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Service Change Notice 23-104
National Weather Service Headquarters Silver Spring MD
1000 AM EDT Wed Nov 2 2023

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From: Mike Farrar, Director
 National Centers for Environmental Prediction

Subject: Upgrade of the North American Ensemble Forecast System (NAEFS) to
Version 7.0: Effective December 5, 2023

Effective on or about Tuesday, December 5, 2023 with the 1200 Coordinated
Universal Time (UTC) cycle, the National Centers for Environmental
Prediction (NCEP) Central Operations (NCO) will upgrade the North American
Ensemble Forecast System (NAEFS) to version 7.0.

The upgrade will improve the overall accuracy of NAEFS, which will use all
31 members of the Global Ensemble Forecast System (GEFS) as opposed to the
21-member subset used in version 6.1. The main improvements to NAEFS
include an extension of probabilistic forecast skill by about three to
four forecast hours and an overall improvement in calibrated precipitation
forecasts. Additional information on forecast improvements for NAEFS
version 7.0 can be found at:

<https://www.emc.ncep.noaa.gov/users/meg/naefsv7/>

New and existing data files for bias-corrected GEFS forecasts, forecast
reprocessed or derived from GEFS bias-corrected products, NAEFS products,
as well as forecasts from Canadian Meteorological Centre (CMC) and Fleet
Numerical Meteorology and Oceanography Center (FNMOC) ensembles, will
remain at their current location, i.e. they can be located on the NOAA
Operational Model Archive and Distribution Service (NOMADS)/FTP/PRD web
services at:

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

Below are NAEFS v7.0 changes and additions to data offered via
NOMADS/FTP/PRD web services:

- Addition of GEFS ensemble members 21-30.
- The following new files will be made available:

gefs.YYYYMMDD/CC/pgrb2ap5_bc/gepMM.tCCz.pgrb2a.0p50_bcfFFF

gefs.YYYYMMDD/CC/pgrb2ap5_an/gepMM.tCCz.pgrb2a.0p50_anFFFF

Where YYYYMMDD is forecast date, CC is forecast cycle (00, 06, 12, 18), MM is ensemble member (21, 22, 23, ..., 30), and FFF is forecast time step (000, 003, 006, ..., 192, 198, 204, ..., 384 for pgrb2ap5_bc files and 003, 006, 009, ..., 192, 198, 204, ..., 384 for pgrb2ap5_an files).

- Output for ensembles 21-30 will now be included in the following files:

gefs.YYYYMMDD/CC/prcp_bc_gb2/geprcp.tCCz.pgrb2a.0p50.bc_06hFFFF
gefs.YYYYMMDD/CC/prcp_bc_gb2/geprcp.tCCz.pgrb2a.0p50.bc_24hFFFF
gefs.YYYYMMDD/CC/ndgd_prcp_gb2/geprcp.tCCz.ndgd2p5_conus.06hFFFF.gb2
gefs.YYYYMMDD/CC/ndgd_prcp_gb2/geprcp.tCCz.ndgd2p5_conus.24hFFFF.gb2

Where YYYYMMDD is forecast date, CC is forecast cycle (00, 06, 12, 18), and FFF is forecast time step (006, 012, 018, ..., 384 for 6-hour files and 024, 030, 036, ..., 384 for 24-hour files).

- The following gridded binary (Grib) Filter will now include GEFS ensembles files 21-30:

<https://nomads.ncep.noaa.gov/gribfilter.php?ds=gensbc>

- The following OPeNDAP product will now include GEFS ensembles 21-30:

https://nomads.ncep.noaa.gov/dods/gens_bc

A real-time parallel feed of NAEFS v7.0 has been made available on NOMADS/FTPFRD web services at:

<ftp://ftp.ncep.noaa.gov/pub/data/nccf/com/naefs/para/>
<https://www.ftp.ncep.noaa.gov/data/nccf/com/naefs/para/>
<https://nomads.ncep.noaa.gov/pub/data/nccf/com/naefs/para/>

For questions regarding these model changes, please contact:

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For questions regarding the data flow aspects of these datasets, contact:

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National Service Change Notices are online at:

<https://www.weather.gov/notification/>

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