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Technical Implementation Notice 15-33 Amended
National Weather Service Headquarters Washington DC
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From: Tim McClung
Chief Operating Officer
NWS Office of Science and Technology Integration

Subject: Amended: Changes to North American Mesoscale Model
(NAM)-based Model Output Statistics (MOS) Guidance
Effective on Wednesday, January 13, 2016

Amended to change the implementation date from a date to be
determined to Wednesday, January 13, 2016

Updates to the NAM-based MOS guidance by the NWS Meteorological
Development Laboratory (MDL), which were originally scheduled
for Tuesday, October 6, 2015, and postponed due to requirements
for additional evaluation and coordination, are now scheduled to
be implemented on or about Wednesday, January 13, 2016,
beginning with the 1200 Coordinated Universal Time (UTC) model
run.

The updates will include new equations for forecasts of snowfall
amount for 6- and 12-h thunderstorm probability, and for 6- and
12-h probability of severe weather. Implementation of the new
equations will remove any remaining influence of data collected
from the older eta-coordinate model on MOS forecasts for these
elements. In addition, MDL will introduce new NAM MOS
probabilistic and categorical guidance for cool-season
precipitation type.

Before the implementation date, users may find parallel data for
download on NOAA's Operational Model Archive and Distribution
System (NOMADS) at the following link (files will reside in
nam_mos.YYYYMMDD, where YYYYMMDD is the year, month, day):

<http://para.nomads.ncep.noaa.gov/pub/data/nccf/com/nam/para/>

The addition of precipitation type will increase the length of
the cool-season NAM MOS messages by three lines in the body of
text for each station contained in the MOS alphanumeric (MET)
bulletin, and by three records for each station in the BUFR

messages. These added lines will contain probabilistic forecasts for the occurrence of freezing precipitation and snow (labeled POZ, POS), as well as a categorical forecast of the most likely precipitation type (labeled TYP). Due to changes in reporting frequencies, sufficient data were not available for development of new precipitation type equations at 14 sites currently in the NAM MOS system. Therefore, precipitation type guidance will not be produced and no additional information will appear in the MET and BUFR messages for these sites. These sites are listed in Table 1 below.

NAM MOS messages for Alaskan sites also will contain an additional two lines for the new 6- and 12-h thunderstorm probability forecasts (labeled T06 and T12) during the convective season, May 1 through September 30; however, since the observed frequency of severe convective weather events over Alaska is quite low, it was not possible to obtain stable statistical relationships for the severe weather probabilities at those sites. Therefore, all Alaska severe weather probability forecasts will be coded as missing (99) at their respective positions within the NAM MOS messages.

Users should take the necessary steps for ingest of this additional information. Following implementation of these changes, the format of the cool-season NAM MOS messages will be identical to those being generated for the companion short-range GFS MOS text (MAV) and BUFR products.

Table 1: Sites for which NAM MOS precipitation type guidance will not be available

ID	STATION	LAT	LON
K3A6	NEWHALL	CA 34.37N	118.57W
K47A	CHEROKEE CNTY ARPT	GA 34.31N	84.42W
K48I	SUTTON/BRAXTON CO AP	WV 38.69N	80.65W
K4BL	BLANDING	UT 37.62N	109.47W
K4HV	HANKSVILLE	UT 38.37N	110.72W
KHMS	HANFORD	WA 46.57N	119.60W
KNHZ	BRUNSWICK NAS	ME 43.89N	69.94W
KPFN	PANAMA CITY	FL 30.20N	85.80W
KRZZ	ROANOKE_RAPIDS	NC 36.44N	77.71W
KTDO	TOLEDO	WA 46.48N	122.80W
PADT	SLANA AIRPORT	AK 62.70N	143.98W
PALV	BIG RIVER LAKE	AK 60.82N	152.30W
PASP	SHEEP MOUNTAIN	AK 61.82N	147.51W
PAWR	WHITTIER	AK 60.77N	148.68W

The following public weather alphanumeric messages and BUFR products are affected by the above changes:

Table 2: Communication identifiers for the NAM-based MOS Public weather text products

WMO HEADING AWIPS ID

FOAK47 KWNO METAJK
FOAK48 KWNO METAFC
FOAK49 KWNO METAFG
FOPA40 KWNO METPA0
FOUS44 KWNO METNE1
FOUS45 KWNO METSE1
FOUS46 KWNO METNC1
FOUS47 KWNO METSC1
FOUS48 KWNO METRM1
FOUS49 KWNO METWC1

Table 3: Communication identifiers for the NAM-based MOS BUFR messages

WMO HEADING

JSML10 KWNO
JSML11 KWNO
JSML12 KWNO
JSML13 KWNO
JSML14 KWNO
JSML15 KWNO
JSML16 KWNO
JSML17 KWNO

For questions regarding the updates to the NAM MOS guidance and associated message changes please contact:

Mark Antolik
MDL/Silver Spring, Maryland
301-427-9480
Mark.Antolik@noaa.gov

or

Matthew Peroutka
MDL/Silver Spring, Maryland
301-427-9483
Matthew.Peroutka@noaa.gov

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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