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From: Edward Myers
 Chief, Coastal Marine Modeling Branch
 NOS/Coast Survey Development Laboratory

Subject: Soliciting Comments on the Upgrade of the Global Extratropical Surge and Tide Operational Forecast System (Global ESTOFS) to Version 2.0.1 through April 8, 2021

The Coast Survey Development Laboratory (CSDL) is proposing to upgrade the Global Extratropical Surge and Tide Operational Forecast System (Global ESTOFS) to Version 2.0.1 in the summer of 2021. CSDL is seeking comments on this proposed upgrade through April 8, 2021. If approved, a Service Change Notice (SCN) will be issued at least 30 days before implementation of Global ESTOFS V2.0.1 with more detailed information.

Global ESTOFS V2.0.1 represents a major upgrade over V1.0.6, implemented in November 2020. V2.0.1 contains several enhancements improving model performance, resolution, and coverage. Model upgrades include:

- Inclusion of levees and dikes along the U.S. Atlantic coast, which are important for flooding and navigation. To accommodate the levees, a small number of changes will result in the model grid and topography/bathymetry in the U.S. Atlantic Coast region. These few changes will be reflected in the native model resolution field files of water level forecast guidance:

estofs.tCC.fields.{cwl,htp,swl}.nc, where:

CC is cycle 00, 06, 12 and 18 Coordinated Universal Time (UTC)
cwl: combined surge and tide water level
htp: harmonic tidal prediction water level component
swl: surge only water level component

- Improved spatial resolution in waters surrounding Puerto Rico. These changes will be reflected in the same native model field files of water level forecast guidance:

estofs.tCCz.fields.{cwl,htp,swl}.nc

- Possible upgrade of bottom friction representation by the use of spatially-varying Manning's N.
- Updates to the topography and bathymetry with the latest source data for Pacific Island regions.
- Output of depth-integrated current velocities for future use in the Nearshore Wave Prediction System (NWPS). NWPS hopes to resolve wave-current interactions, e.g., steepening waves, important for weather/wave forecasters in small/large inlets. For this upgrade, currents will only be output to WCOSS for use in NWPS; the depth-integrated current output from Global ESTOFS may be expanded for broader public use in a future upgrade.

CSDL will evaluate all comments to determine whether to proceed with all portions of this upgrade.

A webpage describing Global ESTOFS and providing real-time verification statistics can be found at:

<https://polar.ncep.noaa.gov/estofs/>

Global ESTOFS model forecast guidance can also be viewed at nowcast.noaa.gov.

Global ESTOFS output can also be accessed via the AWS cloud courtesy of the NOAA Big Data Program at:

<https://registry.opendata.aws/noaa-gestofs/>

Send comments on this proposal for the upgrade of Global ESTOFS to Version 2.0.1 by April 8, 2021 to:

Michael Lalime
michael.lalime@noaa.gov

National Public Information Statements are online at:

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

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