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EASTERN REGION TSUNAMI PROGRAM

NOTICE: This publication is available at: <http://www.nws.noaa.gov/directives/>.

OPR: W/ER1x3 (M. Willis)

Certified by: W/ER1 (J. Guiney)

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SUMMARY OF REVISIONS: This supplement replaces ERS 05-2007, “Eastern Region Tsunami Program”, dated October 18, 2007, applicable to NWS 10-701, and contains the following revisions:

1. Added guidance on WFO procedures during Tsunami Advisories.
2. Expanded guidance on content for an SPS during a Tsunami event.
3. Deleted sections 2.4.1 and 2.4.2 and referred to this content relating to Atlantic Tsunami criteria in 10-701.
4. Updated example of TMA message in section 2.7.1.
5. Added section 2.7.2 on Tsunami NAWAS tests.
6. Added section 2.9 on requirement of at least one annual tsunami drill.
7. Embedded appendices into this document instead of utilizing Tsunami Resource Page on Eastern Region intranet page.
8. Removed appendices on WC/ATWC product examples and referred to those examples in 10-701.

<signed>

October 17, 2011

Mickey J. Brown
Acting Director, NWS Eastern Region

Date

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1. **Purpose.**

The Eastern Region (ER) tsunami program procedures are detailed in this document. These procedures provide guidance and policy to ER Weather Forecast Offices (WFO) and River Forecast Centers (RFC) on the national tsunami warning system and procedures to be followed by ER WFOs in the event tsunami related products are issued by one of the national tsunami warning centers for the Atlantic Basin within the ER area of responsibility (AOR). Additional resources on various aspects of the Eastern Region tsunami program, including source areas in the Atlantic and Atlantic tsunami history, are provided on the [Eastern Region Tsunami Wiki Page](#).

2. **Atlantic Coast WFO and RFC Tsunami Program Procedures.**

The West Coast/Alaska Tsunami Warning Center (WC/ATWC) monitors the Atlantic for seismic events and issues tsunami warning, advisory, watch, information statement, and cancellation products for the southern and eastern United States. NWSI 10-701 describes the seismic and location criteria used by the WC/ATWC for issuing tsunami products. The WFOs disseminate this information on NOAA All Hazards Weather Radio (NWR) and provide updates to their local customers and partners throughout and after events. The RFCs provide support to their customers and WFOs.

2.1 **Communication.**

- a. **Advanced Weather Interactive Processing System (AWIPS).** RFCs and WFOs will ensure all of the products listed in Section 2.2.a and Section 2.2.b are *alarmed* in AWIPS. In addition, they will ensure after all AWIPS build installations or system maintenance/recovery that the products are reconfigured to be alarmed. It is also recommended that WFOs have a guardian banner pop up when tsunami products from the WC/ATWC are issued.
- b. **Contact logs.** Offices will receive numerous calls from the media, public, emergency managers, etc. during tsunami events. Log all calls received or initiated, and all associated actions.
- c. **Emergency Phones.** Emergency office cell and/or satellite phones should be easily accessible to and ready for use by all staff. Staff should be proficient in the use of emergency cell/satellite phones.

2.2 **WC/ATWC Products.**

- a. **Warnings, Advisories, Watches and Cancellation Messages.** The WC/ATWC issues tsunami warnings, advisories, and watches (for earthquakes with magnitudes greater than 6.4) under the following World

Meteorological Organization (WMO) Header and Product Identifiers (IDs):

WEXX20 PAAQ ANCTSUAT1 – Standard format product (M>6.4)

WEXX30 PAAQ ANCTSUATE – Public format product (M>6.4)

These product IDs are also used to *cancel* a warning, advisory, or watch.

TSU = Tsunami Warning, Advisory, Watch, or Cancellation product.

The WC/ATWC will issue Tsunami Warnings, Advisories, and Watches using both the TSUAT1 and TSUATE products. The TSUAT1 product is a tabular formatted product that contains technical details of the tsunami including location, magnitude and forecasted arrival time(s). The TSUATE product is a narrative styled product that will contain the same warning/watch information as the TSUAT1 product, but presented in a less technical style suitable for the general public. Additional information on these products and examples are provided in NWSI 10-701.

- b. **Tsunami Information Statements.** A Tsunami Information Statement is issued when no tsunami warning, advisory, or watch is issued, and provides pertinent information after earthquakes occur in the region. Two separate types of products, (1) Tsunami Information Statements (TIB) and (2) Tsunami Seismic Information Statements (EQI), are issued depending on the magnitude of the earthquake. A TIB is issued for earthquakes with magnitudes of 6.0 to 6.4 while an EQI is issued for earthquakes with a magnitude less than 6.0. A TIB is also issued for earthquakes with magnitude 6.0 and over outside of the WC/ATWC area of responsibility (AOR) which are not expected to generate a tsunami threatening to the AOR. The WMO Header and Product IDs for Tsunami Information Statements are:

WEXX22 PAAQ ANCTIBAT1 – Standard format product (M 6.0 to 6.4)

WEXX32 PAAQ ANCTIBATE – Public format product (M 6.0 to 6.4)

SEXX60 PAAQ ANCEQIAT1 – Used when M < 6.0

M = Magnitude.

TIB = Tsunami Information Statement.

EQIAT1 = Tsunami Seismic Information Statement.

Please refer to NWSI 10-701 for more information on Tsunami Information Statements.

- c. **Follow up and Cancellation Messages.** WC/ATWC normally issues follow-up statements every 30 to 60 minutes (or sooner if the situation warrants) under the TSUAT1 and TSUATE products. If a tsunami is no longer expected, the WC/ATWC will issue a cancellation message under the same product IDs (TSUAT1 and TSUATE). There are normally no follow up messages for the EQI or TIB products.

2.3 Dissemination. WC/ATWC will disseminate the TSU and TIB tsunami products for the Atlantic basin via all of the methods described in NWSI 10-701.

2.4 Procedural Thresholds. If an earthquake is detected in the Atlantic basin (including the Gulf of Mexico), the WC/ATWC will issue a Tsunami Warning, Tsunami Advisory, Tsunami Watch or Tsunami Information Statement using the criteria of earthquake magnitude and earthquake depth shown in NWSI 10-701.

2.5 Break Points. Break points along the coast are used to define the areal extent of tsunami warning, advisory, and/or watch products. Below are the designated break points used by the WC/ATWC for Eastern Region:

Altamaha Sound, GA
South Santee River, SC
Surf City, NC
Duck, NC
New Point Comfort, VA
Cape Henlopen, DE
Sandy Hook, NJ
Watch Hill, RI
Merrimack River, MA
Stonington, ME
US/Canada Border

2.6 WFO Procedures. Coastal WFOs within the tsunami warning, advisory, or watch area will follow the below procedures. Appendix A provides WFO procedure checklists when tsunami related products are issued by WC/ATWC.

2.6.1 NWR Procedures.

a. If a Tsunami Watch or Tsunami Warning is issued for your area:

- 1) NWR Activation.** When a Tsunami Watch or Tsunami Warning has been issued by WC/ATWC for your area, affected coastal WFOs will *immediately* activate the Emergency Alert System (EAS), tone alert (both 1050HZ and SAME [Specific Area Message Encoding]) NWR Console Replacement System (CRS) for all affected NWR coastal transmitters, and broadcast the tsunami information on NWR. The sample broadcast template listed in Appendix B (Tsunami Watch) or Appendix C (Tsunami Warning) should be used. Use information in the TSU product to fill in the template and then use the template as a broadcast script.

Only tone alert the proper EAS codes on NWR. *Do not* issue them as a product from AWIPS. For example, do not issue a TSW, TSA, CEM, or CFW product from AWIPS – only EAS activate the proper

EAS code on NWR.

2) **EAS Codes.** One of the following codes should be used for EAS dissemination:

- (a) Civil Emergency Message (CEM),
- (b) Coastal Hazards Message (CFW), or
- (c) Tsunami Warning message (TSW) [or Tsunami Watch message (TSA) if a Tsunami Watch was issued].

The choice of the above codes must be collaborated with emergency management, state liaison offices and other partners to ensure their systems are configured to receive the EAS code. Note in your Station Duty Manual (SDM) which EAS code to activate on NWR and which transmitters should be activated for tsunami information.

3) **Special Weather Statements (SPS).** If a Tsunami Warning and/or Tsunami Watch is issued by WC/ATWC for your County Warning Area (CWA), WFOs should issue an SPS at least every hour via AWIPS and broadcast over NWR. Tsunami SPSs should ideally be issued in between the issuance of WC/ATWC products to ensure a continuous flow of information. These SPS's are intended to provide timely updates to our customers and partners while the tsunami warning/advisory/watch is in effect. In most cases the SPS will reemphasize what is in the WC/ATWC products, while adding additional local impact information such as flooding and any messages relayed by emergency managers. Specifically, a tsunami SPS should include an overview of the situation, headlines from the WC/ATWC as appropriate, local impacts, local tsunami point forecasts and/or observations as provided by WC/ATWC, Call to Action statements, changes since the last message, and when the next update will be. An example of a tsunami SPS is provided in Appendix F. When a tsunami warning or watch is cancelled, issue an SPS to relay this information. Issue the SPS's via AWIPS and broadcast them on NWR.

b. **If a Tsunami Advisory is issued for your area:** Upon receipt of a tsunami advisory from the WC/ATWC, WFOs will broadcast this information over NWR using the template provided in Appendix D. WFOs *may* tone alert the proper EAS codes on NWR for tsunami advisories based upon agreements with your local partners. If it is decided to tone alert for tsunami advisories, WFOs should use either the Coastal Hazards Message (CFW) or Tsunami Watch (TSA) EAS codes. It is not recommended to use the Civil Emergency Message (CEM) or Tsunami Warning (TSW) codes for a tsunami advisory. It is crucial that all coastal WFOs discuss and review tsunami procedures annually with their partners to ensure their systems are configured to receive the proper EAS codes, and to ensure seamless communication during an

event. Note in your Station Duty Manual (SDM) if your office will tone alert NWR for tsunami advisories. WFOs should also issue SPSs (from AWIPS and also broadcast over NWR) every 30 to 60 minutes after the initial advisory is read on NWR. An example of a tsunami SPS is provided in Appendix F. When a tsunami advisory is canceled, use the SPS to relay this information.

- c. **If a TIB or EQI is issued for your area:** If the WC/ATWC issues a TIB or EQI product for your area, a tsunami is not expected. TIBs or EQIs do not need to be broadcast on NWR; however, an earthquake in the local area may increase the amount of phone calls or activities at an office. Therefore, at forecaster discretion, a Public Information Statement (PNS) or SPS may be issued and broadcast on NWR to help address public questions regarding the earthquake. This may be especially useful during local or “felt” earthquake events.
- d. **If a Tsunami Warning, Advisory, or Watch is cancelled for your area:** If the WC/ATWC cancels a Tsunami Warning, Advisory, or Watch, broadcast the information on NWR using the template in Appendix E. The choice to tone alert NWR cancellation messages must be collaborated with your partners. Note in your SDM if your office will tone alert NWR for cancelled tsunami warnings, advisories, or watches. As a reminder, use the SPS to relay information that a Tsunami Watch, Warning, or Advisory was cancelled. Broadcast the SPSs on NWR.

2.7 Monthly Communication Tests. Monthly dissemination tests will be conducted for tsunami products via AWIPS and NAWAS. WC/ATWC will disseminate a test TIB and/or test TSU product roughly once a month to WFOs, FAA, and federal and state emergency managers.

2.7.1 Tsunami Acknowledgement Message (TMA). After receipt of the WC/ATWC tsunami test product(s), WFO's will respond immediately by disseminating a TMA as provided in the example below. Ensure that “TEST...TEST...TEST” is at the beginning and end of the TMA product because some customers can receive the product and may get confused. The TMA product is *not* to be sent during actual events. It is only disseminated during monthly tests.

Example of a TMA message sent back to WC/ATWC from a WFO:

SEUS42 KMHX 101507

TMAMHX

TEST...TEST...TEST

A. RECEIPT OF TSUAT1 ON 3/10/11 AT 1605Z

B. NWS NEWPORT/MOREHEAD CITY NC

C. MARK.WILLIS@NOAA.GOV

D. 252-223-5737

TEST...TEST...TEST

\$\$

- 2.7.2 Tsunami NAWAS tests.** The WC/ATWC conducts monthly tests over NAWAS. WFOs will respond to roll calls on this test as appropriate.
- 2.8 Notification Procedures to Eastern Region Headquarters (ERH) for Tsunami Events.** Notification of ERH for tsunami related events including watches, advisories, warnings, and information statements will follow the guidelines provided in the [Eastern Region Significant Event Notification Resource Page](#).
- 2.9 Drills.** Drills are critical to maintaining operational proficiency in WFO tsunami procedures, especially since tsunamis do not occur regularly in the Atlantic basin. ER coastal WFOs will conduct at least one annual tsunami program drill and will notify the ERH Tsunami Program Leader via email when the drill is completed.

Appendix A: Sample WFO Checklist to use when a Tsunami Watch, Warning or Advisory is issued by WC/ATWC for Your Area.

TSUNAMI WATCH / WARNING / ADVISORY
(circle one)

Criteria: By direction of the West Coast / Alaska Tsunami Warning Center.

Issued: Date _____ Time _____

Valid until: Date _____ Time _____

Initials of Warning Coordinator _____

Area Affected _____

**Time
Completed/Initials**

WATCH / WARNING CHECKLIST

_____/_____

Put the watch or warning information immediately on NWR as follows:

- Get a CRS/NWR Broadcast Template from Appendix B (for a Tsunami Watch) or Appendix C (for a Tsunami Warning) or Appendix D (for a Tsunami Advisory) .
- Fill in the blanks on the template. That is what you will read on CRS.
- Use the following EAS code _____ (defined locally in your SDM)
- Follow the proper procedures to broadcast the message for CRS.
- Write on the template the time your message was initially broadcast on NWR and record in shift log.

_____/_____

If other weather warnings are in effect during the tsunami event, after a short period of time that the tsunami message has played alone, play the additional warning messages in the interest of protecting lives and property. Keep CRS programming at an absolute minimum. This should all be programmed to happen automatically if you recorded the message correctly on CRS.

_____/_____

Issue an SPS product every 30 to 60 minutes and broadcast on NWR. The SPS product should provide updates and/or local information (see Section 2.6.1.a.3 and Appendix F for details).

_____/_____
Consider any additional actions that may enhance community response to this watch/warning. These may include additional phone calls to local emergency managers, law enforcement, fire departments, etc., where impact may be particularly damaging. Record all actions in the shift log.

_____/_____
Continue to record updates from WC/ATWC to CRS and also SPSs issued from your local office.

**Time
Completed**

CANCELLATION CHECKLIST

- _____/_____
Put the cancellation on NWR as follows:
- Get a Cancellation Broadcast Template from Appendix E.
 - Fill in the blanks. This is what you will read on CRS.
 - Follow the proper procedures to broadcast the message for CRS.
 - Write the time your cancellation message was initially broadcast on the template and record in shift log.
 - Remove the message after about 1 hour.
- _____/_____
Retain all records of this event and place on the WCM's desk.
- _____/_____
Notify the MIC or the WCM if they are not on station.
- _____/_____
Log all additional incidents or actions that pertain to this event. Any verification information received should be recorded as well.
- _____/_____
Contact the MIC and WCM if they are not on station. Also contact the RFC (if applicable).
- _____/_____
Gather pertinent documents and review evacuation/safety procedures if the office is threatened by the tsunami.

Appendix B: CRS/NWR Broadcast Template for Tsunami Watch

Upon receipt of a **Tsunami Watch** product (TSUAT1) from the WC/ATWC that includes all or a portion of your area, print this form and fill it out based on information included in the tsunami watch product. Use the proper procedures to get the message below disseminated via CRS/NWR. Be sure to select the appropriate coastal transmitters that the Tsunami Watch will play on. Attach this form to the Tsunami Watch checklist. Here is the message to fill out and read:

"The National Weather Service has issued a TSUNAMI WATCH for coastal areas in _____ (specify area), from _____ to _____, at _____ AM / PM _____ (time zone). A large earthquake, with a preliminary magnitude of _____, has been detected approximately _____ miles _____ (direction) of _____ (location).

Though it remains uncertain if a tsunami will impact the TSUNAMI WATCH area, the arrival times for the initial tsunami wave are estimated for the following locations:

- _____ (LOCATION) _____ AM / PM _____ (time zone).
- _____ (LOCATION) _____ AM / PM _____ (time zone).
- _____ (LOCATION) _____ AM / PM _____ (time zone).
- _____ (LOCATION) _____ AM / PM _____ (time zone).

Include the following italicized section if this information appears in the watch product:

A tsunami has been generated which could impact coastal areas of (list your area here). Observed tsunami wave heights from this earthquake have been _____ (FEET) at _____ (LOCATION) and _____ (FEET) at _____ (LOCATION) around _____ (AM / PM _____ (time zone).

Once again, a TSUNAMI WATCH is in effect from _____ (location) to _____ in _____ (specify area) at _____ AM / PM _____ (time zone).

A TSUNAMI WATCH means that the risk of a tsunami has increased, but its occurrence and timing are still uncertain.

If you are in the TSUNAMI WATCH area, stay posted on this potential hazard and be alert for instructions from local emergency officials. Your National Weather Service Office in (your location) will continue to monitor the situation, and will provide updates on NOAA Weather Radio every hour or sooner as conditions warrant."

Appendix C: CRS/NWR Broadcast Template for Tsunami Warning

Upon receipt of a **Tsunami Warning** product (TSUAT1) from the WC/ATWC that includes all or a portion of your area, print this form and fill it out based on information included in the Tsunami Warning product. Use the proper procedures to get the message below disseminated via CRS/NWR. Be sure to select the appropriate coastal transmitters that the Tsunami Warning will play on. Attach this form to the Tsunami Warning checklist. Here is the message to fill out and read:

"The National Weather Service has issued a TSUNAMI WARNING for coastal areas in _____ (specify area), from _____ to _____, at _____ AM / PM _____ (time zone). A large earthquake, with a preliminary magnitude of _____, has been detected approximately _____ miles _____ (direction) of _____ (location).

The arrival times and forecast amplitudes for the initial tsunami waves are estimated for the following locations:

_____(LOCATION) _____ AM / PM _____ (time zone) _____(ft).
_____(LOCATION) _____ AM / PM _____ (time zone) _____(ft).
_____(LOCATION) _____ AM / PM _____ (time zone) _____(ft).
_____(LOCATION) _____ AM / PM _____ (time zone) _____(ft).

Include the following italicized section if this information appears in the warning product:

A tsunami has been generated which could impact coastal areas of (list your area here). Observed tsunami wave heights from this earthquake have been _____ (FEET) at _____(LOCATION) and _____ (FEET) at _____ (LOCATION) around _____ (AM / PM _____ (time zone).

Once again, a TSUNAMI WARNING is in effect from _____ (location) to _____ in _____ (specify area) at _____ AM / PM _____ (time zone).

A TSUNAMI WARNING means that a tsunami is (circle one): occurring, imminent or highly likely.

Tsunamis are a series of waves generated by an undersea earthquake. This series of waves could be dangerous for several hours after the initial tsunami flood wave arrives.

If you are in the TSUNAMI WARNING area, stay alert for instructions from local emergency officials. Anyone on or near the beach in the TSUNAMI WARNING area should move to higher ground. Your National Weather Service Office in (your location) will continue to monitor the situation and will provide updates on NOAA Weather Radio every hour or sooner as conditions warrant."

Note: The warning coordinator can add information (call to action statements, etc...) to the last paragraph above, from the "EVALUATION" portion of WC/ATWC's tsunami warning product if he/she deems it appropriate.

Appendix D: CRS/NWR Broadcast Template for Tsunami Advisory

Upon receipt of a **Tsunami Advisory** product (TSUAT1) from the WC/ATWC that includes all or a portion of your area, print this form and fill it out based on information included in the Tsunami Advisory product. Use the proper procedures to get the message below disseminated via CRS/NWR. Be sure to select the appropriate coastal transmitters that the Tsunami Advisory will play on. Attach this form to the Tsunami Advisory checklist. Here is the message to fill out and read:

"The National Weather Service has issued a TSUNAMI ADVISORY for coastal areas in _____ (specify area), from _____ to _____, at _____ AM / PM _____ (time zone). A large earthquake, with a preliminary magnitude of _____, has been detected approximately _____ miles _____ (direction) of _____ (location).

The arrival times for the initial tsunami waves are estimated for the following locations:

- _____ (LOCATION) _____ AM / PM _____ (time zone).
- _____ (LOCATION) _____ AM / PM _____ (time zone).
- _____ (LOCATION) _____ AM / PM _____ (time zone).
- _____ (LOCATION) _____ AM / PM _____ (time zone).

Include the following italicized section if this information appears in the advisory product:

A tsunami has been generated which could impact coastal areas of (list your area here). Observed tsunami wave heights from this earthquake have been _____ (FEET) at _____ (LOCATION) and _____ (FEET) at _____ (LOCATION) around _____ (AM / PM _____ (time zone).

Once again, a TSUNAMI ADVISORY is in effect from _____ (location) to _____ in _____ (specify area) at _____ AM / PM _____ (time zone).

A TSUNAMI ADVISORY means that a tsunami capable of producing strong currents or waves dangerous to persons in or very near the water is imminent or expected.

If you are in the TSUNAMI ADVISORY area, stay alert for instructions from local emergency officials. Persons in the TSUNAMI ADVISORY area should move out of the water, off the beach and out of harbors and marinas. Your National Weather Service Office in (your location) will continue to monitor the situation and will provide updates on NOAA Weather Radio every hour or sooner as conditions warrant."

Note: The warning coordinator can add information (call to action statements, etc...) to the last paragraph above, from the "EVALUATION" portion of WC/ATWC's tsunami warning product if he/she deems it appropriate

Appendix E: CRS/NWR Broadcast Template for Tsunami Cancellation

Upon receipt of a Tsunami Watch/Warning/Advisory **Cancellation** product (TSUAT1) from the WC/ATWC for all or portions of your area, print this form and fill it out based on information included in the cancellation product. Use the proper procedures to get the message below disseminated via CRS/NWR. Be sure to select the appropriate coastal transmitters that the tsunami cancellation information will play on. Attach this form to the Tsunami Watch/Warning/Advisory checklist. Here is the message to fill out and read:

"The National Weather Service has Canceled the TSUNAMI (WATCH / WARNING/ ADVISORY) for coastal areas in _____ (specify area), from _____ (location) to _____, at _____ AM / PM _____ time zone. The Tsunami Warning Center has determined that the tsunami danger for _____ (specify area) no longer exists.

Include the following italicized section if this information appears in the cancellation product :

A regional tsunami was generated from a magnitude _____ earthquake, approximately _____ miles _____ (direction) of _____. Observed tsunami wave heights from this earthquake were _____ (FEET) at _____ (LOCATION) and _____ (FEET) at _____ (LOCATION).

Once again, the TSUNAMI (WATCH / WARNING/ ADVISORY) has been Canceled for coastal areas in _____ (specify area), from _____ (location) to _____, at _____ AM / PM _____ time zone. The Tsunami Warning Center has determined that no tsunami danger exists for _____ (specify area). Some coastal areas may experience small sea level changes. As local surf conditions can vary widely, the all clear determination must be made by local authorities. This is the final statement on this situation that will be broadcast by your National Weather Service Office in _____ (specify location). Our normal NOAA Weather Radio broadcast cycle will resume shortly."

Appendix F – Example of SPS to be issued by ER WFOs during tsunami events

WWUS82 MHX 240417
SPSMHX

SPECIAL WEATHER STATEMENT
NATIONAL WEATHER SERVICE NEWPORT/MOREHEAD CITY NC
1217 AM EDT THU MAR 24 2011

NCZ103-104-95-98-240417-
OUTER BANKS DARE-OUTER BANKS HYDE-CARTERET-ONSLOW
1217 AM EDT THU MAR 24 2011

...THIS IS A TEST SPECIAL WEATHER STATEMENT FOR INSTRUCTIONAL PURPOSES ONLY...

...A TEST TSUNAMI ADVISORY IS NOW IN EFFECT FOR MUCH OF THE EAST COAST...INCLUDING NORTH CAROLINA...

* OVERVIEW...A STRONG EARTHQUAKE HAS OCCURRED JUST NORTH OF PUERTO RICO AND HAS CREATED A TSUNAMI IN THE WESTERN ATLANTIC OCEAN. A TSUNAMI ADVISORY IS IN EFFECT FOR PORTIONS OF THE EAST COAST INCLUDING THE ENTIRE COAST OF NORTH CAROLINA. THE FIRST TSUNAMI WAVES ARE EXPECTED TO ARRIVE IN NORTH CAROLINA AROUND 3 AM EDT. UNUSUAL WAVE ACTION AND DANGEROUS CURRENTS ARE POSSIBLE FOR SEVERAL HOURS AFTER THAT. DUE TO THE LIMITED HISTORY OF TSUNAMIS ON THE EAST COAST...THERE IS LARGE UNCERTAINTY IN THE POTENTIAL IMPACTS OF THIS EVENT.

* LOCAL IMPACTS...COASTAL AREAS UNDER A TSUNAMI ADVISORY SHOULD PREPARE FOR STRONG CURRENTS NEAR SHORE AND IN HARBORS AND BAYS. WIDESPREAD INUNDATION IS NOT EXPECTED...THOUGH DANGEROUS CURRENTS WILL BE HAZARDOUS TO THOSE IN OR VERY NEAR THE OCEAN FOR SEVERAL HOURS AFTER THE INITIAL ARRIVAL.

* MEASUREMENTS AND/OR FORECASTS OF TSUNAMI ACTIVITY...

SITE	ARRIVAL TIME	FCST AMP	OBS AMP
CAPE HATTERAS	312 AM EDT	2.1 FT	

FCST AMP - FORECAST TSUNAMI AMPLITUDE ABOVE AMBIENT SEA LEVEL.

OBS AMP - OBSERVED TSUNAMI AMPLITUDE ABOVE AMBIENT SEA LEVEL. IT IS ...NOT... CREST-TO-TROUGH WAVE HEIGHT.

* PRECAUTIONARY/PREPAREDNESS ACTIONS...PERSONS IN TSUNAMI ADVISORY AREAS SHOULD MOVE OUT OF THE WATER...OFF THE BEACH...AND OUT OF HARBORS AND MARINAS.

* UPDATES AND ADDITIONAL INFORMATION...UPDATES WILL CONTINUE TO BE ISSUED UNTIL THE TSUNAMI THREAT HAS SUBSIDED. ADDITIONAL INFORMATION CAN BE FOUND AT THE LINK BELOW TO THE WEST COAST AND ALASKA TSUNAMI WARNING CENTER WEB SITE.

[HTTP://WCATWC.ARH.NOAA.GOV/](http://wcatwc.arh.noaa.gov/)

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

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