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Technical Implementation Notice 15-xx
National Weather Service Headquarters Washington DC
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From: Timothy McClung
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 Office of Science and Technology

Subject: Climatology Calibrated Precipitation Analysis (CCPA)
 Changes: Effective XXX XX, 2016

On or about Tuesday, XXX XX, 2016, beginning with the 1200 Coordinated Universal Time (UTC) run, the Climatology Calibrated Precipitation Analysis (CCPA) product will be updated.

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 2015.
2. Change the computation of weights used in downscaling from 6 hourly CCPA to 3-hourly CCPA, by using Stage II to replace Stage IV data in CNRFC where the latter has poor quality.
3. Extend the CCPA look-back period following the Stage IV update schedule in 2015 implementation of the RTMA/URMA upgrade. The job makes additional reruns at 1/3/5/7 days past the valid date.
4. Add 2.5 km NDGD grid output. This grid analysis is generated by interpolating from the HRAP grid to 2.5 km NDGD grid. The 2.5 km NDGD CCPA covers the same domain as the 5km NDGD CCPA, and it is also available for both 3-hourly and 6-hourly accumulations.

Following the NCO implementation standards, there will be significant changes in CCPA product directory structure and output file names.

Directory Changes:

Files on WCOSS will be moved from
/com/gens/prod/gefs.YYYYMMDD/HH/ccpa to
/com2/ccpa/prod/ccpa.YYYYMMDD/HH

Therefore, all files are available at the following locations:

NCEP NOMADS server:

<http://nomads.ncep.noaa.gov/pub/data/nccf/com/ccpa/prod/ccpa.YYYYMMDD/HH>

NCEP FTP server:

<http://www.ftp.ncep.noaa.gov/data/nccf/com/ccpa/prod/ccpa.YYYYMMDD/HH>

or

<ftp://ftp.ncep.noaa.gov/pub/data/nccf/com/ccpa/prod/ccpa.YYYYMMDD/HH> ,

where YYYYMMDD is the date and HH is the ending time (hour) of the 6-hour accumulation period.

File Name Changes:

All existing files named `ccpa_conus_GRID_tXXz_LLh_gb2` will be replaced by `ccpa.tXXz.LLh.GRID.conus.gb2`. Where **GRID** is the spatial resolution, **XX** is the accumulation ending time, and **LL** is the accumulation length.

There will be six files for each (**XX,LL**) pair corresponding to the following six grids (**GRID**):

1. **hrap**: HRAP Grid (same as the Stage IV grid)
2. **ndgd5p0**: 5 km National Digital Forecast Database (NDFD) CONUS grid
3. **ndgd2p5**: 2.5 km National Digital Forecast Database (NDFD) CONUS grid
4. **0p125**: 0.125 degree CONUS latitude/longitude grid (Grid ID 110)
5. **0p5**: 0.5 degree latitude/longitude grid with data coverage over CONUS only
6. **1p0**: 1.0 degree latitude/longitude grid with data coverage over CONUS only (Grid ID 3)

For specifications of Grid IDs 3 and 110, see

<http://www.nco.ncep.noaa.gov/pmb/docs/on388/tableb.html>

The timing of final data delivery will be delayed by this implementation as some additional reruns will be made and some additional time will be needed to compute the 2.5km NDGD grid. However, the impact to real time application of the data set will be negligible.

Test data will be available at:

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/yzhu/imp/i201507/CCPA_upgrade_2015.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.

For questions regarding these changes, please contact:

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

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NWS National Technical Implementation Notices are online at:

<http://www.nws.noaa.gov/os/notif.htm>

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