

NOUS41 KWBC 131224 AAA  
PNSWSH

Technical Implementation Notice 13-49  
National Weather Service Headquarters Washington DC  
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To: Subscribers:  
-FamiAmended: Adding several new elements to experimental  
GFS-based gridded MOS guidance over the CONUS and  
Alaska Effective March 25, 2014ly of Services  
-NOAA Weather Wire Service  
-Emergency Managers Weather Information Network  
-NOAAPORT  
Other NWS Partners, Users and Employees

From: Tim McClung  
Science Plans Branch Chief  
Office of Science and Technology

Subject: Amended: Adding several new elements to experimental  
GFS-based gridded MOS guidance over the CONUS and  
Alaska Effective March 25, 2014

Amended to change the implementation date from Tuesday, February  
18, 2014 to Tuesday, March 25, 2014

On or about Tuesday, March 25, 2014, beginning with the 1200  
Universal Coordinated Time (UTC) model run, the NWS  
Meteorological Development Laboratory (MDL) will add several new  
elements to the experimental Global Forecast System (GFS)-based  
Gridded Model Output Statistics (MOS) guidance over the CONUS  
and Alaska. The elements to be added include:

- Conditional probability of freezing precipitation
- Conditional probability of frozen precipitation
- Conditional probability of liquid precipitation
- Precipitation type conditional best category
- Precipitation potential index (PPI)
- Probability of precipitation occurrence (PoPO)
- Predominant weather

Grids for conditional precipitation type probability and best  
category are seasonal and will be available during the period  
September 1-May 31 over the CONUS and September 1-June 15 over  
Alaska. Grids for PPI, PoPO, and predominant weather will be  
available year-round. Graphics, links to GRIB2 data for  
download, and more details on these new GFS-based gridded MOS  
elements over the CONUS and Alaska can be found at the following  
links:

[http://www.mdl.nws.noaa.gov/~mos/gmos/ptype\\_conus2p5/](http://www.mdl.nws.noaa.gov/~mos/gmos/ptype_conus2p5/)

[http://www.mdl.nws.noaa.gov/~mos/gmos/ptype\\_alaska/](http://www.mdl.nws.noaa.gov/~mos/gmos/ptype_alaska/)

<http://www.mdl.nws.noaa.gov/~wxgrid/>

On the change date, these products will be disseminated on the Satellite Broadcast Network (SBN), NOAAPORT, and the NWS ftp server in GRIB2 format. These additional MOS grids will be produced on a 2.5-km Lambert Conformal grid over the CONUS and on a 3-km Polar Stereographic grid over Alaska, each covering the same expanse as their respective National Digital Forecast Database (NDFD) grids. NWS will generate guidance from the 0000 and 1200 UTC model cycles for projections every 3 hours from 6-192 hours in advance.

The new GRIB2 products for the CONUS will be available in the experimental area of the National Digital Guidance Database (NDGD) on the NWS ftp server:

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

The new GRIB2 products for Alaska will be available in the experimental area of NDGD on the NWS ftp server:

<ftp://tgftp.nws.noaa.gov/SL.us008001/ST.expr/DF.gr2/DC.ndgd/GT.mosgfs/AR.alaska/>

Each element-specific GRIB2 file will contain a super header and individual headers for each forecast projection. A list of GRIB2 file names for each new gridded MOS element is given in Table 1 below. Representations of the WMO superheaders for the new CONUS and Alaska gridded MOS elements are given in Tables 2 and 3, respectively.

Table 1: GRIB2 file names for each new GFS-based Gridded MOS element:

FILE NAME	ELEMENT
ds.cpoz.bin	Conditional probability of freezing
ds.cpos.bin	Conditional probability of frozen
ds.cpor.bin	Conditional probability of liquid
ds.ptype.bin	Precipitation type best category
ds.ppi.bin	Precipitation potential index
ds.popo.bin	Probability of precip. occurrence
ds.wx.bin	Predominant weather

Table 2: WMO superheaders for each new 2.5-km CONUS gridded MOS element; listed below are representations of the superheaders for each element, where ii=98 for short-range guidance (days 1-3) and ii=97 for medium range guidance (days 4-7):

WMO HEADER	ELEMENT
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MAUZii KWBQ	Conditional probability of freezing
MBUZii KWBQ	Conditional probability of frozen
MCUZii KWBQ	Conditional probability of liquid
YLUZii KWBQ	Precipitation type best category
YMUZii KWBQ	Precipitation potential index
YNUZii KWBQ	Probability of precip. occurrence
YZUZii KWBQ	Predominant weather

Table 3: WMO superheaders for each new 3-km Alaska gridded MOS element; listed below are representations of the superheaders for each element, where ii=98 for short-range guidance (days 1-3) and ii=97 for medium range guidance (days 4-7):

WMO HEADER	ELEMENT
MARZii KWBQ	Conditional probability of freezing
MBRZii KWBQ	Conditional probability of frozen
MCRZii KWBQ	Conditional probability of liquid
LLRZii KWBQ	Precipitation type best category
LMRZii KWBQ	Precipitation potential index
LNRZii KWBQ	Probability of precip. occurrence
LZRZii KWBQ	Predominant weather

A complete list of the WMO superheaders and individual headers for the CONUS is available at:

[www.nws.noaa.gov/mdl/synop/gmos/gmos2p5headers.pdf](http://www.nws.noaa.gov/mdl/synop/gmos/gmos2p5headers.pdf)

A complete list of the WMO superheaders and individual headers for Alaska is available at:

[www.nws.noaa.gov/mdl/synop/gmos/gmosAKheaders.pdf](http://www.nws.noaa.gov/mdl/synop/gmos/gmosAKheaders.pdf)

A web page outlining the gridded MOS guidance and the FTP server structure can be found at:

<http://www.nws.noaa.gov/mdl/synop/gmos.php>

For questions regarding the addition of precipitation type to the Gridded MOS suite over the CONUS and Alaska, contact:

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For questions regarding the addition of predominant weather and PPI to the Gridded MOS suite over the CONUS and Alaska, contact:

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Links to the MOS products and descriptions are online at:

<http://www.nws.noaa.gov/mdl/synop>

NWS national Technical Implementation Notices are online at:

<http://www.weather.gov/os/notif.htm>

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