

NWS REQUEST FOR CHANGE FORM

1. WSH TRACKING NUMBER DRG RC 10494	1A. REV LEVEL	2. DATE RECEIVED 5/2/07
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PART A - COVER SHEET

This form is in three parts. Submitters must complete unshaded blocks in Part A, and as much of Part B and C as possible. If there is no specific required change date, enter 60 days from date submitted. Address questions to NWS Change Management at (301) 713-1373. Submit change requests to the NWSRC mailbox (External: NWSRC@noaa.gov).

3. ORIGINATOR OFFICE NWS/OST/MDL	4. SUBMITTING AUTHORITY Name: Rebecca Cosgrove Routing Code: W/OST22	5. COGNIZANT TECHNICAL INDIVIDUAL Name: Kathryn Gilbert Routing Code: W/OST22 Phone: 301-713-0023 x130	6. ORIGINATOR TRACKING NUMBER MDL2007-02	7. DATE SUBMITTED February 2, 2007
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8. SYSTEMS AFFECTED BY CHANGE <input type="checkbox"/> ASOS <input checked="" type="checkbox"/> AWIPS <input type="checkbox"/> CSSA <input type="checkbox"/> CRS <input checked="" type="checkbox"/> DATA PRODUCTS <input type="checkbox"/> EMWIN <input type="checkbox"/> NEXRAD <input type="checkbox"/> RRS <input type="checkbox"/> OTHER (specify)	9. ORD IDENTIFIER
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10. TITLE OF CHANGE
Elements added to GFS-based gridded MOS guidance for the CONUS

11. CATEGORY OF CHANGE <input checked="" type="checkbox"/> RC <input type="checkbox"/> PECP <input type="checkbox"/> ECP	12. TYPE OF CHANGE <input type="checkbox"/> DOCUMENTATION ONLY <input type="checkbox"/> HARDWARE <input checked="" type="checkbox"/> SOFTWARE <input checked="" type="checkbox"/> DATA
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13. SITES AFFECTED
all

14. STATEMENT OF REQUIREMENT, PROBLEM, OR DEFICIENCY OF EXISTING SYSTEM
To support the NDFD, forecasters must produce accurate forecasts on a high-resolution grid in an optimal manner, using guidance available on a grid at a resolution comparable to that used in the WFO forecast process. The current MOS QPF, wind gust and sky cover guidance is only available at specific sites. The IFPS ISST has recommended the development of MOS guidance in gridded format.
(Text adapted from Gridded MOS OSIP Stage 2 documents)

15. KNOWN OR PROPOSED SOLUTION
MDL currently generates GFS-based MOS guidance on the 5-km NDFD CONUS grid twice daily (0000 and 1200 UTC model cycles) in GRIB2 format (see DRG 9332). Guidance is currently available for projections of 6 to 192 hours after model run time for maximum and minimum temperature, 2-m spot temperatures and dewpoints, 6- and 12-h probability of precipitation (POP), wind direction and speed, 3-, 6- and 12-hr probability of thunderstorms, and relative humidity. 24-hr snowfall amount was also approved with DRG9332, but we have not begun disseminating that product.

At this time we will add new guidance for 6- and 12-hr quantitative precipitation amount (QPF) from 6 to 156 hours, wind gusts and opaque total sky cover from 6 to 192 hours, and begin disseminating the 24-hr snowfall amount. Prior to the official SBN implementation date we need to send data to the testNCF.

The GRIB2 products will be sent from the NCEP CCS via the SBN to AWIPS, decoded by the GRIB2 decoder, and then ingested into GFE and the volume browser. These products are slated for Application Release 8.2. We anticipate these products to add roughly 20 MB of data to the SBN twice per day.

More information about the gridded MOS products is available at <http://www.weather.gov/mdl/synop/gmos.html>. The attached document outlines the headers for these new products and contains a list of the explicit headers that must be added to the switching directory by Data Management.

16. ALTERNATE SOLUTIONS
none

17. REQUIRED CHANGE DATE 3/13/07	18. RATIONALE FOR REQUIRED CHANGE DATE We need to transmit sample data to the testNCF as soon as possible for testing. March 13, 2007 for official SBN transmission corresponds to 120 advance notice for new WMO headers. See TIN 06-87.	19. PRIORITY <input checked="" type="checkbox"/> ROUTINE <input type="checkbox"/> URGENT <input type="checkbox"/> EMERGENCY
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DRG/CCB/PMC/CMB DECISION

20. DECISION AUTHORITY AND IMPACT LEVEL	<input type="checkbox"/> PMC or NWS CMB DECISION REQUIRED <input type="checkbox"/> CCB LEVEL ONLY <input type="checkbox"/> FAST TRACK	<input type="checkbox"/> MAJOR CHANGE <input type="checkbox"/> MINOR CHANGE
21. CCB LEVEL DECISION	<input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> DISAPPROVED	SIGNATURE Anthony Robinson
	<input type="checkbox"/> RECOMMEND APPROVAL <input type="checkbox"/> REFERRED TO OSIP	

FOR USE ONLY WHEN PMC or NWS CMB DECISION REQUIRED

22. PMC OR NWS CMB DECISION	<input type="checkbox"/> APPROVED <input type="checkbox"/> DISAPPROVED	SIGNATURE/DATE
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Table 1. Gridded MOS products to be added March 2007.
The CCCC for all headers is KWBQ.

Element	Header	No. of grids per cycle	First/Last Proj./Time Increment (hr)	Bytes per grid/cycle
Sky Cover	LAUA _{2ii}	63	6/192/3	100K/6.3M
Quantitative Precip. (QPF) (6h)	LIUA _{2ii}	25	12/156/6	100K/2.5M
Quantitative Precip. (QPF) (12h)	LVUA _{2ii}	24	18/156/6	100K/2.4M
Wind Gusts	LWUA _{2ii}	63	6/192/3	150K/9.4M

Table 2. WMO headers for gridded MOS products to be added March 2007.
The CCCC for all headers is KWBQ.

Element	Header Category	Product Headers
Sky Cover	LAUA _{2ii}	LAUA18 LAUA21 LAUB00 LAUB03 LAUB06 LAUB09 LAUB12 LAUB15 LAUB18 LAUB21 LAUC00 LAUC03 LAUC06 LAUC09 LAUC12 LAUC15 LAUC18 LAUC21 LAUD00 LAUD03 LAUD06 LAUD09 LAUD12 LAUD15 LAUD18 LAUD21 LAUE00 LAUE03 LAUE06 LAUE09 LAUE12 LAUE15 LAUE18 LAUE21 LAUF00 LAUF03 LAUF06 LAUF09 LAUF12 LAUF15 LAUF18 LAUF21 LAUG00 LAUG03 LAUG06 LAUG09 LAUG12 LAUG15 LAUG18 LAUG21 LAUH00 LAUH03 LAUH06 LAUH09 LAUH12 LAUH15 LAUH18 LAUH21 LAUI00 LAUI03 LAUI06 LAUI09 LAUI12 LAUI15 LAUI18 LAUI21 LAUJ00
QPF (6h)	LIUA _{2ii}	LIUB00 LIUB06 LIUB12 LIUB18 LIUC00 LIUC06 LIUC12 LIUC18 LIUD00 LIUD06 LIUD12 LIUD18 LIUE00 LIUE06 LIUE12 LIUE18 LIUF00 LIUF06 LIUF12 LIUF18 LIUG00 LIUG06 LIUG12 LIUG18 LIUH00 LIUH06 LIUH12

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QPF (12h)	LVUA _{2ii}	LVUB06 LVUB12 LVUB18 LVUC00 LVUC06 LVUC12 LVUC18 LVUD00 LVUD06 LVUD12 LVUD18 LVUE00 LVUE06 LVUE12 LVUE18 LVUF00 LVUF06 LVUF12 LVUF18 LVUG00 LVUG06 LVUG12 LVUG18 LVUH00 LVUH06 LVUH12
Wind Gusts	LWUA _{2ii}	LWUA18 LWUA21 LWUB00 LWUB03 LWUB06 LWUB09 LWUB12 LWUB15 LWUB18 LWUB21 LWUC00 LWUC03 LWUC06 LWUC09 LWUC12 LWUC15 LWUC18 LWUC21 LWUD00 LWUD03 LWUD06 LWUD09 LWUD12 LWUD15 LWUD18 LWUD21 LWUE00 LWUE03 LWUE06 LWUE09 LWUE12 LWUE15 LWUE18 LWUE21 LWUF00 LWUF03 LWUF06 LWUF09 LWUF12 LWUF15 LWUF18 LWUF21 LWUG00 LWUG03 LWUG06 LWUG09 LWUG12 LWUG15 LWUG18 LWUG21 LWUH00 LWUH03 LWUH06 LWUH09 LWUH12 LWUH15 LWUH18 LWUH21 LWUI00 LWUI03 LWUI06 LWUI09 LWUI12 LWUI15 LWUI18 LWUI21 LWUJ00