

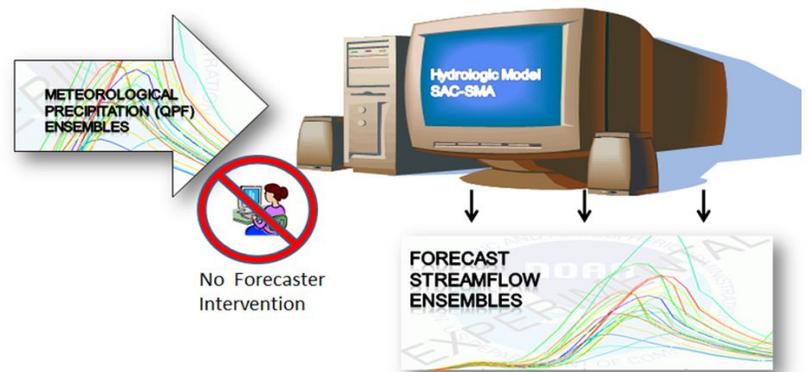
Meteorological Model-based Ensemble River Forecasts (MMEFS)

Southeast River Forecast Center

What are the Meteorological Model-based Ensemble River Forecasts (MMEFS)?

The MMEFS is a short-term hydrologic ensemble forecast system which utilizes temperature and precipitation output from the National Centers for Environmental Prediction (NCEP) GEFS and NAEFS meteorological models. The various ensemble precipitation forecasts from the meteorological models are used to produce an ensemble of river forecasts. Temperature ensemble data is used for the snow model within the hydrologic forecast model.

How does MMEFS work?



What is the forecast period for MMEFS forecasts at the Southeast River Forecast Center?

The GEFS and NAEFS are out to 10 days.

How often are MMEFS forecasts updated?

The GEFS and NAEFS update twice a day. The SREF was also used but was discontinued in February 2020. Update times can be found [here](#).

When did the Southeast River Forecast Center begin MMEFS forecasts?

The Southeast River Forecast Center began issuing MMEFS forecasts in 2011.

How can I use MMEFS forecasts?

MMEFS forecasts give a 10-day river forecast perspective. Users can gain an outlook on what rivers may do beyond the official river forecast period. While the official river forecast uses a one value deterministic 48-hour forecast of future precipitation to predict river response, MMEFS uses an ensemble of future precipitation forecasts for the entire forecast period to predict river forecast response. This would be 10 days for both the GEFS and NAEFS model runs. MMEFS not only provides a longer river forecast perspective given a longer period of potential future precipitation but also delivers a factor of uncertainty in the river forecast. Using ensemble precipitation forecasts provides the uncertainty based on the precipitation forecasts magnitude of precipitation as well as the spatial and temporal differences in precipitation forecasts. This information can be used to make better decisions and plan ahead of a potential heavy rainfall event and river flood. National Weather Service Forecast Offices use this tool as a resource when making decisions about issuance of River Flood Outlook and Flood Watch products.

Where can I find MMEFS forecasts?

<http://www.weather.gov/erh/mmeefs>

