# Oklahoma Monthly Climate Summary

Fears of the strengthening drought and associated wildfire danger, so prevalent through the first three months of the year, lasted about a week into April before Mother Nature unleashed spring on Oklahoma. Flooding, gigantic hail, severe winds and a final week filled with the threat of tornadoes were all in the offing during the month. The drought was quenched in most parts of the state by repeated storm systems. According to preliminary data from the Oklahoma Mesonet, the robust moisture propelled April to rank as the seventh wettest on record, dating back to 1895. The statewide average of 6.11 inches was nearly 3 inches above normal.

| Description        | Extreme   | Station    | Day |
|--------------------|-----------|------------|-----|
| High Temperature   | 92°F      | Altus      | 25  |
| Low Temperature    | 22°F      | Kenton     | 1   |
| High Precipitation | 16.95 in. | Broken Bow |     |
| Low Precipitation  | 2.23 in.  | Arnett     |     |

#### **April 2016 Statewide Extremes**

Regional ranks ranged from the third wettest April for southwestern Oklahoma to the 27th wettest in east central parts of the state. Broken Bow led the Mesonet's totals with 16.95 inches while Arnett had a more modest 2.23 inches. A few pockets in far western and east central Oklahoma had below normal rainfall and remained a concern for droughty conditions due to deficits that date to the beginning of the year. The month was also the 39th warmest April on record at 1.5 degrees above normal. Altus recorded a statewide high of 92 degrees on the 25th. Boise City recorded the last freeze of the month with 32 degrees on the 18th.

Despite the gaudy statistics, the real star of the month was the extreme and sometimes violent weather. Wildfires during that dry first week dominated the headlines, and none more so than the "350 Complex Fire" in northwest Oklahoma. The fire began on April 5 and burned uncontrolled for days despite the efforts of fire crews, some from as far away as Tennessee. Emergency management personnel estimated damages at \$2.3 million from the fire as it scorched nearly 90 square miles in Woodward and Harper counties. The weather became much more exciting following that point with a cavalcade of powerful storm systems. Torrential rains fell from the 10th through the 20th, particularly across southern Oklahoma and the western Panhandle. Cimarron County saw severe flooding from 3-6 inches in some areas, nearly a third of their normal annual total. Two confirmed



weak tornadoes touched down near Eva in Texas County on April 15, damaging a couple of farmhouses and out buildings. A few days of nice weather followed from the 21st through the 25th before severe weather erupted again on the heels of two consecutive storm systems. The first on the 26th dropped at least eight confirmed tornadoes from across the state according to local National Weather Service (NWS) offices, although all were considered weak tornadoes rated at EF-0 or EF-1 intensity. Nevertheless, the twisters and associated straight-line winds were quite damaging to power infrastructure, trees, residences and businesses.

# April 2016 Statewide Statistics

Temperature

|                             | Average | Depart. | Rank (1895-2016) |
|-----------------------------|---------|---------|------------------|
| Month (April)               | 60.9°F  | 1.5°F   | 39th Warmest     |
| Season-to-Date<br>(Mar-Apr) | 57.7°F  | 3.0°F   | 11th Warmest     |
| Year-to-Date<br>(Jan-Apr)   | 50.3°F  | 2.9°F   | 6th Warmest      |

#### Precipitation

|                             | Total     | Depart.  | Rank (1895-2016) |
|-----------------------------|-----------|----------|------------------|
| Month (April)               | 6.11 in.  | 2.85 in. | 7th Wettest      |
| Season-to-Date<br>(Mar-Apr) | 8.44 in.  | 2.14 in. | 14th Wettest     |
| Year-to-Date<br>(Jan-Apr)   | 10.00 in. | 0.31 in. | 36th Wettest     |

Depart. = departure from 30-year normal

Flash flood warnings were issued for some of the storms, and hail to the size of golf balls was reported. Finally, the month closed out with another storm system on the 29th. Tornadic supercells were once again on the agenda, forming in southwestern Oklahoma before marching to the east and northeast. At least three confirmed tornadoes touched down according to NWS survey teams, but that preliminary number could go higher as more investigations are conducted. As with the twisters previously in the week, the confirmed tornadoes were all of the weak variety, but still damaging. Large hail was widespread with this round of storms. Ice to the size of grapefruits fell in Comanche County, with several other reports of baseball size hail or larger scattered around the state. More flooding occurred, especially across southeastern Oklahoma. The Mesonet site at Broken Bow recorded 8.73 inches of rain on the 29th, and several other southeastern Mesonet sites saw more than 4 inches.

# **APRIL 2016 DAILY SUMMARIES**

**APRIL 1-5:** Although April started off with cooler than normal temperatures, weather conditions quickly became pleasant with increasing temperatures. The warmest Mesonet temperatures recorded in the state increased from 65 degrees in southern Oklahoma on the 1st to 91 degrees in Beaver and Buffalo on the 5th. The coolest maximum temperatures increased from the mid-50s to the upper 70s. Minimum temperatures increased from a 22 to 47 degree range on the 1st to a 39 to 60 degree range four days later. As a trough moved in on the 4th, winds shifted and became breezy. The highest daily wind speed averages in Oklahoma were 13mph on the 1st, 11mph on the 2nd, 16mph on the 3rd, 12mph on the 4th, and 25mph on the 5th. A wind gust of 73mph was reported in Goodwell on the 5th. These high winds, warm temperatures, lack of rain, and low relative humidities created dangerous fire conditions.

**APRIL 6:** Due to a passing cold front, temperatures plummeted and light rain fell in northern Oklahoma. Highs ranged from 67 degrees in Westville to 79 degrees in Altus. Lows were between 26 degrees in Kenton and 56 degrees in Tulsa. Rainfall was fairly insignificant with the highest accumulation only measuring .16 inches in Miami. Average wind speeds were 5-19mph.

**APRIL 7-9:** Trace amounts of rain fell in eastern Oklahoma on the 9th due to an upper level disturbance. Apart from that, however, precipitation was negligible and temperatures were mild. The highest maximum temperatures huddled in the upper 70s and low 80s all three days. The lowest maximum temperatures were in the mid-upper 60s. The highest minimum temperatures measured between 52 and 55 degrees and the lowest minimum temperatures were between 32 and 36 degrees. Average wind speeds were 3-15mph on the 7th, 3-14mph on the 8th, and 3-21mph on the 9th. The highest peak wind gust during this period was 46mph, which occurred in May Ranch on the 7th and Beaver on the 9th.

APRIL 10-12: While some maximum temperatures in the state were able to hit 90 degrees on the 10th, temperatures quickly fell as a cold front passed through. The warmest maximum temperatures the following two days were 74 degrees in Lane and Pauls Valley and 70 degrees in the southeast, respectively. The coolest maximum temperatures were 69 degrees in Westville on the 10th, 51 degrees in Boise City on the 11th, and 58 degrees in Boise City again on the 12th. The warmest minimum temperatures decreased from 61 degrees in Talihina to 52 degrees in Cloudy during this three-day stretch. Likewise, the coolest minimum temperatures decreased from 44 degrees in Hooker to 31 degrees in Boise City. As the cold front approached on the 10th, rain, hail, and severe thunderstorms migrated over portions of the state. The highest daily amounts of rainfall recorded were 2.26 inches at Perkins on the 10th, 2.32 inches in Ardmore on the 11th, and a much smaller amount of .20 inches in Ringling and Waurika on the 12th. 2.00 inch diameter hail was reported in Byers on the 10th and 2.75 inch diameter hail was reported in Atoka on the 11th. While a significant wind gust of 75mph was reported in Hardy on the 10th, it was nowhere near the 90mph wind gust reported in Geronimo that same day. The highest daily average wind speeds were 22mph on the 10th, 16mph on the 11th, and 14mph on the 12th.

**APRIL 13-14**: As the environment tried to rebound from the passing storms, temperatures increased. Maximum temperatures were between 56 degrees in Westville and 76 degrees in Hooker and Slapout on the 13th, and between 64 degrees in Altus and 83 degrees in Kenton on the 14th. The highest minimum temperatures were in the mid-50s and the lowest minimum temperatures were in the mid-30s. Just before showers moved completely east and exited the state, they left 1.33 inches of rain in Idabel, .74 inches in Ringling, and .61 inches in Bowlegs. Other areas in the southeast received less than half an inch. Daily average wind speeds were less than 11mph on the 13th and less than 20mph on the 14th. The highest wind gusts were in the 30s both days and occurred at the Kenton Mesonet site.

APRIL 15-20: A low pressure system and cold front moved in from the west, producing a very wet period for Oklahoma. The highest rainfall accumulations reported each day were 3.01 inches in Boise City on the 15th, 3.75 inches in Tipton on the 16th, 5.34 inches in Ringling on the 17th, 2.05 inches in Mt. Herman on the 18th, 2.25 inches in Walters on the 19th, and 1.61 inches in Broken Bow on the 20th. Some thunderstorms developed and became severe, leaving behind 2.00 inch diameter hail in Cimarron and Texas County on the 15th and flooding in Jackson County on the 16th. Oklahoma City broke its daily maximum rainfall record with 3.39 inches on the 17th. Temperatures were cooler, but also fairly consistent with the highest maximum temperatures in the mid-70s all six days. The lowest maximum temperatures started off at 71 degrees on the 15th, dropped into the lowmid 50s from the 16th through the 19th, and ended at 63 degrees in Boise City on the 20th. The highest minimum temperatures ranged from the mid-50s to the low 60s and the lowest minimum temperatures were between 32 and 42 degrees. Daily average wind speeds gradually decreased each day, measuring less than 24mph on the 15th, less than 22mph on the 16th, less than 19mph on the 17th, less than 13mph on the 18th, and less than 10mph on the 19th and 20th. The highest wind gust during this period was 55mph in Mangum on the 16th, followed by 54mph in Burneyville on the 19th.

**APRIL 21-25**: Despite some lingering showers on the 21st that left as much as .23 inches of rain in El Reno, the 22nd through the 25th took a break from precipitation. Temperatures climbed with the warmest maximum temperature increasing from 77 degrees in the southeast on

the 21st to a searing 92 degrees in Altus on the 25th. The coolest maximum temperatures remained in the 70s. The warmest minimum temperatures increased from 56 degrees in Durant on the 21st to 68 degrees in Burneyville on the 25th. The lowest minimum temperatures measured were 37 degrees in Kenton on the 21st, 38 degrees in Beaver on the 22nd, 44 degrees in Nowata on the 23rd, 46 degrees in Kenton and Boise City on the 24th, and 39 degrees in Kenton on the 25th. The highest daily average wind speeds each consecutive day were 11mph, 13mph, 23mph, 23mph again, and finally, 19mph.

APRIL 26-29: Oklahoma had a bout of severe weather during this period with a dryline initiating storms on the 26th and a warm front directing storms on the 29th. The eastwardnortheastward moving storms produced all modes of severe weather, including floods, hail, high winds, and tornadoes. On the 26th, one Ef-1 tornado started near Mustang and ended in southwest Oklahoma City. That same day, a second EF-1 started in Jones and ended in Luther. Additional tornadoes returned to the state on the 29th with an EF-1 starting in Elgin and ending in Fletcher, an EF-0 occurring in Cyril, and another EF-1 reported in Ninnekah. A number of severe wind gusts (greater than 70mph) were reported in Alfalfa, Grady, Oklahoma, Noble, Comanche, Tulsa, Washington, McIntosh, and Mayes County on the 26th, in Le Flore County on the 27th, and in Pottawatomie County on the 29th. The top two wind gusts were 91mph at the Will Rogers Airport in Oklahoma City and 87mph in Copan on the 26th. Flooding was reported in Kiowa County on the 26th and in McClain and McCurtain County on the 29th. Hail greater than 2.00 inches in diameter fell in Comanche, Seminole, Tillman, McIntosh, and Wagoner County on the 29th. The largest hail reported that day was 4.00 inches in Lake Lawtonka. Apart from the severe storm reports, the highest daily rainfall amounts were 1.76 inches in Marena on the 26th, .61 inches in Wister on the 27th, .72 inches in Buffalo on the 28th, and a hefty 8.73 inches in Broken Bow on the 29th. The highest maximum temperatures were in the 80s and the lowest maximum temperatures decreased from 68 degrees in Boise City to 45 degrees in Kenton. The highest minimum temperatures were between 55 and 65 degrees and the lowest minimum temperatures were in the upper 30s and low 40s in the panhandle.

**APRIL 30**: Rainfall was negligible on the last day of April. Highs were between 53 degrees in Kenton and 81 degrees in Broken Bow and lows were between 34 degrees in Goodwell and 63 degrees in Idabel. Daily average wind speeds were 3-18mph and the highest wind gust was 35mph in Boise City.

# **APRIL 2016 SEVERE WEATHER**

## Hail (2 Inches in Diameter or Greater)

| Size (in) | Location          | County   | Day |
|-----------|-------------------|----------|-----|
| 2.00      | 6 N Byers         | Cotton   | 10  |
| 2.75      | 4 SSE Atoka       | Atoka    | 11  |
| 2.00      | 10 SSW Keyes      | Cimarron | 15  |
| 2.00      | 5 ESE Sturgis     | Texas    | 15  |
| 2.75      | Manitou           | Tillman  | 29  |
| 3.25      | 2 N Manitou       | Tillman  | 29  |
| 3.50      | 1 N Manitou       | Tillman  | 29  |
| 3.75      | 1 N Manitou       | Tillman  | 29  |
| 2.50      | Meers             | Comanche | 29  |
| 2.00      | 1 W Lawton        | Comanche | 29  |
| 2.00      | 3 N Little        | Seminole | 29  |
| 2.50      | 7 N Seminole      | Seminole | 29  |
| 3.43      | 2 N Manitou       | Tillman  | 29  |
| 4.00      | 3 N Lake Lawtonka | Comanche | 29  |
| 2.00      | 3 NW Pierce       | McIntosh | 29  |
| 2.00      | 1 SE Coweta       | Wagoner  | 29  |
| 2.50      | 2 N Redbird       | Wagoner  | 29  |

#### Wind Gusts (75 mph or Greater)

| Speed (mph) | Location                | County       | Day |
|-------------|-------------------------|--------------|-----|
| 73.00       | 2 E Goodwell            | Texas        | 5   |
| 75.00       | 8 SW Hardy              | Kay          | 10  |
| 90.00       | 1 S Geronimo            | Comanche     | 10  |
| 73.00       | 1 SSW Cherokee          | Alfalfa      | 26  |
| 74.00       | 2 SSE Chickasha         | Grady        | 26  |
| 91.00       | 1 E Will Rogers Airport | Oklahoma     | 26  |
| 71.00       | 7 SSE Red Rock          | Noble        | 26  |
| 75.00       | 5 E Lawton              | Comanche     | 26  |
| 72.00       | 5 W Tulsa               | Tulsa        | 26  |
| 87.00       | 2 ENE Copan             | Washington   | 26  |
| 72.00       | 4 WSW Tulsa             | Tulsa        | 26  |
| 70.00       | 3 S Checotaw            | McIntosh     | 26  |
| 70.00       | Spavinaw                | Mayes        | 26  |
| 75.00       | 1 W Spiro               | Le Flore     | 27  |
| 70.00       | 3 S Shawnee             | Pottawatomie | 29  |

#### Flooding

| Location         | County    | Day |
|------------------|-----------|-----|
| Altus            | Jackson   | 16  |
| 3 SW Snyder      | Kiowa     | 26  |
| Goldsby          | McClain   | 29  |
| 3 NE Cole        | McClain   | 29  |
| Broken Bow       | McCurtain | 29  |
| 1 SW Broken Bow  | McCurtain | 29  |
| 1 SSW Broken Bow | McCurtain | 29  |



# **APRIL 2016 OBSERVED PRECIPITATION**

# **APRIL 2016 DEPARTURE FROM NORMAL PRECIPITATION**





# **APRIL 2016 PERCENT OF NORMAL PRECIPITATION**

# **APRIL 2016 AVERAGE SOIL MOISTURE AT 25CM**





# **APRIL 2016 AVERAGE TEMPERATURE**

# **APRIL 2016 DEPARTURE FROM NORMAL TEMPERATURE**



# **MESONET MONTHLY SUMMARY FOR APRIL 2016**

| NAME  | MEAN<br>TEMP   | HIGH<br>TEMP   | DAY  | LOW<br>TEMP  | DAY  | HDD   | CDD  | ТОТ<br>РРТ   | HIGH<br>24-HR  | DAY  | NAME   | MEAN<br>TEMP  | HIGH<br>TEMP  | DAY   | LOW<br>TEMP   | DAY  | HDD  | CDD  | ТОТ<br>РРТ   | HIGH<br>24-HR  | DAY  |
|---|--|--|--|--|--|---|--|--|--|--|--|---|---|---|---|--|--|--|--|--|--|
| <b>PANHANDLE</b><br>Arnett<br>Beaver<br>Boise City<br>Buffalo   | 59.4<br>57.5<br>52.6<br>58.9   | 89<br>91<br>85<br>91   | 5<br>5<br>5  | 29<br>26<br>24<br>27   | 2<br>2<br>2<br>2   | 196<br>246<br>373<br>213  | 27<br>20<br>1<br>31  | 2.23<br>4.45<br>6.62<br>4.48   | .83<br>2.47<br>3.01<br>1.53  | 16<br>29<br>15<br>29   | Goodwell<br>Hooker<br>Kenton<br>Slapout  | 55.7<br>55.7<br>52.5<br>58.3  | 86<br>89<br>87<br>90  | 5<br>5<br>5<br>5  | 27<br>25<br>22<br>30  | 2<br>1<br>1<br>1   | 283<br>284<br>376<br>224   | 5<br>5<br>2<br>22  | 3.84<br>4.49<br>3.91<br>3.94   | 1.47<br>1.78<br>1.93<br>1.68   | 29<br>29<br>15<br>29                                     |
| NORTH CENTRAL<br>Alva<br>Blackwell<br>Breckinridge<br>Cherokee<br>Fairview<br>Freedom<br>Lahoma   | 59.6<br>59.2<br>59.4<br>60.1<br>60.3<br>59.5<br>59.6   | 90<br>88<br>88<br>90<br>88<br>89<br>88                         | 10<br>10<br>10<br>10<br>10<br>10<br>10               | 27<br>26<br>24<br>29<br>33<br>25<br>28                               | 2<br>2<br>2<br>2<br>2<br>2<br>2  | 189<br>198<br>198<br>175<br>167<br>192<br>****                                    | 26<br>25<br>29<br>27<br>25<br>28<br>****                               | 4.50<br>4.61<br>5.35<br>4.28<br>5.77<br>4.36<br>4.00   | 1.49<br>1.89<br>1.73<br>1.63<br>2.06<br>1.77<br>1.63   | 17<br>17<br>17<br>17<br>17<br>16<br>17                         | May Ranch<br>Medford<br>Newkirk<br>Red Rock<br>Seiling<br>Woodward   | 60.0<br>59.7<br>60.2<br>60.5<br>59.5<br>60.4                                  | 88<br>89<br>88<br>88<br>88<br>88                                | 5<br>10<br>10<br>5<br>10<br>5                                       | 32<br>25<br>28<br>29<br>26<br>30                                | 2<br>2<br>2<br>2<br>2<br>2   | 184<br>189<br>173<br>166<br>193<br>174                                     | 32<br>28<br>30<br>28<br>34                                       | 4.74<br>4.36<br>5.15<br>4.45<br>3.79<br>3.96   | 1.46<br>1.42<br>1.41<br>1.75<br>1.37<br>2.66                                 | 16<br>17<br>17<br>17<br>17<br>16                         |
| NORTHEAST<br>Bixby<br>Burbank<br>Copan<br>Foraker<br>Inola<br>Jay<br>Miami<br>Nowata  | 62.0<br>60.9<br>60.7<br>61.2<br>60.0<br>60.4<br>59.7   | 85<br>87<br>86<br>87<br>84<br>80<br>81<br>83                   | 5<br>10<br>10<br>5<br>26<br>5<br>10                  | 32<br>29<br>31<br>29<br>27<br>31<br>29                               | 2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2                                    | 113<br>173<br>145<br>153<br>135<br>166<br>157<br>180                              | 23<br>24<br>23<br>22<br>16<br>18<br>22                                 | 5.72<br>4.13<br>3.87<br>4.36<br>7.17<br>5.18<br>6.11<br>5.58                                 | 1.08<br>1.31<br>.88<br>1.49<br>2.75<br>2.25<br>1.85<br>1.48                                  | 17<br>17<br>18<br>29<br>29<br>29<br>29                         | Pawnee<br>Porter<br>Pryor<br>Skiatook<br>Talala<br>Tulsa<br>Vinita<br>Wynona   | 61.1<br>62.4<br>60.7<br>61.9<br>61.2<br>62.9<br>59.7<br>61.6                  | 87<br>85<br>83<br>85<br>85<br>87<br>82<br>88                    | 5<br>5<br>5<br>5<br>5<br>26<br>5                                    | 30<br>35<br>28<br>31<br>31<br>35<br>28<br>31                    | 2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2                                      | 146<br>102<br>152<br>120<br>137<br>94<br>175<br>134                        | 30<br>23<br>26<br>24<br>31<br>17<br>30                           | 4.45<br>6.75<br>6.42<br>5.80<br>6.08<br>5.92<br>5.48<br>4.85                         | 1.05<br>1.85<br>2.76<br>1.75<br>1.50<br>1.27<br>1.10<br>1.47                 | 17<br>29<br>29<br>11<br>11<br>19<br>19<br>11             |
| WEST CENTRAL<br>Bessie<br>Butler<br>Camargo<br>Cheyenne<br>Elk City   | 60.6<br>60.3<br>58.6<br>59.7<br>60.7   | 87<br>90<br>90<br>87<br>88                                     | 10<br>10<br>10<br>5<br>10                            | 33<br>26<br>27<br>34<br>36   | 2<br>2<br>2<br>2<br>2  | 153<br>169<br>216<br>184<br>150   | 22<br>28<br>24<br>26<br>22   | 4.38<br>3.58<br>3.61<br>3.67<br>2.82   | 1.35<br>1.12<br>1.73<br>1.86<br>.80  | 17<br>16<br>16<br>16<br>16                                     | Erick<br>Putnam<br>Watonga<br>Weatherford  | 59.3<br>59.6<br>60.1<br>60.0  | 88<br>87<br>86<br>85  | 10<br>10<br>10<br>10  | 28<br>30<br>33<br>30  | 2<br>2<br>2<br>2   | 190<br>185<br>167<br>170   | 18<br>22<br>21<br>20   | 2.66<br>5.18<br>5.24<br>5.99   | 1.37<br>1.72<br>2.15<br>2.16   | 16<br>17<br>17<br>17                                     |
| CENTRAL<br>Acme<br>Bowlegs<br>Bristow<br>Lake Carl Blac<br>Chandler<br>Chickasha<br>El Reno<br>Guthrie<br>Kingfisher<br>Marena<br>Minco<br>Marshall | 62.0<br>61.4<br>60.4<br>60.3<br>62.2<br>60.8<br>60.2<br>61.6<br>60.5<br>61.3<br>61.4<br>60.2 | 86<br>85<br>88<br>87<br>85<br>87<br>87<br>87<br>89<br>87<br>88 | 5<br>5<br>10<br>5<br>10<br>10<br>10<br>5<br>10<br>10 | 29<br>33<br>29<br>29<br>33<br>27<br>28<br>30<br>27<br>30<br>32<br>26 | 2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2 | 121<br>132<br>****<br>171<br>116<br>148<br>170<br>140<br>170<br>144<br>135<br>179 | 30<br>22<br>****<br>31<br>31<br>23<br>26<br>39<br>34<br>32<br>28<br>34 | 4.46<br>7.43<br>5.61<br>5.27<br>5.67<br>6.17<br>6.22<br>7.03<br>4.43<br>5.49<br>7.08<br>5.31 | 1.87<br>2.11<br>1.81<br>2.33<br>2.76<br>2.09<br>2.90<br>2.89<br>2.29<br>1.99<br>3.10<br>2.43 | 17<br>17<br>17<br>17<br>17<br>17<br>17<br>17<br>17<br>17<br>17 | Ninnekah<br>Norman<br>Oilton<br>OKC East<br>OKC North<br>Okemah<br>Perkins<br>Shawnee<br>Spencer<br>Stillwater<br>Washington | 61.9<br>*****<br>62.2<br>62.8<br>61.5<br>61.4<br>61.8<br>62.1<br>60.9<br>62.1 | 87<br>***<br>86<br>86<br>86<br>84<br>89<br>84<br>87<br>89<br>86 | 5<br>**<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5 | 30<br>***<br>25<br>32<br>37<br>29<br>29<br>34<br>33<br>29<br>34 | 2<br>***<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2 | 122<br>****<br>168<br>123<br>109<br>131<br>140<br>126<br>126<br>155<br>114 | 28<br>****<br>25<br>39<br>42<br>25<br>33<br>31<br>38<br>33<br>26 | 4.92<br>7.75<br>6.23<br>6.16<br>7.13<br>6.80<br>7.18<br>6.61<br>6.52<br>5.56<br>7.77 | 1.97<br>2.70<br>2.18<br>3.05<br>1.66<br>2.26<br>3.02<br>2.67<br>1.96<br>2.93 | 17<br>17<br>17<br>17<br>17<br>10<br>17<br>17<br>17<br>17 |
| EAST CENTRAL<br>Cookson<br>Eufaula<br>Haskell<br>Hectorville<br>Holdenville<br>McAlester<br>Okmulgee  | 60.9<br>62.8<br>61.5<br>62.6<br>62.8<br>62.3<br>61.3   | 82<br>84<br>85<br>85<br>85<br>84<br>86                         | 26<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5           | 28<br>37<br>31<br>36<br>37<br>31<br>30                               | 2<br>2<br>2<br>2<br>2<br>2<br>2  | 147<br>93<br>122<br>100<br>97<br>108<br>134                                       | 22<br>27<br>18<br>29<br>31<br>26<br>22                                 | 4.73<br>6.70<br>7.10<br>6.49<br>7.90<br>7.55<br>6.49   | 1.51<br>3.14<br>1.92<br>1.45<br>2.71<br>4.05<br>1.65   | 29<br>29<br>17<br>29<br>29<br>29<br>17                         | Sallisaw<br>Stigler<br>Stuart<br>Tahlequah<br>Webbers Falls<br>Westville   | 61.8<br>61.6<br>63.0<br>*****<br>63.6<br>60.7                                 | 85<br>85<br>84<br>***<br>87<br>80                               | 26<br>26<br>5<br>***<br>26<br>26                                    | 32<br>34<br>36<br>***<br>34<br>31                               | 2<br>2<br>***<br>2<br>2  | 114<br>123<br>86<br>****<br>84<br>141                                      | 20<br>22<br>26<br>****<br>41<br>12                               | 5.33<br>5.05<br>7.83<br>4.98<br>5.70<br>4.21   | 2.34<br>2.42<br>2.61<br>2.06<br>2.79<br>1.55                                 | 29<br>29<br>29<br>29<br>29<br>29                         |
| SOUTHWEST<br>Altus<br>Apache<br>Fort Cobb<br>Grandfield<br>Hinton<br>Hobart   | 61.9<br>61.6<br>61.0<br>61.8<br>60.2<br>60.6   | 92<br>87<br>87<br>87<br>85<br>85                               | 25<br>5<br>10<br>25<br>10<br>5                       | 31<br>29<br>33<br>30<br>29   | 2<br>2<br>2<br>2<br>2<br>2   | 126<br>125<br>142<br>121<br>165<br>155  | 35<br>23<br>23<br>26<br>20<br>24                                       | 7.66<br>7.86<br>7.25<br>8.00<br>5.59<br>7.21   | 3.40<br>3.70<br>2.51<br>2.28<br>1.84<br>3.58   | 16<br>17<br>17<br>17<br>17<br>17                               | Hollis<br>Mangum<br>Medicine Park<br>Tipton<br>Walters   | 60.5<br>60.2<br>62.4<br>61.7<br>62.7  | 90<br>89<br>85<br>88<br>87                                      | 25<br>25<br>25<br>25<br>25  | 29<br>29<br>37<br>29<br>37                                      | 2<br>2<br>2<br>2<br>2  | 158<br>171<br>108<br>126<br>101  | 22<br>27<br>30<br>28<br>31                                       | 2.27<br>3.81<br>10.64<br>8.56<br>5.88  | .45<br>1.11<br>3.49<br>3.75<br>2.25  | 16<br>10<br>17<br>16<br>19                               |
| SOUTH CENTRAL<br>Ada<br>Ardmore<br>Burneyville<br>Byars<br>Centrahoma<br>Durant<br>Fittstown<br>Ketchum Ranch                                       | 62.7<br>*****<br>63.1<br>63.0<br>62.2<br>64.0<br>62.3<br>62.8                                | 86<br>***<br>85<br>86<br>84<br>83<br>83                        | 5<br>***<br>5<br>5<br>5<br>5<br>5                    | 32<br>***<br>34<br>35<br>31<br>37<br>36<br>36                        | 2<br>***<br>2<br>2<br>2<br>2<br>2<br>2<br>2                                  | 99<br>****<br>93<br>96<br>109<br>73<br>100<br>97                                  | 28<br>****<br>35<br>37<br>24<br>43<br>19<br>32                         | 8.11<br>7.70<br>5.39<br>9.19<br>7.33<br>8.81<br>7.05<br>7.96                                 | 2.45<br>2.44<br>1.75<br>4.76<br>2.26<br>2.79<br>2.19<br>3.20                                 | 17<br>17<br>17<br>29<br>29<br>17<br>17                         | Lane<br>Madill<br>Newport<br>Pauls Valley<br>Ringling<br>Sulphur<br>Tishomingo<br>Waurika                                    | 62.6<br>63.2<br>63.6<br>63.2<br>63.1<br>62.0<br>62.3<br>63.8                  | 84<br>85<br>86<br>85<br>84<br>83<br>89                          | 4<br>4<br>5<br>5<br>4<br>25   | 35<br>35<br>35<br>35<br>35<br>32<br>36<br>33                    | 2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2                                      | 98<br>91<br>78<br>92<br>90<br>120<br>103<br>82                             | 26<br>37<br>38<br>34<br>30<br>24<br>47                           | 6.07<br>6.46<br>8.26<br>9.31<br>11.59<br>8.06<br>8.05<br>9.29                        | 1.86<br>1.65<br>3.07<br>4.93<br>5.34<br>2.93<br>2.18<br>3.84                 | 29<br>17<br>17<br>17<br>17<br>17<br>29<br>17             |
| SOUTHEAST<br>Antlers<br>Broken Bow<br>Clayton<br>Cloudy<br>Hugo<br>Idabel   | 62.1<br>62.1<br>62.4<br>62.8<br>64.0<br>63.0   | 84<br>83<br>84<br>83<br>83                                     | 4<br>26<br>26<br>5<br>26                             | 33<br>33<br>33<br>37<br>40<br>36                                     | 2<br>2<br>3<br>2<br>2  | 110<br>111<br>106<br>91<br>71<br>94   | 24<br>24<br>27<br>24<br>41<br>35                                       | 8.49<br>16.95<br>8.53<br>8.78<br>6.74<br>13.48   | 2.54<br>8.73<br>4.13<br>2.72<br>2.25<br>4.45   | 29<br>29<br>29<br>29<br>29<br>29                               | Mt Herman<br>Talihina<br>Valliant<br>Wilburton<br>Wister   | 62.0<br>62.2<br>62.9<br>62.1<br>61.4  | 81<br>84<br>83<br>84<br>84                                      | 4<br>26<br>26<br>26<br>26   | 33<br>32<br>34<br>32<br>31                                      | 2<br>2<br>2<br>2<br>2  | 110<br>109<br>94<br>111<br>131   | 19<br>24<br>31<br>24<br>23                                       | 10.73<br>7.17<br>11.23<br>5.83<br>7.85   | 2.53<br>3.24<br>4.20<br>2.07<br>4.11   | 17<br>29<br>29<br>29<br>29                               |



## 2014, 2015 AND 2016 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL

| April 2016 Wesonet Precipitation Compariso |
|--|
|--|

| <b>Climate Division</b> | Precipitation<br>(inches) | Departure from<br>Normal (inches) | Rank since 1895 | Wettest on Record<br>(Year) | Driest on<br>Record (Year) | Apr-15<br>(inches) |
|-------------------------|---------------------------|-----------------------------------|-----------------|-----------------------------|----------------------------|--------------------|
| Panhandle               | 4.25                      | 2.58                              | 9th Wettest     | 5.31 (1900)                 | 0.02 (1935)                | 2.91               |
| North Central           | 4.56                      | 1.74                              | 20th Wettest    | 7.14 (1999)                 | 0.47 (2014)                | 5.29               |
| Northeast               | 5.49                      | 1.42                              | 22nd Wettest    | 9.06 (1942)                 | 0.22 (1989)                | 3.37               |
| West Central            | 4.13                      | 1.72                              | 14th Wettest    | 8.43 (1997)                 | 0.16 (1996)                | 7.00               |
| Central                 | 6.21                      | 2.86                              | 11th Wettest    | 9.37 (1942)                 | 0.28 (1989)                | 4.94               |
| East Central            | 6.16                      | 1.93                              | 27th Wettest    | 11.32 (1957)                | 0.74 (1989)                | 5.10               |
| Southwest               | 6.79                      | 4.16                              | 3rd Wettest     | 7.53 (1997)                 | 0.14 (1989)                | 4.44               |
| South Central           | 8.04                      | 4.42                              | 7th Wettest     | 11.33 (1942)                | 0.40 (1903)                | 5.09               |
| Southeast               | 9.62                      | 5.14                              | 5th Wettest     | 12.81 (1957)                | 0.80 (1987)                | 6.35               |
| Statewide               | 6.11                      | 2.85                              | 7th Wettest     | 8.32 (1942)                 | 0.55 (1989)                | 4.85               |

## 2014, 2015 AND 2016 STATEWIDE TEMPERATURE MONTHLY TOTALS VS. NORMAL

Main Temperature (degrees F)



## **April 2016 Mesonet Temperature Comparison**

| <b>Climate Division</b> | Average<br>Temp (F) | Departure from<br>Normal (F) | Rank since 1895 | Hottest on Record<br>(Year) | Coldest on<br>Record (Year) | Apr-15 (F) |
|-------------------------|---------------------|------------------------------|-----------------|-----------------------------|-----------------------------|------------|
| Panhandle               | 56.3                | 1.0                          | 46th Warmest    | 62.1 (1946)                 | 48.8 (1997)                 | 57.4       |
| North Central           | 59.7                | 2.0                          | 37th Warmest    | 64.4 (1981)                 | 50.4 (1983)                 | 60.7       |
| Northeast               | 61.0                | 2.0                          | 34th Warmest    | 65.7 (1954)                 | 52.5 (1983)                 | 61.5       |
| West Central            | 59.9                | 1.5                          | 40th Warmest    | 65.1 (2006)                 | 52.2 (1983)                 | 60.7       |
| Central                 | 61.2                | 1.3                          | 42nd Warmest    | 66.9 (2006)                 | 53.6 (1983)                 | 62.1       |
| East Central            | 62.1                | 1.7                          | 37th Warmest    | 67.8 (1896)                 | 54.5 (1907)                 | 62.8       |
| Southwest               | 61.3                | 0.7                          | 49th Warmest    | 67.6 (2006)                 | 54.9 (1997)                 | 62.2       |
| South Central           | 62.9                | 1.2                          | 43rd Warmest    | 68.8 (1925)                 | 56.6 (1983)                 | 63.4       |
| Southeast               | 62.4                | 1.8                          | 37th Warmest    | 66.7 (2006)                 | 55.3 (1983)                 | 62.9       |
| Statewide               | 60.8                | 1.5                          | 39th Warmest    | 65.8 (2006)                 | 53.2 (1983)                 | 61.5       |

# **RECORD EVENT REPORTS APRIL 2016**

| Description            | Day | Location      | Record | Previous<br>Record | Year |
|------------------------|-----|---------------|--------|--------------------|------|
| Daily Maximum Rainfall | 17  | Oklahoma City | 3.39   | 2.42               | 2013 |

| MESONET | EXTREMES | FOR | APRIL | 2016 |
|---------|----------|-----|-------|------|
|---------|----------|-----|-------|------|

| Climate<br>Division | High<br>Temp<br>(F) | Day  | Station       | Low<br>Temp<br>(F) | Day | Station      | High<br>Monthly<br>Rainfall<br>(inches) | Station       | High<br>Daily<br>Rainfall<br>(inches) | Day  | Station     |
|---------------------|---------------------|------|---------------|--------------------|-----|--------------|---|---------------|---------------------------------------|------|-------------|
| Panhandle           | 91                  | 5th  | Beaver        | 22                 | 1st | Kenton       | 6.62                                    | Boise City    | 3.01                                  | 15th | Boise City  |
| North Central       | 90                  | 10th | Cherokee      | 24                 | 2nd | Breckinridge | 5.77                                    | Fiarview      | 2.66                                  | 16th | Woodward    |
| Northeast           | 88                  | 5th  | Wynona        | 27                 | 2nd | Jay          | 7.17                                    | Inola         | 2.76                                  | 29th | Pryor       |
| West Central        | 90                  | 10th | Butler        | 26                 | 2nd | Butler       | 5.99                                    | Weatherford   | 2.16                                  | 17th | Weatherford |
| Central             | 89                  | 5th  | Perkins       | 25                 | 2nd | Oilton       | 7.77                                    | Washington    | 3.10                                  | 17th | Minco       |
| East Central        | 87                  | 26th | Webbers Falls | 28                 | 2nd | Cookson      | 7.90                                    | Holdenville   | 4.05                                  | 29th | McAlester   |
| Southwest           | 92                  | 25th | Altus         | 29                 | 2nd | Magnum       | 10.64                                   | Medicine Park | 3.75                                  | 16th | Tipton      |
| South Central       | 89                  | 25th | Waurika       | 31                 | 2nd | Centrahoma   | 11.59                                   | Ringling      | 5.34                                  | 17th | Ringling    |
| Southeast           | 84                  | 26th | Wister        | 31                 | 2nd | Wister       | 16.95                                   | Broken Bow    | 8.73                                  | 29th | Broken Bow  |
| Statewide           | 92                  | 25th | Altus         | 22                 | 1st | Kenton       | 16.95                                   | Broken Bow    | 8.73                                  | 29th | Broken Bow  |

#### **Oklahoma Climate Divisions**

![](_page_10_Figure_5.jpeg)

# **APRIL 2016 DROUGHT MONITOR**

# U.S. Drought Monitor Oklahoma

# May 3, 2016 (Released Thursday, May. 5, 2016) Valid 8 a.m. EDT

Drought Conditions (Percent Area)

|  |   | None   | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4   |
|--|---|--------|-------|-------|-------|-------|------|
|  | Current                                 | 87.75  | 12.25 | 1.67  | 0.00  | 0.00  | 0.00 |
|  | Last Week<br>4/26/2016                  | 56.23  | 43.77 | 10.30 | 1.65  | 0.00  | 0.00 |
|  | 3 Month s Ago<br>2/2/2016               | 100.00 | 0.00  | 0.00  | 0.00  | 0.00  | 0.00 |
|  | Start of<br>Calendar Year<br>12/29/2015 | 100.00 | 0.00  | 0.00  | 0.00  | 0.00  | 0.00 |
|  | Start of<br>Water Year<br>9/29/2015     | 52.60  | 47.40 | 16.79 | 6.37  | 0.97  | 0.00 |
|  | One Year Ago<br>5/2015                  | 29.24  | 70.76 | 59.05 | 46.19 | 17.95 | 4.03 |

![](_page_11_Figure_4.jpeg)

Intensity: D0 Abnom ally D ry

D3 E xtrem e D rought D1 M oderate Drought D4 Exceptional Drought

D2 Severe Drought The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author: Brian Fuchs National Drought Mitigation Center

![](_page_11_Picture_10.jpeg)

http://droughtmonitor.unl.edu/

# **INTERPRETATION INFORMATION**

**MEAN DAILY TEMPERATURE**: Calculated from an average of the daily maximum and minimum temperatures. Daily averages are summed for each day, and then divided by the number of valid data points – typically the number of days in the month. Although this November differ from the "true" daily average, it is consistent with historical methods of observation and comparable to the normals and extremes for stations and regions of the state.

**DEGREE DAYS**: Degree Days are calculated each day of the month for which there is a temperature report and the mean temperature for the day is less than (Heating Degree Days) or greater than (Cooling Degree Days) 65 degrees. Daily values are summed to arrive at a monthly total. HDD/CDD are qualitative measures of how much heating/cooling was required to maintain a comfortable indoor temperature. Missing observations November result in an artificially high or low value.

**SEVERE WEATHER REPORTS:** Only the most significant events are listed. Tornadoes of F2 or greater strength (on the 0-5 Fujita scale), hail of two inches diameter or greater, and wind speeds of 70 miles per hour or above are listed. National Weather Service defines storms as severe when they produce a tornado, hail of three-quarters inch or greater, or wind speeds above 57 miles per hour (50 knots). For additional reports, contact the Oklahoma Climatological Survey, Storm Prediction Center, or your local National Weather Service forecast office.

**SOIL MOISTURE:** The soil moisture variable displayed is the Fractional Water Index (FWI), measured at a depth of 25 cm. This unitless value ranges from very dry soil having a value of 0, to saturated soils having a value of 1.

# **ADDITIONAL RESOURCES**

SUNRISE / SUNSET TABLES U.S. Naval Observatory: <u>http://aa.usno.navy.mil/data</u>

**SEVERE STORM REPORTS** Storm Prediction Center: <u>http://spc.noaa.gov/climo/</u>

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/

![](_page_12_Picture_11.jpeg)

Oklahoma Climatological Survey is the State Climate Office for Oklahoma

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