

# User's Guide for the Tsunami Warning System in the West Coast/Alaska Tsunami Warning Center Area-of-Responsibility



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**National Oceanic and Atmospheric Administration  
National Weather Service**



## Section 1: Operations Plan Objective and Scope

### 1.1 Plan Objective

The purpose of the Operations Plan for the West Coast/Alaska Tsunami Warning Center (WCATWC) is to provide warning recipients in the area-of-responsibility (AOR = Canadian coastal regions, Puerto Rico and the Virgin Islands, and the ocean coasts of all U.S. states except Hawaii) a document which summarizes the tsunami warning system, tsunami warning and informational messages, and message dissemination throughout the AOR. Subjects in this plan include:

- Tsunami Warning Center Operations
- Procedures
- Messages
- Dissemination routes
- Primary contacts

### 1.2 Plan Scope

The scope of this plan is limited to provide an overview of the tsunami warning system within the WCATWC AOR, and its procedures, products, dissemination paths, and primary message recipients. For further information on Administrative details of NOAA's tsunami warning system, please refer to the appropriate National Weather Service directives and instructions:

- Tsunami Warning Services - <http://www.nws.noaa.gov/directives/sym/pd01007curr.pdf>
- Tsunami Warning Center Operations - <http://www.nws.noaa.gov/directives/sym/pd01007001curr.pdf>

For further information on the Tsunami Warning System in the Pacific, please refer to the Communications Plan for the Tsunami Warning System in the Pacific maintained by the Pacific Tsunami Warning Center ([http://ioc3.unesco.org/itic/files/TWSP\\_Communications\\_Plan\\_2005\\_rev2.pdf](http://ioc3.unesco.org/itic/files/TWSP_Communications_Plan_2005_rev2.pdf)).



## Section 2: The West Coast/Alaska Tsunami Warning Center

### 2.1 NOAA Tsunami Warning Center Mission

NOAA's tsunami mission is to provide reliable tsunami detection, forecasts, and warnings and to promote community resilience.

The primary operational warning system objectives for carrying out this mission are to rapidly locate, size, and otherwise characterize major earthquakes, determine their tsunamigenic potential, predict tsunami arrival times, predict coastal runup when possible, and disseminate appropriate warning and informational products based on this information.

NOAA operates two tsunami warning centers in the United States: the West Coast/Alaska Tsunami Warning Center and the Pacific Tsunami Warning Center. The West Coast/Alaska Tsunami Warning Center area-of-responsibility (AOR) consists of Canadian coastal regions, Puerto Rico and the Virgin Islands, and the ocean coasts of all U.S. States except Hawaii. The Pacific Tsunami Warning Center AOR consists of Hawaii, other U.S. interests in the Pacific Basin, countries participating in the Tsunami Warning System in the Pacific, and on an interim basin Indian Ocean and other Caribbean Sea countries.

### 2.2 Overview of West Coast/Alaska Tsunami Warning Center Operations

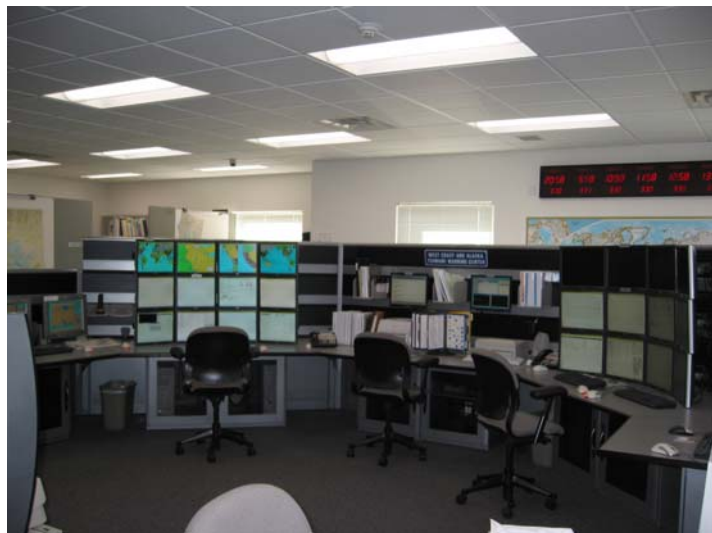
#### Background

The West Coast/Alaska Tsunami Warning Center (WC/ATWC) is operated by the Alaska Region of the National Weather Service and is located in Palmer Alaska. The center collaborates with the Pacific Tsunami Warning Center to provide tsunami warning service, and mutual backup, to tsunami threatened areas throughout the United States and many other countries throughout the world.



To accomplish its mission of providing accurate and timely tsunami bulletins to its AOR, the center detects, locates, sizes, and analyzes earthquakes throughout the world. Earthquakes that activate the center's alarm system initiate an earthquake and tsunami investigation which includes the following four basic steps: automatic locating and sizing the earthquake; earthquake analysis and review; sea level data analysis to verify the existence of a tsunami and to calibrate models; and disseminating information to the appropriate emergency management officials.

In addition to its basic functions, the center conducts a community preparedness program intended to increase public awareness of the tsunami hazard and improve tsunami planning at the community level. The center also actively pursues developmental projects which enhance tsunami warning operations.



The WC/ATWC staff level has recently been increased such that the center operates 24 hours every day with two watchstanders on duty. The center began 24x7 operations on April 23, 2006.

### **Observational Networks**

Tsunami bulletins are initially issued based solely on seismic data. Approximately 350 channels of seismic data are recorded at the center. Seismic networks which provide the data are operated and funded by many different agencies, including the United States Geological Survey (USGS), the

Global Seismic Network, the National Tsunami Hazard Mitigation Program, various universities throughout the country, other national networks, and the tsunami warning centers. Access to this data is provided through dedicated circuits, private satellite networks, and the internet.

Once a significant event has occurred, the nearest tide gages and deep ocean tsunami detectors (DART) are monitored to confirm the existence or nonexistence of a tsunami, and its degree of severity. The center has access to more than 400 tide sites and 39 DARTs. Many of these sites are maintained by NOAA's National Ocean Survey (NOS). In addition to the NOS sites, other agencies such as the Pacific Tsunami Warning Center, the Canadian Hydrographic Survey, and the Japanese Meteorological Agency provide sea level information to the center. The WC/ATWC also operates several gages in Alaska.

### **Procedures**

The warning center's initial response must be issued very quickly and is based on seismic analysis and well-defined, preset criteria given in Section 3. Whether a Tsunami Warning, Watch, Advisory, or Information Statement is issued is based on these pre-set criteria and the initial seismic analysis. Following the first message, the tsunami is analyzed using observed sea level data, forecast models, historic data, and further seismic processing. Based on this analysis, supplemental messages are issued if a Warning, Watch, or Advisory was originally issued. Areas with forecasts 1m or greater in zero-to-peak amplitude are generally put in a tsunami Warning; those with forecasts 0.3m to 1m in an Advisory, and for those less than 0.3m Warning, Watch, and/or Advisory are cancelled. Historical information has shown that tsunamis can cause damage due to strong currents when amplitudes reach 0.5m or greater.

## Products

Primary recipients of tsunami messages (discussed further in Section 4 with examples in Section 7) are coastal state/province departments of emergency services, the Federal Emergency Management Agency, National Weather Service offices, Canada's Atlantic Storm Prediction Center, the U.S. Coast Guard, and military bases. While these agencies are considered primary, the bulletins are available through a variety of means, discussed further in Section 5, to local emergency managers and the general public. WC/ATWC primary contacts are listed in Section 6.

Since 1980, 13 tsunami warnings have been issued by the center for events occurring within the AOR. Response time to issue warnings has ranged from 5 to 14 minutes with an average response of 9.5 minutes. All but one of these warning occurred prior to the center going to a 24x7 operation, and of the 13 warnings only three occurred during regular work hours. The other 10 occurred while duty personnel were not on site. Each year the WC/ATWC staff responds to hundreds of alarmed events.

## Community Preparedness



The ability of any warning system to successfully save lives and reduce property damage depends upon getting the information to the public and getting them to respond to the emergency. To help attain this goal, the National Weather Service has implemented a program known as TsunamiReady which sets forth guidelines for communities to improve tsunami preparedness. This program was started in 2000 and was based on the National Weather Service StormReady program. The TsunamiReady program's purpose is to recognize communities which have taken the steps necessary to be as prepared as

possible for a tsunami. This requires the communities to follow a set of guidelines. The guidelines show that the community can receive and disseminate warnings, have a tsunami hazard plan in place, have posted evacuation routes, designated shelters, and have worked to enhance tsunami awareness throughout their community. As of July 2008, 57 communities and counties along the U.S. west coast, east coast, Alaska, and Hawaii are recognized as TsunamiReady. Center personnel actively work with local emergency officials to attain the TsunamiReady recognition.

## Section 3: Procedures

### Summary

WC/ATWC procedures are organized by the source's geographic region and magnitude. The basic procedures are summarized in the bar chart in Figure 1. The actions shown in Figure 1 indicate the first bulletin (and in many cases the only bulletin) to be issued. Follow up actions are described by using the Flow Charts located in the center's Operation manual. Supplemental warning, watch or advisory bulletins for events within the AOR are issued every 30 minutes in the early parts of an event, and less often in the latter parts of an event. Occasionally a follow-up message may be necessary for a Tsunami Information Statement (e.g., when a small tsunami was recorded or where the statement must be upgraded to a warning). This would be considered Tsunami Information Statement #2 or, if upgraded to a warning, Tsunami Warning #2.

### Breakpoints

Warning, Watch, and Advisory extent are set based on distance from epicenter or tsunami travel time, and are listed in the messages as extending from X to Y (except for special cases like the Bering Sea or Gulf of Saint Lawrence). Atlantic AOR breakpoints are the breakpoints between WFO AORs. Estimated tsunami arrival times are provided in WEXX20 W/W/A messages for up to twenty cities in the US, four in PR/VI, and six in Canada. The breakpoints are listed below.

Brownsville, TX	Jupiter Inlet, FL	Stonington, ME
Baffin Bay, TX	Flagler Beach, FL	US/Canada border
Port O'Connor, TX	Altamaha Sound, GA	Charlesville, NS
High Island, TX	South Santee River, SC	Chezzetcook Inlet, NS
Morgan City, LA	Surf City, NC	Meat Cove, NS
MS/AL Border	Duck, NC	Cape Ray, NF
Destin, FL	New Point Comfort VA	La Manche, NF
Suwannee River, FL	Cape Henlopen, DE	Boat Harbour, NF
Bonita Beach, FL	Sandy Hook, NJ	Cape Chidley, NL
Flamingo, FL	Watch Hill, RI	
Ocean Reef, FL	Merrimack River, MA	

Estimated tsunami arrival times are provided in the Pacific WEPA41 W/W/A messages for up to twenty-four cities along the Pacific U.S. and Canadian coasts. The Pacific AOR break points are:

Attu, AK	Yakutat, AK	Cape Blanco, OR
Adak, AK	Sitka, AK	Oregon-California Border
Nikolski, AK	Langara Island, BC	Cape Mendocino, CA
Dutch Harbor, AK	Northern Tip Vancouver Island, BC	Point Reyes, CA
Sand Point, AK	Washington-BC Border	Point Sur, CA
Kodiak, AK	Washington-OR Border	Point Conception, CA
Seward, AK	Cascade Head, OR	California-Mexico Border
Cordova, AK		





Area	WCATWC-Pacific					WCATWC-Atlantic							PTWC Backup										
	AK, BC, WA, OR, CA <sup>a</sup>	Bering Sea Deep <sup>a</sup>	Arctic O. and Bering Shallow	Not in Pacific AOR <sup>a</sup>	Indian Ocean Basin	East Coast US & Canada <sup>a</sup>	East Coast Inland <400 Mile	Gulf Mex Gulf St. L. <sup>a</sup>	Puerto Rico/VI <sup>a</sup>	Not AOR Western Caribbean <sup>a</sup>	Not AOR Eastern Caribbean <sup>a</sup>	Not AOR Atlantic	Hawaii <sup>a</sup>	Pacific <sup>a</sup>	WCATWC Hawaii	All <sup>a</sup> Pacific	Indian Ocean	Ocean Ocean	Caribbean Sea	Atlantic Ocean	Caribbean/Atlantic		
Mag						Mag							Mag										
4						4	TIS*** SEXX60		TIS*** SEXX60	TIS*** SEXX60			4	TIS SEHW70					<100 KM deep	Inland or >100 deep	<100 KM deep	<100 KM deep	Inland or >100 deep
5						5																	
6	TIS*** SEAK71 or SEUS71	TIS*** SEAK71	TIS*** SEAK71			6	TIS WEXX22 and WEXX32	TIS WEXX22 and WEXX32	TIS WEXX22 and WEXX32	TIS WEXX22 and WEXX32	TIS WEXX22 and WEXX32											(Caribbean > 6.0)	
6.4						6.4																	
6.5	TIS WEP443 and WEA453	TIS WEP443 and WEA453		TIS WEP443 and WEA453	TIS WEP443 and WEA453 (if PTWC issues msg.)	6.5	Warning * 250km WEXX20 and WEXX30		Warning * Puerto Rico/VI WEXX20 and WEXX30			6.5	TIS WEHW42	TIS WEHW42	TIS WEP442	TIS WEIO23	TIS WEIO23	TIS WECA 43	TIS WECA43				
7	Warning * 250km WEP441 and WEA451	Warning * Pribilof/Aleutian Is appropriate Evaluation	TIS WEP443 and WEA453 with appropriate Evaluation	TIS WEP443 and WEA453 (if a watch or warning is issued for the Indian Ocean)		7	Warning * 250km WEXX20 and WEXX30	Warning * Gulf only WEXX20 and WEXX30				7	Warning County WEHW40										(Atlantic > 6.5)
7.1						7.1						7.1											
7.5						7.5						7.5		Advisory WEHW40									
7.6	Warn/Adv <sup>a</sup> 500/500km WEP441/51			TIS WEP443/53 or Watch/Warning WEP441 and WEA451		7.6	Warn/Adv <sup>a</sup> 500/500km WEXX20/30					7.6		Adv/Wrm <sup>**</sup> 1000km WEHW40		Warning <sup>**</sup> 1000km WEP440	Regional Watch WEIO21			Regional Watch WECA41			
7.8						7.8						7.8											
7.9	Warning 3W/W WEP441/ WEA451					7.9	Warning 1000km ACR Watch WEXX20/ WEXX30		Advisory * Puerto Rico/VI WEXX20/30	Warning* PR/VI WEXX20/30	TIS/Warning Spec. area WEXX22/32 and WEXX20/30	7.9	Warning State WEHW40	Advisory/ Warning 3W/3W WEHW40	Watch/ Warning WEHW40	Warning 3W/3W WEP440	All IO Nations Watch WEIO21		All Carib. Nations Watch WECA41	All Carib. Nations Watch WECA41			
10						10						10											

\*\*\* Based on magnitude and distance from the coast.  
 No TIS for Alaska if less than magnitude 5 and West of 155W  
 3W/3W => warning for area impacted within 3 hours and watch for area 3 to 6 hours away  
 3W/W => warning for area impacted within 3 hours and watch for rest of AOR  
 TIS = Tsunami Information Statement  
 WMO product IDs listed under message type

<sup>a</sup> if deeper than 100km and <7.9, use TIS

\* No Watch

\*\* countries within 1000 km of epicenter

\* if North of 35 degrees, Hawaii in Watch

PTWC issues two messages for most Pacific events (Hawaii and international)

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<sup>a</sup> Top shows source zone and line below is where the product is sent

**Figure 1-Procedures Chart**



## Section 4: Messages

### 4.1 Message Definitions

West Coast/Alaska Tsunami Warning Center (WCATWC) product definitions will change on February 12, 2008. The products issued by the center are warning, watch, advisory, and information statement. Each has a distinct meaning relating to local emergency response. In summary:

Warning	->	Inundating wave possible	->	Full evacuation suggested
Watch	->	Danger level not yet known	->	Stay alert for more info
Advisory	->	Strong currents likely	->	Stay away from the shore
Information	->	Minor waves at most	->	No action suggested

Based on seismic data analysis or forecasted amplitude (dependent on whether the center has obtained sea level data), WCATWC will issue the appropriate product. Warnings and Advisories suggest that action be taken. Watches are issued to provide an early alert for areas that are distant from the wave front, but may have danger. Once the danger level is determined, the watch is upgraded to a warning or advisory, or canceled. The full definition of each message is given below:

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

**Tsunami 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 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 Information Statement** - 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 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.

In December 2005, the center began issuing “public” products in addition to the standard NWS format tsunami products. These were designed to include wording easier for the layman to understand. Tabulated tsunami travel times and hypocenter information were removed and replaced with information written in a more readable format. Tsunami warnings, watches, advisories, and information statements now have corresponding public products. The public products do not include NWS universal generic codes (UGC) while the standard watch/warning messages contain segmented UGCs.

The WC/ATWC also issues monthly communication tests over its primary dissemination paths. The Tsunami Warning Message product code (see section 4.2) is used on the test messages. Each month a Pacific AOR and an Atlantic AOR test are conducted. As tsunamis are uncommon events, this testing is critical to ensure robust message dissemination.

#### 4.2 Message Identifiers

The WCATWC tsunami messages are National Weather Service products. NWS products are described by both a World Meteorological Organization (WMO) Header and an AWIPS ID. The following table describes the products. The standard warning, watch, and advisory products (WEPA41 and WEXX20) are segmented at the end of the bulletin by Universal Generic Codes. NWS VTEC codes are not included in the products. The public products (WEAK51, WEAK53, WEXX30, and WEXX32) are in an easy-to-read format intended for the general public and contain action statements and information highlighting the dangers of tsunamis.

<b>WMO Header</b>	<b>NWS AWIPS ID</b>	<b>Explanation</b>
WEPA41 PAAQ	TSUWCA	Tsunami Warnings, Watches, and Advisories AK, BC, and US West Coast
WEPA43 PAAQ	TIBWCA	Tsunami Information Statements AK, BC, and US West Coast
WEAK51 PAAQ	TSUAK1	“Public” Tsunami Warnings, Watches, and Advisories AK, BC, and US West Coast
WEAK53 PAAQ	TIBAK1	“Public” Tsunami Information Statements

		AK, BC, and US West Coast
SEAK71 PAAQ	EQIAKX	Tsunami Seismic Information Statements Alaska
SEUS71 PAAQ	EQIWOC	Tsunami Seismic Information Statements BC and US West Coast
WEXX20 PAAQ	TSUAT1	Tsunami Warnings, Watches, and Advisories PR/VI, US East, Gulf, and Canadian Maritime Provinces
WEXX22 PAAQ	TIBAT1	Information Statements PR/VI, US East, Gulf, and Canadian Maritime Provinces
WEXX30 PAAQ	TSUATE	“Public” Tsunami Warnings, Watches, and Advisories PR/VI, US East, Gulf, and Canadian Maritime Provinces
WEXX32 PAAQ	TIBATE	“Public” Tsunami Information Statements PR/VI, US East, Gulf, and Canadian Maritime Provinces
SEXX60 PAAQ	EQIAT1	Tsunami Seismic Information Statements PR/VI, US East, Gulf, and Canadian Maritime Provinces

Products are generated by the WC/ATWC Message2 software. PTWC products can be generated at WC/ATWC in case backup is necessary. Experimental web-based products are created and issued by the WC/ATWC to its web site. The web-based products are written in an html format with embedded links to related information and are similar in format to the public products.



## Section 5: Message Dissemination Routes

### 5.1 Overview of Product Dissemination Paths

#### Summary of Message Dissemination Methods at the West Coast/Alaska Tsunami Warning Center

Service	Owner or Operating Agency	Primary user audience
* AFTN	FAA	FAA Regional Operations Centers, Flight Service Stations and Alaska WSO's
* NMCLine	NWS	NWS Offices via AWIPS, NWS Telecommunications Gateway to EMWIN, Family of Services, Global telecommunications system, and other NWS communication systems.
* NOAA Weather Wire	NWS	National Weather Service forecast subscribers and U.S./Canada state/province emergency management agencies
NAWAS	FEMA	Emergency management agencies nationwide.
AKWAS	Alaska DHS&EM/FEMA	Emergency management offices in State of Alaska
VHF radio	Alaska DHS&EM	Alaska DHS&EM, AK State Troopers, Palmer Police
Satellite Phone Backup	WCATWC & PTWC	Tsunami Warning Centers (emergency backup communications)
*QDDS	USGS	Emergency management officials.
*INTERNET (web site, email, RSS, and cell phone text messaging)	Public	International and domestic government agencies, academic institutions and the public in general
Telephone	Public	A Primary and Secondary phone list is maintained



Text messages are automatically composed by the message generation software. The wording of the text is dependant on the size and location of the earthquake. An asterisk (\*) in the table above indicates messages are transmitted on these systems simultaneously from the Operations console at the center. Figure 2 shows main communications paths and recipients.

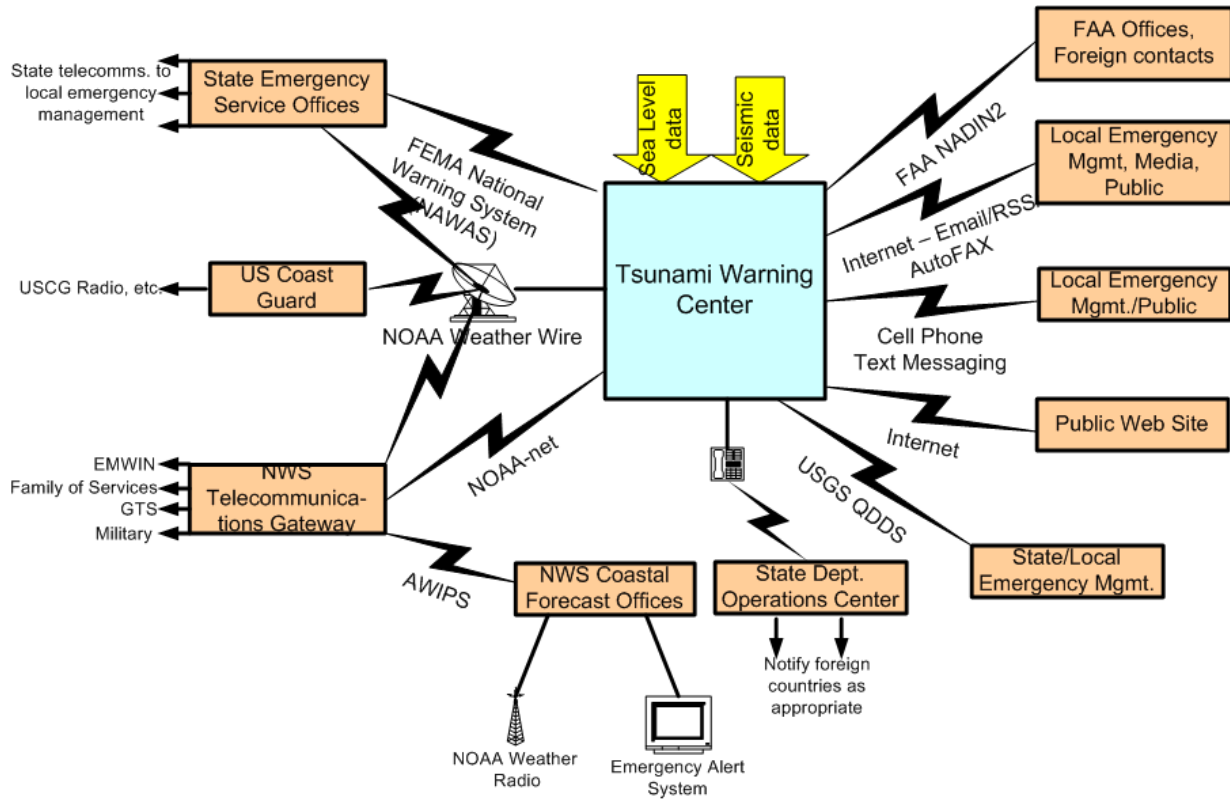


Figure 2 - WCATWC message communications

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**AFTN** - The **Aeronautical Fixed Telecommunications Network** is a world-wide communications system for the exchange of messages and/or digital data between stations primarily for the safety of air navigation and other air services. Since most flight service facilities must be cognizant of current aviation weather forecasts, many weather forecast offices are provided with AFTN terminals. Messages over this media must be specifically addressed to recipients. Collective addresses are used to transmit to the Alaska Weather Service Offices, Weather Forecast Offices, Flight Service Stations, and Federal Aviation Administration regional Operation Centers nationwide.

**NMCLine** – This is the circuit between the NWS Telecommunication Gateway in Silver Spring MD and the Alaska Regional Headquarters (ARH) in Anchorage AK. The WC/ATWC transmits and receives messages to and from this line via a socket connection to a server at the ARH. ARH then sends tsunami products to the NWS AWIPS system and provides a secondary route into the NOAA Weather Wire system at the Anchorage WFO. This routing also provides tsunami messages to the NWS telecommunications gateway, and from there to a multitude of NWS communication

services such as the Emergency Managers Weather Information Network (EMWIN), Family of Services, and the Global telecommunications system.

**NOAA Weather Wire** - The NOAA Weather Wire is a satellite broadcast service maintained by the NWS to disseminate weather products domestically. Both the WCATWC and PTWC have uplink and downlink capability on the NWW system. Users of the NWW system consist of Weather Service Offices, state and provincial emergency management agencies, and the U.S. Coast Guard. Receiver sites can program their selector box to receive any number of selected NWS products (or messages).

**NAWAS** - The **NA**ational **WA**arning **S**ystem is a nationwide dedicated voice telephone system connecting selected defense, National Weather Service, emergency management, and Coast Guard agencies. The circuit is supported by the Federal Emergency Management Agency (FEMA). Control over transmissions on the circuit is maintained by the FEMA Operations Center or the FEMA Alternate Operations Center.

**AKWAS** - The **AlasKa WA**arning **S**ystem is a statewide dedicated voice telephone system connecting Alaska Division of Homeland Security and Emergency Management (DHS&EM), National Guard, Law Enforcement and Weather Service Offices. The circuit is supported by the FEMA and the Alaska DHS&EM. Control over transmissions on the circuit is maintained by the State Warning Point at Fort Richardson, Alaska.

**VHF Radio** – Broadcasting on 155.295 (Emergency Area Command Frequency) and 155.250 MHz this system provides emergency voice communications to the Alaska DHS&EM, Alaska State Troopers, and Palmer Police. Messages are only transmitted by this means in absence of primary communications.

**Satellite Phone** – This phone system is for emergency communications between the two tsunami warning centers and other primary message recipients. It is intended for use when other normal communications systems have failed.

**QDDS** – An earthquake information dissemination tool operated by the United States Geological Survey. The internet is used to transmit earthquake information to USGS servers where it is disseminated to various web sites and agencies.

**Internet** –Group email lists (for emergency managers) are maintained. Watch/Warning/Advisory messages and Tsunami Information Statements (WExxxx products) are sent to the full set, whereas messages regarding lesser events (SExxxx) are sent to a smaller subset. Shortened cell phone pager messages are also transmitted via internet to emergency managers. A public web site is maintained at <http://wcatwc.arh.noaa.gov/> where current event messages and maps are posted. The web site also provides a large amount of educational, safety, and scientific information. A public email and cell phone text messaging service is also available through the WCATWC web site, as well as RSS feeds and XML/CAP format products.

**Telephone** – Primary and Secondary telephone lists are maintained. A short call down list is notified after events.

## 5.2 Overview of Product Retrieval Methods

WC/ATWC products are issued and can be retrieved by several different methods. Many communities have developed local methods for disseminating the message; such as, sirens, automatic phone calls, local CB radio, AHAB Radio, etc. Contact your local emergency management for dissemination methods within your community.

### National Weather Service Systems

- NOAA Weather Wire Service
- NOAA Weather Radio (NWR)
- EMWIN®
- National Weather Service Forecast Offices
- Email/cell phone text messaging
- WCATWC Web Page
- RSS feed

### State and Provincial Dissemination Systems

#### Federal Communications Commission

- Emergency Alert System

#### United States Coast Guard

- US Coast Guard Radio

## Section 6: Primary Contact List

State	Agency	Primary Comms Method	Street	City	St	Zip
<b>AK</b>	USAF - Elmendorf Command Center	Email - phone	Q Street	Elmendorf AFB	AK	99506-2830
	SWP - Alaska	NWW - NAWAS	P. O. Box 5750	Ft Richardson	AK	99505
	WFO - Anchorage AK	AWIPS	6930 Sand Lake Road	Anchorage	AK	99502-1845
	Alaska State Troopers Headquarters - Fairbanks	AKWAS	1979 Peger Road	Fairbanks	AK	99709
	NWS - Alaska Regional HQ	Phone	222 W. 7th Ave., RM 517	Anchorage	AK	99513-7575
	NWS - Alaska Regional HQ	Phone	222 W. 7th Ave., RM 517	Anchorage	AK	99513-7575
	WFO - Juneau AK	AWIPS	8500 Mendenhall Loop Rd	Juneau	AK	99801
	NWS - Alaska Regional HQ	Phone	222 W. 7th Ave., RM 517	Anchorage	AK	99513-7575
	USCG - 17th District Juneau AK - CC	NWW - NAWAS	P.O. Box 25517	Juneau	AK	99801-5517
	<b>AL</b>	WFO - Mobile AL	AWIPS	8400 Airport Blvd., Bldg 11	Mobile	AL
SWP - Alabama		NWW - NAWAS	P. O Box 2160	Clanton	AL	35046-2160
<b>BC</b>						
	MARPAC - Maritime Forces Pacific Operations Centre	NAWAS	Building 77, Box 17000 Stn Forces	Victoria	BC	V9A 7N2
	PEP - Emergency Coordination Center	NWW - NAWAS	455 Boleskine Rd.	Victoria	BC	V8W 9J1

State	Agency	Primary Comms Method	Street	City	St	Zip
<b>CA</b>	WFO - Monterey CA	AWIPS	21 Grace Hopper Ave	Monterey	CA	93943-5505
	FNMOCC – Fleet Numeric – Navy/DMS interface, Monterey	NOAAPORT	7 Grace Hopper Ave.	Monterey	CA	93943-0027
	USCG -11th District Alameda CA - CC	NWW - NAWAS	Coast Guard Island	Alameda	CA	94501-5100
	FEMA - Region IX	NAWAS	1111 Broadway, Suite 1200	Oakland	CA	94607
	SWP - California	NWW - NAWAS	3650 Schriver Ave.	Mather	CA	65655
	USCG - CAMSPAC Pt Reyes CA	NWW	17000 Sir Francis Drake Blvd	Pt Reyes Station	CA	94956-0560
	WFO - Oxnard CA	AWIPS	520 North Elevar Street	Oxnard	CA	93030
	WFO - Eureka CA	AWIPS	300 Startare Dr.	Eureka	CA	95501
	<b>CO</b>	National Earthquake Information Center - USGS	Phone	1711 Illinois Street	Golden	CO
<b>CT</b>	SWP - Connecticut	NWW - NAWAS	25 Sigourney Street	Hartford	CT	06106-5042
<b>DC</b>	State Department - Emergency Operations Center	NAWAS-Email	2201 C Street NW	Washington	DC	20520
	SWP - District of Columbia	NWW - NAWAS	2000 14 <sup>th</sup> Street NW, 8 <sup>th</sup> Floor	Washington	DC	20009

State	Agency	Primary Comms Method	Street	City	St	Zip
<b>DE</b>						
	SWP - Delaware	NWW - NAWAS	165 Brick Store Landing Rd.	Smyrna	DE	19977
<b>FL</b>						
	WFO - Melbourne Fl	AWIPS	421 Croton Rd	Melbourne	FL	32935
	WFO - Key West FL	AWIPS	1315 White Street	Key West	FL	33040
	WFO - Jacksonville FL	AWIPS	13701 Fang Drive	Jacksonville	FL	32218
	WFO - Tallahassee FL	AWIPS	Love Bldg, Florida State University	Tallahassee	FL	32306-4509
	USCG - 7th District Miami FL - CC	NWW - NAWAS	909 SE 1 st	Miami	FL	33131
	SWP - Florida	NWW - NAWAS	2555 Shumard Oak Blvd	Tallahassee	FL	32399-2100
	WFO - Miami FL	AWIPS	11691 SW 17 <sup>th</sup> Street	Miami	FL	33165
<b>GA</b>						
	SWP - Georgia	NWW - NAWAS	P. O. Box 18055	Atlanta	GA	30316
	FEMA Alternate Ops Center - Thomasville GA	NAWAS	404 S. Pine Tree Blvd	Thomasville	GA	31792
<b>HI</b>						
	Pacific Tsunami Warning Center	All systems	91-270 Fort Weaver Rd	Ewa Beach	HI	96706-2928
<b>LA</b>						
	SWP – Louisiana	NWW – NAWAS	7667 Independence Blvd	Baton Rouge	LA	70806
	WFO - New Orleans LA	AWIPS	62300 Airport Road	Slidell	LA	70460-5243
	WFO - Lake Charles LA	AWIPS	500 Airport Road	Lake Charles	LA	70607
	USCG - 8th District New Orleans LA - CC	NWW - NAWAS	500 Poydras Street	New Orleans	LA	70130-3310

State	Agency	Primary Comms Method	Street	City	St	Zip
<b>MA</b>						
	SWP - Massachusetts	NWW - NAWAS	400 Worcester	Framingham	MA	01702
	WFO - Taunton MA	AWIPS	445 Myles Standish	Taunton	MA	02780
<b>MD</b>						
	SWP - Maryland	NWW - NAWAS	5401 Rue Saint Lo Drive	Reisterstown	MD	21136
	NGA – National Geospatial-Intelligence Agency	Email	4600 Sangamore Road	Bethesda	MD	20816
	CORMS - National Ocean Survey	Phone	1325 E. West Hwy, RM 6390	Silver Spring	MD	20910
	NWS – HQ – Metwatch Desk	Email	1325 East West Highway	Silver Spring	MD	20910
<b>ME</b>						
	WFO - Gray ME	AWIPS	1 Weather Lane, Route 231	Gray	ME	04039
	WFO - Caribou ME	AWIPS	810 Main Street	Caribou	ME	04736
	SWP - Maine	NWW - NAWAS	72 State House Station	Augusta	ME	04333-0072
<b>MS</b>						
	SWP - Mississippi	NWW - NAWAS	P. O. Box 4501	Jackson	MS	39296-4501
	DART Buoys - Data Management Analysis Center - NDBC	Email - Phone	Bldg 3201	Bay St Louis	MS	39522
<b>NC</b>						
	SWP - North Carolina	NWW - NAWAS	4008 District Drive	Raleigh	NC	27607
	WFO - Wilmington NC	AWIPS	2015 Gardner Drive	Wilmington	NC	28405
<b>NH</b>						
	SWP - New Hampshire	NWW - NAWAS	33 Hazen Drive	Concord	NH	03305

State	Agency	Primary Comms Method	Street	City	St	Zip
<b>NJ</b>						
	WFO - Mount Holly NJ	AWIPS	732 Woodlane Road	Mount Holly	NJ	08060-9615
	SWP - New Jersey	NWW - NAWAS	P. O. Box 7068	Trenton	NJ	08628
<b>NS</b>						
	Atlantic Storm Prediction Centre - Nova Scotia	GTS - Email	45 Alderney Drive	Dartmouth	NS	B2Y 2N6
<b>NY</b>						
	WFO - Albany NY	AWIPS	251 Fuller Rd, Suite B300	Albany	NY	12203-3640
	SWP - New York	NWW - NAWAS	1220 Washington Ave, Suite 101, Bldg 22	Albany	NY	12226-2251
<b>ON</b>						
	Govt of Canada - Ops Ctr Public Safety & Em Prep Canada	NAWAS	122 Banks St.	Ottawa	ON	K1A0W6
<b>OR</b>						
	WFO - Portland OR	AWIPS	5241 NE 122 <sup>nd</sup> Ave.	Portland	OR	97230-1089
	SWP - Oregon	NWW - NAWAS	3225 State St.	Salem	OR	97309
<b>PA</b>						
	SWP - Pennsylvania	NWW - NAWAS	2605 Interstate Drive	Harrisburg	PA	17110-9364
	WFO - Pittsburg PA	AWIPS	192 Shafer Road	Moon Township	PA	15108



State	Agency	Primary Comms Method	Street	City	St	Zip
<b>PR</b>						
	Puerto Rico Seismic Network	Email-Phone	PO Box 9017	Mayaguez	PR	00681
	SWP – Puerto Rico	NWW - EMWIN	PO Box 566597	San Juan	PR	00906
<b>RI</b>						
	SWP - Rhode Island	NWW - NAWAS	645 New London Ave	Cranston	RI	02920
<b>SC</b>						
	SWP - South Carolina	NWW - NAWAS	279 fish Hatchery Rd	West Columbia	SC	29172
	WFO - Charleston SC	AWIPS	5777 S. Aviation Ave	Charleston	SC	29406-6162
<b>TX</b>						
	WFO - Houston TX	AWIPS	1353 FM 646, Suite 202	Dickinson	TX	77539
	WFO - Corpus Cristi TX	AWIPS	300 Pinson Dr	Corpus Cristi	TX	78406-1803
	WFO - Brownsville TX	AWIPS	20 Vermillion Rd	Brownsville	TX	78521-5798
	SWP - Texas	NWW - NAWAS	5805 N. Lamar Blvd	Austin	TX	78752
<b>VA</b>						
	USN - NAVLANTMETOC - Norfolk VA	AWIPS - Phone	9141 3rd Ave.	Norfolk	VA	23511
	WFO - Wakefield VA	AWIPS	10009 General Mahone	Wakefield	VA	23888
	FEMA Operation Center - Berryville VA	NAWAS	19844 Blue Ridge Mountain Rd	Berryville	VA	22611
	USCG - CAMSLANT - Chesapeake VA	NWW	4720 Douglas Munro Rd	Chesapeake	VA	23322-2598
	SWP - Virginia	NWW - NAWAS	10501 Trade Court	Richmond	VA	23236
<b>VI</b>						
	SWP U.S. Virgin Islands	NWW - EMWIN	2-C Contant, A-Q Bldg.	St. Thomas	VI	00820

State	Agency	Primary Comms Method	Street	City	St	Zip
<b>WA</b>	SWP - Washington	NWW - NAWAS	Military Dept. Emergency Management Div.	Camp Murray, Tacoma	WA	98430-1522
	USCG - 13th District Seattle WA – CC	NWW - NAWAS	915 2nd Avenue	Seattle	WA	98174-1067
	FEMA MERS Ops Center -Region 10 - Bothell WA	NAWAS	200 228th St. SW	Bothell	WA	98021-8665
	WFO - Seattle WA	AWIPS	7600 Sand Point Way NE	Seattle	WA	98115



## Section 7: Message Examples

### 7.1 Pacific AOR Tsunami Warning/Watch/Advisory (WEPA41)

WEPA41 PAAQ 130850  
TSUWCA

BULLETIN  
TSUNAMI MESSAGE NUMBER 1  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
1150 PM AKST SAT JAN 12 2008

...THIS MESSAGE IS FOR TEST PURPOSES TO SHOW AN EXAMPLE  
WEPA41 MESSAGE...

...A TEST TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE ALASKA  
COASTAL AREAS FROM KODIAK ALASKA TO ATTU ALASKA...

...A TEST TSUNAMI WATCH IS IN EFFECT FOR THE CALIFORNIA - OREGON  
- WASHINGTON - BRITISH COLUMBIA AND ALASKA COASTAL AREAS  
FROM POINT REYES CALIFORNIA TO KODIAK ALASKA...

...THIS MESSAGE IS INFORMATION ONLY FOR U.S. AND CANADIAN  
PACIFIC COASTAL REGIONS NOT INCLUDED IN THE AREAS LISTED  
ABOVE...

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD  
INUNDATION IS IMMINENT OR EXPECTED. WARNINGS INDICATE THAT  
WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL  
CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE  
INITIAL WAVE ARRIVAL.

TSUNAMI WATCHES ARE AN ADVANCE ALERT TO AREAS THAT COULD BE IMPACTED  
BY A TSUNAMI AT A LATER TIME. WATCH AREAS MAY UPGRADED TO A  
WARNING OR ADVISORY - OR CANCELED - BASED ON NEW INFORMATION  
OR ANALYSIS. PERSONS IN A WATCH AREA SHOULD CLOSELY FOLLOW  
SUBSEQUENT TSUNAMI MESSAGES.

#### RECOMMENDED ACTIONS

IT IS NOT KNOWN - REPEAT NOT KNOWN - IF A TSUNAMI EXISTS BUT A  
TSUNAMI MAY HAVE BEEN GENERATED. PERSONS IN LOW-LYING COASTAL  
AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL EMERGENCY  
OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY EMERGENCY RESPONSE  
AGENCIES.

- PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO  
HIGHER GROUND.
- PERSONS IN TSUNAMI WATCH AREAS SHOULD STAY ALERT FOR  
SUPPLEMENTAL INFORMATION.

THIS MESSAGE IS BASED MAINLY ON EARTHQUAKE DATA. AS MORE  
INFORMATION BECOMES AVAILABLE THE ALERT AREAS WILL BE REFINED.

#### PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.9  
TIME - 2345 AKST JAN 12 2008  
0045 PST JAN 13 2008  
0845 UTC JAN 13 2008  
LOCATION - 52.4 NORTH 175.2 WEST  
45 MILES/72 KM NW OF ATKA VILLAGE ALASKA  
75 MILES/121 KM NE OF ADAK ALASKA  
DEPTH - 17 MILES/27 KM

THE PACIFIC TSUNAMI WARNING CENTER IN EWA BEACH HAWAII WILL  
ISSUE MESSAGES FOR HAWAII AND OTHER AREAS OF THE PACIFIC  
OUTSIDE THE STATES AND PROVINCES LISTED ABOVE.

MESSAGES WILL BE ISSUED EVERY 30 MINUTES OR MORE FREQUENTLY IF  
THE SITUATION WARRANTS. THE TSUNAMI ALERT WILL REMAIN IN EFFECT  
UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE  
WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

PKZ136>138-132-150-155-170-171-172-175-176-AKZ171-181-185-  
187-191-130950-  
COASTAL AREAS BETWEEN AND INCLUDING KODIAK ALASKA TO ATTU  
ALASKA  
1150 PM AKST SAT JAN 12 2008

...A TEST TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE ALASKA  
COASTAL AREAS FROM KODIAK ALASKA TO ATTU ALASKA...

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD  
INUNDATION IS IMMINENT OR EXPECTED. TSUNAMIS ARE A SERIES OF  
WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL  
TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED  
SITES IN THE WARNING ARE PROVIDED BELOW.

ADAK-AK	0009	AKST	JAN 13	SAND PT.-AK	0222	AKST	JAN 13
SHEMYA-AK	0103	AKST	JAN 13	COLD BAY-AK	0255	AKST	JAN 13
DUTCH HARBOR-AK	0105	AKST	JAN 13	KODIAK-AK	0316	AKST	JAN 13

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
WCATWC.ARH.NOAA.GOV

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PZZ455-540-450-356-353-350-255-250-210-110-156-153-150-130>135-  
170-PKZ310-041-031>036-042-043-011>013-021-022-051-052-053-  
125>129-121-120-130-140-141-CAZ505-002-001-ORZ022-002-021-  
001-WAZ503-506>511-001-514>517-021-AKZ023-024-026>029-018>022-  
025-017-135-131-125-121-145-130950-  
COASTAL AREAS FROM POINT REYES CALIFORNIA TO KODIAK ALASKA  
1150 PM AKST SAT JAN 12 2008

...A TEST TSUNAMI WATCH IS IN EFFECT FOR THE CALIFORNIA - OREGON  
- WASHINGTON - BRITISH COLUMBIA AND ALASKA COASTAL AREAS  
FROM POINT REYES CALIFORNIA TO KODIAK ALASKA...

TSUNAMI WATCHES ARE AN ADVANCE ALERT TO AREAS THAT COULD BE  
IMPACTED BY A TSUNAMI AT A LATER TIME. TSUNAMIS ARE A SERIES OF  
WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL  
TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED  
SITES IN THE WARNING ARE PROVIDED BELOW.

SEWARD-AK	0341	AKST	JAN 13	JUNEAU-AK	0500	AKST	JAN 13
YAKUTAT-AK	0350	AKST	JAN 13	TOFINO-BC	0624	PST	JAN 13
SITKA-AK	0351	AKST	JAN 13	NEAH BAY-WA	0636	PST	JAN 13
VALDEZ-AK	0400	AKST	JAN 13	CHARLESTON-OR	0640	PST	JAN 13
LANGARA-BC	0500	PST	JAN 13	CRESCENT CITY-CA	0648	PST	JAN 13
CORDOVA-AK	0410	AKST	JAN 13	SEASIDE-OR	0649	PST	JAN 13
HOMER-AK	0434	AKST	JAN 13	WESTPORT-WA	0650	PST	JAN 13
KETCHIKAN-AK	0458	AKST	JAN 13				

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
WCATWC.ARH.NOAA.GOV

THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST  
MESSAGE.  
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## 7.2 Pacific AOR Tsunami Information Statement (WEPA43)

WEPA43 PAAQ 130942  
TIBWCA

TSUNAMI INFORMATION STATEMENT NUMBER 1  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
142 AM PST SUN JAN 13 2008

...THIS MESSAGE IS FOR TEST PURPOSES TO SHOW AN EXAMPLE  
WEPA43 MESSAGE...

...THIS TEST TSUNAMI INFORMATION STATEMENT IS FOR ALASKA/ BRITISH  
COLUMBIA/ WASHINGTON/ OREGON AND CALIFORNIA ONLY...

NO - REPEAT NO - WARNING... WATCH OR ADVISORY IS IN EFFECT FOR  
THE STATES AND PROVINCES LISTED ABOVE.

### EVALUATION

BASED ON MAGNITUDE AND HISTORIC TSUNAMI RECORDS THE EARTHQUAKE  
WAS NOT SUFFICIENT TO GENERATE A TSUNAMI DAMAGING TO CALIFORNIA/  
OREGON/ WASHINGTON/ BRITISH COLUMBIA OR ALASKA. SOME OF THESE  
AREAS MAY EXPERIENCE NON-DAMAGING SEA LEVEL CHANGES. IN COASTAL  
AREAS OF INTENSE SHAKING LOCALLY GENERATED TSUNAMIS CAN BE  
TRIGGERED BY UNDERWATER LANDSLIDES.

### PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 6.7  
TIME - 0035 AKST JAN 13 2008  
0135 PST JAN 13 2008  
0935 UTC JAN 13 2008  
LOCATION - 42.2 NORTH 124.7 WEST  
100 MILES/161 KM NW OF EUREKA CALIFORNIA  
255 MILES/410 KM SW OF PORTLAND OREGON  
DEPTH - 6 MILES/10 KM

THE PACIFIC TSUNAMI WARNING CENTER IN EWA BEACH HAWAII WILL ISSUE  
MESSAGES FOR HAWAII AND OTHER AREAS OF THE PACIFIC.

THIS WILL BE THE ONLY STATEMENT ISSUED FOR THIS EVENT BY THE  
WEST COAST/ALASKA TSUNAMI WARNING CENTER UNLESS ADDITIONAL  
INFORMATION BECOMES AVAILABLE. REFER TO THE INTERNET SITE  
WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

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

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### 7.3 Alaska Information Statement (SEAK71)

SEAK71 PAAQ 130951  
EQIAKX

TSUNAMI SEISMIC INFORMATION STATEMENT  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
1251 AM AKST SUN JAN 13 2008

...THIS MESSAGE IS FOR TEST PURPOSES TO SHOW AN EXAMPLE  
SEAK71 MESSAGE...

...THIS IS A TEST INFORMATION STATEMENT...

#### EVALUATION

AN EARTHQUAKE HAS OCCURRED WITH A MAGNITUDE SUCH THAT A TSUNAMI  
IS NOT EXPECTED. IN COASTAL AREAS OF INTENSE SHAKING LOCALLY  
GENERATED TSUNAMIS CAN BE TRIGGERED BY UNDERWATER LANDSLIDES.  
THIS WILL BE THE ONLY WCATWC MESSAGE ISSUED FOR THIS EVENT.

#### PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 5.7  
TIME - 0048 AKST JAN 13 2008  
0148 PST JAN 13 2008  
0948 UTC JAN 13 2008  
LOCATION - 59.7 NORTH 145.3 WEST  
60 MILES/97 KM SE OF CORDOVA ALASKA  
190 MILES/306 KM SE OF ANCHORAGE ALASKA  
DEPTH - 6 MILES/10 KM

THE LOCATION AND MAGNITUDE ARE BASED ON PRELIMINARY INFORMATION.  
FURTHER INFORMATION WILL BE ISSUED BY THE UNITED STATES  
GEOLOGICAL SURVEY - EARTHQUAKE.USGS.GOV - OR THE APPROPRIATE  
REGIONAL SEISMIC NETWORK.

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

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## 7.4 U.S. West Coast Information Statement (SEUS71)

SEUS71 PAAQ 130948  
EQIWOC

TSUNAMI SEISMIC INFORMATION STATEMENT  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
148 AM PST SUN JAN 13 2008

...THIS MESSAGE IS FOR TEST PURPOSES TO SHOW AN EXAMPLE  
SEUS71 MESSAGE...

...THIS IS A TEST INFORMATION STATEMENT...

### EVALUATION

AN EARTHQUAKE HAS OCCURRED WITH A MAGNITUDE SUCH THAT A TSUNAMI  
WILL NOT BE GENERATED. THIS WILL BE THE ONLY WCATWC MESSAGE  
ISSUED FOR THIS EVENT.

### PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 5.2  
TIME - 0045 AKST JAN 13 2008  
          0145 PST JAN 13 2008  
          0945 UTC JAN 13 2008  
LOCATION - 52.2 NORTH 129.3 WEST  
          130 MILES/209 KM SE OF SANDSPIT BRITISH COLUMBIA  
          445 MILES/716 KM NW OF SEATTLE WASHINGTON  
DEPTH - 6 MILES/10 KM

THE LOCATION AND MAGNITUDE ARE BASED ON PRELIMINARY INFORMATION.  
FURTHER INFORMATION WILL BE ISSUED BY THE UNITED STATES  
GEOLOGICAL SURVEY - EARTHQUAKE.USGS.GOV - OR THE APPROPRIATE  
REGIONAL SEISMIC NETWORK.

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

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## 7.5 Atlantic AOR Tsunami Warning/Watch (WEXX20)

WEXX20 PAAQ 131000  
TSUAT1

### BULLETIN

TSUNAMI MESSAGE NUMBER 2  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
600 AM AST SUN JAN 13 2008

...THIS MESSAGE IS FOR TEST PURPOSES TO SHOW AN EXAMPLE  
WEXX20 MESSAGE...

...A TEST TSUNAMI WARNING IS IN EFFECT FOR PUERTO RICO AND THE  
VIRGIN ISLANDS...

...A TEST TSUNAMI ADVISORY IS IN EFFECT FOR THE NORTH CAROLINA -  
VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK -  
CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE  
- MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND  
COASTAL AREAS FROM DUCK NORTH CAROLINA TO LA MANCHE  
NEWFOUNDLAND...

...THIS MESSAGE IS INFORMATION ONLY FOR U.S. AND CANADIAN  
ATLANTIC AND GULF OF MEXICO COASTAL REGIONS NOT INCLUDED IN  
THE AREAS LISTED ABOVE...

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD  
INUNDATION IS IMMINENT OR EXPECTED. WARNINGS INDICATE THAT  
WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL  
CURRENTS IS POSSIBLE AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE  
INITIAL WAVE ARRIVAL.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING  
STRONG CURRENTS OR WAVES DANGEROUS TO PERSONS IN OR VERY NEAR THE  
WATER IS IMMINENT OR EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION  
IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY. CURRENTS MAY BE  
HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL STRUCTURES AND MAY  
CONTINUE FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

### RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH COULD CAUSE DAMAGE TO THE  
WARNING AND/OR ADVISORY REGIONS LISTED IN THE HEADLINE. PERSONS  
IN LOW-LYING COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM  
THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED BY  
EMERGENCY RESPONSE AGENCIES.

- PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO  
HIGHER GROUND.
- PERSONS IN TSUNAMI ADVISORY AREAS SHOULD MOVR OUT OF THE  
WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

THIS MESSAGE IS BASED ON EARTHQUAKE DATA... OBSERVED TSUNAMI  
AMPLITUDES... HISTORICAL INFORMATION AND FORECAST MODELS.

A TSUNAMI HAS BEEN OBSERVED AT THE FOLLOWING SITES

LOCATION	LAT	LON	TIME	AMPL
SAN JUAN - PR	18.5N	66.1W	1145UTC	2.0M/6.6FT

TIME - TIME OF MEASUREMENT

AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL.  
IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.  
VALUES ARE GIVEN IN BOTH METERS (M) AND FEET (FT) .

PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 8.2  
TIME - 0455 EST JAN 13 2008  
0555 AST JAN 13 2008  
0955 UTC JAN 13 2008  
LOCATION - 19.5 NORTH 68.6 WEST  
130 MILES/209 KM NW OF MAYAGUEZ PUERTO RICO  
180 MILES/290 KM NW OF SAN JUAN PUERTO RICO  
DEPTH - 16 MILES/25 KM

THE PACIFIC TSUNAMI WARNING CENTER IN EWA BEACH HAWAII WILL  
ISSUE MESSAGES FOR AREAS IN THE CARIBBEAN OUTSIDE PUERTO RICO  
AND THE VIRGIN ISLANDS.

MESSAGES WILL BE ISSUED EVERY 30 MINUTES OR MORE FREQUENTLY IF  
THE SITUATION WARRANTS. THE TSUNAMI ALERT WILL REMAIN IN EFFECT  
UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE  
WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

AMZ710-720-730-740-750-PRZ001>003-005-007-008-010-011-VIZ001-  
002-131100-  
COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.  
600 AM AST SUN JAN 13 2008

...A TEST TSUNAMI WARNING IS IN EFFECT FOR PUERTO RICO AND THE  
VIRGIN ISLANDS...

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD  
INUNDATION IS IMMINENT OR EXPECTED. TSUNAMIS ARE A SERIES OF  
WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL  
TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED  
SITES IN THE WARNING ARE PROVIDED BELOW.

SAN JUAN-PR 0620 AST JAN 13 CHRISTIANSTED-VI 0643 AST JAN 13  
MAYAGUEZ-PR 0624 AST JAN 13 CHARLOT AMALI-VI 0700 AST JAN 13  
FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
WCATWC.ARH.NOAA.GOV

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ANZ631>633-656-658-650-652-654-430-431-450>455-330-335-338-  
350-353-355-230>237-250-254-255-150-050>052-081-NCZ015>017-  
030>032-102-VAZ084-086-091-094-095-098-099-100-MDZ025-DEZ002>004-  
NJZ005-006-011>014-021-023>026-NYZ071>081-CTZ009>012-RIZ002-  
005>007-MAZ007-019>024-016-NHZ014-MEZ022>028-029-030-131100-  
COASTAL AREAS FROM DUCK NORTH CAROLINA TO LA MANCHE  
NEWFOUNDLAND  
600 AM AST SUN JAN 13 2008

...A TEST TSUNAMI ADVISORY IS IN EFFECT FOR THE NORTH CAROLINA -  
VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK -  
CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE  
- MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND  
COASTAL AREAS FROM DUCK NORTH CAROLINA TO LA MANCHE  
NEWFOUNDLAND...

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING  
STRONG CURRENTS OR WAVES DANGEROUS TO PERSONS IN OR VERY NEAR  
WATER IS IMMINENT OF EXPECTED. SIGNIFICANT WIDESPREAD INUNDATION  
IS NOT EXPECTED FOR AREAS IN AN ADVISORY. TSUNAMIS ARE A SERIES OF  
WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL  
TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED  
SITES IN THE WARNING ARE PROVIDED BELOW.

LOCKEPORT-NS 1024 AST JAN 13 ST LAWRENCE-NL 1158 NST JAN 13  
MONTAUK-NY 0927 EST JAN 13 GRAND MANAN-NB 1137 AST JAN 13  
VIRGINIA BCH-VA 0928 EST JAN 13 MANHATTAN-NY 1053 EST JAN 13  
ATLANTIC CITY-NJ 0935 EST JAN 13 PORTLAND-ME 1111 EST JAN 13  
NANTUCKET IS-MA 1003 EST JAN 13 BOSTON-MA 1126 EST JAN 13  
SCATARIE IS-NS 1125 AST JAN 13

FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
WCATWC.ARH.NOAA.GOV

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

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## 7.6 Atlantic AOR Tsunami Information Statement (WEXX22)

WEXX22 PAAQ 131012  
TIBAT1

TSUNAMI INFORMATION STATEMENT NUMBER 1  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
512 AM EST SUN JAN 13 2008

...THIS MESSAGE IS FOR TEST PURPOSES TO SHOW AN EXAMPLE  
WEXX22 MESSAGE...

...THIS TEST TSUNAMI INFORMATION STATEMENT IS FOR PUERTO RICO/  
THE VIRGIN ISLANDS/ THE U.S. ATLANTIC AND GULF OF  
MEXICO STATES/ AND EASTERN CANADIAN PROVINCES...

NO - REPEAT NO - WARNING... WATCH OR ADVISORY IS IN EFFECT FOR  
THESE AREAS.

### EVALUATION

BASED ON EARTHQUAKE DATA AND HISTORIC TSUNAMI RECORDS THE  
EARTHQUAKE WAS NOT SUFFICIENT TO GENERATE A TSUNAMI DAMAGING TO  
PUERTO RICO/ THE VIRGIN ISLANDS/ THE U.S. ATLANTIC AND GULF  
OF MEXICO COASTS/ AND EASTERN CANADA.

HOWEVER - EARTHQUAKES OF THIS SIZE SOMETIMES GENERATE  
TSUNAMIS THAT CAN BE DESTRUCTIVE ALONG COASTS LOCATED IN THE  
REGION OF THE EARTHQUAKE EPICENTER. AUTHORITIES IN THE REGION  
SHOULD BE AWARE OF THIS POSSIBILITY AND TAKE APPROPRIATE ACTION.

### PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.4  
TIME - 0505 EST JAN 13 2008  
0405 CST JAN 13 2008  
1005 UTC JAN 13 2008  
LOCATION - 38.8 NORTH 10.9 WEST  
- NORTH ATLANTIC OCEAN  
DEPTH - 21 MILES/33 KM

THE PACIFIC TSUNAMI WARNING CENTER IN EWA BEACH HAWAII WILL  
ISSUE MESSAGES FOR AREAS IN THE CARIBBEAN OUTSIDE PUERTO RICO  
AND THE VIRGIN ISLANDS.

THIS WILL BE THE ONLY STATEMENT ISSUED FOR THIS EVENT BY THE  
WEST COAST/ALASKA TSUNAMI WARNING CENTER UNLESS ADDITIONAL  
INFORMATION BECOMES AVAILABLE. REFER TO THE INTERNET SITE  
WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

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

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## 7.7 Atlantic Information Statement (SEXX60)

SEXX60 PAAQ 131018  
EQIAT1

TSUNAMI SEISMIC INFORMATION STATEMENT  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
518 AM EST SUN JAN 13 2008

...THIS MESSAGE IS FOR TEST PURPOSES TO SHOW AN EXAMPLE  
SEXX60 MESSAGE...

...THIS IS A TEST INFORMATION STATEMENT...

### EVALUATION

AN EARTHQUAKE HAS OCCURRED WITH A MAGNITUDE SUCH THAT A TSUNAMI  
WILL NOT BE GENERATED. THIS WILL BE THE ONLY WCATWC MESSAGE  
ISSUED FOR THIS EVENT.

### PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 5.4  
TIME - 0510 EST JAN 13 2008  
0410 CST JAN 13 2008  
1010 UTC JAN 13 2008  
LOCATION - 42.1 NORTH 70.5 WEST  
50 MILES/80 KM NE OF PROVIDENCE RHODE ISLAND  
35 MILES/56 KM SE OF BOSTON MASSACHUSETTS  
DEPTH - 21 MILES/33 KM

THE LOCATION AND MAGNITUDE ARE BASED ON PRELIMINARY INFORMATION.  
FURTHER INFORMATION WILL BE ISSUED BY THE UNITED STATES  
GEOLOGICAL SURVEY - EARTHQUAKE.USGS.GOV - OR THE APPROPRIATE  
REGIONAL SEISMIC NETWORK.

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

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## 7.8 Pacific AOR Public Tsunami Warning/Watch/Advisory (WEAK51)

WEAK51 PAAQ 130850  
TSUAK1

### BULLETIN

PUBLIC TSUNAMI MESSAGE NUMBER 1  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
1150 PM AKST SAT JAN 12 2008

...THIS MESSAGE IS FOR TEST PURPOSES TO SHOW AN EXAMPLE  
WEAK51 MESSAGE...

...A TEST TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE ALASKA  
COASTAL AREAS FROM KODIAK ALASKA TO ATTU ALASKA...

...A TEST TSUNAMI WATCH IS IN EFFECT FOR THE CALIFORNIA - OREGON  
- WASHINGTON - BRITISH COLUMBIA AND ALASKA COASTAL AREAS  
FROM POINT REYES CALIFORNIA TO KODIAK ALASKA...

...THIS MESSAGE IS INFORMATION ONLY FOR U.S. AND CANADIAN  
PACIFIC COASTAL REGIONS NOT INCLUDED IN THE AREAS LISTED  
ABOVE...

A TSUNAMI WARNING MEANS... ALL COASTAL RESIDENTS IN THE WARNING  
AREA WHO ARE NEAR THE BEACH OR IN LOW-LYING REGIONS SHOULD MOVE  
IMMEDIATELY INLAND TO HIGHER GROUND AND AWAY FROM ALL HARBORS AND  
INLETS INCLUDING THOSE SHELTERED DIRECTLY FROM THE SEA. THOSE  
FEELING THE EARTH SHAKE... SEEING UNUSUAL WAVE ACTION... OR THE  
WATER LEVEL RISING OR RECEDING MAY HAVE ONLY A FEW MINUTES BEFORE  
THE TSUNAMI ARRIVAL AND SHOULD MOVE IMMEDIATELY. HOMES AND  
SMALL BUILDINGS ARE NOT DESIGNED TO WITHSTAND TSUNAMI IMPACTS.  
DO NOT STAY IN THESE STRUCTURES.

ALL RESIDENTS WITHIN THE WARNED AREA SHOULD BE ALERT FOR  
INSTRUCTIONS BROADCAST FROM THEIR LOCAL CIVIL AUTHORITIES. THIS  
TSUNAMI WARNING IS BASED SOLELY ON EARTHQUAKE INFORMATION - THE  
TSUNAMI HAS NOT YET BEEN CONFIRMED.

A TSUNAMI WATCH MEANS... ALL COASTAL RESIDENTS IN THE WATCH AREA  
SHOULD PREPARE FOR POSSIBLE EVACUATION. A TSUNAMI WATCH IS ISSUED  
TO AREAS WHICH WILL NOT BE IMMEDIATELY IMPACTED BY THE TSUNAMI.  
WATCH AREAS WILL EITHER BE UPGRADED TO WARNING OR ADVISORY STATUS  
OR CANCELED.

AT 1145 PM ALASKAN STANDARD TIME ON JANUARY 12 AN EARTHQUAKE WITH  
PRELIMINARY MAGNITUDE 7.9 OCCURRED 45 MILES/72 KM NORTHWEST OF  
ATKA VILLAGE ALASKA.  
THIS EARTHQUAKE MAY HAVE GENERATED A TSUNAMI. IF A TSUNAMI  
HAS BEEN GENERATED THE WAVES WILL FIRST REACH  
ADAK ALASKA AT 009 AM AKST ON JANUARY 13.  
ESTIMATED TSUNAMI ARRIVAL TIMES AND MAPS ALONG WITH SAFETY RULES  
AND OTHER INFORMATION CAN BE FOUND ON THE WEB SITE  
WCATWC.ARH.NOAA.GOV.

TSUNAMIS CAN BE DANGEROUS WAVES THAT ARE NOT SURVIVABLE. WAVE  
HEIGHTS ARE AMPLIFIED BY IRREGULAR SHORELINE AND ARE DIFFICULT TO  
FORECAST. TSUNAMIS OFTEN APPEAR AS A STRONG SURGE AND MAY BE  
PRECEDED BY A RECEDING WATER LEVEL. MARINERS IN WATER DEEPER  
THAN 600 FEET SHOULD NOT BE AFFECTED BY A TSUNAMI. WAVE HEIGHTS  
WILL INCREASE RAPIDLY AS WATER SHALLOWS. TSUNAMIS ARE A SERIES OF  
OCEAN WAVES WHICH CAN BE DANGEROUS FOR SEVERAL HOURS AFTER THE  
INITIAL WAVE ARRIVAL. DO NOT RETURN TO EVACUATED AREAS UNTIL AN  
ALL CLEAR IS GIVEN BY LOCAL CIVIL AUTHORITIES.

THE PACIFIC TSUNAMI WARNING CENTER IN EWA BEACH HAWAII WILL ISSUE  
MESSAGES FOR HAWAII AND OTHER AREAS OF THE PACIFIC OUTSIDE  
CALIFORNIA/ OREGON/ WASHINGTON/ BRITISH COLUMBIA AND ALASKA.

MESSAGES WILL BE ISSUED EVERY 30 MINUTES OR MORE FREQUENTLY IF  
THE SITUATION WARRANTS. THE TSUNAMI ALERT WILL REMAIN  
IN EFFECT UNTIL FURTHER NOTICE. FOR FURTHER INFORMATION STAY TUNED  
TO NOAA WEATHER RADIO... YOUR LOCAL TV OR RADIO STATIONS... OR SEE  
THE WEB SITE [WCATWC.ARH.NOAA.GOV](http://WCATWC.ARH.NOAA.GOV).

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

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## 7.9 Pacific AOR Public Tsunami Information Statement (WEAK53)

WEAK53 PAAQ 130942  
TIBAK1

PUBLIC TSUNAMI INFORMATION STATEMENT NUMBER 1  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
142 AM PST SUN JAN 13 2008

...THIS MESSAGE IS FOR TEST PURPOSES TO SHOW AN EXAMPLE  
WEAK53 MESSAGE...

...A STRONG EARTHQUAKE HAS OCCURRED BUT A TSUNAMI IS NOT  
EXPECTED ALONG THE CALIFORNIA/ OREGON/ WASHINGTON/  
BRITISH COLUMBIA OR ALASKA COASTS...

NO - REPEAT NO - WARNING... WATCH OR ADVISORY IS IN EFFECT FOR  
THESE AREAS.

BASED ON THE EARTHQUAKE MAGNITUDE AND HISTORIC TSUNAMI RECORDS  
A DAMAGING TSUNAMI IS NOT EXPECTED ALONG  
THE CALIFORNIA/ OREGON/ WASHINGTON/ BRITISH COLUMBIA AND ALASKA  
COASTS. SOME OF THESE AREAS MAY EXPERIENCE NON-DAMAGING SEA  
LEVEL CHANGES. AT COASTAL LOCATIONS WHICH HAVE EXPERIENCED  
STRONG GROUND SHAKING LOCAL TSUNAMIS ARE POSSIBLE DUE  
TO UNDERWATER LANDSLIDES.

AT 135 AM PACIFIC STANDARD TIME ON JANUARY 13 AN EARTHQUAKE WITH  
PRELIMINARY MAGNITUDE 6.7 OCCURRED 100 MILES/161 KM NORTHWEST OF  
EUREKA CALIFORNIA.

THE PACIFIC TSUNAMI WARNING CENTER IN EWA BEACH HAWAII WILL ISSUE  
MESSAGES FOR HAWAII AND OTHER AREAS OF THE PACIFIC OUTSIDE  
CALIFORNIA/ OREGON/ WASHINGTON/ BRITISH COLUMBIA AND ALASKA.

THIS WILL BE THE ONLY STATEMENT ISSUED FOR THIS EVENT BY THE  
WEST COAST/ALASKA TSUNAMI WARNING CENTER UNLESS ADDITIONAL  
INFORMATION BECOMES AVAILABLE. SEE THE WEB SITE WCATWC.ARH.NOAA.GOV  
FOR BASIC TSUNAMI INFORMATION - SAFETY RULES AND TSUNAMI TRAVEL  
TIMES.

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

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## 7.10 Atlantic AOR Public Tsunami Warning/Watch/Advisory (WEXX30)

WEXX30 PAAQ 131000  
TSUATE

BULLETIN  
PUBLIC TSUNAMI MESSAGE NUMBER 2  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
600 AM AST SUN JAN 13 2008

...THIS MESSAGE IS FOR TEST PURPOSES TO SHOW AN EXAMPLE  
WEXX30 MESSAGE...

...A TEST TSUNAMI WARNING IS IN EFFECT FOR PUERTO RICO AND THE  
VIRGIN ISLANDS...

...A TEST TSUNAMI ADVISORY IS IN EFFECT FOR THE NORTH CAROLINA -  
VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK -  
CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE  
- MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND  
COASTAL AREAS FROM DUCK NORTH CAROLINA TO LA MANCHE  
NEWFOUNDLAND...

...THIS MESSAGE IS INFORMATION ONLY FOR U.S. AND CANADIAN  
ATLANTIC AND GULF OF MEXICO COASTAL REGIONS NOT INCLUDED IN  
THE AREAS LISTED ABOVE...

A TSUNAMI WARNING MEANS... ALL COASTAL RESIDENTS IN THE WARNING  
AREA WHO ARE NEAR THE BEACH OR IN LOW-LYING REGIONS SHOULD MOVE  
IMMEDIATELY INLAND TO HIGHER GROUND AND AWAY FROM ALL HARBORS AND  
INLETS INCLUDING THOSE SHELTERED DIRECTLY FROM THE SEA. THOSE  
FEELING THE EARTH SHAKE... SEEING UNUSUAL WAVE ACTION... OR THE  
WATER LEVEL RISING OR RECEDING MAY HAVE ONLY A FEW MINUTES BEFORE  
THE TSUNAMI ARRIVAL AND SHOULD MOVE IMMEDIATELY. HOMES AND  
SMALL BUILDINGS ARE NOT DESIGNED TO WITHSTAND TSUNAMI IMPACTS.  
DO NOT STAY IN THESE STRUCTURES.

ALL RESIDENTS WITHIN THE WARNED AREA SHOULD BE ALERT FOR  
INSTRUCTIONS BROADCAST FROM THEIR LOCAL CIVIL AUTHORITIES.  
A TSUNAMI HAS BEEN RECORDED.

A TSUNAMI ADVISORY MEANS THAT A TSUNAMI CAPABLE OF PRODUCING  
STRONG CURRENTS OR WAVES DANGEROUS TO PERSONS IN OR VERY NEAR  
THE WATER IS IMMINENT OR EXPECTED. SIGNIFICANT WIDESPREAD  
INUNDATION IS NOT EXPECTED FOR AREAS UNDER AN ADVISORY.  
CURRENTS MAY BE HAZARDOUS TO SWIMMERS... BOATS... AND COASTAL  
STRUCTURES AND MAY CONTINUE FOR SEVERAL HOURS AFTER THE  
INITIAL WAVE ARRIVAL.

AT 555 AM ATLANTIC STANDARD TIME ON JANUARY 13 AN EARTHQUAKE WITH  
PRELIMINARY MAGNITUDE 8.2 OCCURRED 130 MILES/209 KM NORTHWEST OF  
MAYAGUEZ PUERTO RICO.  
THIS EARTHQUAKE HAS GENERATED A TSUNAMI WHICH COULD CAUSE DAMAGE  
TO REGIONS IN A WARNING OR ADVISORY. THE WAVES WILL FIRST REACH  
SAN JUAN PUERTO RICO AT 620 AM AST ON JANUARY 13.  
ESTIMATED TSUNAMI ARRIVAL TIMES AND MAPS ALONG WITH SAFETY RULES  
AND OTHER INFORMATION CAN BE FOUND ON THE WEB SITE  
WCATWC.ARH.NOAA.GOV.

A TSUNAMI HAS BEEN OBSERVED AT THE FOLLOWING SITES

LOCATION	LAT	LON	TIME	AMPL
SAN JUAN - PR	18.5N	66.1W	1045UTC	2.0M/6.6FT

TIME - TIME OF MEASUREMENT  
AMPL - TSUNAMI AMPLITUDES ARE MEASURED RELATIVE TO NORMAL SEA LEVEL.  
IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.  
VALUES ARE GIVEN IN BOTH METERS(M) AND FEET(FT) .

TSUNAMIS CAN BE DANGEROUS WAVES THAT ARE NOT SURVIVABLE. WAVE HEIGHTS ARE AMPLIFIED BY IRREGULAR SHORELINE AND ARE DIFFICULT TO FORECAST. TSUNAMIS OFTEN APPEAR AS A STRONG SURGE AND MAY BE PRECEDED BY A RECEDING WATER LEVEL. MARINERS IN WATER DEEPER THAN 600 FEET SHOULD NOT BE AFFECTED BY A TSUNAMI. WAVE HEIGHTS WILL INCREASE RAPIDLY AS WATER SHALLOWS. TSUNAMIS ARE A SERIES OF OCEAN WAVES WHICH CAN BE DANGEROUS FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL. DO NOT RETURN TO EVACUATED AREAS UNTIL AN ALL CLEAR IS GIVEN BY LOCAL CIVIL AUTHORITIES.

THE PACIFIC TSUNAMI WARNING CENTER IN EWA BEACH HAWAII WILL ISSUE MESSAGES FOR AREAS IN THE CARIBBEAN OUTSIDE PUERTO RICO AND THE VIRGIN ISLANDS.

MESSAGES WILL BE ISSUED EVERY 30 MINUTES OR MORE FREQUENTLY IF THE SITUATION WARRANTS. THE TSUNAMI ALERT WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. FOR FURTHER INFORMATION STAY TUNED TO NOAA WEATHER RADIO... YOUR LOCAL TV OR RADIO STATIONS... OR SEE THE WEB SITE WCATWC.ARH.NOAA.GOV.

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

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## 7.11 Atlantic AOR Public Tsunami Information Statement (WEXX32)

WEXX32 PAAQ 131012  
TIBATE

PUBLIC TSUNAMI INFORMATION STATEMENT NUMBER 1  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
512 AM EST SUN JAN 13 2008

...THIS MESSAGE IS FOR TEST PURPOSES TO SHOW AN EXAMPLE  
WEXX32 MESSAGE...

...A STRONG EARTHQUAKE HAS OCCURRED BUT A TSUNAMI IS NOT  
EXPECTED ALONG THE COASTS OF PUERTO RICO/ THE VIRGIN  
ISLANDS/ U.S. ATLANTIC AND GULF OF MEXICO STATES/ AND EASTERN  
CANADIAN PROVINCES...

NO - REPEAT NO - WARNING... WATCH OR ADVISORY IS IN EFFECT FOR  
THESE AREAS.

BASED ON THE EARTHQUAKE LOCATION - MAGNITUDE AND HISTORIC TSUNAMI  
RECORDS A DAMAGING TSUNAMIS IS NOT EXPECTED ALONG THE PUERTO RICO/  
VIRGIN ISLANDS/ U.S. ATLANTIC/ EASTERN CANADIAN AND GULF OF  
MEXICO COASTS. EARTHQUAKES OF THIS SIZE CAN GENERATE DESTRUCTIVE  
TSUNAMIS ALONG THE COAST NEAR THE EPICENTER. AUTHORITIES IN THE  
EPICENTRAL REGION SHOULD BE AWARE OF THIS POSSIBILITY AND TAKE  
APPROPRIATE ACTION.

AT 505 AM EASTERN STANDARD TIME ON JANUARY 13 AN EARTHQUAKE WITH  
PRELIMINARY MAGNITUDE 7.4 OCCURRED  
IN THE NORTH ATLANTIC OCEAN.

THE PACIFIC TSUNAMI WARNING CENTER IN EWA BEACH HAWAII WILL  
ISSUE MESSAGES FOR AREAS IN THE CARIBBEAN OUTSIDE PUERTO RICO  
AND THE VIRGIN ISLANDS.

THIS WILL BE THE ONLY STATEMENT ISSUED FOR THIS EVENT BY THE  
WEST COAST/ALASKA TSUNAMI WARNING CENTER UNLESS ADDITIONAL  
INFORMATION BECOMES AVAILABLE. SEE THE WEB SITE WCATWC.ARH.NOAA.GOV  
FOR BASIC TSUNAMI INFORMATION - SAFETY RULES AND TSUNAMI TRAVEL  
TIMES.

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

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