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Service Change Notice 19-39
National Weather Service Headquarters Silver Spring MD
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From: Bob Maxson, Acting Director
 National Centers for Environmental Prediction

Subject: Replacement of the Marine Fog Product with GFS
Visibility Product: Effective June 12, 2019

On or about June 12, 2019, the National Centers for Environmental Prediction (NCEP) will replace the Marine Fog product with the Global Forecast System (GFS) visibility output. The Environmental Modeling Center (EMC) has been running a Marine Fog model based off of the atmospheric GFS model to produce a visibility product. EMC is discontinuing this product in favor of a unified suite of products.

A comparison of the two approaches can be found in:

https://www.emc.ncep.noaa.gov/gmb/STATS_vsdb/doc/GFSv15/GFSv15_0_MB_visibility.pdf

While both the GFS and Marine products are based off of variations of the Stolinga-Warner algorithms, the GFS-based visibility product uses much higher resolution, instantaneous atmospheric fields. It is also using the newer microphysics that are being implemented with GFS Version 15.

The Marine product being discontinued can be found in the following locations:

1) Non-operational site, but including graphics>
<https://polar.ncep.noaa.gov/marine.meteorology/global.visibility/>

2) NCEP Web Services gridded binary version 2 (GRIB2) files:

<ftp://ftpprd.ncep.noaa.gov/pub/data/nccf/com/omb/prod/fog.YYYYMMDD>

<https://nomads.ncep.noaa.gov/pub/data/nccf/com/omb/prod/fog.YYYYMMDD>

<https://www.ftp.ncep.noaa.gov/data/nccf/com/omb/prod/fog.YYYYMMDD>

Where YYYYMMDD is year, month day, and Filenames are:

```
fog.tCCz.fvnhg.grib2
fog.tCCz.fvnhg.grib2.idx
fog.tCCz.gvisg.grib2
fog.tCCz.gvisg.grib2.idx
```

Where CC is cycle for 00, 06, 12 and 18 Coordinated Universal Time (UTC).

Users can find the replacement product within the GFS output GRIB2 files by extracting the variable "VIS" visibility on:

<ftp://ftpprd.ncep.noaa.gov/pub/data/nccf/com/gfs/prod/gfs.YYYYMMDD>

<https://nomads.ncep.noaa.gov/pub/data/nccf/com/gfs/prod/gfs.YYYYMMDD>

Where GRIB2 full filenames are:

```
gfs.tCCz.pgrb2.0p25.fFFF (0.25 degree resolution)
gfs.tCCz.pgrb2.0p50.fFFF (0.50 degree resolution)
gfs.tCCz.pgrb2.1p0.fFFF (1.0 degree resolution)
```

Or users can extract just the visibility parameter by using the NOAA Operational Model Archive and Distribution System (NOMADS) Grib Filter option here:

https://nomads.ncep.noaa.gov/cgi-bin/filter_gfs_0p25.pl

Select a date and cycle. On the following page select a forecast hour, check the level "surface" and the variable "VIS" to download only the visibility parameter for the 0.25 degree resolution GFS.

NCEP will evaluate all comments and decide whether to proceed.

For questions regarding these model changes, please contact:

Vijay Tallapragada, Chief
EMC Modeling and Data Assimilation Branch
vijay.tallapragada@noaa.gov

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

Carissa Klemmer, Chief
NCEP Central Operations Implementation and Data Services Branch
ncep.list.pmb-dataflow@noaa.gov

National Service Change Notices are online at:

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

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