

OKLAHOMA MONTHLY CLIMATE SUMMARY

March 2009



A late-month blizzard kicked all other March weather stories to the curb with northwestern Oklahoma seeing more than 2 feet of snow and drifts taller than the average adult. The storm – which provided the state with snow, sleet, freezing rain, and severe thunderstorms – struck on the 27th and 28th. Preliminary reports from the National Weather Service (NWS) offices in Norman and Amarillo indicate the state’s 24-hour snowfall record might have been bested in several locations. The previous record was 23 inches from the Buffalo blizzard of February 1971. The totals indicate the spring snowstorm rivals the worst in state history. Before that late storm system, the month was on its way to being exceedingly warm and dry. Despite the moisture and cold air, however, the month still finished as the 32nd warmest and 58th driest on record. That continues a pattern seen during the previous couple months of 2009, and the first three months of the year now rank as the 19th warmest such period since 1895, and the 33rd driest. Severe weather consisted of standard spring fare – large hail and strong winds. One tornado touched down during the month, a weak EF-0 twister which struck near Pawnee early on the 24th.

Precipitation

While the snowfall in the northwest undoubtedly helped the dry conditions there, much of the state was still very dry for the month. The statewide average precipitation total was nearly an inch below normal, with the driest spots located in the western half of Oklahoma. There were wet sections of the state as well, with above normal precipitation totals found in portions of southwestern and northeastern Oklahoma, and into the southeastern corner. The first three months of the year continued dry, more than 2 inches below normal. West central Oklahoma has been the hardest hit due to lack of moisture at nearly three inches below normal for January-March, the 18th driest such period on record. Only the northeast has fared well at just a fraction below normal, the 53rd wettest on record.

Temperature

Despite a few cold intrusions, including the aforementioned blizzard, February ended nearly 2 degrees above normal. All portions of the state were above normal save for small areas in the Panhandle and in far eastern Oklahoma. The January-March period’s statewide average temperature was more than 2 degrees above normal.

March 2009 Statewide Extremes

| Description | Extreme | Station | Day |
|--------------------|----------|-----------------|------|
| High Temperature | 92°F | Altus, Fairview | 5 22 |
| Low Temperature | 7°F | Beaver | 1 |
| High Precipitation | 7.08 in. | Mt. Herman | |
| Low Precipitation | 0.25 in. | Boise City | |

March Daily Highlights

March 1-3: March began with unseasonably cool air on the first with low temperatures dipping into the single digits and teens across most of Oklahoma. The month’s lowest temperature of 7 degrees was recorded at the Beaver Mesonet site on this day. Temperatures moderated over the next couple of days as winds kicked up from the south as high as 35 mph. By the third, temperatures were in the 60s and 70s across much of the state.

March 4-7: Lots of extreme warmth occurred in this four day period, courtesy of strong south winds kicked up by surface and upper-level low pressure systems. The winds, gusting to 40 mph at times, brought temperatures in the 80s and 90s into all parts of Oklahoma. Altus and Fairview both recorded 92 degrees on the fifth to lead state temperatures for the month. A cold front brought cooler air into the northwest on the sixth, but the warm air returned across the state on the seventh in the form of a warm front. A few scattered storms brought fractional rainfall amounts to a few areas on the seventh.

March 8-14: A cold front early on the eighth brought northwesterly winds gusting to 40 mph, but high temperatures still rose into the 60s and 70s that afternoon. The front moved back to the north on the ninth as a warm front, bringing south winds and moisture from the Gulf of Mexico with it. Showers and storms kicked up along the frontal boundary that evening with a few becoming severe. Hail to the size of golf balls fell in central Oklahoma near El Reno, and wind gusts of 60 mph were scattered across northwestern sections of the state. A strong cold front passed through the state the following two days, bringing temperatures well below seasonal normals. A very cold rain fell across most portions of the state on the 11th, with heavier showers in the extreme southeast. That rain

turned to snow in the northwest on the 12th as an upper-level system moved closer to the state. Freezing drizzle occurred further to the south, with a cold rain in southern Oklahoma. High temperatures rose into the 30s and 40s, but wind chill values were in the 20s and 30s. The weather became a bit more seasonable during the 13th and 14th, but still a bit on the chilly side. Highs on the 14th rose into the 40s and 50s across the state as the low clouds eventually began to dissipate.

March 15-22: The next eight days were mostly on the warm side, but very windy. A few showers struck here and there, but very little rain fell across the state, with no severe weather. Moisture began streaming back into the state on the 22nd with strong southerly winds and highs in the 70s.

March 23-24: An upper-level storm moving towards the state kicked winds up from the south, gusting to 45 mph at times. Moisture from the Gulf streamed northward into the state. A dry line in western Oklahoma kicked off a round of storms on the 23rd that quickly became severe. Lots of large hail reports filtered in from across the state, including a 2.75-inch report near Stillwater. A tornado was confirmed by NWS survey near Pawnee early on the 24th. The EF-0 twister destroyed a barn and significantly damaged a nursery and trees. The storms eventually moved out of the state and cold front moved through, whipping winds around from the northwest with gusts of 50 mph. Highs climbed into the 60s and 70s following the front.

March 25-28: The 25th and 26th set the scene for possibly the greatest springtime snowstorm the state has ever seen. Some rain did fall on those two days, mostly in southern sections as the moisture began to stream back into the state. A few of the storms in south central Oklahoma exceeded severe levels the evening of the 26th. Thunder snow began about that same time in the Oklahoma Panhandle along a very strong cold front. The precipitation for the body of the state on the 27th began early in southern Oklahoma with a few heavy thunderstorms firing up. The snow then began in the northwest around 5 a.m. and started spreading to the east. Freezing rain and sleet occurred out ahead of the snow. Parts of north central Oklahoma eventually lost power due to ice accumulating on lines being blown by strong winds. By the afternoon, temperatures ranged from the 20s in the northwest to the 60s in the southeast. A blizzard warning issued earlier for the northwest verified quite

| March 2009 Statewide Statistics | | | |
|---|----------------|----------------|-------------------------|
| Temperature | | | |
| | Average | Depart. | Rank (1895-2009) |
| Month (March) | 52.0°F | 1.8°F | 32nd Warmest |
| Year-to-Date (Jan-Mar) | 45.1°F | 2.4°F | 19th Warmest |
| Precipitation | | | |
| | Total | Depart. | Rank (1895-2009) |
| Month (March) | 2.36 in. | -0.75 in. | 58th Driest |
| Year-to-Date (Jan-Mar) | 4.23 in. | -2.09 in. | 33rd Driest |
| Depart. = Departure from 30-year normal | | | |

easily as the heavy snow and strong winds gusting to over 40 mph caused white-out conditions across the area. The heavy snow and strong winds continued for much of the 28th before exiting the state to the northeast later that day. The storm totals reported by the various NWS offices, while preliminary, indicate more than 2 feet of snow fell in the Panhandle and northwestern Oklahoma, with drifts at times higher than 5 feet. The snow totals decreased to the south and east. Northeastern Oklahoma was hit by wrap-around precipitation with some areas recording up to 10 inches of snow. High temperatures ranged from the 20s in the areas with snowpack to the 50s in the southeast. The storm brought travel to a standstill over much of northwestern Oklahoma, stranding many along the very roads they were travelling.

March 29-31: A surface low pressure system began moving towards the state, bringing with it warm southerly winds for the next couple of days. The temperatures warmed into the 70s and 80s over parts of the state, but areas still bound by snow were 20-30 degrees cooler. A cold front late on the 30th kicked off rain showers in the southeast and cooled temperatures down to below seasonable territory. High temperatures on the 31st were in the 50s and 60s with a northwesterly wind of 20-30 mph making it feel much cooler.

Record Event Reports

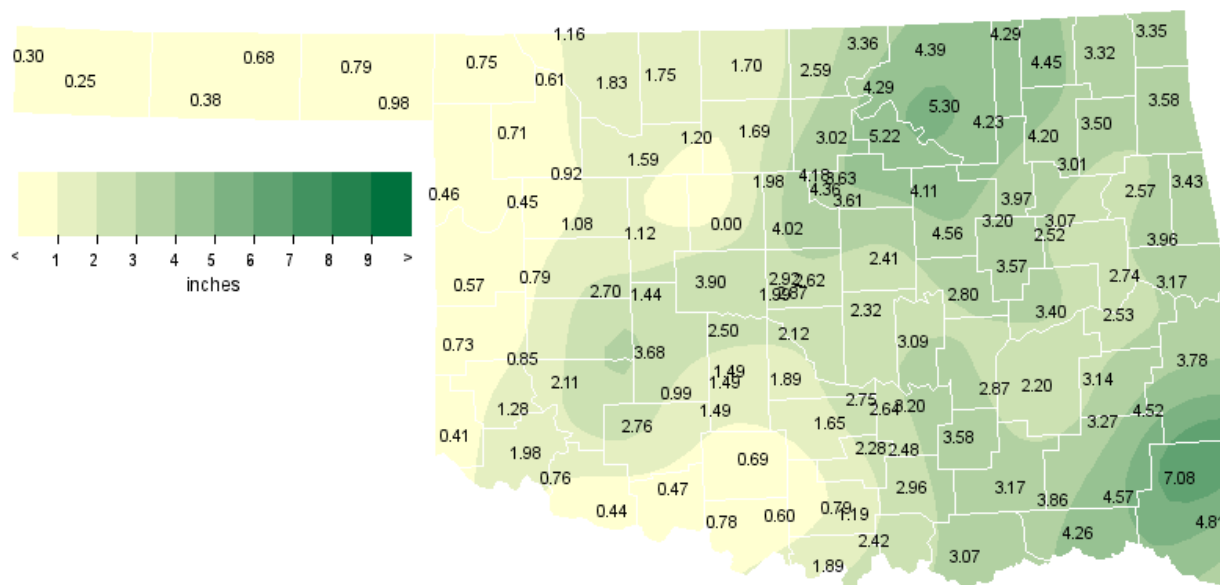
| Description | Day | Location | Record | Previous Record | Year |
|------------------------------------|------------|-----------------|---------------|------------------------|-------------|
| Highest Minimum Temperature (tied) | 5 | Oklahoma City | 59 | 59 | 1921 |
| Highest Minimum Temperature (tied) | 7 | Oklahoma City | 61 | 61 | 1974 |
| Daily Maximum Snowfall | 29 | Tulsa | 9.9 inches | 1 inch | 1931 |
| Lowest Minimum Temperature (tied) | 29 | McAlester | 28 | 28 | 1975 |

March 2009 Severe Weather

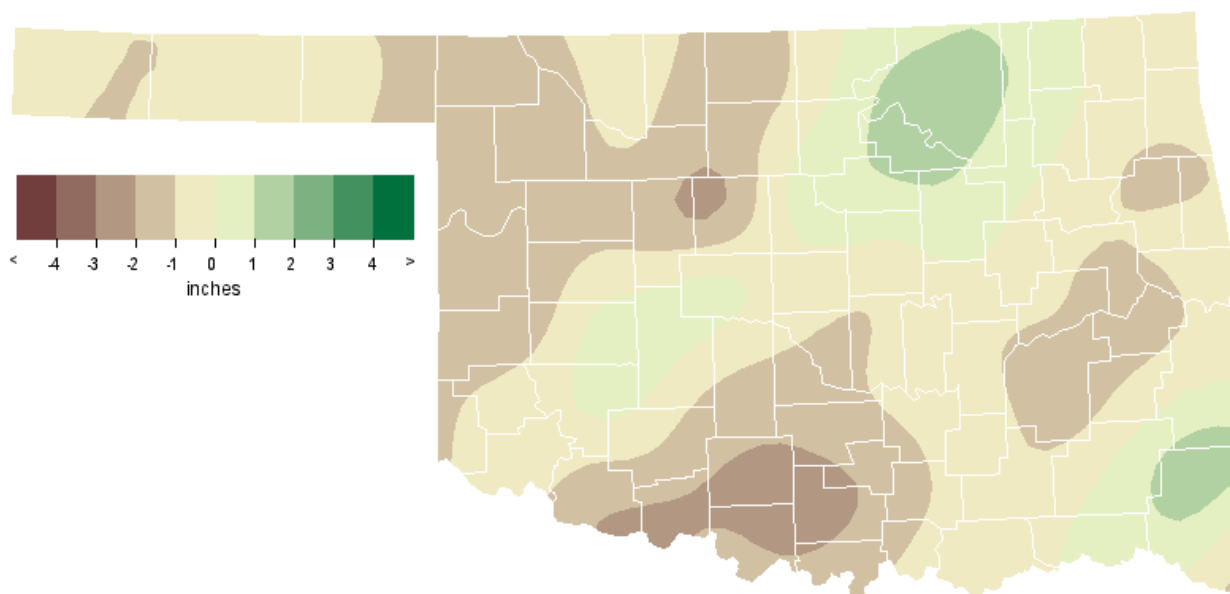
Hail (2 inches in diameter or greater)

| Size (in.) | Location | County | Day |
|-------------------|-----------------|---------------|------------|
| 2.19 | 3 S Watonga | Blaine | 9 |
| 2.75 | Stillwater | Payne | 23 |

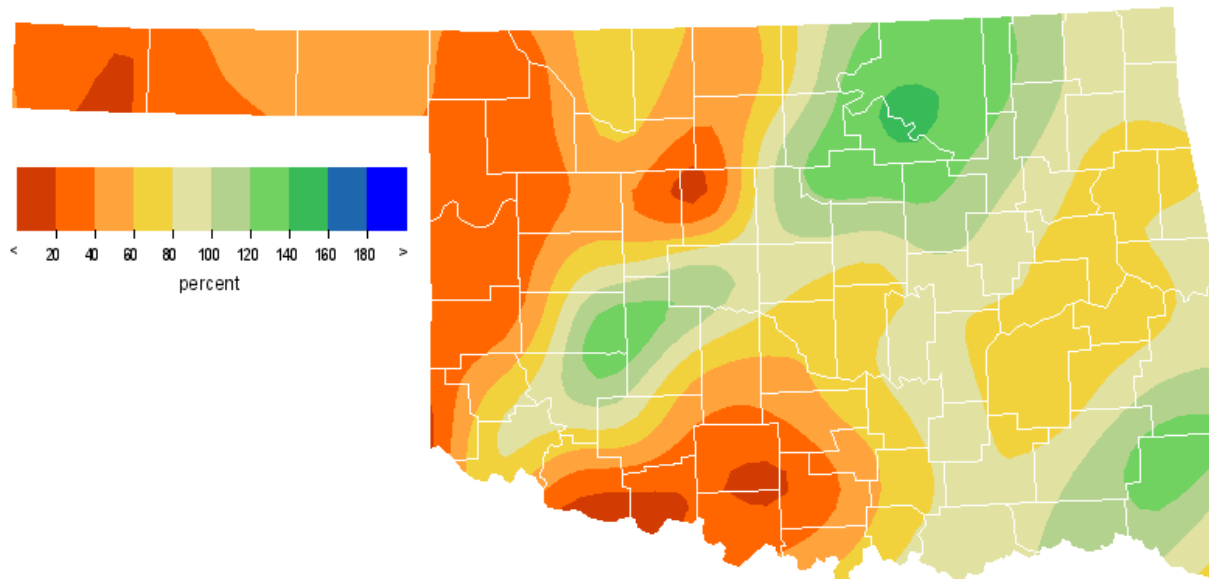
March 2009 Observed Precipitation



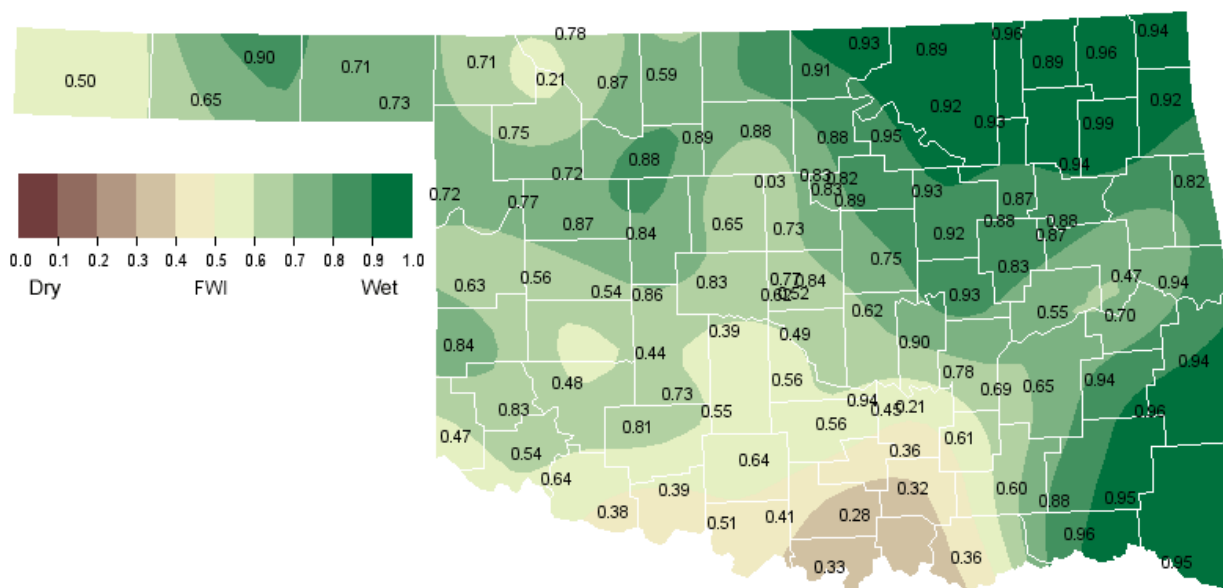
March 2009 Departure from Normal Precipitation



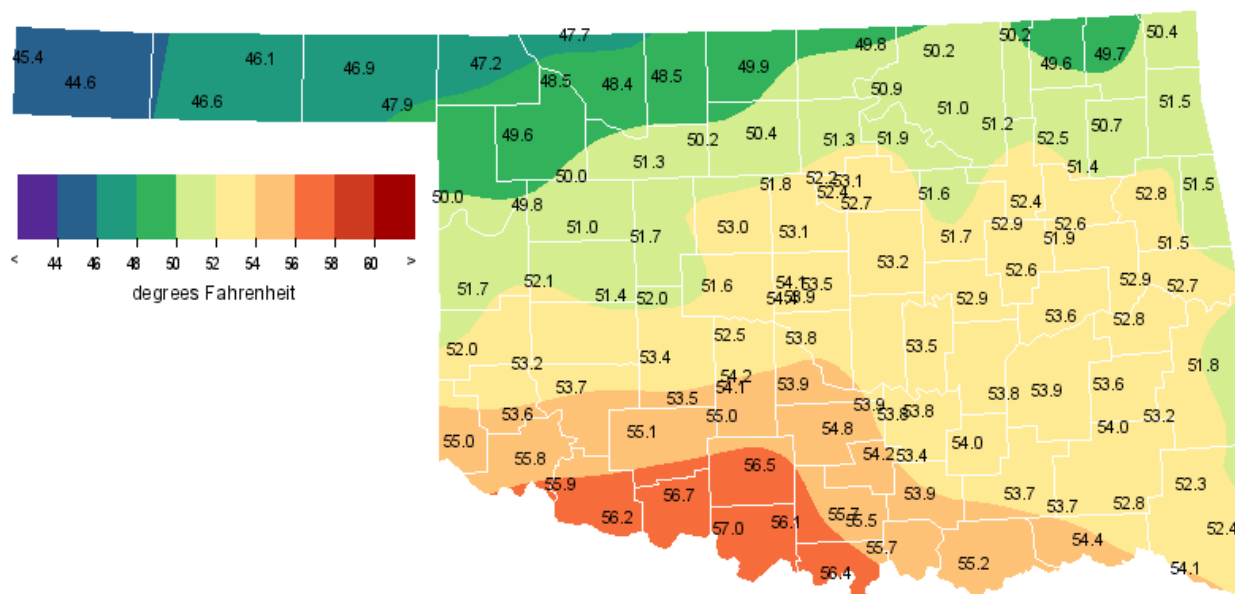
March 2009 Percent of Normal Precipitation



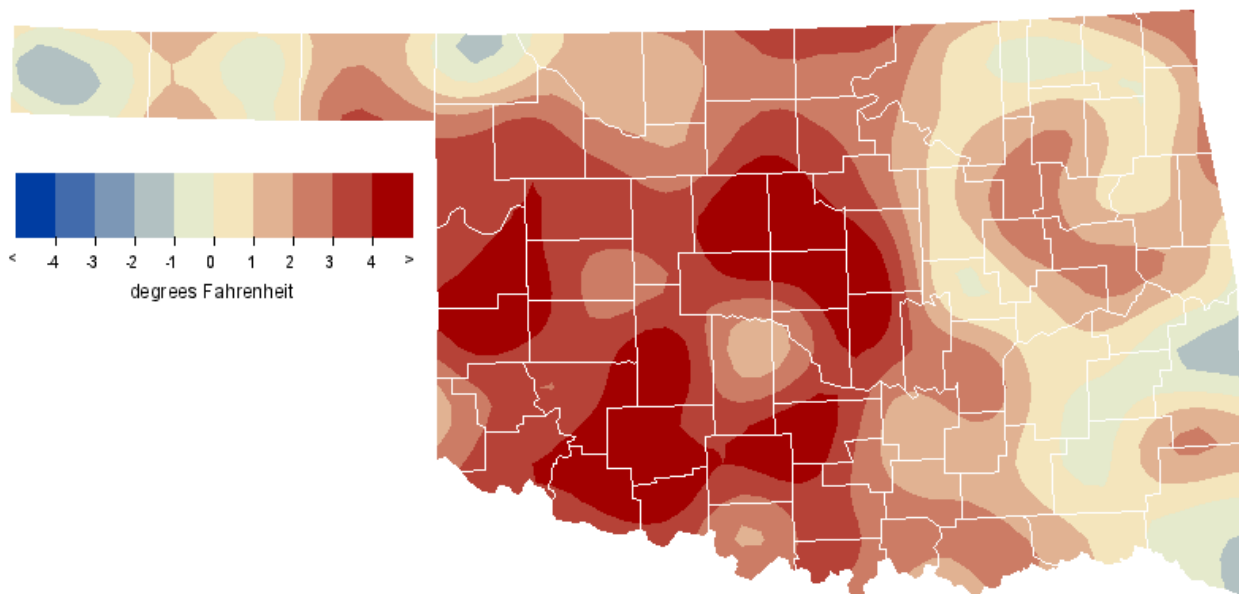
March 2009 Average Soil Moisture at 25cm



March 2009 Average Temperature



March 2009 Departure from Normal Temperature



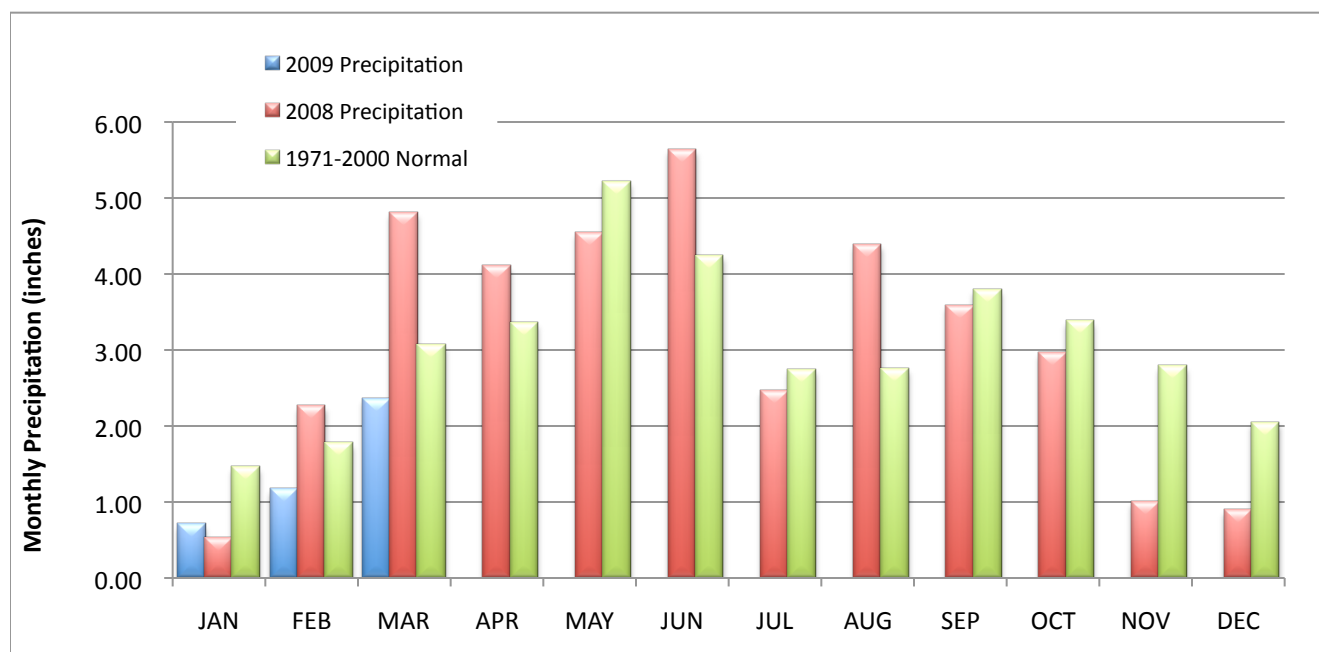
Mesonet Monthly Summary for March 2009

| NAME | MEAN HIGH | | | LOW | | | TOT HIGH | | | NAME | MEAN HIGH | | | LOW | | | TOT HIGH | | | | |
|----------------------|-----------|------|-----|------|-----|------|----------|-------|-------|------|---------------|-------|------|-----|------|-----|----------|-------|-------|-------|-----|
| | TEMP | TEMP | DAY | TEMP | DAY | HDD | CDD | PPT | 24-HR | | DAY | TEMP | TEMP | DAY | TEMP | DAY | HDD | CDD | PPT | 24-HR | DAY |
| PANHANDLE | | | | | | | | | | | | | | | | | | | | | |
| Arnett | 49.9 | 89 | 4 | 15 | 1 | 470 | 2 | .46 | .28 | 28 | Goodwell | 46.6 | 82 | 4 | 13 | 1 | 571 | 0 | .38 | .26 | 28 |
| Beaver | 46.9 | 88 | 4 | 7 | 1 | 560 | 0 | .79 | .41 | 29 | Hooker | 46.1 | 85 | 17 | 12 | 1 | 586 | 0 | .68 | .32 | 21 |
| Boise City | 44.6 | 80 | 4 | 11 | 28 | 632 | 0 | .25 | .09 | 26 | Kenton | 45.4 | 80 | 4 | 14 | 1 | 607 | 0 | .30 | .23 | 13 |
| Buffalo | 47.2 | 90 | 4 | 9 | 1 | 555 | 5 | .75 | .45 | 29 | Slapout | 47.9 | 88 | 4 | 13 | 1 | 533 | 3 | .98 | .91 | 29 |
| NORTH CENTRAL | | | | | | | | | | | | | | | | | | | | | |
| Alva | 48.3 | 89 | 5 | 11 | 1 | 525 | 8 | 1.83 | 1.10 | 29 | May Ranch | 47.7 | 87 | 5 | 12 | 1 | 543 | 6 | 1.16 | .49 | 29 |
| Blackwell | 50.2 | 86 | 5 | 16 | 1 | **** | **** | 2.59 | 1.47 | 27 | Medford | 49.9 | 90 | 5 | 12 | 1 | 486 | 16 | 1.70 | .64 | 29 |
| Breckinridge | 50.4 | 88 | 5 | 15 | 1 | 467 | 15 | 1.69 | .75 | 27 | Newkirk | 49.7 | 85 | 5 | 13 | 1 | 484 | 12 | 3.36 | 2.05 | 27 |
| Cherokee | 48.5 | 90 | 5 | 12 | 1 | 520 | 9 | 1.75 | 1.40 | 29 | Red Rock | 51.3 | 86 | 5 | 14 | 1 | 446 | 21 | 3.02 | 1.57 | 27 |
| Fairview | 51.4 | 92 | 5 | 15 | 1 | 445 | 23 | 1.59 | .90 | 29 | Seiling | 50.0 | 89 | 5 | 12 | 1 | 473 | 7 | .92 | .40 | 28 |
| Freedom | 48.5 | 87 | 5 | 10 | 1 | 516 | 4 | .61 | .55 | 29 | Woodward | 49.7 | 91 | 4 | 14 | 1 | 484 | 8 | .71 | .41 | 28 |
| Lahoma | 50.2 | 89 | 5 | 15 | 1 | 470 | 11 | 1.20 | .48 | 28 | | | | | | | | | | | |
| NORTHEAST | | | | | | | | | | | | | | | | | | | | | |
| Bixby | 52.4 | 84 | 17 | 19 | 2 | 416 | 25 | 3.97 | 1.48 | 27 | Nowata | 49.6 | 83 | 6 | 15 | 1 | 486 | 10 | 4.45 | 1.15 | 24 |
| Burbank | 50.9 | 85 | 5 | 15 | 2 | 455 | 17 | 4.29 | 2.00 | 27 | Pawnee | 51.8 | 86 | 5 | 17 | 1 | 429 | 20 | 5.22 | 1.73 | 24 |
| Claremore | 52.5 | 84 | 18 | 17 | 1 | 409 | 21 | 4.20 | 1.07 | 28 | Porter | 52.6 | 83 | 18 | 17 | 1 | 403 | 17 | 3.07 | .82 | 27 |
| Copan | 50.1 | 83 | 6 | 15 | 1 | 470 | 9 | 4.29 | 1.46 | 24 | Pryor | 50.8 | 82 | 17 | 15 | 1 | 458 | 16 | 3.50 | 1.42 | 28 |
| Foraker | 50.1 | 85 | 5 | 14 | 1 | 474 | 11 | 4.39 | 1.47 | 27 | Skiatook | 51.1 | 84 | 6 | 16 | 1 | 445 | 15 | 4.23 | 1.33 | 27 |
| Inola | 51.4 | 83 | 6 | 16 | 2 | 435 | 14 | 3.01 | .98 | 28 | Vinita | 49.7 | 82 | 6 | 13 | 1 | 483 | 9 | 3.32 | .98 | 24 |
| Jay | 51.5 | 81 | 18 | 15 | 1 | 435 | 16 | 3.58 | .74 | 24 | Wynona | 51.0 | 85 | 6 | 16 | 2 | 453 | 18 | 5.30 | 2.36 | 24 |
| Miami | 50.5 | 81 | 17 | 13 | 1 | 460 | 10 | 3.35 | .67 | 24 | | | | | | | | | | | |
| WEST CENTRAL | | | | | | | | | | | | | | | | | | | | | |
| Bessie | ***** | *** | *** | *** | *** | **** | **** | ***** | ***** | *** | Putnam | 51.1 | 90 | 5 | 18 | 1 | 444 | 12 | 1.08 | .40 | 29 |
| Butler | 52.1 | 91 | 5 | 14 | 1 | 414 | 15 | .79 | .27 | 28 | Retrop | 53.2 | 89 | 5 | 16 | 1 | 384 | 19 | .85 | .31 | 23 |
| Camargo | 49.9 | 89 | 5 | 14 | 1 | 471 | 2 | .45 | .28 | 28 | Watonga | 51.6 | 85 | 5 | 18 | 1 | 427 | 13 | 1.12 | .30 | 28 |
| Cheyenne | 51.7 | 87 | 5 | 17 | 1 | 420 | 7 | .57 | .17 | 13 | Weatherford | 51.4 | 84 | 5 | 18 | 1 | 429 | 7 | 2.70 | 1.99 | 23 |
| Erick | 52.1 | 88 | 5 | 14 | 1 | 410 | 10 | .73 | .20 | 27 | | | | | | | | | | | |
| CENTRAL | | | | | | | | | | | | | | | | | | | | | |
| Acme | 55.0 | 86 | 5 | 21 | 1 | 346 | 35 | 1.49 | .41 | 23 | Ninnekah | 54.1 | 86 | 5 | 21 | 1 | 364 | 25 | 1.49 | .56 | 23 |
| Bowlegs | 53.5 | 83 | 5 | 19 | 2 | 381 | 25 | 3.09 | 1.20 | 27 | Norman | 53.8 | 84 | 5 | 20 | 1 | 371 | 25 | 2.12 | .64 | 23 |
| Bristow | 51.8 | 83 | 18 | 15 | 2 | 430 | 20 | 4.56 | 2.09 | 27 | Oilton | 51.6 | 84 | 17 | 14 | 2 | 436 | 21 | 4.11 | 1.35 | 27 |
| Lake Carl Blac | 52.2 | 86 | 17 | 16 | 1 | 419 | 22 | 4.18 | 1.64 | 23 | OKC East | 53.9 | 84 | 5 | 20 | 1 | 373 | 29 | 2.87 | 1.34 | 27 |
| Chandler | 53.2 | 84 | 17 | 18 | 1 | 392 | 26 | 2.41 | 1.46 | 27 | OKC North | 54.1 | 85 | 5 | 19 | 1 | 366 | 29 | 2.92 | .93 | 27 |
| Chickasha | 54.2 | 86 | 5 | 19 | 2 | 358 | 24 | 1.49 | .45 | 23 | OKC West | 54.3 | 85 | 17 | 21 | 1 | 358 | 28 | 1.99 | .64 | 27 |
| El Reno | 51.6 | 86 | 5 | 18 | 1 | 428 | 13 | 3.90 | 1.49 | 23 | Okemah | 52.9 | 81 | 18 | 19 | 1 | 395 | 19 | 2.80 | 1.28 | 27 |
| Guthrie | 53.2 | 85 | 5 | 16 | 1 | 391 | 25 | 4.02 | 1.31 | 23 | Perkins | 52.7 | 86 | 5 | 17 | 1 | 406 | 25 | 3.61 | 1.26 | 27 |
| Kingfisher | ***** | *** | *** | *** | *** | **** | **** | ***** | ***** | *** | Shawnee | 53.3 | 83 | 17 | 19 | 1 | **** | **** | 2.32 | .96 | 27 |
| Marena | 52.5 | 86 | 17 | 17 | 1 | 408 | 19 | 4.36 | 1.46 | 23 | Spencer | 53.5 | 84 | 17 | 18 | 1 | 380 | 23 | 2.62 | 1.34 | 27 |
| Minco | 52.6 | 85 | 5 | 19 | 1 | 397 | 12 | 2.50 | 1.29 | 23 | Stillwater | 53.1 | 86 | 17 | 18 | 1 | 395 | 26 | 3.63 | 1.20 | 27 |
| Marshall | 51.8 | 86 | 5 | 13 | 1 | 428 | 18 | 1.98 | 1.10 | 27 | Washington | 54.0 | 85 | 17 | 20 | 1 | 366 | 24 | 1.89 | .73 | 27 |
| EAST CENTRAL | | | | | | | | | | | | | | | | | | | | | |
| Calvin | ***** | *** | *** | *** | *** | **** | **** | ***** | ***** | *** | Sallisaw | 52.7 | 82 | 6 | 19 | 2 | 393 | 13 | 3.17 | .70 | 26 |
| Cookson | 51.5 | 80 | 18 | 14 | 2 | 428 | 10 | 3.96 | 1.06 | 27 | Stigler | 52.8 | 81 | 18 | 16 | 2 | 396 | 17 | 2.53 | .53 | 24 |
| Eufaula | 53.7 | 81 | 6 | 20 | 1 | 372 | 20 | 3.40 | 1.34 | 27 | Stuart | 53.8 | 82 | 6 | 20 | 1 | 368 | 20 | 2.87 | .82 | 27 |
| Haskell | 51.9 | 82 | 6 | 17 | 2 | 422 | 15 | 2.52 | .91 | 27 | Tahlequah | 52.8 | 82 | 18 | 15 | 1 | 392 | 14 | 2.57 | .62 | 30 |
| Hectorville | 52.9 | 83 | 18 | 19 | 1 | 402 | 26 | 3.20 | 1.47 | 27 | Webbers Falls | 52.9 | 81 | 6 | 20 | 1 | 386 | 12 | 2.74 | .77 | 27 |
| McAlester | 53.9 | 81 | 6 | 17 | 2 | 366 | 22 | 2.20 | .49 | 30 | Westville | 51.5 | 79 | 6 | 15 | 1 | 426 | 6 | 3.43 | .92 | 24 |
| Okmulgee | 52.6 | 83 | 18 | 18 | 2 | 411 | 26 | 3.57 | 1.87 | 27 | | | | | | | | | | | |
| SOUTHWEST | | | | | | | | | | | | | | | | | | | | | |
| Altus | 55.8 | 92 | 5 | 19 | 1 | 316 | 30 | 1.98 | 1.17 | 23 | Hollis | 54.9 | 91 | 4 | 19 | 1 | 336 | 23 | .41 | .15 | 14 |
| Apache | 53.5 | 87 | 5 | 19 | 1 | 376 | 19 | .99 | .56 | 23 | Mangum | 53.6 | 91 | 5 | 16 | 1 | 371 | 19 | 1.28 | .52 | 23 |
| Fort Cobb | 53.4 | 87 | 5 | 17 | 1 | 378 | 17 | 3.68 | 2.90 | 23 | Medicine Park | 55.1 | 89 | 5 | 21 | 1 | 339 | 31 | 2.76 | 1.91 | 23 |
| Grandfield | 56.2 | 90 | 5 | 18 | 1 | 304 | 32 | .44 | .14 | 14 | Tipton | 56.0 | 90 | 5 | 15 | 1 | 310 | 30 | .76 | .24 | 27 |
| Hinton | 52.0 | 84 | 5 | 18 | 1 | 409 | 7 | 1.44 | .57 | 23 | Walters | 56.7 | 89 | 5 | 21 | 1 | 296 | 39 | .47 | .21 | 14 |
| Hobart | 53.7 | 90 | 5 | 17 | 1 | 373 | 22 | 2.11 | .84 | 9 | | | | | | | | | | | |
| SOUTH CENTRAL | | | | | | | | | | | | | | | | | | | | | |
| Ada | 53.8 | 83 | 5 | 18 | 2 | 371 | 24 | 3.20 | 1.14 | 27 | Madill | 55.8 | 85 | 5 | 20 | 2 | 317 | 31 | 2.42 | .53 | 10 |
| Ardmore | 55.5 | 86 | 5 | 23 | 2 | 322 | 29 | 1.19 | .58 | 27 | Newport | 55.7 | 87 | 5 | 23 | 1 | 319 | 31 | .79 | .37 | 27 |
| Burneyville | 56.4 | 88 | 5 | 19 | 2 | 309 | 41 | 1.89 | .43 | 11 | Pauls Valley | 54.8 | 86 | 5 | 22 | 1 | 345 | 30 | 1.65 | .51 | 30 |
| Byars | 53.8 | 83 | 18 | 21 | 1 | 372 | 26 | 2.75 | 1.27 | 27 | Ringling | 56.1 | 89 | 5 | 20 | 1 | 307 | 31 | .60 | .20 | 27 |
| Centrahoma | 53.9 | 82 | 5 | 17 | 2 | 366 | 24 | 3.58 | 1.54 | 27 | Sulphur | 54.1 | 83 | 5 | 21 | 1 | 362 | 25 | 2.28 | .81 | 27 |
| Durant | 55.2 | 82 | 5 | 21 | 2 | 329 | 26 | 3.07 | .83 | 27 | Tishomingo | 53.9 | 83 | 5 | 21 | 1 | 363 | 19 | 2.96 | 1.09 | 27 |
| Fittstown | 53.4 | 82 | 5 | 21 | 1 | 376 | 16 | 2.48 | .85 | 27 | Vanoss | 53.8 | 84 | 18 | 17 | 2 | 372 | 25 | 2.64 | .81 | 27 |
| Ketchum Ranch | 56.4 | 90 | 5 | 22 | 1 | 312 | 46 | .69 | .26 | 27 | Waurika | 57.0 | 89 | 5 | 23 | 1 | 288 | 40 | .78 | .35 | 27 |
| Lane | 53.7 | 80 | 5 | 18 | 2 | 368 | 18 | 3.17 | .72 | 19 | | | | | | | | | | | |
| SOUTHEAST | | | | | | | | | | | | | | | | | | | | | |
| Antlers | 53.7 | 81 | 6 | 17 | 2 | 371 | 20 | 3.86 | .86 | 24 | Idabel | 54.1 | 79 | 5 | 21 | 2 | 351 | 14 | ***** | ***** | *** |
| Broken Bow | 52.4 | 79 | 5 | 19 | 2 | 393 | 4 | 4.81 | 1.13 | 11 | Mt Herman | ***** | *** | *** | *** | *** | ***** | ***** | 7.08 | 1.81 | 11 |
| Clayton | 54.0 | 81 | 6 | 18 | 2 | 361 | 20 | 3.27 | .90 | 27 | Talihina | 53.1 | 79 | 6 | 17 | 2 | 385 | 17 | 4.52 | 1.41 | 27 |
| Cloudy | 52.8 | 78 | 18 | 20 | 2 | 389 | 10 | 4.57 | 1.00 | 11 | Wilburton | 53.7 | 81 | 6 | 16 | 2 | 372 | 21 | 3.14 | .66 | 24 |
| Hugo | 54.3 | 78 | 5 | 23 | 1 | 349 | 18 | 4.26 | 1.30 | 11 | Wister | 51.8 | 81 | 18 | 16 | 2 | 427 | 19 | 3.78 | .97 | 24 |

March 2009 Mesonet Precipitation Comparison

| Climate Division | Precipitation (inches) | Departure from Normal (inches) | Rank since 1895 | Wettest on Record (Year) | Driest on Record (Year) | Mar-08 |
|------------------|------------------------|--------------------------------|-----------------|--------------------------|-------------------------|--------|
| Panhandle | 0.57 | -1.06 | 40th Driest | 5.84 (1973) | 0.00 (1895) | 0.13 |
| North Central | 1.70 | -0.98 | 58th Driest | 8.18 (1973) | 0.00 (1936) | 2.24 |
| Northeast | 4.01 | 0.34 | 30th Wettest | 9.79 (1973) | 0.00 (1900) | 5.60 |
| West Central | 1.04 | -1.36 | 39th Driest | 7.24 (1973) | 0.00 (1895) | 2.31 |
| Central | 2.76 | -0.48 | 44th Wettest | 7.88 (1990) | 0.00 (1900) | 3.50 |
| East Central | 3.01 | -1.08 | 56th Driest | 10.63 (1945) | 0.46 (1911) | 8.88 |
| Southwest | 1.48 | -0.78 | 51st Driest | 5.52 (1973) | 0.00 (1940) | 1.82 |
| South Central | 2.13 | -1.42 | 39th Driest | 8.46 (1945) | 0.20 (1950) | 6.50 |
| Southeast | 4.37 | -0.11 | 44th Wettest | 12.38 (1945) | 1.01 (1954) | 9.80 |
| Statewide | 2.36 | -0.75 | 58th Driest | 7.46 (1973) | 0.38 (1971) | 4.44 |

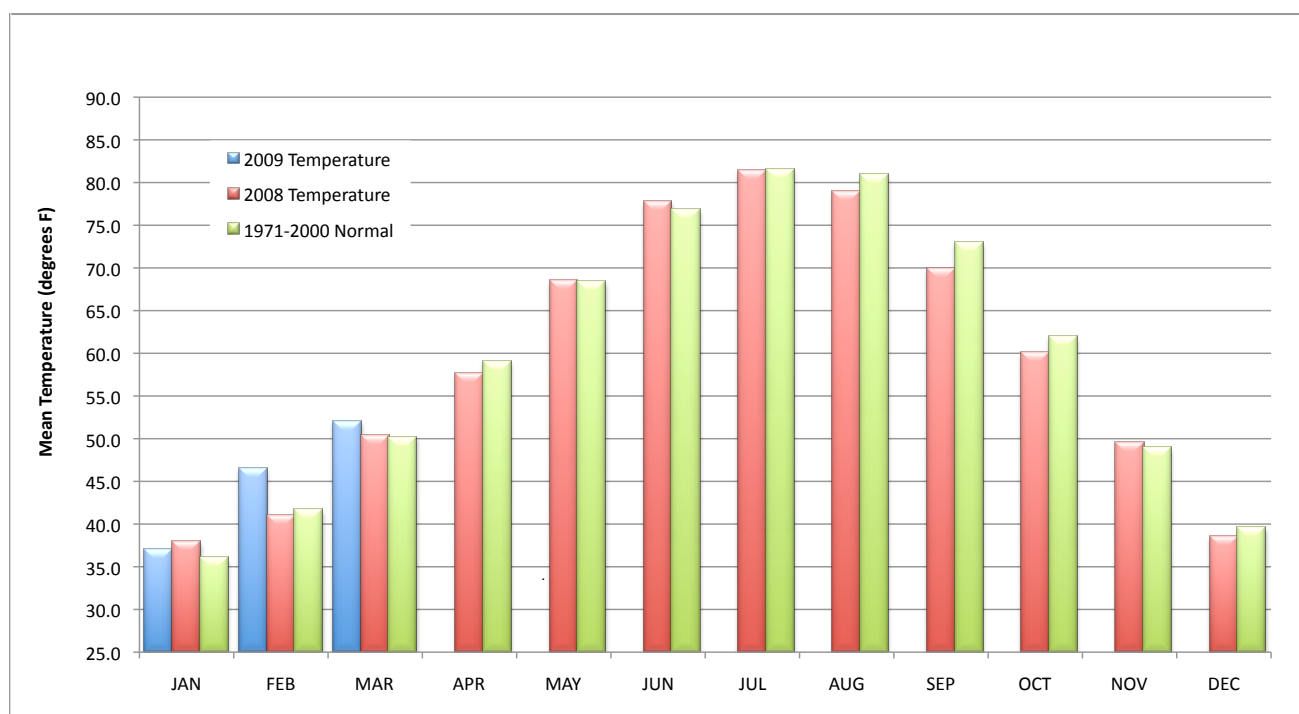
2008 and 2009 Statewide Precipitation Monthly Totals vs. Normal



March 2009 Mesonet Temperature Comparison

| Climate Division | Average Temp (F) | Departure from Normal (F) | Rank since 1895 | Hottest on Record (Year) | Coldest on Record (Year) | Mar-08 (F) |
|------------------|------------------|---------------------------|-----------------|--------------------------|--------------------------|------------|
| Panhandle | 46.8 | 0.5 | 38th Warmest | 54.3 (1910) | 32.9 (1915) | 46.8 |
| North Central | 49.6 | 1.4 | 37th Warmest | 57.6 (1910) | 35.3 (1915) | 48.1 |
| Northeast | 51.1 | 1.5 | 34th Warmest | 58.6 (2007) | 37.3 (1960) | 49.6 |
| West Central | 51.6 | 2.7 | 23rd Warmest | 57.3 (2007) | 35.8 (1915) | 50.1 |
| Central | 53.1 | 2.6 | 25th Warmest | 59.1 (2007) | 37.7 (1915) | 51.3 |
| East Central | 52.7 | 1.2 | 35th Warmest | 60.2 (2007) | 39.2 (1915) | 52.6 |
| Southwest | 54.6 | 3.1 | 18th Warmest | 58.8 (2007) | 38.2 (1915) | 52.2 |
| South Central | 54.9 | 1.9 | 30th Warmest | 61.1 (1907) | 40.4 (1915) | 53.1 |
| Southeast | 53.2 | 0.4 | 43rd Warmest | 61.5 (1907) | 42.0 (1915) | 52.4 |
| Statewide | 52.0 | 1.8 | 32nd Warmest | 58.3 (2007) | 37.6 (1915) | 50.6 |

2008 and 2009 Statewide Temperature Monthly Averages vs. Normal



Mesonet Extremes for March 2009

| Climate Division | High Temp (F) | Day | Station | Low Temp (F) | Day | Station | High Monthly Rainfall (inches) | Station | High Daily Rainfall (inches) | Day | Station |
|------------------|---------------|------|---------------|--------------|-----|------------|--------------------------------|-------------|------------------------------|------|-------------|
| Panhandle | 90 | 4th | Buffalo | 7 | 1st | Beaver | 0.98 | Slapout | 0.91 | 29th | Slapout |
| North Central | 92 | 5th | Fairview | 10 | 1st | Freedom | 3.36 | Newkirk | 2.05 | 27th | Newkirk |
| Northeast | 86 | 5th | Pawnee | 13 | 1st | Vinita | 5.30 | Wynona | 2.36 | 24th | Wynona |
| West Central | 91 | 5th | Butler | 14 | 1st | Butler | 2.70 | Weatherford | 1.99 | 23rd | Weatherford |
| Central | 86 | 17th | Stillwater | 13 | 1st | Marshall | 4.56 | Bristow | 2.09 | 27th | Bristow |
| East Central | 83 | 18th | Hectorville | 14 | 2nd | Cookson | 3.96 | Cookson | 1.87 | 27th | Okmulgee |
| Southwest | 92 | 5th | Altus | 15 | 1st | Tipton | 3.68 | Fort Cobb | 2.90 | 23rd | Fort Cobb |
| South Central | 90 | 5th | Ketchum Ranch | 17 | 2nd | Centrahoma | 3.58 | Centrahoma | 1.54 | 27th | Centrahoma |
| Southeast | 81 | 6th | Antlers | 16 | 2nd | Wister | 7.08 | Mt Herman | 1.81 | 11th | Mt Herman |
| Statewide | 92 | 5th | Altus | 7 | 1st | Beaver | 7.08 | Mt Herman | 2.90 | 23rd | Fort Cobb |

April Climatological Outlook

April is the first full month of spring- the season of newly green trees and grass, redbud trees in bloom, and wildflowers aplenty. Baseball, romance, and pollen permeate the air, creating the dizzying mixture of joy and misery that marks the season. Most of April features exceedingly pleasant weather, much like that on April 22, 1889. According to the weather report submitted by the observer at Fort Reno, the day of the first great land run featured a high temperature of 80 degrees Fahrenheit, sandwiched between overnight lows of 46 and 54 degrees. Winds were northeasterly and light. Clouds were few.

Temperature

Mean: 59.8 degrees
Warmest Location: 63.9 degrees, Waurika
Coolest Location: 54.0 degrees, Boise City
Warmest April: 1954, 65.4 degrees
Coolest April: 1983, 54.0 degrees
Hottest recorded: 106 degrees, Mangum, April 12, 1972
Coldest recorded: 7 degrees, Hooker, April 4, 1979

April is the state's 5th wettest and 7th warmest month, establishing it clearly as part of the spring transition season. The statewide-averaged normal precipitation, based on the 30-year record compiled from 1971 through 2000, is 3.32 inches. The average monthly temperature, compiled from observations over the same period, is 59.8 degrees.

Precipitation

Mean: 3.32 inches
Wettest April: 1942, 8.50 inches
Driest April: 1989, 0.58 inches
Wettest location: Daisy, 5.19 inches
Driest location: Regnier, 1.36 inches
Most recorded: 17.78 inches, Okemah, 1945

Precipitation generally increases from southeast to northwest. Monthly normal precipitation for individual stations ranges from 1.36 inches at Oklahoma's driest observing station, Regnier (in the northwestern panhandle), to 5.19 inches at Daisy, on the western edge of southeastern Oklahoma's Ouachita Mountains. A statewide-averaged precipitation of 8.50 inches rates 1942 as the wettest April in the state's annals. The driest April, statewide, was in 1989 when the state's reporting stations received an average of just 0.58 inch for the month. The greatest April precipitation at any reporting station was 17.78 inches recorded at Okemah in 1945. Snowfall is rare in April, except in the panhandle. Boise City averages 2.5 inches of snow during April. Goodwell reported 17 inches of snow during April 1988, and Fargo received 14 inches during that month in 1973.

Normal monthly temperatures decrease from south to north. Waurika is the state's warmest location during April with a normal temperature of 63.9 degrees. Boise City ranks as the coolest site with a monthly average temperature of 54 degrees. Normal daily maximum temperatures range from 77 degrees at Waurika to 67.8 degrees at Newkirk. Normal daily minimum temperatures range from Waurika's 50.7 degrees to Boise City's 37.3. Temperatures drop below the freezing mark an average of nearly 8 times during April at Kenton, but freezes are uncommon across most of the main body of the state. Except in the panhandle, any sub-freezing temperatures after mid-April would constitute a late freeze and would be harmful to plants, especially fruit or pecan trees. Southwestern Oklahoma experiences temperatures in the 90s an average of three times each April. Hot and cold do manage to creep in, however. On April 12, 1972, Mangum recorded a high temperature of 106 degrees, the highest of the 15 temperature reports of 102 degrees or more across the state that day. Conversely, Hooker's daily minimum temperature on April 4, 1979 was 7 degrees, thereby establishing the other extreme temperature for the month.

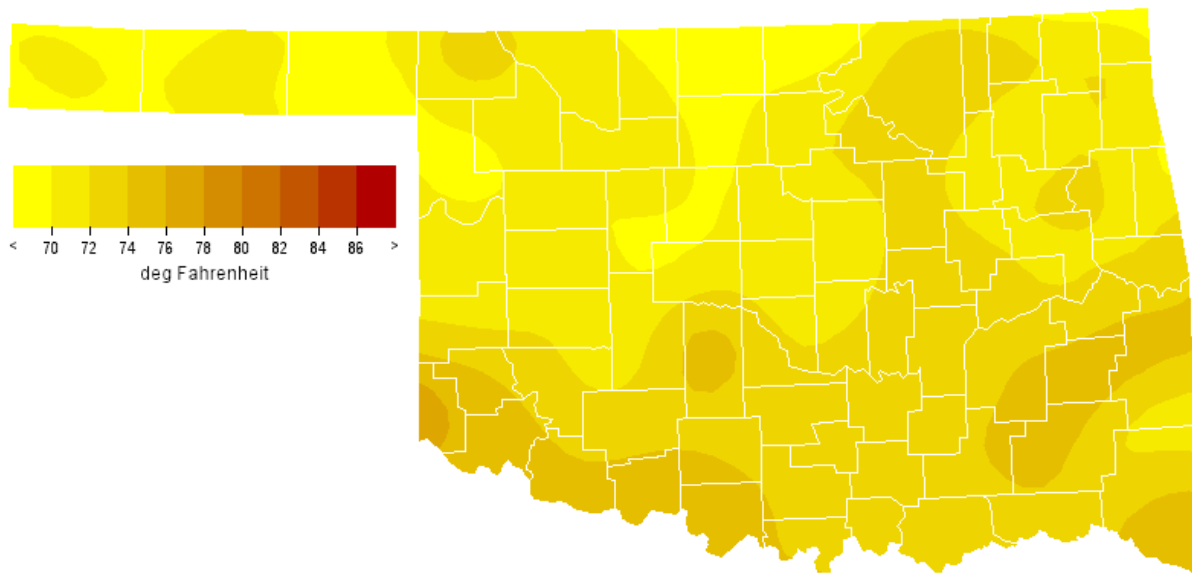
Tornadoes

Average April Tornadoes: 10.7
Most: 40 (1957)

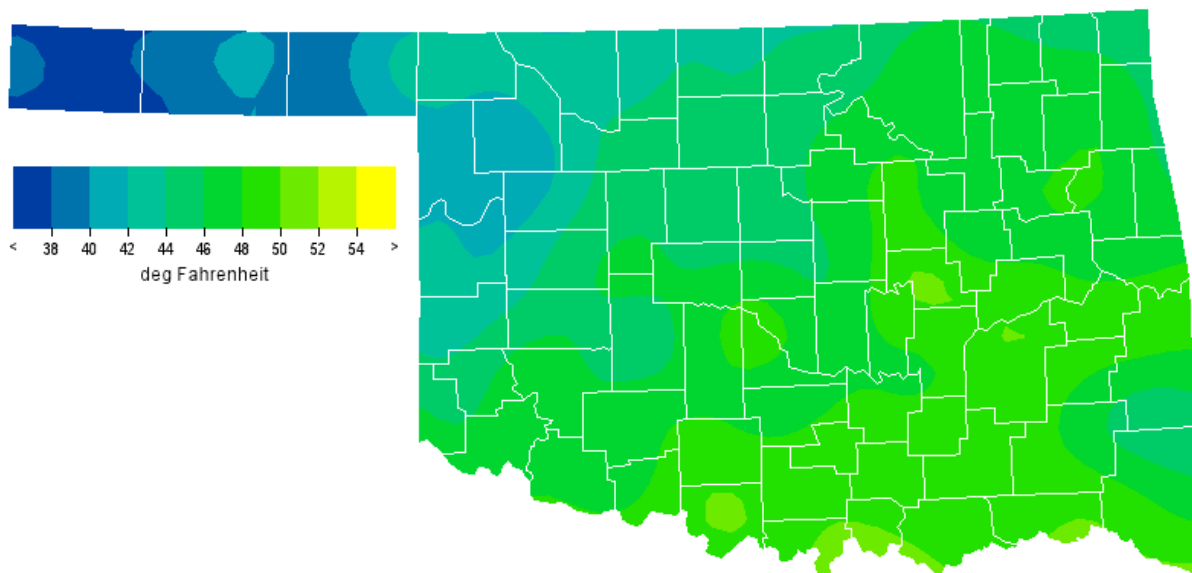
Spring brings with it Oklahoma's noted severe weather season. April is Oklahoma's windiest month and ranks second among the 12 months in the number of tornadoes observed across the state. The state has averaged 10.7 tornadoes each April since 1950, a monthly average exceeded only by May. Eight years of wind observations from the statewide Oklahoma Mesonet have revealed an average April wind speed, statewide, of 10.6 miles per hour, which barely edges March for windiest month honors. South winds prevail in most areas, although passing cold fronts are still capable of turning winds to northerly for a day or so at a time.

Comprehensive records of tornado occurrence are available from 1950 to the present. A total of 579 tornadoes are listed as having struck within Oklahoma during April from 1950 through 2003. Forty of those tornadoes were reported in 1957, easily the most of any April during the period.

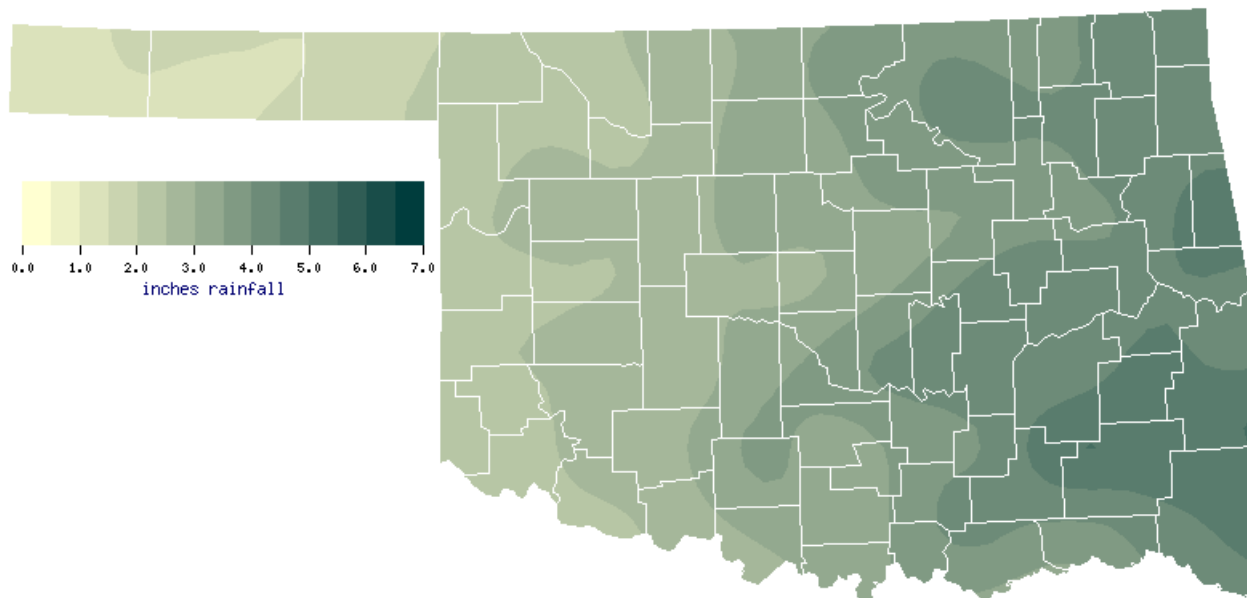
April Normal Daily Maximum Temperature (1971-2000)



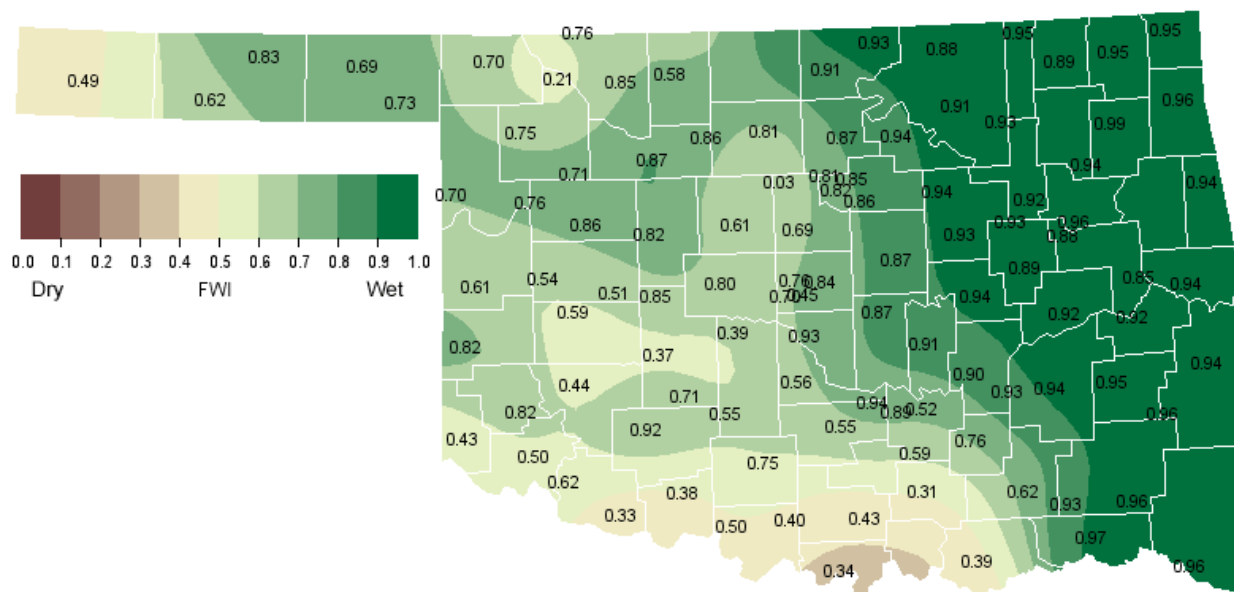
April Normal Daily Minimum Temperature (1971-2000)



April Normal Precipitation (1971-2000)



April 1, 2009 Soil Moisture Conditions at 25cm



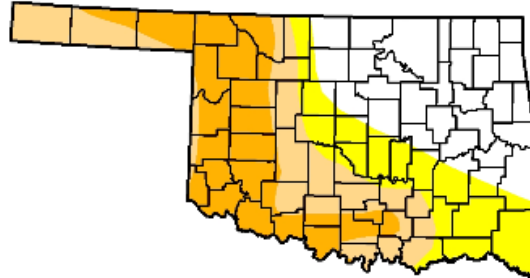
U.S. Drought Monitor

Oklahoma

March 31, 2009
Valid 7 a.m. EST

Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|---|------|-------|-------|-------|-------|-----|
| Current | 33.2 | 66.8 | 47.3 | 26.3 | 0.0 | 0.0 |
| Last Week (03/24/2009 map) | 18.6 | 81.4 | 48.8 | 27.1 | 0.0 | 0.0 |
| 3 Months Ago (01/06/2009 map) | 41.6 | 58.4 | 12.0 | 3.4 | 0.0 | 0.0 |
| Start of Calendar Year (01/06/2009 map) | 41.6 | 58.4 | 12.0 | 3.4 | 0.0 | 0.0 |
| Start of Water Year (10/07/2008 map) | 84.4 | 15.6 | 5.0 | 3.5 | 0.0 | 0.0 |
| One Year Ago (04/01/2008 map) | 81.7 | 18.3 | 10.9 | 0.0 | 0.0 | 0.0 |



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

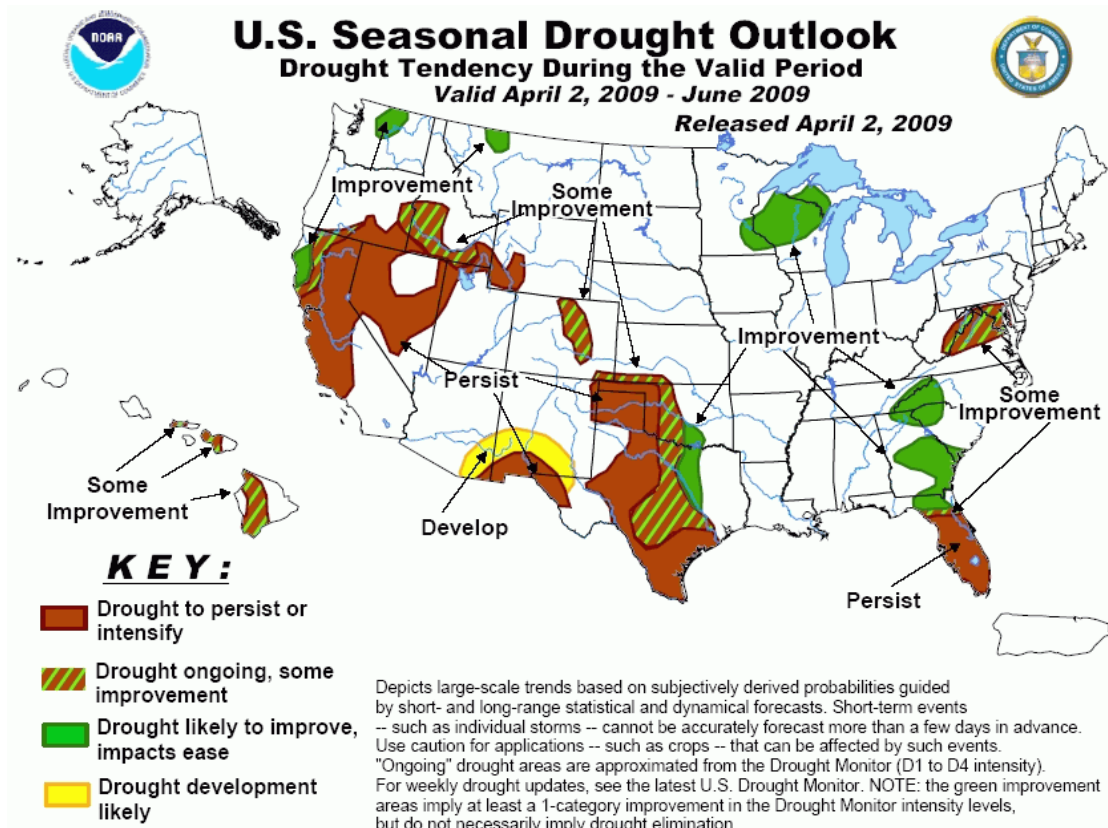
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements

<http://drought.unl.edu/dm>

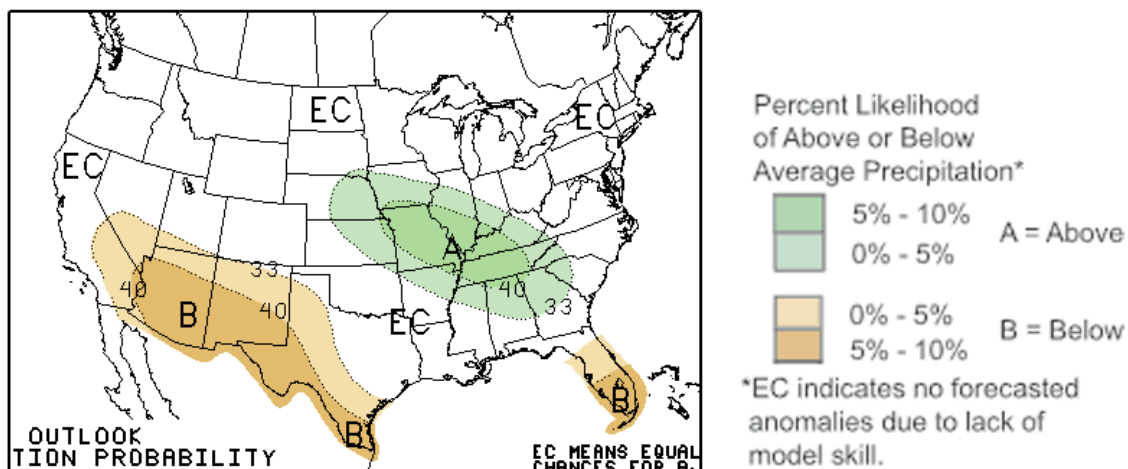


Released Thursday, April 2, 2009

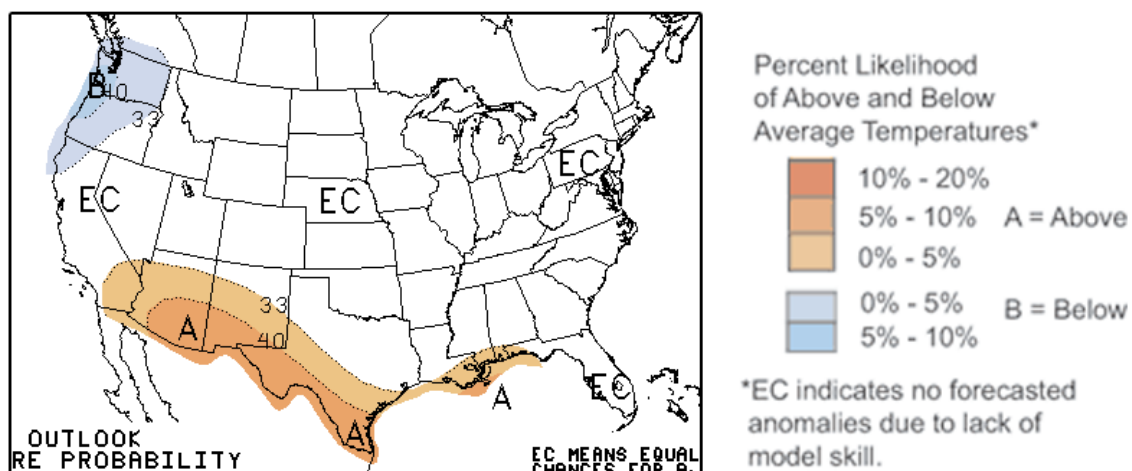
Author: Mark Svoboda, National Drought Mitigation Center



April 2009 U.S. Precipitation Forecast



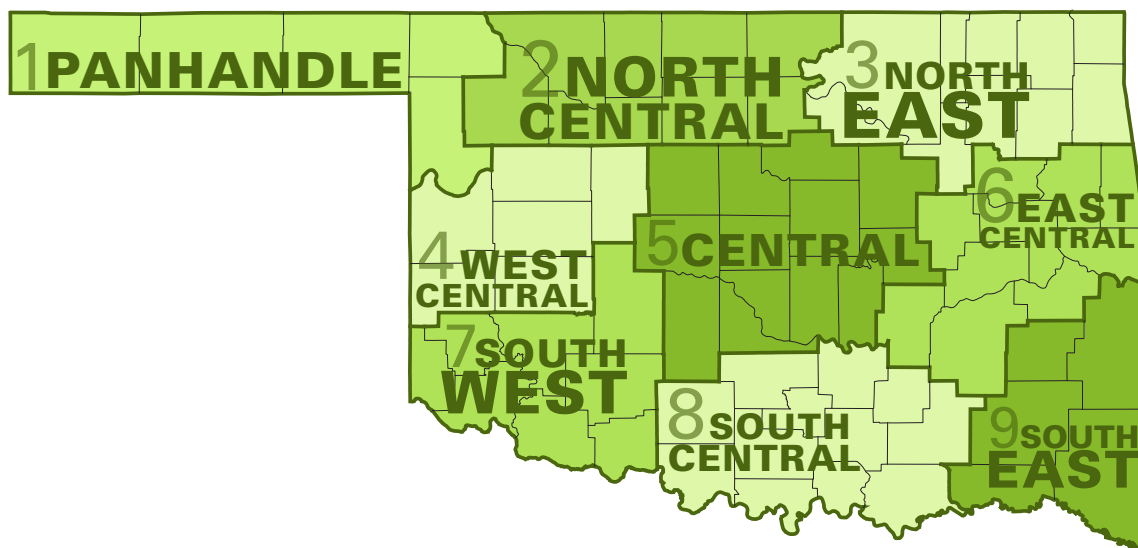
April 2009 U.S. Temperature Forecast



April Climate Normals

| Climate Division | Max. Temperature (°F) | Min. Temperature (°F) | Avg. Temperature (°F) | Precipitation (inches) |
|------------------|-----------------------|-----------------------|-----------------------|------------------------|
| 1 | 70.7 | 40.5 | 55.6 | 1.81 |
| 2 | 70.2 | 43.6 | 56.9 | 2.95 |
| 3 | 72.1 | 47.1 | 59.6 | 3.92 |
| 4 | 71.0 | 44.3 | 57.7 | 2.48 |
| 5 | 71.9 | 47.2 | 59.6 | 3.47 |
| 6 | 72.3 | 48.3 | 60.3 | 4.24 |
| 7 | 73.6 | 46.4 | 60.0 | 2.66 |
| 8 | 73.5 | 48.9 | 61.2 | 3.74 |
| 9 | 73.7 | 47.8 | 60.8 | 4.46 |
| Statewide | 72.1 | 46.2 | 59.2 | 3.41 |

Oklahoma Climate Divisions



Interpretation Information

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

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

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

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

Additional Resources

Sunrise / Sunset tables

U.S. Naval Observatory: <http://aa.usno.navy.mil/data>

Severe Storm Reports

Storm Prediction Center: <http://spc.noaa.gov/climo/>

National Climatic Data Center (more than about 4-5 months old):

<http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storms>

Seasonal Outlooks

Climate Prediction Center:

http://www.cpc.ncep.noaa.gov/products/OUTLOOKS_index.html

Climate Calendars and other local weather and climate information

Oklahoma Climatological Survey: <http://climate.mesonet.org> or

<http://climate.ok.gov/>

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



Oklahoma Climatological Survey is the State
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