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PNSWSH

Technical Implementation Notice 14-41 Amended  
National Weather Service Headquarters Washington DC  
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From: Timothy McClung  
Science Plans Branch Chief  
Office of Science and Technology

Subject: Amended: Ozone Air Quality Prediction Update  
Effective January 27, 2015

Amended to change implementation date from November 25, 2014, to  
January 27, 2015

Effective on or about Tuesday, January 27, 2015, beginning with  
the 1200 Coordinated Universal Time (UTC) run, the National  
Centers for Environmental Prediction (NCEP) will upgrade the  
Community Multi-scale Air Quality (CMAQ) modeling system that  
provides ozone air quality predictions.

The updated CMAQ model includes an updated carbon bond gas phase  
(CB05) mechanism and additional updates. This update is for the  
contiguous 48 states (CONUS) domain.

Ozone predictions from the updated CMAQ model are available  
through a parallel feed at the links below.

HTTP:  
<http://www.ftp.ncep.noaa.gov/data/nccf/com/aqm/para/aqm.YYYYMMDD>

FTP:  
<ftp://ftp.ncep.noaa.gov/pub/data/nccf/com/aqm/para/aqm.YYYYMMDD>

where YYYYMMDD is the year, month, day.

The names of the CONUS grib files have changed to the following:

aqm.tCCz.8ho3.227.grib2  
aqm.tCCz.1ho3.227.grib2  
aqm.tCCz.1ho3-max.227.grib2  
aqm.tCCz.8ho3-max.227.grib2

Additionally Alaska and Hawaii grib files are now available:

aqm.tCCz.8ho3.196.grib2  
aqm.tCCz.1ho3.196.grib2  
aqm.tCCz.8ho3-max.196.grib2  
aqm.tCCz.1ho3-max.196.grib2  
aqm.tCCz.8ho3.198.grib2  
aqm.tCCz.1ho3.198.grib2  
aqm.tCCz.8ho3-max.198.grib2  
aqm.tCCz.1ho3-max.198.grib2.

The CMAQ GRIB products from the parallel feed are also disseminated via the NCEP website:

[ftp://ftp.emc.ncep.noaa.gov/mmb/aq/for\\_NDGD\\_5x\\_expr/](ftp://ftp.emc.ncep.noaa.gov/mmb/aq/for_NDGD_5x_expr/)

and the products will be displayed at:

<http://airquality.weather.gov/expr/>

The hourly ozone maps are available at:

<http://www.emc.ncep.noaa.gov/mmb/aq/cmaq/web/html>

The daily maximum ozone maps are available at

[http://www.emc.ncep.noaa.gov/mmb/aq/para/web/html/max\\_p6.html](http://www.emc.ncep.noaa.gov/mmb/aq/para/web/html/max_p6.html)

The current operational CMAQ model will continue providing forecasts through

<ftp://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/DF.gr2/DC.ndgd/GT.aq/AR.conus/>

and displayed at

<http://airquality.weather.gov/>

The scientific enhancements include the following:

- Updated rate constants for Carbon Bond Mechanisms (CB05)
- Inclusion of monthly varying lateral boundary conditions for 36 gaseous and aerosol species below 7km altitude
- Modified dry deposition velocity calculation
- Constraint of planetary boundary layer height in the model to be at least 50m
- Faster removal of organic nitrate from the atmosphere
- Inclusion of particulate emissions from wildfires based on wildfire locations observed over the previous day
- Suppression of soil emissions when terrain is covered by ice or snow
- Inclusion of windblown dust emissions using threshold friction velocity and soil wetness fraction with climatological source composition and locations

There are no changes to existing products or their contents.

Due to this upgrade, the CONUS products will be delivered 30 to

35 minutes later than in the past.

For questions or comments, 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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