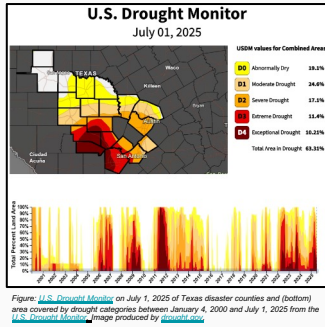


Weather Whiplash: Drought to Flood

Central Texas deadly floods in July 2025 followed an exceptional multi-year drought

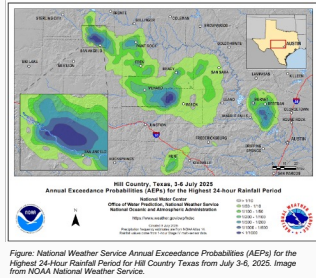
Exceptional Drought

The 20 Texas counties included in the flood disaster declaration experienced drought since late 2021, the second longest such uninterrupted period of drought since 2000.



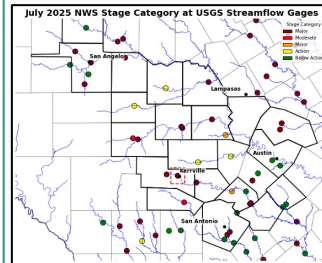
Extreme Precipitation

Exceptional precipitation fell over central Texas between 3 and 6 July 2025 resulting from tropical moisture and slow-moving atmospheric motions. The rainfall was a 1 in 1000-year event - an event with a 0.1% chance of occurring at a given location each year.



Deadly Floods

The rain fell on hilly, flood-prone terrain, accelerating flash flood conditions and river rises. 59 stream gages exceeded major flood stage thresholds and 3 additional gages exceeded moderate thresholds.



Extreme Impacts

- Prolonged drought caused several years of livestock losses and low water availability, leading to billions in economic losses.
- Significant loss of life making it one of the deadliest inland floods in U.S. history¹.
- Economic damages estimated to exceed 18 billion dollars due to flooding².

¹ [Texas Flood Was America's Deadliest Rainfall Flash Flood in 49 Years](#)
² [Accuweather - \(In\)consequence: Dry, flash flood tragedy in Texas causes an estimated \\$18 billion to \\$22 billion in total damage and economic loss](#)

Outstanding Research Questions

- Is extreme precipitation more likely to improve long-term drought in some areas than others, and can we predict future occurrences?
- How does a precipitation event of this magnitude challenge our understanding of its rarity?
- How does the effect of long-term drought on the land surface affect the magnitude of devastating floods?