NOUS41 KWBC 011855
PNSWSH

Public Information Statement 25-28
National Weather Service Headquarters Silver Spring MD
255 PM EDT Thu May 1 2025

To: Subscribers
-NOAA Weather Wire Service
-Emergency Managers Weather Information Network
-NOAAPORT
Other NWS Partners, Users and Employees

From: Geoff Manikin
Chief, Statistical Modeling Division, Meteorological Development Lab

Subject: Soliciting Comments on the Proposed Upgrade of LAMP and Gridded LAMP Guidance through May 30, 2025

The NWS Meteorological Development Laboratory (MDL) is proposing to implement Localized Aviation MOS Program (LAMP) and Gridded LAMP (GLMP) Version 2.7 in Summer 2025. The NWS is seeking public comments on this proposed upgrade through May 30, 2025. If approved, a Service Change Notice (SCN) will be issued at least 30 days prior to the implementation of these changes with more detailed information.

LAMP/GLMP v2.7 will include the following enhancements/changes in support of the National Blend of Models (NBM) and other NWS initiatives:

1) Addition of station-based guidance for ceiling height and visibility that provides the forecasted start and end (aka onset and cessation) times of aviation flight categories and provides probabilistic information. The guidance will be made available in three text bulletin formats:

A. An expanded sub-hourly bulletin containing guidance valid for 15-minute periods out to six hours, updating every 15 minutes (96 cycles per day), for 1818 CONUS stations including San Mateo Bridge, CA (identifier “KSMB”). The expanded sub-hourly bulletins will contain guidance for:

i. The lowest forecasted combined flight category during the 15-minute period.
ii. The forecasted start, prevailing, and end times of each combined flight category.
iii. The lowest forecasted LAMP categorical ceiling and categorical visibility during the 15-minute period.
iv. The lowest forecasted ceiling height in units of hundreds of feet during the 15-minute period, obtained by interpolation from the operational 15-minute GLMP ceiling height grids.
v. Cumulative probabilities for specific ceiling categories occurring during the 15-minute period.
vi. Cumulative probabilities for specific visibility categories occurring during the 15-minute period.

B. A new extended bulletin containing guidance for hourly projections out to 38 hours, updating each hour at the nominal HH:30 UTC LAMP cycle times, for 1817 CONUS stations (excluding San Mateo Bridge) plus Honolulu, HI. The extended bulletins will contain guidance for:

i. The forecasted combined flight category at the hour.
ii. The forecasted start, prevailing, and end times of each combined flight category.
iii. The forecasted LAMP categorical ceiling and categorical visibility valid at the hour.
iv. The forecasted ceiling height in units of hundreds of feet at the top of the hour, obtained by interpolation from the operational hourly GLMP ceiling grids.
v. Cumulative probabilities for specific ceiling categories occurring at the top of the hour.
vi. Cumulative probabilities for specific visibility categories occurring at the top of the hour.

C. A new simplified bulletin that indicates the start day and time and end day and time in UTC for each flight category, produced every 15 minutes (96 cycles per day) covering the first six hours, and produced hourly (24 cycles per day) covering 1-38 hours.

Note that the sub-hourly bulletin out to six hours (format A described above) will replace the existing 15-minute bulletins that contain only the LAMP ceiling and visibility categories. Thus, the format of the existing LAMP sub-hourly bulletins will be changing to add the flight category and probabilistic information described above.

If approved, the new text bulletin products described above will be made available on NCEP Web Services (NOMADS) when LAMP v2.7 is implemented in Summer 2025. There are no plans to disseminate these new bulletins over the Satellite Broadcast Network (SBN) at this time.

2) Updated hourly categorical visibility guidance at stations to improve over-forecast biases. Presently, national thresholds which do not vary by station are used for each LAMP visibility category. This has led to over-forecasting of the lower visibility categories in some parts of the country, particularly over the Eastern U.S. off the coastal plain. To address this issue, stations were grouped based on deciles of forecast bias for each visibility category, and then thresholds were re-derived for each decile group that apply to all stations in the group. Forecast biases and/or threat scores for visibility are either unchanged or improved at a majority of LAMP stations using the redeveloped thresholds. If this proposed change is approved, the updated categorical visibility guidance will be reflected in the hourly LAMP “LAV” and “LEV” text bulletins and BUFR message when LAMP v2.7 is implemented in Summer 2025.

3) Addition of ceiling height and visibility guidance for 335 stations in the “LAV” and “LEV” text bulletins and BUFR message. These stations were originally added to the LAMP system in 2023 for temperature, dewpoint, and wind elements (see Service Change Notice 23-50 here

https://www.weather.gov/media/notification/pdf_2023_24/scn23-50_lamp_glmp_v2.5_aaa.pdf). Availability of LAMP guidance for these stations is now being expanded to include categorical ceiling and visibility. A list of the 335 stations that will now have ceiling and visibility guidance can be viewed here https://vlab.noaa.gov/web/mdl/lamp-stns-add-2023. Note that these stations will be added to the GLMP ceiling and visibility analyses in a future upgrade.

4) A bug fix to correct a misrepresentation of unlimited ceiling height in the Alaska GLMP ceiling grids. Presently, the GLMP deterministic ceiling grids for Alaska can contain values greater than 12,000 feet, which is unintended. This has been corrected to set ceilings greater than 12,000 feet to a value of "-100" in the disseminated GRIB2 output.

Expected benefits of this LAMP/GLMP upgrade include:

1) The addition of sub-hourly and hourly text bulletins for flight categories will provide forecasted start and end times for impactful ceiling and visibility conditions as well as probabilistic information to aviation users.

2) The updated visibility thresholds based on bias deciles will result in generally improved forecast biases and threat scores for visibility guidance at the majority of LAMP stations.

3) The addition of ceiling and visibility guidance for 335 stations will expand the availability of LAMP guidance elements for these stations.

4) Correcting the issue with misrepresentation of unlimited ceilings in the Alaska GLMP ceiling guidance will improve the quality of the gridded guidance for users. Since GLMP ceiling guidance is used 100% in the NBM guidance in the first 36 hours, this will also fix this issue in the NBM ceiling guidance grids.

The website below contains additional information about the LAMP/GLMP v2.7 upgrade and links to sample prototype guidance:

https://vlab.noaa.gov/web/mdl/experimental-lamp

Note that data on the experimental LAMP webpage is subject to outages when the development WCOSS machine is unavailable for maintenance or if input data is otherwise unavailable. Also note that these experimental web pages will be available through the user evaluation for feedback purposes only and will not be continued thereafter.

For providing comments on the above changes to LAMP and Gridded LAMP guidance, please use the feedback form which can be accessed via this link:

https://forms.gle/WhkxopLvtEbo9wBr5

Alternatively, you can provide comments by sending an email with "Feedback on Proposed LAMP/GLMP v2.7 Upgrade" in the email

subject to:

Phil Shafer
Email: phil.shafer@noaa.gov
Meteorological Development Laboratory
Decision Support Division - LAMP Team Lead
Silver Spring, MD

and/or

Geoff Manikin
Email: geoffrey.manikin@noaa.gov
Meteorological Development Laboratory
Statistical Modeling Division Chief
Silver Spring, MD

The NWS and MDL will evaluate all comments on the proposed changes to determine whether to proceed with the upgrade.

Links to LAMP products and descriptions can be found at:

https://vlab.noaa.gov/web/mdl/lamp

NWS National Service Change Notices and Public Statements are online at:

https://www.weather.gov/notification/

NNNN