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Technical Implementation Notice 10-50, Amended
National Weather Service Headquarters Washington DC
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From: Timothy McClung
 Chief, Science Plans Branch
 Office of Science and Technology

Subject: Amended: Changes to the North American Ensemble
 Forecasting System (NAEFS): Postponed

Amended to postpone this implementation for at least 30 days pending further evaluation. Notification will be sent when this implementation is rescheduled.

Previously scheduled implementation for Tuesday, January 18, 2011, beginning with the 1200 Coordinated Universal Time (UTC) run will not take place. The National Centers for Environmental Prediction (NCEP) will not make modifications to the North American Ensemble Forecasting System (NAEFS) until a later date.

The current NAEFS output is derived by combining the NCEP Global Ensemble Forecast System (GEFS) and the Canadian Meteorological Center's GEFS. When announced, the global ensemble system run by the Fleet Numerical Meteorology and Oceanography Center (FNMOC) will also be included in the NAEFS.

The NAEFS output is disseminated only via the NCEP server. Products are available for http and ftp download at the following URLs:

<http://www.ftp.ncep.noaa.gov/data/nccf/com/gens/prod/>
and
<ftp://ftp.ncep.noaa.gov/pub/data/nccf/com/gens/prod/>

In addition to including the FNMOC data in the NAEFS ensemble calculations, NCEP will also be modifying the output available from the NCEP GEFS, CMC GEFS, and the NAEFS. These modifications include:

Adding the following 13 bias-corrected elements to the NCEP GEFS and NAEFS output for all probabilistic products:

10 hPa(mb) geopotential height
10 hPa(mb) temperature
10 hPa(mb) u component of wind
10 hPa(mb) v component of wind
50 hPa(mb) geopotential height
50 hPa(mb) temperature
50 hPa(mb) u component of wind
50 hPa(mb) v component of wind
100 hPa(mb) geopotential height
100 hPa(mb) temperature
100 hPa(mb) u component of wind
100 hPa(mb) v component of wind
850 hPa(mb) vertical velocity

The directory location of the raw CMC GEFS data will be changed. Starting on a date to be announced in a future TIN, the GRIB2 output for the individual member and ensemble means and spreads will be online in the following directories, where YYYYMMDD is the date and CC is the model cycle:

<http://www.ftp.ncep.noaa.gov/data/nccf/com/gens/prod/cmce.YYYYMMDD/CC/pgrb2a>
and
<ftp://ftp.ncep.noaa.gov/pub/data/nccf/com/gens/prod/cmce.YYYYMMDD/CC/pgrb2a/>

In addition, the following 28 variables will be added to the CMC output:

10 hPa(mb) geopotential height
10 hPa(mb) temperature
10 hPa(mb) relative humidity
10 hPa(mb) u component of wind
10 hPa(mb) v component of wind
50 hPa(mb) geopotential height
50 hPa(mb) temperature
50 hPa(mb) relative humidity
50 hPa(mb) u component of wind
50 hPa(mb) v component of wind
100 hPa(mb) geopotential height
100 hPa(mb) temperature
100 hPa(mb) relative humidity
100 hPa(mb) u component of wind
100 hPa(mb) v component of wind
850 hPa(mb) vertical velocity
Convective inhibition (CIN 180-0 hPa)
Latent heat net flux
Sensible heat net flux
Downward shortwave radiation flux at surface
Downward longwave radiation flux at surface
Upward shortwave radiation flux at surface
Upward longwave radiation flux at surface
Upward longwave radiation flux at top of atmosphere
Volumetric soil moisture (0-10cm)
Water equivalent of accumulated snow depth

Snow depth (surface)
Soil temperature (0-10cm down)

Data delivery timing is not expected to be impacted by the implementation. There will only be a minor increase in the data volumes of existing files due to the addition of new variables.

A sample dataset for this NAEFS implementation is available at:

ftp://ftp.emc.ncep.noaa.gov/gc_wmb/yzhu/1q2011

Specific information regarding the NAEFS and scientific implementation is online at:

http://www.emc.ncep.noaa.gov/gmb/yzhu/html/imp/201012_imp.html

Once the model is running in parallel on the NCEP Central Computing System, a consistent parallel feed of data will be available on the NCEP server. The parallel data will be available via the following URLs:

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

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 GRIB files, 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:

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NWS National Technical Implementation Notices are online at:

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

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