NOUS41 KWBC 101315 AAA
PNSWSH

Service Change Notice 20-72 Updated
National Weather Service Headquarters Silver Spring, MD
915 AM EDT Thu Sep 10 2020

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

From: Ben Kyger
Director, NCEP Central Operations

Subject: Updated: Upgrade IDP Multi-Radar, Multi-Sensor Application Effective October 14, 2020

Updated to delay the implementation date from September 23 to October 14, 2020. Also, updated to clarify that Canadian S-Band dual-pol radars are not included in the MRMS v12.0.0 release.

Effective on or about Wednesday, October 14, 2020, the National Centers for Environmental Prediction (NCEP) Central Operations (NCO) will upgrade the Multi-Radar, Multi-Sensor (MRMS) Integrated Dissemination Program (IDP) application to Version 12.0.0.

The IDP MRMS output can be found
1. On the NCEP Web Services:
https://mrms.ncep.noaa.gov/data/
2. On the NCEP Local Data Manager (LDM) by requesting access:
https://www.nssl.noaa.gov/projects/mrms/MRMS_data.php
3. On SBN/NOAAPORT

The technical enhancements include the following:

(A) Changes to existing products

- Improved velocity dealiasing

- Canada radars (C-band only) are now included in both raw and QC'd 2-D mosaics of composite reflectivity for the CONUS. Canada radars (C-band only) are now included in both raw and QC'd 2-D mosaics of composite reflectivity for the CONUS Canadian S-band radars will be included in future builds of MRMS.

- Updated radar-based Quantitative Precipitation Estimate (QPE) products to use a synthetic dual-pol scheme.

- Updated Flooded Location and Simulated Hydrographs (FLASH) to use the instantaneous rainfall rates from the dual-pol radar synthetic QPE.

- Switched AutoNowCaster's satellite input from full disk scans to more frequent CONUS scans.

- Product name changes for lightning density and some reflectivity products

  NLDN_CG_001min_00.00 -> NLDN_CG_001min_AvgDensity_00.00
  NLDN_CG_005min_00.00 -> NLDN_CG_005min_AvgDensity_00.00
  NLDN_CG_015min_00.00 -> NLDN_CG_015min_AvgDensity_00.00
  NLDN_CG_030min_00.00 -> NLDN_CG_030min_AvgDensity_00.00

- Product name change and new GRIB2 product ID for lightning probability

  LightningProbabilityNext30min_scale_0 (Category 2, Product 4) ->
  LightningProbabilityNext30minGrid_scale_1 (Category 2, Product 5)

- SBN/NOAAPORT Changes:
  - Replacing GaugeCorrected QPEs with MultiSensor Pass 1 QPEs. Reusing GaugeCorrected's WMO code (YAUP04).
  - Replacing MountainMapper QPEs with MultiSensor Pass 2 QPEs. Reusing MountainMapper's WMO code (YAUP06).
  - Will continue to distribute CONUS products only; no oCONUS.

- NCEP Web RIDGEII Changes:
  - For all domains, the L2_PCPN_TYP (PrecipFlag) color table was updated to properly display for areas with no precipitation
  - For all TDWRs, the L3_BNET color table was updated to properly display for areas with no echo tops.
  - For all WSR88Ds, the L3_BSDA color table was updated to correctly display precip amounts.

- For Alaska, Hawaii, Guam and the Caribbean the PCPN_TYP product has replaced Level III DHC, as its input, with MRMS PrecipFlag. The MRMS PrecipFlag is sourced from Level II data rather than Level III. Filename changes:

ALASKA_L3_PCPN_TYPE -> ALASKA_L2_PCPN_TYPE
CARIB_L3_PCPN_TYPE -> CARIB_L2_PCPN_TYPE
GUAM_L3_PCPN_TYPE -> GUAM_L2_PCPN_TYPE
HAWAII_L3_PCPN_TYPE -> HAWAII_L2_PCPN_TYPE

(B) New products

For details on new product output please see additional link here:
https://www.nco.ncep.noaa.gov/pmb/changes/MRMS_SCN_v12.0_Upgrade_Supplemental.pdf

- Addition of Vertically Integrated Liquid (VIL) Swaths for 1 and 24-hours.
- New 60-min Lightning Probability and new Lightning Jump products
- New 3-D Correlation Function (RhoHV) and Differential Reflectivity (Zdr) mosaics. Vertical levels will be stored in separate GRIB2 files like the 3-D Reflectivity mosaic.
- Addition of a Radar Only 15-minute QPE and Radar QPE Accumulation Quality Index fields.
- Addition of MultiSensor QPE (MSQPE) Pass 1 and Pass 2 products. MSQPE Pass 1 and 2 will replace GaugeCorrected and MountainMapper QPE and use their World Meteorological Organization (WMO) codes.
- Addition of GaugeInfluenceIndex Pass 1 and Pass 2
- Added ProbSevere for CONUS
- Expansion of nearly all severe weather products to the oCONUS domains. Exceptions are the lightning products (not available for any oCONUS domain) and AzithumalShear and RotationTracks (not available for Alaska).
- Expansion of QPE and QPE-related products to the oCONUS domains.
- Expansion of FLASH to the oCONUS domains.
- Expanded the number of products available in NEXRAD Information Dissemination Service (NIDS) format, which will be

evaluated as possible replacements for Unisys generated gridded products

(C) Discontinued products

- The "CONUS Plus" 3-D Reflectivity mosaic will be discontinued. It's redundant now that the CONUS (no plus) 3-D Reflectivity mosaic includes Canadian radars.
  MRMS_MergedReflectivityQC_[level]* (Via LDM)
  MergedReflectivityQC_[level]* (Via NCEP Web)
- GaugeCorrected, GaugeOnly, and MountainMapper QPEs will be replaced by MultiSensor QPE Pass 1 and 2.
- GaugeInfluenceIndex will be replaced by GaugeInfluence Pass 1 and 2

For a real-time feed of data, that include all the changes listed in this notice, please see the Web Service URL:
https://mrmst.ncep.noaa.gov/data

NCEP encourages users to ensure their decoders are flexible and are able to adequately handle changes in content order, changes in the scaling factor component within the product definition section (PDS) of the GRIB files, and any volume changes which may be forthcoming. These elements may change with future NCEP application upgrades. NCEP will make every attempt to alert users to these changes prior to any implementations.

NCEP will evaluate all comments to determine whether to proceed with this upgrade. For questions regarding these application changes, please contact:

Ken Howard
OAR/National Severe Storms Laboratory
Norman, OK
Kenneth.Howard@noaa.gov
and
Tabitha Huntemann
NWS/Office of Science and Technology Integration
Silver Spring, MD
Tabitha.Huntemann@noaa.gov

For questions regarding the operational application, please contact:

Joshua Huber
NCEP/NCO Implementation and Data Services Branch
College Park, Maryland
idp-support@noaa.gov

NWS Service Change Notices are online at:
https://www.weather.gov/notification

NNNN