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PNSWSH

Service Change Notice 17-16  
National Weather Service Headquarters Silver Spring MD  
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To:           Subscribers:  
              -NOAA Weather Wire Service  
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              -NOAAPORT  
              Other NWS Partners and NWS Employees

From:         Allison Allen  
              Chief, Marine, Tropical and Tsunami Services Branch

Subject:      Addition of Tropical Cyclone Storm Surge Watches  
              and Warnings for the Atlantic and Gulf Coasts of  
              the Contiguous United States effective on or around  
              June 1, 2017

Reference PNS16-21 Amended:

<http://www.nws.noaa.gov/om/notification/pns16-21tcvhlchangesforsswwaaa.htm>

Effective on or around June 1, 2017, NWS will implement new Storm Surge Watches and Warnings in association with Atlantic basin tropical cyclones (i.e., hurricanes, tropical storms and tropical depressions), subtropical cyclones or post-tropical cyclones affecting the contiguous United States. The new Storm Surge Watch/Warning will be integrated into the current NWS product suite, including all applicable tropical cyclone graphical and textual advisory products. Definitions for the Storm Surge Watch and Warning are provided below:

**Storm Surge Watch:** The possibility of life-threatening inundation from rising water moving inland from the shoreline somewhere within the specified area, generally within 48 hours, in association with a tropical cyclone, a subtropical cyclone or a post-tropical cyclone. The watch may be issued earlier when other conditions, such as the onset of tropical-storm-force winds, are expected to limit the time available to take protective actions for surge (e.g., evacuations). The watch may also be issued for locations not expected to receive life-threatening inundation but which could potentially be isolated by inundation in adjacent areas.

**Storm Surge Warning:** The danger of life-threatening inundation from rising water moving inland from the shoreline somewhere within the specified area, generally within 36 hours, in association with a tropical cyclone, a subtropical cyclone or a post-tropical cyclone. The warning may be issued earlier when other conditions, such as the onset of tropical-storm-force

winds, are expected to limit the time available to take protective actions for surge (e.g., evacuations). The warning may also be issued for locations not expected to receive life-threatening inundation, but which could potentially be isolated by inundation in adjacent areas.

Storm Surge Watches or Warnings will not be issued for the Pacific hurricane basin or Weather Forecast Office (WFO) San Juan's area of responsibility at this time.

NWS will continue to issue Coastal Flood Watches, Warnings, and Advisories for flooding of coastal areas associated with storms that are not tropical cyclones, subtropical cyclones, or post-tropical cyclones. Most frequently, they will be issued for winter storms, unusually high tides, or prolonged periods of strong onshore winds that have pushed water into places it does not normally go. NWS may issue Coastal Flood Advisories in areas adjacent to Tropical Cyclone Wind or Storm Surge Watches or Warnings to alert for potentially dangerous coastal flooding that is below the threshold established by the NWS for life-threatening inundation.

Changes to the Hurricane Local Statement (HLS) product to reflect Storm Surge Watches or Warnings issued by WFOs will be limited to the "NEW INFORMATION" section of the product. The subsections for "CHANGES TO THE WATCHES AND WARNINGS" and "CURRENT WATCHES AND WARNINGS" will include Storm Surge Watches or Warnings when condition warrant.

National Hurricane Center (NHC) Tropical Cyclone Public Advisory (TCP) products will now list Storm Surge Watches and Warnings, as applicable, under the "WATCHES AND WARNINGS" section. More detailed information about the storm surge hazard will be provided in the "HAZARDS AFFECTING LAND" section. Storm Surge Watches and Warnings will be listed in the "SUMMARY OF WATCHES AND WARNINGS IN EFFECT" section of the Tropical Cyclone Forecast/Advisory (TCM) product.

In addition, the Storm Surge Watch/Warning graphic previously issued by NHC as a prototype will become operational at the start of the 2017 Atlantic hurricane season. Because Storm Surge Watches and Warnings are issued on a grid rather than for entire NWS zones or for entire counties, users are highly encouraged to use the Keyhole Markup Language (KML) files available on the NHC website, rather than the Valid Time Event Code (VTEC), to obtain the most timely and accurate depiction of the area under a Storm Surge Watch or Warning. This information is also available in the NWS National Digital Forecast Database (NDFD).

All Tropical Cyclone Watch/Warning (TCV) products issued by NHC and WFOs for tropical cyclones, subtropical cyclone and post-tropical cyclones affecting the Atlantic and Gulf coasts of the contiguous United States will include VTEC for Storm Surge

Watches and/or Warnings when conditions warrant. The following VTEC phenomenon and significance codes will be used:

SS.A - Storm Surge Watch  
SS.W - Storm Surge Warning

Examples of the WFO and NHC issued TCV products with the new Storm Surge Watches and Warnings can be viewed at:

[www.nhc.noaa.gov/experimental/tcv](http://www.nhc.noaa.gov/experimental/tcv)

VTEC will continue to be used to activate some dissemination systems, such as NOAA Weather Radio All-Hazards (NWR). While users are highly encouraged to use the KML files to display Storm Surge Watches and Warnings, the NWS recognizes many users rely on VTEC to parse and disseminate information. VTEC users should be aware the geographical area associated with a Storm Surge Watch or Warning using VTEC will be larger than the actual area of the gridded-based watch or warning as seen in the Storm Surge Watch/Warning Graphic KML file or the NDFD.

Common Alerting Protocol (CAP) formatted WFO TCV products will be produced and available through a number of dissemination sources including the NWS website and NOAAport under the header XOUS5x. The CAP messages will be used to activate Wireless Emergency Alerts (WEA) and to populate NWS WFO watch/warning/advisory maps and point forecast pages. Users of these products and direct users of the CAP messages should be aware that the geographical area associated with a Storm Surge Watch or Warning using CAP will be larger than the actual grid-based area of the watch or warning as depicted by the NDFD grids or KML file. The CAP-associated geographical watch/warning areas will, however, more closely match the true gridded watch/warning than the areas identified by VTEC, as the CAP-associated areas will be limited to the portions of zones known to be susceptible to tropical cyclone storm surge flooding.

Beginning in the 2017 hurricane season, the NWS may request Emergency Alert System (EAS) and WEA activation for the Storm Surge Warning. In most jurisdictions, the NWS will not request EAS or WEA activation for the Storm Surge Watch. Specific details about changes to the EAS for your area will be provided by your local WFO in Public Information Statements, on WFO web pages, and over NWR. Broadcasters should note that if EAS equipment is not updated and the WFO requests EAS activation with the new event code(s), EAS encoder/decoder equipment will usually decode the information received as an "UNKNOWN" event code.

Storm Surge Watches and Warnings will be broadcast over NWR. Current NWR receivers providing a limited, caption-like message display will likely show wording such as "UNKNOWN WATCH" or "UNKNOWN WARNING." Receivers equipped with Special Area Message Encoding (SAME) capability, and properly programmed, should

automatically turn on for counties affected by a Storm Surge Watch or Warning. The 1050-Hz Warning Alarm Tone (WAT) will generally be used for the Storm Surge Warning but will not be used for the Storm Surge Watch.

The NWS is seeking comments now through March 4, 2017, on changing the criteria for issuing tropical cyclone watches and warnings to include certain land-threatening disturbances that are not yet tropical cyclones. If this change is adopted, the NWS would have the option to issue Storm Surge Watches and Warnings for such disturbances. Please see NWS Public Information Statement 17-04 linked below for more details:

[http://www.nws.noaa.gov/om/notification/pns17-04potential\\_cyclones.htm](http://www.nws.noaa.gov/om/notification/pns17-04potential_cyclones.htm)

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National Public Information Statements are online at:

<http://www.weather.gov/os/notif.htm>

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