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PNSWSH

Service Change Notice 18-51 Updated  
National Weather Service Headquarters Silver Spring MD  
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To:           Subscribers:  
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From:         Dave Myrick  
              NWS Office of Science and Technology Integration

Subject:      Updated: Climatology Calibrated Precipitation  
              Analysis (CCPA) Changes: Effective July 18, 2018

Updated to reflect a new implementation date of July 18, 2018

Effective on or about Wednesday, July 18, 2018, beginning with the 1200 Coordinated Universal Time (UTC) run, the National Centers for Environmental Prediction (NCEP) will upgrade the Climatology Calibrated Precipitation Analysis (CCPA) product.

The upgrade in the CCPA production suite includes:

1. Update the regression coefficients with extended historical training data sets of the NCEP Climate Prediction Center (CPC) Unified Global Daily Gauge Analysis and the NCEP Environmental Modeling Center (EMC) Stage IV 6-hourly multi-sensor estimation from 2002 to 2017.
2. Change the computation of weights used in downscaling from 6-hourly CCPA to 3-hourly CCPA, by using Stage IV to replace Stage II data in NWRFC (Northwest River Forecast Center) and CNRFC (California Nevada River Forecast Center) where the former data has better quality.
3. Introduce 1-hourly accumulated precipitation analysis. Similar to 3-hourly CCPA, this analysis is generated by splitting each 6-hourly accumulated precipitation analysis based on a ratio calculated from hourly Stage IV (over all River Forecast Centers in the continental US) values at each grid cell on the HRAP (Hydrologic Rainfall Analysis Project) grid. The analysis is then interpolated from the HRAP grid to other grids. The 1-hourly CCPA covers the same domain as the existing 6-hourly and 3-hourly analysis.

Changes to output data

A. The output is available on six grids, and among them two grids have minor changes:

- hrap: HRAP Grid (same as the Stage IV grid)
- ndgd5p0: 5 km National Digital Forecast Database (NDFD) CONUS grid
- ndgd2p5: 2.5 km National Digital Forecast Database (NDFD) CONUS grid (Change to the National Blend of Models (NBM) 2.5km NDFD CONUS grid)
- 0p125: 0.125 degree CONUS latitude/longitude grid (Grid ID 110)
- 0p5: 0.5 degree latitude/longitude grid with data coverage over CONUS only  
(Change from Grid ID 3 to Grid ID 4)
- 1p0: 1.0 degree latitude/longitude grid with data coverage over CONUS only (Remains Grid ID 3)

For specifications of Grid IDs 3, 4 and 110, see <http://www.nco.ncep.noaa.gov/pmb/docs/on388/tableb.html>

B. New 1-hour accumulation files named ccpa.tXXz.01h.GRID.conus.gb2 will be added to NCEP servers.

GRID is the spatial resolution defined as the above grids and XX is the accumulation ending time.

There will be no delay for the timing of final data delivery. However, users are still advised to pay special attention to additional updates with the extended look-back periods from last implementation: the added updates 3/5/7 days after the valid date slightly improve the product accuracy.

A consistent parallel feed of CCPA data will be available on the NCEP server via the following URL:

<http://para.nomads.ncep.noaa.gov/pub/data/nccf/com/ccpa/para>

Test data will be available at:  
[ftp://ftp.emc.ncep.noaa.gov/gc\\_wmb/yluo](ftp://ftp.emc.ncep.noaa.gov/gc_wmb/yluo)

More information regarding the CCPA and its scientific implementation can be found at:  
<http://journals.ametsoc.org/doi/abs/10.1175/JHM-D-11-0140.1>

[http://www.emc.ncep.noaa.gov/gmb/ens/NAEFS-5th/Session\\_3/Hou\\_precipitation\\_analysis.pdf](http://www.emc.ncep.noaa.gov/gmb/ens/NAEFS-5th/Session_3/Hou_precipitation_analysis.pdf)

[http://www.emc.ncep.noaa.gov/gmb/yzhu/imp/i201801/CCPAv4\\_upgrade\\_2017.pdf](http://www.emc.ncep.noaa.gov/gmb/yzhu/imp/i201801/CCPAv4_upgrade_2017.pdf)

Disclaimer: NCEP would encourage all users to ensure their decoders are flexible and are able to adequately handle changes in content order, parameter fields changing order, changes in the scaling factor component within the Product Definition Section (PDS) of the GRIB files and also any volume changes which may be forthcoming. These elements may change with future NCEP model implementations. NCEP will make every attempt to alert users to these changes prior to any implementation.

Questions, comments or requests regarding this change should be directed to the contacts below. We will review feedback and decide whether to proceed.

For questions regarding these changes, please contact:

Yan Luo  
NCEP/EMC Global Modeling Branch  
College Park, Maryland  
Phone: 301-683-3778  
Email: [Yan.Luo@noaa.gov](mailto:Yan.Luo@noaa.gov)

For questions regarding the dataflow aspects of this data set, please contact:

Carissa Klemmer  
NCEP/NCO Dataflow Team  
College Park, Maryland  
Phone: 301-683-0567  
Email: [ncep.list.pmb-dataflow@noaa.gov](mailto:ncep.list.pmb-dataflow@noaa.gov)

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

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