

Experimental National Blend of Models Text Messages

Product Description Document (PDD)

Part I - Mission Connection

- a. Product Description - The National Blend of Models (NBM) is a nationally consistent and skillful suite of calibrated forecast guidance based on a blend of both NWS and non-NWS numerical weather prediction model data and post-processed model guidance. The NBM has been generating experimental gridded guidance since January 6, 2016. To familiarize and engage a wider customer base with the NBM, the NWS proposes to generate a product suite of station MOS-like guidance. The NBM guidance in these bulletins will reflect the value of the closest gridpoint to the station listed in the bulletin.
- b. Purpose - The NBM contains several new weather elements along with their associated probabilities that are not part of the Meteorological Development Laboratory's (MDL's) current MOS guidance suite. Moreover, certain categorical elements within the current MOS guidance (for example, 6-h quantitative precipitation forecasts) are in categorical form which limit the amount of information forecasters can glean from potential upcoming hazardous events for IDSS. These shortcomings, along with the infrequent updating cadence of the current MOS guidance, have necessitated that these NBM ASCII text bulletins be added to the current suite of MDL's products.
- c. Audience - The target audience includes NWS forecasters both at Weather Forecast Offices (WFO's), Regional and National Centers along with public, commerce, media, and emergency managers.
- d. Presentation Format - As noted above, the NBM text messages will be very similar in format and appearance to the current Localized Aviation Model Output Statistics Program (LAMP) hourly and GFS-MOS short-term and extended-range text bulletins. The top two rows of each message will indicate the times for which the guidance is valid and the left-most column will indicate the weather element for which guidance is available. The values inside this matrix will be populated by the guidance itself. Please see the Technical Description below for NBM text file examples.
- e. Feedback Method - We would appreciate feedback concerning this new experimental product between the dates of March 15, 2018 through June 27, 2018. For those users with an NOAA LDAP account we welcome your feedback with the subject line "NBM Text File Feedback" using the following email address: VLab.Notifications@noaa.gov

For those individuals without an NOAA LDAP account you may email Jeff Craven,

MDL's Statistical Modeling Branch Chief, using the same subject line mentioned above at: jeffrey.craven@noaa.gov

Part II - Technical Description

- a. Format and Science Basis - Hourly NBM processing involves ingesting new DMO and statistically post-processed model fields to generate blended guidance for that hour. In some instances the updates are confined to just the short-term as no new global model guidance is available. For select hours, however, new global model guidance is ingested along with the routinely updating hourly short-term model guidance. To quickly capture and interrogate these hourly and inter-hourly NBM updates, we have generated four distinct NBM bulletins. These bulletins along with their respective detailed descriptions can be found at https://www.weather.gov/mdl/nbm_text. Customers who require a more dedicated connection to this data flow can find these text messages at (add ftpprd url). Internal NOAA customers can also find NBM text files at <https://sats.nws.noaa.gov/~downloads/nbm/bulk-text/>. We note that the sats server is not supported 24/7 and as such experiences planned and unplanned outages every so often. What follows are examples of each of the four types of NBM text files.

1-hourly NBM guidance from 1-25 hours (NBH)

KDCA	NBM	NBH	GUIDANCE 2/21/2018 0000 UTC																						
UTC	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	00	01
TMP	66	65	65	64	64	63	63	63	63	63	63	63	64	65	66	68	69	71	73	74	75	74	73	70	70
DPT	59	59	59	59	59	60	60	60	61	61	61	61	62	63	63	63	63	64	64	64	63	63	63	63	64
SKY	13	6	8	19	21	8	18	32	60	70	79	78	79	76	66	66	56	37	36	21	22	23	22	29	38
WDR	20	20	20	20	21	21	20	21	20	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	22
WSP	5	5	6	5	5	4	4	4	4	4	5	6	6	7	8	8	8	9	8	8	8	7	5	4	4
GST	15	15	16	16	16	16	14	14	14	13	15	15	16	20	21	21	21	20	19	18	16	14	13	11	12
P01	0	0	0	0	0	0	0	0	0	0	0	1	0	5	1	0	0	0	0	0	0	5	12	10	14
P06						0						0					6							12	
PZR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PSN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PPL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PRA	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
T01	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
Q01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
I01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CIG	888888888888888888888888888888	10	8	70	11	60	80	8	808888888888888888888888888888																
VIS	11	11	11	11	11	11	10	10	9	9	7	8	10	11	12	12	11	12	12	12	12	12	11	11	10
LCB	9999999999	20	20	999	14	6	8	8	8	8	8	7	7	8	13	36	42	14	16	99999999999999	24				

3-hourly NBM guidance from 6-66 hours (NBS)

KDCA	NBM NBX		GUIDANCE				2/21/2018				0000 UTC		
THU 01	FRI 02	SAT 03	SUN 04	MON 05	TUE 06	WED 07	THU 08	CLIMO					
UTC 12	00 12	00 12	00 12	00 12	00 12	00 12	00 12						
FHR 204	216 228	240 252	264 276	288 300	312 324	336 348	360 372						
N/X 38	56 37	51 34	51 999	999 999	999 999	999 999	999 999	32 50					
TMP 40	51 41	45 37	44 999	999 999	999 999	999 999	999 999						
DPT 33	37 32	30 29	27 999	999 999	999 999	999 999	999 999						
SKY 28	51 52	33 30	38 999	999 999	999 999	999 999	999 999						
WDR 35	34 33	32 33	32 999	999 999	999 999	999 999	999 999						
WSP 4	3 4	6 8	8 999	999 999	999 999	999 999	999 999						
GST 4	3 4	999 999	999 999	999 999	999 999	999 999	999 999						
P12 6	13 20	999 999	999 999	999 999	999 999	999 999	999 999	22 23					
Q12 0	0 0	999 999	999 999	999 999	999 999	999 999	999 999						
Q24	0	0	999	999	999	999	999						
PZR 0	0 0	0 0	0 999	999 999	999 999	999 999	999 999						
PSN 0	0 0	0 100	0 999	999 999	999 999	999 999	999 999						
PPL 0	0 0	0 0	0 999	999 999	999 999	999 999	999 999						
PRA 100	100 100	100 100	100 999	999 999	999 999	999 999	999 999						
S12 0	0 0	999 999	999 999	999 999	999 999	999 999	999 999						
SLV 12	18 13	8 0	2 999	999 999	999 999	999 999	999 999						
I12 0	0 0	999 999	999 999	999 999	999 999	999 999	999 999						
S24	0	0	999	999	999	999	999						

b. Data Availability - These four distinct NBM bulletins will be issued hourly (0000-2300 UTC) and will be available approximately 15 minutes past each hour.