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

From:    Stephan Smith
Acting Director
NWS Office of Science and Technology Integration

Subject: Soliciting Public Comments through December 19, 2020 on Proposed Changes to MRMS Products Available on the SBN and the Removal of Binary Products from the MRMS System

The NWS is soliciting comments through December 19, 2020 on adding or removing certain Multi-Radar Multi-Sensor (MRMS) products from the Satellite Broadcast Network (SBN) and the removal of binary products from the MRMS system. NWS intends these changes to result in a more efficient, reliable delivery process for new and future NWS products.

Tables 1-3 below contain descriptions of the recommended SBN actions for MRMS products. Products removed from the SBN will remain available on:

1. The National Centers for Environmental Prediction (NCEP) Web Services:
   https://mrms.ncep.noaa.gov/data/

2. The NCEP Local Data Manager (LDM) by requesting access:
   https://www.nssl.noaa.gov/projects/mrms/MRMS_data.php

Table 1. World Meteorological Organization (WMO) Headers and Product Names for MRMS Products Proposed for Addition to the MRMS SBN

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Product Description</th>
</tr>
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<tbody>
<tr>
<td>YAUE01</td>
<td>Flooded Locations and Simulated Hydrographs (FLASH)</td>
</tr>
<tr>
<td></td>
<td>Coupled Routing and Excess Storage (CREST) Unit Streamflow</td>
</tr>
<tr>
<td>YAUE04</td>
<td>FLASH Sacramento Soil Moisture Accounting (SAC) Unit Streamflow</td>
</tr>
<tr>
<td>YAUE06</td>
<td>FLASH SAC Soil Saturation</td>
</tr>
<tr>
<td>YAUE09</td>
<td>FLASH Precipitation Average Recurrence Interval</td>
</tr>
<tr>
<td>YAUE10</td>
<td>FLASH Quantitative Precipitation Estimate to Flash Flood Guidance (QPE-to-FFG) Ratio</td>
</tr>
<tr>
<td>YAUS09</td>
<td>Probability of Severe Hail</td>
</tr>
<tr>
<td>YAUF01</td>
<td>Probability of Severe (JSON format)</td>
</tr>
</tbody>
</table>
Alaska Products to be Added to the MRMS SBN:

YAA01   Composite Reflectivity
YAAP02   PrecipRate
YAAP03   RadarOnly_QPE_01-hour, 03-hour, 06-hour, 12-hour, 24-hour, 48-hour, 72-hour
YAAP04   MultiSensor_QPE_[01, 03, 06, 12, 24, 48, 72]hour_Pass1
YAAP06   MultiSensor_QPE_[01, 03, 06, 12, 24, 48, 72]hour_Pass2

Hawaii Products to be Added to the MRMS SBN:

YAP02   PrecipRate
YAP03   RadarOnly_QPE_01-hour, 03-hour, 06-hour, 12-hour, 24-hour, 48-hour, 72-hour
YAP04   MultiSensor_QPE_[01, 03, 06, 12, 24, 48, 72]hour_Pass1
YAP06   MultiSensor_QPE_[01, 03, 06, 12, 24, 48, 72]hour_Pass2

Table 2. WMO Headers and Product Names for MRMS Products Currently on the MRMS SBN to be Retained

CONUS Products to be Retained on the MRMS SBN

YAC01   Composite Reflectivity
YAP01   Surface Precipitation Type (Convective, Stratiform, Tropical, Hail, Snow)
YAP02   Precipitation Rate
YAP03   Radar Precipitation Accumulation
YAP04   MultiSensor_QPE_[01, 03, 06, 12, 24, 48, 72]hour_Pass1
YAP06   MultiSensor_QPE_[01, 03, 06, 12, 24, 48, 72]hour_Pass2
YAU01   Mosaic Base Reflectivity (optimal method)
YAU04   Low-Level Rotation Tracks (30, 60, ... minutes accumulation)
YAU06   Mid-Level Rotation Tracks (30, 60, ... minutes accumulation)
YAU010  Maximum Estimated Size of Hail (MESH)
YAU11   MESH Hail Swath (* min)
YAU15   Vertically Integrated Ice (VII)
YAU22   Reflectivity at Lowest Altitude (RALA)

Table 3. WMO Headers and Product Names for MRMS Products Proposed for Removal from the MRMS SBN

CONUS Products to be Removed from the MRMS SBN

YAC02   Composite Reflectivity Height
YAC03   Composite Reflectivity [0-4 km]
YAUD01  Radar Quality Index
YAUD02  Seamless Hybrid Scan Reflectivity (HSR)
YAU01   Cloud-to-Ground Lightning Density (1, 5, 15, 30 minutes)
YAU02   Cloud-to-Ground Lightning Probability (0-30 minutes)
YAU03   Probability of Warm Rain
YAU013  Vertically Integrated Liquid (VIL)
YAU016  xx dBZ Echo Top (ET)
YAU017  Height of 50dBZ Echo Above -20C
NWS is also proposing to remove binary data products from the MRMS LDM feed. These products are available in GRIdded Binary version two (GRIB2) format. The binary data files being proposed for removal from the MRMS Local Data Manager (LDM) feed and their equivalent GRIB2 data files are listed in Table 4 below.

Table 4. Product Identifiers for the MRMS Files being Proposed for Removal from the MRMS LDM and their Equivalent in GRIB2 Format

<table>
<thead>
<tr>
<th>Binary</th>
<th>GRIB2</th>
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<tbody>
<tr>
<td>cref/CREF</td>
<td>MergedReflectivityQCComposite</td>
</tr>
<tr>
<td>etp18/ETP18</td>
<td>EchoTop_18</td>
</tr>
<tr>
<td>etp30/ETP30</td>
<td>EchoTop_30</td>
</tr>
<tr>
<td>posh/POSH</td>
<td>POSH</td>
</tr>
<tr>
<td>shi/SHI</td>
<td>SHI</td>
</tr>
<tr>
<td>vil/VIL</td>
<td>VIL</td>
</tr>
<tr>
<td>tile01/mrefl/MREF3D33L</td>
<td>MergedReflectivityQC*</td>
</tr>
<tr>
<td>tile02/mrefl/MREF3D33L</td>
<td>MergedReflectivityQC*</td>
</tr>
<tr>
<td>tile03/mrefl/MREF3D33L</td>
<td>MergedReflectivityQC*</td>
</tr>
<tr>
<td>tile04/mrefl/MREF3D33L</td>
<td>MergedReflectivityQC*</td>
</tr>
</tbody>
</table>

The intermediate binary format of these products are available only for the contiguous U.S. (CONUS) and only via LDM (feedtype: NOTHER). They are not distributed by any other method.

There are 33 2D MergedReflectivityQC products (one per vertical level of the MRMS 3-dimensional (3D) reflectivity mosaic). The intermediate binary files are 3D products covering a quarter of the CONUS each. Tile 01, 02, 03 and 04 represent the CONUS northwest, northeast, southwest and southeast tiles, respectively.

These changes will occur when NCEP implements the next version of MRMS, Version 12.1, into operations. NWS will collect comments on these proposed product changes for 30 days. If product changes are approved, NWS will issue a Service Change Notice at least 30 days before implementing these changes.

Send comments on this proposal to:

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tabitha.huntemann@noaa.gov

National Public Information Statements are online at:

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

NNNN