

PRODUCT DESCRIPTION DOCUMENT

Tropical Cyclone Storm Surge Probabilities

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Part I - Mission Connection

- a. Product Description - The Tropical Cyclone Storm Surge Probabilities graphics show probabilities, in percent, of storm surge exceeding 2 feet through 25 feet, at 1 foot intervals (e.g., the probabilities in percent, of storm surge exceeding 2 feet, 3 feet, 4 feet..., 25 feet). These storm surge graphics are based upon an ensemble of Sea, Lake, and Overland Surge from Hurricanes (SLOSH) model runs using the National Hurricane Center (NHC) official advisory and accounts for track, size, and intensity errors based on historical errors. Storm surge values used in the calculations are produced by the SLOSH model; details on that model are available via:
http://www.nhc.noaa.gov/ssurge/ssurge_slosh.shtml.
- b. Purpose – This product is intended to provide users with information which enhances their ability to make preparedness decisions specific to their own situations. Customers have requested additional tropical cyclone probabilistic information, and the National Research Council’s Fair Weather Report encourages probabilistic products.
- c. Audience – The emergency management community is the primary target audience. However, this product will also be widely used by other federal, state, and local government agencies; the media; maritime interests; and the general public.
- d. Presentation Format – Graphics are provided on a Google map interface at:
<http://www.nhc.noaa.gov>.

Data will be provided on NOAAPORT in GRIB2 format.

Data will be provided to the National Digital Guidance Database in GRIB2 format.

Feedback Method

Technical questions may be addressed to:

National Weather Service
Attn: Arthur Taylor
W/OST25
1325 East-West Highway
Silver Spring, MD 20910

or e-mail to: arthur.taylor@noaa.gov

Policy questions may be addressed to:

National Weather Service
Attn: Timothy Schott
W/OS21
1325 East West Highway

Silver Spring, MD 20910

or e-mail to: timothy.schott@noaa.gov

Part II - Technical Description

- a. Format & Science Basis - The Tropical Cyclone Storm Surge Probabilities product is a statistical combination of an ensemble of SLOSH model runs. All ensemble members are based on the current NHC's tropical cyclone advisory. Ensemble members take into account historical error characteristics by varying input parameters such as forward speed, cross track location, radius of maximum wind, and hurricane intensity.
- b. Product Availability - The product is available whenever a hurricane watch or hurricane warning is in effect for any portion of the Gulf or Atlantic coasts of the continental United States. Updates to the product are produced about one hour after the issuance of routine NHC tropical cyclone advisories (03, 09, 15, and 21 Coordinated Universal Time – UTC).

A static example of the product is available at:

<http://www.nhc.noaa.gov/aboutnhcgraphics.shtml#PSURGE>

During times of tropical cyclone activity the graphic can be found at:

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

- c. Additional Information
A full description of this and other NWS Tropical Cyclone Weather Services Program Products is provided in NWSI 10-601, which is available on the Internet at:
<http://www.nws.noaa.gov/directives/010/010.htm>