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Technical Implementation Notice 10-45
National Weather Service Headquarters Washington DC
230 PM EDT Tuesday Feb 18 2013

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From: Tim McClung
Science Plans Branch Chief
Office of Science and Technology

Subject: Addition of GEFS/NAEFS Bias Corrected Products and Downscaled Products for Alaska and CONUS: Effective February 18, 2013

Effective February 18, 2013, beginning with the 1200 Coordinated Universal Time (UTC) run, the National Centers for Environmental Prediction (NCEP) will add new variables to bias corrected products globally and downscaled probabilistic products for CONUS and Alaska from the Global Ensemble Forecast System (GEFS) and the North American Ensemble Forecast System (NAEFS). Another modification is the new product generation of calibrated CONUS precipitation.

Except for new output for **C**ONUS precipitation, there will be no change to the current GEFS and NAEFS output file names. NCEP will be modifying the output variables from the NCEP GEFS and the NAEFS. These modifications include:

A. Adding the following 2 bias-corrected elements to the NCEP GEFS bias corrected, and NAEFS output for all probabilistic products:
2-meter relative humidity
2-meter dew point temperature

Ensemble products with the 2 new variables listed above include:
NCEP bias corrected GEFS forecast for each member
NCEP bias corrected GFS forecast
10% probability forecast (filenames ge10pt and naefs_ge10pt)
50% probability forecast (filenames ge50pt and naefs_ge50pt)
90% probability forecast (filenames ge90pt and naefs_ge90pt)
Ensemble mean forecast (filenames geavg and naefs_geavg)
Ensemble mode forecast (filenames gemode and naefs_gemode)
Ensemble spread forecast (filenames gesprd and naefs_gesprd)

B. Inclusion of six new variables for CONUS products:
2-meter maximum temperature
2-meter minimum temperature
2-meter relative humidity
2-meter dew point temperature
10-meter wind speed

10-meter wind direction

Ensemble products with the 6 new variables listed above
include:
10% probability forecast (filenames ge10pt and naefs_ge10pt)
50% probability forecast (filenames ge50pt and naefs_ge50pt)
90% probability forecast (filenames ge90pt and naefs_ge90pt)
Ensemble mean forecast (filenames geavg and naefs_geavg)
Ensemble mode forecast (filenames gemode and naefs_gemode)
Ensemble spread forecast (filenames gesprd and naefs_gesprd)

C. Inclusion of two new variables for Alaska products:
2-meter relative humidity
2-meter dew point temperature

Ensemble products with the 2 new variables listed above
include:
10% probability forecast (filenames ge10pt and naefs_ge10pt)
50% probability forecast (filenames ge50pt and naefs_ge50pt)
90% probability forecast (filenames ge90pt and naefs_ge90pt)
Ensemble mean forecast (filenames geavg and naefs_geavg)
Ensemble mode forecast (filenames gemode and naefs_gemode)
Ensemble spread forecast (filenames gesprd and naefs_gesprd

D. Adding precipitation to the NCEP GEFS bias corrected products:
NCEP bias corrected GFS Quantitative Precipitation Forecast(QPF)plus
NCEP bias corrected GEFS QPF for each member
(filenames geprcp)
NCEP bias corrected GEFS Probabilistic QPF (PQPF) for 14 thresholds
(filenames gepqpf)

E. Inclusion of precipitation for CONUS products:
NCEP downscaled GFS QPF plus
NCEP downscaled GEFS QPF for each member
(filenames geprcp)
NCEP downscaled GEFS PQPF for 14 thresholds
(filenames gepqpf)

Test data is currently available at:

ftp://ftp.emc.ncep.noaa.gov/gc_wmb/bcui/NAEFS_Upgrade/

Specific information regarding the GEFS/NAEFS model and
associated products can be found at:

http://www.emc.ncep.noaa.gov/gmb/yzhu/html/imp/201204_imp.html

A consistent parallel feed of data will become available on the
NCEP server once the model is running in parallel on the NCEP
Central Computing System by mid-January. The parallel data will
be available via the following URLs:

http://www.ftp.ncep.noaa.gov/data/nccf/com/gens/para
ftp://ftp.ncep.noaa.gov/pub/data/nccf/com/gens/para

The products except the precipitation products will be available in the

pgrb2a_bc and ndgd_gb2 directories under gefs and naefs. The files will be the same in the filename. The precipitation products will be available in the new prcp_gb2 and ndgd_prcp_gb2 directories under gefs. For consistency, the existing 24 hour accumulated PQPF files from the prcp directory will be relocated to the prcp_gb2 directory. After the implementation, the operational products will be available on the same server but the URLs above will end in “prod” rather than “para.”

NCEP encourages all users to ensure their decoders are flexible and are able to adequately handle changes in content 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 implementations.

For questions regarding these changes...please contact:

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For questions regarding the dataflow aspects of these data sets... please contact:

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NWS National Technical Implementation Notices are online at:

http://www.weather.gov/os/notif.htm

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