

NOUS41 KWBC 031742
PNSWSH

TECHNICAL IMPLEMENTATION NOTICE 10-20
NATIONAL WEATHER SERVICE HEADQUARTERS WASHINGTON DC
903 AM EDT MON MAY 3 2010

TO: SUBSCRIBERS:
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SCIENCE PLANS BRANCH CHIEF
OFFICE OF SCIENCE AND TECHNOLOGY

SUBJECT: CHANGES TO SHORT-RANGE AND EXTENDED-RANGE
GLOBAL FORECAST SYSTEM /GFS/-BASED MOS
BUFR PRODUCTS: EFFECTIVE JULY 13 2010

ATTENTION USERS OF THE MODEL OUTPUT STATISTICS /MOS/ GUIDANCE:

ON TUESDAY JULY 13 2010...BEGINNING WITH THE 1200 COORDINATED
UNIVERSAL TIME /UTC/ RUN...THE NWS METEOROLOGICAL DEVELOPMENT
LABORATORY /MDL/ WILL MAKE THE FOLLOWING CHANGES TO THE SHORT-
RANGE /MAV/ AND EXTENDED-RANGE /MEX/ MOS BUFR PRODUCTS:

1. TOTAL SKY COVER WILL BE REPLACED WITH OPAQUE SKY COVER IN
THE MAV BUFR MESSAGE. THIS CHANGE WAS IMPLEMENTED IN 2007 FOR
ALL PUBLIC MOS PRODUCTS EXCEPT FOR THE BUFR MESSAGES. REFER TO
TECHNICAL IMPLEMENTATION NOTICE /TIN/ 07-34 TRANSMITTED ON
MAY 8 2007 FOR INFORMATION REGARDING THE REPLACEMENT OF THE GFS-
BASED MOS TOTAL SKY COVER GUIDANCE WITH OPAQUE SKY COVER. THIS
CHANGE TO THE MAV BUFR MESSAGE WILL BE TRANSPARENT TO USERS WITH
NO CHANGES TO DESCRIPTORS IN THE BUFR FILE.

2. FORECASTS FOR PROJECTIONS OUT TO 264 HOURS /DAY 11/ WILL BE
ADDED TO THE MEX MOS BUFR MESSAGE FOR THE FOLLOWING ELEMENTS:

2-METER TEMPERATURE
2-METER DEWPOINT TEMPERATURE
DAYTIME MAXIMUM AND NIGHTTIME MINIMUM TEMPERATURE
WIND SPEED
WIND DIRECTION
PROBABILITY OF PRECIPITATION /12 HOUR/

3. GUIDANCE FOR OPAQUE SKY COVER AND CONDITIONAL PRECIPITATION
TYPE WILL BE ADDED TO THE MEX MOS BUFR MESSAGE FOR PROJECTIONS
EVERY 3 HOURS OUT TO 192 HOURS. PREVIOUSLY THE PRECIPITATION
TYPE GUIDANCE IN THE MEX BUFR MESSAGE WAS POPULATED WITH MISSING
VALUES. EFFECTIVE ON JULY 13 2010...CONDITIONAL PROBABILITIES OF

FREEZING...FROZEN AND LIQUID PRECIPITATION TYPES WILL NOW BE AVAILABLE IN THE MEX BUFR MESSAGE OUT TO 192 HOURS. THE ADDITION OF OPAQUE SKY COVER AND PRECIPITATION TYPE WILL REQUIRE CHANGES TO DESCRIPTORS IN THE MEX BUFR FILE. SEE TABLE 1 FOR A LISTING OF THE DESCRIPTORS THAT WILL BE CHANGED.

4. FORECASTS OF 24-H SNOWFALL AMOUNT WILL BE ADDED TO THE MEX BUFR MESSAGE FOR THE 150- AND 162-H PROJECTIONS. THIS CHANGE INCLUDES THE FOLLOWING 24-H SNOWFALL VARIABLES:

- PROB SNOW AMOUNT > TRACE
- PROB SNOW AMOUNT >= 2 INCHES
- PROB SNOW AMOUNT >= 4 INCHES
- PROB SNOW AMOUNT >= 6 INCHES
- PROB SNOW AMOUNT >= 8 INCHES
- CATEGORICAL SNOWFALL AMOUNT

THE COMMUNICATION IDENTIFIERS AFFECTED BY THE ABOVE CHANGES ARE SHOWN IN TABLE 2. ADDITIONAL DETAILS ABOUT THE UPCOMING CHANGES TO THE GFS-BASED MOS BUFR PRODUCTS ARE AVAILABLE ONLINE AT /USE LOWERCASE/:

[HTTP://WWW.WEATHER.GOV/MDL/SYNOP/BUFR.PHP](http://www.weather.gov/mdl/synop/bufr.php)

TABLE 1. DESCRIPTORS TO BE CHANGED IN THE MEX MOS BUFR MESSAGE.

ELEMENT	DESCRIPTOR /OLD/	DESCRIPTOR /NEW/
PROB OF CLR	0 60 181	0 60 100
PROB OF FEW	0 60 182	0 60 108
PROB OF SCT	0 60 183	0 60 109
PROB OF BKN	0 60 184	0 60 103
PROB OF OVER	0 60 186	0 60 104
CAT SKY COVER	0 60 192	0 20 11
COND PROB FRZ	0 60 172	0 60 20
COND PROB SNOW	0 60 174	0 60 21
COND PROB LIQ	0 60 176	0 60 22
COND PROB IP	0 60 173	(REMOVED - OBSOLETE)
COND PROB MIX	0 60 175	(REMOVED - OBSOLETE)

TABLE 2. COMMUNICATION IDENTIFIERS FOR THE MAV AND MEX MOS BUFR PRODUCTS THAT ARE 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
JSML37 KWNO JSMT37 KWNO ALASKA
JSML38 KWNO WESTERN PACIFIC ISLANDS

FOR QUESTIONS REGARDING THE CHANGES TO THE GFS-BASED MOS
BUFR PRODUCTS...PLEASE 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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