

NOUS41 KWBC 041915 AAA  
PNSWSH

Technical Implementation Notice 16-03  
National Weather Service Headquarters Washington DC  
315 PM EST Fri Mar 4 2016

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From: Tim McClung  
Portfolio Manager  
NWS Office of Science and Technology Integration

Subject: Amended: Addition of GEFS/NAEFS Bias Corrected  
Products and Downscaled Products for Alaska and CONUS:  
Effective March 29, 2016

Amended to change the implementation date from Tuesday, March  
22, 2016 to Tuesday, March 29, 2016

Effective on or about Tuesday, March 29, 2016, beginning with  
the 1200 Universal Coordinated Time (UTC) run, the National  
Centers for Environmental Prediction (NCEP) will upgrade the  
Global Ensemble Forecast System (GEFS) and the North American  
Ensemble Forecast System (NAEFS). The upgrade will include:

- Adding one variable to bias-corrected products 1 degree globally from GEFS
- Increasing resolution of downscaled probabilistic products for CONUS (from 5km to 2.5km) and Alaska (from 6km to 3km) for GEFS and NAEFS
- Extending the CONUS domain to cover southern part of Canada following the extended NDGD
- Upgrading FNMOC ensemble. Variable Total Cloud Cover will use percentage (%) instead of fraction (0-1)
- Directly distributing FNMOC's bias corrected forecast instead of NCEP produced bias corrected forecast

All filenames given below can be located on the NCEP servers at:

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

Addition of A New Variable

1. Adding the following one bias-corrected element:  
Total cloud cover (TCDC)

Ensemble products with the one new variable listed include:

NCEP bias-corrected GEFS forecast for each member

GEFS filenames pgrb2a\_bc/gep###

NCEP bias-corrected GFS forecast

GEFS filenames pgrb2a\_bc/gegfs

## Changes in File Names

The file names in the ndgd\_gb2 sub-directory will be different from those in current production

1. File names for GEFS and NAEFS CONUS products (where ### is 000-384)

10% probability forecast

GEFS filenames

ndgd\_gb2/gefs.tCCz.ge10pt.f###.conus\_ext\_2p5.grib2

NAEFS filenames

ndgd\_gb2/naefs.tCCz.ge10pt.f###.conus\_ext\_2p5.grib2

50% probability forecast

GEFS filenames

ndgd\_gb2/gefs.tCCz.ge50pt.f###.conus\_ext\_2p5.grib2

NAEFS filenames

ndgd\_gb2/naefs.tCCz.ge50pt.f###.conus\_ext\_2p5.grib2

90% probability forecast

GEFS filenames

ndgd\_gb2/gefs.tCCz.ge90pt.f###.conus\_ext\_2p5.grib2

NAEFS filenames

ndgd\_gb2/naefs.tCCz.ge90pt.f###.conus\_ext\_2p5.grib2

Ensemble mean forecast

GEFS filenames

ndgd\_gb2/gefs.tCCz.geavg.f###.conus\_ext\_2p5.grib2

NAEFS filenames

ndgd\_gb2/naefs.tCCz.geavg.f###.conus\_ext\_2p5.grib2

Ensemble mode forecast

GEFS filenames

ndgd\_gb2/gefs.tCCz.gemode.f###.conus\_ext\_2p5.grib2

NAEFS filenames

ndgd\_gb2/naefs.tCCz.gemode.f###.conus\_ext\_2p5.grib2

Ensemble spread forecast

GEFS filenames

ndgd\_gb2/gefs.tCCz.gespr.f###.conus\_ext\_2p5.grib2

NAEFS filenames

ndgd\_gb2/naefs.tCCz.gespr.f###.conus\_ext\_2p5.grib2

2. File names for GEFS and NAEFS Alaska products:

10% probability forecast

GEFS filenames

ndgd\_gb2/gefs.tCCz.ge10pt.f###.alaska\_3p0.grib2

NAEFS filenames

ndgd\_gb2/naefs.tCCz.ge10pt.f###.alaska\_3p0.grib2

50% probability forecast

GEFS filenames

ndgd\_gb2/gefs.tCCz.ge50pt.f###.alaska\_3p0.grib2

NAEFS filenames

ndgd\_gb2/naefs.tCCz.ge50pt.f###.alaska\_3p0.grib2

90% probability forecast

GEFS filenames

ndgd\_gb2/gefs.tCCz.ge90pt.f###.alaska\_3p0.grib2

NAEFS filenames

ndgd\_gb2/naefs.tCCz.ge90pt.f###.alaska\_3p0.grib2

Ensemble mean forecast

GEFS filenames

ndgd\_gb2/gefs.tCCz.geavg.f###.alaska\_3p0.grib2

NAEFS filenames

ndgd\_gb2/naefs.tCCz.geavg.f###.alaska\_3p0.grib2

Ensemble mode forecast

GEFS filenames

ndgd\_gb2/gefs.tCCz.gemode.f###.alaska\_3p0.grib2

NAEFS filenames

ndgd\_gb2/naefs.tCCz.gemode.f###.alaska\_3p0.grib2

Ensemble spread forecast

GEFS filenames

ndgd\_gb2/gefs.tCCz.gespr.f###.alaska\_3p0.grib2

NAEFS filenames

ndgd\_gb2/naefs.tCCz.gespr.f###.alaska\_3p0.grib2

Upgrade of FNMOC Raw and Bias Corrected Ensemble:

1. Upgrade the following one element:

Total cloud cover(TCDC): use percentage(%)instead of fraction (0-1)

Ensemble products with the one upgraded variables listed include:

FNMOC raw ensemble forecast for each member

FNMOC filenames pgrb2a/ENSEMBLE.MET.fcst\_et###

2. Changing file names for FNMOC bias corrected products

FNMOC bias corrected forecast for each member

FNMOC filenames pgrb2a\_bc/ENSEMBLE.MET.fcst\_bc0###

3. GRIB2 packing change for FNMOC bias corrected products

Maximum Temperature and Minimum Temperature: Parameters for discipline in temperature category are updated to WMO standard

4. Add two new variables for FNMOC bias corrected products
  - 2-meter dew point temperature
  - Upward long wave radiation flux (OLR) at the top of the atmosphere

A consistent parallel feed of both GEFS and NAEFS data will be available on the NCEP server via the following URLs:

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