

FORECASTING FOR HURRICANE JOSEPHINE

Tarran Craver¹ and Jonathan Atwell²

AUTHORS: ^{1,2}Hydrologic Forecaster, National Weather Service Southeast River Forecast Center, 4 Falcon Drive, Peachtree City, Georgia 30269.
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Abstract. The Southeast River Forecast Center (SERFC) is responsible for the production of river forecasts for all the rivers that drain into the Atlantic Ocean along the coasts of North Carolina, South Carolina, Georgia, and Florida, as well as the rivers that drain into the Gulf of Mexico from Mobile Bay to the southernmost tip of Florida. This area of responsibility covers about 270,000 square miles.

Although the primary mission of the SERFC is to forecast flooding, forecasts for various purposes are issued daily for numerous locations within this vast area.

Tropical Storm Alberto (1994) was still fresh in the minds of southwest Georgia residents when Hurricane Josephine approached this flood sensitive area in early October, 1996, presenting the possibility of catastrophic flooding. Hydrologists at the SERFC used quantitative precipitation forecasts supplied by National Weather Service Weather Forecast Offices in their hydrologic prediction model to improve lead time associated with flood forecasts.

The heaviest rainfall associated with Hurricane Josephine was confined within the area which includes the panhandle of Florida, southeastern Georgia, and the coastal Carolinas. Excellent quantitative precipitation forecasts provided by the Weather Forecast Office in Jacksonville, Florida, accurately predicted basin average rainfall of 4-5 inches across northern Florida and southern Georgia 24 hours in advance of its occurrence. This accurate prediction led to increased awareness of potential trouble spots along rivers and streams across southern Georgia as well as Florida. In addition to notifying emergency management officials concerning locations of possible trouble spots, much desired lead time was gained with this accurate quantitative precipitation forecast.