

## WE'VE MOVED

> The Oklahoma Climatological Survey has moved to its new home in the National Weather Center

## Our new address:

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Norman, OK 73072-7305

The heat was turned up on the state during July, complete with a string of triple-digit temperatures fitting of a drought-fraught summer month. A few days of 70 s and 80 s for highs in the north early in the month helped nudge the statewide average temperature downwards a bit, but the month still finished as the 16th warmest July on record at just over two degrees above normal. The month was on the dry side, of course, and ranked as the 30th driest on record. A few spots did receive significant rainfall, however, including a localized amount of over seven inches in Osage County. Tornadoes were once again non-existent, continuing a drought of a more welcome nature. The 19 reported tornadoes during the year thus far are less than half the normal 46 expected for that time frame.

## Precipitation

The most notable precipitation total was the seven inches recorded at Wister. Surrounding areas had from 3-5 inches as well, with another swath of 3-4 inches extending down into central Oklahoma. The only other area with significant precipitation was the Panhandle, which happened to occur during that area's rainy season. Close to four inches fell in Texas County. Accordingly, those areas were the only areas that managed to eclipse the established normals for
the month. The hardest hit area was the far southeast corner, which fell to more than four inches below normal. The southeast as a whole was nearly three inches below normal and finished as the 5 th driest July since record-keeping began in 1895. South central Oklahoma was also parched, receiving little more than a half of an inch, on average, to rank as that region's 10th driest. Southern Oklahoma's woes were punctuated by Burneyville's total of one one-hundredth of an inch of rain. The year-to-date totals reflect ongoing severe drought conditions across the state. Southwestern Oklahoma's January-July precipitation average of less than 10 inches is more than nine inches below normal, the 5th driest in history. The state as a whole is in proportion to that amount, and its 10th driest.

## Temperature

Triple-digit temperatures were widespread and prevalent during the month. The Oklahoma Mesonet sites at Grandfield, Tipton, and Walters recorded temperatures of 100 degrees or more 20 times apiece. That area of the state was also the warmest, with an average temperature of 85.6 degrees. The state's warmest temperature was 109 degrees, reported three times at Cherokee, twice at Walters, and once at Alva, Buffalo, Fairview, and Freedom. The year-to-date statewide average temperature continued as the warmest on record at more than three degrees above normal.

| July 2006 Statewide Extremes |  |  |  |
| :---: | :---: | :---: | :---: |
| Description | Extreme | Station | Date |
| High Temperature | $109^{\circ} \mathrm{F}$ | 6 stations | July 17-20 |
| Low Temperature | $50^{\circ} \mathrm{F}$ | Wister | July 8 |
| High Precipitation | 7.92 in. | Wynona |  |
| Low Precipitation | 0.01 in . | Burneyville |  |

## July Daily Highlights

July 1-3: The month's first three days were mostly sunny and hot with lows in the 60s and 70s and highs in the 90s. There were a few light showers on the 2nd and 3rd but rainfall totals were very light.

July 4-5: Much-needed rain fell over some portions of the state along a stalled cold front during these two days. Hooker reported well over two inches of rain, with Guthrie garnering over two inches. High temperatures remained in the upper 90s, but the Panhandle enjoyed temperatures in the 70s due to the aforementioned cold front. Goodwell and Hooker only reached 72 degrees on the 5th to tie for the lowest high temperature of the month.

July 6-8: The state cooled considerably after the cold front. Highs struggled into the 80 s in most areas, with 70 s and a few 90 s elsewhere. Widespread lows in the 50 s were reported all three days for a welcome respite from the heat. By the 8th, temperatures were creeping back towards the triple-digit mark in the south. A few light showers in the northwest dropped around a quarter of an inch in that area, although the Mesonet site at May Ranch came in with about six-tenths of an inch.

July 9-14: The only true rainy period during the month, the precipitation that fell during these six days was very well received due to the ongoing drought. The rain began on the 9th in the Panhandle with amounts reported in the half-inch to inch range. The heat began in earnest on the 9th as well, with highs shooting into the 100s. Heavy rain fell on the 10th, especially in the northeast. The Wynona Mesonet site recorded over four inches of rain, with several more stations in the northeast receiving over three inches. The northeast was the lucky recipient of the heaviest totals the next couple of days as well with more amounts between 1-2 inches. Severe weather accompanied the storms with large hail and high winds quite common across the northern half of the state. High temperatures crept even higher through the 14th from low 100s to upper 100s.

July 15-20: There is no other way to describe this six-day period other than "hot." High temperatures peaked at 109 degrees on the 17 th through the 20 th. Cherokee reached that mark on three of those days, with a 108-degree reading on the other. Low temperatures struggled to drop below 80 degrees during this period. Fairview was still a stifling 85 degrees at its coolest point on the 20th.

July 21-24: A much too short respite from the heat occurred during these four days following an unseasonably strong cold front. A few storms fired along the front on the 21 st ; most amounts were light, although Washington recorded over an inch. High temperatures on the 21 st still shot well about 100 degrees ahead of the front, but the next several days saw temperatures in the 80s and low 90s for the most part.

July 25-31: The heat once again built into the state and stayed until the end of the month. Highs were in the upper 90s and mid-100s statewide, and lows only dropped into the mid-70s to low 80 s for the most part. The only saving grace of the month's last week was a couple of days of decent localized rainfall on the 27th and 28th. Over two inches fell in Blackwell and Fairview, with several more amounts between 1-2 inches.

| July 2006 Statewide Statistics Temperature |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Average | Depart. | Rank (1892-2006) |
| Month (July) | $83.9^{\circ} \mathrm{F}$ | $2.3{ }^{\circ} \mathrm{F}$ | 16th Warmest |
| Season-to-Date (Jun-July) | $80.9^{\circ} \mathrm{F}$ | $1.8{ }^{\circ} \mathrm{F}$ | 23rd Warmest |
| Year -to-Date (Jan-July) | $62.8^{\circ} \mathrm{F}$ | $3.6{ }^{\circ} \mathrm{F}$ | 1st Warmest |
| Precipitation |  |  |  |
|  | Total | Depart. | Rank (1892-2006) |
| Month (July) | 1.76 in. | -0.98 in. | 30th Driest |
| Season-to-Date (Jun-July) | 4.12 in. | -2.88 in. | 14th Driest |
| Year-to-Date (Jan-July) | 14.53 in. | -7.36 in. | 10th Driest |
| Depart. = Departure from 30-year normal |  |  |  |

## July 2006 Severe Weather

## Significant Tornadoes (F2 or greater)

No significant tornadoes reported in the state.

## Hail (2 inches in diameter or greater)

No significant hail reported in the state.

## Flooding

No flooding events reported in the state.

## Wind Gusts ( 70 mph or greater)

| Speed (m.p.h.) | Location | County | Day |
| :--- | :--- | :--- | :--- |
| 80 | 6 E Waukomis | Garfield | 11 |
| 78 | Nowata | Nowata | 11 |
| 70 | Bearden | Okfuskee | 10 |
| 70 | 2 W Stroud | Lincoln | 10 |

## Record Event Report

| Description | Day | Location | Record | Previous Record | Year |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Low Temperature | 1 | McAlester | 61 | 62 | 1985 |
| Low Temperature | 8 | McAlester | 56 | 57 | 1983 |
| Low Temperature | 8 | Tulsa | 60 | 61 | 1958 |
| High Temperature | 20 | McAlester | 106 | 104 | 1998 |
| High Temperature (tied) | 20 | Oklahoma City | 107 | 107 | 1936 |
| Warmest Low Temperature (tied) | 31 | Oklahoma City | 79 | 79 | 1943 |

July 2006 Observed Precipitation


July 2006 Departure from Normal Precipitation



July 2006 Average Soil Moisture at 25cm


July 2006 Average Temperature


July 2006 Departure from Normal Temperature


| NAME | MEAN <br> TEMP | HIGH <br> TEMP | DAY | LOW <br> TEMP | DAY | HDD | CDD | $\begin{aligned} & \text { TOT } \\ & \text { PPT } \end{aligned}$ | HIGH $24-H R$ | DAY | NAME | MEAN <br> TEMP | HIGH TEMP | DAY | LOW <br> TEMP | DAY | HDD | CDD | $\begin{aligned} & \text { TOT } \\ & \text { PPT } \end{aligned}$ | $\begin{aligned} & \text { HIGH } \\ & 24-H R \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PANHANDLE |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Arnett | 82.7 | 104 | 17 | 59 | 22 | 0 | 549 | 2.42 | 1.79 | 4 | Goodwell | 80.3 | 104 | 25 | 56 | 22 | 0 | 474 | 2.05 | . 69 | 5 |
| Beaver | 83.5 | 107 | 25 | 58 | 22 | 0 | 574 | 1.06 | . 74 | 28 | Hooker | 80.7 | 105 | 20 | 56 | 22 | 0 | 486 | 3.76 | 2.09 | 5 |
| Boise City | 77.1 | 101 | 25 | 56 | 22 | 0 | 376 | 2.48 | . 80 | 9 | Kenton | 78.5 | 100 | 25 | 58 | 22 | **** | **** | 1.43 | 1.05 | 9 |
| Buffalo | 85.5 | 109 | 20 | 59 | 22 | 0 | 635 | 1.12 | . 46 | 5 | Slapout | 82.1 | 106 | 20 | 59 | 22 | 0 | 531 | 2.53 | 1.51 | 4 |
| NORTH CENTRAL |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Blackwell | 83.7 | 108 | 20 | 57 | 7 | **** | ** | 2.26 | 2.07 | 27 | Medford | 84.8 | 108 | 20 | 59 | 23 | 0 | 613 | 1.48 | . 46 | 28 |
| Breckinridge | 84.4 | 107 | 18 | 59 | 23 | 0 | 602 | . 94 | . 30 | 5 | Newkirk | 82.6 | 106 | 20 | 58 | 7 | 0 | 545 | 1.41 | . 74 | 27 |
| Cherokee | 85.4 | 109 | 19 | 60 | 23 | 0 | 632 | . 70 | . 24 | 9 | Red Rock | 84.3 | 107 | 20 | 55 | 7 | 0 | 599 | 1.33 | . 73 | 11 |
| Fairview | ***** | *** | *** | *** | *** | **** | **** | ***** | **** | *** | Seiling | 84.7 | 107 | 20 | 63 | 7 | 0 | 610 | 2.18 | 1.82 | 28 |
| Freedom | 84.2 | 109 | 19 | 60 | 22 | 0 | 596 | 1.58 | . 73 | 27 | Woodward | 85.3 | 107 | 20 | 62 | 22 | 0 | 628 | . 38 | . 23 | 8 |
| Lahoma | 84.4 | 108 | 20 | 60 | 6 | 0 | 600 | 1.54 | . 60 | 10 | Alva | 85.6 | 109 | 20 | 63 | 6 | 0 | 638 | . 75 | . 26 | 4 |
| May Ranch | 83.9 | 107 | 19 | 59 | 8 | 0 | 585 | 2.07 | . 88 | 27 |  |  |  |  |  |  |  |  |  |  |  |
| NORTHEAST |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bixby | 83.1 | 103 | 19 | 57 | 8 | 0 | 560 | 4.44 | 3.09 | 10 | Pryor | 81.9 | 102 | 20 | 52 | 8 | 0 | 522 | 4.10 | 1.20 | 11 |
| Burbank | 82.3 | 105 | 20 | 58 | 8 | 0 | 537 | 3.98 | 2.47 | 10 | Skiatook | 83.1 | 101 | 19 | 62 | 7 | 0 | 560 | 3.90 | 1.56 | 11 |
| Copan | 82.5 | 106 | 20 | 58 | 7 | 0 | 541 | 2.76 | 1.84 | 11 | Vinita | 81.0 | 101 | 20 | 53 | 8 | 0 | 498 | 3.44 | 1.14 | 10 |
| Foraker | 82.2 | 106 | 20 | 57 | 8 | 0 | 532 | 1.81 | 1.31 | 11 | Wynona | 82.2 | 103 | 19 | 59 | 7 | 0 | 534 | 7.02 | 4.33 | 10 |
| Jay | 81.4 | 102 | 20 | 55 | 8 | 0 | 510 | 1.93 | . 96 | 12 | Porter | 83.7 | 104 | 20 | 56 | 8 | 0 | 581 | 2.27 | . 92 | 12 |
| Miami | 80.8 | 103 | 20 | 56 | 8 | 0 | 491 | 2.52 | 1.29 | 10 | Inola | 82.6 | 103 | 19 | 54 | 8 | ** | **** | 3.89 | 1.26 | 12 |
| Nowata | 82.1 | 102 | 19 | 53 | 7 | 0 | 530 | 2.46 | 1.47 | 10 | Claremore | 83.5 | 103 | 20 | 59 | 8 | 0 | 572 | 5.47 | 2.58 | 10 |
| Pawnee | 83.7 | 106 | 20 | 59 | 7 | 0 | 581 | 2.10 | 1.37 | 4 |  |  |  |  |  |  |  |  |  |  |  |
| WEST CENTRAL |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bessie | 84.8 | 105 | 18 | 63 | 8 | 0 | 613 | 1.25 | . 57 | 10 | Putnam | 83.7 | 105 | 20 | 62 | 7 | 0 | 580 | . 80 | . 20 | 28 |
| Butler | 85.1 | 106 | 18 | 63 | 22 | 0 | 623 | 1.67 | . 78 | 5 | Retrop | 85.0 | 105 | 18 | 65 | 8 | 0 | 621 | 1.11 | . 47 | 10 |
| Camargo | 83.8 | 106 | 20 | 60 | 22 | 0 | 582 | 1.00 | . 43 | 5 | Watonga | 84.8 | 105 | 17 | 63 | 22 | 0 | 614 | 1.03 | . 57 | 10 |
| Cheyenne | 84.0 | 103 | 17 | 63 | 22 | 0 | 588 | 1.11 | . 69 | 10 | Weatherford | 85.2 | 107 | 18 | 64 | 6 | 0 | 627 | . 88 | . 48 | 28 |
| Erick | 84.1 | 106 | 17 | 63 | 24 | 0 | 593 | . 85 | . 50 | 10 |  |  |  |  |  |  |  |  |  |  |  |
| CENTRAL |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bowlegs | 84.1 | 106 | 19 | 57 | 7 | 0 | 593 | 2.42 | 1.61 | 4 | Okemah | 83.4 | 104 | 19 | 59 | 8 | 0 | 569 | 2.33 | 1.88 | 10 |
| Bristow | 81.9 | 102 | 19 | 54 | 8 | 0 | 525 | 4.72 | 3.88 | 10 | Perkins | 84.6 | 106 | 20 | 61 | 8 | **** | **** | 2.08 | . 85 | 4 |
| Chandler | 84.2 | 104 | 20 | 61 | 8 | 0 | 594 | 2.08 | . 95 | 10 | Shawnee | 85.1 | 106 | 19 | 60 | 7 | 0 | 622 | 1.69 | 1.05 | 10 |
| Chickasha | 85.1 | 107 | 18 | 58 | 8 | 0 | 622 | 1.28 | . 80 | 10 | Spencer | 85.3 | 106 | 20 | 61 | 23 | 0 | 629 | 1.24 | 1.02 | 10 |
| El Reno | 83.5 | 104 | 20 | 58 | 23 | 0 | 572 | 2.37 | 1.38 | 10 | Stillwater | 84.0 | 104 | 20 | 57 | 7 | **** | **** | 3.15 | 1.79 | 10 |
| Guthrie | 84.5 | 104 | 20 | 62 | 23 | **** | **** | 4.84 | 2.29 | 10 | Washington | 84.3 | 107 | 17 | 59 | 8 | 0 | 599 | ** | 1.86 | 27 |
| Kingfisher | 85.4 | 107 | 20 | 61 | 7 | 0 | 633 | 2.20 | 1.73 | 10 | Ninnekah | 85.6 | 107 | 18 | 60 | 8 | 0 | 640 | . 98 | . 51 | 10 |
| Marena | 83.1 | 104 | 20 | 59 | 8 | 0 | 560 | 2.65 | 1.42 | 4 | Acme | 85.4 | 107 | 18 | 62 | 23 | 0 | 631 | . 99 | . 48 | 11 |
| Minco | 84.3 | 105 | 20 | 62 | 8 | 0 | 597 | 3.82 | 2.66 | 10 | Norman | 85.3 | 105 | 20 | 64 | 23 | 0 | 629 | 2.05 | 1.72 | 10 |
| Oilton | 82.9 | 104 | 20 | 56 | 7 | 0 | 554 | 2.94 | . 91 | 4 | Marshall | 84.5 | 106 | 20 | 61 | 23 | 0 | 606 | . 57 | . 24 | 27 |
| EAST CENTRAL |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Calvin | 82.9 | 104 | 20 | 54 | 8 | 0 | 554 | 4.51 | 2.05 | 10 | Stigler | 83.8 | 104 | 20 | 57 | 8 | 0 | 583 | 2.10 | 1.71 | 12 |
| Cookson | 81.7 | 101 | 19 | 55 | 8 | 0 | 517 | 3.05 | 1.92 | 12 | Stuart | 84.2 | 105 | 20 | 57 | 7 | **** | **** | . 79 | . 42 | 10 |
| Eufaula | 85.4 | 107 | 19 | 57 | 8 | 0 | 633 | . 50 | . 37 | 12 | Tahlequah | 81.7 | 101 | 20 | 56 | 8 | 0 | 517 | ***** | ***** | ** |
| Haskell | 83.4 | 106 | 19 | 55 | 8 | 0 | 570 | 2.67 | 1.32 | 10 | Webbers Falls | 84.7 | 107 | 20 | 58 | 8 | 0 | 611 | 1.54 | 1.29 | 12 |
| McAlester | 84.7 | 106 | 20 | 55 | 8 | 0 | 612 | . 06 | . 04 | 10 | Westville | 81.0 | 101 | 19 | 57 | 8 | 0 | 496 | 3.29 | 1.54 | 4 |
| Okmulgee | 82.9 | 104 | 20 | 54 | 8 | 0 | 556 | 3.74 | 1.22 | 12 | Hectorville | 84.6 | 105 | 19 | 61 | 8 | 0 | 608 | 3.45 | 2.29 | 10 |
| Sallisaw | 83.8 | 105 | 19 | 57 | 8 | **** | **** | 1.73 | . 80 | 12 |  |  |  |  |  |  |  |  |  |  |  |
| SOUTHWEST |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Altus | 86.2 | 107 | 18 | 64 | 8 | 0 | 656 | . 84 | . 40 | 10 | Medicine Park | 85.6 | 105 | 18 | 64 | 8 | 0 | 638 | 1.29 | . 83 | 10 |
| Fort Cobb | 84.0 | 104 | 20 | 62 | 8 | 0 | 588 | . 51 | . 17 | 10 | Tipton | 87.4 | 107 | 18 | 65 | 6 | 0 | 695 | 1.09 | . 54 | 11 |
| Hinton | 84.5 | 106 | 18 | 63 | 8 | 0 | 604 | . 69 | . 24 | 12 | Walters | 86.8 | 109 | 17 | 64 | 6 | 0 | 676 | . 75 | . 47 | 28 |
| Hobart | 85.9 | 106 | 18 | 64 | 6 | **** | **** | 1.28 | . 54 | 10 | Apache | 84.8 | 105 | 18 | 63 | 8 | 0 | 615 | 1.12 | . 94 | 10 |
| Hollis | 84.8 | 107 | 18 | 62 | 8 | 0 | 615 | 1.80 | . 54 | 28 | Grandfield | 87.6 | 108 | 18 | 64 | 8 | 0 | 701 | . 10 | . 04 | 10 |
| Mangum | 83.6 | 105 | 18 | 62 | 8 | 0 | 576 | 2.00 | 1.35 | 10 |  |  |  |  |  |  |  |  |  |  |  |
| SOUTH CENTRAL |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ada | 85.4 | 107 | 20 | 60 | 7 | **** | **** | . 57 | . 30 | 13 | Ringling | 86.0 | 107 | 18 | 61 | 8 | 0 | 650 | . 95 | . 69 | 4 |
| Burneyville | 86.0 | 108 | 18 | 60 | 8 | 0 | 650 | . 01 | . 01 | 5 | Sulphur | 84.6 | 106 | 18 | 62 | 8 | **** | **** | . 15 | . 12 | 14 |
| Byars | 84.9 | 106 | 20 | 63 | 23 | **** | **** | . 92 | . 53 | 27 | Tishomingo | 84.8 | 107 | 18 | 56 | 8 | 0 | 612 | . 78 | . 78 | 4 |
| Centrahoma | 84.3 | 106 | 20 | 54 | 8 | **** | **** | 1.53 | 1.48 | 4 | Waurika | 86.6 | 108 | 18 | 61 | 8 | 0 | 669 | . 25 | . 24 | 9 |
| Durant | 85.9 | 106 | 18 | 62 | 8 | 0 | 647 | 1.36 | . 76 | 4 | Vanoss | 85.1 | 107 | 20 | 60 | 7 | **** | **** | . 44 | . 31 | 27 |
| Ketchum Ranch | 85.2 | 107 | 18 | 61 | 8 | 0 | 625 | 2.65 | 1.53 | 4 | Newport | 86.1 | 108 | 18 | 59 | 8 | O | 655 | . 28 | . 26 | 4 |
| Lane | 84.7 | 106 | 18 | 55 | 8 | 0 | 611 | . 03 | . 03 | 3 | Ardmore | 85.3 | 106 | 18 | 59 | 8 | 0 | 630 | . 29 | . 29 | 4 |
| Madill | 86.2 | 107 | 18 | 60 | 8 | 0 | 657 | . 04 | . 02 | 4 | Fittstown | 84.1 | 105 | 20 | 56 | 8 | **** | **** | . 17 | . 11 | 4 |
| Pauls Valley | 85.9 | 107 | 20 | 60 | 7 | 0 | 646 | 1.01 | . 63 | 27 |  |  |  |  |  |  |  |  |  |  |  |
| SOUTHEAST |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Antlers | 84.1 | 107 | 17 | 51 | 8 | 0 | 593 | . 49 | . 49 | 17 | Mt Herman | 82.2 | 103 | 18 | 53 | 7 | 0 | 534 | . 92 | . 28 | 19 |
| Clayton | 84.4 | 107 | 19 | 53 | 7 | 0 | 601 | . 28 | . 28 | 13 | Talihina | 83.5 | 106 | 20 | 52 | 8 | 0 | 573 | . 58 | . 51 | 13 |
| Cloudy | 82.6 | 105 | 19 | 53 | 8 | 0 | 545 | . 62 | . 23 | 17 | Wilburton | 83.0 | 104 | 20 | 56 | 8 | 0 | 559 | 1.58 | . 84 | 13 |
| Hugo | 85.2 | 105 | 18 | 58 | 8 | **** | **** | . 17 | . 17 | 5 | Wister | 82.4 | 105 | 19 | 50 | 8 | 0 | 540 | . 20 | . 15 | 12 |
| Idabel | 83.5 | 105 | 21 | 56 | 8 | 0 | 574 | . 44 | . 22 | 5 | Broken Bow | 80.5 | 103 | 19 | 54 | 8 | 0 | 482 | 1.17 | . 69 | 27 |

July 2006 Mesonet Precipitation Comparison

|  | Precipitation <br> Climate Division | Departure from <br> Normal (inches) | Rank since 1895 | Wettest on <br> Record (Year) | Driest on <br> Record (Year) | Jul-05 |
| :--- | ---: | ---: | :--- | ---: | ---: | ---: |

2005 and 2006 Statewide Precipitation Monthly Totals vs. Normal


July 2006 Mesonet Temperature Comparison

| Climate Division | Average Temp <br> (F) | Departure from Normal (F) | Rank since 1895 | Hottest on Record (Year) | Coldest on Record (Year) | Jul-05 (F) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Panhandle | 81.7 | 2.1 | 18th Warmest | 85.4 (1980) | 73.2 (1906) | 78.3 |
| North Central | 84.4 | 2.2 | 18th Warmest | 89.6 (1954) | 75.8 (1950) | 79.9 |
| Northeast | 82.4 | 1.5 | 32nd Warmest | 89.2 (1954) | 75.0 (1906) | 80.0 |
| West Central | 84.5 | 2.8 | 13th Warmest | 88.1 (1954) | 75.8 (1906) | 79.5 |
| Central | 84.3 | 2.3 | 15th Warmest | 88.6 (1954) | 75.8 (1906) | 80.3 |
| East Central | 83.4 | 2.1 | 21st Warmest | 88.7 (1954) | 75.9 (1906) | 81.1 |
| Southwest | 85.6 | 2.4 | 16th Warmest | 89.1 (1980) | 77.9 (1906) | 81.2 |
| South Central | 85.4 | 2.7 | 12th Warmest | 89.1 (1998) | 77.2 (1906) | 80.8 |
| Southeast | 83.1 | 2.2 | 28th Warmest | 87.5 (1954) | 76.4 (2004) | 79.4 |
| Statewide | 83.9 | 2.3 | 16th Warmest | 88.1 (1954) | 75.9 (1906) | 80.1 |

2005 and 2006 Statewide Temperature Monthly Averages vs. Normal


| Climate Division | High Temp (F) | Day | Station | Low Temp (F) | Day | Station | High Monthly Rainfall (inches) | Station | High <br> Daily Rainfall (inches) | Day | Station |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Panhandle | 109 | 20th | Buffalo | 56 | 22nd | Goodwell | 3.76 | Hooker | 2.09 | 5th | Hooker |
| North Central | 109 | 19th | Cherokee | 55 | 7th | Red Rock | 2.26 | Blackwell | 2.07 | 27th | Blackwell |
| Northeast | 106 | 20th | Pawnee | 52 | 8th | Pryor | 7.02 | Wynona | 4.33 | 10th | Wynona |
| West Central | 107 | 18th | Weatherford | 60 | 22nd | Camargo | 1.67 | Butler | 0.78 | 5th | Butler |
| Central | 107 | 20th | Kingfisher | 54 | 8th | Bristow | 4.84 | Guthrie | 3.88 | 10th | Bristow |
| East Central | 107 | 19th | Eufaula | 54 | 8th | Okmulgee | 4.51 | Calvin | 2.29 | 10th | Hectorville |
| Southwest | 109 | 17th | Walters | 62 | 8th | Hollis | 2.00 | Mangum | 1.35 | 10th | Mangum |
| South Central | 108 | 18th | Waurika | 54 | 8th | Centrahoma | 2.65 | Ketchum Ranch | 1.53 | 4th | Ketchum Ranch |
| Southeast | 107 | 17th | Antlers | 50 | 8th | Wister | 1.58 | Wilburton | 0.84 | 13th | Wilburton |
| Statewide | 109 | 19th | Cherokee | 50 | 8th | Wister | 7.02 | Wynona | 4.33 | 10th | Wynona |

## August Climatological Outlook

NORMAN - According to published daily normal temperatures, the hottest period of the long Oklahoma summer extends from mid-July through mid-August. The gradually shortening days and the occasional arrival of cooler weather from the North frequently bring the state modest relief from the heat by late August. Overall, August, the third and final month of the climatological summer, is Oklahoma's second hottest, fifth driest, and least windy month. Tornado frequency is at its lowest of the March-through-October warm season. Lightning deaths are more frequent in August than during any other month.

## Temperature

Mean: 80.9 degrees
Warmest August: 1936, 87.9 degrees
Coolest August: 1915, 73.9 degrees
Hottest location: Waurika, 84.1 degrees
Coolest Location: Boise City, 75.3 degrees
Hottest recorded: 120 degrees, Poteau, August 10, 1936 Altus, August 12, 1936
Coldest recorded: 41 degrees, Goodwell, August 15, 1915
The normal statewide monthly temperature is 80.9 degrees Fahrenheit. Oklahoma's hottest August, according to National Weather Service records that date from 1892, occurred in 1936 when the state's average monthly temperature was a scorching 87.2 degrees. This is the second highest statewide-averaged monthly temperature (all months) recorded in Oklahoma during the 111 years with comprehensive records. The state's record daily maximum temperature of 120 degrees was equaled at Altus and Poteau on August 12 and 10, 1936, respectively. Relatively cool weather prevailed during August 1915, when the state recorded its lowest August statewide-average monthly temperature, 73.2 degrees. The lowest daily minimum temperature of 39 degrees was recorded at Dacoma on August 26, 1910.

## Precipitation

Mean: 2.84 inches
Wettest Year: 1906, 6.54 inches
Driest Year: 2000, 0.18 inches
Wettest location: Pawnee, 3.76 inches
Driest location: Meeker, 1.93 inches
Most recorded: 15.15 inches, Holdenville, 1906

Isolated or widely scattered thunderstorms provide most of the state's August precipitation. As a result, little systematic variation can be seen in the statewide precipitation pattern. At 3.76 inches, Pawnee has the greatest normal precipitation
for the month. Meeker, near the center of the state, has the lowest normal monthly accumulation, 1.93 inches. Statewideaveraged monthly precipitation during August has ranged from 6.54 inches in 1906 to a dismal 0.14 inch during the droughty summer of 2000. The greatest August precipitation recorded by any reporting station was 15.15 inches at Holdenville in 1906. A 10.34-inch deluge at Carter Tower in northern McCurtain County on August 28, 1947 is the greatest daily precipitation recorded at a regular observing station during August. Precipitation is observed (. 01 inch or more) on an average of as many as 7.8 days at Stilwell and as few as 3.5 days at Bixby. Daily rainfall events of two inches or greater are no more than an every-other-year occurrence everywhere in the state.

## Tornadoes

Average August Tornadoes: 2
Most: 13 (1979)

Severe weather appears in the state during August, but its effects are more notable anecdotally than they are apparent in statistics. The exception is that August has presented the state with more lightning deaths (21) than any other month since such record-keeping began in 1959. Only July among the months accounts for more total casualties (deaths and injuries) from lightning strikes. The average number of tornado for the month of August is 1.4. Of the 80 August tornadoes reported in the state between 1950 and 2003, no fatalities and only three injuries ( 1 in 1959 and 2 in 1982) resulted. Oklahoma's August tornado totals include a high of 13 in 1979. No tornadoes were observed during 22 of the 54 years with comprehensive statistics.

August Normal Monthly Maximum Temperature (1971-2000)


August Normal Monthly Minimum Temperature (1971-2000)


## August Normal Precipitation (1971-2000)



August 1, 2006 Soil Moisture Conditions at 25cm

U.S. Drought Monitor

July 25, 2006
Valid 8 a.m. EDT

http://drought.unl.edu/dm Author: C. Tankersley/L. Love-Brotak, NOAA/NESDIS/NCDC



Percent Likelihood of Above or Below Average Precipitation*

${ }^{*}$ EC indicates no forecasted anomalies due to lack of model skill.

## August 2006 U.S. Temperature Forecast



Percent Likelihood
of Above and Below
Average Temperatures*

$\square$| $\square$ |
| :--- |
|  |
| $5 \%-20 \%$ |
| $5 \%-5 \%$ |$\quad \mathrm{~A}=$ Above


$\square$| $0 \%-5 \%$ |
| :--- |
| $5 \%-10 \%$ |

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

## August Climate Normals

| Climate Division | Max. Temperature $(\infty \mathbf{F})$ | Min. Temperature $(\infty \mathbf{F})$ | Avg. Temperature $(\infty \mathbf{F})$ | Precipitation (inches) |
| :--- | ---: | ---: | ---: | ---: |
| 1 | 92.3 | 64.1 | 78.2 | 2.48 |
| 2 | 93.4 | 67.6 | 80.6 | 3.01 |
| 3 | 92.6 | 68.1 | 80.4 | 3.13 |
| 4 | 93 | 67.7 | 80.4 | 2.63 |
| 5 | 93.2 | 68.8 | 81 | 2.61 |
| 6 | 92.6 | 94.7 | 68.5 | 80.6 |
| 7 | 94.1 | 68.8 | 81.8 | 2.77 |
| 8 | 93.5 | 69.5 | 81.8 | 2.6 |
| 9 | 93.3 | 67.7 | 80.6 | 2.49 |
| Statewide | 68 | 80.7 | 2.72 |  |

## Oklahoma Climate Divisions

## 1 - Panhandle

2 - North Central
3 - Northeast
4 - West Central
5 - Central
6 - East Central
7 -Southwest
8 - South Central
9 - Southeast


## 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.ocs.ou.edu or http://www.ocs.ou.edu/
E-mail (ocs@ou.edu) or telephone (405/325-2541)

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