

# Ejercicio

# LANTEX 10

Manual del Participante

Un ejercicio de aviso de tsunami (maremoto)  
para el Atlántico-Noroeste  
24 de marzo de 2010

Programa Nacional para la Mitigación y Amenaza de Tsunamis  
Subcomité de Coordinación de Avisos



Traducción del inglés al español por la Red Sísmica de Puerto Rico, UPRM

**NOTA:** Este manual está adaptado del manual “Exercise Pacific Wave 08” publicado por la Comisión Oceanográfica Intergubernamental. Citación: “Exercise Pacific Wave 08. A Pacific-wide Tsunami Warning and Communication Exercise”, 28-30 de octubre de 2008. IOC Technical Series No. 82 París, UNESCO, 2008; y el Manual de LANTEX 09.

EJERCICIO

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## 1. Trasfondo

Este ejercicio de tsunami (maremoto) se realiza para ayudar en los esfuerzos de preparación ante un tsunami a lo largo de la costa este de Estados Unidos de America (EUA) y Canadá, la costa del Golfo de México, en Puerto Rico y las Islas Vírgenes. Récor ds históricos de tsunamis del Centro Nacional de Datos Geofísicos (NGDC, por sus siglas en inglés) y de la Administración Atmosférica y Oceánica Nacional (NOAA, por sus siglas en inglés) indican que aproximadamente 85% de los tsunamis oceánicos mundiales ocurren en la Cuenca del Pacífico. La ocurrencia histórica de tsunamis destructivos a lo largo de las costas atlánticas de EUA y Canadá sugieren que estos eventos son raros, aun así existen algunas áreas en la cuenca atlántica en donde ocurren terremotos con el potencial para desarrollar tsunamis destructivos que podrían impactar la costa de EUA y Canadá. Estas áreas incluyen las costas de Puerto Rico, Islas Vírgenes Americanas, la región este de las Islas Azores y porciones del talud continental de la costa de EUA y Canadá debido a deslizamientos submarinos.

Una de las lecciones aprendidas del destructivo tsunami del Océano Índico nos demuestra que aún áreas raramente impactadas por tsunamis pueden sufrir daños tremendos y muertes si la gente que vive en o viaja a esas áreas no están preparadas.

Las estadísticas obtenidas de la base de datos de tsunamis del NGDC indican que las Islas Vírgenes Americanas fueron golpeadas, en 1867 por un tsunami de hasta 8 m de altura que provocó la muerte de 30 personas. Sobre 140 personas murieron en el oeste de Puerto Rico por un tsunami de 6 m de altura ocurrido en 1918. El Caribe es una región de bordes de placas tectónicas complejos que proveen el mecanismo para que los terremotos provoquen grandes tsunamis.

Otra área, en el Océano Atlántico, capaz de producir grandes terremotos es la región entre Portugal y las Islas Azores. En 1755 un terremoto localizado en esta región con una magnitud estimada en más de 8.0, generó un tsunami de hasta 30 m en Portugal. Este tsunami fue ampliamente registrado alrededor del Atlántico produciendo daños en varios lugares, incluyendo Canadá y el Caribe.

Más cerca a la costa atlántica canadiense, en 1929, un terremoto de magnitud 7.2 generó un gran deslizamiento submarino que provocó un tsunami. Este tsunami alcanzó una amplitud de 7 m en Terranova y causó la muerte a 22 personas. Estudios recientes del talud continental a lo largo de la costa este de EUA muestran que este tipo de tsunami ha ocurrido varias veces en los pasados 10,000 años.

NOAA opera un sistema de alerta de tsunamis para las costas del Atlántico de EUA y el Golfo de México, este de Canadá, Puerto Rico y las Islas Vírgenes a través de su Centro de Alerta de Tsunamis de la Costa Oeste y Alaska (WCATWC, por sus siglas en inglés) sede en Palmer, Alaska. Este centro provee avisos, vigilancias, advertencias y declaraciones de información de tsunamis a estas costas, aproximadamente cinco minutos después de ocurrido

un terremoto. Los destinatarios primarios para los mensajes del atlántico del WCATWC incluyen: las Oficinas de Pronóstico del Tiempo (WFO, por sus siglas en inglés) del Servicio Nacional de Meteorología (NWS, por sus siglas en inglés); los puntos de aviso y centros de operaciones de emergencia del estatal o territorial; la Guardia Costanera de EUA; el Centro de Predicción de Tormentas del Atlántico de Canadá; y el ejército de EUA. Estas agencias transmiten el mensaje a la gente que podría ser impactada por un tsunami. El Centro de Alerta de Tsunamis del Pacífico (PTWC, por sus siglas en inglés) de NOAA en Ewa Beach, Hawaii provee un servicio similar a nivel internacional para el Mar Caribe. La Red Sísmica de Puerto Rico (RSPR) de la Universidad de Puerto Rico en Mayagüez también provee información de terremotos y tsunamis, así como servicio de alerta de tsunami para Puerto Rico y las Islas Vírgenes en coordinación con WCATWC.

NOAA y el Programa Nacional para la Mitigación y Amenaza de Tsunamis (NTHMP, por sus siglas en inglés) proveen la estructura de este ejercicio para que el personal de respuesta a emergencias en la costa atlántica y Puerto Rico/Islas Vírgenes (PR/IV) puedan probar y actualizar sus planes de respuesta ante un tsunami. Los altos niveles de vulnerabilidad a lo largo de la costa atlántica (al igual que la analogía del Océano Índico) deben proveer un incentivo fuerte para que las jurisdicciones locales se preparen para un tsunami.

Este ejercicio proveerá los mensajes de alerta de tsunami simulados desde el WCATWC. Este tsunami será producido por un terremoto hipotético localizado a 90 millas al sur de Nantucket, Massachusetts (MA) y a 170 millas al sureste de Boston, MA (en las coordenadas 40.0°N, 70.0°O). Ejercicios como éste aseguran que las comunidades de la costa atlántica de EUA, Canadá y del Caribe estén preparadas para responder en el caso de un tsunami. Ejercicios realizados recientemente en la Cuenca del Pacífico han sido efectivos en fortalecer los niveles de preparación de las organizaciones de manejo de emergencia.

## **2. Concepto del ejercicio**

### **2.1 Propósito**

El propósito de este ejercicio es mejorar la efectividad del Sistema de Alerta de Tsunami a lo largo de la costa atlántica de EUA, Canadá y el Caribe. El ejercicio provee una oportunidad para las organizaciones de manejo de emergencia a lo largo de la costa atlántica y Puerto Rico/Islas Vírgenes para ejercitar sus líneas operacionales de comunicación, revisar sus procedimientos de respuesta a tsunami y promover la preparación ante un tsunami. Probar regularmente los planes de respuesta es crucial para estar mejor preparados ante una emergencia. Esto es, particularmente, cierto para los tsunamis ya que son eventos infrecuentes pero de gran impacto. Se fomenta la participación de todas las organizaciones de manejo de emergencia (OME) de la costa atlántica de Estados Unidos y Canadá.

## 2.2 Objetivos

Cada organización puede desarrollar objetivos propios para este ejercicio, dependiendo de su nivel de participación en el escenario. Los objetivos principales del ejercicio son los siguientes:

- Asegurar la transmisión de mensajes de WCATWC a través de los contactos primarios a las OME costeras y probar la coordinación con la RSPR.
- Probar los planes de respuesta de tsunami para las OME costeras del Atlántico y de PR/IV que tienen planes desarrollados y proveer un catalítico para aquellas OME que aún no han desarrollado uno.
- Que las OME costeras revisen, discutan y evalúen varias de las opciones de comunicación para recibir y diseminar mensajes de tsunami.
- Que las OME costeras revisen, discutan y evalúen posibles acciones y retos de respuesta ante un tsunami.
- Identificar procesos para emitir notificaciones locales de “all clear”.

## 2.3 Tipo de ejercicio

El ejercicio debe llevarse a cabo de manera tal que las comunicaciones y la toma de decisiones, en los varios niveles organizacionales, se lleven a cabo sin interrumpir y alarmar al público general. Sin embargo, los participantes individuales pueden (a su discreción) extender el ejercicio para probar los sistemas de notificación locales como sirenas o altoparlantes.

Los ejercicios estimulan el desarrollo, entrenamiento, pruebas y evaluación de los Planes de Desastre y Procedimientos Estándares de Operaciones. Los participantes pueden usar los ejercicios de peligros múltiples (inundación, huracán, terremoto, tsunami, LANTEX09, etc.) que tengan preparados previamente como esquema para conducir LANTEX 10.

Los ejercicios se pueden conducir en varias escalas de magnitud y sofisticación. Los ejemplos siguientes muestran diferentes tipos de ejercicios conducidos por las OME.

**1. Ejercicio de Orientación (Seminario):** Un ejercicio de orientación o seminario establece la base para un programa comprensivo de ejercicio. Es un evento planificado, desarrollado para unir individuos y oficiales con un papel o interés en planificación de respuesta a peligros múltiples, solución de problemas, desarrollo de procedimientos de estándares de operaciones e integración y coordinación e integración de recursos. Un ejercicio de orientación tendrá una meta específica y objetivos escritos y resultará en un Plan de Acción acordado.

**2. Ejercicio de Práctica (Drill):** El ejercicio de práctica es una actividad planificada que prueba, desarrolla y/o mantiene las habilidades en uno o pocos procedimientos de respuesta a emergencias. Las prácticas generalmente involucran respuestas operacionales de departamentos o agencias. Las prácticas pueden involucrar notificaciones internas y/o actividades en el campo.

**3. Ejercicio de mesa/teórico:** El ejercicio de mesa es una actividad planificada en la cual oficiales locales, personal clave y organizaciones con responsabilidades de manejo de emergencia son expuestos a situaciones de emergencia simuladas. Se desarrolla de manera informal, en una sala de conferencias y es diseñado para provocar discusiones constructivas entre los participantes. Los participantes examinarán e intentarán resolver problemas basados en planes y procedimientos existentes. Se exhorta a los individuos a discutir decisiones a profundidad con énfasis en la solución de problemas a paso lento contrario a la toma de decisiones a tiempo real. Un ejercicio de mesa debería tener metas y objetivos específicos y una narrativa del escenario (en el Anejo A se presenta un ejemplo de un ejercicio de mesa).

**4. Ejercicio funcional:** Un ejercicio funcional es una actividad planificada diseñada para probar y evaluar las capacidades de la organización. También es utilizada para evaluar la capacidad del sistema de manejo de emergencia de una comunidad probando el Plan de Operaciones de Emergencia. El mismo está basado en una simulación de una situación de emergencia realista, que incluye una descripción de la situación (narrativa) con comunicaciones entre participantes y simuladores. El ejercicio funcional le da a los participantes (quienes toman las decisiones) una experiencia completamente simulada de estar en un evento de desastre a gran escala. El mismo debe desarrollarse en el lugar de coordinación apropiado (es decir, en un centro de operaciones de emergencia, centro de mando de emergencia, puesto de mando, centro de control, etc) y activar a todos los miembros designados en el plan. Agencias internas y externas (gobierno, sector privado y agencias de voluntarios) deben involucrarse. Se requieren participantes, directores, simuladores y evaluadores. El envío de mensajes será simulado e insertado por el equipo de control para que los participantes tomen las correspondientes acciones y respuestas, bajo condiciones reales de tiempo limitado. Podría o no incluir desalojos del público. El ejercicio funcional deberá tener metas y objetivos específicos y una narrativa del escenario.

**5. Ejercicio a gran escala:** Un ejercicio a gran escala es la culminación de un programa de ejercicios progresivos que ha crecido junto a la capacidad de la comunidad para conducir los mismos. El ejercicio a gran escala es una actividad planificada en un ambiente "retante" que abarca la mayoría de las funciones de manejo de emergencia. Este tipo de ejercicio involucra la movilización y despliegue del personal apropiado y de recursos necesarios con el fin de demostrar las capacidades operacionales. Se requiere la activación de centros de operación de emergencias y otros centros de comando. El ejercicio a gran escala es el más grande, costoso y complejo dentro de los distintos tipos de ejercicio. Este podría o no incluir desalojos del público.

### Ejemplos de Periodos de tiempo para los diferentes tipos de ejercicio

Tipo	Periodo de planificación	Duración	Comentarios
Seminario	2 semanas	1 día	Individuos o grupos mixtos
Práctica (Drill)	2 días	1 día	Generalmente individuos o grupos técnicos
Ejercicio de mesa o teórico	2 semanas	1-3 días	Una o múltiples agencias
Ejercicio funcional	1-2 meses	1-5 días	Participación multi- agencial
Ejercicio a gran escala	2-6 meses	1 día/semana	Participación multi- agencial

## 3. Bosquejo del ejercicio

### 3.1 General

El escenario para este ejercicio comenzará con un terremoto de magnitud 7.5 (mayor) a 90 millas de sur de Nantucket, Massachusetts (MA) y 170 millas al sureste de Boston, MA (en las coordenadas 40.0°N y 70.0°O). El sismo ocurrirá a 13:00 UTC, el 24 de marzo de 2010 e inmediatamente genera un deslizamiento submarino de sedimentos de unos 100 km cúbicos, deslizándose hacia el sur desde las coordenadas 40.0°N y 70.0°O a un máximo de 50 metros/segundo. El ancho del deslizamiento es 30 km y el largo del bloque es de 20 km. El levantamiento (“uplift”) del temblor no genera un tsunami significativo, pero el deslizamiento genera un tsunami destructivo a lo largo de algunas porciones de la costa este, así como en Puerto Rico y las Islas Vírgenes (con amplitudes de tsunami sobre los 1.5 m). Un tsunami moderado, aunque dañino es observado a lo largo de otras partes de la costa atlántica estadounidense y canadiense (con amplitudes de tsunami entre 0.5 a 1.5 m). Gran parte de las regiones a lo largo de la costa no experimentan inundaciones mayores, aunque todas las áreas experimentan corrientes fuertes que podrían producir daños significativos a botes, puertos y muelles, al igual que hace muy peligroso el nadar.

Inicialmente, se genera un aviso para la región epicentral, y luego se expande para incluir gran parte de la costa este de EUA y Canadá, al igual que a Puerto Rico y las Islas Vírgenes. Se genera una advertencia para el Golfo de Méjico, Labrador y partes de Terranova. El Anejo B muestra las amplitudes esperadas a lo largo de la costa del deslizamiento. Es importante señalar que estas amplitudes serían las registradas por los mareógrafos y no necesariamente reflejan el nivel de inundación real esperado a lo largo de la costa. Típicamente, los niveles de inundación vertical pueden exceder el doble de la altura de los niveles observados por los mareógrafos.

WCATWC no transmitirá mensajes en vivo (tiempo real) durante el ejercicio. Sólo transmitirá el mensaje inicial "dummy" a través de rutas de comunicación estándar, para dar inicio al ejercicio a las 9:05 am (hora local) del 24 de marzo de 2010. El contenido de este mensaje "dummy" se presenta en el Anejo C. El mensaje "dummy" indicará que los participantes del ejercicio deberán referirse al primer



mensaje provisto en este manual. De ahí en adelante, los participantes deben seguir el programa que se presenta en la Tabla 1 para abrir y leer los mensajes subsiguientes. La Tabla 1 presenta el tiempo de emisión de los mensajes de WCATWC si este fuera un evento real. Estos mensajes deberán ser usados por las OME para correr el tiempo del ejercicio. Los mensajes (en el Anejo D) cubren un periodo de 13 horas, aunque en un evento real pudieran durar más tiempo. Los encabezados oficiales utilizados por la Organización Mundial de Meteorología (WMO, por sus siglas en inglés) y el Sistema Avanzado de Procesamiento Interactivo del Tiempo (AWIPS, por sus siglas en inglés) y usados en el mensaje "dummy" se presentan en la Tabla 2. Durante este ejercicio, WCATWC también probará la conexión entre la Línea Directa de Huracanes y las Oficinas de Pronóstico del Tiempo.

Para eventos reales el WCATWC emite dos productos oficiales cada vez que un mensaje real es emitido. El primero, y aquellos presentados en el Anejo D, son conocidos como mensaje estándar. Este mensaje es un mensaje segmentado que incluye las zonas codificadas del NWS, Códigos de Eventos para Tiempos Válidos (VTEC, por sus siglas en inglés), y su nivel de amenaza en la parte inferior del mensaje. La segmentación es usada en los sistemas de procesamiento automático que analizan sintácticamente los productos del NWS. El producto estándar también presenta los tiempos esperados de arribo. El segundo producto se conoce como el mensaje público. Este mensaje no tiene segmentación y es escrito en un formato fácil de leer y sin tabular. Los productos contienen la misma información básica. Las OME, generalmente usan el producto estándar para respuesta a una alerta porque contiene información más completa. WCATWC también emite productos adicionales de gráficas y están disponibles en línea a través de su página del internet. El Anejo E presenta ejemplos de estos mensajes.

Los participantes pueden elegir el utilizar sus propios periodos de tiempo durante el ejercicio, para lograr objetivos particulares. Por ejemplo, la oficina de control de una OME en particular puede decidir someter los boletines de WCATWC dentro del ejercicio cuando así deseen, o, como alternativa colocar los boletines en sobres identificados con el tiempo en que deben ser abiertos (escrito en cada uno de ellos). Cada agencia participante debe tener su propia colección de sobres. Los mensajes en el Anejo D facilitarán este enfoque.

Se exhorta la participación de las OME para asegurar que los planes de respuesta estén en orden. Los tiempos de arribo estimados del tsunami, en varios lugares de la costa atlántica de EUA y Canadá, están incluidos en los mensajes de WCATWC (el Anejo E contiene una lista de tiempos de arribo a otros lugares de la costa atlántica que estarían disponibles en la internet durante un evento real, al igual que un mapa con los tiempos de viaje del tsunami). Además, las OME son bienvenidas a modificar los tiempos de arribo y las amplitudes de onda, según convenga para su ejercicio. Por ejemplo, el tsunami puede llegar antes y con una amplitud mayor. Otras acciones son bienvenidas, como por ejemplo informes de daños de tsunami.

### 3.2 Programa maestro (guión del ejercicio)

**Tabla 1: Periodo de tiempo del escenario**

Tsunami generado por un terremoto de magnitud 7.5, el 24 de marzo de 2010 a las 13:00 UTC (09:00 am hora local) con epicentro en la latitud 40°N y la longitud 70°O.

Fecha	Hora UTC	Hora local	Mensaje de WCATWC		
			#	Tipo	Dummy
03/24/2010	13:00	9:00 am	<b>Ocurre el terremoto</b>		
03/24/2010	13:05	9:05 am	01	WWA	Sí
03/24/2010	13:35	9:35 am	02	WWA	No
03/24/2010	14:05	10:05 am	03	WWA	No
03/24/2010	14:35	10:35 am	04	WWA	No
03/24/2010	15:05	11:05 am	05	WWA	No
03/24/2010	15:35	11:35 am	06	WWA	No
03/24/2010	16:05	12:05 pm	07	WWA	No
03/24/2010	16:35	12:35 pm	08	WWA	No
03/24/2010	17:05	1:05 pm	09	WWA	No
03/24/2010	17:35	1:35 pm	10	WWA	No
03/24/2010	18:05	2:05 pm	11	WWA	No
03/24/2010	19:05	3:05 pm	12	WWA	No
03/24/2010	20:05	4:05 pm	13	WWA	No
03/24/2010	21:05	5:05 pm	14	WWA	No
03/24/2010	22:05	6:05 pm	15	WWA	No
03/24/2010	23:05	7:05 pm	16	WWA	No
03/24/2010	00:05	8:05 pm	17	WWA	No
03/24/2010	01:05	9:05	18	WWA	No
03/24/2010	02:05	10:05	19	WWA	No

**Tipos de mensajes de WCATWC:**

WWA            Aviso/Vigilancia/Advertencia  
 Can            WWA Cancelación

**Dummy:**

Sí              Emitido  
 No              No emitido

**Tabla 2: Tipos de productos**

Tipos de productos emitidos para el mensaje "dummy" con sus métodos de transmisión

Centro	WMO ID	AWIPS ID	NWWS	GTS	EMWIN	Fax	Correo Electrónico
WCATWC	WEXX20 PAAQ	TSUAT1	SÍ	SÍ	SÍ	SÍ	SÍ

NWWS            Servicio de Cable del Tiempo NOAA

GTS              Sistema de Telecomunicaciones Global

EMWIN           Red de Información del Tiempo de los Manejadores de Emergencia

### 3.3 Medidas a ser tomadas en caso de un evento real

En el caso de que un **evento real ocurra durante el ejercicio**, WCATWC emitirá sus productos de mensajería regular para el evento. Se dará mayor prioridad a los mensajes reales y el centro decidirá si emite el mensaje "dummy" del ejercicio y si continúa proveyendo apoyo telefónico para el mismo. Terremotos pequeños que solamente provoquen una declaración de información de tsunami no interrumpirán el ejercicio. Toda documentación y correspondencia relacionada a este ejercicio será claramente identificada como **LANTEX 10 y Ejercicio**.

### 3.4 Recursos

Aunque las organizaciones de manejo de emergencia serán notificadas de antemano sobre el ejercicio, se solicita que se utilicen niveles realistas en la utilización de recursos durante el ejercicio. Esto permitirá la evaluación de los posibles problemas que se podrían presentar durante un evento real. Dichas organizaciones podrán tener un turno especial de trabajo que les permita continuar ininterrumpidamente las actividades normales de la agencia.

Se pueden realizar preguntas sobre el ejercicio a:

Melinda Bailey	NWS Southern Region	817-978-1100x107	<a href="mailto:melinda.bailey@noaa.gov">melinda.bailey@noaa.gov</a>
Don Miller	NWS Eastern Region	631-244-0122	<a href="mailto:donald.j.miller@noaa.gov">donald.j.miller@noaa.gov</a>
Robert Ward	NTHMP Eastern Rep.	410-517-3606	<a href="mailto:rward@mema.state.md.us">rward@mema.state.md.us</a>
Charles Williams	NTHMP GoM Rep.	205-280-2222	<a href="mailto:charles.williams@ema.alabama.gov">charles.williams@ema.alabama.gov</a>
Paul Whitmore	WCATWC Director	907-745-4212	<a href="mailto:paul.whitmore@noaa.gov">paul.whitmore@noaa.gov</a>
Bill Knight	WCATWC TWSO	907-745-4212	<a href="mailto:william.knight@noaa.gov">william.knight@noaa.gov</a>
James Waddell	WCATWC Rep.	907-745-4212	<a href="mailto:james.waddell@noaa.gov">james.waddell@noaa.gov</a>
Víctor Huérfano	PRSN Director	787-833-8433	<a href="mailto:victor@prsn.uprm.edu">victor@prsn.uprm.edu</a>

### 3.5 Arreglos con los medios de comunicación

Una ventaja de conducir este tipo de ejercicio es que promueve la creación de conciencia sobre el tema del ejercicio (en este caso sobre los tsunamis). Muchos residentes en la costa este de EUA y el Golfo de México podrían no darse cuenta de la existencia de un sistema de alerta de tsunami para la región, mucho menos que tipo de respuesta deben ejecutar ante la emergencia. Las comunidades podrían invitar a los medios de comunicación local al ejercicio para promover conciencia del peligro de los tsunamis en su región. El Anejo F contiene un ejemplo del comunicado de prensa que puede adaptarse según sea necesario.

NOAA emitirá un comunicado de prensa, varios días antes del ejercicio, describiendo el ejercicio y el propósito del mismo.

#### 4. Evaluación después del ejercicio

Se les solicita a todas las agencias participantes que provean una breve retroalimentación o evaluación sobre el ejercicio. Esta retroalimentación ayudará a NTHMP y NOAA en la evaluación del ejercicio LANTEX 10 y el desarrollo de ejercicios subsiguientes. Además ayudará a las agencias de respuesta a documentar las lecciones aprendidas.

Los formularios de evaluación del ejercicio están incluidos en el Anejo G. Los formularios deben llenarse en o antes del viernes, 9 de abril de 2010 y enviarse a la siguiente dirección:

WCATWC Director  
NOAA/West Coast/Alaska Tsunami Warning Center  
910 South Felton Street  
Palmer, Alaska 99645

FAX: 907-745-6071

También se podrá escanear y enviar por correo electrónico a [paul.whitmore@noaa.gov](mailto:paul.whitmore@noaa.gov)

Los formularios de evaluación del ejercicio están designados para "uso oficial solamente" y no serán distribuidos por NOAA o NTHMP a otras agencias.

## Anejo A. Ejemplo de ejercicio de mesa o teórico

### Pasos de desarrollo del ejercicio de mesa

Fuente: Oficina de Servicios de Emergencia de California

El ejercicio de mesa es una actividad planificada en la cual oficiales locales, personal clave y organizaciones con responsabilidades en el manejo de emergencia son expuestos a situaciones de emergencia simulada. Se desarrolla de manera informal, a paso lento, en una sala de conferencias, y es diseñado para provocar discusiones constructivas entre los participantes para evaluar planes, políticas y procedimientos. Los participantes examinarán y tratarán de resolver problemas basados en planes y procedimientos existentes. Se exhorta a los individuos a discutir las decisiones a profundidad basado en sus Procedimientos de Operación Estándar (SOP, por sus siglas en inglés), con énfasis en la solución de problemas a paso lento, contrario a la toma de decisiones en tiempo real. El moderador del ejercicio introduce a los participantes a un escenario de tsunami simulado por medio de un mensaje escrito, llamada telefónica simulada o llamada de radio (o por otros medios). También se presentan problemas y actividades del ejercicio. Los participantes conducen discusiones en grupo, llegan a acuerdos por consenso, que más adelante será asumidas por el líder del grupo. Un ejercicio de mesa o teórico deberá contener metas y objetivos específicos y una narrativa del escenario.

A continuación se provee una estructura del ejercicio de mesa o teórico. Así mismo se provee un texto y un ejercicio de ejemplo.

#### 1. **Análisis de vulnerabilidad: Declaración del problema**

Ejemplo en caso de un huracán:

Debido a los recientes incidentes de huracán en la región del sureste de los Estados Unidos, la amenaza que presentan estos desastres ha estado más presente, por lo que la necesidad de un sistema de desalojo es vital. El estado de Luisiana continúa sus tareas de planificar, educar y entrenar para la preparación ante un huracán.

#### 2. **Propósito (misión): Intención; qué se espera lograr (declaración de política)**

Ejemplo en caso de un huracán:

El estado de Luisiana se ha dado cuenta y reconoce la necesidad de un sistema de desalojo eficiente y efectivo. Por esta razón, está respondiendo con este Plan Comprensivo del Ejercicio. Estos eventos incluirán seminarios, talleres, ejercicios de mesa, ejercicios funcionales y a gran escala, dentro de un marco de tiempo de 18 meses, bajo el programa de becas de Seguridad Nacional del Estado.

3. **Alcance: Actividades del ejercicio**  
**Agencias involucradas**  
**Tipo de amenaza**  
**Área geográfica de impacto**

Ejemplo:

Los coordinadores de servicios de emergencia local identificarán jurisdicciones representativas de cada una de las 6 regiones de ayuda mutua localizadas a través del estado. Estas participarán como jurisdicciones anfitrionas en una serie de ejercicios de preparación ante desastre. Estas jurisdicciones anfitrionas desarrollarán una serie de ejercicios progresivos (de cada tipo) partiendo de ejercicios previos. El proceso comenzará con un análisis de vulnerabilidad para cada jurisdicción y continuará a través de una serie de actividades de ejercicios incluyendo: seminarios de orientación, talleres, ejercicios de mesa y ejercicios funcionales. El objetivo eventual de estas actividades será reducir los impactos de los desastres en las poblaciones e infraestructura de las ciudades. Todos los eventos serán evaluados utilizando el Programa de Evaluación de Ejercicio de Seguridad Nacional de EUA (HSEEP, por sus siglas en inglés) y estándares de reporte de acción (AAR, por sus siglas en inglés). Los pasos para las acciones correctivas serán parte del informe y de los procesos de acción posterior. Jurisdicciones aledañas, en el área de ayuda mutua, servirán como miembros del equipo de diseñadores del ejercicio, evaluadores del ejercicio u observadores del ejercicio. Con el propósito de transferir información y así aumentar su preparación operacional. Las jurisdicciones participarán cada dos años de forma rotativa, para proveer la oportunidad de participación a múltiples jurisdicciones.

4. **Metas y objetivos:**

**Criterios para la creación de buenos objetivos: "Think Smart"**

- Simple (conciso)
- Medible
- Que sea viable (¿se puede lograr durante el ejercicio?)
- Realista (y retante)
- Orientado a tareas y funciones

Un ejemplo puede ser:

Objetivos del Programa Comprensivo del Ejercicio

- Mejorar la preparación operacional
- Mejorar la coordinación multi-agencial y la capacidad de respuesta efectiva ante un desastre
- Identificar las vías de comunicación y las áreas problemáticas antes del evento; entre las jurisdicciones locales y las áreas de cooperación, centros regionales y estatales de operaciones de emergencia

- Establecer métodos uniformes para el ordenamiento, al igual que el rastreo y almacenamiento de recursos para agencias involucradas en todos los niveles del gobierno.

5. **Narrativa:**

La narrativa debe describir lo siguiente:

- Generación del evento de desastre o emergencia
- Descripción del ambiente al momento en que comienza el ejercicio
- Proveer información de trasfondo necesario
- Preparación de los participantes para el ejercicio
- Descubrir, informar: ¿Cómo te enteraste?
- Se notificará por anticipado?
- Hora, lugar y nivel de daño

6. **Evaluación:**

La evaluación debe describir lo siguiente:

- Basarse en objetivos
- Entrenar a los equipos de evaluación
- Desarrollar formularios de evaluación

7. **Informes de acción después del evento (AAR):** El AAR debe ser compilado usando los informes de evaluación

8. **Plan de mejoramiento (IP):** El IP debe reducir vulnerabilidades.

## Anejo B. Descripción del escenario

Para simular el tsunami se utilizó el modelo de pronóstico de tsunami de Alaska. El tsunami será generado por un terremoto hipotético de magnitud 7.5 a 90 millas al sur de Nantucket, MA y a 170 millas al sureste de Boston, MA; en la latitud  $40.0^{\circ}$  N y la longitud  $70.0^{\circ}$  O. El mismo será asociado a un deslizamiento del talud continental de 100 km cúbicos. El tsunami generado por el deslizamiento es 30 veces más grande que aquél generado por el levantamiento (uplift) del temblor.

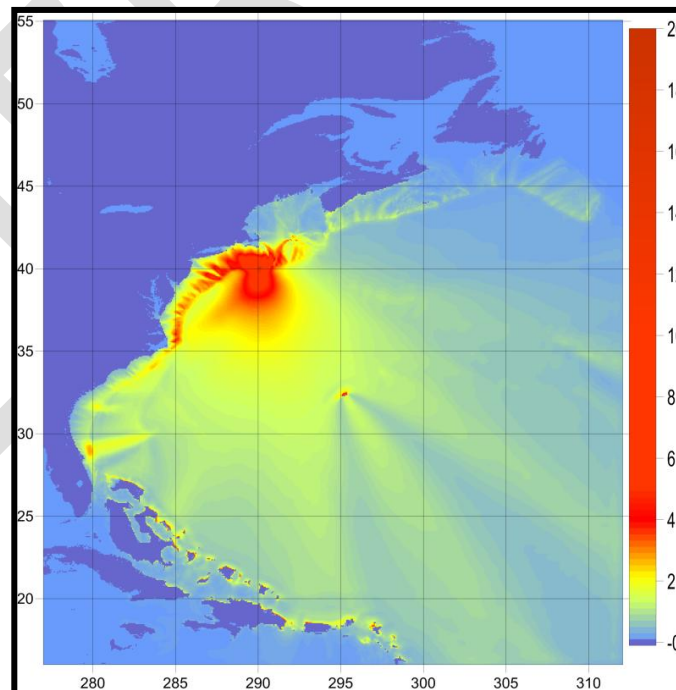
Los parámetros de falla son los siguientes:

Largo:	70 km
Ancho:	35 km
Profundidad:	7 km
Rumbo:	$158^{\circ}$
Buzamiento:	$60^{\circ}$
Desliz:	$100^{\circ}$
Momento:	$7.5 \times 10^{27}$ dyne-cm

Los parámetros del deslizamiento del talud continental son los siguientes:

Ancho:	30 km
Largo (cuesta abajo):	20 km
Velocidad:	0 a 50 m/s

El modelo fue computado usando una rejilla de resolución de 4 minutos en mar abierto y rejillas de resolución de 15 segundos adicionales en la costa atlántica de EUA y Canadá, Bermuda y la región de Puerto Rico y las Islas Vírgenes.





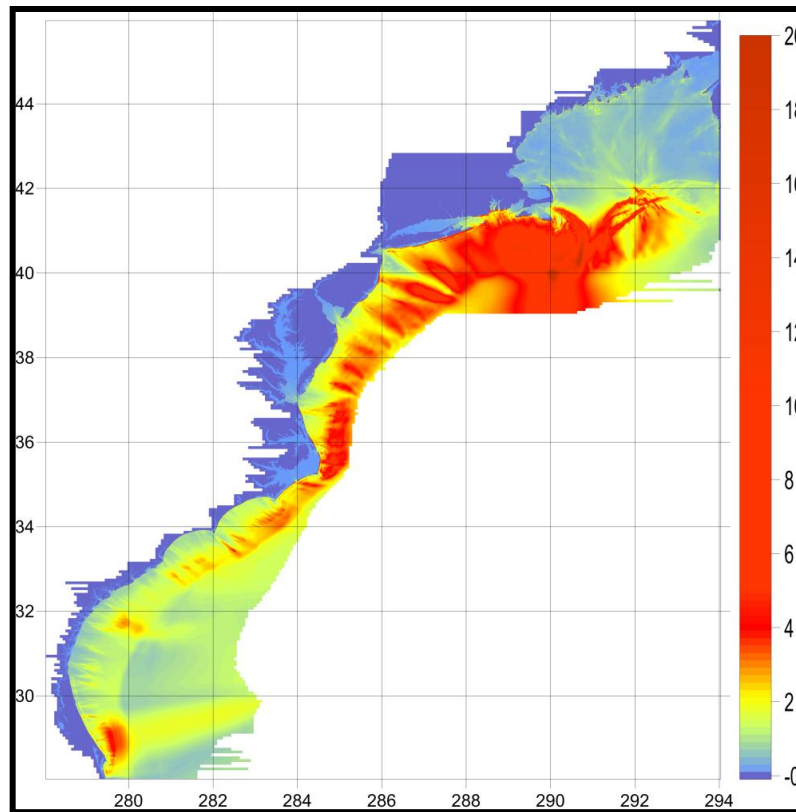


Figura B1. Amplitud máxima de tsunami modelada a través del Atlántico Norte (escala en metros).

Figura B2. Amplitud máxima de tsunami modelada en las rejillas más finas a la costa atlántica de EUA. (escala en metros).

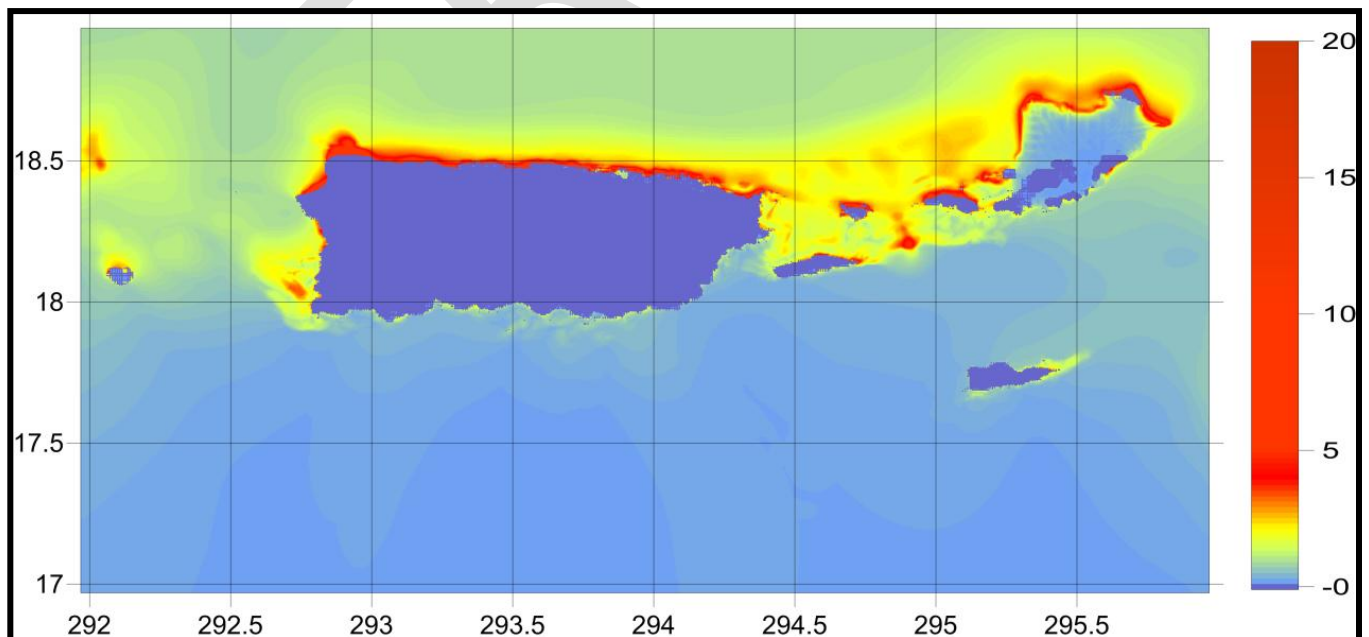


Figura B3. Amplitudes máximas de tsunami modeladas utilizada cerca de Puerto Rico y las Islas

Virgenes (escala en metros, aunque diferente a las escalas de las figuras superiores).

Tabla B1. Provee las amplitudes máximas modeladas en varios puntos a lo largo del área del ejercicio. Amplitud indica el nivel del tsunami sobre el nivel normal del mar.

<b>Lugar</b>	<b>Amplitud maxima (m)</b>	<b>Tiempo de viaje (horas)</b>	<b>Tiempo de viaje (minutos)</b>
D44402	2.17	0.16	9.6
D41424	0.81	1.13	67.8
Bermuda	1.17	1.48	88.8
Oregon Inlet, NC	2.64	1.95	117.0
Montauk, NY	1.96	2.03	121.8
Newport, RI	1.15	2.17	130.2
D44401	0.25	2.23	133.8
Ocean City, MD	2.19	2.25	135.0
Duck, NC	2.58	2.28	136.8
D41420	0.57	2.30	138.0
Woods Hole, MA	0.66	2.38	142.8
D41421	0.40	2.43	145.8
New London, CT	0.57	2.43	145.8
Quonset Pt., NY	0.72	2.45	147.0
Atlantic City, NJ	3.13	2.54	152.4
Nantucket Is., MA	0.22	2.58	154.8
Lewes, DE	0.60	2.73	163.8
Sandy Hook, NJ	0.39	2.83	169.8
Cape May, NJ	0.71	2.88	172.8
Fall River, MA	0.29	2.93	175.8
Beaufort, NC	0.25	3.02	181.2
Aguadilla, PR	7.48	3.03	181.8
Chesapeake, VA	0.36	3.08	184.8
Frontera EUA/Canadá	0.36	3.08	184.8
Bergern Point, NJ	0.38	3.11	186.6
Mona Island, PR	0.88	3.15	189.0
San Juan, PR	1.51	3.15	189.0
Virgin Gorda, BVI	2.09	3.15	189.0
Mayagüez, PR	2.11	3.20	192.0
Christiansted, VI	1.24	3.30	198.0
Fort Point, NH	0.31	3.32	199.2
Kiptopeke, VA	0.18	3.32	199.2
Providence, RI	0.24	3.33	199.8
Wells, NY	0.49	3.33	199.8
The Battery, NY	0.50	3.35	201.0
Lameshur Bay, VI	0.71	3.38	202.8
Culebra, PR	2.75	3.48	208.8

Limetree Bay, VI	0.72	3.48	208.8
Isla Vieques, PR	1.72	3.48	208.8
Wrightsville, NC	1.54	3.52	211.2
Isla Magueyes, PR	0.61	3.53	211.8
Charlotte Amalie, VI	2.12	3.56	213.6
Cutler NAS, ME	0.58	3.60	216.0
Bar Harbor, ME	0.62	3.62	217.2
Portland, ME	0.28	3.62	217.2
Boston, MD	0.17	3.72	223.2
New Haven, CT	0.06	3.82	229.2
Port Canaveral, FL	1.44	3.87	232.2
Bridgeport, CT	0.14	3.88	232.8
Eastport, ME	0.05	4.20	252.0
Ship John Shoals, NJ	0.09	4.22	253.2
Springmaid, SC	1.51	4.23	253.8
Flagler, FL	2.15	4.23	253.8
Vilano Beach, FL	1.11	4.38	262.8
Charleston, SC	0.34	4.42	265.2
Windmill, VA	0.04	4.80	288.0
Kings Point, NY	0.17	4.98	298.8
Marcus Hook, PA	0.15	6.53	391.8
Annapolis, MD	0.04	9.11	546.6

## Anejo C. Mensaje Dummy emitido por el WCATWC

**(Este mensaje permanecerá en inglés, ya que WCATWC sólo emite mensajería en este idioma.)**

WEXX20 PAAQ 241305  
TSUAT1

TEST...TSUNAMI EXERCISE MESSAGE NUMBER 1...TEST  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
9:05 AM EDT WED MAR 24

...LANTEX 10 TSUNAMI EXERCISE MESSAGE. REFER TO WCATWC MESSAGE 1 IN THE  
EXERCISE HANDBOOK. THIS IS AN EXERCISE ONLY...

THIS MESSAGE IS BEING USED TO START OFF THE LANTEX 10 NORTHWEST ATLANTIC TSUNAMI  
EXERCISE. THIS WILL BE THE ONLY EXERCISE MESSAGE TRANSMITTED  
FROM THE WEST COAST/ALASKA TSUNAMI WARNING CENTER. EXERCISE PARTICPANTS SHOULD REFER TO  
THE SCENARIO TIMELINE IN THE HANDBOOK FOR FUTURE MESSAGES. THE HANDBOOK IS AVAILABLE AT  
THE WEB SITE WCATWC.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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## Anejo D. Mensajería emitida por el WCATWC

**(Esta mensajería permanecerá en inglés, ya que WCATWC sólo emite mensajería en este idioma.)**

Los siguientes mensajes, creados para el ejercicio de tsunami LANTEX 10, son representativos de productos estándares oficiales emitidos por el Centro de Alerta de Tsunami de la Costa Oeste y Alaska (WCATWC, por sus siglas en inglés) durante un terremoto de magnitud 7.5 y un tsunami producido a 90 millas al sur de Nantucket, MA y a 170 millas al sureste de Boston, MA; en las coordenadas 40.0°N y 70.0°O. Durante un evento real, el WCATWC emitirá también productos gráficos y de base html en su página web via RSS.

### WCATWC Message #1

WEXX20 PAAQ 241305  
TSUAT1

BULLETIN  
TSUNAMI MESSAGE NUMBER 1  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
905 AM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF NEW JERSEY - NEW YORK - CONNECTICUT -  
RHODE ISLAND AND MASSACHUSETTS FROM SANDY HOOK NEW JERSEY  
TO MERRIMACK RIVER MASSACHUSETTS...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF  
TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA - FLORIDA -  
GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA -  
MARYLAND - DELAWARE AND NEW JERSEY FROM BROWNSVILLE TEXAS  
TO SANDY HOOK NEW JERSEY...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF  
MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK -  
NOVA SCOTIA - NEWFOUNDLAND AND LABRADOR FROM MERRIMACK  
RIVER MASSACHUSETTS TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF  
PUERTO RICO AND THE VIRGIN ISLANDS...

#### 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.

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

#### PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.5  
TIME - 0900 EDT MAR 24 2010  
0900 AST MAR 24 2010  
0800 CDT MAR 24 2010

1300 UTC MAR 24 2010  
 LOCATION - 40.0 NORTH 70.0 WEST  
           90 MILES/145 KM S OF NANTUCKET MASSACHUSETTS  
           170 MILES/274 KM SE OF BOSTON MASSACHUSETTS  
 DEPTH - 28 MILES/45 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.

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.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF  
 THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT  
 UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE  
 WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

ANZ330-335-338-350-353-355-230>237-250-254-255-NYZ071>081-  
 CTZ009>012-RIZ002-005>007-MAZ007-019>024-016-241405-  
 /T.NEW.PAAQ.TS.W.0010.100324T1305Z-000000T0000Z/  
 COASTAL AREAS BETWEEN AND INCLUDING SANDY HOOK NEW JERSEY  
 TO MERRIMACK RIVER MASSACHUSETTS  
 905 AM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
 COASTAL AREAS OF NEW JERSEY - NEW YORK - CONNECTICUT -  
 RHODE ISLAND AND MASSACHUSETTS FROM SANDY HOOK NEW JERSEY  
 TO MERRIMACK RIVER MASSACHUSETTS...

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO  
 HIGHER GROUND.

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.

MONTAUK-NY	1053	EDT MAR 24	MANHATTAN-NY	1231	EDT MAR 24
NANTUCKET IS-MA	1119	EDT MAR 24	BOSTON-MA	1255	EDT MAR 24

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

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**WCATWC Message #2**

WEXX20 PAAQ 241335  
TSUAT1

BULLETIN  
TSUNAMI MESSAGE NUMBER 2  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
935 AM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF NEW JERSEY - NEW YORK - CONNECTICUT -  
RHODE ISLAND AND MASSACHUSETTS FROM SANDY HOOK NEW JERSEY  
TO MERRIMACK RIVER MASSACHUSETTS...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF  
TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA - FLORIDA -  
GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA -  
MARYLAND - DELAWARE AND NEW JERSEY FROM BROWNSVILLE TEXAS  
TO SANDY HOOK NEW JERSEY...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF  
MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK -  
NOVA SCOTIA - NEWFOUNDLAND AND LABRADOR FROM MERRIMACK  
RIVER MASSACHUSETTS TO CAPE CHIDLEY LABRADOR...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF  
PUERTO RICO AND THE VIRGIN ISLANDS...

## 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.

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

## PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.5  
TIME - 0900 EDT MAR 24 2010  
          0900 AST MAR 24 2010  
          0800 CDT MAR 24 2010  
          1300 UTC MAR 24 2010  
LOCATION - 40.0 NORTH 70.0 WEST  
          90 MILES/145 KM S OF NANTUCKET MASSACHUSETTS  
          170 MILES/274 KM SE OF BOSTON MASSACHUSETTS  
DEPTH - 28 MILES/45 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.

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.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

ANZ330-335-338-350-353-355-230>237-250-254-255-NYZ071>081-CTZ009>012-RIZ002-005>007-MAZ007-019>024-016-241435-/T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING SANDY HOOK NEW JERSEY TO MERRIMACK RIVER MASSACHUSETTS  
935 AM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE COASTAL AREAS OF NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND AND MASSACHUSETTS FROM SANDY HOOK NEW JERSEY TO MERRIMACK RIVER MASSACHUSETTS...

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

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.

MONTAUK-NY	1053	EDT MAR 24	MANHATTAN-NY	1231	EDT MAR 24
NANTUCKET IS-MA	1119	EDT MAR 24	BOSTON-MA	1255	EDT MAR 24

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

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**WCATWC Message #3**

WEXX20 PAAQ 241405  
TSUAT1

BULLETIN  
TSUNAMI MESSAGE NUMBER 3  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
1005 AM EDT WED MAR 24 2010

...THE TSUNAMI WARNING IS EXPANDED TO INCLUDE THE  
COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
CAROLINA - VIRGINIA - MARYLAND - DELAWARE AND NEW JERSEY  
FROM OCEAN REEF FLORIDA TO SANDY HOOK NEW JERSEY...

...A TSUNAMI WARNING CONTINUES FOR THE  
COASTAL AREAS OF NEW JERSEY - NEW YORK - CONNECTICUT -  
RHODE ISLAND AND MASSACHUSETTS FROM SANDY HOOK NEW JERSEY  
TO MERRIMACK RIVER MASSACHUSETTS...

...THE TSUNAMI WARNING IS EXPANDED TO INCLUDE THE  
COASTAL AREAS OF MASSACHUSETTS - NEW HAMPSHIRE - MAINE -  
NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM MERRIMACK  
RIVER MASSACHUSETTS TO LA MANCHE NEWFOUNDLAND...

...THE TSUNAMI WARNING IS EXPANDED TO INCLUDE PUERTO RICO AND  
THE VIRGIN ISLANDS...

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA  
AND FLORIDA FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE  
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

## 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 MOVE 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 -  
DEEP-WATER PRESSURE SENSORS INDICATE THAT A TSUNAMI HAS  
BEEN GENERATED APPROXIMATELY 120 MILES/200 KM SEAWARD OF  
LONG ISLAND NEW YORK.

## PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.5  
TIME - 0900 EDT MAR 24 2010  
0900 AST MAR 24 2010  
0800 CDT MAR 24 2010  
1300 UTC MAR 24 2010

LOCATION - 40.0 NORTH 70.0 WEST  
 90 MILES/145 KM S OF NANTUCKET MASSACHUSETTS  
 170 MILES/274 KM SE OF BOSTON MASSACHUSETTS  
 DEPTH - 28 MILES/45 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.

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.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF  
 THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT  
 UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE  
 WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-  
 252-254-256-130-135-150-152-154-156-158-ANZ631>633-656-658-  
 650-652-654-430-431-450>455-FLZ168-172-173-047-054-059-064-  
 141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>050-  
 051-034-046-NCZ097-100-101-045>047-080-081-094-095-098-103-  
 104-015>017-030>032-102-VAZ084-086-091-094-095-098-099-100-  
 MDZ025-DEZ002>004-NJZ005-006-011>014-021-023>026-241505-  
 /T.EXA.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
 COASTAL AREAS BETWEEN AND INCLUDING OCEAN REEF FLORIDA TO  
 SANDY HOOK NEW JERSEY  
 1005 AM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
 COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
 CAROLINA - VIRGINIA - MARYLAND - DELAWARE AND NEW JERSEY  
 FROM OCEAN REEF FLORIDA TO SANDY HOOK NEW JERSEY...

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO  
 HIGHER GROUND.

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.

CAPE HATTERAS-NC	1053	EDT MAR 24	MELBOURNE-FL	1333	EDT MAR 24
ATLANTIC CITY-NJ	1131	EDT MAR 24	JACKSONVILL B-FL	1341	EDT MAR 24
VIRGINIA BCH-VA	1156	EDT MAR 24	CHARLESTON-SC	1344	EDT MAR 24
MIAMI-FL	1245	EDT MAR 24	SAVANNAH-GA	1356	EDT MAR 24
MYRTLE BCH-SC	1323	EDT MAR 24			

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

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ANZ330-335-338-350-353-355-230>237-250-254-255-NYZ071>081-  
 CTZ009>012-RIZ002-005>007-MAZ007-019>024-016-241505-  
 /T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
 COASTAL AREAS BETWEEN AND INCLUDING SANDY HOOK NEW JERSEY  
 TO MERRIMACK RIVER MASSACHUSETTS  
 1005 AM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
 COASTAL AREAS OF NEW JERSEY - NEW YORK - CONNECTICUT -  
 RHODE ISLAND AND MASSACHUSETTS FROM SANDY HOOK NEW JERSEY  
 TO MERRIMACK RIVER MASSACHUSETTS...

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO  
 HIGHER GROUND.

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 SITES IN THE WARNING ARE PROVIDED BELOW.

MONTAUK-NY	1053	EDT MAR 24	MANHATTAN-NY	1231	EDT MAR 24
NANTUCKET IS-MA	1119	EDT MAR 24	BOSTON-MA	1255	EDT MAR 24

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

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ANZ150-050>052-081-NHZ014-MEZ022>028-029-030-241505-  
 /T.EXA.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
 COASTAL AREAS BETWEEN AND INCLUDING MERRIMACK RIVER  
 MASSACHUSETTS TO LA MANCHE NEWFOUNDLAND  
 1005 AM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
 COASTAL AREAS OF MASSACHUSETTS - NEW HAMPSHIRE - MAINE -  
 NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM MERRIMACK  
 RIVER MASSACHUSETTS TO LA MANCHE NEWFOUNDLAND...

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO  
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 TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED  
 SITES IN THE WARNING ARE PROVIDED BELOW.

LOCKEPORT-NS	1221	ADT MAR 24	PORTLAND-ME	1242	EDT MAR 24
GRAND MANAN-NB	1330	ADT MAR 24	ST LAWRENCE-NL	1420	NDT MAR 24
SCATARIE IS-NS	1337	ADT MAR 24			

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

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-  
 VIZ001-002-241505-  
 /T.EXA.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
 COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.  
 1005 AM EDT WED MAR 24 2010

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

VIRGIN ISLANDS...

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

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 1211 AST MAR 24 CHRISTIANSTED-VI 1225 AST MAR 24  
MAYAGUEZ-PR 1220 AST MAR 24 CHARLOT AMALI-VI 1245 AST MAR 24  
FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
WCATWC.ARH.NOAA.GOV

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GMZ130-150-155-235-230-250-255-330-335-350-355-455-452-450-  
555-550-630-655-650-750-755-765-730-830-856-853-850-657-656-  
032-075-052>054-TXZ251-256-257-242>247-213-214-236>238-215-  
216-LAZ051>054-040-062-064-066>070-MSZ080>082-ALZ061>064-FLZ002-  
004-006-008-012-014-015-018-027-028-034-039-042-048>051-055-  
060-062-065-069-070-075-174-076>078-241505-  
/T.NEW.PAAQ.TS.Y.0010.100324T1405Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO  
OCEAN REEF FLORIDA  
1005 AM EDT WED MAR 24 2010

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA  
AND FLORIDA FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

PERSONS IN TSUNAMI ADVISORY AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING STRONG CURRENTS OR WAVES DANGEROUS TO PERSONS IN OR VERY NEAR WATER IS IMMINENT OR 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 ADVISORY ARE PROVIDED BELOW.

KEY WEST-FL 1327 EDT MAR 24 ST PETERSBURG-FL 1815 EDT MAR 24  
PANAMA CITY-FL 1522 CDT MAR 24 BILOXI-MS 1719 CDT MAR 24  
CORPUS CHRISTI-TX 1606 CDT MAR 24 GALVESTON-TX 1722 CDT MAR 24  
FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
WCATWC.ARH.NOAA.GOV

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ANZ081-241505-  
/T.NEW.PAAQ.TS.Y.0010.100324T1405Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND  
TO CAPE CHIDLEY LABRADOR  
1005 AM EDT WED MAR 24 2010

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE  
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

PERSONS IN TSUNAMI ADVISORY AREAS SHOULD MOVE OUT OF THE

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BONAVISTA-NL 1627 NDT MAR 24 BATTLE HARBOR-NL 1659 NDT MAR 24  
FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
WCATWC.ARH.NOAA.GOV

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EXERCICIO

**WCATWC Message #4**

WEXX20 PAAQ 241435  
TSUAT1

BULLETIN  
TSUNAMI MESSAGE NUMBER 4  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
1035 AM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -  
NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW  
HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND  
NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE  
NEWFOUNDLAND...

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

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA  
AND FLORIDA FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE  
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

## 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 MOVE 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 -  
DEEP-WATER PRESSURE SENSORS INDICATE THAT A TSUNAMI HAS  
BEEN GENERATED APPROXIMATELY 120 MILES/200 KM SEAWARD OF  
LONG ISLAND NEW YORK. FORECAST MODELS PROJECT TSUNAMIS  
3.2-9.6 FEET/1-3 METER ABOVE NORMAL SEA LEVEL WILL IMPACT  
PORTIONS OF THE EAST COAST... PUERTO RICO AND THE VIRGIN  
ISLANDS. TSUNAMIS LESS THAN 3.2 FEET/1 METER ABOVE NORMAL  
SEA LEVEL ARE EXPECTED TO OCCUR IN THE GULF OF MEXICO AND  
NORTH OF LA MANCHE NEWFOUNDLAND.

## PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.5  
TIME - 0900 EDT MAR 24 2010  
          0900 AST MAR 24 2010  
          0800 CDT MAR 24 2010  
          1300 UTC MAR 24 2010  
LOCATION - 40.0 NORTH 70.0 WEST  
          90 MILES/145 KM S OF NANTUCKET MASSACHUSETTS

170 MILES/274 KM SE OF BOSTON MASSACHUSETTS  
 DEPTH - 28 MILES/45 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.

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  
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 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.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF  
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 UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE  
 WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-  
 252-254-256-130-135-150-152-154-156-158-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-FLZ168-172-173-047-054-059-064-  
 141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>050-  
 051-034-046-NCZ097-100-101-045>047-080-081-094-095-098-103-  
 104-015>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-  
 029-030-241535-  
 /T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
 COASTAL AREAS BETWEEN AND INCLUDING OCEAN REEF FLORIDA TO  
 LA MANCHE NEWFOUNDLAND  
 1035 AM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
 COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
 CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -  
 NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW  
 HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND  
 NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE  
 NEWFOUNDLAND...

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO  
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TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD  
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 WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL  
 TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED  
 SITES IN THE WARNING ARE PROVIDED BELOW.

CAPE HATTERAS-NC	1053	EDT MAR 24	PORTLAND-ME	1242	EDT MAR 24
MONTAUK-NY	1053	EDT MAR 24	MIAMI-FL	1245	EDT MAR 24
NANTUCKET IS-MA	1119	EDT MAR 24	ST LAWRENCE-NL	1420	NDT MAR 24
LOCKEPORT-NS	1221	ADT MAR 24	BOSTON-MA	1255	EDT MAR 24
ATLANTIC CITY-NJ	1131	EDT MAR 24	MYRTLE BCH-SC	1323	EDT MAR 24
VIRGINIA BCH-VA	1156	EDT MAR 24	MELBOURNE-FL	1333	EDT MAR 24

GRAND MANAN-NB 1330 ADT MAR 24 JACKSONVILL B-FL 1341 EDT MAR 24  
 MANHATTAN-NY 1231 EDT MAR 24 CHARLESTON-SC 1344 EDT MAR 24  
 SCATARIE IS-NS 1337 ADT MAR 24 SAVANNAH-GA 1356 EDT MAR 24  
 FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
 WCATWC.ARH.NOAA.GOV

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-  
 VIZ001-002-241535-  
 /T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
 1035 AM EDT WED MAR 24 2010

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

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SAN JUAN-PR 1211 AST MAR 24 CHRISTIANSTED-VI 1225 AST MAR 24  
 MAYAGUEZ-PR 1220 AST MAR 24 CHARLOT AMALI-VI 1245 AST MAR 24  
 FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
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GMZ130-150-155-235-230-250-255-330-335-350-355-455-452-450-  
 555-550-630-655-650-750-755-765-730-830-856-853-850-657-656-  
 032-075-052>054-TXZ251-256-257-242>247-213-214-236>238-215-  
 216-LAZ051>054-040-062-064-066>070-MSZ080>082-ALZ061>064-FLZ002-  
 004-006-008-012-014-015-018-027-028-034-039-042-048>051-055-  
 060-062-065-069-070-075-174-076>078-241535-  
 /T.CON.PAAQ.TS.Y.0010.000000T0000Z-000000T0000Z/  
 COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO  
 OCEAN REEF FLORIDA  
 1035 AM EDT WED MAR 24 2010

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 COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA  
 AND FLORIDA FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

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TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING  
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 TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED  
 SITES IN THE ADVISORY ARE PROVIDED BELOW.

KEY WEST-FL 1327 EDT MAR 24 ST PETERSBURG-FL 1815 EDT MAR 24  
 PANAMA CITY-FL 1522 CDT MAR 24 BILOXI-MS 1719 CDT MAR 24  
 CORPUS CHRISTI-TX 1606 CDT MAR 24 GALVESTON-TX 1722 CDT MAR 24  
 FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
 WCATWC.ARH.NOAA.GOV



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ANZ081-241535-  
/T.CON.PAAQ.TS.Y.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND  
TO CAPE CHIDLEY LABRADOR  
1035 AM EDT WED MAR 24 2010

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE  
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

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TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED  
SITES IN THE ADVISORY ARE PROVIDED BELOW.

BONAVISTA-NL 1627 NDT MAR 24 BATTLE HARBOR-NL 1659 NDT MAR 24  
FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
WCATWC.ARH.NOAA.GOV

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EXERCISE

**WCATWC Message #5**

WEXX20 PAAQ 241505  
TSUAT1

## BULLETIN

TSUNAMI MESSAGE NUMBER 5  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
1105 AM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -  
NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW  
HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND  
NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE  
NEWFOUNDLAND...

...A TSUNAMI WARNING IS IN EFFECT FOR PUERTO RICO AND THE  
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...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA  
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COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE  
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

## RECOMMENDED ACTIONS

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THEIR LOCAL EMERGENCY OFFICIALS. EVACUATIONS ARE ONLY ORDERED  
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HIGHER GROUND.

- PERSONS IN TSUNAMI ADVISORY AREAS SHOULD MOVE 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
BERMUDA	32.3 N	64.7 W	1457	5.73 FT/1.79 M

DEEP-WATER PRESSURE SENSORS INDICATE THAT A TSUNAMI HAS  
BEEN GENERATED APPROXIMATELY 120 MILES/200 KM SEAWARD  
OF LONG ISLAND NEW YORK. FORECAST MODELS PROJECT TSUNAMIS  
3.2-9.6 FEET/1-3 METER ABOVE NORMAL SEA LEVEL WILL IMPACT  
PORTIONS OF THE EAST COAST... PUERTO RICO AND THE VIRGIN  
ISLANDS. TSUNAMIS LESS THAN 3.2 FEET/1 METER ABOVE NORMAL  
SEA LEVEL ARE EXPECTED TO OCCUR IN THE GULF OF MEXICO AND  
NORTH OF LA MANCHE NEWFOUNDLAND. PEAK TSUNAMI LEVELS ARE  
EXPECTED TO OCCUR ONE TO THREE HOURS AFTER INITIAL ARRIVAL  
TIME.

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 - 7.5  
TIME - 0900 EDT MAR 24 2010  
          0900 AST MAR 24 2010  
          0800 CDT MAR 24 2010  
          1300 UTC MAR 24 2010  
LOCATION - 40.0 NORTH 70.0 WEST  
          90 MILES/145 KM S OF NANTUCKET MASSACHUSETTS  
          170 MILES/274 KM SE OF BOSTON MASSACHUSETTS  
DEPTH - 28 MILES/45 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.

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.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF  
THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT  
UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE  
WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-  
252-254-256-130-135-150-152-154-156-158-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-FLZ168-172-173-047-054-059-064-  
141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>050-  
051-034-046-NCZ097-100-101-045>047-080-081-094-095-098-103-  
104-015>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-  
029-030-241605-  
/T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING OCEAN REEF FLORIDA TO  
LA MANCHE NEWFOUNDLAND  
1105 AM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -  
NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW  
HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND  
NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE  
NEWFOUNDLAND...

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO  
HIGHER GROUND.

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.

-  
 NANTUCKET IS-MA 1119 EDT MAR 24 PORTLAND-ME 1242 EDT MAR 24  
 ATLANTIC CITY-NJ 1131 EDT MAR 24 MIAMI-FL 1245 EDT MAR 24  
 VIRGINIA BCH-VA 1156 EDT MAR 24 ST LAWRENCE-NL 1420 NDT MAR 24  
 LOCKEPORT-NS 1221 ADT MAR 24 BOSTON-MA 1255 EDT MAR 24  
 MANHATTAN-NY 1231 EDT MAR 24 MYRTLE BCH-SC 1323 EDT MAR 24  
 GRAND MANAN-NB 1330 ADT MAR 24 MELBOURNE-FL 1333 EDT MAR 24  
 SCATARIE IS-NS 1337 ADT MAR 24 JACKSONVILL B-FL 1341 EDT MAR 24  
 SAVANNAH-GA 1356 EDT MAR 24 CHARLESTON-SC 1344 EDT MAR 24  
 FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
 WCATWC.ARH.NOAA.GOV

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-  
 VIZ001-002-241605-  
 /T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
 COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.  
 1105 AM EDT WED MAR 24 2010

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

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO  
 HIGHER GROUND.

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 1211 AST MAR 24 CHRISTIANSTED-VI 1225 AST MAR 24  
 MAYAGUEZ-PR 1220 AST MAR 24 CHARLOT AMALI-VI 1245 AST MAR 24  
 FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
 WCATWC.ARH.NOAA.GOV

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GMZ130-150-155-235-230-250-255-330-335-350-355-455-452-450-  
 555-550-630-655-650-750-755-765-730-830-856-853-850-657-656-  
 032-075-052>054-TXZ251-256-257-242>247-213-214-236>238-215-  
 216-LAZ051>054-040-062-064-066>070-MSZ080>082-ALZ061>064-FLZ002-  
 004-006-008-012-014-015-018-027-028-034-039-042-048>051-055-  
 060-062-065-069-070-075-174-076>078-241605-  
 /T.CON.PAAQ.TS.Y.0010.000000T0000Z-000000T0000Z/  
 COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO  
 OCEAN REEF FLORIDA  
 1105 AM EDT WED MAR 24 2010

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
 COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA  
 AND FLORIDA FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

PERSONS IN TSUNAMI ADVISORY AREAS SHOULD MOVE OUT OF THE  
 WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

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 ADVISORY ARE PROVIDED BELOW.

KEY WEST-FL	1327	EDT MAR 24	ST PETERSBURG-FL	1815	EDT MAR 24
PANAMA CITY-FL	1522	CDT MAR 24	BILOXI-MS	1719	CDT MAR 24
CORPUS CHRISTI-TX	1606	CDT MAR 24	GALVESTON-TX	1722	CDT MAR 24

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

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ANZ081-241605-  
/T.CON.PAAQ.TS.Y.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND  
TO CAPE CHIDLEY LABRADOR  
1105 AM EDT WED MAR 24 2010

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE  
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

PERSONS IN TSUNAMI ADVISORY AREAS SHOULD MOVE OUT OF THE  
WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

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 ADVISORY ARE PROVIDED BELOW.

BONAVISTA-NL	1627	NDT MAR 24	BATTLE HARBOR-NL	1659	NDT MAR 24
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FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
WCATWC.ARH.NOAA.GOV

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**WCATWC Message #6**

WEXX20 PAAQ 241535  
TSUAT1

## BULLETIN

TSUNAMI MESSAGE NUMBER 6  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
1135 AM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -  
NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW  
HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND  
NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE  
NEWFOUNDLAND...

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

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA  
AND FLORIDA FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE  
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

## 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 MOVE 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
BERMUDA	32.3 N	64.7 W	1457	5.73 FT/1.79 M
OREGON INLET NC	35.8 N	75.6 W	1502	8.45 FT/2.64 M
MONTAUK NY	41.0 N	71.9 W	1530	6.27 FT/1.96 M
NEWPORT RI	41.5 N	71.3 W	1515	3.07 FT/0.96 M
OCEAN CITY MD	38.3 N	75.1 W	1521	6.85 FT/2.14 M
DUCK NC	36.2 N	75.7 W	1522	8.26 FT/2.58 M

## FORECAST MODELS PROJECT TSUNAMIS

3.2-9.6 FEET/1-3 METER ABOVE NORMAL SEA LEVEL WILL IMPACT  
PORTIONS OF THE EAST COAST... PUERTO RICO AND THE VIRGIN  
ISLANDS. TSUNAMIS LESS THAN 3.2 FEET/1 METER ABOVE NORMAL  
SEA LEVEL ARE EXPECTED TO OCCUR IN THE GULF OF MEXICO AND  
NORTH OF LA MANCHE NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR.  
MAXIMUM TSUNAMI AMPLITUDES ARE EXPECTED TO DEVELOP 1 TO  
THREE HOURS AFTER THE EXPECTED ARRIVAL TIME. TSUNAMIS

BETWEEN 3.2-8.0 FEET/1-2.5 METERS ALONG WITH STRONG CURRENTS HAVE BEEN REPORTED IN RHODE ISLAND... NEW YORK... MARYLAND AND NORTH CAROLINA.

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 - 7.5  
TIME - 0900 EDT MAR 24 2010  
0900 AST MAR 24 2010  
0800 CDT MAR 24 2010  
1300 UTC MAR 24 2010  
LOCATION - 40.0 NORTH 70.0 WEST  
90 MILES/145 KM S OF NANTUCKET MASSACHUSETTS  
170 MILES/274 KM SE OF BOSTON MASSACHUSETTS  
DEPTH - 28 MILES/45 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.

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.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-158-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-FLZ168-172-173-047-054-059-064-141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>050-051-034-046-NCZ097-100-101-045>047-080-081-094-095-098-103-104-015>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>028-029-030-241635-  
/T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING OCEAN REEF FLORIDA TO LA MANCHE NEWFOUNDLAND  
1135 AM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE

NEWFOUNDLAND...

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

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.

VIRGINIA BCH-VA	1156	EDT	MAR 24	PORTLAND-ME	1242	EDT	MAR 24
JACKSONVILL B-FL	1341	EDT	MAR 24	MIAMI-FL	1245	EDT	MAR 24
MANHATTAN-NY	1231	EDT	MAR 24	ST LAWRENCE-NL	1420	NDT	MAR 24
GRAND MANAN-NB	1330	ADT	MAR 24	BOSTON-MA	1255	EDT	MAR 24
SCATARIE IS-NS	1337	ADT	MAR 24	MYRTLE BCH-SC	1323	EDT	MAR 24
SAVANNAH-GA	1356	EDT	MAR 24	MELBOURNE-FL	1333	EDT	MAR 24
CHARLESTON-SC	1344	EDT	MAR 24				

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

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-  
VIZ001-002-241635-  
/T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.  
1135 AM EDT WED MAR 24 2010

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

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

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	1211	AST	MAR 24	CHRISTIANSTED-VI	1225	AST	MAR 24
MAYAGUEZ-PR	1220	AST	MAR 24	CHARLOT AMALI-VI	1245	AST	MAR 24

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

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GMZ130-150-155-235-230-250-255-330-335-350-355-455-452-450-  
555-550-630-655-650-750-755-765-730-830-856-853-850-657-656-  
032-075-052>054-TXZ251-256-257-242>247-213-214-236>238-215-  
216-LAZ051>054-040-062-064-066>070-MSZ080>082-ALZ061>064-FLZ002-  
004-006-008-012-014-015-018-027-028-034-039-042-048>051-055-  
060-062-065-069-070-075-174-076>078-241635-  
/T.CON.PAAQ.TS.Y.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO  
OCEAN REEF FLORIDA  
1135 AM EDT WED MAR 24 2010

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA  
AND FLORIDA FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...



PERSONS IN TSUNAMI ADVISORY AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

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 ADVISORY ARE PROVIDED BELOW.

KEY WEST-FL	1327	EDT	MAR 24	ST PETERSBURG-FL	1815	EDT	MAR 24
PANAMA CITY-FL	1522	CDT	MAR 24	BILOXI-MS	1719	CDT	MAR 24
CORPUS CHRISTI-TX	1606	CDT	MAR 24	GALVESTON-TX	1722	CDT	MAR 24

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

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ANZ081-241635-  
/T.CON.PAAQ.TS.Y.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND  
TO CAPE CHIDLEY LABRADOR  
1135 AM EDT WED MAR 24 2010

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE  
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

PERSONS IN TSUNAMI ADVISORY AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

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 ADVISORY ARE PROVIDED BELOW.

BONAVISTA-NL	1627	NDT	MAR 24	BATTLE HARBOR-NL	1659	NDT	MAR 24
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FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
WCATWC.ARH.NOAA.GOV

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**WCATWC Message #7**

WEXX20 PAAQ 241605  
TSUAT1

## BULLETIN

TSUNAMI MESSAGE NUMBER 7  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
1205 PM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -  
NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW  
HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND  
NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE  
NEWFOUNDLAND...

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

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA  
AND FLORIDA FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE  
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

## 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 MOVE 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
MONTAUK NY	41.0 N	71.9 W	1530	6.27 FT/1.96 M
NEWPORT RI	41.5 N	71.3 W	1515	3.07 FT/0.96 M
OCEAN CITY MD	38.3 N	75.1 W	1521	6.85 FT/2.14 M
DUCK NC	36.2 N	75.7 W	1522	8.26 FT/2.58 M

## FORECAST MODELS PROJECT TSUNAMIS

3.2-9.6 FEET/1-3 METER ABOVE NORMAL SEA LEVEL WILL IMPACT  
PORTIONS OF THE EAST COAST... PUERTO RICO AND THE VIRGIN  
ISLANDS. TSUNAMIS LESS THAN 3.2 FEET/1 METER ABOVE NORMAL  
SEA LEVEL ARE EXPECTED TO OCCUR IN THE GULF OF MEXICO AND  
NORTH OF LA MANCHE NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR.  
MAXIMUM TSUNAMI AMPLITUDES ARE EXPECTED TO DEVELOP ONE TO  
THREE HOURS AFTER THE EXPECTED ARRIVAL TIME.

TSUNAMIS BETWEEN 3.2-8.0 FEET/1-2.5 METERS ALONG WITH  
STRONG CURRENTS HAVE BEEN REPORTED IN RHODE ISLAND... NEW

YORK... MARYLAND AND NORTH CAROLINA. A 9.6-FOOT/3-METER TSUNAMI WAS REPORTED IN ATLANTIC CITY NJ WHICH RESULTED IN NUMEROUS DEATHS AND WIDESPREAD STRUCTURAL DAMAGE.

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 - 7.5  
TIME - 0900 EDT MAR 24 2010  
          0900 AST MAR 24 2010  
          0800 CDT MAR 24 2010  
          1300 UTC MAR 24 2010  
LOCATION - 40.0 NORTH 70.0 WEST  
          90 MILES/145 KM S OF NANTUCKET MASSACHUSETTS  
          170 MILES/274 KM SE OF BOSTON MASSACHUSETTS  
DEPTH - 28 MILES/45 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.

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.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-158-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-FLZ168-172-173-047-054-059-064-141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>050-051-034-046-NCZ097-100-101-045>047-080-081-094-095-098-103-104-015>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>028-029-030-241705-  
/T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING OCEAN REEF FLORIDA TO LA MANCHE NEWFOUNDLAND  
1205 PM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE

NEWFOUNDLAND...

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

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.

MANHATTAN-NY	1231	EDT	MAR 24	PORTLAND-ME	1242	EDT	MAR 24
GRAND MANAN-NB	1330	ADT	MAR 24	MIAMI-FL	1245	EDT	MAR 24
SCATARIE IS-NS	1337	ADT	MAR 24	BOSTON-MA	1255	EDT	MAR 24
SAVANNAH-GA	1356	EDT	MAR 24	MYRTLE BCH-SC	1323	EDT	MAR 24
CHARLESTON-SC	1344	EDT	MAR 24	MELBOURNE-FL	1333	EDT	MAR 24
JACKSONVILL B-FL	1341	EDT	MAR 24				

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

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-  
VIZ001-002-241705-  
/T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.  
1205 PM EDT WED MAR 24 2010

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

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SAN JUAN-PR	1211	AST	MAR 24	CHRISTIANSTED-VI	1225	AST	MAR 24
MAYAGUEZ-PR	1220	AST	MAR 24	CHARLOT AMALI-VI	1245	AST	MAR 24

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

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GMZ130-150-155-235-230-250-255-330-335-350-355-455-452-450-  
555-550-630-655-650-750-755-765-730-830-856-853-850-657-656-  
032-075-052>054-TXZ251-256-257-242>247-213-214-236>238-215-  
216-LAZ051>054-040-062-064-066>070-MSZ080>082-ALZ061>064-FLZ002-  
004-006-008-012-014-015-018-027-028-034-039-042-048>051-055-  
060-062-065-069-070-075-174-076>078-241705-  
/T.CON.PAAQ.TS.Y.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO  
OCEAN REEF FLORIDA  
1205 PM EDT WED MAR 24 2010

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA  
AND FLORIDA FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

PERSONS IN TSUNAMI ADVISORY AREAS SHOULD MOVE OUT OF THE

WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

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 ADVISORY ARE PROVIDED BELOW.

KEY WEST-FL	1327	EDT MAR 24	ST PETERSBURG-FL	1815	EDT MAR 24
PANAMA CITY-FL	1522	CDT MAR 24	BILOXI-MS	1719	CDT MAR 24
CORPUS CHRISTI-TX	1606	CDT MAR 24	GALVESTON-TX	1722	CDT MAR 24

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

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ANZ081-241705-  
/T.CON.PAAQ.TS.Y.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND  
TO CAPE CHIDLEY LABRADOR  
1205 PM EDT WED MAR 24 2010

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE  
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

PERSONS IN TSUNAMI ADVISORY AREAS SHOULD MOVE OUT OF THE  
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BONAVISTA-NL	1627	NDT MAR 24	BATTLE HARBOR-NL	1659	NDT MAR 24
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FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
WCATWC.ARH.NOAA.GOV

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**WCATWC Message #8**

WEXX20 PAAQ 241635  
TSUAT1

## BULLETIN

TSUNAMI MESSAGE NUMBER 8  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
1235 PM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -  
NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW  
HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND  
NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE  
NEWFOUNDLAND...

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

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA  
AND FLORIDA FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE  
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

## 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 MOVE 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
NEWPORT RI	41.5 N	71.3 W	1540	3.68 FT/1.15 M
AGUADILLA PR	18.4 N	67.1 W	1622	23.94 FT/7.48 M

FORECAST MODELS PROJECT TSUNAMIS

3.2-9.6 FEET/1-3 METER ABOVE NORMAL SEA LEVEL WILL IMPACT  
PORTIONS OF THE EAST COAST... PUERTO RICO AND THE VIRGIN  
ISLANDS. TSUNAMIS LESS THAN 3.2 FEET/1 METER ABOVE NORMAL  
SEA LEVEL ARE EXPECTED TO OCCUR IN THE GULF OF MEXICO AND  
NORTH OF LA MANCHE NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR.  
MAXIMUM TSUNAMI AMPLITUDES ARE EXPECTED TO DEVELOP ONE TO  
THREE HOURS AFTER THE EXPECTED ARRIVAL TIME. TSUNAMIS  
BETWEEN 3.2-8.0 FEET/1-2.5 METERS ALONG WITH STRONG  
CURRENTS HAVE BEEN REPORTED IN RHODE ISLAND... NEW YORK...  
MARYLAND AND NORTH CAROLINA. A 24.0 FOOT/7.5-METER TSUNAMI  
WAS REPORTED IN AGUADILLA PR WHICH RESULTED IN INUNDATION

FOR ONE MILE/1.6 KM INLAND AND NUMEROUS DEATHS.

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 - 7.5

TIME - 0900 EDT MAR 24 2010

0900 AST MAR 24 2010

0800 CDT MAR 24 2010

1300 UTC MAR 24 2010

LOCATION - 40.0 NORTH 70.0 WEST

90 MILES/145 KM S OF NANTUCKET MASSACHUSETTS

170 MILES/274 KM SE OF BOSTON MASSACHUSETTS

DEPTH - 28 MILES/45 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.

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.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-158-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-FLZ168-172-173-047-054-059-064-141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>050-051-034-046-NCZ097-100-101-045>047-080-081-094-095-098-103-104-015>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>028-029-030-241735-

/T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/

COASTAL AREAS BETWEEN AND INCLUDING OCEAN REEF FLORIDA TO LA MANCHE NEWFOUNDLAND

1235 PM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE NEWFOUNDLAND...

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

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.

SCATARIE IS-NS	1337	ADT	MAR 24	PORTLAND-ME	1242	EDT	MAR 24
SAVANNAH-GA	1356	EDT	MAR 24	MIAMI-FL	1245	EDT	MAR 24
CHARLESTON-SC	1344	EDT	MAR 24	BOSTON-MA	1255	EDT	MAR 24
JACKSONVILL B-FL	1341	EDT	MAR 24	MYRTLE BCH-SC	1323	EDT	MAR 24
MELBOURNE-FL	1333	EDT	MAR 24				

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

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-  
VIZ001-002-241735-  
/T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.  
1235 PM EDT WED MAR 24 2010

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

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

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CHARLOT AMALI-VI 1245 AST MAR 24  
FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
WCATWC.ARH.NOAA.GOV

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GMZ130-150-155-235-230-250-255-330-335-350-355-455-452-450-  
555-550-630-655-650-750-755-765-730-830-856-853-850-657-656-  
032-075-052>054-TXZ251-256-257-242>247-213-214-236>238-215-  
216-LAZ051>054-040-062-064-066>070-MSZ080>082-ALZ061>064-FLZ002-  
004-006-008-012-014-015-018-027-028-034-039-042-048>051-055-  
060-062-065-069-070-075-174-076>078-241735-  
/T.CON.PAAQ.TS.Y.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO  
OCEAN REEF FLORIDA  
1235 PM EDT WED MAR 24 2010

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA  
AND FLORIDA FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

PERSONS IN TSUNAMI ADVISORY AREAS SHOULD MOVE OUT OF THE  
WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

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 ADVISORY ARE PROVIDED BELOW.

KEY WEST-FL	1327	EDT MAR 24	ST PETERSBURG-FL	1815	EDT MAR 24
PANAMA CITY-FL	1522	CDT MAR 24	BILOXI-MS	1719	CDT MAR 24
CORPUS CHRISTI-TX	1606	CDT MAR 24	GALVESTON-TX	1722	CDT MAR 24

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

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ANZ081-241735-  
/T.CON.PAAQ.TS.Y.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND  
TO CAPE CHIDLEY LABRADOR  
1235 PM EDT WED MAR 24 2010

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE  
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

PERSONS IN TSUNAMI ADVISORY AREAS SHOULD MOVE OUT OF THE  
WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

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STRONG CURRENTS OR WAVES DANGEROUS TO PERSONS IN OR VERY NEAR  
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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 ADVISORY ARE PROVIDED BELOW.

BONAVISTA-NL	1627	NDT MAR 24	BATTLE HARBOR-NL	1659	NDT MAR 24
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FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
WCATWC.ARH.NOAA.GOV

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**WCATWC Message #9**

WEXX20 PAAQ 241705  
TSUAT1

## BULLETIN

TSUNAMI MESSAGE NUMBER 9  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
105 PM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -  
NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW  
HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND  
NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE  
NEWFOUNDLAND...

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

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA  
AND FLORIDA FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

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COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE  
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

## 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 MOVE 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
AGUADILLA PR	18.4 N	67.1 W	1622	23.94 FT/7.48 M
SAN JUAN PR	18.5 N	66.6 W	1627	4.83 FT/1.51 M
VIRGIN GORDA BVI	18.5 N	64.5 W	1629	6.66 FT/2.08 M
MAYAGUEZ PR	18.2 N	67.1 W	1636	6.75 FT/2.11 M
CHRISTIANSTED VI	17.7 N	64.8 W	1645	3.17 FT/0.99 M

TSUNAMIS ALONG THE EAST COAST HAVE REDUCED TO APPROX  
3.2 FEET/1 METER ABOVE NORMAL SEA LEVEL IN MOST LOCATIONS.  
6.4-FOOT/2-METER TSUNAMIS HAVE BEEN REPORTED ALONG THE  
NORTHERN SHORES OF PUERTO RICO AND THE VIRGIN ISLANDS CAUSING  
SIGNIFICANT LEVELS OF DAMAGE ALONG THE COAST.

1.9-FOOT/0.6-METER TSUNAMIS WERE OBSERVED IN BONITA BEACH FL  
AND 1.3-FOOT/0.4-METER IN SUWANNEE RIVER FL.

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 - 7.5  
TIME - 0900 EDT MAR 24 2010  
0900 AST MAR 24 2010  
0800 CDT MAR 24 2010  
1300 UTC MAR 24 2010  
LOCATION - 40.0 NORTH 70.0 WEST  
90 MILES/145 KM S OF NANTUCKET MASSACHUSETTS  
170 MILES/274 KM SE OF BOSTON MASSACHUSETTS  
DEPTH - 28 MILES/45 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.

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.

THIS MESSAGE WILL BE UPDATED IN 30 MINUTES OR SOONER IF  
THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT  
UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE  
WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-  
252-254-256-130-135-150-152-154-156-158-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-FLZ168-172-173-047-054-059-064-  
141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>050-  
051-034-046-NCZ097-100-101-045>047-080-081-094-095-098-103-  
104-015>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-  
029-030-241805-  
/T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING OCEAN REEF FLORIDA TO  
LA MANCHE NEWFOUNDLAND  
105 PM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -  
NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW  
HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND  
NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE  
NEWFOUNDLAND...

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO  
HIGHER GROUND.

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.

SAVANNAH-GA 1356 EDT MAR 24 MELBOURNE-FL 1333 EDT MAR 24  
 CHARLESTON-SC 1344 EDT MAR 24 MYRTLE BCH-SC 1323 EDT MAR 24  
 JACKSONVILL B-FL 1341 EDT MAR  
 FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
 WCATWC.ARH.NOAA.GOV

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-  
 VIZ001-002-241805-  
 /T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
 COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.  
 105 PM EDT WED MAR 24 2010

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

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO  
 HIGHER GROUND.

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.

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

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GMZ130-150-155-235-230-250-255-330-335-350-355-455-452-450-  
 555-550-630-655-650-750-755-765-730-830-856-853-850-657-656-  
 032-075-052>054-TXZ251-256-257-242>247-213-214-236>238-215-  
 216-LAZ051>054-040-062-064-066>070-MSZ080>082-ALZ061>064-FLZ002-  
 004-006-008-012-014-015-018-027-028-034-039-042-048>051-055-  
 060-062-065-069-070-075-174-076>078-241805-  
 /T.CON.PAAQ.TS.Y.0010.000000T0000Z-000000T0000Z/  
 COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO  
 OCEAN REEF FLORIDA  
 105 PM EDT WED MAR 24 2010

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
 COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA  
 AND FLORIDA FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

PERSONS IN TSUNAMI ADVISORY AREAS SHOULD MOVE OUT OF THE  
 WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

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 ADVISORY ARE PROVIDED BELOW.

KEY WEST-FL 1327 EDT MAR 24 ST PETERSBURG-FL 1815 EDT MAR 24

PANAMA CITY-FL 1522 CDT MAR 24 BILOXI-MS 1719 CDT MAR 24  
CORPUS CHRISTI-TX 1606 CDT MAR 24 GALVESTON-TX 1722 CDT MAR 24  
FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
WCATWC.ARH.NOAA.GOV

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ANZ081-241805-  
/T.CON.PAAQ.TS.Y.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND  
TO CAPE CHIDLEY LABRADOR  
105 PM EDT WED MAR 24 2010

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE  
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

PERSONS IN TSUNAMI ADVISORY AREAS SHOULD MOVE OUT OF THE  
WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

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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 ADVISORY ARE PROVIDED BELOW.

BONAVISTA-NL 1627 NDT MAR 24 BATTLE HARBOR-NL 1659 NDT MAR 24  
FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
WCATWC.ARH.NOAA.GOV

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**WCATWC Message #10**

WEXX20 PAAQ 241735  
TSUAT1

## BULLETIN

TSUNAMI MESSAGE NUMBER 10  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
135 PM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -  
NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW  
HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND  
NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE  
NEWFOUNDLAND...

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

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA  
AND FLORIDA FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE  
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

## 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 MOVE 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
MAYAGUEZ PR	18.2 N	67.1 W	1636	6.75 FT/2.11 M
CHRISTIANSTED VI	17.7 N	64.8 W	1709	3.97 FT/1.24 M
PORT CANAVERAL FL	28.4 N	80.6 W	1700	4.61 FT/1.44 M
SPRINGMAID SC	33.7 N	78.9 W	1718	4.80 FT/1.50 M

TSUNAMIS ALONG THE EAST COAST HAVE REDUCED TO APPROX 3.2  
FEET/1 METER IN MOST LOCATIONS. 6.4-FOOT/2-METER WAVES HAVE  
BEEN OBSERVED THROUGHOUT THE NORTHERN COASTS OF PUERTO RICO  
AND THE VIRGIN ISLANDS AND ARE CONTINUING TO CAUSE DAMAGE.  
SEVERAL EAST COAST LOCATIONS SUCH AS BAR HARBOR MAINE AND  
ATLANTIC CITY NEW JERSEY REPORT ONGOING DAMAGE FROM WAVES.  
TWO SWIMMERS MELBOURNE FLORIDA WERE REPORTED DROWNED.

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 - 7.5  
TIME - 0900 EDT MAR 24 2010  
          0900 AST MAR 24 2010  
          0800 CDT MAR 24 2010  
          1300 UTC MAR 24 2010  
LOCATION - 40.0 NORTH 70.0 WEST  
          90 MILES/145 KM S OF NANTUCKET MASSACHUSETTS  
          170 MILES/274 KM SE OF BOSTON MASSACHUSETTS  
DEPTH - 28 MILES/45 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.

TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD  
INUNDATION IS IMMINENT OR EXPECTED. WARNINGS INDICATE THAT  
WIDESPREAD DANGEROUS COASTAL FLOODING ACCOMPANIED BY POWERFUL  
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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  
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THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT  
UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE  
WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-  
252-254-256-130-135-150-152-154-156-158-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-FLZ168-172-173-047-054-059-064-  
141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>050-  
051-034-046-NCZ097-100-101-045>047-080-081-094-095-098-103-  
104-015>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-  
029-030-241835-  
/T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING OCEAN REEF FLORIDA TO  
LA MANCHE NEWFOUNDLAND  
135 PM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -  
NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW  
HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND  
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NEWFOUNDLAND...

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO  
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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.

SAVANNAH-GA 1356 EDT MAR 24 JACKSONVILL B-FL 1341 EDT MAR 24  
 CHARLESTON-SC 1344 EDT MAR 24  
 FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
 WCATWC.ARH.NOAA.GOV

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-  
 VIZ001-002-241835-  
 /T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
 COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.  
 135 PM EDT WED MAR 24 2010

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 VIRGIN ISLANDS...

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TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD  
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 WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL  
 TIME.

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

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GMZ130-150-155-235-230-250-255-330-335-350-355-455-452-450-  
 555-550-630-655-650-750-755-765-730-830-856-853-850-657-656-  
 032-075-052>054-TXZ251-256-257-242>247-213-214-236>238-215-  
 216-LAZ051>054-040-062-064-066>070-MSZ080>082-ALZ061>064-FLZ002-  
 004-006-008-012-014-015-018-027-028-034-039-042-048>051-055-  
 060-062-065-069-070-075-174-076>078-241835-  
 /T.CON.PAAQ.TS.Y.0010.000000T0000Z-000000T0000Z/  
 COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO  
 OCEAN REEF FLORIDA  
 135 PM EDT WED MAR 24 2010

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 COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA  
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 TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED  
 SITES IN THE ADVISORY ARE PROVIDED BELOW.

GALVESTON-TX 1722 CDT MAR 24 ST PETERSBURG-FL 1815 EDT MAR 24  
 PANAMA CITY-FL 1522 CDT MAR 24 BILOXI-MS 1719 CDT MAR 24  
 CORPUS CHRISTI-TX 1606 CDT MAR 24



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

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ANZ081-241835-  
/T.CON.PAAQ.TS.Y.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND  
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135 PM EDT WED MAR 24 2010

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SITES IN THE ADVISORY ARE PROVIDED BELOW.

BONAVISTA-NL 1627 NDT MAR 24 BATTLE HARBOR-NL 1659 NDT MAR 24  
FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
WCATWC.ARH.NOAA.GOV

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**WCATWC Message #11**

WEXX20 PAAQ 241805  
TSUAT1

## BULLETIN

TSUNAMI MESSAGE NUMBER 11  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
205 PM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -  
NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW  
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## RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH COULD CAUSE DAMAGE TO THE  
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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
CHRISTIANSTED VI	17.7 N	64.8 W	1709	3.97 FT/1.24 M
SPRINGMAID SC	33.7 N	78.9 W	1718	4.80 FT/1.50 M
FLAGLER BEACH FL	29.5 N	81.1 W	1739	6.88 FT/2.15 M

1.9-FOOT/0.6-METER WAVES WERE REPORTED IN BONITA BEACH FL AND  
1.3-FOOT/0.4-METER IN SUWANNEE RIVER FL. MINOR BOAT  
DAMAGE HAS BEEN REPORTED DUE TO TSUNAMI CURRENTS IN THE  
EASTERN GULF OF MEXICO. SEVERAL HARBORS IN MAINE HAVE REPORTED  
SIGNIFICANT DAMAGE DUE TO STRONG CURRENTS AND LOW LEVELS OF  
INUNDATION.

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).

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           0900 AST MAR 24 2010  
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           90 MILES/145 KM S OF NANTUCKET MASSACHUSETTS  
           170 MILES/274 KM SE OF BOSTON MASSACHUSETTS  
 DEPTH - 28 MILES/45 KM

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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.

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AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-  
 252-254-256-130-135-150-152-154-156-158-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-FLZ168-172-173-047-054-059-064-  
 141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>050-  
 051-034-046-NCZ097-100-101-045>047-080-081-094-095-098-103-  
 104-015>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-  
 029-030-241905-  
 /T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
 COASTAL AREAS BETWEEN AND INCLUDING OCEAN REEF FLORIDA TO  
 LA MANCHE NEWFOUNDLAND  
 205 PM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
 COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
 CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -  
 NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW  
 HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND  
 NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE  
 NEWFOUNDLAND...

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

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.

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

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-  
VIZ001-002-241905-  
/T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.  
205 PM EDT WED MAR 24 2010

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

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO  
HIGHER GROUND.

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.

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

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GMZ130-150-155-235-230-250-255-330-335-350-355-455-452-450-  
555-550-630-655-650-750-755-765-730-830-856-853-850-657-656-  
032-075-052>054-TXZ251-256-257-242>247-213-214-236>238-215-  
216-LAZ051>054-040-062-064-066>070-MSZ080>082-ALZ061>064-FLZ002-  
004-006-008-012-014-015-018-027-028-034-039-042-048>051-055-  
060-062-065-069-070-075-174-076>078-241905-  
/T.CON.PAAQ.TS.Y.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO  
OCEAN REEF FLORIDA  
205 PM EDT WED MAR 24 2010

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA  
AND FLORIDA FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

PERSONS IN TSUNAMI ADVISORY AREAS SHOULD MOVE OUT OF THE  
WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING  
STRONG CURRENTS OR WAVES DANGEROUS TO PERSONS IN OR VERY NEAR  
WATER IS IMMINENT OR 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 ADVISORY ARE PROVIDED BELOW.

GALVESTON-TX	1722	CDT MAR 24	ST PETERSBURG-FL	1815	EDT MAR 24
PANAMA CITY-FL	1522	CDT MAR 24	BILOXI-MS	1719	CDT MAR 24
CORPUS CHRISTI-TX	1606	CDT MAR 24			

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

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/T.CON.PAAQ.TS.Y.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND  
TO CAPE CHIDLEY LABRADOR  
205 PM EDT WED MAR 24 2010

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE  
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

PERSONS IN TSUNAMI ADVISORY AREAS SHOULD MOVE OUT OF THE  
WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

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WAVES POTENTIALLY DANGEROUS SEVERAL HOURS AFTER INITIAL ARRIVAL  
TIME. ESTIMATED TIMES OF INITIAL WAVE ARRIVAL FOR SELECTED  
SITES IN THE ADVISORY ARE PROVIDED BELOW.

BATTLE HARBOR-NL 1659 NDT MAR 24  
FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
WCATWC.ARH.NOAA.GOV

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EXERCISE

**WCATWC Message #12**

WEXX20 PAAQ 241905  
TSUAT1

## BULLETIN

TSUNAMI MESSAGE NUMBER 12  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
305 PM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -  
NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW  
HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND  
NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE  
NEWFOUNDLAND...

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

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA  
AND FLORIDA FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE  
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

## 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 MOVE 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.

TSUNAMI AMPLITUDES HAVE DROPPED TO 3.2-4.8 FOOT/1-1.5 METER  
THROUGHOUT PUERTO RICO AND VIRGIN ISLANDS WITH DANGEROUS COASTAL  
CONDITIONS PERSISTING. TSUNAMI OBSERVATIONS IN  
THE EASTERN GULF OF MEXICO HAVE DECREASED TO LESS THAN 1.6  
FEET/0.5 METERS. BOAT HARBORS THROUGHOUT THE SOUTHEAST COAST  
OF NOVA SCOTIA HAVE EXPERIENCED SIGNIFICANT DESTRUCTION.  
CITIES WHERE TSUNAMIS EXCEEDING 3.2 FEET/1.0 METER  
ARE STILL BEING OBSERVED INCLUDE ATLANTIC CITY NJ... BAR HARBOR  
ME AND OCEAN CITY MD.

## PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.5

TIME - 0900 EDT MAR 24 2010  
0900 AST MAR 24 2010  
0800 CDT MAR 24 2010  
1300 UTC MAR 24 2010

LOCATION - 40.0 NORTH 70.0 WEST  
90 MILES/145 KM S OF NANTUCKET MASSACHUSETTS

170 MILES/274 KM SE OF BOSTON MASSACHUSETTS  
 DEPTH - 28 MILES/45 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.

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.

THIS MESSAGE WILL BE UPDATED IN 60 MINUTES OR SOONER IF  
 THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT  
 UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE  
 WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-  
 252-254-256-130-135-150-152-154-156-158-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-FLZ168-172-173-047-054-059-064-  
 141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>050-  
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 104-015>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-  
 029-030-242005-  
 /T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
 COASTAL AREAS BETWEEN AND INCLUDING OCEAN REEF FLORIDA TO  
 LA MANCHE NEWFOUNDLAND  
 305 PM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
 COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
 CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -  
 NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW  
 HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND  
 NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE  
 NEWFOUNDLAND...

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO  
 HIGHER GROUND.

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.

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

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 VIZ001-002-242005-

/T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
 COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.  
 305 PM EDT WED MAR 24 2010

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

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO  
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FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
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GMZ130-150-155-235-230-250-255-330-335-350-355-455-452-450-  
 555-550-630-655-650-750-755-765-730-830-856-853-850-657-656-  
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 216-LAZ051>054-040-062-064-066>070-MSZ080>082-ALZ061>064-FLZ002-  
 004-006-008-012-014-015-018-027-028-034-039-042-048>051-055-  
 060-062-065-069-070-075-174-076>078-242005-  
 /T.CON.PAAQ.TS.Y.0010.000000T0000Z-000000T0000Z/  
 COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO  
 OCEAN REEF FLORIDA  
 305 PM EDT WED MAR 24 2010

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
 COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA  
 AND FLORIDA FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

PERSONS IN TSUNAMI ADVISORY AREAS SHOULD MOVE OUT OF THE  
 WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING  
 STRONG CURRENTS OR WAVES DANGEROUS TO PERSONS IN OR VERY NEAR  
 WATER IS IMMINENT OR 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 ADVISORY ARE PROVIDED BELOW.

GALVESTON-TX	1722	CDT	MAR 24	ST PETERSBURG-FL	1815	EDT	MAR 24
PANAMA CITY-FL	1522	CDT	MAR 24	BILOXI-MS	1719	CDT	MAR 24
CORPUS CHRISTI-TX	1606	CDT	MAR 24				

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

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 COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND  
 TO CAPE CHIDLEY LABRADOR  
 305 PM EDT WED MAR 24 2010

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
 COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE  
 NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...



PERSONS IN TSUNAMI ADVISORY AREAS SHOULD MOVE OUT OF THE WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

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.

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

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EJERCICIO

**WCATWC Message #13**

WEXX20 PAAQ 242005  
TSUAT1

## BULLETIN

TSUNAMI MESSAGE NUMBER 13  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
405 PM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -  
NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW  
HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND  
NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE  
NEWFOUNDLAND...

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

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA  
AND FLORIDA FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE  
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

## 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 MOVE 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.

TSUNAMI AMPLITUDES HAVE DECREASED TO 3.2-4.8 FOOT/1-1.5 METER  
THROUGHOUT PUERTO RICO AND VIRGIN ISLANDS THOUGH ARE STILL  
DANGEROUS. NON-DAMAGING 1.0-FOOT/0.3-METER TSUNAMI WERE  
OBSERVED ALONG THE LABRADOR COAST. TSUNAMIS ALONG  
THE EAST COAST HAVE DIMINISHED THOUGH STRONG CURRENTS STILL  
EXIST. CITIES WHERE TSUNAMIS EXCEEDING 3.2 FOOT/1.0  
METER ARE STILL BEING OBSERVED INCLUDE ATLANTIC  
CITY NJ... MONTAUK NY AND OCEAN CITY MD. STRONG CURRENTS HAVE  
OCCURED AT A FEW LOCATIONS THROUGHOUT THE GULF OF MEXICO  
CAUSING DAMAGE TO HARBORS AND MARINAS.

## PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.5  
TIME - 0900 EDT MAR 24 2010  
0900 AST MAR 24 2010  
0800 CDT MAR 24 2010  
1300 UTC MAR 24 2010

LOCATION - 40.0 NORTH 70.0 WEST  
 90 MILES/145 KM S OF NANTUCKET MASSACHUSETTS  
 170 MILES/274 KM SE OF BOSTON MASSACHUSETTS  
 DEPTH - 28 MILES/45 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.

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  
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THIS MESSAGE WILL BE UPDATED IN 60 MINUTES OR SOONER IF  
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 UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE  
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AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-  
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 COASTAL AREAS BETWEEN AND INCLUDING OCEAN REEF FLORIDA TO  
 LA MANCHE NEWFOUNDLAND  
 405 PM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
 COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
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 HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND  
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PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO  
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TSUNAMI WARNINGS MEAN THAT A TSUNAMI WITH SIGNIFICANT WIDESPREAD  
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FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
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 VIZ001-002-242105-  
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 COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.  
 405 PM EDT WED MAR 24 2010

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

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO  
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FOR ARRIVAL TIMES AT ADDITIONAL LOCATIONS SEE  
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GMZ130-150-155-235-230-250-255-330-335-350-355-455-452-450-  
 555-550-630-655-650-750-755-765-730-830-856-853-850-657-656-  
 032-075-052>054-TXZ251-256-257-242>247-213-214-236>238-215-  
 216-LAZ051>054-040-062-064-066>070-MSZ080>082-ALZ061>064-FLZ002-  
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 COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO  
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...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE  
 COASTAL AREAS OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA  
 AND FLORIDA FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

PERSONS IN TSUNAMI ADVISORY AREAS SHOULD MOVE OUT OF THE  
 WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

TSUNAMI ADVISORIES MEAN THAT A TSUNAMI CAPABLE OF PRODUCING  
 STRONG CURRENTS OR WAVES DANGEROUS TO PERSONS IN OR VERY NEAR  
 WATER IS IMMINENT OR 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 ADVISORY ARE PROVIDED BELOW.

GALVESTON-TX	1722	CDT MAR 24	ST PETERSBURG-FL	1815	EDT MAR 24
PANAMA CITY-FL	1522	CDT MAR 24	BILOXI-MS	1719	CDT MAR 24
CORPUS CHRISTI-TX	1606	CDT MAR 24			

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

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ANZ081-242105-  
 /T.CON.PAAQ.TS.Y.0010.000000T0000Z-000000T0000Z/  
 COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND  
 TO CAPE CHIDLEY LABRADOR  
 405 PM EDT WED MAR 24 2010

...A TSUNAMI ADVISORY IS IN EFFECT WHICH INCLUDES THE

COASTAL AREAS OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE  
NEWFOUNDLAND TO CAPE CHIDLEY LABRADOR...

PERSONS IN TSUNAMI ADVISORY AREAS SHOULD MOVE OUT OF THE  
WATER... OFF THE BEACH AND OUT OF HARBORS AND MARINAS.

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.

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

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EXERCICIO

**WCATWC Message #14**

WEXX20 PAAQ 242105  
TSUAT1

## BULLETIN

TSUNAMI MESSAGE NUMBER 14  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
505 PM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -  
NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW  
HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND  
NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE  
NEWFOUNDLAND...

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

...THE TSUNAMI ADVISORY IS CANCELED FOR THE COASTAL AREAS  
OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA  
FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

...THE TSUNAMI ADVISORY IS CANCELED FOR THE COASTAL AREAS  
OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE NEWFOUNDLAND TO  
CAPE CHIDLEY LABRADOR...

## RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH COULD CAUSE DAMAGE TO THE  
WARNING 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.

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

TSUNAMI AMPLITUDES CONTINUE AT 3.2-4.8 FOOT/1-1.5 METER  
THROUGHOUT NORTHERN PUERTO RICO AND VIRGIN ISLANDS AND ARE  
STILL DANGEROUS. TSUNAMI OBSERVATIONS IN THE GULF  
OF MEXICO HAVE DECREASED TO LESS THAN 1.6 FEET/0.5 METERS.  
1.0-FOOT/0.3-METER WAVES HAVE BEEN REPORTED AT  
CAPE CHIDLEY LABRADOR. WAVES ALONG THE EAST COAST  
HAVE DIMINISHED THOUGH STRONG CURRENTS STILL  
EXIST. CITIES WHERE TSUNAMIS EXCEED 3.2 FOOT/1.0 METER  
ARE STILL BEING OBSERVED INCLUDE ATLANTIC CITY NJ... FLAGLER FL  
AND OCEAN CITY MD.

## PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.5

TIME - 0900 EDT MAR 24 2010  
0900 AST MAR 24 2010  
0800 CDT MAR 24 2010  
1300 UTC MAR 24 2010

LOCATION - 40.0 NORTH 70.0 WEST  
90 MILES/145 KM S OF NANTUCKET MASSACHUSETTS  
170 MILES/274 KM SE OF BOSTON MASSACHUSETTS

DEPTH - 28 MILES/45 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.

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.

THIS MESSAGE WILL BE UPDATED IN 60 MINUTES OR SOONER IF  
THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT  
UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE  
WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

GMZ130-150-155-235-230-250-255-330-335-350-355-455-452-450-  
555-550-630-655-650-750-755-765-730-830-856-853-850-657-656-  
032-075-052>054-TXZ251-256-257-242>247-213-214-236>238-215-  
216-LAZ051>054-040-062-064-066>070-MSZ080>082-ALZ061>064-FLZ002-  
004-006-008-012-014-015-018-027-028-034-039-042-048>051-055-  
060-062-065-069-070-075-174-076>078-242205-  
/T.CAN.PAAQ.TS.Y.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING BROWNSVILLE TEXAS TO  
OCEAN REEF FLORIDA  
505 PM EDT WED MAR 24 2010

...THE TSUNAMI ADVISORY IS CANCELED FOR THE COASTAL AREAS  
OF TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA  
FROM BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

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ANZ081-242205-  
/T.CAN.PAAQ.TS.Y.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING LA MANCHE NEWFOUNDLAND  
TO CAPE CHIDLEY LABRADOR  
505 PM EDT WED MAR 24 2010

...THE TSUNAMI ADVISORY IS CANCELED FOR THE COASTAL AREAS  
OF NEWFOUNDLAND AND LABRADOR FROM LA MANCHE NEWFOUNDLAND TO  
CAPE CHIDLEY LABRADOR...

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AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-  
252-254-256-130-135-150-152-154-156-158-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-FLZ168-172-173-047-054-059-064-  
141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>050-  
051-034-046-NCZ097-100-101-045>047-080-081-094-095-098-103-  
104-015>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-  
029-030-242205-  
/T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING OCEAN REEF FLORIDA TO  
LA MANCHE NEWFOUNDLAND  
505 PM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -

NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW  
HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND  
NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE  
NEWFOUNDLAND...

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO  
HIGHER GROUND.

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.

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

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-  
VIZ001-002-242205-  
/T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.  
505 PM EDT WED MAR 24 2010

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

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO  
HIGHER GROUND.

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.

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

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**WCATWC Message #15**

WEXX20 PAAQ 242205  
TSUAT1

## BULLETIN

TSUNAMI MESSAGE NUMBER 15  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
605 PM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -  
NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW  
HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND  
NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE  
NEWFOUNDLAND...

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

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF  
TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM  
BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF  
NEWFOUNDLAND AND LABRADOR FROM LA MANCHE NEWFOUNDLAND TO  
CAPE CHIDLEY LABRADOR...

## RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH COULD CAUSE DAMAGE TO THE  
WARNING 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.

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

TSUNAMI LEVELS HAVE DECREASED TO 1.0-3.2 FOOT/0.3-1.0 METER  
THROUGHOUT MOST OF PUERTO RICO AND VIRGIN ISLANDS. TSUNAMI  
OBSERVATIONS IN THE GULF OF MEXICO AND NORTH OF LA MANCHE  
NEWFOUNDLAND CONTINUE TO BE LESS THAN 1.3FEET/0.4 METERS.  
TSUNAMIS ALONG THE EAST COAST HAVE DIMINISHED THOUGH STRONG  
CURRENTS STILL EXIST. LARGE LEVELS OF DAMAGE HAVE BEEN REPORTED  
FROM PORTIONS OF THE FLORIDA COAST. SEVERAL SWIMMERS ARE REPORTED  
MISSING.

## PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.5  
TIME - 0900 EDT MAR 24 2010  
          0900 AST MAR 24 2010  
          0800 CDT MAR 24 2010  
          1300 UTC MAR 24 2010  
LOCATION - 40.0 NORTH 70.0 WEST  
          90 MILES/145 KM S OF NANTUCKET MASSACHUSETTS  
          170 MILES/274 KM SE OF BOSTON MASSACHUSETTS  
DEPTH - 28 MILES/45 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.

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.

THIS MESSAGE WILL BE UPDATED IN 60 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-158-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-FLZ168-172-173-047-054-059-064-141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>050-051-034-046-NCZ097-100-101-045>047-080-081-094-095-098-103-104-015>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>028-029-030-242305-  
/T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING OCEAN REEF FLORIDA TO LA MANCHE NEWFOUNDLAND  
605 PM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE NEWFOUNDLAND...

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

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.

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

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-VIZ001-002-242305-  
/T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.  
605 PM EDT WED MAR 24 2010

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

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

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.

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

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EJERCICIO

**WCATWC Message #16**

WEXX20 PAAQ 242305  
TSUAT1

## BULLETIN

TSUNAMI MESSAGE NUMBER 16  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
705 PM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -  
NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW  
HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND  
NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE  
NEWFOUNDLAND...

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

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF  
TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM  
BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF  
NEWFOUNDLAND AND LABRADOR FROM LA MANCHE NEWFOUNDLAND TO  
CAPE CHIDLEY LABRADOR...

## RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH COULD CAUSE DAMAGE TO THE  
WARNING 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.

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

TSUNAMI AMPLITUDES HAVE DROPPED TO 1.0-3.2 FOOT/0.3-1.0 METER  
THROUGHOUT PUERTO RICO AND VIRGIN ISLANDS. TSUNAMIS ALONG  
THE EAST COAST HAVE DIMINISHED THOUGH STRONG  
CURRENTS STILL EXIST. REPORTS OF MAJOR DAMAGE TO MANY BOAT  
HARBORS ALONG THE U.S. ATLANTIC COAST AND S.E. CANADIAN COAST  
HAVE BEEN REPORTED.

## PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.5  
TIME - 0900 EDT MAR 24 2010  
0900 AST MAR 24 2010  
0800 CDT MAR 24 2010  
1300 UTC MAR 24 2010  
LOCATION - 40.0 NORTH 70.0 WEST  
90 MILES/145 KM S OF NANTUCKET MASSACHUSETTS  
170 MILES/274 KM SE OF BOSTON MASSACHUSETTS  
DEPTH - 28 MILES/45 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.

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.

THIS MESSAGE WILL BE UPDATED IN 60 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-158-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-FLZ168-172-173-047-054-059-064-141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>050-051-034-046-NCZ097-100-101-045>047-080-081-094-095-098-103-104-015>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>028-029-030-250005-  
/T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING OCEAN REEF FLORIDA TO LA MANCHE NEWFOUNDLAND  
705 PM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE NEWFOUNDLAND...

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

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.

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

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-VIZ001-002-250005-  
/T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.  
705 PM EDT WED MAR 24 2010

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

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

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.

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

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EJERCICIO

**WCATWC Message #17**

WEXX20 PAAQ 250005  
TSUAT1

## BULLETIN

TSUNAMI MESSAGE NUMBER 17  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
805 PM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -  
NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW  
HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND  
NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE  
NEWFOUNDLAND...

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

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF  
TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM  
BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF  
NEWFOUNDLAND AND LABRADOR FROM LA MANCHE NEWFOUNDLAND TO  
CAPE CHIDLEY LABRADOR...

## RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH COULD CAUSE DAMAGE TO THE  
WARNING 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.

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

TSUNAMI AMPLITUDES ALONG THE PUERTO RICO AND VIRGIN ISLAND  
COASTS HAVE DECREASED TO 1.0-1.6 FOOT/0.3-0.5  
METER THOUGH SOME LOCATIONS SUCH AS AGUADILLA  
CONTINUE TO OBSERVE TSUNAMIS EXCEEDING 3.2 FOOT/1.0 METER.  
1.0-3.2 FOOT/0.3-1.0 METER WAVES CONTINUE AT A FEW U.S.  
ATLANTIC COAST LOCATIONS SUCH AS ATLANTIC CITY NJ... BAR HARBOR  
ME... OCEAN CITY MD AND FLAGLER BEACH FL.

## PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.5  
TIME - 0900 EDT MAR 24 2010  
0900 AST MAR 24 2010  
0800 CDT MAR 24 2010  
1300 UTC MAR 24 2010  
LOCATION - 40.0 NORTH 70.0 WEST  
90 MILES/145 KM S OF NANTUCKET MASSACHUSETTS  
170 MILES/274 KM SE OF BOSTON MASSACHUSETTS  
DEPTH - 28 MILES/45 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.

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.

THIS MESSAGE WILL BE UPDATED IN 60 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-158-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-FLZ168-172-173-047-054-059-064-141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>050-051-034-046-NCZ097-100-101-045>047-080-081-094-095-098-103-104-015>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>028-029-030-250105-  
/T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS BETWEEN AND INCLUDING OCEAN REEF FLORIDA TO LA MANCHE NEWFOUNDLAND  
805 PM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE NEWFOUNDLAND...

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

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.

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

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-VIZ001-002-250105-  
/T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.  
805 PM EDT WED MAR 24 2010

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

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

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.

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

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EJERCICIO

**WCATWC Message #18**

WEXX20 PAAQ 250105  
TSUAT1

## BULLETIN

TSUNAMI MESSAGE NUMBER 18  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
905 PM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE  
COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH  
CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY -  
NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW  
HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND  
NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE  
NEWFOUNDLAND...

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

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF  
TEXAS - LOUISIANA - MISSISSIPPI - ALABAMA AND FLORIDA FROM  
BROWNSVILLE TEXAS TO OCEAN REEF FLORIDA...

...THIS MESSAGE IS INFORMATION ONLY FOR COASTAL AREAS OF  
NEWFOUNDLAND AND LABRADOR FROM LA MANCHE NEWFOUNDLAND TO  
CAPE CHIDLEY LABRADOR...

## RECOMMENDED ACTIONS

A TSUNAMI HAS BEEN GENERATED WHICH COULD CAUSE DAMAGE TO THE  
WARNING 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.

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

TSUNAMI AMPLITUDES THROUGHOUT THE U.S./CANADIAN COAST CONTINUE TO  
DECREASE THOUGH MUST STILL BE CONSIDERED VERY DANGEROUS. DANGEROUS  
CONDITIONS PERSIST FOR THOSE IN OR VERY NEAR THE WATER.

## PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.5  
TIME - 0900 EDT MAR 24 2010  
0900 AST MAR 24 2010  
0800 CDT MAR 24 2010  
1300 UTC MAR 24 2010  
LOCATION - 40.0 NORTH 70.0 WEST  
90 MILES/145 KM S OF NANTUCKET MASSACHUSETTS  
170 MILES/274 KM SE OF BOSTON MASSACHUSETTS  
DEPTH - 28 MILES/45 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.

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.

THIS MESSAGE WILL BE UPDATED IN 60 MINUTES OR SOONER IF THE SITUATION WARRANTS. THE TSUNAMI MESSAGE WILL REMAIN IN EFFECT UNTIL FURTHER NOTICE. REFER TO THE INTERNET SITE WCATWC.ARH.NOAA.GOV FOR MORE INFORMATION.

AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-252-254-256-130-135-150-152-154-156-158-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-FLZ168-172-173-047-054-059-064-141-147-024-025-033-038-GAZ154-166-117-119-139-141-SCZ048>050-051-034-046-NCZ097-100-101-045>047-080-081-094-095-098-103-104-015>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>028-029-030-250205-/T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/COASTAL AREAS BETWEEN AND INCLUDING OCEAN REEF FLORIDA TO LA MANCHE NEWFOUNDLAND  
905 PM EDT WED MAR 24 2010

...A TSUNAMI WARNING IS IN EFFECT WHICH INCLUDES THE COASTAL AREAS OF FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA - VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK - CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE - MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM OCEAN REEF FLORIDA TO LA MANCHE NEWFOUNDLAND...

PERSONS IN TSUNAMI WARNING COASTAL AREAS SHOULD MOVE INLAND TO HIGHER GROUND.

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.

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

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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-VIZ001-002-250205-/T.CON.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.  
905 PM EDT WED MAR 24 2010

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

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

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**WCATWC Message #19**

WEXX20 PAAQ 250205  
TSUAT1

BULLETIN  
TSUNAMI MESSAGE NUMBER 19  
NWS WEST COAST/ALASKA TSUNAMI WARNING CENTER PALMER AK  
1005 PM EDT WED MAR 24 2010

...THE TSUNAMI WARNING IS CANCELED FOR THE COASTAL AREAS OF  
FLORIDA - GEORGIA - SOUTH CAROLINA - NORTH CAROLINA -  
VIRGINIA - MARYLAND - DELAWARE - NEW JERSEY - NEW YORK -  
CONNECTICUT - RHODE ISLAND - MASSACHUSETTS - NEW HAMPSHIRE  
- MAINE - NEW BRUNSWICK - NOVA SCOTIA AND NEWFOUNDLAND FROM  
OCEAN REEF FLORIDA TO LA MANCHE NEWFOUNDLAND...

...THE TSUNAMI WARNING IS CANCELED FOR PUERTO RICO AND THE  
VIRGIN ISLANDS...

## EVALUATION

DAMAGING TSUNAMIS ARE NO LONGER EXPECTED ALONG THE ATLANTIC  
COASTS OF THE U.S. AND CANADA. AS LOCAL CONDITIONS CAN CAUSE  
A WIDE VARIATION IN TSUNAMI WAVE ACTION THE ALL CLEAR  
DETERMINATIONS MUST BE MADE BY LOCAL AUTHORITIES.

TSUNAMI AMPLITUDES HAVE DROPPED BELOW DANGEROUS LEVELS AT MOST  
LOCATIONS ALONG THE U.S. AND CANADIAN ATLANTIC COAST. SEA  
LEVEL CONDITIONS STILL VARY GREATLY FROM LOCATION TO LOCATION  
ALONG THE COAST. DECISIONS RELATING TO REOCCUPATION OF COASTAL  
ZONES MUST BE MADE BY LOCAL AUTHORITIES.

ALL WAVE ACTIVITY THROUGHOUT THE WARNING AREA HAS BEEN REPORTED  
AS BEING LESS THAN 1 FOOT/0.3 METERS IN HEIGHT.

## PRELIMINARY EARTHQUAKE PARAMETERS

MAGNITUDE - 7.5  
TIME - 0900 EDT MAR 24 2010  
0900 AST MAR 24 2010  
0800 CDT MAR 24 2010  
1300 UTC MAR 24 2010  
LOCATION - 40.0 NORTH 70.0 WEST  
90 MILES/145 KM S OF NANTUCKET MASSACHUSETTS  
170 MILES/274 KM SE OF BOSTON MASSACHUSETTS  
DEPTH - 28 MILES/45 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 LAST WEST COAST/ALASKA TSUNAMI WARNING  
CENTER MESSAGE ISSUED FOR THIS EVENT.  
THIS INFORMATION IS ALSO POSTED AT WCATWC.ARH.NOAA.GOV.

AMZ630-650-651-550-552-555-450-452-454-330-350-352-354-250-  
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029-030-250305-  
/T.CAN.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
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AMZ712-715-725-735-742-745-PRZ001>003-005-007-008-010-011-  
VIZ001-002-250305-  
/T.CAN.PAAQ.TS.W.0010.000000T0000Z-000000T0000Z/  
COASTAL AREAS OF PUERTO RICO AND THE VIRGIN ISLANDS.  
1005 PM EDT WED MAR 24 2010

...THE TSUNAMI WARNING IS CANCELED FOR PUERTO RICO AND THE  
VIRGIN ISLANDS...

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EXERCICIO

## Anejo E. Productos en Línea

Durante un evento, el WCATWC anuncia en su sitio de internet sus productos gráficos y en línea. Este anejo contiene algunos ejemplos de los mismos. El primero de éstos es el mensaje de texto en formato html con enlaces en línea incluidos.

**A: EUA, el área de Canadá en el Atlántico y las regiones costeras del Golfo de México**

De: **NOAA/NWS/Centro de Alerta de Tsunami de la Costa Oeste y Alaska**

Asunto: **Aviso de Tsunami (maremoto) # 1 emitido el 03/24/2010 a las 9:05 AM EDT**

Un **Aviso de Tsunami** entra en vigor para las áreas costeras de New Jersey, New York, Connecticut, Rhode Island y Massachusetts desde Sandy Hook, New Jersey al Río Merrimack, Massachusetts.

Este es un mensaje de **Información Solamente** para las áreas costeras de Texas, Louisiana, Mississippi, Alabama, Florida, Georgia, Carolina del Sur, Carolina del Norte, Virginia, Maryland, Delaware y New Jersey, desde Brownsville, Texas a Sandy Hook, New Jersey.

Este es un mensaje de **Información Solamente** para las áreas costeras de Massachusetts, New Hampshire, Maine, New Brunswick, Nova Scotia, Terranova, y Labrador desde el Río Merrimack, Massachusetts hasta Cape Chidley, Labrador.

Este es un mensaje de **Información Solamente** para las áreas costeras de Puerto Rico e Islas Vírgenes.

Un **Aviso de Tsunami** significa que todos los residentes de la costa en el **área de aviso**, que están cerca de la playa o en las regiones bajas deben moverse inmediatamente a áreas altas y lejos de los puertos e isletas, inclusive aquellos lugares protegidos directamente del mar. Quiénes sientan el temblor de tierra, vean oleajes inusuales y/o aumento o disminución del nivel del agua, podrían tener sólo **pocos minutos antes de la llegada del tsunami** y deben alejarse inmediatamente del mar. Las residencias y edificios pequeños no están diseñados para resistir el impacto de un tsunami. No permanezca en estas estructuras.

Todos los residentes dentro del área bajo aviso deben permanecer alerta a la información e instrucciones emitidas por las autoridades civiles locales. Este aviso está basado solamente en información de terremoto - todavía no se ha confirmado el tsunami.

A las 9:00 AM en Horario Estándar del Atlántico del 24 de marzo, un **terremoto** de magnitud preliminar 7.5 **ocurrió a 90 millas/145 km al sur de Nantucket, Massachusetts.** (Refiérase al **Servicio Geológico de los Estados Unidos o la Red Sísmica de Puerto Rico** para los parámetros oficiales del terremoto). Este terremoto **podría haber** generado un tsunami. Si se ha generado un tsunami, las olas llegarían primero a Cape Hatteras, Carolina del Norte a las 10:53 AM EDT del 24 de marzo. Los **mapas y las horas estimadas** de llegada del tsunami, junto con las **reglas de seguridad** e **información adicional** pueden conseguirse en el sitio de internet del **WCATWC**.

Los tsunamis pueden ser olas peligrosas mortales. La altura de las olas son amplificadas por orillas irregulares y son difíciles de pronosticar. Frecuentemente los tsunamis parecen ser fuertes oleajes y podrían ser precedidos por una disminución del nivel del mar. Los marineros en aguas de 613 pies/187 metros o más no deberían verse afectados por un tsunami. La altura de las olas aumentará rápidamente al acercarse a áreas poco profundas. Los tsunamis son una serie de olas en el océano que podrían ser peligrosas por varias horas después de la llegada de la primera ola. **NO** regrese a las áreas desalojadas hasta que las autoridades civiles locales anuncien el final del peligro y que es seguro.

El Centro de Alerta de Tsunami del Pacífico en la playa Ewa en Hawaii emitirá mensajes para las áreas del Caribe aparte de Puerto Rico y las Islas Vírgenes.

Este mensaje será actualizado en o antes de 30 minutos si la situación lo amerita. El mensaje de tsunami permanecerá en efecto hasta nuevo aviso. Para más información manténgase sintonizado al Radio del Tiempo NOAA, estaciones de radio o de televisión local, o vea el sitio de internet de WCATWC.

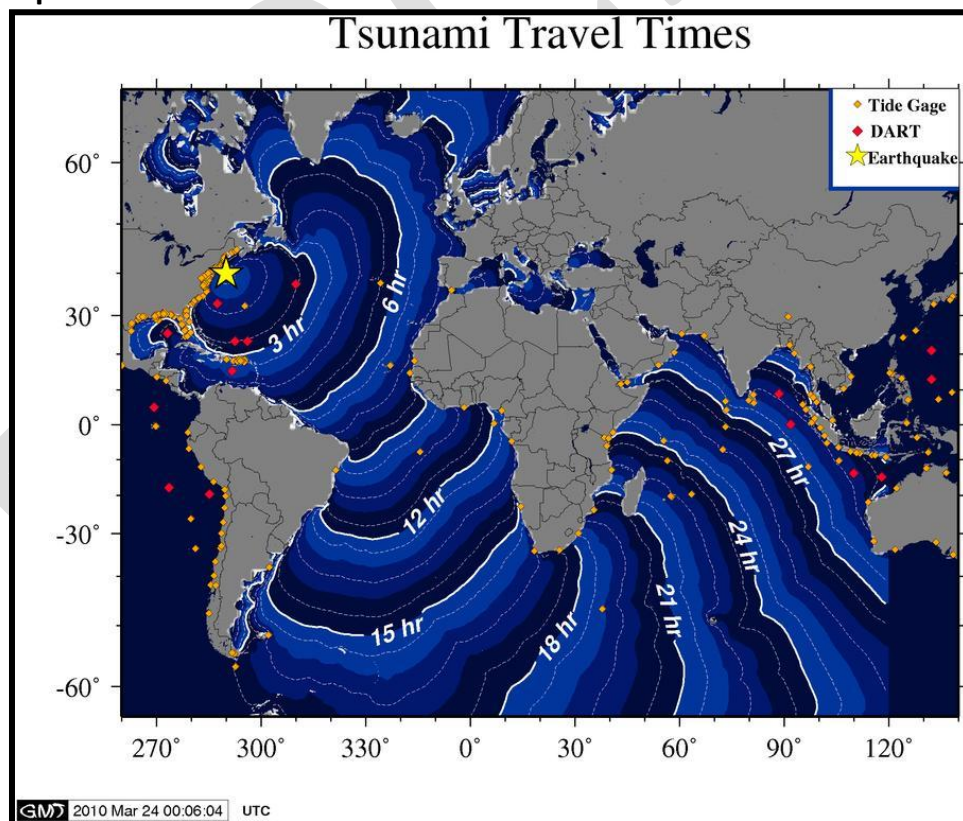
[Enlace para Mensaje de Aviso Estándar](#)

[Enlace para Mensaje de Aviso Público](#)

[Enlace para Mensaje XML/CAP](#)

[Enlace para mensaje imprimible](#)

### Mapa con tiempos de recorrido de tsunami:



## Ejemplo de la lista del tiempo de recorrido de un tsunami.

The following list gives estimated times of arrival for locations along the U.S. and Canadian Atlantic coast from a tsunami generated at the given source location. The list is ordered chronologically. Since tsunami speed is directly related to water depth, tsunami ETAs can be computed independent of tsunami amplitude. THE LISTING OF A TSUNAMI ARRIVAL TIME BELOW DOES NOT INDICATE A WAVE IS IMMINENT. The listed arrival time is the initial wave arrival. Tsunamis can be dangerous for many hours after arrival, and the initial wave is not necessarily the largest.

### Source:

Lat: 40N  
 Lng: 70W  
 Mag: 7.5  
 O-time: 1300UTC  
 Date: MAR 24

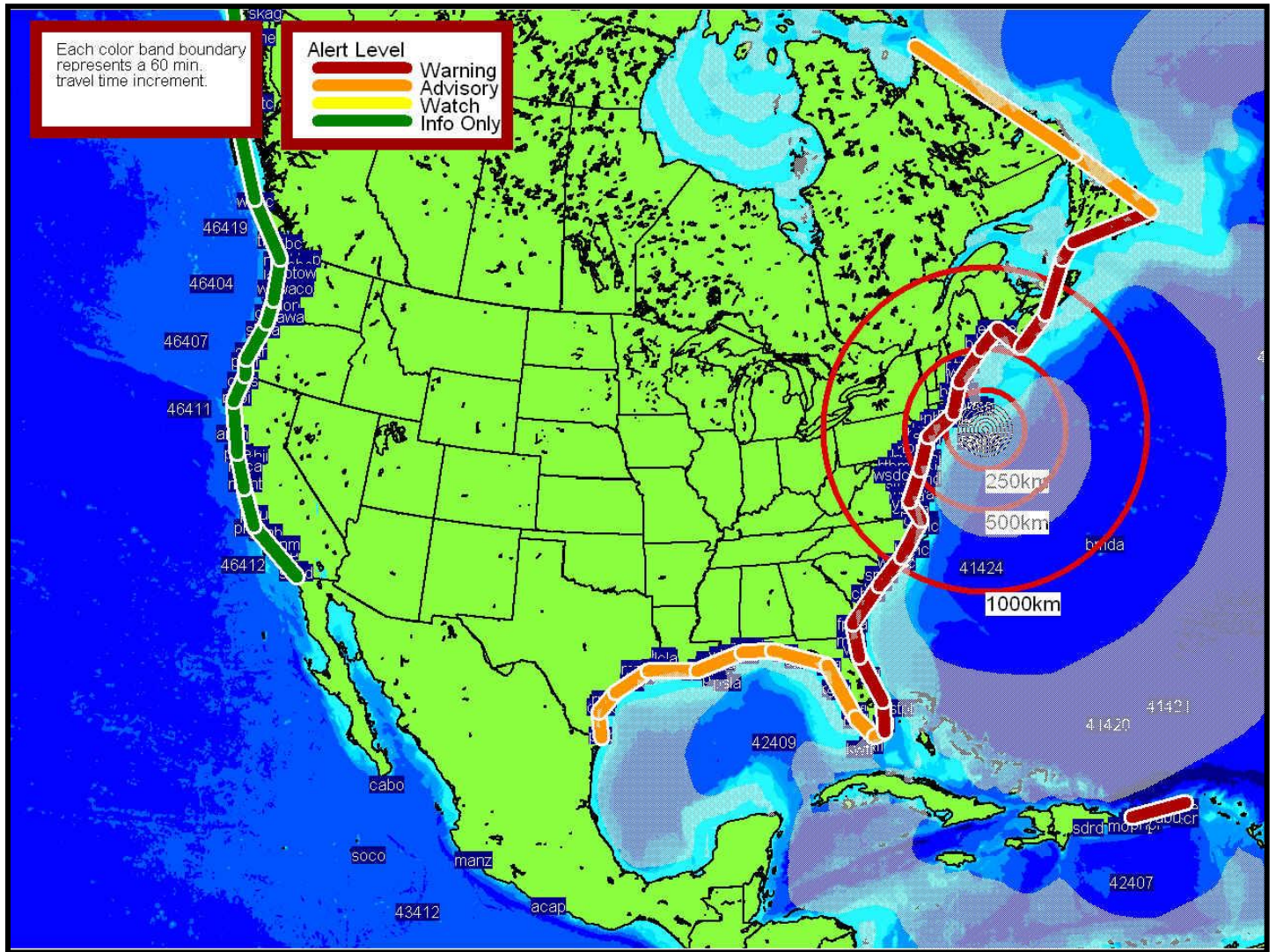
### Estimated times of initial tsunami arrival:

DART 44402	0913 EDT MAR 24	1313 UTC MAR 24
DART 41424	1013 EDT MAR 24	1413 UTC MAR 24
Bermuda	1036 EDT MAR 24	1436 UTC MAR 24
Cape Hatteras, North Carolina	1053 EDT MAR 24	1453 UTC MAR 24
Montauk Point, New York	1053 EDT MAR 24	1453 UTC MAR 24
Oregon Inlet, North Carolina	1103 EDT MAR 24	1503 UTC MAR 24
Watch Hill, Rhode Island	1106 EDT MAR 24	1506 UTC MAR 24
Woods Hole, Massachusetts	1108 EDT MAR 24	1508 UTC MAR 24
Fire Island Light, New York	1112 EDT MAR 24	1512 UTC MAR 24
Newport, Rhode Island	1117 EDT MAR 24	1517 UTC MAR 24
Nantucket Island, Massachusetts	1119 EDT MAR 24	1519 UTC MAR 24
Lockeport, Nova Scotia	1221 ADT MAR 24	1521 UTC MAR 24
Ocean City, Maryland	1121 EDT MAR 24	1521 UTC MAR 24
DART 44401	1123 EDT MAR 24	1523 UTC MAR 24
DART 41420	1127 EDT MAR 24	1527 UTC MAR 24
New London, Connecticut	1128 EDT MAR 24	1528 UTC MAR 24
Duck, North Carolina	1129 EDT MAR 24	1529 UTC MAR 24
Atlantic City, New Jersey	1131 EDT MAR 24	1531 UTC MAR 24
Currituck Beach Lighthouse, North Carolina	1132 EDT MAR 24	1532 UTC MAR 24
DART 41421	1132 EDT MAR 24	1532 UTC MAR 24
Samana Cay, Bahamas	1137 EDT MAR 24	1537 UTC MAR 24
Sandy Hook, New Jersey	1137 EDT MAR 24	1537 UTC MAR 24
Cape Henlopen, Delaware	1140 EDT MAR 24	1540 UTC MAR 24
Lewes, Delaware	1143 EDT MAR 24	1543 UTC MAR 24
Quonset Point, Rhode Island	1149 EDT MAR 24	1549 UTC MAR 24
Beaufort, North Carolina	1151 EDT MAR 24	1551 UTC MAR 24
Virginia Beach, Virginia	1156 EDT MAR 24	1556 UTC MAR 24
Charlesville, Nova Scotia	1259 ADT MAR 24	1559 UTC MAR 24
Yarmouth, Nova Scotia	1303 ADT MAR 24	1603 UTC MAR 24
Settlement Point, Bahamas	1203 EDT MAR 24	1603 UTC MAR 24
Aguadilla, Puerto Rico	1209 AST MAR 24	1609 UTC MAR 24
Cape May, New Jersey	1210 EDT MAR 24	1610 UTC MAR 24
San Juan, Puerto Rico	1211 AST MAR 24	1611 UTC MAR 24
Chezzetcook, Nova Scotia	1312 ADT MAR 24	1612 UTC MAR 24
Halifax, Nova Scotia	1313 ADT MAR 24	1613 UTC MAR 24
Chesapeake Bridge, Virginia	1215 EDT MAR 24	1615 UTC MAR 24
Fort Point, New Hampshire	1215 EDT MAR 24	1615 UTC MAR 24
Cutler NAS, Maine	1215 EDT MAR 24	1615 UTC MAR 24
Mona Island, Puerto Rico	1217 AST MAR 24	1617 UTC MAR 24
Merrimack River, Massachusetts	1219 EDT MAR 24	1619 UTC MAR 24
Mayaguez, Puerto Rico	1220 AST MAR 24	1620 UTC MAR 24
Virgin Gorda, British Virgin Islands	1221 EDT MAR 24	1621 UTC MAR 24
Guantanamo Bay, Cuba	1221 EDT MAR 24	1621 UTC MAR 24
New Haven, Connecticut	1225 EDT MAR 24	1625 UTC MAR 24
Christiansted, U.S. Virgin Is	1225 AST MAR 24	1625 UTC MAR 24
Jupiter Inlet, Florida	1225 EDT MAR 24	1625 UTC MAR 24
Grand Manan Is., New Brunswick	1330 ADT MAR 24	1630 UTC MAR 24

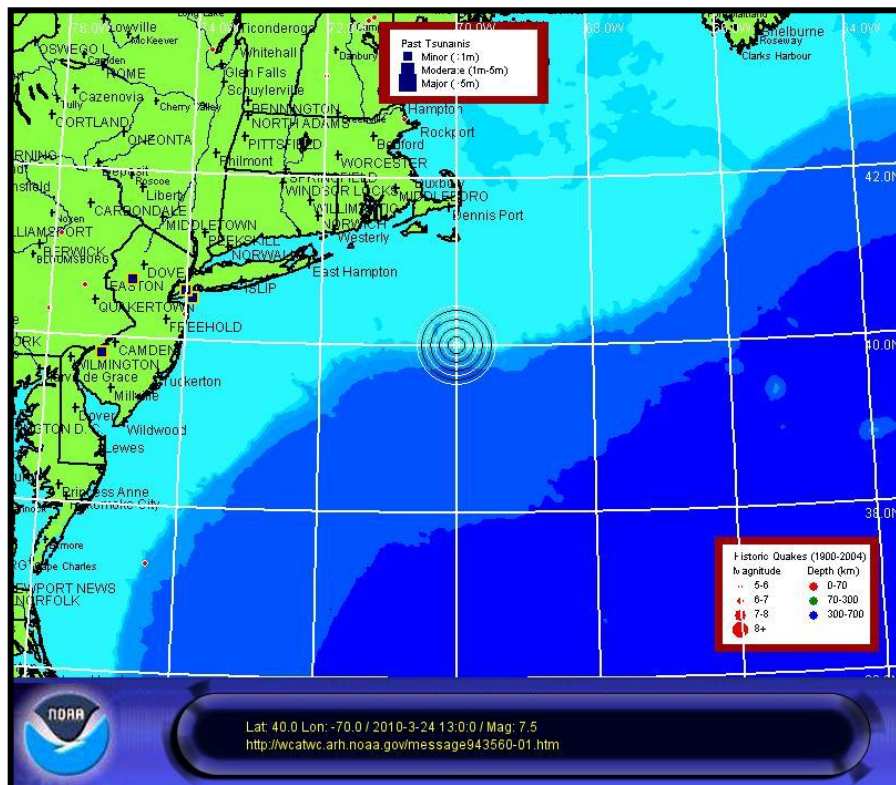


Bar Harbor, Maine	1230	EDT	MAR 24	1630	UTC	MAR 24
Virginia Key, Florida	1230	EDT	MAR 24	1630	UTC	MAR 24
Manhattan, New York	1231	EDT	MAR 24	1631	UTC	MAR 24
Lameshur Bay, U.S. Virgin Islands	1231	AST	MAR 24	1631	UTC	MAR 24
Limetree Bay, U.S. Virgin Is.	1231	AST	MAR 24	1631	UTC	MAR 24
Vieques Is., Puerto Rico	1231	AST	MAR 24	1631	UTC	MAR 24
the U.S.-Canada border	1233	EDT	MAR 24	1633	UTC	MAR 24
Surf City, North Carolina	1233	EDT	MAR 24	1633	UTC	MAR 24
Magueyes Island, Puerto Rico	1236	AST	MAR 24	1636	UTC	MAR 24
Kiptopeke, Virginia	1236	EDT	MAR 24	1636	UTC	MAR 24
Bergen Point, New Jersey	1236	EDT	MAR 24	1636	UTC	MAR 24
Wrightsville Beach, North Carolina	1237	EDT	MAR 24	1637	UTC	MAR 24
Scatarie Island, Nova Scotia	1337	ADT	MAR 24	1637	UTC	MAR 24
Port Aux Basque, Newfoundland	1407	NDT	MAR 24	1637	UTC	MAR 24
Culebra, Puerto Rico	1240	AST	MAR 24	1640	UTC	MAR 24
Cape Ray, Newfoundland	1411	NDT	MAR 24	1641	UTC	MAR 24
Portland, Maine	1242	EDT	MAR 24	1642	UTC	MAR 24
Ocean Reef, Florida	1242	EDT	MAR 24	1642	UTC	MAR 24
Money Point, Virginia	1244	EDT	MAR 24	1644	UTC	MAR 24
Miami, Florida	1245	EDT	MAR 24	1645	UTC	MAR 24
Charlotte Amalie, U.S. Virgin Is	1245	AST	MAR 24	1645	UTC	MAR 24
Stonington, Maine	1247	EDT	MAR 24	1647	UTC	MAR 24
Bridgeport, Connecticut	1247	EDT	MAR 24	1647	UTC	MAR 24
St Lawrence, Newfoundland	1420	NDT	MAR 24	1650	UTC	MAR 24
Saint Pierre/Miquelon	1420	NDT	MAR 24	1650	UTC	MAR 24
Saint John, New Brunswick	1353	ADT	MAR 24	1653	UTC	MAR 24
Windmill Point, Virginia	1254	EDT	MAR 24	1654	UTC	MAR 24
Boston, Massachusetts	1255	EDT	MAR 24	1655	UTC	MAR 24
Meat Cove, Nova Scotia	1356	ADT	MAR 24	1656	UTC	MAR 24
Ship John Shoal, New Jersey	1301	EDT	MAR 24	1701	UTC	MAR 24
New Point Comfort, Virginia	1303	EDT	MAR 24	1703	UTC	MAR 24
South Santee River, South Carolina	1305	EDT	MAR 24	1705	UTC	MAR 24
Providence, Rhode Island	1308	EDT	MAR 24	1708	UTC	MAR 24
Argentia, Newfoundland	1439	NDT	MAR 24	1709	UTC	MAR 24
North Sydney, Nova Scotia	1411	ADT	MAR 24	1711	UTC	MAR 24
Port Canaveral, Florida	1313	EDT	MAR 24	1713	UTC	MAR 24
Myrtle Beach, South Carolina	1323	EDT	MAR 24	1723	UTC	MAR 24
Springmaid Pier, South Carolina	1325	EDT	MAR 24	1725	UTC	MAR 24
La Manche, Newfoundland	1455	NDT	MAR 24	1725	UTC	MAR 24
Key West, Florida	1327	EDT	MAR 24	1727	UTC	MAR 24
Melbourne, Florida	1333	EDT	MAR 24	1733	UTC	MAR 24
Vaca Key, Florida	1335	EDT	MAR 24	1735	UTC	MAR 24
Yorktown, Virginia	1339	EDT	MAR 24	1739	UTC	MAR 24
Jacksonville Beach, Florida	1341	EDT	MAR 24	1741	UTC	MAR 24
Flagler Beach, Florida	1342	EDT	MAR 24	1742	UTC	MAR 24
Saint Johns, Newfoundland	1513	NDT	MAR 24	1743	UTC	MAR 24
Kings Point, New York	1343	EDT	MAR 24	1743	UTC	MAR 24
Charleston, South Carolina	1344	EDT	MAR 24	1744	UTC	MAR 24
Lewisetta, Virginia	1347	EDT	MAR 24	1747	UTC	MAR 24
Savannah, Georgia	1356	EDT	MAR 24	1756	UTC	MAR 24
Fernandina Beach, Florida	1359	EDT	MAR 24	1759	UTC	MAR 24
Cancun, Mexico	1313	CDT	MAR 24	1813	UTC	MAR 24
Altamaha Sound, Georgia	1413	EDT	MAR 24	1813	UTC	MAR 24
St. Simons Is., Georgia	1421	EDT	MAR 24	1821	UTC	MAR 24
Harrington Harbour, Quebec	1530	ADT	MAR 24	1830	UTC	MAR 24
Pointe Saint Pierre, Quebec	1536	ADT	MAR 24	1836	UTC	MAR 24
DART 42409	1441	EDT	MAR 24	1841	UTC	MAR 24
Bonavista, Newfoundland	1627	NDT	MAR 24	1857	UTC	MAR 24
Flamingo, Florida	1459	EDT	MAR 24	1859	UTC	MAR 24
Pilots Station East, Louisiana	1408	CDT	MAR 24	1908	UTC	MAR 24
Battle Harbour, Labrador	1659	NDT	MAR 24	1929	UTC	MAR 24
Lanse au Clair, Newfoundland	1702	NDT	MAR 24	1932	UTC	MAR 24
Wood Islands, Prince Edward Is.	1633	ADT	MAR 24	1933	UTC	MAR 24
Sept Iles, Quebec	1634	ADT	MAR 24	1934	UTC	MAR 24
Holton Harbour, Newfoundland	1716	NDT	MAR 24	1946	UTC	MAR 24
Boat Harbour, Newfoundland	1732	NDT	MAR 24	2002	UTC	MAR 24
Grand Isle, Louisiana	1503	CDT	MAR 24	2003	UTC	MAR 24
Destin, Florida	1509	CDT	MAR 24	2009	UTC	MAR 24
Escuminac, New Brunswick	1711	ADT	MAR 24	2011	UTC	MAR 24
Charlottetown, Prince Edward Is.	1716	ADT	MAR 24	2016	UTC	MAR 24
Belledune, New Brunswick	1720	ADT	MAR 24	2020	UTC	MAR 24

Panama City, Florida	1522	CDT	MAR 24	2022	UTC	MAR 24
Port Fourchon, Louisiana	1522	CDT	MAR 24	2022	UTC	MAR 24
Cape Chidley, Labrador	1624	AST	MAR 24	2024	UTC	MAR 24
Alvarado, Mexico	1528	CDT	MAR 24	2028	UTC	MAR 24
Nuuk, Greenland	1635	EDT	MAR 24	2035	UTC	MAR 24
Tampico, Mexico	1542	CDT	MAR 24	2042	UTC	MAR 24
Brownsville, Texas	1545	CDT	MAR 24	2045	UTC	MAR 24
Apalachicola, Florida	1545	CDT	MAR 24	2045	UTC	MAR 24
Hebron, Newfoundland	1750	ADT	MAR 24	2050	UTC	MAR 24
Port Isabel, Texas	1559	CDT	MAR 24	2059	UTC	MAR 24
the Mississippi-Alabama border	1602	CDT	MAR 24	2102	UTC	MAR 24
Nain, Newfoundland	1803	ADT	MAR 24	2103	UTC	MAR 24
Brevoort Harbour, Nunavut	1705	EDT	MAR 24	2105	UTC	MAR 24
Corpus Christi, Texas	1606	CDT	MAR 24	2106	UTC	MAR 24
Clearwater Beach, Florida	1709	EDT	MAR 24	2109	UTC	MAR 24
Cape Dyer, Nunavut	1715	EDT	MAR 24	2115	UTC	MAR 24
Baffin Bay, Texas	1618	CDT	MAR 24	2118	UTC	MAR 24
Shediac, New Brunswick	1828	ADT	MAR 24	2128	UTC	MAR 24
Naples, Florida	1734	EDT	MAR 24	2134	UTC	MAR 24
Waveland, Mississippi	1640	CDT	MAR 24	2140	UTC	MAR 24
Port O'connor, Texas	1642	CDT	MAR 24	2142	UTC	MAR 24
Rock Port, Texas	1645	CDT	MAR 24	2145	UTC	MAR 24
Freeport, Texas	1647	CDT	MAR 24	2147	UTC	MAR 24
Port Manatee, Florida	1808	EDT	MAR 24	2208	UTC	MAR 24
Bonita Beach, Florida	1809	EDT	MAR 24	2209	UTC	MAR 24
Fort Myers, Florida	1812	EDT	MAR 24	2212	UTC	MAR 24
Champton, Mexico	1714	CDT	MAR 24	2214	UTC	MAR 24
St. Petersburg, Florida	1815	EDT	MAR 24	2215	UTC	MAR 24
Biloxi, Mississippi	1719	CDT	MAR 24	2219	UTC	MAR 24
Suwannee River, Florida	1820	EDT	MAR 24	2220	UTC	MAR 24
Galveston, Texas	1722	CDT	MAR 24	2222	UTC	MAR 24
Eugene Is., Louisiana	1730	CDT	MAR 24	2230	UTC	MAR 24
Clyde River, Nunavut	1838	EDT	MAR 24	2238	UTC	MAR 24
Morgan City, Louisiana	1742	CDT	MAR 24	2242	UTC	MAR 24
Cedar Key, Florida	1857	EDT	MAR 24	2257	UTC	MAR 24
Sabine Pass, Texas	1807	CDT	MAR 24	2307	UTC	MAR 24
High Island, Texas	1808	CDT	MAR 24	2308	UTC	MAR 24
Thule AFB, Greenland	1946	EDT	MAR 24	2346	UTC	MAR 24
Dundas Harbor, Nunavut	1954	EDT	MAR 24	2354	UTC	MAR 24



Ejemplo de un mapa de aviso/advertencia/vigilancia que será emitida en el boletín 6.



Ejemplo de un mapa de zona de origen emitido con el boletín 1.



Ejemplo de un mapa general emitido con el boletín 1.

## Anejo F. Ejemplo de Comunicado de Prensa para Medios de Comunicación Local

### FORMATO PARA LA DIVULGACIÓN DE NOTICIAS

#### ENDOSO DE LA AGENCIA ENCARGADA

Contacto: (nombre)  
(número de teléfono)  
(dirección electrónica)

PARA DIVULGACIÓN INMEDIATA  
(fecha)

### EJERCICIO DE TSUNAMI PARA EL NOROESTE DEL ATLÁNTICO A LLEVARSE A CABO EL 24 DE MARZO DE 2010

**(Incluya comunidad/país/nombre del estado)** participará junto con otras localidades en el noroeste del Atlántico en el ejercicio de respuesta de tsunami del 24 de marzo de 2010. El propósito de este ejercicio es evaluar los planes de respuesta de tsunamis a nivel local, incrementar la preparación en caso de tsunami y mejorar la coordinación a través de la región.

(Incluya el comentario promocional de una oficina local como por ejemplo "El tsunami del Océano Índico en el 2004 trajo a la atención del mundo la necesidad urgente de estar mejor preparados para tales eventos," informo (incluya el nombre de la agencia oficial apropiada.) "Este importante ejercicio evaluará los procedimientos actuales del Sistema de Alerta de Tsunami y ayudará a identificar las fortalezas y las debilidades operacionales en cada comunidad." (Favor de modificar para crear autenticidad.)

El ejercicio, titulado LANTEX 10, simulará una situación extensa de Aviso y Advertencia de tsunami en todo Estados Unidos y las costas canadienses en el noroeste del Atlántico que requieran la implementación de planes de respuesta de tsunami a nivel local. Este es el primer ejercicio que incluye todos los estados del Atlántico, provincias, territorios y estados libre asociados. El ejercicio ("incluirá" o "no incluirá") notificación pública.

El ejercicio simulará un terremoto mayor, un deslizamiento submarino y un tsunami generado a 90 millas al sur de Nantucket, MA y a 170 millas al sureste de Boston, MA; a las 9:00 am Horario Diurno del Este (o el horario local apropiado) el 24 de marzo de 2010. A los participantes del ejercicio se les proveerá un manual que describa el escenario y contiene los mensajes de tsunami emitidos por el Centro de Alerta de Tsunami de la Costa Oeste y Alaska (WCATWC, por sus siglas en inglés). El WCATWC es responsable de proveer los mensajes de aviso de tsunami a las costas atlánticas de EUA, Canadá, las costas del Golfo de México, Puerto Rico y las Islas Vírgenes.

*Incluya un párrafo establecido específicamente para su comunidad. Podrían identificarse agencias participantes y planes específicos. Podrían describirse programas de aviso anticipado, ejercicios de tsunamis pasados (si alguno), programas consecutivos de educación pública, de mitigación y otros. Podrían describir amenazas de tsunami, la historia de los peligros de los tsunamis, si alguno.*

Si durante el periodo de duración del ejercicio alguna amenaza real de tsunami ocurriera, el ejercicio será cancelado.

El ejercicio es patrocinado por la Administración Nacional Oceánica y Atmosférica de EUA (NOAA, por sus siglas en inglés) y por el Programa Nacional de Mitigación y Amenaza de Tsunamis de EUA (NTHMP – una sociedad de 28 estados y territorios, y tres agencias federales). Para más información del Sistema de Alerta de Tsunamis de EUA, vea [www.tsunami.gov](http://www.tsunami.gov). Para más información sobre NTHMP, visite la página electrónica: [nthmp.tsunami.gov](http://nthmp.tsunami.gov).

###

En Línea:

Centro de Alerta de Tsunami de la Costa Oeste y Alaska  
Centro de Alerta de Tsunami del Pacífico  
Programa de Tsunamis de NOAA

<http://wcatwc.arh.noaa.gov>  
<http://www.prh.noaa.gov/ptwc>  
<http://tsunami.noaa.gov>  
<http://tsunami.gov>  
<http://nthmp.tsunami.gov>

NTHMP:

Incluya los URL de respuesta de emergencia local o estatal

EJERCICIO

## **Anejo G. Evaluación del Ejercicio LANTEX 10.**

### **(Esta evaluación permanecerá en inglés)**

Todass las agencias participantes deberán proporcionar restroalimentación sobre el ejercicio con comentarios breves sobre el mismo. Esta información ayudará a NTHMP y a NOAA en la evaluación de Lantex 10 y en el desarrollo de ejercicios posteriores.

Por favor, llene y envíe el siguiente formulario en o antes del Viernes, 9 de abril de 2010 a la siguiente dirección:

WCATWC Director  
NOAA/West Coast/Alaska Tsunami Warning Center  
910 South Felton Street  
Palmer, Alaska 99645

FAX: 907-745-6071

También se podrá escanear y enviar por correo electrónico a [paul.whitmore@noaa.gov](mailto:paul.whitmore@noaa.gov)

Los formularios de evaluación del ejercicio están designados para "uso oficial solamente" y no serán distribuidos por NOAA o NTHMP a otras agencias.

**LANTEX 10 Tsunami Response Exercise  
Evaluation Form  
For Official Use Only**

Participant Location: \_\_\_\_\_

Participant Agency: \_\_\_\_\_

Agency Contact Information:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

**Please answer the following questions and provide any suggestions.**

Was the exercise format satisfactory?

Did you receive the “dummy” message from the WCATWC to start the exercise? If so, through what channel(s) and approximately what time was it received?

Was the content and intention of the tsunami messages clear?

Should any other content be added to the messages, or was any superfluous?

Did your agency have a tsunami response plan in place prior to the exercise?



If so, was the response plan adequate to address the event?

What actions did the agency take during the exercise?

Were the emergency management actions during the event clearly laid out by the plan?

During a real event, how is the local population notified of any tsunami danger?

Was any feedback received from the public?

Are the potential tsunami danger zones known in your area?

Was the exercise helpful in validating the response plan or showing that it was not sufficient?