

Note on Exceedance Probability Analysis for the Hurricane Harvey Rainfall Event August - September 2017



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Exceedance probability analysis for the Hurricane Harvey rainfall event will be published in early November 2017 after we develop preliminary precipitation frequency estimates for NOAA Atlas 14 Volume 11: Texas.

If we were to do the analysis at this time, it would be based on estimates from the <u>Technical Paper No. 40</u> - TP40 (1961) that have the potential to change dramatically in the Houston area for the following reasons:

- a) there have been several significant events in the Houston area since TP40 publication;
- b) data records are extended by over 50 years for NOAA Atlas 14, making statistical analysis more reliable;
- c) significantly more gauges, including local datasets like the Harris County Flood Control District dataset, are available for NOAA Atlas 14 and that will improve spatial patterns.

Also, we expect to see observed precipitation amounts across many durations to have annual exceedance probabilities (AEPs) of 1/500 (500-yr average recurrence interval) or less over large areas. If we were to use TP40 we would have to extrapolate estimates beyond 100-years, making assessment unreliable.