The flooding rains of the previous few months diminished considerably during September, which ranked as the 55th driest on record at just under an inch below normal. Heavy rains and flooding still occurred, but were mainly isolated to a strip of Oklahoma from west central through east central Oklahoma. The month was on the warm side as well and finished as the 35th warmest on record. Despite finishing with above normal temperatures, September still had a decent cold snap from the 10th-12th following a strong cold front. Low temperatures dropped into the 40 s and 50 s across the state, with the lowest temperature of the month, 39 degrees, being recorded at the Beaver Mesonet site on the 11th. Severe weather was relatively scarce compared to the tumultuous few months prior to this one. As mentioned, flooding was the main concern, although hail to the size of golf balls injured one person south of Shattuck during a severe storm on the 26 th.

## Precipitation

The statewide average precipitation total of just under three inches does not depict the state's conditions entirely. Most of south central Oklahoma had a deficit of at least four inches, which ranked that area as the 19th driest on record. The Panhandle was similarly ranked as the 24th driest with a deficit of just over an inch. In contrast, the west central region had surpluses of 2-4 inches locally, and ranked as the 31st wettest September on record for that area. East central Oklahoma led the state with an average of more than five inches, which ranked as the 34th wettest on record.

## Temperature

Temperatures were above average across the entire state, with a statewide average temperature that finished nearly two degrees above normal. The Panhandle was well over two degrees above normal, the 22nd warmest September on record for that section of the state. Triple-digit temperatures were rare during the month, occurring four different locations in far northwestern Oklahoma on the sixth.

| September 2007 Statewide Extremes |  |  |  |
| :---: | :---: | :---: | :---: |
| Description | Extreme | Station | Date |
| High Temperature | $101^{\circ} \mathrm{F}$ | Hooker | Sept. 6 |
| Low Temperature | $39^{\circ} \mathrm{F}$ | Beaver | Sept. 11 |
| High Precipitation | 8.15 in . | Westville |  |
| Low Precipitation | 0.28 in. | Hooker |  |

## September Daily Highlights

September 1-3: The month's first three days were dominated by surface high pressure, which meant sunny skies and warm temperatures. Highs during these three days were mostly in the upper 80s and low 90s. The dry air allowed temperatures to fall into the 50 s and 60 s during the nighttime hours. A few showers popped up in southern Oklahoma on the third, but precipitation amounts remained light.

September 4-10: An upper-level low moving across northeastern Texas fired off showers and thunderstorms across much of the state from the fourth through the sixth. Fueled by abundant tropical moisture, the storms were mainly rain producers on the fourth and fifth. The storms that struck on the sixth were a bit more powerful. Small hail and wind gusts greater than 60 mph were common in southwestern Oklahoma that evening. A cold front moved in from the north on the seventh and stalled across central Oklahoma. That front lingered and the showers and storms remained for the next several days. Flooding was a problem with these storms, mostly in the north and east. A storm on the tenth struck the Oklahoma City metropolitan area and dropped more than six inches of rainfall at Will Rogers Airport in about six hours. The front passed through the remainder of the state late on the tenth.

September 11-16: Cooler weather moved in after the front's passage. The 11th was 10-20 degrees cooler than average with highs in the 70s and 80s to go along with winds from the north at 20 mph . The month's coldest temperature of 39 degrees was recorded that morning by the Beaver Mesonet site. The next few days were seasonable with lows in the 50s and 60s and highs in the 80s. Very little rain occurred through this period, although a few showers on the 15 th left about a half of an inch of rainfall in the rain gauges in northeastern Oklahoma.

September 17-19: An approaching storm system from the west triggered storms in the Panhandle on the 17th. Those storms moved into western Oklahoma that afternoon but rainfall amounts remained on the light side. Highs were in the 80 s and 90 s and winds gusted to over 25 mph . More of the same on the 18 th as the storm system remained out west. The system finally moved across the state on the 19th, triggering strong storms in the northwest. More than an inch fell in some locales across the area. Some small hail accompanied these storms, which never reached severe limits.

September 20-22: Another warm and dry period, these three days were marked by clear skies and highs in the 80s and 90s. A cold front approached from the north on the 22nd.

September 23-26: A return of tropical moisture meant a return of showers and thunderstorms. Most of the rain during this period occurred in east central Oklahoma. Nearly five inches fell at the Eufaula Mesonet site over the four days. Not much severe weather to speak of, other than hail to the size of golf balls near Shattuck on the 26th which destroyed windshields and even injured one person. High temperatures were in the 80 s and 90 s on both the 23 rd and 24 th, but dropped to more seasonable levels in the 70 s and 80 s following a cold front passage on the 25th. Low temperatures were in the 40 s and 50 s on the 25 th and 26 th.

September 27-30: The month's final four days were mostly dry and warm, although a few showers did pop up from time to time - mainly on the 28th and 30th. Outflow boundaries from storms in Kansas triggered storms across the west on the 28th. Some of the storms reached severe levels each day, with winds and small hail being the biggest threat. A cold front entered the state on the 30th, ending the month with a few showers and winds from the north at $20-25 \mathrm{mph}$, gusting as high as 40 mph . High temperatures that day were in the 80 s and 90 s , 10 degrees warmer than normal for that day.

| September 2007 Statewide Statistics |  |
| :--- | :--- | :--- | :--- |
|  | Temperature <br> Average |
| Depart. | Rank (1895-2007) |$|$

## Precipitation

|  | Precipitation |  | Rank (1895-2007) |
| :---: | :---: | :---: | :---: |
|  | Total | Depart. |  |
| Month (Sept) | 2.93 in. | -0.88 in. | 55th Driest |
| Year-to-Date <br> (Jan-Sept) | 35.49 in. | 7.02 in. | 7th Wettest |

Depart. $=$ Departure from 30-year normal

## September 2007 Severe Weather

## Significant Tornadoes (EF2 or greater)

No significant tornadoes were reported in the state.

## Hail (2 inches in diameter or greater)

No significant hail were reported in the state.

## Wind Gusts (70 mph or greater)

No significant wind gusts were reported in the state.

## Flooding

| Location | County | Day |
| :--- | :--- | :--- |
| 2 E Broken Arrow | Wagoner | 8 |
| 3 S Collinsville | Tulsa | 8 |
| Ames | Major | 8 |
| Oilton | Creek | 8 |
| Putnam | Dewey | 8 |
| Sallisaw | Sequoyah | 8 |
| Talala | Rogers | 8 |
| Tulsa | Tulsa | 8 |


| Location | County | Day |
| :--- | :--- | :--- |
| 3 E Corinne | Pushmataha | 9 |
| 5 SW Hollis | Harmon | 9 |
| 9 SW Heavener | Le Flore | 9 |
| Big Cedar | Le Flore | 9 |
| Hartshorne | Pittsburg | 9 |
| Muskogee | Muskogee | 9 |
| 8 W Moore | Cleveland | 10 |

## Record Event Reports

| Description | Day |  | Location | Record |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Previous Record | Year |  |  |  |  |
| Daily Maximum Rainfall | 10 | Oklahoma City | 6.28 | 2.4 | 1925 |

## September 2007 Observed Precipitation



September 2007 Departure from Normal Precipitation


## September 2007 Percent of Normal Precipitation



September 2007 Average Soil Moisture at 25cm


September 2007 Average Temperature


September 2007 Departure from Normal Temperature


| NAME | MEAN TEMP | HIGH <br> temp | DAY | $\begin{aligned} & \text { LOW } \\ & \text { TEMP } \end{aligned}$ | DAY | HDD | CDD |  | $\begin{aligned} & \text { HIGH } \\ & 24-\mathrm{HR} \end{aligned}$ | DAY | NAME | MEAN TEMP | $\begin{aligned} & \text { HIGH } \\ & \text { TEMP } \end{aligned}$ | DAY | $\begin{aligned} & \text { LOW } \\ & \text { TEMP } \end{aligned}$ | DAY | HDD | CDD |  | $\begin{aligned} & \text { HIGH } \\ & 24-\mathrm{HR} \end{aligned}$ | DAY |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PANHANDLE |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Arnett | 72.5 | 96 | 6 | 47 | 12 | 3 | 229 | 1.43 | . 80 | 7 | Goodwell | 72.0 | 101 | 6 | 43 | 11 | 24 | 234 | . 35 | . 22 | 24 |
| Beaver | 73.3 | 101 | 6 | 39 | 11 | 17 | 267 | . 94 | . 67 | 19 | Hooker | 72.8 | 101 | 6 | 40 | 11 | 23 | 258 | . 28 | . 11 | 29 |
| Boise City | 69.3 | 97 | 6 | 42 | 11 | 38 | 167 | 1.89 | 1.22 | 23 | Kenton | 69.6 | 97 | 16 | 41 | 26 | 38 | 177 | . 91 | . 41 | 17 |
| Buffalo | 73.8 | 100 | 6 | 43 | 26 | 13 | 277 | . 45 | . 19 | 17 | Slapout | 72.5 | 98 | 6 | 47 | 12 | 10 | 234 | . 72 | . 40 | 8 |
| NORTH CENTRAL |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Alva | 73.7 | 97 | 6 | 46 | 11 | 5 | 265 | 1.15 | . 63 | 8 | May Ranch | 72.9 | 96 | 6 | 47 | 11 | 6 | 243 | 1.32 | . 52 | 19 |
| Blackwell | 73.9 | 93 | 21 | 50 | 11 | 5 | 273 | 1.50 | . 81 | 8 | Medford | 74.3 | 95 | 6 | 48 | 11 | 3 | 282 | 1.88 | 1.11 | 8 |
| Breckinridge | 73.8 | 94 | 6 | 51 | 12 | 3 | 267 | 3.09 | 1.75 | 8 | Newkirk | 73.0 | 90 | 3 | 50 | 11 | 7 | 248 | 4.03 | 2.26 | 8 |
| Cherokee | 74.4 | 97 | 6 | 50 | 11 | 0 | 281 | 2.16 | 1.81 | 8 | Red Rock | 73.8 | 92 | 6 | 52 | 11 | ** | **** | 6.37 | 2.79 | 8 |
| Fairview | 74.7 | 96 | 6 | 51 | 11 | 0 | 292 | 5.69 | 2.85 | 7 | Seiling | 73.3 | 94 | 6 | 48 | 12 | 3 | 252 | 1.97 | . 92 | 7 |
| Freedom | 73.4 | 97 | 6 | 46 | 11 | 7 | 257 | 2.18 | 1.10 | 19 | Woodward | 73.2 | 95 | 6 | 46 | 11 | 8 | 253 | 1.17 | . 51 | 17 |
| Lahoma | 74.0 | 94 | 6 | 52 | 11 | 1 | 270 | 4.64 | 3.90 | 8 |  |  |  |  |  |  |  |  |  |  |  |
| NORTHEAST |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bixby | 73.9 | 91 | 3 | 53 | 12 | 2 | 268 | 5.57 | 1.61 | 7 | Nowata | 72.5 | 92 | 3 | 51 | 12 | 7 | 232 | 5.30 | 3.32 | 8 |
| Burbank | 73.0 | 91 | 3 | 52 | 11 | 6 | 248 | 2.45 | 1.47 | 8 | Pawnee | 73.7 | 92 | 3 | 52 | 11 | 5 | 267 | 5.28 | 2.27 | 8 |
| Claremore | 74.1 | 94 | 3 | 53 | 12 | 2 | 276 | 6.21 | 1.87 | 8 | Porter | 73.8 | 90 | 2 | 53 | 15 | 3 | 268 | 4.00 | 1.63 | 25 |
| Copan | 72.8 | 93 | 3 | 51 | 15 | 10 | 244 | 2.63 | 1.73 | 8 | Pryor | 73.0 | 92 | 3 | 52 | 12 | 3 | 243 | 3.11 | 1.10 | 8 |
| Foraker | 72.7 | 92 | 3 | 51 | 11 | 6 | 238 | 3.53 | 2.30 | 8 | Skiatook | 73.6 | 93 | 3 | 55 | 12 | 3 | 262 | 5.10 | 2.20 | 8 |
| Inola | 72.4 | 90 | 3 | 52 | 15 | 3 | 224 | 3.58 | 1.48 | 8 | Vinita | 72.3 | 93 | 3 | 51 | 15 | **** | **** | 3.93 | 2.82 | 8 |
| Jay | 72.9 | 93 | 3 | 50 | 12 | 6 | 244 | 5.89 | 1.46 | 25 | Wynona | 73.4 | 94 | 3 | 52 | 15 | 5 | 256 | 4.60 | 1.43 | 8 |
| Miami | 72.6 | 91 | 3 | 50 | 15 | **** | **** | 2.98 | 1.94 | 8 |  |  |  |  |  |  |  |  |  |  |  |
| WEST Central |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bessie | 74.4 | 94 | 6 | 51 | 12 | 1 | 282 | 1.44 | . 45 | 7 | Putnam | 73.2 | 93 | 6 | 50 | 12 | 2 | 248 | 3.72 | 2.34 | 7 |
| Butler | 74.0 | 94 | 6 | 48 | 12 | 1 | 270 | 5.24 | 4.05 | 8 | Retrop | 74.9 | 94 | 6 | 51 | 12 | - | 297 | 3.32 | 1.23 | 9 |
| Camargo | 73.1 | 96 | 6 | 47 | 12 | 2 | 245 | 4.25 | 2.61 | 7 | Watonga | 73.6 | 92 | 21 | 50 | 11 | , | 261 | 2.28 | 1.24 | 8 |
| Cheyenne | 72.7 | 94 | 6 | 48 | 11 |  | 235 | 6.31 | 4.64 | 8 | Weatherford | 74.8 | 94 | 6 | 51 | 11 | 1 | 294 | 1.27 | 1.02 | 8 |
| Erick | 73.6 | 95 | 6 | 46 | 12 | 2 | 259 | 2.28 | . 89 | 9 |  |  |  |  |  |  |  |  |  |  |  |
| CENTRAL |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Acme | 75.4 | 92 | 21 | 46 | 12 | 3 | 315 | 1.48 | 1.12 | 28 | Norman | 74.8 | 90 | 6 | 52 | 12 | 0 | 295 | 2.98 | 1.08 | 10 |
| Bowlegs | 74.6 | 91 | 6 | 50 | 12 | 0 | 288 | 1.54 | . 51 | 25 | Oilton | 72.4 | 91 | 3 | 49 | 12 | , | 232 | 4.95 | 1.91 | 8 |
| Bristow | 73.2 | 92 | 3 | 51 | 12 | 5 | 251 | 4.78 | 1.36 | 10 | Oklahoma City | 74.6 | 90 | 6 | 51 | 12 | 0 | 287 | 3.30 | 1.75 | 10 |
| Chandler | 73.8 | 90 | 3 | 52 | 15 | 3 | 268 | 5.99 | 2.14 | 10 | Oklahoma City | 74.9 | 91 | 6 | 53 | 15 | 1 | 296 | 1.72 | . 98 | 10 |
| Chickasha | 75.4 | 94 | 21 | 49 | 12 | 1 | 312 | 2.07 | . 89 | 9 | Oklahoma City | 75.6 | 91 | 6 | 54 | 12 | 0 | 319 | 3.04 | 2.56 | 10 |
| El Reno | 72.8 | 91 | 6 | 43 | 12 | 13 | 247 | 1.22 | . 82 | 25 | Okemah | 74.1 | 91 | 6 | 52 | 12 | 1 | 275 | 5.52 | 2.87 | 25 |
| Guthrie | 74.9 | 93 | 21 | 51 | 12 | 4 | 302 | . 34 | . 11 | 8 | Perkins | 74.6 | 91 | 3 | 52 | 12 | 3 | 291 | 2.54 | 1.27 | 8 |
| Kingfisher | 74.8 | 93 | 6 | 49 | 12 | 1 | 295 | 1.52 | . 51 | 25 | Shawnee | 74.1 | 90 | 6 | 51 | 15 | 1 | 274 | 2.35 | . 53 | 26 |
| Marena | 73.6 | 92 | 6 | 51 | 12 | 6 | 265 | 3.06 | 1.68 | 7 | Spencer | 74.3 | 90 | 6 | 51 | 15 | 1 | 280 | 2.12 | . 98 | 25 |
| Minco | 74.5 | 92 | 6 | 52 | 15 | 0 | 285 | . 89 | . 28 | 19 | Stillwater | 74.2 | 92 | 3 | 52 | 12 | 2 | 277 | 4.60 | 2.02 | 8 |
| Marshall | 74.8 | 94 | 6 | 51 | 12 | 2 | 296 | 3.73 | 1.84 | 8 | Washington | 75.3 | 91 | 21 | 53 | 12 | - | 310 | 2.06 | 1.38 | 9 |
| Ninnekah | 75.7 | 93 | 6 | 49 | 12 | 0 | 321 | 1.23 | . 60 | 28 |  |  |  |  |  |  |  |  |  |  |  |
| east central |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Calvin | 74.4 | 92 | 8 | 50 | 12 | 0 | 282 | 2.42 | 1.30 | 9 | Sallisaw | 74.7 | 93 | 2 | 53 | 12 | 0 | 292 | 3.79 | . 78 | 30 |
| Cookson | 72.5 | 92 | 3 | 50 | 15 | 5 | 231 | 7.14 | 2.09 | 8 | Stigler | 73.7 | 91 | 3 | 52 | 12 | 0 | 262 | 6.44 | 3.14 | 26 |
| Eufaula | 74.4 | 90 | 3 | 55 | 12 | 0 | 283 | 7.86 | 3.78 | 25 | Stuart | 74.7 | 91 | 3 | 53 | 12 | 0 | 292 | 3.11 | 1.32 | 9 |
| Haskell | 73.8 | 91 | 3 | 52 | 15 | 2 | 266 | 3.97 | 1.60 | 25 | Tahlequah | 73.8 | 94 | 3 | 51 | 12 | - | 265 | 5.05 | 1.78 | 7 |
| Hectorville | 74.0 | 90 | 3 | 53 | 15 | 3 | 275 | 3.89 | . 93 | 8 | Webbers Falls | 75.1 | 93 | 3 | 54 | 12 | 0 | 302 | 7.26 | 1.78 | 5 |
| McAlester | 75.1 | 90 | 8 | 53 | 12 | 0 | 304 | 4.44 | 1.09 | 23 | Westville | 72.7 | 94 | 3 | 53 | 12 | 2 | 233 | 8.15 | 2.26 | 5 |
| Okmulgee | 73.8 | 91 | 3 | 52 | 12 | 2 | 267 | 3.85 | 1.35 | 4 |  |  |  |  |  |  |  |  |  |  |  |
| SOUTHWEST |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Altus | 76.2 | 93 | 22 | 53 | 12 | 0 | 336 | ***** | **** | *** | Hollis | 75.5 | 96 | 6 | 52 | 12 | 0 | 315 | 4.04 | 3.07 | 9 |
| Apache | 74.7 | 92 | 6 | 52 | 12 | 1 | 290 | 2.65 | 1.75 | 28 | Mangum | 75.1 | 95 | 6 | 47 | 12 | 1 | 305 | 1.94 | 1.19 | 6 |
| Fort Cobb | 74.0 | 92 | 6 | 49 | 12 | 1 | 272 | . 70 | . 29 | 25 | Medicine Park | 75.4 | 91 | 6 | 55 | 12 | 0 | 313 | . 94 | . 19 | 26 |
| Grandfield | 77.4 | 95 | 7 | 55 | 12 | 0 | 372 | 3.44 | 3.18 | 9 | Tipton | 77.5 | 95 | 6 | 53 | 12 | 0 | 374 | 1.04 | . 61 | 9 |
| Hinton | 73.6 | 92 | 6 | 50 | 12 | 4 | 262 | ***** | ***** | *** | Walters | 77.0 | 94 | 22 | 52 | 12 | 0 | 361 | . 65 | . 24 | 9 |
| Hobart | 75.4 | 95 | 6 | 50 | 12 | 0 | 311 | 2.43 | 1.24 | 26 |  |  |  |  |  |  |  |  |  |  |  |
| SOUTH CENTRAL |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ada | 75.3 | 92 | 6 | 49 | 12 | 2 | 310 | . 30 | . 09 | 26 | Madill | 77.3 | 93 | 8 | 52 | 12 | 0 | 369 | 1.08 | . 66 | 25 |
| Ardmore | 76.4 | 93 | 8 | 55 | 12 | 0 | 343 | . 66 | . 27 | 25 | Newport | 77.8 | 96 | 8 | 54 | 12 | 0 | 383 | 1.52 | . 76 | 25 |
| Burneyville | 76.7 | 96 | 8 | 53 | 12 | 0 | 350 | . 90 | . 36 | 3 | Pauls Valley | 75.9 | 92 | 6 | 53 | 12 | 0 | 326 | 1.56 | . 66 | 4 |
| Byars | 75.1 | 90 | 6 | 52 | 15 | 0 | 302 | 1.67 | 1.29 | 9 | Ringling | 77.2 | 96 | 8 | 52 | 12 | 0 | 365 | 2.39 | 1.39 | 19 |
| Centrahoma | 75.5 | 91 | 6 | 50 | 12 | 1 | 315 | 1.14 | . 47 | 4 | Sulphur | 75.4 | 91 | 6 | 50 | 12 |  | 312 | 1.54 | . 49 | 9 |
| Durant | 76.4 | 92 | 8 | 57 | 12 | 0 | 342 | 3.47 | 1.45 | 4 | Tishomingo | 75.8 | 95 | 8 | 52 | 12 | 0 | 324 | . 69 | . 52 | 8 |
| Fittstown | 75.0 | 93 | 8 | 50 | 12 | 1 | 302 | . 89 | . 27 | 4 | Vanoss | 74.7 | 91 | 6 | 50 | 12 | 1 | 292 | 2.42 | 1.14 | 9 |
| Ketchum Ranch | ***** | *** | ** | *** | *** | **** | **** | 1.11 | . 39 | 4 | Waurika | 77.7 | 96 | 21 | 53 | 12 | 0 | 382 | . 82 | . 33 | 25 |
| Lane | 75.2 | 92 | 8 | 53 | 12 | 0 | 307 | 2.69 | 1.40 | 25 |  |  |  |  |  |  |  |  |  |  |  |
| SOUTHEAST |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Antlers | 74.4 | 93 | 8 | 51 | 12 | 0 | 282 | 1.40 | . 48 | 10 | Idabel | 75.8 | 94 | 2 | 54 | 29 | 0 | 323 | 2.21 | . 97 | 9 |
| Broken Bow | 74.0 | 93 | 2 | 51 | 29 | 0 | 271 | 5.05 | 1.68 | 9 | Mt Herman | 73.9 | 93 | 2 | 55 | 12 | 0 | 267 | 4.78 | 1.65 | 9 |
| Clayton | 75.5 | 96 | 2 | 53 | 12 | 0 | 314 | 3.51 | 1.32 | 9 | Talihina | 74.6 | 94 | 2 | 53 | 12 | 0 | 287 | 6.54 | 3.66 | 9 |
| Cloudy | 74.1 | 93 | 2 | 54 | 29 | 0 | 274 | 4.68 | 1.54 | 9 | Wilburton | 74.5 | 91 | 19 | 53 | 12 | 0 | 284 | 5.96 | 2.56 | 9 |
| Hugo | 75.5 | 92 | 2 | 57 | 12 | 0 | 314 | 2.84 | . 84 | 26 | Wister | 73.6 | 95 | 2 | 49 | 29 | 0 | 257 | 4.45 | 2.52 | 9 |

September 2007 Mesonet Precipitation Comparison

| Climate Division | Precipitation (inches) | Departure from Normal (inches) | Rank since 1895 | Wettest on Record (Year) | Driest on Record (Year) | Aug-06 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Panhandle | 0.87 | -1.01 | 24th Driest | 4.57 (1985) | 0.05 (1956) | 1.33 |
| North Central | 2.86 | -0.27 | 48th Wettest | 7.08 (1945) | 0.04 (2000) | 0.93 |
| Northeast | 4.28 | -0.50 | 50th Wettest | 12.42 (1986) | 0.13 (1948) | 2.17 |
| West Central | 3.35 | 0.32 | 31st Wettest | 8.64 (1986) | 0.02 (2000) | 1.46 |
| Central | 2.74 | -1.37 | 52nd Driest | 10.68 (1945) | 0.19 (1956) | 2.39 |
| East Central | 5.18 | 0.22 | 34th Wettest | 10.40 (1970) | 0.23 (1948) | 3.99 |
| Southwest | 1.98 | -1.41 | 45th Driest | 8.68 (1936) | 0.00 (1898) | 2.81 |
| South Central | 1.46 | -2.88 | 19th Driest | 9.98 (1936) | 0.00 (1909) | 2.49 |
| Southeast | 4.14 | -0.43 | 44th Wettest | 11.75 (1974) | 0.29 (1948) | 3.24 |
| Statewide | 2.93 | -0.88 | 55th Driest | 7.86 (1945) | 0.27 (1956) | 2.29 |

## 2006 and 2007 Statewide Precipitation Monthly Totals vs. Normal



September 2007 Mesonet Temperature Comparison

| Climate Division | Average Temp (F) | Departure from Normal (F) | Rank since 1895 | Hottest on Record (Year) | Coldest on Record (Year) | Aug-06 (F) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Panhandle | 72.0 | 2.6 | 22nd Warmest | 76.2 (1931) | 62.4 (1974) | 65.2 |
| North Central | 73.7 | 1.6 | 37th Warmest | 80.8 (1931) | 64.0 (1974) | 69.0 |
| Northeast | 73.2 | 1.5 | 40th Warmest | 79.1 (1931) | 63.4 (1974) | 69.0 |
| West Central | 73.8 | 1.9 | 32nd Warmest | 80.4 (1931) | 64.4 (1974) | 69.2 |
| Central | 74.4 | 1.6 | 37th Warmest | 81.3 (1931) | 65.0 (1974) | 69.9 |
| East Central | 74.1 | 1.4 | 46th Warmest | 80.5 (1939) | 65.1 (1974) | 70.0 |
| Southwest | 75.6 | 1.9 | 31st Warmest | 81.2 (1931) | 66.4 (1974) | 70.0 |
| South Central | 76.1 | 2.0 | 33rd Warmest | 81.3 (1998) | 66.3 (1974) | 72.0 |
| Southeast | 74.6 | 1.5 | 49th Warmest | 81.2 (1939) | 65.9 (1974) | 70.8 |
| Statewide | 74.2 | 1.8 | 35th Warmest | 79.8 (1931) | 64.7 (1974) | 69.4 |

2006 and 2007 Statewide Temperature Monthly Averages vs. Normal


| Climate <br> Division | High Temp <br> (F) | Day | Station | Low Temp <br> (F) | Day | Station | High <br> Monthly Rainfall (inches) | Station | High Daily Rainfall (inches) | Day | Station |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Panhandle | 101 | 6th | Hooker | 39 | 11th | Beaver | 1.89 | Boise City | 1.22 | 23rd | Boise City |
| North Central | 97 | 6th | Alva | 46 | 11th | Freedom | 6.37 | Red Rock | 3.90 | 8th | Lahoma |
| Northeast | 94 | 3rd | Wynona | 50 | 12th | Jay | 6.21 | Claremore | 3.32 | 8th | Nowata |
| West Central | 96 | 6th | Camargo | 46 | 12th | Erick | 6.31 | Cheyenne | 4.64 | 8th | Cheyenne |
| Central | 94 | 21st | Chickasha | 43 | 12th | El Reno | 5.99 | Chandler | 2.87 | 25th | Okemah |
| East Central | 94 | 3rd | Westville | 50 | 15th | Cookson | 8.15 | Westville | 3.78 | 25th | Eufaula |
| Southwest | 96 | 6th | Hollis | 47 | 12th | Mangum | 4.04 | Hollis | 3.18 | 9th | Grandfield |
| South Central | 96 | 21st | Waurika | 49 | 12th | Ada | 3.47 | Durant | 1.45 | 4th | Durant |
| Southeast | 96 | 2nd | Clayton | 49 | 29th | Wister | 6.54 | Talihina | 3.66 | 9th | Talihina |
| Statewide | 101 | 6th | Hooker | 39 | 11th | Beaver | 8.15 | Westville | 4.64 | 8th | Cheyenne |

## October Climatological Outlook

NORMAN - 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.

## Precipitation

Mean: 3.38 inches
Wettest October: 1941, 11.32 inches
Driest October: 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
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, but occasionally originating in the Pacific 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.

## 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
Warmest recorded: 110 degrees, Waukomis, October 2, 1898
Coldest recorded: 6 degrees, Kenton, October 30, 1993
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.

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.

## Tornadoes

Average October Tornadoes: 2
Most: 27 (1998)

## October Normal Daily Maximum Temperature (1971-2000)



October Normal Daily Minimum Temperature (1971-2000)


October Normal Precipitation (1971-2000)


October 1, 2007 Soil Moisture Conditions at 25cm


## U.S. Drought Monitor <br> Oklahoma

|  | Drought Conditions (Percent Area) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
| Current | 95.6 | 4.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Last Week (09/19/2007 map) | 95.6 | 4.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3 Months Ago (07/03/2007 map) | 96.9 | 3.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Start of <br> Calendar Year <br> (01/02/2007 map) | 31.3 | 68.7 | 39.8 | 24.5 | 18.2 | 0.0 |
| Start of <br> Water Year <br> (10003/2006 map) | 2.7 | 97.3 | 92.7 | 46.2 | 16.6 | 0.0 |
| One Year Ago (09/28/2006 map) | 2.7 | 97.3 | 92.7 | 46.2 | 16.6 | 0.0 |



Intensity:
D0 Abnormally Dry
D1 Drought - Moderate
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


Released Thursday, September 27, 2007 Author: David Miskus, JAWF/CPC/NOAA

Drought to persist or intensify

Drought ongoing, some improvement

Depicts large-scale trends based on subjectively derived probabilities guided Drought likely to improve, impacts ease
Drought development likely
by short- and long-range statistical and dynamical forecasts. Short-term events - such as individual storms - cannot be accurately forecast more than a few days in advance Use caution for applications - such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.

October 2007 U.S. Precipitation Forecast


## October 2007 U.S. Temperature Forecast



## October Climate Normals

| Climate Division | Max. Temperature $\left({ }^{\mathbf{}} \mathbf{F}\right.$ ) | Min. Temperature $\left({ }^{\mathbf{}} \mathbf{} \mathbf{F}\right)$ | Avg. Temperature $\left({ }^{\circ} \mathbf{F}\right)$ | 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

- 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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Dr. Ken Crawford, Director and State Climatologist

Editor
Gary D. McManus, Assistant State Climatologist

Contributors
Gary D. McManus
Mark A. Shafer, Director of Climate Information
Derek S. Arndt, Assistant State Climatologist
Howard Johnson, Associate State Climatologist (Ret.)

Design
Stdrovia Blackburn, Graphic Design Manager

For more information, contact:
Oklahoma Climatological Survey
The University of Oklahoma
120 David L. Boren Blvd., Suite 2900
Norman, OK 73072-7305
tel: 405-325-2541
fax: 405-325-2550
e-mail: ocs@ou.edu
http://www.ocs.ou.edu

