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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:
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-Emergency Managers Weather Information Network
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From: Michael Farrar
NCEP Director

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 Universal Coordinated 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.

1) Output changes for NCEP NOMADS and FTPPRD web services

A. 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.

B. 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

C. 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.

2) NOAAPORT/SBN

A. Timeliness:

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

B. WMO headers:

There are no changes to the 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

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 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
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Coast Survey Development Laboratory
NOAA/NOS/Office of Coast Survey
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For questions regarding the data flow aspects of these datasets, contact:

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

<http://www.weather.gov/om/notif.htm>

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