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PNSWSH

Service Change Notice 21-58 Updated  
National Weather Service Headquarters Silver Spring MD  
440 PM EDT Thu Jul 1 2021

To:           Subscribers:  
              -NOAA Weather Wire Service  
              -Emergency Managers Weather Information Network  
              -NOAAPort  
              Other NWS Partners, Users and Employees

From:         Michael Farrar, Director  
              National Centers for Environmental Prediction

Subject: Updated: Upgrade of the Global Extratropical Surge and Tide  
Operational Forecast System (Global ESTOFS) to Version 2.0.3: Effective  
July 27, 2021

Updated to reflect new implementation date of July 27, 2021.

Effective on or about July 27, 2021, beginning with the 1200 Coordinated  
Universal Time (UTC) cycle, the National Centers for Environmental  
Prediction (NCEP) Central Operations (NCO) will upgrade the Global  
Extratropical Surge and Tide Operational Forecast System (Global ESTOFS)  
to Version 2.0.3.

The new upgrade represents a major upgrade over V1.0.6, implemented in  
November 2020. Global ESTOFS V2.0.3 contains several enhancements  
improving model performance, resolution and coverage.

Expected benefits from this upgrade include:

- Inclusion of levees and dikes around New Orleans, LA and the lower  
Mississippi River, which are important for flooding and navigation.
- Improved spatial resolution in waters surrounding Puerto Rico (PR), and  
the addition of a floodplain for PR and surrounding islands.
- Output of depth-integrated current velocities for 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.
- Improvements to coastal topography, bathymetry, and bottom friction and  
subsequent wetting/drying performance, to remediate persistent high water  
spots observed to occur in some coastal areas.

Output changes for NCEP NOAA Operational Model Archive and Distribution System (NOMADS) and FTPPRD web services:

Additional files:

The following files will be made available at:

<https://nomads.ncep.noaa.gov/pub/data/nccf/com/estofs/prod/> and  
<ftp://ftpprd.ncep.noaa.gov/pub/data/nccf/com/estofs/prod/>

estofs.tCCz.alaska.{cwl,htp,swl}.grib2  
estofs.tCCz.conus.east.{cwl,htp,swl}.grib2  
estofs.tCCz.conus.west.{cwl,htp,swl}.grib2  
estofs.tCCz.hawaii.{cwl,htp,swl}.grib2  
estofs.tCCz.puertori.{cwl,htp,swl}.grib2

Where tCCz is forecast cycle: CC = 00, 06, 12, 18; cwl = combined water level, htp = tidal predictions, swl = surge-only component.

Timeliness changes:

The following NetCDF htp (tidal predictions) fields and points files will be available up to 27 minutes earlier:

estofs.tCCz.{fields,points}.htp.nc

Where tCCz is forecast cycle: CC = 00, 06, 12, 18.

Resolution changes only to NetCDF fields files:

The new unstructured grid consists of over 8.45 million nodes, which includes an increase in coastal grid resolution from up to 500 m to up to 120 m for Puerto Rico (PR). There is also an addition of a floodplain for PR, which extends the grid inland up to 6 m above Mean Sea Level (MSL) for PR and surrounding islands. This resolution change is *\*only\** for the following NetCDF fields files:

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

Where tCCz is forecast cycle: CC = 00, 06, 12, 18; cwl = combined water level, htp = tidal predictions, swl = surge-only component.

NOAAPort/Satellite Broadcast Network (SBN)

Timeliness:

There are no timeliness changes for data distributed over NOAAPort for the upgrade of Global ESTOFS to Version 2.0.3.

WMO headers:

There are no changes to the World Meteorological Organization (WMO) headers for the upgrade of Global ESTOFS to Version 2.0.3.

The Ocean Prediction Center (OPC) of NWS will continue to deliver graphics of the model outputs on the following site:

[https://ocean.weather.gov/estofs/estofs\\_surge\\_info.php](https://ocean.weather.gov/estofs/estofs_surge_info.php)

A consistent parallel feed of data is available on the NCEP HTTPS site at the following URL:

<https://para.nomads.ncep.noaa.gov/pub/data/nccf/com/estofs/para>

NCEP urges all users to ensure their decoders can handle changes in content order, changes in the scaling factor component within the product definition section (PDS) of the gridded binary (GRIB) files, and volume changes. These elements may change with future NCEP model implementations. NCEP will make every attempt to alert users to these changes before implementation.

Any questions, comments or requests regarding this implementation should be directed to the contacts below.

For questions concerning science changes, please contact:

Michael Lalime  
Coastal Marine Modeling Branch  
Coast Survey Development Laboratory  
NOAA/NOS/Office of Coast Survey  
Silver Spring, MD  
[michael.lalime@noaa.gov](mailto:michael.lalime@noaa.gov)

For questions regarding the data flow aspects of these datasets, contact:

Anne Myckow  
NCEP Central Operations Dataflow Team Lead  
College Park, MD  
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National Service Change Notices are online at:

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

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