It had been awhile since Oklahoma has seen a month like October. Eleven months, to be exact. Not since September 2011 had Oklahoma seen a month where the statewide average temperature finished on the cold side of normal. In fact, 25 of the 30 months prior to October were warmer than normal, starting with April 2010. According to data from the Oklahoma Mesonet, October became the 26th coolest on record with a statewide average of 59.7 degrees, 1.6 degrees below normal. Statewide records date back to 1895. Oklahoma seemed to be racing towards its warmest calendar year on record, a mark currently held by 1954 at 62.8 degrees. The cool October dealt that effort a major blow, however, bringing the two years into a virtual dead heat with two months remaining. The January-October statewide average temperature came in at 66.2 degrees, a mere tenth of a degree ahead of 1954. These values remain unofficial until the National Climatic Data Center releases its final numbers in a few months as data continue to trickle in.

The cool month was due in large part to a couple of intrusions of frosty air. A strong arctic cold front plowed through the state during the month's first week, bringing one of the earliest fall freezes on record at some locations. The thermometer hit 31 degrees at Will Rogers World Airport on Oct. 8, the earliest freeze ever for the official Oklahoma City observing station. Another cold plunge of air from the Arctic provided a widespread freeze during October's final week, an early occurrence for southern parts of the state.

Although the heat may have faded during October, the dry weather did not. The Mesonet's statewide average rainfall total of 1.1 inches fell more than 2 inches below normal and ranked the month as the 15th driest October on record. Eighteen of the Mesonet's 120 stations recorded less than a tenth of an inch of rain for the month and 66 measured less than an inch. The Cheyenne and Retrop stations recorded no precipitation during October. By October 31, it had been up to 34 days since parts of northern and western Oklahoma had seen a tenth of an inch of rainfall in a single day, and as many as 48 days without at least a quarter of an inch. On the bright side, twelve stations recorded at least 3 inches of rain during the month with Oilton leading the way at 4.7 inches.

Although parts of the state have been in continual drought for more than two years, most of the state's current drought woes can be traced back to deficits beginning in May 2012. The May-October statewide average of 12.72 inches fell more than 9 inches below normal and ranked as the fourth driest such period on record. For the important wheat producing
area of north central Oklahoma, the statistics are even more dismal with deficits of more than 13 inches. The May-October rainfall total of 8.1 inches in that part of the state is the second lowest on record for that span.

The U.S. Drought Monitor report at the end of October showed that extreme-to-exceptional drought still covered more than two-thirds of the state. Virtually all of Oklahoma was covered by severe-to-exceptional drought.

October 2012 Statewide Extremes

| Description | Extreme | Station | Day |
| :--- | :--- | :--- | :---: |
| High Temperature | $98^{\circ} \mathrm{F}$ | Mangum | 21 |
| Low Temperature | $17^{\circ} \mathrm{F}$ | Beaver | 27 |
| High Precipitation | 4.68 in. | Oilton |  |
| Low Precipitation | 0.00 in. | Cheyenne, <br> Retrop |  |

October 2012 Statewide Statistics

Temperature

|  | Average | Depart. | Rank (1895-2012) |
| :--- | :---: | :---: | :--- |
| Month <br> (October) | $59.7^{\circ} \mathrm{F}$ | $-1.6^{\circ} \mathrm{F}$ | 26th Coolest |
| Season-to- <br> Date (Sept <br> - Oct) | $66.8^{\circ} \mathrm{F}$ | $0.0^{\circ} \mathrm{F}$ | 56th Coolest |
| Year-to-Date <br> (Jan-Oct) | $66.3^{\circ} \mathrm{F}$ | $3.5^{\circ} \mathrm{F}$ | 1st Warmest |

Precipitation

|  | Average | Depart. | Rank (1895-2012) |
| :--- | :---: | :---: | :--- |
| Month (October) | 1.09 in. | -2.29 in. | 15th Driest |
| Season-to-Date <br> (Sept-0ct) | 4.00 in. | -3.19 in. | 24th Driest |
| Year-to-Date <br> (Jan-0ct) | 24.70 in. | -7.15 in. | 22nd Driest |

Depart. $=$ departure from 30-year normal

## OCTOBER DAILY HIGHLIGHTS

остовеR 1: Lingering effects from the previous days' lowpressure system were present for the start of October. Scattered showers and thunderstorms were seen across the state, producing wind gusts as high as 47 mph in Boise City and 50 mph in Hinton. Even with the sporadic showers, however, rainfall amounts throughout Oklahoma remained negligible at less than a tenth of an inch. Maximum temperatures ranged between the low 70s to low 80s. Minimum temperatures ranged from the mid-upper 40s to the low 60s.

OCTOBER 2-3: The 2nd and 3rd of the month provided some sunny relief. With the absence of stormy weather, peak wind gusts only reached between 20 and 30 mph in much of the state. Winds became more southerly and averaged between $5-10 \mathrm{mph}$ on the 2 nd and $5-15 \mathrm{mph}$ on the 3 rd . Maximum temperatures measured in the low 70s to the low 80s. Minimum temperatures dropped by a couple degrees, ranging between 40 and 60 degrees.

остовеR 4-8: This five-day period was marked by numerous record events. A strong cold front pushed through the region, creating a significant 50 to 80 degree maximum temperature range. Daily records for lowest maximum temperature on the 6th were reported in Oklahoma City, Wichita Falls, Tulsa, and McAlester at 50 degrees. The lowest average temperature for that same day was 45 and 48 degrees in Tulsa and McAlester, respectively. Tulsa experienced record-breaking daily temperatures again on the 7th, measuring the lowest average (44) and minimum temperature (32). The 8th, Oklahoma City not only measured its lowest average temperature at 31 degrees for that day, but it fell witness to the earliest fall freeze on record. The 4th was the only day that peak wind gusts hit above 50 mph ; all other days had gusts in the 20 s and 30 s . Although the northeast portion of the state did see small amounts of precipitation, most cities measured less than . 1 inches.

OCTOBER 9-10: Another cold front moved into Oklahoma from the northwest on the 9th, bringing much cooler maximum temperatures to the state on the 10th. Maximum temperatures varied between the low 60s to mid-80s on the 9th, dropping by roughly 10 degrees the following day. Despite the cooler, cloudy weather, no rainfall was reported. Wind speeds averaged between 5 and 15 mph .

OCTOBER 11-14: Temperatures for this four-day period were unseasonably warm due to a passing warm front. The highs averaged in the upper 80s, peaking at 90 on the 11th and 13th. Lows ranged between the low 40 s and upper 60 s. On the 12th, scattered showers and thunderstorms moved into the state, becoming severe on the 13th, and finally moving out of the region on the 14th. The moist air from the front that was made available to the storm systems, allowed for heavy precipitation in many areas. Portions of central and north-central Oklahoma received the most precipitation, with many Mesonet stations seeing over an inch and a half. On the 13th, 4.6 inches of rain was reported in Oilton, 3.42 inches in Durant, and a daily record of 2.56 inches was set in Oklahoma City, breaking the previous record of 1.44 inches in 1923 for that day. Other effects of the storms on that day were made evident as wind gusts peaked at 80 mph in Ringling and Lehigh, and flash flood reports were called in from Tulsa County.

OCTOBER 15-16: Once storms migrated out of the region, sunny skies and calm winds made for some pleasant weather. Maximum temperatures were fairly high, ranging from the 70s to the low-90s; minimum temperatures measured between the low-40s to low-60s.

OCTOBER 17-18: A cold front moved through on the 17th, introducing higher wind speeds behind it (15-20 mph). The most noticeable drop in temperature from the front was seen on the 18th, when the highs dipped by more than 10 degrees and the low temperatures hit the freezing mark in the panhandle. The combination of high wind speeds and loose soil produced blowing dust in north-central Oklahoma, decreasing visibility to less than a mile on the 18th. Some areas had close to zero visibility, causing a car pile-up in Kay County.

OCTOBER 19-21: The clear, cool air on the 19th slowly transitioned into warmer air as winds became more southerly. This warming trend was so strong that it broke multiple maximum temperature records around the state. The highest temperature recorded was 98 in Mangum, followed by 97 in Altus and Hollis on the 21st. The lowest maximum temperatures reported on that day were still a warm 77 degrees in the far northeast. Average lows remained in the 30s, however, and wind speeds were between 5 and 15 mph .

OCTOBER 22: The 22nd was set apart from the surrounding days, as short-lasting showers and thunderstorms passed through and quickly moved out. The rainfall that did occur was less than a quarter of an inch and was fairly isolated to southern Oklahoma. Clayton was the only odd-ball that received . 45 inches. Thunderstorm gusts measured as high as 56 mph in Bessie, but remained in the 40 s for the other stormy areas. Average wind speeds were between 5 and 20 mph . High temperatures ranged from the upper 60s to mid-80s. Lows were generally between 40 and 70 . This higher end of the low temperature spectrum allowed for Oklahoma City to break a daily record for warmest low temperature at 66 degrees.

ОСтовеR 23-28: Unseasonably warm temperatures that were observed on Tuesday and Wednesday dropped abruptly as a strong cold front moved through on the 25th. The abnormal highs for this time decreased from the mid-90s all the way down into the 70s. As the air became colder and drier, many of the low temperatures fell below freezing. Beaver got as cold as 17 degrees on the 27th, with Buffalo and Camargo bottoming out at 18. The daily low temperatures in Bartlesville were deemed record events at 27 degrees on the 27th and 23 degrees on the 28th. The breezy winds that started on the 23 rd gradually died down from $10-20 \mathrm{mph}$ to $5-10 \mathrm{mph}$ by the 28th.

остоber 29-31: Mostly sunny skies and the changeover to southerly winds helped create slightly warmer weather for the end of the month. Highs ranged from the mid-60s to mid-80s, and lows varied between 20 degrees and 56 degrees. Winds remained calm and skies clear for a beautiful Halloween day.

Flooding

| Location | County | Day |
| :--- | :--- | ---: |
| Tulsa | Tulsa | 13 |

Wind Gusts (70 mph or greater)

| Speed (m.p.h.) | Location | County | Day |
| :---: | :--- | :--- | :---: |
| 80 | 1 N Ringling | Jefferson | 13 |
| 80 | 4 SW Lehigh | Coal | 13 |
| 70 | 2 S Wynona | Osage | 13 |
| 72 | 7 E Centrailia | Craig | 13 |

## OCTOBER 2012 OBSERVED PRECIPITATION



OCTOBER 2012 DEPARTURE FROM NORMAL PRECIPITATION


## OCTOBER 2012 PERCENT OF NORMAL PRECIPITATION



OCTOBER 2012 AVERAGE SOIL MOISTURE AT 25CM


## OCTOBER 2012 AVERAGE TEMPERATURE



## OCTOBER 2012 DEPARTURE FROM NORMAL TEMPERATURE



## MESONET MONTHLY SUMMARY FOR OCTOBER 2012

| NAME | MEAN TEMP | $\begin{aligned} & \text { HIGH } \\ & \text { TEMP } \end{aligned}$ | DAY | $\begin{aligned} & \text { LOW } \\ & \text { TEMP } \end{aligned}$ | DAY | HDD | CDD | $\begin{aligned} & \text { TOT } \\ & \text { PPT } \end{aligned}$ | HIGH $24-H R$ | DAY | NAME | MEAN TEMP | $\begin{aligned} & \text { HIGH } \\ & \text { TEMP } \end{aligned}$ | DAY | $\begin{aligned} & \text { LOW } \\ & \text { TEMP } \end{aligned}$ | DAY | HDD | CDD | TOT PPT | $\begin{aligned} & \text { HIGH } \\ & 24-H R \end{aligned}$ | DAY |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PANHANDLE |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Arnett | 58.6 | 95 | 23 | 19 | 27 | 246 | 47 | . 03 | . 02 | 1 | Goodwe 11 | 54.9 | 90 | 23 | 22 | 27 | 322 | 11 | . 27 | . 27 | 13 |
| Beaver | 56.7 | 93 | 23 | 17 | 27 | 284 | 25 | . 18 | . 17 | 13 | Hooker | 54.4 | 92 | 23 | 20 | 27 | 333 | 5 | . 27 | . 27 | 13 |
| Boise City | 53.7 | 88 | 3 | 23 | 27 | 355 | 6 | 2.64 | 2.01 | 12 | Kenton | 54.4 | 88 | 3 | 25 | 28 | 341 | 12 | . 93 | . 86 | 12 |
| Buffalo | 58.5 | 95 | 23 | 18 | 27 | 243 | 41 | . 08 | . 05 | 13 | Slapout | 57.6 | 93 | 23 | 22 | 27 | 255 | 25 | . 26 | . 24 | 13 |
| NORTH CENTRAL |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Alva | 58.8 | 95 | 23 | 21 | 27 | 246 | 53 | . 07 | . 04 | 13 | May Ranch | 59.4 | 93 | 23 | 22 | 27 | 233 | 60 | . 05 | . 02 | 12 |
| Blackwell | 59.0 | 92 | 21 | 21 | 27 | 247 | 61 | . 08 | . 05 | 12 | Medford | 58.9 | 91 | 21 | 20 | 27 | 252 | 62 | . 18 | 10 | 13 |
| Breckinridge | 59.1 | 89 | 21 | 21 | 27 | 238 | 55 | . 21 | . 17 | 12 | Newkirk | 58.8 | 88 | 21 | 24 | 27 | 247 | 53 | 2.65 | 2.57 | 12 |
| Cherokee | 59.1 | 94 | 21 | 22 | 27 | 235 | 54 | . 02 | . 02 | 13 | Red Rock | 59.7 | 91 | 21 | 23 | 27 | 236 | 72 | . 44 | . 33 | 13 |
| Fairview | 60.5 | 93 | 21 | 25 | 27 | 214 | 74 | . 47 | . 46 | 12 | Seiling | 58.9 | 93 | 21 | 19 | 27 | 244 | 55 | 1.48 | 1.45 | 12 |
| Freedom | 58.7 | 95 | 23 | 21 | 27 | 245 | 49 | . 09 | . 07 | 1 | Woodward | 59.3 | 94 | 23 | 20 | 27 | 233 | 55 | 1.60 | 1.53 | 12 |
| Lahoma | 25.2 | 91 | 21 | *** | 30 | 230 | 57 | . 07 | . 05 | 12 |  |  |  |  |  |  |  |  |  |  |  |
| NORTHEAST |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bixby | 59.9 | 86 | 15 | 25 | 28 | 228 | 69 | . 14 | . 07 | 13 | Nowata | 57.1 | 84 | 15 | 23 | 28 | 293 | 49 | 1.77 | . 98 | 13 |
| Burbank | 59.2 | 89 | 21 | 25 | 28 | 244 | 63 | . 80 | . 79 | 13 | Pawnee | 60.0 | 89 | 21 | 23 | 28 | 226 | 71 | . 39 | . 37 | 13 |
| Claremore | 59.7 | 85 | 15 | 28 | 27 | 226 | 62 | 4.11 | 2.02 | 12 | Porter | 60.0 | 84 | 21 | 29 | 28 | 218 | 64 | . 73 | . 46 | 13 |
| Copan | 58.5 | 85 | 24 | 25 | 28 | 260 | 58 | 3.07 | 1.55 | 13 | Pryor | 58.2 | 83 | 15 | 26 | 27 | 271 | 60 | 2.99 | 2.02 | 12 |
| Foraker | 58.6 | 88 | 21 | 25 | 27 | 258 | 58 | 3.17 | 1.60 | 13 | Skiatook | 60.0 | 85 | 15 | 29 | 28 | 222 | 68 | 3.00 | 1.69 | 13 |
| Inola | 58.7 | 84 | 15 | 27 | 28 | 247 | 53 | 1.75 | 1.34 | 12 | Vinita | 56.9 | 83 | 24 | 25 | 28 | 293 | 41 | 3.00 | 1.81 | 13 |
| Jay | 57.3 | 81 | 4 | 24 | 28 | **** | **** | 2.70 | 1.79 | 12 | Wynona | 59.6 | 88 | 21 | 26 | 28 | 236 | 68 | 1.34 | 1.19 | 13 |
| Miami | 57.2 | 81 | 24 | 26 | 28 | 286 | 45 | 3.82 | 2.11 | 13 |  |  |  |  |  |  |  |  |  |  |  |
| WEST CENTRAL |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bessie | 60.9 | 96 | 21 | 26 | 27 | 203 | 75 | . 02 | . 01 | 1 | Putnam | 59.4 | 94 | 21 | 22 | 27 | 237 | 64 | . 03 | . 02 | 12 |
| Butler | 59.1 | 95 | 21 | 21 | 27 | 236 | 53 | . 12 | . 12 | 1 | Retrop | 60.6 | 96 | 21 | 25 | 27 | 210 | 73 | . 00 | . 00 | 1 |
| Camargo | 57.8 | 93 | 21 | 18 | 27 | 267 | 43 | . 02 | . 01 | 1 | Watonga | 60.0 | 91 | 21 | 26 | 27 | 218 | 62 | . 72 | . 70 | 12 |
| Cheyenne | 59.5 | 91 | 21 | 26 | 27 | 225 | 55 | . 00 | . 00 | 1 | Weatherford | 59.8 | 94 | 21 | 26 | 27 | 223 | 63 | . 05 | . 04 | 12 |
| Erick | 58.4 | 95 | 21 | 21 | 27 | 244 | 40 | . 01 | . 01 | 1 |  |  |  |  |  |  |  |  |  |  |  |
| CENTRAL |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Acme | 60.3 | 89 | 21 | 24 | 28 | 210 | 63 | . 64 | . 54 | 13 | Ninnekah | 60.5 | 89 | 21 | 25 | 28 | 204 | 65 | . 40 | . 19 | 13 |
| Bowlegs | 60.2 | 87 | 21 | 25 | 28 | 212 | 64 | . 70 | . 56 | 13 | Norman | 60.0 | 87 | 21 | 28 | 28 | 209 | 56 | . 44 | . 38 | 13 |
| Bristow | 59.0 | 87 | 21 | 22 | 28 | 246 | 61 | . 45 | . 16 | 13 | 0ilton | 59.0 | 86 | 21 | 24 | 28 | 247 | 62 | 4.68 | 4.60 | 13 |
| Lake Carl Blac | 58.6 | 91 | 21 | 22 | 28 | 254 | 57 | . 46 | . 26 | 13 | Ok1ahoma City | 60.1 | 87 | 21 | 29 | 28 | 212 | 59 | 3.26 | 2.94 | 13 |
| Chandler | 60.1 | 87 | 21 | 27 | 28 | 211 | 60 | ***** | ***** | *** | Ok1ahoma City | 60.9 | 87 | 21 | 28 | 27 | 196 | 69 | 2.48 | 1.66 | 13 |
| Chickasha | 60.4 | 90 | 21 | 27 | 28 | 205 | 63 | . 54 | . 49 | 13 | Oklahoma City | 60.6 | 87 | 21 | 32 | 27 | 196 | 59 | 2.07 | 1.77 | 13 |
| E1 Reno | 58.6 | 89 | 21 | 22 | 27 | 244 | 47 | 1.56 | . 78 | 13 | Okemah | 59.8 | 85 | 21 | 28 | 28 | 223 | 61 | . 73 | . 32 | 13 |
| Guthrie | 60.3 | 88 | 21 | 27 | 27 | 211 | 65 | . 97 | . 63 | 12 | Perkins | 60.4 | 89 | 21 | 27 | 28 | 207 | 64 | . 87 | . 58 | 13 |
| Kingfisher | 59.7 | 92 | 21 | 25 | 27 | 225 | 60 | . 84 | . 82 | 12 | Shawnee | 60.1 | 86 | 21 | 26 | 27 | 209 | 58 | . 81 | . 39 | 13 |
| Marena | 60.2 | 90 | 21 | 26 | 27 | 216 | 66 | . 71 | . 46 | 12 | Spencer | 60.4 | 87 | 21 | 27 | 27 | 208 | 66 | 3.09 | 2.50 | 13 |
| Minco | 59.7 | 87 | 21 | 27 | 27 | 212 | 47 | 1.33 | 1.17 | 13 | Stillwater | 59.7 | 89 | 21 | 24 | 27 | 227 | 63 | . 61 | . 48 | 13 |
| Marshal 1 | 59.4 | 89 | 21 | 23 | 27 | 233 | 61 | 1.37 | 1.14 | 12 | Washington | 60.4 | 88 | 21 | 28 | 27 | 197 | 54 | . 19 | . 13 | 13 |
| EAST CENTRAL |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cookson | 58.4 | 83 | 4 | 25 | 28 | 253 | 48 | 3.15 | 1.48 | 13 | Sallisaw | ***** | *** | *** | *** | *** | **** | **** | ***** | **** | *** |
| Eufaula | 61.7 | 85 | 21 | 30 | 28 | 183 | 80 | . 91 | . 72 | 13 | Stigler | 60.3 | 86 | 4 | 28 | 28 | 202 | 58 | 2.13 | 1.12 | 12 |
| Haskell | 59.2 | 84 | 21 | 24 | 28 | 236 | 57 | . 76 | . 50 | 13 | Stuart | 61.7 | 85 | 21 | 30 | 28 | 186 | 83 | 1.06 | 1.00 | 13 |
| Hectorville | 61.3 | 87 | 21 | 29 | 28 | 197 | 81 | . 09 | . 06 | 13 | Tahlequah | 58.3 | 82 | 4 | 26 | 28 | 252 | 45 | 2.74 | 1.33 | 12 |
| Holdenville | 61.1 | 86 | 21 | 27 | 27 | 198 | 78 | . 40 | . 32 | 13 | Webbers Falls | 60.6 | 87 | 4 | 29 | 28 | 197 | 62 | 2.36 | 1.35 | 12 |
| McAlester | 61.2 | 85 | 4 | 27 | 28 | 199 | 80 | 1.24 | 1.19 | 13 | Westville | 58.2 | 81 | 4 | 29 | 28 | 250 | 39 | 3.25 | 1.71 | 12 |
| Okmulgee | 59.6 | 86 | 21 | 24 | 28 | 234 | 67 | . 37 | . 19 | 13 |  |  |  |  |  |  |  |  |  |  |  |
| SOUTHWEST |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Altus | 62.3 | 97 | 21 | 27 | 27 | 174 | 89 | . 30 | . 29 | 13 | Hollis | 60.9 | 97 | 21 | 23 | 27 | 193 | 67 | . 02 | . 01 | 1 |
| Apache | 60.1 | 90 | 21 | 23 | 27 | 210 | 60 | . 10 | . 07 | 13 | Mangum | 60.5 | 98 | 21 | 20 | 27 | 210 | 70 | . 04 | . 03 | 22 |
| Fort Cobb | 60.4 | 93 | 21 | 28 | 28 | 207 | 65 | 1.35 | 1.10 | 13 | Medicine Park | 62.2 | 93 | 21 | 31 | 27 | 170 | 85 | . 34 | . 26 | 13 |
| Grandfield | 62.9 | 96 | 21 | 27 | 27 | 169 | 103 | . 41 | . 22 | 22 | Tipton | 62.3 | 96 | 21 | 24 | 27 | 182 | 96 | . 24 | . 18 | 13 |
| Hinton | 59.1 | 91 | 21 | 26 | 27 | 232 | 48 | . 59 | . 30 | 12 | Walters | ***** | *** | *** | *** | *** | **** | **** | ***** | ***** | *** |
| Hobart | 60.8 | 95 | 21 | 25 | 27 | 206 | 76 | . 11 | . 06 | 13 |  |  |  |  |  |  |  |  |  |  |  |
| SOUTH CENTRAL |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ada | 61.0 | 86 | 21 | 25 | 28 | 197 | 72 | . 60 | . 57 | 13 | Madil1 | 62.2 | 86 | 21 | 28 | 28 | 176 | 89 | 1.06 | . 96 | 13 |
| Ardmore | 63.0 | 87 | 21 | 32 | 27 | 160 | 99 | . 89 | . 81 | 13 | Newport | 62.6 | 88 | 21 | 32 | 29 | 165 | 90 | 1.32 | 1.27 | 13 |
| Burneyville | 62.5 | 88 | 21 | 25 | 28 | 177 | 98 | 1.00 | . 92 | 13 | Pauls Valley | 61.6 | 88 | 21 | 28 | 28 | 181 | 75 | . 83 | . 41 | 12 |
| Byars | 61.4 | 86 | 21 | 28 | 27 | 185 | 73 | . 39 | . 39 | 13 | Ringling | 62.0 | 88 | 21 | 29 | 28 | 174 | 80 | 1.12 | 1.00 | 13 |
| Centrahoma | 61.2 | 87 | 21 | 24 | 28 | 195 | 79 | 1.15 | 1.12 | 13 | Sulphur | 60.4 | 86 | 21 | 26 | 28 | 209 | 66 | 1.01 | . 99 | 13 |
| Durant | 63.0 | 85 | 4 | 33 | 29 | 161 | 97 | 3.85 | 3.42 | 13 | Tishomingo | 60.9 | 86 | 21 | 28 | 29 | 195 | 68 | ***** | ***** | *** |
| Fittstown | 60.9 | 85 | 21 | 30 | 28 | 188 | 60 | 1.43 | 1.42 | 13 | Vanoss | 60.9 | 87 | 21 | 24 | 28 | 198 | 71 | 1.00 | . 95 | 13 |
| Ketchum Ranch | 61.6 | 89 | 21 | 28 | 27 | 179 | 73 | . 22 | . 13 | 22 | Waurika | 62.4 | 90 | 21 | 28 | 28 | 172 | 91 | . 66 | . 53 | 13 |
| Lane | 61.7 | 86 | 4 | 30 | 28 | 183 | 79 | 2.30 | 2.10 | 13 |  |  |  |  |  |  |  |  |  |  |  |
| SOUTHEAST |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Antlers | 61.0 | 86 | 4 | 28 | 29 | 196 | 73 | 1.53 | 1.42 | 13 | Idabe 1 | 62.4 | 86 | 4 | 29 | 29 | 166 | 86 | . 96 | . 60 | 13 |
| Antlers | ***** | *** | *** | *** | *** | **** | **** | ***** | ***** | *** | Mt Herman | 60.6 | 83 | 4 | 27 | 28 | 197 | 59 | 2.03 | 1.79 | 13 |
| Broken Bow | 61.3 | 86 | 4 | 28 | 29 | 182 | 66 | 1.26 | 1.00 | 13 | Talihina | 60.7 | 86 | 4 | 27 | 28 | 207 | 73 | 1.92 | 1.50 | 13 |
| Clayton | 61.3 | 85 | 4 | 29 | 29 | 192 | 76 | 1.98 | 1.41 | 13 | Wilburton | 60.9 | 86 | 4 | 26 | 28 | 202 | 75 | 1.25 | . 77 | 13 |
| Cloudy | 61.2 | 84 | 4 | 30 | 29 | 190 | 71 | 2.25 | 1.92 | 13 | Wister | 59.8 | 86 | 4 | 24 | 28 | 213 | 53 | 1.89 | . 89 | 12 |
| Hugo | 62.8 | 86 | 4 | 32 | 27 | 162 | 92 | 1.52 | 1.42 | 13 |  |  |  |  |  |  |  |  |  |  |  |

2011 AND 2012 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL


October 2012 Mesonet Precipitation Comparison

| Climate Division | Precipitation (inches) | Departure from Normal (inches) | Rank since 1895 | Wettest on Record (Year) | Driest on Record (Year) | Oct-11 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Panhandle | 0.58 | -0.93 | 30th Driest | 6.41 (2000) | 0.03 (1952) | 1.27 |
| North Central | 0.58 | -2.08 | 16th Driest | 9.65 (1998) | 0.00 (1952) | 2.22 |
| Northeast | 2.19 | -1.44 | 40th Driest | 17.33 (1941) | 0.05 (1917) | 1.83 |
| West Central | 0.11 | -2.45 | 4th Driest | 9.41 (1986) | 0.00 (1910) | 2.69 |
| Central | 1.27 | -2.39 | 23rd Driest | 13.51 (1941) | 0.00 (1917) | 3.89 |
| East Central | 1.54 | -2.73 | 25th Driest | 14.75 (1941) | 0.19 (1904) | 3.17 |
| Southwest | 0.46 | -2.52 | 8th Driest | 11.44 (1983) | 0.00 (1952) | 3.62 |
| South Central | 1.18 | -3.07 | 22nd Driest | 14.61 (1981) | 0.00 (1917) | 4.16 |
| Southeast | 1.66 | -3.30 | 26th Driest | 13.21 (2009) | 0.10 (1921) | 2.57 |
| Statewide | 1.09 | -2.29 | 15th Driest | 11.32 (1941) | 0.14 (1952) | 2.85 |

2011 AND 2012 STATEWIDE TEMPERATURE MONTHLY TOTALS VS. NORMAL


October 2012 Mesonet Temperature Comparison

| Climate Division | Average Temp (F) | Departure from Normal (F) | Rank since 1895 | Hottest on Record (Year) | Coldest on Record (Year) | 0ct-11 (F) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Panhandle | 56.1 | -1.7 | 27th Coolest | 66.4 (1963) | 50.9 (1925) | 59.6 |
| North Central | 59.0 | -1.4 | 28th Coolest | 69.6 (1963) | 52.1 (1925) | 60.4 |
| Northeast | 58.6 | -2.1 | 24th Coolest | 70.0 (1963) | 52.9 (1925) | 60.8 |
| West Central | 59.5 | -1.0 | 33rd Coolest | 69.0 (1963) | 53.2 (2009) | 61.4 |
| Central | 59.9 | -2.0 | 24th Coolest | 70.3 (1963) | 54.5 (1925) | 62.6 |
| East Central | 60.1 | -2.0 | 26th Coolest | 71.2 (1963) | 55.3 (2009) | 62.5 |
| Southwest | 61.2 | -1.3 | 33rd Coolest | 70.5 (1963) | 55.4 (1925) | 63.4 |
| South Central | 61.7 | -1.8 | 28th Coolest | 71.5 (1963) | 56.4 (1976) | 63.8 |
| Southeast | 61.2 | -1.2 | 34th Coolest | 70.6 (1963) | 55.7 (1976) | 61.9 |
| Statewide | 59.7 | -1.6 | 26th Coolest | 69.9 (1963) | 54.4 (1925) | 61.8 |

## RECORD EVENT REPORTS

| Description | Day | Location | Record | Previous Record | Year |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Daily Coldest High Temperature | 6 | Oklahoma City | 50 | 55 | 1891 |
| Daily Low Maximum Temperature | 6 | Tulsa | 50 | 57 | 1988 |
| Daily Low Average Temperature | 6 | Tulsa | 45 | 50 | 1976 |
| Daily Low Maximum Temperature | 6 | McAlester | 50 | 61 | 2000 |
| Daily Low Average Temperature | 6 | McAlester | 48 | 51 | 2001 |
| Daily Low Temperature | 7 | Tulsa | 32 | 33 | 1952 |
| Daily Low Average Temperature | 7 | Tulsa | 44 | 46 | 2000 |
| Daily Cold Low Temperature | 8 | Oklahoma City | 31 | 34 | 2000 |
| Earliest Fall Freeze on Record | 8 | Oklahoma City |  | Oct. 9 | 2000 |
| Daily Maximum Rainfall | 13 | Oklahoma City | 2.56 in. | 1.44 in . | 1923 |
| Daily Warmest Low Temperature | 22 | Oklahoma City | 66 | 65 | 2004 |
| Daily Low Temperature | 27 | Bartlesville | 27 | 27 | 1957 |
| Daily Low Temperature | 28 | Bartlesville | 23 | 23 | 1925 |

MESONET EXTREMES FOR OCTOBER 2012

| Climate Division | High <br> Temp <br> (F) | Day | Station | Low (F) | Day | Station | High Monthly Rainfal (inches) | Station | High Daily Rainfall (inches) | Day | Station |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Panhandle | 95 | 23rd | Buffalo | 17 | 27th | Beaver | 2.64 | Boise City | 2.01 | 12th | Boise City |
| North Central | 95 | 23rd | Freedom | 19 | 27th | Seiling | 2.65 | Newkirk | 2.57 | 12th | Newkirk |
| Northeast | 89 | 21st | Burbank | 23 | 28th | Nowata | 4.11 | Claremore | 2.11 | 13th | Miami |
| West Central | 96 | 21st | Retrop | 18 | 27th | Camargo | 0.72 | Watonga | 0.70 | 12th | Watonga |
| Central | 92 | 21st | Kingfisher | 22 | 28th | Lake Carl Blackwell | 4.68 | Oilton | 4.60 | 13th | Oilton |
| East Central | 87 | 4th | Webbers Falls | 24 | 28th | Okmulgee | 3.25 | Westville | 1.71 | 12th | Westville |
| Southwest | 98 | 21st | Mangum | 20 | 27th | Mangum | 1.52 | Walters | 1.43 | 13th | Walters |
| South Central | 90 | 21st | Waurika | 24 | 28th | Vanoss | 3.85 | Durant | 3.42 | 13th | Durant |
| Southeast | 86 | 4th | Idabel | 24 | 28th | Wister | 2.25 | Cloudy | 1.92 | 13th | Cloudy |
| Statewide | 98 | 21st | Mangum | 17 | 27th | Beaver | 4.68 | Oilton | 4.60 | 13th | Oilton |

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.

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.

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.

Temperature

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

## Precipitation

| Mean | 2.78 inches |
| :--- | :--- |
| Wettest Year | $1909,5.72$ inches |
| Driest Year | $1910,0.12$ 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 | 1.5 |
| :--- | :--- |
| Most | $12(1958)$ |

NOVEMBER NORMAL DAILY MAXIMUM TEMPERATURE (1981-2010)


NOVEMBER NORMAL DAILY MINIMUM TEMPERATURE (1981-2010)


NOVEMBER NORMAL PRECIPITATION (1981-2010)


NOVEMBER 1, 2012 SOIL MOISTURE CONDITIONS AT 25CM


# U.S. Drought Monitor 

November 6, 2012
Valid 7 a.m. EST

## Oklahoma

|  | Drought Conditions (Percent Area) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | None | DO-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
| Current | 0.00 | 100.00 | 100.00 | 99.96 | 75.74 | 31.90 |
| Last Week (10/30/2012 map) | 0.00 | 100.00 | 100.00 | 99.43 | 67.64 | 27.13 |
| 3 Months Ago (08/07/2012 map) | 0.00 | 100.00 | 100.00 | 100.00 | 96.78 | 16.03 |
| $\begin{gathered} \text { Start of } \\ \text { Calendar Year } \\ \text { (12227/2011 map) } \\ \hline \end{gathered}$ | 14.83 | 85.17 | 78.76 | 50.55 | 27.48 | 3.33 |
| Start of Water Year (09/25/2012 map) | 0.00 | 100.00 | 100.00 | 99.98 | 95.33 | 42.09 |
| One Year Ago (11/01/2011 map) | 0.00 | 100.00 | 100.00 | 99.28 | 85.48 | 42.87 |



Intensity:

| D0 Abnormally Dry | D3 Drought - Extreme |
| :--- | :--- |
| D1 Drought - Moderate | D4 Drought - Exceptional |

D2 Drought - Severe

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

http://droughtmonitor.unl.edu


NOVEMBER 2012 U.S. PRECIPITATION FORECAST


Percent Likelihood of Above or Below Average Precipitation*

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

NOVEMBER 2012 U.S. TEMPERATURE FORECAST


Percent Likelihood of Above or Below Average Temperatures*


## 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) |
| :---: | :---: | :---: | :---: | :---: |
| 1.0 | 58.8 | 30.2 | 44.6 | 1.0 |
| 2.0 | 58.1 | 33.4 | 45.8 | 2.1 |
| 3.0 | 60.0 | 37.5 | 48.8 | 3.6 |
| 4.0 | 59.0 | 34.3 | 46.7 | 1.7 |
| 5.0 | 60.3 | 37.2 | 48.8 | 2.7 |
| 6.0 | 60.9 | 39.0 | 50.0 | 4.2 |
| 7.0 | 61.7 | 36.3 | 49.0 | 1.7 |
| 8.0 | 62.7 | 39.2 | 51.0 | 3.1 |
| 9.0 | 63.0 | 39.0 | 51.0 | 5.0 |
| Statewide | 60.5 | 36.4 | 48.5 | 2.9 |

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 may 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 may 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 Cumatological Survey

Oklahoma Climatological Survey is the State Climate Office for Oklahoma

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