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TECHNICAL IMPLEMENTATION NOTICE 09-39...AMENDED
NATIONAL WEATHER SERVICE HEADQUARTERS WASHINGTON DC
320 PM EST FRI JAN 15 2010

TO: SUBSCRIBERS:
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-NOAA WEATHER WIRE SERVICE
-EMERGENCY MANAGERS WEATHER INFORMATION NETWORK
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OTHER NWS PARTNERS...USERS AND EMPLOYEES

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

SUBJECT: AMENDED DATE: CHANGES TO GFS MOS GUIDANCE EQUATIONS:
POSTPONED TO FEBRUARY 9 2010

AMENDED TO POSTPONE EFFECTIVE DATE FOR UPDATING GFS MOS
EQUATIONS FROM JANUARY 26 2010 TO FEBRUARY 9 2010

ON TUESDAY FEBRUARY 9 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 1 TO 4 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 1 TO 7 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 PRECIPITATION 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 AWIPS IDS MAV AND MEX/ AND 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 WEB PAGE OUTLINING THE STATION CHANGES AND MORE DETAILS ABOUT THE UPDATES TO THE EQUATIONS IS ONLINE AT /USE LOWERCASE/:

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 LOWERCASE/:

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	FTPHEFD
FOUS12 KWNO	FTPGRF
FOUS12 KWNO	FTPMSR
FOUS12 KWNO	FTPPTTR
FOUS12 KWNO	FTPRHA
FOUS12 KWNO	FTPRSA
FOUS12 KWNO	FTPSLR
FOUS12 KWNO	FTPTUR
FOAK12 KWNO	FTPACR

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

PRODUCTS.

WMO HEADING	WMO HEADING	REGION
/SHORT RANGE/	/EXTENDED RANGE/	
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	AWIPS ID	STATION REMOVED
/SHORT RANGE/		
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
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301-713-0023 EXT 130
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FOR QUESTIONS REGARDING GFS LAMP GUIDANCE PRODUCTS... CONTACT:

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

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

NWS NATIONAL TECHNICAL IMPLEMENTATION NOTICES ARE ONLINE AT
/USE LOWERCASE/:

[HTTP://WWW.WEATHER.GOV/OS/NOTIF.HTM](http://www.weather.gov/os/notif.htm)

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