

**NATIONAL WEATHER SERVICE INSTRUCTION 10-315**

**AUGUST 20, 2018**

**Operations and Services**

**Marine and Coastal Weather Services, NWSPD 10-3**

**MARINE WEATHER MESSAGE**

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

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**OPR:** W/AFS26 (D. Wright)

**Certified by:** W/AFS26 (A. Allen)

**Type of Issuance:** Routine

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**SUMMARY OF REVISIONS:** This directive supersedes NWSI 10-315, *Marine Weather Message*, dated September 10, 2015. This directive includes the following changes:

1. Created section 2.3 to briefly describe how the ETN is generated.
2. Adjusted definitions in Tables 1 and 3 to be consistent with definitions in the tropical instructions.
3. Added headline examples below Tables 2 and 4.
4. Added \* to EXB and EXT in Table 2 and added \* to EXB, EXP, and EXT in Table 4 to indicate these are not valid for tropical hazards.
5. Updated Appendix A to show examples of Marine Weather Messages (MWW) carrying tropical hazards.
6. Updated Appendix A to convert all examples into mixed case.

Signed

8/6/2018

Andrew D. Stern

Date

Director

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**Marine Weather Message**

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## 1 Introduction

This procedural directive describes the marine weather message products issued by National Weather Service (NWS) Weather Forecast Offices (WFOs) serving the U.S. coastal waters and Great Lakes (except in Alaska), guidelines associated with this product, and detailed content and format.

## 2 Marine Weather Event

A marine weather event is a meteorological phenomenon that impacts public safety, transportation, and/or commerce. A marine weather event (watch/warning/advisory) will apply to an entire marine zone.

### 2.1 Marine Weather Event Beginning Time

A marine weather event begins either when the issuance criteria are forecast to be initially met or exceeded, or when public safety, transportation and/or commerce are adversely affected as a direct result of the expected or occurring meteorological conditions before criteria are met.

### 2.2 Marine Weather Event Ending Time

A marine weather event ends when the issuance criteria are forecast to no longer be met, when meteorological conditions are expected to no longer pose a threat to public safety, transportation and/or commerce, or when such conditions are forecast to end.

### 2.3 Event Tracking Number (ETN) and Storm/Cyclone Identifier Number

The ETN used for tropical hazards in the Marine Weather Message (MWW) comes from the storm/cyclone identifier number assigned in the tropical cyclone public advisory (TCP) associated with the storm. Section 1.1.3.4 of NWS Instruction (NWSI) 10-607, [Tropical Cyclone Forecast Center Products](#), points to the location of the storm/cyclone identifier number in the TCP Mass News Disseminator (MND) header. Information about the numbering process for ETNs and storm/cyclone identifier numbers for tropical cyclone watches and warnings is outlined in section 2.1.6.1 of NWSI 10-1703, [Valid Time Event Code \(VTEC\)](#).

## 3 Multi-tiered Concept

The NWS marine weather warning program should use, when appropriate, the multi-tiered concept to increase public awareness and promote a proper response to the impending hazardous marine weather event. Generically, the multi-tiered concept is:

- a. **Outlook:** An outlook is used to indicate that a hazardous marine weather event may develop. It is intended to provide information to those who need considerable lead time to prepare for the event. Marine outlooks are issued with a Hazardous Weather Outlook (HWO) and/or a Marine Weather Statement (MWS).
- b. **Watch:** A watch is used when the risk of a hazardous marine weather event has increased, but its occurrence, location, and/or timing is still uncertain. It is intended to provide enough lead time so those who need to set their plans in motion can do so.

- c. **Warning:** A warning is used when a hazardous marine weather event is occurring, is imminent, or has a very high probability of occurrence. A warning is used for conditions posing a threat to life or property.
- d. **Advisory:** An advisory is used for less serious conditions that cause significant inconvenience and, if caution is not exercised, could lead to situations that may threaten life and/or property.

To properly apply the multi-tiered concept, it is important to have agreement between the forecast staff and other affected WFOs to reach a forecast consensus. This will increase consistency and decrease geographical/time discontinuities, especially for the longer duration products like outlooks and watches. Proper coordination will enable the NWS to speak with one voice when alerting users to the potential for such an event.

#### **4 Marine Weather Outlook (product category HWO or MWS)**

##### **4.1 Mission Connection**

Marine Weather Outlooks provide our users and partners three- to five-day advance notice of a hazardous marine weather event which has the potential to threaten life or property. The primary goal of this product is to provide information to those who need considerable lead time to prepare for the event.

##### **4.2 Issuance Guidelines**

WFOs should use the HWO and/or the MWS to highlight hazardous marine weather conditions beyond 48 hours.

##### **4.3 Technical Description**

Marine Weather Outlooks should follow the format and content described in NWSI 10-517, [Multi-Purpose Weather Products Specification](#), section 4.3 for the HWO, and NWSI 10-314, [Marine Weather Statements](#), section 2.3 for the MWS.

#### **5 Marine Weather Watches (product category MWW)**

##### **5.1 Mission Connection**

Marine Weather Watches provide our users and partners 12 to 48 hours advance notice of hazardous marine weather events which have the potential to threaten life or property. The primary goal of this product is to provide enough lead time for mariners who may wish to consider altering their plans.

##### **5.2 Issuance Guidelines**

###### **5.2.1 Creation Software**

WFOs will use the Advanced Weather Interactive Processing System (AWIPS) Graphical Hazard Generator (GHG) as the primary software to create and issue Marine Weather Watches.

**5.2.2 Issuance Criteria**

WFOs should issue a Marine Weather Watch when conditions are favorable for a hazardous marine weather event to develop over part or all of the marine forecast area, but the occurrence is uncertain. WFOs should issue a Marine Weather Watch for the second, third, fourth, or occasionally fifth forecast periods when there is a significant chance of a hazardous marine weather event meeting or exceeding warning criteria.

**5.2.2.1 Marine Weather Watch Products**

All possible Marine Weather Watch products affecting marine areas and subsequent issuance criteria are listed in Table 1.

**Table 1:** Marine Weather Watch Product Table

Marine Watch Product Name	Issuance Criteria
Gale Watch	Conditions are favorable for a gale force wind event to meet the Gale Warning criteria of sustained winds or frequent gusts* of 34 knots (39 mph) to 47 knots (54 mph) in the next 12 to 60 hours.
Storm Watch	Conditions are favorable for a storm force wind event to meet Storm Warning criteria of sustained winds or frequent gusts* of 48 knots (55 mph) to 63 knots (73 mph) in the next 12 to 60 hours.
Hurricane Force Wind Watch	Conditions are favorable for a hurricane force wind event to meet or exceed Hurricane Force Wind Warning criteria of sustained winds or frequent gusts* of 64 knots (74 mph) or greater in the next 12 to 60 hours.
Heavy Freezing Spray Watch	Conditions are favorable for a heavy freezing spray event to meet local Heavy Freezing Spray Warning criteria in the next 12 to 60 hours.
Hazardous Seas Watch	Conditions are favorable for a hazardous seas event to meet or exceed Hazardous Seas Warning criteria in the next 12 to 60 hours.
Tropical Storm Watch for the Atlantic, Eastern Pacific, Central Pacific, and western North Pacific Hurricane basins	Sustained winds of 34 to 63 knots (39 to 73 mph or 63 to 118 km/hour) are possible within the specified area within 48 hours in association with a potential or ongoing tropical cyclone, a subtropical cyclone, or a post-tropical cyclone.
Hurricane/Typhoon Watch for the Atlantic, Eastern Pacific, Central Pacific, and western	Sustained winds of 64 knots (74 mph or 119 km/hour) or higher are possible within the specified area in association with a potential or ongoing tropical cyclone, a subtropical cyclone, or a post-tropical cyclone. Because hurricane

North Pacific hurricane basins	preparedness activities become difficult once winds reach tropical storm force, the hurricane/typhoon watch is issued 48 hours in advance of the anticipated onset of tropical storm force winds.
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\*Frequent Gusts: For 2 or more hours during a 12 hour forecast period

**5.2.3 Issuance Time**

The Marine Weather Watch is an event-driven product. WFOs should issue the initial MWW when the watch issuance criteria are met. Subsequent updates are issued at least once every 12 hours until a warning or advisory is issued or the Marine Weather Watch is cancelled.

**5.2.4 Valid Time**

A Marine Weather Watch is valid for 12 to 48 hours after the issuance time. The valid time (event start and end time) is placed in the Product Valid Time Event Code (P-VTEC) line and described in the watch headline. For tropical storm, hurricane, and typhoon watches, an event start time and end time is not explicitly provided because of inherent uncertainties in forecasting tropical cyclones.

**5.2.5 Product Expiration Time**

The product expiration time is generally 12 hours after the issuance time and is placed at the end of the Universal Geographic Code (UGC) string. The product expiration time is the time when users can expect to receive an updated Marine Weather Watch.

**5.2.6 Event Ending Time**

The event ending time is when the marine hazardous event is expected to end. The event ending time is placed in the P-VTEC line and described in the watch headline (e.g., GALE WATCH IN EFFECT FROM LATE SUNDAY NIGHT TO MONDAY MORNING). See 5.2.4 for tropical exceptions.

**5.3 Technical Description**

Marine Weather Watches will follow the format and content described in this section.

**5.3.1 Universal Geographic Code (UGC) Type**

Marine Weather Watches will use the (Z) form of the UGC.

**5.3.2 Mass News Disseminator (MND) Broadcast Instruction Line**

Not applicable.

**5.3.3 MND Product Type Line**

The Marine Weather Watch MND line is “URGENT - MARINE WEATHER MESSAGE”.

**5.3.4 Marine Weather Watch Content**

The Marine Weather Watch may contain an overview section, but will include segmented forecast information.

#### 5.3.4.1 Overview Section

The Marine Weather Watch overview section is optional. If included, it should contain at least one of the following items:

- a. Overview Headline - a general headline statement that summarizes the hazardous weather threat, area affected and expected time of development. The overview headline will begin and end with three periods (...).

Example:

...STORM FORCE WINDS POSSIBLE TUESDAY AND TUESDAY NIGHT...

- b. Overview - a brief, non-technical description of the developing marine event. The description may include the location and movement of large scale weather features (e.g., fronts, low pressure systems). A period “.” will precede the first line of this descriptive information.

#### 5.3.4.2 Segmented Forecast Information

Each segment of the Marine Weather Watch will include a watch headline. The headline should be followed by a descriptive text describing why the watch was issued. Each segment describes a specific hazardous marine weather event(s) for the same geographical area.

- a. Watch Headline. The watch headline will include the following elements in the order shown:
  1. Leading ellipsis (...)
  2. Valid watch product name listed in Table 1
  3. Event action phrase defined in Table 2
  4. General event beginning day and time phrase
  5. General event ending day and time phrase
  6. Trailing ellipsis (...)

Generic Watch Headline Format:

(1) Used when watch product is in effect:

...<watch product name> <event action phrase> FROM <event beginning date and time phrase> THROUGH <event ending date and time phrase>...

(2) Used to cancel a watch prior to event beginning date and time:

...<watch product name> IS CANCELLED...

**Event Action Phrase.** The event action phrase in the watch headline corresponds with the VTEC action code. Only the following event action phrases in Table 2 will be used in marine weather watch headlines:



**Table 2:** Event Action Phrases for Marine and Tropical Weather Watch Headlines

VTEC Action Code	Description	Required Event Action Phrase	Include Time/Date Phrase?
NEW	Initial Issuance	IN EFFECT	Yes**
EXA	Expansion of watch area	IN EFFECT	Yes**
EXB*	Expansion of watch area and change to watch valid time	IN EFFECT	Yes
CON	Continuation or update of event	REMAINS IN EFFECT	Yes**
EXT*	Extend/shorten event start and/or ending date/time	NOW IN EFFECT	Yes
CAN	Product cancelled prior to event end time	IS CANCELLED	No
UPG	Upgrade watch - no headline		

\* Not valid for tropical hazards.

\*\* Except for tropical hazards.

a. Watch Headline Examples:

(1) Initial Issuance:

...GALE WATCH IN EFFECT FROM SUNDAY MORNING THROUGH MONDAY MORNING...

(2) Update:

...GALE WATCH REMAINS IN EFFECT FROM SUNDAY MORNING THROUGH MONDAY MORNING...

(3) Extended event end time:

...GALE WATCH NOW IN EFFECT FROM SUNDAY MORNING THROUGH MONDAY AFTERNOON...

(4) Expansion of watch area and shortened event start and end time:

...GALE WATCH IN EFFECT FROM SATURDAY EVENING THROUGH SUNDAY EVENING...

(5) Watch cancelled prior to event end time/date:

...GALE WATCH IS CANCELLED...

(6) Initial Issuance:  
...TROPICAL STORM WATCH IN EFFECT...

(7) Update:  
...TROPICAL STORM WATCH REMAINS IN EFFECT...

(8) Cancel:  
...TROPICAL STORM WATCH IS CANCELLED...

b. Watch Descriptive Text: This section should provide the following watch information:

(1) NWS attribution line. For the initial watch, include the following phrase to begin the text of a watch:

THE NATIONAL WEATHER SERVICE IN [WFO NAME or LOCATION] HAS ISSUED  
A (e.g., GALE/STORM/HURRICANE FORCE WIND) WATCH.

The attribution line should not appear on subsequent issuances.

(2) Reason watch was issued. Include marine weather elements prompting the watch.

(3) Generalized quantitative wind speed forecasts (or frequent gusts, wave heights, steepness, etc.) based upon warning criteria (e.g., when the risk of gale force winds of 34 to 47 knots has significantly increased).

(4) Explanation of a watch and uncertainty involved. Include the following phrase to define a marine watch:

A (e.g., GALE/STORM FORCE WIND) WATCH IS ISSUED WHEN THE RISK OF (e.g., GALE/STORM/HURRICANE FORCE WINDS) HAS SIGNIFICANTLY INCREASED, BUT THE SPECIFIC TIMING AND/OR LOCATION IS STILL UNCERTAIN.

(5) Brief potential impact or Call to Action (CTA) statements. CTAs can be effective in reminding mariners what actions to take in preparing themselves for the potential hazardous marine weather event.

c. Order of Segments: Marine Weather Watches are usually placed last in the order of segments. This order was designed to place the most important and/or time sensitive information near the beginning of the message. The order of segments is:

1. Cancellation
2. Warnings
3. Advisories
4. Watches

- d. Multiple Headlines: More than one headline is allowed in a segment when two or more marine weather events are forecast to occur for the same UGC or geographical area.

Example:

Small Craft Advisory and Gale Watch in effect for the same geographical area:

...SMALL CRAFT ADVISORY IN EFFECT UNTIL 9 AM EST THIS MORNING...

...GALE WATCH IN EFFECT FROM THURSDAY AFTERNOON THROUGH FRIDAY AFTERNOON...

<u>Product Format</u>	<u>Description of Entry</u>
WHaaii cccc ddhhmm MWWxxx	<i>(WMO Header)</i> <i>(AWIPS ID)</i>
URGENT - MARINE WEATHER MESSAGE National Weather Service city state time am/pm time_zone day mon dd yyyy	<i>(Product Name or MND)</i> <i>(Issuing Office)</i> <i>(Issuance time/date)</i>
...<Overview headline statement>...	<i>(Optional)</i>
<General marine weather synopsis>	<i>(Optional - one to three paragraphs)</i>
mmZxxx-xxx-xxx-ddhhmm- /k.aaa.cccc.pp.s.####.yymmddThhnnZB- yymmddThhnnZE/ zone-zone-zone- time am/pm time_zone day mon dd yyyy	<i>(UGC: Z and expiration time)</i> <i>(P-VTEC Line(s))</i>  <i>(Zone Names)</i> <i>(Issuance time/date)</i>
...WATCH HEADLINE...	
<Descriptive Text>	<i>(In bullet format)</i>
Includes the following information: 1. NWS attribution line <i>(Initial issuance only)</i> 2. Why watch was issued 3. Potential Impact	
PRECAUTIONARY/PREPAREDNESS ACTIONS...	<i>(Start of CTA Marker)</i>
4. Definition of a watch with uncertainty 5. Call to action statement.	
&&	<i>(End of CTA Marker)</i>
\$\$	<i>(UGC Delimiter)</i>

Name/Initials/Forecaster ID	<i>(Optional after last segment)</i>
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**Figure 1:** Generic Format for a Marine Weather Watch

**5.4 Updates, Cancellations, and Corrections**

WFOs will update Marine Weather Watches at least once every 12 hours, or when there is a significant change in timing, areal extent, or expected conditions. WFOs should issue the updated Marine Weather Watch before the product expiration time is reached.

Marine Weather Watches are either upgraded to warnings or advisories, or cancelled.

WFOs will issue a MWW to cancel a watch when the forecaster believes the threat of hazardous marine weather will not develop.

WFOs will issue correction statements for format or grammatical errors as required. To reduce format or grammatical errors, forecasters should proofread the product before transmission.

**5.5 Upgrade Watch to Warning or Advisory**

When a Marine Weather Watch is upgraded to a Marine Weather Warning or Marine Weather Advisory for the same geographical area, the MWW segment will contain one headline and two P-VTEC lines. The headline will list the new warning or advisory only. The first P-VTEC line will use the upgrade (UPG) action code to show the old marine weather watch is being upgraded. The second P-VTEC line will either use the NEW action code to start the new marine weather warning or advisory, or use the expand in area (EXA) or expand in area and change time (EXB) action code to extend an existing marine weather warning or advisory into this geographical area.

**5.5.1 Upgrade Watch to Warning Segment Examples**

```
ANZ050 050245
/O.UPG.KCAR.SR.A.0001.060805T0800Z-060805T2300Z/      (P-VTEC line 1)
/O.NEW.KCAR.SR.W.0001.060805T0800Z-060805T2300Z/      (P-VTEC line 2)
COASTAL WATERS FROM EASTPORT ME TO STONINGTON ME OUT 25 NM
237 PM EDT FRI AUG 4 2006
```

...STORM WARNING IN EFFECT FROM 4 AM TO 7 PM EDT SATURDAY...  
*(Only one headline used - lists active Marine Weather Warning)*

<descriptive text>

\$\$

**Tropical Example:**

GMZ430-432-450-202330-  
/O.UPG.KLCH.TR.A.1003.000000T0000Z-000000T0000Z/  
/O.EXA.KLCH.TR.W.1003.000000T0000Z-000000T0000Z/  
SABINE LAKE-CALCASIEU LAKE-  
COASTAL WATERS FROM CAMERON LA TO HIGH ISLAND TX OUT 20 NM-  
1022 AM CDT TUE JUN 20 2017

...TROPICAL STORM WARNING IN EFFECT...  
(Only one headline used - lists active Tropical Weather Warning)

<descriptive text>

\$\$

**6 Marine Weather Warnings (product category MWW)**

**6.1 Mission Connection**

Marine Weather Warnings provide our users and partners advance notice of hazardous marine weather events that threaten life or property.

**6.2 Issuance Guidelines**

**6.2.1 Creation Software**

WFOs will use AWIPS GHG as the primary software to create and issue Marine Weather Warnings.

**6.2.2 Issuance Criteria.**

WFOs will issue Marine Weather Warnings when hazardous marine weather is imminent, occurring or highly likely over part or all of the forecast area. WFOs should issue a Marine Weather Warning for the first, second, third, or occasionally fourth forecast periods, when there is high confidence of a hazardous marine weather event meeting or exceeding warning criteria.

**6.2.2.1 Marine Weather Warning Products**

The list of all possible warning products affecting marine areas and subsequent issuance criteria are listed in Table 3.

**Table 3:** Marine Weather Warning Product Table

Warning Product Name	Issuance Criteria
Ashfall Warning	A warning issued for a volcano undergoing a major eruption where mariners will be affected to a significant extent such as greater than or equal to ¼” of ashfall accumulation, significant debris, lava or lahar flows.
Gale Warning	Sustained surface winds, or frequent gusts* in the range of 34 knots (39 mph) to 47 knots (54 mph) inclusive, either predicted or occurring, and not directly associated with a tropical cyclone.
Storm Warning	Sustained surface winds, or frequent gusts* in the range of 48 knots (55 mph) to 63 knots (73 mph) inclusive, either predicted or occurring, and not directly associated with a tropical cyclone.
Hurricane Force Wind Warning	Sustained winds, or frequent gusts* of 64 knots (74 mph) or greater, either predicted or occurring, and not directly associated with a tropical cyclone.
Heavy Freezing Spray Warning	An accumulation of freezing water droplets on a vessel at a rate of 2 cm per hour or greater caused by some appropriate combination of cold water, wind, cold air temperature, and vessel movement.
Hazardous Seas Warning	Wave heights and/or wave steepness values meeting or exceeding locally defined warning criteria.
Tropical Storm Warning for the Atlantic, Eastern Pacific, Central Pacific, and Western North Pacific Hurricane basins	Sustained winds of 34 to 63 knots (39 to 73 mph or 63 to 118 km/hour) are expected somewhere within the specified area within 36 hours (24 hours for the western North Pacific) in association with a potential or ongoing tropical cyclone, a subtropical cyclone, or a post-tropical cyclone.
Hurricane/Typhoon Warning for the Atlantic, Eastern Pacific, Central Pacific, and western North Pacific Hurricane basins	Sustained winds of 64 knots (74 mph or 119 km/hour) or higher are expected somewhere within the specified area in association with a potential or ongoing tropical cyclone, a subtropical cyclone, or a post-tropical cyclone. Because hurricane preparedness activities become difficult once winds reach tropical storm force, the hurricane/typhoon warning is issued 36 hours in advance of the anticipated onset of tropical storm force winds (24 hours for the western North Pacific). A hurricane or typhoon warning can remain in effect when dangerously high water or a combination of dangerously high water and waves continue, even though winds may be less than hurricane or typhoon force.

\*Frequent Gusts: For 2 or more hours during a 12 hour forecast period

### **6.2.3 Issuance Time**

A Marine Weather Warning is an event-driven product and is initially issued when a hazardous marine weather event is expected to meet or exceed local warning criteria. WFOs should issue updated warnings at least once every six to eight hours until the event ends or is canceled.

### **6.2.4 Valid Time.**

A Marine Weather Warning is valid up to 36 hours after the issuance time. The valid time (event start and end times) is placed in the P-VTEC line(s) and is described in the warning headline. In extreme cases, the valid time may exceed 36 hours from the time of issuance. For tropical storm, hurricane, and typhoon warnings, an event start time and end time is not explicitly provided because of inherent uncertainties in forecasting tropical cyclones.

### **6.2.5 Product Expiration Time**

The product expiration time is generally 6 to 8 hours after the issuance time and should coincide with the next expected update or when the event is forecast to end. The product expiration time is placed in the UGC line.

### **6.2.6 Event Ending Time**

The event ending time is when the hazardous marine weather event is expected to end. The event ending time can match the product expiration time if the warning is in effect for eight hours or less. The event ending time is placed in the P-VTEC line and is described in the warning headline (e.g., STORM WARNING IN EFFECT UNTIL 9 AM EST TODAY). The event ending time should generally not exceed 36 hours from the time of issuance. See 6.2.4 for tropical exceptions.

## **6.3 Technical Description**

Marine Weather Warnings will follow the format and content described in this section

### **6.3.1 UGC Type**

Marine Weather Warnings will use the (Z) form of the UGC.

### **6.3.2 MND Broadcast Instruction Line**

Not applicable.

### **6.3.3 MND Product Type Line**

The Marine Weather Warning MND line is “URGENT - MARINE WEATHER MESSAGE”.

### **6.3.4 Content**

The Marine Weather Warning may contain an overview section, but will include segmented forecast information.

#### **6.3.4.1 Overview Section**

The Marine Weather Warning overview section is optional. If included, it should contain at least one of the following items:

- a. Overview Headline - a general headline statement that summarizes the hazardous weather threat, area affected and expected time of development. An ellipsis “...” will begin the overview headline.

Examples:

...GALE FORCE WINDS DEVELOPING THIS AFTERNOON AND TONIGHT...  
...STORM FORCE WINDS WILL IMPACT THE PACIFIC NORTHWEST COASTAL WATERS LATE TONIGHT AND FRIDAY...

- b. Overview - a brief, non-technical description of the developing marine event. The description may include the location and movement of large scale weather features (e.g., fronts, low pressure systems). A period “.” will precede the first line of this descriptive information.

### 6.3.4.2 Segmented Forecast Information

Each segment of a Marine Weather Warning will include a warning headline. The headline should be followed by a descriptive text describing why the warning was issued. Each segment describes a specific hazardous marine weather event(s) for the same geographical area.

- a. Warning Headline. The warning headline should include the following elements in the order shown:
1. Leading ellipsis (...)
  2. Valid marine weather warning product name listed in Table 3
  3. Event action phrase defined in Table 4
  4. Appropriate event beginning day and time phrase from Tables 1-3 of NWSI 10-310
  5. Appropriate event ending day and time phrase from Tables 1-3 of NWSI 10-310.
  6. Trailing ellipsis (...)

Generic Warning Headline Format:

(1) Warning product issuance time prior to event beginning time:

...<warning product name> <event action phrase> FROM <event beginning date and time phrase> TO <event ending date and time phrase>...

(2) Warning product issuance time equals event beginning time:

...<warning product name> <event action phrase> UNTIL <event ending date and time phrase>...

(3) Warning product cancellation or expiration statement:

...<warning product name> <event action phrase>...

Event Action Phrase. The event action phrase in the warning headline corresponds with the VTEC action code. Only the following event action phrases in Table 4 will be used in marine weather warning headlines:



**Table 4:** Event Action Phrases for Marine Weather Warning Headlines

VTEC Action Code	Description	Required Event Action Phrase	Include Time/Date?
NEW	Initial warning issuance	IN EFFECT	Yes**
EXA	Expansion of warning area	IN EFFECT	Yes**
EXB*	Expansion of warning area and change to warning valid time	IN EFFECT	Yes
CON	Continuation or update of warning	REMAINS IN EFFECT	Yes**
EXT*	Extend/shorten warning start and/or ending date/time	NOW IN EFFECT	Yes
CAN	Warning cancelled prior to event end time	IS CANCELLED	No
EXP*	Advisory approaching the expiration time. Used up to 30 minutes prior to advisory end time.	WILL EXPIRE AT	Yes
	Advisory has expired. Used up to 30 minutes after advisory expiration has passed.	HAS EXPIRED	No
UPG	Upgrade applies only from Tropical Storm Warning to Hurricane Warning. Only Hurricane Warning headline used.	IN EFFECT	No

\* Not valid for tropical hazards.

\*\* Except for tropical hazards.

a. Warning Headline Examples:

(1) Initial issuance or expansion in area:

...STORM WARNING IN EFFECT FROM 7 AM THIS MORNING TO 11 AM EST WEDNESDAY...

(2) Update:

...STORM WARNING REMAINS IN EFFECT UNTIL 11 AM EST WEDNESDAY...

(3) Change to event end time:

...STORM WARNING NOW IN EFFECT UNTIL 5 PM EST WEDNESDAY...

(4) Cancelled prior to event end time/date:  
...STORM WARNING IS CANCELLED...

(5) Expiration statement up to 30 minutes prior to event end time:  
...STORM WARNING WILL EXPIRE AT 5 PM EST THIS AFTERNOON...

(6) Expiration statement up to 30 minutes after event end time:  
...STORM WARNING HAS EXPIRED...

(7) Initial issuance:  
...TROPICAL STORM WARNING IN EFFECT...

(8) Update:  
...TROPICAL STORM WARNING REMAINS IN EFFECT...

(9) Cancel:  
...HURRICANE WARNING IS CANCELLED...

b. **Warning Descriptive Text.** This section should include the following warning information:

(1) NWS attribution line. For the initial warning, include the following phrase to begin the text of a warning:

THE NATIONAL WEATHER SERVICE IN [WFO NAME or LOCATION] HAS ISSUED  
A (e.g., GALE/STORM/HURRICANE FORCE WIND) WARNING.

The attribution line should not appear in subsequent issuances.

(2) Reason warning was issued. Include marine weather element(s) prompting the warning.

(3) Quantitative wind speed forecasts (or wave heights, steepness, etc.).

(4) Definition of a warning when event has not yet begun. Use the following phrase to define a warning:

A (GALE/STORM/HURRICANE FORCE WIND, etc.) WARNING MEANS  
(HAZARDOUS WEATHER CONDITIONS) ARE IMMINENT OR OCCURRING.

(5) Brief CTA statements, safety rules.

c. **Order of Segments.** Marine Weather Warnings are placed second in the order of segments. This order was designed to place the most important and/or time sensitive information near the beginning of the message. The order of segments is:

1. Cancellation
2. Warnings

- 3. Advisories
- 4. Watches

d. Multiple Headlines. More than one headline is allowed in a segment when two or more marine weather events are forecast to occur for the same UGC or geographical area.

Example:

Gale Warning and Storm Watch in effect for the same geographical area:

...GALE WARNING IN EFFECT UNTIL 9 AM EST THIS MORNING...  
 ...STORM WATCH IN EFFECT FROM THURSDAY AFTERNOON THROUGH FRIDAY AFTERNOON...

<u>Product Format</u>	<u>Description of Entry</u>
WHaaii cccc ddhhmm	(WMO Header)
MWWxxx	(AWIPS ID)
URGENT - MARINE WEATHER MESSAGE	(Product Name or MND)
National Weather Service city state	(Issuing Office)
time am/pm time_zone day mon dd yyyy	(Issuance time/date)
...<Overview headline statement>...	(Optional)
<General marine weather synopsis>	(Optional - one to three paragraphs)
mmZxxx-xxx-xxx-ddhhmm-	(UGC: Z & expiration time)
/k.aaa.cccc.pp.s.####.yymmddThhnnZB-yymmddThhnnZE/	(P-VTEC Line(s))
zone-zone-zone- time am/pm time_zone day mon dd yyyy	(Zone Names)
...WARNING HEADLINE...	(Issuance time/date)
<Descriptive Text>	
Includes the following information:	(In bullet format)
1. NWS attribution line (Initial issuance only)	
2. Why warning was issued (marine weather element(s) prompting the warning)	
3. Timing of the event (beginning, ending, timing of worst conditions, duration)	
PRECAUTIONARY/PREPAREDNESS ACTIONS...	(Start of CTA Marker)
4. Definition of a warning (before event begins)	
5. Potential impact, call to action statement.	
&&	(End of CTA Marker)

\$\$	<i>(UGC Delimiter)</i> <i>(Optional after last segment)</i>
Name/Initials/Forecaster ID	

**Figure 2:** Generic Format for a Marine Weather Warning

### 6.4 Updates, Cancellations, and Corrections

WFOs will update Marine Weather Warnings at least once every six to eight hours until the event ends or is canceled. WFOs should issue the updated MWW before the product expiration time is reached. Frequent updates help to keep our users and partners informed on the current and short term aspects of the hazardous weather event. Update warnings whenever there is a change in timing, areal extent, or expected conditions.

WFOs will issue a MWW to cancel a warning when the forecaster believes the weather threat has diminished before the valid time expires.

WFOs will issue correction statements for format or grammatical errors as required. To reduce format or grammatical errors, forecasters should proofread the product before transmission.

### 6.5 Downgrade Warning to Advisory

When a Marine Weather Warning is downgraded to a Marine Weather Advisory or a lower level warning (e.g., Storm Warning to Gale Warning) for the same geographical area, the MWW segment will contain two P-VTEC lines.

#### 6.5.1 Downgrade Warning to Advisory Segment Example

```
LHZ421-422-441>443-032230-
/O.CAN.KDTX.GL.W.0003.000000T0000Z-040103T2300Z/      (P-VTEC line 1)
/O.NEW.KDTX.SC.Y.0050.040103T0900Z-040103T2300Z/      (P-VTEC line 2)
Outer Saginaw Bay-Inner Saginaw Bay- Port Austin to Harbor Beach MI-Harbor Beach to Port
Sanilac MI-Port Sanilac to Port Huron MI- 400 AM EST SAT JAN 3 2004
```

```
...SMALL CRAFT ADVISORY IN EFFECT UNTIL 6 PM EST THIS EVENING...
...GALE WARNING IS CANCELLED...
```

*(Two headlines used - lists new advisory, then cancelled warning)*

<descriptive text>

\$\$

### 6.6 Upgrade Tropical Storm Warning to Hurricane Warning

When a Tropical Storm Warning is upgraded to a Hurricane Warning for the same geographical area, the MWW segment will contain two P-VTEC lines but only one headline.

### 6.6.1 Upgrade Tropical Storm Warning to Hurricane Warning Segment Example

AMZ250-252-254-256-080400-  
/O.UPG.KILM.TR.W.1013.000000T0000Z-000000T0000Z/  
/O.NEW.KILM.HU.W.1013.161007T1559Z-000000T0000Z/  
Coastal waters from Surf City to Cape Fear NC out 20 nm-  
Coastal waters from Cape Fear NC to Little River Inlet SC out 20 nm-  
Coastal waters from Little River Inlet to Murrells Inlet SC out 20 nm-  
Coastal waters from Murrells Inlet to South Santee River SC out 20 nm-  
1159 AM EDT Fri Oct 7 2016

...HURRICANE WARNING IN EFFECT...

*(One headline used – for the new Hurricane Warning)*

<descriptive text>

\$\$

## 7 Marine Weather Advisories (product category MWW)

### 7.1 Mission Connection

Marine Weather Advisories provide our users and partners advance notice of hazardous marine weather events which could lead to life-threatening situations if caution is not exercised.

### 7.2 Issuance Guidelines

#### 7.2.1 Creation Software

WFOs will use AWIPS GHG as the primary software to create and issue Marine Weather Advisories.

#### 7.2.2 Issuance Criteria

WFOs should issue Marine Weather Advisories for hazardous marine weather events that cause significant inconveniences and, if caution is not exercised, could lead to life-threatening situations over part or all of the forecast area.

WFOs should issue Marine Weather Advisories for the first, second, third, or occasionally fourth forecast periods, when there is high confidence of a hazardous marine weather event meeting or exceeding local advisory criteria.

##### 7.2.2.1 Marine Weather Advisory Products

The list of all possible advisory products affecting marine areas and subsequent issuance criteria are listed in Table 5.

**Table 5:** Marine Weather Advisory Product Table

<b>Advisory Product Name</b>	<b>Issuance Criteria</b>
Ashfall Advisory	An advisory issued for a volcano undergoing a minor eruption where there is the potential that mariners could be affected by a limited hazard extent such as less than ¼” of ashfall accumulation, pumice rafts or some floating debris.
Brisk Wind Advisory	Small Craft Advisory winds expected for ice covered waters.
Dense Fog Advisory	Widespread or localized fog reducing visibilities to 1 nautical mile or less (regionally or locally defined)**.
Dense Smoke Advisory	Widespread or localized smoke reducing visibilities to 1 nautical mile or less (regionally or locally defined)**.
Freezing Spray Advisory	Light to moderate accumulation of ice is expected on vessels.
Low Water Advisory	Water levels are significantly below average and may cause impact to safe marine navigation. The need for this product is locally determined**.
Small Craft Advisory	Sustained wind speeds or frequent gusts* of 20 to 33 knots (regionally defined**) and/or seas or waves 4 feet and greater (locally defined**).
Small Craft Advisory for Hazardous Seas	Wind speeds are lower than small craft advisory criteria, yet waves or seas are potentially hazardous due to wave period, steepness, or swell direction. The criteria are regionally defined**.
Small Craft Advisory for Rough Bar	Waves in or near bars are hazardous to mariners due to the interaction of swell, tidal or river currents in relatively shallow water. Threshold criteria are locally defined** and are specific to local geographic areas, and are based upon parameters such as wave steepness, wind speed and direction, and local bathymetry.
Small Craft Advisory for Winds	When wave heights and/or wave steepness are lower than Small Craft Advisory criteria, yet wind speeds are potentially hazardous.

\*Frequent Gusts: For 2 or more hours during a 12 hour forecast period

\*\*Refer to NWSI 10-303 (Appendix A) for Regional and Local Criteria

### **7.2.3 Issuance Time**

Advisories are event-driven products and are initially issued when a hazardous marine weather event is expected to meet or exceed local advisory criteria. WFOs should issue updated advisories at least once every six to eight hours until the event ends or is canceled.

### **7.2.4 Valid Time**

A Marine Weather Advisory is valid up to 36 hours after the issuance time. The valid time (event start and end times) is placed in the P-VTEC line(s) and is described in the warning headline. In extreme cases, the valid time may exceed 36 hours from the time of issuance.

### **7.2.5 Product Expiration Time**

The product expiration time should be 6 to 8 hours after the issuance time and should coincide with the next expected update or when the event is forecast to end. The product expiration time is placed in the UGC line.

### **7.2.6 Event Ending Time**

The event ending time is when the hazardous marine weather event is expected to end. The event ending time can match the product expiration time if the advisory is in effect for eight hours or less. The event ending time is placed in the P-VTEC line and is described in the advisory headline (e.g., SMALL CRAFT ADVISORY IN EFFECT UNTIL 9 AM EST MONDAY). The event ending time should generally not exceed 36 hours from the time of issuance.

## **7.3 Technical Description**

Marine Weather Advisories will follow the format and content described in this section.

### **7.3.1 UGC Type**

Marine Weather Advisories will use the (Z) form of the UGC.

### **7.3.1 MND Broadcast Instruction Line**

Not applicable.

### **7.3.2 MND Product Type Line**

The Marine Weather Advisory MND line is “URGENT - MARINE WEATHER MESSAGE”.

### **7.3.3 Content**

The Marine Weather Advisory may contain an overview section, but will include segmented forecast information.

#### **7.3.3.1 Overview Section**

The advisory overview section is optional. If included, it should contain at least one of the following items:

- a. Overview Headline – a general headline statement that summarizes the hazardous weather threat, area affected and estimated time of development. The overview headline will begin and end with three periods “...”.

For example:

...DENSE FOG EXPECTED ACROSS PARTS OF SOUTHERN LAKE MICHIGAN  
SHORELINE TONIGHT...

- b. Overview – a brief, non-technical description of the developing marine weather event. The description may include the location and movement of large scale weather features (e.g., fronts, low pressure systems). A period “.” will precede the first line of this descriptive information.

### 7.3.3.2 Segmented Forecast Information

Each segment of a Marine Weather Advisory will include the advisory headline. The headline should be followed by a descriptive text describing why the advisory was issued. Each segment describes a specific hazardous marine weather event(s) for the same geographical area.

- a. Advisory Headline. The advisory headline should include the following elements in the order shown:
1. Leading ellipsis (...)
  2. Valid marine weather advisory product name listed in Table 5
  3. Event action phrase defined in Table 6
  4. Appropriate event beginning day and time phrase from Tables 1-3 of NWSI 10-310
  5. Appropriate event ending day and time phrase from Tables 1-3 of NWSI 10-310
  6. Trailing ellipsis (...)

Generic Advisory Headline Format:

- (1) Advisory product issuance time prior to event beginning time:  
...<advisory product name> <event action phrase> FROM <event beginning date and time phrase> TO <event ending date and time phrase>...
- (2) Advisory product issuance time equals event beginning time:  
...<advisory product name> <event action phrase> UNTIL <event ending date and time phrase>...
- (3) Advisory product cancellation or expiration statement:  
...<advisory product name> <event action phrase>...

Event Action Phrase. The event action phrase in the advisory headline corresponds with the VTEC action code. Only the following event action phrases in Table 6 will be used in marine weather advisory headlines:



**Table 6:** Event Action Phrases for Marine Weather Advisory Headlines

VTEC Action Code	Description	Required Event Action Phrase	Include Time/Date?
NEW	Initial advisory issuance	IN EFFECT	Yes
EXA	Expansion of advisory area	IN EFFECT	Yes
EXB	Expansion of advisory area and change to advisory valid time	IN EFFECT	Yes
CON	Continuation or update of advisory	REMAINS IN EFFECT	Yes
EXT	Extend/shorten advisory start and/or ending date/time	NOW IN EFFECT	Yes
CAN	Advisory cancelled prior to event end time	IS CANCELLED	No
EXP	Advisory approaching the expiration time. Used up to 30 minutes prior to advisory end time.	WILL EXPIRE AT	Yes
EXP	Advisory has expired. Used up to 30 minutes after advisory expiration has passed.	HAS EXPIRED	No
UPG	Upgrade to warning - no headline		

a. Advisory Headline Examples:

(1) Initial issuance or expansion in area:

...SMALL CRAFT ADVISORY IN EFFECT FROM 7 AM THIS MORNING TO 11 AM EST WEDNESDAY...

(2) Update:

...SMALL CRAFT ADVISORY REMAINS IN EFFECT UNTIL 11 AM EST WEDNESDAY...

(3) Extend event end time:

...SMALL CRAFT ADVISORY NOW IN EFFECT UNTIL 5 PM EST WEDNESDAY...

(4) Cancelled prior to event end time/date:

...SMALL CRAFT ADVISORY IS CANCELLED...

(5) Expiration statement up to 30 minutes prior to event end time:  
...SMALL CRAFT ADVISORY WILL EXPIRE AT 5 PM EST THIS AFTERNOON...

(6) Expiration statement up to 30 minutes after event end time:  
...SMALL CRAFT ADVISORY HAS EXPIRED...

b. Advisory Descriptive Text. This section should include the following advisory information:

(1) NWS attribution line. For the **initial** advisory, include the following phrase to begin the text of the advisory:

THE NATIONAL WEATHER SERVICE IN [WFO NAME or LOCATION] HAS ISSUED A (e.g., DENSE FOG/SMALL CRAFT) ADVISORY.

The attribution line should not appear in subsequent issuances.

(2) Reason advisory was issued. Include marine weather element(s) prompting the advisory.

(3) Quantitative wind speed forecasts (or wave heights, steepness, etc.).

(4) Brief CTA statements, safety rules.

c. Order of Segments. Advisories are placed third in the order of segments. This order was designed to place the most important and/or time sensitive information near the beginning of the message. The order of segments is:

1. Cancellation
2. Warnings
3. Advisories
4. Watches

d. Multiple Headlines. More than one headline is allowed in a segment when two or more marine weather events are forecast to occur for the same UGC or geographical area. However, duplicate Small Craft Advisories (one for winds and one for seas) is not allowed in the same area at the same time. A generic Small Craft Advisory will instead be issued.

Example: Dense Fog Advisory and Storm Watch in effect for the same geographical area:

...DENSE FOG ADVISORY IN EFFECT UNTIL 9 AM EST THIS MORNING...  
...STORM WATCH IN EFFECT FROM THURSDAY AFTERNOON TO FRIDAY  
AFTERNOON...

<u>Product Format</u>	<u>Description of Entry</u>
WHaaii cccc ddhhmm MWWxxx	(WMO Header) (AWIPS ID)
URGENT - MARINE WEATHER MESSAGE National Weather Service city state time am/pm time_zone day mon dd yyyy	(Product Name or MND) (Issuing Office) (Issuance time/date)
...<Overview headline statement>...	(Optional)
<General marine weather synopsis>	(Optional - one to three paragraphs)
mmZxxx-xxx-xxx-ddhhmm- /k.aaa.cccc.pp.s.####.yymmddThhnnZB-yymmddThhnnZE/ zone-zone-zone- time am/pm time_zone day mon dd yyyy	(UGC: Z & expiration time) (P-VTEC Line(s)) (Zone Names) (Issuance time/date)
...ADVISORY HEADLINE...	
<Descriptive text> Includes the following information: 1. NWS attribution line ( <i>Initial issuance only</i> ) 2. Why advisory was issued (marine weather element(s) prompting the advisory) 3. Timing of the event (beginning, ending, timing of worst conditions, duration)	(In bullet format)
PRECAUTIONARY/PREPAREDNESS ACTIONS...	(Start of CTA Marker)
4. Definition of an advisory (before event begins) 5. Potential impact, call to action statement. &&	(End of CTA Marker)
\$\$	(UGC Delimiter)
Name/Initials/Forecaster ID	(Optional after last segment)

**Figure 3:** Generic Format for a Marine Weather Advisory

#### 7.4 Updates, Amendments, and Corrections

WFOs will update advisories at least once every six to eight hours until the event ends or is canceled. WFOs should issue the updated MWW before the product expiration time is reached. The frequent updates help to keep our users and partners informed on the current and short term aspects of the marine weather event. Update advisories whenever there is a change in timing,

areal extent, or expected conditions. WFOs will issue a MWW to cancel an advisory when the forecaster believes the weather threat has ended before the valid time expires.

WFOs will issue correction statements for format or grammatical errors as required. To reduce format or grammatical errors, forecasters should proofread the product before transmission.

## 7.5 Upgrade Advisory to Warning

When a Marine Weather Advisory is upgraded to a Marine Weather Warning for the same geographical area, the MWW segment will contain one headline and two P-VTEC lines. The headline will list the new warning only. The first P-VTEC line will use the UPG action code to show the old advisory is being upgraded. The second P-VTEC line will either use the NEW action code to start the new warning, or use the EXA or EXB action code to extend an existing advisory into this geographical area.

### 7.5.1 Upgrade Advisory to Warning Segment Example

PZZ350-356-370-376-092300-

/O.UPG.KMFR.SW.Y.0051.000000T0000Z-180310T0500Z/ (*P-VTEC line 1*)

/O.NEW.KMFR.GL.W.0003.180309T1600Z-180310T0500Z/ (*P-VTEC line 2*)

Coastal waters from Florence to Cape Blanco OR out 20 nm-

Coastal waters from Cape Blanco OR to Pt. St. George CA out 20 nm-

Waters from Florence to Cape Blanco OR from 20 to 60 nm-

Waters from Cape Blanco OR to Pt. St. George CA from 20 to 60 nm-

705 AM PST Fri Mar 9 2018

...GALE WARNING IN EFFECT UNTIL 9 PM PST THIS EVENING...

*(One headline used - lists new warning only)*

<descriptive text>

**APPENDIX A — Marine Weather Message Product Examples.** Below are 10 Marine Weather Watch and Warning Examples.

**1. Gale Watch**

An example of a Gale Watch

WHUS73 KMQT 241509  
MWWMQT

URGENT - MARINE WEATHER MESSAGE  
National Weather Service Marquette MI  
1109 AM EDT Thu May 24 2018

LSZ263-264-266-242315-  
/O.CON.KMQT.GL.A.0015.180525T0600Z-180525T1600Z/  
Lake Superior from Saxon Harbor WI to Upper Entrance to Portage Canal MI 5NM off shore to the US/Canadian border including Isle Royale National Park-  
Lake Superior from Upper Entrance to Portage Canal to Manitou Island MI 5NM off shore to the US/Canadian border-  
Lake Superior east of a line from Manitou Island to Marquette MI and west of a line from Grand Marais MI to the US/Canadian border beyond 5NM from shore-  
1109 AM EDT Thu May 24 2018

...GALE WATCH REMAINS IN EFFECT FROM LATE TONIGHT THROUGH FRIDAY MORNING...

\* Wind and waves during the Gale Watch, expect sustained winds of up to 32 knots from the southwest, with gusts up to 34 knots. The largest expected significant waves will be 9 feet with a maximum wave height of up to 14 feet possible.

\* TIMING...The maximum winds are expected around 8 AM EDT Friday with the largest waves expected around 11 AM EDT Friday.

Please see the latest marine forecasts for more detailed information.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Gale Watch is issued when the risk of gale force winds of 34 to 47 knots has significantly increased, but the specific timing and/or location is still uncertain. It is intended to provide additional lead time for mariners who may wish to consider altering their plans.

&&

\$\$

## 2. Gale Warning

Below is an example of a Gale Warning, first issuance: NWS attribution line is mandatory.

WHUS76 KPQR 220940

MWWPQR

URGENT - MARINE WEATHER MESSAGE

National Weather Service Portland OR

240 AM PDT Tue May 22 2018

PZZ250-255-270-275-221745-

/O.UPG.KPQR.GL.A.0016.180522T1800Z-180523T0000Z/

/O.NEW.KPQR.GL.W.0034.180522T1700Z-180523T0500Z/

Coastal waters from Cape Shoalwater WA to Cascade Head OR out 10 nm-

Coastal waters from Cascade Head to Florence OR out 10 nm-

Waters from Cape Shoalwater WA to Cascade Head OR from 10 to 60 nm-

Waters from Cascade Head to Florence OR from 10 to 60 nm-

240 AM PDT Tue May 22 2018

...GALE WARNING IN EFFECT FROM 10 AM THIS MORNING TO 10 PM PDT THIS EVENING...

The National Weather Service in Portland has issued a Gale Warning, which is in effect from 10 AM this morning to 10 PM PDT this evening. This replaces the Gale Watch which was previously in effect.

\* WINDS...S winds increasing to 20 to 30 kt by midday with gusts to 40 kt. Winds will shift more westerly later this afternoon, with gusts to 35 kt continuing into this evening.

\* SEAS...Steep, mainly wind-driven seas of 10 to 12 feet are expected this afternoon. Seas eventually becoming a longer period west swell later this afternoon and evening. Seas will subside below 10 feet later tonight or early Wednesday.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Gale Warning means winds of 34 to 47 knots are imminent or occurring. Operating a vessel in gale conditions requires experience and properly equipped vessels. It is highly recommended that mariners without the proper experience seek safe harbor prior to the onset of gale conditions.

&&

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### 3. Hurricane Force Wind Warning

Below is an example of a continuation of a Hurricane Force Wind Warning.

WHUS76 KPQR 120949  
MWWPQR

URGENT - MARINE WEATHER MESSAGE  
National Weather Service Portland OR  
249 AM PDT Mon Mar 12 2018

PZZ250-270-121800-  
/O.CON.KPQR.HF.W.0002.000000T0000Z-180312T2000Z/  
Coastal waters from Cape Shoalwater WA to Cascade Head OR out 10 NM-  
Waters from Cape Shoalwater WA to Cascade Head OR from 10 to 60 NM-  
249 AM PDT Mon Mar 12 2018

...A HURRICANE FORCE WIND WARNING REMAINS IN EFFECT UNTIL 1 PM PDT  
THIS AFTERNOON...

\* WINDS...South wind rising to 40 to 50 knots with gusts to 70 knots tonight and Monday morning and early afternoon. The strongest wind should occur Monday morning.

\* SEAS...Combined seas are likely to build to 32 feet, possibly to 35 feet in the outer waters, early Monday morning, then ease to the mid 20s in the afternoon, and then around 20 feet by early Monday evening. Seas will be quite choppy with a high south to southwest wind wave component and a west longer period swell component.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Hurricane Force Wind Warning means winds of 64 knots or greater are imminent or occurring. All vessels should remain in port, or take shelter as soon as possible, until winds and waves subside.

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#### 4. Ashfall Warning

Below is an example of an Ashfall Warning, first issuance: NWS attribution line is mandatory.

WHUS76 KSEA 071340  
MWWSEA

URGENT - MARINE WEATHER MESSAGE  
National Weather Service Seattle WA  
640 AM PDT Fri May 7 2021

PZZ135-072200-  
/O.NEW.KSEW.MH.W.0012.210507T1340Z-100508T0400Z/  
Puget Sound and Hood Canal-  
640 AM PDT Fri May 7 2021

...ASHFALL WARNING IN EFFECT UNTIL 9 PM PDT TONIGHT...

The National Weather Service in Seattle has issued an Ashfall Warning, which is in effect until 9 PM PDT this evening.

\* LOCATION...The Cascades Volcano Observatory reports strong seismicity indicative of an explosive eruption at Mount Rainier Volcano in the Cascade Range. Satellite analysis indicates a vent at the summit of Mount Rainier.

\* IMPACTS...Heavy ashfall is occurring west of the volcano. Debris and mud flows are expected in Commencement Bay. Vessels should avoid the immediate area and also be alert for floating pumice.

\* TIMING...Ashfall Warning in effect until 9 PM this evening.

#### PRECAUTIONARY/PREPAREDNESS ACTIONS...

An Ashfall Warning means that the volcano is undergoing a major eruption. It is very likely that mariners will be affected by volcanic hazards in the warning area such as significant debris, greater than one quarter of an inch of ashfall, lava, or lahar and debris flows.

Ash is an eye and respiratory irritant and is abrasive. Those with respiratory sensitivities should take extra precautions to minimize exposure. Protect electronics and cover air intakes if ash fall is expected or confirmed. Remove ash from surfaces with water if possible to prevent excessive accumulation.

Additional information is available at [vulcan.wr.usgs.gov](http://vulcan.wr.usgs.gov).

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## 5. Marine Weather Advisory Examples

### Small Craft Advisory

Below is an example of a Small Craft Advisory, first issuance: The NWS attribution line is mandatory.

WHUS71 KBOX 260828  
MWWBOX

URGENT - MARINE WEATHER MESSAGE  
National Weather Service Taunton MA  
428 AM EDT Thu Jun 26 2014

ANZ254-261630-  
/O.NEW.KBOX.SC.Y.0078.140627T0400Z-140627T2200Z/  
Coastal waters from Provincetown MA to Chatham MA to Nantucket MA out 20 NM-  
428 AM EDT Thu Jun 26 2014

...SMALL CRAFT ADVISORY IN EFFECT FROM MIDNIGHT TONIGHT TO 6 PM EDT  
FRIDAY...

The National Weather Service in Taunton has issued a Small Craft Advisory, which is in effect from Midnight tonight to 6 PM EDT Friday.

\* WINDS AND SEAS...North winds 10 to 15 kt with gusts up to 20 kt. Seas 3 to 5 feet.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Small Craft Advisory means that wind speeds of 25 to 33 knots are expected to produce hazardous wave conditions to small craft. Inexperienced mariners, especially those operating smaller vessels should avoid navigating in these conditions.

&&

\$\$

ANZ255-261630-  
/O.NEW.KBOX.SC.Y.0078.140627T1000Z-140627T2200Z/  
Coastal waters extending out to 25 NM south of Martha's Vineyard and Nantucket-  
428 AM EDT Thu Jun 26 2014

...SMALL CRAFT ADVISORY IN EFFECT FROM 6 AM TO 6 PM EDT FRIDAY...

The National Weather Service in Taunton has issued a Small Craft Advisory, which is in effect from 6 AM to 6 PM EDT Friday.

\* WINDS AND SEAS...North winds 10 to 15 kt with gusts up to 20 kt. Seas 3 to 5 feet.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Small Craft Advisory means that wind speeds of 25 to 33 knots are expected to produce hazardous wave conditions to small craft. Inexperienced mariners, especially those operating smaller vessels should avoid navigating in these conditions.

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For the latest updates, please visit our webpage at [www.weather.gov/boston](http://www.weather.gov/boston).  
You can follow us on Facebook at [www.facebook.com/us.nationalweatherservice.boston.gov](http://www.facebook.com/us.nationalweatherservice.boston.gov).  
You can follow us on twitter at @NWSBoston.

**6. Small Craft Advisory for Rough Bar**

Below is an example of a Small Craft Advisory for Rough Bar.

PZZ210-261500-  
/O.CON.KPQR.RB.Y.0107.000000T0000Z-140626T1500Z/  
Columbia River Bar-  
300 AM PDT Thu Jun 26 2014

...SMALL CRAFT ADVISORY FOR ROUGH BAR REMAINS IN EFFECT UNTIL 8 AM  
PDT THIS MORNING...

\* IN THE MAIN CHANNEL...

\* GENERAL SEAS: 2 to 4 feet through Thursday.

\* FIRST EBB: Seas will temporarily build to 7 feet with breakers during the strong ebb around 445 AM.

\* SECOND EBB: Seas will temporarily build to 5 feet during the weaker ebb around 515 PM.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Small Craft Advisory for Rough Bar means that wave conditions are expected to be hazardous to small craft in or near harbor entrances.

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## 7. Cancellation Product Example

### Cancelled Small Craft Advisory

Below is an example of a cancelled Small Craft Advisory for Winds.

WHUS76 KSGX 181457  
MWWSGX

URGENT - MARINE WEATHER MESSAGE  
National Weather Service San Diego CA  
757 AM PDT Fri May 18 2018

PZZ775-181600-  
/O.CAN.KSGX.SI.Y.0012.000000T0000Z-180519T0300Z/  
Waters from San Mateo Point to the Mexican Border extending 30 to 60 NM out including San  
Clemente Island-  
757 AM PDT Fri May 18 2018

...SMALL CRAFT ADVISORY FOR WINDS IS CANCELLED...

The National Weather Service in San Diego has cancelled the Small Craft Advisory for Winds.

Winds are expected to remain below 25 knots over the outer waters today.

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## 8. Hurricane Warning

WHUS72 KMLB 061036  
MWWMLB

URGENT - MARINE WEATHER MESSAGE  
National Weather Service Melbourne FL  
636 AM EDT Thu Oct 6 2016

AMZ550-552-555-570-572-575-071100-  
/O.CON.KMLB.HU.W.1014.000000T0000Z-000000T0000Z/  
Flagler Beach to Volusia-Brevard County Line 0-20 nm-  
Volusia-Brevard County Line to Sebastian Inlet 0-20 nm-  
Sebastian Inlet to Jupiter Inlet 0-20 nm-  
Flagler Beach to Volusia-Brevard County Line 20-60 nm-  
Volusia-Brevard County Line to Sebastian Inlet 20-60 nm-  
Sebastian Inlet to Jupiter Inlet 20-60 nm-

636 AM EDT Thu Oct 6 2016

...HURRICANE WARNING REMAINS IN EFFECT...

\* WINDS...As major Hurricane Matthew moves closer, sustained high winds will develop into the afternoon. Hurricane Force Winds are expected to develop from tonight and persist into Friday.

\* WAVES/SEAS...Seas will increase steadily while peaking late tonight and Friday to 35 to 40 feet offshore. Mariners are advised to return to port by this afternoon and make all preparations to secure their vessels.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Hurricane Warning means sustained winds of 64 kts or higher associated with a hurricane are expected within 36 hours. A Hurricane Warning can remain in effect when dangerously high water or a combination of dangerously high water and exceptionally high waves continue, even though winds may be less than hurricane force.

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## 9. Tropical Storm Warning to Hurricane Warning

WHUS72 KILM 071438  
MWWILM

URGENT - MARINE WEATHER MESSAGE  
National Weather Service Wilmington NC  
1038 AM EDT Fri Oct 7 2016

...TROPICAL STORM WARNING REMAINS IN EFFECT...

AMZ250-252-254-256-072245-  
/O.CON.KILM.TR.W.1013.000000T0000Z-000000T0000Z/  
Coastal waters from Surf City to Cape Fear NC out 20 NM-  
Coastal waters from Cape Fear NC to Little River Inlet SC out 20 NM-  
Coastal waters from Little River Inlet to Murrells Inlet SC out 20 NM-  
Coastal waters from Murrells Inlet to South Santee River SC out 20 NM-  
1038 AM EDT Fri Oct 7 2016

...TROPICAL STORM WARNING REMAINS IN EFFECT...

\* WINDS...Northeast 60 to 80 kt.

- \* SEAS...11 to 16 feet.
- \* TIMING...The worst winds and seas conditions will occur late Friday night through midday Sunday.
- \* IMPACTS...Tropical Storm winds with hurricane wind gusts will produce fully risen seas that will result in life threatening conditions for mariners navigating with any size vessel.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Tropical Storm Warning means that tropical storm conditions are expected somewhere within the warning area within 36 hours.

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WHUS72 KILM 071559  
MWWILM

URGENT - MARINE WEATHER MESSAGE  
National Weather Service Wilmington NC  
1159 AM EDT Fri Oct 7 2016

...COASTAL WATERS UPGRADED TO A HURRICANE WARNING...

AMZ250-252-254-256-080400-  
/O.UPG.KILM.TR.W.1013.000000T0000Z-000000T0000Z/  
/O.NEW.KILM.HU.W.1013.161007T1559Z-000000T0000Z/  
Coastal waters from Surf City to Cape Fear NC out 20 NM-  
Coastal waters from Cape Fear NC to Little River Inlet SC out 20 NM-  
Coastal waters from Little River Inlet to Murrells Inlet SC out 20 NM-  
Coastal waters from Murrells Inlet to South Santee River SC out 20 NM-  
1159 AM EDT Fri Oct 7 2016

...HURRICANE WARNING IN EFFECT...

The National Weather Service in Wilmington has issued a Hurricane Warning, which is in effect. The Tropical Storm Warning is no longer in effect.

- \* WINDS...Northeast 65 to 85 kt.
- \* SEAS...14 to 22 feet...highest offshore.

\* TIMING...The highest winds and seas will rake the area Saturday afternoon through Sunday morning.

\* IMPACTS...Hurricane wind gusts will produce fully risen seas that will result in life threatening conditions for mariners navigating with any size vessel.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Hurricane Warning means sustained winds of 64 kts or higher associated with Hurricane Matthew are expected within 36 hours.

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**10. Potential Tropical Cyclone**

WHUS71 KOKX 301857  
MWWOKX

URGENT - MARINE WEATHER MESSAGE  
National Weather Service New York NY  
257 PM EDT Sat Sep 30 2017

ANZ330-340-350-353-355-010200-  
/O.CON.KOKX.TR.A.1013.000000T0000Z-000000T0000Z/  
Long Island Sound east of New Haven CT/Port Jefferson NY-  
Peconic and Gardiners Bays-  
Moriches Inlet NY to Montauk Point NY out 20 NM-  
Fire Island Inlet NY to Moriches Inlet NY out 20 NM-  
Sandy Hook NJ to Fire Island Inlet NY out 20 NM-  
257 PM EDT Sat Sep 30 2017

...TROPICAL STORM WATCH REMAINS IN EFFECT...

\* With the expectation that the developing system will become a tropical cyclone before reaching the coast...the system has been designated...Potential Tropical Cyclone Two...and advisories have been initiated.

\* WINDS...Increasing to 40 knots by Sunday morning. Gusts to 60 knots are possible.

\* WAVES/SEAS...Highest seas are forecast to build to 15 to 20 feet by Sunday morning.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

There is an extreme threat to mariners. At Beaufort Scale 10...very high waves with long overhanging crests form. Visibility is greatly reduced from blowing dense foam and spray. At Beaufort Scale 12...medium sized ships may be lost to view behind exceptionally high waves as the air fills with foam and spray. Bay and inland waters become extremely rough.

**PRECAUTIONARY/PREPAREDNESS ACTIONS...**

A Tropical Storm Watch is issued when sustained winds of 34 to 63 kts associated with a tropical cyclone are possible within 48 hours.

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