# OKLAHOMA
# MONTHLY SUMMARY
# JULY 1989

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## JULY 1989 OKLAHOMA SUMMARY

The State experienced its 13th coolest July since 1892 and its third consecutive month this year with below normal temperatures. Every temperature observing station except one recorded a monthly mean temperature at least 1.5 degrees below normal. Cloud cover and cool air masses contributed to much below normal daily maximum temperatures (see Map 1). Fewer than half the stations, including only one in the eastern third of the State, recorded any days with 100 degree readings, during a month in which averages typically range from 5 days in the northeast to more than 15 days in the southwest.

Most stations recorded little or no precipitation during the dry, warm first 11 days of the month. On July 11 and 12, strong solar radiation provided the Panhandle its only 100-degree readings. On the 12th, however, a surface trough met the hot, moist, unstable air over Oklahoma causing scattered thunderstorms which produced golfball-size hail in McIntosh and Beaver Counties, and nickel-size hail in Woods and Blaine Counties. Slow-moving storms on July 13 caused localized street-flooding in central and south central Oklahoma. The low pressure system lingered over the State for several days. On July 15, severe storms in the Tulsa area dropped 2" diameter hail, and 75-mph winds knocked down several large trees in nearby Coweta. Severe storms formed near the reintensifying trough and struck eastern Oklahoma on July 17. Bartlesville reported 80-mph winds from a thunderstorm. Most stations in CD's 3 and 6 recorded more than 1" of rain from these storms, including 2.82" at Tahlequah.

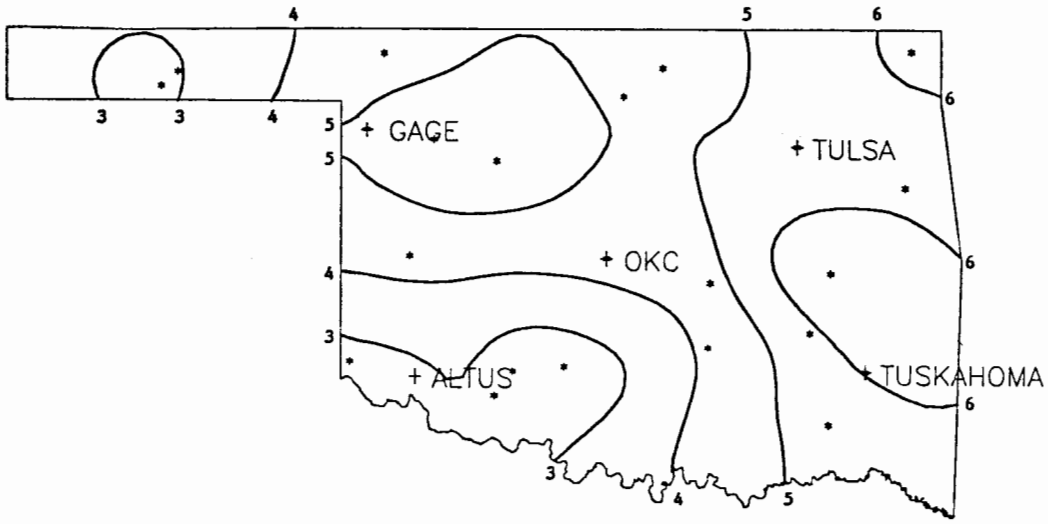
A high pressure ridge brought cooler air on July 18 as it settled over the State behind a cold front. Temperatures averaged 4 to 8 degrees below normal during the following week. Under the influence of this mild air mass, most stations experienced their lowest temperatures of the month, mostly in the near-record 55 to 60 degree range, between July 20 and 23.

A strong cluster of thunderstorms developed in north central Oklahoma on the 22nd. Hail and 70-mph winds accompanied storms in the Enid area. On the following morning, the storms produced over 2" of rain in Norman where streets flooded with up to 2 feet of water.

A tropical air mass returned to the State and daily maximum temperatures rose quite steadily during the last week of the month. Temperatures at many locations in the western two-thirds of the State reached 100 degrees on July 30 or 31. Cloud cover and rain associated with Hurricane Chantel's remnants kept temperatures several degrees lower in the east. Chantel-related rainfall amounts on July 31 included Quapaw 3.75", Miami 3.91", Muskogee 1.90" and Jay Tower 1.54".

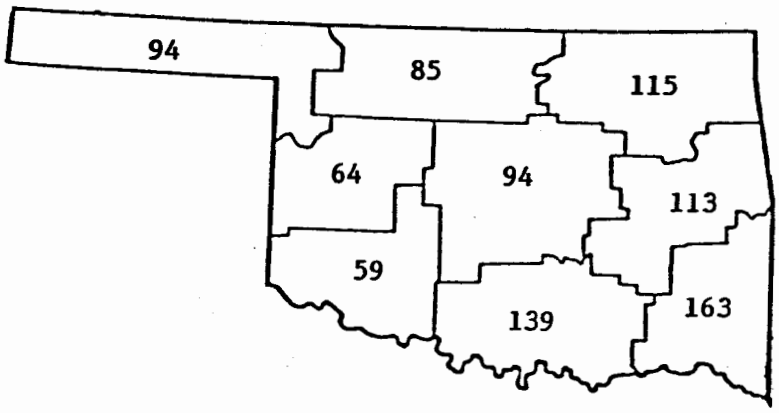
- R. J. Sladewski

Map 1. July 1989 daily maximum temperature departures from the long-term mean (all values are degrees F BELOW the mean).

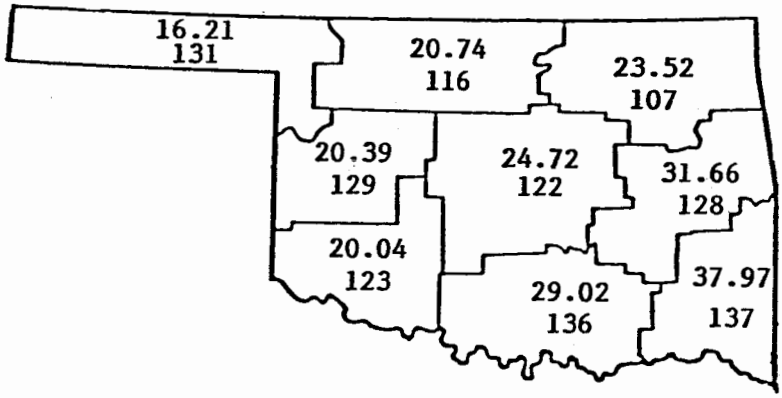



July afternoons may have seemed more mild than the 2 to 3.5 degree monthly deviations recorded over much of the State (see July Temperature Deviation Map). This resulted from much lower daily maximum temperatures but only slightly cooler, near normal morning lows. When averaged together for use in calculating the overall monthly deviation, the large temperature departures of the afternoon highs are offset by the smaller deviations in the minimums. Map 1 depicts maximum deviations which were nearly twice the magnitude of the overall deviations. These below normal daily highs, alone, account for much of the monthly deviations and for milder days this July.

**JULY 1989**
**PERCENT OF NORMAL JULY PRECIPITATION**




January-July, 1989 cumulative precipitation (upper value) and percent of normal precipitation (lower value).




Oklahoma's July precipitation slightly exceeded the long-term mean, leaving April as the only month this year with below normal Statewide precipitation. Boosted by nearly twice the normal rainfall in June, year-to-date precipitation amounts exceed normals in all CD's, and by as much as 36 and 37% in the south central and southeast districts.

## TABLE OF 1988/1989 COMPARISONS

| Station | July Temperatures (F) 1988 | 1989 | July Precipitation (in.) 1988 | 1989 |
|---|---|---|---|---|
| Arnett | 78.6 | 77.7 | 1.21 | 1.23 |
| Enid | 82.2 | 80.1 | 2.69 | 4.11 |
| Mutual | 79.8 | 78.1 | 2.22 | 1.29 |
| Tulsa | 82.7 | 80.5 | 4.20 | 3.98 |
| Elk City | 80.5 | 79.5 | 2.60 | 1.02 |
| Oklahoma City | 81.7 | 79.7 | 1.97 | 1.95 |
| McAlester | 81.7 | 78.9 | 3.18 | 1.72 |
| Altus Irr. Sta. | 83.0 | 82.3 | 2.10 | 1.97 |
| Durant | 81.8 | 79.1 | 1.25 | 8.49 |
| Ada | 82.3 | 79.5 | 2.63 | 2.25 |
| Antlers | 82.4 | 79.1 | 3.88 | 6.01 |

## EXTREMES

| Variable | Station | Division | Observation | Date |
|---|---|---|---|---|
| Minimum temperature (F) | Gage | 1 | 52 | 21 |
| | Reydon | 4 | 52 | 21 |
| Maximum temperature (F) | Altus Irr. | 7 | 111 | 17 |
| | Mangum Rs. | 7 | 111 | 17 |
| Maximum 24-hour precipitation | Ketchum Ranch | 8 | 5.30" | 14 |

## JULY 1989 SUMMARY FOR NORTHWEST DIVISION (CD1)

| NAME | ID | CD | MEAN TEMP | DEV NUM OBS | DEV FROM NORM | MAX TEMP | MAX DAY | MIN TEMP | MIN DAY | HEAT DEG DAY | DEV FROM NORM | COOL DEG DAY | DEV FROM NORM | TOT PPT | DEV NUM OBS | DEV FROM NORM | MAX 24-HR | MAX DAY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ARNETT | 332 | 1 | 77.7 | 31 | -3.1 | 99. | 13 | 57. | 22 | .0 | .0 | 393.5 | -96.5 | 1.233 | 31 | -.86 | .75 | 13 |
| BOISE CITY 2 E | 908 | 1 | 75.9 | 31 | -2.1 | 98. | 1 | 57. | 10 | .0 | .0 | 339.0 | -64.0 | 1.070 | 31 | -1.53 | .40 | 24 |
| BUFFALO | 1243 | 1 | 79.9 | 31 | -3.5 | 103. | 11 | 54. | 22 | .0 | .0 | 462.0 | -108.0 | 3.200 | 31 | -.12 | 2.88 | 13 |
| FARGO | 3070 | 1 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.670 | 31 | -.52 | 1.33 | 14 |
| GAGE FAA APT | 3407 | 1 | 77.8 | 31 | -3.7 | 98. | 30 | 52. | 21 | .0 | .0 | 398.0 | -114.0 | 1.702 | 31 | -.41 | .76 | 13 |
| GATE | 3489 | 1 | 77.9 | 31 | ***** | 100. | 12 | 58. | 22 | .0 | ****** | 399.0 | ****** | 4.390 | 31 | ***** | 3.19 | 13 |
| GOODWELL RES ST | 3628 | 1 | 76.4 | 31 | -3.0 | 100. | 12 | 55. | 8 | .0 | .0 | 354.0 | -92.0 | 1.444 | 31 | -1.44 | 1.34 | 13 |
| GUYMON | 3835 | 1 | 77.1 | 28 | ***** | 100. | 11 | 57. | 21 | .0 | ****** | 338.0 | ****** | .801 | 29 | ***** | .72 | 13 |
| HOOKER | 4298 | 1 | 76.5 | 31 | -3.8 | 99. | 12 | 55. | 21 | .0 | .0 | 355.0 | -119.0 | 1.630 | 31 | -1.30 | .86 | 26 |
| KENTON | 4766 | 1 | 75.1 | 31 | -3.5 | 98. | 18 | 57. | 23 | .0 | .0 | 313.0 | -109.0 | 2.460 | 31 | -.43 | 1.64 | 13 |
| LAVERNE | 5045 | 1 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 4.960 | 31 | 2.47 | 3.20 | 14 |
| OPTIMA LAKE | 6740 | 1 | 76.6 | 31 | ***** | 99. | 12 | 57. | 21 | .0 | ****** | 360.5 | ****** | 1.440 | 31 | ***** | .40 | 13 |
| REGNIER | 7534 | 1 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | .180 | 31 | -2.32 | .12 | 15 |
| TURPIN 4 SSE | 9017 | 1 | 76.8 | 31 | ***** | 100. | 12 | 55. | 25 | .0 | ****** | 366.5 | ****** | 3.180 | 31 | ***** | 1.15 | 24 |

## JULY 1989 SUMMARY FOR NORTH CENTRAL DIVISION (CD2)

| NAME | ID | CD | MEAN TEMP | DEV NUM OBS | DEV FROM NORM | MAX TEMP | MAX DAY | MIN TEMP | MIN DAY | HEAT DEG DAY | DEV FROM NORM | COOL DEG DAY | DEV FROM NORM | TOT PPT | DEV NUM OBS | DEV FROM NORM | MAX 24-HR | MAX DAY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ALVA 1 ENE | 194 | 2 | 80.2 | 31 | -3.2 | 102. | 29 | 58. | 22 | .0 | .0 | 472.5 | -97.5 | 1.310 | 31 | -1.28 | .68 | 31 |
| VANCE AFB | 302 | 2 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.613 | 29 | ***** | .67 | 29 |
| BILLINGS | 755 | 2 | 80.0 | 31 | ***** | 100. | 31 | 60. | 24 | .0 | ****** | 466.0 | ****** | 1.460 | 31 | -2.06 | .60 | 24 |
| BLACKWELL 2E | 818 | 2 | 79.4 | 31 | ***** | 103. | 30 | 60. | 20 | .0 | ****** | 447.0 | ****** | 2.801 | 31 | ***** | 1.35 | 14 |
| BRAMAN | 1075 | 2 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 2.403 | 31 | ***** | 1.02 | 3 |
| CEDARDALE | 1620 | 2 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | .930 | 31 | ***** | .66 | 14 |
| CHEROKEE | 1724 | 2 | 81.1 | 31 | -2.6 | 101. | 29 | 59. | 22 | .0 | .0 | 498.0 | -82.0 | 1.430 | 31 | -1.33 | .52 | 26 |
| ENID | 2912 | 2 | 80.1 | 31 | -3.4 | 100. | 30 | 62. | 23 | .0 | .0 | 469.5 | -104.5 | 4.113 | 31 | .93 | 2.02 | 24 |
| FT SUPPLY DAM | 3304 | 2 | 76.9 | 31 | -4.9 | 97. | 31 | 56. | 21 | .0 | .0 | 368.5 | -152.5 | 2.500 | 31 | .31 | 2.50 | 14 |
| FREEDOM | 3358 | 2 | 78.7 | 31 | ***** | 101. | 30 | 56. | 22 | .0 | ****** | 423.5 | ****** | 1.960 | 31 | ***** | 1.24 | 14 |
| GREAT SALT PLNS | 3740 | 2 | 81.5 | 31 | ***** | 107. | 31 | 61. | 21 | .0 | ****** | 511.5 | ****** | 1.022 | 31 | -2.16 | .50 | 3 |
| HARDY | 3909 | 2 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 5.332 | 31 | ***** | 1.50 | 11 |
| HELENA 1 SSE | 4019 | 2 | 79.8 | 31 | ***** | 102. | 30 | 59. | 22 | .0 | ****** | 458.5 | ****** | 1.913 | 31 | -1.17 | 1.20 | 13 |
| JEFFERSON | 4573 | 2 | 80.8 | 31 | -2.8 | 103. | 30 | 57. | 22 | .0 | .0 | 491.0 | -86.0 | 1.651 | 31 | -2.27 | .73 | 2 |
| LAMONT | 5013 | 2 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 5.250 | 31 | ***** | 2.83 | 15 |
| MEDFORD | 5768 | 2 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.630 | 31 | ***** | .53 | 13 |
| MORRISON | 6065 | 2 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.540 | 31 | ***** | .66 | 13 |
| MUTUAL | 6139 | 2 | 78.0 | 31 | -4.6 | 102. | 31 | 56. | 21 | .0 | .0 | 404.0 | -142.0 | 1.290 | 31 | -1.27 | .46 | 25 |
| NEWKIRK | 6278 | 2 | 78.7 | 31 | -3.8 | 100. | 30 | 61. | 20 | .0 | .0 | 425.0 | -118.0 | 3.902 | 31 | .35 | 1.10 | 14 |
| ORIENTA | 6751 | 2 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 4.410 | 31 | ***** | 1.40 | 26 |
| PERRY | 7012 | 2 | 73.9 | 29 | ***** | 95. | 6 | 54. | 21 | .0 | ****** | 257.5 | ****** | 1.991 | 29 | ***** | .57 | 3 |
| PONCA CITY FAA | 7201 | 2 | 79.8 | 30 | -2.8 | 102. | 30 | 61. | 21 | .0 | .0 | 442.5 | -103.5 | 2.423 | 31 | -1.68 | .78 | 12 |
| RED ROCK 1 NNE | 7505 | 2 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 3.650 | 31 | -.07 | 1.40 | 17 |
| RENFROW | 7556 | 2 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 3.892 | 31 | .38 | 1.84 | 23 |
| WAYNOKA | 9404 | 2 | 78.8 | 31 | -4.7 | 101. | 30 | 55. | 22 | .0 | .0 | 428.5 | -145.5 | 4.100 | 31 | 1.55 | 3.11 | 13 |
| WOODWARD | 9760 | 2 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 2.201 | 31 | ***** | 1.50 | 14 |

## JULY 1989 SUMMARY FOR NORTHEAST DIVISION (CD3)

| NAME | ID | CD | MEAN TEMP | NUM OBS | DEV FROM NORM | MAX TEMP | MAX DAY | MIN TEMP | MIN DAY | HEAT DEG DAY | DEV FROM NORM | COOL DEG DAY | DEV FROM NORM | TOT PPT | NUM OBS | DEV FROM NORM | MAX 24-HR | MAX 24-HR DAY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BARNSDALL | 535 | 3 | 77.4 | 31 | ***** | 95. | 30 | 57. | 21 | .0 | ****** | 385.0 | ****** | 2.540 | 31 | -.66 | 1.21 | 3 |
| BARTLESVILLE 2W | 548 | 3 | 79.0 | 31 | -3.0 | 98. | 30 | 61. | 21 | .0 | .0 | 434.5 | -92.5 | 3.602 | 31 | .61 | 1.55 | 18 |
| BIXBY | 782 | 3 | 78.8 | 31 | -3.0 | 98. | 31 | 60. | 21 | .0 | .0 | 426.5 | -94.5 | 1.951 | 31 | -1.26 | 1.00 | 18 |
| BURBANK | 1256 | 3 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 3.551 | 31 | ***** | 1.52 | 17 |
| CHELSEA 4 S | 1717 | 3 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.560 | 31 | ***** | 1.01 | 18 |
| CLAREMORE | 1828 | 3 | 78.8 | 31 | -2.8 | 95. | 31 | 62. | 21 | .0 | .0 | 429.0 | -86.0 | 3.403 | 31 | .32 | 2.38 | 18 |
| CLEVELAND 5 WSW | 1902 | 3 | 78.6 | 31 | ***** | 99. | 30 | 58. | 21 | .0 | ****** | 420.5 | ****** | 2.722 | 31 | ***** | .86 | 18 |
| FORAKER | 3250 | 3 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 2.661 | 31 | -.81 | 1.02 | 18 |
| HOLLOW | 4258 | 3 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 5.500 | 31 | 1.75 | 2.78 | 18 |
| HOMINY | 4289 | 3 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 4.271 | 31 | .85 | 1.44 | 18 |
| HULAH DAM | 4393 | 3 | 77.7 | 21 | ***** | 97. | 31 | 60. | 24 | .0 | ****** | 267.5 | ****** | 2.520 | 21 | ***** | 1.20 | 18 |
| JAY TOWER | 4567 | 3 | 76.0 | 31 | ***** | 96. | 31 | 58. | 23 | .0 | ****** | 341.5 | ****** | 4.460 | 31 | ***** | 1.54 | 31 |
| KANSAS 1 ESE | 4672 | 3 | 76.1 | 31 | ***** | 92. | 30 | 60. | 21 | .0 | ****** | 345.5 | ****** | 2.673 | 31 | ***** | 1.27 | 18 |
| KEYSTONE DAM | 4812 | 3 | 77.3 | 31 | ***** | 96. | 31 | 60. | 21 | .0 | ****** | 382.5 | ****** | 2.922 | 31 | ***** | 1.01 | 18 |
| LENAPAH | 5118 | 3 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 3.970 | 31 | ***** | 1.50 | 18 |
| MANNFORD 6 NW | 5522 | 3 | 78.1 | 29 | ***** | 99. | 30 | 55. | 21 | .0 | ****** | 380.5 | ****** | 3.660 | 30 | ***** | 1.15 | 24 |
| MARAMEC | 5540 | 3 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.201 | 31 | -1.92 | .63 | 3 |
| MIAMI | 5855 | 3 | 77.6 | 31 | -3.5 | 93. | 31 | 59. | 21 | .0 | .0 | 390.5 | -108.5 | 9.590 | 31 | 5.66 | 3.91 | 31 |
| NOWATA | 6485 | 3 | 78.3 | 31 | -3.8 | 96. | 30 | 62. | 21 | .0 | .0 | 413.0 | -117.0 | 3.611 | 31 | .67 | 1.20 | 12 |
| ONETA 1 WNW | 6713 | 3 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 4.283 | 31 | ***** | 1.44 | 18 |
| PAWHUSKA | 6935 | 3 | 77.8 | 31 | -4.0 | 97. | 30 | 58. | 21 | .0 | .0 | 396.0 | -125.0 | 3.862 | 31 | .41 | 1.18 | 17 |
| PAWHUSKA | 6937 | 3 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 3.161 | 31 | ***** | .99 | 14 |
| PAWNEE | 6940 | 3 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.391 | 31 | -1.74 | .63 | 3 |
| PRYOR 6 N | 7309 | 3 | 77.5 | 31 | -4.1 | 96. | 31 | 59. | 21 | .0 | .0 | 387.5 | -127.5 | 3.055 | 31 | -.01 | 1.62 | 18 |
| QUAPAW | 7358 | 3 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 8.522 | 31 | 4.75 | 3.75 | 31 |
| RALSTON | 7390 | 3 | 80.4 | 31 | ***** | 101. | 30 | 61. | 22 | .0 | ****** | 477.0 | ****** | 3.621 | 31 | .13 | 1.00 | 17 |
| RAMONA 4 N | 7394 | 3 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 4.470 | 31 | ***** | 1.40 | 18 |
| SKIATOOK | 8258 | 3 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 5.070 | 31 | 1.66 | 2.76 | 18 |
| SPAVINAW | 8380 | 3 | 78.1 | 31 | ***** | 92. | 31 | 59. | 21 | .0 | ****** | 407.0 | ****** | 3.593 | 31 | -.14 | 1.50 | 18 |
| TULSA WSO APT | 8992 | 3 | 80.5 | 31 | -2.7 | 97. | 30 | 64. | 21 | .0 | .0 | 480.0 | -84.0 | 3.983 | 31 | .47 | 1.44 | 18 |
| VINITA 2 N | 9203 | 3 | 77.3 | 31 | -3.8 | 95. | 30 | 57. | 21 | .0 | .0 | 381.0 | -118.0 | 3.060 | 31 | -.32 | .89 | 12 |
| WAGONER | 9247 | 3 | 78.7 | 31 | -3.7 | 94. | 30 | 60. | 18 | .0 | .0 | 425.0 | -114.0 | 1.643 | 31 | -1.86 | 1.59 | 18 |
| WANN | 9298 | 3 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 5.340 | 31 | ***** | 1.48 | 13 |
| WYNONA | 9792 | 3 | 81.0 | 31 | ***** | 98. | 30 | 64. | 21 | .0 | ****** | 495.5 | ****** | 3.541 | 31 | ***** | 1.38 | 18 |

## JULY 1989 SUMMARY FOR WEST CENTRAL DIVISION (CD4)

| NAME | ID | CD | MEAN TEMP | NUM OBS | DEV FROM NORM | MAX TEMP | MAX DAY | MIN TEMP | MIN DAY | HEAT DEG DAY | DEV FROM NORM | COOL DEG DAY | DEV FROM NORM | TOT PPT | NUM OBS | DEV FROM NORM | MAX 24-HR | MAX 24-HR DAY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CANTON DAM | 1445 | 4 | 78.5 | 31 | -4.4 | 102. | 13 | 58. | 24 | .0 | .0 | 418.0 | -137.0 | 3.012 | 31 | .60 | 1.48 | 14 |
| CHEYENNE | 1738 | 4 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 2.660 | 31 | ***** | 1.37 | 13 |
| CLINTON | 1909 | 4 | 81.6 | 31 | -1.7 | 104. | 12 | 58. | 21 | .0 | .0 | 515.0 | -52.0 | .930 | 31 | -1.59 | .59 | 14 |
| COLONY | 2039 | 4 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.030 | 31 | ***** | .37 | 27 |
| CORDELL | 2125 | 4 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.640 | 31 | -.88 | 1.41 | 13 |
| ELK CITY 1 E | 2849 | 4 | 79.5 | 31 | ***** | 101. | 12 | 58. | 21 | .0 | ****** | 450.0 | ****** | 1.021 | 31 | -1.39 | .79 | 13 |
| ERICK 4 E | 2944 | 4 | 79.3 | 31 | -2.6 | 102. | 17 | 56. | 21 | .0 | .0 | 442.5 | -81.5 | 1.140 | 31 | -.99 | .38 | 13 |
| GEARY | 3497 | 4 | 78.7 | 30 | -4.3 | 99. | 12 | 61. | 24 | .0 | .0 | 410.5 | -147.5 | 2.100 | 31 | -.37 | 2.10 | 14 |
| HAMMON 1 NNE | 3871 | 4 | 79.1 | 31 | -3.9 | 102. | 30 | 55. | 21 | .0 | .0 | 437.0 | -121.0 | 1.050 | 31 | -1.10 | .55 | 13 |
| MACKIE 4 NNW | 5463 | 4 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.320 | 31 | ***** | .47 | 24 |
| MORAVIA 2 NNE | 6035 | 4 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | .741 | 31 | -1.55 | .27 | 13 |
| OKEENE | 6629 | 4 | 80.5 | 31 | -3.4 | 102. | 30 | 59. | 22 | .0 | .0 | 480.5 | -105.5 | 4.390 | 31 | 2.05 | 3.98 | 14 |
| RETROP | 7565 | 4 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.140 | 31 | ***** | .76 | 14 |
| REYDON | 7579 | 4 | 77.6 | 28 | ***** | 101. | 17 | 52. | 21 | .0 | ****** | 351.5 | ****** | 1.472 | 28 | ***** | .76 | 13 |
| SAYRE | 7952 | 4 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 2.831 | 31 | .76 | 2.55 | 13 |
| SWEETWATER 2 E | 8652 | 4 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.021 | 31 | ***** | .65 | 12 |
| TALOGA | 8708 | 4 | 78.6 | 31 | -3.6 | 103. | 12 | 53. | 24 | .0 | .0 | 421.0 | -112.0 | .371 | 31 | -2.25 | .25 | 14 |
| THOMAS | 8815 | 4 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 3.530 | 31 | ***** | 1.81 | 24 |
| VICI | 9172 | 4 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.801 | 31 | ***** | .98 | 14 |
| WATONGA | 9364 | 4 | 79.3 | 31 | ***** | 101. | 12 | 59. | 21 | .0 | ****** | 442.0 | ****** | 3.312 | 31 | 1.07 | 3.12 | 14 |
| WEATHERFORD | 9422 | 4 | 80.9 | 31 | -2.1 | 106. | 31 | 59. | 21 | .0 | .0 | 494.0 | -64.0 | 1.200 | 31 | -1.29 | .59 | 25 |

## JULY 1989 SUMMARY FOR CENTRAL DIVISION (CD5)

| NAME | ID | CD | MEAN TEMP | NUM OBS | DEV FROM NORM | MAX TEMP | MAX DAY | MIN TEMP | MIN DAY | HEAT DEG DAY | DEV FROM NORM | COOL DEG DAY | DEV FROM NORM | TOT PPT | NUM OBS | DEV FROM NORM | MAX 24-HR | MAX DAY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AMBER | 200 | 5 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.410 | 31 | ***** | 1.30 | 14 |
| ARCADIA | 288 | 5 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 2.720 | 31 | ***** | 1.45 | 14 |
| TINKER AFB | 325 | 5 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 2.032 | 28 | ***** | 1.20 | 24 |
| BLANCHARD 2 SSW | 830 | 5 | 79.6 | 31 | ***** | 99. | 12 | 61. | 22 | .0 | ****** | 452.0 | ****** | 2.482 | 31 | ***** | 1.10 | 29 |
| BRISTOW | 1144 | 5 | 79.0 | 31 | -3.2 | 97. | 31 | 58. | 21 | .0 | .0 | 433.0 | -100.0 | 1.823 | 31 | -1.74 | .57 | 2 |
| CHANDLER | 1684 | 5 | 79.0 | 31 | -3.8 | 96. | 30 | 59. | 21 | .0 | .0 | 433.5 | -118.5 | 2.453 | 31 | -.89 | 1.35 | 14 |
| CHICKASHA EX ST | 1750 | 5 | 80.4 | 31 | -2.6 | 100. | 12 | 59. | 22 | .0 | .0 | 476.0 | -82.0 | 3.140 | 31 | .62 | 2.82 | 14 |
| COX CITY 1 E | 2196 | 5 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.800 | 31 | ***** | 1.30 | 14 |
| CRESCENT | 2242 | 5 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.960 | 31 | ***** | 1.23 | 24 |
| CUSHING | 2318 | 5 | 78.7 | 31 | -3.7 | 97. | 31 | 62. | 23 | .0 | .0 | 426.0 | -113.0 | 2.460 | 31 | -1.26 | 1.15 | 24 |
| EL RENO 1 N | 2818 | 5 | 79.6 | 31 | -2.9 | 99. | 30 | 57. | 22 | .0 | .0 | 452.0 | -91.0 | 3.190 | 31 | .42 | 1.73 | 14 |
| GUTHRIE | 3821 | 5 | 80.8 | 31 | -2.3 | 100. | 30 | 60. | 22 | .0 | .0 | 489.0 | -72.0 | 1.790 | 31 | -1.05 | .79 | 14 |
| HENNESSEY 2 SE | 4055 | 5 | 79.0 | 31 | -4.7 | 101. | 30 | 59. | 22 | .0 | .0 | 435.0 | -145.0 | 2.441 | 31 | -.07 | .92 | 24 |
| INGALLS | 4489 | 5 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 3.012 | 31 | ***** | 1.07 | 15 |
| KINGFISHER 2 SE | 4861 | 5 | 79.8 | 31 | -3.9 | 100. | 12 | 58. | 21 | .0 | .0 | 457.5 | -122.5 | 3.291 | 31 | .72 | 2.20 | 13 |
| KONAWA | 4915 | 5 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 3.080 | 31 | .55 | 1.41 | 23 |
| MARSHALL | 5589 | 5 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.360 | 31 | -1.23 | 1.36 | 23 |
| MEEKER 4 W | 5779 | 5 | 78.5 | 28 | ***** | 96. | 30 | 59. | 22 | .0 | ****** | 378.0 | ****** | 1.790 | 28 | ***** | .82 | 14 |
| MULHALL | 6110 | 5 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 2.130 | 31 | ***** | .98 | 3 |
| NORMAN 3 S | 6386 | 5 | 80.7 | 31 | ***** | 101. | 12 | 60. | 22 | .0 | ****** | 487.5 | ****** | 4.965 | 31 | 1.73 | 2.25 | 14 |
| OILTON 2 SE | 6616 | 5 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.020 | 31 | ***** | .56 | 3 |
| OKEMAH | 6638 | 5 | 79.2 | 31 | -2.9 | 97. | 30 | 63. | 21 | .0 | .0 | 441.5 | -88.5 | 2.860 | 31 | -.52 | 1.32 | 15 |
| OKLAHOMA CITY WS | 6661 | 5 | 79.7 | 31 | -2.4 | 99. | 12 | 62. | 21 | .0 | .0 | 457.0 | -73.0 | 1.955 | 31 | -1.08 | .71 | 24 |
| PERKINS | 7003 | 5 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 3.030 | 31 | -.50 | .94 | 23 |
| PIEDMONT | 7068 | 5 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 4.030 | 31 | ***** | 1.85 | 14 |
| PRAGUE | 7264 | 5 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 2.331 | 31 | -.88 | 1.40 | 14 |
| PURCELL 5 SW | 7327 | 5 | 79.2 | 31 | -3.6 | 99. | 12 | 55. | 22 | .0 | .0 | 441.0 | -111.0 | 3.250 | 31 | .25 | 1.26 | 14 |
| SEMINOLE | 8042 | 5 | 80.6 | 31 | -3.1 | 99. | 13 | 63. | 25 | .0 | .0 | 483.5 | -96.5 | 3.970 | 31 | 1.02 | 2.75 | 14 |
| SHAWNEE | 8110 | 5 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 3.500 | 31 | .84 | 2.95 | 14 |
| STELLA | 8479 | 5 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 5.600 | 31 | ***** | 3.82 | 14 |
| STILLWATER 2 W | 8501 | 5 | 78.7 | 31 | -3.4 | 97. | 31 | 59. | 22 | .0 | .0 | 425.5 | -104.5 | 4.421 | 31 | .63 | 3.85 | 15 |
| STROUD 1 N | 8563 | 5 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.703 | 31 | ***** | .82 | 3 |
| TECUMSEH | 8751 | 5 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.730 | 31 | ***** | .95 | 14 |
| TROUSDALE | 8960 | 5 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 5.550 | 31 | ***** | 2.05 | 14 |
| UNION CITY 1 SE | 9086 | 5 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | .560 | 31 | -1.58 | .44 | 14 |
| WELTY 1 SSE | 9479 | 5 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 2.560 | 31 | ***** | .72 | 3 |
| WEWOKA | 9575 | 5 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 3.410 | 31 | .62 | 1.66 | 14 |

## JULY 1989 SUMMARY FOR EAST CENTRAL DIVISION (CD6)

| NAME | ID | CD | MEAN TEMP | NUM OBS | DEV FROM NORM | MAX TEMP | MAX DAY | MIN TEMP | MIN DAY | HEAT DEG DAY | DEV FROM NORM | COOL DEG DAY | DEV FROM NORM | TOT PPT | NUM OBS | DEV FROM NORM | MAX 24-HR | MAX DAY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ASHLAND | 364 | 6 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 3.112 | 31 | ***** | 1.52 | 18 |
| BEGGS | 631 | 6 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 4.190 | 31 | ***** | 1.37 | 18 |
| BOYNTON | 1027 | 6 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 3.711 | 31 | ***** | 1.46 | 3 |
| CALVIN | 1391 | 6 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 6.283 | 31 | 2.73 | 3.76 | 14 |
| CHECOTAH | 1711 | 6 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 3.553 | 31 | .09 | 1.87 | 18 |
| CLAYTON 11 WNW | 1858 | 6 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 6.000 | 31 | ***** | 1.65 | 17 |
| DEWAR 2 NE | 2485 | 6 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 4.340 | 31 | .80 | 2.57 | 18 |
| DUSTIN | 2690 | 6 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 2.340 | 31 | ***** | 1.00 | 3 |
| EUFAULA | 2993 | 6 | 78.9 | 31 | ***** | 94. | 30 | 64. | 21 | .0 | ****** | 430.5 | ****** | 5.753 | 31 | 2.10 | 1.35 | 18 |
| HANNA | 3884 | 6 | 78.6 | 31 | ***** | 95. | 30 | 62. | 21 | .0 | ****** | 422.0 | ****** | 4.972 | 31 | 1.81 | 1.42 | 13 |
| HARTSHORNE | 3946 | 6 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 4.111 | 31 | ***** | 1.39 | 3 |
| HASKELL | 3956 | 6 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 3.300 | 31 | .12 | 1.27 | 18 |
| HOLDENVILLE | 4235 | 6 | 79.0 | 31 | -3.6 | 96. | 30 | 61. | 22 | .0 | .0 | 434.0 | -112.0 | 3.050 | 31 | -.41 | 1.46 | 18 |
| LYONS 2 N | 5437 | 6 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 3.581 | 31 | .36 | 2.11 | 17 |
| MARBLE CITY | 5546 | 6 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 4.094 | 31 | ***** | 1.52 | 18 |
| MCALESTER FAA | 5664 | 6 | 78.9 | 31 | -3.8 | 96. | 30 | 61. | 21 | .0 | .0 | 431.0 | -143.0 | 1.723 | 31 | -1.69 | .56 | 18 |
| MCCURTAIN 1 SE | 5693 | 6 | 78.9 | 31 | ***** | 95. | 29 | 61. | 22 | .0 | ****** | 432.0 | ****** | 3.701 | 31 | -.11 | 1.45 | 18 |
| MUSKOGEE | 6130 | 6 | 79.3 | 31 | -3.3 | 95. | 31 | 63. | 22 | .0 | .0 | 443.0 | -103.0 | 4.540 | 31 | 1.44 | 1.90 | 31 |
| OKMULGEE W W | 6670 | 6 | 77.5 | 30 | -4.2 | 97. | 30 | 59. | 21 | .0 | .0 | 375.0 | -143.0 | 3.050 | 30 | ***** | 1.45 | 17 |
| OKTAHA 2 NE | 6678 | 6 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 2.810 | 31 | ***** | 1.16 | 18 |
| QUINTON | 7372 | 6 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 4.633 | 31 | .83 | 1.75 | 18 |
| SALLISAW 2 NE | 7862 | 6 | 78.2 | 28 | ***** | 95. | 30 | 61. | 21 | .0 | ****** | 369.0 | ****** | 3.460 | 31 | -.09 | 1.90 | 18 |
| SCIPIO | 7979 | 6 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 3.650 | 31 | ***** | 1.85 | 13 |
| SCRAPER | 7993 | 6 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 4.130 | 31 | ***** | 2.49 | 18 |
| SHORT | 8170 | 6 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 2.090 | 31 | ***** | 1.85 | 18 |
| STILWELL 1 NE | 8506 | 6 | 76.3 | 31 | ***** | 93. | 30 | 60. | 22 | .0 | ****** | 351.5 | ****** | 2.653 | 31 | -1.08 | 2.10 | 18 |
| TAHLEQUAH | 8677 | 6 | 77.6 | 31 | -3.1 | 95. | 30 | 60. | 21 | .0 | .0 | 390.5 | -96.5 | 4.420 | 31 | 1.03 | 2.82 | 18 |
| WEBBERS FALLS | 9445 | 6 | 78.7 | 31 | -3.4 | 96. | 31 | 61. | 21 | .0 | .0 | 425.5 | -104.5 | 2.691 | 31 | -.46 | 1.31 | 18 |
| WESTVILLE | 9523 | 6 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 2.490 | 31 | ***** | 1.23 | 18 |
| WETUMKA 3 NE | 9571 | 6 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 4.363 | 31 | 1.17 | 2.00 | 3 |

## JULY 1989 SUMMARY FOR SOUTHWEST DIVISION (CD7)

| NAME | ID | CD | MEAN TEMP | NUM OBS | DEV FROM NORM | MAX TEMP | MAX DAY | MIN TEMP | MIN DAY | HEAT DEG DAY | DEV FROM NORM | COOL DEG DAY | DEV FROM NORM | TOT PPT | NUM OBS | DEV FROM NORM | MAX 24-HR | MAX DAY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ALTUS IRR STA | 179 | 7 | 82.3 | 31 | -2.3 | 111. | 17 | 60. | 21 | .0 | .0 | 536.0 | -72.0 | 1.970 | 31 | .05 | .95 | 25 |
| ALTUS DAM | 184 | 7 | 82.9 | 31 | ***** | 110. | 18 | 64. | 22 | .0 | ****** | 554.5 | ****** | .730 | 31 | -1.87 | .52 | 13 |
| ANADARKO | 224 | 7 | 79.6 | 25 | ***** | 100. | 30 | 54. | 22 | .0 | ****** | 365.5 | ****** | 1.980 | 25 | ***** | 1.80 | 14 |
| APACHE | 260 | 7 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 2.470 | 31 | ***** | .68 | 23 |
| ALTUS AFB | 447 | 7 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | .970 | 29 | ***** | .52 | 23 |
| CARNEGIE 2 ENE | 1504 | 7 | 81.1 | 30 | -2.6 | 105. | 12 | 55. | 21 | .0 | .0 | 483.5 | -96.5 | .270 | 30 | ***** | .12 | 23 |
| CHATTANOOGA | 1706 | 7 | 82.5 | 31 | -1.8 | 104. | 12 | 62. | 22 | .0 | .0 | 544.0 | -54.0 | 2.361 | 31 | -.19 | 2.26 | 14 |
| DUNCAN 12 W | 2668 | 7 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 2.220 | 31 | ***** | 1.57 | 14 |
| FREDERICK | 3353 | 7 | 82.5 | 31 | -3.3 | 108. | 18 | 63. | 24 | .0 | .0 | 542.0 | -103.0 | .610 | 31 | -1.58 | .33 | 14 |
| GRANDFIELD 4 NW | 3709 | 7 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 2.050 | 31 | -.01 | .95 | 15 |
| HOBART FAA APT | 4204 | 7 | 81.7 | 31 | -1.8 | 107. | 17 | 58. | 21 | .0 | .0 | 516.5 | -57.5 | 1.102 | 31 | -1.39 | .92 | 13 |
| HOLLIS | 4249 | 7 | 82.4 | 31 | -2.5 | 110. | 17 | 61. | 24 | .0 | .0 | 539.5 | -77.5 | 1.072 | 31 | -.80 | .93 | 31 |
| LAWTON | 5063 | 7 | 82.1 | 31 | -1.6 | 102. | 17 | 64. | 22 | .0 | .0 | 529.0 | -51.0 | 1.171 | 31 | -1.34 | .90 | 13 |
| FORT SILL | 5068 | 7 | 81.2 | 31 | ***** | 101. | 12 | 65. | 22 | .0 | ****** | 503.5 | ****** | .792 | 31 | -1.72 | .22 | 9 |
| LOOKEBA 2 ENE | 5329 | 7 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | .710 | 31 | ***** | .41 | 14 |
| MANGUM RES STA | 5509 | 7 | 82.4 | 31 | -1.5 | 111. | 17 | 61. | 1 | .0 | .0 | 539.0 | -47.0 | .330 | 31 | -2.36 | .15 | 13 |
| RANDLETT 9 E | 7403 | 7 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.280 | 31 | ***** | 1.28 | 14 |
| ROOSEVELT | 7727 | 7 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | .900 | 31 | -1.47 | .63 | 31 |
| SEDAN | 8016 | 7 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | .500 | 31 | ***** | .35 | 14 |
| SNYDER | 8299 | 7 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.341 | 31 | -1.13 | .81 | 14 |
| VINSON 3 WNW | 9212 | 7 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | .900 | 31 | -1.06 | .46 | 25 |
| WALTERS | 9278 | 7 | 82.2 | 31 | -2.3 | 102. | 12 | 62. | 22 | .0 | .0 | 532.0 | -73.0 | 2.240 | 31 | -.72 | 1.71 | 14 |
| WICHITA MT WLR | 9629 | 7 | 83.1 | 31 | .5 | 104. | 31 | 60. | 22 | .0 | .0 | 560.0 | 14.0 | 2.620 | 31 | .13 | 1.65 | 31 |
| WILLOW | 9668 | 7 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | .870 | 31 | ***** | .45 | 13 |

## JULY 1989 SUMMARY FOR SOUTH CENTRAL DIVISION (CD8)

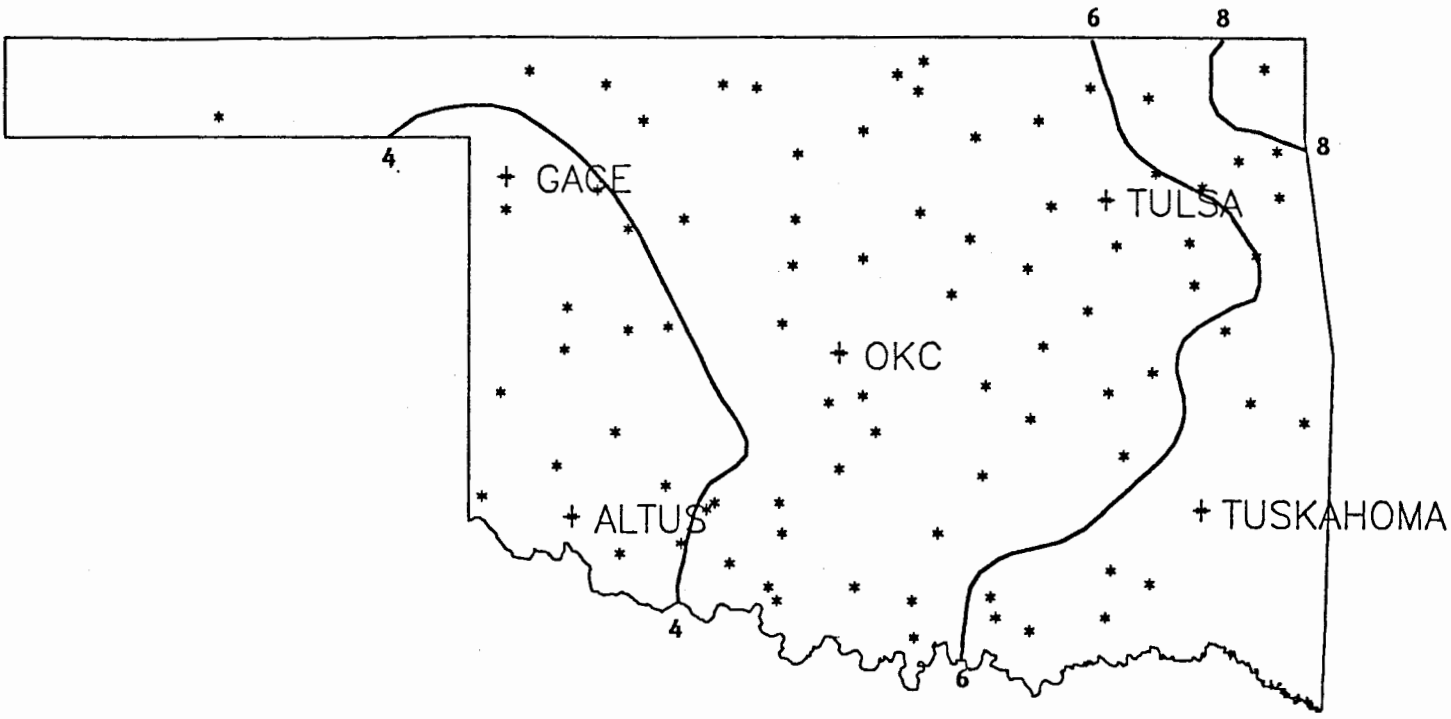
| NAME | ID | CD | MEAN TEMP | NUM OBS | DEV FROM NORM | MAX TEMP | MAX DAY | MIN TEMP | MIN DAY | HEAT DEG DAY | DEV FROM NORM | COOL DEG DAY | DEV FROM NORM | TOT PPT | NUM OBS | DEV FROM NORM | MAX 24-HR | MAX DAY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ADA | 17 | 8 | 79.5 | 31 | -3.2 | 96. | 31 | 61. | 25 | .0 | .0 | 449.5 | -99.5 | 2.250 | 31 | -.44 | .63 | 15 |
| ALLEN | 147 | 8 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 2.600 | 31 | ***** | 1.35 | 17 |
| ARDMORE | 292 | 8 | 79.7 | 31 | -5.1 | 95. | 18 | 63. | 22 | .0 | .0 | 455.5 | -158.5 | 5.570 | 31 | 3.27 | 3.64 | 14 |
| ATOKA DAM | 394 | 8 | 80.4 | 20 | ***** | 97. | 31 | 65. | 24 | .0 | ****** | 307.5 | ****** | 4.060 | 31 | ***** | 1.75 | 17 |
| BOKCHITO | 917 | 8 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 4.500 | 31 | ***** | 2.50 | 15 |
| CANEY | 1437 | 8 | 81.0 | 25 | ***** | 97. | 18 | 64. | 24 | .0 | ****** | 400.0 | ****** | 3.720 | 26 | ***** | 1.59 | 15 |
| CENTRAHOMA | 1648 | 8 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 2.590 | 31 | ***** | 1.10 | 15 |
| CHICKASAW NRA | 1745 | 8 | 79.1 | 31 | ***** | 97. | 13 | 57. | 22 | .0 | ****** | 437.5 | ****** | 5.670 | 31 | ***** | 2.63 | 14 |
| COLEMAN | 2011 | 8 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 3.480 | 31 | ***** | .75 | 27 |
| COMANCHE | 2054 | 8 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.341 | 31 | ***** | .98 | 14 |
| DAISY 4 ENE | 2354 | 8 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 7.112 | 31 | 2.79 | 2.56 | 18 |
| DUNCAN | 2660 | 8 | 80.8 | 31 | -3.0 | 98. | 31 | 63. | 21 | .0 | .0 | 489.5 | -93.5 | 4.981 | 31 | 2.65 | 4.32 | 14 |
| DURANT USDA | 2678 | 8 | 79.1 | 31 | ***** | 95. | 15 | 62. | 22 | .0 | ****** | 438.5 | ****** | 8.490 | 31 | 5.95 | 2.50 | 14 |
| ELMORE CITY | 2872 | 8 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 2.811 | 31 | ***** | 1.70 | 14 |
| FARRIS 3 WNW | 3083 | 8 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 4.730 | 31 | ***** | 1.36 | 19 |
| GRADY | 3688 | 8 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.610 | 21 | ***** | .53 | 27 |
| HEALDTON | 4001 | 8 | 80.3 | 31 | ***** | 99. | 18 | 60. | 22 | .0 | ****** | 473.5 | ****** | 2.410 | 31 | .04 | 1.48 | 15 |
| HENNEPIN | 4052 | 8 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 2.971 | 31 | ***** | 1.69 | 14 |
| KETCHUM RANCH | 4780 | 8 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 5.420 | 31 | ***** | 5.30 | 14 |
| KINGSTON | 4865 | 8 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 6.690 | 31 | 4.36 | 4.38 | 15 |
| LINDSAY 2 W | 5216 | 8 | 80.4 | 31 | ***** | 99. | 30 | 58. | 22 | .0 | ****** | 477.5 | ****** | .651 | 31 | -1.96 | .28 | 13 |
| LOCO 6 SE | 5247 | 8 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | .770 | 31 | ***** | .35 | 15 |
| MADILL | 5468 | 8 | 80.4 | 31 | -3.3 | 96. | 30 | 62. | 22 | .0 | .0 | 477.5 | -102.5 | 3.350 | 31 | 1.07 | 2.27 | 14 |
| MARIETTA | 5563 | 8 | 80.8 | 31 | -2.8 | 97. | 30 | 63. | 21 | .0 | .0 | 490.0 | -87.0 | 3.203 | 31 | 1.06 | .92 | 14 |
| MARLOW 1 WSW | 5581 | 8 | 80.5 | 31 | ***** | 100. | 30 | 58. | 22 | .0 | ****** | 479.0 | ****** | 2.261 | 31 | -.31 | 2.21 | 14 |
| MCGEE CREEK DAM | 5713 | 8 | 79.9 | 31 | ***** | 95. | 31 | 64. | 22 | .0 | ****** | 461.5 | ****** | 5.130 | 31 | ***** | 1.50 | 19 |
| OSWALT | 6787 | 8 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 3.050 | 31 | ***** | 1.65 | 19 |
| PAULS VALLEY | 6926 | 8 | 79.5 | 31 | -4.6 | 97. | 30 | 57. | 22 | .0 | .0 | 450.0 | -142.0 | 4.170 | 31 | 1.84 | 1.80 | 24 |
| PONTOTOC | 7214 | 8 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 5.150 | 31 | 2.56 | 1.90 | 15 |
| TISHOMINGO NWLR | 8884 | 8 | 80.5 | 30 | ***** | 96. | 30 | 61. | 22 | .0 | ****** | 464.0 | ****** | 4.532 | 31 | 1.83 | 3.53 | 15 |
| TUSSY | 9032 | 8 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 1.580 | 31 | ***** | 1.03 | 14 |
| WAURIKA | 9395 | 8 | 82.3 | 31 | -2.4 | 103. | 18 | 62. | 21 | .0 | .0 | 536.0 | -75.0 | 2.481 | 31 | .20 | 1.40 | 14 |
| WAURIKA DAM | 9399 | 8 | 81.5 | 31 | ***** | 101. | 19 | 63. | 21 | .0 | ****** | 510.0 | ****** | 1.371 | 31 | ***** | 1.00 | 14 |

## JULY 1989 SUMMARY FOR SOUTHEAST DIVISION (CD9)

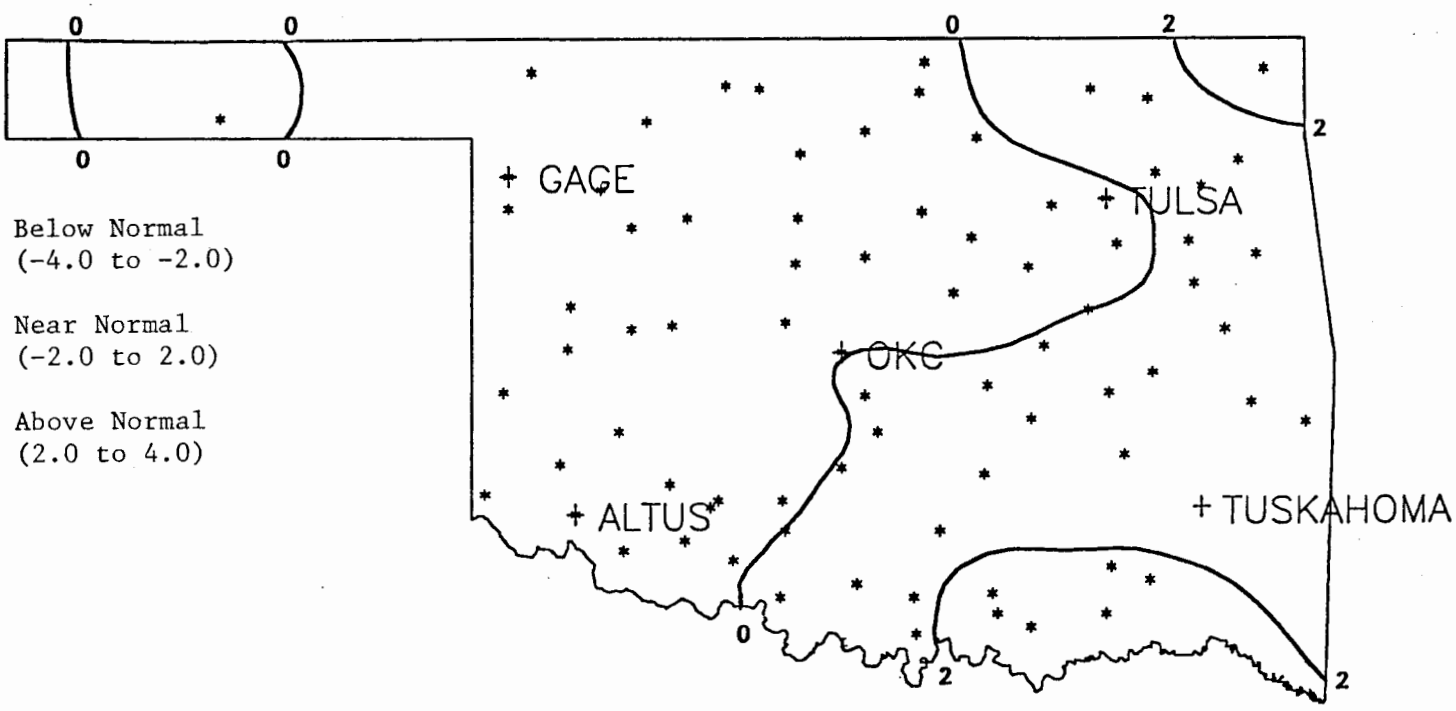
| NAME | ID | CD | MEAN TEMP | NUM OBS | DEV FROM NORM | MAX TEMP | MAX DAY | MIN TEMP | MIN DAY | HEAT DEG DAY | DEV FROM NORM | COOL DEG DAY | DEV FROM NORM | TOT PPT | NUM OBS | DEV FROM NORM | MAX 24-HR | MAX DAY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ANTLERS | 256 | 9 | 79.1 | 31 | -2.9 | 95. | 30 | 63. | 22 | .0 | .0 | 436.5 | -90.5 | 6.010 | 31 | 2.84 | 1.08 | 15 |
| BATTIEST 1 SSW | 567 | 9 | 77.3 | 31 | ***** | 95. | 1 | 59. | 22 | .0 | ****** | 381.0 | ****** | 5.841 | 31 | ***** | 1.77 | 15 |
| BENGAL | 670 | 9 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 3.330 | 31 | ***** | 1.13 | 18 |
| BOSWELL 4 NNW | 980 | 9 | 80.0 | 31 | ***** | 96. | 14 | 62. | 21 | .0 | ****** | 466.5 | ****** | 4.995 | 31 | 2.34 | 1.46 | 15 |
| BROKEN BOW 1 N | 1162 | 9 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 6.030 | 31 | 2.16 | 2.00 | 2 |
| BROKEN BOW DAM | 1168 | 9 | 78.1 | 31 | ***** | 96. | 30 | 61. | 19 | .0 | ****** | 406.5 | ****** | 4.740 | 29 | ***** | 1.12 | 2 |
| CARNASAW TWR | 1499 | 9 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 4.690 | 31 | .55 | 1.06 | 31 |
| CARTER TWR | 1544 | 9 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 7.660 | 31 | 3.27 | 1.74 | 22 |
| FANSHAWE | 3065 | 9 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 7.570 | 31 | 3.54 | 2.38 | 18 |
| FLAGPOLE TWR | 3169 | 9 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 5.210 | 31 | ***** | 2.75 | 15 |
| HEAVENER 1 SE | 4008 | 9 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 5.900 | 31 | 2.34 | 2.30 | 13 |
| HEE MT TWR | 4017 | 9 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 6.750 | 31 | ***** | 1.35 | 13 |
| HUGO | 4384 | 9 | 80.5 | 26 | ***** | 94. | 31 | 64. | 30 | .0 | ****** | 404.0 | ****** | 5.912 | 31 | 2.86 | 2.18 | 15 |
| IDABEL | 4451 | 9 | 78.4 | 31 | -3.5 | 93. | 31 | 61. | 19 | .0 | .0 | 415.5 | -108.5 | 4.780 | 31 | 1.23 | 1.25 | 3 |
| POTEAU W W | 7254 | 9 | 78.0 | 31 | ***** | 95. | 30 | 61. | 22 | .0 | ****** | 401.5 | ****** | 5.321 | 31 | ***** | 1.33 | 17 |
| SMITHVILLE 1 W | 8285 | 9 | 75.9 | 31 | ***** | 93. | 30 | 58. | 22 | .0 | ****** | 338.5 | ****** | 10.351 | 31 | ***** | 1.65 | 17 |
| SOBAL TOWER | 8305 | 9 | 69.6 | 26 | ***** | 83. | 12 | 57. | 21 | 2.0 | ****** | 122.5 | ****** | 7.664 | 30 | ***** | 3.52 | 17 |
| SPIRO | 8416 | 9 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 4.470 | 31 | .68 | 1.74 | 18 |
| TUSKAHOMA | 9023 | 9 | 78.0 | 31 | ***** | 94. | 30 | 59. | 22 | .0 | ****** | 401.5 | ****** | 5.931 | 31 | ***** | 1.65 | 3 |
| VALLIANT 3 W | 9118 | 9 | ***** | 0 | ***** | **** | 0 | **** | 0 | ****** | ****** | ****** | ****** | 6.841 | 31 | 3.26 | 2.27 | 15 |

## JULY 1989 CLIMATE DIVISION SUMMARY

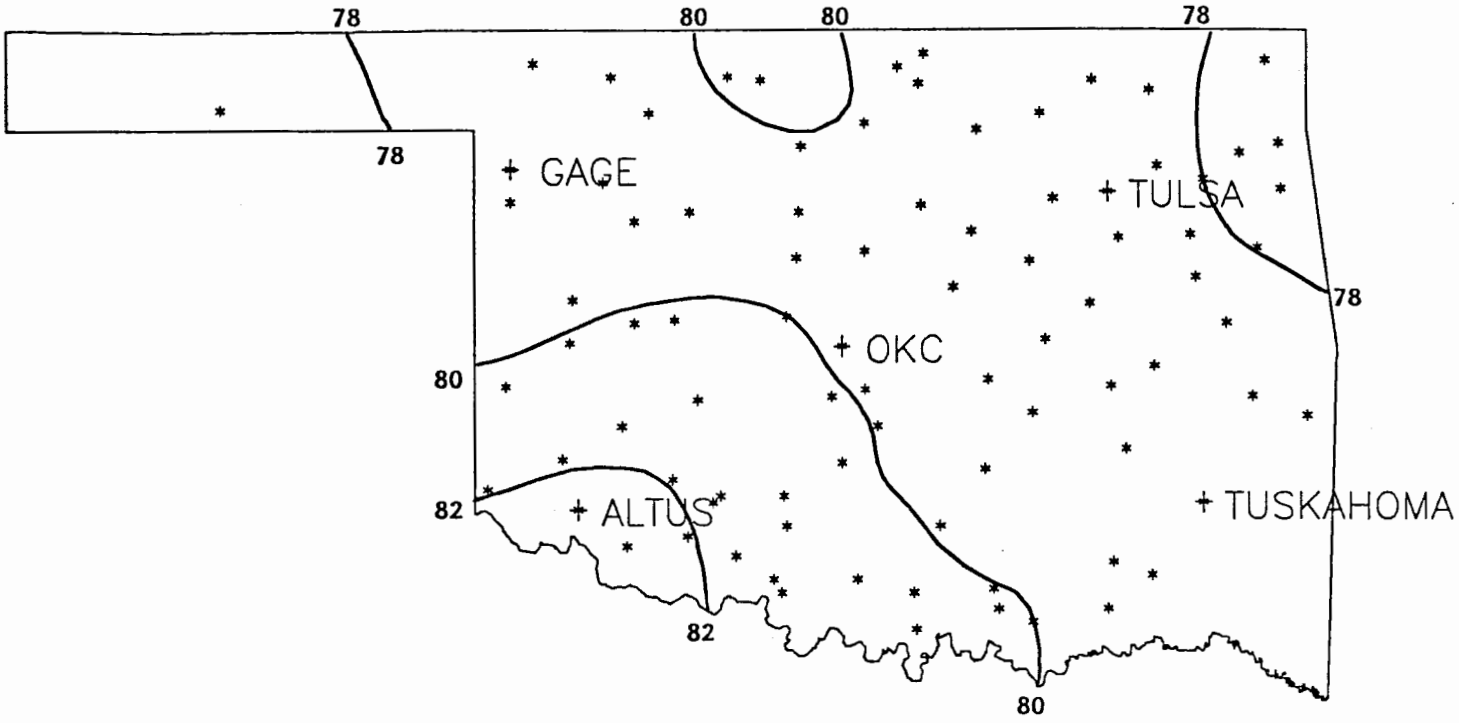
| CLIMATE DIV | MEAN TEMP | NUM STA | DEV FROM NORM | MAX TEMP | DAY | MIN TEMP | DAY | HEAT DEGREE DAYS | DEV FROM NORM | COOL DEGREE DAYS | DEV FROM NORM | TOT PPT | NUM STA | DEV FROM NORM | MAX 24-HR | DAY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 77.1 | 10 | -3.2 | 103.0 | 11 | 52.0 | 21 | .0 | .0 | 374.0 | -99.8 | 2.20 | 13 | -.40 | 3.20 | 14 |
| 2 | 79.6 | 14 | -3.5 | 107.0 | 31 | 54.0 | 21 | .0 | .0 | 450.4 | -109.1 | 2.63 | 24 | -.57 | 3.11 | 13 |
| 3 | 78.3 | 18 | -3.5 | 101.0 | 30 | 55.0 | 21 | .0 | .0 | 412.1 | -108.7 | 3.71 | 32 | .36 | 3.91 | 31 |
| 4 | 79.6 | 10 | -3.3 | 106.0 | 31 | 52.0 | 21 | .0 | .0 | 451.0 | -103.8 | 1.81 | 20 | -.53 | 3.98 | 14 |
| 5 | 79.6 | 15 | -3.1 | 101.0 | 12 | 55.0 | 22 | .0 | .0 | 452.7 | -97.6 | 2.77 | 35 | -.21 | 3.85 | 15 |
| 6 | 78.4 | 10 | -3.7 | 97.0 | 30 | 59.0 | 21 | .0 | .0 | 413.5 | -119.5 | 3.78 | 29 | .37 | 3.76 | 14 |
| 7 | 82.2 | 12 | -1.9 | 111.0 | 17 | 54.0 | 22 | .0 | .0 | 531.6 | -59.6 | 1.34 | 21 | -1.05 | 2.26 | 14 |
| 8 | 80.3 | 15 | -3.6 | 103.0 | 18 | 57.0 | 22 | .0 | .0 | 472.6 | -113.9 | 3.72 | 31 | 1.16 | 5.30 | 14 |
| 9 | 78.1 | 8 | -4.2 | 96.0 | 30 | 57.0 | 21 | .0 | .0 | 405.9 | -130.4 | 5.98 | 18 | 2.35 | 3.52 | 17 |



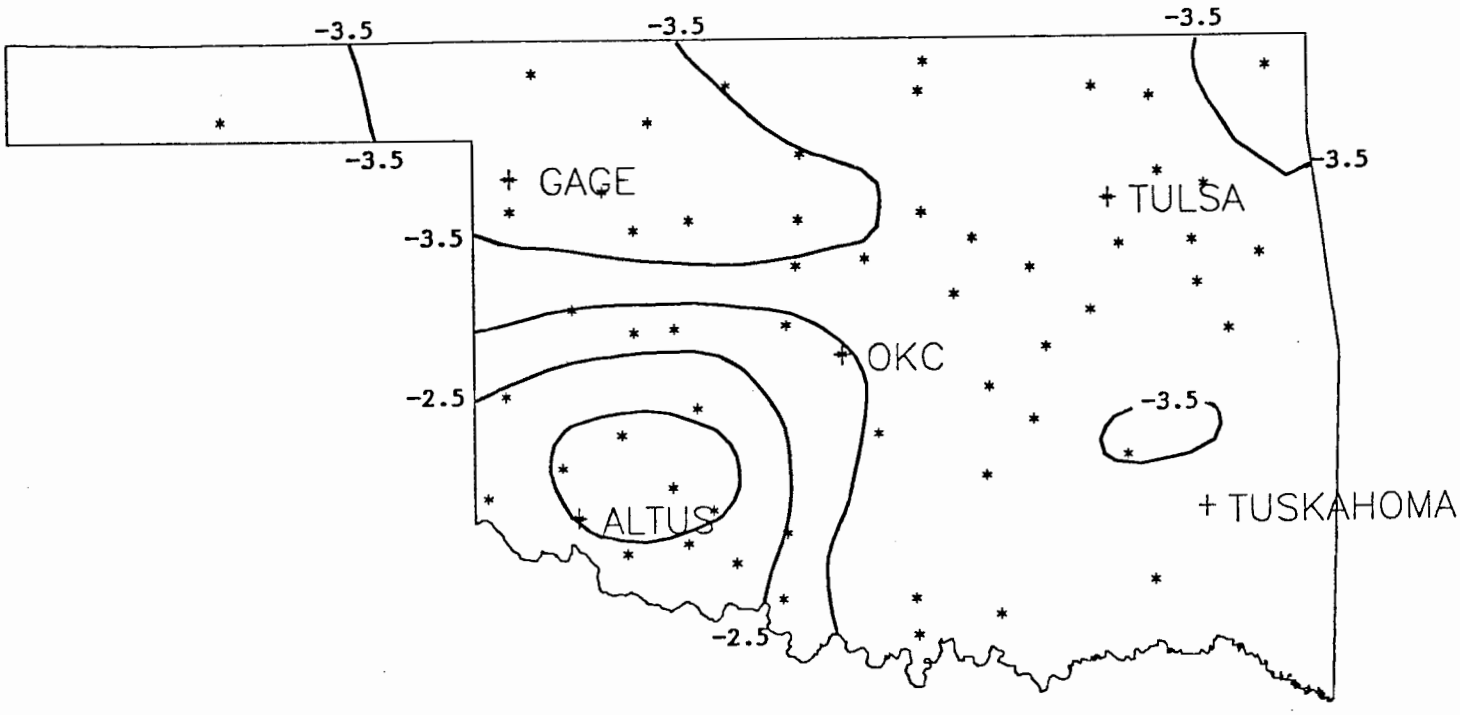

**JULY 1989 TOTAL PRECIPITATION**
**(Inches)**



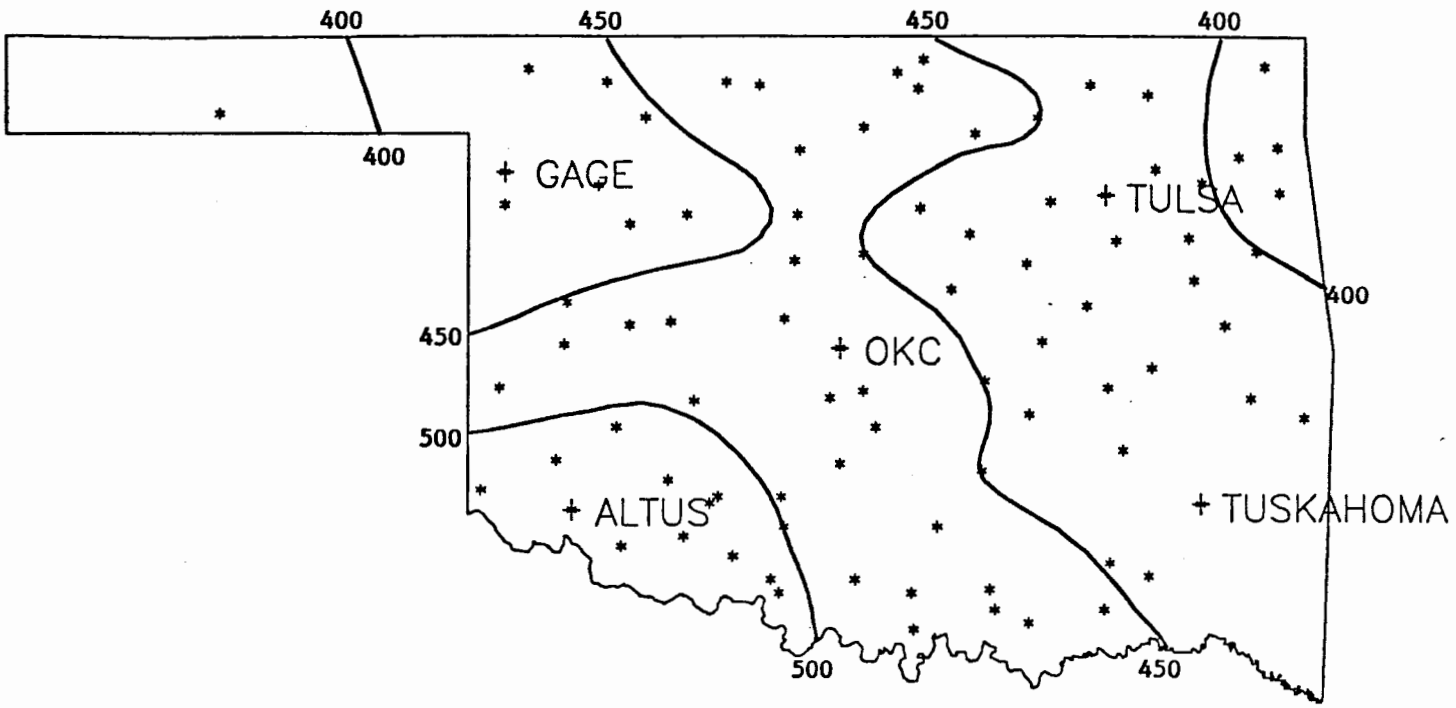

**JULY 1989 DEVIATION FROM NORMAL PRECIPITATION**
**(Inches)**



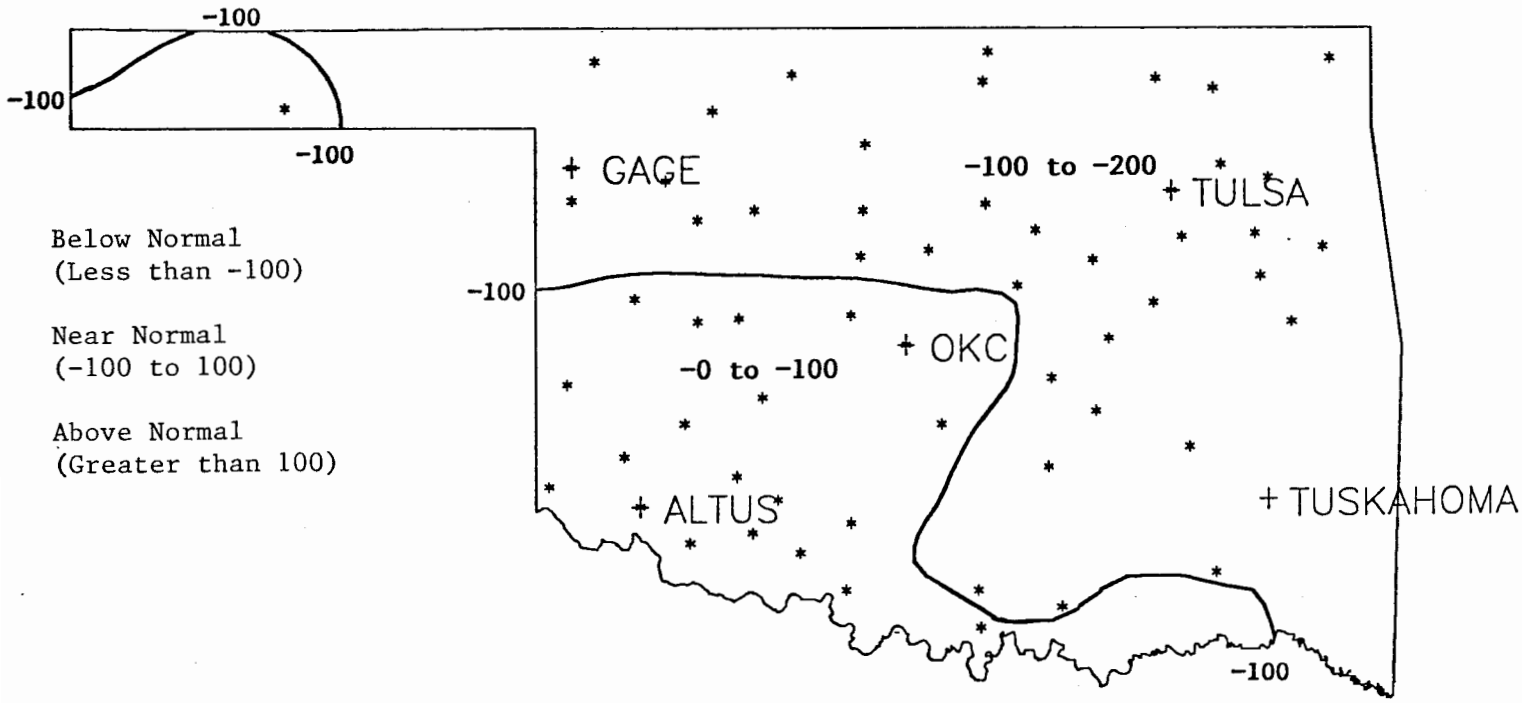

**JULY 1989 AVERAGE MONTHLY TEMPERATURES**
**(Degrees F)**




**JULY 1989 DEVIATION FROM NORMAL TEMPERATURES**
**(Degrees F)**

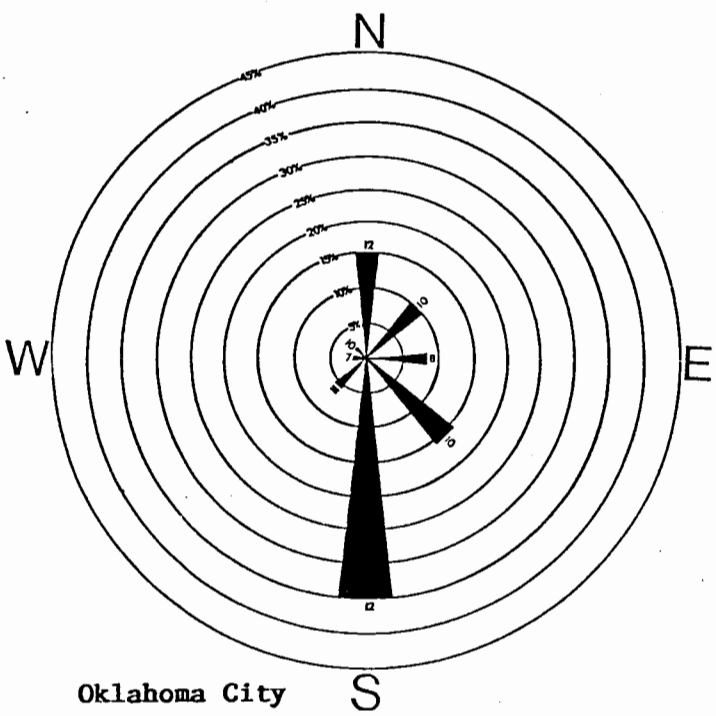



JULY 1989 COOLING DEGREE DAYS

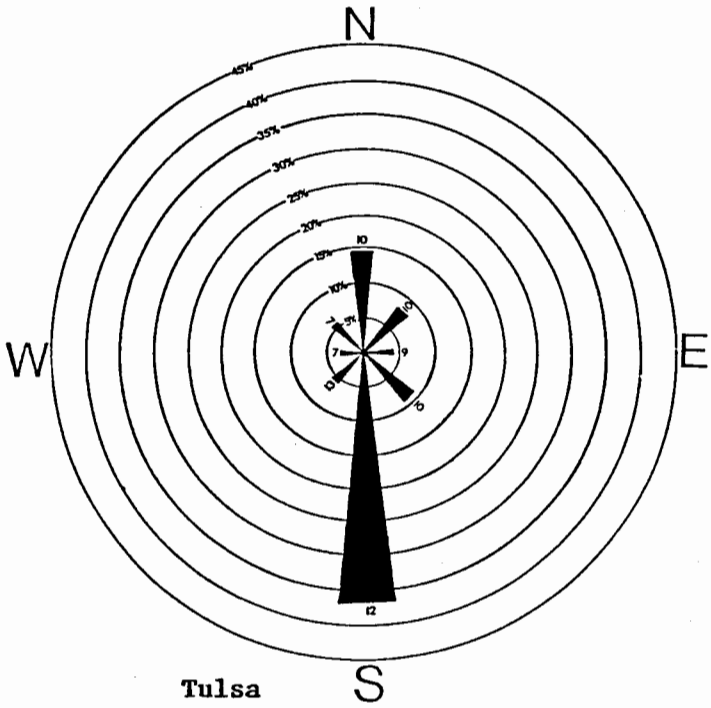



JULY 1989 DEVIATION FROM NORMAL COOLING DEGREE DAYS

September wind roses for Oklahoma City and Tulsa for 10-year (1965-1974) mean winds (data adapted from NOAA Airport Climatology Series). Percents represent the percentage for winds coming from a direction. The numbers at the end of the bars indicate the average speed (miles per hour) of winds from that direction.




Oklahoma City




Tulsa

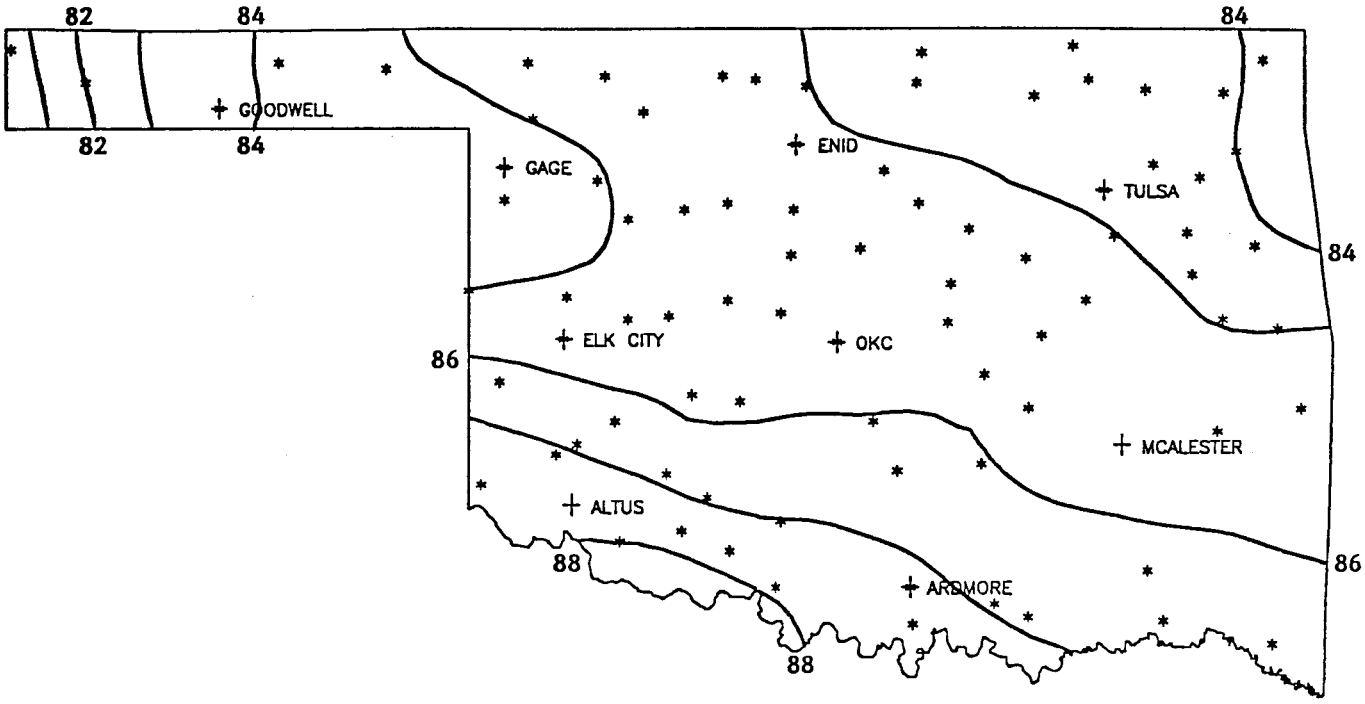
## SEPTEMBER 1989 SUNRISE AND SUNSET

### Oklahoma City

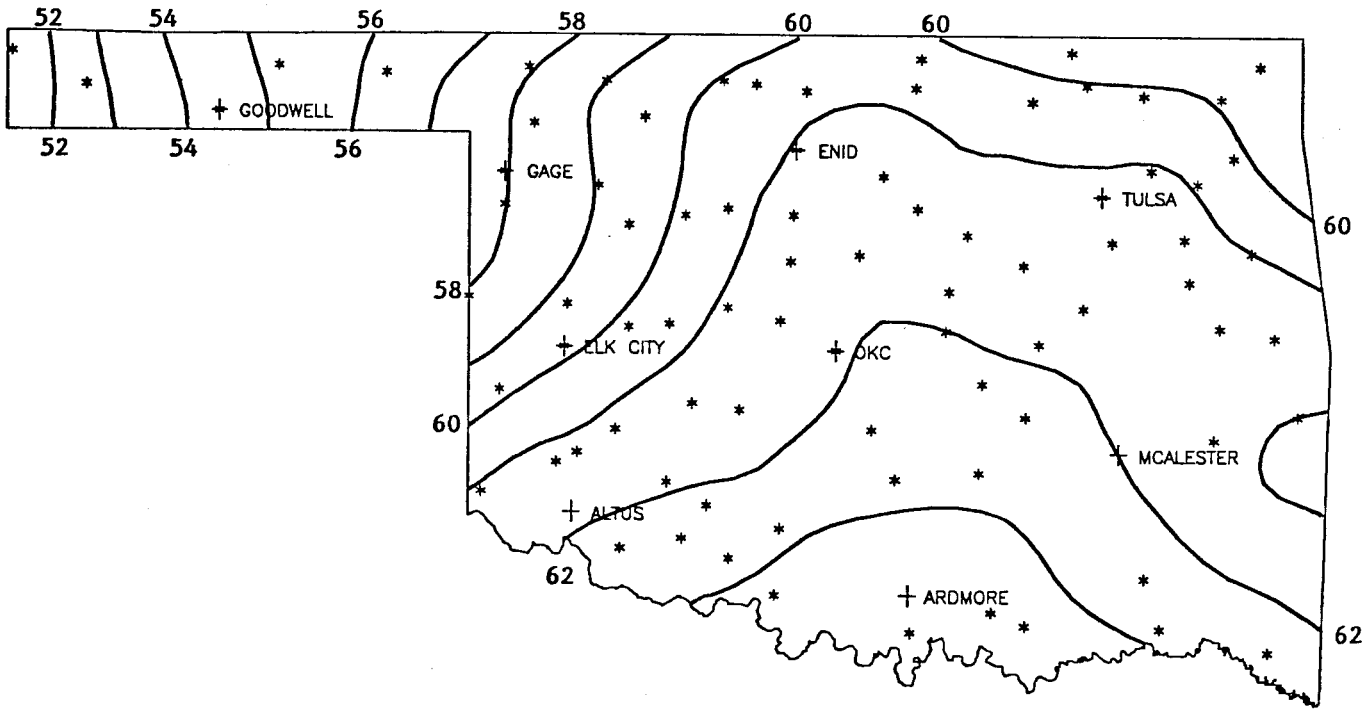
| DATE | SUNRISE | SUNSET | DAYLIGHT |
|---|---|---|---|
| 890901 | 7: 2AM | 7:59PM LT | 12:58 |
| 890902 | 7: 2AM | 7:58PM LT | 12:56 |
| 890903 | 7: 3AM | 7:56PM LT | 12:53 |
| 890904 | 7: 4AM | 7:55PM LT | 12:51 |
| 890905 | 7: 4AM | 7:54PM LT | 12:49 |
| 890906 | 7: 5AM | 7:52PM LT | 12:47 |
| 890907 | 7: 6AM | 7:51PM LT | 12:45 |
| 890908 | 7: 7AM | 7:49PM LT | 12:43 |
| 890909 | 7: 7AM | 7:48PM LT | 12:41 |
| 890910 | 7: 8AM | 7:46PM LT | 12:38 |
| 890911 | 7: 9AM | 7:45PM LT | 12:36 |
| 890912 | 7: 9AM | 7:44PM LT | 12:34 |
| 890913 | 7:10AM | 7:42PM LT | 12:32 |
| 890914 | 7:11AM | 7:41PM LT | 12:30 |
| 890915 | 7:12AM | 7:39PM LT | 12:28 |
| 890916 | 7:12AM | 7:38PM LT | 12:25 |
| 890917 | 7:13AM | 7:36PM LT | 12:23 |
| 890918 | 7:14AM | 7:35PM LT | 12:21 |
| 890919 | 7:15AM | 7:33PM LT | 12:19 |
| 890920 | 7:15AM | 7:32PM LT | 12:16 |
| 890921 | 7:16AM | 7:30PM LT | 12:14 |
| 890922 | 7:17AM | 7:29PM LT | 12:12 |
| 890923 | 7:18AM | 7:27PM LT | 12:10 |
| 890924 | 7:18AM | 7:26PM LT | 12: 8 |
| 890925 | 7:19AM | 7:24PM LT | 12: 5 |
| 890926 | 7:20AM | 7:23PM LT | 12: 3 |
| 890927 | 7:21AM | 7:21PM LT | 12: 1 |
| 890928 | 7:21AM | 7:20PM LT | 11:59 |
| 890929 | 7:22AM | 7:19PM LT | 11:57 |
| 890930 | 7:23AM | 7:17PM LT | 11:54 |

### Tulsa

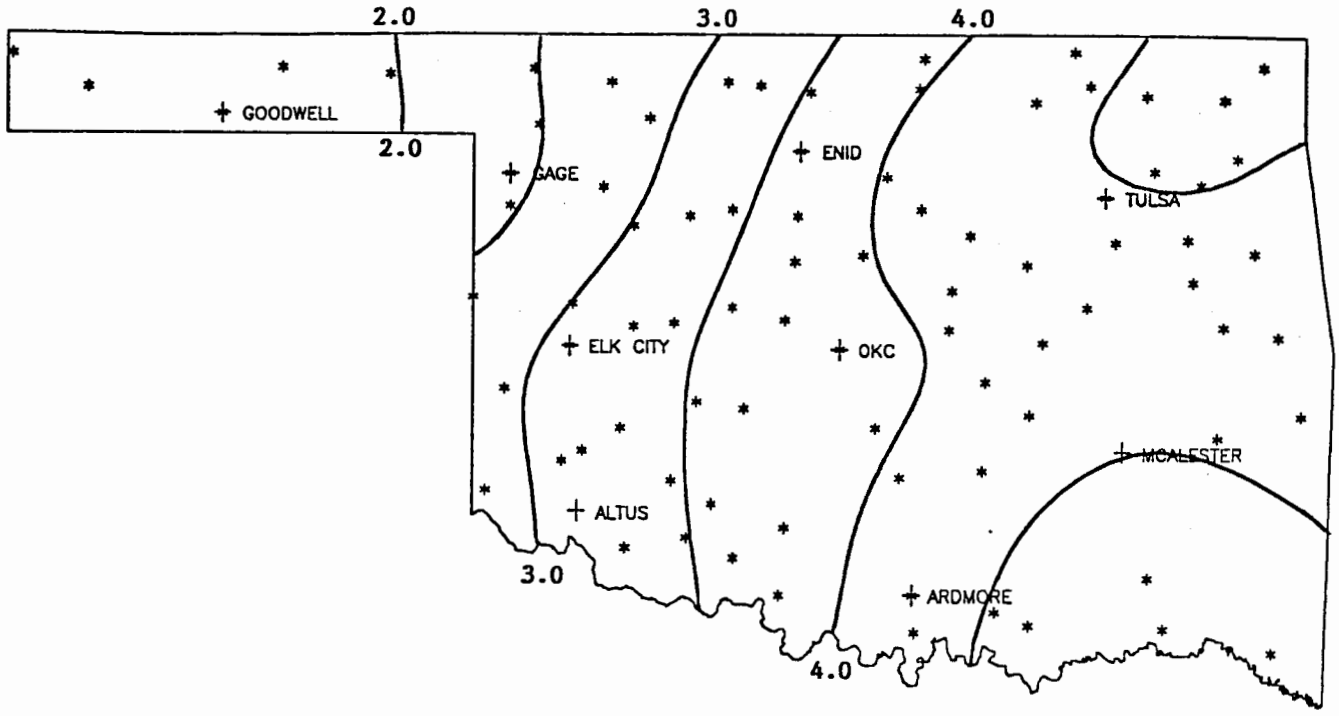
| DATE | SUNRISE | SUNSET | DAYLIGHT |
|---|---|---|---|
| 890901 | 6:54AM | 7:53PM LT | 12:59 |
| 890902 | 6:55AM | 7:52PM LT | 12:57 |
| 890903 | 6:56AM | 7:50PM LT | 12:55 |
| 890904 | 6:56AM | 7:49PM LT | 12:53 |
| 890905 | 6:57AM | 7:48PM LT | 12:50 |
| 890906 | 6:58AM | 7:46PM LT | 12:48 |
| 890907 | 6:59AM | 7:45PM LT | 12:46 |
| 890908 | 6:59AM | 7:43PM LT | 12:44 |
| 890909 | 7: 0AM | 7:42PM LT | 12:42 |
| 890910 | 7: 1AM | 7:40PM LT | 12:39 |
| 890911 | 7: 2AM | 7:39PM LT | 12:37 |
| 890912 | 7: 2AM | 7:37PM LT | 12:35 |
| 890913 | 7: 3AM | 7:36PM LT | 12:33 |
| 890914 | 7: 4AM | 7:34PM LT | 12:30 |
| 890915 | 7: 5AM | 7:33PM LT | 12:28 |
| 890916 | 7: 5AM | 7:31PM LT | 12:26 |
| 890917 | 7: 6AM | 7:30PM LT | 12:24 |
| 890918 | 7: 7AM | 7:28PM LT | 12:21 |
| 890919 | 7: 8AM | 7:27PM LT | 12:19 |
| 890920 | 7: 8AM | 7:25PM LT | 12:17 |
| 890921 | 7: 9AM | 7:24PM LT | 12:15 |
| 890922 | 7:10AM | 7:22PM LT | 12:12 |
| 890923 | 7:11AM | 7:21PM LT | 12:10 |
| 890924 | 7:11AM | 7:19PM LT | 12: 8 |
| 890925 | 7:12AM | 7:18PM LT | 12: 5 |
| 890926 | 7:13AM | 7:16PM LT | 12: 3 |
| 890927 | 7:14AM | 7:15PM LT | 12: 1 |
| 890928 | 7:15AM | 7:13PM LT | 11:59 |
| 890929 | 7:15AM | 7:12PM LT | 11:56 |
| 890930 | 7:16AM | 7:10PM LT | 11:54 |




30-YEAR MEAN SEPTEMBER MAXIMUM TEMPERATURE




30-YEAR MEAN SEPTEMBER DAILY MINIMUM TEMPERATURE




30-YEAR MEAN SEPTEMBER PRECIPITATION

## 30- and 90-DAY NATIONAL WEATHER SERVICE OUTLOOK

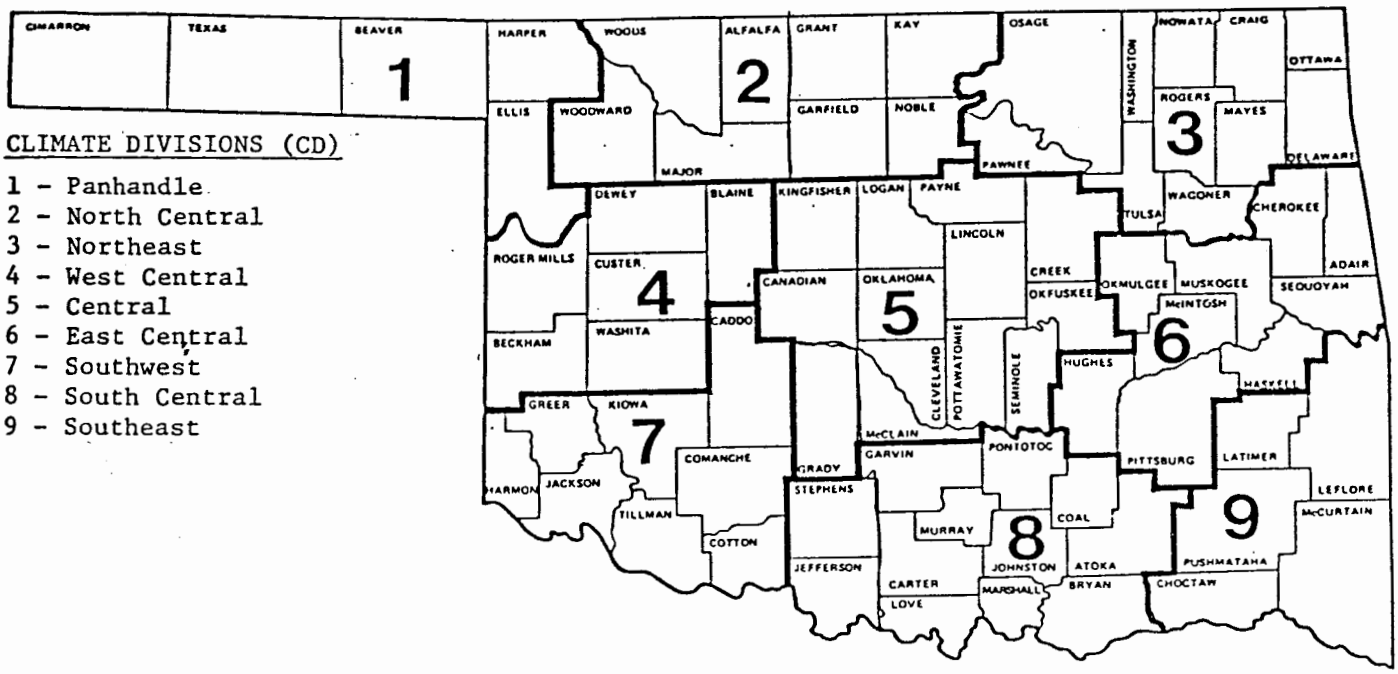
### 30-DAY OUTLOOK (AUGUST)

Precipitation - Near Normal Statewide
Temperature - Near Normal Statewide

### 90-DAY OUTLOOK (AUGUST-OCTOBER)

Precipitation - Near Normal Statewide
Temperature - Below Normal Statewide

# O K L A H O M A




CLIMATE DIVISIONS (CD)

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

## EXPLANATION OF TABLES

Two kinds of tables appear in this summary. The first is a set of tables containing all reporting stations grouped by climate division. The figure above shows the locations of the climate divisions. Each table contains the following information for each station:

Station Name:

Station Identification Number: These are usually assigned by the National Climatic Data Center.

Climate Division: See the figure above.

Number of Temperature Observations: These are the actual number of temperature reports recorded at the station during the current month. Missing observations may result in artificially high or low mean monthly temperatures.

Deviation from Normal: The deviation of the observed mean monthly temperature from the monthly station normal. A positive value indicates the month was warmer than normal. A negative value indicates the month was cooler than normal. Normal monthly temperatures may be calculated by subtracting the deviation from the observed temperature.

Maximum Daily Maximum: The maximum daily maximum temperature observed during the current month and year and the day which it occurred.

Minimum Daily Minimum: The minimum daily minimum temperature observed during the current month and year and the day which it occurred.

Heating Degree Days: HDD are calculated each day of the month for which there is a temperature report and summed. They are a qualitative measure of how much heat was required to maintain a comfortable indoor temperature. Missing observations may result in an artificially high or low value. For February 1984 HDD would be calculated as:

$$\sum_{i=1}^{29} 65-((TMAX_i + TMIN_i)/2)$$

Deviation from Normal Heating Degree Days: A positive value indicates higher than normal heating requirements for the month as a whole. A negative value indicates lower than normal heating requirements for the month as a whole. Normal HDD may be calculated by subtracting the deviation from observed HDD.

Cooling Degree Days: CDD are calculated each day of the month for which there is a temperature report and summed. They are a proxy measure of how much cooling was required to maintain a comfortable indoor temperature. Missing observations may result in an artificially high or low value. For June, CDD would be calculated as:

$$\sum_{i=1}^{30} ((TMAX_i + TMIN_i)/2)-65$$

Deviation from Normal Cooling Degree Days: A positive value indicates higher than normal cooling requirements for the month as a whole. A negative value indicates lower than normal cooling requirements for the month as a whole. Normal cooling degree days may be found by subtracting the deviation from the observed cooling degree days.

Total Precipitation: Often incorrectly referred to as mean precipitation, this value is the sum of all precipitation reported during the month at a station. If snow occurred, it is to be melted and its water equivalent recorded.

Number of Precipitation Observations: The number of days a rain or no-rain observation was reported. Missing observations frequently result in artificially low total precipitation values.

Deviation from Normal Precipitation: A positive value indicates more rain than normal was received. A negative value indicates less than was expected rainfall was received. Normal rainfall may be calculated by subtracting the deviation from monthly total.

Maximum 24-Hour Report and Day: The maximum amount of precipitation recorded during the station's 24-hour observation period for the current month and year and the day on which it was recorded.

The second set of tables contain similar information but are the average or extreme over all the stations reporting in each climate division.

## EXPLANATION OF MAPS

To give a Statewide perspective, a series of maps is produced each month from the information contained in the station tables. Each map is calculated using between 50 and 200 observations. Only stations with complete monthly records are used. Each observation is put into one of three categories and assigned a plus (+), minus (-), or a dot (.). The minus is the lowest numeric category, the dot is the middle and the plus the highest numeric category. If a map location has no report, a value is estimated. Each map is accompanied by its own legend. The categories will vary from month to month throughout the year. The categories for the deviations from normal maps will always remain constant. This is to facilitate comparisons between months and across years.

SEPTEMBER 1989

## CLIMATE CALENDAR

The data on this calendar are for Oklahoma City. Normal values are calculated for the period 1948-1987. Extremes are found for the period of record (1924-present).

| Normal | 1 | Actual |
|---|---|---|
| 89.2 | max | |
| 66.2 | min | |
| .163 | pcpn | |
| 0 | HDD | |
| 13 | CDD | |
| Highest Max | | 105-1939 |
| Lowest Max | | 69-1932 |
| Lowest Min | | 53-1956 |
| Highest Min | | 77-1936 |
| Greatest pcpn | | 2.53-1974 |

| Normal | 2 | Actual |
|---|---|---|
| 88.6 | max | |
| 66.2 | min | |
| .108 | pcpn | |
| 0 | HDD | |
| 13 | CDD | |
| Highest Max | | 104-1939 |
| Lowest Max | | 68-1967 |
| Lowest Min | | 52-1974 |
| Highest Min | | 78-1936 |
| Greatest pcpn | | 2.04-1969 |

| Normal | 3 | Actual |
|---|---|---|
| 89.8 | max | |
| 65.6 | min | |
| .267 | pcpn | |
| 0 | HDD | |
| 13 | CDD | |
| Highest Max | | 105-1947 |
| Lowest Max | | 71-1974 |
| Lowest Min | | 47-1974 |
| Highest Min | | 80-1939 |
| Greatest pcpn | | 3.16-1926 |

| Normal | 4 | Actual |
|---|---|---|
| 88.7 | max | |
| 66.3 | min | |
| .075 | pcpn | |
| 0 | HDD | |
| 13 | CDD | |
| Highest Max | | 106-1947 |
| Lowest Max | | 66-1961 |
| Lowest Min | | 46-1974 |
| Highest Min | | 79-1936 |
| Greatest pcpn | | 1.74-1940 |

| Normal | 5 | Actual |
|---|---|---|
| 88.2 | max | |
| 65.9 | min | |
| .056 | pcpn | |
| 0 | HDD | |
| 12 | CDD | |
| Highest Max | | 103-1931 |
| Lowest Max | | 64-1962 |
| Lowest Min | | 47-1974 |
| Highest Min | | 77-1939 |
| Greatest pcpn | | .70-1926 |

| Normal | 6 | Actual |
|---|---|---|
| 88.9 | max | |
| 66.0 | min | |
| .032 | pcpn | |
| 0 | HDD | |
| 13 | CDD | |
| Highest Max | | 106-1947 |
| Lowest Max | | 72-1962 |
| Lowest Min | | 51-1974 |
| Highest Min | | 76-1936 |
| Greatest pcpn | | .75-1973 |

| Normal | 7 | Actual |
|---|---|---|
| 88.1 | max | |
| 65.8 | min | |
| .077 | pcpn | |
| 0 | HDD | |
| 12 | CDD | |
| Highest Max | | 102-1936 |
| Lowest Max | | 66-1962 |
| Lowest Min | | 52-1950 |
| Highest Min | | 77-1936 |
| Greatest pcpn | | .86-1951 |

| Normal | 8 | Actual |
|---|---|---|
| 87.8 | max | |
| 64.7 | min | |
| .027 | pcpn | |
| 0 | HDD | |
| 12 | CDD | |
| Highest Max | | 98-1936 |
| Lowest Max | | 75-1957 |
| Lowest Min | | 48-1957 |
| Highest Min | | 77-1936 |
| Greatest pcpn | | 2.66-1940 |

| Normal | 9 | Actual |
|---|---|---|
| 87.4 | max | |
| 64.6 | min | |
| .068 | pcpn | |
| 0 | HDD | |
| 11 | CDD | |
| Highest Max | | 99-1936 |
| Lowest Max | | 67-1928 |
| Lowest Min | | 51-1962 |
| Highest Min | | 77-1936 |
| Greatest pcpn | | 1.22-1951 |

| Normal | 10 | Actual |
|---|---|---|
| 86.2 | max | |
| 63.6 | min | |
| .088 | pcpn | |
| 0 | HDD | |
| 10 | CDD | |
| Highest Max | | 100-1936 |
| Lowest Max | | 64-1928 |
| Lowest Min | | 47-1962 |
| Highest Min | | 77-1938 |
| Greatest pcpn | | 1.98-1934 |

| Normal | 11 | Actual |
|---|---|---|
| 87.2 | max | |
| 63.3 | min | |
| .038 | pcpn | |
| 0 | HDD | |
| 11 | CDD | |
| Highest Max | | 98-1930 |
| Lowest Max | | 70-1928 |
| Lowest Min | | 48-1940 |
| Highest Min | | 77-1936 |
| Greatest pcpn | | 1.69-1943 |

| Normal | 12 | Actual |
|---|---|---|
| 85.5 | max | |
| 63.4 | min | |
| .178 | pcpn | |
| 0 | HDD | |
| 10 | CDD | |
| Highest Max | | 102-1930 |
| Lowest Max | | 65-1975 |
| Lowest Min | | 48-1959 |
| Highest Min | | 78-1930 |
| Greatest pcpn | | 3.03-1961 |

| Normal | 13 | Actual |
|---|---|---|
| 84.3 | max | |
| 61.9 | min | |
| .164 | pcpn | |
| 0 | HDD | |
| 9 | CDD | |
| Highest Max | | 102-1965 |
| Lowest Max | | 61-1975 |
| Lowest Min | | 50-1959 |
| Highest Min | | 78-1978 |
| Greatest pcpn | | .78-1977 |

| Normal | 14 | Actual |
|---|---|---|
| 83.6 | max | |
| 62.1 | min | |
| .211 | pcpn | |
| 1 | HDD | |
| 9 | CDD | |
| Highest Max | | 102-1965 |
| Lowest Max | | 58-1975 |
| Lowest Min | | 47-1961 |
| Highest Min | | 77-1931 |
| Greatest pcpn | | 3.61-1957 |

| Normal | 15 | Actual |
|---|---|---|
| 83.0 | max | |
| 62.7 | min | |
| .097 | pcpn | |
| 1 | HDD | |
| 9 | CDD | |
| Highest Max | | 100-1965 |
| Lowest Max | | 58-1949 |
| Lowest Min | | 47-1961 |
| Highest Min | | 78-1931 |
| Greatest pcpn | | 2.30-1982 |

| Normal | 16 | Actual |
|---|---|---|
| 83.3 | max | |
| 62.1 | min | |
| .128 | pcpn | |
| 0 | HDD | |
| 8 | CDD | |
| Highest Max | | 101-1978 |
| Lowest Max | | 66-1966 |
| Lowest Min | | 47-1979 |
| Highest Min | | 76-1965 |
| Greatest pcpn | | 1.15-1969 |

| Normal | 17 | Actual |
|---|---|---|
| 82.4 | max | |
| 62.0 | min | |
| .130 | pcpn | |
| 1 | HDD | |
| 8 | CDD | |
| Highest Max | | 99-1931 |
| Lowest Max | | 58-1973 |
| Lowest Min | | 46-1981 |
| Highest Min | | 78-1978 |
| Greatest pcpn | | 1.42-1936 |

| Normal | 18 | Actual |
|---|---|---|
| 84.7 | max | |
| 61.6 | min | |
| .070 | pcpn | |
| 1 | HDD | |
| 9 | CDD | |
| Highest Max | | 99-1952 |
| Lowest Max | | 53-1971 |
| Lowest Min | | 42-1981 |
| Highest Min | | 78-1978 |
| Greatest pcpn | | 1.17-1971 |

| Normal | 19 | Actual |
|---|---|---|
| 84.1 | max | |
| 62.5 | min | |
| .064 | pcpn | |
| 0 | HDD | |
| 9 | CDD | |
| Highest Max | | 98-1954 |
| Lowest Max | | 56-1971 |
| Lowest Min | | 44-1971 |
| Highest Min | | 76-1978 |
| Greatest pcpn | | 1.49-1942 |

| Normal | 20 | Actual |
|---|---|---|
| 84.0 | max | |
| 61.0 | min | |
| .093 | pcpn | |
| 1 | HDD | |
| 8 | CDD | |
| Highest Max | | 100-1954 |
| Lowest Max | | 56-1983 |
| Lowest Min | | 41-1971 |
| Highest Min | | 76-1931 |
| Greatest pcpn | | .99-1946 |

| Normal | 21 | Actual |
|---|---|---|
| 81.4 | max | |
| 60.3 | min | |
| .101 | pcpn | |
| 1 | HDD | |
| 7 | CDD | |
| Highest Max | | 97-1980 |
| Lowest Max | | 61-1934 |
| Lowest Min | | 39-1983 |
| Highest Min | | 76-1931 |
| Greatest pcpn | | 1.48-1957 |

| Normal | 22 | Actual |
|---|---|---|
| 82.3 | max | |
| 59.7 | min | |
| .290 | pcpn | |
| 1 | HDD | |
| .7 | CDD | |
| Highest Max | | 96-1956 |
| Lowest Max | | 64-1972 |
| Lowest Min | | 45-1975 |
| Highest Min | | 76-1931 |
| Greatest pcpn | | 7.53-1970 |

| Normal | 23 | Actual |
|---|---|---|
| 82.1 | max | |
| 59.6 | min | |
| .028 | pcpn | |
| 1 | HDD | |
| 7 | CDD | |
| Highest Max | | 93-1984 |
| Lowest Max | | 63-1974 |
| Lowest Min | | 46-1983 |
| Highest Min | | 75-1931 |
| Greatest pcpn | | 1.47-1988 |

| Normal | 24 | Actual |
|---|---|---|
| 81.3 | max | |
| 59.3 | min | |
| .188 | pcpn | |
| 1 | HDD | |
| 7 | CDD | |
| Highest Max | | 98-1939 |
| Lowest Max | | 56-1974 |
| Lowest Min | | 48-1942 |
| Highest Min | | 74-1931 |
| Greatest pcpn | | 3.87-1959 |

| Normal | 25 | Actual |
|---|---|---|
| 81.0 | max | |
| 59.4 | min | |
| .060 | pcpn | |
| 1 | HDD | |
| 6 | CDD | |
| Highest Max | | 97-1938 |
| Lowest Max | | 53-1926 |
| Lowest Min | | 43-1926 |
| Highest Min | | 74-1933 |
| Greatest pcpn | | .95-1955 |

| Normal | 26 | Actual |
|---|---|---|
| 80.1 | max | |
| 58.4 | min | |
| .156 | pcpn | |
| 1 | HDD | |
| 6 | CDD | |
| Highest Max | | 98-1977 |
| Lowest Max | | 46-1936 |
| Lowest Min | | 39-1942 |
| Highest Min | | 73-1981 |
| Greatest pcpn | | 1.74-1973 |

| Normal | 27 | Actual |
|---|---|---|
| 80.2 | max | |
| 58.5 | min | |
| .122 | pcpn | |
| 1 | HDD | |
| 6 | CDD | |
| Highest Max | | 96-1953 |
| Lowest Max | | 48-1926 |
| Lowest Min | | 38-1942 |
| Highest Min | | 70-1971 |
| Greatest pcpn | | 1.75-1936 |

| Normal | 28 | Actual |
|---|---|---|
| 79.8 | max | |
| 57.8 | min | |
| .030 | pcpn | |
| 2 | HDD | |
| 6 | CDD | |
| Highest Max | | 103-1953 |
| Lowest Max | | 53-1926 |
| Lowest Min | | 41-1936 |
| Highest Min | | 73-1977 |
| Greatest pcpn | | 2.88-1945 |

| Normal | 29 | Actual |
|---|---|---|
| 80.0 | max | |
| 56.9 | min | |
| .108 | pcpn | |
| 2 | HDD | |
| 6 | CDD | |
| Highest Max | | 98-1953 |
| Lowest Max | | 47-1945 |
| Lowest Min | | 41-1976 |
| Highest Min | | 71-1933 |
| Greatest pcpn | | 2.90-1986 |

| Normal | 30 | Actual |
|---|---|---|
| 79.5 | max | |
| 55.2 | min | |
| .096 | pcpn | |
| 3 | HDD | |
| 5 | CDD | |
| Highest Max | | 100-1977 |
| Lowest Max | | 54-1985 |
| Lowest Min | | 37-1972 |
| Highest Min | | 72-1977 |
| Greatest pcpn | | 1.79-1986 |

### SEPTEMBER AVERAGES

Temperature : 73.3
Precipitation : 3.31"
Heating Degree Days: 19
Cooling Degree Days: 275