March 24, 2016

MEMORANDUM FOR: Distribution Email

FROM: Christine Caruso Magee
Configuration Manager, NCEP Central Operations

SUBJECT: Scheduled Operational Changes and Upgrades for CPC, OPC, and WPC

**Climate Prediction Center**

The following accelerated items were implemented this past week:

RFC #607 – fcst-consolidation v1.1.1 – Fixed an issue where precip probabilities were being plotted using tmean colors instead of precip colors. Implemented on March 24 at 1700Z.

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The following will be implemented the week of March 28, 2016:

None

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The following RFCs are in progress or have been delayed:

RFC #605 – Africa_RFE v1.0.0 – Implement into operations a new process called the Africa RFC (Rainfall Estimator) for International Desk monitoring activities. Was to be implemented on March 21 at 1600Z; delayed to March 30 due to personnel being unavailable to implement.

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The following NCO RFCs to be implemented the week of March 28, 2016 may affect CPC:

RFC #1816 – CCPA v3.0.0 – Major upgrade of the Climatology-calibrated Precipitation Analysis (CCPA), including: 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 multisensor 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 the 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 the 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. To be implemented on March 29 at 1200Z.

RFC #1822 - Update Verification Web Tool WAR files using the new files in a CPC developer's 'vwt.war' file. The WAR files contain some added code to improve the communication with the frontend, which will ease the transition when the Java frontend is removed and the servlet is called through AJAX requests. Requested by CPC. To be implemented on March 30 at 1500Z.

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The following NCO RFCs are in progress and may affect CPC:

RFC #1756 - NetCDF4-Python v4-1.2.1 - IBM will install the Python NetCDF4 software on Luna and Surge in /gpfs/hps/usrx/local/prod. This software reads and writes NetCDF files. Implementation began on March 7 at 1600Z; was to be completed by March 21 but IBM has found they need to install HDF5 and NetCDF first on the Crays in order to properly install this software, so the new completion date for this RFC is April 20.

RFC #1796 – LSF v9.1.2 – On the Crays, modify the LSF queue configurations to reject all jobs with memory specifications greater than 3GB submitted to the following queues: devonprod, hpc_cray, prenpost, preprod, prod, debug, dev, devhigh, devmax, prod. This will maximize job slot efficiency on MAMU nodes for jobs executing parallel tasks via aprun. Implementation began on March 22 at 1700Z and should be completed by April 6.

RFC #1802 – Decommission cpccf4-6, 10-12 VMs. CPC has already moved their operations to the RHEL5 CPCCF VMs. The older RHEL5 systems are being re-purposed as dev and QA systems. To be implemented on March 24 at 1400Z.

RFC #1803 – Enable sudo for CPC production accounts cpcfcst, cpcobs, cpcwebs, cpcdata, cwlinks, and cpcsat, so that CPC users will be able to sudo CPC production accounts. To be implemented on March 24 at 1500Z.

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**Ocean Prediction Center**

The following accelerated items were implemented this past week:

None

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The following will be implemented the week of March 28, 2016:

RFC #608 – Change the recipient of emails indicating fatal error conditions generated by script 'probabilities_by_wnd_wav_cat_and_pmsl.pl' from the developer to OPC/OAB. To be implemented on March 28 at 1400Z.

RFC #609 – Update the 'split_up_vgf.pl' script to move the "BoxCircles" line from the input vg files in the "Misc" layer to the "Freezing_Spray" layer in the output xml files. To be implemented on March 31 at 0000Z.

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The following RFCs are in progress:

None

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The following NCO RFCs to be implemented the week of March 28, 2016 may affect OPC:

RFC #1809 - Route multiple Storm Prediction Center grib2 products to the AWIPS2 systems (CTBN/NTBN/OPCN/HPCN). The SREF products (awcsref) will be sent from WCOSS, and the calthunder products will be sent from NCOSRV. Also, stop sending the SREF grib files to NCOSRV, as they're not needed on that system. To be implemented beginning on March 28 at 1400Z and should be completed by April 1.

RFC #1815 – NAEFS v5.0.0 – Major upgrade of the NAEFS model, including: 1) Adding variable Total cloud cover (TCDC) to bias-corrected products 1 degree globally from GEFS; 2) Increasing resolution of downscaled probabilistic products for CONUS (from 5km to 2.5km) and Alaska (from 6km to 3km) for GEFS and NAEFS; 3) Extending the CONUS domain to cover southern part of Canada following the extended NDGD; 4) Upgrading FNMOC ensemble. Variable Total Cloud Cover will use "percentage (%)" instead of "fraction (0-1)"; 5) Directly distributing FNMOC's bias corrected forecast instead of NCEP produced bias corrected forecast. To be implemented on March 29 at 1200Z.

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The following NCO RFCs are in progress and may affect OPC:

RFC #1796 – LSF v9.1.2 – On the Crays, modify the LSF queue configurations to reject all jobs with memory specifications greater than 3GB submitted to the following queues: devonprod, hpc_cray, prenpost, preprod, prod, debug, dev, devhigh, devmax, prod. This will maximize job slot efficiency on MAMU nodes for jobs executing parallel tasks via aprun. Implementation began on March 22 at 1700Z and should be completed by April 6.

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The following NCO RFCs, which may affect OPC, were approved with an implementation date TBD:

RFC #1357 – RTOFS global v1.1.0 – Major upgrade of the Global RTOFS model. See the TIN at: http://www.nws.noaa.gov/os/notification/tin15-36global-rtofsaaa.htm for details. This was advertised as having an October 6 implementation date but this implementation is being postponed due to a delay in the Navy's HYCOM model upgrade. Once the HYCOM upgrade is implemented, the Global RTOFS will be scheduled for implementation. The Navy hopes to upgrade HYCOM in FY16Q3. Notification will be given in advance so users may prepare for any changes which may affect them. This upgrade of the Global RTOFS was approved by the NCEP Director.

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**Weather Prediction Center**

The following accelerated items were implemented this past week:

RFC #606 – Updated script "create_ak_tclo_blend.ksh" to change the cloud cover parameter name for forecast hours greater than 192 from TCLD12 to TCLD06 for the GFS. Because the parameter name was incorrect, lower cloud cover values than expected were being seen. Implemented on March 21 at 1257Z.

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The following will be implemented the week of March 28, 2016:

None

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The following RFCs are in progress:

None

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The following NCO RFCs to be implemented the week of March 28, 2016 may affect WPC:

RFC #1809 - Route multiple Storm Prediction Center grib2 products to the AWIPS2 systems (CTBN/NTBN/OPCN/HPCN). The SREF products (awcsref) will be sent from WCOSS, and the calthunder products will be sent from NCOSRV. Also, stop sending the SREF grib files to NCOSRV, as they're not needed on that system. To be implemented beginning on March 28 at 1400Z and should be completed by April 1.

RFC #1815 – NAEFS v5.0.0 – Major upgrade of the NAEFS model, including: 1) Adding variable Total cloud cover (TCDC) to bias-corrected products 1 degree globally from GEFS; 2) Increasing resolution of downscaled probabilistic products for CONUS (from 5km to 2.5km) and Alaska (from 6km to 3km) for GEFS and NAEFS; 3) Extending the CONUS domain to cover southern part of Canada following the extended NDGD; 4) Upgrading FNMOC ensemble. Variable Total Cloud Cover will use “percentage (%)” instead of “fraction (0-1)”; 5) Directly distributing FNMOC’s bias corrected forecast instead of NCEP produced bias corrected forecast. To be implemented on March 29 at 1200Z.

RFC #1816 – CCPA v3.0.0 – Major upgrade of the Climatology-calibrated Precipitation Analysis (CCPA), including: 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 multisensor 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. To be implemented on March 29 at 1200Z.

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The following NCO RFCs are in progress and may affect WPC:

None

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Please note that security-related RFCs are never listed in the RFC memo.

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---- OPERATIONAL ANNOUNCEMENTS ----

The CPC/OPC/WPC Configuration Management documents are available at https://sites.google.com/a/noaa.gov/nws-ncep-nco-cm/.

Please review these documents if you have questions prior to submitting changes for CPC/OPC/WPC configurable items.