Integrating GFE, MPE, and Site-Specific into WFO Operations

Stephen DiRienzo
NOAA/NWS
Weather Forecast Office, Albany, New York

Monitoring the hydrologic conditions across a Weather Forecast Office (WFO) Hydrologic Service Area (HSA) can be a challenge. This presentation outlines how the Albany WFO uses current AWIPS hydrologic Tools coupled with Graphical Forecast Editor (GFE) precipitation forecasts to aid in the watch and warning decision making process.

Current tools in AWIPS to monitor hydrologic conditions include Hydroview, the Multisensor Precipitation Estimator (MPE), and the Site Specific Hydrologic Predictor (SSHP). At the Albany WFO, these tools are coupled with GFE forecast data to maintain situational awareness, and provide input into watch and warning decisions. Specifically, GFE precipitation forecast data is used as input into the SSHP to provide guidance concerning the possibility of flooding. This information may be included in the hazardous weather outlook product. The same information is used to help determine the need for flood watches for the HSA. At short forecast projections, quality controlled precipitation estimates from MPE, and GFE forecast data, automatically ingested into the SSHP, are used as a basis for flood and flash flood warnings.

Technical aspects of the above hydrologic operational practice, including the creation of local river basins in GFE and how gridded data is converted into basin average precipitation forecasts, will be discussed.