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Service Change Notice 23-25  
National Weather Service Headquarters Silver Spring MD  
1000 AM EST Thu Feb 23 2023

To:           Subscribers:  
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From:         Greg Schoor, Chief  
              Marine, Tropical and Tsunami Services Branch

Subject:      Expansion of the Potential Storm Surge Flooding Map to Puerto Rico and the U.S. Virgin Islands on or around May 15, 2023

Effective on or around May 15, 2023, the Potential Storm Surge Flooding Map issued by the National Hurricane Center (NHC) that is currently produced for the U.S. Gulf and East Coasts will be expanded to include Puerto Rico and the U.S. Virgin Islands (USVI).

The Potential Storm Surge Map shows:

- Geographical areas where inundation from storm surge could occur.
- How high above ground the water could reach in those areas.

Areas of possible storm surge flooding for a given storm are represented in different colors on the map based on water level:

- Blue: greater than 1 foot above ground
- Yellow: greater than 3 feet above ground
- Orange: greater than 6 feet above ground
- Red: greater than 9 feet above ground

The Potential Storm Surge Flooding map takes into account:

- Flooding due to storm surge from the ocean, including adjoining tidal rivers, sounds, and bays.
- Normal astronomical tides.
- Land elevation.
- Uncertainties in the track, landfall location, intensity, forward speed and size of the cyclone.

The map does not take into account freshwater flooding from rainfall, riverine discharge, and flooding inside and overtopping of certain levees. However, unlike the Potential Storm Surge Flooding Maps issued elsewhere, the map issued for Puerto Rico and the USVI will take wave action into account.

The intertidal zone, the area that is above water at low tide and under

water at high tide, is displayed with a user-selectable mask layer on the Potential Storm Surge Flooding Map. This mask layer allows users to differentiate between areas that could experience consequential flooding of normally dry ground and areas that routinely flood during typical high tides. The intertidal mask is depicted as gray on the Potential Storm Surge Flooding Map.

NHC will release the initial map for any storm that is expected to affect the Gulf or East Coast or Puerto Rico and the USVI when it issues a hurricane or storm surge watch or warning, but may choose to issue it at other times if conditions warrant it.

The map is subject to change every 6 hours with each new NHC full advisory package. Due to the processing time required to generate the storm surge guidance and produce the map, it is available about 60 to 90 minutes after the NHC advisory.

The map provides a reasonable worst-case scenario for flooding at particular locations due to storm surge, and therefore conveys the flooding that a person should be prepared for. Specifically, the map depicts the amount of flooding over normally dry land that has a 1-in-10 (10 percent) chance of being exceeded. The map is created from multiple runs of the Sea, Lake, and Overland Surges from Hurricanes (SLOSH) model.

Additional information and map examples are online at:

<http://www.nhc.noaa.gov/surge/inundation>

The webpage listed above with examples of the Potential Storm Surge Inundation Map will not be updated to include the extension of the map to Puerto Rico and the USVI until closer to the implementation date.

When a map is issued, it will be available on the NHC website at:

<http://www.nhc.noaa.gov>

Geographic Information System (GIS)-friendly data will be available for each advisory this graphic is active. Two GIS datasets in GeoTIFF format will be available for download: without intertidal mask and with intertidal mask. Each dataset will be available for download as a .zip file from a link found below the map viewer of the active storm on the NHC webpage or can be found via the NHC GIS webpage at:

<http://www.nhc.noaa.gov/gis>

Please direct any questions regarding this notice to:

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National Service Change Notices are online at:

<https://www.weather.gov/notification/>

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