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Service Change Notification 21-27  
National Weather Service Headquarters Silver Spring MD  
845 AM EDT Mon May 3 2021

To:           Subscribers  
              -NOAA Weather Wire Service  
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From:         Jeffrey Craven  
              NWS Office of Science and Technology Integration  
              Meteorological Development Laboratory

Subject:      Update to the National Blend of Model's (NBM)  
              Quantile Mapping and Dressing (QMD) to Fix an  
              Issue with Unrealistically High Probability of  
              Precipitation values over Northwest Mexico

Effective on or about Tuesday May 11, 2021, beginning with the 1200 Universal Time Coordinated (UTC) model run, the NWS National Centers for Environmental Prediction (NCEP) Central Operations will implement an update to the National Blend of Models (NBM) Quantile Mapping and Dressing (QMD).

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.

In late-March, stakeholders including NWS's Forecast Offices in Arizona and New Mexico identified anomalous high Probability of Precipitation (PoP) values over northwestern Mexico (Baja California peninsula, Gulf of California, and interior Mexico).

Upon investigation, it was determined that there was a missing check for a certain condition in the QMD system. The missing check was causing zero amount precipitation forecast values from direct model output to be quantile-mapped, yielding light precipitation amounts, strong enough to exceed the PoP threshold of 0.01 inches. This update will apply the check, which should alleviate the artificially high PoP values in the above mentioned region.

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

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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:

[http://www.weather.gov/mdl/nbm\\_home](http://www.weather.gov/mdl/nbm_home)

NWS National Service Change Notices are online at:

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

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