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PNSWSH

Service Change Notice 17-26 Updated
National Weather Service Headquarters Silver Spring MD
1155 AM EDT Mon Apr 10 2017

To: Subscribers:
 - NOAA Weather Wire Service
 - Emergency Managers Weather Information Network
 - NOAAPORT
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From: Dave Myrick
 NWS Office of Science and Technology Integration

Subject: Update: Probabilistic Tropical Cyclone Storm Surge
 (P-Surge) Model Upgrades: Effective April 18, 2017

Updated the implementation date from April 11, 2017, to
April 18, 2017

Effective on or about April 18, 2017, starting with the
1200 Coordinated Universal Time (UTC) cycle, the National
Centers for Environmental Prediction (NCEP) will upgrade the
Probabilistic Hurricane Storm Surge model (P-Surge) from version
2.5 to version 2.6.

P-Surge is run on demand, when hurricane watches and/or warnings
are in effect for the Atlantic and Gulf Coasts of the
continental United States and on a case by case basis for
tropical storms. The model is based on an ensemble of Sea, Lake,
and Overland Surge from Hurricane (SLOSH) model runs. The
ensemble members are forced by storms derived from the National
Hurricane Center (NHC) official advisory along with historic
errors in its track, size, and intensity.

P-Surge version 2.6 includes the following updates:

- Extend the forecast hours from 78 to 102 hours on web services
- Allow the NHC to add new storm types: Sub-Tropical Storm, Sub-Tropical Depression, Potential Tropical Cyclone and Post Tropical Cyclone.
- Update the South Florida basin area. Five historic operational basins were replaced with a single South Florida basin with higher resolution and the latest bathymetry/topography information. Unfortunately, run-time issues required it to be split into three parts. Future upgrades will address using the single basin.
- Product removals on NCEP servers and additions to NDGD.

Web Product Changes:

1. Forecasts hours are being extended to 102 on the National Digital Guidance Database (NDGD) Web service:

<http://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/DF.gr2/DC.ndgd/GT.slosh/AR.conus/>

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The following exceedance GRIB2 products (on a CONUS 625 m resolution grid corresponding to the National Digital Forecast Database's CONUS 2.5 km resolution grid) defined as the surge + tide height in feet that X% of storms exceed.

* Exceedance above ground level (incremental grouping): 10, 20, 30, 40, 50% for 0-6, 6-12, 12-18, ..., 84-90, 90-96, 96-102 hours

File: VD.agl/ds.psurgeexcdPPinc.bin

* Exceedance above ground level (cumulative grouping): 10, 20, 30, 40, 50% for 0-6, 0-12, 0-18, ..., 0-90, 0-96, 0-102 hours

File: VD.agl/ds.psurgeexcdPPcum.bin

* Exceedance above NAVD-88 (cumulative grouping): 10, 20, 30, 40, 50, 60, 70, 80, 90% for 0-80 and 0-102 hours

File: ds.psurgeexcdPP.bin

Where PP is the respective percentage of exceedance

The following probability GRIB2 products (on the same CONUS 625 m resolution grid) defined as the probability that X feet of surge + tide will be exceeded in a cell.

* Probabilities of > 0, 1, 2, ... 20 feet above ground level (incremental grouping) for 0-6, 6-12, 12-18, ... 84-90, 90-96, 96-102 hours

File: VD.agl/ds.psurgeabvPPinc.bin

* Probabilities of > 0, 1, 2, ... 20 feet above ground level (cumulative grouping) for 0-6, 0-12, 0-18, ... 0-90, 0-96, 0-102 hours

File: VD.agl/ds.psurgeabvPPcum.bin

* Probabilities of > 2, 3, 4, ... 25 feet above NAVD-88 (cumulative grouping) for 0-80 hours and 0-102 hours

File: ds.psurgeabvPP.bin

Where PP is the respective probability

2. Addition of the 10, 20, 30, 40, 50% exceedance above NAVD-88 hourly incremental groupings (e.g. 0-1, 1-2, 2-3, ..., 99-100,

100-101, 101-102 hours) GRIB2 products (on the same CONUS 625 m resolution grid) to the NDGD Web service File:
ds.psurgeexcdPPinc.bin

Where PP is the respective percentage of exceedance

3. Remove all P-Surge output from NCEP web services

Users can instead find all products for P-Surge under the NDGD web services.

<http://nomads.ncep.noaa.gov/pub/data/nccf/com/nhc/prod/psurge.YY YMMDD>

<http://ftp.ncep.noaa.gov/data/nccf/com/nhc/prod/psurge.YYYYMMDD>

<ftp://ftp.ncep.noaa.gov/pub/data/nccf/com/nhc/prod/psurge.YYYYMM DD>

Where YYYYMMDD is Year, Month, and Day

NOAAPORT/SBN Impacts:

There are no changes to any NOAAPORT/SBN products. For a complete list of existing product WMO Headers please reference: http://www.nws.noaa.gov/os/notification/mc/psurge_abvdatum.pdf

A sample set of parallel data is available on the NCEP server via the following URLs:

<http://para.nomads.ncep.noaa.gov/pub/data/nccf/noaaport/psurge>

Graphical versions as well as ESRI shape files of the products will be posted online at:

<http://slosh.nws.noaa.gov/psurge2.0>

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. We will review any feedback and decide whether to proceed.

For questions regarding this notice, please contact

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National Service Change Notices are online at:

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

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