

Autumn didn't fully arrive during August, but it sure gave Oklahomans a nice preview for a week during the middle of the month. It was enough of a sneak peek to keep the month's statewide average temperature at about a half-degree below normal. Unfortunately, the autumnal preview was flanked by some downright miserable summer weather. Those summer bookends came with plenty of triple-digit temperatures and even more triple-digit heat indexes. Grandfield led the state with 106 degrees recorded on the third. Meanwhile, it was jacket weather at Bristow with a low of 48 degrees on the 22nd. Oilton recorded a low of 49 degrees the previous day for the first 40s registered in the state since June 17.

Mesonet gauges in McCurtain County recorded from 8-12 inches. That region's average of 5.99 inches was more than 3 inches above normal and ranked as their 12th wettest August. Outside of those areas, however, Mother Nature was a bit stingier. From 1-2 inches was the norm, while several stations reported less than an inch. Overall, the statewide average came out just a bit above normal at 3.08 inches. Ringling had the Mesonet's lowest total during August at 0.26 inches. Mt. Herman led all sites with 12.88 inches. The summer was also near normal but again the disparity between regions was quite stark. The northeast had the driest time at 3.4 inches below normal, their 28th driest summer on record.

August 2016 Statewide Extremes

| Description | Extreme | Station | Day |
|--------------------|-----------|------------|-----|
| High Temperature | 106°F | Grandfield | 3 |
| Low Temperature | 48°F | Bristow | 22 |
| High Precipitation | 12.88 in. | Mt. Herman | -- |
| Low Precipitation | 0.26 in. | Ringling | -- |

Broken Bow had the misfortune to claim not only the top heat index of the month at 116 degrees on the 11th, but they also came in second with 114 degrees a day later. The Mesonet reported 110 instances of heat index values of at least 110 degrees. The Panhandle was particularly fortunate to spend a significant amount of time during August behind stalled cold fronts. While those fronts often failed to progress too far southeast, they provided the Panhandle with its 32nd coolest August to date at 1.3 degrees below normal. The end of August also brought the climatological summer – June 1 through August 31 – to a close and this year's ended as the 31st warmest since records began in 1895 at 1.4 degrees above normal, signifying the very warm June and July this year. For the January-August period, Oklahoma was again on the warm side at 1.7 degrees above normal, the 11th warmest on record.

As is often the case, the rainfall pattern was not quite as simple. The stalled fronts across the northwest provided frequent triggering mechanisms for showers and storms. The Panhandle and west central Oklahoma saw their 26th and 19th wettest Augusts on record, respectively. The far southeast was caught up in the tropical moisture that produced the historic flooding in Louisiana and Texas. The

August 2016 Statewide Statistics

Temperature

| | Average | Depart. | Rank (1895-2016) |
|--------------------------|---------|---------|------------------|
| Month (Aug) | 80.3°F | -0.5°F | 55th Coolest |
| Season-to-Date (Jan-Aug) | 81.0°F | 1.4°F | 31st Warmest |
| Year-to-Date (Jan-Aug) | 63.9°F | 1.7°F | 11th Warmest |

Precipitation

| | Total | Depart. | Rank (1895-2016) |
|--------------------------|-----------|-----------|------------------|
| Month (Aug) | 3.08 in. | 0.13 in. | 48th Wettest |
| Season-to-Date (Jan-Aug) | 9.96 in. | -0.39 in. | 60th Wettest |
| Year-to-Date (Jan-Aug) | 23.89 in. | -0.97 in. | 54th Wettest |

Depart. = departure from 30-year normal

West central Oklahoma fared the best at more than 2 inches above normal to rank as their 17th wettest. The January-August statewide average came in at 23.89 inches, about an inch below normal.

While the rains across southeastern and northwestern Oklahoma helped prevent and eradicate drought, the dearth of moisture in other areas accelerated drought formation and intensification. The U.S. Drought Monitor map at the beginning of August showed eight percent of the state in at least moderate drought, with an additional 30 percent in abnormally dry conditions – a precursor to drought formation. By month's end, those numbers had risen to 14 percent in at least moderate drought to 34 percent in abnormally

dry conditions. The moderate to severe drought in the far southeast had shifted west, also intensifying across central and northeast Oklahoma. Heavy rains during the month's final two days could signal drought relief on September's first Drought Monitor report.

AUGUST 2016 DAILY SUMMARIES

AUGUST 1-4: August started with triple-digit temperatures, scattered showers and thunderstorms which made for some pretty humid conditions. The hottest temperatures in the state were between 104 and 106 degrees in Grandfield and Hollis. Some areas basked in cooler weather as the lowest maximum temperatures recorded were 93 degrees in Westville and Mt. Herman on the 1st, 84 degrees in Freedom on the 2nd, 91 degrees in Kenton and Boise City on the 3rd, and 87 degrees in Lahoma and Fairview on the 4th. Minimum temperatures ranged from the low 60s to the low 80s with Eva recording the coolest minimum temperature of 61 degrees on the 1st. Although the widely scattered storms left trace amounts of rain on the 1st and 3rd, Eva recorded the highest daily rainfall amount of .83 inches on the 2nd while Goodwell recorded the highest amount of .50 inches on the 4th. Average wind speeds were 4-18 mph on the 1st, 3-15 mph on the 2nd, 3-12 mph on the 3rd, and 3-15 mph on the 4th. Goodwell reported a severe wind gust of 75 mph on the 4th.

AUGUST 5-8: A cold front entered northwest Oklahoma causing the panhandle to experience maximum temperatures in the 80s while the southwest third of the state remained in the triple-digits. Steered by the cold front, the coolest minimum temperatures (low 60s) occurred in the panhandle while the rest of the state measured minimum temperatures between the mid-70s and low 80s. During this time, rainfall and thunderstorms intensified. The highest precipitation amounts measured were 1.26 inches in Putnam on the 5th, 2.27 inches in Chandler on the 6th, 1.95 inches in Watonga on the 7th, and 3.17 inches in Burneyville on the 8th. As storms picked up strength, they produced severe wind gusts of 73 mph in Watonga on the 7th and 70 mph in Sulphur and Davis on the 8th. Average wind speeds were less than 13 mph.

AUGUST 9: For the first time since August 1st, maximum temperatures did not make it above 100 degrees. Instead, highs ranged from 87 degrees in Grandfield to 98 degrees in central, south-central, and southeast Oklahoma. Lows were between 62 degrees in Kenton and 77 degrees in Ketchum Ranch. Showers and thunderstorms continued with the top three rainfall amounts measuring 2.26 inches in Broken Bow, 1.07 inches in Clayton, and .76 inches in Mt. Herman. Average wind speeds were 3-13 mph. The highest wind gust that day was 46 mph in Broken Bow.

AUGUST 10-12: Triple digit temperatures returned to the state with heat indexes between 105 and 110 degrees. The warmest daily maximum temperatures were 103 degrees in Chickasha on the 10th, 104 degrees in western parts of the state on the

11th, and 102 degrees in Durant, Idabel, Antlers, and Ringling on the 12th. The coolest maximum temperatures decreased from 93 degrees on the 10th to 81 degrees on the 12th. The warmest minimum temperatures were in the upper 70s and low 80s around parts of northeast, central, and south-central Oklahoma and the coolest minimum temperatures were between 58 and 64 degrees in the panhandle. Along with the heat came showers, thunderstorms, and plenty of lightning. Rainfall amounts increased each day with the highest amount occurring in Freedom (.39 inches) on the 10th, Arnett (.62 inches) on the 11th, and Madill (1.24 inches) on the 12th. Winds became more northerly as a cold front moved into northern Oklahoma on the 12th and daily average wind speeds were less than 16 mph. Cherokee reported the highest wind gust of 56 mph on the 11th.

AUGUST 13-14: Oklahomans welcomed the cooler temperatures from the previous day's cold front. Maximum temperatures ranged from 85 degrees in Boise City to 95 degrees in Hollis, Grandfield, and Altus on the 13th and from 80 degrees in Mt. Herman to 93 degrees in Waurika on the 14th. Minimum temperatures were between 55 degrees in the panhandle and 75 degrees in southern Oklahoma. Showers and thunderstorms continued and produced locally heavy rainfall in parts of southeast Oklahoma. While the heaviest amounts were generally 1-2 inches on the 13th, Mt. Herman reported 4.08 inches. The next day, skies started to clear and rainfall was negligible. Average wind speeds were less than 15 mph on the 13th and less than 13 mph on the 14th.

AUGUST 15-17: Temperatures rebounded and a warming trend ensued. The highest maximum temperatures in the state increased from 95 degrees to 99 degrees in Hooker. The lowest maximum temperatures increased from 73 degrees in Mt. Herman on the 15th to 81 degrees in Mt. Herman, Hugo, Talihina, and Valliant on the 17th. The highest minimum temperatures increased from the low 70s to the mid-70s and the lowest minimum temperatures increased from the low 50s to the mid-50s. The coolest Mesonet temperature reading during this period was 50 degrees in Eva on the 15th. Scattered light showers fell in parts of central and southeast Oklahoma with the highest daily rainfall amounts measuring .60 inches in Broken Bow on the 15th, .26 inches in Broken Bow on the 16th, and .98 inches in Antlers on the 17th. The maximum daily wind speeds recorded each consecutive day were 14 mph in Boise City, 11 mph in Goodwell, and 12 mph in Goodwell.

AUGUST 18-20: Heavy rain showers and thunderstorms occurred over the next three days, causing flooding in Beckham County on the 19th and McCurtain County on the 20th. Southern Oklahoma got the best soaking with as much as 2.29 inches in Cloudy on the 18th, 1.96 inches in Elk City on the 19th, and 3.02 inches in Mt. Herman on the 20th. Temperatures gradually declined as a cold front entered northwest Oklahoma and moved southeast. The warmest temperatures recorded were in the mid-upper 90s on the 18th and 19th before dropping to 86 degrees on the 20th. Some areas only reported maximum

temperatures in the low-mid 70s. The warmest minimum temperatures were in the low-mid 70s and occurred in south-central and southeast Oklahoma. The coolest temperatures in the state were in the low to mid-50s and occurred in the panhandle. Although average wind speeds were generally less than 12 mph on the 18th and 20th, the impending cold front caused gustier winds on the 19th. That day, wind speeds averaged less than 16 mph and wind gusts of 66 mph, 63 mph, and 62 mph were reported in Hollis, Elk City, and Freedom, respectively.

AUGUST 21: Oklahoma took a hiatus from the rain and enjoyed cooler temperatures. Highs were between 81 degrees in Miami and Jay and 88 degrees in Ringling and Kingfisher. Lows were between 49 degrees in Oilton and 69 degrees in Broken Bow. Daily average wind speeds were 2-13 mph and a peak wind gust of 33 mph was measured in Boise City.

AUGUST 22-24: The 22nd started with dense fog in central and south-central Oklahoma before rain showers and thunderstorms moved in that afternoon. Storms developed primarily over southern Oklahoma on the 22nd, southwest Oklahoma on the 23rd, and western Oklahoma on the 24th. The top rainfall amounts measured each consecutive day were .61 inches in Durant, 2.15 inches in Butler, and 1.22 inches in Goodwell. Storm intensity increased and caused flooding in Roger Mills County on the 23rd and a wind gust of 86 mph at Vance Air Force Base on the 24th. The highest maximum temperatures increased during this period from 93 degrees in Kingfisher on the 22nd to 101 degrees in Beaver on the 23rd and 100 degrees in Talihina on the 24th. The lowest daily maximum temperatures were 86 degrees in Skiatook on Monday, 81 degrees in Kenton on Tuesday, and 72 degrees in Goodwell and Hooker on Wednesday. The highest minimum temperatures increased from 70 degrees to 80 degrees and the lowest minimum temperatures increased from the upper 40s to the upper 50s. Warm temperatures coupled with showers and storms made for pretty muggy conditions. Average wind speeds were less than 20 mph on the 22nd, less than 22 mph on the 23rd, and less than 17 mph on the 24th. The highest wind gusts each day were 43 mph in Kenton on the 22nd, 55 mph in Freedom on the 23rd, and 61 mph in Blackwell on the 24th.

AUGUST 25: A cold front entered the state from the northwest before becoming stationary later that day. The front aided in thunderstorm development and heavy precipitation. The three Mesonet stations that reported the highest amount of rainfall were Guthrie with 3.07 inches, Marena with 2.33 inches, and Putnam with 2.07 inches. Maximum temperatures ranged from 72 degrees in Goodwell and Hooker to 98 degrees in Oilton and Talihina. Minimum temperatures were between 53 degrees in Kenton and 74 degrees in Tulsa. Average wind speeds were 3-11 mph and the top wind gust that day was 66 mph in Putnam.

AUGUST 26-28: Showers and thunderstorms continued as a cold front passed slowly through the state. Maximum rainfall

amounts were over 3.0 inches in Oilton and Cookson on the 26th and well over an inch in parts of northwest, south-central, and southeast Oklahoma on the 27th, and in northwest Oklahoma on the 28th. The highest maximum temperature was 96 degrees each day and the lowest maximum temperatures were 77 degrees in Valliant on the 26th, 86 degrees in Mt. Herman and Fort Cobb on the 27th, and 83 degrees in Boise City on the 28th. The highest minimum temperatures were in the low to mid-70s and the lowest minimum temperatures were in the mid-50s. Winds were fairly calm on the 26th, averaging less than 9 mph. Increasing a tad, wind speeds were generally less than 13 mph the following two days. The highest wind gust during this period was 57 mph in Boise City on the 27th.

AUGUST 29-31: Oklahoma skies were unrelenting as showers and thunderstorms refused to let up at the close of August. The Mesonet rain gauges that observed the highest amounts of rainfall were Copan (1.17 in.) on the 29th, Hobart (1.29 in.) on the 30th, and Guthrie (3.77 in.) on the 31st. Heavy rain on the last day of August caused flooding in Oklahoma, McClain, and Caddo County. High temperatures remained fairly consistent with the warmest maximum temperature measuring 97 degrees each day. The warmest areas in Oklahoma were eastern Oklahoma on the 29th, the southeast half of the state on the 30th, and south-central Oklahoma on the 31st. The coolest daily maximum temperatures increased from 71 degrees in Hooker and Boise City to 76 degrees in Woodward. The warmest minimum temperature was 73 degrees each day and the coolest minimum temperatures were in the upper 50s and low-60s in the panhandle. Wind speeds were mild, averaging less than 8 mph. The peak wind gust during this three-day stretch was 63 mph in Freedom on the 31st.

AUGUST 2016 SEVERE WEATHER

Flooding

| Location | County | Day |
|-----------------|-------------|-----|
| 1 S Sayre | Beckham | 19 |
| Watson | McCurtain | 20 |
| Hammon | Roger Mills | 23 |
| S Oklahoma City | Oklahoma | 31 |
| Byars | McClain | 31 |
| 4 ENE Edmond | Oklahoma | 31 |
| 3 WNW Edmond | Oklahoma | 31 |
| 2 SE Eakly | Caddo | 31 |

Wind Gusts (70 mph or Greater)

| Speed (mph) | Location | County | Day |
|-------------|----------------------|----------|-----|
| 75.00 | 2 E Goodwell | Texas | 4 |
| 73.00 | 7 W Watonga | Blaine | 7 |
| 70.00 | Sulphur | Murray | 8 |
| 70.00 | Davis | Murray | 8 |
| 86.00 | Vance Air Force Base | Garfield | 24 |

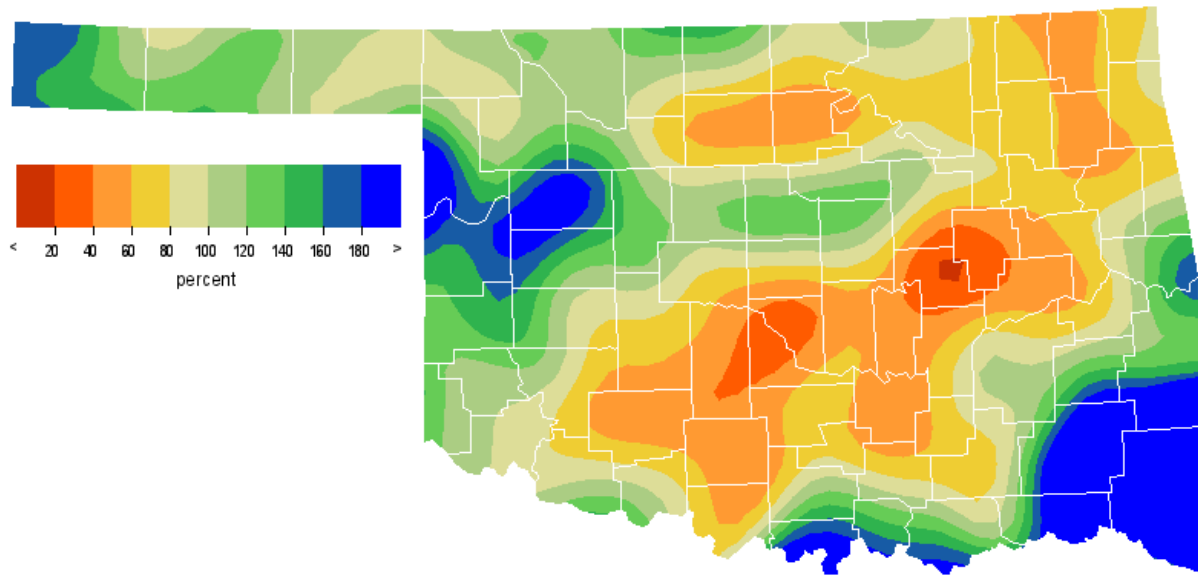
Hail (2 Inches in Diameter or Greater)

| Size (in) | Location | County | Day |
|-----------|----------|--------|-----|
| None | | | |

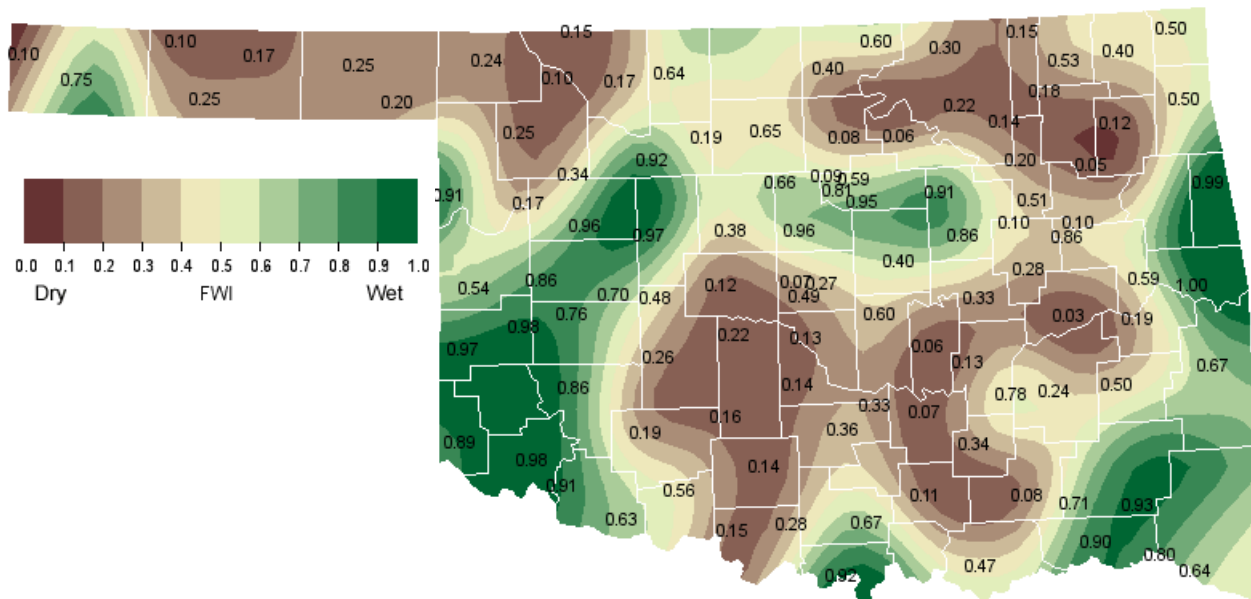
Significant Tornadoes (EF2 or Greater)

| EF-Rating | County (Start/End) | Day |
|-----------|--------------------|-----|
| None | | |

AUGUST 2016 PERCENT OF NORMAL PRECIPITATION



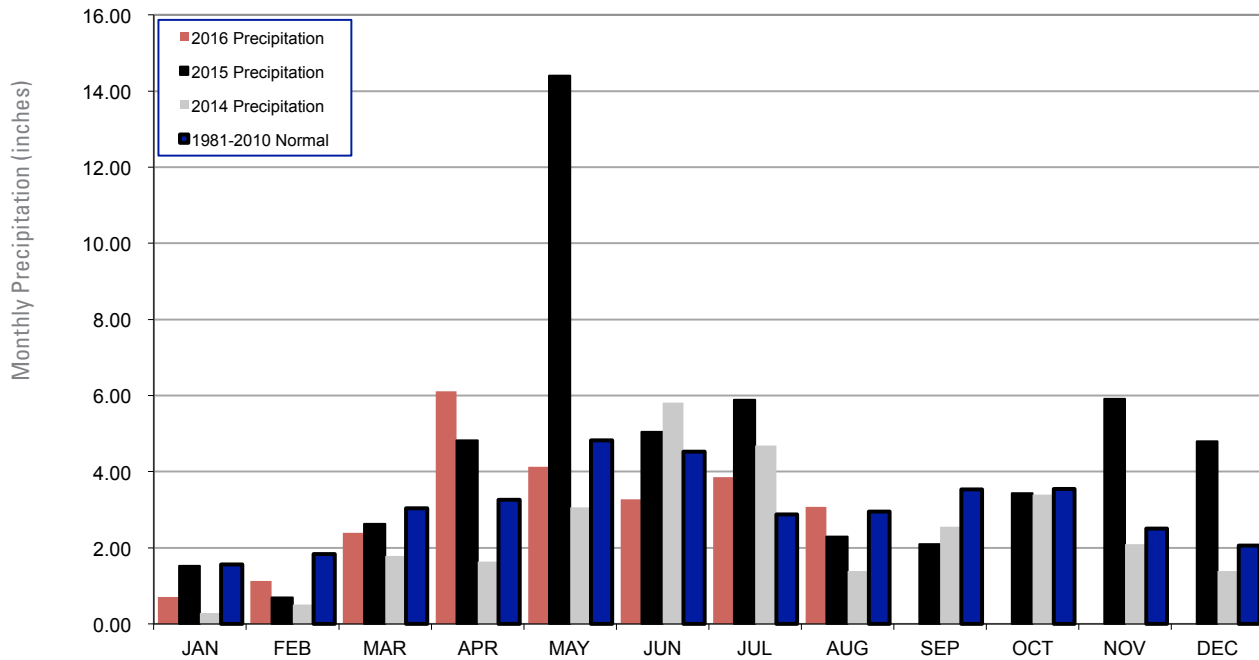
AUGUST 2016 AVERAGE SOIL MOISTURE AT 25CM



MESONET MONTHLY SUMMARY FOR AUGUST 2016

| NAME | MEAN TEMP | HIGH TEMP | LOW TEMP | DAY | DAY | HDD | CDD | TOT PPT | HIGH 24-HR | DAY | NAME | MEAN TEMP | HIGH TEMP | LOW TEMP | DAY | DAY | HDD | CDD | TOT PPT | HIGH 24-HR | DAY |
|----------------------|-----------|-----------|----------|-----|-----|------|------|---------|------------|-----|---------------|-----------|-----------|----------|-----|-----|------|-------|---------|------------|-----|
| PANHANDLE | | | | | | | | | | | | | | | | | | | | | |
| Arnett | 78.1 | 101 | 2 | 57 | 21 | 0 | 406 | 6.48 | 1.53 | 27 | Goodwell | 75.8 | 101 | 1 | 54 | 15 | 0 | 335 | 3.27 | 1.22 | 24 |
| Beaver | 77.7 | 101 | 1 | 52 | 21 | 0 | 392 | 2.71 | .62 | 6 | Hooker | 76.7 | 102 | 1 | 55 | 15 | 0 | 361 | 2.70 | .70 | 6 |
| Boise City | 72.9 | 96 | 1 | 53 | 20 | 2 | 248 | 4.87 | 1.23 | 5 | Kenton | ***** | *** | *** | *** | *** | **** | ***** | ***** | ***** | *** |
| Buffalo | 80.0 | 104 | 11 | 51 | 21 | 0 | 465 | 3.03 | .75 | 6 | Slapout | 78.0 | 101 | 1 | 55 | 21 | 0 | 404 | 2.64 | .45 | 6 |
| Eva | 73.8 | 100 | 1 | 50 | 15 | 0 | 271 | 2.52 | .96 | 5 | | | | | | | | | | | |
| NORTH CENTRAL | | | | | | | | | | | | | | | | | | | | | |
| Alva | 80.1 | 103 | 3 | 53 | 21 | 0 | 469 | 3.17 | .81 | 6 | May Ranch | 79.4 | 101 | 11 | 57 | 21 | 0 | 447 | 3.66 | 1.25 | 6 |
| Blackwell | 79.2 | 100 | 11 | 52 | 21 | 0 | 440 | 3.01 | .81 | 12 | Medford | 80.3 | 102 | 11 | 52 | 21 | 0 | 474 | 4.12 | 1.76 | 31 |
| Breckinridge | 81.1 | 103 | 11 | 52 | 21 | 0 | 500 | 2.20 | 1.16 | 24 | Newkirk | 79.0 | 97 | 11 | 55 | 21 | 0 | 432 | 3.20 | 1.40 | 6 |
| Cherokee | 80.9 | 103 | 3 | 55 | 21 | 0 | 492 | 4.53 | 1.01 | 6 | Red Rock | 81.0 | 102 | 11 | 53 | 21 | 0 | 497 | .83 | .34 | 6 |
| Fairview | 80.9 | 104 | 3 | 55 | 21 | 0 | 492 | 3.00 | 1.21 | 28 | Seiling | 79.3 | 100 | 3 | 52 | 21 | 0 | 443 | 4.93 | 1.76 | 7 |
| Freedom | 80.0 | 103 | 3 | 54 | 21 | 0 | 465 | 3.66 | 1.72 | 31 | Woodward | 79.9 | 104 | 11 | 58 | 21 | 0 | 463 | 2.24 | .97 | 30 |
| Lahoma | 80.6 | 103 | 11 | 55 | 21 | 0 | 485 | 1.78 | .73 | 26 | | | | | | | | | | | |
| NORTHEAST | | | | | | | | | | | | | | | | | | | | | |
| Bixby | 81.6 | 101 | 2 | 57 | 21 | 0 | 514 | 2.63 | 1.61 | 6 | Pawnee | 80.4 | 98 | 3 | 55 | 21 | 0 | 476 | 2.25 | 1.34 | 6 |
| Burbank | 79.5 | 100 | 2 | 52 | 21 | 0 | 448 | 2.51 | 1.41 | 6 | Porter | 81.0 | 99 | 11 | 58 | 22 | 0 | 497 | 1.05 | .47 | 20 |
| Copan | 80.9 | 102 | 11 | 53 | 21 | 0 | 493 | 2.02 | 1.17 | 29 | Pryor | 80.7 | 100 | 11 | 52 | 22 | 0 | 488 | 1.70 | 1.07 | 30 |
| Foraker | 79.0 | 97 | 3 | 53 | 21 | 0 | 435 | 3.77 | .94 | 31 | Skiatook | 80.8 | 98 | 3 | 55 | 21 | 0 | 491 | 2.19 | 1.05 | 6 |
| Inola | 80.6 | 98 | 4 | 55 | 21 | 0 | 484 | 2.39 | 1.23 | 6 | Talala | 81.4 | 102 | 11 | 57 | 22 | 0 | 509 | 2.45 | 1.33 | 25 |
| Jay | 79.5 | 98 | 4 | 52 | 21 | 0 | 450 | 2.80 | 1.93 | 31 | Tulsa | 82.7 | 101 | 2 | 58 | 22 | 0 | 550 | 2.09 | 1.54 | 6 |
| Miami | 79.3 | 99 | 4 | 52 | 21 | 0 | 442 | 2.47 | 1.01 | 31 | Vinita | 79.4 | 98 | 11 | 53 | 21 | 0 | 445 | 1.34 | .25 | 29 |
| Nowata | 79.9 | 100 | 4 | 50 | 22 | 0 | 462 | 2.13 | .77 | 6 | Wynona | 81.0 | 100 | 2 | 54 | 21 | 0 | 496 | 2.74 | 1.12 | 6 |
| WEST CENTRAL | | | | | | | | | | | | | | | | | | | | | |
| Bessie | 81.5 | 105 | 7 | 58 | 21 | 0 | 512 | 3.24 | 2.00 | 25 | Erick | 79.3 | 103 | 7 | 57 | 22 | 0 | 443 | 3.77 | 1.58 | 25 |
| Butler | 79.7 | 103 | 7 | 55 | 21 | 0 | 455 | 5.81 | 2.15 | 23 | Putnam | 79.2 | 100 | 3 | 57 | 21 | 0 | 440 | 6.50 | 2.07 | 25 |
| Camargo | 78.7 | 101 | 11 | 51 | 21 | 0 | 426 | 2.61 | .68 | 30 | Watonga | 79.9 | 100 | 7 | 59 | 21 | 0 | 463 | 4.51 | 1.95 | 7 |
| Cheyenne | 78.5 | 101 | 7 | 59 | 21 | 0 | 419 | 3.93 | 1.06 | 31 | Weatherford | 80.7 | 102 | 7 | 58 | 21 | 0 | 488 | 2.84 | 1.21 | 25 |
| Elk City | 80.3 | 104 | 7 | 58 | 22 | 0 | 475 | 6.11 | 1.96 | 19 | | | | | | | | | | | |
| CENTRAL | | | | | | | | | | | | | | | | | | | | | |
| Acme | 82.2 | 102 | 11 | 60 | 22 | **** | **** | .60 | .53 | 20 | Ninnekah | 82.3 | 103 | 3 | 57 | 22 | 0 | 536 | 1.77 | .87 | 27 |
| Bowlegs | 81.7 | 101 | 11 | 55 | 22 | 0 | 517 | 1.60 | 1.10 | 31 | Norman | 82.0 | 100 | 11 | 56 | 22 | 0 | 526 | .51 | .21 | 23 |
| Bristow | 79.1 | 98 | 11 | 48 | 22 | 0 | 436 | .78 | 1.38 | 30 | Oilton | 80.4 | 99 | 11 | 49 | 21 | 0 | 477 | 4.86 | 3.03 | 26 |
| Lake Carl Blac | 80.9 | 102 | 11 | 50 | 22 | 0 | 493 | 1.25 | .86 | 25 | OKC East | 81.7 | 100 | 11 | 56 | 22 | 0 | 519 | 3.41 | 2.83 | 31 |
| Chandler | 80.5 | 97 | 11 | 56 | 21 | 0 | 482 | 3.39 | 2.27 | 6 | OKC North | 82.7 | 102 | 11 | 59 | 22 | 0 | 548 | 1.58 | .76 | 31 |
| Chickasha | 82.6 | 105 | 7 | 55 | 22 | **** | **** | 1.17 | .48 | 20 | Okemah | 81.2 | 101 | 11 | 57 | 22 | 0 | 503 | .41 | .19 | 20 |
| El Reno | 79.8 | 101 | 11 | 51 | 21 | 0 | 459 | 2.02 | .56 | 31 | Perkins | 81.8 | 102 | 11 | 56 | 21 | 0 | 520 | 2.86 | 1.85 | 25 |
| Guthrie | 81.9 | 103 | 11 | 57 | 21 | 0 | 524 | 7.17 | 3.77 | 31 | Shawnee | 81.1 | 99 | 11 | 57 | 22 | 0 | 499 | 1.58 | 1.18 | 6 |
| Kingfisher | 81.7 | 104 | 11 | 53 | 21 | **** | **** | 4.58 | 2.58 | 31 | Spencer | 81.1 | 100 | 11 | 56 | 21 | 0 | 500 | 1.02 | .40 | 31 |
| Marena | 81.1 | 101 | 11 | 55 | 22 | 0 | 499 | 3.77 | 2.33 | 25 | Stillwater | 81.8 | 101 | 11 | 54 | 22 | 0 | 521 | 3.14 | 1.70 | 31 |
| Minco | 80.9 | 101 | 11 | 59 | 21 | 0 | 492 | 2.47 | .62 | 27 | Washington | 82.0 | 104 | 11 | 56 | 22 | 0 | 526 | .97 | .78 | 20 |
| Marshall | 81.3 | 102 | 11 | 53 | 21 | 0 | 504 | 1.47 | .73 | 25 | | | | | | | | | | | |
| EAST CENTRAL | | | | | | | | | | | | | | | | | | | | | |
| Cookson | 79.9 | 100 | 5 | 55 | 21 | 0 | 462 | 4.82 | 3.52 | 26 | Sallisaw | 80.8 | 99 | 11 | 59 | 21 | 0 | 489 | 3.85 | 2.60 | 26 |
| Eufaula | 81.5 | 100 | 11 | 59 | 16 | 0 | 512 | 1.72 | 1.12 | 20 | Stigler | 80.2 | 101 | 3 | 58 | 16 | 0 | 472 | 2.10 | .90 | 20 |
| Haskell | 80.2 | 99 | 11 | 57 | 21 | 0 | 472 | 2.37 | 1.51 | 20 | Stuart | 81.4 | 102 | 7 | 59 | 22 | 0 | 508 | 2.79 | 1.02 | 18 |
| Hectorville | 82.2 | 102 | 11 | 59 | 21 | 0 | 532 | 1.16 | .96 | 6 | Tahlequah | 80.0 | 98 | 4 | 55 | 21 | 0 | 465 | 1.86 | .78 | 6 |
| Holdenville | 81.8 | 101 | 7 | 58 | 21 | 0 | 520 | 1.84 | .72 | 26 | Webbers Falls | 81.4 | 100 | 11 | 60 | 21 | 0 | 510 | 1.11 | .39 | 26 |
| McAlester | 80.3 | 99 | 11 | 60 | 16 | 0 | 475 | 2.59 | 1.13 | 8 | Westville | 79.2 | 96 | 24 | 56 | 21 | 0 | 439 | 2.60 | 2.22 | 26 |
| Okmulgee | 80.1 | 99 | 11 | 56 | 22 | 0 | 468 | .96 | .35 | 9 | | | | | | | | | | | |
| SOUTHWEST | | | | | | | | | | | | | | | | | | | | | |
| Altus | 80.2 | 101 | 3 | 59 | 22 | 0 | 470 | 3.10 | .95 | 24 | Hollis | 81.6 | 105 | 4 | 59 | 22 | 0 | 515 | 3.40 | 1.32 | 19 |
| Apache | 81.1 | 102 | 3 | 58 | 22 | 0 | 499 | 2.16 | .77 | 31 | Mangum | 79.4 | 102 | 7 | 55 | 22 | 0 | 445 | 2.48 | .64 | 8 |
| Fort Cobb | ***** | *** | *** | *** | *** | **** | **** | 1.41 | .36 | 23 | Medicine Park | 83.0 | 104 | 3 | 63 | 22 | 0 | 558 | 1.04 | .47 | 30 |
| Grandfield | 83.1 | 106 | 3 | 59 | 22 | 0 | 560 | 3.40 | 1.33 | 20 | Tipton | 82.3 | 104 | 3 | 60 | 22 | 0 | 536 | 1.95 | 1.38 | 20 |
| Hinton | 79.7 | 102 | 7 | 55 | 21 | 0 | 456 | 5.14 | 2.52 | 31 | Walters | 82.4 | 104 | 3 | 61 | 22 | 0 | 539 | 1.74 | 1.28 | 20 |
| Hobart | 81.3 | 103 | 7 | 57 | 22 | 0 | 506 | 3.41 | 1.29 | 30 | | | | | | | | | | | |
| SOUTH CENTRAL | | | | | | | | | | | | | | | | | | | | | |
| Ada | 82.3 | 103 | 11 | 56 | 16 | 0 | 535 | .45 | .36 | 20 | Lane | 81.6 | 102 | 11 | 59 | 16 | 0 | 514 | 1.50 | .35 | 12 |
| Ardmore | 82.8 | 101 | 8 | 61 | 16 | **** | **** | 3.98 | 1.93 | 13 | Madill | 82.3 | 101 | 7 | 60 | 16 | 0 | 535 | 2.86 | 1.24 | 12 |
| Burneyville | 82.1 | 102 | 8 | 58 | 16 | 0 | 530 | 5.56 | 3.17 | 8 | Newport | 82.9 | 102 | 7 | 60 | 16 | 0 | 555 | 1.98 | .78 | 8 |
| Byars | 81.7 | 101 | 11 | 58 | 21 | 0 | 518 | 3.37 | 2.28 | 31 | Pauls Valley | 83.0 | 103 | 11 | 59 | 22 | 0 | 558 | 1.77 | 1.01 | 31 |
| Centrahoma | 81.3 | 101 | 7 | 58 | 22 | 0 | 504 | 2.64 | 1.29 | 8 | Ringling | 83.0 | 104 | 11 | 60 | 16 | 0 | 558 | .26 | .15 | 20 |
| Durant | 82.5 | 102 | 11 | 63 | 16 | 0 | 542 | 3.71 | .69 | 6 | Sulphur | 81.9 | 101 | 7 | 56 | 16 | 0 | 524 | 1.17 | .37 | 20 |
| Fittstown | 81.2 | 102 | 7 | 56 | 16 | 0 | 504 | .74 | .30 | 8 | Tishomingo | 81.7 | 102 | 8 | 57 | 16 | 0 | 518 | 1.96 | .99 | 31 |
| Ketchum Ranch | 83.0 | 103 | 11 | 61 | 22 | 0 | 558 | 1.87 | 1.01 | 20 | Waurika | 82.3 | 103 | 11 | 58 | 16 | 0 | 537 | 2.02 | .64 | 19 |
| SOUTHEAST | | | | | | | | | | | | | | | | | | | | | |
| Antlers | 81.2 | 103 | 7 | 60 | 16 | 0 | 501 | 3.28 | 1.07 | 18 | Mt Herman | 79.6 | 97 | 12 | 63 | 21 | 0 | 454 | 12.88 | 4.08 | 13 |
| Broken Bow | 80.2 | 98 | 12 | 67 | 22 | 0 | 471 | 8.82 | 2.26 | 9 | Talihina | 80.6 | 102 | 5 | 59 | 22 | 0 | 483 | 5.05 | 1.36 | 26 |
| Clayton | 80.7 | 102 | 5 | 60 | 22 | 0 | 487 | 4.42 | 1.07 | 9 | Valliant | 81.5 | 101 | 12 | 66 | 21 | 0 | 511 | 5.22 | 1.85 | 18 |
| Cloudy | 80.7 | 101 | 11 | 66 | 21 | 0 | 487 | 8.68 | 2.29 | 18 | Wilburton | 80.8 | 102 | 5 | 60 | 22 | 0 | 490 | 3.36 | 1.02 | 8 |
| Hugo | 82.2 | 102 | 7 | 67 | 21 | 0 | 534 | 5.50 | 2.34 | 8 | Wister | 79.8 | 99 | 5 | 58 | 22 | 0 | 458 | 3.52 | | |

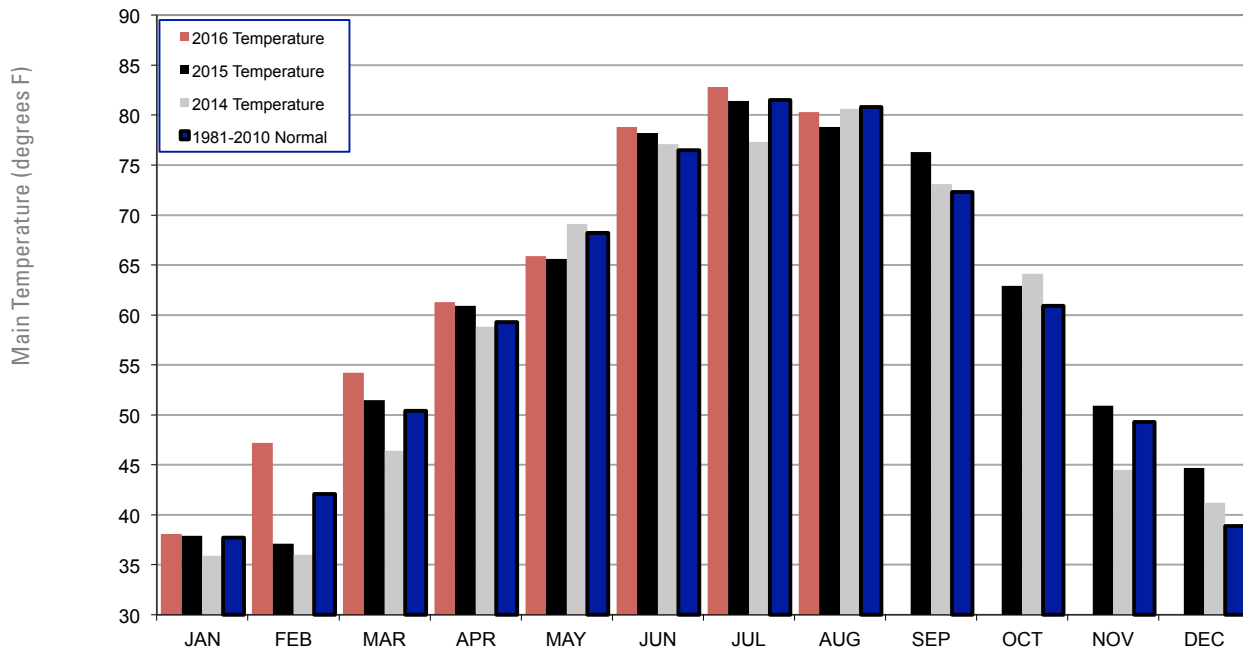
2014, 2015 AND 2016 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL



August 2016 Mesonet Precipitation Comparison

| Climate Division | Precipitation (inches) | Departure from Normal (inches) | Rank since 1895 | Wettest on Record (Year) | Driest on Record (Year) | Aug-15 (inches) |
|------------------|------------------------|--------------------------------|-----------------|--------------------------|-------------------------|-----------------|
| Panhandle | 3.53 | 0.83 | 26th Wettest | 5.81 (1917) | 0.54 (1936) | 2.34 |
| North Central | 3.10 | -0.12 | 50th Wettest | 8.10 (1974) | 0.14 (2000) | 2.22 |
| Northeast | 2.28 | -0.96 | 43rd Driest | 7.51 (1964) | 0.03 (2000) | 4.51 |
| West Central | 4.37 | 1.36 | 19th Wettest | 6.18 (2005) | 0.02 (2000) | 2.62 |
| Central | 2.28 | -0.82 | 50th Driest | 8.18 (1906) | 0.02 (2000) | 2.04 |
| East Central | 2.29 | -0.74 | 40th Driest | 10.88 (1915) | 0.02 (2000) | 3.43 |
| Southwest | 2.66 | -0.11 | 48th Wettest | 7.38 (1996) | 0.00 (2000) | 2.12 |
| South Central | 2.24 | -0.36 | 59th Wettest | 8.72 (1906) | 0.01 (2000) | 0.81 |
| Southeast | 5.99 | 3.17 | 12th Wettest | 9.68 (1915) | 0.25 (1936) | 2.04 |
| Statewide | 3.08 | 0.13 | 48th Wettest | 6.47 (1915) | 0.12 (2000) | 2.45 |

2014, 2015 AND 2016 STATEWIDE TEMPERATURE MONTHLY TOTALS VS. NORMAL



August 2016 Mesonet Temperature Comparison

| Climate Division | Average Temp (F) | Departure from Normal (F) | Rank since 1895 | Hottest on Record (Year) | Coldest on Record (Year) | Aug-15 (F) |
|------------------|------------------|---------------------------|-----------------|--------------------------|--------------------------|------------|
| Panhandle | 76.6 | -1.3 | 32nd Coolest | 83.7 (1937) | 71.4 (1915) | 77.1 |
| North Central | 80.1 | -0.7 | 50th Coolest | 88.3 (1936) | 72.9 (1915) | 78.3 |
| Northeast | 80.5 | 0.2 | 61st Coolest | 88.8 (1936) | 72.7 (1915) | 77.0 |
| West Central | 79.8 | -0.9 | 46th Coolest | 87.9 (2011) | 73.6 (1915) | 79.7 |
| Central | 81.0 | -0.4 | 56th Coolest | 88.7 (1936) | 74.1 (1915) | 79.2 |
| East Central | 80.7 | -0.2 | 58th Coolest | 88.6 (1936) | 73.5 (1915) | 78.6 |
| Southwest | 81.4 | -1.0 | 47th Coolest | 91.4 (2011) | 76.1 (1915) | 81.9 |
| South Central | 81.9 | -0.6 | 50th Coolest | 90.8 (2011) | 76.1 (1992) | 82.0 |
| Southeast | 80.8 | 0.4 | 54th Warmest | 87.5 (2011) | 74.2 (1915) | 80.7 |
| Statewide | 80.3 | -0.5 | 55th Coolest | 87.7 (2011) | 73.9 (1915) | 79.3 |

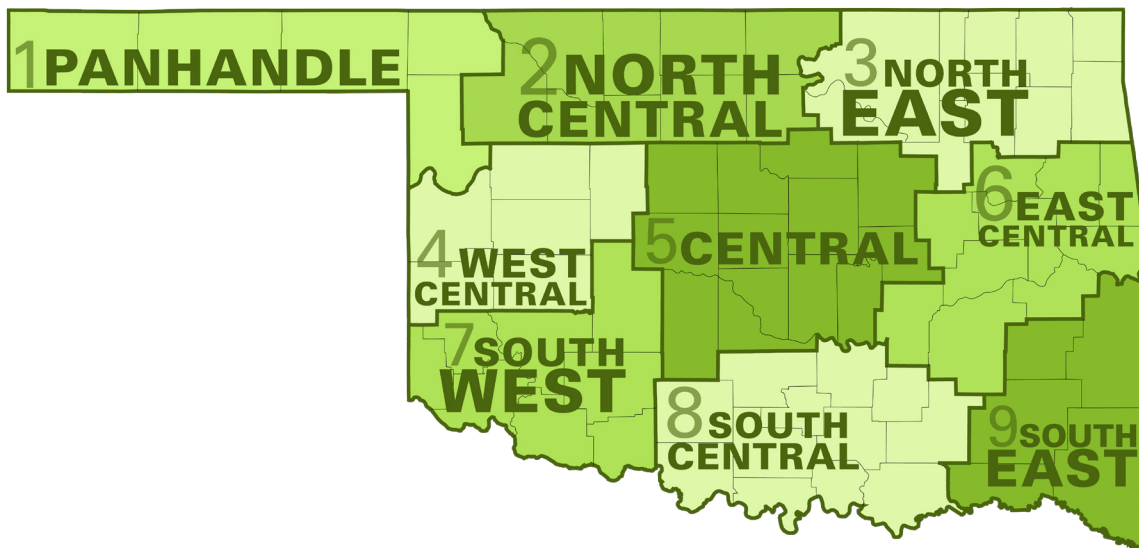
RECORD EVENT REPORTS AUGUST 2016

| Description | Day | Location | Record | Previous Record | Year |
|-------------|-----|----------|--------|-----------------|------|
| NONE | -- | -- | -- | -- | -- |

MESONET EXTREMES FOR AUGUST 2016

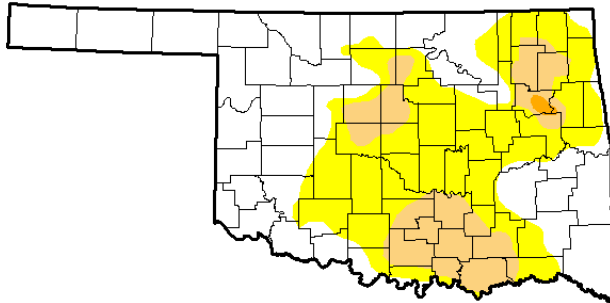
| Climate Division | High Temp (F) | | | Low Temp (F) | | | High Monthly Rainfall (inches) | | High Daily Rainfall (inches) | | |
|------------------|---------------|---------|------------|--------------|---------|-----------|--------------------------------|-------------|------------------------------|------|-------------|
| | Day | Station | Day | Day | Station | Station | Day | Station | | | |
| Panhandle | 104 | 11th | Buffalo | 50 | 15th | Eva | 6.48 | Arnett | 1.53 | 27th | Arnett |
| North Central | 104 | 11th | Woodward | 52 | 21st | Medford | 4.93 | Seiling | 1.76 | 31st | Medford |
| Northeast | 102 | 11th | Talala | 50 | 22nd | Nowata | 3.77 | Foraker | 1.93 | 31st | Jay |
| West Central | 105 | 7th | Bessie | 51 | 21st | Camargo | 6.50 | Putnam | 2.15 | 23rd | Butler |
| Central | 105 | 7th | Chickasha | 48 | 22nd | Birstow | 7.17 | Guthrie | 3.77 | 31st | Guthrie |
| East Central | 102 | 7th | Stuart | 55 | 21st | Tahlequah | 4.82 | Cookson | 3.52 | 26th | Cookson |
| Southwest | 106 | 3rd | Grandfield | 55 | 21st | Hinton | 5.14 | Hinton | 2.52 | 31st | Hinton |
| South Central | 104 | 11th | Ringling | 56 | 16th | Fittstown | 5.56 | Burneyville | 3.17 | 8th | Burneyville |
| Southeast | 103 | 7th | Antlers | 58 | 22nd | Wister | 12.88 | Mt Herman | 4.08 | 13th | Mt Herman |
| Statewide | 106 | 3rd | Grandfield | 48 | 22nd | Bristow | 12.88 | Mt Herman | 4.08 | 13th | Mt Herman |

Oklahoma Climate Divisions



U.S. Drought Monitor Oklahoma

August 30, 2016
(Released Thursday, Sep. 1, 2016)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|---|--------|-------|-------|-------|-------|------|
| Current | 52.00 | 48.00 | 14.06 | 0.30 | 0.00 | 0.00 |
| Last Week 8/23/2016 | 64.06 | 35.94 | 9.31 | 0.30 | 0.00 | 0.00 |
| 3 Months Ago 5/31/2016 | 97.18 | 2.82 | 0.00 | 0.00 | 0.00 | 0.00 |
| Start of Calendar Year 12/29/2015 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Start of Water Year 9/29/2015 | 52.60 | 47.40 | 16.79 | 6.37 | 0.97 | 0.00 |
| One Year Ago 8/9/2015 | 79.57 | 20.43 | 8.84 | 2.83 | 0.00 | 0.00 |

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Chris Fenimore
NCE/NESDIS/NOAA



<http://droughtmonitor.unl.edu/>

INTERPRETATION INFORMATION

MEAN DAILY TEMPERATURE: Calculated from an average of the daily maximum and minimum temperatures. Daily averages are summed for each day, and then divided by the number of valid data points – typically the number of days in the month. Although this November differs from the “true” daily average, it is consistent with historical methods of observation and comparable to the normals and extremes for stations and regions of the state.

DEGREE DAYS: Degree Days are calculated each day of the month for which there is a temperature report and the mean temperature for the day is less than (Heating Degree Days) or greater than (Cooling Degree Days) 65 degrees. Daily values are summed to arrive at a monthly total. HDD/CDD are qualitative measures of how much heating/cooling was required to maintain a comfortable indoor temperature. Missing observations November result in an artificially high or low value.

SEVERE WEATHER REPORTS: Only the most significant events are listed. Tornadoes of F2 or greater strength (on the 0-5 Fujita scale), hail of two inches diameter or greater, and wind speeds of 70 miles per hour or above are listed. National Weather Service defines storms as severe when they produce a tornado, hail of three-quarters inch or greater, or wind speeds above 57 miles per hour (50 knots). For additional reports, contact the Oklahoma Climatological Survey, Storm Prediction Center, or your local National Weather Service forecast office.

SOIL MOISTURE: The soil moisture variable displayed is the Fractional Water Index (FWI), measured at a depth of 25 cm. This unitless value ranges from very dry soil having a value of 0, to saturated soils having a value of 1.

ADDITIONAL RESOURCES

SUNRISE / SUNSET TABLES

U.S. Naval Observatory: <http://aa.usno.navy.mil/data>

SEVERE STORM REPORTS

Storm Prediction Center: <http://spc.noaa.gov/climo/>

National Climatic Data Center (more than about 4-5 months old):

<http://www4.ncdc.noaa.gov/cgi-win/wwwcgi.dll?wwEvent~Storms>

SEASONAL OUTLOOKS

Climate Prediction Center:

http://www.cpc.ncep.noaa.gov/products/OUTLOOKS_index.html

CLIMATE CALENDARS AND OTHER LOCAL WEATHER AND CLIMATE INFORMATION

Oklahoma Climatological Survey:

<http://climate.mesonet.org> or <http://climate.ok.gov/>



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