NOUS41 KWBC 291845
PNSWSH

Service Change Notice 20-48A
National Weather Service Headquarters Silver Spring MD
245 PM EDT Wed Apr 29 2020

To: Subscribers:
           -NOAA Weather Wire Service
           -Emergency Managers Weather Information Network
           -NOAAPort
           Other NWS Partners, Users and Employees

From: Grant Cooper
           Acting Director
           National Centers for Environmental Prediction

Subject: Replace Global Forecast Systems (GFS) Variables on
NOAAPort and GTS: Effective June 16, 2020

Effective on about June 16, 2020, beginning with the 1200
Coordinated Universal Time (UTC) run, the National Centers for
Environmental Prediction (NCEP) will upgrade the Global Forecast
System. The upgrade will replace the variables for precipitation
and vertical velocity for all World Meteorological Organization
(WMO) headed data over NOAAPort and on the Global
Telecommunications System (GTS). In the event of a Critical
Weather Day (CWD) declaration, the upgrade will move to the next
business day once the CWD is over.

GFS version 15.1.0 was implemented into operations at the 12Z
cycle on June 12, 2019. It was the first GFS implementation with
the finite-volume cubed-sphere (FV3) dynamical core as the NWS
Next Generation Global Prediction System (NGGPS). With this
upgrade, NCEP added new variables to allow users extended testing
periods. Please reference Service Change Notice (SCN) 19-40 to
review those changes:

https://www.weather.gov/media/notification/scn19-40gfs_v15_1.pdf

Product changes impact all GFS WMO Headed Data products in gridded
binary (GRIB) format to include the following grids:

a) Global Latitude/Longitude 1 degree Resolution (Grid #3)
[YZ]*P*## KWBC
b) Grid over Alaska polar stereographic 20 km [YZ]*B*## KWBC
c) Grid over Pacific Mercator 20 km (grid #254) [YZ]*F*## KWBC

d) Grid over Puerto Rico Latitude/Longitude 20 km [YZ]*E## KWBC
e) Grid over contiguous U.S. (CONUS) Latitude/Longitude 20 km
(grid #215) [YZ]*N*## KWBC
f) Grid over CONUS Lambert Conformal 80 km (#211) [YZ]*Q*## KWBC
g) World Area Forecast System (WAFS) Latitude-Longitude 1.25 x
1.25 (#37-44)

1) Changes to replace the vertical velocity variable:

   - All levels will remain the same
   - Units will be changing from:
     VVEL (pascal/s) -> DZDT (m/s)
   - The parameter number will be changing from VVEL #8 to DZDT #9
   - All WMO headers will be remaining the same.

2) Changes to replace the total and convective precipitation
variables:

   - Units will be changing from hourly/3-hourly/6-hourly
accumulation to total accumulation over the forecast period:
     APCP:surface:234-240 hour acc fcst ->
       APCP:surface:0-240 hour acc fcst
     ACPCP:surface:234-240 hour acc fcst ->
       ACPCP:surface:0-240 hour acc fcst
   - All WMO headers will be remaining the same.

The replacement of these variables will occur with the exact cycle
referenced above. NCEP will not be able to run these variables in
parallel. The only impacts from this notice are to WMO headed
data, including to NOAAPort and the GTS data feeds. All other
data sources will continue providing both legacy and new variables
in parallel and will not be changing. A static sample of the new
output is available on para NOAA National Operational Model
Archive and Distribution System (NOMADS):

https://para.nomads.ncep.noaa.gov/pub/data/nccf/noaaport/gfs_newprecip/

NCEP will evaluate all comments to determine whether to proceed
with this upgrade.

For questions regarding these GFS system changes, please contact:

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

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National Service Change Notices are online at:

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

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