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Technical Implementation Notice 16-13 Amended
National Weather Service Headquarters Washington DC
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 Office of Science and Technology Integration

Subject: Amended: Changes to Gridded Localized Aviation Model Output
Statistics Program (LAMP): Effective June 14, 2016

Amended to clarify dissemination paths for new and existing Gridded LAMP products. On the change date, the new elements described in (1) and (2) below will be available in the operational National Digital Guidance Database (NDGD), but will not be disseminated on the Satellite Broadcast Network (SBN) or NOAAPort until such time as there is sufficient bandwidth available to accommodate these new products. Existing Gridded LAMP products will continue to be disseminated on the SBN/NOAAPort and to NDGD.

On or about Tuesday, June 14, 2016, beginning with the 1200 Coordinated Universal Time (UTC) model run, the NWS Meteorological Development Laboratory (MDL) will implement changes to the Gridded Localized Aviation Model Output Statistics Program (LAMP).

Gridded LAMP products are generated on a 2.5-km Lambert Conformal grid over the contiguous U.S. (CONUS). Gridded observations and gridded forecasts (1- to 25-hour projections) are produced hourly.

The changes are as follows:

- Add seven new elements to LAMP gridded forecast guidance for CONUS. Guidance will be available for the following new elements:

10-m wind gusts
Probability of ceiling height less than 500 feet
Probability of ceiling height less than 1,000 feet
Probability of ceiling height less than or equal to 3,000 feet
Probability of visibility less than 1 mile
Probability of visibility less than 3 miles
Probability of visibility less than or equal to 5 miles

- Add one new element to LAMP gridded observations for CONUS. Gridded LAMP observations will be available for the following new element:

- 10-m wind gusts

- Minor algorithm changes and updated station lists for station input into Gridded LAMP are expected to provide slight improvements to the Gridded LAMP observations and forecast guidance for existing elements:

2-m Temperature
2-m Dewpoint temperature
Ceiling height
Visibility
Sky Cover
10-m Wind speed
10-m Wind direction

Specifically, the criteria to reject input points have been modified slightly. The gridding algorithm for temperature and dewpoint now utilizes upper air data, which is expected to improve accuracy of the Gridded LAMP temperature and dewpoint observations and forecasts at higher elevations in the mountainous regions. The gridding algorithm and smoothing have been modified slightly and the station list has been updated for ceiling height, visibility, and sky cover.

Benefits of the system changes include:

- Availability of Gridded LAMP gridded observations and forecasts guidance for new element of 10-m wind gusts.
- Availability of Gridded LAMP gridded forecasts for new elements of ceiling height probabilities and visibility probabilities.
- In general, expected slight improvements in the gridded fields due to additional data and minor algorithm modifications.
- Expected improved accuracy of Gridded LAMP temperature and dewpoint observations and forecasts at higher elevations in the mountainous regions.
- Ceiling and visibility observations and forecasts gridded data now better fit the underlying point data and reduce the spread of very low ceiling and visibility values into areas on the grid where there are no nearby station points.

Dissemination:

On the change date, the new elements described in (1) and (2) above will be available in the operational NDGD, but will not be disseminated on the SBN or NOAAPort until such time as there is sufficient bandwidth available to accommodate these new products. Existing Gridded LAMP products will continue to be disseminated on the SBN/NOAAPort and to NDGD.

The gridded LAMP products for the CONUS, in gridded binary version two (GRIB2) format, are available on the NWS server at:

<ftp://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/DF.gr2/DC.ndgd/GT.glmp/AR.conus/>
or
<http://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/DF.gr2/DC.ndgd/GT.glmp/AR.conus/>

A listing of the GRIB2 file names for gridded observations and forecasts for new and existing elements is available at:

http://www.weather.gov/mdl/lamp_glmf_NWS_tgftp_server

The new communication identifiers for the GRIB2 products are shown below in Tables 1 and 2. A complete list of GLMP World Meteorological Organization (WMO) headers is available at:

http://www.weather.gov/media/mdl/glmphheaders_2016.pdf

Table 1: Communication Identifiers for the Gridded LAMP Observation Products in GRIB2 Format

Listed below are representations of the WMO header: xx represents the valid UTC hour (00-23).

WMO Header	Element
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LAUAxx KMDL	2-meter gridded temperature observations
LAUBxx KMDL	2-meter gridded temperature observation error estimations
LBUAxx KMDL	2-meter gridded dewpoint temperature observations
LBUBxx KMDL	2-meter gridded dewpoint temperature observation error estimations
LCUAxx KMDL	Gridded ceiling height observations
LDUAxx KMDL	Gridded visibility observations
LEUAxx KMDL	Gridded opaque sky cover observations
LFUAxx KMDL	10-m gridded wind speed observations
LGUAxx KMDL	10-m gridded wind direction observations
LHUAxx KMDL	10-m gridded wind gust observations

Table 2: Communication Identifiers for the Gridded LAMP Forecast Products in GRIB2 Format

Listed below are representations of the WMO header: xx represents the forecast projections (01-25).

WMO Header	Element
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LKUAXx KMDL	Gridded 2-meter temperature forecasts
LLUAXx KMDL	Gridded 2-meter dewpoint temperature forecasts
LMUAXx KMDL	Gridded ceiling height forecasts
LNUAXx KMDL	Gridded visibility forecasts
LOUAXx KMDL	Gridded opaque sky cover forecasts
LPUAXx KMDL	10-m gridded wind speed forecasts
LQUAXx KMDL	10-m gridded wind direction forecasts
LRUAXx KMDL	10-m gridded wind gust forecasts
LMUCxx KMDL	Gridded probability of ceiling height less than 500 feet forecasts
LMUDxx KMDL	Gridded probability of ceiling height less than 1,000 feet forecasts
LMUFxx KMDL	Gridded probability of ceiling height less than or equal to 3,000 feet forecasts
LNUCxx KMDL	Gridded probability of visibility less than 1 mile

	forecasts
LNUExx KMDL	Gridded probability of visibility less than 3 mile forecasts
LNUFxx KMDL	Gridded probability of visibility less than or equal to 5 mile forecasts

More details about the Gridded LAMP products and this implementation, including a link to a website for displaying the new and improved products, can be found online at:

http://www.weather.gov/mdl/lamp_docs

A consistent parallel feed of data is available on the NCEP HTTP. The data are available at the following URL:

<http://para.nomads.ncep.noaa.gov/pub/data/nccf/noaaport/glmp/>

If you have technical comments or questions, please contact:

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Links to the LAMP products and descriptions can found at:

http://www.weather.gov/mdl/lamp_home

National Technical Implementation Notices are online at:

<https://www.weather.gov/notification/archive>

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