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Technical Implementation Notice 15-18
National Weather Service Headquarters Washington DC
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 Office of Science and Technology

Subject: Extra-Tropical Storm Surge (ETSS) Model and Post-Processing
Upgrades: Effective May 19, 2015

On Tuesday, May 19, 2015, beginning with the 1200 Universal Coordinated Time (UTC) cycle, the Extra-Tropical Storm Surge (ETSS) model will be upgraded to include overland calculations based on surge only for the East Coast and Gulf of Mexico. This change involves nesting fine-scale tropical basins within the current larger coarser ETSS basins to take advantage of the tropical basins' finer overland information and the larger areal extent of the ETSS basins. Details on these calculations are online in the following conference papers:

<https://ams.confex.com/ams//95Annual/webprogram/Paper269755.html>
<https://ams.confex.com/ams//95Annual/webprogram/Paper269709.html>

As a result of this upgrade, the ETSS station text products for the East Coast and Gulf of Mexico and gridded product for the contiguous U.S. (CONUS; covering the East Coast, Gulf of Mexico and West Coast) will be delivered up to 30 minutes later than they are currently. Other ETSS products, including the station text products for the West Coast and three Alaska regions, and gridded product for Alaska, will be delivered slightly earlier.

Also on Tuesday, May 19, 2015, ETSS post-processing which produces bias-corrected total water level guidance will be included in the National Centers for Environmental Prediction (NCEP) operational system. This guidance will be encoded in Standard Hydrological Exchange Format (SHEF) and provided over the Satellite Broadcast Network (SBN). Further details on the post-processing can be found in the following conference paper:

<https://ams.confex.com/ams//95Annual/webprogram/Paper269775.html>

NWS Server (FTP or HTTP):

The 2.5 km CONUS (ds.etss-2p5.bin) products will continue to be available in the National Digital Guidance Database (NDGD) here:

<http://weather.noaa.gov/pub/SL.us008001/ST.expr/DF.gr2/DC.ndgd/GT.slosh/AR.conus>

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

Similarly, the 3.0 km Alaska (ds.etss-3p0.bin) products will continue to be available in the NDGD here:

<http://weather.noaa.gov/pub/SL.us008001/ST.expr/DF.gr2/DC.ndgd/GT.slosh/AR.alaska>

<ftp://tgftp.nws.noaa.gov/SL.us008001/ST.expr/DF.gr2/DC.ndgd/GT.slosh/AR.alaska>

NCEP server (FTP or two HTTP):

Several changes will occur to the NCEP server output, which are listed below. An example of these name changes and additional products changes can be seen here:

<http://para.nomads.ncep.noaa.gov/pub/data/nccf/com/etss/para/>

Products to be Removed:

To continue the migration to finer ETSS gridded products started in the fall of 2014, the coarse ETSS gridded products will no longer be available from the NCEP server. Specifically, the five km CONUS products (grib2.mdlsurgegrid.HHcon for HH=00, 06, 12 and 18) and six km Alaska products (grib2.mdlsurgegrid.HHala for HH=00, 06, 12 and 18) will no longer be available.

Destination Directory is Changing:

The ETSS products will now be in subfolders of the following (which will exist on or after May 19, 2015):

<http://www.ftp.ncep.noaa.gov/data/nccf/com/etss/prod/>
<http://nomads.ncep.noaa.gov/pub/data/nccf/com/etss/prod/>
<ftp://ftp.ncep.noaa.gov/pub/data/nccf/com/etss/prod/>

They had been in subfolders of:

<http://www.ftp.ncep.noaa.gov/data/nccf/com/gfs/prod/>

Further, the subfolder will be labeled etss.YYYYMMDDHH rather than gfs.YYYYMMDDHH (where YYYYMMDDHH is respectively the current year, month, day, and hour).

Product Name Changes:

The fine resolution gridded products are being renamed with the CONUS products labeled etss.tHHz.stormsurge.con2p5km.grib2 and the Alaska one labeled etss.tHHz.stormsurge.ala3km.grib2, where HH is the cycle hour.

New Products:

A new text format for surge only at stations is being provided. It has higher precision and more stations than the current text format and will be labeled etss.tHHz.surge_stations.bsn_R.txt where HH is the cycle hour and R is the region (e=East coast, g=Gulf of Mx, w=West coast, a=Bering Sea, z=Arctic, k=Gulf of AK).

The new SHEF messages are being provided as a tarball labeled etss.tHHz.shef_tar, where HH is the cycle hour.

SBN and NOAAPort:

Both the coarse resolution (five km and six km) and higher resolution (2.5 km and three km) gridded ETSS products will be available over the SBN and NOAAPort. The higher resolution products have World Meteorological Organization (WMO) headers of:

WMO Heading	Region
MHU... KNHC	National Digital Forecast Database (NDFD) CONUS 2.5 km grid
MHR... KNHC	NDFD Alaska three km grid

The ... in the WMO heading will be replaced by DHH where D is the day of the forecast. A=Day 0, B=Day 1, ..., F=Day 5 and HH is the hour of day when the forecast is valid. A full chart of the header combinations per forecast cycle is available here:

<http://www.nws.noaa.gov/mdl/etsurge/docs/headers2.xls>

Once the Advanced Weather Interactive Processing System (AWIPS) (presumably AWIPS II) is ready to handle the higher resolution gridded products (likely in the fall of 2015), the old products with WMO heading of LHU...KNHC and LHR...KNHC will be discontinued.

The new ETSS SHEF-encoded, bias-corrected total water level guidance will have the following WMO headers:

WMO Heading	Region
SRUS70 KWNO	CONUS
SRAK70 KWNO	Alaska

AWIPS IDs:

AWIPS ID	Region
TIDTWE	U.S. East Coast
TIDTWG	Gulf of Mexico
TIDTWP	U.S. West Coast
TIDTWC	Gulf of Alaska
TIDTWB	Alaskan Bering Sea Coast
TIDTWA	Alaskan Arctic Coast

If you have any questions about these changes and additions to the Extra-Tropical Storm Surge guidance, please contact:

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National Technical Implementation Notices are online at:

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

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