

## Inland and Coastal Flood Forecast Operations During Northern Florida Landfalling Tropical Cyclones

Richard J. Lanier  
Michael A. Jamski  
James L. Pearman  
Richard J. Verdi  
Theresa Heiker

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*AUTHORS:* Senior Service Hydrologist, National Weather Service, Love Building, Florida State University, Tallahassee, FL 32306-4509; Forecaster, National Weather Service Tallahassee, FL; Hydrologics Network Chief, United States Geological Survey, Orlando, FL; Hydrologist, United States Geological Survey, Tallahassee, FL; Public Works Storm Water Manager, Leon County, Tallahassee, FL;

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**Abstract.** Tropical cyclones often generate inland and coastal flooding as they pass over northern Florida and southern Georgia. While some storms, such as Tropical Storm Fay (2008) and Hurricane Dora (1964) have followed similar tracks, others such as Tropical Storm Allison (2001), Hurricanes Frances and Jeanne (2004), and Dennis (2005), followed substantially different tracks.

All of these wet tropical cyclones posed a challenge to National Weather Service forecast operations and the associated flood warning support to emergency managers and the general public. New technology, such as the Flash Flood Monitoring Program, has enhanced the NWS's ability to provide products uniquely tailored support to emergency management during landfalling tropical cyclones. However, challenges remain regarding the prediction of the location of the heavy rainfalls that can be expected with such landfalling tropical cyclones. These challenges, in turn, also impact the forecasts of the resulting hydrologic response of the rivers and streams in affected coastal region.

This presentation will review the flooding and related forecast operations during recent landfalling tropical cyclones in northern Florida, with an emphasis on those associated with Tropical Storm Fay. Similarities and differences between Tropical Storm Fay and Hurricane Dora will be discussed, and lessons learned will be presented.