

# WE'VE MOVED 

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

## Our new address:

120 David L. Boren Blvd., Suite 2900
Norman, OK 73072-7305

Things were not looking good for September, following the scorcher of a summer Oklahoma endured in 2006. Fortune smiled upon the state, however, and provided the 10th coolest September on record, just in time to halt a slew of triple-digit temperatures. The cool weather also stopped 2006's march towards the warmest year on record, dropping the January-September period to the 2nd warmest since 1895. Drought conditions were alleviated somewhat, especially in the southwest and east central sections, where rainfall amounts between 3-6 inches were common. Other areas, including the northwestern one-third of the state, were extremely dry once again. The month finished as the 39th driest on record, averaged statewide. Several bouts with severe weather were punctuated by the return of tornadoes with two touchdowns of weak twisters in Pushmataha County. Those two F0 tornadoes were the first to strike Oklahoma since June 21.

## Precipitation

The statewide average precipitation total fell more than an inch below normal. North central Oklahoma was the hardest hit at barely under an inch, the 12th driest September for that region. Most areas of the state were 1-3 inches below normal for the
month. Apache led the state at over six inches of precipitation, with Freedom bringing up the rear at less than one-third of an inch. The year-to-date precipitation total still lags well behind normal with a deficit of more than eight inches, enough to rank as the 11th driest January-September on record.

## Temperature

Oklahoma temperatures were 2-4 degrees below normal over much of the state during September, an even three degrees below normal averaged statewide. The Panhandle spent much of the month behind meandering cold fronts to finish over 4 degrees below normal, the 3rd coolest September on record for that region. The southwest was nearly four degrees below normal as well, the 7th coolest on record. The Mesonet site at Kenton recorded the coolest reading of the month with a 35 degree mark on the 28 th. The warmest reading, 98 degrees, occurred at Newport on the 22nd.

September 2006 Statewide Extremes

| Description | Extreme | Station | Date |
| :--- | ---: | :--- | :--- |
| High Temperature | $98^{\circ} \mathrm{F}$ | Newport | Sep 22 |
| Low Temperature | $35^{\circ} \mathrm{F}$ | Kenton | Sep 28 |
| High Precipitation | 6.07 in. | Apache |  |
| Low Precipitation | 0.31 in. | Freedom |  |

## September Daily Highlights

September 1-4: A rainy beginning to September, a narrow band of showers and storms settled in the northwest ahead of an approaching cold front on the 1 st. The 2 nd was cloudy and cool as a widespread rain fell across the state, with high temperatures a good 10-20 degrees below normal. The cool weather continued for the next couple of days. Low temperatures dropped into the 40s in the Panhandle, but still managed to remain in the 70s in southeastern Oklahoma. High temperatures also modified somewhat, but remained more than 10 degrees below normal.

September 5-8: The next several days were almost autumnal under the influence of the surface high pressure system that built in following the cold front. High temperatures were in the 70 s and 80 s , and lows dropped predominantly into the 50 s and 60s.

September 9-11: More rain on the 9th as another cold front approached the state. Amounts were light, but Beaver had a heaver storm dump well over an inch of rain on that location. Stronger storms, some severe, were in store for the state on the 10th and 11th. Hail to the size of golf balls fell in Roger Mills County, while winds gusted to 60 mph in several locations. High temperatures managed to return to seasonal averages by the 11 th, rising into the 80 s and 90 s .

September 12-16: Strong northerly winds ushered in much cooler air on the 12th. High temperatures struggled into the 70s under cloudy skies and surface high pressure. A pleasantly cool night followed on the 13th with calm winds and lows in the 40 s and 50 s. The state began a slow warm up the next couple of days. Strong southerly winds in lieu of an approaching cold front pumped moisture up from the Gulf of Mexico which kept low temperatures in the 60 s and 70 s, while highs once again soared into the 90s. The winds at times gusted to over 40 mph in western Oklahoma, and over 30 mph in the remainder of the state.

September 17-18: Storms fired along a cold front moving through the state early on the 17 th and spread southeastward. Oklahoma City broke its record for rainfall on the 17th, and Apache had over four inches. Three-inch amounts were recorded in southwestern and northeastern locations. High temperatures that day occurred soon after midnight, and remained in the 60s and 70 s for the remainder of the day. Skies cleared from west to east on the 18 th. Temperatures rebounded into the 70 s and 80 s later that day.

September 19-20: The 19th began clear and crisp with lows in the 40s and 50s. A beautiful afternoon followed under surface high pressure. High temperatures rose into the 70s and low 80s. Winds kicked up from the south later that night which allowed low temperatures to remain in the upper 50s and low 60s. Clouds increased due to an approaching upper-level storm, which also kicked up winds from the south at over 40 mph . Temperatures rose into the 80s.

September 21-23: The strong upper-level storm continued its march towards the state on the 18th. Non-thunderstorm related winds with gusts to over 60 mph struck in the west, and strong to severe thunderstorms fired later that day in the east. Two tornadoes touched down in Pushmataha County, but caused only minor damage. Both twisters were rated F0 in intensity. More severe storms ignited on the 22 nd and 23 rd in eastern Oklahoma, touched off by a slow-moving frontal system. Reports of severe winds and large hail were common with the storms. Throughout this three-day period, the southeastern one-third of the state reported a good general rainfall of 1-3 inches.

September 24-30: The 24th turned out clear and cool following the cold front's passage. Lows dropped to the 40 s and 50 s , and rebounded into the low- to mid-70s, which marked the coolest high temperatures across the state since May. The low temperatures the following morning dropped into the 30 s and low 40s statewide, marking it as the coolest morning since May as well. A slow warm up after that, the high temperatures crept into the 80 s and then 90 s by month's end. Plenty of sunshine and light winds greeted Oklahoma on the 30th.

## September 2006 Statewide Statistics Temperature

|  | Average | Depart. | Rank (1892-2006) |
| :--- | ---: | ---: | :--- |
| Month (Sep) | $69.4^{\circ} \mathrm{F}$ | $-3.0^{\circ} \mathrm{F}$ | 10th Coolest |
| Year-to-Date <br> (Jan-Sep) | $65.9^{\circ} \mathrm{F}$ | $2.9^{\circ} \mathrm{F}$ | 2nd Warmest |

## Precipitation

|  | Total | Depart. | Rank (1892-2006) |
| :--- | ---: | ---: | :--- |
| Month (Sep) | 2.29 in. | -1.52 in. | 39th Driest |
| Year-to-Date <br> (Jan-Sep) | 19.99 in. | -8.48 in. | 11th Driest |

[^0]
## September 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 state.
Wind Gusts ( 70 mph or greater)

| Speed (m.p.h.) | Location | County | Day |
| :--- | :--- | :--- | :--- |
| 73 | Webbers Falls | Muskogee | 23 |

## Record Event Report

| Description | Day | Location | Record | Previous Record | Year |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Daily Maximum Rainfall | 17 | Oklahoma City | 2.49 inches | 1.42 inches | 1936 |

## September 2006 Observed Precipitation



September 2006 Departure from Normal Precipitation


## September 2006 Percent of Normal Precipitation



September 2006 Average Soil Moisture at 25cm


September 2006 Average Temperature


September 2006 Departure from Normal Temperature


## NAME PANHANDLE

Arnett
Boise City
Buffalo
NORTH CENTRAL
Blackwell Breckinridge Cherokee Fairview Freedom Lahoma May Ranch

## NORTHEAST

 Bixby Burbank Copan Foraker Jay MiamiNowata
Pawnee

## WEST CENTRAL

## Bessie Butler

Camargo
Cheyenne
Erick

## CENTRAL

Bowlegs
Bristow
Chickasha
El Reno
Guthrie
Kingfisher
Marena
Minco
Oilton

## EAST CENTRAL

Calvin
Cookson
Eufaula
Haskell
McAlester
Okmulgee
Sallisaw
SOUTHWEST
Altus
Fort Cobb
Hinton
Hobart
Hollis
Mangum

## SOUTH CENTRAL

Burneyville
Byars
Centrahoma
Durant
Ketchum Ranch
Lane
Madill
Pauls Valley

## SOUTHEAST

Antlers
Clayton
Cloudy
Hugo
Idabel

MEAN HIGH LOW TOT HIGH TEMP TEMP DAY TEMP DAY HDD CDD PPT 24-HR DAY

| 67.4 | 93 | 30 | 42 | 25 | 33 | 106 | 2.07 | 1.59 | 2 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 65.7 | 93 | 16 | 37 | 25 | 66 | 88 | 2.00 | 1.51 | 9 |
| 61.8 | 86 | 16 | 37 | 24 | 124 | 28 | 1.44 | .60 | 1 |
| 68.3 | 96 | 16 | 39 | 28 | 34 | 133 | .64 | .19 | 2 |


| 68.8 | 96 | 16 | 41 | 19 | 29 | 143 | 1.20 | .58 | 11 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | ---: | :--- | ---: |
| 69.9 | 95 | 16 | 41 | 19 | 23 | 169 | .39 | .27 | 21 |
| 69.3 | 94 | 16 | 41 | 25 | 24 | 154 | .75 | .61 | 1 |
| 70.1 | 96 | 30 | 42 | 25 | 14 | 168 | .70 | .35 | 2 |
| 68.6 | 94 | 16 | 41 | 28 | 26 | 134 | .31 | .15 | 2 |
| 70.0 | 95 | 16 | 44 | 19 | 18 | 168 | .34 | .10 | 2 |
| 68.1 | 92 | 16 | 42 | 28 | 28 | 120 | 1.72 | .62 | 1 |


| 69.5 | 94 | 16 | 42 | 29 | 26 | 161 | 3.48 | 1.74 | 23 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 68.6 | 96 | 16 | 39 | 29 | 31 | 140 | .60 | .38 | 21 |
| 69.0 | 96 | 16 | 42 | 19 | 32 | 151 | .79 | .43 | 21 |
| 68.6 | 96 | 16 | 42 | 29 | 31 | 138 | .74 | .45 | 21 |
| 67.8 | 92 | 16 | 41 | 28 | $* * * *$ | $* * * *$ | 2.69 | 1.80 | 17 |
| 67.9 | 92 | 16 | 41 | 29 | 44 | 130 | 1.80 | 1.21 | 17 |
| 68.3 | 94 | 16 | 38 | 29 | 40 | 140 | 1.24 | .79 | 17 |
| 70.6 | 96 | 16 | 44 | 19 | $* * * * * * * *$ | 1.01 | .43 | 21 |  |


| 69.5 | 94 | 16 | 48 | 28 | 11 | 146 | 1.09 | .44 | 17 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 69.0 | 94 | 30 | 41 | 25 | 19 | 140 | 1.75 | 1.34 | 10 |
| 68.1 | 94 | 30 | 40 | 25 | 24 | 118 | 1.48 | 1.02 | 10 |
| 69.0 | 92 | 30 | 45 | 28 | $* * * * * * * *$ | .94 | .62 | 10 |  |
| 68.6 | 95 | 30 | 40 | 25 | 23 | 130 | .74 | .37 | 2 |


| 70.6 | 96 | 16 | 43 | 29 | 19 | 187 | 3.33 | 2.68 | 17 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 68.6 | 94 | 16 | 38 | 29 | 35 | 142 | 1.17 | .74 | 17 |
| 70.2 | 93 | 30 | 44 | 25 | 16 | 173 | 2.89 | 1.23 | 4 |
| 69.4 | 94 | 1 | 42 | 25 | 17 | 148 | 2.89 | 2.13 | 17 |
| 68.4 | 92 | 30 | 41 | 25 | 25 | 128 | 1.39 | .47 | 17 |
| 70.9 | 96 | 16 | 46 | 25 | 14 | 190 | 1.42 | .82 | 17 |
| 70.5 | 96 | 16 | 43 | 25 | 11 | 176 | 1.01 | .50 | 21 |
| 70.0 | 96 | 16 | 44 | 29 | 17 | 167 | 1.46 | .41 | 17 |
| 69.2 | 91 | 1 | 45 | 29 | 18 | 144 | 4.25 | 2.08 | 17 |
| 68.3 | 94 | 16 | 39 | 28 | 41 | 141 | 1.90 | .86 | 4 |


| 70.7 | 96 | 16 | 41 | 29 | 20 | 189 | 3.59 | 1.59 | 17 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 67.8 | 91 | 16 | 39 | 29 | 53 | 138 | 4.61 | 1.88 | 23 |
| 72.2 | 96 | 16 | 47 | 29 | 14 | 230 | 5.76 | 2.80 | 22 |
| 69.8 | 96 | 16 | 43 | 29 | 27 | 171 | 3.32 | 1.63 | 17 |
| 71.6 | 95 | 16 | 43 | 29 | $* * * * * * * *$ | 2.16 | .83 | 23 |  |
| 69.8 | 96 | 16 | 42 | 29 | 28 | 173 | 4.24 | 2.98 | 17 |
| 70.3 | 95 | 16 | 42 | 29 | 27 | 187 | 4.48 | 1.43 | 23 |

$\begin{array}{llllllllll}70.3 & 94 & 30 & 44 & 25 & 9 & 169 & 3.17 & 1.21 & 17\end{array}$ $\begin{array}{llllllllll}69.0 & 93 & 30 & 45 & 25 & 16 & 136 & 2.35 & 1.33 & 17\end{array}$ $\begin{array}{llllllllll}70.4 & 96 & 30 & 43 & 25 & 13 & 174 & 1.21 & .92 & 2 \\ 69.5 & 95 & 16 & 44 & 29 & 13 & 148 & 2.06 & .74 & 2\end{array}$ $\begin{array}{llllllllll}68.5 & 95 & 30 & 41 & 25 & 19 & 123 & 1.93 & 1.23 & 2\end{array}$

| 71.8 | 95 | 1 | 45 | 29 | 15 | 218 | 2.75 | 1.55 | 17 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 71.9 | 97 | 1 | 44 | 25 | 11 | 217 | 1.92 | .88 | 4 |
| 71.9 | 94 | 16 | 48 | 25 | 9 | 216 | 1.89 | 1.31 | 17 |
| 71.5 | 96 | 22 | 41 | 29 | 17 | 211 | 2.28 | .96 | 23 |
| 73.6 | 96 | 16 | 49 | 29 | 4 | 262 | 3.02 | 1.11 | 23 |
| 71.5 | 97 | 1 | 46 | 29 | 9 | 205 | 4.16 | 3.22 | 17 |
| 72.3 | 96 | 16 | 45 | 29 | 11 | 229 | 3.48 | 1.34 | 23 |
| 72.6 | 96 | 22 | 45 | 29 | 8 | 237 | 2.36 | .93 | 23 |


| 71.0 | 97 | 16 | 40 | 29 | 18 | 198 | 2.96 | 1.32 | 17 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 71.2 | 95 | 22 | 40 | 29 | 22 | 206 | 2.28 | .77 | 23 |
| 70.8 | 94 | 11 | 40 | 29 | 18 | 192 | 3.23 | 1.27 | 17 |
| 72.8 | 96 | 11 | 44 | 29 | 8 | 243 | 3.86 | 1.52 | 17 |
| 71.7 | 94 | 16 | 42 | 29 | $* * *$ | $* * *$ | 40 | 2.58 | 23 |

Goodwell
Hooker
Kenton
Slapout
Medford
Newkirk
Red Rock
Seiling
Woodward
Alva

Pryor Skiatook Vinita Wynona Porter Inola
Claremore

## Putnam

Retrop
Watonga Weatherford
Okemah
Perkins
Shawnee
Spencer
Stillwater
Washington
Ninnekah
Acme
Norman
Marshall

| 70.2 | 95 | 16 | 43 | 29 | 22 | 179 | 4.43 | 2.58 | 17 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 70.7 | 96 | 16 | 46 | 25 | 15 | 185 | 2.69 | 1.72 | 17 |
| 70.5 | 95 | 30 | 46 | 25 | 16 | 181 | 1.88 | .83 | 17 |
| 70.7 | 95 | 16 | 47 | 25 | 17 | 189 | 2.02 | 1.42 | 17 |
| 69.9 | 96 | 16 | 42 | 25 | 25 | 170 | 1.32 | .54 | 17 |
| 69.6 | 93 | 16 | 42 | 29 | 17 | 156 | 2.81 | 1.52 | 17 |
| 70.0 | 94 | 1 | 44 | 25 | 16 | 166 | 3.92 | 1.86 | 17 |
| 69.6 | 93 | 1 | 43 | 25 | $* * * *$ | $* * * *$ | 3.38 | 2.11 | 17 |
| 70.3 | 93 | 16 | 46 | 25 | 16 | 173 | 2.96 | 2.09 | 17 |
| 69.6 | 95 | 16 | 42 | 25 | 25 | 162 | .74 | .51 | 21 |

Stigler
Stuart Tahlequah Webbers Falls Westville Hectorville

Medicine Park Tipton Walters
Apache
Grandfield

| 64.5 | 90 | 16 | 37 | 28 | $* * * *$ | $* * * *$ | 1.19 | .53 | 2 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 65.5 | 92 | 16 | 37 | 28 | $* * * *$ | $* * * *$ | 1.29 | .55 | 1 |
| 61.5 | 85 | 30 | 35 | 28 | 130 | 26 | .71 | .32 | 12 |
| 66.6 | 93 | 16 | 40 | 28 | 42 | 89 | $* * * * *$ | $* * * * *$ | $* * *$ |


| 69.5 | 96 | 16 | 41 | 19 | 23 | 158 | .83 | .71 | 1 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 68.3 | 94 | 16 | 43 | 19 | 28 | 127 | .85 | .36 | 21 |
| 68.9 | 95 | 16 | 42 | 29 | 28 | 145 | 1.34 | .49 | 1 |
| 68.3 | 92 | 30 | 40 | 25 | 27 | 127 | 1.44 | .75 | 10 |
| 68.1 | 92 | 30 | 42 | 19 | 27 | 120 | 1.42 | .70 | 10 |
| 68.9 | 95 | 16 | 43 | 25 | $* * * *$ | $* * * *$ | .81 | .36 | 2 |


| 67.9 | 92 | 16 | 39 | 29 | 42 | 130 | 3.69 | 1.89 | 17 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 70.6 | 95 | 16 | 46 | 25 | 14 | 182 | 1.91 | 1.64 | 17 |
| 68.4 | 95 | 16 | 39 | 29 | 36 | 137 | 3.68 | 3.17 | 17 |
| 69.3 | 95 | 16 | 43 | 28 | 26 | 155 | 1.09 | .58 | 21 |
| 69.9 | 94 | 16 | 43 | 29 | 25 | 172 | 3.86 | 2.06 | 17 |
| 68.6 | 92 | 16 | 42 | 28 | 34 | 143 | 3.00 | 1.43 | 17 |
| 70.4 | 96 | 16 | 45 | 29 | 20 | 184 | 2.91 | 1.31 | 23 |


| 69.1 | 93 | 16 | 45 | 18 | 17 | 139 | .91 | .62 | 10 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 69.5 | 93 | 30 | 47 | 25 | 13 | 148 | 2.81 | 1.30 | 2 |
| 70.0 | 92 | 16 | 48 | 28 | 14 | 164 | 1.58 | .66 | 17 |
| 69.2 | 93 | 16 | 47 | 24 | 18 | 143 | 1.88 | .50 | 10 |

$\begin{array}{lrrrrrrrrr}70.6 & 96 & 16 & 41 & 29 & 26 & 193 & 4.09 & 1.50 & 17 \\ 72.1 & 94 & 22 & 44 & 29 & * * * * & * * * * & * * * * * & * * * * & * * * \\ 67.6 & 91 & 16 & 40 & 29 & \text { **** } & \text { t*** } & 3.20 & 1.78 & 23\end{array}$ $\begin{array}{lllllrrrr}7.6 & 91 & 16 & 40 & 29 & \text { **** } & \text { **** } & 3.20 & 1.78 \\ 70.8 & 96 & 16 & 42 & 29 & 23 & 199 & 5.59 & 2.38 \\ 67.5\end{array}$ $\begin{array}{rrrrrrrrrr}67.5 & 92 & 16 & 42 & 29 & 46 & 121 & 4.37 & 1.43 & 23\end{array}$都$71.1 \quad 93-30$

| 71.0 | 96 | 16 | 45 | 25 | 8 | 188 | 2.85 | 1.09 | 17 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 71.8 | 96 | 16 | 45 | 25 | $* * * *$ | $* * * *$ | 3.49 | 2.10 | 17 |
| 69.4 | 92 | 30 | 47 | 29 | 15 | 147 | 6.07 | 4.15 | 17 |
| 72.0 | 95 | 30 | 46 | 25 | 7 | 216 | 2.06 | .87 | 2 |

$\begin{array}{llllll}\text { MEAN HIGH } & \text { LOW } & & \text { TOT HIGH } \\ \text { TEMP TEMP DAY } & \text { TEMP DAY HDD CDD } & \text { PPT } 24-H R \text { DAY }\end{array}$
Ringling
Sulphur
Tishomingo
Waurika
Vanoss
Newport
Ardmore
Fittstown

| 72.5 | 97 | 1 | 46 | 29 | $* * * *$ | $* * * *$ | 1.81 | .63 | 4 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 71.3 | 96 | 22 | 42 | 25 | 18 | 207 | 1.89 | .95 | 23 |
| 71.5 | 96 | 16 | 43 | 29 | $* * * *$ | $* * * *$ | 2.48 | 1.53 | 23 |
| 72.1 | 96 | 1 | 46 | 25 | 7 | 219 | 3.53 | 1.54 | 10 |
| 71.0 | 95 | 16 | 43 | 29 | 19 | 200 | 2.91 | 1.94 | 17 |
| 73.0 | 98 | 22 | 48 | 25 | 2 | 243 | .97 | .49 | 23 |
| 72.8 | 97 | 22 | 48 | 25 | 5 | 240 | 1.69 | .96 | 23 |
| 71.3 | 95 | 22 | 45 | 29 | 16 | 205 | 2.57 | .90 | 23 |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| 70.0 | 90 | 16 | 42 | 29 | $* * * * * * * *$ | 4.74 | 1.95 | 17 |  |
| 70.4 | 94 | 16 | 39 | 29 | 26 | 187 | 2.44 | .93 | 23 |
| 70.3 | 94 | 16 | 41 | 29 | $* * * * * * * *$ | 2.52 | .91 | 11 |  |
| 69.4 | 96 | 16 | 37 | 29 | $* * * *$ | $* * * *$ | 2.53 | .87 | 21 |
| 69.9 | 93 | 16 | 38 | 29 | $* * * *$ | $* * * *$ | 2.72 | 1.61 | 23 |

September 2006 Mesonet Precipitation Comparison

| Climate Division | Precipitation (inches) | Departure from <br> Normal (inches) | Rank since 1895 | Wettest on Record (Year) | Driest on Record (Year) | Sep-05 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Panhandle | 1.33 | -0.55 | 43rd Driest | 4.57 (1985) | 0.05 (1956) | 0.68 |
| North Central | 0.93 | -2.20 | 12th Driest | 7.08 (1945) | 0.04 (2000) | 1.06 |
| Northeast | 2.17 | -2.61 | 26th Driest | 12.42 (1986) | 0.13 (1948) | 2.41 |
| West Central | 1.46 | -1.57 | 27th Driest | 8.64 (1986) | 0.02 (2000) | 1.44 |
| Central | 2.39 | -1.72 | 42nd Driest | 10.68 (1945) | 0.19 (1956) | 2.16 |
| East Central | 3.99 | -0.97 | 54th Wettest | 10.40 (1970) | 0.23 (1948) | 1.92 |
| Southwest | 2.81 | -0.58 | 48th Wettest | 8.68 (1936) | 0.00 (1898) | 2.75 |
| South Central | 2.49 | -1.85 | 47th Driest | 9.98 (1936) | 0.00 (1909) | 2.45 |
| Southeast | 3.24 | -1.33 | 54th Driest | 11.75 (1974) | 0.29 (1948) | 3.17 |
| Statewide | 2.29 | -1.52 | 39th Driest | 7.86 (1945) | 0.27 (1956) | 1.99 |

2005 and 2006 Statewide Precipitation Monthly Totals vs. Normal


September 2006 Mesonet Temperature Comparison

| Climate Division | Average Temp (F) | Departure from Normal (F) | Rank since 1895 | Hottest on Record (Year) | Coldest on <br> Record (Year) | Sep-05 (F) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Panhandle | 65.2 | -4.2 | 3rd Coolest | 76.2 (1931) | 62.4 (1974) | 74.4 |
| North Central | 69.0 | -3.1 | 12th Coolest | 80.8 (1931) | 64.0 (1974) | 76.3 |
| Northeast | 69.0 | -2.7 | 15th Coolest | 79.1 (1931) | 63.4 (1974) | 76.2 |
| West Central | 69.2 | -2.7 | 15th Coolest | 80.4 (1931) | 64.4 (1974) | 76.6 |
| Central | 69.9 | -2.9 | 13th Coolest | 81.3 (1931) | 65.0 (1974) | 77.2 |
| East Central | 70.0 | -2.7 | 10th Coolest | 80.5 (1939) | 65.1 (1974) | 78.3 |
| Southwest | 70.0 | -3.7 | 7th Coolest | 81.2 (1931) | 66.4 (1974) | 78.3 |
| South Central | 72.0 | -2.1 | 21st Coolest | 81.3 (1998) | 66.3 (1974) | 80.5 |
| Southeast | 70.8 | -2.3 | 17th Coolest | 81.2 (1939) | 65.9 (1974) | 78.8 |
| Statewide | 69.4 | -3.0 | 10th Coolest | 79.8 (1931) | 64.7 (1974) | 77.4 |

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 | 96 | 16th | Buffalo | 35 | 28th | Kenton | 2.07 | Arnett | 1.59 | 2nd | Arnett |
| North Central | 96 | 30th | Fairview | 40 | 25th | Seiling | 1.72 | May Ranch | 0.75 | 10th | Seiling |
| Northeast | 96 | 16th | Burbank | 38 | 29th | Nowata | 3.86 | Porter | 3.17 | 17th | Vinita |
| West Central | 95 | 30th | Erick | 40 | 25th | Camargo | 2.81 | Retrop | 1.34 | 10th | Butler |
| Central | 96 | 16th | Perkins | 38 | 29th | Bristow | 4.43 | Okemah | 2.68 | 17th | Bowlegs |
| East Central | 96 | 16th | Webbers Falls | 39 | 29th | Cookson | 5.76 | Eufaula | 2.98 | 17th | Okmulgee |
| Southwest | 96 | 16th | Tipton | 41 | 25th | Mangum | 6.07 | Apache | 4.15 | 17th | Apache |
| South Central | 98 | 22nd | Newport | 41 | 29th | Centrahoma | 4.16 | Ketchum Ranch | 3.22 | 17th | Ketchum Ranch |
| Southeast | 97 | 16th | Antlers | 37 | 29th | Wister | 4.74 | Mt Herman | 2.58 | 23rd | Idabel |
| Statewide | 98 | 22nd | Newport | 35 | 28th | Kenton | 6.07 | Apache | 4.15 | 17th | Apache |

## October Climatological Outlook

October typically brings Oklahoma some of its most pleasant weather. Days are usually pleasantly warm and nights typically are refreshingly cool. On the occasions that the weather does turn nasty, however, the result too often is flood, as October seems to be a favored time for extreme precipitation events. The year's tenth month is Oklahoma's 6th warmest and 4th wettest, according to the most recently compiled statewide normals. From 1971 through 2000, the period from which current normals of temperature and precipitation were calculated, Oklahoma's October average temperature was 62.0 degrees Fahrenheit and the average reporting station received a monthly precipitation of 3.38 inches.

## Temperature

Mean: 62.0 degrees
Warmest October: 1963, 70.7 degrees
Coolest October: 1974, 65.4 degrees
Warmest location: Waurika, 66.3 degrees
Coolest Location: Turpin, 56.6 degrees
Hottest recorded: 110 degrees, Waukomis, October 2, 1898
Coldest recorded: 6 degrees, Kenton, October 30, 1993

October is given to wide extremes of precipitation. The larger monthly figures are usually impacted by one or two very large events. Remnants of tropical storms or hurricanes, usually from the Gulf of Mexico, butoccasionally originating inthePacific Ocean, occasionally bring widespread heavy rains to the state during October. At other times, mid-latitude storm systems have stalled over the state and, taking advantage of moisture borne from the Gulf by the prevailing southerly winds, produced prodigious amounts of rain. In many other years, October is virtually without rain. Monthly precipitation totals include a statewide-averaged high of 11.32 inches in 1941, the largest total ever recorded for Oklahoma (any month), and a low of 0.14 inch, attained in 1952. The remnants of Hurricane Norma provided enough rain over a three-day period in October 1981 to give Madill the greatest monthly precipitation total ( 25.80 inches) ever recorded at a recognized reporting station in Oklahoma (all months). A thoroughly extra-tropical thunderstorm system inundated Enid with 15.68 inches of rain in about 12 hours ( 12 inches in just 3 hours) on October 11, 1973. That total, reported the following morning, is the state's greatest 24-hour precipitation in any month, as measured at an official reporting station.

## Precipitation

Mean: 3.38 inches
Wettest Year: 1941, 11.32 inches
Driest Year: 1917 and 1952, 0.14 inches
Wettest location: Smithville, 6.22 inches
Driest location: Kenton, 0.99 inches
Most recorded: 25.80 inches, Madill, 1981
The normal precipitation pattern across Oklahoma in October returns to its familiar configuration with eastern stations receiving substantially more rainfall than those in the west. Normal monthly precipitation across the state during October ranges from 6.22 inches at Smithville to 0.99 inches at Kenton. Snowfall is not common during October, but Regnier, Kenton, and Boise City each average receiving about one inch of snow during the month. Those averages were inflated by a freak snowstorm on October 25 and 26, 1997 that dropped 15 inches of snow on Kenton. As many as 15,000 head of cattle across the panhandle died during that snowstorm.

## Tornadoes

Average October Tornadoes: 2
Most: 27 (1998)

Severe thunderstorms, apart from the floods, historically have been little more than footnotes in October for most of the state's history. However, recent occurrences have altered that notion somewhat. Reasonably comprehensive and well-documented tornado records in the state date from 1950. During those 54 years, 123 October tornadoes have been identified in Oklahoma, an average of 2.3 per year. There were no October tornadoes reported during 23 of those years. However, 25 tornadoes were reported in the state on October 4, 1998 and 19 more were reported on October 9, 2001. Those two days account for over one-third of the tornadoes reported (and confirmed) within the state in October during that 54-year period. The state's monthly total of 27 tornadoes during October 1998 represents the most tornadoes ever reported within any state during an October.

October Normal Monthly Maximum Temperature (1971-2000)


October Normal Monthly Minimum Temperature (1971-2000)


October Normal Precipitation (1971-2000)


October 1, 2006 Soil Moisture Conditions at 25cm


## U.S. Drought Monitor

 Oklahoma|  | Drought Conditions (Percent Area) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
| Current | 2.7 | 97.3 | 92.7 | 46.2 | 16.6 | 0.0 |
| Last Week <br> (9/19/2006 map) | 2.6 | 97.4 | 94.3 | 46.2 | 16.6 | 5.5 |
| 3 Months Ago <br> (6/13/2006 map) | 0.0 | 100.0 | 88.4 | 67.5 | 33.2 | 0.0 |
| Start of <br> Calendar Year <br> (1/3/2006 map) | 1.3 | 98.7 | 79.9 | 40.8 | 10.1 | 5.7 |
| Start of <br> Water Year <br> (10/4/2005 map) | 80.1 | 19.9 | 9.1 | 0.2 | 0.0 | 0.0 |
| One Year Ago <br> (9V27/2005 map) | 81.9 | 18.1 | 8.1 | 0.2 | 0.0 | 0.0 |

Intensity:


D2 Drought - Severe

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

http://drought.unl.edu/dm



Percent Likelihood of Above or Below Average Precipitation*

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

## October 2006 U.S. Temperature Forecast



Percent Likelihood
of Above and Below
Average Temperatures*

$\square$| $10 \%-20 \%$ |
| :--- |
| $5 \%-10 \%$ |
| $0 \%-5 \%$ |$\quad \mathrm{~A}=$ Above


$\square$| $0 \%-5 \%$ |
| :--- |
| $5 \%-10 \%$ |$\quad \mathrm{~B}=\mathrm{Below}$

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

## October Climate Normals

| Climate Division | Max. Temperature $(\infty \mathbf{F})$ | Min. Temperature $(\infty \mathbf{F})$ | Avg. Temperature $(\infty \mathbf{F})$ | Precipitation (inches) |
| :--- | ---: | ---: | ---: | ---: |
| 1 | 73.70 | 42.90 | 58.30 | 1.49 |
| 2 | 73.50 | 46.50 | 60.00 | 2.66 |
| 3 | 73.80 | 48.70 | 61.30 | 3.62 |
| 4 | 73.70 | 47.20 | 60.50 | 2.47 |
| 5 | 74.40 | 49.30 | 61.80 | 3.64 |
| 6 | 74.50 | 50.00 | 62.30 | 4.19 |
| 7 | 75.80 | 48.90 | 62.30 | 2.99 |
| 8 | 76.10 | 50.80 | 63.50 | 4.17 |
| 9 | 76.10 | 49.50 | 62.80 | 4.98 |
| Statewide | 74.60 | 48.30 | 61.50 | 3.48 |

## 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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[^0]:    Depart. $=$ Departure from 30-year normal

