZ	MEXICO	16.5N	95.2W	0419	03/26
PITCAIRN ISLAND	PITCAIRN ISLANDS	25.1S	130.1W	0444	03/26
CABO SAN ELENA	COSTA RICA	10.9N	86.0W	0515	03/26
CORINTO	NICARAGUA	12.5N	87.2W	0527	03/26
PUERTO SANDINO	NICARAGUA	12.2N	86.8W	0527	03/26
AUCKLAND EAST	NEW ZEALAND	36.7S	175.0E	0531	03/26
SAN JUAN DL SUR	NICARAGUA	11.2N	85.9W	0536	03/26
PUERTO QUEPOS	COSTA RICA	9.4N	84.2W	0538	03/26
COCOS ISLAND	COSTA RICA	5.5N	87.1W	0539	03/26
CABO MATAPALO	COSTA RICA	8.4N	83.3W	0542	03/26
PUNTA BURICA	PANAMA	8.0N	82.9W	0550	03/26
BALTRA ISLAND	ECUADOR	0.5S	90.3W	0636	03/26
PUNTA MALA	PANAMA	7.5N	80.0W	0641	03/26
EASTER ISLAND	CHILE	27.1S	109.4W	0648	03/26
PUERTO PINA	PANAMA	7.4N	78.0W	0655	03/26
BAHIA SOLANO	COLOMBIA	6.3N	77.4W	0656	03/26
ESMERELDAS	ECUADOR	1.2N	79.8W	0711	03/26
TUMACO	COLOMBIA	1.8N	78.9W	0718	03/26
LA LIBERTAD	ECUADOR	2.2S	81.2W	0733	03/26
BUENAVENTURA	COLOMBIA	3.8N	77.2W	0736	03/26
TALARA	PERU	4.6S	81.5W	0750	03/26
CAPE ADARE	ANTARCTICA	71.0S	170.0E	0852	03/26
PIMENTAL	PERU	6.9S	80.0W	0852	03/26
LA PUNTA	PERU	12.1S	77.2W	0858	03/26
CHIMBOTE	PERU	9.0S	78.8W	0900	03/26
BALBOA HEIGHTS	PANAMA	9.0N	79.6W	0903	03/26
SAN JUAN	PERU	15.3S	75.2W	0913	03/26
MOLLENDO	PERU	17.1S	72.0W	0947	03/26
ARICA	CHILE	18.5S	70.3W	1003	03/26
IQUIQUE	CHILE	20.2S	70.1W	1004	03/26
ANTOFAGASTA	CHILE	23.3S	70.4W	1019	03/26
CALDERA	CHILE	27.1S	70.8W	1039	03/26
COQUIMBO	CHILE	29.9S	71.4W	1048	03/26
VALPARAISO	CHILE	33.0S	71.6W	1105	03/26
THURSTON ISLAND	ANTARCTICA	72.0S	100.0W	1112	03/26
TALCAHUANO	CHILE	36.7S	73.1W	1128	03/26
CORRAL	CHILE	39.8S	73.5W	1145	03/26
GOLFO DE PENAS	CHILE	47.1S	74.9W	1228	03/26
PUERTO MONTT	CHILE	41.5S	73.0W	1423	03/26

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.

TSUNAMI OBSERVATIONS...UPDATED

PACIFEX 15 Handbook

* 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 TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
DART 21416	48.0N	163.5E	1554	0.8M/02.6FT	14
DART 21415	50.2N	171.8E	1616	0.4M/01.3FT	15
UST KAMCHATSK RU	56.0N	163.0E	1550	3.1M/10.0FT	20
NIKOL'SKOE RU	55.2N	166.0E	1559	2.9M/09.5FT	16
PETROPAVLOVSK RU	53.0N	158.6E	1551	1.1M/03.5FT	20
SHEMYA AK	52.7N	174.1E	1635	0.9M/02.9FT	17
ADAK AK	51.9N	176.6W	1645	0.5M/01.6FT	15
ATKA AK	52.2N	174.2W	1652	0.7M/02.3FT	18

----- 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 LOWER CASE-.
- * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.
- * COASTAL REGIONS OF HAWAII... AMERICAN SAMOA... GUAM... AND CNMI SHOULD REFER TO PACIFIC TSUNAMI WARNING CENTER MESSAGES SPECIFICALLY FOR THOSE PLACES THAT CAN BE FOUND AT PTWC.WEATHER.GOV.
- * COASTAL REGIONS OF CALIFORNIA... OREGON... WASHINGTON... BRITISH COLUMBIA AND ALASKA SHOULD ONLY REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT NTWC.ARH.NOAA.GOV.

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PTWC International Message #5

ZCZC
WEPA40 PHEB 251804
TSUPAC

TSUNAMI MESSAGE NUMBER 5
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1804 UTC WED MAR 25 2015

...PTWC TSUNAMI THREAT MESSAGE...

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

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MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

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

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE 8.6
* ORIGIN TIME 1500 UTC MAR 25 2015
* COORDINATES 53.5 NORTH 162.0 EAST
* DEPTH 30 KM / 19 MILES
* LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 1500 UTC ON WEDNESDAY MARCH 25 2015.
- * BASED ON THE PRELIMINARY EARTHQUAKE PARAMETERS... HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TSUNAMI THREAT FORECAST

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

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

ECUADOR... CHILE... KIRIBATI... PALMYRA ISLAND... SOLOMON ISLANDS... HAWAII... AND NW HAWAIIAN ISLANDS.
- * TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

MEXICO... COSTA RICA... NICARAGUA... PANAMA... COLOMBIA... PERU... ANTARCTICA... JAPAN... PHILIPPINES... NEW CALEDONIA... NEW ZEALAND... TAIWAN... NORTHERN MARIANAS... GUAM... PALAU... YAP... POHNPEI... CHUUK... KOSRAE... MARSHALL ISLANDS... FIJI... SAMOA... AMERICAN SAMOA... COOK ISLANDS... TOKELAU... VANUATU... FRENCH POLYNESIA... WAKE ISLAND... MIDWAY ISLAND... JOHNSTON ISLAND... JARVIS ISLAND... HOWLAND AND BAKER... TONGA... TUVALU... WALLIS AND FUTUNA... PITCAIRN ISLANDS... NIUE... PAPUA NEW GUINEA... AND INDONESIA.
- * TSUNAMI WAVES ARE FORECAST TO BE LESS THAN 0.3 METERS ABOVE THE TIDE LEVEL FOR THE COASTS OF

EL SALVADOR... GUATEMALA... HONDURAS... AUSTRALIA... CHINA... REPUBLIC OF KOREA... DPR OF KOREA... NAURU... VIETNAM... MALAYSIA... AND BRUNEI.

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- * 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 PLACES WITHIN A REGION WITH FORECAST TSUNAMI AMPLITUDES OF 0.3 METERS AND GREATER 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)
KUSHIRO	JAPAN	42.9N 144.3E	1713 03/25
HACHINOHE	JAPAN	40.5N 141.5E	1748 03/25
KATSUURA	JAPAN	35.1N 140.3E	1802 03/25
HACHIJO JIMA	JAPAN	33.1N 139.8E	1820 03/25
CHICHI JIMA	JAPAN	27.0N 142.3E	1846 03/25
MINAMITORISHIMA	JAPAN	24.3N 154.0E	1855 03/25
GASTELLO	RUSSIA	49.1N 143.0E	1901 03/25
MIDWAY ISLAND	MIDWAY ISLAND	28.2N 177.4W	1902 03/25
SHIMIZU	JAPAN	32.8N 133.0E	1929 03/25
SAPPORO	JAPAN	43.5N 141.0E	1930 03/25
WAKE ISLAND	WAKE ISLAND	19.3N 166.6E	1931 03/25
NOBEOKA	JAPAN	32.5N 131.8E	1933 03/25
NIIGATA	JAPAN	38.0N 139.0E	1950 03/25
SAIPAN	NORTHERN MARIANA	15.3N 145.8E	2020 03/25
GUAM	GUAM	13.4N 144.7E	2042 03/25
UST KAHYRYUZOVO	RUSSIA	57.1N 156.7E	2048 03/25
SHIMANE	JAPAN	35.8N 133.0E	2049 03/25
ENIWETOK	MARSHALL ISLANDS	11.4N 162.3E	2056 03/25
KWAJALEIN	MARSHALL ISLANDS	8.7N 167.7E	2103 03/25
OKINAWA	JAPAN	26.2N 127.8E	2104 03/25
HUALIEN	TAIWAN	24.0N 121.7E	2106 03/25
TAITUNG	TAIWAN	22.7N 121.2E	2110 03/25
NAGASAKI	JAPAN	32.7N 129.7E	2113 03/25
MAJUORO	MARSHALL ISLANDS	7.1N 171.4E	2116 03/25
POHNPEI ISLAND	POHNPEI	7.0N 158.2E	2118 03/25
YAP ISLAND	YAP	9.5N 138.1E	2119 03/25
KOSRAE ISLAND	KOSRAE	5.5N 163.0E	2126 03/25
PALANAN	PHILIPPINES	17.1N 122.6E	2128 03/25
CHILUNG	TAIWAN	25.2N 121.8E	2134 03/25

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CHUUK ISLAND	CHUUK	7.4N	151.8E	2139	03/25
LEGASPI	PHILIPPINES	13.2N	123.8E	2155	03/25
MALAKAL	PALAU	7.3N	134.5E	2214	03/25
GEME	INDONESIA	4.6N	126.8E	2226	03/25
DAVAO	PHILIPPINES	6.8N	125.7E	2226	03/25
HOWLAND ISLAND	HOWLAND AND BAKE	0.6N	176.6W	2232	03/25
BEREBERE	INDONESIA	2.5N	128.7E	2235	03/25
PALMYRA ISLAND	PALMYRA ISLAND	5.9N	162.1W	2243	03/25
WARSA	INDONESIA	0.6S	135.8E	2245	03/25
MANUS ISLAND	PAPUA NEW GUINEA	2.0S	147.5E	2248	03/25
KAVIENG	PAPUA NEW GUINEA	2.5S	150.7E	2251	03/25
MANOKWARI	INDONESIA	0.8S	134.2E	2253	03/25
TARAWA ISLAND	KIRIBATI	1.5N	173.0E	2256	03/25
JAYAPURA	INDONESIA	2.4S	140.8E	2302	03/25
PATANI	INDONESIA	0.4N	128.8E	2303	03/25
VANIMO	PAPUA NEW GUINEA	2.6S	141.3E	2303	03/25
SORONG	INDONESIA	0.8S	131.1E	2309	03/25
KANTON ISLAND	KIRIBATI	2.8S	171.7W	2311	03/25
WEWAK	PAPUA NEW GUINEA	3.5S	143.6E	2315	03/25
RABAU	PAPUA NEW GUINEA	4.2S	152.3E	2316	03/25
FUNAFUTI ISLAND	TUVALU	7.9S	178.5E	2324	03/25
CHRISTMAS ISLAND	KIRIBATI	2.0N	157.5W	2327	03/25
ULAMONA	PAPUA NEW GUINEA	5.0S	151.3E	2328	03/25
KIETA	PAPUA NEW GUINEA	6.1S	155.6E	2331	03/25
AMUN	PAPUA NEW GUINEA	6.0S	154.7E	2335	03/25
JARVIS ISLAND	JARVIS ISLAND	0.4S	160.1W	2337	03/25
FALAMAE	SOLOMON ISLANDS	7.4S	155.6E	2341	03/25
PANGGOE	SOLOMON ISLANDS	6.9S	157.2E	2345	03/25
ENSENADA	MEXICO	31.8N	116.8W	2346	03/25
WOODLARK ISLAND	PAPUA NEW GUINEA	9.0S	152.9E	2348	03/25
MADANG	PAPUA NEW GUINEA	5.2S	145.8E	2349	03/25
GHATERE	SOLOMON ISLANDS	7.8S	159.2E	2359	03/25
NUKUNONU ISLAND	TOKELAU	9.2S	171.8W	0000	03/26
KIRAKIRA	SOLOMON ISLANDS	10.4S	161.9E	0003	03/26
AUKI	SOLOMON ISLANDS	8.8S	160.6E	0008	03/26
MUNDA	SOLOMON ISLANDS	8.4S	157.2E	0012	03/26
LAE	PAPUA NEW GUINEA	6.8S	147.0E	0016	03/26
WALLIS ISLAND	WALLIS AND FUTUN	13.3S	176.3W	0021	03/26
MALDEN ISLAND	KIRIBATI	3.9S	154.9W	0022	03/26
SANTA CRUZ ISLAND	SOLOMON ISLANDS	10.9S	165.9E	0027	03/26
PUNTA ABREOJOS	MEXICO	26.7N	113.6W	0028	03/26
PUKAPUKA ISLAND	COOK ISLANDS	10.8S	165.9W	0030	03/26
HONIARA	SOLOMON ISLANDS	9.3S	160.0E	0033	03/26
FUTUNA ISLAND	WALLIS AND FUTUN	14.3S	178.2W	0034	03/26
APIA	SAMOA	13.8S	171.8W	0037	03/26
PENRYN ISLAND	COOK ISLANDS	8.9S	157.8W	0045	03/26
PAGO PAGO	AMERICAN SAMOA	14.3S	170.7W	0045	03/26
ESPERITU SANTO	VANUATU	15.1S	167.3E	0051	03/26
NIUATOPUTAPU	TONGA	16.0S	173.5W	0058	03/26
PORT VILA	VANUATU	17.8S	168.2E	0113	03/26
CABO SAN LUCAS	MEXICO	22.8N	110.0W	0113	03/26
NIUE ISLAND	NIUE	19.0S	170.0W	0120	03/26
VAVAU	TONGA	18.7S	173.9W	0124	03/26
FLINT ISLAND	KIRIBATI	11.4S	151.8W	0127	03/26
ANATOM ISLAND	VANUATU	20.2S	169.9E	0136	03/26
PORT MORESBY	PAPUA NEW GUINEA	9.3S	146.9E	0152	03/26
NUKUALOFA	TONGA	21.0S	175.2W	0153	03/26
SUVA	FIJI	18.1S	178.4E	0158	03/26
RAROTONGA	COOK ISLANDS	21.2S	159.8W	0209	03/26
HIVA OA	FRENCH POLYNESIA	10.0S	139.0W	0211	03/26
PUERTO VALLARTA	MEXICO	20.6N	105.3W	0220	03/26
PAPEETE	FRENCH POLYNESIA	17.5S	149.6W	0225	03/26
NOUMEA	NEW CALEDONIA	22.3S	166.5E	0229	03/26
SAN BLAS	MEXICO	21.5N	105.3W	0230	03/26
LAZARO CARDENAS	MEXICO	17.9N	102.2W	0246	03/26
ACAPULCO	MEXICO	16.9N	99.9W	0307	03/26

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NORTH CAPE	NEW ZEALAND	34.4S	173.3E	0354	03/26
RIKITEA	FRENCH POLYNESIA	23.1S	135.0W	0415	03/26
SALINA CRUZ	MEXICO	16.5N	95.2W	0419	03/26
PITCAIRN ISLAND	PITCAIRN ISLANDS	25.1S	130.1W	0444	03/26
CABO SAN ELENA	COSTA RICA	10.9N	86.0W	0515	03/26
CORINTO	NICARAGUA	12.5N	87.2W	0527	03/26
PUERTO SANDINO	NICARAGUA	12.2N	86.8W	0527	03/26
AUCKLAND EAST	NEW ZEALAND	36.7S	175.0E	0531	03/26
SAN JUAN DL SUR	NICARAGUA	11.2N	85.9W	0536	03/26
PUERTO QUEPOS	COSTA RICA	9.4N	84.2W	0538	03/26
COCOS ISLAND	COSTA RICA	5.5N	87.1W	0539	03/26
CABO MATAPALO	COSTA RICA	8.4N	83.3W	0542	03/26
PUNTA BURICA	PANAMA	8.0N	82.9W	0550	03/26
BALTRA ISLAND	ECUADOR	0.5S	90.3W	0636	03/26
PUNTA MALA	PANAMA	7.5N	80.0W	0641	03/26
EASTER ISLAND	CHILE	27.1S	109.4W	0648	03/26
PUERTO PINA	PANAMA	7.4N	78.0W	0655	03/26
BAHIA SOLANO	COLOMBIA	6.3N	77.4W	0656	03/26
ESMERELDAS	ECUADOR	1.2N	79.8W	0711	03/26
TUMACO	COLOMBIA	1.8N	78.9W	0718	03/26
LA LIBERTAD	ECUADOR	2.2S	81.2W	0733	03/26
BUENAVENTURA	COLOMBIA	3.8N	77.2W	0736	03/26
TALARA	PERU	4.6S	81.5W	0750	03/26
CAPE ADARE	ANTARCTICA	71.0S	170.0E	0852	03/26
PIMENTAL	PERU	6.9S	80.0W	0852	03/26
LA PUNTA	PERU	12.1S	77.2W	0858	03/26
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SAN JUAN	PERU	15.3S	75.2W	0913	03/26
MOLLENDO	PERU	17.1S	72.0W	0947	03/26
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CALDERA	CHILE	27.1S	70.8W	1039	03/26
COQUIMBO	CHILE	29.9S	71.4W	1048	03/26
VALPARAISO	CHILE	33.0S	71.6W	1105	03/26
THURSTON ISLAND	ANTARCTICA	72.0S	100.0W	1112	03/26
TALCAHUANO	CHILE	36.7S	73.1W	1128	03/26
CORRAL	CHILE	39.8S	73.5W	1145	03/26
GOLFO DE PENAS	CHILE	47.1S	74.9W	1228	03/26
PUERTO MONTT	CHILE	41.5S	73.0W	1423	03/26

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.

TSUNAMI OBSERVATIONS...UPDATED

- * 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

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TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LOX			
DART 21416	48.0N	163.5E	1554	0.8M/02.6FT	14
DART 21415	50.2N	171.8E	1616	0.4M/01.3FT	15
UST KAMCHATSK RU	56.0N	163.0E	1550	3.1M/10.0FT	20
NIKOL'SKOE RU	55.2N	166.0E	1559	2.9M/09.5FT	16
PETROPAVLOVSK RU	53.0N	158.6E	1733	1.6M/05.2FT	17
SHEMYA AK	52.7N	174.1E	1725	0.9M/04.2FT	17
ADAK AK	51.9N	176.6W	1715	0.8M/02.8FT	15
ATKA AK	52.2N	174.2W	1734	0.8M/02.7FT	18
KUSHIRO JP	43.0N	144.4E	1720	0.8M/02.6FT	20
HANASAKI JP	43.3N	145.6E	1745	0.5M/01.6FT	19
OFUNATO JP	39.0N	141.8E	1755	0.5M/01.6FT	18
NIKOLSKI AK	52.9N	168.9W	1758	0.8M/02.5FT	15

NEXT UPDATE AND ADDITIONAL INFORMATION

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- * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.
- * COASTAL REGIONS OF HAWAII... AMERICAN SAMOA... GUAM... AND CNMI SHOULD REFER TO PACIFIC TSUNAMI WARNING CENTER MESSAGES SPECIFICALLY FOR THOSE PLACES THAT CAN BE FOUND AT PTWC.WEATHER.GOV.
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PTWC International Message #6

ZCZC
WEPA40 PHEB 251900
TSUPAC

TSUNAMI MESSAGE NUMBER 6
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1900 UTC WED MAR 25 2015

...PTWC TSUNAMI THREAT MESSAGE...
THIS MESSAGE CONTAINS NEW OBSERVATIONS.

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

THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE

PACIFEX 15 Handbook

UNESCO/IOC PACIFIC TSUNAMI WARNING AND MITIGATION SYSTEM AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

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PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE 8.6
* ORIGIN TIME 1500 UTC MAR 25 2015
* COORDINATES 53.5 NORTH 162.0 EAST
* DEPTH 30 KM / 19 MILES
* LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

EVALUATION

-
- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 1500 UTC ON WEDNESDAY MARCH 25 2015.
 - * BASED ON THE PRELIMINARY EARTHQUAKE PARAMETERS... HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TSUNAMI THREAT FORECAST

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

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

ECUADOR... CHILE... KIRIBATI... PALMYRA ISLAND... SOLOMON ISLANDS... HAWAII... AND NW HAWAIIAN ISLANDS.
 - * TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

MEXICO... COSTA RICA... NICARAGUA... PANAMA... COLOMBIA... PERU... ANTARCTICA... JAPAN... PHILIPPINES... NEW CALEDONIA... NEW ZEALAND... TAIWAN... NORTHERN MARIANAS... GUAM... PALAU... YAP... POHNPEI... CHUUK... KOSRAE... MARSHALL ISLANDS... FIJI... SAMOA... AMERICAN SAMOA... COOK ISLANDS... TOKELAU... VANUATU... FRENCH POLYNESIA... WAKE ISLAND... MIDWAY ISLAND... JOHNSTON ISLAND... JARVIS ISLAND... HOWLAND AND BAKER... TONGA... TUVALU... WALLIS AND FUTUNA... PITCAIRN ISLANDS... NIUE... PAPUA NEW GUINEA... AND INDONESIA.
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MALAYSIA... AND BRUNEI.

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ESTIMATED TIMES OF ARRIVAL

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LOCATION	REGION	COORDINATES	ETA (UTC)
KATSUURA	JAPAN	35.1N 140.3E	1802 03/25
HACHIJO JIMA	JAPAN	33.1N 139.8E	1820 03/25
CHICHI JIMA	JAPAN	27.0N 142.3E	1846 03/25
MINAMITORISHIMA	JAPAN	24.3N 154.0E	1855 03/25
GASTELLO	RUSSIA	49.1N 143.0E	1901 03/25
MIDWAY ISLAND	MIDWAY ISLAND	28.2N 177.4W	1902 03/25
SHIMIZU	JAPAN	32.8N 133.0E	1929 03/25
SAPPORO	JAPAN	43.5N 141.0E	1930 03/25
WAKE ISLAND	WAKE ISLAND	19.3N 166.6E	1931 03/25
NOBEOKA	JAPAN	32.5N 131.8E	1933 03/25
NIIGATA	JAPAN	38.0N 139.0E	1950 03/25
SAIPAN	NORTHERN MARIANA	15.3N 145.8E	2020 03/25
GUAM	GUAM	13.4N 144.7E	2042 03/25
UST KAHYRYUZOVO	RUSSIA	57.1N 156.7E	2048 03/25
SHIMANE	JAPAN	35.8N 133.0E	2049 03/25
ENIWETOK	MARSHALL ISLANDS	11.4N 162.3E	2056 03/25
KWAJALEIN	MARSHALL ISLANDS	8.7N 167.7E	2103 03/25
OKINAWA	JAPAN	26.2N 127.8E	2104 03/25
HUALIEN	TAIWAN	24.0N 121.7E	2106 03/25
TAITUNG	TAIWAN	22.7N 121.2E	2110 03/25
NAGASAKI	JAPAN	32.7N 129.7E	2113 03/25
MAJURO	MARSHALL ISLANDS	7.1N 171.4E	2116 03/25
POHNPEI ISLAND	POHNPEI	7.0N 158.2E	2118 03/25
YAP ISLAND	YAP	9.5N 138.1E	2119 03/25
KOSRAE ISLAND	KOSRAE	5.5N 163.0E	2126 03/25
PALANAN	PHILIPPINES	17.1N 122.6E	2128 03/25
CHILUNG	TAIWAN	25.2N 121.8E	2134 03/25
CHUUK ISLAND	CHUUK	7.4N 151.8E	2139 03/25

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LEGASPI	PHILIPPINES	13.2N	123.8E	2155	03/25
MALAKAL	PALAU	7.3N	134.5E	2214	03/25
GEME	INDONESIA	4.6N	126.8E	2226	03/25
DAVAO	PHILIPPINES	6.8N	125.7E	2226	03/25
HOWLAND ISLAND	HOWLAND AND BAKE	0.6N	176.6W	2232	03/25
BEREBERE	INDONESIA	2.5N	128.7E	2235	03/25
PALMYRA ISLAND	PALMYRA ISLAND	5.9N	162.1W	2243	03/25
WARSA	INDONESIA	0.6S	135.8E	2245	03/25
MANUS ISLAND	PAPUA NEW GUINEA	2.0S	147.5E	2248	03/25
KAVIENG	PAPUA NEW GUINEA	2.5S	150.7E	2251	03/25
MANOKWARI	INDONESIA	0.8S	134.2E	2253	03/25
TARAWA ISLAND	KIRIBATI	1.5N	173.0E	2256	03/25
JAYAPURA	INDONESIA	2.4S	140.8E	2302	03/25
PATANI	INDONESIA	0.4N	128.8E	2303	03/25
VANIMO	PAPUA NEW GUINEA	2.6S	141.3E	2303	03/25
SORONG	INDONESIA	0.8S	131.1E	2309	03/25
KANTON ISLAND	KIRIBATI	2.8S	171.7W	2311	03/25
WEWAK	PAPUA NEW GUINEA	3.5S	143.6E	2315	03/25
RABAU	PAPUA NEW GUINEA	4.2S	152.3E	2316	03/25
FUNAFUTI ISLAND	TUVALU	7.9S	178.5E	2324	03/25
CHRISTMAS ISLAND	KIRIBATI	2.0N	157.5W	2327	03/25
ULAMONA	PAPUA NEW GUINEA	5.0S	151.3E	2328	03/25
KIETA	PAPUA NEW GUINEA	6.1S	155.6E	2331	03/25
AMUN	PAPUA NEW GUINEA	6.0S	154.7E	2335	03/25
JARVIS ISLAND	JARVIS ISLAND	0.4S	160.1W	2337	03/25
FALAMAE	SOLOMON ISLANDS	7.4S	155.6E	2341	03/25
PANGGOE	SOLOMON ISLANDS	6.9S	157.2E	2345	03/25
ENSENADA	MEXICO	31.8N	116.8W	2346	03/25
WOODLARK ISLAND	PAPUA NEW GUINEA	9.0S	152.9E	2348	03/25
MADANG	PAPUA NEW GUINEA	5.2S	145.8E	2349	03/25
GHATERE	SOLOMON ISLANDS	7.8S	159.2E	2359	03/25
NUKUNONU ISLAND	TOKELAU	9.2S	171.8W	0000	03/26
KIRAKIRA	SOLOMON ISLANDS	10.4S	161.9E	0003	03/26
AUKI	SOLOMON ISLANDS	8.8S	160.6E	0008	03/26
MUNDA	SOLOMON ISLANDS	8.4S	157.2E	0012	03/26
LAE	PAPUA NEW GUINEA	6.8S	147.0E	0016	03/26
WALLIS ISLAND	WALLIS AND FUTUN	13.3S	176.3W	0021	03/26
MALDEN ISLAND	KIRIBATI	3.9S	154.9W	0022	03/26
SANTA CRUZ ISLAND	SOLOMON ISLANDS	10.9S	165.9E	0027	03/26
PUNTA ABREOJOS	MEXICO	26.7N	113.6W	0028	03/26
PUKAPUKA ISLAND	COOK ISLANDS	10.8S	165.9W	0030	03/26
HONIARA	SOLOMON ISLANDS	9.3S	160.0E	0033	03/26
FUTUNA ISLAND	WALLIS AND FUTUN	14.3S	178.2W	0034	03/26
APIA	SAMOA	13.8S	171.8W	0037	03/26
PENRYN ISLAND	COOK ISLANDS	8.9S	157.8W	0045	03/26
PAGO PAGO	AMERICAN SAMOA	14.3S	170.7W	0045	03/26
ESPERITU SANTO	VANUATU	15.1S	167.3E	0051	03/26
NIUATOPUTAPU	TONGA	16.0S	173.5W	0058	03/26
PORT VILA	VANUATU	17.8S	168.2E	0113	03/26
CABO SAN LUCAS	MEXICO	22.8N	110.0W	0113	03/26
NIUE ISLAND	NIUE	19.0S	170.0W	0120	03/26
VAVAU	TONGA	18.7S	173.9W	0124	03/26
FLINT ISLAND	KIRIBATI	11.4S	151.8W	0127	03/26
ANATOM ISLAND	VANUATU	20.2S	169.9E	0136	03/26
PORT MORESBY	PAPUA NEW GUINEA	9.3S	146.9E	0152	03/26
NUKUALOFA	TONGA	21.0S	175.2W	0153	03/26
SUVA	FIJI	18.1S	178.4E	0158	03/26
RAROTONGA	COOK ISLANDS	21.2S	159.8W	0209	03/26
HIVA OA	FRENCH POLYNESIA	10.0S	139.0W	0211	03/26
PUERTO VALLARTA	MEXICO	20.6N	105.3W	0220	03/26
PAPEETE	FRENCH POLYNESIA	17.5S	149.6W	0225	03/26
NOUMEA	NEW CALEDONIA	22.3S	166.5E	0229	03/26
SAN BLAS	MEXICO	21.5N	105.3W	0230	03/26
LAZARO CARDENAS	MEXICO	17.9N	102.2W	0246	03/26
ACAPULCO	MEXICO	16.9N	99.9W	0307	03/26
NORTH CAPE	NEW ZEALAND	34.4S	173.3E	0354	03/26

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RIKITEA	FRENCH POLYNESIA	23.1S	135.0W	0415	03/26
SALINA CRUZ	MEXICO	16.5N	95.2W	0419	03/26
PITCAIRN ISLAND	PITCAIRN ISLANDS	25.1S	130.1W	0444	03/26
CABO SAN ELENA	COSTA RICA	10.9N	86.0W	0515	03/26
CORINTO	NICARAGUA	12.5N	87.2W	0527	03/26
PUERTO SANDINO	NICARAGUA	12.2N	86.8W	0527	03/26
AUCKLAND EAST	NEW ZEALAND	36.7S	175.0E	0531	03/26
SAN JUAN DL SUR	NICARAGUA	11.2N	85.9W	0536	03/26
PUERTO QUEPOS	COSTA RICA	9.4N	84.2W	0538	03/26
COCOS ISLAND	COSTA RICA	5.5N	87.1W	0539	03/26
CABO MATAPALO	COSTA RICA	8.4N	83.3W	0542	03/26
PUNTA BURICA	PANAMA	8.0N	82.9W	0550	03/26
BALTRA ISLAND	ECUADOR	0.5S	90.3W	0636	03/26
PUNTA MALA	PANAMA	7.5N	80.0W	0641	03/26
EASTER ISLAND	CHILE	27.1S	109.4W	0648	03/26
PUERTO PINA	PANAMA	7.4N	78.0W	0655	03/26
BAHIA SOLANO	COLOMBIA	6.3N	77.4W	0656	03/26
ESMERELDAS	ECUADOR	1.2N	79.8W	0711	03/26
TUMACO	COLOMBIA	1.8N	78.9W	0718	03/26
LA LIBERTAD	ECUADOR	2.2S	81.2W	0733	03/26
BUENAVENTURA	COLOMBIA	3.8N	77.2W	0736	03/26
TALARA	PERU	4.6S	81.5W	0750	03/26
CAPE ADARE	ANTARCTICA	71.0S	170.0E	0852	03/26
PIMENTAL	PERU	6.9S	80.0W	0852	03/26
LA PUNTA	PERU	12.1S	77.2W	0858	03/26
CHIMBOTE	PERU	9.0S	78.8W	0900	03/26
BALBOA HEIGHTS	PANAMA	9.0N	79.6W	0903	03/26
SAN JUAN	PERU	15.3S	75.2W	0913	03/26
MOLLENDO	PERU	17.1S	72.0W	0947	03/26
ARICA	CHILE	18.5S	70.3W	1003	03/26
IQUIQUE	CHILE	20.2S	70.1W	1004	03/26
ANTOFAGASTA	CHILE	23.3S	70.4W	1019	03/26
CALDERA	CHILE	27.1S	70.8W	1039	03/26
COQUIMBO	CHILE	29.9S	71.4W	1048	03/26
VALPARAISO	CHILE	33.0S	71.6W	1105	03/26
THURSTON ISLAND	ANTARCTICA	72.0S	100.0W	1112	03/26
TALCAHUANO	CHILE	36.7S	73.1W	1128	03/26
CORRAL	CHILE	39.8S	73.5W	1145	03/26
GOLFO DE PENAS	CHILE	47.1S	74.9W	1228	03/26
PUERTO MONTT	CHILE	41.5S	73.0W	1423	03/26

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.

TSUNAMI OBSERVATIONS...UPDATED

- * 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 TIDE LEVEL.

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GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD
	LAT	LOX	(UTC)		(MIN)
DART 21416	48.0N	163.5E	1554	0.8M/02.6FT	14
DART 21415	50.2N	171.8E	1616	0.4M/01.3FT	15
UST KAMCHATSK RU	56.0N	163.0E	1550	3.1M/10.0FT	20
NIKOL'SKOE RU	55.2N	166.0E	1559	2.9M/09.5FT	16
PETROPAVLOVSK RU	53.0N	158.6E	1733	1.6M/05.2FT	17
SHEMYA AK	52.7N	174.1E	1725	0.9M/04.2FT	17
ADAK AK	51.9N	176.6W	1715	0.8M/02.8FT	15
ATKA AK	52.2N	174.2W	1734	0.7M/02.7FT	18
KUSHIRO JP	43.0N	144.4E	1720	0.8M/02.6FT	20
HANASAKI JP	43.3N	145.6E	1745	0.5M/01.6FT	19
OFUNATO JP	39.0N	141.8E	1755	0.5M/01.6FT	18
NIKOLSKI AK	52.9N	168.9W	1830	0.8M/03.0FT	15
DUTCH HBR AK	51.1N	164.0W	1855	0.1M/00.4FT	17

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 LOWER CASE-.
- * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.
- * COASTAL REGIONS OF HAWAII... AMERICAN SAMOA... GUAM... AND CNMI SHOULD REFER TO PACIFIC TSUNAMI WARNING CENTER MESSAGES SPECIFICALLY FOR THOSE PLACES THAT CAN BE FOUND AT PTWC.WEATHER.GOV.
- * COASTAL REGIONS OF CALIFORNIA... OREGON... WASHINGTON... BRITISH COLUMBIA AND ALASKA SHOULD ONLY REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT NTWC.ARH.NOAA.GOV.

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PTWC International Message #7

ZCZC
WEPA40 PHEB 252000
TSUPAC

TSUNAMI MESSAGE NUMBER 7
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
2000 UTC WED MAR 25 2015

...PTWC TSUNAMI THREAT MESSAGE...

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

THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC PACIFIC TSUNAMI WARNING AND MITIGATION SYSTEM AND IS

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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 ****

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE 8.6
* ORIGIN TIME 1500 UTC MAR 25 2015
* COORDINATES 53.5 NORTH 162.0 EAST
* DEPTH 30 KM / 19 MILES
* LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 1500 UTC ON WEDNESDAY MARCH 25 2015.
- * BASED ON THE PRELIMINARY EARTHQUAKE PARAMETERS... HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TSUNAMI THREAT FORECAST

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

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

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GASTELLO	RUSSIA	49.1N 143.0E	1901 03/25
MIDWAY ISLAND	MIDWAY ISLAND	28.2N 177.4W	1902 03/25
SHIMIZU	JAPAN	32.8N 133.0E	1929 03/25
SAPPORO	JAPAN	43.5N 141.0E	1930 03/25
WAKE ISLAND	WAKE ISLAND	19.3N 166.6E	1931 03/25
NOBEOKA	JAPAN	32.5N 131.8E	1933 03/25
NIIGATA	JAPAN	38.0N 139.0E	1950 03/25
SAIPAN	NORTHERN MARIANA	15.3N 145.8E	2020 03/25
GUAM	GUAM	13.4N 144.7E	2042 03/25
UST KAHYRYUZOVO	RUSSIA	57.1N 156.7E	2048 03/25
SHIMANE	JAPAN	35.8N 133.0E	2049 03/25
ENIWETOK	MARSHALL ISLANDS	11.4N 162.3E	2056 03/25
KWAJALEIN	MARSHALL ISLANDS	8.7N 167.7E	2103 03/25
OKINAWA	JAPAN	26.2N 127.8E	2104 03/25
HUALIEN	TAIWAN	24.0N 121.7E	2106 03/25
TAITUNG	TAIWAN	22.7N 121.2E	2110 03/25
NAGASAKI	JAPAN	32.7N 129.7E	2113 03/25
MAJURO	MARSHALL ISLANDS	7.1N 171.4E	2116 03/25
POHNPEI ISLAND	POHNPEI	7.0N 158.2E	2118 03/25
YAP ISLAND	YAP	9.5N 138.1E	2119 03/25
KOSRAE ISLAND	KOSRAE	5.5N 163.0E	2126 03/25
PALANAN	PHILIPPINES	17.1N 122.6E	2128 03/25
CHILUNG	TAIWAN	25.2N 121.8E	2134 03/25
CHUUK ISLAND	CHUUK	7.4N 151.8E	2139 03/25
LEGASPI	PHILIPPINES	13.2N 123.8E	2155 03/25
MALAKAL	PALAU	7.3N 134.5E	2214 03/25
GEME	INDONESIA	4.6N 126.8E	2226 03/25
DAVAO	PHILIPPINES	6.8N 125.7E	2226 03/25
HOWLAND ISLAND	HOWLAND AND BAKE	0.6N 176.6W	2232 03/25

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BEREBERE	INDONESIA	2.5N	128.7E	2235	03/25
PALMYRA ISLAND	PALMYRA ISLAND	5.9N	162.1W	2243	03/25
WARSA	INDONESIA	0.6S	135.8E	2245	03/25
MANUS ISLAND	PAPUA NEW GUINEA	2.0S	147.5E	2248	03/25
KAVIENG	PAPUA NEW GUINEA	2.5S	150.7E	2251	03/25
MANOKWARI	INDONESIA	0.8S	134.2E	2253	03/25
TARAWA ISLAND	KIRIBATI	1.5N	173.0E	2256	03/25
JAYAPURA	INDONESIA	2.4S	140.8E	2302	03/25
PATANI	INDONESIA	0.4N	128.8E	2303	03/25
VANIMO	PAPUA NEW GUINEA	2.6S	141.3E	2303	03/25
SORONG	INDONESIA	0.8S	131.1E	2309	03/25
KANTON ISLAND	KIRIBATI	2.8S	171.7W	2311	03/25
WEWAK	PAPUA NEW GUINEA	3.5S	143.6E	2315	03/25
RABAU	PAPUA NEW GUINEA	4.2S	152.3E	2316	03/25
FUNAFUTI ISLAND	TUVALU	7.9S	178.5E	2324	03/25
CHRISTMAS ISLAND	KIRIBATI	2.0N	157.5W	2327	03/25
ULAMONA	PAPUA NEW GUINEA	5.0S	151.3E	2328	03/25
KIETA	PAPUA NEW GUINEA	6.1S	155.6E	2331	03/25
AMUN	PAPUA NEW GUINEA	6.0S	154.7E	2335	03/25
JARVIS ISLAND	JARVIS ISLAND	0.4S	160.1W	2337	03/25
FALAMAE	SOLOMON ISLANDS	7.4S	155.6E	2341	03/25
PANGGOE	SOLOMON ISLANDS	6.9S	157.2E	2345	03/25
ENSENADA	MEXICO	31.8N	116.8W	2346	03/25
WOODLARK ISLAND	PAPUA NEW GUINEA	9.0S	152.9E	2348	03/25
MADANG	PAPUA NEW GUINEA	5.2S	145.8E	2349	03/25
GHATERE	SOLOMON ISLANDS	7.8S	159.2E	2359	03/25
NUKUNONU ISLAND	TOKELAU	9.2S	171.8W	0000	03/26
KIRAKIRA	SOLOMON ISLANDS	10.4S	161.9E	0003	03/26
AUKI	SOLOMON ISLANDS	8.8S	160.6E	0008	03/26
MUNDA	SOLOMON ISLANDS	8.4S	157.2E	0012	03/26
LAE	PAPUA NEW GUINEA	6.8S	147.0E	0016	03/26
WALLIS ISLAND	WALLIS AND FUTUN	13.3S	176.3W	0021	03/26
MALDEN ISLAND	KIRIBATI	3.9S	154.9W	0022	03/26
SANTA CRUZ ISLAND	SOLOMON ISLANDS	10.9S	165.9E	0027	03/26
PUNTA ABREOJOS	MEXICO	26.7N	113.6W	0028	03/26
PUKAPUKA ISLAND	COOK ISLANDS	10.8S	165.9W	0030	03/26
HONIARA	SOLOMON ISLANDS	9.3S	160.0E	0033	03/26
FUTUNA ISLAND	WALLIS AND FUTUN	14.3S	178.2W	0034	03/26
APIA	SAMOA	13.8S	171.8W	0037	03/26
PENRYN ISLAND	COOK ISLANDS	8.9S	157.8W	0045	03/26
PAGO PAGO	AMERICAN SAMOA	14.3S	170.7W	0045	03/26
ESPERITU SANTO	VANUATU	15.1S	167.3E	0051	03/26
NIUATOPUTAPU	TONGA	16.0S	173.5W	0058	03/26
PORT VILA	VANUATU	17.8S	168.2E	0113	03/26
CABO SAN LUCAS	MEXICO	22.8N	110.0W	0113	03/26
NIUE ISLAND	NIUE	19.0S	170.0W	0120	03/26
VAVAU	TONGA	18.7S	173.9W	0124	03/26
FLINT ISLAND	KIRIBATI	11.4S	151.8W	0127	03/26
ANATOM ISLAND	VANUATU	20.2S	169.9E	0136	03/26
PORT MORESBY	PAPUA NEW GUINEA	9.3S	146.9E	0152	03/26
NUKUALOFA	TONGA	21.0S	175.2W	0153	03/26
SUVA	FIJI	18.1S	178.4E	0158	03/26
RAROTONGA	COOK ISLANDS	21.2S	159.8W	0209	03/26
HIVA OA	FRENCH POLYNESIA	10.0S	139.0W	0211	03/26
PUERTO VALLARTA	MEXICO	20.6N	105.3W	0220	03/26
PAPEETE	FRENCH POLYNESIA	17.5S	149.6W	0225	03/26
NOUMEA	NEW CALEDONIA	22.3S	166.5E	0229	03/26
SAN BLAS	MEXICO	21.5N	105.3W	0230	03/26
LAZARO CARDENAS	MEXICO	17.9N	102.2W	0246	03/26
ACAPULCO	MEXICO	16.9N	99.9W	0307	03/26
NORTH CAPE	NEW ZEALAND	34.4S	173.3E	0354	03/26
RIKITEA	FRENCH POLYNESIA	23.1S	135.0W	0415	03/26
SALINA CRUZ	MEXICO	16.5N	95.2W	0419	03/26
PITCAIRN ISLAND	PITCAIRN ISLANDS	25.1S	130.1W	0444	03/26
CABO SAN ELENA	COSTA RICA	10.9N	86.0W	0515	03/26
CORINTO	NICARAGUA	12.5N	87.2W	0527	03/26

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PUERTO SANDINO	NICARAGUA	12.2N	86.8W	0527	03/26
AUCKLAND EAST	NEW ZEALAND	36.7S	175.0E	0531	03/26
SAN JUAN DL SUR	NICARAGUA	11.2N	85.9W	0536	03/26
PUERTO QUEPOS	COSTA RICA	9.4N	84.2W	0538	03/26
COCOS ISLAND	COSTA RICA	5.5N	87.1W	0539	03/26
CABO MATAPALO	COSTA RICA	8.4N	83.3W	0542	03/26
PUNTA BURICA	PANAMA	8.0N	82.9W	0550	03/26
BALTRA ISLAND	ECUADOR	0.5S	90.3W	0636	03/26
PUNTA MALA	PANAMA	7.5N	80.0W	0641	03/26
EASTER ISLAND	CHILE	27.1S	109.4W	0648	03/26
PUERTO PINA	PANAMA	7.4N	78.0W	0655	03/26
BAHIA SOLANO	COLOMBIA	6.3N	77.4W	0656	03/26
ESMERELDAS	ECUADOR	1.2N	79.8W	0711	03/26
TUMACO	COLOMBIA	1.8N	78.9W	0718	03/26
LA LIBERTAD	ECUADOR	2.2S	81.2W	0733	03/26
BUENAVENTURA	COLOMBIA	3.8N	77.2W	0736	03/26
TALARA	PERU	4.6S	81.5W	0750	03/26
CAPE ADARE	ANTARCTICA	71.0S	170.0E	0852	03/26
PIMENTAL	PERU	6.9S	80.0W	0852	03/26
LA PUNTA	PERU	12.1S	77.2W	0858	03/26
CHIMBOTE	PERU	9.0S	78.8W	0900	03/26
BALBOA HEIGHTS	PANAMA	9.0N	79.6W	0903	03/26
SAN JUAN	PERU	15.3S	75.2W	0913	03/26
MOLLENDO	PERU	17.1S	72.0W	0947	03/26
ARICA	CHILE	18.5S	70.3W	1003	03/26
IQUIQUE	CHILE	20.2S	70.1W	1004	03/26
ANTOFAGASTA	CHILE	23.3S	70.4W	1019	03/26
CALDERA	CHILE	27.1S	70.8W	1039	03/26
COQUIMBO	CHILE	29.9S	71.4W	1048	03/26
VALPARAISO	CHILE	33.0S	71.6W	1105	03/26
THURSTON ISLAND	ANTARCTICA	72.0S	100.0W	1112	03/26
TALCAHUANO	CHILE	36.7S	73.1W	1128	03/26
CORRAL	CHILE	39.8S	73.5W	1145	03/26
GOLFO DE PENAS	CHILE	47.1S	74.9W	1228	03/26
PUERTO MONTT	CHILE	41.5S	73.0W	1423	03/26

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.

TSUNAMI OBSERVATIONS...UPDATED

- * 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 TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD
	LAT	LON	(UTC)		(MIN)

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DART 21416	48.0N 163.5E	1554	0.8M/02.6FT	14
DART 21415	50.2N 171.8E	1616	0.4M/01.3FT	15
UST KAMCHATSK RU	56.0N 163.0E	1550	3.1M/10.0FT	20
NIKOL'SKOE RU	55.2N 166.0E	1559	2.9M/09.5FT	16
PETROPAVLOVSK RU	53.0N 158.6E	1733	1.6M/05.2FT	17
SHEMYA AK	52.7N 174.1E	1725	0.9M/04.2FT	17
ADAK AK	51.9N 176.6W	1715	0.8M/02.8FT	15
ATKA AK	52.2N 174.2W	1734	0.7M/02.7FT	18
KUSHIRO JP	43.0N 144.4E	1720	0.8M/02.6FT	20
HANASAKI JP	43.3N 145.6E	1745	0.5M/01.6FT	19
OFUNATO JP	39.0N 141.8E	1755	0.5M/01.6FT	18
NIKOLSKI AK	52.9N 168.9W	1928	1.1M/03.7FT	15
DUTCH HBR AK	51.1N 164.0W	1935	0.3M/01.0FT	17
OMAEZAKI JP	34.6N 138.2E	1859	0.4M/01.3FT	19
CHICHIJIMA JP	27.1N 142.2E	1855	0.3M/01.2FT	
MIDWAY US	28.2N 177.4W	1918	0.9M/02.9FT	14
WAKE US	19.3N 166.6E	1940	0.5M/01.6FT	14

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 LOWER CASE-.
- * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.
- * COASTAL REGIONS OF HAWAII... AMERICAN SAMOA... GUAM... AND CNMI SHOULD REFER TO PACIFIC TSUNAMI WARNING CENTER MESSAGES SPECIFICALLY FOR THOSE PLACES THAT CAN BE FOUND AT PTWC.WEATHER.GOV.
- * COASTAL REGIONS OF CALIFORNIA... OREGON... WASHINGTON... BRITISH COLUMBIA AND ALASKA SHOULD ONLY REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT NTWC.ARH.NOAA.GOV.

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PTWC International Message #8

ZCZC
WEPA40 PHEB 252100
TSUPAC

TSUNAMI MESSAGE NUMBER 8
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
2100 UTC WED MAR 25 2015

...PTWC TSUNAMI THREAT MESSAGE...

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

THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC PACIFIC TSUNAMI WARNING AND MITIGATION SYSTEM AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

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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 ****

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE 8.6
* ORIGIN TIME 1500 UTC MAR 25 2015
* COORDINATES 53.5 NORTH 162.0 EAST
* DEPTH 30 KM / 19 MILES
* LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 1500 UTC ON WEDNESDAY MARCH 25 2015.
- * BASED ON THE PRELIMINARY EARTHQUAKE PARAMETERS... HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TSUNAMI THREAT FORECAST

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

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

ECUADOR... CHILE... KIRIBATI... PALMYRA ISLAND... SOLOMON ISLANDS... HAWAII... AND NW HAWAIIAN ISLANDS.
- * TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

MEXICO... COSTA RICA... NICARAGUA... PANAMA... COLOMBIA... PERU... ANTARCTICA... JAPAN... PHILIPPINES... NEW CALEDONIA... NEW ZEALAND... TAIWAN... NORTHERN MARIANAS... GUAM... PALAU... YAP... POHNPEI... CHUUK... KOSRAE... MARSHALL ISLANDS... FIJI... SAMOA... AMERICAN SAMOA... COOK ISLANDS... TOKELAU... VANUATU... FRENCH POLYNESIA... WAKE ISLAND... MIDWAY ISLAND... JOHNSTON ISLAND... JARVIS ISLAND... HOWLAND AND BAKER... TONGA... TUVALU... WALLIS AND FUTUNA... PITCAIRN ISLANDS... NIUE... PAPUA NEW GUINEA... AND INDONESIA.
- * TSUNAMI WAVES ARE FORECAST TO BE LESS THAN 0.3 METERS ABOVE THE TIDE LEVEL FOR THE COASTS OF

EL SALVADOR... GUATEMALA... HONDURAS... AUSTRALIA... CHINA... REPUBLIC OF KOREA... DPR OF KOREA... NAURU... VIETNAM... MALAYSIA... AND BRUNEI.

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- * 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 PLACES WITHIN A REGION WITH FORECAST TSUNAMI AMPLITUDES OF 0.3 METERS AND GREATER 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)
SAIPAN	NORTHERN MARIANA	15.3N 145.8E	2020 03/25
GUAM	GUAM	13.4N 144.7E	2042 03/25
UST KAHYRYUZOVO	RUSSIA	57.1N 156.7E	2048 03/25
SHIMANE	JAPAN	35.8N 133.0E	2049 03/25
ENIWETOK	MARSHALL ISLANDS	11.4N 162.3E	2056 03/25
KWAJALEIN	MARSHALL ISLANDS	8.7N 167.7E	2103 03/25
OKINAWA	JAPAN	26.2N 127.8E	2104 03/25
HUALIEN	TAIWAN	24.0N 121.7E	2106 03/25
TAITUNG	TAIWAN	22.7N 121.2E	2110 03/25
NAGASAKI	JAPAN	32.7N 129.7E	2113 03/25
MAJURO	MARSHALL ISLANDS	7.1N 171.4E	2116 03/25
POHNPEI ISLAND	POHNPEI	7.0N 158.2E	2118 03/25
YAP ISLAND	YAP	9.5N 138.1E	2119 03/25
KOSRAE ISLAND	KOSRAE	5.5N 163.0E	2126 03/25
PALANAN	PHILIPPINES	17.1N 122.6E	2128 03/25
CHILUNG	TAIWAN	25.2N 121.8E	2134 03/25
CHUUK ISLAND	CHUUK	7.4N 151.8E	2139 03/25
LEGASPI	PHILIPPINES	13.2N 123.8E	2155 03/25
MALAKAL	PALAU	7.3N 134.5E	2214 03/25
GEME	INDONESIA	4.6N 126.8E	2226 03/25
DAVAO	PHILIPPINES	6.8N 125.7E	2226 03/25
HOWLAND ISLAND	HOWLAND AND BAKE	0.6N 176.6W	2232 03/25
BEREBERE	INDONESIA	2.5N 128.7E	2235 03/25
PALMYRA ISLAND	PALMYRA ISLAND	5.9N 162.1W	2243 03/25
WARSA	INDONESIA	0.6S 135.8E	2245 03/25
MANUS ISLAND	PAPUA NEW GUINEA	2.0S 147.5E	2248 03/25
KAVIENG	PAPUA NEW GUINEA	2.5S 150.7E	2251 03/25
MANOKWARI	INDONESIA	0.8S 134.2E	2253 03/25
TARAWA ISLAND	KIRIBATI	1.5N 173.0E	2256 03/25
JAYAPURA	INDONESIA	2.4S 140.8E	2302 03/25

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PATANI	INDONESIA	0.4N	128.8E	2303	03/25
VANIMO	PAPUA NEW GUINEA	2.6S	141.3E	2303	03/25
SORONG	INDONESIA	0.8S	131.1E	2309	03/25
KANTON ISLAND	KIRIBATI	2.8S	171.7W	2311	03/25
WEWAK	PAPUA NEW GUINEA	3.5S	143.6E	2315	03/25
RABAUL	PAPUA NEW GUINEA	4.2S	152.3E	2316	03/25
FUNAFUTI ISLAND	TUVALU	7.9S	178.5E	2324	03/25
CHRISTMAS ISLAN	KIRIBATI	2.0N	157.5W	2327	03/25
ULAMONA	PAPUA NEW GUINEA	5.0S	151.3E	2328	03/25
KIETA	PAPUA NEW GUINEA	6.1S	155.6E	2331	03/25
AMUN	PAPUA NEW GUINEA	6.0S	154.7E	2335	03/25
JARVIS ISLAND	JARVIS ISLAND	0.4S	160.1W	2337	03/25
FALAMAE	SOLOMON ISLANDS	7.4S	155.6E	2341	03/25
PANGGOE	SOLOMON ISLANDS	6.9S	157.2E	2345	03/25
ENSENADA	MEXICO	31.8N	116.8W	2346	03/25
WOODLARK ISLAND	PAPUA NEW GUINEA	9.0S	152.9E	2348	03/25
MADANG	PAPUA NEW GUINEA	5.2S	145.8E	2349	03/25
GHATERE	SOLOMON ISLANDS	7.8S	159.2E	2359	03/25
NUKUNONU ISLAND	TOKELAU	9.2S	171.8W	0000	03/26
KIRAKIRA	SOLOMON ISLANDS	10.4S	161.9E	0003	03/26
AUKI	SOLOMON ISLANDS	8.8S	160.6E	0008	03/26
MUNDA	SOLOMON ISLANDS	8.4S	157.2E	0012	03/26
LAE	PAPUA NEW GUINEA	6.8S	147.0E	0016	03/26
WALLIS ISLAND	WALLIS AND FUTUN	13.3S	176.3W	0021	03/26
MALDEN ISLAND	KIRIBATI	3.9S	154.9W	0022	03/26
SANTA CRUZ ISLA	SOLOMON ISLANDS	10.9S	165.9E	0027	03/26
PUNTA ABREOJOS	MEXICO	26.7N	113.6W	0028	03/26
PUKAPUKA ISLAND	COOK ISLANDS	10.8S	165.9W	0030	03/26
HONIARA	SOLOMON ISLANDS	9.3S	160.0E	0033	03/26
FUTUNA ISLAND	WALLIS AND FUTUN	14.3S	178.2W	0034	03/26
APIA	SAMOA	13.8S	171.8W	0037	03/26
PENRYN ISLAND	COOK ISLANDS	8.9S	157.8W	0045	03/26
PAGO PAGO	AMERICAN SAMOA	14.3S	170.7W	0045	03/26
ESPERITU SANTO	VANUATU	15.1S	167.3E	0051	03/26
NIUATOPUTAPU	TONGA	16.0S	173.5W	0058	03/26
PORT VILA	VANUATU	17.8S	168.2E	0113	03/26
CABO SAN LUCAS	MEXICO	22.8N	110.0W	0113	03/26
NIUE ISLAND	NIUE	19.0S	170.0W	0120	03/26
VAVAU	TONGA	18.7S	173.9W	0124	03/26
FLINT ISLAND	KIRIBATI	11.4S	151.8W	0127	03/26
ANATOM ISLAND	VANUATU	20.2S	169.9E	0136	03/26
PORT MORESBY	PAPUA NEW GUINEA	9.3S	146.9E	0152	03/26
NUKUALOFA	TONGA	21.0S	175.2W	0153	03/26
SUVA	FIJI	18.1S	178.4E	0158	03/26
RAROTONGA	COOK ISLANDS	21.2S	159.8W	0209	03/26
HIVA OA	FRENCH POLYNESIA	10.0S	139.0W	0211	03/26
PUERTO VALLARTA	MEXICO	20.6N	105.3W	0220	03/26
PAPEETE	FRENCH POLYNESIA	17.5S	149.6W	0225	03/26
NOUMEA	NEW CALEDONIA	22.3S	166.5E	0229	03/26
SAN BLAS	MEXICO	21.5N	105.3W	0230	03/26
LAZARO CARDENAS	MEXICO	17.9N	102.2W	0246	03/26
ACAPULCO	MEXICO	16.9N	99.9W	0307	03/26
NORTH CAPE	NEW ZEALAND	34.4S	173.3E	0354	03/26
RIKITEA	FRENCH POLYNESIA	23.1S	135.0W	0415	03/26
SALINA CRUZ	MEXICO	16.5N	95.2W	0419	03/26
PITCAIRN ISLAND	PITCAIRN ISLANDS	25.1S	130.1W	0444	03/26
CABO SAN ELENA	COSTA RICA	10.9N	86.0W	0515	03/26
CORINTO	NICARAGUA	12.5N	87.2W	0527	03/26
PUERTO SANDINO	NICARAGUA	12.2N	86.8W	0527	03/26
AUCKLAND EAST	NEW ZEALAND	36.7S	175.0E	0531	03/26
SAN JUAN DL SUR	NICARAGUA	11.2N	85.9W	0536	03/26
PUERTO QUEPOS	COSTA RICA	9.4N	84.2W	0538	03/26
COCOS ISLAND	COSTA RICA	5.5N	87.1W	0539	03/26
CABO MATAPALO	COSTA RICA	8.4N	83.3W	0542	03/26
PUNTA BURICA	PANAMA	8.0N	82.9W	0550	03/26
BALTRA ISLAND	ECUADOR	0.5S	90.3W	0636	03/26

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PUNTA MALA	PANAMA	7.5N	80.0W	0641	03/26
EASTER ISLAND	CHILE	27.1S	109.4W	0648	03/26
PUERTO PINA	PANAMA	7.4N	78.0W	0655	03/26
BAHIA SOLANO	COLOMBIA	6.3N	77.4W	0656	03/26
ESMERELDAS	ECUADOR	1.2N	79.8W	0711	03/26
TUMACO	COLOMBIA	1.8N	78.9W	0718	03/26
LA LIBERTAD	ECUADOR	2.2S	81.2W	0733	03/26
BUENAVENTURA	COLOMBIA	3.8N	77.2W	0736	03/26
TALARA	PERU	4.6S	81.5W	0750	03/26
CAPE ADARE	ANTARCTICA	71.0S	170.0E	0852	03/26
PIMENTAL	PERU	6.9S	80.0W	0852	03/26
LA PUNTA	PERU	12.1S	77.2W	0858	03/26
CHIMBOTE	PERU	9.0S	78.8W	0900	03/26
BALBOA HEIGHTS	PANAMA	9.0N	79.6W	0903	03/26
SAN JUAN	PERU	15.3S	75.2W	0913	03/26
MOLLEDO	PERU	17.1S	72.0W	0947	03/26
ARICA	CHILE	18.5S	70.3W	1003	03/26
IQUIQUE	CHILE	20.2S	70.1W	1004	03/26
ANTOFAGASTA	CHILE	23.3S	70.4W	1019	03/26
CALDERA	CHILE	27.1S	70.8W	1039	03/26
COQUIMBO	CHILE	29.9S	71.4W	1048	03/26
VALPARAISO	CHILE	33.0S	71.6W	1105	03/26
THURSTON ISLAND	ANTARCTICA	72.0S	100.0W	1112	03/26
TALCAHUANO	CHILE	36.7S	73.1W	1128	03/26
CORRAL	CHILE	39.8S	73.5W	1145	03/26
GOLFO DE PENAS	CHILE	47.1S	74.9W	1228	03/26
PUERTO MONTT	CHILE	41.5S	73.0W	1423	03/26

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.

TSUNAMI OBSERVATIONS...UPDATED

- * 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 TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
DART 21416	48.0N	163.5E	1554	0.8M/02.6FT	14
DART 21415	50.2N	171.8E	1616	0.4M/01.3FT	15
UST KAMCHATSK RU	56.0N	163.0E	1550	3.1M/10.0FT	20
NIKOL'SKOE RU	55.2N	166.0E	1559	2.9M/09.5FT	16
PETROPAVLOVSK RU	53.0N	158.6E	1733	1.6M/05.2FT	17
SHEMYA AK	52.7N	174.1E	1725	0.9M/04.2FT	17
ADAK AK	51.9N	176.6W	1715	0.8M/02.8FT	15

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ATKA AK	52.2N 174.2W	1734	0.7M/02.7FT	18
KUSHIRO JP	43.0N 144.4E	1720	0.8M/02.6FT	20
HANASAKI JP	43.3N 145.6E	1745	0.5M/01.6FT	19
OFUNATO JP	39.0N 141.8E	1755	0.5M/01.6FT	18
NIKOLSKI AK	52.9N 168.9W	1928	1.1M/03.7FT	15
DUTCH HBR AK	51.1N 164.0W	1935	0.3M/01.0FT	17
OMAEZAKI JP	34.6N 138.2E	1859	0.4M/01.3FT	19
CHICHIJIMA JP	27.1N 142.2E	1855	0.3M/01.2FT	
MIDWAY US	28.2N 177.4W	1918	0.9M/02.9FT	14
WAKE US	19.3N 166.6E	1940	0.5M/01.6FT	14
KODIAK AK	57.7N 152.5W	2052	0.1M/00.4FT	18
TERN FR FRIGATE US	23.9N 166.3W	2025	0.9M/03.0FT	14

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PTWC International Message #9

ZCZC
WEPA40 PHEB 252200
TSUPAC

TSUNAMI MESSAGE NUMBER 9
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
2200 UTC WED MAR 25 2015

...PTWC TSUNAMI THREAT MESSAGE...

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

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PACIFEX 15 Handbook

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE 8.6
* ORIGIN TIME 1500 UTC MAR 25 2015
* COORDINATES 53.5 NORTH 162.0 EAST
* DEPTH 30 KM / 19 MILES
* LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

EVALUATION

-
- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 1500 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 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

ECUADOR... CHILE... KIRIBATI... PALMYRA ISLAND... SOLOMON ISLANDS... HAWAII... AND NW HAWAIIAN ISLANDS.
 - * TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

MEXICO... COSTA RICA... NICARAGUA... PANAMA... COLOMBIA... PERU... ANTARCTICA... JAPAN... PHILIPPINES... NEW CALEDONIA... NEW ZEALAND... TAIWAN... NORTHERN MARIANAS... GUAM... PALAU... YAP... POHNPEI... CHUUK... KOSRAE... MARSHALL ISLANDS... FIJI... SAMOA... AMERICAN SAMOA... COOK ISLANDS... TOKELAU... VANUATU... FRENCH POLYNESIA... WAKE ISLAND... MIDWAY ISLAND... JOHNSTON ISLAND... JARVIS ISLAND... HOWLAND AND BAKER... TONGA... TUVALU... WALLIS AND FUTUNA... PITCAIRN ISLANDS... NIUE... PAPUA NEW GUINEA... AND INDONESIA.
 - * TSUNAMI WAVES ARE FORECAST TO BE LESS THAN 0.3 METERS ABOVE THE TIDE LEVEL FOR THE COASTS OF

EL SALVADOR... GUATEMALA... HONDURAS... AUSTRALIA... CHINA... REPUBLIC OF KOREA... DPR OF KOREA... NAURU... VIETNAM... MALAYSIA... AND BRUNEI.
 - * 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.

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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 PLACES WITHIN A REGION WITH FORECAST TSUNAMI AMPLITUDES OF 0.3 METERS AND GREATER 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)
KWAJALEIN	MARSHALL ISLANDS	8.7N 167.7E	2103 03/25
OKINAWA	JAPAN	26.2N 127.8E	2104 03/25
HUALIEN	TAIWAN	24.0N 121.7E	2106 03/25
TAITUNG	TAIWAN	22.7N 121.2E	2110 03/25
NAGASAKI	JAPAN	32.7N 129.7E	2113 03/25
MAJURO	MARSHALL ISLANDS	7.1N 171.4E	2116 03/25
POHNPEI ISLAND	POHNPEI	7.0N 158.2E	2118 03/25
YAP ISLAND	YAP	9.5N 138.1E	2119 03/25
KOSRAE ISLAND	KOSRAE	5.5N 163.0E	2126 03/25
PALANAN	PHILIPPINES	17.1N 122.6E	2128 03/25
CHILUNG	TAIWAN	25.2N 121.8E	2134 03/25
CHUUK ISLAND	CHUUK	7.4N 151.8E	2139 03/25
LEGASPI	PHILIPPINES	13.2N 123.8E	2155 03/25
MALAKAL	PALAU	7.3N 134.5E	2214 03/25
GEME	INDONESIA	4.6N 126.8E	2226 03/25
DAVAO	PHILIPPINES	6.8N 125.7E	2226 03/25
HOWLAND ISLAND	HOWLAND AND BAKE	0.6N 176.6W	2232 03/25
BEREBERE	INDONESIA	2.5N 128.7E	2235 03/25
PALMYRA ISLAND	PALMYRA ISLAND	5.9N 162.1W	2243 03/25
WARSA	INDONESIA	0.6S 135.8E	2245 03/25
MANUS ISLAND	PAPUA NEW GUINEA	2.0S 147.5E	2248 03/25
KAVIENG	PAPUA NEW GUINEA	2.5S 150.7E	2251 03/25
MANOKWARI	INDONESIA	0.8S 134.2E	2253 03/25
TARAWA ISLAND	KIRIBATI	1.5N 173.0E	2256 03/25
JAYAPURA	INDONESIA	2.4S 140.8E	2302 03/25
PATANI	INDONESIA	0.4N 128.8E	2303 03/25
VANIMO	PAPUA NEW GUINEA	2.6S 141.3E	2303 03/25
SORONG	INDONESIA	0.8S 131.1E	2309 03/25
KANTON ISLAND	KIRIBATI	2.8S 171.7W	2311 03/25
WEWAK	PAPUA NEW GUINEA	3.5S 143.6E	2315 03/25
RABAUL	PAPUA NEW GUINEA	4.2S 152.3E	2316 03/25
FUNAFUTI ISLAND	TUVALU	7.9S 178.5E	2324 03/25
CHRISTMAS ISLAN	KIRIBATI	2.0N 157.5W	2327 03/25
ULAMONA	PAPUA NEW GUINEA	5.0S 151.3E	2328 03/25
KIETA	PAPUA NEW GUINEA	6.1S 155.6E	2331 03/25
AMUN	PAPUA NEW GUINEA	6.0S 154.7E	2335 03/25
JARVIS ISLAND	JARVIS ISLAND	0.4S 160.1W	2337 03/25
FALAMAE	SOLOMON ISLANDS	7.4S 155.6E	2341 03/25
PANGGOE	SOLOMON ISLANDS	6.9S 157.2E	2345 03/25
ENSENADA	MEXICO	31.8N 116.8W	2346 03/25
WOODLARK ISLAND	PAPUA NEW GUINEA	9.0S 152.9E	2348 03/25

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MADANG	PAPUA NEW GUINEA	5.2S	145.8E	2349	03/25
GHATERE	SOLOMON ISLANDS	7.8S	159.2E	2359	03/25
NUKUNONU ISLAND	TOKELAU	9.2S	171.8W	0000	03/26
KIRAKIRA	SOLOMON ISLANDS	10.4S	161.9E	0003	03/26
AUKI	SOLOMON ISLANDS	8.8S	160.6E	0008	03/26
MUNDA	SOLOMON ISLANDS	8.4S	157.2E	0012	03/26
LAE	PAPUA NEW GUINEA	6.8S	147.0E	0016	03/26
WALLIS ISLAND	WALLIS AND FUTUN	13.3S	176.3W	0021	03/26
MALDEN ISLAND	KIRIBATI	3.9S	154.9W	0022	03/26
SANTA CRUZ ISLA	SOLOMON ISLANDS	10.9S	165.9E	0027	03/26
PUNTA ABREOJOS	MEXICO	26.7N	113.6W	0028	03/26
PUKAPUKA ISLAND	COOK ISLANDS	10.8S	165.9W	0030	03/26
HONIARA	SOLOMON ISLANDS	9.3S	160.0E	0033	03/26
FUTUNA ISLAND	WALLIS AND FUTUN	14.3S	178.2W	0034	03/26
APIA	SAMOA	13.8S	171.8W	0037	03/26
PENRYN ISLAND	COOK ISLANDS	8.9S	157.8W	0045	03/26
PAGO PAGO	AMERICAN SAMOA	14.3S	170.7W	0045	03/26
ESPERITU SANTO	VANUATU	15.1S	167.3E	0051	03/26
NIUATOPUTAPU	TONGA	16.0S	173.5W	0058	03/26
PORT VILA	VANUATU	17.8S	168.2E	0113	03/26
CABO SAN LUCAS	MEXICO	22.8N	110.0W	0113	03/26
NIUE ISLAND	NIUE	19.0S	170.0W	0120	03/26
VAVAU	TONGA	18.7S	173.9W	0124	03/26
FLINT ISLAND	KIRIBATI	11.4S	151.8W	0127	03/26
ANATOM ISLAND	VANUATU	20.2S	169.9E	0136	03/26
PORT MORESBY	PAPUA NEW GUINEA	9.3S	146.9E	0152	03/26
NUKUALOFA	TONGA	21.0S	175.2W	0153	03/26
SUVA	FIJI	18.1S	178.4E	0158	03/26
RAROTONGA	COOK ISLANDS	21.2S	159.8W	0209	03/26
HIVA OA	FRENCH POLYNESIA	10.0S	139.0W	0211	03/26
PUERTO VALLARTA	MEXICO	20.6N	105.3W	0220	03/26
PAPEETE	FRENCH POLYNESIA	17.5S	149.6W	0225	03/26
NOUMEA	NEW CALEDONIA	22.3S	166.5E	0229	03/26
SAN BLAS	MEXICO	21.5N	105.3W	0230	03/26
LAZARO CARDENAS	MEXICO	17.9N	102.2W	0246	03/26
ACAPULCO	MEXICO	16.9N	99.9W	0307	03/26
NORTH CAPE	NEW ZEALAND	34.4S	173.3E	0354	03/26
RIKITEA	FRENCH POLYNESIA	23.1S	135.0W	0415	03/26
SALINA CRUZ	MEXICO	16.5N	95.2W	0419	03/26
PITCAIRN ISLAND	PITCAIRN ISLANDS	25.1S	130.1W	0444	03/26
CABO SAN ELENA	COSTA RICA	10.9N	86.0W	0515	03/26
CORINTO	NICARAGUA	12.5N	87.2W	0527	03/26
PUERTO SANDINO	NICARAGUA	12.2N	86.8W	0527	03/26
AUCKLAND EAST	NEW ZEALAND	36.7S	175.0E	0531	03/26
SAN JUAN DL SUR	NICARAGUA	11.2N	85.9W	0536	03/26
PUERTO QUEPOS	COSTA RICA	9.4N	84.2W	0538	03/26
COCOS ISLAND	COSTA RICA	5.5N	87.1W	0539	03/26
CABO MATAPALO	COSTA RICA	8.4N	83.3W	0542	03/26
PUNTA BURICA	PANAMA	8.0N	82.9W	0550	03/26
BALTRA ISLAND	ECUADOR	0.5S	90.3W	0636	03/26
PUNTA MALA	PANAMA	7.5N	80.0W	0641	03/26
EASTER ISLAND	CHILE	27.1S	109.4W	0648	03/26
PUERTO PINA	PANAMA	7.4N	78.0W	0655	03/26
BAHIA SOLANO	COLOMBIA	6.3N	77.4W	0656	03/26
ESMERELDAS	ECUADOR	1.2N	79.8W	0711	03/26
TUMACO	COLOMBIA	1.8N	78.9W	0718	03/26
LA LIBERTAD	ECUADOR	2.2S	81.2W	0733	03/26
BUENAVENTURA	COLOMBIA	3.8N	77.2W	0736	03/26
TALARA	PERU	4.6S	81.5W	0750	03/26
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CHIMBOTE	PERU	9.0S	78.8W	0900	03/26
BALBOA HEIGHTS	PANAMA	9.0N	79.6W	0903	03/26
SAN JUAN	PERU	15.3S	75.2W	0913	03/26
MOLLENDO	PERU	17.1S	72.0W	0947	03/26

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ARICA	CHILE	18.5S	70.3W	1003	03/26
IQUIQUE	CHILE	20.2S	70.1W	1004	03/26
ANTOFAGASTA	CHILE	23.3S	70.4W	1019	03/26
CALDERA	CHILE	27.1S	70.8W	1039	03/26
COQUIMBO	CHILE	29.9S	71.4W	1048	03/26
VALPARAISO	CHILE	33.0S	71.6W	1105	03/26
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GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LOE			
DART 21416	48.0N	163.5E	1554	0.8M/02.6FT	14
DART 21415	50.2N	171.8E	1616	0.4M/01.3FT	15
UST KAMCHATSK RU	56.0N	163.0E	1550	3.1M/10.0FT	20
NIKOL'SKOE RU	55.2N	166.0E	1559	2.9M/09.5FT	16
PETROPAVLOVSK RU	53.0N	158.6E	1733	1.6M/05.2FT	17
SHEMYA AK	52.7N	174.1E	1725	0.9M/04.2FT	17
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OMAEZAKI JP	34.6N	138.2E	1859	0.4M/01.3FT	19
CHICHIJIMA JP	27.1N	142.2E	1855	0.3M/01.2FT	
MIDWAY US	28.2N	177.4W	1918	0.9M/02.9FT	14
WAKE US	19.3N	166.6E	1940	0.5M/01.6FT	14
KODIAK AK	57.7N	152.5W	2052	0.1M/00.4FT	18
TERN FR FRIGATE US	23.9N	166.3W	2025	0.9M/03.0FT	14
YAKUTAT AK	59.5N	139.7W	2130	0.1M/00.4FT	
PAGO BAY GU	13.4N	144.8E	2105	0.5M/01.7FT	17
SEWARD AK	60.1N	149.4W	2152	0.1M/00.3FT	20
HANALET HI	22.2N	159.5W	2110	1.0M/03.3FT	16

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NAWILIWILI HI	21.9N 159.4W	2130	0.8M/02.7FT	17
HALEIWA HI	21.6N 158.1W	2125	1.1M/03.6FT	15
HONOLULU HI	21.3N 157.9W	2135	0.4M/01.3FT	19
DEKEHTIK FM	7.0N 158.2E	2124	0.3M/01.0FT	13
HILO HI	19.7N 155.0W	2150	1.3M/04.3FT	18

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PTWC International Message #10

ZCZC
WEPA40 PHEB 252300
TSUPAC

TSUNAMI MESSAGE NUMBER 10
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
2300 UTC WED MAR 25 2015

...PTWC TSUNAMI THREAT MESSAGE...

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PRELIMINARY EARTHQUAKE PARAMETERS

- * MAGNITUDE 8.6
- * ORIGIN TIME 1500 UTC MAR 25 2015

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* COORDINATES 53.5 NORTH 162.0 EAST
* DEPTH 30 KM / 19 MILES
* LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 1500 UTC ON WEDNESDAY MARCH 25 2015.
- * BASED ON THE PRELIMINARY EARTHQUAKE PARAMETERS... HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TSUNAMI THREAT FORECAST

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

ECUADOR... CHILE... KIRIBATI... PALMYRA ISLAND... SOLOMON ISLANDS... HAWAII... AND NW HAWAIIAN ISLANDS.
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MEXICO... COSTA RICA... NICARAGUA... PANAMA... COLOMBIA... PERU... ANTARCTICA... JAPAN... PHILIPPINES... NEW CALEDONIA... NEW ZEALAND... TAIWAN... NORTHERN MARIANAS... GUAM... PALAU... YAP... POHNPEI... CHUUK... KOSRAE... MARSHALL ISLANDS... FIJI... SAMOA... AMERICAN SAMOA... COOK ISLANDS... TOKELAU... VANUATU... FRENCH POLYNESIA... WAKE ISLAND... MIDWAY ISLAND... JOHNSTON ISLAND... JARVIS ISLAND... HOWLAND AND BAKER... TONGA... TUVALU... WALLIS AND FUTUNA... PITCAIRN ISLANDS... NIUE... PAPUA NEW GUINEA... AND INDONESIA.
- * TSUNAMI WAVES ARE FORECAST TO BE LESS THAN 0.3 METERS ABOVE THE TIDE LEVEL FOR THE COASTS OF

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ESTIMATED TIMES OF ARRIVAL

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LOCATION	REGION	COORDINATES	ETA (UTC)
MALAKAL	PALAU	7.3N 134.5E	2214 03/25
GEME	INDONESIA	4.6N 126.8E	2226 03/25
DAVAO	PHILIPPINES	6.8N 125.7E	2226 03/25
HOWLAND ISLAND	HOWLAND AND BAKE	0.6N 176.6W	2232 03/25
BEREBERE	INDONESIA	2.5N 128.7E	2235 03/25
PALMYRA ISLAND	PALMYRA ISLAND	5.9N 162.1W	2243 03/25
WARSA	INDONESIA	0.6S 135.8E	2245 03/25
MANUS ISLAND	PAPUA NEW GUINEA	2.0S 147.5E	2248 03/25
KAVIENG	PAPUA NEW GUINEA	2.5S 150.7E	2251 03/25
MANOKWARI	INDONESIA	0.8S 134.2E	2253 03/25
TARAWA ISLAND	KIRIBATI	1.5N 173.0E	2256 03/25
JAYAPURA	INDONESIA	2.4S 140.8E	2302 03/25
PATANI	INDONESIA	0.4N 128.8E	2303 03/25
VANIMO	PAPUA NEW GUINEA	2.6S 141.3E	2303 03/25
SORONG	INDONESIA	0.8S 131.1E	2309 03/25
KANTON ISLAND	KIRIBATI	2.8S 171.7W	2311 03/25
WEWAK	PAPUA NEW GUINEA	3.5S 143.6E	2315 03/25
RABAU	PAPUA NEW GUINEA	4.2S 152.3E	2316 03/25
FUNAFUTI ISLAND	TUVALU	7.9S 178.5E	2324 03/25
CHRISTMAS ISLAND	KIRIBATI	2.0N 157.5W	2327 03/25
ULAMONA	PAPUA NEW GUINEA	5.0S 151.3E	2328 03/25
KIETA	PAPUA NEW GUINEA	6.1S 155.6E	2331 03/25
AMUN	PAPUA NEW GUINEA	6.0S 154.7E	2335 03/25
JARVIS ISLAND	JARVIS ISLAND	0.4S 160.1W	2337 03/25
FALAMAE	SOLOMON ISLANDS	7.4S 155.6E	2341 03/25
PANGGOE	SOLOMON ISLANDS	6.9S 157.2E	2345 03/25
ENSENADA	MEXICO	31.8N 116.8W	2346 03/25
WOODLARK ISLAND	PAPUA NEW GUINEA	9.0S 152.9E	2348 03/25
MADANG	PAPUA NEW GUINEA	5.2S 145.8E	2349 03/25
GHATERE	SOLOMON ISLANDS	7.8S 159.2E	2359 03/25
NUKUNONU ISLAND	TOKELAU	9.2S 171.8W	0000 03/26
KIRAKIRA	SOLOMON ISLANDS	10.4S 161.9E	0003 03/26
AUKI	SOLOMON ISLANDS	8.8S 160.6E	0008 03/26
MUNDA	SOLOMON ISLANDS	8.4S 157.2E	0012 03/26
LAE	PAPUA NEW GUINEA	6.8S 147.0E	0016 03/26
WALLIS ISLAND	WALLIS AND FUTUN	13.3S 176.3W	0021 03/26
MALDEN ISLAND	KIRIBATI	3.9S 154.9W	0022 03/26
SANTA CRUZ ISLAND	SOLOMON ISLANDS	10.9S 165.9E	0027 03/26
PUNTA ABREOJOS	MEXICO	26.7N 113.6W	0028 03/26
PUKAPUKA ISLAND	COOK ISLANDS	10.8S 165.9W	0030 03/26
HONIARA	SOLOMON ISLANDS	9.3S 160.0E	0033 03/26
FUTUNA ISLAND	WALLIS AND FUTUN	14.3S 178.2W	0034 03/26
APIA	SAMOA	13.8S 171.8W	0037 03/26
PENRYN ISLAND	COOK ISLANDS	8.9S 157.8W	0045 03/26
PAGO PAGO	AMERICAN SAMOA	14.3S 170.7W	0045 03/26
ESPERITU SANTO	VANUATU	15.1S 167.3E	0051 03/26
NIUATOPUTAPU	TONGA	16.0S 173.5W	0058 03/26
PORT VILA	VANUATU	17.8S 168.2E	0113 03/26
CABO SAN LUCAS	MEXICO	22.8N 110.0W	0113 03/26

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NIUE ISLAND	NIUE	19.0S	170.0W	0120	03/26
VAVAU	TONGA	18.7S	173.9W	0124	03/26
FLINT ISLAND	KIRIBATI	11.4S	151.8W	0127	03/26
ANATOM ISLAND	VANUATU	20.2S	169.9E	0136	03/26
PORT MORESBY	PAPUA NEW GUINEA	9.3S	146.9E	0152	03/26
NUKUALOFA	TONGA	21.0S	175.2W	0153	03/26
SUVA	FIJI	18.1S	178.4E	0158	03/26
RAROTONGA	COOK ISLANDS	21.2S	159.8W	0209	03/26
HIVA OA	FRENCH POLYNESIA	10.0S	139.0W	0211	03/26
PUERTO VALLARTA	MEXICO	20.6N	105.3W	0220	03/26
PAPEETE	FRENCH POLYNESIA	17.5S	149.6W	0225	03/26
NOUMEA	NEW CALEDONIA	22.3S	166.5E	0229	03/26
SAN BLAS	MEXICO	21.5N	105.3W	0230	03/26
LAZARO CARDENAS	MEXICO	17.9N	102.2W	0246	03/26
ACAPULCO	MEXICO	16.9N	99.9W	0307	03/26
NORTH CAPE	NEW ZEALAND	34.4S	173.3E	0354	03/26
RIKITEA	FRENCH POLYNESIA	23.1S	135.0W	0415	03/26
SALINA CRUZ	MEXICO	16.5N	95.2W	0419	03/26
PITCAIRN ISLAND	PITCAIRN ISLANDS	25.1S	130.1W	0444	03/26
CABO SAN ELENA	COSTA RICA	10.9N	86.0W	0515	03/26
CORINTO	NICARAGUA	12.5N	87.2W	0527	03/26
PUERTO SANDINO	NICARAGUA	12.2N	86.8W	0527	03/26
AUCKLAND EAST	NEW ZEALAND	36.7S	175.0E	0531	03/26
SAN JUAN DL SUR	NICARAGUA	11.2N	85.9W	0536	03/26
PUERTO QUEPOS	COSTA RICA	9.4N	84.2W	0538	03/26
COCOS ISLAND	COSTA RICA	5.5N	87.1W	0539	03/26
CABO MATAPALO	COSTA RICA	8.4N	83.3W	0542	03/26
PUNTA BURICA	PANAMA	8.0N	82.9W	0550	03/26
BALTRA ISLAND	ECUADOR	0.5S	90.3W	0636	03/26
PUNTA MALA	PANAMA	7.5N	80.0W	0641	03/26
EASTER ISLAND	CHILE	27.1S	109.4W	0648	03/26
PUERTO PINA	PANAMA	7.4N	78.0W	0655	03/26
BAHIA SOLANO	COLOMBIA	6.3N	77.4W	0656	03/26
ESMERELDAS	ECUADOR	1.2N	79.8W	0711	03/26
TUMACO	COLOMBIA	1.8N	78.9W	0718	03/26
LA LIBERTAD	ECUADOR	2.2S	81.2W	0733	03/26
BUENAVENTURA	COLOMBIA	3.8N	77.2W	0736	03/26
TALARA	PERU	4.6S	81.5W	0750	03/26
CAPE ADARE	ANTARCTICA	71.0S	170.0E	0852	03/26
PIMENTAL	PERU	6.9S	80.0W	0852	03/26
LA PUNTA	PERU	12.1S	77.2W	0858	03/26
CHIMBOTE	PERU	9.0S	78.8W	0900	03/26
BALBOA HEIGHTS	PANAMA	9.0N	79.6W	0903	03/26
SAN JUAN	PERU	15.3S	75.2W	0913	03/26
MOLLEDO	PERU	17.1S	72.0W	0947	03/26
ARICA	CHILE	18.5S	70.3W	1003	03/26
IQUIQUE	CHILE	20.2S	70.1W	1004	03/26
ANTOFAGASTA	CHILE	23.3S	70.4W	1019	03/26
CALDERA	CHILE	27.1S	70.8W	1039	03/26
COQUIMBO	CHILE	29.9S	71.4W	1048	03/26
VALPARAISO	CHILE	33.0S	71.6W	1105	03/26
THURSTON ISLAND	ANTARCTICA	72.0S	100.0W	1112	03/26
TALCAHUANO	CHILE	36.7S	73.1W	1128	03/26
CORRAL	CHILE	39.8S	73.5W	1145	03/26
GOLFO DE PENAS	CHILE	47.1S	74.9W	1228	03/26
PUERTO MONTT	CHILE	41.5S	73.0W	1423	03/26

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

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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.

TSUNAMI OBSERVATIONS...UPDATED

* 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 TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LOE			
DART 21416	48.0N	163.5E	1554	0.8M/02.6FT	14
DART 21415	50.2N	171.8E	1616	0.4M/01.3FT	15
UST KAMCHATSK RU	56.0N	163.0E	1550	3.1M/10.0FT	20
NIKOL'SKOE RU	55.2N	166.0E	1559	2.9M/09.5FT	16
PETROPAVLOVSK RU	53.0N	158.6E	1733	1.6M/05.2FT	17
SHEMYA AK	52.7N	174.1E	1725	0.9M/04.2FT	17
ADAK AK	51.9N	176.6W	1715	0.8M/02.8FT	15
ATKA AK	52.2N	174.2W	1734	0.7M/02.7FT	18
KUSHIRO JP	43.0N	144.4E	1720	0.8M/02.6FT	20
HANASAKI JP	43.3N	145.6E	1745	0.5M/01.6FT	19
OFUNATO JP	39.0N	141.8E	1755	0.5M/01.6FT	18
NIKOLSKI AK	52.9N	168.9W	1830	1.1M/03.7FT	15
DUTCH HBR AK	51.1N	164.0W	1855	0.3M/01.0FT	17
OMAEZAKI JP	34.6N	138.2E	1859	0.4M/01.3FT	19
CHICHIJIMA JP	27.1N	142.2E	1855	0.3M/01.2FT	
MIDWAY US	28.2N	177.4W	1918	0.9M/02.9FT	14
WAKE US	19.3N	166.6E	1940	0.5M/01.6FT	14
KODIAK AK	57.7N	152.5W	2052	0.1M/00.4FT	18
TERN FR FRIGATE US	23.9N	166.3W	2025	0.9M/03.0FT	14
YAKUTAT AK	59.5N	139.7W	2130	0.1M/00.4FT	
PAGO BAY GU	13.4N	144.8E	2105	0.5M/01.7FT	17
SEWARD AK	60.1N	149.4W	2152	0.1M/00.3FT	20
LANGARA PT BC	54.2N	133.1W	2222	0.1M/00.2FT	
HANAIEI HI	22.2N	159.5W	2110	1.0M/03.3FT	16
NAWILIWILI HI	21.9N	159.4W	2130	0.8M/02.7FT	17
HALEIWA HI	21.6N	158.1W	2125	1.1M/03.6FT	15
HONOLULU HI	21.3N	157.9W	2135	0.4M/01.3FT	19
DEKEHTIK FM	7.0N	158.2E	2124	0.3M/01.0FT	13
HILO HI	19.7N	155.0W	2150	1.3M/04.3FT	18
NAURU NR	0.5S	166.9E	2236	0.2M/00.7FT	15
BETIO TARAWA KI	1.4N	172.9E	2248	0.2M/00.7FT	16

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 LOWER CASE-.

* FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT

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PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.

- * COASTAL REGIONS OF HAWAII... AMERICAN SAMOA... GUAM... AND CNMI SHOULD REFER TO PACIFIC TSUNAMI WARNING CENTER MESSAGES SPECIFICALLY FOR THOSE PLACES THAT CAN BE FOUND AT PTWC.WEATHER.GOV.
- * COASTAL REGIONS OF CALIFORNIA... OREGON... WASHINGTON... BRITISH COLUMBIA AND ALASKA SHOULD ONLY REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT NTWC.ARH.NOAA.GOV.

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PTWC International Message #11

ZCZC
WEPA40 PHEB 260000
TSUPAC

TSUNAMI MESSAGE NUMBER 11
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
0000 UTC THU MAR 26 2015

...PTWC TSUNAMI THREAT MESSAGE...

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

THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC PACIFIC TSUNAMI WARNING AND MITIGATION SYSTEM AND IS MEANT FOR NATIONAL AUTHORITIES IN EACH COUNTRY OF THAT SYSTEM.

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LOCATION	REGION	COORDINATES	ETA (UTC)
JAYAPURA	INDONESIA	2.4S 140.8E	2302 03/25
PATANI	INDONESIA	0.4N 128.8E	2303 03/25

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VANIMO	PAPUA NEW GUINEA	2.6S	141.3E	2303	03/25
SORONG	INDONESIA	0.8S	131.1E	2309	03/25
KANTON ISLAND	KIRIBATI	2.8S	171.7W	2311	03/25
WEWAK	PAPUA NEW GUINEA	3.5S	143.6E	2315	03/25
RBAUL	PAPUA NEW GUINEA	4.2S	152.3E	2316	03/25
FUNAFUTI ISLAND	TUVALU	7.9S	178.5E	2324	03/25
CHRISTMAS ISLAN	KIRIBATI	2.0N	157.5W	2327	03/25
ULAMONA	PAPUA NEW GUINEA	5.0S	151.3E	2328	03/25
KIETA	PAPUA NEW GUINEA	6.1S	155.6E	2331	03/25
AMUN	PAPUA NEW GUINEA	6.0S	154.7E	2335	03/25
JARVIS ISLAND	JARVIS ISLAND	0.4S	160.1W	2337	03/25
FALAMAE	SOLOMON ISLANDS	7.4S	155.6E	2341	03/25
PANGGOE	SOLOMON ISLANDS	6.9S	157.2E	2345	03/25
ENSENADA	MEXICO	31.8N	116.8W	2346	03/25
WOODLARK ISLAND	PAPUA NEW GUINEA	9.0S	152.9E	2348	03/25
MADANG	PAPUA NEW GUINEA	5.2S	145.8E	2349	03/25
GHATERE	SOLOMON ISLANDS	7.8S	159.2E	2359	03/25
NUKUNONU ISLAND	TOKELAU	9.2S	171.8W	0000	03/26
KIRAKIRA	SOLOMON ISLANDS	10.4S	161.9E	0003	03/26
AUKI	SOLOMON ISLANDS	8.8S	160.6E	0008	03/26
MUNDA	SOLOMON ISLANDS	8.4S	157.2E	0012	03/26
LAE	PAPUA NEW GUINEA	6.8S	147.0E	0016	03/26
WALLIS ISLAND	WALLIS AND FUTUN	13.3S	176.3W	0021	03/26
MALDEN ISLAND	KIRIBATI	3.9S	154.9W	0022	03/26
SANTA CRUZ ISLA	SOLOMON ISLANDS	10.9S	165.9E	0027	03/26
PUNTA ABREOJOS	MEXICO	26.7N	113.6W	0028	03/26
PUKAPUKA ISLAND	COOK ISLANDS	10.8S	165.9W	0030	03/26
HONIARA	SOLOMON ISLANDS	9.3S	160.0E	0033	03/26
FUTUNA ISLAND	WALLIS AND FUTUN	14.3S	178.2W	0034	03/26
APIA	SAMOA	13.8S	171.8W	0037	03/26
PENRYN ISLAND	COOK ISLANDS	8.9S	157.8W	0045	03/26
PAGO PAGO	AMERICAN SAMOA	14.3S	170.7W	0045	03/26
ESPERITU SANTO	VANUATU	15.1S	167.3E	0051	03/26
NIUATOPUTAPU	TONGA	16.0S	173.5W	0058	03/26
PORT VILA	VANUATU	17.8S	168.2E	0113	03/26
CABO SAN LUCAS	MEXICO	22.8N	110.0W	0113	03/26
NIUE ISLAND	NIUE	19.0S	170.0W	0120	03/26
VAVAU	TONGA	18.7S	173.9W	0124	03/26
FLINT ISLAND	KIRIBATI	11.4S	151.8W	0127	03/26
ANATOM ISLAND	VANUATU	20.2S	169.9E	0136	03/26
PORT MORESBY	PAPUA NEW GUINEA	9.3S	146.9E	0152	03/26
NUKUALOFA	TONGA	21.0S	175.2W	0153	03/26
SUVA	FIJI	18.1S	178.4E	0158	03/26
RAROTONGA	COOK ISLANDS	21.2S	159.8W	0209	03/26
HIVA OA	FRENCH POLYNESIA	10.0S	139.0W	0211	03/26
PUERTO VALLARTA	MEXICO	20.6N	105.3W	0220	03/26
PAPEETE	FRENCH POLYNESIA	17.5S	149.6W	0225	03/26
NOUMEA	NEW CALEDONIA	22.3S	166.5E	0229	03/26
SAN BLAS	MEXICO	21.5N	105.3W	0230	03/26
LAZARO CARDENAS	MEXICO	17.9N	102.2W	0246	03/26
ACAPULCO	MEXICO	16.9N	99.9W	0307	03/26
NORTH CAPE	NEW ZEALAND	34.4S	173.3E	0354	03/26
RIKITEA	FRENCH POLYNESIA	23.1S	135.0W	0415	03/26
SALINA CRUZ	MEXICO	16.5N	95.2W	0419	03/26
PITCAIRN ISLAND	PITCAIRN ISLANDS	25.1S	130.1W	0444	03/26
CABO SAN ELENA	COSTA RICA	10.9N	86.0W	0515	03/26
CORINTO	NICARAGUA	12.5N	87.2W	0527	03/26
PUERTO SANDINO	NICARAGUA	12.2N	86.8W	0527	03/26
AUCKLAND EAST	NEW ZEALAND	36.7S	175.0E	0531	03/26
SAN JUAN DL SUR	NICARAGUA	11.2N	85.9W	0536	03/26
PUERTO QUEPOS	COSTA RICA	9.4N	84.2W	0538	03/26
COCOS ISLAND	COSTA RICA	5.5N	87.1W	0539	03/26
CABO MATAPALO	COSTA RICA	8.4N	83.3W	0542	03/26
PUNTA BURICA	PANAMA	8.0N	82.9W	0550	03/26
BALTRA ISLAND	ECUADOR	0.5S	90.3W	0636	03/26
PUNTA MALA	PANAMA	7.5N	80.0W	0641	03/26

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EASTER ISLAND	CHILE	27.1S	109.4W	0648	03/26
PUERTO PINA	PANAMA	7.4N	78.0W	0655	03/26
BAHIA SOLANO	COLOMBIA	6.3N	77.4W	0656	03/26
ESMERELDAS	ECUADOR	1.2N	79.8W	0711	03/26
TUMACO	COLOMBIA	1.8N	78.9W	0718	03/26
LA LIBERTAD	ECUADOR	2.2S	81.2W	0733	03/26
BUENAVENTURA	COLOMBIA	3.8N	77.2W	0736	03/26
TALARA	PERU	4.6S	81.5W	0750	03/26
CAPE ADARE	ANTARCTICA	71.0S	170.0E	0852	03/26
PIMENTAL	PERU	6.9S	80.0W	0852	03/26
LA PUNTA	PERU	12.1S	77.2W	0858	03/26
CHIMBOTE	PERU	9.0S	78.8W	0900	03/26
BALBOA HEIGHTS	PANAMA	9.0N	79.6W	0903	03/26
SAN JUAN	PERU	15.3S	75.2W	0913	03/26
MOLLENDO	PERU	17.1S	72.0W	0947	03/26
ARICA	CHILE	18.5S	70.3W	1003	03/26
IQUIQUE	CHILE	20.2S	70.1W	1004	03/26
ANTOFAGASTA	CHILE	23.3S	70.4W	1019	03/26
CALDERA	CHILE	27.1S	70.8W	1039	03/26
COQUIMBO	CHILE	29.9S	71.4W	1048	03/26
VALPARAISO	CHILE	33.0S	71.6W	1105	03/26
THURSTON ISLAND	ANTARCTICA	72.0S	100.0W	1112	03/26
TALCAHUANO	CHILE	36.7S	73.1W	1128	03/26
CORRAL	CHILE	39.8S	73.5W	1145	03/26
GOLFO DE PENAS	CHILE	47.1S	74.9W	1228	03/26
PUERTO MONTT	CHILE	41.5S	73.0W	1423	03/26

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.

TSUNAMI OBSERVATIONS...UPDATED

- * 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 TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
DART 21416	48.0N	163.5E	1554	0.8M/02.6FT	14
DART 21415	50.2N	171.8E	1616	0.4M/01.3FT	15
UST KAMCHATSK RU	56.0N	163.0E	1550	3.1M/10.0FT	20
NIKOL'SKOE RU	55.2N	166.0E	1559	2.9M/09.5FT	16
PETROPAVLOVSK RU	53.0N	158.6E	1733	1.6M/05.2FT	17
SHEMYA AK	52.7N	174.1E	1725	0.9M/04.2FT	17
ADAK AK	51.9N	176.6W	1715	0.8M/02.8FT	15
ATKA AK	52.2N	174.2W	1734	0.7M/02.7FT	18

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KUSHIRO JP	43.0N 144.4E	1720	0.8M/02.6FT	20
HANASAKI JP	43.3N 145.6E	1745	0.5M/01.6FT	19
OFUNATO JP	39.0N 141.8E	1755	0.5M/01.6FT	18
NIKOLSKI AK	52.9N 168.9W	1830	1.1M/03.7FT	15
DUTCH HBR AK	51.1N 164.0W	1855	0.3M/01.0FT	17
OMAEZAKI JP	34.6N 138.2E	1859	0.4M/01.3FT	19
CHICHIJIMA JP	27.1N 142.2E	1855	0.3M/01.2FT	
MIDWAY US	28.2N 177.4W	1918	0.9M/02.9FT	14
WAKE US	19.3N 166.6E	1940	0.5M/01.6FT	14
KODIAK AK	57.7N 152.5W	2052	0.1M/00.4FT	18
TERN FR FRIGATE US	23.9N 166.3W	2025	0.9M/03.0FT	14
YAKUTAT AK	59.5N 139.7W	2130	0.1M/00.4FT	
PAGO BAY GU	13.4N 144.8E	2105	0.5M/01.7FT	17
SEWARD AK	60.1N 149.4W	2152	0.1M/00.3FT	20
LANGARA PT BC	54.2N 133.1W	2222	0.1M/00.2FT	
HANALEI HI	22.2N 159.5W	2110	1.0M/03.3FT	16
NAWILIWILI HI	21.9N 159.4W	2130	0.8M/02.7FT	17
HALEIWA HI	21.6N 158.1W	2125	1.1M/03.6FT	15
HONOLULU HI	21.3N 157.9W	2135	0.4M/01.3FT	19
DEKEHTIK FM	7.0N 158.2E	2124	0.3M/01.0FT	13
HILO HI	19.7N 155.0W	2150	1.3M/04.3FT	18
NAURU NR	0.5S 166.9E	2236	0.2M/00.7FT	15
BETIO TARAWA KI	1.4N 172.9E	2248	0.2M/00.7FT	16
MANUS PG	2.0S 147.4E	2320	0.3M/01.0FT	
KANTON KI	2.8S 171.7W	2321	0.1M/00.4FT	13
WESTPORT WA	46.9N 124.1W	2333	0.2M/00.6FT	
FUNAFUTI TV	8.5S 179.2E	2355	0.1M/00.3FT	
CRESCENT CITY CA	41.7N 124.2W	2356	0.7M/02.3FT	

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 LOWER CASE-.
- * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.
- * COASTAL REGIONS OF HAWAII... AMERICAN SAMOA... GUAM... AND CNMI SHOULD REFER TO PACIFIC TSUNAMI WARNING CENTER MESSAGES SPECIFICALLY FOR THOSE PLACES THAT CAN BE FOUND AT PTWC.WEATHER.GOV.
- * COASTAL REGIONS OF CALIFORNIA... OREGON... WASHINGTON... BRITISH COLUMBIA AND ALASKA SHOULD ONLY REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT NTWC.ARH.NOAA.GOV.

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PTWC International Message #12

ZCZC
WEPA40 PHEB 260100
TSUPAC

TSUNAMI MESSAGE NUMBER 12
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
0100 UTC THU MAR 26 2015

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...PTWC TSUNAMI THREAT MESSAGE...

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

THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC PACIFIC TSUNAMI WARNING AND MITIGATION SYSTEM 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 ****

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE 8.6
* ORIGIN TIME 1500 UTC MAR 25 2015
* COORDINATES 53.5 NORTH 162.0 EAST
* DEPTH 30 KM / 19 MILES
* LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

EVALUATION

- * THIS IS A TEST MESSAGE. AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 1500 UTC ON WEDNESDAY MARCH 25 2015.
- * THIS IS A TEST MESSAGE. BASED ON ALL AVAILABLE DATA... HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 1500 UTC ON WEDNESDAY MARCH 25 2015.
- * BASED ON THE PRELIMINARY EARTHQUAKE PARAMETERS... HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS.

TSUNAMI THREAT FORECAST

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

ECUADOR... CHILE... KIRIBATI... PALMYRA ISLAND... SOLOMON ISLANDS... HAWAII... AND NW HAWAIIAN ISLANDS.

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

MEXICO... COSTA RICA... NICARAGUA... PANAMA... COLOMBIA... PERU... ANTARCTICA... JAPAN... PHILIPPINES... NEW CALEDONIA... NEW ZEALAND... TAIWAN... NORTHERN MARIANAS... GUAM... PALAU... YAP... POHNPEI... CHUUK... KOSRAE... MARSHALL ISLANDS... FIJI...

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SAMOA... AMERICAN SAMOA... COOK ISLANDS... TOKELAU... VANUATU...
 FRENCH POLYNESIA... WAKE ISLAND... MIDWAY ISLAND... JOHNSTON
 ISLAND... JARVIS ISLAND... HOWLAND AND BAKER... TONGA...
 TUVALU... WALLIS AND FUTUNA... PITCAIRN ISLANDS... NIUE... PAPUA
 NEW GUINEA... AND INDONESIA.

* TSUNAMI WAVES ARE FORECAST TO BE LESS THAN 0.3 METERS ABOVE
 THE TIDE LEVEL FOR THE COASTS OF

EL SALVADOR... GUATEMALA... HONDURAS... AUSTRALIA... CHINA...
 REPUBLIC OF KOREA... DPR OF KOREA... NAURU... VIETNAM...
 MALAYSIA... AND BRUNEI.

* 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 PLACES WITHIN A REGION WITH FORECAST TSUNAMI AMPLITUDES OF
 0.3 METERS AND GREATER 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)
NUKUNONU ISLAND	TOKELAU	9.2S 171.8W	0000 03/26
KIRAKIRA	SOLOMON ISLANDS	10.4S 161.9E	0003 03/26
AUKI	SOLOMON ISLANDS	8.8S 160.6E	0008 03/26
MUNDA	SOLOMON ISLANDS	8.4S 157.2E	0012 03/26
LAE	PAPUA NEW GUINEA	6.8S 147.0E	0016 03/26
WALLIS ISLAND	WALLIS AND FUTUN	13.3S 176.3W	0021 03/26
MALDEN ISLAND	KIRIBATI	3.9S 154.9W	0022 03/26
SANTA CRUZ ISLA	SOLOMON ISLANDS	10.9S 165.9E	0027 03/26
PUNTA ABREOJOS	MEXICO	26.7N 113.6W	0028 03/26
PUKAPUKA ISLAND	COOK ISLANDS	10.8S 165.9W	0030 03/26
HONIARA	SOLOMON ISLANDS	9.3S 160.0E	0033 03/26
FUTUNA ISLAND	WALLIS AND FUTUN	14.3S 178.2W	0034 03/26
APIA	SAMOA	13.8S 171.8W	0037 03/26
PENRYN ISLAND	COOK ISLANDS	8.9S 157.8W	0045 03/26
PAGO PAGO	AMERICAN SAMOA	14.3S 170.7W	0045 03/26
ESPERITU SANTO	VANUATU	15.1S 167.3E	0051 03/26

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NIUATOPUTAPU	TONGA	16.0S	173.5W	0058	03/26
PORT VILA	VANUATU	17.8S	168.2E	0113	03/26
CABO SAN LUCAS	MEXICO	22.8N	110.0W	0113	03/26
NIUE ISLAND	NIUE	19.0S	170.0W	0120	03/26
VAVAU	TONGA	18.7S	173.9W	0124	03/26
FLINT ISLAND	KIRIBATI	11.4S	151.8W	0127	03/26
ANATOM ISLAND	VANUATU	20.2S	169.9E	0136	03/26
PORT MORESBY	PAPUA NEW GUINEA	9.3S	146.9E	0152	03/26
NUKUALOFA	TONGA	21.0S	175.2W	0153	03/26
SUVA	FIJI	18.1S	178.4E	0158	03/26
RAROTONGA	COOK ISLANDS	21.2S	159.8W	0209	03/26
HIVA OA	FRENCH POLYNESIA	10.0S	139.0W	0211	03/26
PUERTO VALLARTA	MEXICO	20.6N	105.3W	0220	03/26
PAPEETE	FRENCH POLYNESIA	17.5S	149.6W	0225	03/26
NOUMEA	NEW CALEDONIA	22.3S	166.5E	0229	03/26
SAN BLAS	MEXICO	21.5N	105.3W	0230	03/26
LAZARO CARDENAS	MEXICO	17.9N	102.2W	0246	03/26
ACAPULCO	MEXICO	16.9N	99.9W	0307	03/26
NORTH CAPE	NEW ZEALAND	34.4S	173.3E	0354	03/26
RIKITEA	FRENCH POLYNESIA	23.1S	135.0W	0415	03/26
SALINA CRUZ	MEXICO	16.5N	95.2W	0419	03/26
PITCAIRN ISLAND	PITCAIRN ISLANDS	25.1S	130.1W	0444	03/26
CABO SAN ELENA	COSTA RICA	10.9N	86.0W	0515	03/26
CORINTO	NICARAGUA	12.5N	87.2W	0527	03/26
PUERTO SANDINO	NICARAGUA	12.2N	86.8W	0527	03/26
AUCKLAND EAST	NEW ZEALAND	36.7S	175.0E	0531	03/26
SAN JUAN DL SUR	NICARAGUA	11.2N	85.9W	0536	03/26
PUERTO QUEPOS	COSTA RICA	9.4N	84.2W	0538	03/26
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CABO MATAPALO	COSTA RICA	8.4N	83.3W	0542	03/26
PUNTA BURICA	PANAMA	8.0N	82.9W	0550	03/26
BALTRA ISLAND	ECUADOR	0.5S	90.3W	0636	03/26
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TUMACO	COLOMBIA	1.8N	78.9W	0718	03/26
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BUENAVENTURA	COLOMBIA	3.8N	77.2W	0736	03/26
TALARA	PERU	4.6S	81.5W	0750	03/26
CAPE ADARE	ANTARCTICA	71.0S	170.0E	0852	03/26
PIMENTAL	PERU	6.9S	80.0W	0852	03/26
LA PUNTA	PERU	12.1S	77.2W	0858	03/26
CHIMBOTE	PERU	9.0S	78.8W	0900	03/26
BALBOA HEIGHTS	PANAMA	9.0N	79.6W	0903	03/26
SAN JUAN	PERU	15.3S	75.2W	0913	03/26
MOLLENDO	PERU	17.1S	72.0W	0947	03/26
ARICA	CHILE	18.5S	70.3W	1003	03/26
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ANTOFAGASTA	CHILE	23.3S	70.4W	1019	03/26
CALDERA	CHILE	27.1S	70.8W	1039	03/26
COQUIMBO	CHILE	29.9S	71.4W	1048	03/26
VALPARAISO	CHILE	33.0S	71.6W	1105	03/26
THURSTON ISLAND	ANTARCTICA	72.0S	100.0W	1112	03/26
TALCAHUANO	CHILE	36.7S	73.1W	1128	03/26
CORRAL	CHILE	39.8S	73.5W	1145	03/26
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PUERTO MONTT	CHILE	41.5S	73.0W	1423	03/26

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MANY HOURS OR LONGER AFTER THE INITIAL WAVE.

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

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GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LOE			
DART 21416	48.0N	163.5E	1554	0.8M/02.6FT	14
DART 21415	50.2N	171.8E	1616	0.4M/01.3FT	15
UST KAMCHATSK RU	56.0N	163.0E	1550	3.1M/10.0FT	20
NIKOL'SKOE RU	55.2N	166.0E	1559	2.9M/09.5FT	16
PETROPAVLOVSK RU	53.0N	158.6E	1733	1.6M/05.2FT	17
SHEMYA AK	52.7N	174.1E	1725	0.9M/04.2FT	17
ADAK AK	51.9N	176.6W	1715	0.8M/02.8FT	15
ATKA AK	52.2N	174.2W	1734	0.7M/02.7FT	18
KUSHIRO JP	43.0N	144.4E	1720	0.8M/02.6FT	20
HANASAKI JP	43.3N	145.6E	1745	0.5M/01.6FT	19
OFUNATO JP	39.0N	141.8E	1755	0.5M/01.6FT	18
NIKOLSKI AK	52.9N	168.9W	1830	1.1M/03.7FT	15
DUTCH HBR AK	51.1N	164.0W	1855	0.3M/01.0FT	17
OMAEZAKI JP	34.6N	138.2E	1859	0.4M/01.3FT	19
CHICHIJIMA JP	27.1N	142.2E	1855	0.3M/01.2FT	
MIDWAY US	28.2N	177.4W	1918	0.9M/02.9FT	14
WAKE US	19.3N	166.6E	1940	0.5M/01.6FT	14
KODIAK AK	57.7N	152.5W	2052	0.1M/00.4FT	18
TERN FR FRIGATE US	23.9N	166.3W	2025	0.9M/03.0FT	14
YAKUTAT AK	59.5N	139.7W	2130	0.1M/00.4FT	
PAGO BAY GU	13.4N	144.8E	2105	0.5M/01.7FT	17
SEWARD AK	60.1N	149.4W	2152	0.1M/00.3FT	20
LANGARA PT BC	54.2N	133.1W	2222	0.1M/00.2FT	
HANAIEI HI	22.2N	159.5W	2110	1.0M/03.3FT	16
NAWILIWILI HI	21.9N	159.4W	2130	0.8M/02.7FT	17
HALEIWA HI	21.6N	158.1W	2125	1.1M/03.6FT	15
HONOLULU HI	21.3N	157.9W	2135	0.4M/01.3FT	19
DEKEHTIK FM	7.0N	158.2E	2124	0.3M/01.0FT	13
HILO HI	19.7N	155.0W	2150	1.3M/04.3FT	18
NAURU NR	0.5S	166.9E	2236	0.2M/00.7FT	15
BETIO TARAWA KI	1.4N	172.9E	2248	0.2M/00.7FT	16
MANUS PG	2.0S	147.4E	2320	0.3M/01.0FT	14
KANTON KI	2.8S	171.7W	2321	0.1M/00.4FT	13
WESTPORT WA	46.9N	124.1W	2333	0.2M/00.6FT	
FUNAFUTI TV	8.5S	179.2E	2355	0.1M/00.3FT	12
CRESCENT CITY CA	41.7N	124.2W	2356	0.7M/02.3FT	
ENSENADA MX	31.8N	116.6W	0012	0.5M/01.6FT	14
LATA WHARF SB	10.7S	165.8E	0025	0.4M/01.4FT	
LOS ANGELES CA	33.7N	118.3W	0054	0.2M/00.6FT	
APIA WS	13.8S	171.8W	0055	0.4M/01.3FT	
PAGO PAGO AS	14.3S	170.7W	0052	0.3M/01.0FT	

PACIFEX 15 Handbook

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 LOWER CASE-.
- * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.
- * COASTAL REGIONS OF HAWAII... AMERICAN SAMOA... GUAM... AND CNMI SHOULD REFER TO PACIFIC TSUNAMI WARNING CENTER MESSAGES SPECIFICALLY FOR THOSE PLACES THAT CAN BE FOUND AT PTWC.WEATHER.GOV.
- * COASTAL REGIONS OF CALIFORNIA... OREGON... WASHINGTON... BRITISH COLUMBIA AND ALASKA SHOULD ONLY REFER TO U.S. NATIONAL TSUNAMI WARNING CENTER MESSAGES THAT CAN BE FOUND AT NTWC.ARH.NOAA.GOV.

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PTWC International Message #13

ZCZC

WEPA40 PHEB 260200

TSUPAC

TSUNAMI MESSAGE NUMBER 13

NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI

0200 UTC THU MAR 26 2015

...PTWC TSUNAMI THREAT MESSAGE...

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

THIS MESSAGE IS ISSUED FOR INFORMATION ONLY IN SUPPORT OF THE UNESCO/IOC PACIFIC TSUNAMI WARNING AND MITIGATION SYSTEM 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 ****

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE	8.6
* ORIGIN TIME	1500 UTC MAR 25 2015
* COORDINATES	53.5 NORTH 162.0 EAST
* DEPTH	30 KM / 19 MILES
* LOCATION	OFF THE EAST COAST OF KAMCHATKA RUSSIA

PACIFEX 15 Handbook

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 1500 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 1 TO 3 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE ALONG SOME COASTS OF

ECUADOR... CHILE... KIRIBATI... PALMYRA ISLAND... SOLOMON ISLANDS... HAWAII... AND NW HAWAIIAN ISLANDS.
- * TSUNAMI WAVES REACHING 0.3 TO 1 METERS ABOVE THE TIDE LEVEL ARE POSSIBLE FOR SOME COASTS OF

MEXICO... COSTA RICA... NICARAGUA... PANAMA... COLOMBIA... PERU... ANTARCTICA... PHILIPPINES... NEW CALEDONIA... NEW ZEALAND... TAIWAN... NORTHERN MARIANAS... GUAM... PALAU... YAP... POHNPEI... CHUUK... KOSRAE... MARSHALL ISLANDS... FIJI... SAMOA... AMERICAN SAMOA... COOK ISLANDS... TOKELAU... VANUATU... FRENCH POLYNESIA... WAKE ISLAND... MIDWAY ISLAND... JOHNSTON ISLAND... JARVIS ISLAND... HOWLAND AND BAKER... TONGA... TUVALU... WALLIS AND FUTUNA... PITCAIRN ISLANDS... NIUE... PAPUA NEW GUINEA... AND INDONESIA.
- * TSUNAMI WAVES ARE FORECAST TO BE LESS THAN 0.3 METERS ABOVE THE TIDE LEVEL FOR THE COASTS OF

EL SALVADOR... GUATEMALA... HONDURAS... AUSTRALIA... CHINA... REPUBLIC OF KOREA... DPR OF KOREA... NAURU... VIETNAM... MALAYSIA... AND BRUNEI.
- * 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.

PACIFEX 15 Handbook

ESTIMATED TIMES OF ARRIVAL

* ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE FOR PLACES WITHIN A REGION WITH FORECAST TSUNAMI AMPLITUDES OF 0.3 METERS AND GREATER 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)
PORT VILA	VANUATU	17.8S 168.2E	0113 03/26
CABO SAN LUCAS	MEXICO	22.8N 110.0W	0113 03/26
NIUE ISLAND	NIUE	19.0S 170.0W	0120 03/26
VAVAU	TONGA	18.7S 173.9W	0124 03/26
FLINT ISLAND	KIRIBATI	11.4S 151.8W	0127 03/26
ANATOM ISLAND	VANUATU	20.2S 169.9E	0136 03/26
PORT MORESBY	PAPUA NEW GUINEA	9.3S 146.9E	0152 03/26
NUKUALOFA	TONGA	21.0S 175.2W	0153 03/26
SUVA	FIJI	18.1S 178.4E	0158 03/26
RAROTONGA	COOK ISLANDS	21.2S 159.8W	0209 03/26
HIVA OA	FRENCH POLYNESIA	10.0S 139.0W	0211 03/26
PUERTO VALLARTA	MEXICO	20.6N 105.3W	0220 03/26
PAPEETE	FRENCH POLYNESIA	17.5S 149.6W	0225 03/26
NOUMEA	NEW CALEDONIA	22.3S 166.5E	0229 03/26
SAN BLAS	MEXICO	21.5N 105.3W	0230 03/26
LAZARO CARDENAS	MEXICO	17.9N 102.2W	0246 03/26
ACAPULCO	MEXICO	16.9N 99.9W	0307 03/26
NORTH CAPE	NEW ZEALAND	34.4S 173.3E	0354 03/26
RIKITEA	FRENCH POLYNESIA	23.1S 135.0W	0415 03/26
SALINA CRUZ	MEXICO	16.5N 95.2W	0419 03/26
PITCAIRN ISLAND	PITCAIRN ISLANDS	25.1S 130.1W	0444 03/26
CABO SAN ELENA	COSTA RICA	10.9N 86.0W	0515 03/26
CORINTO	NICARAGUA	12.5N 87.2W	0527 03/26
PUERTO SANDINO	NICARAGUA	12.2N 86.8W	0527 03/26
AUCKLAND EAST	NEW ZEALAND	36.7S 175.0E	0531 03/26
SAN JUAN DL SUR	NICARAGUA	11.2N 85.9W	0536 03/26
PUERTO QUEPOS	COSTA RICA	9.4N 84.2W	0538 03/26
COCOS ISLAND	COSTA RICA	5.5N 87.1W	0539 03/26
CABO MATAPALO	COSTA RICA	8.4N 83.3W	0542 03/26
PUNTA BURICA	PANAMA	8.0N 82.9W	0550 03/26
BALTRA ISLAND	ECUADOR	0.5S 90.3W	0636 03/26
PUNTA MALA	PANAMA	7.5N 80.0W	0641 03/26
EASTER ISLAND	CHILE	27.1S 109.4W	0648 03/26
PUERTO PINA	PANAMA	7.4N 78.0W	0655 03/26
BAHIA SOLANO	COLOMBIA	6.3N 77.4W	0656 03/26
ESMERELDAS	ECUADOR	1.2N 79.8W	0711 03/26
TUMACO	COLOMBIA	1.8N 78.9W	0718 03/26
LA LIBERTAD	ECUADOR	2.2S 81.2W	0733 03/26
BUENAVENTURA	COLOMBIA	3.8N 77.2W	0736 03/26
TALARA	PERU	4.6S 81.5W	0750 03/26
CAPE ADARE	ANTARCTICA	71.0S 170.0E	0852 03/26
PIMENTAL	PERU	6.9S 80.0W	0852 03/26
LA PUNTA	PERU	12.1S 77.2W	0858 03/26
CHIMBOTE	PERU	9.0S 78.8W	0900 03/26
BALBOA HEIGHTS	PANAMA	9.0N 79.6W	0903 03/26
SAN JUAN	PERU	15.3S 75.2W	0913 03/26
MOLLENDO	PERU	17.1S 72.0W	0947 03/26
ARICA	CHILE	18.5S 70.3W	1003 03/26
IQUIQUE	CHILE	20.2S 70.1W	1004 03/26
ANTOFAGASTA	CHILE	23.3S 70.4W	1019 03/26
CALDERA	CHILE	27.1S 70.8W	1039 03/26
COQUIMBO	CHILE	29.9S 71.4W	1048 03/26
VALPARAISO	CHILE	33.0S 71.6W	1105 03/26
THURSTON ISLAND	ANTARCTICA	72.0S 100.0W	1112 03/26

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TALCAHUANO	CHILE	36.7S	73.1W	1128	03/26
CORRAL	CHILE	39.8S	73.5W	1145	03/26
GOLFO DE PENAS	CHILE	47.1S	74.9W	1228	03/26
PUERTO MONTT	CHILE	41.5S	73.0W	1423	03/26

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.

TSUNAMI OBSERVATIONS - UPDATED

- * 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 TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
DART 21416	48.0N	163.5E	1554	0.8M/02.6FT	14
DART 21415	50.2N	171.8E	1616	0.4M/01.3FT	15
UST KAMCHATSK RU	56.0N	163.0E	1550	3.1M/10.0FT	20
NIKOL'SKOE RU	55.2N	166.0E	1559	2.9M/09.5FT	16
PETROPAVLOVSK RU	53.0N	158.6E	1733	1.6M/05.2FT	17
SHEMYA AK	52.7N	174.1E	1725	0.9M/04.2FT	17
ADAK AK	51.9N	176.6W	1715	0.8M/02.8FT	15
ATKA AK	52.2N	174.2W	1734	0.7M/02.7FT	18
KUSHIRO JP	43.0N	144.4E	1720	0.8M/02.6FT	20
HANASAKI JP	43.3N	145.6E	1745	0.5M/01.6FT	19
OFUNATO JP	39.0N	141.8E	1755	0.5M/01.6FT	18
NIKOLSKI AK	52.9N	168.9W	1830	1.1M/03.7FT	15
DUTCH HBR AK	51.1N	164.0W	1855	0.3M/01.0FT	17
OMAEZAKI JP	34.6N	138.2E	1859	0.4M/01.3FT	19
CHICHIJIMA JP	27.1N	142.2E	1855	0.3M/01.2FT	14
MIDWAY US	28.2N	177.4W	1918	0.9M/02.9FT	14
WAKE US	19.3N	166.6E	1940	0.5M/01.6FT	14
KODIAK AK	57.7N	152.5W	2052	0.1M/00.4FT	18
TERN FR FRIGATE US	23.9N	166.3W	2025	0.9M/03.0FT	14
YAKUTAT AK	59.5N	139.7W	2130	0.1M/00.4FT	17
PAGO BAY GU	13.4N	144.8E	2105	0.5M/01.7FT	17
SEWARD AK	60.1N	149.4W	2152	0.1M/00.3FT	20
LANGARA PT BC	54.2N	133.1W	2222	0.1M/00.2FT	16
HANAIEI HI	22.2N	159.5W	2110	1.0M/03.3FT	16
NAWILIWILI HI	21.9N	159.4W	2130	0.8M/02.7FT	17
HALEIWA HI	21.6N	158.1W	2125	1.1M/03.6FT	15
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HILO HI	19.7N	155.0W	2150	1.3M/04.3FT	18
NAURU NR	0.5S	166.9E	2236	0.2M/00.7FT	15

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BETIO TARAWA KI	1.4N 172.9E	2248	0.2M/00.7FT	16
MANUS PG	2.0S 147.4E	2320	0.3M/01.0FT	14
KANTON KI	2.8S 171.7W	2321	0.1M/00.4FT	13
WESTPORT WA	46.9N 124.1W	2333	0.2M/00.6FT	
FUNAFUTI TV	8.5S 179.2E	2355	0.1M/00.3FT	12
CRESCENT CITY CA	41.7N 124.2W	2356	0.7M/02.3FT	
ENSENADA MX	31.8N 116.6W	0012	0.5M/01.6FT	14
LATA WHARF SB	10.7S 165.8E	0025	0.4M/01.4FT	12
LOS ANGELES CA	33.7N 118.3W	0054	0.2M/00.6FT	
APIA WS	13.8S 171.8W	0055	0.4M/01.3FT	14
PAGO PAGO AS	14.3S 170.7W	0130	0.5M/01.6FT	

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 LOWER CASE-.
- * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.
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PTWC International Message #14

ZCZC
WEPA40 PHEB 260300
TSUPAC

TSUNAMI MESSAGE NUMBER 14
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
0300 UTC THU MAR 26 2015

...PTWC TSUNAMI THREAT MESSAGE...

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

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

PACIFEX 15 Handbook

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE 8.6
* ORIGIN TIME 1500 UTC MAR 25 2015
* COORDINATES 53.5 NORTH 162.0 EAST
* DEPTH 30 KM / 19 MILES
* LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

EVALUATION

-
- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 1500 UTC ON WEDNESDAY MARCH 25 2015.
 - * BASED ON ALL DATA AVAILABLE TO THIS CENTER... THE TSUNAMI THREAT FROM THIS EARTHQUAKE HAS NOW MOSTLY PASSED. ANY REMAINING THREAT SHOULD BE EVALUATED BY LOCAL AUTHORITIES IN IMPACTED AREAS.

TSUNAMI THREAT FORECAST...UPDATED

-
- * THE TSUNAMI THREAT HAS NOW LARGELY PASSED.

RECOMMENDED ACTIONS

-
- * 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.
 - * PERSONS LOCATED NEAR IMPACTED COASTAL AREAS SHOULD STAY ALERT FOR INFORMATION AND FOLLOW INSTRUCTIONS FROM LOCAL AUTHORITIES.
 - * REMAIN OBSERVANT AND EXERCISE NORMAL CAUTION NEAR THE SEA.

POTENTIAL IMPACTS

-
- * MINOR SEA LEVEL FLUCTUATIONS MAY OCCUR IN COASTAL AREAS NEAR THE EARTHQUAKE OVER THE NEXT FEW HOURS.... AND CONTINUING FOR UP TO SEVERAL HOURS.

TSUNAMI OBSERVATIONS

-
- * 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 TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
DART 21416	48.0N	163.5E	1554	0.8M/02.6FT	14
DART 21415	50.2N	171.8E	1616	0.4M/01.3FT	15

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UST KAMCHATSK	RU	56.0N	163.0E	1550	3.1M/10.0FT	20
NIKOL'SKOE	RU	55.2N	166.0E	1559	2.9M/09.5FT	16
PETROPAVLOVSK	RU	53.0N	158.6E	1733	1.6M/05.2FT	17
SHEMYA	AK	52.7N	174.1E	1725	0.9M/04.2FT	17
ADAK	AK	51.9N	176.6W	1715	0.8M/02.8FT	15
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OMAEZAKI	JP	34.6N	138.2E	1859	0.4M/01.3FT	19
CHICHIJIMA	JP	27.1N	142.2E	1855	0.3M/01.2FT	
MIDWAY	US	28.2N	177.4W	1918	0.9M/02.9FT	14
WAKE	US	19.3N	166.6E	1940	0.5M/01.6FT	14
KODIAK	AK	57.7N	152.5W	2052	0.1M/00.4FT	18
TERN FR FRIGATE	US	23.9N	166.3W	2025	0.9M/03.0FT	14
YAKUTAT	AK	59.5N	139.7W	2130	0.1M/00.4FT	
PAGO BAY	GU	13.4N	144.8E	2105	0.5M/01.7FT	17
SEWARD	AK	60.1N	149.4W	2152	0.1M/00.3FT	20
LANGARA	PT BC	54.2N	133.1W	2222	0.1M/00.2FT	
HANALEI	HI	22.2N	159.5W	2110	1.0M/03.3FT	16
NAWILIWILI	HI	21.9N	159.4W	2130	0.8M/02.7FT	17
HALEIWA	HI	21.6N	158.1W	2125	1.1M/03.6FT	15
HONOLULU	HI	21.3N	157.9W	2135	0.4M/01.3FT	19
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KANTON	KI	2.8S	171.7W	2321	0.1M/00.4FT	13
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FUNAFUTI	TV	8.5S	179.2E	2355	0.1M/00.3FT	12
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ENSENADA	MX	31.8N	116.6W	0012	0.5M/01.6FT	14
LATA WHARF	SB	10.7S	165.8E	0025	0.4M/01.4FT	12
LOS ANGELES	CA	33.7N	118.3W	0054	0.2M/00.6FT	
APIA	WS	13.8S	171.8W	0055	0.4M/01.3FT	14
PAGO PAGO	AS	14.3S	170.7W	0130	0.5M/01.6FT	
NUKU HIVA	PF	8.9S	140.1W	0240	0.8M/02.6FT	

NEXT UPDATE AND ADDITIONAL INFORMATION

- * THIS WILL BE THE FINAL STATEMENT ISSUED FOR THIS EVENT UNLESS NEW INFORMATION IS RECEIVED OR THE SITUATION CHANGES.
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Exercise

PTWC Hawaii Message #1

ZCZC
WEHW40 PHEB 251505
TSUHWX
HIZ001>003-005>009-012>014-016>021-023>026-251705-
/O.NEW.PHEB.TS.A.0366.150325T1505Z-000000T0000Z/

TSUNAMI MESSAGE NUMBER 1
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
505 AM HST WED MAR 25 2015

TO - EMERGENCY MANAGEMENT IN THE STATE OF HAWAII

SUBJECT - TSUNAMI WATCH

A TSUNAMI WATCH IS ISSUED FOR THE STATE OF HAWAII EFFECTIVE AT
0505 AM HST.

AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS

ORIGIN TIME - 0500 AM HST 25 MAR 2015
COORDINATES - 53.5 NORTH 162.0 EAST
LOCATION - OFF THE EAST COAST OF KAMCHATKA RUSSIA
MAGNITUDE - 8.1 MOMENT

EVALUATION

BASED ON ALL AVAILABLE DATA A TSUNAMI MAY HAVE BEEN GENERATED BY
THIS EARTHQUAKE THAT COULD BE DESTRUCTIVE ON COASTAL AREAS EVEN
FAR FROM THE EPICENTER. AN INVESTIGATION IS UNDERWAY TO DETERMINE
IF THERE IS A TSUNAMI THREAT TO HAWAII.

IF TSUNAMI WAVES IMPACT HAWAII THE ESTIMATED EARLIEST ARRIVAL OF
THE FIRST TSUNAMI WAVE IS

1055 AM HST WED 25 MAR 2015

FURTHER MESSAGES WILL BE ISSUED HOURLY OR SOONER AS CONDITIONS
WARRANT UNTIL THE THREAT TO HAWAII HAS PASSED.

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PTWC Hawaii Message #2

ZCZC
WEHW40 PHEB 251530
TSUHWX
HIZ001>003-005>009-012>014-016>021-023>026-251730-
/O.CON.PHEB.TS.A.0366.000000T0000Z-000000T0000Z/

TSUNAMI MESSAGE NUMBER 2
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
530 AM HST WED MAR 25 2015

TO - EMERGENCY MANAGEMENT IN THE STATE OF HAWAII

SUBJECT - TSUNAMI WATCH SUPPLEMENT

A TSUNAMI WATCH CONTINUES IN EFFECT FOR THE STATE OF HAWAII.

AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS

PACIFEX 15 Handbook

ORIGIN TIME - 0500 AM HST 25 MAR 2015
COORDINATES - 53.5 NORTH 162.0 EAST
LOCATION - OFF THE EAST COAST OF KAMCHATKA RUSSIA
MAGNITUDE - 8.6 MOMENT

EVALUATION

BASED ON ALL AVAILABLE DATA A TSUNAMI MAY HAVE BEEN GENERATED BY THIS EARTHQUAKE THAT COULD BE DESTRUCTIVE ON COASTAL AREAS EVEN FAR FROM THE EPICENTER. AN INVESTIGATION IS UNDERWAY TO DETERMINE IF THERE IS A TSUNAMI THREAT TO HAWAII.

IF TSUNAMI WAVES IMPACT HAWAII THE ESTIMATED EARLIEST ARRIVAL OF THE FIRST TSUNAMI WAVE IS

1055 AM HST WED 25 MAR 2015

FURTHER MESSAGES WILL BE ISSUED HOURLY OR SOONER AS CONDITIONS WARRANT UNTIL THE THREAT TO HAWAII HAS PASSED.

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PTWC Hawaii Message #3

ZCZC
WEHW40 PHEB 251603
TSUHWX
HIZ001>003-005>009-012>014-016>021-023>026-251803-
/O.CAN.PHEB.TS.A.0366.000000T0000Z-000000T0000Z/
/O.NEW.PHEB.TS.W.0124.150325T1603Z-000000T0000Z/

TSUNAMI MESSAGE NUMBER 3
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
603 AM HST WED MAR 25 2015

TO - EMERGENCY MANAGEMENT IN THE STATE OF HAWAII

SUBJECT - TSUNAMI WARNING

A TSUNAMI WARNING IS ISSUED FOR THE STATE OF HAWAII EFFECTIVE AT 0603 AM HST.

AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS

ORIGIN TIME - 0500 AM HST 25 MAR 2015
COORDINATES - 53.5 NORTH 162.0 EAST
LOCATION - OFF THE EAST COAST OF KAMCHATKA RUSSIA
MAGNITUDE - 8.6 MOMENT

MEASUREMENTS OR REPORTS OF TSUNAMI WAVE ACTIVITY

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
DART 21416	48.0N	163.5E	1554	0.8M/02.6FT	14
PETROPAVLOVSK RU	53.0N	158.6E	1551	1.1M/03.5FT	20
UST KAMCHATSK RU	56.0N	163.0E	1550	3.1M/10.0FT	20

LAT - LATITUDE (N-NORTH, S-SOUTH)
LON - LONGITUDE (E-EAST, W-WEST)
TIME - TIME OF THE MEASUREMENT (Z IS UTC IS GREENWICH TIME)
AMPL - TSUNAMI AMPLITUDE MEASURED RELATIVE TO NORMAL SEA LEVEL.

PACIFEX 15 Handbook

IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.
VALUES ARE GIVEN IN BOTH METERS(M) AND FEET(FT).
PER - PERIOD OF TIME IN MINUTES(MIN) FROM ONE WAVE TO THE NEXT.

EVALUATION

A TSUNAMI HAS BEEN GENERATED THAT COULD CAUSE DAMAGE ALONG COASTLINES OF ALL ISLANDS IN THE STATE OF HAWAII. URGENT ACTION SHOULD BE TAKEN TO PROTECT LIVES AND PROPERTY.

A TSUNAMI IS A SERIES OF LONG OCEAN WAVES. EACH INDIVIDUAL WAVE CREST CAN LAST 5 TO 15 MINUTES OR MORE AND EXTENSIVELY FLOOD COASTAL AREAS. THE DANGER CAN CONTINUE FOR MANY HOURS AFTER THE INITIAL WAVE AS SUBSEQUENT WAVES ARRIVE. TSUNAMI WAVE HEIGHTS CANNOT BE PREDICTED AND THE FIRST WAVE MAY NOT BE THE LARGEST. TSUNAMI WAVES EFFICIENTLY WRAP AROUND ISLANDS. ALL SHORES ARE AT RISK NO MATTER WHICH DIRECTION THEY FACE. THE TROUGH OF A TSUNAMI WAVE MAY TEMPORARILY EXPOSE THE SEAFLOOR BUT THE AREA WILL QUICKLY FLOOD AGAIN. EXTREMELY STRONG AND UNUSUAL NEARSHORE CURRENTS CAN ACCOMPANY A TSUNAMI. DEBRIS PICKED UP AND CARRIED BY A TSUNAMI AMPLIFIES ITS DESTRUCTIVE POWER. SIMULTANEOUS HIGH TIDES OR HIGH SURF CAN SIGNIFICANTLY INCREASE THE TSUNAMI HAZARD.

THE ESTIMATED ARRIVAL TIME IN HAWAII OF THE FIRST TSUNAMI WAVE IS

1055 AM HST WED 25 MAR 2015

FURTHER MESSAGES WILL BE ISSUED HOURLY OR SOONER AS CONDITIONS WARRANT UNTIL THE THREAT TO HAWAII HAS PASSED.

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PTWC Hawaii Message #4

ZCZC
WEHW40 PHEB 251704
TSUHWX
HIZ001>003-005>009-012>014-016>021-023>026-251904-
/O.CON.PHEB.TS.W.0124.000000T0000Z-000000T0000Z/

TSUNAMI MESSAGE NUMBER 4
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
704 AM HST WED MAR 25 2015

TO - EMERGENCY MANAGEMENT IN THE STATE OF HAWAII

SUBJECT - TSUNAMI WARNING SUPPLEMENT

A TSUNAMI WARNING CONTINUES IN EFFECT FOR THE STATE OF HAWAII.

AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS

ORIGIN TIME - 0500 AM HST 25 MAR 2015
COORDINATES - 53.5 NORTH 162.0 EAST
LOCATION - OFF THE EAST COAST OF KAMCHATKA RUSSIA
MAGNITUDE - 8.6 MOMENT

MEASUREMENTS OR REPORTS OF TSUNAMI WAVE ACTIVITY

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD
	LAT	LON	(UTC)		(MIN)
DART 21416	48.0N	163.5E	1554	0.8M/02.6FT	14

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DART 21415	50.2N 171.8E	1616	0.4M/01.3FT	15
NIKOL'SKOE RU	55.2N 166.0E	1559	2.9M/09.5FT	16
PETROPAVLOVSK RU	53.0N 158.6E	1551	1.1M/03.5FT	20
SHEMYA AK	52.7N 174.1E	1635	0.9M/02.9FT	17
ADAK AK	51.9N 176.6W	1645	0.5M/01.6FT	15
ATKA AK	52.2N 174.2W	1652	0.7M/02.3FT	18

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

EVALUATION

A TSUNAMI HAS BEEN GENERATED THAT COULD CAUSE DAMAGE ALONG COASTLINES OF ALL ISLANDS IN THE STATE OF HAWAII. URGENT ACTION SHOULD BE TAKEN TO PROTECT LIVES AND PROPERTY.

A TSUNAMI IS A SERIES OF LONG OCEAN WAVES. EACH INDIVIDUAL WAVE CREST CAN LAST 5 TO 15 MINUTES OR MORE AND EXTENSIVELY FLOOD COASTAL AREAS. THE DANGER CAN CONTINUE FOR MANY HOURS AFTER THE INITIAL WAVE AS SUBSEQUENT WAVES ARRIVE. TSUNAMI WAVE HEIGHTS CANNOT BE PREDICTED AND THE FIRST WAVE MAY NOT BE THE LARGEST. TSUNAMI WAVES EFFICIENTLY WRAP AROUND ISLANDS. ALL SHORES ARE AT RISK NO MATTER WHICH DIRECTION THEY FACE. THE TROUGH OF A TSUNAMI WAVE MAY TEMPORARILY EXPOSE THE SEAFLOOR BUT THE AREA WILL QUICKLY FLOOD AGAIN. EXTREMELY STRONG AND UNUSUAL NEARSHORE CURRENTS CAN ACCOMPANY A TSUNAMI. DEBRIS PICKED UP AND CARRIED BY A TSUNAMI AMPLIFIES ITS DESTRUCTIVE POWER. SIMULTANEOUS HIGH TIDES OR HIGH SURF CAN SIGNIFICANTLY INCREASE THE TSUNAMI HAZARD.

THE ESTIMATED ARRIVAL TIME IN HAWAII OF THE FIRST TSUNAMI WAVE IS
1055 AM HST WED 25 MAR 2015

FURTHER MESSAGES WILL BE ISSUED HOURLY OR SOONER AS CONDITIONS WARRANT UNTIL THE THREAT TO HAWAII HAS PASSED.

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PTWC Hawaii Message #5

ZCZC
WEHW40 PHEB 251804
TSUHWX
HIZ001>003-005>009-012>014-016>021-023>026-252004-
/O.CON.PHEB.TS.W.0124.000000T0000Z-000000T0000Z/

TSUNAMI MESSAGE NUMBER 5
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
804 AM HST WED MAR 25 2015

TO - EMERGENCY MANAGEMENT IN THE STATE OF HAWAII

SUBJECT - TSUNAMI WARNING SUPPLEMENT

A TSUNAMI WARNING CONTINUES IN EFFECT FOR THE STATE OF HAWAII.

AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS

PACIFEX 15 Handbook

ORIGIN TIME - 0500 AM HST 25 MAR 2015
COORDINATES - 53.5 NORTH 162.0 EAST
LOCATION - OFF THE EAST COAST OF KAMCHATKA RUSSIA
MAGNITUDE - 8.6 MOMENT

MEASUREMENTS OR REPORTS OF TSUNAMI WAVE ACTIVITY

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	Lon			
DART 21416	48.0N	163.5E	1554	0.8M/02.6FT	14
DART 21415	50.2N	171.8E	1616	0.4M/01.3FT	15
NIKOL'SKOE RU	55.2N	166.0E	1559	2.9M/09.5FT	16
PETROPAVLOVSK RU	53.0N	158.6E	1733	1.6M/05.2FT	17
SHEMYA AK	52.7N	174.1E	1725	0.9M/04.2FT	17
ADAK AK	51.9N	176.6W	1715	0.8M/02.8FT	15
ATKA AK	52.2N	174.2W	1734	0.8M/02.7FT	18
KUSHIRO JP	43.0N	144.4E	1720	0.8M/02.6FT	20
HANASAKI JP	43.3N	145.6E	1745	0.5M/01.6FT	19
OFUNATO JP	39.0N	141.8E	1755	0.5M/01.6FT	18
NIKOLSKI AK	52.9N	168.9W	1758	0.8M/02.5FT	15

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

EVALUATION

A TSUNAMI HAS BEEN GENERATED THAT COULD CAUSE DAMAGE ALONG COASTLINES OF ALL ISLANDS IN THE STATE OF HAWAII. URGENT ACTION SHOULD BE TAKEN TO PROTECT LIVES AND PROPERTY.

A TSUNAMI IS A SERIES OF LONG OCEAN WAVES. EACH INDIVIDUAL WAVE CREST CAN LAST 5 TO 15 MINUTES OR MORE AND EXTENSIVELY FLOOD COASTAL AREAS. THE DANGER CAN CONTINUE FOR MANY HOURS AFTER THE INITIAL WAVE AS SUBSEQUENT WAVES ARRIVE. TSUNAMI WAVE HEIGHTS CANNOT BE PREDICTED AND THE FIRST WAVE MAY NOT BE THE LARGEST. TSUNAMI WAVES EFFICIENTLY WRAP AROUND ISLANDS. ALL SHORES ARE AT RISK NO MATTER WHICH DIRECTION THEY FACE. THE TROUGH OF A TSUNAMI WAVE MAY TEMPORARILY EXPOSE THE SEAFLOOR BUT THE AREA WILL QUICKLY FLOOD AGAIN. EXTREMELY STRONG AND UNUSUAL NEARSHORE CURRENTS CAN ACCOMPANY A TSUNAMI. DEBRIS PICKED UP AND CARRIED BY A TSUNAMI AMPLIFIES ITS DESTRUCTIVE POWER. SIMULTANEOUS HIGH TIDES OR HIGH SURF CAN SIGNIFICANTLY INCREASE THE TSUNAMI HAZARD.

THE ESTIMATED ARRIVAL TIME IN HAWAII OF THE FIRST TSUNAMI WAVE IS

1055 AM HST WED 25 MAR 2015

FURTHER MESSAGES WILL BE ISSUED HOURLY OR SOONER AS CONDITIONS WARRANT UNTIL THE THREAT TO HAWAII HAS PASSED.

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PTWC Hawaii Message #6

ZCZC

PACIFEX 15 Handbook

WEHW40 PHEB 251900
TSUHWX
HIZ001>003-005>009-012>014-016>021-023>026-252100-
/O.CON.PHEB.TS.W.0124.000000T0000Z-000000T0000Z/

TSUNAMI MESSAGE NUMBER 6
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
900 AM HST WED MAR 25 2015

TO - EMERGENCY MANAGEMENT IN THE STATE OF HAWAII

SUBJECT - TSUNAMI WARNING SUPPLEMENT

A TSUNAMI WARNING CONTINUES IN EFFECT FOR THE STATE OF HAWAII.

AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS

ORIGIN TIME - 0500 AM HST 25 MAR 2015
COORDINATES - 53.5 NORTH 162.0 EAST
LOCATION - OFF THE EAST COAST OF KAMCHATKA RUSSIA
MAGNITUDE - 8.6 MOMENT

MEASUREMENTS OR REPORTS OF TSUNAMI WAVE ACTIVITY

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LOE			
DART 21416	48.0N	163.5E	1554	0.8M/02.6FT	14
DART 21415	50.2N	171.8E	1616	0.4M/01.3FT	15
NIKOL'SKOE RU	55.2N	166.0E	1559	2.9M/09.5FT	16
PETROPAVLOVSK RU	53.0N	158.6E	1733	1.6M/05.2FT	17
SHEMYA AK	52.7N	174.1E	1725	0.9M/04.2FT	17
ADAK AK	51.9N	176.6W	1715	0.8M/02.8FT	15
ATKA AK	52.2N	174.2W	1734	0.7M/02.7FT	18
KUSHIRO JP	43.0N	144.4E	1720	0.8M/02.6FT	20
HANASAKI JP	43.3N	145.6E	1745	0.5M/01.6FT	19
OFUNATO JP	39.0N	141.8E	1755	0.5M/01.6FT	18
NIKOLSKI AK	52.9N	168.9W	1830	0.8M/03.0FT	15
DUTCH HBR AK	51.1N	164.0W	1855	0.1M/00.4FT	17

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

EVALUATION

A TSUNAMI HAS BEEN GENERATED THAT COULD CAUSE DAMAGE ALONG COASTLINES OF ALL ISLANDS IN THE STATE OF HAWAII. URGENT ACTION SHOULD BE TAKEN TO PROTECT LIVES AND PROPERTY.

A TSUNAMI IS A SERIES OF LONG OCEAN WAVES. EACH INDIVIDUAL WAVE CREST CAN LAST 5 TO 15 MINUTES OR MORE AND EXTENSIVELY FLOOD COASTAL AREAS. THE DANGER CAN CONTINUE FOR MANY HOURS AFTER THE INITIAL WAVE AS SUBSEQUENT WAVES ARRIVE. TSUNAMI WAVE HEIGHTS CANNOT BE PREDICTED AND THE FIRST WAVE MAY NOT BE THE LARGEST. TSUNAMI WAVES EFFICIENTLY WRAP AROUND ISLANDS. ALL SHORES ARE AT RISK NO MATTER WHICH DIRECTION THEY FACE. THE TROUGH OF A TSUNAMI WAVE MAY TEMPORARILY EXPOSE THE SEAFLOOR BUT THE AREA WILL QUICKLY FLOOD AGAIN. EXTREMELY STRONG AND UNUSUAL NEARSHORE

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CURRENTS CAN ACCOMPANY A TSUNAMI. DEBRIS PICKED UP AND CARRIED BY A TSUNAMI AMPLIFIES ITS DESTRUCTIVE POWER. SIMULTANEOUS HIGH TIDES OR HIGH SURF CAN SIGNIFICANTLY INCREASE THE TSUNAMI HAZARD.

THE ESTIMATED ARRIVAL TIME IN HAWAII OF THE FIRST TSUNAMI WAVE IS

1055 AM HST WED 25 MAR 2015

FURTHER MESSAGES WILL BE ISSUED HOURLY OR SOONER AS CONDITIONS WARRANT UNTIL THE THREAT TO HAWAII HAS PASSED.

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PTWC Hawaii Message #7

ZCZC
WEHW40 PHEB 252000
TSUHWX
HIZ001>003-005>009-012>014-016>021-023>026-252200-
/O.CON.PHEB.TS.W.0124.000000T0000Z-000000T0000Z/

TSUNAMI MESSAGE NUMBER 7
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1000 AM HST WED MAR 25 2015

TO - EMERGENCY MANAGEMENT IN THE STATE OF HAWAII

SUBJECT - TSUNAMI WARNING SUPPLEMENT

A TSUNAMI WARNING CONTINUES IN EFFECT FOR THE STATE OF HAWAII.

AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS

ORIGIN TIME - 0500 AM HST 25 MAR 2015
COORDINATES - 53.5 NORTH 162.0 EAST
LOCATION - OFF THE EAST COAST OF KAMCHATKA RUSSIA
MAGNITUDE - 8.6 MOMENT

MEASUREMENTS OR REPORTS OF TSUNAMI WAVE ACTIVITY

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (UTC)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
DART 21416	48.0N	163.5E	1554	0.8M/02.6FT	14
DART 21415	50.2N	171.8E	1616	0.4M/01.3FT	15
NIKOL'SKOE RU	55.2N	166.0E	1559	2.9M/09.5FT	16
PETROPAVLOVSK RU	53.0N	158.6E	1733	1.6M/05.2FT	17
SHEMYA AK	52.7N	174.1E	1725	0.9M/04.2FT	17
ADAK AK	51.9N	176.6W	1715	0.8M/02.8FT	15
ATKA AK	52.2N	174.2W	1734	0.7M/02.7FT	18
KUSHIRO JP	43.0N	144.4E	1720	0.8M/02.6FT	20
HANASAKI JP	43.3N	145.6E	1745	0.5M/01.6FT	19
OFUNATO JP	39.0N	141.8E	1755	0.5M/01.6FT	18
NIKOLSKI AK	52.9N	168.9W	1830	1.1M/03.7FT	15
DUTCH HBR AK	51.1N	164.0W	1855	0.3M/01.0FT	17
OMAEZAKI JP	34.6N	138.2E	1859	0.4M/01.3FT	19
CHICHIJIMA JP	27.1N	142.2E	1855	0.3M/01.2FT	
MIDWAY US	28.2N	177.4W	1918	0.9M/02.9FT	14
WAKE US	19.3N	166.6E	1940	0.5M/01.6FT	14

LAT - LATITUDE (N-NORTH, S-SOUTH)
LON - LONGITUDE (E-EAST, W-WEST)

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TIME - TIME OF THE MEASUREMENT (Z IS UTC IS GREENWICH TIME)
AMPL - TSUNAMI AMPLITUDE MEASURED RELATIVE TO NORMAL SEA LEVEL.
IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.
VALUES ARE GIVEN IN BOTH METERS (M) AND FEET (FT).
PER - PERIOD OF TIME IN MINUTES (MIN) FROM ONE WAVE TO THE NEXT.

EVALUATION

A TSUNAMI HAS BEEN GENERATED THAT COULD CAUSE DAMAGE ALONG COASTLINES OF ALL ISLANDS IN THE STATE OF HAWAII. URGENT ACTION SHOULD BE TAKEN TO PROTECT LIVES AND PROPERTY.

A TSUNAMI IS A SERIES OF LONG OCEAN WAVES. EACH INDIVIDUAL WAVE CREST CAN LAST 5 TO 15 MINUTES OR MORE AND EXTENSIVELY FLOOD COASTAL AREAS. THE DANGER CAN CONTINUE FOR MANY HOURS AFTER THE INITIAL WAVE AS SUBSEQUENT WAVES ARRIVE. TSUNAMI WAVE HEIGHTS CANNOT BE PREDICTED AND THE FIRST WAVE MAY NOT BE THE LARGEST. TSUNAMI WAVES EFFICIENTLY WRAP AROUND ISLANDS. ALL SHORES ARE AT RISK NO MATTER WHICH DIRECTION THEY FACE. THE TROUGH OF A TSUNAMI WAVE MAY TEMPORARILY EXPOSE THE SEAFLOOR BUT THE AREA WILL QUICKLY FLOOD AGAIN. EXTREMELY STRONG AND UNUSUAL NEARSHORE CURRENTS CAN ACCOMPANY A TSUNAMI. DEBRIS PICKED UP AND CARRIED BY A TSUNAMI AMPLIFIES ITS DESTRUCTIVE POWER. SIMULTANEOUS HIGH TIDES OR HIGH SURF CAN SIGNIFICANTLY INCREASE THE TSUNAMI HAZARD.

THE ESTIMATED ARRIVAL TIME IN HAWAII OF THE FIRST TSUNAMI WAVE IS

1055 AM HST WED 25 MAR 2015

FURTHER MESSAGES WILL BE ISSUED HOURLY OR SOONER AS CONDITIONS WARRANT UNTIL THE THREAT TO HAWAII HAS PASSED.

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PTWC Hawaii Message #8

ZCZC
WEHW40 PHEB 252100
TSUHWX
HIZ001>003-005>009-012>014-016>021-023>026-252300-
/O.CON.PHEB.TS.W.0124.000000T0000Z-000000T0000Z/

TSUNAMI MESSAGE NUMBER 8
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1100 AM HST WED MAR 25 2015

TO - EMERGENCY MANAGEMENT IN THE STATE OF HAWAII

SUBJECT - TSUNAMI WARNING SUPPLEMENT

A TSUNAMI WARNING CONTINUES IN EFFECT FOR THE STATE OF HAWAII.

AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS

ORIGIN TIME - 0500 AM HST 25 MAR 2015
COORDINATES - 53.5 NORTH 162.0 EAST
LOCATION - OFF THE EAST COAST OF KAMCHATKA RUSSIA
MAGNITUDE - 8.6 MOMENT

MEASUREMENTS OR REPORTS OF TSUNAMI WAVE ACTIVITY

GAUGE LOCATION	LAT	LOX	TIME	AMPL	PER
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DART 21416	48.0N 163.5E	1554	0.8M/02.6FT	14
DART 21415	50.2N 171.8E	1616	0.4M/01.3FT	15
NIKOL'SKOE RU	55.2N 166.0E	1559	2.9M/09.5FT	16
PETROPAVLOVSK RU	53.0N 158.6E	1733	1.6M/05.2FT	17
SHEMYA AK	52.7N 174.1E	1725	0.9M/04.2FT	17
ADAK AK	51.9N 176.6W	1715	0.8M/02.8FT	15
ATKA AK	52.2N 174.2W	1734	0.7M/02.7FT	18
KUSHIRO JP	43.0N 144.4E	1720	0.8M/02.6FT	20
HANASAKI JP	43.3N 145.6E	1745	0.5M/01.6FT	19
OFUNATO JP	39.0N 141.8E	1755	0.5M/01.6FT	18
NIKOLSKI AK	52.9N 168.9W	1830	1.1M/03.7FT	15
DUTCH HBR AK	51.1N 164.0W	1855	0.3M/01.0FT	17
OMAEZAKI JP	34.6N 138.2E	1859	0.4M/01.3FT	19
CHICHIJIMA JP	27.1N 142.2E	1855	0.3M/01.2FT	
MIDWAY US	28.2N 177.4W	1918	0.9M/02.9FT	14
WAKE US	19.3N 166.6E	1940	0.5M/01.6FT	14
KODIAK AK	57.7N 152.5W	2052	0.1M/00.4FT	18
TERN FR FRIGATE US	23.9N 166.3W	2025	0.9M/03.0FT	14

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

EVALUATION

TSUNAMI WAVES ARE NOW IMPACTING THE STATE OF HAWAII. URGENT ACTION SHOULD BE TAKEN TO PROTECT LIVES AND PROPERTY.

A TSUNAMI IS A SERIES OF LONG OCEAN WAVES. EACH INDIVIDUAL WAVE CREST CAN LAST 5 TO 15 MINUTES OR MORE AND EXTENSIVELY FLOOD COASTAL AREAS. THE DANGER MAY PERSIST FOR MANY MORE HOURS AS WAVES ACTIVITY CONTINUES. TSUNAMI WAVES EFFICIENTLY WRAP AROUND ISLANDS SO ALL SHORES ARE AT RISK NO MATTER WHICH DIRECTION THEY FACE. THE TROUGH OF A TSUNAMI WAVE MAY TEMPORARILY EXPOSE THE SEAFLOOR BUT THE AREA WILL QUICKLY FLOOD AGAIN. EXTREMELY STRONG AND UNUSUAL NEARSHORE CURRENTS CAN ACCOMPANY A TSUNAMI. DEBRIS PICKED UP AND CARRIED BY A TSUNAMI AMPLIFIES ITS DESTRUCTIVE POWER. SIMULTANEOUS HIGH TIDES OR HIGH SURF CAN SIGNIFICANTLY INCREASE THE TSUNAMI HAZARD.

FURTHER MESSAGES WILL BE ISSUED HOURLY OR SOONER AS CONDITIONS WARRANT UNTIL THE THREAT TO HAWAII HAS PASSED.

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PTWC Hawaii Message #9

ZCZC
WEHW40 PHEB 252200
TSUHWX
HIZ001>003-005>009-012>014-016>021-023>026-260000-
/O.CON.PHEB.TS.W.0124.000000T0000Z-000000T0000Z/

TSUNAMI MESSAGE NUMBER 9
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1200 PM HST WED MAR 25 2015

TO - EMERGENCY MANAGEMENT IN THE STATE OF HAWAII

PACIFEX 15 Handbook

SUBJECT - TSUNAMI WARNING SUPPLEMENT

A TSUNAMI WARNING CONTINUES IN EFFECT FOR THE STATE OF HAWAII.

AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS

ORIGIN TIME - 0500 AM HST 25 MAR 2015
 COORDINATES - 53.5 NORTH 162.0 EAST
 LOCATION - OFF THE EAST COAST OF KAMCHATKA RUSSIA
 MAGNITUDE - 8.6 MOMENT

MEASUREMENTS OR REPORTS OF TSUNAMI WAVE ACTIVITY

GAUGE LOCATION	LAT	Lon	TIME	AMPL	PER
DART 21416	48.0N	163.5E	1554	0.8M/02.6FT	14
DART 21415	50.2N	171.8E	1616	0.4M/01.3FT	15
NIKOL'SKOE RU	55.2N	166.0E	1559	2.9M/09.5FT	16
PETROPAVLOVSK RU	53.0N	158.6E	1733	1.6M/05.2FT	17
SHEMYA AK	52.7N	174.1E	1725	0.9M/04.2FT	17
ADAK AK	51.9N	176.6W	1715	0.8M/02.8FT	15
ATKA AK	52.2N	174.2W	1734	0.7M/02.7FT	18
KUSHIRO JP	43.0N	144.4E	1720	0.8M/02.6FT	20
HANASAKI JP	43.3N	145.6E	1745	0.5M/01.6FT	19
OFUNATO JP	39.0N	141.8E	1755	0.5M/01.6FT	18
NIKOLSKI AK	52.9N	168.9W	1830	1.1M/03.7FT	15
DUTCH HBR AK	51.1N	164.0W	1855	0.3M/01.0FT	17
OMAEZAKI JP	34.6N	138.2E	1859	0.4M/01.3FT	19
CHICHIJIMA JP	27.1N	142.2E	1855	0.3M/01.2FT	
MIDWAY US	28.2N	177.4W	1918	0.9M/02.9FT	14
WAKE US	19.3N	166.6E	1940	0.5M/01.6FT	14
KODIAK AK	57.7N	152.5W	2052	0.1M/00.4FT	18
TERN FR FRIGATE US	23.9N	166.3W	2025	0.9M/03.0FT	14
YAKUTAT AK	59.5N	139.7W	2130	0.1M/00.4FT	
PAGO BAY GU	13.4N	144.8E	2105	0.5M/01.7FT	17
SEWARD AK	60.1N	149.4W	2152	0.1M/00.3FT	20
HANAIEI HI	22.2N	159.5W	2110	1.0M/03.3FT	16
NAWILIWILI HI	21.9N	159.4W	2130	0.8M/02.7FT	17
HALEIWA HI	21.6N	158.1W	2125	1.1M/03.6FT	15
HONOLULU HI	21.3N	157.9W	2135	0.4M/01.3FT	19
DEKEHTIK FM	7.0N	158.2E	2124	0.3M/01.0FT	13
HILO HI	19.7N	155.0W	2150	1.3M/04.3FT	18

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

EVALUATION

TSUNAMI WAVES ARE NOW IMPACTING THE STATE OF HAWAII. URGENT ACTION SHOULD BE TAKEN TO PROTECT LIVES AND PROPERTY.

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PACIFEX 15 Handbook

POWER. SIMULTANEOUS HIGH TIDES OR HIGH SURF CAN SIGNIFICANTLY INCREASE THE TSUNAMI HAZARD.

FURTHER MESSAGES WILL BE ISSUED HOURLY OR SOONER AS CONDITIONS WARRANT UNTIL THE THREAT TO HAWAII HAS PASSED.

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PTWC Hawaii Message #10

ZCZC

WEHW40 PHEB 252300

TSUHWX

HIZ001>003-005>009-012>014-016>021-023>026-260100-
/O.CON.PHEB.TS.W.0124.000000T0000Z-000000T0000Z/

TSUNAMI MESSAGE NUMBER 10

NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
100 PM HST WED MAR 25 2015

TO - EMERGENCY MANAGEMENT IN THE STATE OF HAWAII

SUBJECT - TSUNAMI WARNING SUPPLEMENT

A TSUNAMI WARNING CONTINUES IN EFFECT FOR THE STATE OF HAWAII.

AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS

ORIGIN TIME - 0500 AM HST 25 MAR 2015
COORDINATES - 53.5 NORTH 162.0 EAST
LOCATION - OFF THE EAST COAST OF KAMCHATKA RUSSIA
MAGNITUDE - 8.6 MOMENT

MEASUREMENTS OR REPORTS OF TSUNAMI WAVE ACTIVITY

GAUGE LOCATION	LAT	LON	TIME	AMPL	PER
DART 21416	48.0N	163.5E	1554	0.8M/02.6FT	14
DART 21415	50.2N	171.8E	1616	0.4M/01.3FT	15
NIKOL'SKOE RU	55.2N	166.0E	1559	2.9M/09.5FT	16
PETROPAVLOVSK RU	53.0N	158.6E	1733	1.6M/05.2FT	17
SHEMYA AK	52.7N	174.1E	1725	0.9M/04.2FT	17
ADAK AK	51.9N	176.6W	1715	0.8M/02.8FT	15
ATKA AK	52.2N	174.2W	1734	0.7M/02.7FT	18
KUSHIRO JP	43.0N	144.4E	1720	0.8M/02.6FT	20
HANASAKI JP	43.3N	145.6E	1745	0.5M/01.6FT	19
OFUNATO JP	39.0N	141.8E	1755	0.5M/01.6FT	18
NIKOLSKI AK	52.9N	168.9W	1830	1.1M/03.7FT	15
DUTCH HBR AK	51.1N	164.0W	1855	0.3M/01.0FT	17
OMAEZAKI JP	34.6N	138.2E	1859	0.4M/01.3FT	19
CHICHIJIMA JP	27.1N	142.2E	1855	0.3M/01.2FT	
MIDWAY US	28.2N	177.4W	1918	0.9M/02.9FT	14
WAKE US	19.3N	166.6E	1940	0.5M/01.6FT	14
KODIAK AK	57.7N	152.5W	2052	0.1M/00.4FT	18
TERN FR FRIGATE US	23.9N	166.3W	2025	0.9M/03.0FT	14
YAKUTAT AK	59.5N	139.7W	2130	0.1M/00.4FT	
PAGO BAY GU	13.4N	144.8E	2105	0.5M/01.7FT	17
SEWARD AK	60.1N	149.4W	2152	0.1M/00.3FT	20
LANGARA PT BC	54.2N	133.1W	2222	0.1M/00.2FT	
HANAIEI HI	22.2N	159.5W	2110	1.0M/03.3FT	16
NAWILIWILI HI	21.9N	159.4W	2130	0.8M/02.7FT	17
HALEIWA HI	21.6N	158.1W	2125	1.1M/03.6FT	15
HONOLULU HI	21.3N	157.9W	2135	0.4M/01.3FT	19

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DEKEHTIK FM	7.0N 158.2E	2124	0.3M/01.0FT	13
HILO HI	19.7N 155.0W	2150	1.3M/04.3FT	18
NAURU NR	0.5S 166.9E	2236	0.2M/00.7FT	15
BETIO TARAWA KI	1.4N 172.9E	2248	0.2M/00.7FT	16

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

EVALUATION

TSUNAMI WAVES ARE NOW IMPACTING THE STATE OF HAWAII. URGENT ACTION SHOULD BE TAKEN TO PROTECT LIVES AND PROPERTY.

A TSUNAMI IS A SERIES OF LONG OCEAN WAVES. EACH INDIVIDUAL WAVE CREST CAN LAST 5 TO 15 MINUTES OR MORE AND EXTENSIVELY FLOOD COASTAL AREAS. THE DANGER MAY PERSIST FOR MANY MORE HOURS AS WAVES ACTIVITY CONTINUES. TSUNAMI WAVES EFFICIENTLY WRAP AROUND ISLANDS SO ALL SHORES ARE AT RISK NO MATTER WHICH DIRECTION THEY FACE. THE TROUGH OF A TSUNAMI WAVE MAY TEMPORARILY EXPOSE THE SEAFLOOR BUT THE AREA WILL QUICKLY FLOOD AGAIN. EXTREMELY STRONG AND UNUSUAL NEARSHORE CURRENTS CAN ACCOMPANY A TSUNAMI. DEBRIS PICKED UP AND CARRIED BY A TSUNAMI AMPLIFIES ITS DESTRUCTIVE POWER. SIMULTANEOUS HIGH TIDES OR HIGH SURF CAN SIGNIFICANTLY INCREASE THE TSUNAMI HAZARD.

FURTHER MESSAGES WILL BE ISSUED HOURLY OR SOONER AS CONDITIONS WARRANT UNTIL THE THREAT TO HAWAII HAS PASSED.

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PTWC Hawaii Message #11

ZCZC
WEHW40 PHEB 260000
TSUHWX
HIZ001>003-005>009-012>014-016>021-023>026-260200-
/O.CON.PHEB.TS.W.0124.000000T0000Z-000000T0000Z/

TSUNAMI MESSAGE NUMBER 11
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
200 PM HST WED MAR 25 2015

TO - EMERGENCY MANAGEMENT IN THE STATE OF HAWAII

SUBJECT - TSUNAMI WARNING SUPPLEMENT

A TSUNAMI WARNING CONTINUES IN EFFECT FOR THE STATE OF HAWAII.

AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS

ORIGIN TIME - 0500 AM HST 25 MAR 2015
COORDINATES - 53.5 NORTH 162.0 EAST
LOCATION - OFF THE EAST COAST OF KAMCHATKA RUSSIA
MAGNITUDE - 8.6 MOMENT

MEASUREMENTS OR REPORTS OF TSUNAMI WAVE ACTIVITY

GAUGE LOCATION	LAT	LON	TIME	AMPL	PER
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PACIFEX 15 Handbook

DART 21416	48.0N 163.5E	1554	0.8M/02.6FT	14
DART 21415	50.2N 171.8E	1616	0.4M/01.3FT	15
NIKOL'SKOE RU	55.2N 166.0E	1559	2.9M/09.5FT	16
PETROPVLOVSK RU	53.0N 158.6E	1733	1.6M/05.2FT	17
SHEMYA AK	52.7N 174.1E	1725	0.9M/04.2FT	17
ADAK AK	51.9N 176.6W	1715	0.8M/02.8FT	15
ATKA AK	52.2N 174.2W	1734	0.7M/02.7FT	18
KUSHIRO JP	43.0N 144.4E	1720	0.8M/02.6FT	20
HANASAKI JP	43.3N 145.6E	1745	0.5M/01.6FT	19
OFUNATO JP	39.0N 141.8E	1755	0.5M/01.6FT	18
NIKOLSKI AK	52.9N 168.9W	1830	1.1M/03.7FT	15
DUTCH HBR AK	51.1N 164.0W	1855	0.3M/01.0FT	17
OMAEZAKI JP	34.6N 138.2E	1859	0.4M/01.3FT	19
CHICHIJIMA JP	27.1N 142.2E	1855	0.3M/01.2FT	
MIDWAY US	28.2N 177.4W	1918	0.9M/02.9FT	14
WAKE US	19.3N 166.6E	1940	0.5M/01.6FT	14
KODIAK AK	57.7N 152.5W	2052	0.1M/00.4FT	18
TERN FR FRIGATE US	23.9N 166.3W	2025	0.9M/03.0FT	14
YAKUTAT AK	59.5N 139.7W	2130	0.1M/00.4FT	
PAGO BAY GU	13.4N 144.8E	2105	0.5M/01.7FT	17
SEWARD AK	60.1N 149.4W	2152	0.1M/00.3FT	20
LANGARA PT BC	54.2N 133.1W	2222	0.1M/00.2FT	
HANAIEI HI	22.2N 159.5W	2110	1.0M/03.3FT	16
NAWILIWILI HI	21.9N 159.4W	2130	0.8M/02.7FT	17
HALEIWA HI	21.6N 158.1W	2125	1.1M/03.6FT	15
HONOLULU HI	21.3N 157.9W	2135	0.4M/01.3FT	19
DEKEHTIK FM	7.0N 158.2E	2124	0.3M/01.0FT	13
HILO HI	19.7N 155.0W	2150	1.3M/04.3FT	18
NAURU NR	0.5S 166.9E	2236	0.2M/00.7FT	15
BETIO TARAWA KI	1.4N 172.9E	2248	0.2M/00.7FT	16
MANUS PG	2.0S 147.4E	2320	0.3M/01.0FT	
KANTON KI	2.8S 171.7W	2321	0.1M/00.4FT	13
WESTPORT WA	46.9N 124.1W	2333	0.2M/00.6FT	
FUNAFUTI TV	8.5S 179.2E	2355	0.1M/00.3FT	
CRESCENT CITY CA	41.7N 124.2W	2356	0.7M/02.3FT	

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

EVALUATION

TSUNAMI WAVES ARE NOW IMPACTING THE STATE OF HAWAII. URGENT ACTION SHOULD BE TAKEN TO PROTECT LIVES AND PROPERTY.

A TSUNAMI IS A SERIES OF LONG OCEAN WAVES. EACH INDIVIDUAL WAVE CREST CAN LAST 5 TO 15 MINUTES OR MORE AND EXTENSIVELY FLOOD COASTAL AREAS. THE DANGER MAY PERSIST FOR MANY MORE HOURS AS WAVES ACTIVITY CONTINUES. TSUNAMI WAVES EFFICIENTLY WRAP AROUND ISLANDS SO ALL SHORES ARE AT RISK NO MATTER WHICH DIRECTION THEY FACE. THE TROUGH OF A TSUNAMI WAVE MAY TEMPORARILY EXPOSE THE SEAFLOOR BUT THE AREA WILL QUICKLY FLOOD AGAIN. EXTREMELY STRONG AND UNUSUAL NEARSHORE CURRENTS CAN ACCOMPANY A TSUNAMI. DEBRIS PICKED UP AND CARRIED BY A TSUNAMI AMPLIFIES ITS DESTRUCTIVE POWER. SIMULTANEOUS HIGH TIDES OR HIGH SURF CAN SIGNIFICANTLY INCREASE THE TSUNAMI HAZARD.

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PACIFEX 15 Handbook

PTWC Hawaii Message #12

ZCZC
 WEHW40 PHEB 260100
 TSUHWX
 HIZ001>003-005>009-012>014-016>021-023>026-260300-
 /O.CAN.PHEB.TS.W.0124.000000T0000Z-000000T0000Z/
 /O.NEW.PHEB.TS.Y.0133.150326T0100Z-000000T0000Z/

TSUNAMI MESSAGE NUMBER 12
 NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
 300 PM HST WED MAR 25 2015

TO - EMERGENCY MANAGEMENT IN THE STATE OF HAWAII

SUBJECT - TSUNAMI ADVISORY

EFFECTIVE AT 0300 PM HST THE TSUNAMI WARNING IS NOW DOWNGRADED
 TO A TSUNAMI ADVISORY FOR THE ENTIRE STATE OF HAWAII.

AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS

ORIGIN TIME - 0500 AM HST 25 MAR 2015
 COORDINATES - 53.5 NORTH 162.0 EAST
 LOCATION - OFF THE EAST COAST OF KAMCHATKA RUSSIA
 MAGNITUDE - 8.6 MOMENT

MEASUREMENTS OR REPORTS OF TSUNAMI WAVE ACTIVITY

GAUGE LOCATION	LAT	LON	TIME	AMPL	PER
DART 21416	48.0N	163.5E	1554	0.8M/02.6FT	14
DART 21415	50.2N	171.8E	1616	0.4M/01.3FT	15
NIKOL'SKOE RU	55.2N	166.0E	1559	2.9M/09.5FT	16
PETROPAVLOVSK RU	53.0N	158.6E	1733	1.6M/05.2FT	17
SHEMYA AK	52.7N	174.1E	1725	0.9M/04.2FT	17
ADAK AK	51.9N	176.6W	1715	0.8M/02.8FT	15
ATKA AK	52.2N	174.2W	1734	0.7M/02.7FT	18
KUSHIRO JP	43.0N	144.4E	1720	0.8M/02.6FT	20
HANASAKI JP	43.3N	145.6E	1745	0.5M/01.6FT	19
OFUNATO JP	39.0N	141.8E	1755	0.5M/01.6FT	18
NIKOLSKI AK	52.9N	168.9W	1830	1.1M/03.7FT	15
DUTCH HBR AK	51.1N	164.0W	1855	0.3M/01.0FT	17
OMAEZAKI JP	34.6N	138.2E	1859	0.4M/01.3FT	19
CHICHIJIMA JP	27.1N	142.2E	1855	0.3M/01.2FT	
MIDWAY US	28.2N	177.4W	1918	0.9M/02.9FT	14
WAKE US	19.3N	166.6E	1940	0.5M/01.6FT	14
KODIAK AK	57.7N	152.5W	2052	0.1M/00.4FT	18
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PAGO BAY GU	13.4N	144.8E	2105	0.5M/01.7FT	17
SEWARD AK	60.1N	149.4W	2152	0.1M/00.3FT	20
LANGARA PT BC	54.2N	133.1W	2222	0.1M/00.2FT	
HANAIEI HI	22.2N	159.5W	2110	1.0M/03.3FT	16
NAWILIWILI HI	21.9N	159.4W	2130	0.8M/02.7FT	17
HALEIWA HI	21.6N	158.1W	2125	1.1M/03.6FT	15
HONOLULU HI	21.3N	157.9W	2135	0.4M/01.3FT	19
DEKEHTIK FM	7.0N	158.2E	2124	0.3M/01.0FT	13
HILO HI	19.7N	155.0W	2150	1.3M/04.3FT	18
NAURU NR	0.5S	166.9E	2236	0.2M/00.7FT	15
BETIO TARAWA KI	1.4N	172.9E	2248	0.2M/00.7FT	16
MANUS PG	2.0S	147.4E	2320	0.3M/01.0FT	

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KANTON KI	2.8S 171.7W	2321	0.1M/00.4FT	13
WESTPORT WA	46.9N 124.1W	2333	0.2M/00.6FT	
FUNAFUTI TV	8.5S 179.2E	2355	0.1M/00.3FT	
CRESCENT CITY CA	41.7N 124.2W	2356	0.7M/02.3FT	

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

EVALUATION

TSUNAMI WAVES HAVE NOW CROSSED THE STATE OF HAWAII AND HAVE DIMISHED TO ADVISORY LEVELS. SEA LEVEL CHANGES AND STRONG CURRENTS MAY OCCUR ALONG ALL COASTS THAT COULD BE A HAZARD TO SWIMMERS AND BOATERS AS WELL AS TO PERSONS NEAR THE SHORE AT BEACHES AND IN HARBORS AND MARINAS. THE THREAT MAY CONTINUE FOR SEVERAL HOURS.

THIS ADVISORY DOES NOT MEAN IT IS SAFE TO RETURN TO EVACUATED AREAS. DECISIONS AND INSTRUCTIONS FOR RETURNING TO EVACUATED AREAS WILL BE MADE AND COME FROM HAWAII STATE AND COUNTY CIVIL DEFENSE AGENCIES.

FURTHER MESSAGES WILL BE ISSUED HOURLY OR SOONER AS CONDITIONS WARRANT UNTIL THE THREAT TO HAWAII HAS PASSED.

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PTWC Hawaii Message #13

ZCZC
WEHW40 PHEB 260200
TSUHWX
HIZ001>003-005>009-012>014-016>021-023>026-260400-
/O.CON.PHEB.TS.Y.0133.000000T0000Z-000000T0000Z/

TSUNAMI MESSAGE NUMBER 13
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
400 PM HST WED MAR 25 2015

TO - EMERGENCY MANAGEMENT IN THE STATE OF HAWAII

SUBJECT - TSUNAMI ADVISORY SUPPLEMENT

A TSUNAMI ADVISORY CONTINUES IN EFFECT FOR THE STATE OF HAWAII.

AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS

ORIGIN TIME - 0500 AM HST 25 MAR 2015
COORDINATES - 53.5 NORTH 162.0 EAST
LOCATION - OFF THE EAST COAST OF KAMCHATKA RUSSIA
MAGNITUDE - 8.6 MOMENT

MEASUREMENTS OR REPORTS OF TSUNAMI WAVE ACTIVITY

GAUGE LOCATION	LAT	LON	TIME	AMPL	PER
DART 21416	48.0N	163.5E	1554	0.8M/02.6FT	14
DART 21415	50.2N	171.8E	1616	0.4M/01.3FT	15

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NIKOL'SKOE RU	55.2N	166.0E	1559	2.9M/09.5FT	16
PETROPAVLOVSK RU	53.0N	158.6E	1733	1.6M/05.2FT	17
SHEMYA AK	52.7N	174.1E	1725	0.9M/04.2FT	17
ADAK AK	51.9N	176.6W	1715	0.8M/02.8FT	15
ATKA AK	52.2N	174.2W	1734	0.7M/02.7FT	18
KUSHIRO JP	43.0N	144.4E	1720	0.8M/02.6FT	20
HANASAKI JP	43.3N	145.6E	1745	0.5M/01.6FT	19
OFUNATO JP	39.0N	141.8E	1755	0.5M/01.6FT	18
NIKOLSKI AK	52.9N	168.9W	1830	1.1M/03.7FT	15
DUTCH HBR AK	51.1N	164.0W	1855	0.3M/01.0FT	17
OMAEZAKI JP	34.6N	138.2E	1859	0.4M/01.3FT	19
CHICHIJIMA JP	27.1N	142.2E	1855	0.3M/01.2FT	
MIDWAY US	28.2N	177.4W	1918	0.9M/02.9FT	14
WAKE US	19.3N	166.6E	1940	0.5M/01.6FT	14
KODIAK AK	57.7N	152.5W	2052	0.1M/00.4FT	18
TERN FR FRIGATE US	23.9N	166.3W	2025	0.9M/03.0FT	14
YAKUTAT AK	59.5N	139.7W	2130	0.1M/00.4FT	
PAGO BAY GU	13.4N	144.8E	2105	0.5M/01.7FT	17
SEWARD AK	60.1N	149.4W	2152	0.1M/00.3FT	20
LANGARA PT BC	54.2N	133.1W	2222	0.1M/00.2FT	
HANALEI HI	22.2N	159.5W	2110	1.0M/03.3FT	16
NAWILIWILI HI	21.9N	159.4W	2130	0.8M/02.7FT	17
HALEIWA HI	21.6N	158.1W	2125	1.1M/03.6FT	15
HONOLULU HI	21.3N	157.9W	2135	0.4M/01.3FT	19
DEKEHTIK FM	7.0N	158.2E	2124	0.3M/01.0FT	13
HILO HI	19.7N	155.0W	2150	1.3M/04.3FT	18
NAURU NR	0.5S	166.9E	2236	0.2M/00.7FT	15
BETIO TARAWA KI	1.4N	172.9E	2248	0.2M/00.7FT	16
MANUS PG	2.0S	147.4E	2320	0.3M/01.0FT	14
KANTON KI	2.8S	171.7W	2321	0.1M/00.4FT	13
WESTPORT WA	46.9N	124.1W	2333	0.2M/00.6FT	
FUNAFUTI TV	8.5S	179.2E	2355	0.1M/00.3FT	12
CRESCENT CITY CA	41.7N	124.2W	2356	0.7M/02.3FT	
ENSENADA MX	31.8N	116.6W	0012	0.5M/01.6FT	14
LATA WHARF SB	10.7S	165.8E	0025	0.4M/01.4FT	12
LOS ANGELES CA	33.7N	118.3W	0054	0.2M/00.6FT	
APIA WS	13.8S	171.8W	0055	0.4M/01.3FT	14
PAGO PAGO AS	14.3S	170.7W	0130	0.5M/01.6FT	

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

EVALUATION

TSUNAMI WAVES THAT CAN BE A HAZARD TO SWIMMERS AND BOATERS AS WELL AS TO PERSONS NEAR THE SHORE AT BEACHES AND IN HARBORS AND MARINAS ARE NOW AFFECTING THE STATE OF HAWAII. THIS HAZARD COULD CONTINUE FOR SEVERAL HOURS. THE SITUATION IS BEING MONITORED CLOSELY AND THE ADVISORY WILL END WHEN THE HAZARD HAS PASSED.

FURTHER MESSAGES WILL BE ISSUED HOURLY OR SOONER AS CONDITIONS WARRANT UNTIL THE THREAT TO HAWAII HAS PASSED.

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PTWC Hawaii Message #14

ZCZC
 WEHW40 PHEB 260300

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TSUHWX
 HIZ001>003-005>009-012>014-016>021-023>026-260500-
 /O.CAN.PHEB.TS.Y.0133.000000T0000Z-000000T0000Z/

TSUNAMI MESSAGE NUMBER 14
 NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
 500 PM HST WED MAR 25 2015

TO - EMERGENCY MANAGEMENT IN THE STATE OF HAWAII

SUBJECT - FINAL TSUNAMI ADVISORY

THE TSUNAMI ADVISORY IS ENDED FOR THE STATE OF HAWAII EFFECTIVE
 AT 0500 PM HST.

AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS

ORIGIN TIME - 0500 AM HST 25 MAR 2015
 COORDINATES - 53.5 NORTH 162.0 EAST
 LOCATION - OFF THE EAST COAST OF KAMCHATKA RUSSIA
 MAGNITUDE - 8.6 MOMENT

MEASUREMENTS OR REPORTS OF TSUNAMI WAVE ACTIVITY

GAUGE LOCATION	LAT	Lon	TIME	AMPL	PER
DART 21416	48.0N	163.5E	1554	0.8M/02.6FT	14
DART 21415	50.2N	171.8E	1616	0.4M/01.3FT	15
NIKOL'SKOE RU	55.2N	166.0E	1559	2.9M/09.5FT	16
PETROPAVLOVSK RU	53.0N	158.6E	1733	1.6M/05.2FT	17
SHEMYA AK	52.7N	174.1E	1725	0.9M/04.2FT	17
ADAK AK	51.9N	176.6W	1715	0.8M/02.8FT	15
ATKA AK	52.2N	174.2W	1734	0.7M/02.7FT	18
KUSHIRO JP	43.0N	144.4E	1720	0.8M/02.6FT	20
HANASAKI JP	43.3N	145.6E	1745	0.5M/01.6FT	19
OFUNATO JP	39.0N	141.8E	1755	0.5M/01.6FT	18
NIKOLSKI AK	52.9N	168.9W	1830	1.1M/03.7FT	15
DUTCH HBR AK	51.1N	164.0W	1855	0.3M/01.0FT	17
OMAEZAKI JP	34.6N	138.2E	1859	0.4M/01.3FT	19
CHICHIJIMA JP	27.1N	142.2E	1855	0.3M/01.2FT	
MIDWAY US	28.2N	177.4W	1918	0.9M/02.9FT	14
WAKE US	19.3N	166.6E	1940	0.5M/01.6FT	14
KODIAK AK	57.7N	152.5W	2052	0.1M/00.4FT	18
TERN FR FRIGATE US	23.9N	166.3W	2025	0.9M/03.0FT	14
YAKUTAT AK	59.5N	139.7W	2130	0.1M/00.4FT	
PAGO BAY GU	13.4N	144.8E	2105	0.5M/01.7FT	17
SEWARD AK	60.1N	149.4W	2152	0.1M/00.3FT	20
LANGARA PT BC	54.2N	133.1W	2222	0.1M/00.2FT	
HANALEI HI	22.2N	159.5W	2110	1.0M/03.3FT	16
NAWILIWILI HI	21.9N	159.4W	2130	0.8M/02.7FT	17
HALEIWA HI	21.6N	158.1W	2125	1.1M/03.6FT	15
HONOLULU HI	21.3N	157.9W	2135	0.4M/01.3FT	19
DEKEHTIK FM	7.0N	158.2E	2124	0.3M/01.0FT	13
HILO HI	19.7N	155.0W	2150	1.3M/04.3FT	18
NAURU NR	0.5S	166.9E	2236	0.2M/00.7FT	15
BETIO TARAWA KI	1.4N	172.9E	2248	0.2M/00.7FT	16
MANUS PG	2.0S	147.4E	2320	0.3M/01.0FT	14
KANTON KI	2.8S	171.7W	2321	0.1M/00.4FT	13
WESTPORT WA	46.9N	124.1W	2333	0.2M/00.6FT	
FUNAFUTI TV	8.5S	179.2E	2355	0.1M/00.3FT	12
CRESCENT CITY CA	41.7N	124.2W	2356	0.7M/02.3FT	
ENSENADA MX	31.8N	116.6W	0012	0.5M/01.6FT	14
LATA WHARF SB	10.7S	165.8E	0025	0.4M/01.4FT	12
LOS ANGELES CA	33.7N	118.3W	0054	0.2M/00.6FT	
APIA WS	13.8S	171.8W	0055	0.4M/01.3FT	14

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PAGO PAGO AS	14.3S 170.7W	0130	0.5M/01.6FT
NUKU HIWA PF	8.9S 140.1W	0240	0.8M/02.6FT

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

EVALUATION

TSUNAMI WAVE HEIGHTS ACROSS THE STATE OF HAWAII ARE NOW BELOW ADVISORY LEVELS AND ARE CONTINUING TO DIMINISH. BASED ON ALL AVAILABLE DATA THE PACIFIC TSUNAMI WARNING CENTER IS NOW CANCELLING THE TSUNAMI ADVISORY. SMALL SEA LEVEL CHANGES AND STRONG OR UNUSUAL CURRENTS MAY PERSIST FOR SEVERAL ADDITIONAL HOURS IN SOME COASTAL AREAS AND APPROPRIATE CAUTION SHOULD BE EXERCISED BY BOATERS AND SWIMMERS.

THIS WILL BE THE FINAL MESSAGE ISSUED FOR THIS EVENT UNLESS ADDITIONAL DATA ARE RECEIVED.

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PTWC Message #1 for Guam and CNMI

ZCZC
WEGM42 PHEB 251506
TIBGUM

TSUNAMI INFORMATION STATEMENT NUMBER 1
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
106 AM CHST THU MAR 26 2015

...POSSIBLE TSUNAMI THREAT TO GUAM/CNMI FROM A DISTANT EARTHQUAKE...

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.1 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 100 AM CHST ON THURSDAY MARCH 26 2015.
- * THE TSUNAMI THREAT TO GUAM... ROTA... TINIAN AND SAIPAN FROM THIS EARTHQUAKE IS STILL UNDER INVESTIGATION.

RECOMMENDED ACTIONS

- * STAY ALERT FOR FURTHER INFORMATION. THERE IS THE POSSIBILITY THAT A TSUNAMI WATCH... ADVISORY... OR WARNING COULD BE ISSUED LATER FOR GUAM... ROTA... TINIAN AND SAIPAN.

POTENTIAL IMPACTS

- * POTENTIAL TSUNAMI IMPACTS ARE STILL BEING EVALUATED.
- * IF THERE IS A TSUNAMI THREAT TO GUAM... ROTA... TINIAN AND SAIPAN... THE EARLIEST IMPACTS WOULD BE AROUND 619 AM CHST ON THURSDAY MARCH 26 2015.

PRELIMINARY EARTHQUAKE PARAMETERS

- * MAGNITUDE 8.1
- * ORIGIN TIME 100 AM CHST MAR 26 2015
- * COORDINATES 53.5 NORTH 162.0 EAST
- * DEPTH 19 MILES
- * LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

NEXT UPDATE AND ADDITIONAL INFORMATION

- * THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
- * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND ON THE INTERNET AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.

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

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PTWC Message #2 for Guam and CNMI

ZCZC

WEGM40 PHEB 251531

TSUGUM

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/O.NEW.PHEB.TS.A.0009.150325T1531Z-000000T0000Z/

BULLETIN

TSUNAMI MESSAGE NUMBER 2

NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI

131 AM CHST THU MAR 26 2015

...A TSUNAMI WATCH IS NOW IN EFFECT FOR GUAM AND CNMI...

THIS MESSAGE CONTAINS REVISED ALERT LEVELS... AND EARTHQUAKE PARAMETERS.

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 100 AM CHST ON THURSDAY MARCH 26 2015.
- * THE TSUNAMI THREAT TO GUAM... ROTA... TINIAN AND SAIPAN FROM THIS EARTHQUAKE IS STILL BEING EVALUATED.
- * IF A TSUNAMI THREAT EXISTS... THE EARLIEST ESTIMATED ARRIVAL TIME OF TSUNAMI WAVES WITHIN GUAM... ROTA... TINIAN OR SAIPAN WOULD BE

619 AM CHST ON THURSDAY MARCH 26 2015

RECOMMENDED ACTIONS

- * STAY ALERT FOR FURTHER INFORMATION. THE TSUNAMI WATCH COULD BE ELEVATED TO AN ADVISORY OR WARNING.
- * CONSIDER YOUR COURSE OF ACTION IF A TSUNAMI ADVISORY OR WARNING IS ISSUED.

ESTIMATED TIMES OF ARRIVAL

- * ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE

PACIFEX 15 Handbook

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 (CHST)
MAGICIENNE BAY	SAIPAN	15.1N 145.8E	619 AM 03/26
WING BEACH	SAIPAN	15.3N 145.8E	620 AM 03/26
GARAPAN	SAIPAN	15.2N 145.7E	623 AM 03/26
LONG BEACH	TINIAN	15.0N 145.7E	625 AM 03/26
CHULU BEACH	TINIAN	15.1N 145.6E	625 AM 03/26
OBYAN	SAIPAN	15.1N 145.7E	625 AM 03/26
SAN JOSE	TINIAN	15.0N 145.6E	626 AM 03/26
ARATSU BAY	ROTA	14.1N 145.2E	628 AM 03/26
MOCHON BEACH	ROTA	14.2N 145.3E	628 AM 03/26
SONGSONG	ROTA	14.1N 145.1E	631 AM 03/26
PATI POINT	GUAM	13.6N 145.0E	635 AM 03/26
INARAJAN	GUAM	13.3N 144.8E	637 AM 03/26
PAGO BAY	GUAM	13.4N 144.8E	637 AM 03/26
APRA HARBOR	GUAM	13.5N 144.6E	642 AM 03/26

POTENTIAL IMPACTS

- * POTENTIAL TSUNAMI IMPACTS ARE STILL BEING EVALUATED.
- * IF THERE IS A TSUNAMI THREAT TO GUAM... ROTA... TINIAN AND SAIPAN... THE EARLIEST IMPACTS WOULD BE AROUND 619 AM CHST ON THURSDAY MARCH 26 2015.

PRELIMINARY EARTHQUAKE PARAMETERS - UPDATED

- * MAGNITUDE 8.6
- * ORIGIN TIME 100 AM CHST MAR 26 2015
- * COORDINATES 53.5 NORTH 162.0 EAST
- * DEPTH 19 MILES
- * LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

NEXT UPDATE AND ADDITIONAL INFORMATION

- * THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
- * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND ON THE INTERNET AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.
- * AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL LOWERCASE LETTERS-.

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PTWC Message #3 for Guam and CNMI

ZCZC
WEGM40 PHEB 251604
TSUGUM

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/T.NEW.PHEB.TS.Y.0004.150325T1604Z-000000T0000Z/

BULLETIN

TSUNAMI MESSAGE NUMBER 3
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
204 AM CHST THU MAR 26 2015

...A TSUNAMI ADVISORY IS NOW IN EFFECT FOR GUAM AND CNMI...

THIS MESSAGE CONTAINS REVISED ALERT LEVELS.

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 100 AM CHST ON THURSDAY MARCH 26 2015.
- * BASED ON ALL AVAILABLE DATA... THERE IS A THREAT TO GUAM... ROTA... TINIAN AND SAIPAN OF SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS THAT COULD BE A HAZARD ALONG BEACHES... IN HARBORS... AND IN COASTAL WATERS.
- * THE EARLIEST ESTIMATED TIME THAT HAZARDOUS SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS MAY BEGIN IN GUAM... ROTA... TINIAN OR SAIPAN IS

619 AM CHST ON THURSDAY MARCH 26 2015

RECOMMENDED ACTIONS

- * PERSONS IN THE OCEAN SHOULD GET OUT OF THE WATER. PERSONS NEAR THE OCEAN SHOULD MOVE AWAY FROM BEACHES AND HARBORS.
- * FOLLOW INSTRUCTIONS AS THEY ARE GIVEN BY GOVERNMENT AGENCIES.

ESTIMATED TIMES OF ARRIVAL

- * ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE 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 (CHST)
MAGICIENNE BAY	SAIPAN	15.1N 145.8E	619 AM 03/26
WING BEACH	SAIPAN	15.3N 145.8E	620 AM 03/26
GARAPAN	SAIPAN	15.2N 145.7E	623 AM 03/26
LONG BEACH	TINIAN	15.0N 145.7E	625 AM 03/26
CHULU BEACH	TINIAN	15.1N 145.6E	625 AM 03/26
OBYAN	SAIPAN	15.1N 145.7E	625 AM 03/26
SAN JOSE	TINIAN	15.0N 145.6E	626 AM 03/26
ARATSU BAY	ROTA	14.1N 145.2E	628 AM 03/26
MOCHON BEACH	ROTA	14.2N 145.3E	628 AM 03/26

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SONGSONG	ROTA	14.1N	145.1E	631 AM	03/26
PATI POINT	GUAM	13.6N	145.0E	635 AM	03/26
INARAJAN	GUAM	13.3N	144.8E	637 AM	03/26
PAGO BAY	GUAM	13.4N	144.8E	637 AM	03/26
APRA HARBOR	GUAM	13.5N	144.6E	642 AM	03/26

POTENTIAL IMPACTS

- * SEA LEVEL FLUCTUATIONS THAT ARE GENERALLY NO MORE THAN 3 FEET ABOVE AND BELOW THE TIDE LEVEL.
- * MINOR FLOODING OF BEACH AND HARBOR AREAS.
- * STRONG AND UNUSUAL OCEAN CURRENTS IN HARBORS... BAYS... AND OTHER NEAR SHORE WATERS.
- * THE HAZARD IS FORECAST TO BEGIN AROUND 619 AM CHST ON THURSDAY MARCH 26 AND IT CAN PERSIST FOR MANY HOURS OR LONGER.

PRELIMINARY EARTHQUAKE PARAMETERS

- * MAGNITUDE 8.6
- * ORIGIN TIME 100 AM CHST MAR 26 2015
- * COORDINATES 53.5 NORTH 162.0 EAST
- * DEPTH 19 MILES
- * LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

TSUNAMI OBSERVATIONS

- * 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 TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (CHST)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
DART 21416	48.0N	163.5E	0154	2.6FT/ 0.8M	14
UST KAMCHATSK RU	56.0N	163.0E	0150	10.0FT/ 3.1M	20
PETROPAVLOVSK RU	53.0N	158.6E	0151	3.5FT/ 1.1M	20

NEXT UPDATE AND ADDITIONAL INFORMATION

- * THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
- * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND ON THE INTERNET AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.
- * AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL LOWERCASE LETTERS-.

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PTWC Message #4 for Guam and CNMI

ZCZC

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WEGM40 PHEB 251705
TSUGUM

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/T.NEW.PHEB.TS.Y.0004.150325T1705Z-000000T0000Z/

BULLETIN
TSUNAMI MESSAGE NUMBER 4
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
305 AM CHST THU MAR 26 2015

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR GUAM AND CNMI...

THIS MESSAGE CONTAINS NEW TSUNAMI OBSERVATIONS.

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 100 AM CHST ON THURSDAY MARCH 26 2015.
- * BASED ON ALL AVAILABLE DATA... THERE IS A THREAT TO GUAM... ROTA... TINIAN AND SAIPAN OF SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS THAT COULD BE A HAZARD ALONG BEACHES... IN HARBORS... AND IN COASTAL WATERS.
- * THE EARLIEST ESTIMATED TIME THAT HAZARDOUS SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS MAY BEGIN IN GUAM... ROTA... TINIAN OR SAIPAN IS

619 AM CHST ON THURSDAY MARCH 26 2015

RECOMMENDED ACTIONS

- * PERSONS IN THE OCEAN SHOULD GET OUT OF THE WATER. PERSONS NEAR THE OCEAN SHOULD MOVE AWAY FROM BEACHES AND HARBORS.
- * FOLLOW INSTRUCTIONS AS THEY ARE GIVEN BY GOVERNMENT AGENCIES.

ESTIMATED TIMES OF ARRIVAL

- * ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE 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 (CHST)
MAGICIENNE BAY	SAIPAN	15.1N 145.8E	619 AM 03/26
WING BEACH	SAIPAN	15.3N 145.8E	620 AM 03/26
GARAPAN	SAIPAN	15.2N 145.7E	623 AM 03/26
LONG BEACH	TINIAN	15.0N 145.7E	625 AM 03/26
CHULU BEACH	TINIAN	15.1N 145.6E	625 AM 03/26
OBYAN	SAIPAN	15.1N 145.7E	625 AM 03/26

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SAN JOSE	TINIAN	15.0N 145.6E	626 AM 03/26
ARATSU BAY	ROTA	14.1N 145.2E	628 AM 03/26
MOCHON BEACH	ROTA	14.2N 145.3E	628 AM 03/26
SONGSONG	ROTA	14.1N 145.1E	631 AM 03/26
PATI POINT	GUAM	13.6N 145.0E	635 AM 03/26
INARAJAN	GUAM	13.3N 144.8E	637 AM 03/26
PAGO BAY	GUAM	13.4N 144.8E	637 AM 03/26
APRA HARBOR	GUAM	13.5N 144.6E	642 AM 03/26

POTENTIAL IMPACTS

- * SEA LEVEL FLUCTUATIONS THAT ARE GENERALLY NO MORE THAN 3 FEET ABOVE AND BELOW THE TIDE LEVEL.
- * MINOR FLOODING OF BEACH AND HARBOR AREAS.
- * STRONG AND UNUSUAL OCEAN CURRENTS IN HARBORS... BAYS... AND OTHER NEAR SHORE WATERS.
- * THE HAZARD IS FORECAST TO BEGIN AROUND 619 AM CHST ON THURSDAY MARCH 26 AND IT CAN PERSIST FOR MANY HOURS OR LONGER.

PRELIMINARY EARTHQUAKE PARAMETERS

- * MAGNITUDE 8.6
- * ORIGIN TIME 100 AM CHST MAR 26 2015
- * COORDINATES 53.5 NORTH 162.0 EAST
- * DEPTH 19 MILES
- * LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

TSUNAMI OBSERVATIONS - UPDATED

- * 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 TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES	TIME OF MEASURE	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD
LAT LON	(CHST)	HEIGHT	(MIN)	
DART 21416	48.0N 163.5E	0154	2.6FT/ 0.8M	14
DART 21415	50.2N 171.8E	0216	1.3FT/ 0.4M	15
UST KAMCHATSK RU	56.0N 163.0E	0150	10.0FT/ 3.1M	20
NIKOL'SKOE RU	55.2N 166.0E	0159	9.5FT/ 2.9M	16
PETROPAVLOVSK RU	53.0N 158.6E	0151	3.5FT/ 1.1M	20
SHEMYA AK	52.7N 174.1E	0235	2.9FT/ 0.9M	17
ADAK AK	51.9N 176.6W	0245	1.6FT/ 0.5M	15
ATKA AK	52.2N 174.2W	0252	2.3FT/ 0.7M	18

NEXT UPDATE AND ADDITIONAL INFORMATION

- * THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
- * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND ON THE INTERNET AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.

PACIFEX 15 Handbook

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

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PTWC Message #5 for Guam and CNMI

ZCZC
WEGM40 PHEB 251805
TSUGUM

GUZ001>004-252005-
/T.CON.PHEB.TS.Y.0004.000000T0000Z-000000T0000Z/

BULLETIN
TSUNAMI MESSAGE NUMBER 5
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
405 AM CHST THU MAR 26 2015

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR GUAM AND CNMI...

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 100 AM CHST ON THURSDAY MARCH 26 2015.
- * BASED ON ALL AVAILABLE DATA... THERE IS A THREAT TO GUAM... ROTA... TINIAN AND SAIPAN OF SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS THAT COULD BE A HAZARD ALONG BEACHES... IN HARBORS... AND IN COASTAL WATERS.
- * THE EARLIEST ESTIMATED TIME THAT HAZARDOUS SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS MAY BEGIN IN GUAM... ROTA... TINIAN OR SAIPAN IS

619 AM CHST ON THURSDAY MARCH 26 2015

RECOMMENDED ACTIONS

- * PERSONS IN THE OCEAN SHOULD GET OUT OF THE WATER. PERSONS NEAR THE OCEAN SHOULD MOVE AWAY FROM BEACHES AND HARBORS.
- * FOLLOW INSTRUCTIONS AS THEY ARE GIVEN BY GOVERNMENT AGENCIES.

ESTIMATED TIMES OF ARRIVAL

- * ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE 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.

PACIFEX 15 Handbook

LOCATION	REGION	COORDINATES	ETA (CHST)
MAGICIENNE BAY	SAIPAN	15.1N 145.8E	619 AM 03/26
WING BEACH	SAIPAN	15.3N 145.8E	620 AM 03/26
GARAPAN	SAIPAN	15.2N 145.7E	623 AM 03/26
LONG BEACH	TINIAN	15.0N 145.7E	625 AM 03/26
CHULU BEACH	TINIAN	15.1N 145.6E	625 AM 03/26
OBYAN	SAIPAN	15.1N 145.7E	625 AM 03/26
SAN JOSE	TINIAN	15.0N 145.6E	626 AM 03/26
ARATSU BAY	ROTA	14.1N 145.2E	628 AM 03/26
MOCHON BEACH	ROTA	14.2N 145.3E	628 AM 03/26
SONGSONG	ROTA	14.1N 145.1E	631 AM 03/26
PATI POINT	GUAM	13.6N 145.0E	635 AM 03/26
INARAJAN	GUAM	13.3N 144.8E	637 AM 03/26
PAGO BAY	GUAM	13.4N 144.8E	637 AM 03/26
APRA HARBOR	GUAM	13.5N 144.6E	642 AM 03/26

POTENTIAL IMPACTS

- * SEA LEVEL FLUCTUATIONS THAT ARE GENERALLY NO MORE THAN 3 FEET ABOVE AND BELOW THE TIDE LEVEL.
- * MINOR FLOODING OF BEACH AND HARBOR AREAS.
- * STRONG AND UNUSUAL OCEAN CURRENTS IN HARBORS... BAYS... AND OTHER NEAR SHORE WATERS.
- * THE HAZARD IS FORECAST TO BEGIN AROUND 619 AM CHST ON THURSDAY MARCH 26 AND IT CAN PERSIST FOR MANY HOURS OR LONGER.

PRELIMINARY EARTHQUAKE PARAMETERS

- * MAGNITUDE 8.6
- * ORIGIN TIME 100 AM CHST MAR 26 2015
- * COORDINATES 53.5 NORTH 162.0 EAST
- * DEPTH 19 MILES
- * LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

TSUNAMI OBSERVATIONS - UPDATED

- * 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 TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (CHST)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
DART 21416	48.0N	163.5E	0154	2.6FT/ 0.8M	14
DART 21415	50.2N	171.8E	0216	1.3FT/ 0.4M	15
UST KAMCHATSK RU	56.0N	163.0E	0150	10.0FT/ 3.1M	20
NIKOL'SKOE RU	55.2N	166.0E	0159	9.5FT/ 2.9M	16
PETROPAVLOVSK RU	53.0N	158.6E	0333	5.2FT/ 1.6M	17
SHEMYA AK	52.7N	174.1E	0235	2.9FT/ 0.9M	17
ADAK AK	51.9N	176.6W	0245	1.6FT/ 0.5M	15
ATKA AK	52.2N	174.2W	0252	2.3FT/ 0.7M	18
KUSHIRO JP	43.0N	144.4E	0320	2.6FT/ 0.8M	20
HANASAKI JP	43.3N	145.6E	0345	1.6FT/ 0.5M	19

PACIFEX 15 Handbook

OFUNATO JP	39.0N 141.8E	0355	1.6FT/ 0.5M	18
NIKOLSKI AK	52.9N 168.9W	0358	2.5FT/ 0.8M	15

NEXT UPDATE AND ADDITIONAL INFORMATION

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- * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND ON THE INTERNET AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.
- * AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL LOWERCASE LETTERS-.

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PTWC Message #6 for Guam and CNMI

ZCZC
WEGM40 PHEB 251901
TSUGUM

GUZ001>004-252101-
/T.CON.PHEB.TS.Y.0004.000000T0000Z-000000T0000Z/

BULLETIN
TSUNAMI MESSAGE NUMBER 6
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
501 AM CHST THU MAR 26 2015

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR GUAM AND CNMI...

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 100 AM CHST ON THURSDAY MARCH 26 2015.
- * BASED ON ALL AVAILABLE DATA... THERE IS A THREAT TO GUAM... ROTA... TINIAN AND SAIPAN OF SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS THAT COULD BE A HAZARD ALONG BEACHES... IN HARBORS... AND IN COASTAL WATERS.
- * THE EARLIEST ESTIMATED TIME THAT HAZARDOUS SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS MAY BEGIN IN GUAM... ROTA... TINIAN OR SAIPAN IS

619 AM CHST ON THURSDAY MARCH 26 2015

RECOMMENDED ACTIONS

PACIFEX 15 Handbook

- * PERSONS IN THE OCEAN SHOULD GET OUT OF THE WATER. PERSONS NEAR THE OCEAN SHOULD MOVE AWAY FROM BEACHES AND HARBORS.
- * FOLLOW INSTRUCTIONS AS THEY ARE GIVEN BY GOVERNMENT AGENCIES.

ESTIMATED TIMES OF ARRIVAL

- * ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE 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 (CHST)
MAGICIENNE BAY	SAIPAN	15.1N 145.8E	619 AM 03/26
WING BEACH	SAIPAN	15.3N 145.8E	620 AM 03/26
GARAPAN	SAIPAN	15.2N 145.7E	623 AM 03/26
LONG BEACH	TINIAN	15.0N 145.7E	625 AM 03/26
CHULU BEACH	TINIAN	15.1N 145.6E	625 AM 03/26
OBYAN	SAIPAN	15.1N 145.7E	625 AM 03/26
SAN JOSE	TINIAN	15.0N 145.6E	626 AM 03/26
ARATSU BAY	ROTA	14.1N 145.2E	628 AM 03/26
MOCHON BEACH	ROTA	14.2N 145.3E	628 AM 03/26
SONGSONG	ROTA	14.1N 145.1E	631 AM 03/26
PATI POINT	GUAM	13.6N 145.0E	635 AM 03/26
INARAJAN	GUAM	13.3N 144.8E	637 AM 03/26
PAGO BAY	GUAM	13.4N 144.8E	637 AM 03/26
APRA HARBOR	GUAM	13.5N 144.6E	642 AM 03/26

POTENTIAL IMPACTS

- * SEA LEVEL FLUCTUATIONS THAT ARE GENERALLY NO MORE THAN 3 FEET ABOVE AND BELOW THE TIDE LEVEL.
- * MINOR FLOODING OF BEACH AND HARBOR AREAS.
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PRELIMINARY EARTHQUAKE PARAMETERS

- * MAGNITUDE 8.6
- * ORIGIN TIME 100 AM CHST MAR 26 2015
- * COORDINATES 53.5 NORTH 162.0 EAST
- * DEPTH 19 MILES
- * LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

TSUNAMI OBSERVATIONS - UPDATED

- * 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 TIDE LEVEL.

GAUGE	TIME OF	MAXIMUM	WAVE
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PACIFEX 15 Handbook

GAUGE LOCATION	COORDINATES		MEASURE (CHST)	TSUNAMI HEIGHT	PERIOD (MIN)
	LAT	LON			
DART 21416	48.0N	163.5E	0154	2.6FT/ 0.8M	14
DART 21415	50.2N	171.8E	0216	1.3FT/ 0.4M	15
UST KAMCHATSK RU	56.0N	163.0E	0150	10.0FT/ 3.1M	20
NIKOL'SKOE RU	55.2N	166.0E	0159	9.5FT/ 2.9M	16
PETROPAVLOVSK RU	53.0N	158.6E	0333	5.2FT/ 1.6M	17
SHEMYA AK	52.7N	174.1E	0235	2.9FT/ 0.9M	17
ADAK AK	51.9N	176.6W	0245	1.6FT/ 0.5M	15
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KUSHIRO JP	43.0N	144.4E	0320	2.6FT/ 0.8M	20
HANASAKI JP	43.3N	145.6E	0345	1.6FT/ 0.5M	19
OFUNATO JP	39.0N	141.8E	0355	1.6FT/ 0.5M	18
NIKOLSKI AK	52.9N	168.9W	0358	2.5FT/ 0.8M	15
DUTCH HBR AK	51.1N	164.0W	0455	0.4FT/ 0.1M	17

NEXT UPDATE AND ADDITIONAL INFORMATION

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PTWC Message #7 for Guam and CNMI

ZCZC

WEGM40 PHEB 252001

TSUGUM

GUZ001>004-252201-

/T.CON.PHEB.TS.Y.0004.000000T0000Z-000000T0000Z/

BULLETIN

TSUNAMI MESSAGE NUMBER 7

NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI

601 AM CHST THU MAR 26 2015

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR GUAM AND CNMI...

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 100 AM CHST ON THURSDAY MARCH 26 2015.
- * BASED ON ALL AVAILABLE DATA... THERE IS A THREAT TO GUAM... ROTA... TINIAN AND SAIPAN OF SEA LEVEL FLUCTUATIONS AND STRONG

PACIFEX 15 Handbook

OCEAN CURRENTS THAT COULD BE A HAZARD ALONG BEACHES... IN HARBORS... AND IN COASTAL WATERS.

- * THE EARLIEST ESTIMATED TIME THAT HAZARDOUS SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS MAY BEGIN IN GUAM... ROTA... TINIAN OR SAIPAN IS

619 AM CHST ON THURSDAY MARCH 26 2015

RECOMMENDED ACTIONS

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LOCATION	REGION	COORDINATES	ETA (CHST)
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WING BEACH	SAIPAN	15.3N 145.8E	620 AM 03/26
GARAPAN	SAIPAN	15.2N 145.7E	623 AM 03/26
LONG BEACH	TINIAN	15.0N 145.7E	625 AM 03/26
CHULU BEACH	TINIAN	15.1N 145.6E	625 AM 03/26
OBYAN	SAIPAN	15.1N 145.7E	625 AM 03/26
SAN JOSE	TINIAN	15.0N 145.6E	626 AM 03/26
ARATSU BAY	ROTA	14.1N 145.2E	628 AM 03/26
MOCHON BEACH	ROTA	14.2N 145.3E	628 AM 03/26
SONGSONG	ROTA	14.1N 145.1E	631 AM 03/26
PATI POINT	GUAM	13.6N 145.0E	635 AM 03/26
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PAGO BAY	GUAM	13.4N 144.8E	637 AM 03/26
APRA HARBOR	GUAM	13.5N 144.6E	642 AM 03/26

POTENTIAL IMPACTS

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PRELIMINARY EARTHQUAKE PARAMETERS

- * MAGNITUDE 8.6
- * ORIGIN TIME 100 AM CHST MAR 26 2015

PACIFEX 15 Handbook

* COORDINATES 53.5 NORTH 162.0 EAST
* DEPTH 19 MILES
* LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

TSUNAMI OBSERVATIONS - UPDATED

* 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 TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (CHST)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LOE			
DART 21416	48.0N	163.5E	0154	2.6FT/ 0.8M	14
DART 21415	50.2N	171.8E	0216	1.3FT/ 0.4M	15
UST KAMCHATSK RU	56.0N	163.0E	0150	10.0FT/ 3.1M	20
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OFUNATO JP	39.0N	141.8E	0355	1.6FT/ 0.5M	18
NIKOLSKI AK	52.9N	168.9W	0528	3.7FT/ 1.1M	15
DUTCH HBR AK	51.1N	164.0W	0535	1.0FT/ 0.3M	17
OMAEZAKI JP	34.6N	138.2E	0459	1.3FT/ 0.4M	19
CHICHIJIMA JP	27.1N	142.2E	0455	1.2FT/ 0.3M	
MIDWAY US	28.2N	177.4W	0518	2.9FT/ 0.9M	14
WAKE US	19.3N	166.6E	0540	1.6FT/ 0.5M	14

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PTWC Message #8 for Guam and CNMI

ZCZC
WEGM40 PHEB 252101
TSUGUM

GUZ001>004-252301-
/T.CON.PHEB.TS.Y.0004.000000T0000Z-000000T0000Z/

BULLETIN
TSUNAMI MESSAGE NUMBER 8
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
701 AM CHST THU MAR 26 2015

PACIFEX 15 Handbook

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR GUAM AND CNMI...

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

EVALUATION

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PAGO BAY	GUAM	13.4N 144.8E	637 AM 03/26
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POTENTIAL IMPACTS

PACIFEX 15 Handbook

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UST KAMCHATSK RU	56.0N	163.0E	0150	10.0FT/ 3.1M	20
NIKOL'SKOE RU	55.2N	166.0E	0159	9.5FT/ 2.9M	16
PETROPAVLOVSK RU	53.0N	158.6E	0333	5.2FT/ 1.6M	17
SHEMYA AK	52.7N	174.1E	0235	2.9FT/ 0.9M	17
ADAK AK	51.9N	176.6W	0245	1.6FT/ 0.5M	15
ATKA AK	52.2N	174.2W	0252	2.3FT/ 0.7M	18
KUSHIRO JP	43.0N	144.4E	0320	2.6FT/ 0.8M	20
HANASAKI JP	43.3N	145.6E	0345	1.6FT/ 0.5M	19
OFUNATO JP	39.0N	141.8E	0355	1.6FT/ 0.5M	18
NIKOLSKI AK	52.9N	168.9W	0528	3.7FT/ 1.1M	15
DUTCH HBR AK	51.1N	164.0W	0535	1.0FT/ 0.3M	17
OMAEZAKI JP	34.6N	138.2E	0459	1.3FT/ 0.4M	19
CHICHIJIMA JP	27.1N	142.2E	0455	1.2FT/ 0.3M	
MIDWAY US	28.2N	177.4W	0518	2.9FT/ 0.9M	14
WAKE US	19.3N	166.6E	0540	1.6FT/ 0.5M	14
KODIAK AK	57.7N	152.5W	0652	0.4FT/ 0.1M	18
TERN FR FRIGATE US	23.9N	166.3W	0625	3.0FT/ 0.9M	14

NEXT UPDATE AND ADDITIONAL INFORMATION

-
- * THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
 - * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND ON THE INTERNET AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.
 - * AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT

PACIFEX 15 Handbook

EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL LOWERCASE LETTERS-.

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PTWC Message #9 for Guam and CNMI

ZCZC
WEGM40 PHEB 252201
TSUGUM

GUZ001>004-260001-
/T.CON.PHEB.TS.Y.0004.000000T0000Z-000000T0000Z/

BULLETIN
TSUNAMI MESSAGE NUMBER 9
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
801 AM CHST THU MAR 26 2015

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR GUAM AND CNMI...

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 100 AM CHST ON THURSDAY MARCH 26 2015.
- * BASED ON ALL AVAILABLE DATA... THERE IS A THREAT TO GUAM... ROTA... TINIAN AND SAIPAN OF SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS THAT COULD BE A HAZARD ALONG BEACHES... IN HARBORS... AND IN COASTAL WATERS.

RECOMMENDED ACTIONS

- * PERSONS IN THE OCEAN SHOULD GET OUT OF THE WATER. PERSONS NEAR THE OCEAN SHOULD MOVE AWAY FROM BEACHES AND HARBORS.
- * FOLLOW INSTRUCTIONS AS THEY ARE GIVEN BY GOVERNMENT AGENCIES.

POTENTIAL IMPACTS

- * SEA LEVEL FLUCTUATIONS THAT ARE GENERALLY NO MORE THAN 3 FEET ABOVE AND BELOW THE TIDE LEVEL.
- * MINOR FLOODING OF BEACH AND HARBOR AREAS.
- * STRONG AND UNUSUAL OCEAN CURRENTS IN HARBORS... BAYS... AND OTHER NEAR SHORE WATERS.
- * THE HAZARD BEGAN AROUND 619 AM CHST ON THURSDAY MARCH 26 AND IT CAN PERSIST FOR MANY HOURS OR LONGER.

PRELIMINARY EARTHQUAKE PARAMETERS

PACIFEX 15 Handbook

* MAGNITUDE 8.6
 * ORIGIN TIME 100 AM CHST MAR 26 2015
 * COORDINATES 53.5 NORTH 162.0 EAST
 * DEPTH 19 MILES
 * LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

TSUNAMI OBSERVATIONS - UPDATED

* 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 TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (CHST)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
DART 21416	48.0N	163.5E	0154	2.6FT/ 0.8M	14
DART 21415	50.2N	171.8E	0216	1.3FT/ 0.4M	15
UST KAMCHATSK RU	56.0N	163.0E	0150	10.0FT/ 3.1M	20
NIKOL'SKOE RU	55.2N	166.0E	0159	9.5FT/ 2.9M	16
PETROPAVLOVSK RU	53.0N	158.6E	0333	5.2FT/ 1.6M	17
SHEMYA AK	52.7N	174.1E	0235	2.9FT/ 0.9M	17
ADAK AK	51.9N	176.6W	0245	1.6FT/ 0.5M	15
ATKA AK	52.2N	174.2W	0252	2.3FT/ 0.7M	18
KUSHIRO JP	43.0N	144.4E	0320	2.6FT/ 0.8M	20
HANASAKI JP	43.3N	145.6E	0345	1.6FT/ 0.5M	19
OFUNATO JP	39.0N	141.8E	0355	1.6FT/ 0.5M	18
NIKOLSKI AK	52.9N	168.9W	0528	3.7FT/ 1.1M	15
DUTCH HBR AK	51.1N	164.0W	0535	1.0FT/ 0.3M	17
OMAEZAKI JP	34.6N	138.2E	0459	1.3FT/ 0.4M	19
CHICHIJIMA JP	27.1N	142.2E	0455	1.2FT/ 0.3M	
MIDWAY US	28.2N	177.4W	0518	2.9FT/ 0.9M	14
WAKE US	19.3N	166.6E	0540	1.6FT/ 0.5M	14
KODIAK AK	57.7N	152.5W	0652	0.4FT/ 0.1M	18
TERN FR FRIGATE US	23.9N	166.3W	0625	3.0FT/ 0.9M	14
YAKUTAT AK	59.5N	139.7W	0730	0.4FT/ 0.1M	
PAGO BAY GU	13.4N	144.8E	0705	1.7FT/ 0.5M	17
SEWARD AK	60.1N	149.4W	0752	0.3FT/ 0.1M	20
HANALEI HI	22.2N	159.5W	0710	3.3FT/ 1.0M	16
NAWILIWILI HI	21.9N	159.4W	0730	2.7FT/ 0.8M	17
HALEIWA HI	21.6N	158.1W	0725	3.6FT/ 1.1M	15
HONOLULU HI	21.3N	157.9W	0735	1.3FT/ 0.4M	19
DEKEHTIK FM	7.0N	158.2E	0724	1.0FT/ 0.3M	13
HILO HI	19.7N	155.0W	0750	4.3FT/ 1.3M	18

NEXT UPDATE AND ADDITIONAL INFORMATION

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- * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND ON THE INTERNET AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.
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PTWC Message #10 for Guam and CNMI

ZCZC
WEGM40 PHEB 252201
TSUGUM

GUZ001>004-260001-
/T.CON.PHEB.TS.Y.0004.000000T0000Z-000000T0000Z/

BULLETIN
TSUNAMI MESSAGE NUMBER 9
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
801 AM CHST THU MAR 26 2015

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR GUAM AND CNMI...

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 100 AM CHST ON THURSDAY MARCH 26 2015.
- * BASED ON ALL AVAILABLE DATA... THERE IS A THREAT TO GUAM... ROTA... TINIAN AND SAIPAN OF SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS THAT COULD BE A HAZARD ALONG BEACHES... IN HARBORS... AND IN COASTAL WATERS.

RECOMMENDED ACTIONS

- * PERSONS IN THE OCEAN SHOULD GET OUT OF THE WATER. PERSONS NEAR THE OCEAN SHOULD MOVE AWAY FROM BEACHES AND HARBORS.
- * FOLLOW INSTRUCTIONS AS THEY ARE GIVEN BY GOVERNMENT AGENCIES.

POTENTIAL IMPACTS

- * SEA LEVEL FLUCTUATIONS THAT ARE GENERALLY NO MORE THAN 3 FEET ABOVE AND BELOW THE TIDE LEVEL.
- * MINOR FLOODING OF BEACH AND HARBOR AREAS.
- * STRONG AND UNUSUAL OCEAN CURRENTS IN HARBORS... BAYS... AND OTHER NEAR SHORE WATERS.
- * THE HAZARD BEGAN AROUND 619 AM CHST ON THURSDAY MARCH 26 AND IT CAN PERSIST FOR MANY HOURS OR LONGER.

PRELIMINARY EARTHQUAKE PARAMETERS

- * MAGNITUDE 8.6
- * ORIGIN TIME 100 AM CHST MAR 26 2015
- * COORDINATES 53.5 NORTH 162.0 EAST

PACIFEX 15 Handbook

* DEPTH 19 MILES
 * LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

TSUNAMI OBSERVATIONS - UPDATED

* 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 TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (CHST)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LOX			
DART 21416	48.0N	163.5E	0154	2.6FT/ 0.8M	14
DART 21415	50.2N	171.8E	0216	1.3FT/ 0.4M	15
UST KAMCHATSK RU	56.0N	163.0E	0150	10.0FT/ 3.1M	20
NIKOL'SKOE RU	55.2N	166.0E	0159	9.5FT/ 2.9M	16
PETROPAVLOVSK RU	53.0N	158.6E	0333	5.2FT/ 1.6M	17
SHEMYA AK	52.7N	174.1E	0235	2.9FT/ 0.9M	17
ADAK AK	51.9N	176.6W	0245	1.6FT/ 0.5M	15
ATKA AK	52.2N	174.2W	0252	2.3FT/ 0.7M	18
KUSHIRO JP	43.0N	144.4E	0320	2.6FT/ 0.8M	20
HANASAKI JP	43.3N	145.6E	0345	1.6FT/ 0.5M	19
OFUNATO JP	39.0N	141.8E	0355	1.6FT/ 0.5M	18
NIKOLSKI AK	52.9N	168.9W	0528	3.7FT/ 1.1M	15
DUTCH HBR AK	51.1N	164.0W	0535	1.0FT/ 0.3M	17
OMAEZAKI JP	34.6N	138.2E	0459	1.3FT/ 0.4M	19
CHICHIJIMA JP	27.1N	142.2E	0455	1.2FT/ 0.3M	
MIDWAY US	28.2N	177.4W	0518	2.9FT/ 0.9M	14
WAKE US	19.3N	166.6E	0540	1.6FT/ 0.5M	14
KODIAK AK	57.7N	152.5W	0652	0.4FT/ 0.1M	18
TERN FR FRIGATE US	23.9N	166.3W	0625	3.0FT/ 0.9M	14
YAKUTAT AK	59.5N	139.7W	0730	0.4FT/ 0.1M	
PAGO BAY GU	13.4N	144.8E	0705	1.7FT/ 0.5M	17
SEWARD AK	60.1N	149.4W	0752	0.3FT/ 0.1M	20
HANAIEI HI	22.2N	159.5W	0710	3.3FT/ 1.0M	16
NAWILIWILI HI	21.9N	159.4W	0730	2.7FT/ 0.8M	17
HALEIWA HI	21.6N	158.1W	0725	3.6FT/ 1.1M	15
HONOLULU HI	21.3N	157.9W	0735	1.3FT/ 0.4M	19
DEKEHTIK FM	7.0N	158.2E	0724	1.0FT/ 0.3M	13
HILO HI	19.7N	155.0W	0750	4.3FT/ 1.3M	18

NEXT UPDATE AND ADDITIONAL INFORMATION

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

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PTWC Message #11 for Guam and CNMI

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PACIFEX 15 Handbook

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/T.CON.PHEB.TS.Y.0004.000000T0000Z-000000T0000Z/

BULLETIN
TSUNAMI MESSAGE NUMBER 11
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1001 AM CHST THU MAR 26 2015

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR GUAM AND CNMI...

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 100 AM CHST ON THURSDAY MARCH 26 2015.
- * BASED ON ALL AVAILABLE DATA... THERE IS A THREAT TO GUAM... ROTA... TINIAN AND SAIPAN OF SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS THAT COULD BE A HAZARD ALONG BEACHES... IN HARBORS... AND IN COASTAL WATERS.

RECOMMENDED ACTIONS

- * PERSONS IN THE OCEAN SHOULD GET OUT OF THE WATER. PERSONS NEAR THE OCEAN SHOULD MOVE AWAY FROM BEACHES AND HARBORS.
- * FOLLOW INSTRUCTIONS AS THEY ARE GIVEN BY GOVERNMENT AGENCIES.

POTENTIAL IMPACTS

- * SEA LEVEL FLUCTUATIONS THAT ARE GENERALLY NO MORE THAN 3 FEET ABOVE AND BELOW THE TIDE LEVEL.
- * MINOR FLOODING OF BEACH AND HARBOR AREAS.
- * STRONG AND UNUSUAL OCEAN CURRENTS IN HARBORS... BAYS... AND OTHER NEAR SHORE WATERS.
- * THE HAZARD BEGAN AROUND 619 AM CHST ON THURSDAY MARCH 26 AND IT CAN PERSIST FOR MANY HOURS OR LONGER.

PRELIMINARY EARTHQUAKE PARAMETERS

- * MAGNITUDE 8.6
- * ORIGIN TIME 100 AM CHST MAR 26 2015
- * COORDINATES 53.5 NORTH 162.0 EAST
- * DEPTH 19 MILES
- * LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

PACIFEX 15 Handbook

TSUNAMI OBSERVATIONS - UPDATED

* 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 TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (CHST)	MAXIMUM TSUNAMI HEIGHT		WAVE PERIOD (MIN)
	LAT	Lon				
DART 21416	48.0N	163.5E	0154	2.6FT/	0.8M	14
DART 21415	50.2N	171.8E	0216	1.3FT/	0.4M	15
UST KAMCHATSK RU	56.0N	163.0E	0150	10.0FT/	3.1M	20
NIKOL'SKOE RU	55.2N	166.0E	0159	9.5FT/	2.9M	16
PETROPAVLOVSK RU	53.0N	158.6E	0333	5.2FT/	1.6M	17
SHEMYA AK	52.7N	174.1E	0235	2.9FT/	0.9M	17
ADAK AK	51.9N	176.6W	0245	1.6FT/	0.5M	15
ATKA AK	52.2N	174.2W	0252	2.3FT/	0.7M	18
KUSHIRO JP	43.0N	144.4E	0320	2.6FT/	0.8M	20
HANASAKI JP	43.3N	145.6E	0345	1.6FT/	0.5M	19
OFUNATO JP	39.0N	141.8E	0355	1.6FT/	0.5M	18
NIKOLSKI AK	52.9N	168.9W	0528	3.7FT/	1.1M	15
DUTCH HBR AK	51.1N	164.0W	0535	1.0FT/	0.3M	17
OMAEZAKI JP	34.6N	138.2E	0459	1.3FT/	0.4M	19
CHICHIJIMA JP	27.1N	142.2E	0455	1.2FT/	0.3M	
MIDWAY US	28.2N	177.4W	0518	2.9FT/	0.9M	14
WAKE US	19.3N	166.6E	0540	1.6FT/	0.5M	14
KODIAK AK	57.7N	152.5W	0652	0.4FT/	0.1M	18
TERN FR FRIGATE US	23.9N	166.3W	0625	3.0FT/	0.9M	14
YAKUTAT AK	59.5N	139.7W	0730	0.4FT/	0.1M	
PAGO BAY GU	13.4N	144.8E	0705	1.7FT/	0.5M	17
SEWARD AK	60.1N	149.4W	0752	0.3FT/	0.1M	20
HANAIEI HI	22.2N	159.5W	0710	3.3FT/	1.0M	16
NAWILIWILI HI	21.9N	159.4W	0730	2.7FT/	0.8M	17
HALEIWA HI	21.6N	158.1W	0725	3.6FT/	1.1M	15
HONOLULU HI	21.3N	157.9W	0735	1.3FT/	0.4M	19
DEKEHTIK FM	7.0N	158.2E	0724	1.0FT/	0.3M	13
HILO HI	19.7N	155.0W	0750	4.3FT/	1.3M	18
NAURU NR	0.5S	166.9E	0836	0.7FT/	0.2M	15
BETIO TARAWA KI	1.4N	172.9E	0848	0.7FT/	0.2M	16
MANUS PG	2.0S	147.4E	0920	1.0FT/	0.3M	
KANTON KI	2.8S	171.7W	0921	0.4FT/	0.1M	13
WESTPORT WA	46.9N	124.1W	0933	0.6FT/	0.2M	
FUNAFUTI TV	8.5S	179.2E	0955	0.3FT/	0.1M	
CRESCENT CITY CA	41.7N	124.2W	0956	2.3FT/	0.7M	

NEXT UPDATE AND ADDITIONAL INFORMATION

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PTWC Message #12 for Guam and CNMI

PACIFEX 15 Handbook

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GUZ001>004-260301-
/T.CAN.PHEB.TS.Y.0004.000000T0000Z-000000T0000Z/

BULLETIN
TSUNAMI MESSAGE NUMBER 12
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1101 AM CHST THU MAR 26 2015

...THE TSUNAMI ADVISORY IS NOW CANCELED FOR GUAM AND CNMI...

THIS MESSAGE CONTAINS REVISED ALERT LEVELS.

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 100 AM CHST ON THURSDAY MARCH 26 2015.
- * BASED ON ALL AVAILABLE DATA... THERE IS NO FURTHER TSUNAMI THREAT TO GUAM... ROTA... TINIAN OR SAIPAN FROM THIS EARTHQUAKE ALTHOUGH MINOR SEA LEVEL FLUCTUATIONS MAY CONTINUE.

RECOMMENDED ACTIONS

- * FOLLOW INSTRUCTIONS AS THEY ARE GIVEN BY GOVERNMENT AGENCIES.
- * BE OBSERVANT AND EXERCISE NORMAL CAUTION IF YOU ARE NEAR OR IN THE OCEAN.
- * OTHERWISE... NO FURTHER ACTION IS REQUIRED.

POTENTIAL IMPACTS

- * MINOR SEA LEVEL FLUCTUATIONS OF UP TO 1 FOOT ABOVE AND BELOW THE TIDE LEVEL MAY CONTINUE OVER THE NEXT FEW HOURS.

PRELIMINARY EARTHQUAKE PARAMETERS

- * MAGNITUDE 8.6
- * ORIGIN TIME 100 AM CHST MAR 26 2015
- * COORDINATES 53.5 NORTH 162.0 EAST
- * DEPTH 19 MILES
- * LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

TSUNAMI OBSERVATIONS - UPDATED

PACIFEX 15 Handbook

* 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 TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (CHST)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LOX			
DART 21416	48.0N	163.5E	0154	2.6FT/ 0.8M	14
DART 21415	50.2N	171.8E	0216	1.3FT/ 0.4M	15
UST KAMCHATSK RU	56.0N	163.0E	0150	10.0FT/ 3.1M	20
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CHICHIJIMA JP	27.1N	142.2E	0455	1.2FT/ 0.3M	
MIDWAY US	28.2N	177.4W	0518	2.9FT/ 0.9M	14
WAKE US	19.3N	166.6E	0540	1.6FT/ 0.5M	14
KODIAK AK	57.7N	152.5W	0652	0.4FT/ 0.1M	18
TERN FR FRIGATE US	23.9N	166.3W	0625	3.0FT/ 0.9M	14
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PAGO BAY GU	13.4N	144.8E	0705	1.7FT/ 0.5M	17
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HANAIEI HI	22.2N	159.5W	0710	3.3FT/ 1.0M	16
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HONOLULU HI	21.3N	157.9W	0735	1.3FT/ 0.4M	19
DEKEHTIK FM	7.0N	158.2E	0724	1.0FT/ 0.3M	13
HILO HI	19.7N	155.0W	0750	4.3FT/ 1.3M	18
NAURU NR	0.5S	166.9E	0836	0.7FT/ 0.2M	15
BETIO TARAWA KI	1.4N	172.9E	0848	0.7FT/ 0.2M	16
MANUS PG	2.0S	147.4E	0920	1.0FT/ 0.3M	
KANTON KI	2.8S	171.7W	0921	0.4FT/ 0.1M	13
WESTPORT WA	46.9N	124.1W	0933	0.6FT/ 0.2M	
FUNAFUTI TV	8.5S	179.2E	0955	0.3FT/ 0.1M	
CRESCENT CITY CA	41.7N	124.2W	0956	2.3FT/ 0.7M	
ENSENADA MX	31.8N	116.6W	1012	1.6FT/ 0.5M	14
LATA WHARF SB	10.7S	165.8E	1025	1.4FT/ 0.4M	12
LOS ANGELES CA	33.7N	118.3W	1054	0.6FT/ 0.2M	
APIA WS	13.8S	171.8W	1055	1.3FT/ 0.4M	14
PAGO PAGO AS	14.3S	170.7W	1052	1.0FT/ 0.3M	

NEXT UPDATE AND ADDITIONAL INFORMATION

- * THIS WILL BE THE FINAL STATEMENT ISSUED FOR THIS EVENT UNLESS NEW INFORMATION IS RECEIVED OR THE SITUATION CHANGES.
- * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND ON THE INTERNET AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.
- * AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL LOWERCASE LETTERS-.

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PTWC Message #1 for American Samoa

ZCZC
WEZS42 PHEB 251506
TIBPPG

TSUNAMI INFORMATION STATEMENT NUMBER 1
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
406 AM SST WED MAR 25 2015

...POSSIBLE TSUNAMI THREAT FROM A DISTANT EARTHQUAKE...

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.1 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 400 AM SST ON WEDNESDAY MARCH 25 2015.
- * THE TSUNAMI THREAT TO AMERICAN SAMOA FROM THIS EARTHQUAKE IS STILL UNDER INVESTIGATION.

RECOMMENDED ACTIONS

- * STAY ALERT FOR FURTHER INFORMATION. THERE IS THE POSSIBILITY THAT A TSUNAMI WATCH... ADVISORY... OR WARNING COULD BE ISSUED LATER FOR AMERICAN SAMOA.

POTENTIAL IMPACTS

- * POTENTIAL TSUNAMI IMPACTS ARE STILL BEING EVALUATED.
- * IF THERE IS A TSUNAMI THREAT TO AMERICAN SAMOA... THE EARLIEST IMPACTS WOULD BE AROUND 119 PM SST ON WEDNESDAY MARCH 25 2015.

PRELIMINARY EARTHQUAKE PARAMETERS

- * MAGNITUDE 8.1
- * ORIGIN TIME 400 AM SST MAR 25 2015
- * COORDINATES 53.5 NORTH 162.0 EAST
- * DEPTH 19 MILES
- * LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

NEXT UPDATE AND ADDITIONAL INFORMATION

- * THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
- * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND ON THE

PACIFEX 15 Handbook

INTERNET AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.

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

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PTWC Message #2 for American Samoa

ZCZC
WEZS42 PHEB 251531
TIBPPG

TSUNAMI INFORMATION STATEMENT NUMBER 2
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
431 AM SST WED MAR 25 2015

...POSSIBLE TSUNAMI THREAT FROM A DISTANT EARTHQUAKE...

THIS MESSAGE REVISES THE EARTHQUAKE MAGNITUDE UPWARD.

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 400 AM SST ON WEDNESDAY MARCH 25 2015.
- * THE TSUNAMI THREAT TO AMERICAN SAMOA FROM THIS EARTHQUAKE IS STILL UNDER INVESTIGATION.

RECOMMENDED ACTIONS

- * STAY ALERT FOR FURTHER INFORMATION. THERE IS THE POSSIBILITY THAT A TSUNAMI WATCH... ADVISORY... OR WARNING COULD BE ISSUED LATER FOR AMERICAN SAMOA.

POTENTIAL IMPACTS

- * POTENTIAL TSUNAMI IMPACTS ARE STILL BEING EVALUATED.
- * IF THERE IS A TSUNAMI THREAT TO AMERICAN SAMOA... THE EARLIEST IMPACTS WOULD BE AROUND 119 PM SST ON WEDNESDAY MARCH 25 2015.

PRELIMINARY EARTHQUAKE PARAMETERS

- * MAGNITUDE 8.6
- * ORIGIN TIME 400 AM SST MAR 25 2015
- * COORDINATES 53.5 NORTH 162.0 EAST
- * DEPTH 19 MILES
- * LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

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NEXT UPDATE AND ADDITIONAL INFORMATION

- * THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
- * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND ON THE INTERNET AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.
- * AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL LOWERCASE LETTERS-.

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PTWC Message #3 for American Samoa

ZCZC
WEZS40 PHEB 251604
TSUPPG

ASZ001>003-251804-
/T.NEW.PHEB.TS.Y.0008.150325T1604Z-000000T0000Z/

BULLETIN
TSUNAMI MESSAGE NUMBER 3
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
504 AM SST WED MAR 25 2015

...A TSUNAMI ADVISORY IS NOW IN EFFECT FOR AMERICAN SAMOA...

IN THIS MESSAGE ARE REVISED ALERTS.

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 400 AM SST ON WEDNESDAY MARCH 25 2015.
- * A TSUNAMI WAS GENERATED BY THIS EARTHQUAKE. BASED ON ALL AVAILABLE DATA... THERE IS A THREAT TO AMERICAN SAMOA OF SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS THAT COULD BE A HAZARD ALONG BEACHES... IN HARBORS... AND IN COASTAL WATERS.
- * THE EARLIEST ESTIMATED TIME THAT HAZARDOUS SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS MAY BEGIN IN AMERICAN SAMOA IS

119 PM SST ON WEDNESDAY MARCH 25 2015

RECOMMENDED ACTIONS

- * PERSONS IN THE OCEAN SHOULD GET OUT OF THE WATER. PERSONS NEAR

PACIFEX 15 Handbook

THE OCEAN SHOULD MOVE AWAY FROM BEACHES AND HARBORS.

* FOLLOW ANY INSTRUCTIONS FROM GOVERNMENT AGENCIES.

ESTIMATED TIMES OF ARRIVAL

* ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE 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 (SST)
SWAINS ISLAND	SWAINS	11.1S 171.1W	119 PM 03/25
PAGO PAGO	TUTUILA	14.3S 170.7W	143 PM 03/25
VATIA	TUTUILA	14.2S 170.7W	143 PM 03/25
MASEFAU	TUTUILA	14.3S 170.6W	143 PM 03/25
PAGAI	TUTUILA	14.3S 170.6W	143 PM 03/25
AUMI	TUTUILA	14.3S 170.7W	143 PM 03/25
AMANAVE	TUTUILA	14.3S 170.8W	145 PM 03/25
TAFUNA	TUTUILA	14.3S 170.7W	145 PM 03/25
LEONE	TUTUILA	14.3S 170.8W	145 PM 03/25
FAGAMALO	TUTUILA	14.3S 170.8W	145 PM 03/25
FAGASA	TUTUILA	14.3S 170.7W	145 PM 03/25
OLESEGA ISLAND	MANUA	14.2S 169.6W	148 PM 03/25
OFU ISLAND	MANUA	14.2S 169.7W	148 PM 03/25
TULA	TUTUILA	14.3S 170.6W	148 PM 03/25
AUNUU ISLAND	AUNUU	14.3S 170.6W	148 PM 03/25
TAU ISLAND	MANUA	14.3S 169.5W	151 PM 03/25

POTENTIAL IMPACTS

- * SEA LEVEL FLUCTUATIONS THAT ARE GENERALLY NO MORE THAN 3 FEET ABOVE AND BELOW THE TIDE LEVEL.
- * MINOR FLOODING OF BEACH AND HARBOR AREAS.
- * STRONG AND UNUSUAL OCEAN CURRENTS IN HARBORS... BAYS... AND OTHER NEAR SHORE WATERS.
- * THE HAZARD IS FORECAST TO BEGIN AROUND 119 PM SST ON WEDNESDAY MARCH 25 AND IT CAN PERSIST FOR MANY HOURS OR LONGER.

PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE 8.6
* ORIGIN TIME 400 AM SST MAR 25 2015
* COORDINATES 53.5 NORTH 162.0 EAST
* DEPTH 19 MILES
* LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

TSUNAMI OBSERVATIONS

* 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 TIDE LEVEL.

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GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD
	LAT	LOX	(SST)		(MIN)
DART 21416	48.0N	163.5E	0454	2.6FT/ 0.8M	14
UST KAMCHATSK RU	56.0N	163.0E	0450	10.0FT/ 3.1M	20
PETROPAVLOVSK RU	53.0N	158.6E	0451	3.5FT/ 1.1M	20

NEXT UPDATE AND ADDITIONAL INFORMATION

- * THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
- * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND ON THE INTERNET AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.
- * AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL LOWERCASE LETTERS-.

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PTWC Message #4 for American Samoa

ZCZC

WEZS40 PHEB 251705

TSUPPG

ASZ001>003-251905-

/T.NEW.PHEB.TS.Y.0008.150325T1705Z-000000T0000Z/

BULLETIN

TSUNAMI MESSAGE NUMBER 4

NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI

605 AM SST WED MAR 25 2015

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR AMERICAN SAMOA...

IN THIS MESSAGE ARE REVISED ALERTS.

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 400 AM SST ON WEDNESDAY MARCH 25 2015.
- * A TSUNAMI WAS GENERATED BY THIS EARTHQUAKE. BASED ON ALL AVAILABLE DATA... THERE IS A THREAT TO AMERICAN SAMOA OF SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS THAT COULD BE A HAZARD ALONG BEACHES... IN HARBORS... AND IN COASTAL WATERS.
- * THE EARLIEST ESTIMATED TIME THAT HAZARDOUS SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS MAY BEGIN IN AMERICAN SAMOA IS

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119 PM SST ON WEDNESDAY MARCH 25 2015

RECOMMENDED ACTIONS

- * PERSONS IN THE OCEAN SHOULD GET OUT OF THE WATER. PERSONS NEAR THE OCEAN SHOULD MOVE AWAY FROM BEACHES AND HARBORS.
- * FOLLOW ANY INSTRUCTIONS FROM GOVERNMENT AGENCIES.

ESTIMATED TIMES OF ARRIVAL

- * ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE 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 (SST)
SWAINS ISLAND	SWAINS	11.1S 171.1W	119 PM 03/25
PAGO PAGO	TUTUILA	14.3S 170.7W	143 PM 03/25
VATIA	TUTUILA	14.2S 170.7W	143 PM 03/25
MASEFAU	TUTUILA	14.3S 170.6W	143 PM 03/25
PAGAI	TUTUILA	14.3S 170.6W	143 PM 03/25
AUMI	TUTUILA	14.3S 170.7W	143 PM 03/25
AMANAVE	TUTUILA	14.3S 170.8W	145 PM 03/25
TAFUNA	TUTUILA	14.3S 170.7W	145 PM 03/25
LEONE	TUTUILA	14.3S 170.8W	145 PM 03/25
FAGAMALO	TUTUILA	14.3S 170.8W	145 PM 03/25
FAGASA	TUTUILA	14.3S 170.7W	145 PM 03/25
OLESEGA ISLAND	MANUA	14.2S 169.6W	148 PM 03/25
OFU ISLAND	MANUA	14.2S 169.7W	148 PM 03/25
TULA	TUTUILA	14.3S 170.6W	148 PM 03/25
AUNUU ISLAND	AUNUU	14.3S 170.6W	148 PM 03/25
TAU ISLAND	MANUA	14.3S 169.5W	151 PM 03/25

POTENTIAL IMPACTS

- * SEA LEVEL FLUCTUATIONS THAT ARE GENERALLY NO MORE THAN 3 FEET ABOVE AND BELOW THE TIDE LEVEL.
- * MINOR FLOODING OF BEACH AND HARBOR AREAS.
- * STRONG AND UNUSUAL OCEAN CURRENTS IN HARBORS... BAYS... AND OTHER NEAR SHORE WATERS.
- * THE HAZARD IS FORECAST TO BEGIN AROUND 119 PM SST ON WEDNESDAY MARCH 25 AND IT CAN PERSIST FOR MANY HOURS OR LONGER.

PRELIMINARY EARTHQUAKE PARAMETERS

- * MAGNITUDE 8.6
- * ORIGIN TIME 400 AM SST MAR 25 2015
- * COORDINATES 53.5 NORTH 162.0 EAST
- * DEPTH 19 MILES
- * LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

PACIFEX 15 Handbook

TSUNAMI OBSERVATIONS - UPDATED

-
- * 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 TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (SST)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
DART 21416	48.0N	163.5E	0454	2.6FT/ 0.8M	14
DART 21415	50.2N	171.8E	0516	1.3FT/ 0.4M	15
UST KAMCHATSK RU	56.0N	163.0E	0450	10.0FT/ 3.1M	20
NIKOL'SKOE RU	55.2N	166.0E	0459	9.5FT/ 2.9M	16
PETROPAVLOVSK RU	53.0N	158.6E	0451	3.5FT/ 1.1M	20
SHEMYA AK	52.7N	174.1E	0535	2.9FT/ 0.9M	17
ADAK AK	51.9N	176.6W	0545	1.6FT/ 0.5M	15
ATKA AK	52.2N	174.2W	0552	2.3FT/ 0.7M	18

NEXT UPDATE AND ADDITIONAL INFORMATION

-
- * THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
 - * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND ON THE INTERNET AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.
 - * AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL LOWERCASE LETTERS-.

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PTWC Message #5 for American Samoa

ZCZC
WEZS40 PHEB 251805
TSUPPG
ASZ001>003-252005-
/T.CON.PHEB.TS.Y.0008.000000T0000Z-000000T0000Z/

BULLETIN
TSUNAMI MESSAGE NUMBER 5
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
705 AM SST WED MAR 25 2015

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR AMERICAN SAMOA...

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

EVALUATION

-
- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 400 AM SST ON WEDNESDAY

PACIFEX 15 Handbook

MARCH 25 2015.

- * A TSUNAMI WAS GENERATED BY THIS EARTHQUAKE. BASED ON ALL AVAILABLE DATA... THERE IS A THREAT TO AMERICAN SAMOA OF SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS THAT COULD BE A HAZARD ALONG BEACHES... IN HARBORS... AND IN COASTAL WATERS.
- * THE EARLIEST ESTIMATED TIME THAT HAZARDOUS SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS MAY BEGIN IN AMERICAN SAMOA IS

119 PM SST ON WEDNESDAY MARCH 25 2015

RECOMMENDED ACTIONS

- * PERSONS IN THE OCEAN SHOULD GET OUT OF THE WATER. PERSONS NEAR THE OCEAN SHOULD MOVE AWAY FROM BEACHES AND HARBORS.
- * FOLLOW ANY INSTRUCTIONS FROM GOVERNMENT AGENCIES.

ESTIMATED TIMES OF ARRIVAL

- * ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE 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 (SST)
SWAINS ISLAND	SWAINS	11.1S 171.1W	119 PM 03/25
PAGO PAGO	TUTUILA	14.3S 170.7W	143 PM 03/25
VATIA	TUTUILA	14.2S 170.7W	143 PM 03/25
MASEFAU	TUTUILA	14.3S 170.6W	143 PM 03/25
PAGAI	TUTUILA	14.3S 170.6W	143 PM 03/25
AUMI	TUTUILA	14.3S 170.7W	143 PM 03/25
AMANAVE	TUTUILA	14.3S 170.8W	145 PM 03/25
TAFUNA	TUTUILA	14.3S 170.7W	145 PM 03/25
LEONE	TUTUILA	14.3S 170.8W	145 PM 03/25
FAGAMALO	TUTUILA	14.3S 170.8W	145 PM 03/25
FAGASA	TUTUILA	14.3S 170.7W	145 PM 03/25
OLESEGA ISLAND	MANUA	14.2S 169.6W	148 PM 03/25
OFU ISLAND	MANUA	14.2S 169.7W	148 PM 03/25
TULA	TUTUILA	14.3S 170.6W	148 PM 03/25
AUNUU ISLAND	AUNUU	14.3S 170.6W	148 PM 03/25
TAU ISLAND	MANUA	14.3S 169.5W	151 PM 03/25

POTENTIAL IMPACTS

- * SEA LEVEL FLUCTUATIONS THAT ARE GENERALLY NO MORE THAN 3 FEET ABOVE AND BELOW THE TIDE LEVEL.
- * MINOR FLOODING OF BEACH AND HARBOR AREAS.
- * STRONG AND UNUSUAL OCEAN CURRENTS IN HARBORS... BAYS... AND OTHER NEAR SHORE WATERS.
- * THE HAZARD IS FORECAST TO BEGIN AROUND 119 PM SST ON WEDNESDAY MARCH 25 AND IT CAN PERSIST FOR MANY HOURS OR LONGER.

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PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE 8.6
* ORIGIN TIME 400 AM SST MAR 25 2015
* COORDINATES 53.5 NORTH 162.0 EAST
* DEPTH 19 MILES
* LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

TSUNAMI OBSERVATIONS - UPDATED

* 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 TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (SST)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	Lon			
DART 21416	48.0N	163.5E	0454	2.6FT/ 0.8M	14
DART 21415	50.2N	171.8E	0516	1.3FT/ 0.4M	15
UST KAMCHATSK RU	56.0N	163.0E	0450	10.0FT/ 3.1M	20
NIKOL'SKOE RU	55.2N	166.0E	0459	9.5FT/ 2.9M	16
PETROPAVLOVSK RU	53.0N	158.6E	0633	5.2FT/ 1.6M	17
SHEMYA AK	52.7N	174.1E	0535	2.9FT/ 0.9M	17
ADAK AK	51.9N	176.6W	0545	1.6FT/ 0.5M	15
ATKA AK	52.2N	174.2W	0552	2.3FT/ 0.7M	18
KUSHIRO JP	43.0N	144.4E	0620	2.6FT/ 0.8M	20
HANASAKI JP	43.3N	145.6E	0645	1.6FT/ 0.5M	19
OFUNATO JP	39.0N	141.8E	0655	1.6FT/ 0.5M	18
NIKOLSKI AK	52.9N	168.9W	0658	2.5FT/ 0.8M	15

NEXT UPDATE AND ADDITIONAL INFORMATION

-
- * THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
 - * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND ON THE INTERNET AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.
 - * AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL LOWERCASE LETTERS-.

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PTWC Message #6 for American Samoa

ZCZC
WEZS40 PHEB 251901
TSUPPG

ASZ001>003-252101-
/T.CON.PHEB.TS.Y.0008.000000T0000Z-000000T0000Z/

BULLETIN
TSUNAMI MESSAGE NUMBER 6
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI

PACIFEX 15 Handbook

801 AM SST WED MAR 25 2015

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR AMERICAN SAMOA...

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 400 AM SST ON WEDNESDAY MARCH 25 2015.
- * A TSUNAMI WAS GENERATED BY THIS EARTHQUAKE. BASED ON ALL AVAILABLE DATA... THERE IS A THREAT TO AMERICAN SAMOA OF SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS THAT COULD BE A HAZARD ALONG BEACHES... IN HARBORS... AND IN COASTAL WATERS.
- * THE EARLIEST ESTIMATED TIME THAT HAZARDOUS SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS MAY BEGIN IN AMERICAN SAMOA IS

119 PM SST ON WEDNESDAY MARCH 25 2015

RECOMMENDED ACTIONS

- * PERSONS IN THE OCEAN SHOULD GET OUT OF THE WATER. PERSONS NEAR THE OCEAN SHOULD MOVE AWAY FROM BEACHES AND HARBORS.
- * FOLLOW ANY INSTRUCTIONS FROM GOVERNMENT AGENCIES.

ESTIMATED TIMES OF ARRIVAL

- * ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE 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 (SST)
SWAINS ISLAND	SWAINS	11.1S 171.1W	119 PM 03/25
PAGO PAGO	TUTUILA	14.3S 170.7W	143 PM 03/25
VATIA	TUTUILA	14.2S 170.7W	143 PM 03/25
MASEFAU	TUTUILA	14.3S 170.6W	143 PM 03/25
PAGAI	TUTUILA	14.3S 170.6W	143 PM 03/25
AUMI	TUTUILA	14.3S 170.7W	143 PM 03/25
AMANAVE	TUTUILA	14.3S 170.8W	145 PM 03/25
TAFUNA	TUTUILA	14.3S 170.7W	145 PM 03/25
LEONE	TUTUILA	14.3S 170.8W	145 PM 03/25
FAGAMALO	TUTUILA	14.3S 170.8W	145 PM 03/25
FAGASA	TUTUILA	14.3S 170.7W	145 PM 03/25
OLESEGA ISLAND	MANUA	14.2S 169.6W	148 PM 03/25
OFU ISLAND	MANUA	14.2S 169.7W	148 PM 03/25
TULA	TUTUILA	14.3S 170.6W	148 PM 03/25
AUNUU ISLAND	AUNUU	14.3S 170.6W	148 PM 03/25
TAU ISLAND	MANUA	14.3S 169.5W	151 PM 03/25

PACIFEX 15 Handbook

POTENTIAL IMPACTS

- * SEA LEVEL FLUCTUATIONS THAT ARE GENERALLY NO MORE THAN 3 FEET ABOVE AND BELOW THE TIDE LEVEL.
- * MINOR FLOODING OF BEACH AND HARBOR AREAS.
- * STRONG AND UNUSUAL OCEAN CURRENTS IN HARBORS... BAYS... AND OTHER NEAR SHORE WATERS.
- * THE HAZARD IS FORECAST TO BEGIN AROUND 119 PM SST ON WEDNESDAY MARCH 25 AND IT CAN PERSIST FOR MANY HOURS OR LONGER.

PRELIMINARY EARTHQUAKE PARAMETERS

- * MAGNITUDE 8.6
- * ORIGIN TIME 400 AM SST MAR 25 2015
- * COORDINATES 53.5 NORTH 162.0 EAST
- * DEPTH 19 MILES
- * LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

TSUNAMI OBSERVATIONS - UPDATED

- * 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 TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (SST)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
DART 21416	48.0N	163.5E	0454	2.6FT/ 0.8M	14
DART 21415	50.2N	171.8E	0516	1.3FT/ 0.4M	15
UST KAMCHATSK RU	56.0N	163.0E	0450	10.0FT/ 3.1M	20
NIKOL'SKOE RU	55.2N	166.0E	0459	9.5FT/ 2.9M	16
PETROPAVLOVSK RU	53.0N	158.6E	0633	5.2FT/ 1.6M	17
SHEMYA AK	52.7N	174.1E	0535	2.9FT/ 0.9M	17
ADAK AK	51.9N	176.6W	0545	1.6FT/ 0.5M	15
ATKA AK	52.2N	174.2W	0552	2.3FT/ 0.7M	18
KUSHIRO JP	43.0N	144.4E	0620	2.6FT/ 0.8M	20
HANASAKI JP	43.3N	145.6E	0645	1.6FT/ 0.5M	19
OFUNATO JP	39.0N	141.8E	0655	1.6FT/ 0.5M	18
NIKOLSKI AK	52.9N	168.9W	0658	2.5FT/ 0.8M	15
DUTCH HBR AK	51.1N	164.0W	0755	0.4FT/ 0.1M	17

NEXT UPDATE AND ADDITIONAL INFORMATION

- * THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
- * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND ON THE INTERNET AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.
- * AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL LOWERCASE LETTERS-.

PACIFEX 15 Handbook

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PTWC Message #7 for American Samoa

ZCZC
WEZS40 PHEB 252001
TSUPPG

ASZ001>003-252201-
/T.CON.PHEB.TS.Y.0008.000000T0000Z-000000T0000Z/

BULLETIN
TSUNAMI MESSAGE NUMBER 7
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
901 AM SST WED MAR 25 2015

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR AMERICAN SAMOA...

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

EVALUATION

* AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 400 AM SST ON WEDNESDAY MARCH 25 2015.
* A TSUNAMI WAS GENERATED BY THIS EARTHQUAKE. BASED ON ALL AVAILABLE DATA... THERE IS A THREAT TO AMERICAN SAMOA OF SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS THAT COULD BE A HAZARD ALONG BEACHES... IN HARBORS... AND IN COASTAL WATERS.
* THE EARLIEST ESTIMATED TIME THAT HAZARDOUS SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS MAY BEGIN IN AMERICAN SAMOA IS
119 PM SST ON WEDNESDAY MARCH 25 2015

RECOMMENDED ACTIONS

* PERSONS IN THE OCEAN SHOULD GET OUT OF THE WATER. PERSONS NEAR THE OCEAN SHOULD MOVE AWAY FROM BEACHES AND HARBORS.
* FOLLOW ANY INSTRUCTIONS FROM GOVERNMENT AGENCIES.

ESTIMATED TIMES OF ARRIVAL

* ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE 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 (SST)
SWAINS ISLAND	SWAINS	11.1S 171.1W	119 PM 03/25

PACIFEX 15 Handbook

PAGO PAGO	TUTUILA	14.3S	170.7W	143	PM	03/25
VATIA	TUTUILA	14.2S	170.7W	143	PM	03/25
MASEFAU	TUTUILA	14.3S	170.6W	143	PM	03/25
PAGAI	TUTUILA	14.3S	170.6W	143	PM	03/25
AUMI	TUTUILA	14.3S	170.7W	143	PM	03/25
AMANAVE	TUTUILA	14.3S	170.8W	145	PM	03/25
TAFUNA	TUTUILA	14.3S	170.7W	145	PM	03/25
LEONE	TUTUILA	14.3S	170.8W	145	PM	03/25
FAGAMALO	TUTUILA	14.3S	170.8W	145	PM	03/25
FAGASA	TUTUILA	14.3S	170.7W	145	PM	03/25
OLESEGA ISLAND	MANUA	14.2S	169.6W	148	PM	03/25
OFU ISLAND	MANUA	14.2S	169.7W	148	PM	03/25
TULA	TUTUILA	14.3S	170.6W	148	PM	03/25
AUNUU ISLAND	AUNUU	14.3S	170.6W	148	PM	03/25
TAU ISLAND	MANUA	14.3S	169.5W	151	PM	03/25

POTENTIAL IMPACTS

- * SEA LEVEL FLUCTUATIONS THAT ARE GENERALLY NO MORE THAN 3 FEET ABOVE AND BELOW THE TIDE LEVEL.
- * MINOR FLOODING OF BEACH AND HARBOR AREAS.
- * STRONG AND UNUSUAL OCEAN CURRENTS IN HARBORS... BAYS... AND OTHER NEAR SHORE WATERS.
- * THE HAZARD IS FORECAST TO BEGIN AROUND 119 PM SST ON WEDNESDAY MARCH 25 AND IT CAN PERSIST FOR MANY HOURS OR LONGER.

PRELIMINARY EARTHQUAKE PARAMETERS

- * MAGNITUDE 8.6
- * ORIGIN TIME 400 AM SST MAR 25 2015
- * COORDINATES 53.5 NORTH 162.0 EAST
- * DEPTH 19 MILES
- * LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

TSUNAMI OBSERVATIONS - UPDATED

- * 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 TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (SST)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LOE			
DART 21416	48.0N	163.5E	0454	2.6FT/ 0.8M	14
DART 21415	50.2N	171.8E	0516	1.3FT/ 0.4M	15
UST KAMCHATSK RU	56.0N	163.0E	0450	10.0FT/ 3.1M	20
NIKOL'SKOE RU	55.2N	166.0E	0459	9.5FT/ 2.9M	16
PETROPAVLOVSK RU	53.0N	158.6E	0633	5.2FT/ 1.6M	17
SHEMYA AK	52.7N	174.1E	0535	2.9FT/ 0.9M	17
ADAK AK	51.9N	176.6W	0545	1.6FT/ 0.5M	15
ATKA AK	52.2N	174.2W	0552	2.3FT/ 0.7M	18
KUSHIRO JP	43.0N	144.4E	0620	2.6FT/ 0.8M	20
HANASAKI JP	43.3N	145.6E	0645	1.6FT/ 0.5M	19
OFUNATO JP	39.0N	141.8E	0655	1.6FT/ 0.5M	18
NIKOLSKI AK	52.9N	168.9W	0828	3.7FT/ 1.1M	15

PACIFEX 15 Handbook

DUTCH HBR AK	51.1N 164.0W	0835	1.0FT/ 0.3M	17
OMAEZAKI JP	34.6N 138.2E	0759	1.3FT/ 0.4M	19
CHICHIJIMA JP	27.1N 142.2E	0755	1.2FT/ 0.3M	
MIDWAY US	28.2N 177.4W	0818	2.9FT/ 0.9M	14
WAKE US	19.3N 166.6E	0840	1.6FT/ 0.5M	14

NEXT UPDATE AND ADDITIONAL INFORMATION

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PTWC Message #8 for American Samoa

ZCZC

WEZS40 PHEB 252101

TSUPPG

ASZ001>003-252301-

/T.CON.PHEB.TS.Y.0008.000000T0000Z-000000T0000Z/

BULLETIN

TSUNAMI MESSAGE NUMBER 8

NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI

1001 AM SST WED MAR 25 2015

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR AMERICAN SAMOA...

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 400 AM SST ON WEDNESDAY MARCH 25 2015.
- * A TSUNAMI WAS GENERATED BY THIS EARTHQUAKE. BASED ON ALL AVAILABLE DATA... THERE IS A THREAT TO AMERICAN SAMOA OF SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS THAT COULD BE A HAZARD ALONG BEACHES... IN HARBORS... AND IN COASTAL WATERS.
- * THE EARLIEST ESTIMATED TIME THAT HAZARDOUS SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS MAY BEGIN IN AMERICAN SAMOA IS

119 PM SST ON WEDNESDAY MARCH 25 2015

RECOMMENDED ACTIONS

PACIFEX 15 Handbook

* PERSONS IN THE OCEAN SHOULD GET OUT OF THE WATER. PERSONS NEAR THE OCEAN SHOULD MOVE AWAY FROM BEACHES AND HARBORS.

* FOLLOW ANY INSTRUCTIONS FROM GOVERNMENT AGENCIES.

ESTIMATED TIMES OF ARRIVAL

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LOCATION	REGION	COORDINATES	ETA (SST)
SWAINS ISLAND	SWAINS	11.1S 171.1W	119 PM 03/25
PAGO PAGO	TUTUILA	14.3S 170.7W	143 PM 03/25
VATIA	TUTUILA	14.2S 170.7W	143 PM 03/25
MASEFAU	TUTUILA	14.3S 170.6W	143 PM 03/25
PAGAI	TUTUILA	14.3S 170.6W	143 PM 03/25
AUMI	TUTUILA	14.3S 170.7W	143 PM 03/25
AMANAVE	TUTUILA	14.3S 170.8W	145 PM 03/25
TAFUNA	TUTUILA	14.3S 170.7W	145 PM 03/25
LEONE	TUTUILA	14.3S 170.8W	145 PM 03/25
FAGAMALO	TUTUILA	14.3S 170.8W	145 PM 03/25
FAGASA	TUTUILA	14.3S 170.7W	145 PM 03/25
OLESEGA ISLAND	MANUA	14.2S 169.6W	148 PM 03/25
OFU ISLAND	MANUA	14.2S 169.7W	148 PM 03/25
TULA	TUTUILA	14.3S 170.6W	148 PM 03/25
AUNUU ISLAND	AUNUU	14.3S 170.6W	148 PM 03/25
TAU ISLAND	MANUA	14.3S 169.5W	151 PM 03/25

POTENTIAL IMPACTS

* SEA LEVEL FLUCTUATIONS THAT ARE GENERALLY NO MORE THAN 3 FEET ABOVE AND BELOW THE TIDE LEVEL.

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* STRONG AND UNUSUAL OCEAN CURRENTS IN HARBORS... BAYS... AND OTHER NEAR SHORE WATERS.

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PRELIMINARY EARTHQUAKE PARAMETERS

* MAGNITUDE 8.6
* ORIGIN TIME 400 AM SST MAR 25 2015
* COORDINATES 53.5 NORTH 162.0 EAST
* DEPTH 19 MILES
* LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

TSUNAMI OBSERVATIONS - UPDATED

* THE FOLLOWING ARE TSUNAMI WAVE OBSERVATIONS FROM COASTAL AND/OR DEEP-OCEAN SEA LEVEL GAUGES AT THE INDICATED LOCATIONS.

PACIFEX 15 Handbook

THE MAXIMUM TSUNAMI HEIGHT IS MEASURED WITH RESPECT TO THE TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (SST)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LON			
DART 21416	48.0N	163.5E	0454	2.6FT/ 0.8M	14
DART 21415	50.2N	171.8E	0516	1.3FT/ 0.4M	15
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NIKOL'SKOE RU	55.2N	166.0E	0459	9.5FT/ 2.9M	16
PETROPAVLOVSK RU	53.0N	158.6E	0633	5.2FT/ 1.6M	17
SHEMYA AK	52.7N	174.1E	0535	2.9FT/ 0.9M	17
ADAK AK	51.9N	176.6W	0545	1.6FT/ 0.5M	15
ATKA AK	52.2N	174.2W	0552	2.3FT/ 0.7M	18
KUSHIRO JP	43.0N	144.4E	0620	2.6FT/ 0.8M	20
HANASAKI JP	43.3N	145.6E	0645	1.6FT/ 0.5M	19
OFUNATO JP	39.0N	141.8E	0655	1.6FT/ 0.5M	18
NIKOLSKI AK	52.9N	168.9W	0828	3.7FT/ 1.1M	15
DUTCH HBR AK	51.1N	164.0W	0835	1.0FT/ 0.3M	17
OMAEZAKI JP	34.6N	138.2E	0759	1.3FT/ 0.4M	19
CHICHIJIMA JP	27.1N	142.2E	0755	1.2FT/ 0.3M	
MIDWAY US	28.2N	177.4W	0818	2.9FT/ 0.9M	14
WAKE US	19.3N	166.6E	0840	1.6FT/ 0.5M	14
KODIAK AK	57.7N	152.5W	0952	0.4FT/ 0.1M	18
TERN FR FRIGATE US	23.9N	166.3W	0925	3.0FT/ 0.9M	14

NEXT UPDATE AND ADDITIONAL INFORMATION

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PTWC Message #9 for American Samoa

ZCZC

WEZS40 PHEB 252201

TSUPPG

ASZ001>003-260001-

/T.CON.PHEB.TS.Y.0008.000000T0000Z-000000T0000Z/

BULLETIN

TSUNAMI MESSAGE NUMBER 9

NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI

1101 AM SST WED MAR 25 2015

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR AMERICAN SAMOA...

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

PACIFEX 15 Handbook

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 400 AM SST ON WEDNESDAY MARCH 25 2015.
- * A TSUNAMI WAS GENERATED BY THIS EARTHQUAKE. BASED ON ALL AVAILABLE DATA... THERE IS A THREAT TO AMERICAN SAMOA OF SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS THAT COULD BE A HAZARD ALONG BEACHES... IN HARBORS... AND IN COASTAL WATERS.
- * THE EARLIEST ESTIMATED TIME THAT HAZARDOUS SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS MAY BEGIN IN AMERICAN SAMOA IS

119 PM SST ON WEDNESDAY MARCH 25 2015

RECOMMENDED ACTIONS

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- * FOLLOW ANY INSTRUCTIONS FROM GOVERNMENT AGENCIES.

ESTIMATED TIMES OF ARRIVAL

- * ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE 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.

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AUMI	TUTUILA	14.3S 170.7W	143 PM 03/25
AMANAVE	TUTUILA	14.3S 170.8W	145 PM 03/25
TAFUNA	TUTUILA	14.3S 170.7W	145 PM 03/25
LEONE	TUTUILA	14.3S 170.8W	145 PM 03/25
FAGAMALO	TUTUILA	14.3S 170.8W	145 PM 03/25
FAGASA	TUTUILA	14.3S 170.7W	145 PM 03/25
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OFU ISLAND	MANUA	14.2S 169.7W	148 PM 03/25
TULA	TUTUILA	14.3S 170.6W	148 PM 03/25
AUNUU ISLAND	AUNUU	14.3S 170.6W	148 PM 03/25
TAU ISLAND	MANUA	14.3S 169.5W	151 PM 03/25

POTENTIAL IMPACTS

- * SEA LEVEL FLUCTUATIONS THAT ARE GENERALLY NO MORE THAN 3 FEET ABOVE AND BELOW THE TIDE LEVEL.
- * MINOR FLOODING OF BEACH AND HARBOR AREAS.

PACIFEX 15 Handbook

- * STRONG AND UNUSUAL OCEAN CURRENTS IN HARBORS... BAYS... AND OTHER NEAR SHORE WATERS.
- * THE HAZARD IS FORECAST TO BEGIN AROUND 119 PM SST ON WEDNESDAY MARCH 25 AND IT CAN PERSIST FOR MANY HOURS OR LONGER.

PRELIMINARY EARTHQUAKE PARAMETERS

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* MAGNITUDE          8.6
* ORIGIN TIME        400 AM SST MAR 25 2015
* COORDINATES        53.5 NORTH 162.0 EAST
* DEPTH              19 MILES
* LOCATION           OFF THE EAST COAST OF KAMCHATKA  RUSSIA
  
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TSUNAMI OBSERVATIONS - UPDATED

- * 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 TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (SST)	MAXIMUM TSUNAMI HEIGHT		WAVE PERIOD (MIN)
	LAT	LOE		FT	M	
DART 21416	48.0N	163.5E	0454	2.6FT/	0.8M	14
DART 21415	50.2N	171.8E	0516	1.3FT/	0.4M	15
UST KAMCHATSK RU	56.0N	163.0E	0450	10.0FT/	3.1M	20
NIKOL'SKOE RU	55.2N	166.0E	0459	9.5FT/	2.9M	16
PETROPAVLOVSK RU	53.0N	158.6E	0633	5.2FT/	1.6M	17
SHEMYA AK	52.7N	174.1E	0535	2.9FT/	0.9M	17
ADAK AK	51.9N	176.6W	0545	1.6FT/	0.5M	15
ATKA AK	52.2N	174.2W	0552	2.3FT/	0.7M	18
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HANASAKI JP	43.3N	145.6E	0645	1.6FT/	0.5M	19
OFUNATO JP	39.0N	141.8E	0655	1.6FT/	0.5M	18
NIKOLSKI AK	52.9N	168.9W	0828	3.7FT/	1.1M	15
DUTCH HBR AK	51.1N	164.0W	0835	1.0FT/	0.3M	17
OMAEZAKI JP	34.6N	138.2E	0759	1.3FT/	0.4M	19
CHICHIJIMA JP	27.1N	142.2E	0755	1.2FT/	0.3M	
MIDWAY US	28.2N	177.4W	0818	2.9FT/	0.9M	14
WAKE US	19.3N	166.6E	0840	1.6FT/	0.5M	14
KODIAK AK	57.7N	152.5W	0952	0.4FT/	0.1M	18
TERN FR FRIGATE US	23.9N	166.3W	0925	3.0FT/	0.9M	14
YAKUTAT AK	59.5N	139.7W	1030	0.4FT/	0.1M	
PAGO BAY GU	13.4N	144.8E	1005	1.7FT/	0.5M	17
SEWARD AK	60.1N	149.4W	1052	0.3FT/	0.1M	20
HANAIEI HI	22.2N	159.5W	1010	3.3FT/	1.0M	16
NAWILIWILI HI	21.9N	159.4W	1030	2.7FT/	0.8M	17
HALEIWA HI	21.6N	158.1W	1025	3.6FT/	1.1M	15
HONOLULU HI	21.3N	157.9W	1035	1.3FT/	0.4M	19
DEKEHTIK FM	7.0N	158.2E	1024	1.0FT/	0.3M	13
HILO HI	19.7N	155.0W	1050	4.3FT/	1.3M	18

NEXT UPDATE AND ADDITIONAL INFORMATION

- * THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
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PACIFEX 15 Handbook

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PTWC Message #10 for American Samoa

ZCZC
WEZS40 PHEB 252301
TSUPPG

ASZ001>003-260101-
/T.CON.PHEB.TS.Y.0008.000000T0000Z-000000T0000Z/

BULLETIN
TSUNAMI MESSAGE NUMBER 10
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
1201 PM SST WED MAR 25 2015

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR AMERICAN SAMOA...

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 400 AM SST ON WEDNESDAY MARCH 25 2015.
- * A TSUNAMI WAS GENERATED BY THIS EARTHQUAKE. BASED ON ALL AVAILABLE DATA... THERE IS A THREAT TO AMERICAN SAMOA OF SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS THAT COULD BE A HAZARD ALONG BEACHES... IN HARBORS... AND IN COASTAL WATERS.
- * THE EARLIEST ESTIMATED TIME THAT HAZARDOUS SEA LEVEL FLUCTUATIONS AND STRONG OCEAN CURRENTS MAY BEGIN IN AMERICAN SAMOA IS

119 PM SST ON WEDNESDAY MARCH 25 2015

RECOMMENDED ACTIONS

- * PERSONS IN THE OCEAN SHOULD GET OUT OF THE WATER. PERSONS NEAR THE OCEAN SHOULD MOVE AWAY FROM BEACHES AND HARBORS.
- * FOLLOW ANY INSTRUCTIONS FROM GOVERNMENT AGENCIES.

ESTIMATED TIMES OF ARRIVAL

- * ESTIMATED TIMES OF ARRIVAL -ETA- OF THE INITIAL TSUNAMI WAVE ARE GIVEN BELOW. ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST. A TSUNAMI IS A SERIES OF

PACIFEX 15 Handbook

WAVES AND THE TIME BETWEEN WAVES CAN BE FIVE MINUTES TO ONE HOUR.

LOCATION	REGION	COORDINATES	ETA (SST)
SWAINS ISLAND	SWAINS	11.1S 171.1W	119 PM 03/25
PAGO PAGO	TUTUILA	14.3S 170.7W	143 PM 03/25
VATIA	TUTUILA	14.2S 170.7W	143 PM 03/25
MASEFAU	TUTUILA	14.3S 170.6W	143 PM 03/25
PAGAI	TUTUILA	14.3S 170.6W	143 PM 03/25
AUMI	TUTUILA	14.3S 170.7W	143 PM 03/25
AMANAVE	TUTUILA	14.3S 170.8W	145 PM 03/25
TAFUNA	TUTUILA	14.3S 170.7W	145 PM 03/25
LEONE	TUTUILA	14.3S 170.8W	145 PM 03/25
FAGAMALO	TUTUILA	14.3S 170.8W	145 PM 03/25
FAGASA	TUTUILA	14.3S 170.7W	145 PM 03/25
OLESEGA ISLAND	MANUA	14.2S 169.6W	148 PM 03/25
OFU ISLAND	MANUA	14.2S 169.7W	148 PM 03/25
TULA	TUTUILA	14.3S 170.6W	148 PM 03/25
AUNUU ISLAND	AUNUU	14.3S 170.6W	148 PM 03/25
TAU ISLAND	MANUA	14.3S 169.5W	151 PM 03/25

POTENTIAL IMPACTS

- * SEA LEVEL FLUCTUATIONS THAT ARE GENERALLY NO MORE THAN 3 FEET ABOVE AND BELOW THE TIDE LEVEL.
- * MINOR FLOODING OF BEACH AND HARBOR AREAS.
- * STRONG AND UNUSUAL OCEAN CURRENTS IN HARBORS... BAYS... AND OTHER NEAR SHORE WATERS.
- * THE HAZARD IS FORECAST TO BEGIN AROUND 119 PM SST ON WEDNESDAY MARCH 25 AND IT CAN PERSIST FOR MANY HOURS OR LONGER.

PRELIMINARY EARTHQUAKE PARAMETERS

- * MAGNITUDE 8.6
- * ORIGIN TIME 400 AM SST MAR 25 2015
- * COORDINATES 53.5 NORTH 162.0 EAST
- * DEPTH 19 MILES
- * LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

TSUNAMI OBSERVATIONS - UPDATED

- * 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 TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (SST)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	LOE			
DART 21416	48.0N	163.5E	0454	2.6FT/ 0.8M	14
DART 21415	50.2N	171.8E	0516	1.3FT/ 0.4M	15
UST KAMCHATSK RU	56.0N	163.0E	0450	10.0FT/ 3.1M	20
NIKOL'SKOE RU	55.2N	166.0E	0459	9.5FT/ 2.9M	16
PETROPAVLOVSK RU	53.0N	158.6E	0633	5.2FT/ 1.6M	17
SHEMYA AK	52.7N	174.1E	0535	2.9FT/ 0.9M	17

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ADAK AK	51.9N 176.6W	0545	1.6FT/ 0.5M	15
ATKA AK	52.2N 174.2W	0552	2.3FT/ 0.7M	18
KUSHIRO JP	43.0N 144.4E	0620	2.6FT/ 0.8M	20
HANASAKI JP	43.3N 145.6E	0645	1.6FT/ 0.5M	19
OFUNATO JP	39.0N 141.8E	0655	1.6FT/ 0.5M	18
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OMAEZAKI JP	34.6N 138.2E	0759	1.3FT/ 0.4M	19
CHICHIJIMA JP	27.1N 142.2E	0755	1.2FT/ 0.3M	
MIDWAY US	28.2N 177.4W	0818	2.9FT/ 0.9M	14
WAKE US	19.3N 166.6E	0840	1.6FT/ 0.5M	14
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YAKUTAT AK	59.5N 139.7W	1030	0.4FT/ 0.1M	
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HALEIWA HI	21.6N 158.1W	1025	3.6FT/ 1.1M	15
HONOLULU HI	21.3N 157.9W	1035	1.3FT/ 0.4M	19
DEKEHTIK FM	7.0N 158.2E	1024	1.0FT/ 0.3M	13
HILO HI	19.7N 155.0W	1050	4.3FT/ 1.3M	18
NAURU NR	0.5S 166.9E	1136	0.7FT/ 0.2M	15
BETIO TARAWA KI	1.4N 172.9E	1148	0.7FT/ 0.2M	16

NEXT UPDATE AND ADDITIONAL INFORMATION

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PTWC Message #11 for American Samoa

ZCZC
WEZS40 PHEB 060001
TSUPPG

ASZ001>003-060201-
/T.CON.PHEB.TS.Y.0008.000000T0000Z-000000T0000Z/

BULLETIN
TSUNAMI MESSAGE NUMBER 11
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
101 PM SST THU MAR 05 2015

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR AMERICAN SAMOA...

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

EVALUATION

PACIFEX 15 Handbook

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TULA	TUTUILA	14.3S 170.6W	148 PM 03/25
AUNUU ISLAND	AUNUU	14.3S 170.6W	148 PM 03/25
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PACIFEX 15 Handbook

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PRELIMINARY EARTHQUAKE PARAMETERS

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* MAGNITUDE      8.6
* ORIGIN TIME    400 AM SST MAR 25 2015
* COORDINATES    53.5 NORTH 162.0 EAST
* DEPTH          19 MILES
* LOCATION       OFF THE EAST COAST OF KAMCHATKA RUSSIA
  
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KANTON KI	2.8S	171.7W	1221	0.4FT/ 0.1M	13
WESTPORT WA	46.9N	124.1W	1233	0.6FT/ 0.2M	
FUNAFUTI TV	8.5S	179.2E	1255	0.3FT/ 0.1M	
CRESCENT CITY CA	41.7N	124.2W	1256	2.3FT/ 0.7M	

NEXT UPDATE AND ADDITIONAL INFORMATION

PACIFEX 15 Handbook

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PTWC Message #12 for American Samoa

ZCZC
WEZS40 PHEB 260101
TSUPPG

ASZ001>003-260301-
/T.CON.PHEB.TS.Y.0009.150326T0101Z-000000T0000Z/

BULLETIN
TSUNAMI MESSAGE NUMBER 12
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
201 PM SST WED MAR 25 2015

...THE TSUNAMI ADVISORY CONTINUES IN EFFECT FOR AMERICAN SAMOA...

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

EVALUATION

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PACIFEX 15 Handbook

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PRELIMINARY EARTHQUAKE PARAMETERS

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* MAGNITUDE      8.6
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	LAT	Lon	(SST)		(MIN)
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ENSENADA MX	31.8N 116.6W	1312	1.6FT/ 0.5M	14
LATA WHARF SB	10.7S 165.8E	1325	1.4FT/ 0.4M	12
LOS ANGELES CA	33.7N 118.3W	1354	0.6FT/ 0.2M	
APIA WS	13.8S 171.8W	1355	1.3FT/ 0.4M	14
PAGO PAGO AS	14.3S 170.7W	1352	1.0FT/ 0.3M	

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PTWC Message #13 for American Samoa

ZCZC
WEZS40 PHEB 260201
TSUPPG

ASZ001>003-260401-
/T.CON.PHEB.TS.Y.0008.000000T0000Z-000000T0000Z/

BULLETIN
TSUNAMI MESSAGE NUMBER 13
NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI
301 PM SST WED MAR 25 2015

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AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

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UST KAMCHATSK RU	56.0N	163.0E	0450	10.0FT/ 3.1M	20
NIKOL'SKOE RU	55.2N	166.0E	0459	9.5FT/ 2.9M	16
PETROPAVLOVSK RU	53.0N	158.6E	0633	5.2FT/ 1.6M	17
SHEMYA AK	52.7N	174.1E	0535	2.9FT/ 0.9M	17
ADAK AK	51.9N	176.6W	0545	1.6FT/ 0.5M	15
ATKA AK	52.2N	174.2W	0552	2.3FT/ 0.7M	18
KUSHIRO JP	43.0N	144.4E	0620	2.6FT/ 0.8M	20
HANASAKI JP	43.3N	145.6E	0645	1.6FT/ 0.5M	19
OFUNATO JP	39.0N	141.8E	0655	1.6FT/ 0.5M	18
NIKOLSKI AK	52.9N	168.9W	0828	3.7FT/ 1.1M	15
DUTCH HBR AK	51.1N	164.0W	0835	1.0FT/ 0.3M	17
OMAEZAKI JP	34.6N	138.2E	0759	1.3FT/ 0.4M	19
CHICHIJIMA JP	27.1N	142.2E	0755	1.2FT/ 0.3M	
MIDWAY US	28.2N	177.4W	0818	2.9FT/ 0.9M	14
WAKE US	19.3N	166.6E	0840	1.6FT/ 0.5M	14
KODIAK AK	57.7N	152.5W	0952	0.4FT/ 0.1M	18
TERN FR FRIGATE US	23.9N	166.3W	0925	3.0FT/ 0.9M	14
YAKUTAT AK	59.5N	139.7W	1030	0.4FT/ 0.1M	
PAGO BAY GU	13.4N	144.8E	1005	1.7FT/ 0.5M	17
SEWARD AK	60.1N	149.4W	1052	0.3FT/ 0.1M	20
HANAIEI HI	22.2N	159.5W	1010	3.3FT/ 1.0M	16
NAWILIWILI HI	21.9N	159.4W	1030	2.7FT/ 0.8M	17
HALEIWA HI	21.6N	158.1W	1025	3.6FT/ 1.1M	15

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HONOLULU HI	21.3N 157.9W	1035	1.3FT/ 0.4M	19
DEKEHTIK FM	7.0N 158.2E	1024	1.0FT/ 0.3M	13
HILO HI	19.7N 155.0W	1050	4.3FT/ 1.3M	18
NAURU NR	0.5S 166.9E	1136	0.7FT/ 0.2M	15
BETIO TARAWA KI	1.4N 172.9E	1148	0.7FT/ 0.2M	16
MANUS PG	2.0S 147.4E	1220	1.0FT/ 0.3M	
KANTON KI	2.8S 171.7W	1221	0.4FT/ 0.1M	13
WESTPORT WA	46.9N 124.1W	1233	0.6FT/ 0.2M	
FUNAFUTI TV	8.5S 179.2E	1255	0.3FT/ 0.1M	
CRESCENT CITY CA	41.7N 124.2W	1256	2.3FT/ 0.7M	
ENSENADA MX	31.8N 116.6W	1312	1.6FT/ 0.5M	14
LATA WHARF SB	10.7S 165.8E	1325	1.4FT/ 0.4M	12
LOS ANGELES CA	33.7N 118.3W	1354	0.6FT/ 0.2M	
APIA WS	13.8S 171.8W	1355	1.3FT/ 0.4M	14
PAGO PAGO AS	14.3S 170.7W	1430	1.6FT/ 0.5M	

NEXT UPDATE AND ADDITIONAL INFORMATION

- * THE NEXT MESSAGE WILL BE ISSUED IN ONE HOUR... OR SOONER IF THE SITUATION WARRANTS.
- * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND ON THE INTERNET AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.
- * AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL LOWERCASE LETTERS-.

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PTWC Message #14 for American Samoa

ZCZC

WEZS40 PHEB 260301

TSUPPG

ASZ001>003-260501-

/T.CAN.PHEB.TS.Y.0008.000000T0000Z-000000T0000Z/

BULLETIN

TSUNAMI MESSAGE NUMBER 14

NWS PACIFIC TSUNAMI WARNING CENTER EWA BEACH HI

401 PM SST WED MAR 25 2015

...THE TSUNAMI ADVISORY IS NOW CANCELED FOR AMERICAN SAMOA...

IN THIS MESSAGE ARE REVISED ALERTS.

AUDIENCE

EMERGENCY MANAGERS... MEDIA... GENERAL PUBLIC

EVALUATION

- * AN EARTHQUAKE WITH A PRELIMINARY MAGNITUDE OF 8.6 OCCURRED OFF THE EAST COAST OF KAMCHATKA, RUSSIA AT 400 AM SST ON WEDNESDAY MARCH 25 2015.
- * BASED ON ALL AVAILABLE DATA... THERE IS NO FURTHER TSUNAMI

PACIFEX 15 Handbook

THREAT TO AMERICAN SAMOA FROM THIS EARTHQUAKE ALTHOUGH MINOR
SEA LEVEL FLUCTUATIONS MAY CONTINUE.

RECOMMENDED ACTIONS

- * FOLLOW ANY INSTRUCTIONS FROM GOVERNMENT AGENCIES.
- * BE OBSERVANT AND EXERCISE NORMAL CAUTION IF YOU ARE NEAR OR IN THE OCEAN.
- * OTHERWISE... NO FURTHER ACTION IS REQUIRED.

POTENTIAL IMPACTS

- * MINOR SEA LEVEL FLUCTUATIONS OF UP TO 1 FOOT ABOVE AND BELOW THE TIDE LEVEL MAY CONTINUE OVER THE NEXT FEW HOURS.

PRELIMINARY EARTHQUAKE PARAMETERS

- * MAGNITUDE 8.6
- * ORIGIN TIME 400 AM SST MAR 25 2015
- * COORDINATES 53.5 NORTH 162.0 EAST
- * DEPTH 19 MILES
- * LOCATION OFF THE EAST COAST OF KAMCHATKA RUSSIA

TSUNAMI OBSERVATIONS - UPDATED

- * 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 TIDE LEVEL.

GAUGE LOCATION	GAUGE COORDINATES		TIME OF MEASURE (SST)	MAXIMUM TSUNAMI HEIGHT	WAVE PERIOD (MIN)
	LAT	Lon			
DART 21416	48.0N	163.5E	0454	2.6FT/ 0.8M	14
DART 21415	50.2N	171.8E	0516	1.3FT/ 0.4M	15
UST KAMCHATSK RU	56.0N	163.0E	0450	10.0FT/ 3.1M	20
NIKOL'SKOE RU	55.2N	166.0E	0459	9.5FT/ 2.9M	16
PETROPAVLOVSK RU	53.0N	158.6E	0633	5.2FT/ 1.6M	17
SHEMYA AK	52.7N	174.1E	0535	2.9FT/ 0.9M	17
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KUSHIRO JP	43.0N	144.4E	0620	2.6FT/ 0.8M	20
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OMAEZAKI JP	34.6N	138.2E	0759	1.3FT/ 0.4M	19
CHICHIJIMA JP	27.1N	142.2E	0755	1.2FT/ 0.3M	
MIDWAY US	28.2N	177.4W	0818	2.9FT/ 0.9M	14
WAKE US	19.3N	166.6E	0840	1.6FT/ 0.5M	14
KODIAK AK	57.7N	152.5W	0952	0.4FT/ 0.1M	18
TERN FR FRIGATE US	23.9N	166.3W	0925	3.0FT/ 0.9M	14
YAKUTAT AK	59.5N	139.7W	1030	0.4FT/ 0.1M	
PAGO BAY GU	13.4N	144.8E	1005	1.7FT/ 0.5M	17
SEWARD AK	60.1N	149.4W	1052	0.3FT/ 0.1M	20

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HANAIEI HI	22.2N 159.5W	1010	3.3FT/ 1.0M	16
NAWILIWILI HI	21.9N 159.4W	1030	2.7FT/ 0.8M	17
HALEIWA HI	21.6N 158.1W	1025	3.6FT/ 1.1M	15
HONOLULU HI	21.3N 157.9W	1035	1.3FT/ 0.4M	19
DEKEHTIK FM	7.0N 158.2E	1024	1.0FT/ 0.3M	13
HILO HI	19.7N 155.0W	1050	4.3FT/ 1.3M	18
NAURU NR	0.5S 166.9E	1136	0.7FT/ 0.2M	15
BETIO TARAWA KI	1.4N 172.9E	1148	0.7FT/ 0.2M	16
MANUS PG	2.0S 147.4E	1220	1.0FT/ 0.3M	
KANTON KI	2.8S 171.7W	1221	0.4FT/ 0.1M	13
WESTPORT WA	46.9N 124.1W	1233	0.6FT/ 0.2M	
FUNAFUTI TV	8.5S 179.2E	1255	0.3FT/ 0.1M	
CRESCENT CITY CA	41.7N 124.2W	1256	2.3FT/ 0.7M	
ENSENADA MX	31.8N 116.6W	1312	1.6FT/ 0.5M	14
LATA WHARF SB	10.7S 165.8E	1325	1.4FT/ 0.4M	12
LOS ANGELES CA	33.7N 118.3W	1354	0.6FT/ 0.2M	
APIA WS	13.8S 171.8W	1355	1.3FT/ 0.4M	14
PAGO PAGO AS	14.3S 170.7W	1430	1.6FT/ 0.5M	
NUKU HIVA PF	8.9S 140.1W	1540	2.6FT/ 0.8M	

NEXT UPDATE AND ADDITIONAL INFORMATION

- * THIS WILL BE THE FINAL STATEMENT ISSUED FOR THIS EVENT UNLESS NEW INFORMATION IS RECEIVED OR THE SITUATION CHANGES.
- * FURTHER INFORMATION ABOUT THIS EVENT MAY BE FOUND ON THE INTERNET AT PTWC.WEATHER.GOV AND AT WWW.TSUNAMI.GOV.
- * AUTHORITATIVE INFORMATION ABOUT THE EARTHQUAKE FROM THE U.S. GEOLOGICAL SURVEY CAN BE FOUND ON THE INTERNET AT EARTHQUAKE.USGS.GOV/EARTHQUAKES -ALL LOWERCASE LETTERS-.

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Appendix E. Sample Press Release for Local Media

TEMPLATE FOR NEWS RELEASE

USE AGENCY MASTHEAD

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

FOR IMMEDIATE RELEASE
(insert date)

NORTH PACIFIC TSUNAMI EXERCISE TO BE CONDUCTED MARCH 25, 2015

(insert community/county/state name) will join other localities in the north Pacific as a participant in a tsunami response exercise on March 25, 2015. The purpose of this exercise is to evaluate local tsunami response plans, increase tsunami preparedness, and improve coordination throughout the region.

(insert a promotional comment from a local official, such as “The 2011 Japan earthquake and tsunami reminded the world again of the urgent need to be more prepared for such events,” said (insert name of appropriate official). “This important exercise will test the current procedures of the Tsunami Warning System and help identify operational strengths and weaknesses in each community.” (Please modify for uniqueness.)

The exercise, titled Pacifex15, will simulate a widespread Tsunami Warning, Watch, and Advisory situation along U.S. and Canadian west coasts requiring implementation of local tsunami response plans. The exercise will *(insert “include” or “not include”)* public notification.

A major earthquake and tsunami will be simulated with a source near Petropavlovsk, Kamchatka at 08:00 am Pacific Daylight Time *(or appropriate local time)* on March 25, 2015. Exercise participants will be provided with a handbook which describes the scenario and contains tsunami alert messages.

Insert paragraph tailored for specific community. Could identify participating agencies and specific plans. Could describe current early warning program, past tsunami exercises (if any), ongoing mitigation and public education programs, etc. Could describe tsunami threat, history of tsunami hazards, if any.

If any real tsunami threat occurs during the time period of the exercise, the exercise will be terminated.

The exercise is sponsored by the U.S. National Oceanic and Atmospheric Administration (NOAA) and by the U.S. National Tsunami Hazard Mitigation Program (NTHMP – a partnership of 28 states and territories and three federal agencies). For more information on the U.S. tsunami warning system, see www.tsunami.gov. For more information on the NTHMP, see nthmp.tsunami.gov.

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On the Web:

National Tsunami Warning Center

NOAA Tsunami Program

NTHMP:

Insert state/local emergency response URLs

<http://ntwc.arh.noaa.gov>

<http://www.tsunami.gov>

<http://nthmp.tsunami.gov>

Exercise