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Technical Implementation Notice 11-54 Amended National Weather Service Headquarters Washington DC 330 PM EDT Mon Apr 16 2012

- To: Subscribers: -Family of Services -NOAA Weather Wire Service -Emergency Managers Weather Information Network -NOAAPort Other NWS Partners, Users and Employees
- From: Tim McClung Chief, Science Plans Branch Office of Science and Technology

Subject: Amended: Change to First Guess Used by Real-Time Mesoscale Analysis To Rapid Refresh (RAP): Effective Date Set for May 1, 2012

Amended to set the implementation date for Tuesday, May 1, 2012. Users are cautioned that if a Critical Weather Day (CWD) designation is in effect on May 1, this implementation will be delayed until the conclusion of CWD. You can monitor the CWD status at the following webpage:

http://www.nco.ncep.noaa.gov/pmb/cwd/

On Tuesday, May 1, 2012, with the 1200 Coordinated Universal Time (UTC) run, the Real-Time Mesoscale Analysis (RTMA) for the contiguous U.S. (CONUS) at both 5-km and 2.5-km resolution will use the Rapid Refresh (RAP) instead of the Rapid Update Cycle (RUC) as the forecast model that provides the first guess. The current 5- and 2.5-km resolution RTMA terrain fields, which were created at Earth Systems Research Laboratory (ESRL)/Global Services Division (GSD), will also be replaced by terrain fields created at the National Centers for Environmental Prediction (NCEP)/Environmental Modeling Center (EMC).

The RTMA is a set of gridded surface and near-surface analyses that are created by combining observations with the first guess, weighted by their error statistics.

The change of the first guess is necessary since the RUC is being replaced by the RAP on that same date (see <u>NWS Technical Implementation Notice 11-53</u> for details of the RUC to RAP transition). The main impact of this change will occur in areas of sparse observational data where the RTMA analysis relies more heavily on the guess field than in areas with greater observational coverage. While the use of the new RTMA terrain will have little impact on the overall analysis on scales larger than a few grid lengths, users who might be using the RTMA terrain to locally adjust the analysis are advised of the need to use the updated terrain provided in the output files. NCEP urges all users to ensure their decoders can handle changes in content order, changes in the scaling factor component within the product definition section (PDS) of the gridded binary (GRIB) files, changes to the GRIB Bit Map Section (BMS), and volume changes. These elements may change with future NCEP model implementations. NCEP will make every attempt to alert users to these changes before implementation.

For questions regarding these changes, please contact:

Manuel Pondeca NCEP/Mesoscale Modeling Branch Camp Springs, MD 301-763-8000, X 7734 manuel.pondeca@noaa.gov

For questions regarding the dataflow aspects of these datasets, please contact:

Rebecca Cosgrove NCEP/NCO Dataflow Team Camp Springs, MD 301-763-8000, X 7198 ncep.pmb.dataflow@noaa.gov

National Technical Implementation Notices are online at:

https://www.weather.gov/notification/archive

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