



Expected Frequency of Extreme Rain: Before and after Harvey

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ABSTRACT

Hurricane Harvey produced area-wide rainfall totals over a broad swath of southeast Texas that were unprecedented not just for the local area but for anywhere in the United States. The mere existence of the event alters our understanding of the probability of extreme rainfall totals. It will have a definite effect on official storm frequency analyses such as the NOAA Atlas 14 effort, and thereby affect future development, property values, and infrastructure in the region. From an overall storm perspective, the slow movement of Harvey was key to its prodigious rainfall totals, and stalling storms have been some of the most deadly storms in history. Climate change also appears to be enhancing the likelihood of extreme rainfall events such as Harvey, although different studies estimate different levels of enhancement.