

NATIONAL WEATHER SERVICE INSTRUCTION 10-320

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Operations and Services

Marine And Coastal Weather Services, NWSPD 10-3

COASTAL/LAKESHORE HAZARD SERVICES

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

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SUMMARY OF REVISIONS: This directive supersedes NWSI 10-320, dated July 5, 2006 and recertified August 22, 2008. This directive includes the following changes:

1. Section 5.4 and Table 1, CFW Product Actions when Tropical Cyclone Advisories are subsequently issued, were adjusted to be consistent with Section 7.1.3.3 and Table 2 in NWSI 10-601.

Signed by

November 6, 2009

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Date

Coastal/Lakeshore Hazard Services

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1. Mission Connection. Coastal/Lakeshore Hazard Message products (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.

2. Issuance Guidelines

2.1 Creation Software. CONUS Weather Forecast Offices (WFO) and WFO Honolulu will use AWIPS Interactive Forecast Preparation System (IFPS) Graphical Hazards Generation (GHG) software to generate CFW products. OCONUS WFOs (except WFO Honolulu) and WSO American Samoa will use regionally approved software.

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

2.2.1 Flooding. This directive addresses two types of flooding:

- a. Coastal Flooding. Coastal Flooding is the inundation of people, buildings, and coastal structures on land at locations that, under normal conditions, are above the level of high tide. This flooding may impact the immediate oceanfront, gulfs, bays, back bays, sounds, tidal portions of river mouths and inland tidal waterways.
- b. Lakeshore Flooding. The inundation of land areas along any of the Great Lakes over and above normal lake levels. This flooding may impact the immediate lakefront, bays, and interfaces between the Great Lakes and connecting waterways, such as rivers.

Coastal/lakeshore flooding intensities range from minor water overflow, with little or no damage, to significant water overflow, with extensive inundation and severe beach erosion. Coastal flooding is highly dependent on local coastline topography and nearshore bathymetry. WFOs with marine responsibilities should maintain records of previous coastal flood events and benchmark data (e.g., tide datum, storm summaries with pertinent observations, and a description of the synoptic situation, etc.) to respond to potential flooding episodes. Specific coastal/lakeshore flooding events include coastal flood, lakeshore flood, and seiche. See NWSI 10-301 for these definitions.

2.2.2 High Surf. High surf is characterized by observations specific to a geographical area, such as large waves breaking in the surf zone with sufficient energy to erode beaches, move large logs, wash over jetties or exposed rocks, etc. The primary threat from high surf is to people in the surf zone. High surf presents dangers to persons in the surf zone, both in the water and along the immediate shoreline.

- 2.3 Issuance Time. Coastal/Lakeshore Hazard Message products are non-scheduled, event-driven products.
- 2.4 Valid Time. Coastal/Lakeshore Hazard Message products are valid from the time of release or specified time until canceled, updated, replaced, or until the product's expiration time.
- 2.5 Universal Geographic Code (UGC). Coastal and Lakeshore Hazard Message products will contain land-based zone UGC codes.
- 3 Technical Description. AWIPS Product Category CFW is used for all Coastal/Lakeshore Hazard events:
Coastal/Lakeshore Flood Advisory
Coastal/Lakeshore Flood Watch/Warning
Coastal/Lakeshore Hazard Message – to issue/update/cancel/expire Advisories, Watches, and Warnings
High Surf Advisory/High Surf Warning
Coastal/Lakeshore Hazard Message - Informational
- 3.1 Coastal/Lakeshore Flood Advisory
- 3.1.1. Functions
- a. A Coastal/Lakeshore Flood Advisory informs users 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.
- 3.1.2 Contents. Coastal/Lakeshore Flood Advisories will include:
- a. The expiration time in the communications header.
- b. Information on the location, areal coverage, and expected duration of the event.
- 3.2 Coastal/Lakeshore Flood Watch/Warning
- 3.2.1 Functions
- a. A Coastal/Lakeshore Flood Watch informs users coastal/lakeshore flooding with significant impacts is possible. A watch should be issued 12 to 48 hours in advance.
- b. A Coastal/Lakeshore Flood Warning informs users coastal/lakeshore flooding, posing 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 first forecast period when a strong likelihood of the event exists or when a longer advance notice is needed for public response.

3.2.2 Contents. Coastal/Lakeshore Flood Watches and Warnings will include:

- a. The expiration time in the communications header.
- b. The phrase “Urgent – Immediate Broadcast Requested” as the Mass News Disseminator Broadcast Line, immediately above the Product Type Line with issuance of the watch or warning.
- c. The definition of a Coastal/Lakeshore Flood Watch/Warning (i.e., A Coastal /Lakeshore Flood Warning means flooding and beach erosion is highly probable.)
- d. For a warning, an indication of the severity of the flooding including expected water levels in either inches or feet and tenths, but not both. This may be given with reference to low water normals or recent averages. Coastal WFOs will generally provide references to expected tide heights and Mean Sea Level (MSL) or Mean Lower Low Water (MLLW). WFOs may use general terms regarding beach erosion, associated weather, and wave heights. WFOs may include location-specific information as reported to the NWS by emergency management officials. For more significant events the forecaster may reference a previous well-known (historical) high water event.

3.3 Coastal/Lakeshore Hazard Message - to issue/update/cancel/expire Advisories, Watches, and Warnings

3.3.1 Functions

- a. Coastal/Lakeshore Hazard Messages inform users on new or existing Coastal Flood Advisories, Coastal/Lakeshore Flood Watches, and Coastal/Lakeshore Flood Warnings with supplemental information, including updated observations and impact information. Coastal/Lakeshore Hazard Messages also have the same functionality as the previous Coastal/Lakeshore Flood Statements. Coastal/Lakeshore Hazard Messages should be issued at least every 6 hours after watches and warnings are in effect. Statements issued to routinely update an existing advisory, watch or warning will include information similar to that in the original product (see Section 3.2). The headline(s) will include the same information as in the watch or warning and will note the advisory, watch or warning continues-in effect, such as:

...COASTAL FLOOD WATCH REMAINS IN EFFECT UNTIL FRIDAY EVENING...

- b. Coastal/Lakeshore Hazard Messages cancel an advisory, watch or warning, remove areas from a watch or warning, or announce the expiration of a warning, such as:

...COASTAL FLOOD WARNING HAS EXPIRED...

...COASTAL FLOOD WATCH IS CANCELLED...

3.3.2 Contents. Coastal/Lakeshore Hazard Messages will include:

- a. The expiration time in the communications header. If a product is issued with the intent of clearing all zones from a previously issued watch or warning, then the product expiration time is normally one hour after the product issuance time.
- b. Information on the location, areal coverage, severity, and expected duration of the event.

3.4 High Surf Advisory, High Surf Warning

- a. Coastal Hazard Messages (CFW) also inform users of high surf hazards. High Surf Advisory and Warning criteria is locally and regionally determined. High Surf Warnings are a NWS Regional option.

3.4.1 Functions

- a. High Surf Advisories are issued when breaking wave action poses a threat to life and property within the surf zone. High Surf Advisories will be headlined in the Surf Zone Forecast (SRF), if the SRF is routinely issued by the WFO. High Surf Advisories are not issued for the Great Lakes.
- b. High Surf Warnings are issued when breaking wave action results in an especially heightened threat to life and property within the surf zone.

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. High Surf Warnings are not issued for the Great Lakes.

- c. In many situations a moderate or high risk of rip currents is concurrent with another coastal hazard, and in particular high surf. In this situation the risk of rip currents and high surf may be referenced within the body of the CFW product with VTEC code /SU.Y/ or /SU.W/

3.4.2 Contents. High Surf Advisories/Warnings will include:

- a. The expiration time in the communications header.
- b. Information on the location, areal coverage, and expected duration of the event.

3.5 Coastal/Lakeshore Hazard Message - Informational

3.5.1 Function. Informational Coastal/Lakeshore Hazard Messages (VTEC code /CF.S/ and /LS.S/) may be used to describe hazards that do not meet Advisory, Watch, or Warning criteria. One example would be an oil spill. A second example is to heighten awareness for a moderate or high risk of rip currents. Informational Coastal Hazard Messages also direct users to a Hurricane Local Statement (HLS) in certain situations. See the HLS discussion in Section 5.4.

4. Format. CFWs use the following product format.

4.1 Product Type Line in Mass News Disseminator Block. Only two Product Type Lines are permitted in the Product Type Line: Coastal Hazard Message or Lakeshore Hazard Message. Please reference NWSI 10-1701 for additional information on Text Product Formats and Codes.

4.2 Product Segmentation. The CFW is a segmented product. CFWs may be issued for multiple events, such as a High Surf Advisory and a Coastal Flood Warning. Examples of multiple events are provided in the Appendix. Please reference NWSI 10-1702, Universal Geographic Code (UGC) for additional information on product segmentation.

4.3 Valid Time Event Code (VTEC). Please see NWSI 10-1703, Valid Time Event Code, for VTEC guidance. VTEC lines are included in the examples provided in the appendix of NWSI 10-320.

This product is available in industry standard encoding and languages, and may include, but not be limited to, American Standard Code for Information Interchange, Extensible Markup

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(WMO HEADER) (UTC ISSUANCE DATE TIME)
(AWIPS IDENTIFIER)

URGENT - IMMEDIATE BROADCAST REQUESTED (for watches and warnings)
COASTAL/LAKESHORE HAZARD MESSAGE
NATIONAL WEATHER SERVICE (CITY) (STATE)
(ISSUANCE TIME) AM/PM (LOCAL TIME)(DAY)(DATE)

(AREAL UGC CODES[S])-(EXPIRATION TIME)-
(VTEC STRING)
(ZONE A)-(ZONE B)-(ZONE C)-
(INCLUDING THE CITIES OF)...(CITY 1)...(CITY 2)...(CITY 3)
(ISSUANCE TIME)AM/PM (LOCAL TIME)(DAY)(DATE)

...HEADLINE FOR WEATHER EVENT (S)

NARRATIVE TEXT

$$ (required)
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Language, Wireless Markup Language and HyperText Markup Language.

5. Consistency with other NWS Products. Forecasters will coordinate and ensure consistency among products within their WFO, and with neighboring WFOs, the River Forecast Center(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.

5.1 Zone, Coastal/Nearshore Forecasts. Coastal/Lakeshore Hazard Message advisory/watch/warning products will be headlined in associated public zone forecasts. Coastal/Lakeshore Hazard Message advisory/watch/warning products will not be headlined in Coastal/Nearshore forecasts.

5.2 Hazardous Weather Outlook (AWIPS Product 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.

5.3 Short Term Forecast (AWIPS Product 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. 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.

5.4 Hurricane Local Statement (AWIPS Product HLS).

If no CFW products were issued by the WFO prior to the issuance of a tropical cyclone watch or warning, then no CFW products will be issued when tropical cyclone watches or warnings are in effect.

Complications occur when a CFW product is in effect and tropical cyclone watches and/or warnings are issued. The basic premise is if the threat level of a tropical cyclone product equals or exceeds the threat level of an existing CFW, then the CFW will be discontinued. Below are details that are further summarized in Table 1.

- A CFW product is in effect for a Coastal Flood Advisory or Coastal Flood Warning and/or High Surf Advisory or High Surf Warning and a tropical cyclone watch is issued - CFW will **continue** as standalone product along with HLS product.
- A CFW product is in effect for a Coastal Flood Advisory or Coastal Flood Warning and/or High Surf Advisory or High Surf Warning and a tropical cyclone warning is

issued - CFW will be **canceled** and users directed to the HLS for further information on coastal hazards.

- A CFW product is in effect for a Coastal Flood Watch and a tropical cyclone *watch* or *warning* is issued - CFW will be **canceled** and users directed to the HLS for further information on coastal hazards.

INITIAL WFO PRODUCT IN EFFECT	SUBSEQUENTLY-ISSUED TROPICAL CYCLONE (TC) ADVISORY	CONTINUE CFW	CANCEL CFW
Coastal Flood ADVISORY (CFW)	TC WATCH	X	
Coastal Flood ADVISORY (CFW)	TC WARNING		X
Coastal Flood WATCH (CFW)	TC WATCH/WARNING		X
Coastal Flood WARNING (CFW)	TC WATCH	X	
Coastal Flood WARNING (CFW)	TC WARNING		X
High Surf ADVISORY (CFW)	TC WATCH	X	
High Surf ADVISORY (CFW)	TC WARNING		X
High Surf WARNING (CFW)	TC WATCH	X	
High Surf WARNING (CFW)	TC WARNING		X

Table 1. CFW Product Actions when Tropical Cyclone Advisories are subsequently issued. Also see related table in NWSI 10-601.

Finally, if tropical cyclone advisories are discontinued and coastal hazards are expected behind the departing tropical cyclone, then CFW products will be issued as appropriate.

6. Water Level Observations and Dissemination.

6.1 Tidal Observations. Real-time access of a WFO to accurate water-level data is especially important during times of exceptionally high tide. WFOs 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 measurements. Many of these definitions are provided in NWSI 10-301.

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://www.co-ops.nos.noaa.gov/>

6.2 NWS Tide Reports. Some WFOs issue routine tide reports, while other offices only issue tide reports on an as-needed basis during significant coastal events. Most tide reports are issued using the AWIPS product identifier TID.

Reference tide reports to standard datums used by the NOS. For most areas the reference tidal datum is Mean Lower Low Water (MLLW).

6.3 Great Lakes Water Levels. Data for lake water levels are available from the U.S. Army Corps of Engineers and the NOS.

6.4 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.

APPENDIX A - Examples of NWS Coastal/Lakeshore Hazard Products

1. Coastal Flood Advisory
2. Coastal/Lakeshore Flood Watches
3. Coastal/Lakeshore Flood Warnings
4. Coastal/Lakeshore Hazard Message – to update/cancel an Advisory, Watch, or Warning; and in Informational Statements
5. High Surf Advisory
6. Coastal Hazard Message with Multiple Functions
7. Tide Report
8. Great Lakes Water Level Report

1. Example of Coastal Flood Advisory

WHUS46 KEKA 091509
CFWEKA

COASTAL HAZARD MESSAGE
NATIONAL WEATHER SERVICE EUREKA CA
709 AM PST SUN JAN 9 2005

CAZ001-092000-
/O.CON.KEKA.CF.Y.0001.000000T0000Z-050109T2000Z/
REDWOOD COAST CA-
709AM PST SUN JAN 9 2005

...COASTAL FLOOD ADVISORY REMAINS IN EFFECT UNTIL NOON TODAY...

SOME MINOR COASTAL FLOODING HAS OCCURRED IN THE HUMBOLDT BAY AREA. MORE FLOODING IS EXPECTED LATER THIS MORNING. FLOODING WILL ALSO OCCUR IN LOW LYING AGRICULTURAL LAND IN THE ELK RIVER VALLEY SOUTH OF EUREKA. ADDITIONAL FLOODING MAY OCCUR ON SECONDARY ROADS NEAR HUMBOLDT BAY.

TIDES ARE FORECAST TO PEAK AT 8.4 FEET AT 9:58 AM ON SUNDAY...HOWEVER...THEY MAY RISE UP TO A FOOT OVER THE FORECAST HIGHS. THESE UNUSUALLY HIGH TIDES WILL RESULT FROM THE COMBINATION OF SOUTHWEST WINDS OF 20 TO 30 MPH...AND NORTHWEST SWELL WAVES NEAR 15 FEET.

MINOR FLOODING WILL LIKELY CONTINUE THROUGH EARLY NEXT WEEK AS TIDES ARE FORECAST TO REMAIN HIGH...ALTHOUGH WINDS AND WAVES ARE EXPECTED TO DIMINISH.

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2. Examples of Coastal/Lakeshore Flood Watches

Example Lakeshore Flood Watch

WHUS61 KGRR 260845
CFWGRR

URGENT - IMMEDIATE BROADCAST REQUESTED
LAKESHORE HAZARD MESSAGE
NATIONAL WEATHER SERVICE GRAND RAPIDS MI

445 AM EDT FRI OCT 26 2001

MIZ037-043-050-056-064-071-077-261500-
/O.NEW.KGRR.LS.A.0010.011027T0100Z-011027T1300Z/
MASON-OCEANA-MUSKEGON-OTTAWA-ALLEGAN-VAN BUREN-BERRIEN-
445 AM EDT FRI OCT 26 2001

...LAKESHORE FLOOD WATCH IN EFFECT FROM THIS EVENING TO SATURDAY
MORNING...

A DEEPENING LOW PRESSURE SYSTEM IN WESTERN QUEBEC WILL AFFECT LAKE
MICHIGAN TODAY. CURRENTLY WINDS ARE GUSTING TO 30 MPH AND WAVES
RANGE FROM 4 TO 6 FEET. HOWEVER...BY THIS AFTERNOON WINDS ARE
EXPECTED TO GUST TO 60 MPH AND WAVES MAY INCREASE UP TO 18 FEET.

REMEMBER...A LAKESHORE FLOOD WATCH MEANS LAKESHORE FLOODING IS
POSSIBLE. PEOPLE ALONG THE LAKE MICHIGAN SHORELINE SHOULD BE READY
TO MOVE TO SAFE GROUND AND TAKE ACTION IF FLOODING OCCURS OR IF
WARNINGS ARE ISSUED. MINOR FLOODING HAS ALREADY BEEN REPORTED
NEAR BIG SABLE POINT. LISTEN TO LOCAL RADIO...TELEVISION...OR NOAA
WEATHER RADIO FOR FURTHER INFORMATION.

WARNINGS WILL BE ISSUED IMMEDIATELY AS CONDITIONS WARRANT. THE
NEXT SCHEDULED STATEMENT ON THIS POTENTIAL FLOODING EVENT WILL BE
ISSUED AROUND 11 AM.

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Example Coastal Flood Watch

WHUS41 KOKX 300719
CFWOKX

URGENT - IMMEDIATE BROADCAST REQUESTED
COASTAL HAZARD MESSAGE
NATIONAL WEATHER SERVICE NEW YORK NY
320 AM EDT SUN SEP 30 2001

CTZ009-NYZ071>077-301400-
/O.NEW.KOKX.CF.A.0009.011001T0200Z-011001T1000Z/
SOUTHERN FAIRFIELD-SOUTHERN WESTCHESTER-NEW YORK/MANHATTAN-
BRONX-RICHMOND/STATEN ISLAND-KINGS/BROOKLYN-QUEENS-NASSAU-
320 AM EDT SUN SEP 30 2001

...COASTAL FLOOD WATCH IN EFFECT FROM THIS EVENING TO MONDAY
MORNING...

THE NATIONAL WEATHER SERVICE HAS ISSUED A COASTAL FLOOD WATCH FOR PEOPLE LIVING ALONG THE SHORES OF NEW YORK CITY...COASTAL WESTCHESTER...COASTAL FAIRFIELD AND COASTAL NASSAU COUNTIES FOR HIGH TIDES TONIGHT.

A LARGE AREA OF HIGH PRESSURE EXTENDING FROM THE GREAT LAKES NORTHEAST ACROSS NEW ENGLAND AND AN INTENSIFYING LOW PRESSURE SYSTEM OFF THE MID ATLANTIC COAST WILL PROLONG THE STRONG NORTHEAST WINDS THAT DEVELOPED DURING EARLY SATURDAY. NORTHEAST GALES BLOWING ACROSS A LARGE DISTANCE OR FETCH WILL PILE WATER ALONG THE COAST TODAY AND TONIGHT.

MINOR TIDAL FLOODING IS FORECAST THIS MORNING FOR MOST SHORES BORDERING LONG ISLAND SOUND AND THE ATLANTIC OCEAN. FOR LONG ISLAND SOUND...TIDAL DEPARTURES WILL RANGE FROM AROUND 1.5 FEET ABOVE NORMAL AT NEW LONDON CT TO 2.5 FEET ABOVE NORMAL AT KINGS POINT NY. FOR THE ATLANTIC SHORES...TIDAL DEPARTURES WILL RANGE FROM AROUND 1.5 FEET ABOVE NORMAL AT MONTAUK POINT TO 2.1 FEET ABOVE NORMAL AT SANDY HOOK NJ. MODERATE TIDAL FLOODING IS POSSIBLE IN ISOLATED AREAS SUCH AS FREEPORT NY.

MODERATE TIDAL FLOODING MAY OCCUR ACROSS SEVERAL AREAS DURING TONIGHT'S HIGH TIDES BEFORE MIDNIGHT. FOR LONG ISLAND SOUND...TIDAL DEPARTURES WILL RANGE FROM AROUND 2 FEET ABOVE NORMAL AT NEW LONDON CT TO AROUND 3 FEET ABOVE NORMAL AT STAMFORD CT AND KINGS POINT NY. FOR THE ATLANTIC SHORES...TIDAL DEPARTURES WILL RANGE FROM AROUND 1.5 FEET ABOVE NORMAL AT MONTAUK POINT TO AROUND 3 FEET ABOVE NORMAL AT SANDY HOOK NJ.

AS THE LOW MOVES WELL OFFSHORE...WINDS WILL SHIFT TO THE NORTHWEST ON MONDAY...WHICH WILL CAUSE TIDAL DEPARTURES TO RECEDE BACK TO MORE NORMAL LEVELS.

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3. Examples of Coastal/Lakeshore Flood Warnings

Example Lakeshore Flood Warning

WHUS61 KBUF 121501
CFWBUF

URGENT - IMMEDIATE BROADCAST REQUESTED
LAKESHORE HAZARD MESSAGE
NATIONAL WEATHER SERVICE BUFFALO NY

1000 AM EST TUE DEC 12 2000

NYZ010-019-122100-
/O.CON.KBUF.LS.W.0012.000000T0000Z-001213T0400Z/
NORTHERN ERIE-CHAUTAUQUA-
INCLUDING THE CITIES OF DUNKIRK AND BUFFALO
1000 AM EST TUE DEC 12 2000

...LAKESHORE FLOOD WARNING REMAINS IN EFFECT UNTIL 11 PM EST THIS EVENING...

A STRONG STORM SYSTEM IS PRODUCING SUSTAINED WESTERLY WINDS OF UP TO 60 MILES AN HOUR OVER LAKE ERIE THIS MORNING. THESE WINDS ARE PILING WATER UP OVER THE EASTERN END OF THE LAKE WITH WATER LEVELS JUST OVER 5 FEET ABOVE NORMAL AT SUNRISE. THESE MAY RISE TO OVER 8 FEET ABOVE NORMAL BY THIS AFTERNOON.

A LAKESHORE FLOOD WARNING MEANS THAT FLOODING AND BEACH EROSION WILL OCCUR. SOME LAKESHORE FLOODING HAS ALREADY BEEN REPORTED NEAR EVANGOLA STATE PARK. VISITORS SHOULD STAY AWAY FROM THAT LOCALE AND ANY OTHER FLOODED AREAS. COASTAL RESIDENTS...ESPECIALLY THOSE FROM SILVER CREEK TO ANGOLA ON THE LAKE...SHOULD BE ALERT AND BE PREPARED MOVE AWAY FROM THE BEACH.

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Example Lakeshore Flood Warning - Emphasis on Erosion
WHUS61 KLOT 051837
CFWLOT

URGENT - IMMEDIATE BROADCAST REQUESTED
LAKESHORE HAZARD MESSAGE
NATIONAL WEATHER SERVICE CHICAGO IL
1237 PM CST SAT NOV 5 2005

INZ001>003-062100-
/O.NEW.KLOT.LS.W.0011.051105T2200Z-051106T2200Z/
LAKE-PORTER-LA PORTE-
1237 PM CST SAT NOV 5 2005

...LAKESHORE FLOOD WARNING IN EFFECT FROM 4 PM THIS AFTERNOON TO 4 PM EST SUNDAY..

VERY STRONG NORTH WINDS WILL DEVELOP OVER THE REGION TONIGHT AND CONTINUE INTO SUNDAY AFTERNOON. SUSTAINED WINDS OF 50 TO 60 MPH DOWN MUCH OF THE LENGTH OF LAKE MICHIGAN WILL GENERATE WAVES UP

TO 15 FEET ON THE SOUTH END OF THE LAKE BY DAYBREAK SUNDAY. THE SUSTAINED WINDS WILL ALSO RAISE THE AVERAGE WATER LEVEL ON SOUTHERN LAKE MICHIGAN BY ABOUT 2 FEET. THESE LARGE WAVES...ON TOP OF THE WATER LEVEL RISE...WILL CAUSE FLOODING AND BEACH EROSION ALONG PARTS OF THE LAKE MICHIGAN SHORELINE BETWEEN GARY AND NEW BUFFALO.

A LAKESHORE FLOOD WARNING MEANS LAKESHORE FLOODING AND BEACH EROSION ARE IMMINENT.

IF YOU LIVE...WORK OR HAVE INTERESTS ALONG THE SOUTHERN LAKE MICHIGAN SHORE FROM GARY TO NEW BUFFALO...YOU SHOULD PREPARE FOR THESE HIGH WINDS AND WAVES NOW. BEACH EROSION AND DAMAGE TO UNPROTECTED VESSELS AND STRUCTURES IS LIKELY.

STAY AWAY FROM PIERS....BREAK WALLS...UNPROTECTED DOCKS AND SHORELINE. ALL WILL BE HAZARDOUS PLACES DURING THE HIGH WINDS AND WAVES.

THE STRONG WINDS WILL BE GENERATED BY A POTENT FALL STORM SYSTEM. THE LOW PRESSURE WILL MOVE NORTHEAST FROM CENTRAL KENTUCKY TO WESTERN OHIO THIS AFTERNOON...AND CONTINUE NORTH THROUGH THE EASTERN GREAT LAKES TONIGHT AND INTO EASTERN ONTARIO BY SUNDAY MORNING.

A LAKESHORE FLOOD STATEMENT WILL BE ISSUED AROUND 600 PM CST THIS EVENING WITH THE LATEST INFORMATION ON THIS STORM SYSTEM AND THE LAKESHORE FLOODING AND BEACH EROSION SITUATION.

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Example Lakeshore Flood Warning - Seiche Emphasis

WHUS43 KMQT 102015
CFWMQT

URGENT - IMMEDIATE BROADCAST REQUESTED
LAKESHORE HAZARD MESSAGE
NATIONAL WEATHER SERVICE MARQUETTE MI
415 PM EDT THU APR 10 2003

MIZ006-110100-
/O.NEW.KMQT.LS.W.0004.030410T2015Z-030411T0100Z/
ALGER-
415 PM EDT THU APR 10 2003

...LAKESHORE FLOOD WARNING IN EFFECT UNTIL 9 PM EDT THIS EVENING...

EARLIER THIS AFTERNOON...A LINE OF SEVERE THUNDERSTORMS WITH WIND GUSTS TO 120 MPH HAD MOVED ACROSS LAKE SUPERIOR. STANNARD ROCK LIGHTHOUSE AT 145 PM EDT REPORTED A WIND GUST TO 120 MPH AS THIS LINE OF SEVERE THUNDERSTORMS MOVED THROUGH AND THE EASTERN LAKE SUPERIOR BUOY HAD A WIND GUST TO 90 MPH AT 2 PM EDT. THIS LINE OF THUNDERSTORMS HAS CAUSED AN EIGHT FOOT HIGH WALL OF WATER TO PILE UP AGAINST THE CANADIAN SHORELINE OF NORTHEASTERN LAKE SUPERIOR.

AT 330 PM EDT...A GAGE MONITORING LAKE WATER LEVELS AT MARQUETTE HAD DROPPED 6 FEET BELOW THE NORMAL VALUE OF 601 FEET AND THE LAKESHORE GAGE AT WHITEFISH POINT HAD DROPPED 5 FEET BELOW THE NORMAL VALUE OF 601 FEET.

AT 340 PM EDT...THE ALGER COUNTY SHERIFF REPORTED THAT MUNISING BAY HAD BEEN COMPLETELY DRAINED OF WATER. THE EIGHT FOOT WALL OF WATER AGAINST THE CANADIAN SHORELINE OF NORTHEASTERN LAKE SUPERIOR WILL RECEDE AND WILL CAUSE RAPID FLUCTUATIONS IN WATER LEVELS ALONG THE EASTERN LAKE SUPERIOR SHORELINE. THIS RAPID FLUCTUATION OF WATER LEVELS WILL BE MAGNIFIED AT MUNISING BAY. A WAVE AS HIGH AS 20 FEET WILL MOVE INTO MUNISING BAY FROM LAKE SUPERIOR AS THE WATER RECEDES FROM THE CANADIAN SHORELINE OF NORTHEASTERN LAKE SUPERIOR. THIS WAVE AND SUBSEQUENT SMALLER WAVES WILL CAUSE SIGNIFICANT FLOODING AND DAMAGE OF PROPERTY ALONG THE SHORELINE OF MUNISING BAY. WATER LEVELS SHOULD RETURN TO NORMAL BY 715 PM EDT.

RESIDENTS IN MUNISING SHOULD EVACUATE IMMEDIATELY AND MOVE TO HIGHER GROUND AWAY FROM LAKE SUPERIOR AND MUNISING BAY. THIS IS A DANGEROUS AND LIFE THREATENING SITUATION.

A LAKESHORE FLOOD WARNING MEANS THAT LAKESHORE FLOODING AND BEACH EROSION IS OCCURRING OR IS IMMINENT ALONG THE LAKE SUPERIOR SHORELINE AROUND MUNISING BAY. STAY OFF PIERS...DOCKS...BREAKWALLS AND BEACHES.

LISTEN TO NOAA WEATHER RADIO OR YOUR LOCAL MEDIA OUTLET FOR THE LATEST MARINE FORECASTS AND STATEMENTS FROM THE NATIONAL WEATHER SERVICE ABOUT THIS DANGEROUS AND LIFE THREATENING SITUATION.

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Example Coastal Flood Warning

WHUS42 KTAE 240659
CFWTAE

URGENT - IMMEDIATE BROADCAST REQUESTED
COASTAL HAZARD MESSAGE
NATIONAL WEATHER SERVICE TALLAHASSEE FL
300 AM EDT TUE JUL 24 2001

FLZ028-241400-
/O.EXB.KTAE.CF.W.0011.010724T0700Z-010724T1400Z/
TAYLOR-
300 AM EDT TUE JUL 24 2001

...COASTAL FLOOD WARNING IN EFFECT UNTIL 10 AM EDT THIS MORNING...

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.

AT 230 AM EDT...MINOR COASTAL FLOODING HAD ALREADY BEEN OBSERVED AT THE MOUTH OF THE STEINHATCHEE RIVER...WHICH RUNS BETWEEN DIXIE AND TAYLOR COUNTIES. THE FLOODING IS BEING DRIVEN BY STRONG ONSHORE WINDS EXCEEDING 30 MPH ASSOCIATED WITH AN AREA OF LOW PRESSURE OVER APALACHEE BAY.

THE WORST OF THE FLOODING CAN BE EXPECTED AROUND THE TIME OF THE NEXT HIGH TIDE...WHICH WILL GENERALLY OCCUR BETWEEN 530 AM EDT AND 600 AM EDT ALONG THE DIXIE AND TAYLOR COUNTY COASTLINE. TIDES OF 2 TO 4 FEET ABOVE NORMAL CAN BE EXPECTED...WHICH WILL CAUSE FLOODING IN LOW LYING AREAS. CONDITIONS ARE EXPECTED TO IMPROVE BY LATE MORNING AFTER THE TIME OF HIGH TIDE AS THE LOW PRESSURE SYSTEM MOVES INLAND OVER THE FLORIDA BIG BEND.

STAY TUNED TO NOAA WEATHER RADIO AND OTHER LOCAL MEDIA FOR UPDATES.

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FLZ034-241400-
/O.EXT.KTAE.CF.W.0011.000000T0000Z-010724T1400Z/
DIXIE-
300 AM EDT TUE JUL 24 2001

...COASTAL FLOOD WARNING IS NOW IN EFFECT UNTIL 10 AM EDT THIS MORNING...

AT 230 AM EDT...MINOR COASTAL FLOODING HAD ALREADY BEEN OBSERVED AT THE MOUTH OF THE STEINHATCHEE RIVER...WHICH RUNS BETWEEN DIXIE AND TAYLOR COUNTIES. THE FLOODING IS BEING DRIVEN BY STRONG ONSHORE WINDS EXCEEDING 30 MPH ASSOCIATED WITH AN AREA OF LOW PRESSURE OVER APALACHEE BAY.

THE WORST OF THE FLOODING CAN BE EXPECTED AROUND THE TIME OF THE NEXT HIGH TIDE...WHICH WILL GENERALLY OCCUR BETWEEN 530 AM EDT AND 600 AM EDT ALONG THE DIXIE AND TAYLOR COUNTY COASTLINE. TIDES OF 2 TO 4 FEET ABOVE NORMAL CAN BE EXPECTED...WHICH WILL CAUSE FLOODING IN LOW LYING AREAS. CONDITIONS ARE EXPECTED TO IMPROVE BY LATE MORNING AFTER THE TIME OF HIGH TIDE AS THE LOW PRESSURE SYSTEM MOVES INLAND OVER THE FLORIDA BIG BEND.

STAY TUNED TO NOAA WEATHER RADIO AND OTHER LOCAL MEDIA FOR UPDATES.

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Example Coastal Flood Warning

WHUS41 KAKQ 100928
CFWAKQ

URGENT - IMMEDIATE BROADCAST REQUESTED
COASTAL HAZARD MESSAGE
NATIONAL WEATHER SERVICE WAKEFIELD VA
528 AM EDT THU APR 10 2003

VAZ084-086-091-094-095-098-101500-
/O.CON.KAKQ.CF.W.0005.000000T0000Z-030411T1000Z/
GLOUCESTER-MATHEWS-YORK-NEWPORT NEWS/HAMPTON-
NORFOLK/PORTSMOUTH-VIRGINIA BEACH-
INCLUDING POQUOSON
528 AM EDT THU APR 10 2003

...COASTAL FLOOD WARNING REMAINS IN EFFECT UNTIL 6 AM EDT FRIDAY...

PERSISTENT NORTHEAST WINDS 25 AND 35 MILES PER HOUR...WITH POSSIBLE HIGHER GUSTS...WILL RAISE WATER LEVELS OVER THE SOUTHERN BAY TODAY INTO TONIGHT. THIS PROLONGED PERIOD OF ONSHORE WINDS WILL CAUSE MINOR TO MODERATE COASTAL FLOODING AROUND THE TIME OF HIGH TIDE THIS AFTERNOON...AND POSSIBLY AGAIN EARLY FRIDAY MORNING.

TIDE LEVELS ARE EXPECTED TO INCREASE TO 4 TO 4.5 FEET ABOVE

NORMAL THURSDAY AFTERNOON. FOR HAMPTON ROADS...MINOR COASTAL FLOODING BEGINS WITH A WATER LEVEL OF 5 FEET ABOVE MEAN LOWER LOW WATER...WITH MODERATE COASTAL FLOODING BEGINNING AT 6 FEET. MORE SIGNIFICANT...MODERATE COASTAL FLOODING IS EXPECTED AROUND THE THURSDAY AFTERNOON HIGH TIDE. THE FOLLOWING ARE THE TIMES AND FORECASTED LEVELS OF HIGH TIDES AT SEWELLS POINT AND VIRGINIA BEACH...WITH THE TIDE LEVELS REFERENCED TO MEAN LOWER LOW WATER:

LOCATION	TIME OF HIGH TIDE	EXPECTED HEIGHT
SEWELLS PT	415 PM THURSDAY	6.6 FEET.
	450 AM FRIDAY	4.8 FEET.
VIRGINIA BEACH	248 PM THURSDAY	6.3 FEET.
	323 AM FRIDAY	5.1 FEET.

STAY TUNED TO NOAA WEATHER RADIO AND OTHER LOCAL MEDIA FOR FURTHER DETAILS OR UPDATES FROM THE NATIONAL WEATHER SERVICE. FOR ADDITIONAL WEATHER INFORMATION...YOU CAN ALSO REFER TO OUR WEB SITE AT [HTTP://WEATHER.NOAA.GOV/AKQ](http://weather.noaa.gov/akq).

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4. Examples of Coastal/Lakeshore Hazard Messages – to update/cancel an Advisory, Watch, or Warning; and Informational

Example Coastal Hazard Message to cancel an existing Warning

WHUS42 KJAX 161441
CFWJAX

COASTAL HAZARD MESSAGE
NATIONAL WEATHER SERVICE JACKSONVILLE FL
941 AM EST FRI NOV 16 2001

FLZ024-025-033-038-161600-
/O.CAN.KJAX.CF.W.0011.000000T0000Z-011116T1600Z/
NASSAU-DUVAL-ST. JOHNS-FLAGLER-
941 AM EST FRI NOV 16 2001

...COASTAL FLOOD WARNING IS CANCELED...

ALTHOUGH WIND SPEEDS WILL REMAIN STRONG BETWEEN THE LOW PRESSURE CENTER OFF THE FLORIDA EAST COAST AND HIGH PRESSURE TO THE NORTH...THE WIND DIRECTION HAS SHIFTED TO THE NORTH. THIS HAS SIGNIFICANTLY REDUCED THE THREAT FOR COASTAL FLOODING ALONG THE

NORTHEAST FLORIDA COAST. THEREFORE...THE COASTAL FLOOD WARNING HAS BEEN CANCELED FROM FERNANDINA BEACH TO FLAGLER BEACH.. THIS IS THE LAST STATEMENT ON THIS COASTAL FLOODING EVENT.

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Example Lakeshore Hazard Message to Cancel Lakeshore Warning

WHUS61 KBUF 122000
CFWBUF

LAKESHORE HAZARD MESSAGE
NATIONAL WEATHER SERVICE BUFFALO NY
300 PM EST TUE DEC 12 2000

NYZ010-019-122100-
/O.CAN.KBUF.LS.W.0013.000000T0000Z-001212T2100Z/
NORTHERN ERIE-CHAUTAUQUA-
300 PM EST TUE DEC 12 2000

...LAKESHORE FLOOD WARNING IS CANCELLED...

THE LAKESHORE FLOOD WARNING THAT WAS IN EFFECT FOR THE LAKE ERIE COAST FROM DUNKIRK TO BUFFALO NEW YORK HAS BEEN CANCELLED.

THE STRONG STORM SYSTEM THAT PRODUCED SUSTAINED WEST WINDS OF UP TO 60 MILES AN HOUR EARLIER TODAY OVER LAKE ERIE HAS MOVED AWAY. MINOR FLOODING NOW OCCURRING ALONG THE LAKESHORE WILL SOON ABATE AS WINDS HAVE DECREASED TO 25 TO 35 MPH AND WAVES HAVE DECREASED TO 4 TO 6 FEET. WINDS AND WAVES WILL DECREASE FURTHER TONIGHT.

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Example Informational Coastal Hazard Message for High Risk of rip currents.

WHUS42 KMHX 260705
CFWMHX

COASTAL HAZARD MESSAGE
NATIONAL WATHER SERVICE NEWPORT/MOREHEAD CITY NC
305 AM EDT MON SEP 26 2005

NCZ095-098-103-104-261515
/X.CON.KMHX.CF.S.0024.050926T1200Z-050926T2300Z/
CARTERET-ONSLOW-OUTER BANKS DARE-OUTER BANKS HYDE-
305 AM EDT MON SEP 26 2005

...RIP CURRENT RISK IS HIGH MONDAY...

A 4 TO 7 FOOT LONG PERIOD EAST SWELL AND INCREASING SOUTHERLY WINDS WILL CREATE A HIGH RISK OF RIP CURRENTS ALONG AREA BEACHES SOUTH OF CURRITUCK LIGHT TO SURF CITY TODAY.

IT IS RECOMMENDED PEOPLE STAY OUT OF THE WATER. RIP CURRENTS ARE NARROW CHANNELS OF WATER THAT FLOW FROM THE SURF ZONE OUT TO DEEPER WATER. IF YOU GET CAUGHT IN A RIP CURRENT...WADE OR SWIM PARALLEL TO THE BEACH UNTIL OUT OF ITS PULL...WADE OR SWIM PARALLEL TO THE BEACH UNTIL OUT OF ITS PULL AND THEN HEAD BACK TO SHORE.

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Example Informational Coastal Hazard Message directing users to Hurricane Local Statements when no Coastal Flood Watch/Warning was in effect

WHUS42 KMFL 040351
CFWMFL

COASTAL HAZARD MESSAGE
NATIONAL WEATHER SERVICE MIAMI FL
1051 PM EST SAT NOV 3 2011

FLZ067-068-071>074-040451-
/O.NEW.KMFL.CF.S.0027.111104T0400Z-111104T0800Z/
INLAND PALM BEACH-METROPOLITAN PALM BEACH-INLAND BROWARD-
METROPOLITAN BROWARD-INLAND MIAMI DADE-METROPOLITAN MIAMI
DADE-
1051 PM EST SAT NOV 3 2011

A HURRICANE LOCAL STATEMENT WILL BE ISSUED BY THE MIAMI WEATHER FORECAST OFFICE AT 11 PM TONIGHT.

EFFECTIVE AT 11 PM TONIGHT COUNTY SPECIFIC INFORMATION ABOUT COASTAL FLOODING AND OTHER SIGNIFICANT WEATHER IMPACTS ASSOCIATED WITH HURRICANE BETA WILL BE ISSUED BY THE NATIONAL WEATHER SERVICE OFFICE IN MIAMI USING A COMPREHENSIVE HURRICANE LOCAL STATEMENT. UNTIL FURTHER NOTICE SEPARATE COASTAL HAZARD MESSAGES WILL NOT BE ISSUED BY THE NATIONAL WEATHER SERVICE OFFICE IN MIAMI.

HURRICANE LOCAL STATEMENTS WILL BE ISSUED UNDER THE WMO HEADER WTUS82 KMFL. NOAAPORT DATA USERS WILL FIND THE STATEMENTS UNDER THE HEADER HLSMIA.

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5. Example High Surf Advisory

WHUS44 KLCH 101500
CFWLCH

COASTAL HAZARD MESSAGE
NATIONAL WEATHER SERVICE LAKE CHARLES LA
1000 AM CDT THU JUN 10 2004

LAZ053-102200-
/O.NEW.KLCH.SU.Y.0005.040610T1700Z-040611T1700Z/
IBERIA-
1000 AM CDT THU JUN 10 2004

...HIGH SURF ADVISORY IN EFFECT UNTIL NOON CDT FRIDAY...

A PROLONGED PERIOD OF MODERATE ONSHORE FLOW ACROSS THE GULF OF MEXICO CONTINUES TO GENERATE SWELLS MOVING TOWARD THE LOUISIANA COASTLINE. SWELLS OF 6 TO 8 FEET WILL IMPACT COASTAL INTERESTS FROM INTRACOASTAL CITY TO CYPREMORT POINT.

THE SWELLS WILL CREATE DANGEROUS SURF CONDITIONS AND VERY STRONG CURRENTS AT AREA BEACHES. IN ADDITION...SOME BEACH EROSION CAN BE EXPECTED DURING THE NEXT HIGH TIDE CYCLE...WHICH WILL OCCUR BETWEEN 2 AND 3 AM FRIDAY MORNING. PEOPLE ARE ADVISED NOT TO ENTER THE WATER THIS WEEKEND DUE TO DANGEROUS CONDITIONS EXPECTED WITHIN THE SURF ZONE.

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LAZ054-102200-
/O.CON.KLCH.SU.Y.0005.000000T0000Z-040610T2200Z/
SAINT MARY-
1000 AM CDT THU JUN 10 2004

...HIGH SURF ADVISORY REMAINS IN EFFECT UNTIL 5 PM CDT THIS AFTERNOON...

THIS ADVISORY CONTINUES FOR SAINT MARY PARISH IN LOUISIANA. SWELLS WILL CONTINUE TO IMPACT THIS PORTION OF THE COAST AND WILL CREATE DANGEROUS SURF CONDITIONS. STAY TUNED TO THE NATIONAL WEATHER SERVICE FOR THE LATEST WEATHER INFORMATION. FOR ADDITIONAL INFORMATION...SEE THE NATIONAL WEATHER SERVICE IN LAKE CHARLES HOMEPAGE AT [HTTP://WWW.SRH.NOAA.GOV/LCH](http://www.srh.noaa.gov/lch).

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6. Examples of Coastal Hazard Message with multiple functions

Example CFW to cancel Coastal Flood Watch, continue Coastal Flood Warning, continue High Surf Advisory

WHUS41 KAKQ 010249
CFWAKQ

COASTAL HAZARD MESSAGE
NATIONAL WEATHER SERVICE WAKEFIELD VA
1048 PM EDT SUN SEP 30 2001

VAZ095-098>100-010400-
/O.CAN.KAKQ.CF.A.0007.000000T0000Z-011001T0400Z/
NORFOLK/PORTSMOUTH-VIRGINIA BEACH-ACCOMACK-NORTHAMPTON-
1048 PM EDT SUN SEP 30 2001

...COASTAL FLOOD WATCH IS CANCELLED...

FOR AREAS ALONG THE SOUTHERN SHORE OF THE CHESAPEAKE BAY...INCLUDING NORFOLK, PORTSMOUTH, AND VIRGINIA BEACH...THE POTENTIAL FOR MINOR COASTAL FLOODING EXISTS WITH THE HIGH TIDE MONDAY MORNING. THE THREAT FOR MINOR COASTAL FLOODING WILL BE GREATEST IN THE NORFOLK...PORTSMOUTH AND VIRGINIA BEACH AREAS.

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MDZ025-011000-
/O.CON.KAKQ.CF.W.0004.000000T0000Z-011001T1000Z/
MARYLAND BEACHES-
1048 PM EDT SUN SEP 30 2001

...COASTAL FLOOD WARNING REMAINS IN EFFECT UNTIL 6 AM EDT MONDAY...

AN INTENSIFYING LOW PRESSURE SYSTEM OFF THE MIDDLE ATLANTIC COAST WILL PRODUCE NORTH AND NORTHEAST WINDS OF 25 TO 35 MILES PER HOUR TONIGHT...WITH HIGHER GUSTS. THESE WINDS WILL PRODUCE SEAS OF 10 TO 15 FEET FROM FENWICK ISLAND DELAWARE SOUTH TO CURRITUCK BEACH LIGHT NORTH CAROLINA...AS WELL AS GENERATE TIDES OF 2 TO 3 FEET ABOVE NORMAL IN THE CHESAPEAKE BAY FROM NEW POINT COMFORT TO CAPE HENRY...AND ALONG COASTAL AREAS FROM FENWICK ISLAND TO CURRITUCK BEACH LIGHT.

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NCZ102-011000-
/O.CON.KAKQ.SU.Y.0016.000000T0000Z-011001T1000Z/

EASTERN CURRITUCK-
1048 PM EDT SUN SEP 30 2001

...HIGH SURF ADVISORY REMAINS IN EFFECT UNTIL 6 AM EDT MONDAY...

AN INTENSIFYING LOW PRESSURE SYSTEM OFF THE MIDDLE ATLANTIC COAST WILL PRODUCE NORTH AND NORTHEAST WINDS OF 25 TO 35 MILES PER HOUR TONIGHT...WITH HIGHER GUSTS. THESE WINDS WILL PRODUCE SEAS OF 10 TO 15 FEET FROM FENWICK ISLAND DELAWARE SOUTH TO CURRITUCK BEACH LIGHT NORTH CAROLINA...AS WELL AS GENERATE TIDES OF 2 TO 3 FEET ABOVE NORMAL IN THE CHESAPEAKE BAY FROM NEW POINT COMFORT TO CAPE HENRY...AND ALONG COASTAL AREAS FROM FENWICK ISLAND TO CURRITUCK BEACH LIGHT.

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Example CFW in Tropical Cyclone situation: Cancels Coastal Flood Watch for one segment, Continues Coastal Flood Watch for other segments

WHUS42 KTBW 142120
CFWTBW

COASTAL HAZARD MESSAGE
NATIONAL WEATHER SERVICE TAMPA BAY AREA – RUSKIN FL
520 PM EDT TUE SEP 14 2004

.POWERFUL HURRICANE IVAN WILL CONTINUE TO MOVE ON A NORTH-NORTHWEST TRACK THROUGH THE SOUTH CENTRAL GULF OF MEXICO TONIGHT AND EARLY WEDNESDAY. THE STORM IS GENERATING LARGE SWELLS OF OVER 12 FEET AND WILL BRING DANGEROUS WATER ACTION ALONG THE COAST BY TONIGHT THROUGH WEDNESDAY. THIS INCLUDES HIGH SURF...LARGE WAVES...STRONG UNDERTOWS...AND RIP CURRENTS.

FLZ039-142230-
/O.CAN.KTBW.CF.A.0014.000000T0000Z-040915T1700Z/
LEVY-
INCLUDING THE CITIES OF...CEDAR KEY AND YANKEETOWN
520 PM EDT TUE SEP 14 2004

...COASTAL FLOOD WATCH IS CANCELLED...

THE COASTAL FLOOD WATCH HAS BEEN REPLACED WITH A TROPICAL STORM WARNING.

DUE TO THE SIZE OF HURRICANE IVAN NEAR TROPICAL STORM FORCE WINDS WILL BEGIN TO IMPACT COASTAL SECTIONS OF LEVY COUNTY ON WEDNESDAY

AND WILL CONTINUE INTO EARLY THURSDAY. SEAS OVER THE ADJACENT GULF WILL BE BUILDING IN EXCESS OF 12 FEET AND WATER LEVELS ALONG THE LEVY COUNTY COAST ARE EXPECTED TO RISE TO 2 TO 4 FEET ABOVE NORMAL TIDES BEGINNING WEDNESDAY EVENING...AND COULD INCREASE TO 3 TO 5 FEET ABOVE NORMAL TIDES WEDNESDAY NIGHT INTO THURSDAY.

PLEASE SEE THE HURRICANE LOCAL STATEMENT...WITH WMO PRODUCT HEADER HTUS82 KTWB...FOR DETAILED INFORMATION ON IMPACTS FROM HURRICANE IVAN.

FLZ042-048>051-055-060>062-065-150600-
/O.CON.KTBW.CF.A.0014.000000T0000Z-040915T1700Z/
CHARLOTTE-CITRUS-HERNANDO-HILLSBOROUGH-LEE-MANATEE-PASCO-
PINELLAS-SARASOTA-
INCLUDING THE CITIES OF...BRADENTON...BRADENTON
BEACH...CLEARWATER...CRYSTAL RIVER...FORT MYERS...HERNANDO
BEACH...HUDSON...NEW PORT RICHEY...PORT CHARLOTTE...PUNTA
GORDA...SANIBEL...SARASOTA...TAMPA...VENICE
520 PM EDT TUE SEP 14 2004

...COASTAL FLOOD WATCH REMAINS IN EFFECT UNTIL 1 PM EDT WEDNESDAY...

IN RESPONSE TO HURRICANE IVAN TIDES ARE EXPECTED TO RISE TO 2 TO 4 FEET ABOVE NORMAL FROM WEDNESDAY EVENING INTO THURSDAY. NWS TAMPA BAY WILL CONTINUE TO CLOSELY MONITOR THE SITUATION. THE POTENTIAL EXISTS FOR COASTAL FLOODING. COASTAL FLOOD WARNINGS FOR THESE AREAS WOULD BE ISSUED USING THE COASTAL HAZARD MESSAGE PRODUCT.

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Example CFW to cancel High Surf Advisory; continue High Surf Warning; cancel High Surf Warning and issue new High Surf Advisory; continue High Surf Advisory

WHHW40 PHFO 012000
CFWHFO

COASTAL HAZARD MESSAGE
NATIONAL WEATHER SERVICE HONOLULU HI
1000 AM HST SAT NOV 1 2003

.OVERVIEW...Optional short overview. SURF HEIGHTS ARE GIVEN IN FULL FACE VALUES.

HIZ014-023-026-012100-

/O.CAN.PHFO.SU.Y.0039.000000T0000Z-031102T0800Z/
LANAI MAKAI-KOHALA-KONA-
1000 AM HST SAT NOV 1 2003

...HIGH SURF ADVISORY IS CANCELLED...

. SURF HEIGHTS ARE BELOW ADVISORY CRITERIA OF 8 FEET AND WILL
CONTINUE TO DECREASE THROUGH SUNDAY.

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HIZ003-006-007-020200-
/O.CON.PHFO.SU.W.0011.000000T0000Z-031102T0800Z/
KAUAI LEEWARD-OAHU NORTH SHORE-WAIANAE COAST-
1000 AM HST SAT NOV 1 2003

...HIGH SURF WARNING REMAINS IN EFFECT UNTIL 10 PM HST THIS EVENING...

FOR THE NORTH AND WEST FACING SHORES OF KAUAI AND OAHU...A LARGE
NORTHWEST SWELL WILL PRODUCE DANGEROUS SURF HEIGHTS AT OR ABOVE
25 FEET...SLOWLY DECREASING SUNDAY.

THE HIGH SURF WILL PRODUCE DANGEROUS CONDITIONS. BEACH GOERS
ALONG THE AFFECTED SHORES ARE ADVISED TO USE CAUTION AND STAY
AWAY FROM THE SHORE BREAK. THE HIGH SURF MAY ALSO RESULT IN SOME
BEACH EROSION OR PROPERTY DAMAGE.

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HIZ012-013-017-019-020200-
/O.CAN.PHFO.SU.W.0011.000000T0000Z-031102T0800Z/
/O.NEW.PHFO.SU.Y.0040.031101T2200Z-031102T0800Z/
MOLOKAI LEEWARD-MOLOKAI WINDWARD-WINDWARD WEST MAUI-MAUI
CENTRAL VALLEY-
1000 AM HST SAT NOV 1 2003

...HIGH SURF WARNING IS CANCELLED...

...HIGH SURF ADVISORY IN EFFECT UNTIL 10 PM HST THIS EVENING...

FOR THE NORTH AND WEST FACING SHORES OF MOLOKAI AND MAUI...A
NORTHWEST SWELL WILL PRODUCE SURF HEIGHTS OF 15 TO 20
FEET...DECREASING LATER ON SUNDAY.

THE HIGH SURF WILL PRODUCE DANGEROUS CONDITIONS. BEACH GOERS
ALONG THE AFFECTED SHORES ARE ADVISED TO USE CAUTION AND STAY
AWAY FROM THE SHORE BREAK.

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HIZ003-008-009-020-025-020200-
 /O.CON.PHFO.SU.Y.0039.000000T0000Z-031102T0800Z/
 KAUAI WINDWARD-OAHU KOOLAU-OLOMANA-WINDWARD HALEAKALA-BIG
 ISLAND NORTH AND EAST-
 1000 AM HST SAT NOV 1 2003

...HIGH SURF ADVISORY REMAINS IN EFFECT UNTIL 10 PM HST THIS EVENING...

FOR THE EAST FACING SHORES OF THE BIG ISLAND...MAUI...OAHU AND KAUAI ...
 STRONG TRADEWINDS ARE RESULTING IN A LARGER THAN NORMAL SWELL
 FROM THE EAST. SURF HEIGHTS WILL BE AROUND 10 FEET...DECREASING TO
 BELOW 8 FEET SUNDAY MORNING.

THE HIGH SURF WILL PRODUCE DANGEROUS CONDITIONS. BEACH GOERS
 ALONG THE AFFECTED SHORES ARE ADVISED TO USE CAUTION AND STAY
 AWAY FROM THE SHORE BREAK.

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 FORECASTER

7. Example NWS Tide Report

SOUS44 KLIX 051301
 TIDNEW

LOUISIANA COASTAL TIDE DATA
 NATIONAL WEATHER SERVICE NEW ORLEANS LA
 705 AM CST TUE FEB 05 2002

...LOUISIANA COASTAL TIDE DATA FOR...WED FEB 06 2002

CALCASIEU PASS...LIGHTHOUSE WHARF							
LO	4 17 AM	STAGE	-1.2	HI	12 14 PM	STAGE	0.9
LO	6 06 PM	STAGE	0.2	HI	9 36 PM	STAGE	0.4
SHELL ISLAND...ATCHAFALAYA BAY							
LO	5 15 AM	STAGE	-1.6	HI	4 10 PM	STAGE	0.2
BARATARIA PASS...GRAND ISLE							
LO	4 12 AM	STAGE	-1.1	HI	5 50 PM	STAGE	0.5
RIGOLETS...LAKE BORGNE							
LO	6 53 AM	STAGE	-0.9	HI	8 03 PM	STAGE	0.4
SOUTHWEST PASS...MISSISSIPPI RIVER							
LO	2 40 AM	STAGE	-1.2	HI	4 00 PM	STAGE	0.6

WINE ISLAND...TERREBONNE BAY
LO 5 24 AM STAGE -1.2 HI 5 58 PM STAGE 0.6

5. Example Great Lakes Water Level Report

SXUS08 KDTX 281504
OMRDTX

GREAT LAKES WATER LEVELS
NATIONAL WEATHER SERVICE DETROIT/PONTIAC MI
1005 AM EST MON JAN 28 2002

THE FOLLOWING ARE THE MEAN LAKE LEVELS FORECAST OVER THE NEXT
WEEK.

LAKE	LEVEL... INCHES FROM CHART DATUM
SUPERIOR	1
MICHIGAN AND HURON	-2
ST CLAIR	10
ERIE	15
ONTARIO	16