

## **Recent Extreme Rainfall in the Southeastern US**

Bill D. Kappel, President, Applied Weather Associates

Record rainfall and devastating flooding occurred October 2015 in South Carolina as tropical moisture originating from Hurricane Joaquin streamed into the region over several days. Rainfall accumulations from this storm was unprecedented in portions of coastal South Carolina, with nearly 28 inches of rainfall accumulating. An event of this magnitude seemed unlikely to happen again anytime soon in this region. Then in September 2018, Hurricane Florence moved onshore just 150 miles north of the October 2015 storm center, with rainfall far exceeding the October 2015 event, as more than 40 inches accumulated in and around the Wilmington, NC region. These types of storm events raise questions about dam safety and the need for revisiting Probable Maximum Precipitation (PMP). Applied Weather Associates (AWA) has completed numerous PMP studies in the region both before these storms and subsequent to the storms. This presentation will discuss how the rainfall from these events relates to previously derived PMP depths, if these storms are now controlling PMP, and what updates should be considered from the dam safety community.