Using Probabilistic Rainfall and Probabilistic River Information to Provide Long-Lead IDSS for Record Flooding along the Illinois River Basin in Eastern Oklahoma during the 2015 Christmas Holiday

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QPF forecast = 6”
10% Prob. QPF = 13” Early probabilistic data = high-end event Email briefings began due to event during the Christmas holiday One-on-one briefings to OK Scenic Rivers Commission for Illinois River Basin began.

Dec. 21, 2015

QPF forecast = 8”-9”
10% Prob. QPF = 18” Recorded + email briefings IDSS increased significantly even though rain wasn’t to start for 3-4 days + flood crest not expected for 5 days!

Dec. 22-23, 2015

NWS Tulsa conference call with partner agencies Communicate rain + river 10% worst case scenarios Aggressive messaging – life-threatening flood event appeared likely along a recreational river.

Dec. 24, 2015

WFO Tulsa + ABRFC emphasized near record Illinois River levels. Official river forecast did not include record levels yet. Probabilistic scenarios best way to provide IDSS for decision makers.

Dec. 25, 2015

Forecast + briefings transitioned to deterministic forecasts of a near-record flood event. Rain began late 12/25. 8”-12” over entire Illinois River Basin, isolated reports to 18”. New record crest 2.75’ higher than previous record at Tahlequah.

Dec. 25-28, 2015

Note: yellow basin outline added for AMS poster reference

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