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Public Information Statement 20-16
National Weather Service Headquarters Silver Spring MD
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From: Jeffrey Craven
           NWS Office of Science and Technology Integration
           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:

David Rudack
MDL/Silver Spring, MD
301-427-9456
david.rudack@noaa.gov

or

Brian Miretzky
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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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