NOUS41 KWBC DDHHHH

PNSWSH

Technical Implementation Notice 15-XX

National Weather Service Headquarters Washington DC

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From: Tim McClung

Science Plans Branch Chief

Office of Science and Technology

Subject: Extra-Tropical Storm Surge (ETSS) model and

post-processing upgrades:

Effective Sep 8, 2015

On Tuesday, Sep 8, 2015, beginning with the 1200 Universal Coordinated Time (UTC) cycle, the Extra-Tropical Storm Surge (ETSS) model will be upgraded to (1) use a new Alaska basin which lets water flow through the Bering Strait and (2) include over overland calculations based upon surge plus tide for all US coastal areas. The surge plus tide enhancement is possible because ETSS now has gridded tides in all computation domains. For the East and Gulf of Mexico, it uses 37 constituents from ADCIRC’s EC-2014 grid. For the West coast and Alaska, it uses 13 constituents from Oregon State University’s TPXO Global Tidal model.

The products are available on the following three dissemination sites.

1. NCEP server (aka NOMADS):

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

Several changes will occur as described below.

A) Product name changes…

The newer station text format products will now have a name as follows: etss.tHHz.stormsurge\_RGN.txt, where HH is the cycle hour and RGN is the region (est=East coast, gom=Gulf of Mx, wst=West coast, Ber=New Alaska Basin, gok=Gulf of AK). Previously the region had used the following convention (e=East coast, g=Gulf of Mexico, w=West coast, k=Gulf of Alaska, a=Bering Sea, z=Arctic).

B) New surge plus tide products:

The gridded surge plus tide products will be labeled etss.tHHz.stormtide.con2p5km.grib2 for CONUS and etss.tHHz.stormtide.ala3km.grib2 for Alaska.

The newer station based text format surge plus tide products will be labeled etss.tHHz.stormtide\_RGN.txt, where HH is the cycle hour and RGN is the region (est=East coast, gom=Gulf of Mx, wst=West coast, ber=New Alaska Basin, gok=Gulf of AK).

C) New higher resolution (625 m) products for East coast and Gulf of Mexico

Surge plus tide guidance on the 625 m NDFD CONUS grid will be labeled etss.tHHz.stormtide.con625m.grib2 where HH is the cycle hour.

Tide only guidance on the 625 m NDFD CONUS grid will be labeled etss.tHHz.tide.con625m.grib2 where HH is the cycle hour.

2. NWS server (aka NDGD)

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>

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>

3. Satellite Broadcast Network:

The surge only CONUS 5 km and 2.5 km gridded products will be available over the SBN. The surge only Alaska 6 km and 3 km gridded products will be available over the SBN.

The 2.5 and 3 km resolution products have WMO headers of:

WMO Heading Region

MHU... KNHC NDFD CONUS 2.5 km grid

MHR... KNHC NDFD Alaska 3 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 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 ETSS SHEF-encoded, bias-corrected total water level guidance has the following WMO headers:

WMO Heading Region

SRUS70 KWNO Conus

SRAK70 KWNO Alaska

...and AWIPS IDs:

AWIPS ID Region

TIDTWE US East Coast

TIDTWG Gulf of Mexico

TIDTWP US 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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This and other NWS Technical Implementation Notices are available here:

<http://www.nws.noaa.gov/om/notif.htm>

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