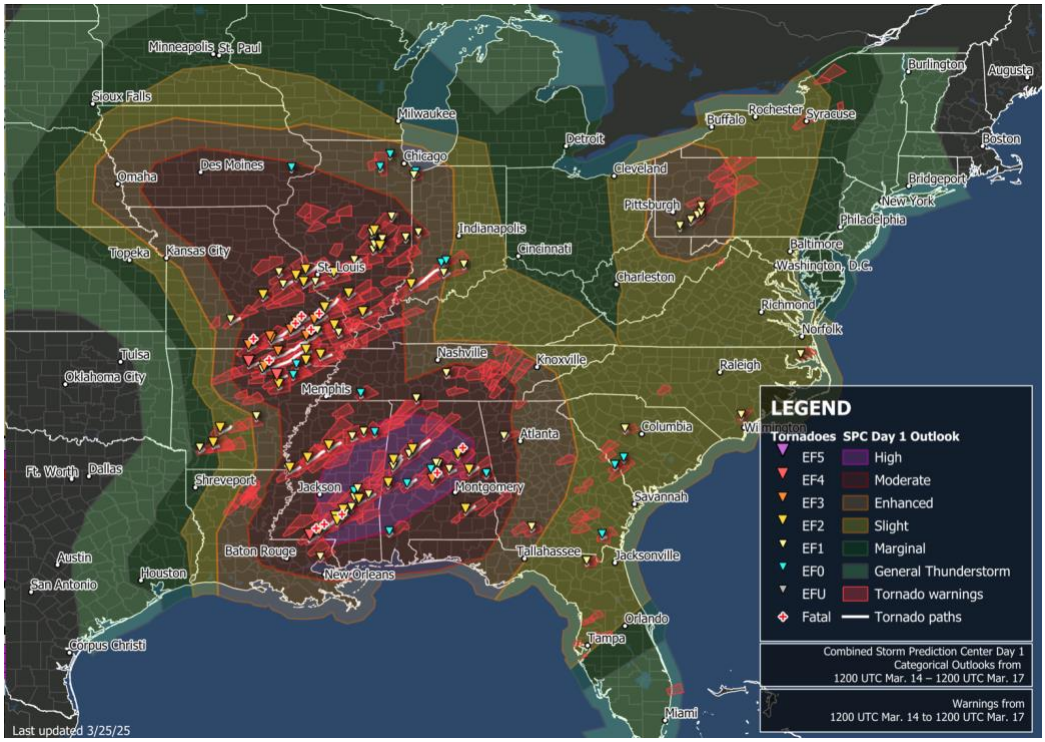
# Historic March Tornado Outbreak Devastates Central and Eastern U.S.




## Key Summary

Between March 14 and 16, 2025, a historic and deadly tornado outbreak swept across the central and eastern United States, marking the largest such event ever recorded in the month of March. Over 110 tornadoes were confirmed across at least 14 states, causing widespread destruction and claiming at least 43 lives.

# Synopsis

Over the span of three days, at least 117 tornadoes touched down across 14 states, stretching from Texas to Ohio. The outbreak resulted in at least 43 confirmed fatalities and widespread destruction. Communities in Arkansas, Missouri, Mississippi, and Alabama were among the hardest hit.

The severe weather was triggered by an unusually strong low-pressure system moving from the West Coast into the Midwest, combined with record-breaking warmth and humidity. Temperatures soared into the low 80s in parts of Illinois, fueling atmospheric instability. The Storm Prediction Center issued a rare high-risk outlook two days in advance for portions of the Deep South — only the third such issuance in history for a Day 2 forecast.

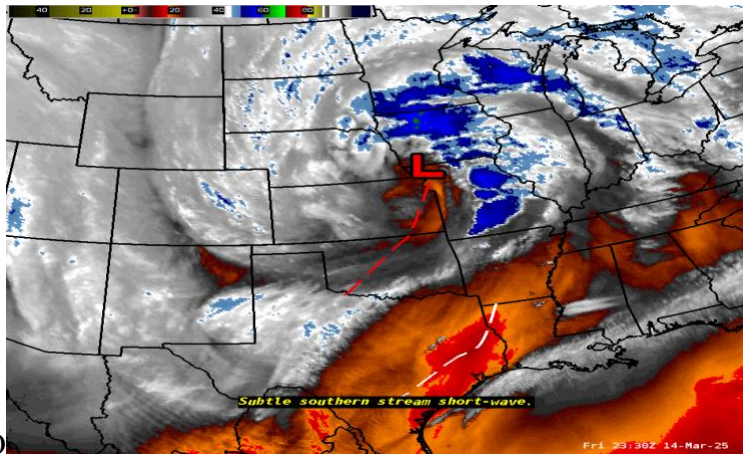
Several violent, long-track tornadoes were confirmed, including two EF4 tornadoes. One tore through Diaz, Arkansas, with estimated winds up to 190 mph, while another devastated area of Franklin, Arkansas. Missouri saw multiple deadly tornadoes as well, including an EF3 that struck Poplar Bluff, killing one resident.

# Meteorological Setup

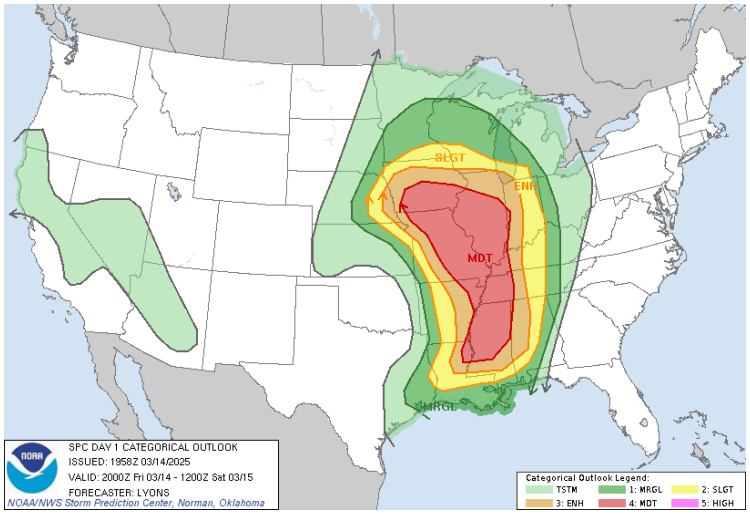
The outbreak was triggered by an anomalous strong low-pressure system that moved from the West Coast into the Midwest. This system brought record-breaking warmth to parts of the Midwest, with temperatures reaching the low 80s in Illinois. The combination of warm, moist air from the Gulf of Mexico and strong wind shear created ideal conditions for the development of severe thunderstorms and tornadoes.

A strong, anomalous strong low-pressure system ejected out into the central High Plains courtesy of a negatively tilted trough. Large-scale ascent in conjunction with an intense mid-level jet streak made it very favorable at the surface for a regional outbreak of supercells.

Robust deep-layer wind shear, strong diurnal heating, a stout low-level jet to inject rich boundary layer moisture and heat in the form of instability all had culminated to produce rapid development of intense supercells. Violent and long-lived tornadoes occurred because of a conducive thermodynamic and kinematic environment. Alongside supercells, bowing segments manifested resulting in damaging wind gusts more than 80 mph and hail reports of 2-3” in diameter.

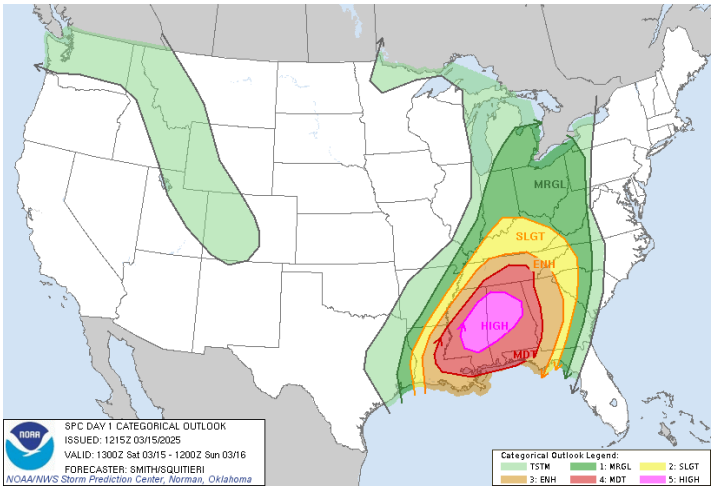
O 


On March 13th, the Storm Prediction Center (SPC) upgraded the risk into a moderate (level 4/5) as it was coined as a “regional outbreak of severe storms” as an environment became favorable for “robust updrafts and intense supercells”.




**Source: Storm Prediction Center**

Then the following morning on March 14th, the SPC upgraded parts of the deep south to a rare "High Risk" valid the 15th indicating that the ceiling was very high in terms of how potent the atmospheric profile was to produce life-threatening severe storms.



# Tornado Reports & Aftermath

The outbreak produced at least 117 tornadoes, including several long-track and violent twisters.

**EF4 – Diaz, AR**

- **Max Winds:** 190 mph
- **Path Length:** 31 miles
- **Casualties:** 8 fatalities

**EF4 – Franklin/Fifty-Six, AR**

- **Max Winds:** 180 mph
- **Long-track tornado across multiple counties**

**EF3 – Poplar Bluff, MO**

- **Casualties:** 1 fatality
- **Severe structural damage to homes and schools**

In addition to tornadoes, the storm system brought destructive straight-line winds, large hail, and heavy rainfall, leading to flash flooding in some areas. The severe weather also sparked wildfires in parts of Texas and Oklahoma due to dry and windy conditions.

With a total of 117 confirmed tornadoes, the outbreak became the largest ever in the month of March, categorizing this event as a "historic" outbreak. According to Aon - a professional risk-mitigation firm, it’s estimated that this outbreak caused $6.25 billion in damages, making it one of the costliest tornado outbreaks in United States history.