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TECHNICAL IMPLEMENTATION NOTICE 09-39 AMENDED
NATIONAL WEATHER SERVICE HEADQUARTERS WASHINGTON DC
1015 AM EST FRI FEB 5 2010

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FROM: TIM MCCLUNG
CHIEF...SCIENCE PLANS BRANCH
OFFICE OF SCIENCE AND TECHNOLOGY

SUBJECT: AMENDED: CHANGES TO GFS MOS GUIDANCE EQUATIONS: POSTPONED TO
MARCH 3 2010

AMENDED TO POSTPONE EFFECTIVE DATE FOR UPDATING GFS MOS EQUATIONS FROM
FEBRUARY 9 2010 TO MARCH 3 2010

ON WEDNESDAY MARCH 3 2010...BEGINNING WITH THE 1200 COORDINATED UNIVERSAL
TIME /UTC/ RUN...THE NWS METEOROLOGICAL DEVELOPMENT LABORATORY /MDL/ WILL
UPDATE THE GLOBAL FORECAST SYSTEM /GFS/ -BASED MODEL OUTPUT STATISTICS
/MOS/ SYSTEM. THESE CHANGES WILL ALSO IMPACT THE GFS-BASED LOCALIZED
AVIATION MOS PROGRAM /LAMP/ PRODUCTS BEGINNING WITH THE 1600 UTC RUN. THE
GFS MOS CHANGES INCLUDE:

1. UPDATED EQUATIONS TO PRODUCE IMPROVED FORECAST GUIDANCE AT PROJECTIONS
OF ONE TO FOUR DAYS IN ADVANCE IN THE SHORT-RANGE PRODUCTS FROM THE
0000...0600...1200 AND 1800 UTC MODEL RUNS. THE CHANGES ARE FOR THE
FOLLOWING ELEMENTS:

DAYTIME MAXIMUM AND NIGHTTIME MINIMUM TEMPERATURE
2-METER TEMPERATURE
2-METER DEWPOINT TEMPERATURE
WIND SPEED
WIND DIRECTION
PROBABILITY OF A THUNDERSTORM /6- AND 12-HOUR/
CONDITIONAL PROBABILITY OF A SEVERE THUNDERSTORM /6- AND 12-HOUR/
CEILING HEIGHT CATEGORIES
CONDITIONAL PROBABILITY OF FREEZING PRECIPITATION
CONDITIONAL PROBABILITY OF SNOW
CONDITIONAL PRECIPITATION TYPE CATEGORIES
CATEGORICAL SNOWFALL AMOUNT /24-HOUR/

2. UPDATED EQUATIONS TO PRODUCE FORECAST GUIDANCE AT PROJECTIONS OF ONE
TO SEVEN DAYS IN ADVANCE IN THE EXTENDED-RANGE PRODUCTS FROM THE 0000 AND
1200 UTC MODEL RUNS. THE CHANGES ARE FOR THE FOLLOWING ELEMENTS:

DAYTIME MAXIMUM AND NIGHTTIME MINIMUM TEMPERATURE

2-METER TEMPERATURE
2-METER DEWPOINT TEMPERATURE
WIND SPEED
WIND DIRECTION
PROBABILITY OF A THUNDERSTORM /12- AND 24-HOUR/
CONDITIONAL PROBABILITY OF FREEZING PRECIPITATION OCCURRING /12-HOUR/
CONDITIONAL PROBABILITY OF SNOW OCCURRING /12-HOUR/
CONDITIONAL PROBABILITY OF RAIN/SNOW MIX OCCURRING /12-HOUR/
CONDITIONAL PRECIPITATON TYPE CATEGORIES /12-HOUR/
CATEGORICAL SNOWFALL AMOUNT /24-HOUR/

3. THE NWS WILL CHANGE THE IDENTIFIERS USED FOR THREE STATIONS IN THE GFS MOS AND LAMP PRODUCTS. BLAKELY GA WILL CHANGE FROM K11J TO KBIJ...WINNER WILEY FIELD SD WILL CHANGE FROM KSFD TO KICR...AND HUSLIA AK WILL CHANGE FROM PAHS TO PAHL.

4. NWS WILL REMOVE 19 STATIONS AND ADD 118 STATIONS TO THE SHORT- AND EXTENDED-RANGE STATION-BASED PUBLIC TEXT MESSAGES /KNOWN BY THEIR ADVANCED WEATHER INTERACTIVE PROCESSING SYSTEM /AWIPS/ IDS MAV AND MEX/ AND BINARY UNIVERSAL FORM FOR THE REPRESENTATION OF METEOROLOGICAL DATA /BUFR/ PRODUCTS. TEN MARINE STATIONS WILL BE REMOVED AND 171 MARINE STATIONS WILL BE ADDED TO THE GFS MOS MARINE TEXT PRODUCT /KNOWN BY THE AWIPS ID MMG/ AND BUFR PRODUCTS. THESE STATION CHANGES WILL BE REFLECTED IN THE UPDATED EQUATIONS AS WELL AS THE EQUATIONS WHICH WERE NOT UPDATED FOR THE ELEMENTS BELOW:

- FORECASTS OF PROBABILITY OF PRECIPITATION
- QUANTITATIVE PRECIPITATION FORECASTS
- VISIBILITY
- OBSTRUCTION TO VISION
- OPAQUE SKY COVER.

THE STATION REMOVALS WILL ALSO IMPACT THE RIVER FORECAST CENTER TEXT PRODUCT /KNOWN BY THE AWIPS ID FTP/.

THESE CHANGES WILL SLIGHTLY ALTER THE FORMAT OF THE MAV...MEX AND MMG TEXT PRODUCTS BECAUSE NEW LINES WILL BE ADDED TO THE EXISTING BULLETINS TO ACCOMMODATE THE NEW STATIONS. FOUR LINES WILL BE ADDED TO THE 1200 UTC MEX MESSAGE WITH THE COMPLETION OF THE PRECIPITATION TYPE ELEMENTS. THE COMMUNICATION IDENTIFIERS FOR THE TEXT AND BUFR PRODUCTS AFFECTED BY THIS CHANGE ARE SHOWN IN THE TABLES BELOW.

A WEBPAGE OUTLINING THE STATION CHANGES AND MORE DETAILS ABOUT THE UPDATES TO THE EQUATIONS IS ONLINE AT /USE LOWER CASE/:

WWW.NWS.NOAA.GOV/MDL/SYNOP/TIN/GFSMOS2009.PHP

BEGINNING AT 1600 UTC...GFS-LAMP WILL REMOVE 18 STATIONS FROM THE PUBLIC TEXT /KNOWN BY ITS AWIPS ID AS LAV/ AND BUFR MESSAGES FOR ALL CYCLES. A FULL DESCRIPTION OF THIS LAMP CHANGE IS AVAILABLE AT /USE LOWER CASE/:

WWW.NWS.NOAA.GOV/MDL/GFSLAMP/DOCS/CHANGE_NOTICE_01222010.SHTML

TABLE 1. COMMUNICATION IDENTIFIERS FOR THE GFS-BASED MOS PUBLIC WEATHER TEXT PRODUCTS.

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
FOAK37 KWNO	MAVAJK	FEAK37 KWNO	MEXAJK
FOAK38 KWNO	MAVAFC	FEAK38 KWNO	MEXAFC
FOAK39 KWNO	MAVAFG	FEAK39 KWNO	MEXAFG

TABLE 2. COMMUNICATION IDENTIFIERS FOR THE GFS-BASED MOS MARINE TEXT PRODUCTS.

WMO HEADING -----	AWIPS ID -----
FQPA20 KWNO	MMGHI1
FQUS21 KWNO	MMGNE1
FQUS22 KWNO	MMGSE1
FQUS23 KWNO	MMGGL1
FQUS24 KWNO	MMGGF1
FQUS25 KWNO	MMGNW1
FQUS26 KWNO	MMGSW1
FQAK37 KWNO	MMGAK1

TABLE 3. COMMUNICATION IDENTIFIERS FOR THE GFS-BASED MOS RIVER FORECAST CENTER TEXT PRODUCTS

WMO HEADING -----	AWIPS ID -----
FOUS12 KWNO	FTPCIN
FOUS12 KWNO	FTPPhFD
FOUS12 KWNO	FTPkrF
FOUS12 KWNO	FTPMSR
FOUS12 KWNO	FTPpTR
FOUS12 KWNO	FTPPrHA
FOUS12 KWNO	FTPPrSA
FOUS12 KWNO	FTPPrSLR
FOUS12 KWNO	FTPPrTUR
FOAK12 KWNO	FTPACR

TABLE 4. COMMUNICATION IDENTIFIERS FOR THE GFS-BASED MOS BUFR PRODUCTS.

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
JSML37 KWNO	JSMT37 KWNO	ALASKA

TABLE 5. COMMUNICATION IDENTIFIERS FOR THE AFFECTED AIR FORCE MOS TEXT PRODUCTS

WMO HEADING /SHORT RANGE/ -----	AWIPS ID -----	STATION REMOVED -----
FOUS30 KWNO	MAVF02	KPLB
FOUS30 KWNO	MAVF14	KNQX
FOUS30 KWNO	MAVF25	KMCC
/EXTENDED RANGE/ -----		
FEUS30 KWNO	MEXF02	KPLB
FEUS30 KWNO	MEXF14	KNQX
FEUS30 KWNO	MEXF25	KMCC

TABLE 6. COMMUNICATION IDENTIFIERS FOR THE GFS-LAMP TEXT PRODUCT AFFECTED BY THE REMOVAL OF STATIONS

WMO HEADING -----	AWIPS ID -----
FOUS11 KWNO	LAVUSA

TABLE 7. COMMUNICATION IDENTIFIERS FOR THE GFS-LAMP BUFR PRODUCTS AFFECTED BY THE REMOVAL OF STATIONS

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
JSMF17 KWNO	ALASKA

FOR QUESTIONS REGARDING GFS MOS GUIDANCE PRODUCTS...CONTACT:

KATHRYN GILBERT
MDL/SILVER SPRING MARYLAND
301-713-0023 EXT. 130
KATHRYN.GILBERT@NOAA.GOV

FOR QUESTIONS REGARDING GFS LAMP GUIDANCE PRODUCTS...CONTACT:

JUDY GHIRARDELLI
MDL/SILVER SPRING MARYLAND
PHONE: 301-713-0056 EXT. 194
JUDY.GHIRARDELLI@NOAA.GOV

LINKS TO THE MOS PRODUCTS...ALONG WITH DESCRIPTIONS...CAN BE FOUND AT /USE LOWER CASE/:

[HTTP://WWW.NWS.NOAA.GOV/MDL/SYNO](http://www.nws.noaa.gov/mdl/synop)

NATIONAL TECHNICAL IMPLEMENTATION NOTICES ARE ONLINE AT /USE LOWER CASE/:

[HTTPS://WWW.WEATHER.GOV/NOTIFICATION/ARCHIVE](https://www.weather.gov/notification/archive)

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