One weekend of heavy rain brightened the fortunes of some Oklahomans during October while others continued on in the embrace of significant drought. Eastern Oklahoma, especially the far northeast corner, came out the big winner in the moisture sweepstakes. Those across the western half of the state, particularly southwest Oklahoma, were not so lucky. According to preliminary data from the Oklahoma Mesonet, the statewide average rainfall total for the month was 3.42 inches, just a tad above normal and the 41st wettest October since records began in 1895. Punctuating the stark difference in fortunes along the southwest-tonortheast diagonal of the state, northeastern Oklahoma saw widespread totals of $5-9$ inches, but much of southwestern Oklahoma received less than an inch. Northeast Oklahoma recorded an average of 5.99 inches, nearly 2.5 inches above normal and the 16th wettest October on record for that area. Meanwhile, southwest Oklahoma garnered a measly 1.34 inches, more than 1.5 inches below normal and the 39th driest on record. The Mesonet site at Oilton led the state with 9.04 inches while Mangum recorded a paltry 0.57 inches. The near normal totals of October kept the year-todate statewide average in firm deficit mode at 25.07 inches, 6.78 inches below normal to rank as the 26th driest JanuaryOctober on record. Southwest Oklahoma stands out in that time frame with an average of 18.32 inches, 9.37 inches below normal to rank as the 17th driest.

## October 2014 Statewide Extremes

| Description | Extreme | Station | Day |
| :--- | :---: | :--- | :---: |
| High Temperature | $99^{\circ} \mathrm{F}$ | Multiple | 7 |
| Low Temperature | $23^{\circ} \mathrm{F}$ | Oilton | 31 |
| High Precipitation | 9.04 in. | Vinita |  |
| Low Precipitation | 0.57 in. | Mangum |  |

Unlike precipitation, temperature had no intention of finishing near normal during October. The statewide average temperature, as determined by the Mesonet, was 64.1 degrees, 2.8 degrees above normal to rank as the 20th warmest on record. The month's highest reading from the Mesonet was 99 degrees from several sites on October 7, although 90s were recorded as late as the 27th. The lowest
reading of 23 degrees was reported at Oilton on the month's final day. Combined with a somewhat warm September, the average for the first two months of climatological fall was 68.6 degrees, good for the 27 th warmest such period on record. The year-to-date average of 62.1 degrees remained 0.7 degrees below normal and ranked as the 28th coolest January-October since 1895.

## October 2014 Statewide Statistics

Temperature

|  | Average | Depart. | Rank (1895-2014) |
| :--- | ---: | ---: | :--- |
| Month (October) | $64.1^{\circ} \mathrm{F}$ | $3.2^{\circ} \mathrm{F}$ | 20th Warmest |
| Season-to-Date <br> (Sept-Oct) | $68.6^{\circ} \mathrm{F}$ | $2.1^{\circ} \mathrm{F}$ | 27th Warmest |
| Year-to-Date <br> (Jan-Oct) | $62.1^{\circ} \mathrm{F}$ | $-1.0^{\circ} \mathrm{F}$ | 28th Coolest |

Precipitation

|  | Total | Depart. | Rank (1895-2014) |
| :--- | :---: | :--- | :--- |
| Month (October) | 3.40 in. | -0.14 in. | 41st Wettest |
| Season-to-Date <br> (Sept-Oct) | 5.90 in. | -1.17 in. | 59th Driest |
| Year-to-Date <br> (Jan-Oct) | 25.10 in. | -6.83 in. | 26th Driest |

Depart. $=$ departure from 30-year normal

The warm weather was a disappointment to those hoping drought would begin to taper during what is considered the beginning of Oklahoma's cool season and secondary rainy season. Daytime highs in the 80s and even 90s at times kept pressure on the soils and reservoirs in the areas impacted by significant drought. Owing to the uneven precipitation pattern of October, the U.S. Drought Monitor showed an overall decrease in drought from 73 percent to 64 percent, but an increase in extreme-exceptional drought - the two worst categories - from 21 percent to 23 percent. Nearly the entire eastern half of the state was drought free, although some moderate drought was noted to the east of I-35 in northern and southern Oklahoma. The majority of southwestern Oklahoma remained in extreme or exceptional drought. One year ago, only 27 percent of the state was considered to be in drought according to the Drought Monitor.

## OCTOBER 2014 DAILY SUMMARIES

остовеR 1-3: Maximum temperatures were warm around the state until an upper-level low and cold front moved into the region. Temperatures fell as showers and thunderstorms developed over northern Oklahoma. The storms moved south over central and southern OK as the front pushed its way through the state. The hottest temperatures in the state dropped from 97 degrees in Mangum, Grady, and Hobart on the 1 st to 78 degrees in Idabel on the 3rd. The coolest highs dropped nearly 20 degrees from 78 degrees in Kenton to 59 degrees in Miami. Minimum temperatures were between 45-73 degrees on the 1st, 42-64 degrees on the 2nd, and 36-51 degrees on the 3rd. The highest rainfall amounts were between half an inch and .81 inches (Copan) on the 1 st. By the 2 nd, storms became severe with wind gusts measuring 83 mph in Webbers Falls, 70 mph in Poteau, and a hail report of 3 inches in Tahlequah. The highest rainfall amounts were around two inches with a maximum of 2.46 inches in Eufaula. Maximum daily average wind speeds were roughly 15 mph during this period.

OCTOBER 4-7: Temperatures rebounded following the cold front with highs climbing from a range of 65-83 degrees to a range of 84-99 degrees. The highest minimums were in the 50 s and 60 s and the lowest minimums were primarily in the 30 s. The coolest Mesonet reading during this four-day stretch was 32 degrees in Blackwell on the 4th. Precipitation fell on the 6th and 7th as a line of storms moved southeast through eastern Oklahoma. Some storms became severe with Mesonet gusts in the 40s and an EF-1 tornado in Le Flore County on the 6th. Central OK generally received a quarter of an inch to .71 inches (Chandler) of rain on Sunday and one-third to 1.93 inches (Newport) in south-central and southeast OK on Monday. Daily average wind speeds were mild, measuring less than 10 mph .

OCTOBER 8-11: Following a brief warm-up, another cold front moved into the region and stalled over the northern third of OK. As the days passed, additional cold fronts as well as a stationary front visited the state. The highest temperatures recorded decreased from 95 degrees in Putnam on the 8th to 93 degrees, 92 degrees, and 67 degrees each consecutive day. In a similar manner, the lowest maximum temperatures decreased from 78 degrees to 67 degrees, 55 degrees, and 53 degrees each day. The highest minimums dropped from the low 70s to the mid-50s and the lowest minimums were generally in the 40s. Although rainfall amounts measured less than one-tenth of an inch on the 8th, heavy rain fell from the 9th-10th. Daily maximum precipitation amounts were 2.35 inches on the 9th, 4.49 inches on the 10 th, and 1.53 inches on the 11th. McAlester broke a daily rainfall record of 2.54 inches and flooding was reported in Langley, Pryor, Vinita, and Miami on the 10th. Average wind speeds were less than 15 mph each day except on Friday when the highest average wind speed was measured at 18.4 mph .

Daily wind gusts hit as high as 56 mph in Cheyenne on the 9 th and 65 mph in Idabel on the 10th.

ОСтOBER 12-13: Throughout the day on the 12th, cloudiness gradually increased and seasonable temperatures returned to the area. Later in the day, isolated showers, storms, and a cold front moved in from the west. The heaviest precipitation was in western and south-central Oklahoma on the 12th and southeast Oklahoma on the 13th. By the afternoon of the 13th, the rain in north-central and central OK turned into drizzle. Rainfall amounts were as high as 2.69 inches in Burneyville (Oct. 12) and 3.12 inches in Wilburton (Oct. 13). Highs were between 59-87 degrees and lows were between 38-56 degrees on the 12th. On the 13th, highs were between 58-74 degrees and lows were between $40-58$ degrees. Storms became severe on Sunday with wind gusts over 70 mph in Altus, Tipton, Hydro, and Temple. Otherwise, average wind speeds were less than 19 mph on the 12th and less than a breezy 26 mph on the 13th.

OCTOBER 14-16: Thanks to upper level ridging, Oklahoma finally got a break from rain and thunderstorms. Maximum temperatures were on the upswing with the maximum temperature range increasing from 67-80 degrees on the 14th to $78-95$ degrees on the 16th. Lows were generally between the 30 s and 50 s . Average wind speeds were $5-16 \mathrm{mph}$ on the 14 th , less than 14 mph on the 15 th , and less than 12 mph on the 16 th .

ОСтовЕR 17-18: As a cold front moved in through southern Oklahoma, the highest maximum temperature recorded dropped from 84 degrees in Waurika on the 17th to 77 degrees in Burneyville, Waurika, and Grandfield the following day. The lowest maximum fell from 65 degrees in Kenton to 58 degrees in Boise City. Lows ranged from 39 degrees in Kenton to 62 degrees in Medicine Park. Since the cold front was a dry front, there was no measurable rainfall in the state except for a trace of .07 inches in Boise City on the 18th. Daily average wind speeds were less than 16 mph on the 17 th and less than 12 mph on the 18 th .

остовеR 19: The 19th was another rain-free day with highs between 68 degrees in Westville, Jay, and Cookson, and 80 degrees in Beaver and Hollis. Lows varied between 39 degrees in Nowata and 56 degrees in Grandfield. Average wind speeds were less than 14 mph .

ОСтовеR 20-22: A weak frontal boundary moved in from the west on the 20th. Dense fog formed over south-central OK on the morning of the 21 st and the central one-third of the state on the morning of the $22 n d$. Scattered showers and thunderstorms developed over northeast OK on the 20th and then over southwest and central OK on the 22nd. Rainfall amounts were generally between a quarter to 1.02 inches in Inola on Monday and a quarter and .59 inches in Hollis on Wednesday. The highest temperatures dropped
from 86 degrees in Mangum to 81 degrees in Waurika and Burneyville throughout this period. The coolest highs were 71 degrees (Westville) on the 20th, 75 degrees (Boise City and Kenton) on the 21st, and 66 degrees (Cheyenne) on the 22 nd. Lows were primarily in the 40 s and 50 s. The highest average wind speeds increased slightly each day with the highest speeds measuring 10 mph on Monday, 12 mph on Tuesday, and 15 mph on Wednesday.

OCTOBER 23-26: Despite lingering showers in the east on the 23rd, this four-day period was fairly dry. The most precipitation measured was .49 inches in Okemah on Thursday. Then, as skies cleared, temperatures warmed. The highest maximum temperature increased from 83 degrees in Grandfield on the 23rd to 93 degrees in Mangum on the 26th. The lowest maximums showed more substantial heating with an increase from 61 degrees at Tahlequah to 82 degrees at Mt. Herman. Lows ranged from the 40s to the 60s. Oklahoma City and McAlester broke their daily high temperature records on the 25th at 92 and 88 degrees, respectively. Fog was an issue in southwest OK on the morning of the 23rd, in western OK on the morning of the 24th, and in north-central OK on the morning of 25th. Average wind speeds were less than 10 mph from the 23rd to the 25 th and less than 20 mph on the 26 th. A 46 mph wind gust from Red Rock accompanied the breezy average winds on Sunday.

OCTOBER 27-29: A strong southward moving cold front entered northwest Oklahoma on the 27th, causing showers and thunderstorms in eastern OK as well as light snow over central OK. The highest recorded precipitation amounts were .48 inches in Chandler on Monday and .38 inches in Broken Bow on Tuesday. By the 29th, precipitation had cleared out. The warmest maximum temperatures plummeted from 91 degrees in Mangum on the 27th to 77 degrees in Waurika on the 29th. The coolest maximum temperatures fluctuated between 62 and 68 degrees. The highest minimums in the state dropped from 67 degrees in Wister, Bixby, and Hectorville, to 51 degrees in Medicine Park within this three-day period. The lowest minimums each day were 38 degrees in Boise City on the 27th, 34 degrees in Boise City and Kenton on the 28th, and 31 degrees in Beaver on the 29th. Average wind speeds died down as the days passed, measuring less than 17 mph on the 27 th , less than 14 mph on the 28th, and less than 11 mph on the 29th.

OCTOBER 30-31: Although temperatures were slightly warmer on the 30th, another cold front made for a chilly Halloween. Highs ranged from 67 (Boise City and Kenton) to 81 degrees (Grandfield) on the 30th and from 51 degrees (Vinita) to 63 degrees (south and southeast OK) on the 31st. Lows were between 34 and 54 degrees on the 30th and 23 and 43 degrees on Halloween. Rainfall was negligible and the highest daily average wind speeds were 13 mph and 15 mph on Thursday and Friday, respectively.

## OCTOBER 2014 SEVERE WEATHER

Hail (2 inches in diameter or greater)

| Size (in.) | Location | County | Day |
| :---: | :---: | :---: | :---: |
| 3 | Tahlequah | Cherokee | 2 |

Wind Gusts (70 mph or greater)

| Speed <br> (m.p. $\mathbf{h})$ | Location | County | Day |
| :---: | :--- | :--- | :---: |
| 83 | Webbers Falls | Muskogee | 2 |
| 70 | Poteau | Le Flore | 2 |
| 76 | Altus | Jackson | 12 |
| 75 | Altus Air Force Base | Jackson | 12 |
| 76 | Tipton | Tillman | 12 |
| 80 | Hydro | Caddo | 12 |
| 70 | Temple | Cotton | 12 |

## Flooding

|  | Location | County |
| :--- | :--- | :---: |
|  | Mayes | 10 |
| Langley | Mayes | 10 |
| Pryor | Craig | 10 |
| Vinita | Ottawa | 10 |
| Miami |  |  |

OCTOBER 2014 OBSERVED PRECIPITATION


OCTOBER 2014 DEPARTURE FROM NORMAL PRECIPITATION


## OCTOBER 2014 PERCENT OF NORMAL PRECIPITATION



OCTOBER 2014 AVERAGE SOIL MOISTURE AT 25CM


## OCTOBER 2014 AVERAGE TEMPERATURE



OCTOBER 2014 DEPARTURE FROM NORMAL TEMPERATURE


MESONET MONTHLY SUMMARY FOR OCTOBER 2014

| NAME | MEAN TEMP | $\begin{aligned} & \text { HIGH } \\ & \text { TEMP } \end{aligned}$ | DAY | $\begin{aligned} & \text { LOW } \\ & \text { TEMP } \end{aligned}$ | DAY | HDD | CDD | $\begin{aligned} & \text { TOT } \\ & \text { PPT } \end{aligned}$ | $\begin{aligned} & \mathrm{HIGH} \\ & 24-\mathrm{HR} \end{aligned}$ | DAY | NAME | $\begin{aligned} & \text { MEAN } \\ & \text { TEMP } \end{aligned}$ | $\begin{aligned} & \text { HIGH } \\ & \text { TEMP } \end{aligned}$ | DAY | $\begin{aligned} & \text { LOW } \\ & \text { TEMP } \end{aligned}$ | DAY | HDD | CDD |  | $\begin{aligned} & \text { HIGH } \\ & 24-\mathrm{HR} \end{aligned}$ | DAY |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PANHANDLE |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Arnett | 62.9 | 95 | 7 | 34 | 31 | 140 | 73 | 1.72 | . 57 | 9 | Goodwel1 | 59.9 | 91 | 7 | 32 | 31 | 180 | 24 | 1.38 | 1.23 | 9 |
| Beaver | 60.9 | 93 | 7 | 31 | 29 | 162 | 35 | 1.58 | . 68 | 9 | Hooker | 60.5 | 93 | 7 | 31 | 31 | 167 | 27 | 1.72 | 1.04 | 9 |
| Boise City | 57.2 | 86 | 26 | 31 | 31 | 246 | 4 | 1.63 | 1.02 | 9 | Kenton | 56.9 | 87 | 25 | 27 | 31 | 253 | 2 | 1.18 | . 86 | 9 |
| Buffalo | 62.2 | 93 | 7 | 33 | 4 | 144 | 58 | 1.17 | . 39 | 13 | Slapout | 62.0 | 92 | 7 | 33 | 31 | 143 | 50 | 1.66 | . 64 | 9 |
| NORTH CENTRAL |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Alva | 63.0 | 94 | 8 | 32 | 31 | 138 | 77 | 1.83 | 1.15 | 13 | May Ranch | 63.4 | 92 | 7 | 32 | 31 | 129 | 78 | . 99 | . 55 | 12 |
| Blackwell | 63.1 | 92 |  | 30 | 31 | 141 | 82 | 3.74 | 1.43 | 13 | Medford | 63.3 | 95 | 1 | 31 | 31 | 140 | 88 | 1.57 | . 98 | 13 |
| Breckinridge | 64.0 | 95 | 7 | 28 | 31 | 130 | 100 | 3.14 | 1.14 | 13 | Newkirk | 63.0 | 91 | 1 | 28 | 31 | 141 | 79 | 4.08 | 1.58 | 10 |
| Cherokee | 64.1 | 95 | 1 | 34 | 31 | 123 | 94 | 2.28 | 1.21 | 13 | Red Rock | 64.2 | 94 | 7 | 29 | 31 | 125 | 101 | 3.39 | 1.04 | 13 |
| Fairview | 64.6 | 95 |  | 32 | 31 | 118 | 105 | 2.56 | 1.65 | 13 | Seiling | 62.7 | 96 | 7 | 30 | 31 | 141 | 71 | 3.02 | 1.57 | 13 |
| Freedom | 63.3 | 95 | 7 | 34 | 31 | **** | **** | 1.13 | . 46 | 10 | Woodward | 63.4 | 94 | 7 | 36 | 31 | 129 | 80 | 1.22 | . 57 | 9 |
| Lahoma | 64.5 | 96 | 1 | 35 | 31 | 117 | 102 | 2.23 | 1.20 | 10 |  |  |  |  |  |  |  |  |  |  |  |
| NORTHEAST |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bixby | 64.3 | 89 | 1 | 36 | 31 | 115 | 92 | 4.77 | 1.36 | 13 | Pawnee | 64.4 | 93 | 7 | 31 | 31 | 125 | 106 | 3.94 | 1.49 | 10 |
| Burbank | 62.9 | 92 | 7 | 28 | 31 | 143 | 78 | 2.85 | 1.01 | 13 | Porter | 64.3 | 89 | 1 | 33 | 31 | 112 | 91 | 7.40 | 4.09 | 10 |
| Copan | 62.5 | 87 | 1 | 29 | 31 | 148 | 70 | 8.69 | 4.49 | 10 | Pryor | 62.1 | 89 | 1 | 28 | 31 | 159 | 69 | 6.92 | 3.35 | 10 |
| Foraker | 62.7 | 90 | 1 | 29 | 31 | 145 | 73 | 4.83 | 1.89 | 9 | Skiatook | 64.0 | 90 | 1 | 34 | 31 | 120 | 88 | 5.75 | 2.16 | 10 |
| Inola | 62.9 | 92 | 1 | 31 | 31 | 138 | 72 | 5.74 | 1.49 | 10 | Talala | 62.8 | 93 | 1 | 29 | 31 | 142 | 74 | 5.72 | 2.90 | 10 |
| Jay | 61.2 | 86 | 1 | 26 | 31 | 178 | 61 | 7.82 | 3.55 | 10 | Tulsa | 65.3 | 92 | 1 | 34 | 31 | 97 | 108 | 3.85 | 1.23 | 10 |
| Miami | 60.9 | 86 | 1 | 27 | 31 | 180 | 52 | 8.18 | 2.73 | 10 | Vinita | 60.7 | 87 | 1 | 27 | 31 | 184 | 49 | 9.04 | 4.25 | 10 |
| Nowata | ***** | *** | *** | *** | *** | **** | **** | ***** | ***** | *** | Wynona | 63.7 | 93 | 1 | 27 | 31 | 128 | 88 | 4.04 | 1.66 | 10 |
| WEST CENTRAL |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bessie | 65.0 | 94 | 7 | 37 | 31 | 101 | 102 | 2.94 | 1.15 | 12 | Putnam | 64.1 | 96 | 7 | 33 | 31 | 123 | 97 | 2.81 | 1.35 | 13 |
| Butler | 63.6 | 94 | 7 | 34 | 4 | 123 | 81 | 2.62 | . 92 | 13 | Retrop | 65.9 | 96 | 7 | 36 | 31 | 83 | 110 | 1.27 | . 41 | 12 |
| Camargo | 62.1 | 95 | 7 | 32 | 29 | 147 | 57 | 1.65 | . 58 | 9 | Watonga | 64.8 | 94 | 1 | 35 | 31 | 111 | 105 | 2.13 | 1.25 | 10 |
| Cheyenne | 64.2 | 95 | 7 | 37 | 31 | 115 | 90 | 2.83 | 2.11 | 9 | Weatherford | 65.2 | 95 | 1 | 34 | 31 | 103 | 109 | 3.28 | 1.89 | 12 |
| Erick | 63.3 | 95 | 7 | 34 | 31 | 128 | 76 | 1.26 | . 60 | 12 |  |  |  |  |  |  |  |  |  |  |  |
| CENTRAL |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Acme | 66.0 | 96 | 7 | 30 | 31 | 102 | 132 | 2.52 | 1.07 | 13 | Ninnekah | 66.2 | 96 | 7 | 34 | 31 | 93 | 130 | 1.72 | . 71 | 12 |
| Bowlegs | 64.9 | 91 | 1 | 32 | 31 | 110 | 106 | 3.49 | 1.05 | 2 | Norman | 65.9 | 94 | 1 | 35 | 31 | 99 | 126 | 2.98 | 1.43 | 10 |
| Bristow | 62.7 | 92 | 1 | 26 | 31 | 147 | 75 | 5.47 | 2.01 | 13 | Oilton | 63.7 | 93 | 1 | 23 | 31 | 137 | 98 | 3.80 | 1.51 | 13 |
| Lake Carl Blac | 63.6 | 93 | 7 | 28 | 31 | 136 | 94 | 3.43 | 1.18 | 10 | OKC East | 65.6 | 93 | 1 | 32 | 31 | 105 | 124 | ***** | ***** | *** |
| Chandler | 64.9 | 91 | 1 | 34 | 31 | 109 | 105 | 3.82 | 1.32 | 13 | OKC North | 66.5 | 92 | 1 | 37 | 31 | 90 | 137 | 2.35 | . 91 | 13 |
| Chickasha | 65.0 | 95 | 1 | 30 | 31 | 110 | 108 | 2.23 | . 65 | 10 | OKC West | 66.3 | 92 | 1 | 39 | 31 | 91 | 131 | 2.90 | . 99 | 10 |
| El Reno | 64.0 | 93 | 1 | 28 | 31 | **** | **** | 1.84 | . 65 | 13 | Okemah | 64.0 | 90 | 1 | 32 | 31 | 118 | 86 | 2.98 | 1.19 | 10 |
| Guthrie | 65.5 | 94 | 7 | 36 | 31 | 110 | 127 | 2.78 | 1.13 | 10 | Perkins | 65.5 | 96 | 1 | 32 | 31 | 108 | 123 | 2.97 | 1.15 | 10 |
| Kingfisher | 64.9 | 94 | 1 | 31 | 31 | 114 | 112 | 4.14 | 1.48 | 13 | Shawnee | 65.2 | 93 | 1 | 34 | 31 | 103 | 111 | 3.68 | 1.14 | 10 |
| Marena | 64.8 | 93 | 7 | 33 | 31 | 113 | 105 | 2.34 | . 79 | 10 | Spencer | 65.8 | 93 | 1 | 30 | 31 | 104 | 130 | 2.97 | 1.35 | 13 |
| Minco | 65.8 | 93 | 7 | 36 | 31 | 92 | 115 | 2.36 | . 88 | 10 | Stillwater | 64.9 | 95 | 7 | 35 | 31 | 113 | 110 | 2.18 | . 82 | 13 |
| Marshal1 | 64.5 | 95 | 7 | 30 | 31 | 127 | 113 | 2.59 | 1.30 | 10 | Washington | 65.7 | 96 | 1 | 31 | 31 | 93 | 115 | 2.29 | . 65 | 6 |
| EAST CENTRAL |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cookson | 62.6 | 86 | 7 | 34 | 31 | 145 | 72 | 8.49 | 3.25 | 10 | Sallisaw | 64.3 | 88 | 1 | 33 | 31 | 107 | 84 | 5.96 | 2.74 | 13 |
| Eufaula | 65.3 | 88 | 1 | 38 | 31 | 89 | 99 | 5.75 | 2.46 | 2 | Stigler | 63.8 | 88 | 7 | 31 | 31 | 115 | 79 | 5.27 | 2.16 | 13 |
| Haskell | 63.6 | 89 | 1 | 32 | 31 | 123 | 81 | 6.41 | 3.23 | 10 | Stuart | 65.6 | 91 | 7 | 36 | 31 | 85 | 104 | 5.56 | 2.13 | 2 |
| Hectorville | 65.2 | 92 | 1 | 33 | 31 | 102 | 109 | 4.85 | 2.08 | 10 | Tahlequah | 62.9 | 87 | 7 | 33 | 31 | **** | **** | 6.09 | 2.05 | 10 |
| Holdenville | 65.2 | 92 | 7 | 31 | 31 | 97 | 104 | 2.69 | 1.02 | 10 | Webbers Falls | 64.7 | 91 | 1 | 35 | 31 | 104 | 94 | 5.60 | 1.93 | 13 |
| McAlester | 64.9 | 90 | 7 | 36 | 31 | 105 | 102 | 6.73 | 2.33 | 2 | Westville | 62.2 | 87 | 7 | 32 | 31 | 150 | 64 | 5.94 | 2.94 | 10 |
| 0kmulgee | 63.5 | 89 | 1 | 30 | 31 | 128 | 83 | 4.49 | 2.45 | 10 |  |  |  |  |  |  |  |  |  |  |  |
| SOUTHWEST |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Altus | 66.8 | 97 | 7 | 37 | 31 | 69 | 126 | . 82 | . 64 | 12 | Hollis | 65.8 | 95 | 16 | 36 | 31 | 83 | 107 | . 81 | . 59 | 22 |
| Apache | 66.0 | 94 | 7 | 35 | 31 | 87 | 117 | 1.72 | . 71 | 12 | Mangum | 65.2 | 97 | 7 | 34 | 4 | 94 | 102 | . 57 | . 21 | 22 |
| Fort Cobb | 65.1 | 93 | 7 | 34 | 31 | 101 | 104 | 2.13 | . 79 | 13 | Medicine Park | 67.6 | 95 | 7 | 43 | 31 | 53 | 135 | 1.18 | . 48 | 12 |
| Grandfield | 68.6 | 99 | 7 | 39 | 31 | 51 | 161 | 1.32 | . 69 | 12 | Tipton | 67.5 | 98 | 7 | 38 | 29 | 62 | 139 | 1.61 | . 74 | 1 |
| Hinton | 64.6 | 94 | 1 | 34 | 31 | 116 | 103 | 1.67 | . 76 | 12 | Walters | 67.7 | 99 | 7 | 40 | 31 | 59 | 142 | 1.50 | . 75 | 12 |
| Hobart | 66.4 | 97 | 1 | 35 | 31 | 83 | 128 | 1.44 | . 63 | 13 |  |  |  |  |  |  |  |  |  |  |  |
| SOUTH CENTRAL |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ada | 66.0 | 93 | 7 | 30 | 31 | 98 | 129 | 2.59 | . 86 | 10 | Lane | 65.5 | 91 | 7 | 36 | 31 | 80 | 97 | 3.03 | 1.45 | 13 |
| Ardmore | 67.0 | 92 | 7 | 37 | 31 | 69 | 132 | 3.24 | 1.07 | 6 | Madill | 66.9 | 91 | 7 | 36 | 31 | 70 | 130 | 5.07 | 1.75 | 13 |
| Burneyville | 67.4 | 97 | 7 | 33 | 4 | 78 | 151 | 5.18 | 2.69 | 12 | Newport | 67.3 | 93 | 7 | 39 | 4 | **** | **** | 4.06 | 1.93 | 6 |
| Byars | 66.5 | 92 | 1 | 35 | 31 | 85 | 130 | 3.24 | 1.20 | 2 | Pauls Valley | 66.6 | 93 | 7 | 35 | 31 | 85 | 133 | 1.99 | . 72 | 12 |
| Centrahoma | 65.6 | 93 | 7 | 31 | 31 | 92 | 111 | 4.21 | 1.60 | 10 | Ringling | 67.5 | 98 | 7 | 37 | 31 | 67 | 146 | 2.04 | 1.02 | 12 |
| Durant | 67.3 | 91 | 7 | 38 | 31 | 52 | 124 | ***** | ***** | *** | Sulphur | 65.8 | 93 | 7 | 33 | 31 | 96 | 121 | 2.11 | . 55 | 10 |
| Fittstown | 65.7 | 92 | 7 | 38 | 4 | 84 | 106 | 2.40 | . 86 | 10 | Tishomingo | 66.0 | 92 | 7 | 37 | 4 | 77 | 107 | 3.16 | 1.28 | 13 |
| Ketchum Ranch | 67.0 | 96 | 7 | 36 | 31 | 74 | 137 | 1.89 | . 69 | 10 | Waurika | 67.8 | 99 | 7 | 37 | 31 | 65 | 153 | 1.79 | . 86 | 10 |
| SOUTHEAST |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Antlers | 64.8 | 90 | 7 | 32 | 31 | 95 | 88 | 4.20 | 2.48 | 13 | Idabe 1 | 65.4 | 92 | 2 | 35 | 31 | 78 | 90 | 2.90 | 1.26 | 13 |
| Broken Bow | 64.0 | 89 | 2 | 36 | 31 | 99 | 68 | 7.82 | 3.70 | 10 | Mt Herman | 64.3 | 87 | 2 | 37 | 31 | 102 | 79 | 4.41 | 2.11 | 13 |
| Clayton | 65.0 | 86 |  | 33 | 31 | 95 | 96 | 6.40 | 3.03 | 10 | Talihina | 64.2 | 88 | 2 | 34 | 4 | 112 | 86 | 6.60 | 2.71 | 10 |
| Cloudy | 64.3 | 88 | 2 | 36 | 31 | 97 | 75 | 4.14 | 1.85 | 13 | Wilburton | 64.3 | 87 | 7 | 34 | 31 | 107 | 85 | 7.70 | 3.76 | 10 |
| Hugo | 66.2 | 89 | 7 | 38 | 31 | 61 | 100 | 3.70 | 2.08 | 13 | Wister | 63.3 | 87 | 2 | 34 | 31 | 120 | 66 | 6.86 | 2.18 | 10 |

## 2012, 2013 AND 2014 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL



October 2014 Mesonet Precipitation Comparison

| Climate Division | Precipitation <br> (inches) | Departure from <br> Normal (inches) | Rank since 1895 | Wettest on Record <br> (Year) | Driest on <br> Record (Year) |  |
| :--- | :---: | :---: | :--- | :--- | :--- | :--- |
| Panhandle | 1.51 | -0.19 | 47th Wettest | 6.84 (1923) | $0.03(2001)$ | 0.72 |
| North Central | 2.40 | -0.51 | 50th Wettest | $8.97(1998)$ | $0.00(1952)$ | 1.95 |
| Northeast | 5.97 | 2.19 | 16th Wettest | $14.98(1941)$ | $0.05(1952)$ | 4.04 |
| West Central | 2.31 | -0.45 | 49th Wettest | $9.57(1923)$ | $0.00(1952)$ | 1.52 |
| Central | 3.01 | -0.74 | 50th Wettest | $13.34(1941)$ | $0.03(1952)$ | 3.16 |
| East Central | 5.68 | 1.24 | 26th Wettest | $14.00(1941)$ | $0.15(1963)$ | 4.72 |
| Southwest | 1.34 | -1.81 | 39th Driest | $11.03(1983)$ | $0.00(1952)$ | 1.71 |
| South Central | 3.07 | -1.30 | 59th Driest | $14.83(1981)$ | $0.09(1921)$ | 3.89 |
| Southeast | 5.47 | 0.51 | 33rd Wettest | $12.89(1984)$ | $0.20(1924)$ | 6.25 |
| Statewide | 3.40 | -0.14 | 41st Wettest | $10.75(1941)$ | $0.14(1952)$ | 3.09 |

2012, 2013 AND 2014 STATEWIDE TEMPERATURE MONTHLY TOTALS VS. NORMAL


October 2014 Mesonet Temperature Comparison

| Climate Division | Average <br> Temp (F) | Departure from <br> Normal (F) | Rank since 1895 | Hottest on Record <br> (Year) | Coldest on <br> Record (Year) |  |
| :--- | :---: | :---: | :---: | :--- | :--- | :--- |
| Panhandle | 60.3 | 2.9 | 17th Warmest | $65.9(1963)$ | $50.1(1925)$ | 56.4 |
| North Central | 63.4 | 3.7 | 14th Warmest | $68.9(1963)$ | $51.6(1925)$ | 58.7 |
| Northeast | 63.0 | 2.8 | 32nd Warmest | $70.2(1963)$ | $53.9(1925)$ | 59.3 |
| West Central | 64.2 | 3.9 | 13th Warmest | $68.5(1963)$ | $52.1(1925)$ | 59.7 |
| Central | 65.0 | 3.6 | 18th Warmest | $70.2(1963)$ | $55.0(2009)$ | 61.1 |
| East Central | 63.7 | 2.0 | 37th Warmest | $70.9(1963)$ | $55.5(1976)$ | 61.1 |
| Southwest | 66.5 | 4.0 | 8th Warmest | $70.2(1963)$ | $55.4(1925)$ | 62.8 |
| South Central | 66.2 | 2.9 | 23rd Warmest | $71.0(1963)$ | $56.8(1976)$ | 63.0 |
| Southeast | 64.6 | 2.6 | 32nd Warmest | $69.8(1963)$ | $55.3(1976)$ | 62.0 |
| Statewide | 64.1 | 3.2 | 20th Warmest | $69.5(1963)$ | $54.6(1925)$ | 60.4 |

## RECORD EVENT REPORTS OCTOBER 2014

| Description | Day | Location | Record | Previous <br> Record | Year |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Daily rainfall | 10 | McAlester | 2.54 | 2.49 | 2004 |
| Daily high temperature | 25 | Oklahoma City | 92 | 87 | 1939 |
| Daily high temperature | 25 | McAlester | 88 | 86 | 1963 |

## MESONET EXTREMES FOR OCTOBER 2014

| Climate Division | High Temp (F) | Day | Station | Low Temp (F) | Day | Station | High <br> Monthly <br> Rainfall <br> (inches) | Station | High Daily Rainfall (inches) | Day | Station |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Panhandle | 95 | 7th | Arnett | 27 | 31st | Kenton | 1.72 | Arnett | 1.23 | 9th | Goodwell |
| North Central | 96 | 1st | Lahoma | 28 | 31st |  | 4.08 | Newkirk | 1.65 | 13th | Fairview |
| Northeast | 93 | 1st | Talala | 26 | 31st | Jay | 9.04 | Vinita | 4.49 | 10th | Copan |
| West Central | 96 | 7th | Retrop | 32 | 29th | Camargo | 3.28 | Weatherford | 2.11 | 9th | Cheyenne |
| Central | 96 | 7th | Acme | 23 | 31st | Oilton | 5.47 | Bristow | 2.01 | 13th | Bristow |
| East Central | 92 | 1st | Hectorville | 30 | 31st | Okmulgee | 8.49 | Cookson | 3.25 | 10th | Cookson |
| Southwest | 99 | 7th | Walters | 34 | 4th | Mangum | 2.13 | Fort Cobb | 0.79 | 13th | Fort Cobb |
| South Central | 99 | 7th | Waurika | 30 | 31st | Ada | 5.18 | Burneyville | 2.69 | 12th | Burneyville |
| Southeast | 92 | 2nd | Idabel | 32 | 31st | Antlers | 7.82 | Broken Bow | 3.76 | 10th | Wilburton |
| Statewide | 99 | 7th | Waurika | 23 | 31st | Oilton | 9.04 | Vinita | 4.49 | 10th | Copan |

Oklahoma's weather descends rather rapidly during November from the pleasantry of autumn into the chill of early winter. The state's normal temperature (averaged statewide) during the month, 49.0 degrees Fahrenheit, is the 4th lowest of any of the year's 12 months. Based on monthly averages across the state, November is 13 degrees cooler than October, easily Oklahoma's largest temperature difference between consecutive months. The increasingly frequent intrusions of cooler (and sometimes frigid) air, frequently accompanied by some dreary, dismal weather, are usually separated by interludes of gorgeous autumn days. The pleasant interludes provide farmers with an opportunity to complete the harvest of peanuts, cotton, and sorghum, or to finish drilling the new wheat crop. The statewide-averaged November normal precipitation is 2.78 inches, making November the 6th wettest of the months in Oklahoma. Snow, sleet, and ice are frequent late-November visitors to the state, too often creating travel hazards during the long Thanksgiving weekend.

## Temperature

| Mean | 49.0 degrees |
| :--- | :--- |
| Warmest November | 1989, 56.2 degrees |
| Coolest November | 1929, 42.6 degrees |
| Warmest location | Waurika, 53.4 degrees |
| Coolest location | Turpin, 42.8 degrees |
| Hottest recorded | 95 degrees, Waukomis, November 1, <br> 1914 <br> and Colgate, November 1, 1937 |
| Coldest recorded | -15 degrees, Kenton, November 28, <br> 1976 |
|  |  |

Statewide-averaged monthly temperature extremes for the Novembers since 1892 have varied between 56.0 degrees in 1999 and 41.3 degrees in 1929. The range of normal daily average temperatures across the state, as published by the National Climatic Data Center, is from 53.4 degrees at Waurika to 42.8 degrees at Turpin. Normal daily maximum temperatures fall between Waurika's 65.3 degrees and Newkirk's 56.6 degrees. Normal daily minimum temperatures range from 42.9 degrees at Okemah to 28.4 degrees at three panhandle reporting stations (Turpin, Boise City, and Beaver). Hot weather is rare, but not absent, during the
month. Coalgate set a state record for November's highest temperature when the thermometer registered 95 degrees on November 1, 1937. November's coldest day, according to the Oklahoma record book, occurred on November 28, 1976 when a temperature of 15 degrees below zero ( -15 ) was reported at Kenton.

## Precipitation

| Mean | 2.78 inches |
| :--- | :--- |
| Wettest November | $1909,5.72$ inches |
| Driest November | $1910,0.12$ inches |
| Wettest location | Carnasaw Fire Tower, 5.64 <br> inches |
| Driest location | Goodwell and Regnier, 0.61 <br> inches |
| Most recorded | 17.01 inches, Idabel, 2000 |

## Tornadoes

| Average November Tornadoes <br> $(1950-2013)$ | 1.5 |
| :--- | :--- |
| Most | $12(1958)$ |

November precipitation is highly variable from year-to-year. The state's driest recorded November, a statewide averaged precipitation of 0.12 inches was attained three times in 1910, 1949, and 1989. The record high precipitation for November is 5.72 inches in 1909. During much of the state's history, November was thought of as a much drier month than it is today. During the period from 1931 through 1960, the statewide-averaged precipitation during November across Oklahoma was only 1.87 inches, nearly a full inch less than the currently established monthly normal (compiled from 1971 through 2000). Annual precipitation across Oklahoma compiled from the earlier was a full 3.25 inches less than the value currently in use. Increased precipitation during November has contributed more to the recent increases in annual precipitation than any other month. At individual locations within Oklahoma, November normal precipitation ranges 5.64 inches at the Carnasaw Fire Tower in McCurtain County to 0.61 inch at the panhandle's Goodwell and Regnier.

Stilwell averages 9.6 days with measurable precipitation (at least 0.01 inch), whereas Leedey averages a mere 2.4 such days. Ponca City holds the record for most precipitation in one day at a recognized reporting site during November: 11.11 inches on November 20, 1979. Idabel recorded 17.01 inches of precipitation during November 2000 to establish the record for total precipitation during the month at a regular reporting station.

Severe and dangerous weather takes on a myriad of forms during November. There were 76 November tornadoes reported in the state from 1950 through 2003. Twelve of those were recorded on November 17, 1958 to establish the state record for most November tornadoes, both during a month and on a day. A tornado that struck Camel Creek School and the town of Bethany on November 19, 1930 killed 23 people. On November 4, 1922, a tornado between Shamrock and Drumright resulted in 11 deaths. The most recent November tornado fatalities occurred on November 19, 1973 when five people were killed in Blanchard. There were no tornadoes reported within the state during 32 of those 54 Novembers.

NOVEMBER NORMAL DAILY MAXIMUM TEMPERATURE (1981-2010)


NOVEMBER NORMAL DAILY MINIMUM TEMPERATURE (1981-2010)


## NOVEMBER NORMAL PRECIPITATION (1981-2010)



## NOVEMBER 1, 2014 SOIL MOISTURE CONDITIONS AT 25CM



## U.S. Drought Monitor Oklahoma



October 28, 2014
(Released Thursday, Oct. 30, 2014) Valid 8 a.m. EDT

| Drought Conditions (Percent Area) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
| Current | 21.40 | 78.60 | 64.49 | 56.08 | 23.00 | 6.86 |
| Last Week <br> 10212014 | 22.15 | 77.85 | 64.49 | 55.44 | 20.87 | 4.84 |
| 3 Months Aggo <br> 72292014 | 12.06 | 87.94 | 76.16 | 60.09 | 23.36 | 4.48 |
| Start of <br> Calendar Year <br> 12312013 | 50.84 | 49.16 | 38.17 | 18.99 | 4.84 | 2.40 |
| Start of <br> Water Year <br> 9302014 | 8.55 | 91.45 | 73.31 | 58.13 | 20.92 | 4.64 |
| One Year Ago <br> 10292013 | 47.79 | 52.21 | 30.50 | 14.58 | 4.42 | 1.47 |

Intensity.
D0 Abnomnally Dry
D1 Moderate Drought
D2 Sextreme D rought
D4 Exceptional Drought
The Drought Monitor focuses on broaco-scale condions.
Localconditions may vary. See accompanying text summany
for forecast statements.
Author:
Brian Fuchs
National Drought Mifigation Center

http://droughtmonitor.unl.edu/


## U.S. Monthly Drought Outlook

 Drought Tendency During the Valid Period
## Valid for November 2014



KEY:

Drought persists or intensifies

Drought remains but improves
Drought removal likely
Drought development
likely

Authors: Adam Allgood \& David Miskus, Climate Prediction Center, NOAA http://www.cpc.ncep.noaa.gov/products/expert_assessment/mdo_summary.html


Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor.
NOTE: The tan areas imply at least a 1 -category improvement in the
Drought Monitor intensity levels by the end of the period although drought will remain. The green areas imply drought removal by the end of the period (DO or none)

## NOVEMBER 2014 U.S. PRECIPITATION FORECAST



Percent Likelihood of Above or Below Average Precipitation*

*EC indicates no forecasted anomalies due to lack of model skill.

## NOVEMBER 2014 U.S. TEMPERATURE FORECAST



Percent Likelihood of Above or Below Average Temperatures*


5\% - 10\% $\qquad$
*EC indicates no forecasted anomalies due to lack of model skill.

## NOVEMBER CLIMATE NORMALS

| Climate <br> Division | Max. <br> Temperature $\left({ }^{\circ} \mathrm{F}\right)$ | Min. <br> Temperature $\left({ }^{\circ} \mathrm{F}\right)$ | Avg. <br> Temperature $\left({ }^{\circ} \mathrm{F}\right)$ | Precipitation <br> (inches) |
| :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | 59.0 | 31.0 | 45.0 | 0.83 |
| 2 | 59.2 | 35.0 | 47.1 | 1.73 |
| 3 | 59.9 | 37.9 | 48.9 | 3.15 |
| 4 | 60.2 | 35.7 | 48.0 | 1.49 |
| 5 | 61.2 | 38.5 | 49.8 | 2.41 |
| 6 | 61.7 | 39.8 | 50.8 | 3.88 |
| 7 | 62.5 | 38.4 | 50.5 | 1.71 |
| 8 | 63.7 | 40.9 | 52.3 | 2.89 |
| 9 | 62.8 | 40.3 | 51.6 | 4.65 |
| Statewide | 61.1 | 37.5 | 49.3 | 2.51 |

Oklahoma Climate Divisions


## 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 differ 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/wwcgi.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/

## C OKLAHOMA CLIMATOLOGICAL SURVEY

Oklahoma Climatological Survey is the State Climate Office for Oklahoma

Dr. Kevin Kloesel Director

EDITOR
Gary D. McManus State Climatologist

CONTRIBUTORS
Gary D. McManus State Climatologist
Dr. Mark A. Shafer Associate State Climatologist
Howard Johnson Associate State Climatologist (Ret.)
Monica Deming Service Climatologist

DESIGN
Nicholas Richardson Graphic Designer
Ada Shih Graphic Designer

For more information, contact:
Oklahoma Climatological Survey
The University of Oklahoma
120 David L. Boren Blvd., Suite 2900
Norman, OK 73072-7305

TEL: 405-325-2541
FAX: 405-325-2550
E-MAIL: ocs@ou.edu
WEBSITE: http://climate.ok.gov

