NWS Hydrologic Forecast Verification Team
Teleconference Notes
12/03/2009

Agenda
- Presentation of the OHD verification activities for FY10 and real-time verification survey by James Brown and Julie Demargne
- Presentation of the initial results for the CR QPF horizon case study by Julie Meyer from MBRFC and Holly Reckel from NCRFC

Questions, Comments and Actions

James' and Julie's presentation

Slide #9: the EVS Version 2.0 is completed and will be made available on the OHD HEP web pages shortly. Since it is the first XEFS component available for public download, several new security and administrative protocols had to be established. However, it has been released to Andrew Philpott at MARFC and a few other collaborators. In case a RFC needs to work with EVS within the next few weeks, please send a request by email to James Brown (James.D.Brown@noaa.gov) or Julie Demargne (Julie.Demargne@noaa.gov) to get the EVS package.

Slide #10: Julie Demargne explained the goal of the survey: to get input from the RFC forecasters on the requirements for the real-time verification capability within the CHPS Verification Service, what verification information they would like to see in real-time and how it might be used. The draft survey will be finalized and sent to the RFCs by December17. Each RFC should send its survey back to Julie Demargne (Julie.Demargne@noaa.gov) by 01/31/2010. If possible, the survey should represent the feedback from multiple forecasters at a given RFC to capture a wide range of requirements.
Action: Julie D. will send the draft survey to William Marosi at MARFC, the NWSEO representative, for his review.

QPF horizon case study presented by Julie Meyer and Holly Reckel

Slide #4: it is difficult to run the multiple forecasting scenarios on basins that give inflows to basins from another RFC (i.e., MBRFC basins that are inflows to NCRFC basins). There are only a few minutes to check that the forecasts have all been successfully produced and sent by ftp to the other RFC. It is crucial to set up scripts to monitor on a daily basis the production of the different forecasts and detect errors. These errors can have some significant impact on the sample size for each QPF horizon scenario.

Slide #5: the RMSE skill score is computed in IVP with persistence forecast as the reference. The meaningful reference in this case study is the flow/stage forecast from Zero

QPF to evaluate how much skill is added when ingesting QPF values for different horizons. Julie Meyer tested a way to compute RMSE skill score using the Zero QPF forecast as the reference: one needs to delete the persistence forecast with the "FR" type source, and replace the type source of the Zero QPF forecast with "FR". Since IVP will still recognize the "FR" forecast as the persistence forecast, the plot labels will need to be modified to identify the reference as the Zero QPF forecast.

Slide #28: Holly underlined the need to look at statistics for individual basins before aggregating the results. The CMOI2 basin has different results and if grouped with the other basins, it could lead to some misinterpretation of the verification results (see ME statistics for lead hour 6 with and without CMOI2). Regarding the statistics to be used, it is recommended to compute the Mean Error, the Root Mean Square Error and the RMSE Skill Score with Zero QPF as the reference forecast.

Slide #29: the categorical statistics are difficult to interpret given the very small sample size for the category "Above Flood Stage", even if, in this case, the forecasts from all the lead times up to 48 hours have been pooled together. One could define other thresholds (e.g., Action Stage) to include more events and get more reliable verification results. Also it is recommended to first analyze the categorical statistics for the individual lead times to see whether they are similar for various lead times and therefore could be estimated from pooling the forecasts from different lead times together.

The next team meeting will be scheduled for **late February-early March** to discuss the feedback on the real-time verification survey, continue to discuss the QPF horizon case study and findings from the Hydrologic Model Output Statistic project, and discuss future steps for the user analysis of standard verification products.