National Hurricane Center to issue storm surge watch and warning graphic

Beginning with the 2015 hurricane season, NOAA’s National Hurricane Center (NHC) will offer a prototype storm surge watch/warning graphic to highlight those areas along the Gulf and Atlantic coasts of the United States that have a significant risk of life-threatening inundation by storm surge from a tropical cyclone.

Here is an example of the new graphic, which will be available on the NHC website (www.hurricanes.gov):

Prototype Storm Surge Watch/Warning Graphic*

*Prototype Product - For official NWS tropical cyclone information, see hurricanes.gov. This graphic displays areas that would qualify for inclusion under a storm surge watch/watching that is under development by the National Weather Service. A storm surge warning/watch/watching indicates there is a danger of life-threatening inundation from rising water moving inland from the shoreline somewhat within the specified area, generally within 36 hours. A storm surge watch/watching indicates that life-threatening inundation is possible somewhere within the specified area, generally within 48 hours. All persons, regardless of whether or not they are in the highlighted areas shown in the graphic, should promptly follow evacuation orders and other instructions from local officials. User feedback on the prototype storm surge watch/watching graphic can be provided at LINK. Upon completion of development, formal public comment/review of this graphic and the experimental storm surge watching will take place in 2016, with operational implementation planned in 2017, if approved.
The new graphic is designed to introduce the concept of a watch or warning specific to the storm surge hazard. Storm surge is often the greatest threat to life and property from a tropical cyclone, and it can occur at different times and at different locations from a storm’s hazardous winds. In addition, while most coastal residents can remain in their homes and be safe from a tropical cyclone’s winds, evacuations are generally needed to keep people safe from storm surge. Having separate warnings for these two hazards should provide emergency managers, the media, and the general public better guidance on the hazards they face when tropical cyclones threaten. NHC and NOAA National Weather Service (NWS) Forecast Offices will determine the area most at risk from life-threatening surge through a collaborative process. In addition to the graphic, the highlighted areas will be mentioned in Hurricane Local Statements issued by NWS Forecast Offices in the affected areas and in the Hazards section of the NHC Public Advisory.

Here is a sample surge statement from the Hazards section of a Public Advisory:

HAZARDS AFFECTING LAND

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STORM SURGE: The combination of a dangerous storm surge and the tide will cause normally dry areas near the coast to be flooded by rising waters moving inland from the shoreline. There is a danger of life-threatening inundation during the next 36 hours along the North Carolina coast from Cape Fear to Duck, including the Outer Banks, the Pamlico and Albemarle Sounds, and along adjacent rivers and estuaries. For a depiction of areas at risk, please see the prototype National Weather Service storm surge watch/warning graphic. This is a life-threatening situation. Persons located within these areas should take all necessary actions to protect life and property from rising water and the potential for other dangerous conditions. Promptly follow evacuation and other instructions from local officials.

The graphic will be experimental for at least two years, during which time comments from users will be solicited and considered. Only the graphic itself will be available during the experimental period; the underlying raw data, including shapefiles, will not be disseminated.

The new watch/warning graphic complements the experimental Potential Storm Surge Flooding Map, which debuted during 2014’s Hurricane Arthur. The Potential Storm Surge Flooding Map shows the geographical areas where inundation from storm surge could occur and how high above ground the water could potentially reach in those areas, based on the latest official NHC forecast and its likely errors.

As part of a phased implementation, NHC plans to consolidate the dissemination of wind and surge watches and warnings in 2016. This new process will merge inland and coastal warning information for both threats into a single message. After incorporating both user and partner input, the new storm surge warning system is expected to become fully operational in 2017.

Additional information:
- NHC Storm Surge resources website http://www.nhc.noaa.gov/surge/resources.php

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