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Operations and Services

Marine And Coastal Weather Services, NWSPD 10-3

SURF ZONE FORECAST AND COASTAL/LAKESHORE HAZARD SERVICES

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SUMMARY OF REVISIONS: This directive supersedes NWSI 10-320, “*Surf Zone Forecast and Coastal/Lakeshore Hazard Services*”, dated June 28, 2017.

This instruction includes the following changes:

- Updated Figures 1 and 2 for mixed case.
- Section 2.5.1.1 – Removed option that the SRF may contain only a headline for a Coastal Flood Warning and refer users to the Coastal Hazard Message.
- Section 2.5.1.3 – Change in the issuance of the Surf Zone Forecast during tropical cyclone events.
- Section 3.11.4.1 and 3.11.4.2 – Coastal WFOs, except Alaska, will reference water levels as above ground for coastal flooding.
- Section 3.13.4 – Coastal Hazard Message allowed to be issued during tropical cyclone events.
- Appendix A – Examples updated to mixed case.

Signed

4/16/2018

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Date

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Surf Zone Forecast and Coastal/Lakeshore Hazard Services

<u>Table of Contents:</u>	<u>Page</u>
1 Introduction.....	4
2 Surf Zone Forecast (product category SRF).....	4
2.1 Mission Connection.....	4
2.2 Issuance Guidelines	4
2.2.1 Creation Software.....	4
2.2.2 Issuance Criteria	4
2.2.3 Issuance Time.....	4
2.2.4 Valid Time.....	4
2.2.5 Universal Geographic Code (UGC)	4
2.2.6 Product Expiration Time	4
2.3 Technical Description.....	5
2.3.1 Mass News Disseminator (MND) Broadcast Line	5
2.3.2 MND Header	5
2.3.3 Content	5
2.4 Format.....	5
2.5 Relationships Between the SRF and Other WFO products.....	7
2.5.1 Advisories or Warnings.....	7
2.5.1.1 Coastal Hazard Message (product category CFW)	7
2.5.1.2 Hazardous Weather Outlook (product category HWO)	7
2.5.1.3 Hurricane Local Statements (product category HLS)	7
2.6 Rip Currents.....	7
2.6.1 Three-Tiered Qualifiers	7
2.6.2 Moderate or High Risk.....	8
2.7 Swim Risk (Great Lakes)	8
2.7.1 Three-Tiered Qualifiers	8
2.7.2 High Risk.....	8
2.8 Updates, Amendments and Corrections	8
3 Coastal/Lakeshore Hazard Message (product category CFW).....	8
3.1 Mission Connection.....	8
3.2 CFW Products	9
3.3 Issuance Guidelines	9
3.3.1 Creation Software.....	9
3.3.2 Issuance Criteria	9
3.3.3 Issuance Time.....	9
3.3.4 Valid Time.....	9
3.3.5 Product Expiration Time	10
3.3.5.1 Watch Expiration Time.....	10
3.3.5.2 Warning, Advisory and Informational Statement Expiration Time	10
3.4 Coastal/Lakeshore Flood Watch.....	10
3.5 Coastal/Lakeshore Flood Warning.....	10
3.6 Coastal/Lakeshore Flood Advisory	10
3.7 High Surf Advisory and Warning.....	10

3.7.1	High Surf and Rip Currents	10
3.8	Informational Statements.....	11
3.8.1	Increasing Awareness of Surf Zone and Beach Hazards.....	11
3.9	Rip Current Statement	11
3.10	Beach Hazards Statement (BHS).....	11
3.11	Technical Description.....	12
3.11.1	UGC Type	12
3.11.2	MND Broadcast Instruction Line	12
3.11.3	MND Product Type Line.....	12
3.11.4	Content	12
3.11.4.1	Overview Section.....	12
3.11.4.2	Segmented Forecast Information.....	13
3.11.5	Format.....	16
3.12	Updates, Cancellations, and Corrections.....	16
3.13	Consistency with other NWS Products	17
3.13.1	Zone, Coastal/Surf Zone Forecasts.....	17
3.13.2	Hazardous Weather Outlook (product category HWO)	17
3.13.3	Short Term Forecast (product category NOW)	17
3.13.4	Tropical Cyclone Local Watch/Warning Product and Hurricane Local Statement (product category TCV, HLS).....	17
4	Water Level Observations and Dissemination	18
4.1	Tide and Water Level Observations	18
4.2	NWS Tide Reports	19
4.3	Great Lakes Water Levels	19
4.3.1	NWS Great Lakes Water Level Report	19
Appendix A	Examples of Surf Zone Forecasts and Coastal/Lakeshore Hazard Products.....	A-1

1 Introduction

This procedural directive describes routine and non-routine products issued by National Weather Service (NWS) Weather Forecast Offices (WFOs) and Weather Service Offices (WSOs) that are associated with the coastal/lakeshore (beach) and surf zone areas. The surf zone is the narrow area of water between high tide level on the beach and the seaward side of the breaking waves. NWS beach and surf zone products are contained within the Surf Zone Forecast (no Valid Time and Event Code (VTEC)) and the Coastal/Lakeshore Hazard Message (VTEC). This instruction provides requirements and guidelines associated with these products, and detailed content and format. Great Lakes offices will issue a Lakeshore Hazard Message and coastal offices will issue a Coastal Hazard Message.

2 Surf Zone Forecast (product category SRF)

2.1 Mission Connection

The Surf Zone Forecast (SRF) provides valuable and life-saving information pertaining to hazards in the surf zone to the beachfront community, including the general public and providers of beachfront safety services, such as lifeguards.

2.2 Issuance Guidelines

2.2.1 Creation Software

WFOs may produce the SRF using Advanced Weather Interactive Processing System (AWIPS) formatters, the AWIPS text editor, or any other text editor.

2.2.2 Issuance Criteria

The SRF should be issued for beach areas as defined by the local WFO in concert with Regional Headquarters. Regional and local WFO policy will govern the specific issuance criteria of the SRF. The main audience for the SRF is the public and local public safety officials. See section 2.3.3 for the content of the SRF.

2.2.3 Issuance Time

Regional policy will govern the issuance time of the SRF. Based on user and partner needs and/or requirements, the SRF should be issued at least once per day on a seasonal basis (e.g., Memorial Day weekend through Labor Day); however, the SRF can be issued year round. The season should be determined by the WFO in coordination with neighboring offices and Regional Headquarters.

2.2.4 Valid Time

Surf Zone Forecasts are valid from the time of issuance until the expiration time.

2.2.5 Universal Geographic Code (UGC)

SRFs will contain land-based zone UGC codes.

2.2.6 Product Expiration Time

The SRF product expiration time is not more than 24 hours from the initial issuance.

2.3 Technical Description

SRFs will follow the format and content described in this section.

2.3.1 Mass News Disseminator (MND) Broadcast Line

None.

2.3.2 MND Header

The SRF MND Header is “Surf Zone Forecast.”

2.3.3 Content

SRF content should be developed in coordination with local safety agencies which have responsibility for beachfront safety. NWS Regions and WFOs/WSOs will determine the parameters to be included in the SRF. At a minimum, the SRF should contain any headlines for hazardous conditions and forecast information on the wave heights within the surf zone. WFOs/WSOs are encouraged to include additional information on weather conditions, beach/surf zone hazards, and other important beach/surf zone information that fit their local partner and user needs, e.g., rip currents, UV index, surf temperature and tides. For offices that issue the SRF on a seasonal basis the SRF should include a message near the end of the season indicating when it will end (current season) and when it will begin next season.

2.4 Format

The SRF is a segmented, free-form, text product and will comply with the requirements of NWSI 10-1701, [Text Product Formats and Codes](#). See Appendix A, pages A-2 and A-3 for product format examples.

This product is available in industry standard encoding and languages, such as American Standard Code for Information Interchange (ASCII), Extensible Markup Language (EML), Wireless Markup Language (WML), and Hypertext Markup Language (HTML).

<u>Product Format</u>	<u>Description of Entry</u>
FPaaii cccc ddhhmm SRFxxx	WMO Heading) (AWIPS ID)
Surf Zone Forecast National Weather Service City, State time am/pm time_zone day mon dd yyyy	(Product Name) (Issuing Office) (Issuance time/date)
.For the beaches of state...for day...	(Optional Statement)
stZ001-005>015-ddhhmm- /k.aaa.cccc.pp.s.####.yymmddThhnnZ _B -yymmddThhnnZ _E / zone st-zone st-zone st- Including <the cities of> location...location time am/pm time_zone day mon dd yyyy	(UGC: Z & expiration time) (P-VTEC Line(s)) (Zone Names) (City/Location - optional) (Issuance time/date)
...WATCH, WARNING, ADVISORY, INFORMATIONAL HEADLINE(S)...Beach/Surf Zone Hazards (such as)...	
Rip Currents and other dangerous currents... Unusual Waves... Lightning... Waterspout... Wave Height...	
Optional parameters as determined by a WFO or Region (such as)...	
Weather Forecast...Air Temperature...Sky Cover/Rain Chances...Wind Speed and Direction...	
Surf Temperature... Approximate Times for Tides... UV Index...	
\$\$	This code ends zone segment
FORECASTER ID	Optional
All times are local.	

Figure 1: Surf Zone Forecast (SRF) Format

2.5 Relationships Between the SRF and Other WFO products

2.5.1 Advisories or Warnings

Forecasters will not use SRFs to issue Advisories or Warnings.

2.5.1.1 Coastal Hazard Message (product category CFW)

Current or expected issuance of Coastal Hazard Messages should be referenced within the SRF. For example, High Surf Advisories should be issued using the CFW but current or expected High Surf Advisories may be referenced within the SRF, as this would be of interest to the beachfront community. See section 3 for additional information regarding Coastal Hazard Messages and the relationship between the SRF and CFW.

2.5.1.2 Hazardous Weather Outlook (product category HWO)

WFOs/WSOs forecasting a high risk of rip currents in the Day 1 forecast period of the SRF will include this information in the Day 1 Marine/Surf portion of the Hazardous Weather Outlook product (HWO); except in Pacific Region and Alaska Region, which do not issue HWOs. See NWSI 10-517, *Multi-purpose Weather Products Specification*. WFOs/WSOs forecasting a high risk of rip currents for the Day 2 period of the SRF with high confidence may include this in the Day 2 Marine/Surf portion of the Hazardous Weather Outlook (HWO).

2.5.1.3 Hurricane Local Statements (product category HLS)

When WFOs/WSO begin to issue the HLS, they will continue (during their normal seasonal period) to issue the SRF when tropical cyclone watches/warnings are in effect.

2.6 Rip Currents

The SRF is the primary product for providing routine rip current information. Rip current information in the SRF should be introduced using the phrase “Rip Current Risk” followed by the text qualifier (See 2.6.1 for definitions).

For the Great Lakes, information about dangerous currents and waves should be provided in the SRF using “Swim Risk”. See section 2.7.

When a Moderate or High Risk of Rip Currents is forecast, refer to section 3.9 for the appropriate way to reference in the CFW and section 2.5.1.2 for the appropriate way to reference in the HWO.

2.6.1 Three-Tiered Qualifiers

Rip Current Outlooks in the SRF (and Rip Current Statement) will use the following, 3-tiered text qualifiers. The qualifiers indicate the likelihood of rip currents occurring. WFOs/WSOs should include the following definitions in their rip current associated text products:

Low Risk – The risk for rip currents is low, however, life threatening rip currents often occur in the vicinity of groins, jetties, reefs, and piers.

Moderate Risk – Life threatening rip currents are possible in the surf zone.

High Risk – Life threatening rip currents are likely in the surf zone.

2.6.2 Moderate or High Risk

WFOs/WSOs forecasting a Moderate or High Risk of Rip Currents will headline this information in the SRF (only required for High Risk of Rip Currents for WFO Guam). To ensure maximum notification of users, WFOs/WSOs forecasting a Moderate or High Risk of Rip Currents will refer to section 3.9 for specifications on how it can be addressed in the CFW, and 2.5.1.2 for how to address in the HWO. Offices may include call to action statements in the SRF.

2.7 Swim Risk (Great Lakes)

WFOs in the Great Lakes use the SRF as the primary product for providing routine information on swimming conditions (waves and currents). Swimming information in the SRF should be introduced using the phrase “Swim Risk” followed by the text qualifier (See 2.7.1 for definitions).

When a High Risk is forecast, refer to section 3.10 for the appropriate way to reference in the CFW and section 2.5.1.2 for the appropriate way to reference in the HWO.

2.7.1 Three-Tiered Qualifiers

Swim Outlooks in the SRF (and Beach Hazard Statement) will use the following, 3-tiered text qualifiers. The qualifiers indicate the likelihood of dangerous waves and currents. WFOs should include the following definitions in their swim outlook associated text products:

Low Risk – Large waves and dangerous currents are not expected, however dangerous currents may exist at any time near piers, breakwalls, and river outlets.

Moderate Risk – Breaking waves and currents are expected.

High Risk – Life threatening waves and currents are expected.

2.7.2 High Risk

WFOs forecasting a High Swim Risk will headline this information in the SRF. To ensure maximum notification of users, WFOs forecasting a High Swim Risk will refer to section 3.10 for specifications on how it can be addressed in the CFW, and 2.5.1.2 for how to address in the HWO. Offices may include call to action statements in the SRF.

2.8 Updates, Amendments and Corrections

SRFs will be updated when forecast conditions change significantly, especially when hazardous conditions arise. WFOs/WSOs will correct SRFs for format and grammatical errors.

3 Coastal/Lakeshore Hazard Message (product category CFW)

3.1 Mission Connection

Coastal/Lakeshore Hazard Message products (Advanced Weather Interactive Processing System (AWIPS) product category CFW) provide the public with detailed information on significant coastal/lakeshore events. Coastal/lakeshore events impact land-based and near shore interests along much of the United States coastline.

3.2 CFW Products

All CFW products contain VTEC, except outside of WFO Guam’s gridded zones. A single segmented product with more than one VTEC can be issued for situations with multiple hazards. See Appendix A, pages A-4 and A-5 for examples. The Event Names and Phenomena Codes are in Table 1.

Table 1: CFW Products Table

Warnings		Watches	
Coastal Flood Warning	/CF.W/	Coastal Flood Watch	/CF.A/
Lakeshore Flood Warning	/LS.W/	Lakeshore Flood Watch	/LS.A/
High Surf Warning	/SU.W/		
Advisories		Informational Statements	
Coastal Flood Advisory	/CF.Y/	Used for coastal / lakeshore hazards that do not meet Advisory, Watch, or Warning criteria, as well as hazards that do not have Advisory, Watch, or Warning criteria (e.g., oil spill, rip current risk, re-directing to HLS). /CF.S/, /LS.S/, /RP.S/BH.S	
Lakeshore Flood Advisory	/LS.Y/		
High Surf Advisory	/SU.Y/		

3.3 Issuance Guidelines

3.3.1 Creation Software

WFOs/WSOs will use AWIPS Interactive Forecast Preparation System (IFPS) Graphical Hazards Generation (GHG) software to generate CFW products. OCONUS WFOs/WSOs without GHG will use regionally approved software.

3.3.2 Issuance Criteria

CFW products are issued to provide the general public, shoreline and surf zone interests with detailed information on a wide spectrum of coastal/lakeshore hazards. WFOs/WSOs with Great Lakes or Coastal Waters Forecast areas of responsibility (see NWSI 10-302) issue Coastal/Lakeshore Hazard products.

3.3.3 Issuance Time

CFW products are non-scheduled, event-driven products. WFOs/WSOs should issue the initial warning, watch, advisory, informational CFW products when a coastal/lakeshore hazardous event is expected to meet or exceed warning, advisory, watch, informational criteria. WFOs/WSOs should issue updates at least every six to eight hours until the event ends or is canceled.

3.3.4 Valid Time

CFW products are valid from the time of release or specified time until cancelled, updated, replaced, or until the expiration time of the product. The valid time (event beginning and end time) is placed in the P-VTEC line and described in the headline.

3.3.5 Product Expiration Time

The product expiration time is the time when users can expect to receive an updated CFW.

3.3.5.1 Watch Expiration Time

The product expiration time is generally 12 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 string.

3.3.5.2 Warning, Advisory and Informational Statement 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 string.

3.4 Coastal/Lakeshore Flood Watch

A Coastal/Lakeshore Flood Watch informs users of coastal/lakeshore flooding that may have significant impacts. A Watch should be issued 12 to 48 hours in advance. See Appendix A, pages A-6 and A-7 for examples.

3.5 Coastal/Lakeshore Flood Warning

A Coastal/Lakeshore Flood Warning informs users that coastal/lakeshore flooding which poses a serious threat to life and property is occurring, imminent, or highly likely in the first to second forecast periods (first 12 to 24 hours). WFOs may occasionally issue warnings valid after the second forecast period when a strong likelihood of the event exists or when a longer advance notice is needed for public response. See Appendix A, pages A-8 and A-9 for examples.

3.6 Coastal/Lakeshore Flood Advisory

A Coastal/Lakeshore Flood Advisory informs users that minor flooding, such as minor tidal overflow, is occurring or is possible within 12 hours. Issuance of Coastal/Lakeshore Flood Advisories is an NWS Regional option. See Appendix A, page A-10 for an example.

3.7 High Surf Advisory and Warning

A High Surf Advisory is issued when breaking wave action in the surf zone becomes a threat to life and property along the coast.

A High Surf Warning is issued when breaking wave action results in an especially heightened threat to life and property along the coast. High Surf Warnings are a NWS Regional option. High Surf Warnings should be headlined in the SRF, if the SRF is routinely issued by the WFO/WSO.

3.7.1 High Surf and Rip Currents

In many situations, life threatening rip currents occur along with high surf (advisory or warning) conditions. If rip currents are not the primary hazard, then rip current information can be included in a High Surf Advisory or Warning; however, the recommended is to issue a High Surf Advisory/Warning (SU.Y or SU.W VTEC) in conjunction with a RP.S VTEC as a single segmented product. Both the High Surf and Rip Current Risk headlines should be headlined. See an example in Appendix A, page A-4. If rip currents are the primary hazard then rip current

information should be issued using the Rip Current Statement (RP.S VTEC). See section 3.9 for more information on the Rip Current Statement.

3.8 Informational Statements

Informational statements may be used to describe hazards that do not meet Advisory, Watch, or Warning criteria, as well as hazards that do not have Advisory, Watch, or Warning criteria (e.g., rip currents, oil spill). Informational statements can also direct users to a Hurricane Local Statement (HLS) in certain situations. See the HLS discussion in Section 2.5.1.3. A WFO/WSO may choose to not issue informational statements for coastal areas where the shoreline is unsuitable for recreational swimming or difficult to access.

3.8.1 Increasing Awareness of Surf Zone and Beach Hazards

To further heighten awareness of rip currents or other hazards not meeting Advisory/Warning criteria in the surf zone, WFOs/WSOs can issue appropriate information using the Rip Current Statement (rip currents only) or the Beach Hazards Statement (multiple or other hazards) which are contained within the Coastal/Lakeshore Hazard Message (CFW). The Beach Hazards Statement has been designed to issue information on multiple hazards. If surf conditions are unusual but do not meet criteria, that information may be included in the Beach Hazards Statement. Only rip current information should be included in the Rip Current Statement.

3.9 Rip Current Statement

The Rip Current Statement (VTEC RP.S) informs the public and public safety officials that life threatening rip currents are expected to occur. WFOs/WSOs will issue the Rip Current Statement to highlight an increased threat (moderate or high risk) from rip currents. Only rip current information should be included in the Rip Current Statement. Multiple hazards can be conveyed in the Beach Hazard Statement.

Rip Currents are the primary threat along coastal locations of the Gulf Coast and southern U.S. Atlantic. WFOs serving those areas will primarily issue the Rip Current Statement to highlight rip current information. Rip current information may also be highlighted in the Beach Hazard Statement or High Surf Advisory/Warning in certain situations (See section 3.10 for Beach Hazard Statement information and 3.7 for High Surf Advisory/Warning information).

WFOs should use the Surf Zone Forecast or the Beach Hazards Statement to highlight information on other surf zone or beach hazards.

WFOs/WSOs should work with their Regional Headquarters to define seasons in which they will issue the Rip Current Statements.

See Appendix A, pages A-13 and A-14 for examples of Rip Current Statement formatting and content.

3.10 Beach Hazards Statement (BHS)

The Beach Hazards Statement (VTEC BH.S) highlights information on many different beach hazards that do not meet advisory or warning criteria. WFOs/WSOs will issue the BHS to provide additional, more targeted information to its users and partners on hazards along beach/

coastal areas and the waters of the surf zone. The BHS can be issued for (but not limited to) dangerous currents in the surf zone, unusually cold water temperatures, potential for lightning along the beach/shoreline, or unusual surf /wave conditions which do not meet advisory criteria. In coordination with other agencies, the product may also be issued to inform users of various types of environmental hazards (e.g., chemical spills, harmful algal blooms, high bacteria levels in the water, or potentially hazardous marine wildlife which may be impacting the area).

A BHS may be issued for “Dangerous Swimming Conditions” in the surf zone, which are created by different types of hazards occurring simultaneously. Hazards such as rough surf, longshore currents, structural currents and rip currents can combine to create especially dangerous swimming conditions.

Rip current information can be included in the BHS in forecast areas where rip currents often occur simultaneously along with other surf zone hazards. For example, coastal WFOs along the U.S. west coast and in the Great Lakes primarily use the BHS (in addition to the SRF) to highlight information on all surf zone and beach hazards because the hazards typically occur simultaneously. If rip currents are the only hazard, a Rip Current Statement (VTEC RP.S) should be issued to address the situation.

WFOs/WSOs should work with their Regional Headquarters to define seasons in which they will issue the BHS.

See Appendix A, pages A-15, 16 and A-17 for examples of BHS formatting and content.

3.11 Technical Description

CFWs will follow the format and content described in this section.

3.11.1 UGC Type

CFWs will use the (Z) form of the UGC.

3.11.2 MND Broadcast Instruction Line

For watches and warnings, the phrase “URGENT – IMMEDIATE BROADCAST REQUESTED” is used.

3.11.3 MND Product Type Line

Only two headlines are permitted in the Product Type Line: Coastal Hazard Message or Lakeshore Hazard Message.

3.11.4 Content

The CFW may contain an overview section, but will include segmented forecast information.

3.11.4.1 Overview Section

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

1. Overview Headline – general headline statement that summarizes the hazardous coastal/lakeshore threat, area affected and expected time of development. The overview headline will begin and end with three periods (...).

Example:

...COASTAL FLOODING POSSIBLE SUNDAY AND SUNDAY NIGHT...

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

If a coastal WFO, except Alaska Region, references water levels for coastal flooding they will provide the water level relative to height above ground level (inundation). Mean Higher High Water (MHHW) should be used as a proxy for ground level in most locations, but the WFO determined ground level may vary when MHHW is not the best approximation. Additionally, WFOs may use other additional vertical datum references (e.g. Mean Lower Low Water (MLLW)), but this information should follow any references to above ground inundation and should be enclosed in parenthesis (e.g. 8 feet above ground (10 feet MLLW)). See Appendix A, pages A-7, A-8, and A-10 for examples.

3.11.4.2 Segmented Forecast Information

Each segment of the CFW will include a coastal/lakeshore hazard headline followed by a descriptive text describing why the product was issued. Each segment describes a specific hazardous CFW event(s) for the same geographical area.

1. Headline – The CFW headline will include the following elements in the order shown:
 - a. Leading ellipsis (...)
 - b. Valid event names listed in Table 1
 - c. Event action phrase defined in Table 2
 - d. General event beginning day and time phrase
 - e. General event ending day and time phrase
 - f. Trailing ellipsis (...)

Generic Headline Format:

Used when CFW event is in effect:

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

Used when CFW event product issuance time equals event beginning time:

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

Used to cancel a watch, warning, or advisory prior to event beginning date and time:
 ...<CFW event name> IS CANCELED...

Event Action Phrase. The event action phrase in the CFW headline corresponds with the VTEC action code. Table 2 lists appropriate phrases for CFW headlines:

Table 2: CFW Products Table

VTEC Action Code	Description	Required Event Action Phrase	Include Time / Date phrase?
NEW	Initial Issuance	IN EFFECT	Yes
EXA	Expansion of event area	IN EFFECT	Yes
EXB	Expansion of event area and change to event 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
EXP	Event approaching the expiration time. Used up to 30 minutes prior to event end time. *Note: Not valid for Watches.	WILL EXPIRE AT	Yes
	Event has expired. Used up to 30 minutes after event expiration time has passed. *Note: Not valid for Watches.	HAS EXPIRED	No
CAN	Event canceled prior to event end time	IS CANCELLED	No
UPG	Upgrade watch to warning/advisory or advisory to warning. No headline. *Note: Warnings cannot be upgraded.		

2. Descriptive Text. This section will provide the following CFW information:
 - a. National Weather Service attribution line. For the initial issuance, include the following phrase to begin the text:

The National Weather Service [WFO Name or Location] has issued a (e.g., Coastal Flood, Lakeshore Flood, High Surf, Rip Current, Beach Hazards)(Watch/Warning/Advisory/Risk Statement*).

* Risk is used for RIP CURRENTS only.

The attribution line is optional for subsequent issuances.

3. Order of Segments. If multiple segments are needed, they will follow the order below. 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:

- a. Cancellation
- b. Warnings
- c. Advisories
- d. Watches
- e. Informational

4. Order of Headlines. If multiple headlines are required in a single segment, then the order of headlines will follow the order of segments above.

5. Bullet Format. Bullet format CFWs ensure brevity and more efficient communication of critical information. Bullets should be one or two sentences and used to present critical information for a coastal/lakeshore hazardous event. Bullets can be locally or regionally defined in order to meet user needs but generally consist of some or all of the following: Hazard Type (i.e., COASTAL FLOODING, LAKESHORE FLOODING, SURF, WAVES, TIDAL ANOMALY, RIP CURRENT RISK, etc.), Timing, Impact, or others as appropriate.

Coastal WFOs, except for Alaska, will reference water levels relative to height above ground (inundation) for coastal flooding. Mean Higher High Water (MHHW) should be used as a proxy for ground level in most locations, but the WFO determined ground level may use other vertical references, but this information should follow any references to above ground inundation and should be enclosed in parenthesis (e.g. 8 feet above ground (10 feet MLLW)).

Each bulleted segment will be followed by:

- a. Brief precautionary/preparedness action statement (Call to Action (CTA)).
- b. Explanation of a watch/warning /advisory/risk (rip currents).

Broadcast Instruction Line used only for watches and warnings.

3.11.5 Format

<u>Product Format</u>	<u>Description of Entry</u>
WHaaii cccc ddhhmm CFW _{xxx}	(WMO Heading) (AWIPS ID)
URGENT - IMMEDIATE BROADCAST REQUESTED ⁽⁺⁾ Coastal/Lakeshore Hazard Message National Weather Service City, State time am/pm time_zone day mon dd yyyy	(Broadcast Instruction Line) (Product Name) (Issuing Office) (Issuance time/date)
...<Overview headline statement>...	(Optional)
<General non precipitation weather synopsis>	(Optional - 1 to 3 paragraphs)
stZ001-005>015-ddhhmm- /k.aaa.cccc.pp.s.####.yymmddThhnnZ _B -yymmddThhnnZ _E / zone st-zone st-zone st- Including <the cities of> location...location time am/pm time_zone day mon dd yyyy	(UGC: Z & expiration time) (P-VTEC Line(s)) (Zone Names) (City/Location - optional) (Issuance time/date)
...WATCH, WARNING, ADVISORY, INFORMATIONAL HEADLINE(S)...	
<Descriptive Text> NWS attribution line	(Optional after initial issuance)
* Bullet1	Type, Order, and Number of bullets may be locally or regionally set.
* Bullet2	
* Bullet3	
* Etc.	
PRECAUTIONARY/PREPAREDNESS ACTIONS... (Call to Action (CTA) statements-Use blank lines between multiple CTAs)	CTA Begin Marker
&&	CTA End Marker
\$\$	(UGC Delimiter)
Name/Initials/Forecaster ID	(Optional after last segment)

Figure 2: Generic Format for CFWs

⁺ Broadcast Instruction Line used only for watches and warnings

3.12 Updates, Cancellations, and Corrections

WFOs/WSOs should update CFWs as follows:

- a) Coastal/Lakeshore Flood Watch: at least once every 12 hours until the event ends or is canceled, or when there is a change in timing, areal extent, or expected conditions.
- b) Warning/advisory/informational products: at least once every 6 to 8 hours until the event ends or is canceled, or when there is a change in timing, areal extent, or expected conditions.

Watches are either upgraded into warnings or advisories, or canceled. WFOs/WSOs will issue a CFW to upgrade an advisory to a warning or to downgrade a warning to an advisory.

WFOs/WSOs will issue a CFW to cancel a warning, advisory, or watch when the forecaster believes there is no longer a threat of the coastal/lakeshore hazard.

3.13 Consistency with other NWS Products

Forecasters will coordinate and ensure consistency among products within their WFO/WSO, and with neighboring WFOs/WSOs, the River Forecast Center(s) (RFC(s)), and the National Centers. For example, coordination with the RFC ensures product consistency when the combined effects of river discharge and storm surge or tidal piling affect river outlets to increase the severity of coastal/lakeshore flooding.

3.13.1 Zone, Coastal/Surf Zone Forecasts

CFW advisory/watch/warning products will be headlined in associated public zone forecasts. CFW advisory /watch/warning products will not be headlined in routine marine forecasts but should be headlined in Surf Zone Forecasts.

3.13.2 Hazardous Weather Outlook (product category HWO)

The HWO provides the public, media, and emergency managers with early notice of potentially hazardous conditions. Events valid within 48 hours may be referenced in the HWO, directing users to the CFW products for specific details on events. Coastal hazards not expected within 48 hours may be addressed in the HWO as an outlook product. See NWSI 10-517 for details on the HWO.

3.13.3 Short Term Forecast (product category NOW)

The Short Term Forecast provides users with a plain language description of current and short-term weather and flooding conditions for the County Warning Area (CWA) of a WFO/WSO. To comply with the intention of the product, coastal hazard information in the Short Term Forecast will be as brief as possible. Therefore, the Short Term Forecast augments, but does not replace, the CFW and its more specific details. See NWSI 10-517 for details on the NOW.

3.13.4 Tropical Cyclone Local Watch/Warning Product and Hurricane Local Statement (product category TCV, HLS)

If tropical cyclone watches/warnings are issued, CFW products should also be issued when conditions warrant. These products should provide ranges of values for above ground inundation and be consistent with values in the WFO TCV/HLS and the NHC/CPHC Tropical Cyclone Public Advisory (TCP). For guidance on issuing CFW products during tropical cyclone events:

- For the Atlantic Basin and WFO Honolulu, see NWSI 10-601 section 1.1.3.7 Table 2A and

2B.

- For the Pacific Basin (except WFO Honolulu, see NWSI 10-601 section 1.3.3.13 Table 4.

4 Water Level Observations and Dissemination

4.1 Tide and Water Level Observations

Real-time access to accurate water level data is especially important during times of potential inundation. WFOs/WSOs should maintain close contact with officials in coastal communities having access to, and interest in, water level data augmenting official gauging systems/networks. Forecasters should be familiar with terminology associated with tide and water level measurements.

The National Ocean Service (NOS) collects and distributes real-time tidal observations and predictions. The NOS Center for Operational Oceanographic Products and Services web site includes Physical Oceanographic Real Time System and Predictions with current tidal observations and daily high and low water tide predictions for tidal reference stations. The web site is: <http://tidesandcurrents.noaa.gov>.

4.2 Tide and Water Level Reports

WFOs/WSOs that issue routine tide reports should issue them using the AWIPS product identifier TID. Other offices that only issue tide reports on an as-needed basis during significant coastal events may append the tide data to a Coastal/Lakeshore Message. See Appendix A, page A-19 for an example.

Reference tide reports to standard datums used by the NOS. For most areas the reference tidal datum MLLW.

4.3 Great Lakes Water Levels

Lake water levels are available from the U.S. Army Corps of Engineers and the NOS.

4.3.1 NWS Great Lakes Water Level Report

Some WFOs disseminate periodic water level reports, while other offices only issue reports on an as-needed basis. Water level reports are issued using the AWIPS product identifier OMR. See Appendix A, page A-19 for an example.

Appendix A Examples of Surf Zone Forecasts and Coastal/Lakeshore Hazard Products

1 Surf Zone Forecast.....A-2

 Example 1 – Headlining High Surf Advisory, High Risk of Rip Currents, and Minor Coastal Flooding.....A-2

 Example 2 – Headlining Beach Hazard Statement.....A-3

2 Multiple CFW VTECs in a Single Product.....A-4

 Example 1 – High Surf Advisory and Rip Current Statement.....A-4

 Example 2 – Coastal Flood Advisory and Rip Current Statement.....A-5

3 Coastal /Lakeshore Flood Watch, Warnings and Advisories.....A-6

 Example 1 – Lakeshore Flood Watch.....A-6

 Example 2 – Coastal Flood Watch.....A-7

 Example 3 – Coastal Flood Warning.....A-8

 Example 4 – Lakeshore Flood Warning.....A-9

 Example 5 – Lakeshore Flood Advisory.....A-10

 Example 6 – Coastal Hazard Message during a Tropical Event.....A-10

 Example 7 – Lakeshore Hazard Message Canceling Lakeshore Flood Warning.....A-12

 Example 8 – High Surf Advisory.....A-12

4 Informational Statements.....A-13

 Example 1 – Rip Current Statement.....A-13

 Example 2 – Rip Current Statement Announcing the Closing of a Beach.....A-14

 Example 3 – Beach Hazards Statement for Dangerous Swimming Conditions.....A-15

 Example 4 – Beach Hazards Statement for Elevated Surf and Rip Currents.....A-16

 Example 5 – Beach Hazards Statement for Red Tide.....A-17

5 NWS Tide Report.....A-19

6 Great Lakes Water Level Report.....A-19

1 Surf Zone Forecasts

Example 1: Headlining High Surf Advisory, High Rip Current Risk, Minor Coastal Flooding

FZUS52 KJAX 191511
SRFJAX

Surf Zone Forecast
National Weather Service Jacksonville FL
1100 AM EDT Sun Jun 19 2016

...HIGH SURF ADVISORY IN EFFECT UNTIL 6 AM EDT MONDAY...
...HIGH RIP CURRENT RISK NOW IN EFFECT THROUGH LATE TONIGHT...
...MINOR COASTAL FLOODING POSSIBLE WITH HIGH TIDE TONIGHT...

GAZ154-166-200500-
Glynn-Camden-
Including the beaches of Brunswick, St. Simons, Country Club Estates, Dock Junction,
St Mary, Kingsland
1100 AM EDT Sun Jun 19 2016

...HIGH SURF ADVISORY IN EFFECT UNTIL 6 AM EDT MONDAY...
...HIGH RIP CURRENT RISK NOW IN EFFECT THROUGH LATE TONIGHT...
...MINOR COASTAL FLOODING POSSIBLE WITH HIGH TIDE TONIGHT...

.TODAY...
Sky/weather.....Partly Cloudy
Max temperature.....Around 84.
Beach winds.....Northeast winds 15 TO 25 mph.
Surf.....4 to 6 feet with occasional 7 feet breakers.
Water conditions.....Choppy.
Water temperature.....Lower 80s.
UV index.....11...extreme.
Lightning threat.....No lightning.
Rip current risk.....High Risk, life threatening rip currents are likely in the surf zone.
Rough surf may knock you down. Remember to head the advice
of local beach patrol and flag warning systems.

Rip Current Outlook: A moderate to high risk of rip currents is expected on Monday.

Tide Information...
Tides for Jun 19, 2016

At Saint Simons Island...

Low tide at 2:33 AM.
High tide at 8:15 AM.
Low tide at 2:24 PM.

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Example 2: Headlining Beach Hazard Statement

FZUS53 KLOT 052040
SRFLOT

Surf Zone Forecast
National Weather Service Chicago/Romeoville IL
340 PM CDT Mon Jun 5 2017

ILZ006-061115-
Lake-
Including the beaches of Illinois Beach State Park
340 PM CDT Mon Jun 5 2017

...BEACH HAZARDS STATEMENT IN EFFECT THROUGH TUESDAY EVENING...

.Rest of This Afternoon...

Sky/weather.....Mostly sunny.
Max temperature.....60-65.
Beach winds.....North winds 15 to 20 mph. Gusts 25 to 30 mph.
Surf.....5 to 8 feet.
Water temperature.....55-58.
UV index.....7 - High.
Sunrise.....5:15 AM CDT.
Sunset.....8:24 PM CDT.
Swim risk.High, which means that life threatening waves
and currents are expected. Stay out of the water,
and stay away from dangerous areas like piers and
breakwalls.

.TUESDAY...

Sky/weather.....Sunny.
Max temperature.....59-64.
Beach winds.....North winds 15 to 20 mph. Gusts to 25 mph.
Surf.....3 to 6 feet.
Water temperature.....55-58.
UV index.....7 - High.
Sunrise.....5:15 AM CDT.
Sunset.....8:24 PM CDT.
Swim risk.....High, which means that life threatening waves
and currents are expected. Stay out of the water,

and stay away from dangerous areas like piers and breakwalls.

.EXTENDED...

.WEDNESDAY...Sunny. Highs in the mid 60s. Northeast winds 5 to 10 mph. WAVES 1 to 3 feet. Low Swim Risk.

.THURSDAY...Mostly sunny. Highs in the mid 70s. Southwest winds around 5 mph. Waves 1 foot or less. Low Swim Risk.

.FRIDAY...Partly cloudy. Chance of thunderstorms. Highs in the lower 70s. West winds 5 to 10 mph shifting to the north in the afternoon. Waves 1 to 3 feet. Low Swim Risk.

\$\$

2 Multiple CFW VTECs in a single product

Example 1: High Surf Advisory and Rip Current Statement

WHUS42 KJAX 160657
CFWJAX

Coastal Hazard Message
National Weather Service Jacksonville FL

257 AM EDT SAT APR 16 2016
FLZ033-038-124-125-GAZ154-166-170000-
/O.NEW.KJAX.SU.Y.0002.160416T0657Z-160417T0000Z/
/O.EXT.KJAX.RP.S.0004.000000T0000Z-160418T0000Z/
St. Johns-Flager-Coastal Nassau-Coastal Duval-Coastal Glynn-
Coastal Camden-
257 AM EDT Sat Apr 16 2016

...HIGH SURF ADVISORY IN EFFECT UNTIL 8 PM EDT THIS EVENING...
...HIGH RIP CURRENT RISK NOW IN EFFECT THROUGH SUNDAY EVENING...

* WAVES AND SURF...Breakers will be up to 7 feet.

* TIMING...Through this evening.

* IMPACTS...Life-threatening rip currents are likely in the surf zone. Rough surf may also knock you down. Remember to heed the advice of the local beach patrol and flag warning systems. Minor beach erosion may occur due to the high surf.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Swim near a lifeguard. If caught in a rip current, relax and float. Don't swim against the current. If able, swim in a direction following the coastline. If unable to escape, face the shore and call or wave for help.

A high surf advisory means that high surf will affect beaches in the advisory area producing rip currents and localized beach erosion.

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Example 2: Coastal Flood Advisory and Rip Current Statement

WHUS42 KMFL 170717
CFWMFL

Coastal Hazard Message
National Weather Service Miami FL
317 AM EDT Mon Oct 17 2016

FLZ168-172-173-180200-
/O.EXT.KMFL.CF.Y.0002.000000T0000Z-161019T1200Z/
/O.EXT.KMFL.RP.S.0032.000000T0000Z-161021T1200Z/
Coastal Palm Beach- Coastal Broward-Coastal Miami-Dade-
317 AM EDT Mon OCT 17 2016

...COASTAL FLOOD ADVISORY NOW IN EFFECT UNTIL 8 AM EDT
WEDNESDAY...

...HIGH RIP CURRENT RISK NOW IN EFFECT THROUGH FRIDAY MORNING...

- * RIP CURRENTS...There is a high risk for rip currents on Atlantic beaches.
- * TIMING...Dangerous rip currents are expected through Friday morning.
- * IMPACTS...Life threatening rip currents will create dangerous conditions for swimmers.
- * COASTAL FLOODING...Tidal flooding of less than 1 foot above ground is likely near high tides through at least Wednesday morning.
- * TIMING...The time of the next high tides at Miami Harbor are 10:10 AM this morning and 10:24 PM this evening. The time of the next high tides at Lake Worth are 9:22 AM this morning and 9:42 PM this evening.
- * IMPACTS...Near high tide, coastal flooding is possible with water potentially covering streets and low-lying areas, particularly at inlets and areas the intercostal waterway.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Swim near a lifeguard. If caught in a rip current, relax and float. Don't swim against the current. If able, swim in a direction following the coastline. If unable to escape, face the shore and call or wave for help.

A Coastal Flood Advisory indicates that onshore winds and tides will combine to generate flooding of low areas along the shore.

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3 Coastal/Lakeshore Flood Watch, Warnings and Advisories

Example 1: Lakeshore Flood Watch

WHUS41 KCLE 012005
CFWCLE

URGENT - IMMEDIATE BROADCAST REQUESTED
Lakeshore Hazard Message
National Weather Service Cleveland OH
405 PM EDT THU OCT 1 2015

...STRONG EAST TO NORTHEAST WINDS MAY BRING COASTAL FLOODING...

.Strong high pressure in eastern Canada and low pressure moving up the southeastern coast will cause northeast winds on Lake Erie to increase to 30 knots with higher gusts beginning today. In addition waves of up to 10 feet will contribute to lakeshore flooding beach erosion.

OHZ003-007>009-020415-
/O.CON.KCLE.CF.A.0001.151002T0100Z-151003T1400Z/
Lucas-Ottawa-Sandusky-Erie OH-
405 PM EDT THU OCT 1 2015

...COASTAL FLOOD WATCH REMAINS IN EFFECT FROM 9 PM EDT THIS
EVENING THROUGH SATURDAY MORNING...

* COASTAL FLOODING...Strong northeast winds, rising lake levels and waves reaching 10 feet will combine to increase the threat of lakeshore flooding and significant beach erosion.

* TIMING...This evening through Saturday morning.

* IMPACTS...Beach erosion and coastal flooding is possible.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A coastal flood watch means that conditions favorable for flooding are expected to develop. Coastal residents should be alert for later statements or warnings, and take action to protect property.

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Example 2: Coastal Flood Watch

WHUS46 KEKA 092016
CFWEKA

URGENT - IMMEDIATE BROADCAST REQUESTED
Coastal Hazard Message
National Weather Service Eureka CA
1216 PM PST Wed Dec 9 2015

...LARGE SWELL TO IMPACT NORTHWEST CALIFORNIA BEACHES BRINGING
ENHANCED WAVE RUNUP...

CAZ001-002-100430-
/O.CON.KEKA.CF.A.0001.151210T1600Z-151210T2100Z/
Redwood Coast-Mendocino Coast-
1216 PM PST Wed Dec 9 2015

...COASTAL FLOOD WATCH REMAINS IN EFFECT FROM THURSDAY MORNING
THROUGH THURSDAY AFTERNOON...

- * COASTAL FLOODING...High astronomical tides combined with a large swell impacting Northwest California coast may result in coastal flooding. Wave runup will be greater than normal with breaker heights building to over 20 feet near the time of high tide. Water levels may reach 2 to 3 feet above ground.
- * TIMING...High tide is between 9 and 11 AM along the Northwest California coast. Flooding may begin an hour before or continue for an hour or two after high tide.
- * IMPACTS...Low lying areas may experience minor flooding including, but not limited to, roadways in King Salmon and the Arcata Bottoms. Wave runup may cause water to wash onto some near coastal roads and parking lots.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Coastal Flood Watch means that conditions favorable for flooding are expected to develop. Coastal residents should be alert for later statements or warnings, and take action to protect property.

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Example 3: Coastal Flood Warning

WHUS42 KMHX 191300
CFWMHX

URGENT - IMMEDIATE BROADCAST REQUESTED
Coastal Hazard Message for North Carolina
National Weather Service Newport/Morehead City NC
900 AM EDT Tue Sep 19 2017

NCZ103-200100-
/O.NEW.KMHX.CF.W.0001.170919T1300Z-170920T0400Z/
Outer Banks Dare-
900 AM EDT Tue Sep 19 2017

...COASTAL FLOOD WARNING IN EFFECT UNTIL MIDNIGHT EDT TONIGHT...

The National Weather Service in Newport/Morehead City has issued a Coastal Flood Warning, which is in effect until midnight EDT tonight.

*COASTAL FLOODING...Significant ocean overwash with coastal flooding 1 to 3 feet above ground, especially north of Cape Hatteras. There is also the potential for minor sound side flooding up to 1 foot above ground tonight.

* LOCATION...Most significant coastal flooding and overwash will be from Cape Hatteras north.

* POTENTIAL IMPACTS...Highway 12 from Cape Hatteras north will likely be flooded and impassable at times. Beach and dune erosion at vulnerable areas around the time of high tide, which will occur again around 730 PM this evening.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Coastal Flood Warning means that flooding is occurring or imminent. Coastal residents in the warned area should be alert for rising water, and take appropriate action to protect life and property.

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Example 4: Lakeshore Flood Warning

WHUS41 KBUF 291732
CFWBUF

URGENT - IMMEDIATE BROADCAST REQUESTED

Lakeshore Hazard Message
National Weather Service Buffalo NY
132 PM EDT SAT APR 29 2017

NYZ001>003-300145-
/O.UPG.KBUF.LS.A.0001.170430T1000Z-170501T0300Z/
/O.NEW.KBUF.LS.W.0001.170430T1000Z-170501T0300Z/
Niagara-Orleans-Monroe-
132 PM EDT Sat Apr 29 2017

...LAKESHORE FLOOD WARNING IN EFFECT FROM 6 AM TO 11 PM EDT
SUNDAY...

The National Weather Service in Buffalo has issued a Lakeshore Flood Warning, which is in effect from 6 AM to 11 PM EDT Sunday. This upgrades the Lakeshore Flood Watch which was previously in effect.

* LOCATIONS...Niagara, Orleans, and Western Monroe Counties.

* LAKE SHORE FLOODING...The combination of high lake levels, moderate to strong northeast winds, and high waves will result in increased flooding and shoreline erosion in areas along the immediate Lake Ontario shore.

* TIMING...From late tonight through late Sunday evening.

* IMPACTS...Flooding will increase along the south shore of Lake Ontario due to high lake levels and increased wave action. Flooding is most likely in low lying, flood prone areas along the immediate lakeshore and in bays and inlets. Wave action will result in increased shoreline and beach erosion.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Lakeshore Flood Warning means lakeshore flooding is occurring, is imminent, or is expected to occur. People in the warning area should take immediate action to protect life and property. Listen to local radio, television, or NOAA Weather Radio for further information.

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Example 5: Lakeshore Flood Advisory

WHUS43 KIWX 101550
CFWIWX

Lakeshore Hazard Message
National Weather Service Northern Indiana
1050 AM EST Sun Jan 10 2016

INZ003-MIZ077-110000-
/O.CON.KIWX.LS.Y.0001.000000T0000Z-160111T0000Z/
La Porte-Berrien-
1050 AM EST Sun Jan 10 2016 /950 AM CST Sun Jan 10 2016/

...LAKESHORE FLOOD ADVISORY REMAINS IN EFFECT UNTIL 7 PM EST
/6 PM CST/ THIS EVENING...

* LAKE SHORE FLOODING...Northwest gales and 8 to 12 foot waves will result in some beach erosion and minor flooding today.

* IMPACTS...The combination of high waves, onshore winds, and high lake levels will result in some beach erosion and minor flooding along the lakeshore. The high waves will wash over piers and jetties.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Lakeshore Flood Advisory indicates that strong onshore winds will generate flooding of low areas along the lakeshore. People should stay off piers and jetties to avoid being swept into the lake.

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Example 6: Coastal Hazard Message During a Tropical Event

URGENT - IMMEDIATE BROADCAST REQUESTED
Coastal Hazard Message
National Weather Service Mobile AL
1019 PM CDT Tue Jun 20 2017

...DANGEROUS CONDITIONS WILL IMPACT THE ALABAMA AND NORTHWEST
FLORIDA COAST THROUGH EARLY FRIDAY MORNING...

ALZ265-266-211000-

/O.UPG.KMOB.CF.Y.0003.000000T0000Z-170623T0000Z/

/O.NEW.KMOB.CF.W.0001.170621T0119Z-170622T2000Z/

/O.CON.KMOB.SU.Y.0005.000000T0000Z-170623T1200Z/

/O.CON.KMOB.RP.S.0018.000000T0000Z-170623T1200Z/

Mobile Coastal-Baldwin Coastal-

1019 PM CDT Tue Jun 20 2017

...COASTAL FLOOD WARNING IN EFFECT UNTIL 3 PM CDT THURSDAY...

...HIGH SURF ADVISORY REMAINS IN EFFECT UNTIL 7 AM CDT FRIDAY...

...HIGH RIP CURRENT RISK REMAINS IN EFFECT THROUGH FRIDAY
MORNING...

The National Weather Service in Mobile has issued a Coastal Flood Warning, which is in effect until 3 PM CDT Thursday. The Coastal Flood Advisory is no longer in effect.

- * SURF HEIGHTS...6 to 9 feet, with a few breaker sets up to 10 feet through Thursday morning, then subsiding to 5 to 7 feet by Thursday night.
- * COASTAL FLOODING...2 to 3 feet of water above ground can be expected through Wednesday morning then 3 to 4 feet through early Thursday afternoon along low lying areas of the Alabama coast, especially around the time of high tide Wednesday and Thursday.
- * COASTAL FLOOD IMPACTS...Moderate flooding along coastal areas, especially over locations such as the west end of Dauphin Island, the Causeway to Dauphin Island, Shell Belt Road between Bayou La Batre and Coden Road and other low lying areas along the shore.
- * HIGH SURF AND RIP CURRENT IMPACTS...The surf will be dangerous to all swimmers. Frequent life threatening rip currents are expected. Minor beach erosion is also possible.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Coastal Flood Warning means that flooding is occurring or imminent. Coastal residents in the warned area should be alert for rising water and take appropriate action to protect life and

A High Surf Advisory means that high surf will affect beaches in the advisory area, producing localized beach erosion and dangerous swimming conditions.

There is a High Risk of Rip Currents. Rip currents are life-threatening to anyone entering the surf.

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Example 7: Lakeshore Hazard Message to Cancel Lakeshore Warning

WHUS43 KIWX 252104
CFWIWX

Lakeshore Hazard Message
National Weather Service Northern Indiana
404 PM EST Thu Feb 25 2016

INZ003-MIZ077-252215-
/O.CAN.KIWX.LS.W.0001.000000T0000Z-160226T0300Z/
La Porte-Berrien-
404 PM EST Thu Feb 25 2016 /304 PM CST Thu Feb 25 2016/

...LAKESHORE FLOOD WARNING IS CANCELLED...

The National Weather Service in Northern Indiana has cancelled the lakeshore flood warning.

The threat of lakeshore flooding has diminished along the southeastern shores of Lake Michigan. Therefore the lakeshore flood warning has been cancelled. Wave heights will continue to slowly subside.

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Example 8: High Surf Advisory

WHHW40 PHFO 021330
CFWHFO

Coastal Hazard Message
National Weather Service Honolulu HI
330 AM HST Tue Feb 2 2016

...HIGH SURF ADVISORY FOR NORTH AND WEST FACING SHORES OF NIIHAU
KAUAI OAHU AND MOLOKAI AND FOR NORTH FACING SHORES OF MAUI...

.The current large northwest swell will continue across most north and west facing shores of the smaller islands this morning. A reinforcing northwest swell arriving later today will lead to another boost of surf heights, possibly reaching the High Surf Warning criteria along some shorelines late this afternoon or evening.

HIZ001>003-006>008-012-013-017-019-020-030230-
/O.CON.PHFO.SU.Y.0011.000000T0000Z-160203T1600Z/
Niihau-Kauai Windward-Kauai Leeward-Waianae Coast- Oahu North Shore-

Oahu Koolau-Molokai Windward-Molokai Leeward-Maui Windward West-
Maui Central Valley-Windward Haleakala-
330 AM HST Tue Feb 2 2016

...HIGH SURF ADVISORY REMAINS IN EFFECT UNTIL 6 AM HST
WEDNESDAY...

* SURF...Along north facing shores of Niihau, Kauai, Oahu, Molokai and Maui, 15 to 20 feet
this morning building to 20 to 24 feet this afternoon and evening. Along west facing shores of
Niihau, Kauai, Oahu and Molokai, 10 to 14 feet this morning building to 12 to 18 feet this
afternoon and evening.

* TIMING...Through early Wednesday morning.

* IMPACTS...Moderate. Expect strong breaking wave, shore break, and strong longshore and rip
currents making swimming difficult and dangerous.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Beachgoers, swimmers, and surfers should heed all advice given by ocean safety officials and
exercise caution.

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4 Informational Statements

Example 1: Rip Current Statement

WHUS41 KPHI 290924
CFWPHI

Coastal Hazard Message for PA, NJ, DE, and MD
National Weather Service Mount Holly NJ
524 AM EDT Sat Jul 29 2017

DEZ004-NJZ014-024>026-300000-
/O.CON.KPHI.RP.S.0002.170729T1200Z-170730T0000Z/
Delaware Beaches-Eastern Monmouth-Atlantic Coastal Cape May-
Coastal Atlantic-Coastal Ocean-

...HIGH RIP CURRENT RISK REMAINS IN EFFECT THROUGH THIS EVENING...

* LOCATIONS...The New Jersey shore and the Delaware beaches.

- * RISK OF RIP CURRENTS...There is a High Risk for the development of dangerous rip currents.
- * SURF HEIGHT...Breaking waves are forecast to range from 5 to 7 feet.
- * TIMING AND TIDES...Low tide occurs early in the morning. High tide occurs in the early afternoon and low tide occurs again in the evening.
- * OUTLOOK...The high risk for the development of dangerous rip currents is expected to continue into tonight and Sunday.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Swim near a lifeguard. If caught in a rip current, relax and float. Do not swim against the current. If unable to escape, face the shore and call or wave for help.

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Example 2: Rip Current Statement Highlighting Beach Flags and Closing of a Beach

Coastal Hazard Message
National Weather Service Tallahassee FL
709 AM EDT Mon Apr 7 2014

...THERE IS A HIGH RISK OF RIP CURRENTS AT THE BEACHES OF THE FLORIDA BIG BEND AND PANHANDLE TODAY...

...THERE IS A HIGH RISK OF RIP CURRENTS AT THE BEACHES OF BAY AND GULF COUNTIES ON TUESDAY AND A MODERATE RISK OF RIP CURRENTS AT THE BEACHES OF WALTON AND FRANKLIN COUNTIES...

.A developing low pressure system off to our west will move northeastward into the Ohio River Valley today. A long and persistent fetch of increasing southeast to southerly winds are expected to reach 15 to 20 mph with higher gusts at the area beaches. This will produce a large area of breaking waves of 3 to 5 feet with some higher sets at the Panhandle beaches today and 2 to 4 feet with higher sets at the Big Bend beaches. Although winds will briefly offshore across the beaches later tonight and on Tuesday, they are expected to increase out of the west again by late in the day. Therefore, we still expect a higher risk of rip currents to continue at the Bay and Gulf County beaches on Tuesday, with a decrease to a moderate risk at the beaches of Walton and Franklin Counties.

FLZ108-112-114-115-081100-
/O.NEW.KTAE.RP.S.0022.140407T1200Z-140408T1100Z/
South Walton-Coastal Bay-Coastal Gulf-Coastal Franklin-
709 AM EDT Mon Apr 7 2014 /609 AM CDT Mon Apr 7 2014/

...A HIGH RIP CURRENT RISK IS IN EFFECT THROUGH TUESDAY MORNING...

The National Weather Service in Tallahassee has issued a High Rip Current Risk, which is in effect through Tuesday morning.

- * LOCATION...The beaches of Walton, Bay, Gulf, and Franklin Counties.
- * TIMING...Today and tonight.
- * BEACH FLAGS...Forecast to be double red with the beaches closed.
- * SURF...3 to 5 feet with higher sets at the Panhandle beaches and 2 to 4 feet with higher sets at the Big Bend beaches.
- * IMPACTS...The surf and rip currents will be life threatening to anyone entering the water today.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Swim near a lifeguard. If caught in a rip current, relax and float. Don't swim against the current. If able, swim in a direction following the coastline. If unable to escape, face the shore and call or wave for help.

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Example 3: Beach Hazards Statement for Dangerous Swimming Conditions

WHUS43 KGRR 061949
CFWGRR

Coastal Hazard Message
National Weather Service Grand Rapids MI
349 PM EDT Mon Jun 6 2016

MIZ037-043-050-056-064-071-070400-
/O.NEW.KGRR.BH.S.0003.160607T0900Z-160608T0000Z/
Mason-Oceana-Muskegon-Ottawa-Allegan-Van Buren-
349 PM EDT Mon Jun 6 2016

...BEACH HAZARDS STATEMENT IN EFFECT FROM 5 AM TUESDAY THROUGH
TUESDAY EVENING...

The National Weather Service in Grand Rapids has issued a Beach Hazards Statement, which is in effect from late tonight through Tuesday evening.

* HIGH WAVE ACTION... Strong currents and dangerous swimming conditions expected.

* STRONG STRUCTURAL CURRENTS POSSIBLE.

* STRONG LONGSHORE CURRENTS POSSIBLE.

* RIP CURRENTS POSSIBLE.

* LOCATION...Beaches from St. Joseph to Manistee.

* OVERVIEW/POTENTIAL IMPACTS...Northwest winds will increase to 15 to 25 mph Tuesday and cause wave heights to build to 3 to 5 feet.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

High wave action makes swimming difficult and can tire even a strong swimmer quickly.

Structural currents form along piers where longshore currents and wave action flow into the structure. Structural currents can sweep you out into deeper water along the pier structure.

A longshore current is a lake current that moves parallel to shore. Longshore currents can be strong enough to prevent swimmers from being able to keep their feet on the bottom, making it difficult to return to shore.

Rip currents are powerful channels of water flowing quickly away from shore, which occur most often at low spots or breaks in sandbars. Rip currents can sweep you into deeper water.

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Example 4 – Beach Hazards Statement for Elevated Surf and Rip Currents

WHUS46 KLOX 310144
CFWLOX

Coastal Hazard Message
National Weather Service Los Angeles/Oxnard CA
644 PM PDT Mon May 30 2016

...ELEVATED SURF AND STRONG RIP CURRENTS EXPECTED ACROSS SOUTH FACING BEACHES WEDNESDAY THROUGH THURSDAY EVENING...

.A long period southerly swell generated from a storm complex south of the equator will move into the coastal waters by Wednesday morning. A long period swell of around 4 feet will bring elevated surf and dangerous rip current conditions, especially across south facing beaches

CAZ041-087-310945-
/O.NEW.KLOX.BH.S.0018.160601T1300Z-160603T0500Z/
Los Angeles County Coast including downtown Los Angeles-
Catalina and Santa Barbara Islands-
644 PM PDT Mon May 30 2016

...BEACH HAZARDS STATEMENT IN EFFECT FROM WEDNESDAY MORNING
THROUGH THURSDAY EVENING...

The National Weather Service in Los Angeles/Oxnard has issued a Beach Hazard Statement for strong rip currents and elevated surf, which is in effect from Wednesday morning through Thursday evening.

* HAZARDS...Surf building from 4 to 6 feet with local sets to 7 feet across south facing beaches early Wednesday morning then subsiding late Thursday evening into Friday morning. There will also be strong rip currents and longshore currents. Some beaches likely affected will include Zuma, Malibu, and around Point Mugu.

* IMPACTS...There is an increased risk of ocean drowning. Rip currents can pull swimmers and surfers out to sea. Sneaker waves can suddenly wash people off beaches and rock jetties.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Beach Hazard Statement is issued when threats to beach and surf zone safety are expected or occurring. Caution should be used when in or near the water. Swim near a lifeguard. If caught in a rip current, relax and float. Don't swim against the current. If able, swim in a direction following the coastline. If unable to escape, face the shore and call or wave for help.

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Example 5: Beach Hazards Statement for Red Tide

WHUS42 KTBW 291520
CFWTBW

Coastal Hazard Message
National Weather Service Tampa Bay Ruskin FL
1120 AM EDT Fri May 29 2015

FLZ160-162-165-292330-
/O.NEW.KTBW.BH.S.0001.150529T1520Z-150530T1800Z/

Coastal Sarasota-Coastal Charlotte -Coastal Lee-
1120 AM EDT Fri May 29 2015

...BEACH HAZARDS STATEMENT NOW IN EFFECT THROUGH FRIDAY EVENING...

A Beach Hazards Statement is in effect for potentially high respiratory irritation associated with Florida red tide in some areas of Charlotte and Lee Counties through Saturday.

* RED TIDE HAZARDS...Possible respiratory irritation in some coastal areas.

For red tide forecast information visit <http://tidesandcurrents.noaa.gov/hab>

* RED TIDE POTENTIAL IMPACTS...Symptoms may include coughing, sneezing, and tearing eyes. People with respiratory conditions such as asthma, emphysema and other pulmonary diseases may be more sensitive. Irritation may vary locally and throughout the day. If you experience uncomfortable symptoms, consider going to an unaffected beach nearby.

* FLORIDA RED TIDE RESPIRATORY IRRITATION TIMING/LOCATION...NOAA forecast:

Southern Sarasota County: Gulf Coast- possible Friday and Saturday. Bay Regions – possible Saturday.

Northern/Southern Charlotte County: Gulf Coast – possible Friday and Saturday. Bay Regions of Southern Charlotte – possible Friday and Saturday.

Northern/Central/Southern Lee County: Gulf and Bay Regions – possible Friday and Saturday.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

* FLORIDA RED TIDE OBSERVATIONS...You can find unaffected beaches by checking reports of recent local observations and data: Mote Marine Laboratory (Mote) daily beach conditions – <http://www.mote.org/beaches> and the Florida Fish and Wildlife Conservation Commission (FWC) red tide status – <http://myfwc.com/redtidestatus>.

* FLORIDA RED TIDE HEALTH INFORMATION...Consult the Florida Department of Health - [http://www.floridahealth.gov/envirnomenta-
l-health/aquatictoxins/red-tide.html](http://www.floridahealth.gov/envirnomenta-
l-health/aquatictoxins/red-tide.html) or call the Poison Control Center: 1-800 222-1222.

Inclusion of external links does not constitute endorsement by the Department of Commerce (DOC)/(NOAA) of these external web sites or the information, products or services contained therein.

* FLORIDA RED TIDE INFORMATION SOURCES...Red tide forecasts are provided by the National Ocean Service with data provided by the FWC and MOTE.

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5 NWS Tide Report

SOUS42 KCHS 231245
TIDCHS

Tide Report
National Weather Service Charleston SC
845 AM EDT Mon May 23 2016

SCZ050-052-231545-
Charleston-Tidal Berkeley-
845 AM EDT Mon May 23 2016

The upcoming tides for Charleston Harbor SC...

High tide at 9:38 AM today...
Low tide at 3:37 PM today...
High tide at 10:05 PM today...
Low tide at 4:28 AM Tue...

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Astronomical Tide Heights in MLLW.

Mon	9:38 AM	4.8 feet	High
Mon	3:37 PM	0.2 feet	Low
Mon	10:05 PM	5.8 feet	High
Tue	4:28 AM	0.2 feet	Low

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6 Great Lakes Water Level Report

SXUS83 KDTX 220825
OMRDTX

Great Lakes Water Levels
National Weather Service Detroit/Pontiac MI
425 AM EDT Sun May 22 2016

The following are the average lake levels forecast for this week.

Lake Level... inches from chart datum

Superior	12
Michigan and Huron	31

St Clair	43
Erie	46
Ontario	36

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