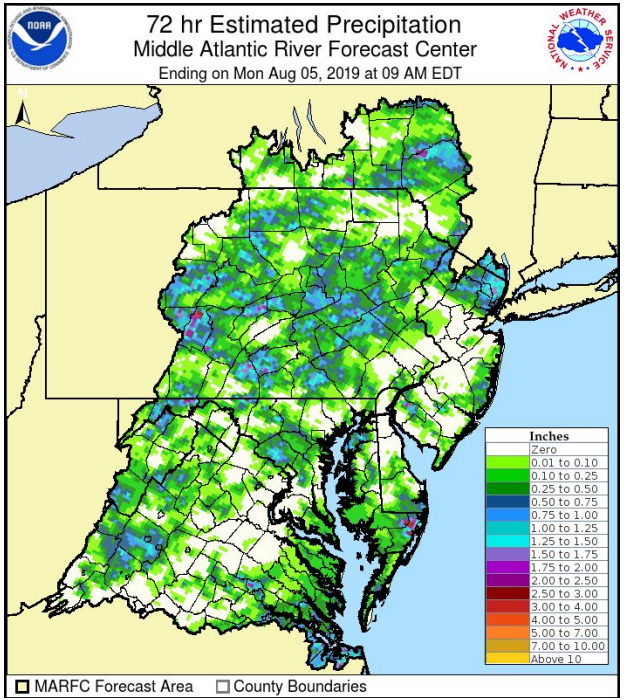
Precipitation Processing at MARFC

Precipitation Processing (Observed)

- Multi-Sensor Precipitation (MPE)
  - Radar-gage combination
  - Data processed on hourly timestep
  - Re-processed after morning gage collection
  - Daily accumulations available at https://water.weather.gov
- Gage-based Precipitation
  - Hourly data processed in MPE application
  - 6-hourly data processing
  - Daily Precipitation procedures
- Both data sets are passed to our forecast system but MPE is default

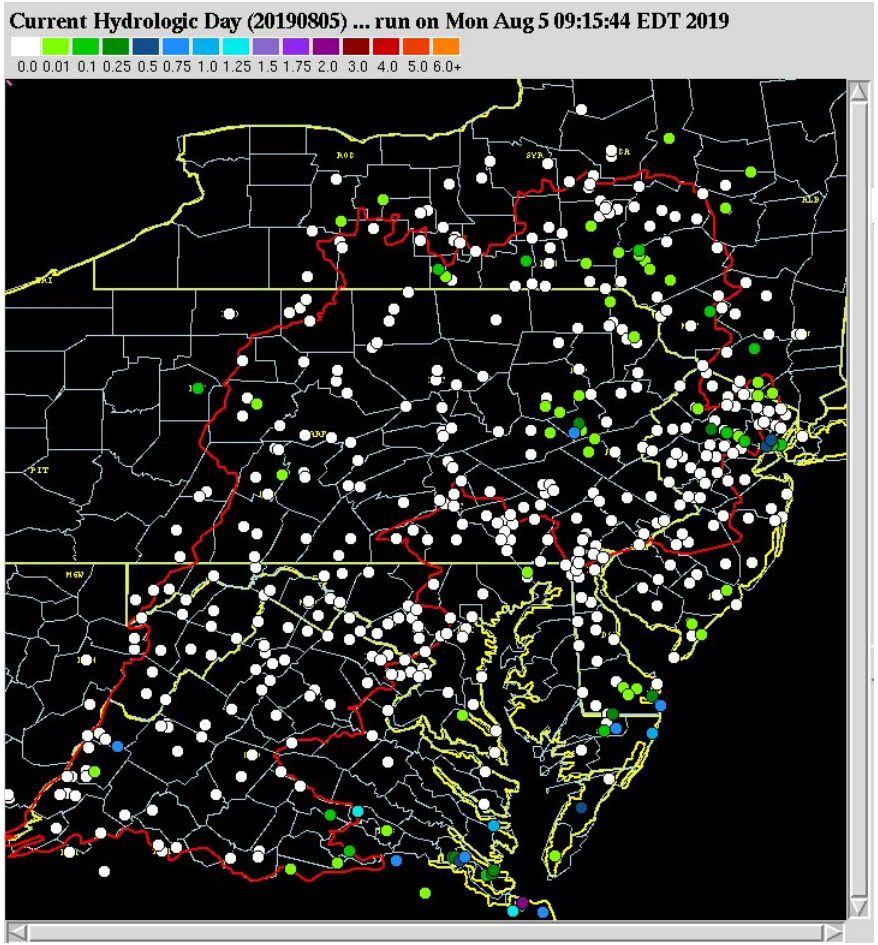


MPE Data Processing

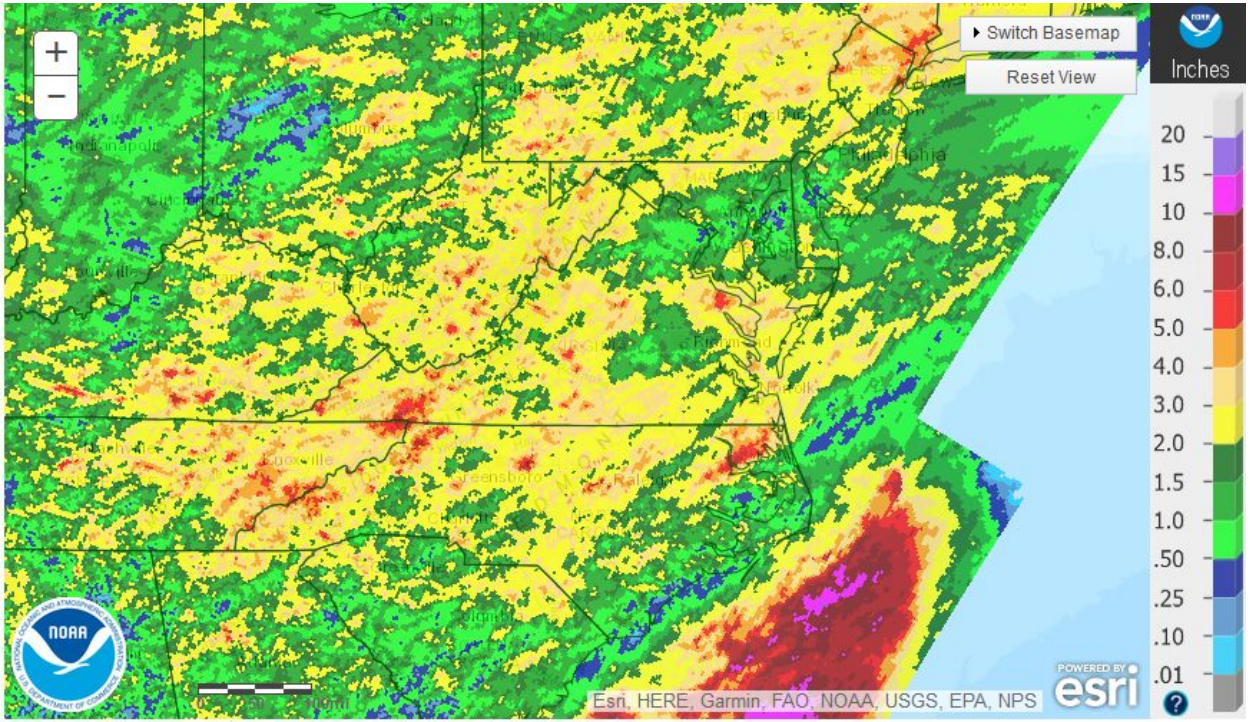
- Several different precipitation fields are available
  - Legacy multi-sensor, radar-only, gage only with different bias procedures
  - Dual Polarization data sets
  - MRMS (Mult-Radar, Multi-Sensor) data from NCEP
- Over the past several years, MARFC has generally initialized our product with the MRMS data
- Additional manual quality control
  - Remove bad gage data
  - Fill in areas where radar missing due to topography
  - Clean up other bad data

Precipitation Gage Network

- ASOS
- IFLOWS
- HADS Satellite Reporting
- State Mesonets
- CoCoRAHS (daily)
- Cooperative Observers (daily)



Precipitation Data Online



- Xmrg format
- ~4km^2 grids
- Currently only data available online
- RFCs generally have access to hourly archives

Forecast Precipitation

- MARFC includes 72hr of forecast precipitation in our river forecasts
- Forecasts are in a 6-hr timestep
- Updated 3x / day
- Initialized with either WPC or National Blend
- Modifications by forecaster in first 24 hours