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From: Judy Ghirardelli
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Meteorological Development Laboratory

Subject: Soliciting Public Comments on the Proposed Upgrades to the P-ETSS and ETSS Models through May 22, 2020

The Decision Support Branch (DSB) of the Meteorological Development Laboratory (MDL) is proposing to upgrade the Extra-Tropical Storm Surge (ETSS) and Probabilistic Extra-Tropical Storm Surge (P-ETSS) in the fall of 2020. The NWS is seeking comments on the proposed changes through Friday, May 22, 2020. If approved, a Service Change Notice (SCN) will be issued at least 30 days before implementation of this upgraded product with more detailed information.

The P-ETSS model will be upgraded to:

A. At 0000 Coordinated Universal Time (UTC) and 1200 UTC, run ETSS v2.3 with the 3-hourly 0.25 degree wind and pressure fields from the new 31 member Global Ensemble Forecast System's (GEFS) and 3-hourly 0.5 degree wind and pressure fields from the 21 member Canadian Ensemble Forecast, instead of the original 3-hourly 0.5 degree 21 member GEFS.

B. At 0600 UTC and 1800 UTC, run ETSS V2.3 with the 3-hourly 0.25 degree wind and pressure fields from the new 31 member GEFS along with 1 cycle old 3-hourly 0.5 degree wind and pressure fields from the 21 member Canadian Ensemble Forecast, instead of the original 3-hourly 0.5 degree 21 member GEFS.

C. Increase the number of P-ETSS forecast stations from 333 to 520, while updating the current stations with the latest tidal and datum information.

D. Operationalize station bias adjustment post-processing and image production.

The core ETSS model, which P-ETSS is dependent on, will be upgraded to ETSS v2.3 with the following updates:

A. Extend the East Coast basin to cover Puerto Rico and the U.S. Virgin Islands.
B. Extend the Gulf of Mexico basin to cover the entire Gulf of Mexico.

C. Add an initial water condition.

Additionally, the ETSS model will be upgraded to:

A. Increase the resolution of the input Global Forecast System's (GFS) winds from 3-hourly, 0.5 degree (i.e., 55-km) resolution to 1-hourly, 13-km resolution.

B. Increase the number of ETSS forecast stations from 333 to 520, while updating the current stations with the latest tidal and datum information.

C. Operationalize image production.

Expected benefits from this upgrade include improved overland inundation guidance and station guidance skill, as well as a larger ensemble spread in the P-ETSS guidance. For verification statistics, please see:

https://slosh.nws.noaa.gov/etss/data/implementation/

Any questions, comments, or requests regarding this implementation should be directed to the contacts below. NWS will review any feedback and decide whether to proceed.

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National Public Information Statements are online at:

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

NNNN