

# OKLAHOMA MONTHLY SUMMARY APRIL 1989

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### APRIL 1989 OKLAHOMA SUMMARY

This month was the driest April in Oklahoma's 98-year climatological history. Precipitation averaged only .52" Statewide, well below the previous record of .88" in 1936 and long term mean of 3.3". Numerous stations broke records for the least April precipitation, (see Table 1), with several recording no rain for the entire month. The dry weather directly affected State agricultural production. The percentage of the State experiencing soil moisture deficits increased from 50% to 90% (topsoil) and 15% to 55% (subsoil). The resulting water stress left 50% of the State's wheat crop in poor or very poor condition. Experts predict a 20-30% bu/planted acre decrease from last year's harvest.

A jet stream track located far to the north prevented organized frontal systems from entering the State for several days. Without these systems, many stations reported only one day of at least .10" of precipitation, 2 to 3 days fewer than typical in April. Oklahoma City recorded its first April since record-keeping began without a thunderstorm. The northerly jet stream allowed warm air from the south and southwest to flow northward into Oklahoma. This warmer air produced a Statewide average monthly mean temperature 2 degrees above normal.

Record-breaking cold air accompanied a strong Canadian high pressure system into the State April 9-12. The coldest air arrived on the 11th, producing a Statewide freeze. On the following morning, the northern one-half of Oklahoma recorded the State's last spring freeze for 1989. Typically, last spring freeze dates range from April 4 to 25 within this region. This system produced snow showers as far south as central Oklahoma on April 9. The Panhandle received the greatest snow accumulations, as much as 2 inches.

An upper level disturbance supported severe thunderstorm development along a western Oklahoma dry line on April 20. Roger Mills County reported golfball-size hail and 60 mph winds. Scattered thunderstorms delivered nearly one-third of an inch of rain to stations in southwest and west central Oklahoma. The dry line redeveloped on several consecutive days along a surface trough over the Texas Panhandle. Although a strong thunderstorm moved over Beckham County on April 25, producing Oklahoma's only reported tornado of the month, the nearly stationary dryline provided very limited precipitation to the rest of the State. The trough finally moved slowly westward across the State. On April 26 north central stations recorded one-fourth to two-thirds of an inch of rain from scattered thunderstorms. The trough developed into a cold front which, on the 29th, kept high temperatures below 80 degrees Statewide for the first time in 8 days. Thunderstorms along the front produced over an inch of rain at many southeastern Oklahoma stations.

- R. J. Sladewski

PERCENT OF MEAN PRECIPITATION  
April 1989

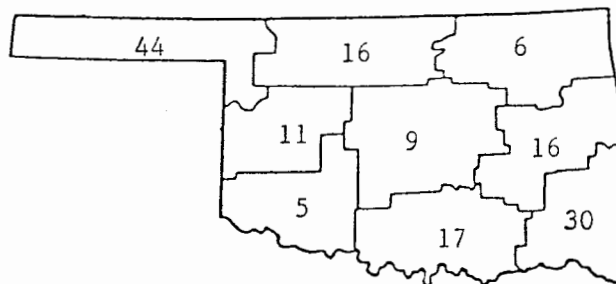


Table 1.

1989 RECORD-BREAKING APRIL PRECIPITATION AMOUNTS  
FOR SELECTED OKLAHOMA STATIONS

| CD | STATION       | APRIL 1989<br>PRECIPITATION<br>AMOUNT | PREVIOUS<br>RECORD<br>AMOUNT | YEAR OF<br>PREVIOUS<br>RECORD* |
|----|---------------|---------------------------------------|------------------------------|--------------------------------|
| 2  | Perry         | .17                                   | .39                          | 1987                           |
| 3  | Tulsa         | .34                                   | .51                          | 1950                           |
| 4  | Elk City      | T                                     | .04                          | 1987                           |
| 4  | Cordell       | T                                     | .02                          | 1987                           |
| 5  | Oklahoma City | .17                                   | .41                          | 1987                           |
| 7  | Mangum        | 0*                                    | 0                            | 1956                           |
| 7  | Hobart        | .01                                   | .02                          | 1987                           |
| 8  | Duncan        | .32                                   | .35                          | 1987                           |

\* Ties Record  
T Trace

TABLE OF 1988/1989 COMPARISONS

| Station         | April<br>Temperatures (F) |      | April<br>Precipitation (in.) |      |
|-----------------|---------------------------|------|------------------------------|------|
|                 | 1988                      | 1989 | 1988                         | 1989 |
| Arnett          | 53.5                      | 60.4 | 3.32                         | .68  |
| Enid            | 58.1                      | 62.7 | 4.46                         | .60  |
| Mutual          | 52.7                      | 60.6 | 3.89                         | .63  |
| Tulsa           | 60.1                      | 64.0 | 3.38                         | .34  |
| Elk City        | 57.6                      | 62.8 | 5.88                         | .001 |
| Oklahoma City   | 61.0                      | 63.9 | 3.05                         | .17  |
| McAlester       | 60.0                      | 63.7 | 2.63                         | .50  |
| Altus Irr. Sta. | 60.6                      | 65.7 | 2.19                         | .34  |
| Durant          | 59.2                      | 63.1 | 2.19                         | .66  |
| Ada             | 60.9                      | 63.0 | 1.80                         | .54  |
| Antlers         | 62.4                      | 64.3 | 1.44                         | 1.04 |

EXTREMES

| Variable                         | Station      | Division | Observation | Date |
|----------------------------------|--------------|----------|-------------|------|
| Minimum temperature (F)          | Perry        | 2        | 18          | 11   |
| Maximum temperature (F)          | Buffalo      | 1        | 105         | 23   |
| Maximum 24-hour<br>Precipitation | Bear Mt. Tw. | 9        | 2.35"       | 29   |

APRIL 1989 SUMMARY FOR NORTHWEST DIVISION (CD1)

| NAME           | ID     | CD | DEV   |     |       |      | MIN  |      | HEAT |       | DEV   |       | COOL  |       | DEV |       | TOT  | NUM | FROM | MAX | 24-HR | DAY |
|----------------|--------|----|-------|-----|-------|------|------|------|------|-------|-------|-------|-------|-------|-----|-------|------|-----|------|-----|-------|-----|
|                |        |    | MEAN  | NUM | FROM  | MAX  | TEMP | DAY  | TEMP | DAY   | DEG   | FROM  | DEG   | FROM  | DEG | FROM  |      |     |      |     |       |     |
| ARNETT         | 332    | 1  | 60.4  | 28  | ***** | 98.  | 24   | 28.  | 11   | 212.0 | ***** | 82.5  | ***** | .680  | 30  | -1.10 | .37  | 21  |      |     |       |     |
| BEAVER         | 593    | 1  | 59.5  | 30  | 2.5   | 102. | 23   | 28.  | 10   | 247.0 | -7.0  | 83.5  | 66.5  | .161  | 30  | -1.09 | .08  | 10  |      |     |       |     |
| BOISE CITY 2 E | 908    | 1  | 57.4  | 30  | 3.0   | 95.  | 22   | 20.  | 10   | 267.0 | -59.0 | 39.5  | 31.5  | .470  | 30  | -.88  | .29  | 30  |      |     |       |     |
| BUFFALO        | 1243   | 1  | 64.4  | 30  | 4.7   | 105. | 23   | 26.  | 11   | 151.0 | -43.0 | 133.5 | 98.5  | 2.270 | 30  | .20   | 1.30 | 10  |      |     |       |     |
| FARGO          | 3070   | 1  | ***** | 0   | ***** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | .702  | 30  | -1.13 | .39  | 27  |      |     |       |     |
| GAGE FAA APT   | 3407   | 1  | 61.7  | 30  | 4.2   | 99.  | 23   | 31.  | 11   | 197.5 | -45.5 | 98.0  | 80.0  | .343  | 30  | -1.51 | .23  | 27  |      |     |       |     |
| GATE           | 3489   | 1  | 62.6  | 30  | ***** | 102. | 23   | 28.  | 9    | 186.0 | ***** | 113.5 | ***** | .253  | 30  | ***** | .13  | 9   |      |     |       |     |
| GOODWELL RES   | ST3628 | 1  | 57.1  | 30  | 1.2   | 100. | 23   | 23.  | 11   | 296.5 | 6.5   | 59.5  | 42.5  | .230  | 30  | -.88  | .16  | 13  |      |     |       |     |
| GUYMON         | 3835   | 1  | 61.0  | 24  | ***** | 101. | 22   | 24.  | 10   | 163.5 | ***** | 68.0  | ***** | .820  | 29  | ***** | .37  | 10  |      |     |       |     |
| HOOKER         | 4298   | 1  | 58.4  | 30  | 2.1   | 101. | 23   | 25.  | 10   | 267.5 | -6.5  | 69.5  | 56.5  | .360  | 30  | -.83  | .15  | 10  |      |     |       |     |
| KENFON         | 4766   | 1  | 56.0  | 30  | 1.6   | 94.  | 23   | 20.  | 10   | 310.5 | -17.5 | 42.0  | 32.0  | .882  | 30  | -.41  | .65  | 30  |      |     |       |     |
| LAVERNE        | 5045   | 1  | ***** | 0   | ***** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | .202  | 30  | -1.33 | .10  | 10  |      |     |       |     |
| OPTIMA LAKE    | 6740   | 1  | 58.8  | 30  | ***** | 100. | 23   | 25.  | 11   | 257.5 | ***** | 71.0  | ***** | .320  | 30  | ***** | .14  | 10  |      |     |       |     |
| RANGE          | 7412   | 1  | ***** | 0   | ***** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | .330  | 30  | ***** | .17  | 9   |      |     |       |     |
| REGNIER        | 7534   | 1  | ***** | 0   | ***** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | 1.103 | 30  | -.01  | .89  | 30  |      |     |       |     |
| TURPIN 4 SSE   | 9017   | 1  | 57.7  | 29  | ***** | 101. | 24   | 27.  | 11   | 266.0 | ***** | 55.0  | ***** | .230  | 29  | ***** | .11  | 10  |      |     |       |     |

APRIL 1989 SUMMARY FOR NORTH CENTRAL DIVISION (CD2)

| NAME            | ID   | CD | DEV   |     |       |      | MIN  |      | HEAT |       | DEV   |       | COOL  |       | DEV |       | TOT  | NUM | FROM | MAX | 24-HR | DAY |
|-----------------|------|----|-------|-----|-------|------|------|------|------|-------|-------|-------|-------|-------|-----|-------|------|-----|------|-----|-------|-----|
|                 |      |    | MEAN  | NUM | FROM  | MAX  | TEMP | DAY  | TEMP | DAY   | DEG   | FROM  | DEG   | FROM  | DEG | FROM  |      |     |      |     |       |     |
| ALVA 1 ENE      | 194  | 2  | 63.0  | 30  | 4.1   | 100. | 23   | 26.  | 11   | 165.5 | -48.5 | 105.5 | 74.5  | .900  | 30  | -1.53 | .84  | 27  |      |     |       |     |
| VANCE AFB       | 302  | 2  | ***** | 0   | ***** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | .173  | 30  | ***** | .17  | 21  |      |     |       |     |
| BILLINGS        | 755  | 2  | 60.4  | 30  | ***** | 92.  | 27   | 28.  | 11   | 215.0 | ***** | 76.0  | ***** | .271  | 30  | -2.65 | .23  | 20  |      |     |       |     |
| BLACKWELL 2E    | 818  | 2  | 60.3  | 30  | ***** | 91.  | 26   | 26.  | 11   | 208.5 | ***** | 69.0  | ***** | .541  | 30  | ***** | .32  | 19  |      |     |       |     |
| BRAMAN          | 1075 | 2  | ***** | 0   | ***** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | .431  | 30  | ***** | .24  | 21  |      |     |       |     |
| CEDARDALE       | 1620 | 2  | ***** | 0   | ***** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | .740  | 30  | ***** | .51  | 27  |      |     |       |     |
| CHEROKEE        | 1724 | 2  | 63.1  | 30  | 3.3   | 97.  | 26   | 30.  | 11   | 169.0 | -27.0 | 111.0 | 71.0  | .750  | 30  | -1.80 | .75  | 27  |      |     |       |     |
| ENID            | 2912 | 2  | 62.7  | 30  | 2.3   | 92.  | 26   | 34.  | 11   | 171.0 | -7.0  | 101.5 | 61.5  | .600  | 30  | -2.18 | .48  | 21  |      |     |       |     |
| FT SUPPLY DAM   | 3304 | 2  | 60.0  | 30  | 1.0   | 98.  | 24   | 30.  | 11   | 232.0 | 16.0  | 83.5  | 47.5  | .750  | 29  | ***** | .32  | 27  |      |     |       |     |
| FREEDOM         | 3358 | 2  | 63.1  | 30  | ***** | 103. | 23   | 27.  | 11   | 175.0 | ***** | 117.5 | ***** | .200  | 30  | ***** | .12  | 27  |      |     |       |     |
| GREAT SALT PLNS | 3740 | 2  | 61.1  | 30  | ***** | 96.  | 27   | 29.  | 11   | 200.0 | ***** | 84.0  | ***** | .833  | 30  | -1.82 | .61  | 27  |      |     |       |     |
| HARDY           | 3909 | 2  | ***** | 0   | ***** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | .134  | 30  | ***** | .10  | 20  |      |     |       |     |
| HELENA 1 SSE    | 4019 | 2  | 59.3  | 30  | ***** | 94.  | 24   | 29.  | 11   | 245.0 | ***** | 75.5  | ***** | .311  | 30  | -2.26 | .12  | 10  |      |     |       |     |
| JEFFERSON       | 4573 | 2  | 62.4  | 30  | 2.8   | 95.  | 26   | 30.  | 11   | 177.0 | -21.0 | 98.0  | 62.0  | .601  | 30  | -2.17 | .39  | 26  |      |     |       |     |
| LAMONT          | 5013 | 2  | ***** | 0   | ***** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | .670  | 30  | ***** | .56  | 21  |      |     |       |     |
| MEDFORD         | 5768 | 2  | ***** | 0   | ***** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | 1.482 | 30  | ***** | 1.20 | 20  |      |     |       |     |
| MORRISON        | 6065 | 2  | ***** | 0   | ***** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | .200  | 30  | ***** | .10  | 10  |      |     |       |     |
| MUTUAL          | 6139 | 2  | 60.6  | 30  | 2.4   | 95.  | 24   | 32.  | 11   | 213.5 | -16.5 | 80.5  | 54.5  | .630  | 30  | -1.82 | .45  | 27  |      |     |       |     |
| NEWKIRK         | 6278 | 2  | 61.1  | 30  | 1.6   | 91.  | 26   | 31.  | 11   | 199.0 | -5.0  | 83.0  | 44.0  | .350  | 30  | -2.60 | .15  | 9   |      |     |       |     |
| ORIENTA         | 6751 | 2  | ***** | 0   | ***** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | .110  | 30  | ***** | .08  | 10  |      |     |       |     |
| PERRY           | 7012 | 2  | 60.8  | 30  | -.7   | 93.  | 27   | 18.  | 11   | 198.0 | 41.0  | 73.5  | 21.5  | .170  | 30  | -2.53 | .08  | 14  |      |     |       |     |
| PONCA CITY FAA  | 7201 | 2  | 62.6  | 30  | 4.0   | 93.  | 26   | 33.  | 11   | 180.0 | -43.0 | 107.0 | 76.0  | .461  | 30  | -2.44 | .30  | 19  |      |     |       |     |
| RED ROCK 1 NNE  | 7505 | 2  | ***** | 0   | ***** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | .000  | 30  | -2.79 | .00  | 30  |      |     |       |     |
| RENFROW         | 7556 | 2  | ***** | 0   | ***** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | .440  | 30  | -2.12 | .13  | 21  |      |     |       |     |
| WAYNOKA         | 9404 | 2  | 61.7  | 30  | 1.4   | 99.  | 23   | 20.  | 11   | 197.0 | 20.0  | 99.0  | 63.0  | .820  | 30  | -1.36 | .67  | 27  |      |     |       |     |
| WOODWARD        | 9760 | 2  | ***** | 0   | ***** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | .404  | 30  | ***** | .25  | 27  |      |     |       |     |

APRIL 1989 SUMMARY FOR NORTHEAST DIVISION (CD3)

| NAME            | ID CD  | DEV       |         |           |          |     |          |     | HEAT    |           | DEV     |           | COOL    |           | DEV   |     | TOT PPT | NUM OBS | FROM | MAX | 24-HR DAY |
|-----------------|--------|-----------|---------|-----------|----------|-----|----------|-----|---------|-----------|---------|-----------|---------|-----------|-------|-----|---------|---------|------|-----|-----------|
|                 |        | MEAN TEMP | NUM OBS | FROM NORM | MAX TEMP | DAY | MIN TEMP | DAY | DEG DAY | FROM NORM | DEG DAY | FROM NORM | DEG DAY | FROM NORM |       |     |         |         |      |     |           |
| BARNSDALL       | 535 3  | 62.1      | 30      | *****     | 89.      | 26  | 24.      | 11  | 183.5   | *****     | 96.0    | *****     | .323    | 30        | -2.97 | .22 | 21      |         |      |     |           |
| BARTLESVILLE ZW | 548 3  | 62.5      | 30      | 1.7       | 92.      | 22  | 24.      | 11  | 171.0   | .0        | 95.5    | 50.5      | .131    | 30        | -3.19 | .12 | 21      |         |      |     |           |
| BIXBY           | 782 3  | 61.1      | 30      | .5        | 91.      | 23  | 27.      | 11  | 205.0   | 37.0      | 88.0    | 52.0      | .370    | 30        | -3.54 | .37 | 14      |         |      |     |           |
| BURBANK         | 1256 3 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | .211    | 30        | ***** | .12 | 20      |         |      |     |           |
| CHELSEA 4 S     | 1717 3 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | .151    | 30        | ***** | .06 | 21      |         |      |     |           |
| CLAREMORE       | 1828 3 | 60.0      | 30      | .0        | 88.      | 23  | 26.      | 12  | 226.0   | 39.0      | 74.5    | 40.5      | .147    | 30        | -3.61 | .11 | 14      |         |      |     |           |
| CLEVELAND 5 WSW | 1902 3 | 64.4      | 27      | *****     | 92.      | 26  | 29.      | 11  | 127.5   | *****     | 111.5   | *****     | .000    | 27        | ***** | .00 | 30      |         |      |     |           |
| FORAKER         | 3250 3 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | 1.581   | 30        | -1.55 | .67 | 5       |         |      |     |           |
| HOLLOW          | 4258 3 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | .140    | 30        | -3.58 | .12 | 19      |         |      |     |           |
| HOMINY          | 4289 3 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | .162    | 30        | -2.96 | .12 | 21      |         |      |     |           |
| HULAH DAM       | 4393 3 | 60.7      | 20      | *****     | 92.      | 27  | 24.      | 11  | 153.5   | *****     | 66.5    | *****     | .000    | 30        | -3.16 | .00 | 30      |         |      |     |           |
| JAY TOWER       | 4567 3 | 62.5      | 27      | *****     | 88.      | 28  | 26.      | 11  | 166.0   | *****     | 98.0    | *****     | .500    | 27        | ***** | .44 | 18      |         |      |     |           |
| KANSAS 1 ESE    | 4672 3 | 60.6      | 30      | *****     | 86.      | 22  | 26.      | 11  | 198.0   | *****     | 65.0    | *****     | .274    | 30        | ***** | .20 | 19      |         |      |     |           |
| KEYSTONE DAM    | 4812 3 | 61.7      | 27      | *****     | 89.      | 27  | 25.      | 11  | 173.0   | *****     | 84.5    | *****     | .132    | 27        | ***** | .08 | 21      |         |      |     |           |
| LENAPAH         | 5118 3 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | .230    | 30        | ***** | .12 | 19      |         |      |     |           |
| MANNFORD 6 NW   | 5522 3 | 64.7      | 30      | *****     | 94.      | 26  | 27.      | 11  | 137.5   | *****     | 129.0   | *****     | .062    | 30        | -3.23 | .06 | 20      |         |      |     |           |
| MARAMEC         | 5540 3 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | .042    | 30        | -2.95 | .04 | 15      |         |      |     |           |
| MIAMI           | 5855 3 | 60.3      | 30      | .2        | 88.      | 26  | 33.      | 11  | 216.5   | 30.5      | 75.0    | 36.0      | .161    | 30        | -3.56 | .14 | 19      |         |      |     |           |
| NOWATA          | 6485 3 | 61.4      | 30      | 1.5       | 88.      | 27  | 30.      | 11  | 190.0   | -4.0      | 83.0    | 42.0      | .002    | 30        | -3.50 | .00 | 20      |         |      |     |           |
| ONETA 1 WNW     | 6713 3 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | .740    | 30        | ***** | .31 | 19      |         |      |     |           |
| PAWHUSKA        | 6935 3 | 62.0      | 30      | 1.5       | 91.      | 26  | 25.      | 11  | 184.0   | 6.0       | 93.0    | 50.0      | .266    | 30        | -2.80 | .18 | 20      |         |      |     |           |
| PAWHUSKA        | 6937 3 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | .184    | 30        | ***** | .18 | 21      |         |      |     |           |
| PAWNEE          | 6940 3 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | .070    | 30        | -2.90 | .05 | 12      |         |      |     |           |
| PRYOR 6 N       | 7309 3 | 58.9      | 29      | -1.1      | 87.      | 22  | 26.      | 12  | 240.0   | 44.0      | 63.5    | 17.5      | .033    | 30        | -3.87 | .03 | 20      |         |      |     |           |
| QUAPAW          | 7358 3 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | .250    | 30        | -3.73 | .15 | 14      |         |      |     |           |
| RALSTON         | 7390 3 | 63.8      | 30      | *****     | 93.      | 26  | 25.      | 11  | 150.5   | *****     | 115.0   | *****     | .231    | 30        | -2.74 | .10 | 21      |         |      |     |           |
| RAMONA 4 N      | 7394 3 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | .041    | 30        | ***** | .04 | 21      |         |      |     |           |
| SKIATOOK        | 8258 3 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | .300    | 30        | -3.17 | .19 | 20      |         |      |     |           |
| SPAVINAW        | 8380 3 | 62.1      | 30      | *****     | 86.      | 23  | 29.      | 11  | 181.0   | *****     | 94.0    | *****     | .061    | 30        | -4.02 | .06 | 15      |         |      |     |           |
| TULSA WSO APT   | 8992 3 | 64.0      | 30      | 3.1       | 89.      | 22  | 34.      | 11  | 144.5   | -23.5     | 114.0   | 69.0      | .344    | 30        | -3.81 | .14 | 21      |         |      |     |           |
| UPPER SPAVINAW  | 9101 3 | 64.8      | 30      | *****     | 95.      | 22  | 28.      | 11  | 141.0   | *****     | 136.0   | *****     | .512    | 30        | ***** | .38 | 14      |         |      |     |           |
| VINITA 2 N      | 9203 3 | 61.4      | 28      | *****     | 87.      | 23  | 25.      | 11  | 182.5   | *****     | 83.0    | *****     | .290    | 30        | -3.78 | .29 | 19      |         |      |     |           |
| WAGONER         | 9247 3 | 62.9      | 30      | 1.3       | 89.      | 22  | 31.      | 11  | 166.5   | 16.5      | 102.5   | 54.5      | .313    | 30        | -4.36 | .11 | 19      |         |      |     |           |
| WANN            | 9298 3 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | .170    | 30        | ***** | .09 | 21      |         |      |     |           |

APRIL 1989 SUMMARY FOR WEST CENTRAL DIVISION (CD4)

| NAME           | ID CD  | DEV       |         |           |          |     |          |     | HEAT    |           | DEV     |           | COOL    |           | DEV   |     | TOT PPT | NUM OBS | FROM | MAX | 24-HR DAY |
|----------------|--------|-----------|---------|-----------|----------|-----|----------|-----|---------|-----------|---------|-----------|---------|-----------|-------|-----|---------|---------|------|-----|-----------|
|                |        | MEAN TEMP | NUM OBS | FROM NORM | MAX TEMP | DAY | MIN TEMP | DAY | DEG DAY | FROM NORM | DEG DAY | FROM NORM | DEG DAY | FROM NORM |       |     |         |         |      |     |           |
| CANTON DAM     | 1445 4 | 60.0      | 28      | *****     | 93.      | 24  | 28.      | 11  | 216.0   | *****     | 75.0    | *****     | .153    | 28        | ***** | .08 | 26      |         |      |     |           |
| CHEYENNE       | 1738 4 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | .301    | 30        | ***** | .30 | 26      |         |      |     |           |
| CLINTON        | 1909 4 | 64.5      | 30      | 3.9       | 96.      | 23  | 29.      | 11  | 134.5   | -44.5     | 120.0   | 73.0      | .390    | 30        | -2.00 | .39 | 26      |         |      |     |           |
| COLONY         | 2039 4 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | .000    | 30        | ***** | .00 | 30      |         |      |     |           |
| CORDELL        | 2125 4 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | .001    | 30        | -2.19 | .00 | 14      |         |      |     |           |
| ELK CITY 1 E   | 2849 4 | 62.5      | 30      | *****     | 96.      | 23  | 29.      | 11  | 162.5   | *****     | 87.5    | *****     | .001    | 30        | -2.21 | .00 | 26      |         |      |     |           |
| ERICK 4 E      | 2944 4 | 63.3      | 30      | 2.9       | 100.     | 23  | 30.      | 11  | 148.0   | -30.0     | 97.5    | 57.5      | .001    | 30        | -2.20 | .00 | 26      |         |      |     |           |
| GEARY          | 3497 4 | 61.9      | 27      | *****     | 89.      | 23  | 30.      | 11  | 165.5   | *****     | 80.5    | *****     | .230    | 27        | ***** | .23 | 26      |         |      |     |           |
| HAMMON 1 NNE   | 3871 4 | 60.5      | 30      | .2        | 98.      | 24  | 28.      | 11  | 219.0   | 36.0      | 82.5    | 40.5      | .450    | 30        | -1.77 | .45 | 26      |         |      |     |           |
| LEEDEY         | 5090 4 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | .001    | 30        | -2.50 | .00 | 23      |         |      |     |           |
| MACKIE 4 NNW   | 5463 4 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | 1.300   | 30        | ***** | .91 | 27      |         |      |     |           |
| MORAVIA 2 NNE  | 6035 4 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | .001    | 30        | -2.09 | .00 | 27      |         |      |     |           |
| OKENE          | 6629 4 | 62.5      | 30      | 1.5       | 94.      | 25  | 30.      | 12  | 175.0   | 7.0       | 100.5   | 52.5      | .400    | 30        | -1.93 | .20 | 11      |         |      |     |           |
| RETROP         | 7565 4 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | .000    | 30        | ***** | .00 | 30      |         |      |     |           |
| REYDON         | 7579 4 | 62.9      | 30      | *****     | 101.     | 23  | 29.      | 10  | 172.0   | *****     | 110.0   | *****     | .930    | 30        | -1.34 | .75 | 27      |         |      |     |           |
| SAYRE          | 7952 4 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | .001    | 30        | -2.05 | .00 | 26      |         |      |     |           |
| SWEETWATER 2 E | 8652 4 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | .880    | 30        | ***** | .88 | 25      |         |      |     |           |
| TALOGA         | 8708 4 | 62.0      | 30      | 2.8       | 95.      | 23  | 27.      | 11  | 165.5   | -35.5     | 77.0    | 47.0      | .060    | 30        | -2.38 | .06 | 10      |         |      |     |           |
| THOMAS         | 8815 4 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | .450    | 30        | ***** | .45 | 26      |         |      |     |           |
| VICI           | 9172 4 | *****     | 0       | *****     | ****     | 0   | ****     | 0   | *****   | *****     | *****   | *****     | .590    | 30        | ***** | .39 | 27      |         |      |     |           |
| WATONGA        | 9364 4 | 62.7      | 30      | *****     | 93.      | 23  | 32.      | 11  | 176.0   | *****     | 107.0   | *****     | .152    | 30        | -2.27 | .08 | 10      |         |      |     |           |
| WEATHERFORD    | 9422 4 | 61.3      | 30      | .5        | 94.      | 25  | 30.      | 11  | 188.0   | 20.0      | 76.5    | 34.5      | .270    | 30        | -1.96 | .22 | 26      |         |      |     |           |

APRIL 1989 SUMMARY FOR CENTRAL DIVISION (CD5)

| NAME             | ID   | CD | DEV          |            |              |             |            |             |     | HEAT<br>DEG<br>DAY | DEV<br>FROM<br>NORM | COOL<br>DEG<br>DAY | DEV<br>FROM<br>NORM | TOT<br>PPT | DEV<br>NUM<br>OBS | FROM<br>NORM | MAX<br>24-HR<br>DAY |    |
|------------------|------|----|--------------|------------|--------------|-------------|------------|-------------|-----|--------------------|---------------------|--------------------|---------------------|------------|-------------------|--------------|---------------------|----|
|                  |      |    | MEAN<br>TEMP | NUM<br>OBS | FROM<br>NORM | MAX<br>TEMP | MIN<br>DAY | TEMP<br>DAY | DAY |                    |                     |                    |                     |            |                   |              |                     |    |
| AMBER            | 200  | 5  | *****        | 0          | *****        | ****        | 0          | ****        | 0   | *****              | *****               | *****              | *****               | .100       | 30                | *****        | .10                 | 14 |
| ARCADIA          | 288  | 5  | *****        | 0          | *****        | ****        | 0          | ****        | 0   | *****              | *****               | *****              | *****               | .130       | 30                | *****        | .08                 | 10 |
| TINKER AFB       | 325  | 5  | *****        | 0          | *****        | ****        | 0          | ****        | 0   | *****              | *****               | *****              | *****               | .381       | 30                | *****        | .25                 | 10 |
| BLANCHARD 2 SSW  | 830  | 5  | 63.8         | 30         | *****        | 89.         | 26         | 33.         | 11  | 137.5              | *****               | 101.0              | *****               | .182       | 30                | *****        | .18                 | 14 |
| BRISTOW          | 1144 | 5  | 63.4         | 30         | 1.5          | 89.         | 26         | 26.         | 11  | 153.0              | -3.0                | 106.0              | 43.0                | .470       | 30                | -3.08        | .22                 | 19 |
| CHANDLER         | 1684 | 5  | 63.4         | 29         | 1.4          | 90.         | 26         | 30.         | 11  | 143.0              | 2.0                 | 98.0               | 47.0                | .252       | 29                | *****        | .15                 | 14 |
| CHICKASHA EX ST1 | 1750 | 5  | 63.8         | 30         | 1.5          | 92.         | 23         | 28.         | 11  | 148.5              | 6.5                 | 112.5              | 51.5                | .270       | 30                | -2.57        | .27                 | 14 |
| CRESCENT         | 2242 | 5  | *****        | 0          | *****        | ****        | 0          | ****        | 0   | *****              | *****               | *****              | *****               | .000       | 30                | *****        | .00                 | 30 |
| CUSHING          | 2318 | 5  | 61.5         | 30         | 1.0          | 90.         | 27         | 31.         | 12  | 195.5              | 26.5                | 89.0               | 58.0                | .171       | 30                | -3.01        | .17                 | 21 |
| EL RENO 1 N      | 2818 | 5  | 63.1         | 30         | 2.6          | 90.         | 26         | 31.         | 11  | 155.5              | -22.5               | 98.5               | 55.5                | .130       | 30                | -2.45        | .08                 | 14 |
| GUTHRIE          | 3821 | 5  | 65.3         | 30         | 4.1          | 97.         | 25         | 31.         | 11  | 123.5              | -40.5               | 132.0              | 82.0                | .140       | 30                | -2.46        | .06                 | 21 |
| HENNESSEY 2 SE   | 4055 | 5  | 61.1         | 30         | .9           | 91.         | 26         | 29.         | 11  | 200.5              | 16.5                | 83.0               | 43.0                | .092       | 30                | -2.29        | .09                 | 10 |
| INGALLS          | 4489 | 5  | *****        | 0          | *****        | ****        | 0          | ****        | 0   | *****              | *****               | *****              | *****               | .201       | 30                | *****        | .10                 | 10 |
| KINGFISHER 2 SE  | 4861 | 5  | 62.2         | 30         | 1.4          | 91.         | 26         | 29.         | 11  | 180.5              | 6.5                 | 95.5               | 47.5                | .051       | 30                | -2.37        | .05                 | 10 |
| KONAWA           | 4915 | 5  | *****        | 0          | *****        | ****        | 0          | ****        | 0   | *****              | *****               | *****              | *****               | .571       | 30                | -3.55        | .44                 | 14 |
| MARSHALL         | 5589 | 5  | *****        | 0          | *****        | ****        | 0          | ****        | 0   | *****              | *****               | *****              | *****               | .300       | 30                | -2.08        | .30                 | 21 |
| MEEKER 4 W       | 5779 | 5  | 63.2         | 29         | 1.9          | 89.         | 26         | 29.         | 11  | 150.5              | -7.5                | 97.5               | 50.5                | .160       | 29                | *****        | .16                 | 14 |
| MULHALL          | 6110 | 5  | *****        | 0          | *****        | ****        | 0          | ****        | 0   | *****              | *****               | *****              | *****               | .080       | 30                | *****        | .08                 | 10 |
| NORMAN 3 S       | 6386 | 5  | 64.3         | 30         | *****        | 92.         | 26         | 28.         | 11  | 134.5              | *****               | 113.5              | *****               | .361       | 30                | -2.94        | .32                 | 14 |
| OILTON 2 SE      | 6616 | 5  | *****        | 0          | *****        | ****        | 0          | ****        | 0   | *****              | *****               | *****              | *****               | .040       | 30                | *****        | .02                 | 15 |
| OKEMAH           | 6638 | 5  | 63.3         | 30         | 1.5          | 88.         | 22         | 31.         | 11  | 146.5              | 10.5                | 95.0               | 55.0                | .452       | 30                | -3.73        | .15                 | 14 |
| OKLAHOMA CITY WS | 6661 | 5  | 63.9         | 30         | 3.7          | 90.         | 26         | 32.         | 11  | 136.5              | -47.5               | 103.0              | 63.0                | .171       | 30                | -2.74        | .10                 | 10 |
| PERKINS          | 7003 | 5  | *****        | 0          | *****        | ****        | 0          | ****        | 0   | *****              | *****               | *****              | *****               | .210       | 30                | -2.43        | .11                 | 21 |
| PIEDMONT         | 7068 | 5  | *****        | 0          | *****        | ****        | 0          | ****        | 0   | *****              | *****               | *****              | *****               | .151       | 30                | *****        | .08                 | 10 |
| PRAGUE           | 7264 | 5  | *****        | 0          | *****        | ****        | 0          | ****        | 0   | *****              | *****               | *****              | *****               | .600       | 30                | -3.27        | .44                 | 14 |
| PURCELL 5 SW     | 7327 | 5  | 63.1         | 30         | 1.4          | 88.         | 26         | 24.         | 11  | 153.5              | -.5                 | 95.5               | 40.5                | .650       | 30                | -2.72        | .65                 | 14 |
| SEMINOLE         | 8042 | 5  | 65.4         | 30         | 2.2          | 89.         | 26         | 27.         | 11  | 117.0              | -15.0               | 129.5              | 51.5                | .340       | 30                | -3.75        | .22                 | 14 |
| SHAWNEE          | 8110 | 5  | *****        | 0          | *****        | ****        | 0          | ****        | 0   | *****              | *****               | *****              | *****               | .680       | 30                | -3.19        | .55                 | 14 |
| STELLA           | 8479 | 5  | *****        | 0          | *****        | ****        | 0          | ****        | 0   | *****              | *****               | *****              | *****               | .390       | 30                | *****        | .33                 | 14 |
| STILLWATER 2 W   | 8501 | 5  | 60.0         | 30         | -.4          | 91.         | 27         | 27.         | 11  | 229.5              | 46.5                | 81.0               | 36.0                | .171       | 30                | -2.41        | .10                 | 21 |
| STROUD 1 N       | 8563 | 5  | *****        | 0          | *****        | ****        | 0          | ****        | 0   | *****              | *****               | *****              | *****               | .272       | 30                | *****        | .10                 | 14 |
| TECUMSEH         | 8751 | 5  | *****        | 0          | *****        | ****        | 0          | ****        | 0   | *****              | *****               | *****              | *****               | .481       | 30                | *****        | .48                 | 13 |
| TROUSDALE        | 8960 | 5  | *****        | 0          | *****        | ****        | 0          | ****        | 0   | *****              | *****               | *****              | *****               | .420       | 30                | *****        | .42                 | 14 |
| UNION CITY 1 SE  | 9086 | 5  | *****        | 0          | *****        | ****        | 0          | ****        | 0   | *****              | *****               | *****              | *****               | .001       | 30                | -3.33        | .00                 | 14 |
| WELTY 1 SSE      | 9479 | 5  | *****        | 0          | *****        | ****        | 0          | ****        | 0   | *****              | *****               | *****              | *****               | .400       | 30                | *****        | .35                 | 13 |
| WEWOKA           | 9575 | 5  | *****        | 0          | *****        | ****        | 0          | ****        | 0   | *****              | *****               | *****              | *****               | .750       | 30                | -3.02        | .36                 | 14 |

APRIL 1989 SUMMARY FOR EAST CENTRAL DIVISION (CD6)

| NAME           | ID   | CD | DEV  |     |      |      |     | HEAT |      | DEV   | COOL  | DEV   | DEV   |       |     |       |       |     |
|----------------|------|----|------|-----|------|------|-----|------|------|-------|-------|-------|-------|-------|-----|-------|-------|-----|
|                |      |    | MEAN | NUM | FROM | MAX  | MIN | DEG  | FROM | DEG   | FROM  | TOT   | NUM   | FROM  | MAX |       |       |     |
|                |      |    | TEMP | OBS | NORM | TEMP | DAY | TEMP | DAY  | DAY   | NORM  | DAY   | NORM  | PPT   | OBS | NORM  | 24-HR | DAY |
| ASHLAND        | 364  | 6  | **** | 0   | **** | **** | 0   | **** | 0    | ***** | ***** | ***** | ***** | 1.180 | 30  | ***** | .60   | 15  |
| BEGGS          | 631  | 6  | **** | 0   | **** | **** | 0   | **** | 0    | ***** | ***** | ***** | ***** | 1.100 | 30  | ***** | 1.10  | 19  |
| BOYNTON        | 1027 | 6  | **** | 0   | **** | **** | 0   | **** | 0    | ***** | ***** | ***** | ***** | .410  | 30  | ***** | .18   | 15  |
| CALVIN         | 1391 | 6  | **** | 0   | **** | **** | 0   | **** | 0    | ***** | ***** | ***** | ***** | 1.091 | 30  | -3.34 | .72   | 19  |
| CHECOTAH       | 1711 | 6  | **** | 0   | **** | **** | 0   | **** | 0    | ***** | ***** | ***** | ***** | .442  | 30  | -4.15 | .21   | 15  |
| DEWAR 2 NE     | 2485 | 6  | **** | 0   | **** | **** | 0   | **** | 0    | ***** | ***** | ***** | ***** | .230  | 30  | -4.05 | .16   | 19  |
| DUSTIN         | 2690 | 6  | **** | 0   | **** | **** | 0   | **** | 0    | ***** | ***** | ***** | ***** | .420  | 30  | ***** | .22   | 14  |
| EUFULA         | 2993 | 6  | 63.2 | 30  | **** | 87.  | 22  | 30.  | 11   | 158.5 | ***** | 104.5 | ***** | 2.040 | 30  | -2.64 | 1.30  | 19  |
| HANNA          | 3884 | 6  | 62.9 | 30  | **** | 88.  | 22  | 24.  | 11   | 162.0 | ***** | 98.0  | ***** | .571  | 30  | -3.87 | .36   | 15  |
| HARTSHORNE     | 3946 | 6  | **** | 0   | **** | **** | 0   | **** | 0    | ***** | ***** | ***** | ***** | 1.230 | 30  | ***** | .34   | 19  |
| HASKELL        | 3956 | 6  | **** | 0   | **** | **** | 0   | **** | 0    | ***** | ***** | ***** | ***** | .272  | 30  | -3.84 | .18   | 14  |
| HOLDENVILLE    | 4235 | 6  | 63.3 | 30  | 1.1  | 86.  | 28  | 27.  | 11   | 146.0 | 15.0  | 95.5  | 48.5  | .870  | 30  | -3.50 | .30   | 19  |
| LAKE EUFAULA   | 4975 | 6  | 62.4 | 30  | **** | 89.  | 24  | 33.  | 11   | 179.5 | ***** | 102.0 | ***** | .840  | 30  | ***** | .40   | 15  |
| LYONS 2 N      | 5437 | 6  | **** | 0   | **** | **** | 0   | **** | 0    | ***** | ***** | ***** | ***** | .202  | 30  | -4.53 | .10   | 29  |
| MARBLE CITY    | 5546 | 6  | **** | 0   | **** | **** | 0   | **** | 0    | ***** | ***** | ***** | ***** | .053  | 30  | ***** | .05   | 11  |
| MCALESTER FAA  | 5664 | 6  | 63.7 | 30  | 1.8  | 88.  | 28  | 28.  | 11   | 146.5 | 2.5   | 106.0 | 55.0  | .500  | 30  | -4.04 | .17   | 15  |
| MCCURTAIN 1 SE | 5693 | 6  | 64.3 | 30  | **** | 90.  | 22  | 25.  | 11   | 153.5 | ***** | 134.0 | ***** | 1.171 | 30  | -3.60 | .40   | 15  |
| MUSKOGEE       | 6130 | 6  | 63.3 | 30  | 1.3  | 88.  | 23  | 28.  | 11   | 155.5 | 17.5  | 106.0 | 58.0  | .770  | 30  | -3.81 | .54   | 18  |
| OKMULGEE W W   | 6670 | 6  | 60.9 | 28  | **** | 89.  | 23  | 26.  | 11   | 184.0 | ***** | 68.0  | ***** | .402  | 28  | ***** | .26   | 14  |
| OKTAHA 2 NE    | 6678 | 6  | **** | 0   | **** | **** | 0   | **** | 0    | ***** | ***** | ***** | ***** | .720  | 30  | ***** | .49   | 19  |
| QUINTON        | 7372 | 6  | **** | 0   | **** | **** | 0   | **** | 0    | ***** | ***** | ***** | ***** | 1.611 | 30  | -2.72 | .51   | 29  |
| SALLISAW 2 NE  | 7862 | 6  | 62.5 | 30  | .3   | 89.  | 28  | 24.  | 11   | 158.0 | 28.0  | 84.5  | 38.5  | .551  | 30  | -3.92 | .35   | 30  |
| SCIPIO         | 7979 | 6  | **** | 0   | **** | **** | 0   | **** | 0    | ***** | ***** | ***** | ***** | .830  | 30  | ***** | .40   | 15  |
| SCRAPER        | 7993 | 6  | **** | 0   | **** | **** | 0   | **** | 0    | ***** | ***** | ***** | ***** | .060  | 30  | ***** | .06   | 14  |
| SHORT          | 8170 | 6  | **** | 0   | **** | **** | 0   | **** | 0    | ***** | ***** | ***** | ***** | 1.160 | 30  | ***** | 1.16  | 19  |
| STILWELL 1 NE  | 8506 | 6  | 61.2 | 30  | **** | 87.  | 28  | 24.  | 11   | 194.5 | ***** | 80.0  | ***** | .241  | 30  | -4.47 | .09   | 15  |
| TAHLEQUAH      | 8677 | 6  | 62.6 | 30  | 1.5  | 88.  | 23  | 24.  | 11   | 167.0 | 4.0   | 96.0  | 50.0  | .261  | 30  | -4.30 | .09   | 10  |
| WEBBERS FALLS  | 9445 | 6  | 61.3 | 30  | .7   | 89.  | 28  | 27.  | 11   | 202.5 | 31.5  | 92.0  | 53.0  | .770  | 30  | -3.83 | .32   | 15  |
| WESTVILLE      | 9523 | 6  | **** | 0   | **** | **** | 0   | **** | 0    | ***** | ***** | ***** | ***** | .240  | 30  | ***** | .19   | 19  |
| WETUMKA 3 NE   | 9571 | 6  | **** | 0   | **** | **** | 0   | **** | 0    | ***** | ***** | ***** | ***** | .470  | 30  | -3.90 | .23   | 14  |

APRIL 1989 SUMMARY FOR SOUTHWEST DIVISION (CD7)

| NAME                | ID   | CD   | DEV  |      |      |      |      | HEAT |      | DEV   | COOL  | DEV   | DEV   |      |     |       |       |     |
|---------------------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|------|-----|-------|-------|-----|
|                     |      |      | MEAN | NUM  | FROM | MAX  | MIN  | DEG  | FROM | DEG   | FROM  | TOT   | NUM   | FROM | MAX |       |       |     |
|                     |      |      | TEMP | OBS  | NORM | TEMP | DAY  | TEMP | DAY  | DAY   | NORM  | DAY   | NORM  | PPT  | OBS | NORM  | 24-HR | DAY |
| ALTUS IRR STA       | 179  | 7    | 65.7 | 30   | 2.4  | 101. | 23   | 27.  | 11   | 106.0 | -18.0 | 125.5 | 52.5  | .340 | 30  | -1.69 | .33   | 21  |
| ALTUS DAM           | 184  | 7    | 63.9 | 30   | **** | 97.  | 24   | 37.  | 11   | 160.5 | ***** | 128.5 | ***** | .000 | 30  | -1.98 | .00   | 30  |
| ANADARKO            | 224  | 7    | 62.3 | 25   | **** | 96.  | 23   | 23.  | 11   | 143.0 | ***** | 76.5  | ***** | .070 | 30  | -2.52 | .07   | 14  |
| APACHE              | 260  | 7    | **** | 0    | **** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | .170 | 30  | ***** | .17   | 14  |
| ALTUS AFB           | 447  | 7    | **** | 0    | **** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | .023 | 30  | ***** | .01   | 14  |
| CARNEGIE 2 ENE      | 1504 | 7    | 64.0 | 30   | 2.2  | 95.  | 23   | 30.  | 11   | 143.0 | -7.0  | 113.5 | 59.5  | .020 | 30  | -2.40 | .02   | 14  |
| CHATTANOOGA         | 1706 | 7    | 64.4 | 30   | 1.6  | 94.  | 23   | 27.  | 11   | 121.5 | -7.5  | 103.0 | 40.0  | .150 | 30  | -2.33 | .09   | 14  |
| DUNCAN 12 W         | 2668 | 7    | **** | 0    | **** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | .110 | 30  | ***** | .08   | 14  |
| FREDERICK           | 3353 | 7    | 64.6 | 30   | .2   | 96.  | 24   | 32.  | 11   | 137.0 | 32.0  | 125.0 | 38.0  | .190 | 30  | -2.13 | .13   | 13  |
| GRANDFIELD 4 NW3709 | 7    | **** | 0    | **** | **** | 0    | **** | 0    | 0    | ***** | ***** | ***** | ***** | .220 | 30  | -2.20 | .13   | 13  |
| HOBART FAA APT      | 4204 | 7    | 63.7 | 30   | 3.4  | 98.  | 23   | 29.  | 11   | 149.0 | -31.0 | 110.0 | 71.0  | .011 | 30  | -2.23 | .01   | 14  |
| HOLLIS              | 4249 | 7    | 65.1 | 30   | 1.9  | 99.  | 24   | 28.  | 12   | 116.5 | -5.5  | 118.0 | 50.0  | .501 | 30  | -1.70 | .26   | 20  |
| LAWTON              | 5063 | 7    | 63.9 | 30   | 1.2  | 92.  | 23   | 32.  | 10   | 139.5 | 12.5  | 106.0 | 48.0  | .102 | 30  | -2.31 | .10   | 13  |
| FORT SILL           | 5068 | 7    | 64.9 | 30   | **** | 92.  | 23   | 35.  | 11   | 117.5 | ***** | 115.0 | ***** | .065 | 30  | -2.35 | .06   | 13  |
| LOOKER 2 ENE        | 5329 | 7    | **** | 0    | **** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | .070 | 30  | ***** | .05   | 14  |
| MANGUM RES STA      | 5509 | 7    | 65.6 | 30   | 2.9  | 99.  | 22   | 28.  | 11   | 126.5 | -13.5 | 145.5 | 74.5  | .000 | 30  | -1.89 | .00   | 30  |
| RANDLETT 9 E        | 7403 | 7    | **** | 0    | **** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | .360 | 30  | ***** | .23   | 14  |
| ROOSEVELT           | 7727 | 7    | **** | 0    | **** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | .000 | 30  | -2.25 | .00   | 30  |
| SEDAN               | 8016 | 7    | **** | 0    | **** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | .002 | 30  | ***** | .00   | 15  |
| SNYDER              | 8299 | 7    | **** | 0    | **** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | .110 | 30  | -1.94 | .04   | 14  |
| VINSON 3 WNW        | 9212 | 7    | **** | 0    | **** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | .002 | 30  | -2.07 | .00   | 14  |
| WALTERS             | 9278 | 7    | 64.5 | 30   | .9   | 92.  | 24   | 30.  | 11   | 123.5 | -.5   | 109.0 | 27.0  | .172 | 30  | -2.66 | .17   | 14  |
| WICHITA MT WLR      | 9629 | 7    | 64.4 | 30   | 2.6  | 95.  | 24   | 26.  | 11   | 137.0 | -11.0 | 119.0 | 67.0  | .161 | 30  | -2.29 | .10   | 14  |
| WILLOW              | 9668 | 7    | **** | 0    | **** | **** | 0    | **** | 0    | ***** | ***** | ***** | ***** | .000 | 30  | ***** | .00   | 30  |

APRIL 1989 SUMMARY FOR SOUTH CENTRAL DIVISION (CD8)

| NAME                | ID   | CD   | DEV          |            |              |             |            |             | HEAT<br>DEG | DEV<br>FROM | COOL<br>DEG | DEV<br>FROM | TOT   | NUM   | DEV<br>FROM | MAX   | 24-HR | DAY |
|---------------------|------|------|--------------|------------|--------------|-------------|------------|-------------|-------------|-------------|-------------|-------------|-------|-------|-------------|-------|-------|-----|
|                     |      |      | MEAN<br>TEMP | NUM<br>OBS | FROM<br>NORM | MAX<br>TEMP | MIN<br>DAY | TEMP<br>DAY |             |             |             |             |       |       |             |       |       |     |
| ADA                 | 17   | 8    | 63.3         | 30         | .8           | 86.         | 28         | 32.         | 11          | 136.5       | 5.5         | 84.5        | 28.5  | .541  | 30          | -3.23 | .54   | 14  |
| ALLEN               | 147  | 8    | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | .700  | 30          | ***** | .70   | 13  |
| ARDMORE             | 292  | 8    | 64.9         | 30         | -.3          | 89.         | 17         | 33.         | 11          | 119.0       | 38.0        | 115.5       | 28.5  | .651  | 30          | -3.22 | .65   | 13  |
| ATOKA DAM           | 394  | 8    | 63.5         | 30         | *****        | 89.         | 4          | 30.         | 11          | 153.0       | *****       | 107.0       | ***** | .500  | 30          | ***** | .50   | 14  |
| BOKCHITO            | 917  | 8    | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | 1.200 | 30          | ***** | 1.20  | 14  |
| CANEY               | 1437 | 8    | 65.9         | 30         | *****        | 91.         | 3          | 31.         | 11          | 94.5        | *****       | 121.0       | ***** | 1.470 | 30          | ***** | .87   | 30  |
| CENTRAHOMA          | 1648 | 8    | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | .750  | 30          | ***** | .35   | 13  |
| CHICKASAW NRA       | 1745 | 8    | 62.4         | 30         | *****        | 88.         | 29         | 29.         | 11          | 167.0       | *****       | 88.0        | ***** | .510  | 30          | ***** | .45   | 14  |
| COLEMAN             | 2011 | 8    | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | .670  | 30          | ***** | .55   | 14  |
| COMANCHE            | 2054 | 8    | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | .231  | 30          | ***** | .23   | 14  |
| DAISY 4 ENE         | 2354 | 8    | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | 1.680 | 30          | -3.75 | .51   | 30  |
| DUNCAN              | 2660 | 8    | 63.1         | 30         | -.6          | 89.         | 23         | 32.         | 11          | 148.5       | 36.5        | 90.5        | 17.5  | .320  | 30          | -2.39 | .25   | 14  |
| DURANT USDA         | 2678 | 8    | 63.1         | 30         | *****        | 89.         | 4          | 36.         | 10          | 148.5       | *****       | 91.0        | ***** | .660  | 30          | -3.88 | .62   | 14  |
| ELMORE CITY         | 2872 | 8    | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | .350  | 30          | ***** | .35   | 14  |
| FARRIS 3 WNW        | 3083 | 8    | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | .890  | 30          | ***** | .38   | 14  |
| GRADY               | 3688 | 8    | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | .930  | 30          | ***** | .91   | 14  |
| HEALDTON            | 4001 | 8    | 64.5         | 30         | *****        | 88.         | 28         | 25.         | 11          | 129.0       | *****       | 113.5       | ***** | .550  | 30          | -2.90 | .52   | 14  |
| HENNEPIN            | 4052 | 8    | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | .300  | 30          | ***** | .30   | 13  |
| KETCHUM RANCH       | 4780 | 8    | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | .181  | 30          | ***** | .13   | 14  |
| KINGSTON            | 4865 | 8    | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | .670  | 30          | -3.43 | .57   | 13  |
| LEHIGH              | 5108 | 8    | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | 1.251 | 30          | ***** | .75   | 14  |
| LINDSAY 2 W         | 5216 | 8    | 63.5         | 29         | *****        | 88.         | 26         | 24.         | 11          | 142.5       | *****       | 99.5        | ***** | .381  | 30          | -2.93 | .38   | 14  |
| LOCO 6 SE           | 5247 | 8    | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | .510  | 30          | ***** | .51   | 14  |
| MARIETTA            | 5563 | 8    | 65.7         | 30         | 2.2          | 90.         | 28         | 30.         | 11          | 107.5       | -2.5        | 127.5       | 62.5  | .450  | 30          | -3.35 | .40   | 14  |
| MARLOW 1 WSW        | 5581 | 8    | 64.3         | 30         | *****        | 89.         | 26         | 29.         | 11          | 125.0       | *****       | 102.5       | ***** | .150  | 30          | -2.53 | .15   | 14  |
| MCGEE CREEK DAM5713 | 8    | 63.6 | 30           | *****      | 91.          | 29          | 27.        | 11          | 144.5       | *****       | 103.5       | *****       | ***** | .630  | 30          | ***** | .38   | 14  |
| OSWALT              | 6787 | 8    | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | .000  | 30          | ***** | .00   | 30  |
| PAULS VALLEY        | 6926 | 8    | 64.8         | 30         | 1.5          | 89.         | 26         | 26.         | 11          | 125.5       | 7.5         | 120.0       | 53.0  | .400  | 30          | -3.10 | .33   | 14  |
| POTOTOC             | 7214 | 8    | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | .650  | 30          | -3.44 | .65   | 14  |
| TISHOMINGO NWLR8884 | 8    | 64.9 | 28           | *****      | 92.          | 3           | 25.        | 11          | 111.5       | *****       | 107.5       | *****       | ***** | .780  | 30          | -3.83 | .67   | 14  |
| TUSSY               | 9032 | 8    | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | .260  | 30          | ***** | .26   | 14  |
| WAURIKA             | 9395 | 8    | 65.8         | 30         | 1.3          | 92.         | 21         | 29.         | 11          | 113.5       | 9.5         | 137.0       | 48.0  | .501  | 30          | -2.46 | .50   | 14  |
| WAURIKA DAM         | 9399 | 8    | 63.3         | 29         | *****        | 90.         | 23         | 28.         | 11          | 149.5       | *****       | 99.0        | ***** | .400  | 29          | ***** | .35   | 14  |

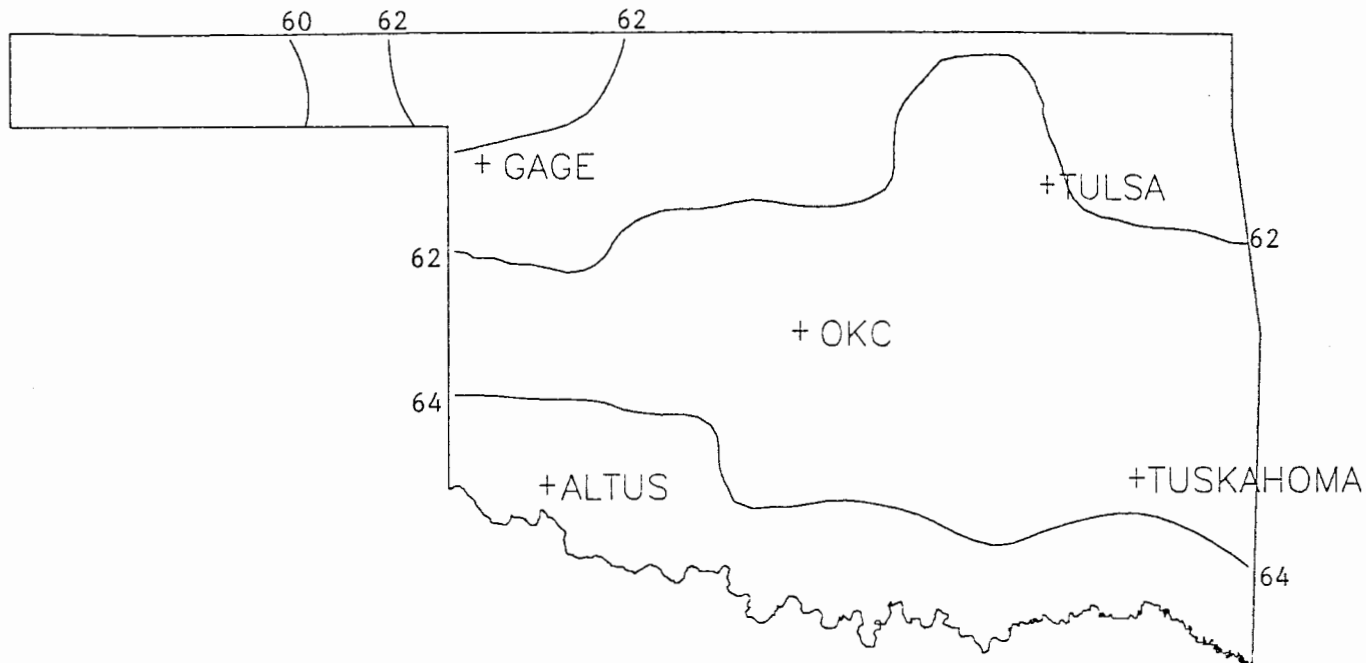
APRIL 1989 SUMMARY FOR SOUTHEAST DIVISION (CD9)

| NAME           | ID   | CD | DEV          |            |              |             |            |             | HEAT<br>DEG | DEV<br>FROM | COOL<br>DEG | DEV<br>FROM | TOT   | NUM   | DEV<br>FROM | MAX   | 24-HR | DAY |
|----------------|------|----|--------------|------------|--------------|-------------|------------|-------------|-------------|-------------|-------------|-------------|-------|-------|-------------|-------|-------|-----|
|                |      |    | MEAN<br>TEMP | NUM<br>OBS | FROM<br>NORM | MAX<br>TEMP | MIN<br>DAY | TEMP<br>DAY |             |             |             |             |       |       |             |       |       |     |
| ANTLERS        | 256  | 9  | 64.1         | 30         | 1.5          | 91.         | 3          | 25.         | 11          | 134.5       | 13.5        | 106.5       | 57.5  | 1.040 | 30          | -4.07 | .61   | 14  |
| BATTIEST 1 SSW | 567  | 9  | 62.2         | 30         | *****        | 88.         | 3          | 23.         | 11          | 160.5       | *****       | 75.5        | ***** | 4.012 | 30          | ***** | 1.43  | 30  |
| BEAR MT TWR    | 584  | 9  | 63.5         | 30         | *****        | 89.         | 3          | 29.         | 11          | 140.0       | *****       | 94.5        | ***** | 4.320 | 30          | -.78  | 2.35  | 29  |
| BENGAL         | 670  | 9  | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | 2.310 | 30          | ***** | .86   | 29  |
| BOSWELL 4 NNW  | 980  | 9  | 65.5         | 30         | *****        | 90.         | 28         | 28.         | 11          | 106.0       | *****       | 122.0       | ***** | .912  | 30          | -3.66 | .58   | 14  |
| BROKEN BOW 1 N | 1162 | 9  | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | 3.300 | 30          | -2.03 | 1.22  | 29  |
| BROKEN BOW DAM | 1168 | 9  | 61.9         | 30         | *****        | 92.         | 4          | 26.         | 11          | 165.5       | *****       | 73.5        | ***** | 3.030 | 30          | ***** | 1.42  | 19  |
| CARNASAW TWR   | 1499 | 9  | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | 2.450 | 30          | -3.03 | 1.07  | 19  |
| CARTER TWR     | 1544 | 9  | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | 3.430 | 30          | -1.83 | 1.62  | 19  |
| FANSHAWE       | 3065 | 9  | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | .980  | 30          | -4.02 | .44   | 15  |
| HEAVENER 1 SE  | 4008 | 9  | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | 1.660 | 30          | -3.27 | .58   | 30  |
| HEE MT TWR     | 4017 | 9  | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | 2.150 | 30          | ***** | .65   | 30  |
| HUGO           | 4384 | 9  | 65.2         | 30         | 1.1          | 89.         | 28         | 30.         | 11          | 108.5       | 14.5        | 113.5       | 46.5  | 2.031 | 30          | -2.69 | 1.09  | 29  |
| IDABEL         | 4451 | 9  | 62.8         | 30         | -.4          | 90.         | 4          | 28.         | 12          | 155.5       | 47.5        | 91.0        | 37.0  | 2.520 | 30          | -2.88 | 1.00  | 29  |
| JADIE TOWER    | 4560 | 9  | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | 2.520 | 30          | ***** | 1.45  | 19  |
| POTEAU W W     | 7254 | 9  | 62.2         | 30         | *****        | 90.         | 22         | 28.         | 11          | 166.0       | *****       | 81.0        | ***** | 1.871 | 30          | ***** | 1.04  | 28  |
| SMITHVILLE 1 W | 8285 | 9  | 59.9         | 30         | *****        | 88.         | 3          | 19.         | 11          | 199.0       | *****       | 45.5        | ***** | 2.681 | 30          | ***** | 1.32  | 30  |
| SPIRO          | 8416 | 9  | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | .480  | 30          | -4.14 | .32   | 15  |
| TUSKAHOMA      | 9023 | 9  | 63.8         | 30         | *****        | 89.         | 29         | 22.         | 11          | 142.5       | *****       | 106.0       | ***** | 1.890 | 30          | ***** | .62   | 19  |
| VALLIANT 3 W   | 9118 | 9  | *****        | 0          | *****        | ****        | 0          | ****        | 0           | *****       | *****       | *****       | ***** | 2.421 | 30          | -2.58 | 1.59  | 29  |

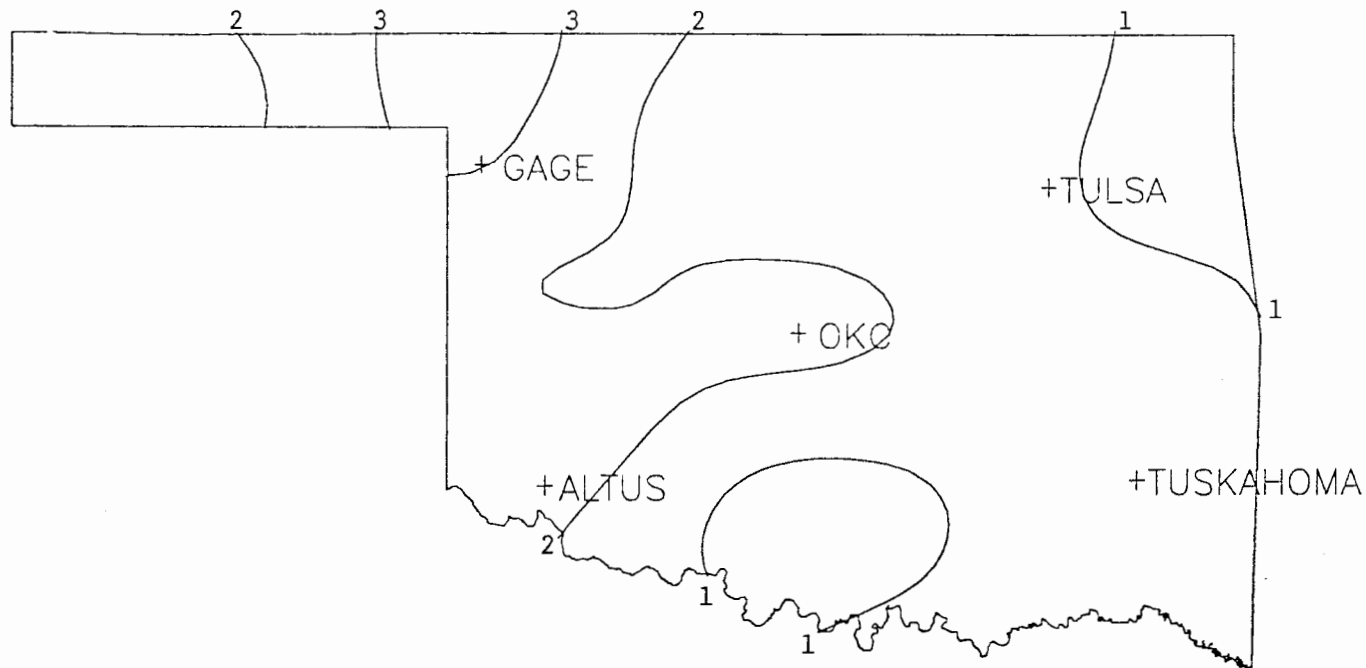


APRIL 1989 CLIMATE DIVISION SUMMARY

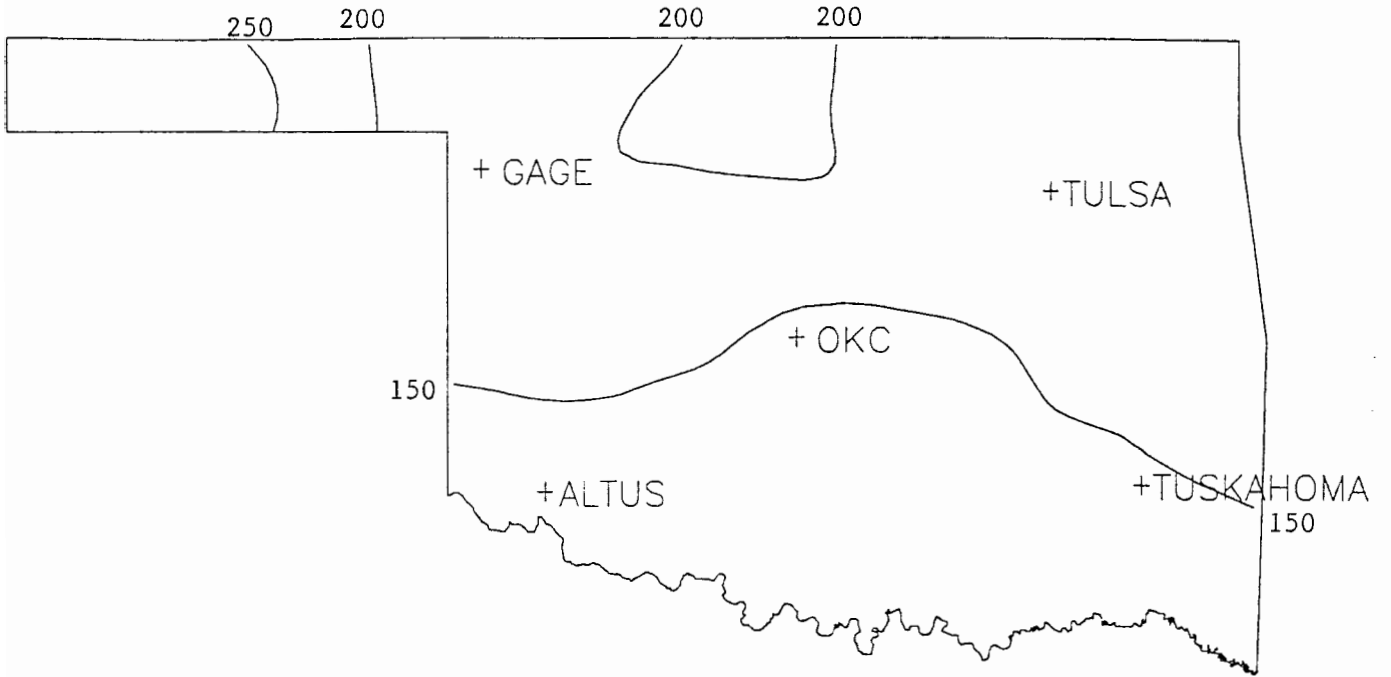
| CLIMATE<br>DIV | MEAN<br>TEMP | NUM<br>STA | DEV          |             |            | HEAT          |              |                | DEV          |            |            | DEV          |              |       |      |    |
|----------------|--------------|------------|--------------|-------------|------------|---------------|--------------|----------------|--------------|------------|------------|--------------|--------------|-------|------|----|
|                |              |            | FROM<br>NORM | MAX<br>TEMP | MIN<br>DAY | DEGREE<br>DAY | FROM<br>NORM | DEGREE<br>DAYS | FROM<br>NORM | TOT<br>PPT | NUM<br>STA | FROM<br>NORM | MAX<br>24-HR | DAY   |      |    |
| 1              | 59.4         | 10         | 2.8          | 105.0       | 23         | 20.0          | 10           | 244.6          | -25.0        | 76.5       | 59.3       | .59          | 14           | -.89  | 1.30 | 10 |
| 2              | 61.5         | 15         | 1.9          | 103.0       | 23         | 18.0          | 11           | 196.4          | -2.9         | 91.0       | 54.3       | .49          | 25           | -2.10 | 1.20 | 20 |
| 3              | 62.1         | 15         | 1.8          | 95.0        | 22         | 24.0          | 11           | 182.3          | 1.4          | 94.9       | 55.3       | .25          | 31           | -3.31 | .67  | 5  |
| 4              | 62.5         | 9          | 2.1          | 101.0       | 23         | 27.0          | 11           | 171.2          | -9.0         | 95.4       | 53.3       | .31          | 20           | -1.98 | .91  | 27 |
| 5              | 63.2         | 16         | 1.9          | 97.0        | 25         | 24.0          | 11           | 156.6          | -4.5         | 101.9      | 52.5       | .29          | 34           | -2.93 | .65  | 14 |
| 6              | 62.8         | 11         | 1.0          | 90.0        | 22         | 24.0          | 11           | 165.8          | 21.8         | 99.9       | 53.1       | .70          | 29           | -3.80 | 1.30 | 19 |
| 7              | 64.6         | 12         | 2.0          | 101.0       | 23         | 23.0          | 11           | 131.5          | -4.1         | 118.2      | 54.6       | .12          | 24           | -2.18 | .33  | 21 |
| 8              | 64.1         | 15         | .3           | 92.0        | 21         | 24.0          | 11           | 133.6          | 24.3         | 106.7      | 33.8       | .62          | 32           | -3.16 | 1.20 | 14 |
| 9              | 63.1         | 10         | -.2          | 92.0        | 4          | 19.0          | 11           | 147.8          | 40.1         | 90.9       | 34.2       | 2.30         | 20           | -2.74 | 2.35 | 29 |



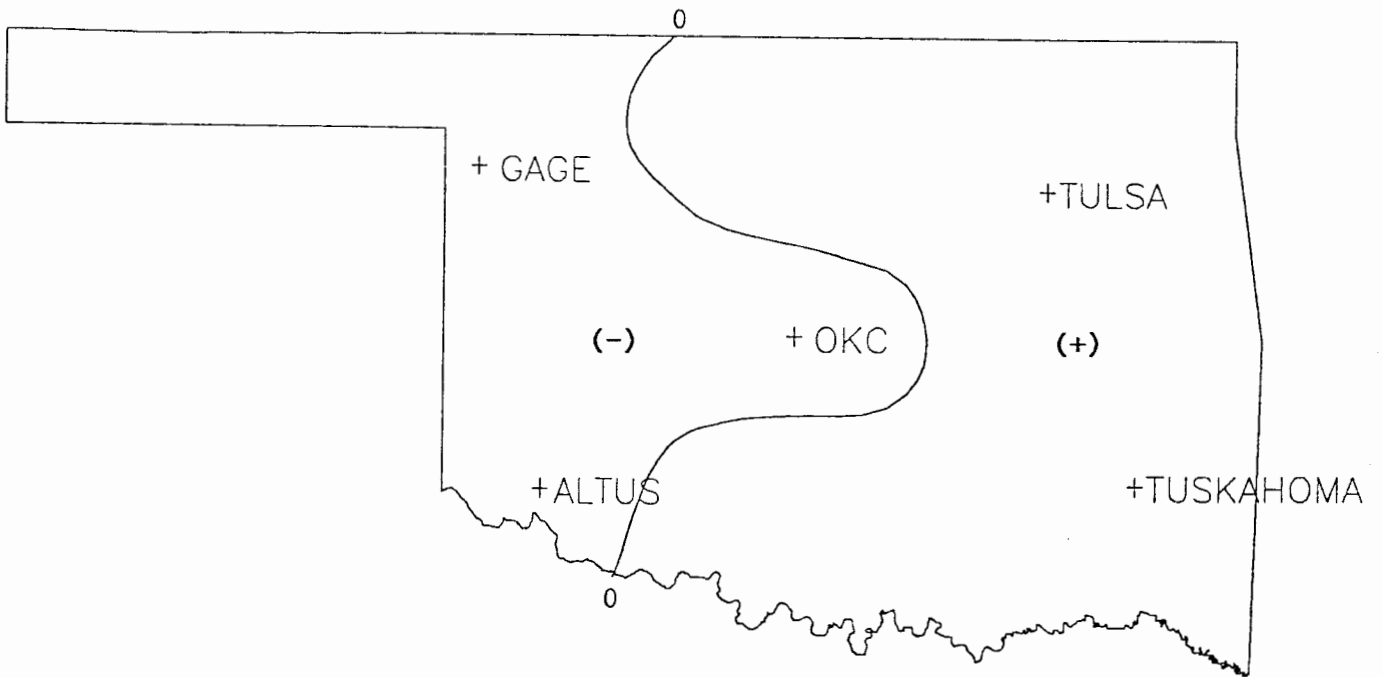
APRIL 1989 AVERAGE MONTHLY TEMPERATURE  
(Degrees F)



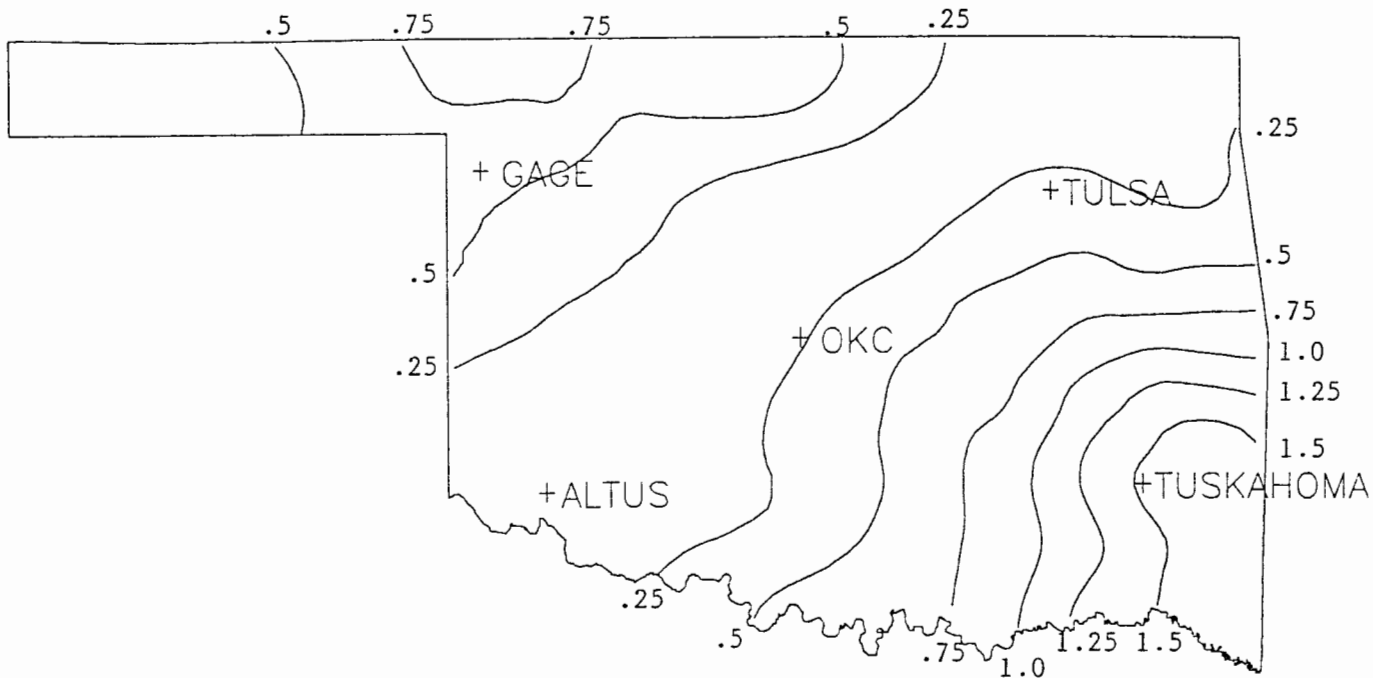
APRIL 1989 DEVIATION FROM NORMAL TEMPERATURE  
(Degrees F)



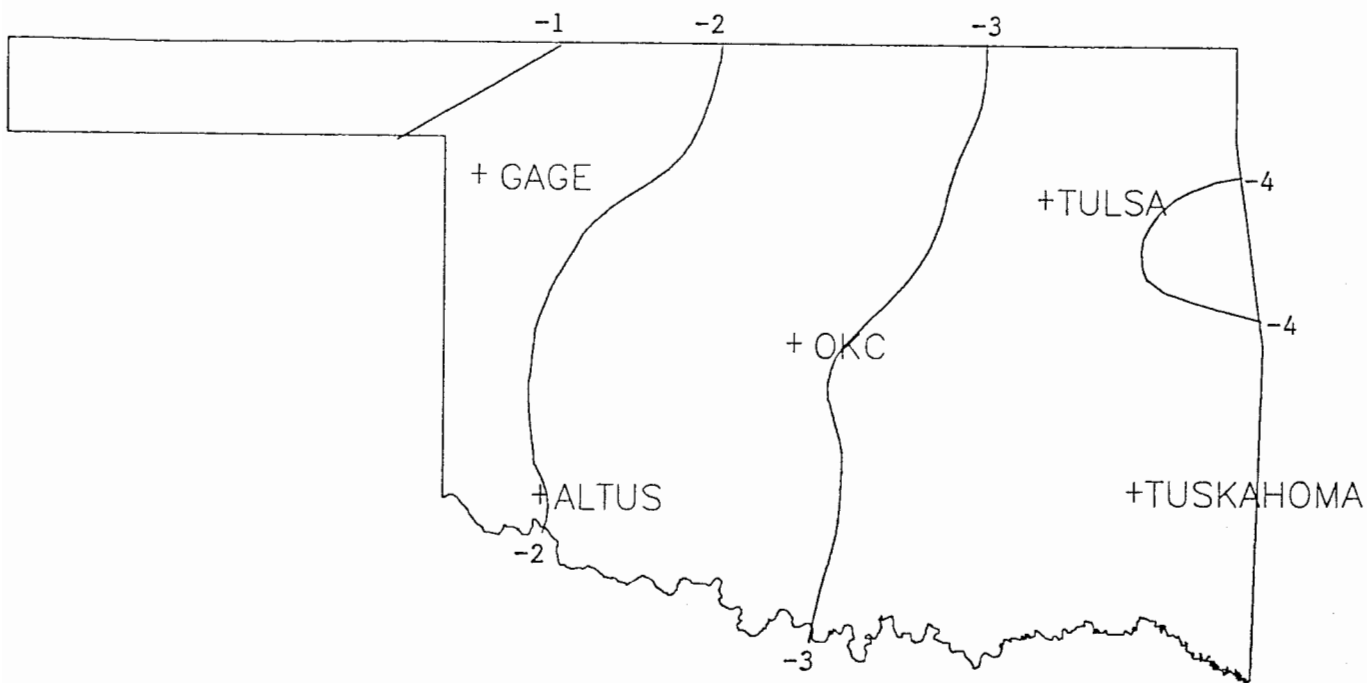
APRIL 1989 TOTAL HEATING DEGREE DAYS



APRIL 1989 DEVIATION FROM NORMAL HEATING DEGREE DAYS

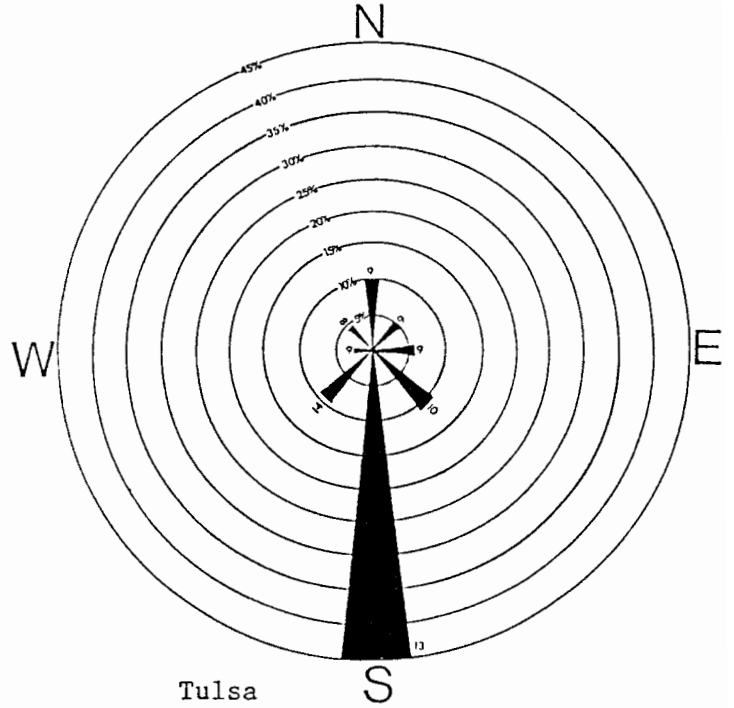
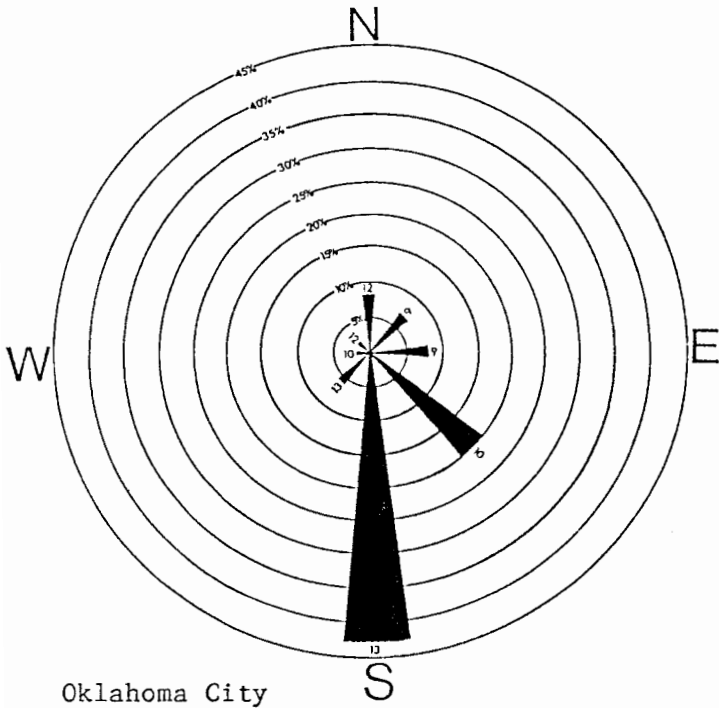


APRIL 1989 TOTAL PRECIPITATION  
(Inches)



APRIL 1989 DEVIATION FROM NORMAL PRECIPITATION  
(Inches)

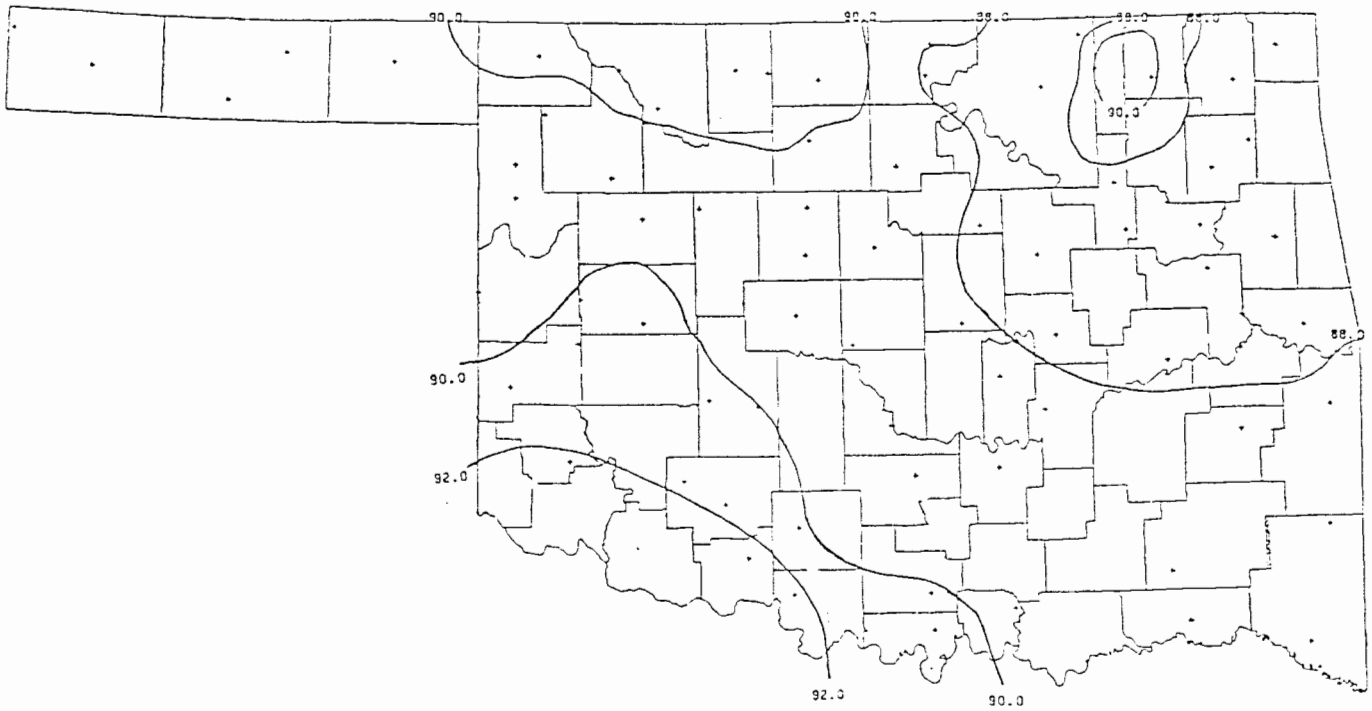
June wind roses for Oklahoma City and Tulsa for 10-year (1965-1974) mean winds (data adapted from NOAA Airport Climatology Series). Percents represent the percentage for winds coming from a direction. The numbers at the end of the bars indicate the average speed (miles per hour) of winds from that direction.



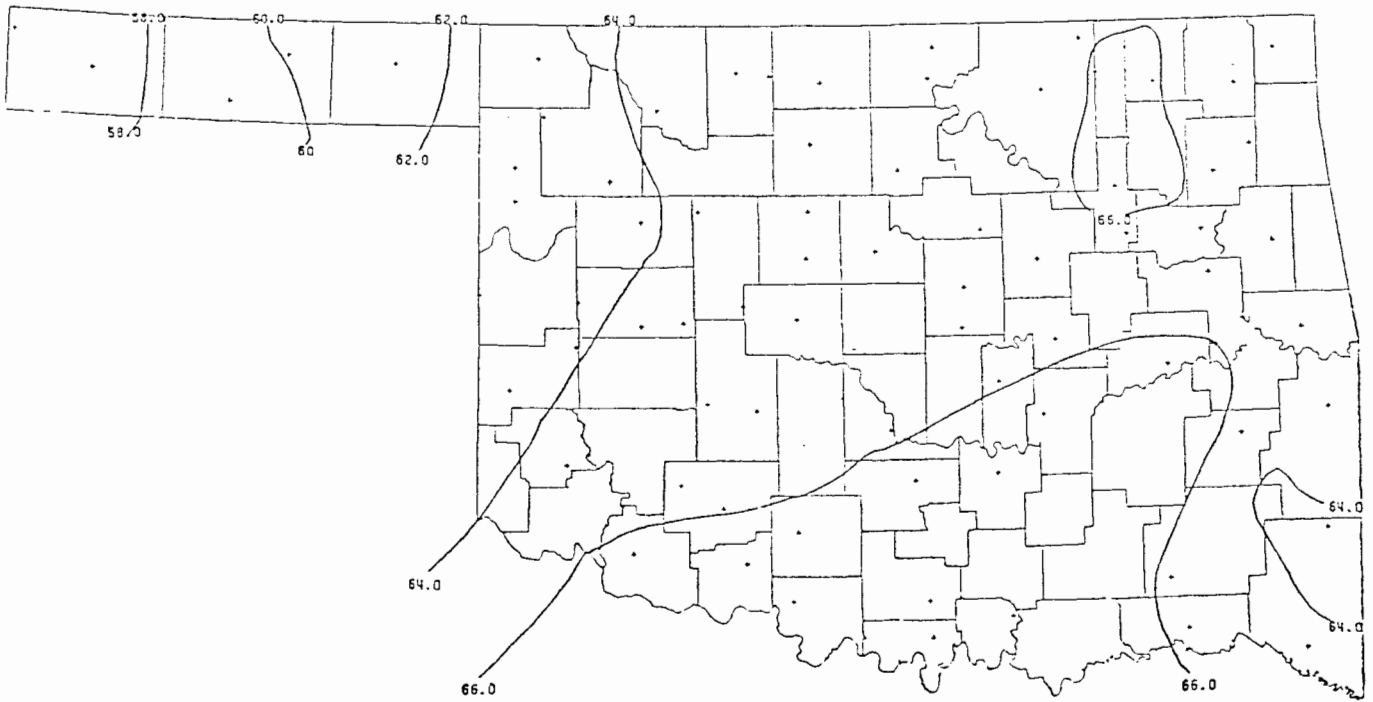
JUNE 1989 SUNRISE AND SUNSET

| DATE   | SUNRISE | SUNSET    | DAYLIGHT |
|--------|---------|-----------|----------|
| 890601 | 6:19AM  | 8:37PM LT | 14:19    |
| 890602 | 6:18AM  | 8:38PM LT | 14:19    |
| 890603 | 6:18AM  | 8:38PM LT | 14:20    |
| 890604 | 6:18AM  | 8:39PM LT | 14:21    |
| 890605 | 6:18AM  | 8:40PM LT | 14:22    |
| 890606 | 6:18AM  | 8:40PM LT | 14:23    |
| 890607 | 6:17AM  | 8:41PM LT | 14:23    |
| 890608 | 6:17AM  | 8:41PM LT | 14:24    |
| 890609 | 6:17AM  | 8:42PM LT | 14:24    |
| 890610 | 6:17AM  | 8:42PM LT | 14:25    |
| 890611 | 6:17AM  | 8:43PM LT | 14:26    |
| 890612 | 6:17AM  | 8:43PM LT | 14:26    |
| 890613 | 6:17AM  | 8:43PM LT | 14:26    |
| 890614 | 6:17AM  | 8:44PM LT | 14:27    |
| 890615 | 6:17AM  | 8:44PM LT | 14:27    |
| 890616 | 6:17AM  | 8:45PM LT | 14:28    |
| 890617 | 6:17AM  | 8:45PM LT | 14:28    |
| 890618 | 6:17AM  | 8:45PM LT | 14:28    |
| 890619 | 6:17AM  | 8:46PM LT | 14:28    |
| 890620 | 6:18AM  | 8:46PM LT | 14:28    |
| 890621 | 6:18AM  | 8:46PM LT | 14:28    |
| 890622 | 6:18AM  | 8:46PM LT | 14:28    |
| 890623 | 6:18AM  | 8:46PM LT | 14:28    |
| 890624 | 6:18AM  | 8:47PM LT | 14:28    |
| 890625 | 6:19AM  | 8:47PM LT | 14:28    |
| 890626 | 6:19AM  | 8:47PM LT | 14:28    |
| 890627 | 6:19AM  | 8:47PM LT | 14:28    |
| 890628 | 6:20AM  | 8:47PM LT | 14:28    |
| 890629 | 6:20AM  | 8:47PM LT | 14:27    |
| 890630 | 6:20AM  | 8:47PM LT | 14:27    |

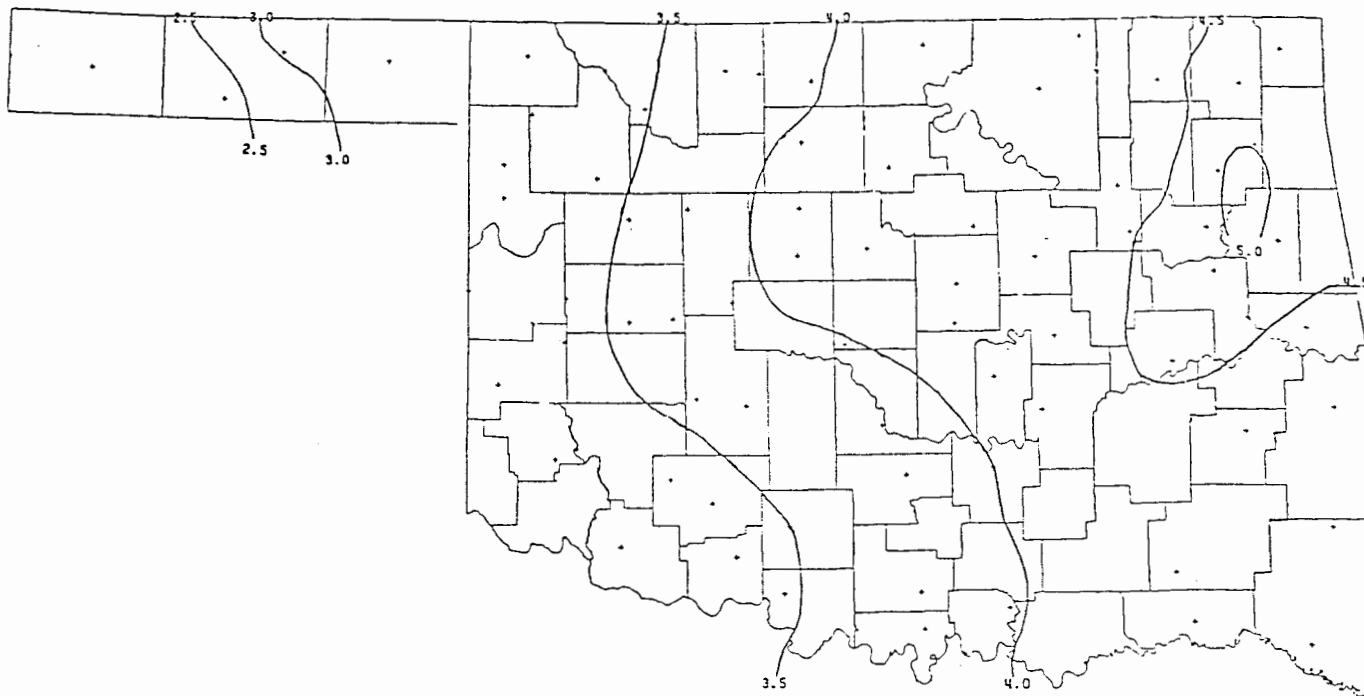
| DATE   | SUNRISE | SUNSET    | DAYLIGHT |
|--------|---------|-----------|----------|
| 890601 | 6:10AM  | 8:32PM LT | 14:23    |
| 890602 | 6:10AM  | 8:33PM LT | 14:23    |
| 890603 | 6: 9AM  | 8:34PM LT | 14:24    |
| 890604 | 6: 9AM  | 8:34PM LT | 14:25    |
| 890605 | 6: 9AM  | 8:35PM LT | 14:26    |
| 890606 | 6: 9AM  | 8:35PM LT | 14:27    |
| 890607 | 6: 8AM  | 8:36PM LT | 14:27    |
| 890608 | 6: 8AM  | 8:36PM LT | 14:28    |
| 890609 | 6: 8AM  | 8:37PM LT | 14:29    |
| 890610 | 6: 8AM  | 8:37PM LT | 14:29    |
| 890611 | 6: 8AM  | 8:38PM LT | 14:30    |
| 890612 | 6: 8AM  | 8:38PM LT | 14:30    |
| 890613 | 6: 8AM  | 8:39PM LT | 14:31    |
| 890614 | 6: 8AM  | 8:39PM LT | 14:31    |
| 890615 | 6: 8AM  | 8:40PM LT | 14:31    |
| 890616 | 6: 8AM  | 8:40PM LT | 14:32    |
| 890617 | 6: 8AM  | 8:40PM LT | 14:32    |
| 890618 | 6: 8AM  | 8:41PM LT | 14:32    |
| 890619 | 6: 8AM  | 8:41PM LT | 14:32    |
| 890620 | 6: 9AM  | 8:41PM LT | 14:33    |
| 890621 | 6: 9AM  | 8:41PM LT | 14:33    |
| 890622 | 6: 9AM  | 8:42PM LT | 14:33    |
| 890623 | 6: 9AM  | 8:42PM LT | 14:33    |
| 890624 | 6: 9AM  | 8:42PM LT | 14:33    |
| 890625 | 6:10AM  | 8:42PM LT | 14:32    |
| 890626 | 6:10AM  | 8:42PM LT | 14:32    |
| 890627 | 6:10AM  | 8:42PM LT | 14:32    |
| 890628 | 6:11AM  | 8:43PM LT | 14:32    |
| 890629 | 6:11AM  | 8:43PM LT | 14:32    |
| 890630 | 6:11AM  | 8:43PM LT | 14:31    |



30-YEAR MEAN JUNE DAILY MAXIMUM TEMPERATURE



30-YEAR MEAN JUNE DAILY MINIMUM TEMPERATURE



**30-YEAR MEAN JUNE PRECIPITATION**

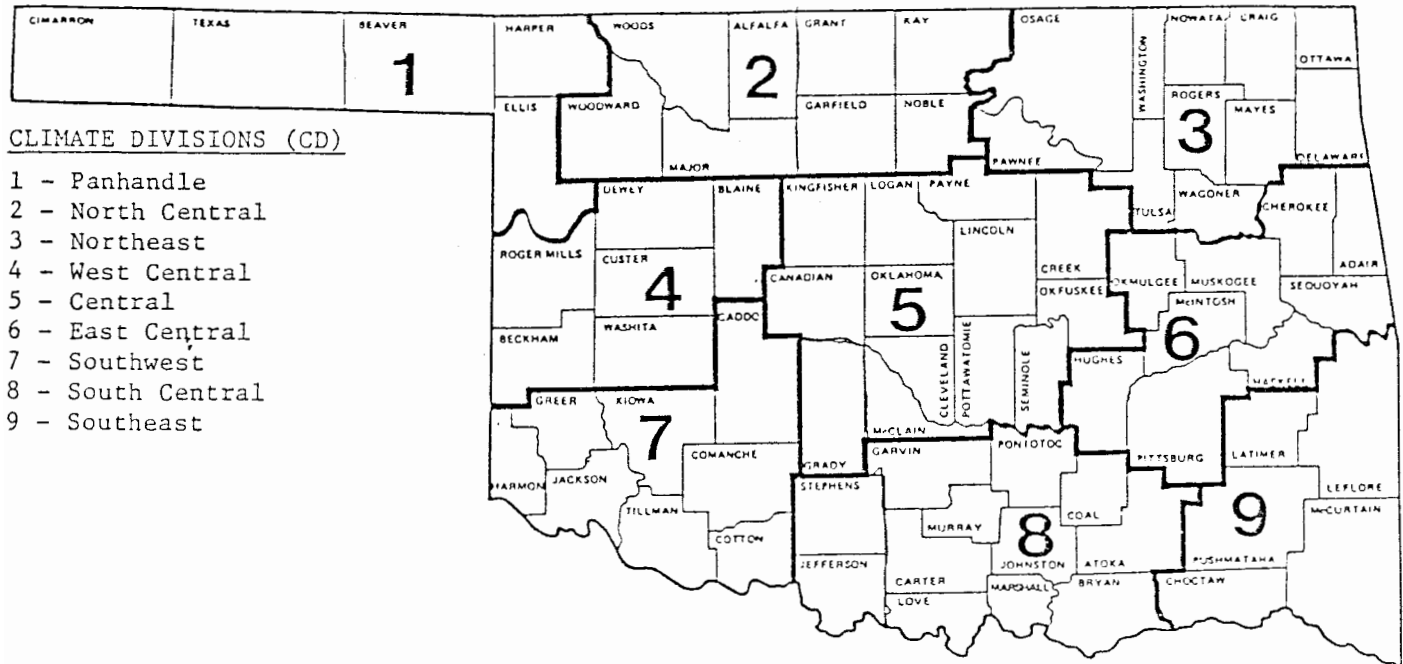
**30- AND 90-DAY NATIONAL WEATHER SERVICE OUTLOOK**

**30-DAY OUTLOOK (MAY)**

Precipitation - Near Normal Statewide.  
Temperature - Slight Chance of Above Normal in  
Western Oklahoma. Near Normal Elsewhere.

**90-DAY OUTLOOK (MAY-JULY)**

Precipitation - Near Normal Statewide.  
Temperature - Above Normal Statewide.



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:

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

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.

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).

|   |   |   |   |   |   |   |   |   |   |           |  |           |  |
|---|---|---|---|---|---|---|---|---|---|-----------|--|-----------|--|
| <b>1</b>  |   | <b>2</b>  |   | <b>3</b>  |   | <b>4</b>  |   | <b>5</b>  |   | <b>6</b>  |  | <b>7</b>  |  |
| Normal<br>80.7 max<br>61.4 min<br>.204 pcpr<br>0 HDD<br>7 CDD<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest pcpr  | Actual<br>—<br>—<br>—<br>—<br>—<br>96-1953<br>69-1970<br>49-1964<br>75-1943<br>3.37-1962  | Normal<br>81.1 max<br>61.9 min<br>.217 pcpr<br>1 HDD<br>7 CDD<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest pcpr  | Actual<br>—<br>—<br>—<br>—<br>—<br>94-1953<br>61-1946<br>52-1969<br>74-1943<br>1.66-1973  | Normal<br>83.0 max<br>62.9 min<br>.222 pcpr<br>0 HDD<br>8 CDD<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest pcpr  | Actual<br>—<br>—<br>—<br>—<br>—<br>94-1942<br>62-1928<br>47-1954<br>73-1943<br>3.38-1986  | Normal<br>85.2 max<br>64.1 min<br>.069 pcpr<br>0 HDD<br>10 CDD<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest pcpr | Actual<br>—<br>—<br>—<br>—<br>—<br>95-1926<br>72-1950<br>52-1928<br>75-1933<br>3.72-1985  | Normal<br>86.8 max<br>64.8 min<br>.087 pcpr<br>0 HDD<br>11 CDD<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest pcpr | Actual<br>—<br>—<br>—<br>—<br>—<br>97-1926<br>70-1935<br>51-1935<br>78-1980<br>1.10-1968  |           |  |           |  |
| <b>8</b>  |   | <b>9</b>  |   | <b>10</b>   |   | <b>11</b>   |   | <b>12</b>   |   | <b>13</b> |  | <b>14</b> |  |
| Normal<br>86.9 max<br>66.2 min<br>.199 pcpr<br>0 HDD<br>12 CDD<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest pcpr | Actual<br>—<br>—<br>—<br>—<br>—<br>100-1988<br>72-1938<br>56-1977<br>76-1984<br>2.60-1974 | Normal<br>86.4 max<br>65.8 min<br>.113 pcpr<br>0 HDD<br>11 CDD<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest pcpr | Actual<br>—<br>—<br>—<br>—<br>—<br>100-1933<br>64-1955<br>54-1974<br>76-1941<br>1.43-1984 | Normal<br>86.6 max<br>65.9 min<br>.109 pcpr<br>0 HDD<br>12 CDD<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest pcpr | Actual<br>—<br>—<br>—<br>—<br>—<br>98-1929<br>73-1940<br>51-1955<br>75-1929<br>1.61-1951  | Normal<br>87.3 max<br>66.6 min<br>.053 pcpr<br>0 HDD<br>12 CDD<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest pcpr | Actual<br>—<br>—<br>—<br>—<br>—<br>98-1953<br>70-1927<br>53-1985<br>78-1958<br>1.66-1927  | Normal<br>88.5 max<br>67.1 min<br>.195 pcpr<br>0 HDD<br>13 CDD<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest pcpr | Actual<br>—<br>—<br>—<br>—<br>—<br>105-1953<br>62-1927<br>51-1947<br>77-1953<br>3.95-1929 |           |  |           |  |
| <b>15</b>   |   | <b>16</b>   |   | <b>17</b>   |   | <b>18</b>   |   | <b>19</b>   |   | <b>20</b> |  | <b>21</b> |  |
| Normal<br>87.8 max<br>66.2 min<br>.107 pcpr<br>0 HDD<br>12 CDD<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest pcpr | Actual<br>—<br>—<br>—<br>—<br>—<br>103-1953<br>74-1969<br>55-1969<br>78-1953<br>3.01-1929 | Normal<br>86.5 max<br>66.1 min<br>.201 pcpr<br>0 HDD<br>12 CDD<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest pcpr | Actual<br>—<br>—<br>—<br>—<br>—<br>99-1936<br>70-1961<br>54-1976<br>77-1985<br>3.59-1955  | Normal<br>87.5 max<br>66.3 min<br>.081 pcpr<br>0 HDD<br>12 CDD<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest pcpr | Actual<br>—<br>—<br>—<br>—<br>—<br>97-1936<br>69-1963<br>57-1945<br>76-1985<br>1.85-1975  | Normal<br>88.4 max<br>67.6 min<br>.063 pcpr<br>0 HDD<br>13 CDD<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest pcpr | Actual<br>—<br>—<br>—<br>—<br>—<br>101-1936<br>75-1961<br>57-1945<br>77-1933<br>93-1957   | Normal<br>89.1 max<br>67.7 min<br>.059 pcpr<br>0 HDD<br>14 CDD<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest pcpr | Actual<br>—<br>—<br>—<br>—<br>—<br>105-1953<br>80-1961<br>51-1976<br>76-1942<br>96-1932   |           |  |           |  |
| <b>22</b>   |   | <b>23</b>   |   | <b>24</b>   |   | <b>25</b>   |   | <b>26</b>   |   | <b>27</b> |  | <b>28</b> |  |
| Normal<br>90.2 max<br>68.4 min<br>.150 pcpr<br>0 HDD<br>14 CDD<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest pcpr | Actual<br>—<br>—<br>—<br>—<br>—<br>107-1936<br>78-1927<br>50-1935<br>79-1936<br>2.38-1957 | Normal<br>88.0 max<br>67.9 min<br>.212 pcpr<br>0 HDD<br>13 CDD<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest pcpr | Actual<br>—<br>—<br>—<br>—<br>—<br>101-1933<br>73-1957<br>58-1958<br>77-1934<br>1.65-1963 | Normal<br>88.1 max<br>67.9 min<br>.150 pcpr<br>0 HDD<br>13 CDD<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest pcpr | Actual<br>—<br>—<br>—<br>—<br>—<br>103-1933<br>67-1929<br>54-1957<br>78-1937<br>2.06-1948 | Normal<br>88.5 max<br>68.2 min<br>.234 pcpr<br>0 HDD<br>14 CDD<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest pcpr | Actual<br>—<br>—<br>—<br>—<br>—<br>105-1980<br>68-1967<br>51-1974<br>79-1953<br>2.29-1960 | Normal<br>89.3 max<br>68.2 min<br>.117 pcpr<br>0 HDD<br>14 CDD<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest pcpr | Actual<br>—<br>—<br>—<br>—<br>—<br>102-1972<br>71-1928<br>50-1958<br>81-1933<br>1.70-1986 |           |  |           |  |
| <b>29</b>   |   | <b>30</b>   |   |   |   |   |   |   |   |           |  |           |  |
| Normal<br>91.9 max<br>69.6 min<br>.014 pcpr<br>0 HDD<br>16 CDD<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest pcpr | Actual<br>—<br>—<br>—<br>—<br>—<br>100-1933<br>81-1942<br>62-1985<br>78-1947<br>2.00-1987 | Normal<br>91.9 max<br>70.4 min<br>.081 pcpr<br>0 HDD<br>16 CDD<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest pcpr | Actual<br>—<br>—<br>—<br>—<br>—<br>101-1934<br>77-1987<br>59-1943<br>80-1980<br>1.09-1942 |   |   |   |   |   |   |           |  |           |  |

**JUNE AVERAGES**  
 Temperature : 76.8  
 Precipitation : 4.15"  
 Heating Degree Days: 1  
 Cooling Degree Days: 363