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PNSWSH

Service Change Notice 23-52
National Weather Service Headquarters Silver Spring MD
430 PM EDT Mon Apr 24 2023

To: Subscribers:
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From: Sarah Perfater
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 NWS Office of Science and Technology Integration
 Meteorological Development Laboratory

Subject: Correcting National Blend of Models (NBM) Low-Level Wind Shear (LLWS) Height Calculation, and Other Minor Fixes to NBM v4.1: Effective on or about April 25, 2023

Effective on or about Tuesday, April 25, 2023, beginning with the 1200 Coordinated Universal Time (UTC) model run, the NWS NCEP Central Operations will implement an update to the NBM V4.1 that was implemented on January 17, 2023:

https://www.weather.gov/media/notification/pdf2/scn22-131_nbm_v4.1.pdf

In the event that the implementation date is declared a Critical Weather Day (CWD), or significant weather is occurring or is anticipated to occur, implementation of this change will occur at 1200 UTC on the next weekday not declared a CWD and when no significant weather is occurring.

Stakeholders from the NWS's Eastern Region have noted that since the implementation of NBM V4.1, NBM LLWS has been unrealistically low and spatially discontinuous. After careful investigation, the issue has been identified as incorrectly incorporating models in the blending calculation which did not indicate a LLWS Height and mistakenly assigned a value of zero.

Three additional issues not related to LLWS will also be corrected in this forthcoming implementation:

(1) The step-like appearance in NBM Mixing Height beginning around Day-3 which were introduced by using non-bias-corrected North American Model (NAM) 12km Mixing Heights rather than its bias-corrected values.

(2) The omission of the 254-hour Daily Maximum Temperature value in the 1000-UTC NBM Extended Text Message (NBX), and

(3) The missing 29- and 35-hour projections from the 24-hour snow and ice amount products at 0100, 0700, 1300, and 1900 UTC. The following gridded binary version two (GRIB2) files on the NOAA Operational Model Archive and

Distribution System (NOMADS) will include the aforementioned changes:

Daily Maximum Temperature:

blend.t10z.core.f254.ak.grib2
blend.t10z.core.f254.co.grib2
blend.t10z.core.f254.hi.grib2
blend.t10z.core.f254.pr.grib2

24-hour snow and ice amount:

blend.t01z.core.f029.ak.grib2
blend.t01z.core.f035.ak.grib2
blend.t01z.core.f029.co.grib2
blend.t01z.core.f035.co.grib2
blend.t07z.core.f029.ak.grib2
blend.t07z.core.f035.ak.grib2
blend.t07z.core.f029.co.grib2
blend.t07z.core.f035.co.grib2
blend.t13z.core.f029.ak.grib2
blend.t13z.core.f035.ak.grib2
blend.t13z.core.f029.co.grib2
blend.t13z.core.f035.co.grib2
blend.t19z.core.f029.ak.grib2
blend.t19z.core.f035.ak.grib2
blend.t19z.core.f029.co.grib2
blend.t19z.core.f035.co.grib2

These new records in files noted above will not be sent over the Satellite Broadcast Network (SBN)/NOAAPort.

Any questions, comments or requests regarding this implementation should be directed to the contacts below:

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or

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For questions regarding the dataflow for NWS/NCEP services, please contact:

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A web page describing the NBM can be found at:

<https://vlab.noaa.gov/web/mdl/nbm>

National Service Change Notices are online at:

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

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