

# OKLAHOMA MONTHLY SUMMARY SEPTEMBER 1992

## TABLE OF CONTENTS

|   |    |
|---|----|
| September 1992 Oklahoma Summary.....              | 2  |
| Table of September 1991/1992 Comparisons.....     | 5  |
| September 1992 Data Summary Tables.....           | 6  |
| September 1992 State Map Summary.....             | 11 |
| November Climatological Normals.....              | 14 |
| 90-Day National Weather Service Outlook.....      | 16 |
| Explanation of Tables and Maps.....               | 17 |
| November 1992 Oklahoma City Climate Calendar..... | 19 |
| November 1992 Tulsa Climate Calendar.....         | 20 |

## MONTHLY SUMMARY FOR SEPTEMBER 1992

Precipitation during September in southeastern and east central Oklahoma averaged nearly twice the 30-year normal for the month which contrasted sharply with very dry conditions in the western third of the state. Seven stations in the eastern half of the state reported monthly precipitation totals in excess of 10 inches, led by 13.96 inches at Quinton. In the west, 31 stations reported less than one inch for the month, including reports of no measurable precipitation at Buffalo, Gage and Reydton.

The statewide average precipitation of 3.69 inches was .25 inch less than the September normal. Statewide precipitation for the year thus far is 31.43 inches, which exceeds the established norm by 4.34 inches and ranks as the 18th greatest January through September precipitation out of 101 years of record.

Temperatures for the month were near-to-slightly below normal. The statewide average temperature for the month was 72.2 degrees, eight-tenths of a degree below normal. For the year-to-date, the state's average temperature of 63.6 degrees is one-tenth of a degree above normal.

High temperatures in the west were in the 90s during the first three weeks of the month. Buffalo reached 101 degrees on the 17th, the only reported temperature to exceed 100 degrees during the month. A series of weak frontal systems and upper-air disturbances traversed the state during the first ten days of the month, producing widespread thunderstorms.

Wilburton and Enid each reported nearly three inches of precipitation the morning of the 2nd. Later in the day, heavy thunderstorms developed in central Oklahoma. A strong tornado touched down southwest of Purcell in McClain County and remained on the ground for 30 minutes, finally lifting 3 miles northeast of Wayne. Large hail was also reported in McClain County. Tuskahoma, Clayton and Quinton each received over three inches of rain from the storms.

Several weak tornadoes were spotted in the northwest on the 5th. Later that night, thunderstorm winds as high as 95 miles per hour struck Norman, causing damages estimated at \$2.7 million. Large hail was also reported in Oklahoma City. Several locations in east central Oklahoma reported more than two inches of precipitation, led by Okemah with 2.86 inches. The storms caused interruption of electrical service to an estimated 52,000 customers, including 28,000 in Norman.

Thunderstorms on the evening of the 8th caused minor flooding in Rogers County and produced several small tornadoes in Rogers and Mayes Counties. Pryor reported 3.30 inches of precipitation from the storms. More thunderstorms on the 9th produced several reports of strong winds, including one of 80 miles per hour at Fairfax. Webbers Falls (3.79), Lake Eufaula (3.33) and Lyons (3.08) all reported over three inches of rain.

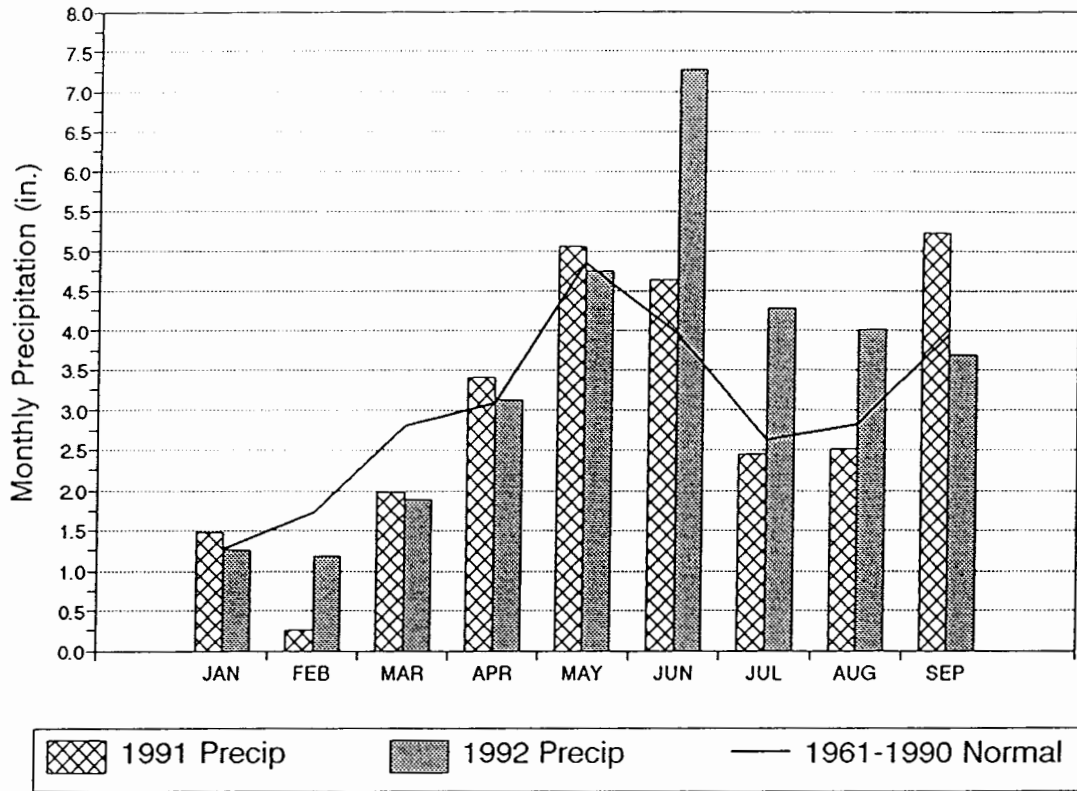
Significantly cooler air reached Oklahoma behind a cold front that crossed the state on the 10th and 11th. Duncan, Farris and Bokchito each reported over three inches of rain with the passage of the system, which dropped overnight low temperatures into the 40s across much of northern Oklahoma. No precipitation was reported in the state on the 15th, 16th and 17th as daytime temperatures returned to the upper 90s, reaching 101 degrees at Buffalo on the 17th.

A new frontal system which entered Oklahoma on the 18th affected weather across the state until leaving with a significant push of cool air on the 22nd. Muskogee reported the greatest daily precipitation for the month (4.10 inches) on the 19th. McAlester, Wetumka, Lake Eufaula and Vinita also reported daily precipitation amounts in excess of three inches with the system. Quinton had consecutive days of precipitation in excess of two inches, totaling 4.86 inches reported on the 18th and 19th.

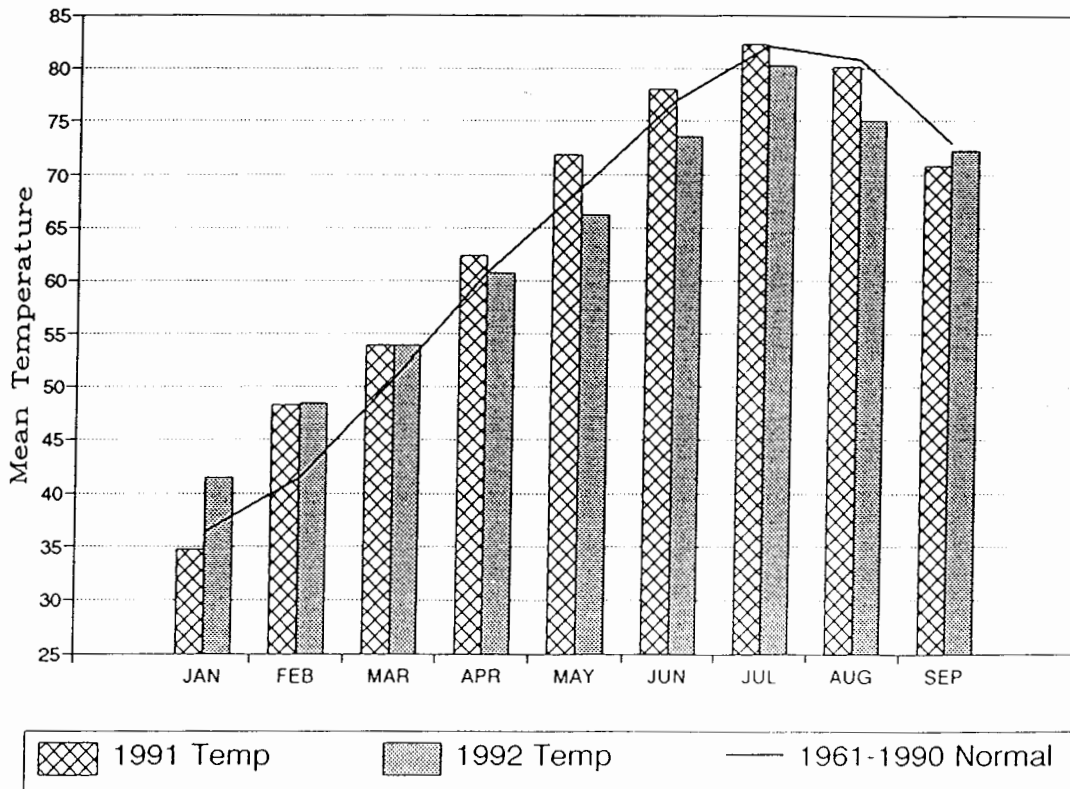
Morning temperatures dipped into the 40s again on the 22nd, as the rains in central and eastern Oklahoma diminished and classical autumn weather began to appear in Oklahoma. Some showers, mainly in the northeast, were reported during the last week of the month, but the heavy precipitation had ended by the 23rd. Minimum temperatures in the 40s and highs in the 80s were commonplace for the remainder of September.

Howard L. Johnson

### 1991 and 1992 STATEWIDE PRECIPITATION January Through September Totals

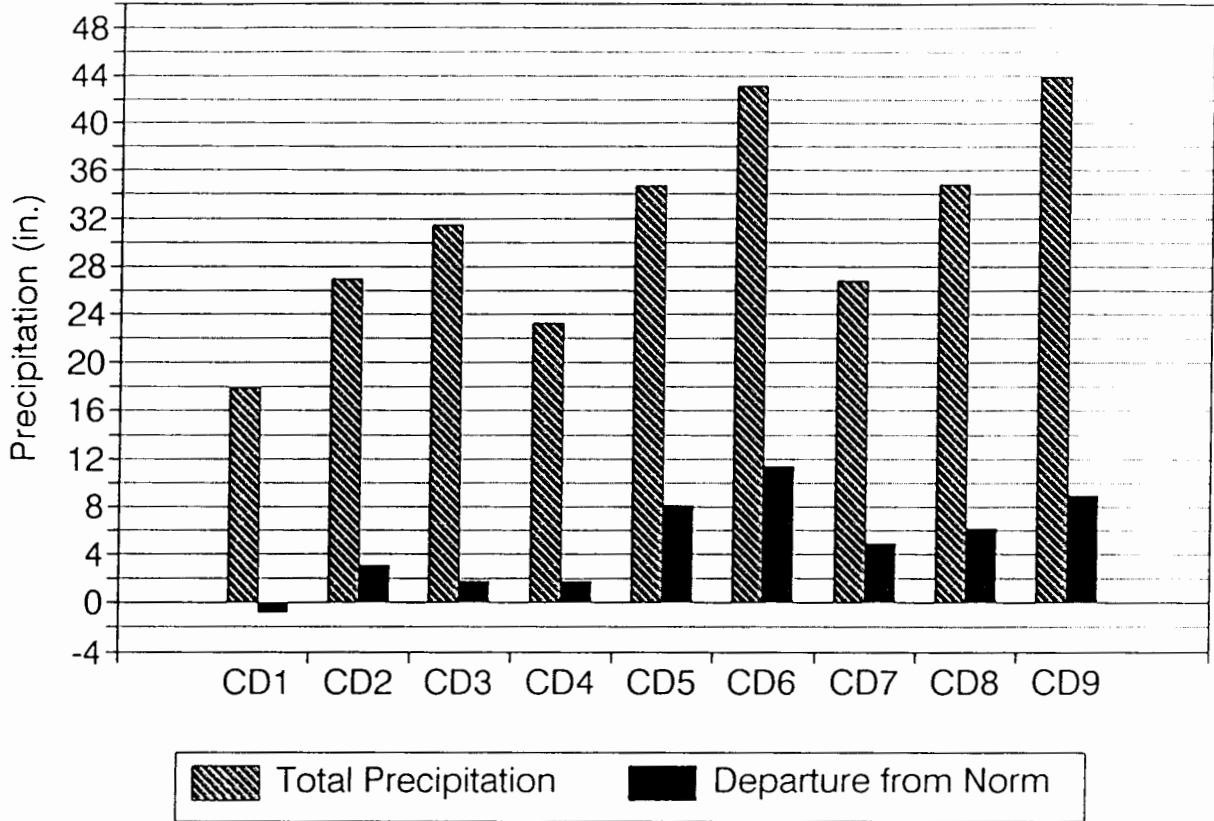


### 1991 and 1992 STATEWIDE TEMPERATURES January Through September Averages

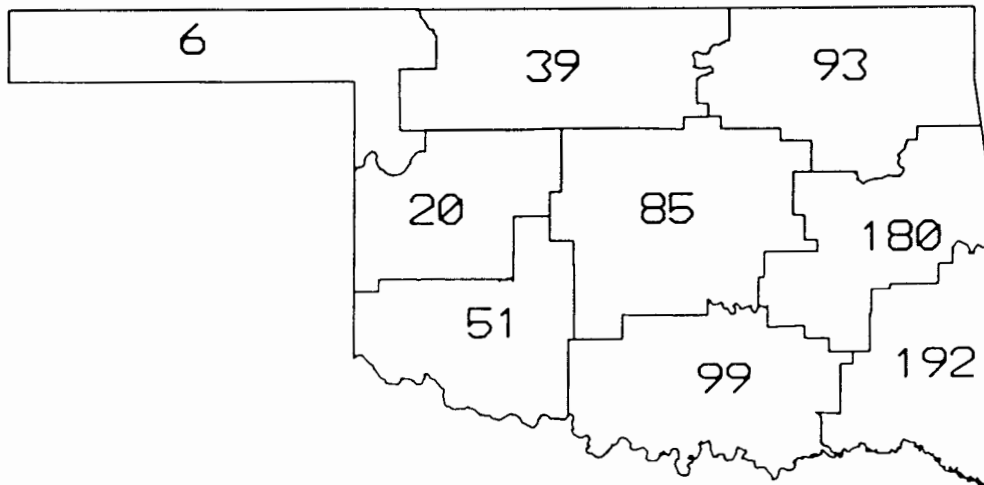


# CD Averaged Precipitation

## January Through September 1992



### SEPTEMBER 1992 CLIMATE DIVISION PERCENT OF NORMAL PRECIPITATION



EXTREME VALUES OF TEMPERATURE AND PRECIPITATION IN EACH CLIMATE DIVISION  
SEPTEMBER, 1992

| CD | MAX  |      |             | MIN  |      |                   | 24-HOUR |      |           | MONTHLY |           |
|----|------|------|-------------|------|------|-------------------|---------|------|-----------|---------|-----------|
|    | TEMP | DATE | LOCATION    | TEMP | DATE | LOCATION          | PRECIP  | DATE | LOCATION  | PRECIP  | LOCATION  |
| 1  | 101  | 17   | BUFFALO     | 39   | 29   | BUFFALO<br>GAGE   | 33      | 1    | GUYMON    | 40      | GUYMON    |
| 2  | 98   | 5    | ALVA        | 35   | 29   | FREEDOM           | 2.93    | 2    | ENID      | 4.45    | ENID      |
|    | 98   | 7    | ALVA        |      |      |                   |         |      |           |         |           |
|    | 98   | 9    | CHEROKEE    |      |      |                   |         |      |           |         |           |
|    | 98   | 8    | MUTUAL      |      |      |                   |         |      |           |         |           |
| 3  | 96   | 26   | BIXBY       | 40   | 24   | HULAH DAM         | 3.54    | 21   | VINITA    | 8.72    | MIAMI     |
| 4  | 99   | 5    | REYDON      | 40   | 25   | HAMMON            | 1.27    | 6    | HAMMON    | 2.30    | HAMMON    |
|    |      |      |             | 40   | 27   | HAMMON            |         |      |           |         |           |
|    |      |      |             | 40   | 28   | HAMMON            |         |      |           |         |           |
|    |      |      |             | 40   | 30   | HAMMON            |         |      |           |         |           |
| 5  | 94   | 10   | GUTHRIE     | 41   | 30   | BRISTOW           | 2.86    | 6    | OKEMAH    | 11.48   | OKEMAH    |
|    | 94   | 9    | KINGFISHER  |      |      |                   |         |      |           |         |           |
|    | 94   | 8    | NORMAN      |      |      |                   |         |      |           |         |           |
| 6  | 94   | 18   | MCALESTER   | 42   | 30   | HANNA<br>OKMULGEE | 4.10    | 19   | MUSKOGEE  | 13.96   | QUINTON   |
|    |      |      |             | 42   | 30   |                   |         |      |           |         |           |
| 7  | 97   | 9    | CHATTANOOGA | 41   | 24   | WICHITA MT        | 2.05    | 1    | ROOSEVELT | 3.31    | ROOSEVELT |
|    | 97   | 5    | HOLLIS      |      |      |                   |         |      |           |         |           |
|    | 97   | 20   | HOLLIS      |      |      |                   |         |      |           |         |           |
| 8  | 98   | 18   | CANEY       | 41   | 27   | WAURIKA           | 3.72    | 11   | DUNCAN    | 7.69    | DAISY     |
|    |      |      |             | 41   | 27   | WAURIKA           |         |      |           |         |           |
| 9  | 95   | 19   | BOSWELL     | 39   | 30   | TUSKAHOMA         | 3.30    | 3    | TUSKAHOMA | 12.08   | FANSHAW   |

TABLE OF 1991/1992 COMPARISONS

| Station       | September<br>Temperature (F) |      | September<br>Precipitation (in.) |      |
|---------------|------------------------------|------|----------------------------------|------|
|               | 1991                         | 1992 | 1991                             | 1992 |
| Arnett        | 66.4                         | 70.0 | 3.34                             | 0.06 |
| Enid          | 70.4                         | 72.4 | 2.77                             | 4.45 |
| Mutual        | 68.3                         | 71.2 | 4.73                             | 0.05 |
| Tulsa         | 73.3                         | 73.4 | 6.15                             | 3.38 |
| Elk City      | 69.5                         | 72.6 | 4.19                             | 1.11 |
| Oklahoma City | 70.8                         | 72.5 | 11.85                            | 2.92 |
| McAlester     | 72.6                         | 73.9 | 5.45                             | 7.85 |
| Altus Irr Sta | 70.7                         | 74.1 | 4.59                             | 1.38 |
| Durant        | 72.6                         | 72.3 | 3.67                             | 6.05 |
| Ada           | 70.8                         | 71.4 | 7.67                             | 5.61 |
| Antlers       | 73.2                         | 73.1 | 1.32                             | 5.84 |

EXTREMES

| Variable                         | Station  | Division | Observation | Date |
|----------------------------------|----------|----------|-------------|------|
| Minimum temperature (F)          | Freedom  | 2        | 35          | 29   |
| Maximum temperature (F)          | Buffalo  | 1        | 101         | 17   |
| Maximum 24-hour<br>precipitation | Muskogee | 6        | 4.10"       | 19   |

**SEPTEMBER 1992 SUMMARY FOR NORTHWEST DIVISION (CD1)**

| NAME            | ID   | CD | DEV          |            |              |             | MIN |      | HEAT<br>DEG<br>DAY | DEV<br>FROM<br>NORM | COOL  |       | DEV<br>FROM<br>NORM | TOT<br>PPT | NUM<br>OBS | DEV   |      | MAX<br>24-HR | DAY |
|-----------------|------|----|--------------|------------|--------------|-------------|-----|------|--------------------|---------------------|-------|-------|---------------------|------------|------------|-------|------|--------------|-----|
|                 |      |    | MEAN<br>TEMP | NUM<br>OBS | FROM<br>NORM | MAX<br>TEMP | DAY | TEMP |                    |                     | DAY   | DEG   |                     |            |            | DEG   | FROM |              |     |
| ARNETT          | 332  | 1  | 70.0         | 30         | -0           | 94.         | 8   | 45.  | 30                 | 22.0                | -3.0  | 171.0 | -4.0                | .061       | 30         | -2.47 | .03  | 9            |     |
| BEAVER          | 593  | 1  | 70.7         | 30         | 1.0          | 96.         | 18  | 43.  | 30                 | 15.0                | -16.0 | 187.0 | 15.0                | .280       | 30         | -1.54 | .21  | 5            |     |
| BOISE CITY 2 E  | 908  | 1  | 70.1         | 30         | 2.3          | 98.         | 17  | 40.  | 28                 | 7.0                 | -25.0 | 159.0 | 43.0                | .583       | 30         | -1.25 | .48  | 14           |     |
| BUFFALO         | 1243 | 1  | 74.5         | 30         | 1.6          | 101.        | 17  | 39.  | 29                 | 7.5                 | -5.5  | 292.0 | 42.0                | .000       | 30         | -3.08 | .00  | 30           |     |
| FARGO           | 3070 | 1  | ****         | 0          | ****         | ****        | 0   | **** | 0                  | *****               | ***** | ***** | *****               | .050       | 30         | -2.22 | .05  | 9            |     |
| GAGE FAA APT    | 3407 | 1  | 72.3         | 29         | .7           | 96.         | 17  | 39.  | 29                 | 13.0                | -5.0  | 225.0 | 9.0                 | .003       | 29         | ***** | .00  | 26           |     |
| GATE            | 3489 | 1  | 72.5         | 30         | 1.3          | 99.         | 18  | 45.  | 29                 | 9.0                 | -8.0  | 233.0 | 30.0                | .000       | 30         | -2.09 | .00  | 30           |     |
| GOODWELL RES ST | 3628 | 1  | 69.8         | 30         | 1.7          | 97.         | 15  | 43.  | 29                 | 12.0                | -27.0 | 155.5 | 23.5                | .091       | 30         | -1.59 | .05  | 4            |     |
| GUYMON          | 3835 | 1  | 70.6         | 28         | ****         | 94.         | 17  | 46.  | 27                 | 14.0                | ***** | 171.0 | *****               | .400       | 29         | ***** | .33  | 1            |     |
| HOOVER          | 4298 | 1  | 69.9         | 30         | .4           | 95.         | 18  | 44.  | 29                 | 16.0                | -18.0 | 162.5 | -6.5                | .362       | 30         | -1.69 | .28  | 1            |     |
| KENTON          | 4766 | 1  | 68.7         | 30         | 2.0          | 96.         | 14  | 43.  | 25                 | 23.0                | -26.0 | 134.0 | 34.0                | .000       | 30         | -1.85 | .00  | 30           |     |
| LAVERNE         | 5045 | 1  | ****         | 0          | ****         | ****        | 0   | **** | 0                  | *****               | ***** | ***** | *****               | .252       | 30         | -1.77 | .25  | 2            |     |
| OPTIMA LAKE     | 6740 | 1  | 70.6         | 30         | ****         | 96.         | 18  | 43.  | 29                 | 15.5                | ***** | 184.5 | *****               | .030       | 30         | ***** | .03  | 4            |     |
| TURPIN 4 SSE    | 9017 | 1  | 70.1         | 30         | ****         | 95.         | 18  | 44.  | 29                 | 19.5                | ***** | 171.5 | *****               | .121       | 30         | ***** | .12  | 5            |     |

**SEPTEMBER 1992 SUMMARY FOR NORTH CENTRAL DIVISION (CD2)**

| NAME            | ID   | CD | DEV          |            |              |             | MIN |      | HEAT<br>DEG<br>DAY | DEV<br>FROM<br>NORM | COOL  |       | DEV<br>FROM<br>NORM | TOT<br>PPT | NUM<br>OBS | DEV   |      | MAX<br>24-HR | DAY |
|-----------------|------|----|--------------|------------|--------------|-------------|-----|------|--------------------|---------------------|-------|-------|---------------------|------------|------------|-------|------|--------------|-----|
|                 |      |    | MEAN<br>TEMP | NUM<br>OBS | FROM<br>NORM | MAX<br>TEMP | DAY | TEMP |                    |                     | DAY   | DEG   |                     |            |            | DEG   | FROM |              |     |
| ALVA            | 193  | 2  | 74.3         | 30         | ****         | 98.         | 7   | 43.  | 29                 | 9.0                 | ***** | 287.0 | *****               | .390       | 30         | ***** | .32  | 10           |     |
| VANCE AFB       | 302  | 2  | ****         | 0          | ****         | ****        | 0   | **** | 0                  | *****               | ***** | ***** | *****               | 1.143      | 29         | ***** | 1.03 | 2            |     |
| BILLINGS        | 755  | 2  | 70.1         | 28         | ****         | 90.         | 8   | 40.  | 28                 | 24.0                | ***** | 165.5 | *****               | 2.520      | 28         | ***** | 1.05 | 21           |     |
| BLACKWELL 2E    | 818  | 2  | 72.4         | 30         | -.4          | 95.         | 9   | 43.  | 29                 | 13.0                | -4.0  | 234.0 | -17.0               | .783       | 30         | -3.30 | .42  | 26           |     |
| CEDARDALE       | 1620 | 2  | ****         | 0          | ****         | ****        | 0   | **** | 0                  | *****               | ***** | ***** | *****               | .682       | 30         | ***** | .55  | 11           |     |
| CHEROKEE        | 1724 | 2  | 74.6         | 30         | .8           | 98.         | 9   | 44.  | 29                 | 5.5                 | -5.5  | 292.5 | 17.5                | 1.610      | 30         | -1.45 | 1.30 | 22           |     |
| ENID            | 2912 | 2  | 72.4         | 30         | -1.0         | 92.         | 9   | 46.  | 29                 | 14.0                | 1.0   | 235.0 | -30.0               | 4.450      | 30         | .97   | 2.93 | 2            |     |
| FT SUPPLY DAM   | 3304 | 2  | 70.9         | 30         | .5           | 94.         | 18  | 43.  | 29                 | 14.0                | -8.0  | 190.0 | 6.0                 | .041       | 30         | -2.27 | .04  | 2            |     |
| FREEDOM         | 3358 | 2  | 71.3         | 30         | -1.4         | 96.         | 18  | 35.  | 29                 | 39.5                | 25.5  | 227.5 | -17.5               | .610       | 30         | -1.98 | .60  | 2            |     |
| GREAT SALT PLNS | 3740 | 2  | 71.5         | 30         | -.6          | 96.         | 10  | 42.  | 29                 | 16.5                | -.5   | 211.5 | -18.5               | 1.271      | 30         | -2.06 | .65  | 6            |     |
| HARDY           | 3909 | 2  | ****         | 0          | ****         | ****        | 0   | **** | 0                  | *****               | ***** | ***** | *****               | 3.413      | 30         | ***** | 1.50 | 9            |     |
| HELENA 1 SSE    | 4019 | 2  | 71.5         | 30         | .0           | 93.         | 18  | 43.  | 29                 | 14.5                | -4.5  | 210.5 | -3.5                | 2.211      | 30         | -1.02 | 1.29 | 6            |     |
| JEFFERSON       | 4573 | 2  | 72.8         | 30         | -.5          | 96.         | 9   | 39.  | 29                 | 20.0                | 9.0   | 253.5 | -6.5                | .581       | 30         | -3.11 | .18  | 25           |     |
| LAMONT          | 5013 | 2  | ****         | 0          | ****         | ****        | 0   | **** | 0                  | *****               | ***** | ***** | *****               | .870       | 30         | ***** | .77  | 22           |     |
| MEDFORD         | 5768 | 2  | ****         | 0          | ****         | ****        | 0   | **** | 0                  | *****               | ***** | ***** | *****               | 1.190      | 30         | ***** | .75  | 21           |     |
| MUTUAL          | 6139 | 2  | 71.2         | 30         | .0           | 98.         | 8   | 41.  | 30                 | 21.5                | 2.5   | 208.5 | 3.5                 | .050       | 30         | -2.60 | .05  | 1            |     |
| NEWKIRK         | 6278 | 2  | 71.9         | 29         | -.8          | 92.         | 9   | 42.  | 29                 | 17.5                | 3.5   | 217.0 | -28.0               | 1.582      | 30         | -2.69 | .56  | 2            |     |
| ORIENTA         | 6751 | 2  | ****         | 0          | ****         | ****        | 0   | **** | 0                  | *****               | ***** | ***** | *****               | .170       | 30         | -2.89 | .10  | 6            |     |
| PERRY           | 7012 | 2  | 73.6         | 30         | .0           | 97.         | 9   | 46.  | 29                 | 8.0                 | -6.0  | 267.0 | -5.0                | 3.510      | 30         | -.87  | 1.23 | 2            |     |
| PONCA CITY FAA  | 7201 | 2  | 73.1         | 29         | 1.0          | 94.         | 9   | 45.  | 29                 | 12.5                | -10.5 | 247.5 | 11.5                | 2.614      | 29         | ***** | 1.59 | 10           |     |
| RED ROCK 1 NNE  | 7505 | 2  | ****         | 0          | ****         | ****        | 0   | **** | 0                  | *****               | ***** | ***** | *****               | 2.180      | 30         | -2.05 | .75  | 10           |     |
| WAYNOKA         | 9404 | 2  | 72.9         | 30         | .0           | 97.         | 5   | 40.  | 29                 | 17.5                | 3.5   | 254.5 | 3.5                 | .980       | 30         | -1.59 | .92  | 2            |     |
| WOODWARD        | 9760 | 2  | ****         | 0          | ****         | ****        | 0   | **** | 0                  | *****               | ***** | ***** | *****               | .030       | 30         | -2.31 | .03  | 1            |     |

SEPTEMBER 1992 SUMMARY FOR NORTHEAST DIVISION (CD3)

| NAME            | ID   | CD | DEV       |         |           |          | HEAT |         |           | DEV     |           | COOL    |           | DEV     |    | TOT PPT | NUM OBS | DEV FROM NORM | MAX 24-HR | DAY |
|-----------------|------|----|-----------|---------|-----------|----------|------|---------|-----------|---------|-----------|---------|-----------|---------|----|---------|---------|---------------|-----------|-----|
|                 |      |    | MEAN TEMP | NUM OBS | FROM NORM | MAX TEMP | DAY  | DEG DAY | FROM NORM | DEG DAY | FROM NORM | DEG DAY | FROM NORM | DEG DAY |    |         |         |               |           |     |
| BARNSDALL       | 535  | 3  | 70.7      | 30      | -2.2      | 91.      | 9    | 42.     | 30        | 40.0    | 16.0      | 209.5   | -48.5     | 2.940   | 30 | -2.67   | .74     | 10            |           |     |
| BARTLESVILLE 2W | 548  | 3  | 71.5      | 30      | -1.3      | 93.      | 7    | 41.     | 30        | 34.5    | 18.5      | 230.0   | -20.0     | 2.013   | 30 | -2.56   | .55     | 26            |           |     |
| BIXBY           | 782  | 3  | 71.0      | 30      | -.5       | 96.      | 26   | 43.     | 30        | 31.0    | 10.0      | 210.5   | -5.5      | 3.680   | 30 | -1.03   | .93     | 10            |           |     |
| BURBANK         | 1256 | 3  | *****     | 0       | *****     | ****     | 0    | ****    | 0         | *****   | *****     | *****   | *****     | 3.060   | 30 | -1.60   | .86     | 9             |           |     |
| CHELSEA 4 S     | 1717 | 3  | *****     | 0       | *****     | ****     | 0    | ****    | 0         | *****   | *****     | *****   | *****     | 8.220   | 30 | *****   | 2.58    | 9             |           |     |
| CLAREMORE       | 1828 | 3  | 70.6      | 30      | -1.4      | 91.      | 10   | 45.     | 30        | 33.5    | 9.5       | 201.5   | -32.5     | 7.030   | 30 | 2.58    | 2.27    | 9             |           |     |
| CLEVELAND 5 WSW | 1902 | 3  | 72.7      | 30      | *****     | 92.      | 9    | 42.     | 29        | 17.5    | *****     | 249.0   | *****     | 4.030   | 30 | *****   | 1.91    | 2             |           |     |
| FORAKER         | 3250 | 3  | *****     | 0       | *****     | ****     | 0    | ****    | 0         | *****   | *****     | *****   | *****     | 4.561   | 30 | -.28    | 1.96    | 22            |           |     |
| HOLLOW          | 4258 | 3  | *****     | 0       | *****     | ****     | 0    | ****    | 0         | *****   | *****     | *****   | *****     | 3.984   | 30 | -1.05   | 1.89    | 9             |           |     |
| HOMINY          | 4289 | 3  | *****     | 0       | *****     | ****     | 0    | ****    | 0         | *****   | *****     | *****   | *****     | 4.641   | 30 | -.48    | 1.14    | 10            |           |     |
| HULAH DAM       | 4393 | 3  | 70.8      | 20      | *****     | 93.      | 8    | 40.     | 24        | 36.5    | *****     | 152.5   | *****     | 1.562   | 29 | *****   | .72     | 26            |           |     |
| JAY TOWER       | 4567 | 3  | 70.9      | 27      | *****     | 94.      | 8    | 42.     | 30        | 37.0    | *****     | 196.0   | *****     | 3.990   | 30 | *****   | 1.58    | 10            |           |     |
| KANSAS 1 ESE    | 4672 | 3  | 69.8      | 30      | -1.8      | 88.      | 9    | 43.     | 29        | 32.5    | 11.5      | 176.5   | -42.5     | 3.822   | 30 | -1.62   | 1.30    | 10            |           |     |
| KEYSTONE DAM    | 4812 | 3  | 69.5      | 30      | -2.0      | 89.      | 7    | 42.     | 30        | 40.5    | 17.5      | 174.5   | -43.5     | 3.991   | 30 | -.78    | 1.64    | 10            |           |     |
| LENAPAH         | 5118 | 3  | *****     | 0       | *****     | ****     | 0    | ****    | 0         | *****   | *****     | *****   | *****     | 4.110   | 30 | *****   | 1.14    | 9             |           |     |
| MANNFORD 6 NW   | 5522 | 3  | 71.1      | 30      | -1.5      | 91.      | 9    | 44.     | 29        | 23.5    | -1.5      | 205.5   | -47.5     | 4.050   | 30 | -.51    | 1.28    | 3             |           |     |
| MARAMEC         | 5540 | 3  | *****     | 0       | *****     | ****     | 0    | ****    | 0         | *****   | *****     | *****   | *****     | 3.861   | 30 | -.83    | 1.45    | 3             |           |     |
| MIAMI           | 5855 | 3  | 69.8      | 30      | -1.2      | 90.      | 10   | 42.     | 24        | 43.5    | 12.5      | 189.0   | -22.0     | 8.720   | 30 | 3.65    | 1.75    | 21            |           |     |
| NOWATA          | 6485 | 3  | 70.4      | 30      | -2.0      | 91.      | 9    | 42.     | 29        | 33.0    | 13.0      | 195.5   | -46.5     | 3.901   | 30 | -1.45   | 1.20    | 9             |           |     |
| ONETA 1 WNW     | 6713 | 3  | *****     | 0       | *****     | ****     | 0    | ****    | 0         | *****   | *****     | *****   | *****     | 4.070   | 30 | *****   | 1.28    | 10            |           |     |
| PAWHUSKA        | 6935 | 3  | 70.9      | 30      | -1.4      | 90.      | 9    | 41.     | 30        | 34.5    | 13.5      | 210.5   | -29.5     | 1.641   | 30 | -3.29   | .50     | 26            |           |     |
| PAWNEE          | 6940 | 3  | *****     | 0       | *****     | ****     | 0    | ****    | 0         | *****   | *****     | *****   | *****     | 3.860   | 30 | -1.18   | 1.20    | 10            |           |     |
| PRYOR 6 N       | 7309 | 3  | 69.0      | 30      | -2.2      | 90.      | 10   | 41.     | 30        | 45.0    | 16.0      | 164.5   | -50.5     | 7.540   | 30 | 2.79    | 3.30    | 9             |           |     |
| RALSTON         | 7390 | 3  | 72.1      | 30      | -.7       | 92.      | 9    | 42.     | 29        | 23.0    | 4.0       | 236.0   | -17.0     | 4.000   | 30 | -.67    | 1.50    | 2             |           |     |
| SKIATOOK        | 8258 | 3  | *****     | 0       | *****     | ****     | 0    | ****    | 0         | *****   | *****     | *****   | *****     | 4.550   | 30 | -.30    | 1.22    | 10            |           |     |
| SPAVINAW        | 8380 | 3  | 72.6      | 30      | -1.1      | 90.      | 4    | 45.     | 29        | 14.0    | 2.0       | 243.0   | -30.0     | 4.274   | 30 | -.51    | .93     | 10            |           |     |
| TULSA WSO APT   | 8992 | 3  | 73.4      | 30      | .1        | 92.      | 9    | 46.     | 29        | 9.5     | -10.5     | 262.5   | -6.5      | 3.383   | 30 | -1.32   | 1.35    | 6             |           |     |
| UPPER SPAVINAW  | 9101 | 3  | 71.6      | 29      | *****     | 93.      | 14   | 42.     | 29        | 38.5    | *****     | 228.5   | *****     | 4.651   | 30 | *****   | 1.19    | 10            |           |     |
| VINITA 2 N      | 9203 | 3  | 72.5      | 19      | *****     | 91.      | 5    | 42.     | 29        | 12.5    | *****     | 154.5   | *****     | 8.350   | 23 | *****   | 3.54    | 21            |           |     |
| WAGONER         | 9247 | 3  | 71.2      | 30      | -2.2      | 89.      | 9    | 45.     | 29        | 25.5    | 11.5      | 212.5   | -53.5     | 7.250   | 30 | 2.69    | 2.31    | 10            |           |     |
| WANN            | 9298 | 3  | *****     | 0       | *****     | ****     | 0    | ****    | 0         | *****   | *****     | *****   | *****     | 4.010   | 30 | *****   | 1.92    | 21            |           |     |
| WYONONA         | 9792 | 3  | *****     | 0       | *****     | ****     | 0    | ****    | 0         | *****   | *****     | *****   | *****     | 2.680   | 30 | *****   | .47     | 26            |           |     |

SEPTEMBER 1992 SUMMARY FOR WEST CENTRAL DIVISION (CD4)

| NAME           | ID   | CD | DEV       |         |           |          | HEAT |         |           | DEV     |           | COOL    |           | DEV     |    | TOT PPT | NUM OBS | DEV FROM NORM | MAX 24-HR | DAY |
|----------------|------|----|-----------|---------|-----------|----------|------|---------|-----------|---------|-----------|---------|-----------|---------|----|---------|---------|---------------|-----------|-----|
|                |      |    | MEAN TEMP | NUM OBS | FROM NORM | MAX TEMP | DAY  | DEG DAY | FROM NORM | DEG DAY | FROM NORM | DEG DAY | FROM NORM | DEG DAY |    |         |         |               |           |     |
| CANTON DAM     | 1445 | 4  | 71.4      | 30      | -.5       | 94.      | 10   | 43.     | 24        | 17.5    | 1.5       | 210.0   | -13.0     | .570    | 30 | -2.61   | .32     | 11            |           |     |
| CHEYENNE       | 1738 | 4  | *****     | 0       | *****     | ****     | 0    | ****    | 0         | *****   | *****     | *****   | *****     | 1.080   | 30 | -1.88   | .93     | 10            |           |     |
| CLINTON        | 1909 | 4  | 73.2      | 30      | -.7       | 93.      | 20   | 45.     | 29        | 9.5     | -3.5      | 255.5   | -24.5     | .531    | 30 | -3.20   | .32     | 1             |           |     |
| COLONY         | 2039 | 4  | *****     | 0       | *****     | ****     | 0    | ****    | 0         | *****   | *****     | *****   | *****     | 1.112   | 30 | *****   | .34     | 1             |           |     |
| CORDELL        | 2125 | 4  | *****     | 0       | *****     | ****     | 0    | ****    | 0         | *****   | *****     | *****   | *****     | .403    | 30 | -3.21   | .40     | 1             |           |     |
| ELK CITY 1 E   | 2849 | 4  | 72.6      | 28      | *****     | 92.      | 21   | 48.     | 29        | 6.5     | *****     | 219.0   | *****     | 1.111   | 28 | *****   | .82     | 6             |           |     |
| ERICK 4 E      | 2944 | 4  | 72.5      | 30      | .1        | 97.      | 5    | 43.     | 28        | 14.0    | 1.0       | 239.5   | 4.5       | 1.121   | 30 | -2.10   | .98     | 10            |           |     |
| GEARY          | 3497 | 4  | 72.5      | 30      | -.2       | 92.      | 20   | 49.     | 29        | 3.5     | -12.5     | 227.5   | -19.5     | .180    | 30 | -3.62   | .18     | 8             |           |     |
| HAMMON 1 NNE   | 3871 | 4  | 69.8      | 29      | -1.5      | 92.      | 21   | 40.     | 30        | 36.5    | 12.5      | 175.5   | -37.5     | 2.300   | 29 | *****   | 1.27    | 6             |           |     |
| MACKIE 4 NNW   | 5463 | 4  | *****     | 0       | *****     | ****     | 0    | ****    | 0         | *****   | *****     | *****   | *****     | .750    | 31 | *****   | .64     | 8             |           |     |
| MORAVIA 2 NNE  | 6035 | 4  | *****     | 0       | *****     | ****     | 0    | ****    | 0         | *****   | *****     | *****   | *****     | 1.381   | 30 | -2.03   | .96     | 6             |           |     |
| OKEENE         | 6629 | 4  | 73.1      | 30      | -.6       | 94.      | 9    | 44.     | 29        | 13.5    | .5        | 255.5   | -18.5     | .760    | 30 | -2.93   | .54     | 8             |           |     |
| RETROP         | 7565 | 4  | *****     | 0       | *****     | ****     | 0    | ****    | 0         | *****   | *****     | *****   | *****     | 1.460   | 30 | *****   | 1.01    | 6             |           |     |
| REYDON         | 7579 | 4  | 74.3      | 30      | 3.5       | 99.      | 5    | 41.     | 29        | 8.0     | -10.0     | 286.5   | 94.5      | .000    | 30 | -3.03   | .00     | 30            |           |     |
| SAYRE          | 7952 | 4  | *****     | 0       | *****     | ****     | 0    | ****    | 0         | *****   | *****     | *****   | *****     | .170    | 30 | -2.87   | .12     | 1             |           |     |
| SWEETWATER 2 E | 8652 | 4  | *****     | 0       | *****     | ****     | 0    | ****    | 0         | *****   | *****     | *****   | *****     | .610    | 30 | *****   | .61     | 9             |           |     |
| TALOGA         | 8708 | 4  | 71.6      | 30      | -.5       | 93.      | 9    | 41.     | 29        | 25.0    | 11.0      | 222.0   | -5.0      | 1.142   | 30 | -1.83   | 1.05    | 6             |           |     |
| THOMAS         | 8815 | 4  | *****     | 0       | *****     | ****     | 0    | ****    | 0         | *****   | *****     | *****   | *****     | .120    | 30 | *****   | .12     | 21            |           |     |
| VICI           | 9172 | 4  | *****     | 0       | *****     | ****     | 0    | ****    | 0         | *****   | *****     | *****   | *****     | .110    | 30 | -2.53   | .06     | 8             |           |     |
| WATONGA        | 9364 | 4  | 73.2      | 30      | .5        | 93.      | 9    | 44.     | 29        | 12.0    | -4.0      | 256.5   | 9.5       | .472    | 30 | -2.90   | .24     | 11            |           |     |
| WEATHERFORD    | 9422 | 4  | 71.8      | 30      | -.3       | 94.      | 21   | 45.     | 24        | 9.0     | -9.0      | 212.5   | -18.5     | .221    | 30 | -3.52   | .09     | 22            |           |     |





SEPTEMBER 1992 SUMMARY FOR SOUTHWEST DIVISION (CD7)

| NAME            | ID   | CD | MEAN TEMP | DEV     |           |          | MIN DAY | DAY  | HEAT DEG DAY | DEV      |       | COOL      |           | TOT PPT | NUM OBS | DEV   |      | DAY |
|-----------------|------|----|-----------|---------|-----------|----------|---------|------|--------------|----------|-------|-----------|-----------|---------|---------|-------|------|-----|
|                 |      |    |           | NUM OBS | FROM NORM | MAX TEMP |         |      |              | FROM DEG | DEG   | FROM NORM | MAX 24-HR |         |         |       |      |     |
| ALTUS IRR STA   | 179  | 7  | 74.1      | 30      | -1.0      | 95.      | 20      | 44.  | 27           | 7.0      | 1.0   | 281.0     | -28.0     | 1.380   | 30      | -2.06 | 1.00 | 1   |
| ALTUS DAM       | 184  | 7  | 70.9      | 29      | -3.1      | 90.      | 21      | 45.  | 27           | 13.5     | 5.5   | 184.0     | -94.0     | 2.600   | 30      | -.83  | .92  | 6   |
| ANADARKO        | 224  | 7  | 73.2      | 30      | -.5       | 92.      | 20      | 44.  | 30           | 18.5     | 5.5   | 263.0     | -11.0     | 1.480   | 27      | ***** | .59  | 6   |
| APACHE          | 260  | 7  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 2.270   | 30      | -1.48 | .70  | 11  |
| ALTUS AFB       | 447  | 7  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 1.873   | 29      | ***** | 1.08 | 1   |
| CARNEGIE 2 ENE  | 1504 | 7  | 73.2      | 30      | -.7       | 95.      | 20      | 42.  | 24           | 16.5     | 4.5   | 262.5     | -16.5     | 1.030   | 29      | ***** | .53  | 6   |
| CHATTANOOGA     | 1706 | 7  | 75.5      | 30      | .2        | 97.      | 9       | 46.  | 24           | 2.0      | -5.0  | 317.0     | 1.0       | .520    | 30      | -3.15 | .52  | 11  |
| DUNCAN 12 W     | 2668 | 7  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 1.841   | 30      | ***** | 1.47 | 10  |
| FREDERICK       | 3353 | 7  | 72.6      | 30      | -1.9      | 93.      | 22      | 48.  | 24           | 5.5      | -1.5  | 233.5     | -58.5     | 1.960   | 30      | -1.62 | 1.35 | 1   |
| GRANDFIELD 4 NW | 3709 | 7  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 2.360   | 30      | -1.67 | .88  | 7   |
| HOBART FAA APT  | 4204 | 7  | 73.6      | 29      | -.3       | 93.      | 20      | 46.  | 27           | 4.5      | -5.5  | 255.0     | -22.0     | 1.020   | 29      | ***** | .91  | 1   |
| HOLLIS          | 4249 | 7  | 74.6      | 25      | *****     | 97.      | 20      | 45.  | 28           | .5       | ***** | 240.0     | *****     | 1.600   | 25      | ***** | 1.60 | 11  |
| HOLLISTER       | 4250 | 7  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 2.500   | 31      | ***** | 1.30 | 1   |
| LAWTON          | 5063 | 7  | 73.3      | 22      | *****     | 95.      | 10      | 48.  | 23           | 2.5      | ***** | 185.0     | *****     | 1.010   | 22      | ***** | .56  | 1   |
| FORT SILL       | 5068 | 7  | 74.2      | 30      | *****     | 95.      | 9       | 47.  | 24           | 3.0      | ***** | 278.0     | *****     | .711    | 30      | ***** | .42  | 10  |
| LOOKEBA 2 ENE   | 5329 | 7  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 1.691   | 30      | -2.66 | .61  | 11  |
| MANGUM RES STA  | 5509 | 7  | 72.7      | 30      | -2.0      | 96.      | 20      | 43.  | 26           | 12.0     | 6.0   | 244.0     | -53.0     | 1.450   | 30      | -1.93 | 1.00 | 1   |
| RANDLETT 9 E    | 7403 | 7  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 3.330   | 30      | ***** | 1.93 | 7   |
| ROOSEVELT       | 7727 | 7  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 3.310   | 30      | -.02  | 2.05 | 1   |
| SEDAN           | 8016 | 7  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 1.730   | 30      | ***** | .94  | 6   |
| SNYDER          | 8299 | 7  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 1.830   | 30      | -1.74 | 1.22 | 1   |
| VINSON 3 WNW    | 9212 | 7  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | .810    | 30      | -2.39 | .60  | 1   |
| WICHITA MT WLR  | 9629 | 7  | 70.4      | 29      | -2.0      | 96.      | 8       | 41.  | 24           | 28.0     | 15.0  | 184.0     | -51.0     | 2.010   | 30      | -2.02 | .95  | 1   |
| WILLOW          | 9668 | 7  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 1.951   | 30      | ***** | 1.31 | 6   |

SEPTEMBER 1992 SUMMARY FOR SOUTH CENTRAL DIVISION (CD8)

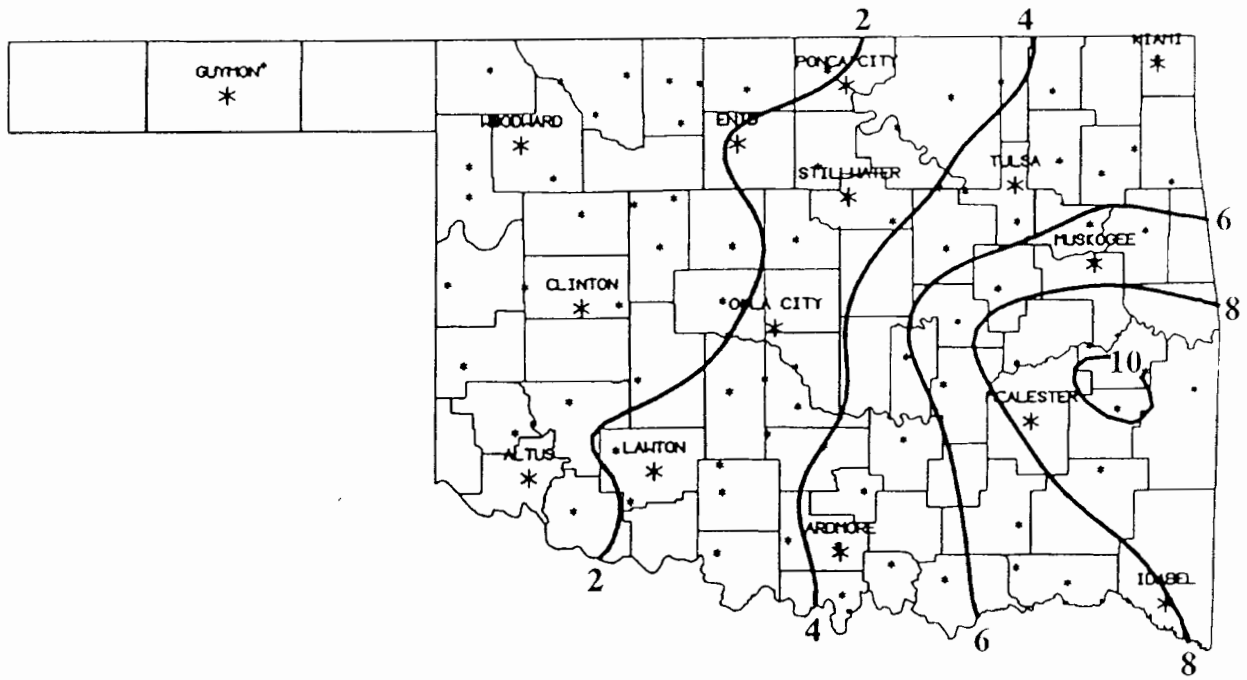
| NAME            | ID   | CD | MEAN TEMP | DEV     |           |          | MIN DAY | DAY  | HEAT DEG DAY | DEV      |       | COOL      |           | TOT PPT | NUM OBS | DEV   |      | DAY |
|-----------------|------|----|-----------|---------|-----------|----------|---------|------|--------------|----------|-------|-----------|-----------|---------|---------|-------|------|-----|
|                 |      |    |           | NUM OBS | FROM NORM | MAX TEMP |         |      |              | FROM DEG | DEG   | FROM NORM | MAX 24-HR |         |         |       |      |     |
| ADA             | 17   | 8  | 71.4      | 30      | -2.4      | 91.      | 8       | 47.  | 29           | 18.5     | 10.5  | 211.0     | -61.0     | 5.610   | 30      | 1.15  | 2.39 | 6   |
| ALLEN           | 147  | 8  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 5.300   | 30      | ***** | 1.90 | 7   |
| ARDMORE         | 292  | 8  | 74.7      | 30      | -1.5      | 93.      | 8       | 48.  | 30           | 6.0      | 1.0   | 296.0     | -45.0     | 3.390   | 30      | -.78  | 1.90 | 10  |
| ATOKA DAM       | 394  | 8  | 72.8      | 21      | *****     | 94.      | 21      | 46.  | 30           | 11.5     | ***** | 174.5     | *****     | 6.991   | 21      | ***** | 1.89 | 10  |
| BOKCHITO        | 917  | 8  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 6.440   | 30      | ***** | 3.09 | 12  |
| CANEY           | 1437 | 8  | 73.4      | 30      | *****     | 98.      | 18      | 49.  | 30           | 5.5      | ***** | 257.5     | *****     | 6.570   | 30      | ***** | 2.80 | 2   |
| CENTRAHOMA      | 1648 | 8  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 6.300   | 30      | ***** | 2.00 | 6   |
| CHICKASAW NRA   | 1745 | 8  | 73.6      | 30      | -.0       | 95.      | 9       | 44.  | 29           | 7.5      | -6.5  | 264.0     | -8.0      | 3.291   | 30      | -1.35 | 1.42 | 11  |
| COLEMAN         | 2011 | 8  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 1.170   | 30      | ***** | .75  | 7   |
| COMANCHE        | 2054 | 8  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 3.690   | 30      | -.79  | 1.56 | 12  |
| DAISY 4 ENE     | 2354 | 8  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 7.694   | 30      | 2.13  | 2.93 | 3   |
| DUNCAN          | 2660 | 8  | 72.7      | 30      | -1.5      | 92.      | 10      | 44.  | 23           | 6.5      | -2.5  | 237.5     | -47.5     | 4.381   | 30      | -.03  | 3.72 | 11  |
| DURANT USDA     | 2678 | 8  | 72.3      | 30      | -1.6      | 93.      | 9       | 44.  | 30           | 14.5     | 4.5   | 234.5     | -42.5     | 6.050   | 30      | .64   | 2.30 | 11  |
| ELMORE CITY     | 2872 | 8  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 5.140   | 30      | ***** | 2.10 | 20  |
| FARRIS 3 WNW    | 3083 | 8  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 6.750   | 30      | 1.88  | 3.00 | 11  |
| GRADY           | 3688 | 8  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 3.250   | 30      | ***** | 1.51 | 7   |
| HEALDTON        | 4001 | 8  | 73.9      | 30      | -.8       | 94.      | 8       | 43.  | 30           | 14.5     | 6.5   | 283.0     | -16.0     | 5.621   | 30      | 1.08  | 2.43 | 11  |
| HENNEPIN        | 4052 | 8  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 2.480   | 30      | ***** | 1.30 | 9   |
| KETCHUM RANCH   | 4780 | 8  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 2.550   | 31      | ***** | 1.48 | 10  |
| KINGSTON        | 4865 | 8  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 6.030   | 30      | 1.25  | 2.95 | 3   |
| LEHIGH          | 5108 | 8  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 6.302   | 30      | ***** | 1.70 | 11  |
| LINDSAY 2 W     | 5216 | 8  | 72.9      | 30      | -.7       | 92.      | 20      | 43.  | 30           | 20.0     | 6.0   | 257.0     | -15.0     | 2.641   | 30      | -1.67 | 1.49 | 6   |
| LOCO 6 SE       | 5247 | 8  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 4.370   | 30      | ***** | 2.02 | 7   |
| MADILL          | 5468 | 8  | 75.0      | 30      | -.4       | 95.      | 19      | 44.  | 30           | 10.5     | 2.5   | 311.0     | -9.0      | 4.811   | 30      | -.01  | 1.91 | 2   |
| MARIETTA        | 5563 | 8  | 75.1      | 30      | -.3       | 95.      | 18      | 51.  | 30           | 3.5      | -4.5  | 306.5     | -13.5     | 3.311   | 30      | -.88  | 1.44 | 11  |
| MARLOW 1 WSW    | 5581 | 8  | 73.1      | 30      | -.6       | 94.      | 20      | 44.  | 29           | 14.5     | 4.5   | 257.5     | -13.5     | 2.691   | 30      | -1.64 | 1.46 | 11  |
| MCGEE CREEK DAM | 5713 | 8  | 71.1      | 30      | *****     | 93.      | 19      | 42.  | 30           | 19.5     | ***** | 203.0     | *****     | 7.041   | 30      | ***** | 2.55 | 11  |
| PAULS VALLEY    | 6926 | 8  | 73.3      | 30      | -1.3      | 92.      | 20      | 43.  | 30           | 17.0     | 8.0   | 265.5     | -31.5     | 5.120   | 30      | 1.07  | 1.50 | 3   |
| PONTOTOC        | 7214 | 8  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 4.770   | 16      | ***** | 1.93 | 24  |
| TISHOMINGO NWLR | 8884 | 8  | 73.5      | 21      | *****     | 95.      | 8       | 45.  | 24           | 9.5      | ***** | 188.5     | *****     | 5.060   | 30      | .15   | 2.77 | 10  |
| TUSSY           | 9032 | 8  | *****     | 0       | *****     | ****     | 0       | **** | 0            | *****    | ***** | *****     | *****     | 3.090   | 30      | ***** | 1.92 | 11  |
| WAURIKA         | 9395 | 8  | 74.9      | 30      | -.8       | 95.      | 18      | 41.  | 27           | 7.0      | 7.0   | 304.0     | -22.0     | 1.570   | 30      | -2.34 | .93  | 11  |
| WAURIKA DAM     | 9399 | 8  | 73.2      | 26      | *****     | 96.      | 21      | 47.  | 25           | 6.5      | ***** | 220.0     | *****     | 3.032   | 27      | ***** | 1.36 | 7   |

**SEPTEMBER 1992 SUMMARY FOR SOUTHEAST DIVISION (CD9)**

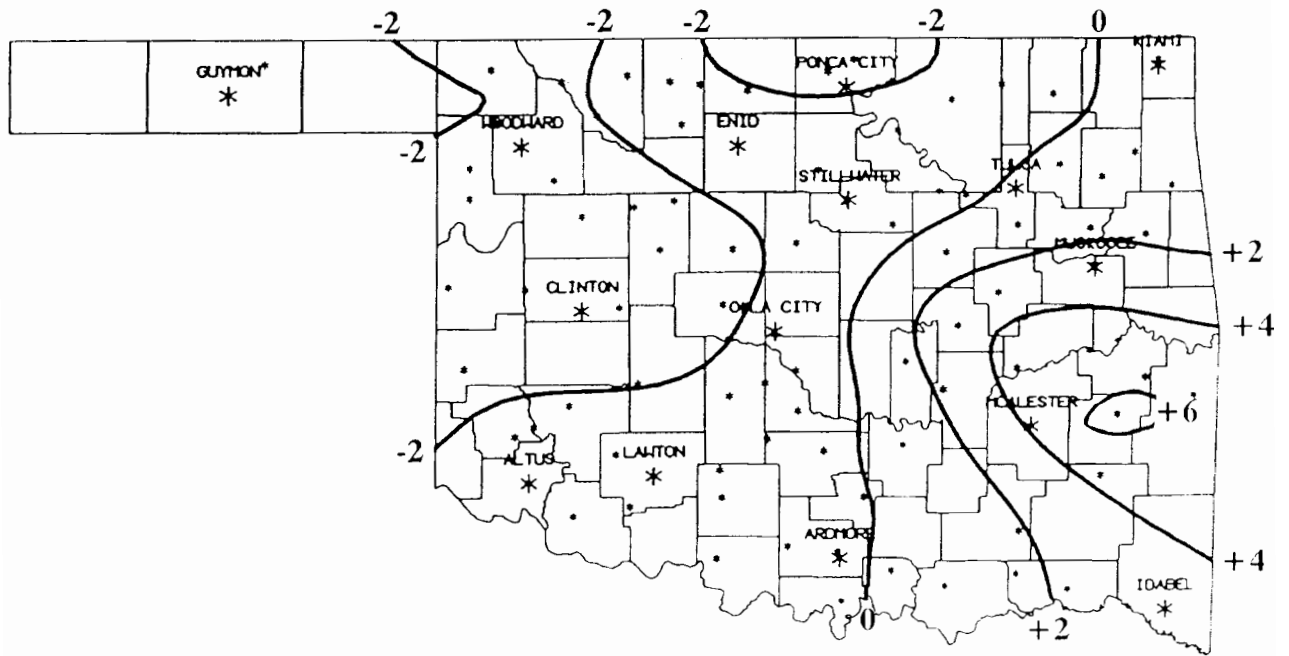
| NAME                | ID   | CD   | DEV   |      |       |      |     | HEAT |      | DEV   |       | COOL  |        | DEV    |      | DEV   |       |     |
|---------------------|------|------|-------|------|-------|------|-----|------|------|-------|-------|-------|--------|--------|------|-------|-------|-----|
|                     |      |      | MEAN  | NUM  | FROM  | MAX  | MIN | DEG  | FROM | DEG   | FROM  | DEG   | TOT    | NUM    | FROM | MAX   | 24-HR | DAY |
| TEMP                | OBS  | NORM | TEMP  | DAY  | TEMP  | DAY  | DAY | NORM | DAY  | NORM  | PPT   | OBS   | NORM   | 24-HR  | DAY  |       |       |     |
| ANTLERS             | 256  | 9    | 73.1  | 26   | ***** | 92.  | 18  | 42.  | 30   | 14.0  | ***** | 224.0 | *****  | 5.840  | 30   | 1.03  | 1.62  | 10  |
| BATTIEST 1 SSW      | 567  | 9    | 67.6  | 30   | ***** | 87.  | 18  | 37.  | 30   | 49.0  | ***** | 126.0 | *****  | 12.240 | 30   | ***** | 3.90  | 2   |
| BEAR MT TWR         | 584  | 9    | 71.5  | 30   | -2.9  | 92.  | 19  | 45.  | 24   | 24.5  | 16.5  | 220.5 | -69.5  | 6.820  | 30   | 1.64  | 1.90  | 2   |
| BENGAL              | 670  | 9    | ***** | 0    | ***** | **** | 0   | **** | 0    | ***** | ***** | ***** | *****  | 9.520  | 30   | ***** | 1.86  | 3   |
| BOSWELL 4 NNW       | 980  | 9    | 73.4  | 29   | -1.1  | 95.  | 19  | 44.  | 25   | 8.5   | -.5   | 253.5 | -40.5  | 5.142  | 29   | ***** | 1.47  | 23  |
| BROKEN BOW 1 N      | 1162 | 9    | ***** | 0    | ***** | **** | 0   | **** | 0    | ***** | ***** | ***** | *****  | 8.270  | 30   | 3.73  | 2.67  | 21  |
| BROKEN BOW DAM      | 1168 | 9    | 72.4  | 30   | -1.3  | 93.  | 19  | 43.  | 30   | 6.0   | -2.0  | 229.0 | -40.0  | 8.091  | 30   | 3.38  | 2.32  | 2   |
| CARNASAW TWR        | 1499 | 9    | ***** | 0    | ***** | **** | 0   | **** | 0    | ***** | ***** | ***** | *****  | 7.110  | 30   | 2.52  | 2.65  | 22  |
| CARTER TWR          | 1544 | 9    | ***** | 0    | ***** | **** | 0   | **** | 0    | ***** | ***** | ***** | *****  | 8.770  | 30   | 3.98  | 1.95  | 3   |
| FANSHAW             | 3065 | 9    | ***** | 0    | ***** | **** | 0   | **** | 0    | ***** | ***** | ***** | *****  | 12.080 | 30   | 7.40  | 2.70  | 19  |
| FLAGPOLE TWR        | 3169 | 9    | ***** | 0    | ***** | **** | 0   | **** | 0    | ***** | ***** | ***** | *****  | 6.770  | 30   | ***** | 2.55  | 2   |
| HEAVENER 1 SE       | 4008 | 9    | ***** | 0    | ***** | **** | 0   | **** | 0    | ***** | ***** | ***** | *****  | 9.103  | 31   | 4.53  | 1.50  | 19  |
| HEE MT TWR          | 4017 | 9    | ***** | 0    | ***** | **** | 0   | **** | 0    | ***** | ***** | ***** | *****  | 10.830 | 30   | 6.21  | 2.01  | 2   |
| HUGO                | 4384 | 9    | 73.4  | 30   | -1.8  | 92.  | 18  | 48.  | 24   | 5.5   | -.5   | 257.0 | -55.0  | 6.930  | 30   | 2.40  | 1.60  | 21  |
| IDABEL              | 4451 | 9    | 71.7  | 30   | -2.2  | 93.  | 19  | 39.  | 30   | 18.5  | 10.5  | 219.0 | -56.0  | 6.591  | 30   | 2.40  | 1.47  | 21  |
| POTEAU W W          | 7254 | 9    | 71.0  | 30   | ***** | 92.  | 19  | 41.  | 30   | 23.5  | ***** | 203.5 | *****  | 7.333  | 30   | ***** | 1.40  | 19  |
| SMITHVILLE 1 W      | 8285 | 9    | 71.8  | 19   | ***** | 89.  | 18  | 52.  | 12   | .0    | ***** | 130.0 | *****  | 12.050 | 30   | 7.48  | 2.65  | 3   |
| SPIRO               | 8416 | 9    | ***** | 0    | ***** | **** | 0   | **** | 0    | ***** | ***** | ***** | *****  | 8.300  | 30   | 4.26  | 1.84  | 22  |
| TUSKAHOMA           | 9023 | 9    | 71.8  | 30   | -2.4  | 91.  | 18  | 39.  | 30   | 27.5  | 14.5  | 231.0 | -58.0  | 10.200 | 30   | 5.02  | 3.30  | 3   |
| VALLIANT 3 W        | 9118 | 9    | ***** | 0    | ***** | **** | 0   | **** | 0    | ***** | ***** | ***** | *****  | 5.710  | 30   | .74   | 1.18  | 2   |
| WILBURTON 9 ENE9634 | 9    | 71.5 | 30    | -1.4 | 93.   | 18   | 41. | 30   | 28.5 | 13.5  | 224.0 | -28.0 | 11.781 | 30     | 6.89 | 2.95  | 2     |     |

**SEPTEMBER 1992 CLIMATE DIVISION SUMMARY**

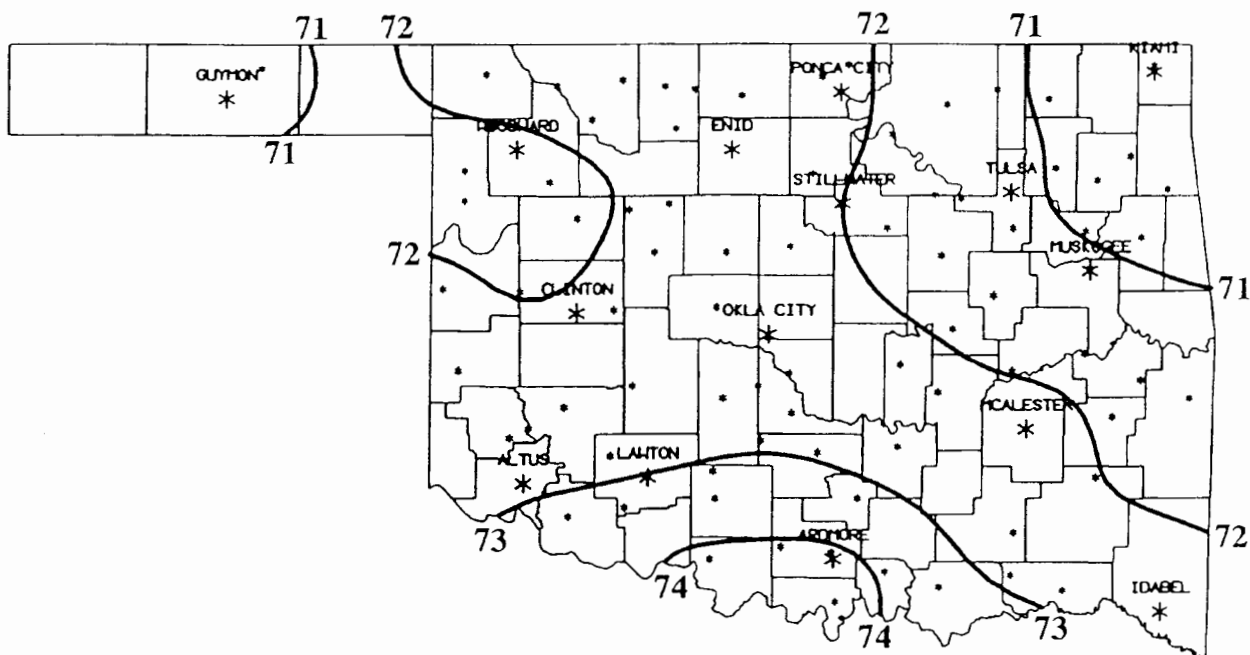
| CLIMATE | MEAN | NUM | DEV  |       |      |      | HEAT |        | DEV   |        | COOL  |        | DEV |       | DEV   |     |
|---------|------|-----|------|-------|------|------|------|--------|-------|--------|-------|--------|-----|-------|-------|-----|
|         |      |     | TEMP | STA   | FROM | MAX  | MIN  | DEGREE | FROM  | DEGREE | FROM  | DEGREE | TOT | NUM   | FROM  | MAX |
| DIV     | TEMP | STA | NORM | TEMP  | DAY  | TEMP | DAY  | DAYS   | NORM  | DAYS   | NORM  | PPT    | STA | NORM  | 24-HR | DAY |
| 1       | 70.8 | 11  | 1.1  | 101.0 | 17   | 39.0 | 29   | 14.5   | -14.2 | 188.6  | 18.3  | .15    | 12  | -1.96 | .48   | 14  |
| 2       | 72.4 | 14  | -.0  | 98.0  | 8    | 35.0 | 29   | 15.9   | -.3   | 238.3  | -2.3  | 1.33   | 20  | -2.09 | 2.93  | 2   |
| 3       | 71.1 | 17  | -1.2 | 96.0  | 26   | 40.0 | 24   | 30.6   | 9.0   | 211.7  | -26.2 | 4.42   | 30  | -.45  | 3.54  | 21  |
| 4       | 72.3 | 10  | -.1  | 99.0  | 5    | 40.0 | 30   | 14.9   | -.2   | 234.1  | -5.1  | .64    | 19  | -2.66 | 1.27  | 6   |
| 5       | 72.5 | 14  | -1.0 | 96.0  | 9    | 41.0 | 30   | 14.4   | .9    | 238.4  | -28.2 | 3.43   | 33  | -.79  | 2.86  | 6   |
| 6       | 71.5 | 10  | -1.7 | 94.0  | 18   | 40.0 | 24   | 23.6   | 8.0   | 218.4  | -45.4 | 7.77   | 28  | 3.20  | 4.10  | 19  |
| 7       | 73.0 | 10  | -1.1 | 97.0  | 20   | 41.0 | 24   | 11.1   | 2.5   | 250.2  | -33.6 | 1.90   | 18  | -1.73 | 2.05  | 1   |
| 8       | 73.4 | 14  | -1.2 | 98.0  | 18   | 41.0 | 27   | 11.8   | 3.1   | 263.4  | -33.0 | 4.59   | 30  | .03   | 3.72  | 11  |
| 9       | 71.6 | 9   | -2.3 | 95.0  | 19   | 37.0 | 30   | 21.3   | 10.4  | 218.2  | -58.4 | 8.72   | 20  | 4.05  | 3.90  | 2   |



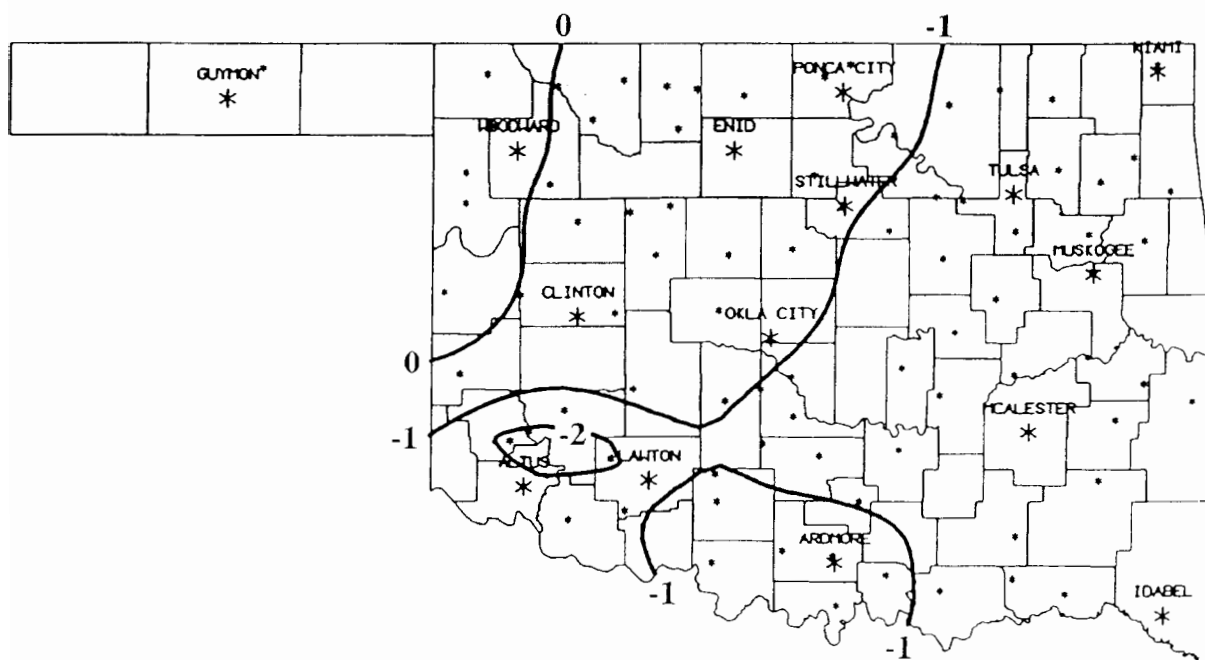
SEPTEMBER 1992 TOTAL PRECIPITATION  
(Inches)



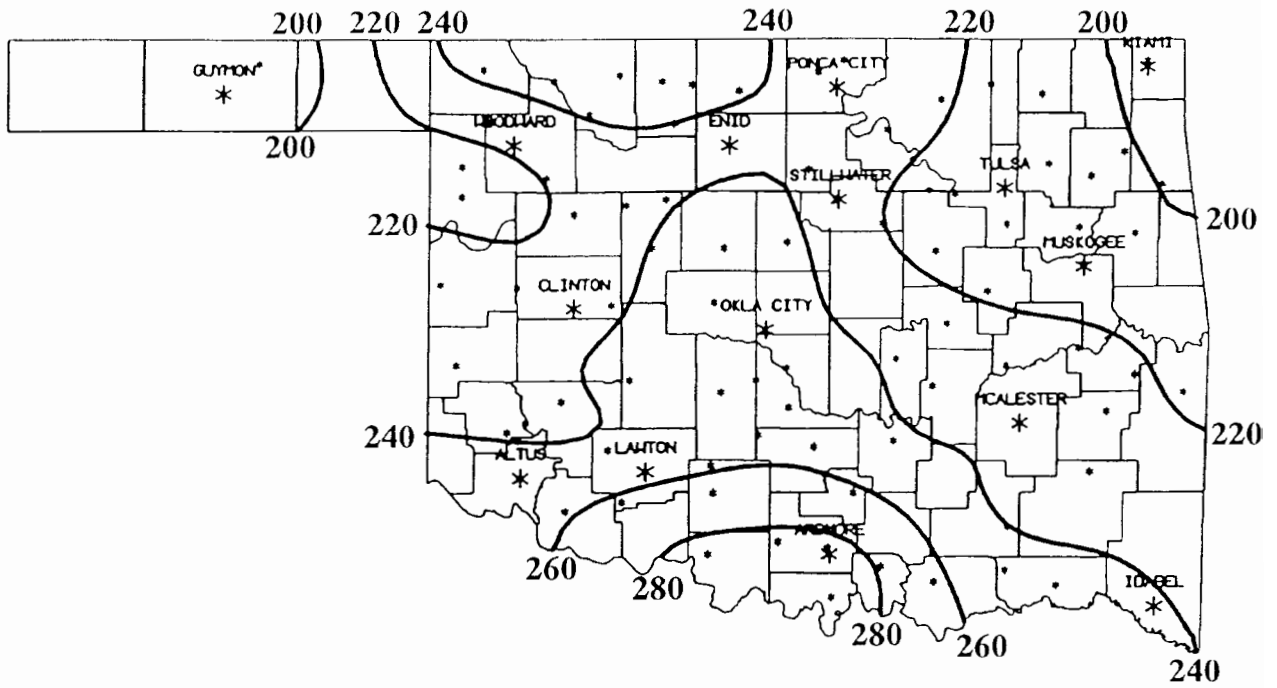
SEPTEMBER 1992 DEVIATION FROM NORMAL PRECIPITATION  
(Inches)



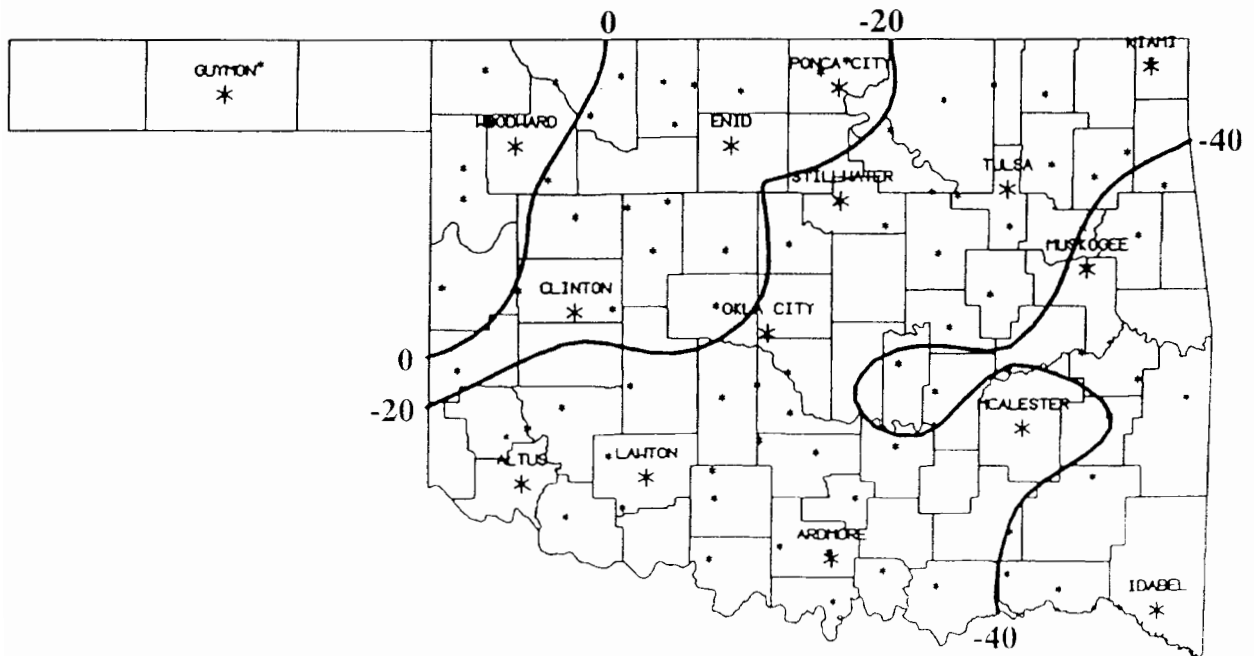
SEPTEMBER 1992 AVERAGE MONTHLY TEMPERATURES  
(Degrees F)



SEPTEMBER 1992 DEVIATION FROM NORMAL TEMPERATURES  
(Degrees F)

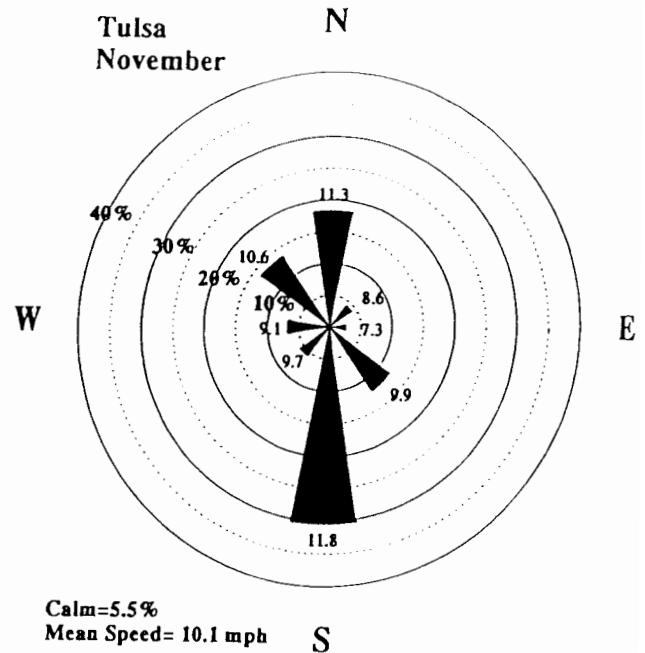
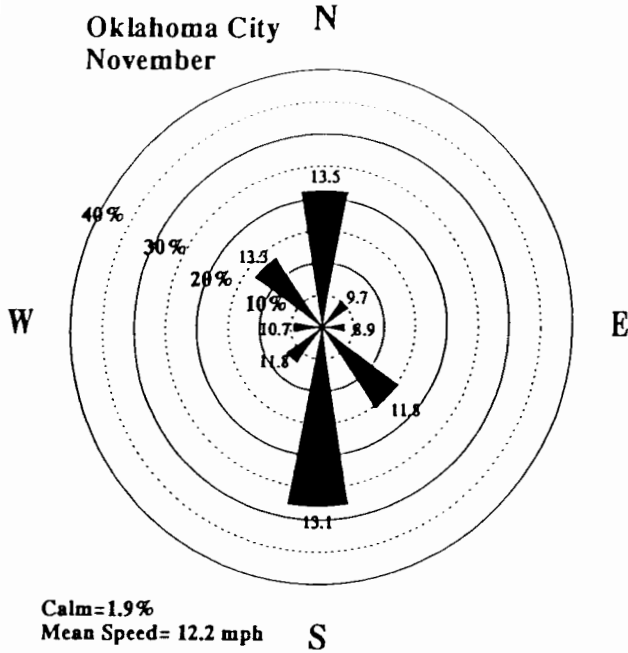


SEPTEMBER 1992 COOLING DEGREE DAYS



SEPTEMBER 1992 DEVIATION FROM NORMAL COOLING DEGREE DAYS

November wind roses for Oklahoma City and Tulsa. Percents represent the percentage of 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.



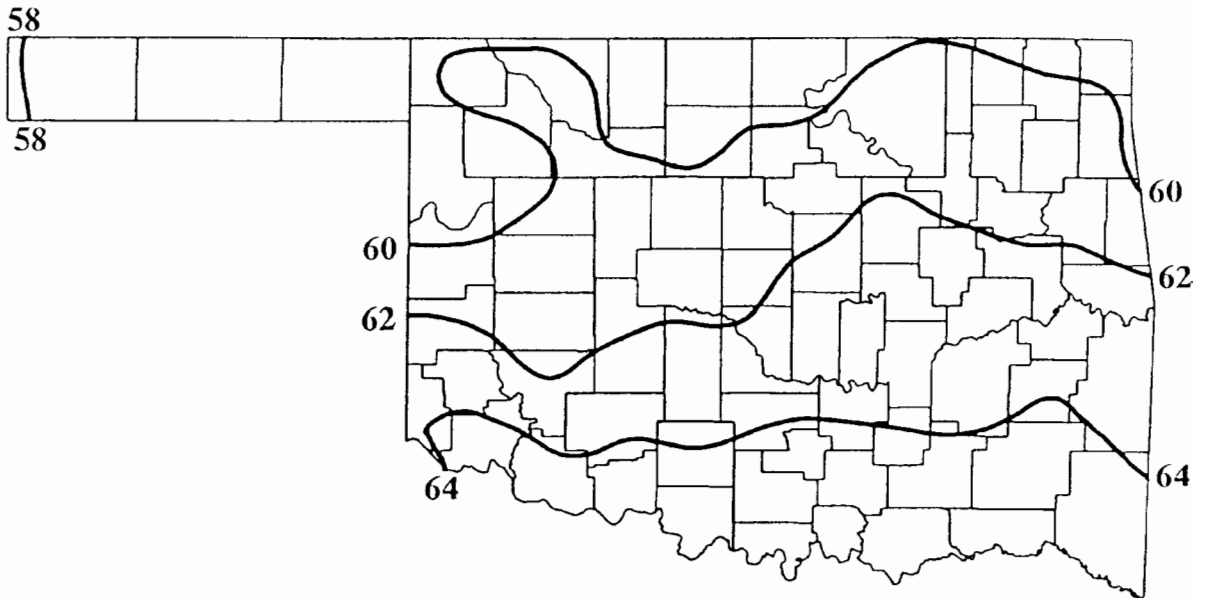
NOVEMBER 1992 SUNRISE AND SUNSET

OKLAHOMA CITY

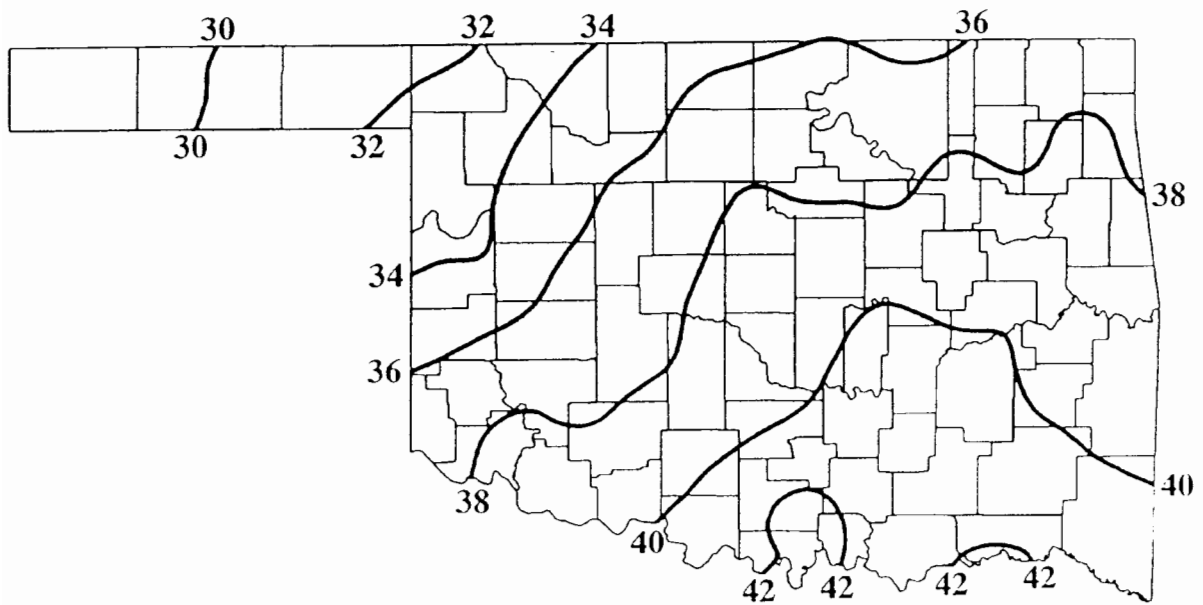
| DATE   | SUNRISE | SUNSET     | DAYLIGHT       |
|--------|---------|------------|----------------|
| 9211 1 | 6:52AM  | 5:37PM CST | 10 hrs 45 mins |
| 9211 2 | 6:52AM  | 5:36PM CST | 10 hrs 43 mins |
| 9211 3 | 6:53AM  | 5:35PM CST | 10 hrs 41 mins |
| 9211 4 | 6:54AM  | 5:34PM CST | 10 hrs 39 mins |
| 9211 5 | 6:55AM  | 5:33PM CST | 10 hrs 38 mins |
| 9211 6 | 6:56AM  | 5:32PM CST | 10 hrs 36 mins |
| 9211 7 | 6:57AM  | 5:31PM CST | 10 hrs 34 mins |
| 9211 8 | 6:58AM  | 5:31PM CST | 10 hrs 32 mins |
| 9211 9 | 6:59AM  | 5:30PM CST | 10 hrs 31 mins |
| 921110 | 7: 0AM  | 5:29PM CST | 10 hrs 29 mins |
| 921111 | 7: 1AM  | 5:29PM CST | 10 hrs 27 mins |
| 921112 | 7: 2AM  | 5:28PM CST | 10 hrs 26 mins |
| 921113 | 7: 3AM  | 5:27PM CST | 10 hrs 24 mins |
| 921114 | 7: 4AM  | 5:27PM CST | 10 hrs 22 mins |
| 921115 | 7: 5AM  | 5:26PM CST | 10 hrs 21 mins |
| 921116 | 7: 6AM  | 5:25PM CST | 10 hrs 19 mins |
| 921117 | 7: 7AM  | 5:25PM CST | 10 hrs 18 mins |
| 921118 | 7: 8AM  | 5:24PM CST | 10 hrs 16 mins |
| 921119 | 7: 9AM  | 5:24PM CST | 10 hrs 15 mins |
| 921120 | 7:10AM  | 5:24PM CST | 10 hrs 13 mins |
| 921121 | 7:11AM  | 5:23PM CST | 10 hrs 12 mins |
| 921122 | 7:12AM  | 5:23PM CST | 10 hrs 11 mins |
| 921123 | 7:13AM  | 5:22PM CST | 10 hrs 9 mins  |
| 921124 | 7:14AM  | 5:22PM CST | 10 hrs 8 mins  |
| 921125 | 7:15AM  | 5:22PM CST | 10 hrs 7 mins  |
| 921126 | 7:16AM  | 5:22PM CST | 10 hrs 6 mins  |
| 921127 | 7:17AM  | 5:21PM CST | 10 hrs 5 mins  |
| 921128 | 7:18AM  | 5:21PM CST | 10 hrs 4 mins  |
| 921129 | 7:18AM  | 5:21PM CST | 10 hrs 2 mins  |
| 921130 | 7:19AM  | 5:21PM CST | 10 hrs 1 mins  |

TULSA

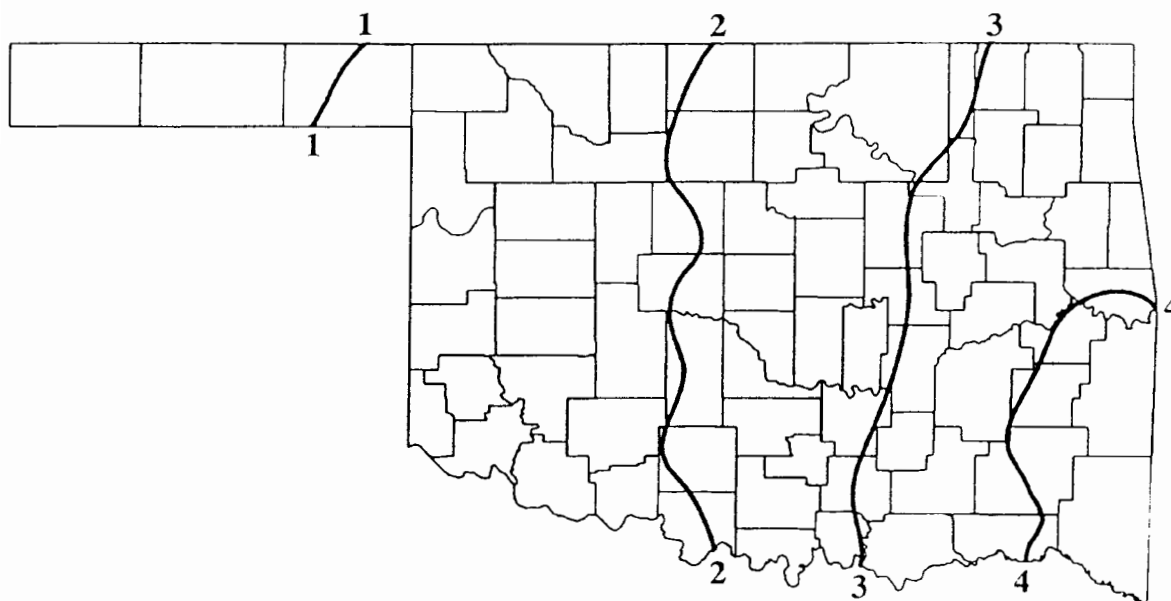
| DATE   | SUNRISE | SUNSET     | DAYLIGHT       |
|--------|---------|------------|----------------|
| 9211 1 | 6:46AM  | 5:29PM CST | 10 hrs 43 mins |
| 9211 2 | 6:47AM  | 5:28PM CST | 10 hrs 41 mins |
| 9211 3 | 6:48AM  | 5:27PM CST | 10 hrs 39 mins |
| 9211 4 | 6:49AM  | 5:26PM CST | 10 hrs 37 mins |
| 9211 5 | 6:50AM  | 5:25PM CST | 10 hrs 35 mins |
| 9211 6 | 6:51AM  | 5:24PM CST | 10 hrs 33 mins |
| 9211 7 | 6:52AM  | 5:23PM CST | 10 hrs 31 mins |
| 9211 8 | 6:53AM  | 5:23PM CST | 10 hrs 30 mins |
| 9211 9 | 6:54AM  | 5:22PM CST | 10 hrs 28 mins |
| 921110 | 6:55AM  | 5:21PM CST | 10 hrs 26 mins |
| 921111 | 6:56AM  | 5:20PM CST | 10 hrs 24 mins |
| 921112 | 6:57AM  | 5:20PM CST | 10 hrs 23 mins |
| 921113 | 6:58AM  | 5:19PM CST | 10 hrs 21 mins |
| 921114 | 6:59AM  | 5:18PM CST | 10 hrs 19 mins |
| 921115 | 7: 0AM  | 5:18PM CST | 10 hrs 18 mins |
| 921116 | 7: 1AM  | 5:17PM CST | 10 hrs 16 mins |
| 921117 | 7: 2AM  | 5:17PM CST | 10 hrs 15 mins |
| 921118 | 7: 3AM  | 5:16PM CST | 10 hrs 13 mins |
| 921119 | 7: 4AM  | 5:16PM CST | 10 hrs 12 mins |
| 921120 | 7: 5AM  | 5:15PM CST | 10 hrs 10 mins |
| 921121 | 7: 6AM  | 5:15PM CST | 10 hrs 9 mins  |
| 921122 | 7: 7AM  | 5:14PM CST | 10 hrs 7 mins  |
| 921123 | 7: 8AM  | 5:14PM CST | 10 hrs 6 mins  |
| 921124 | 7: 9AM  | 5:14PM CST | 10 hrs 5 mins  |
| 921125 | 7:10AM  | 5:13PM CST | 10 hrs 3 mins  |
| 921126 | 7:11AM  | 5:13PM CST | 10 hrs 2 mins  |
| 921127 | 7:12AM  | 5:13PM CST | 10 hrs 1 mins  |
| 921128 | 7:13AM  | 5:12PM CST | 10 hrs 0 mins  |
| 921129 | 7:13AM  | 5:12PM CST | 9 hrs 59 mins  |
| 921130 | 7:14AM  | 5:12PM CST | 9 hrs 58 mins  |



**NOVEMBER 30-YEAR MEAN DAILY MAXIMUM TEMPERATURE**



**NOVEMBER 30-YEAR MEAN DAILY MINIMUM TEMPERATURE**



**NOVEMBER 30-YEAR MEAN MONTHLY PRECIPITATION**

**90-DAY NATIONAL WEATHER SERVICE OUTLOOK**

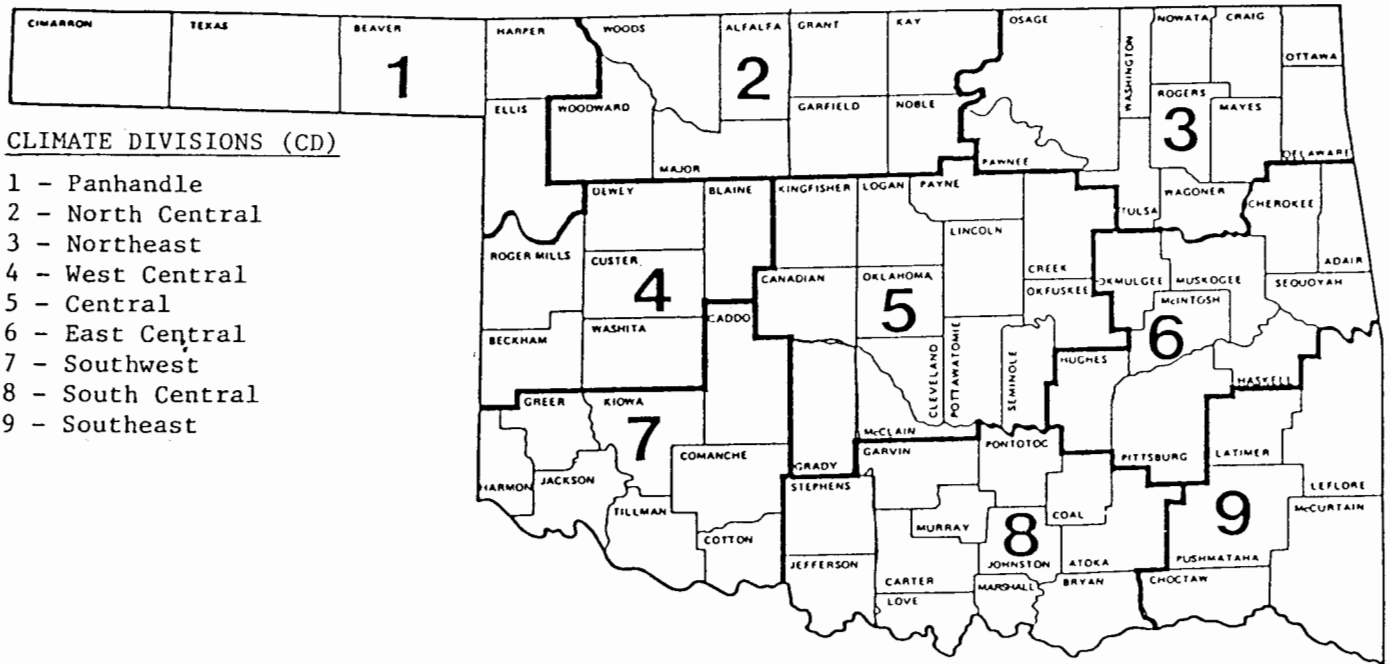
**(October - December 1992)**

**Precipitation - Near Normal Panhandle  
Above Normal Elsewhere**

**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:

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

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.

The data on this calendar are for Oklahoma City  
 Normal values are calculated for the period  
 1961-1990. Extremes are found for the period  
 of record (1891-present).

**OKLAHOMA CITY CLIMATE CALENDAR**  
**November**

| Normal  | Actual  | Normal   | Actual  | Normal   | Actual  | Normal   | Actual  | Normal   | Actual  | Normal   | Actual  | Normal   | Actual  | Normal   | Actual  | Normal   | Actual  | Normal   | Actual  |  |   |  |   |  |   |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |
|---|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|
| 67.0<br>45.0<br>.05<br>9<br>1<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest ppt | 83-1916<br>34-1951<br>28-1912<br>65-1936<br>1-05-1981 | 63.0<br>43.0<br>.09<br>12<br>0<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest ppt | 83-1924<br>31-1951<br>22-1966<br>66-1938<br>1-51-1974 | 62.0<br>41.0<br>.10<br>14<br>0<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest ppt | 84-1909<br>36-1936<br>21-1939<br>61-1959<br>1-51-1964 | 62.0<br>40.0<br>.05<br>13<br>0<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest ppt | 87-1891<br>34-1951<br>23-1959<br>64-1924<br>1-09-1946 | 63.0<br>41.0<br>.04<br>13<br>0<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest ppt | 85-1980<br>39-1959<br>20-1959<br>63-1945<br>2-14-1895 | 63.0<br>41.0<br>.02<br>13<br>0<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest ppt | 86-1980<br>41-1853<br>26-1959<br>62-1916<br>1-71-1920 | 64.0<br>41.0<br>.08<br>13<br>0<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest ppt | 87-1980<br>39-1936<br>21-1896<br>66-1966<br>1-42-1895 | 64.0<br>40.0<br>.06<br>13<br>0<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest ppt | 80-1967<br>28-1940<br>12-1940<br>61-1989<br>3-22-1909 | 62.0<br>40.0<br>.11<br>14<br>0<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest ppt | 84-1903<br>32-1932<br>15-1940<br>61-1971<br>2-43-1890 | 59.0<br>36.0<br>.04<br>18<br>0<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest ppt | 78-1982<br>27-1998<br>15-1898<br>60-1966<br>1-54-1931 | 59.0<br>36.0<br>.02<br>18<br>0<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest ppt | 80-1927<br>29-1926<br>14-1898<br>69-1902<br>1-48-1916 | 53.0<br>30.0<br>.01<br>24<br>0<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest ppt | 80-1927<br>28-1897<br>11-1911<br>64-1923<br>61-1930 | 55.0<br>32.0<br>.02<br>22<br>0<br>Highest Max<br>Lowest Max<br>Lowest Min<br>Highest Min<br>Greatest ppt | 74-1946<br>32-1896<br>13-1975<br>60-1939<br>72-1909 |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |           |        |
| Normal 1  | Actual  | Normal 2   | Actual  | Normal 3   | Actual  | Normal 4   | Actual  | Normal 5   | Actual  | Normal 6   | Actual  | Normal 7   | Actual  | Normal 8   | Actual  | Normal 9   | Actual  | Normal 10  | Actual  | Normal 11  | Actual  | Normal 12  | Actual  | Normal 13  | Actual  | Normal 14 | Actual | Normal 15 | Actual | Normal 16 | Actual | Normal 17 | Actual | Normal 18 | Actual | Normal 19 | Actual | Normal 20 | Actual | Normal 21 | Actual | Normal 22 | Actual | Normal 23 | Actual | Normal 24 | Actual | Normal 25 | Actual | Normal 26 | Actual | Normal 27 | Actual | Normal 28 | Actual | Normal 29 | Actual | Normal 30 | Actual |

**NOVEMBER AVERAGES**

TEMPERATURE : 49.1°F  
 PRECIPITATION : 1.68"  
 HEATING DEGREE DAYS : 485  
 COOLING DEGREE DAYS : 1

The data on this calendar are for Tulsa. Normal values are calculated for the period 1948-1991. Temperature extremes are for the period 1905-1992; precipitation extremes are for the period 1948-1991.

TULSA CLIMATE CALENDAR  
November 1992

Table with 30 columns representing days of the month and 3 rows (Normal, Actual, and Extremes). Rows include data for Normal, Actual, and Greatest values for Temperature (max, min, ppt), Precipitation (hdd, cdd), and Highest/Lowest values (Max, Min, ppt). Includes a 'NOVEMBER AVERAGES' section at the bottom right with summary statistics for Temperature, Precipitation, Heating Degree Days, and Cooling Degree Days.