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PNSWSH

Technical Implementation Notice 12-25 Amended
National Weather Service Headquarters Washington DC
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From: Tim McClung
Chief, Science Plans Branch
Office of Science and Technology

Subject: Amended: Update to GFS-based Model Output Statistics (MOS) Wind Guidance and Resulting Changes to LAMP Wind Guidance: Implementation Postponed to June 12, 2012

Amended to postpone implementation to June 12, 2012.

On Tuesday, June 12, 2012, beginning with the 1200 Coordinated Universal Time (UTC) model cycle, the NWS Meteorological Development Laboratory will implement new Global Forecast System (GFS)-based Model Output Statistics (MOS) wind speed and direction guidance for sites available in the short-range (MAV) and extended-range (MEX) text bulletins. These new equations correct bias changes in the GFS model upgrade implemented May 10, 2011:

https://www.weather.gov/media/notification/tins/tin11-07gfs_update_aab.pdf

These changes also will impact the GFS-based Localized Aviation MOS Program (LAMP) beginning with the 1600 UTC Run.

Geographic expanses of certain vegetation types in the southern and western United States correspond to areas where degradation in the MOS wind guidance was most evident, particularly in the warm season. Wind equations are being replaced for most stations over the contiguous U.S. (CONUS). The GFS model upgrade has shown little impact on MOS guidance over ocean water so the current set of equations for all marine stations will remain in place. Guidance for stations in Alaska and neighboring Canadian sites also are not being replaced at this time because verification of the new equations shows a slight degradation in skill.

Three Meteorological Terminal Air Report (METAR) sites in the West no longer report or do not contain a sufficient number of wind observations from which to develop new equations. Forecasts produced from the old equations are significantly degraded. Guidance for wind direction and speed will be missing for the following three sites for all cycles and projections in the MAV and MEX bulletins:

K4BM Wilkerson Pass, CO

KBJN Tonopah Range 74, Nellis Air Force Base, NV
KTDO Toledo-Winlock Memorial, WA

As a result of the GFS MOS change above, LAMP guidance for wind direction, speed, and gusts will now be missing for the following site for all cycles and projections in the LAMP LAV bulletins and Binary Universal Form for the Representation of meteorological data (BUFR) messages:

KTDO Toledo-Winlock Memorial, WA

In addition, guidance for wind direction and speed has been added for the following two Air Force sites for all cycles and projections in the Air Force MAV and MEX bulletins:

KBYS Bicycle Lake Army Airfield, CA
KL35 Big Bear City Airport, CA

These changes will slightly alter the format of the MAV and MEX text products because lines for wind direction and speed will be added or removed for the five sites listed above. These changes will slightly alter the format of the LAV text products because lines for wind direction, speed, and gusts will be removed for the one site listed above. The tables below list the communication identifiers for all products affected by these changes.

A temporary website has been made available until the new equations are implemented so users may compare the current operational GFS MOS wind speed with the improved GFS MOS wind speed guidance. The comparison page can be found at:

http://www.mdl.nws.noaa.gov/~mos/mos/gfsmos_wind/

Table 1: Communication Identifiers for the GFS-based MOS Public Text Products Affected by the Changes

WMO Heading (Short Range)	AWIPS ID	WMO Heading (Extended Range)	AWIPS ID
FOPA20 KWNO	MAVPA0	FEPA20 KWNO	MEXPA0
FOUS21 KWNO	MAVNE1	FEUS21 KWNO	MEXNE1
FOUS22 KWNO	MAVSE1	FEUS22 KWNO	MEXSE1
FOUS23 KWNO	MAVNC1	FEUS23 KWNO	MEXNC1
FOUS24 KWNO	MAVSC1	FEUS24 KWNO	MEXSC1
FOUS25 KWNO	MAVRM1	FEUS25 KWNO	MEXRM1
FOUS26 KWNO	MAVWC0	FEUS26 KWNO	MEXWC0

Table 2: Communication Identifiers for the Affected Air Force MOS Text Products

WMO Heading (Short Range)	AWIPS ID	WMO Heading (Extended Range)	AWIPS ID
FOUS30 KWNO	MAVF26	FEUS30 KWNO	MEXF26

Table 3: Communication Identifiers for the GFS-based MOS BUFR Products Affected by the Changes

WMO Heading (Short Range)	WMO Heading (Extended Range)	Region
JSML30 KWNO	JSMT30 KWNO	Pacific Region
JSML31 KWNO	JSMT31 KWNO	Northeast CONUS
JSML32 KWNO	JSMT32 KWNO	Southeast CONUS
JSML33 KWNO	JSMT33 KWNO	North Central CONUS
JSML34 KWNO	JSMT34 KWNO	South Central CONUS
JSML35 KWNO	JSMT35 KWNO	Rocky Mountain CONUS
JSML36 KWNO	JSMT36 KWNO	West Coast CONUS

Table 4: Communication Identifiers for the GFS-based LAMP Public Text Product Affected by the Changes

WMO Heading	AWIPS ID
FOUS11 KWNO	LAVUSA

Table 5: Communication Identifiers for the GFS-based LAMP BUFR Products Affected by the Changes

WMO Heading	Region
JSMF10 KWNO	Pacific Region
JSMF11 KWNO	Northeast CONUS
JSMF12 KWNO	Southeast CONUS
JSMF13 KWNO	North Central CONUS
JSMF14 KWNO	South Central CONUS
JSMF15 KWNO	Rocky Mountain CONUS
JSMF16 KWNO	West Coast CONUS

For questions regarding the update to the GFS MOS wind guidance and resulting changes to the MAV and MEX bulletins, contact:

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For questions regarding the changes to LAMP guidance, contact:

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Links to the MOS products and descriptions are online at:

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

National Technical Implementation Notices are online at:

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

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