

# THE 2017 TORNADO SEASON:

A Very Active  
Start and  
a Return  
to Normal  
Yearly Numbers

by Jared Guyer

NWS

EF2 tornado near Carpenter, Wyoming on June 12.

**T**here were approximately 1,412 tornadoes in the United States in 2017, which is around 15% above the 25-year annual average. The above-average tornado counts of 2017 follow a five-year stretch from 2012 to 2016 of well-below-average yearly tornado totals. Much like 2016, the early part of 2017 was very busy with one of the highest January tornado counts on record. The active early part of the year was followed by a near-normal number of tornadoes from late spring onward, although it was a notable year for tropical-cyclone-related tornadoes during the summer and early fall.

Tornadoes were reported in 43 states in 2017. From a national standpoint, approximately 88% of these tornadoes produced EF0 or EF1 damage, while 12% caused EF2 or greater damage at some point along their path. There were two tornadoes during the year that produced EF4 damage (there were no EF5 tornadoes), occurring on February 28 in southeast Missouri and April 29 in North Texas. Texas and Georgia led the way in terms of overall tornado numbers, while the state of Louisiana experienced a modern record (since 1950) number of tornadoes with 88 tornadoes exceeding their prior record of 79 (2008). Texas, Georgia, and Louisiana each had a dozen or more EF2+ tornadoes during 2017.

There were 35 tornado fatalities in 2017. The tornado fatalities all occurred between January and the middle of May, with 16 of the tornado-related fatalities occurring in Georgia on January 22 alone. Nineteen of 2017's tornado fatalities occurred in mobile homes, eight in other housing, and four in vehicles. The 35 fatalities of 2017 were roughly twice that of 2016, but still

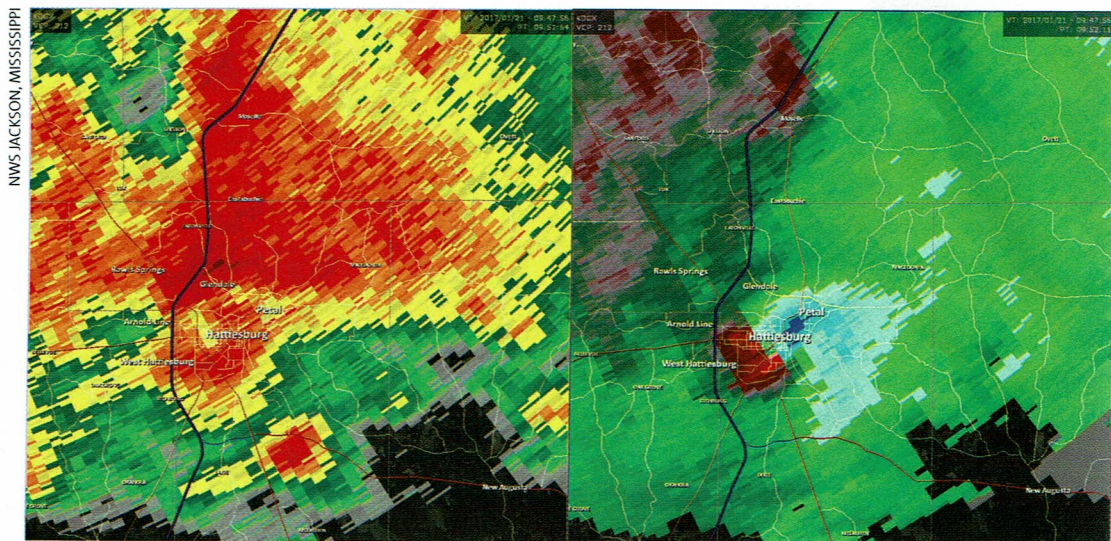
well below the 25-year average of 75 annual tornado deaths.

## January

It was an extremely active beginning to the year. January had 134 tornadoes, which is considerably more than the 25-year monthly average of 36 tornadoes. In fact, January 2017 was the second-most active January (modern era since 1950) for tornadoes since 1999 when 212 tornadoes occurred. January 2017's 20 tornado-related fatalities were second only to January 1969's 32 fatalities.

The first tornado of 2017 developed shortly after 9 a.m. CST on January 2 in far eastern Texas near the community of Browndell, as a brief tornado occurred with a line of storms along an advancing cold front. That was only the beginning, as another 35 tornadoes occurred January 2 mainly from Louisiana into southern Mississippi, with another cluster of tornadoes also impacting southeast Alabama and southwest Georgia. One of the tornadoes produced EF2 damage in south-central Mississippi. There were also multiple EF2 tornadoes that impacted far southeast Alabama and rural far southwest Georgia, including damage to the National Peanut Festival grounds near Dothan, Alabama. After a relatively quiet nearly two weeks, a round of severe storms across parts of Texas on January 15 produced a couple of EF2 tornadoes in central Texas.

Multiple rounds and several days of severe weather across the Gulf Coast region and the Southeast would begin to unfold in the early morning hours of January 21. An EF3 tornado particularly impacted Lamar and Forrest Counties in southern Mississippi, killing four people



Doppler radar imagery from the early morning hours of January 21, 2017, as a strong tornado (EF3) struck Hattiesburg, Mississippi.



Tornado over Michoud area of Eastern New Orleans, Louisiana, on February 7.

in Hattiesburg and injuring over 50 others. More than 500 homes were severely damaged or destroyed along the 31-mile path of this early-morning tornado (beginning around 3:30 a.m. CST). More than a dozen tornadoes occurred during the day on January 21 as a line of storms progressed eastward across parts of Alabama and Georgia into southern South Carolina. Other tornadoes developed this afternoon and early evening across far northeast Texas into Louisiana. In the wake of the squall line that had moved across the region earlier in the day, another significant round of storms developed late on January 21 into the early morning hours of January 22. This included a nearly 25-mile-track tornado across far southern Georgia during the early morning of January 22, resulting in a total of 11 fatalities, including seven in a mobile home park where 35 manufactured homes were destroyed.

January 22 would garner the year's first "high risk" designation by the Storm Prediction Center (first since 2014). As a warm front pushed northward and the atmosphere had brief time to destabilize after early-morning storms, a devastating 70-mile-long EF3 tornado tracked across three counties of far southern Georgia during the afternoon resulting in five fatalities and more than 40 injuries. This long-track tornado was also the costliest tornado of the year in terms of property damage with estimates in excess of \$310 million across four counties. Dougherty County and areas around Albany, Georgia, were particularly hard hit.

## February

There were 68 tornadoes during the month, which is more than double the February average of 31 tornadoes. On February 7, an early-day increase in strong to severe thunderstorms across parts of the Gulf Coast region resulted in several tornadoes, including an EF3 tornado that impacted the New Orleans Metro area shortly after 11 a.m. CST. This tornado caused at least 33 injuries along a 10-mile path through eastern parts of New Orleans. The tornado caused moderate to severe damage to 638 homes and at least 40 businesses during its 20-minute duration. A short time later, a separate tornado near Watson, Louisiana, caused EF3 damage when it collapsed a metal truss tower holding high tension power lines.

The majority of the month's tornadoes were on February 28, as a very favorable setup for severe weather and tornadoes became established across the Midwest in advance of an amplifying upper-level system moving over the Rockies and High Plains. The first tornado of the day occurred in far eastern Iowa near Follets. It was only the second tornado to occur in the state of Iowa during February since 1950. Shortly thereafter, other tornadoes occurred across northern Illinois, including an EF3 tornado that caused two fatalities in Ottawa as a tornado moved along the Illinois River in La Salle County. Other notable tornadoes out of more than two dozen on February 28 occurred from southeast Missouri into southwest Illinois and southwest Indiana that evening. This included a 50-mile-track tornado from southeast



A tornado near Washburn, Illinois, on February 28.

Missouri into southern Illinois that produced EF4 damage near Perryville, Missouri, including a vehicle-related fatality. To the east, another nearly 45-mile-track tornado moved from southern Illinois into southwest Indiana. It damaged or destroyed at least 50 structures, including severely damaging a home two miles east of Crossville, Illinois, that had also been hit by the infamous Tri-State tornado of 1925.

### March

There were 191 tornadoes in March, which was well above the 25-year average of 75 tornadoes. One of the most active severe days of the year was March 6 across parts of the Midwest, when 62 tornadoes occurred during a 24-hour period. Much of this severe weather initially impacted eastern Kansas into Missouri, including parts of the Kansas City metro area, during the early evening. A few of the more notable tornadoes were an EF2 tornado that impacted Smithville, Missouri, and an EF3 tornado that caused extensive damage and injured 12 people in Oak Grove, Missouri. Other noteworthy tornadoes occurred into southern Iowa, including a 35-mile track EF2 tornado across Scott and Clinton Counties. Shortly after midnight CST on March 7, a supercell storm ahead of a squall line produced a 37-mile-track tornado across northwest Arkansas. Several homes were damaged in the town of Parthenon along with destroying the Post Office. As severe storms quickly raced east-northeastward that night, tornadoes were reported as far

east as central Illinois during the early-morning hours of March 7.

### April

A total of 211 tornadoes occurred during the month, as compared to an average of 175 tornadoes. The majority of April's tornadoes were clustered at the beginning and the end of the month across the Deep South. As a potent upper system spread northeastward across the southern tier of the United States, more than 60 tornadoes occurred on April 2–3. Louisiana had nearly 20 tornadoes on April 2, while parts of Georgia into South Carolina were especially impacted on April 3. Just a couple of days later, another developing upper system over the central United States contributed to an additional round of severe weather April 5–6 from the Ohio Valley and Southeast into the Mid-Atlantic states. Near a southern Plains dryline, a relatively localized tornado event materialized April 14, as a slow-moving supercell produced a large (more than a mile wide at times) EF3 tornado that damaged homes and destroyed several structures near Dimmitt, Texas.

At the end of the month, nearly 60 tornadoes impacted parts of the southern Plains into the lower and middle Mississippi River Valley on April 29–30. On April 29, multiple tornadoes ended or began near Canton, Texas, while EF4 damage was noted southwest of Canton in the community of Old Bethel in Van Zandt County. As this tornado dissipated west of Canton,

a separate EF3 tornado developed just east of Canton and moved north-northeastward. This tornado was on the ground approximately 80 minutes while producing a 40-mile continuous path of damage across Northeast Texas. A total of four tornado-related fatalities occurred in Northeast Texas on April 29, with another fatality early on April 30 with an EF2 tornado in central Mississippi.

## May

There were 287 tornadoes in May, which is just above the 25-year average of 268 tornadoes. May's tornadoes were scattered across a broad part of the south-central Great Plains to the Midwest and East Coast, but parts of Kansas, Oklahoma, and Missouri as well as northern Texas were the most tornado-active areas of the month. A multi-day period of severe weather occurred across the southern Plains May 9–11 with nearly 40 tornadoes, although only one of these tornadoes was rated as high as EF2. A more extensive period of severe weather unfolded across the Central United States May 16–19. Across the southern Plains on May 16, a 27-mile track tornado resulted in EF3 damage at Pawnee Rock in east-central Kansas, while other tornadoes developed across the eastern Texas Panhandle into western Oklahoma, including an EF2 tornado that damaged or destroyed more than 200 homes near Elk City, Oklahoma. A separate area of severe storms on May 16 occurred near a warm front across the Upper Midwest. Near this warm front, a long-lived supercell resulted in a very long-track tornado that traveled 83 miles across four counties in northwest Wisconsin, resulting in a fatality and more than \$5 million in damage. This is believed to be the longest single tornado track in Wisconsin since official records began in 1950. A potent setup near and east of a dryline led to a repeat round of severe storms with more than 50 tornadoes on May 18 into the early part of May 19, mainly across west-central Kansas and Oklahoma into Missouri. This same general region was impacted by tornadoes during the afternoon and evening of May 19. On May 23–24, nearly three dozen tornadoes impacted parts of the Southeast into the Ohio Valley, including a regional cluster of EF2 tornadoes across the western Carolinas on May 24.

## June

For the second year in a row, June had well-below average tallies with 144 tornadoes, which is roughly 40% below June's 25-year average of 230 tornadoes. As not uncommon, most of the month's tornadoes occurred across the High Plains and Upper Midwest. One of the most sig-



NWS PADUCAH, KENTUCKY

House damaged near Crossville, Illinois, by an EF3 tornado on February 28. This house was also hit by the 1925 Tri-State Tornado.

nificant severe-weather outbreaks to impact Wyoming and the Nebraska Panhandle in 30 years occurred on the afternoon and evening of June 12. This included the Storm Prediction Center's first-ever issuance of a PDS (particularly dangerous situation) Tornado Watch involving parts of Wyoming. More than 20 tornadoes occurred across the region during the afternoon and evening of June 12, including three EF2 tornadoes across southeast Wyoming into the Nebraska Panhandle. As the storm system spread eastward out of the northern and central Rockies on June 13, additional tornadoes occurred mainly across eastern South Dakota and far western Minnesota.

Tropical Storm Cindy and its remnants contributed to 18 tornadoes (all EF0 or EF1) between June 20–23 from Alabama and the Florida Panhandle into the Ohio Valley. Less than a week later, nearly two dozen tornadoes occurred across the Upper Midwest on June 28, with the majority of these tornadoes impacting Iowa and northern Missouri, and to a lesser extent, the Minnesota–Wisconsin border vicinity. While most of these tornadoes impacted relatively rural areas, three of the tornadoes in southern and eastern Iowa produced EF2 damage.

## July

Damaging thunderstorm wind reports typically far outpace tornado reports during the height of summer (roughly 30:1 in July 2017), but even so, 80 tornadoes occurred in the month as compared to a 25-year average of 125 tornadoes. Most of these tornadoes were scattered across the Upper Midwest, with the most active day of the month



Damage near Purtis Creek, Texas, from April 29, EF4 tornado.

being across eastern North Dakota into western Minnesota on July 11.

## August

There were 119 tornadoes during August, which was above the monthly average of 76. Multiple tornadoes occurred with a line of storms across northeast Oklahoma during the late-night hours of August 5, including an EF2 tornado in parts of Tulsa. Numerous businesses were damaged or destroyed in Tulsa with this particular tornado, and 30 people were injured. During the late afternoon and early evening of August 16, a cluster of tornadoes (11 total) occurred near an area of low pressure across southern Minnesota. Most of these tornadoes were relatively brief and produced EF0 or EF1 damage.

At the end of the month, a powerful Hurricane Harvey made an initial landfall along the middle Texas coast during the evening of August 25. A number of tornadoes occurred along the middle and upper Texas Coast ahead of and after Harvey's initial landfall. Additional tornadoes occurred daily across the upper Texas Coast and southern Louisiana between August 26–29 as Harvey drifted over the Gulf of Mexico and made a final landfall across coastal southwest Louisiana. As Harvey's remnants continued to generally move northeastward, a favorable environment for tornadoes spread across Mississippi, Alabama, and Tennessee August 30–31. In all, around 57 tornadoes were associated with Harvey (or its remnants) between August 25 and 31.

## September

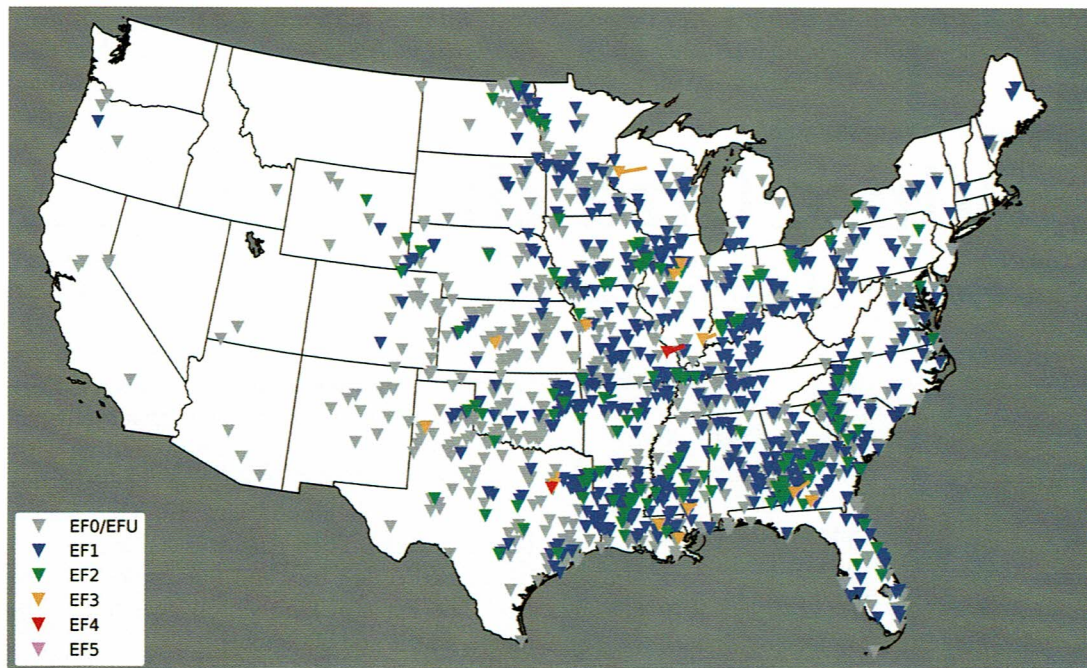
The month had 50 tornadoes as compared to a monthly average of 66 tornadoes. On September 4, ahead of a cold front, a lone EF2 tornado produced damage across north-central Ohio just northwest of Mansfield. After crossing the Florida Keys, Hurricane Irma made landfall on Marco Island, Florida, as a Category 3 hurricane on the afternoon of September 10 and traveled north through southwest Florida through the morning of September 11. As it moved northward, around 25 tornadoes were attributed to Irma across the Florida Peninsula and coastal South Carolina over the two-day period, with three of these producing EF2 damage.

## October

There were 75 tornadoes during the month, as compared to the monthly average of 58 tornadoes. To begin October, there were back-to-back



Severe tornado damage to a mobile home park in Chetek, Wisconsin, on May 16.



SPC/DR. PATRICK MARSH

Map of tornado occurrences in 2017.

tornado days in western Kansas on October 1 and 2, which included a tornado that produced EF2 damage to outbuildings, power poles, and farm equipment in rural parts of Scott and Gove Counties on October 2. The inland movement of a weakening Hurricane Nate was a factor for multiple tornadoes across central and southern Alabama on October 7 and into the western Carolinas on October 8, accounting for a total of 16 Nate-related tornadoes. On October 21, multiple tornadoes occurred across southwest into central Oklahoma. As a related upper-level system deepened toward the Southeast, October 23 was an active tornado day (15 total) across the western Carolinas into southern Virginia.

On October 28, three tornadoes occurred along the southeast Florida coast in relation to Tropical Storm Philippe. The preliminary total of 119 tropical system-related tornadoes makes 2017 one of the more active seasons in terms of hurricane and tropical-system-related tornadoes. Nine years prior, 2008 had 139 such tornadoes during the summer/early fall, while hurricane-prolific years of 2004 and 2005 had 317 and 238 tropical cyclone-related tornadoes, respectively.

## November

A total of 41 tornadoes occurred in November, with almost all of these occurring with two separate events during the early and middle part of the month. November 5 was the most active day of November, accounting for more than half of the month's tornadoes. Plentiful late-season moisture ahead of a cold front was a factor in two-dozen tornadoes during the afternoon and

evening of November 5 across portions of Indiana and Ohio. Five of these tornadoes resulted in EF2 damage, including a 39-mile-long tornado that moved through relatively rural areas of eastern Indiana into western Ohio. On November 18, a fast-moving line of storms produced around 15 tornadoes (all EF0 or EF1) mainly across Kentucky, Tennessee, and northern Alabama.

## December

A preliminary total of 12 tornadoes occurred during the month on three separate days. On December 4, an EF2 tornado produced damage in rural areas of far northeast Missouri into extreme southeast Iowa. The most active period of an otherwise quiet month was December 19–20 across the South. Multiple tornadoes struck parts of East Texas into Louisiana during the evening of December 19 into the early morning hours of the 20th, including an early evening tornado near Rusk, Texas, that downed trees and power poles and caused structural damage to outbuildings and roofs. The final tornado of the year occurred in the early afternoon of December 20, as a brief EF0 tornado produced minor damage in rural Meriwether County in west-central Georgia.

All tornado numbers for 2017 remain preliminary pending further review by SPC and the NOAA National Centers for Environmental Information (NCEI). The tallies indicated here are the best estimates at the time of publication. **W**

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