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From: Jeffrey Craven
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 Meteorological Development Laboratory

Subject: Soliciting Comments on the Upgrade of the National Blend of
Models Guidance through May 22, 2020

The Statistical Modeling Division (SMD) of the Meteorological Development Laboratory (MDL) is proposing to update the National Blend of Models (NBM) this fall. The NWS is seeking comments on this proposed upgrade through May 22, 2020. If approved, a Service Change Notice (SCN) will be issued at least 30 days before implementation of this upgraded product with more detailed information.

NBM Version 4.0, which is scheduled to be implemented on Tuesday, October 6, 2020, will continue to fill existing product gaps requested by the Aviation, Water Resources, Marine and Tropical NWS Service Program Offices. A few highlights associated with this upcoming release include:

- Continuing to infuse cutting-edge science advancements in the area of probabilistic quantitative precipitation forecasting (PQPF) and the addition of calibrated PQPF guidance for the Alaska, Puerto Rico, and Oceanic domains.
- Adding probabilistic daytime maximum (MaxT) and nighttime minimum (MinT) temperatures in the form of percentiles and exceedance values for particular thresholds for the contiguous U.S. (CONUS) domain.
- Using standard deviations for temperature, dew point temperature, percentage of sky cover, convective available potential energy (CAPE), and significant wave height for the CONUS, Alaska, Hawaii, and Puerto Rico domains.
- Improving deterministic aviation guidance routinely used in daily airport operational planning through 84 hours for Terminal Aerodrome forecasts (TAFs).
- Adding 6-hour Probability of Thunder for the CONUS, Alaska, Hawaii, Puerto Rico, and Oceanic domains.

- Adding an innovative feature matching technique to intelligently preserve the wTCM wind field and blend its edges with the NBM background wind field.
- Adding several new elements to the Guam domain.
- Adding new weather elements in the NBM text product along with improvements to the probabilistic text message product.

There will be over 2,000 new station text locations added (bringing the total to about 9,000), including most of the CONUS airports. It is anticipated that these upgrades will benefit the NWS in its mission towards better Impact-based Decision Support Services (IDSS).

Publicly accessible NBM gridded binary version 2 (GRIB2) files can be downloaded at:

<https://blend.mdl.nws.noaa.gov/downloads/>

The subdirectory structure is the following:

blendv40/<region>/grib2/<yyyymmdd>/<hh>, where:

region = co, ak, hi, pr, gu or oc
yyyy = 4-digit year
mm = 2-digit month
dd = 2-digit day
hh = NBM cycle

All or a portion of the NBM text bulletins can be obtained by visiting an interactive graphical user interface (GUI):

https://sats.nws.noaa.gov/~nbm/nbm_text

Details about format changes will be coming soon and will be posted on the MDL NBM homepage below:

https://www.weather.gov/mdl/nbm_home

The NWS will evaluate all comments on this NBM upgrade including the new NBM text bulletins to determine whether to proceed with this upgrade.

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 the implementation of NBM guidance, please contact:

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A webpage describing the NBM can be found at:

http://w2.weather.gov/mdl/nbm_home

National Public Information Statements are online at:

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

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