

NERFC QPF Verification

RFC Verification Team

September 2008

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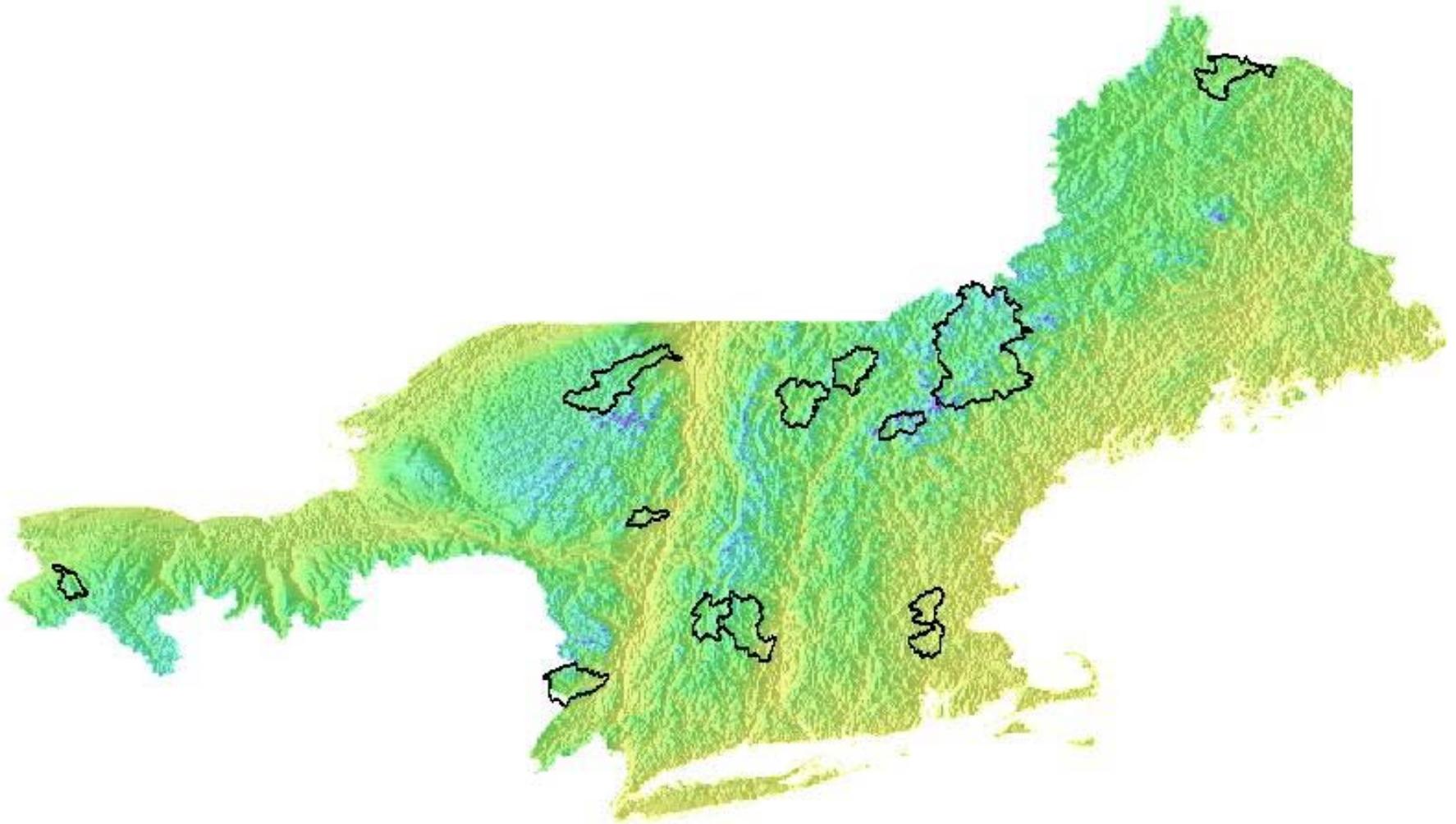
Background

- ER RFCs have “GRPA+” goals
- QPF Goal is to have 0.5-1.0 inch QPF MAE better than HPC 7 months out of 12
- Over past 2 years, HPC has been beating us - barely

Data

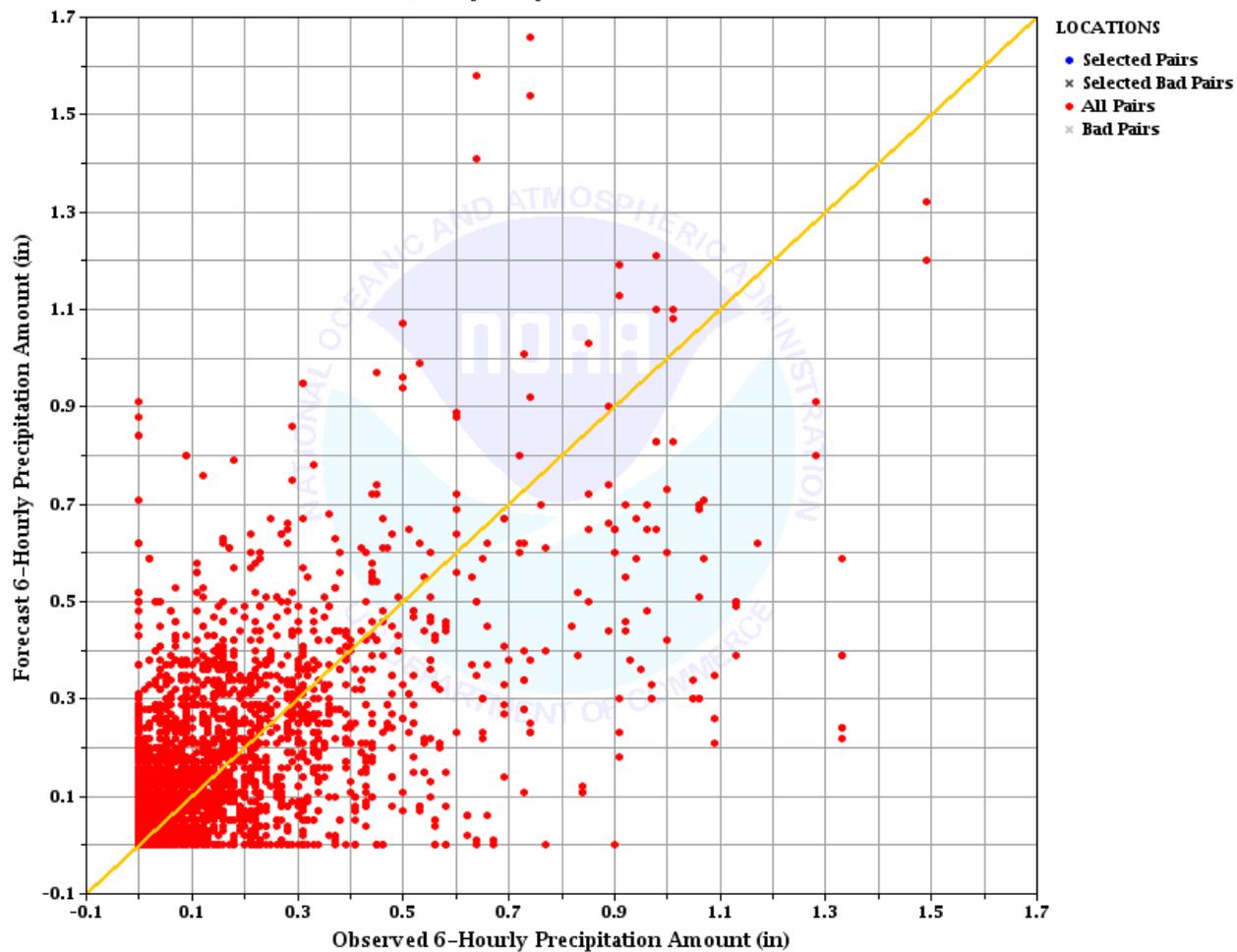
- January 1 – June 30, 2008
- QPF and MAP from:
 - NDFD
 - NDFD and HPC grids converted to MAP areas using GRASS GIS tools
 - HPC
 - NERFC
 - Broken down by forecaster

Test Basins

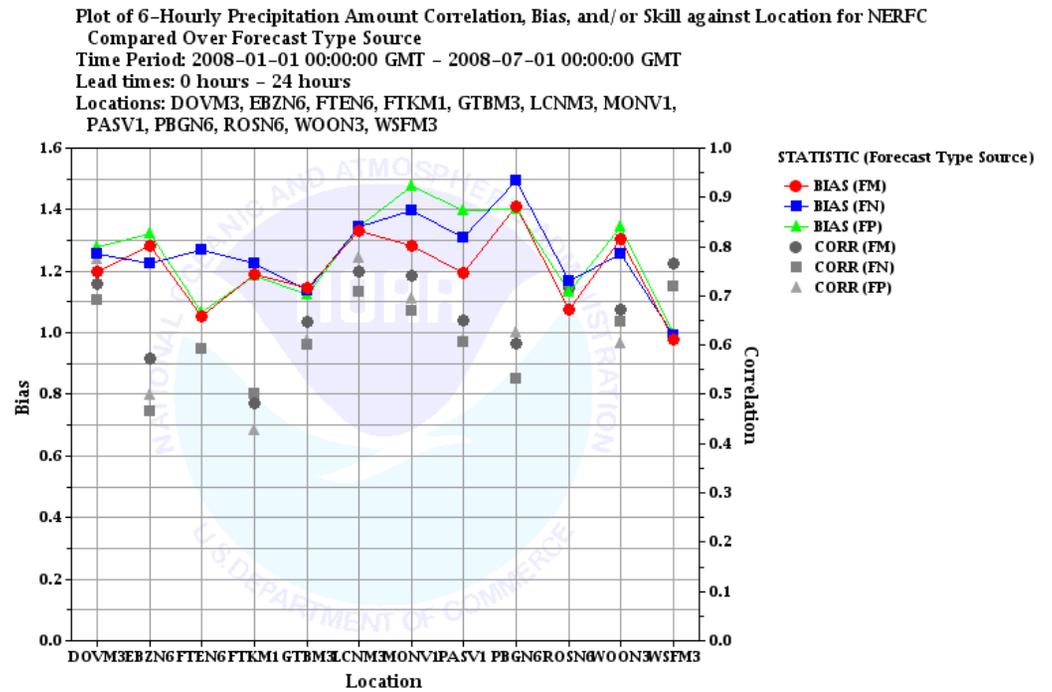
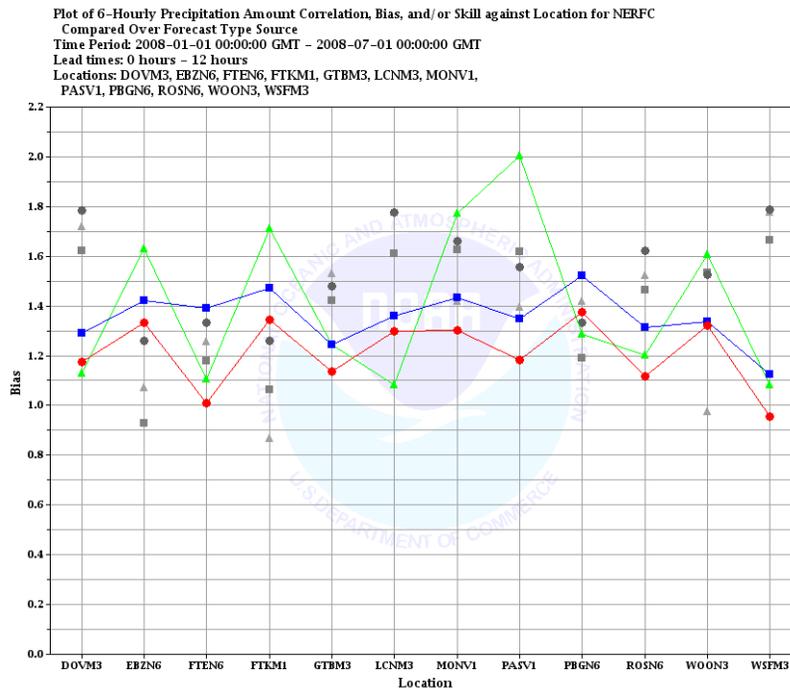


QPF Scatter Plot – All Sources

Plot of Forecast-Observed 6-Hourly Precipitation Amount Data Pairs for NONE
Time Period: 2008-01-01 00:00:00 GMT - 2008-07-01 00:00:00 GMT
Lead times: 0 hours - 12 hours
Selected Location: No Name Available [NONE]

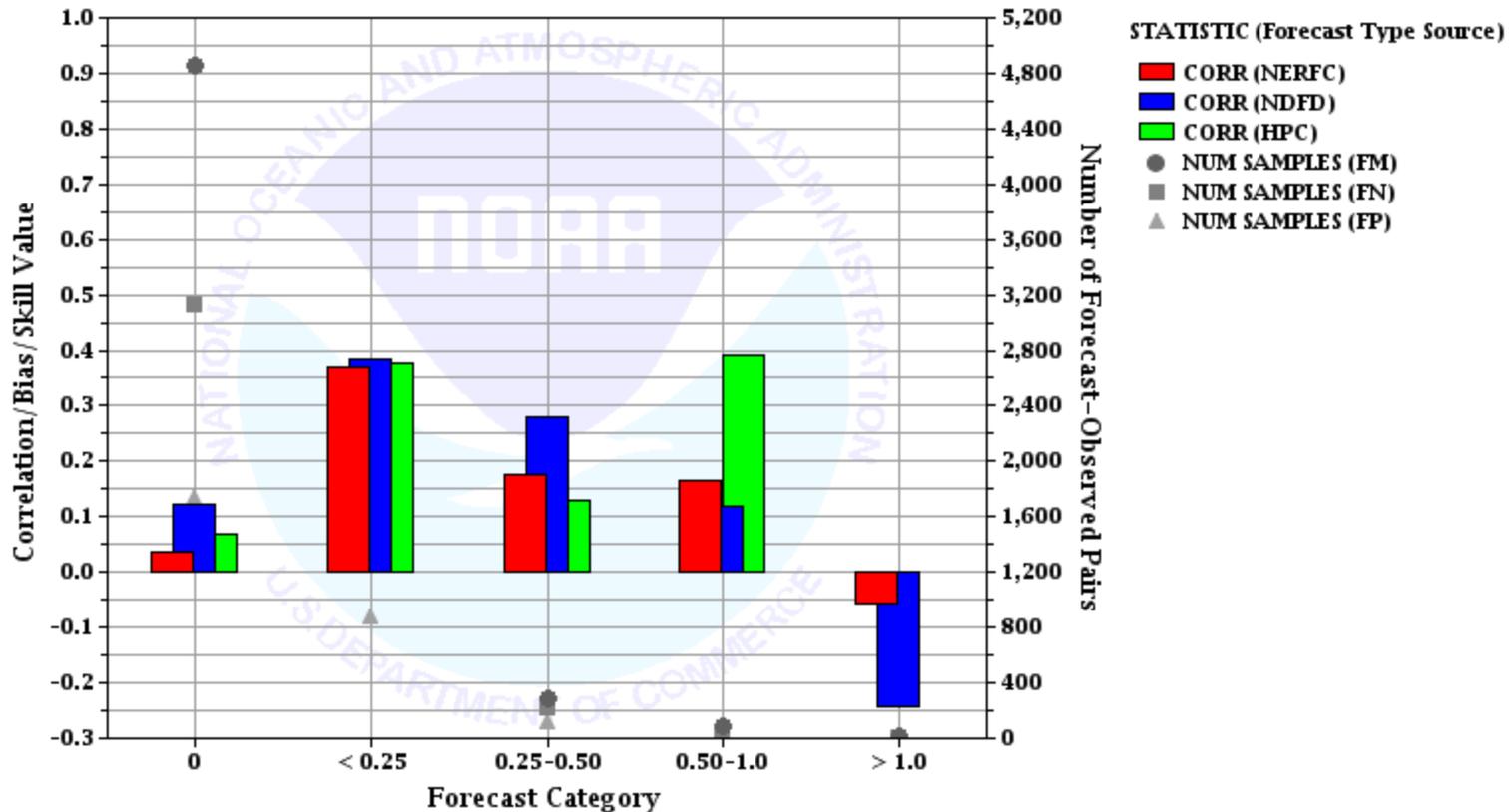


12-hr and 24-hr Bias and Correlation



Correlation by Issuing Office

Plot of 6-Hourly Precipitation Amount Correlation, Bias, and/or Skill against Forecast Category for NERFC
 Compared Over Forecast Type Source
 Time Period: 2008-01-01 00:00:00 GMT - 2008-07-01 00:00:00 GMT
 Lead times: 0 hours - 12 hours
 Locations: DOVM3, EBZN6, FTEN6, FTKM1, GTBM3, LCNM3, MONV1,
 PASV1, PBGN6, ROSN6, WOON3, WSFM3



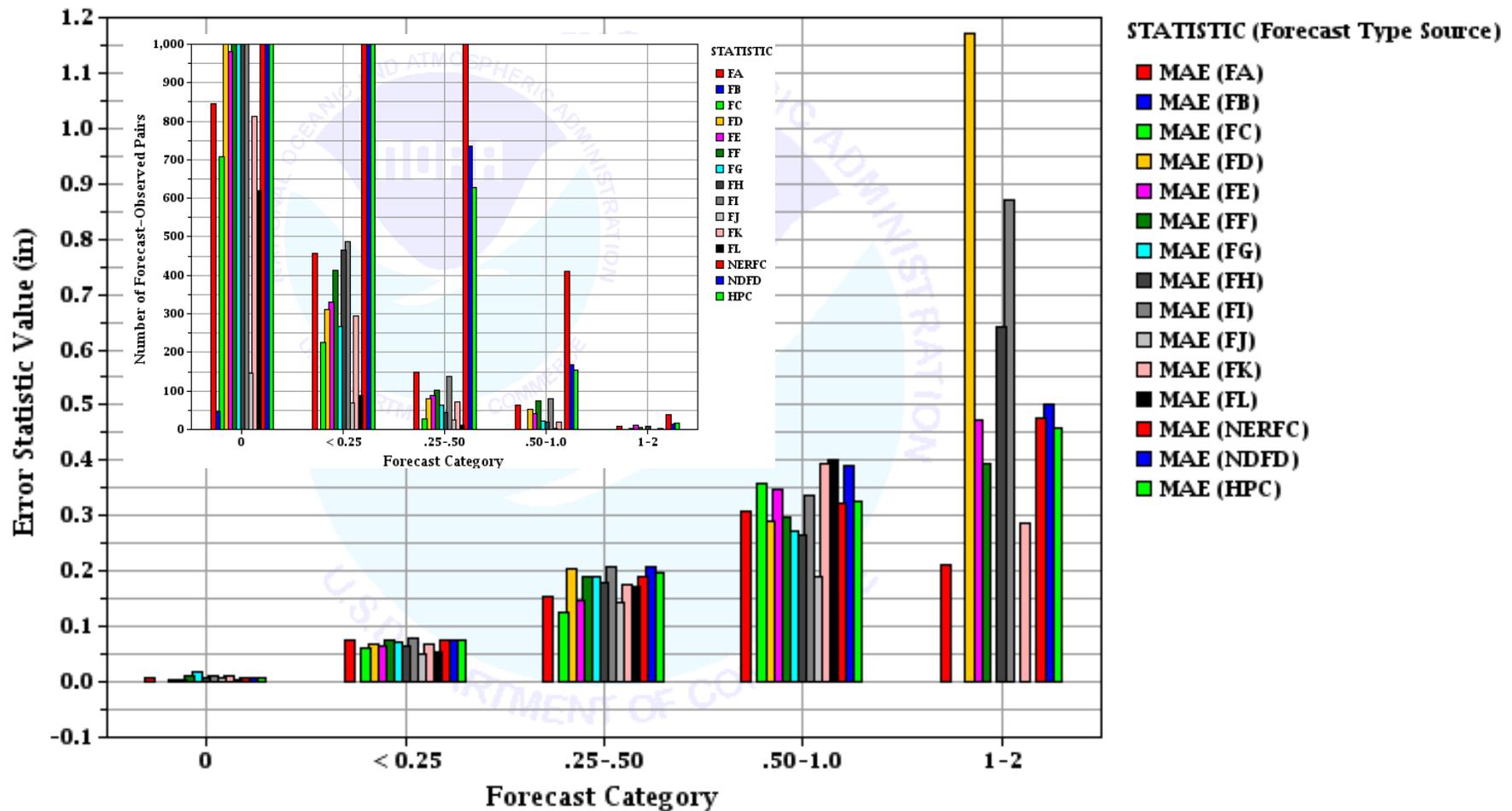
MAE by Forecast Source

Plot of 6-Hourly Precipitation Amount Error Statistics against Forecast Category for NERFC
 Compared Over Forecast Type Source

Time Period: 2008-01-01 00:00:00 GMT - 2008-07-01 00:00:00 GMT

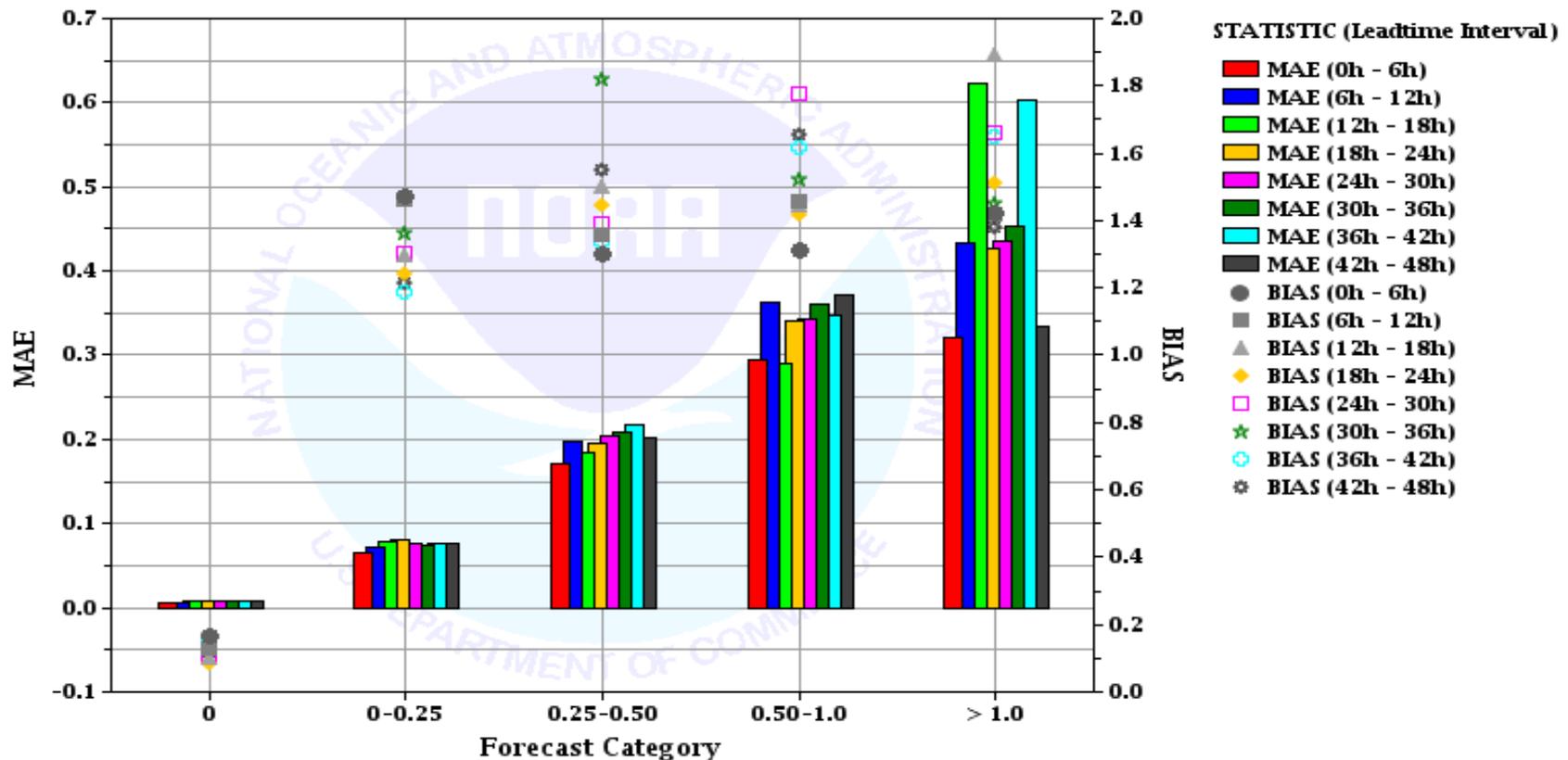
Lead times: 0 hours - 48 hours

Locations: DOVM3, EBZN6, FTEN6, FTKM1, GTBM3, LCNM3, MONV1,
 PASV1, PBGN6, RMFM1, ROSN6, WOON3, WSFM3



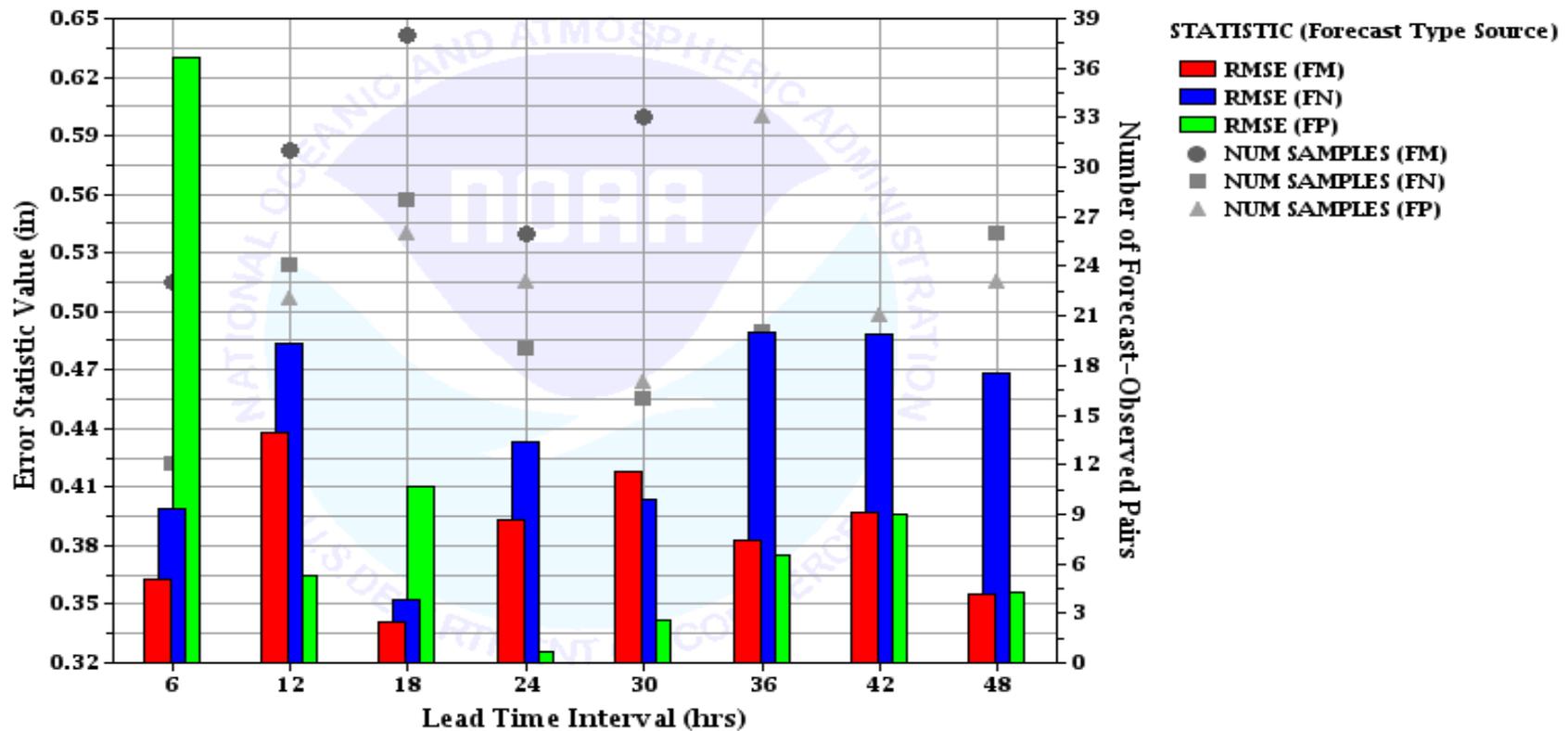
MAE

Plot of 6-Hourly Precipitation Amount Error Statistics against Forecast Category for NERFC
 Compared Over Leadtime Interval
 Time Period: 2008-01-01 00:00:00 GMT - 2008-07-01 00:00:00 GMT
 Lead times: 0 hours - 48 hours
 Locations: DOVM3, EBZN6, FTEN6, FTKM1, GTBM3, LCNM3, MONV1,
 PASV1, PBGN6, RMFM1, ROSN6, WOON3, WSFM3



RMSE

Plot of 6-Hourly Precipitation Amount Error Statistics against Leadtime Interval for NERFC
 Compared Over Forecast Type Source
 Time Period: 2008-01-01 00:00:00 GMT - 2008-07-01 00:00:00 GMT
 Lead times: 0 hours - 48 hours
 Forecast Category: CAT4
 Locations: DOVM3, EBZN6, FTEN6, FTKM1, GTBM3, LCNM3, MONV1,
 PASV1, PBGN6, RMFM1, ROSN6, WOON3, WSFM3



Observations

- Verification was a challenge due to memory limitations
- No significant forecast point differences were noted in this sample
- Number of verification pairs on the higher amounts seriously limits results
- What is truth?