

**OKLAHOMA  
MONTHLY SUMMARY  
REVISED  
NOVEMBER 1999**

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## MONTHLY SUMMARY FOR NOVEMBER 1999

According to preliminary data from the National Weather service, November had a statewide-averaged temperature of 56.2 degrees placing it 6.4 degrees above normal. November 1999 supplanted 1909 (55.7 degrees) as the warmest November of the 108 recorded in Oklahoma. The warm weather was also notable for limited rainfall throughout the state. The statewide-averaged precipitation of 0.81 inch was 1.61 inches less than normal, ranking this as the 26<sup>th</sup> driest November since 1892.

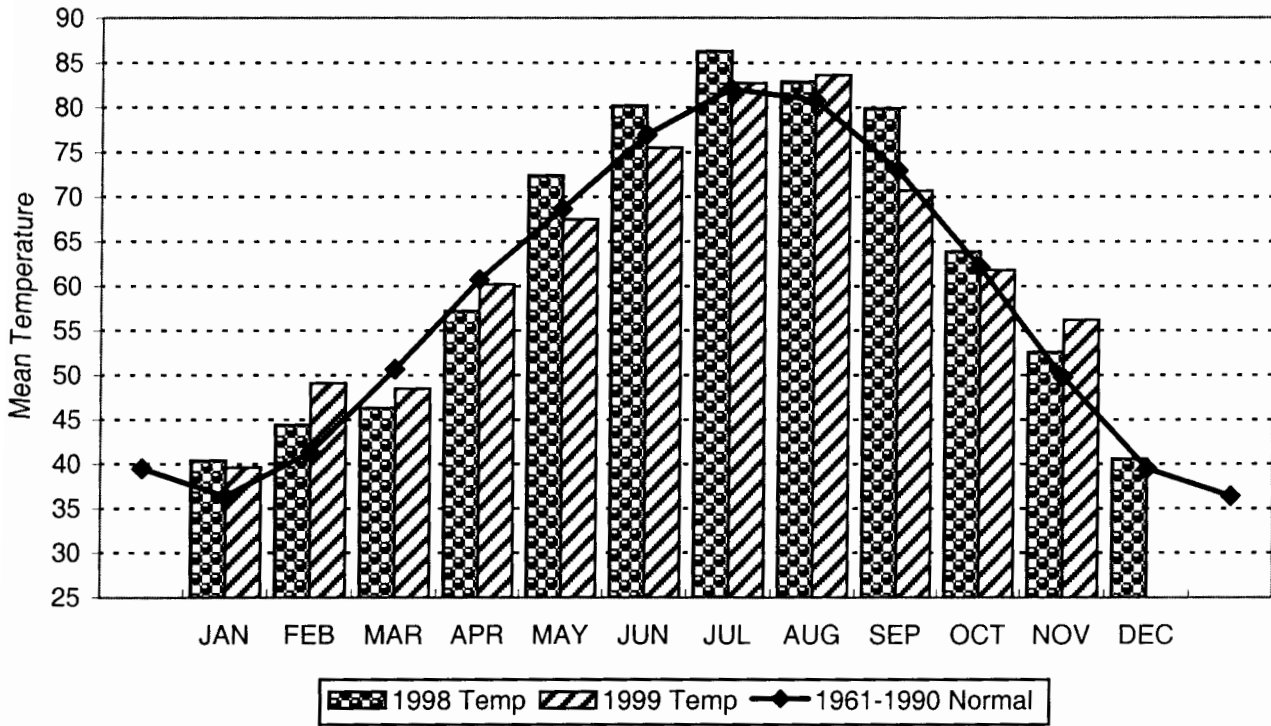
The warm, dry November completed Oklahoma's 35<sup>th</sup> warmest and 36<sup>th</sup> driest autumn. September-through-November temperatures averaged 62.9 degrees (1.3 degrees greater than normal), while statewide precipitation averaged 6.70 inches (2.73 inches less than normal) during the autumn months. The first eleven months of 1999 are the 26<sup>th</sup> warmest and 37<sup>th</sup> wettest January-through-November periods, statewide, on record. The year-to-date statewide temperature of 63.3 degrees is 1.1 degrees higher than normal. Year-to-date precipitation, statewide, is 34.65 inches, 2.07 inches greater than normal despite the very dry late summer and autumn weather.

The state really noticed only a single break from the warm, dry weather, as November reports from the Oklahoma Mesonet show only two days (the 22<sup>nd</sup> and 23<sup>rd</sup>) with over a half inch of rain reported anywhere in the state. Several National Weather Service observing sites reported over an inch of rain on the first as of 7AM, but most of that rain actually fell on October 31<sup>st</sup>, but was not reported until the gauges were read the following morning. Daily rainfall reports of two inches or more were received on the 22<sup>nd</sup> from Okmulgee (Okmulgee County) and Mesonet sites near Pryor (Mayes), Wilburton (Latimer), and Hugo (Choctaw). Claremore (Rogers) reported 2.95 inches on the 23<sup>rd</sup> accompanied by 2.90 inches reported from Okeene (Blaine), 2.77 inches at the Mesonet site east of Broken Bow (McCurtain), and 2.61 inches at Idabel (McCurtain).

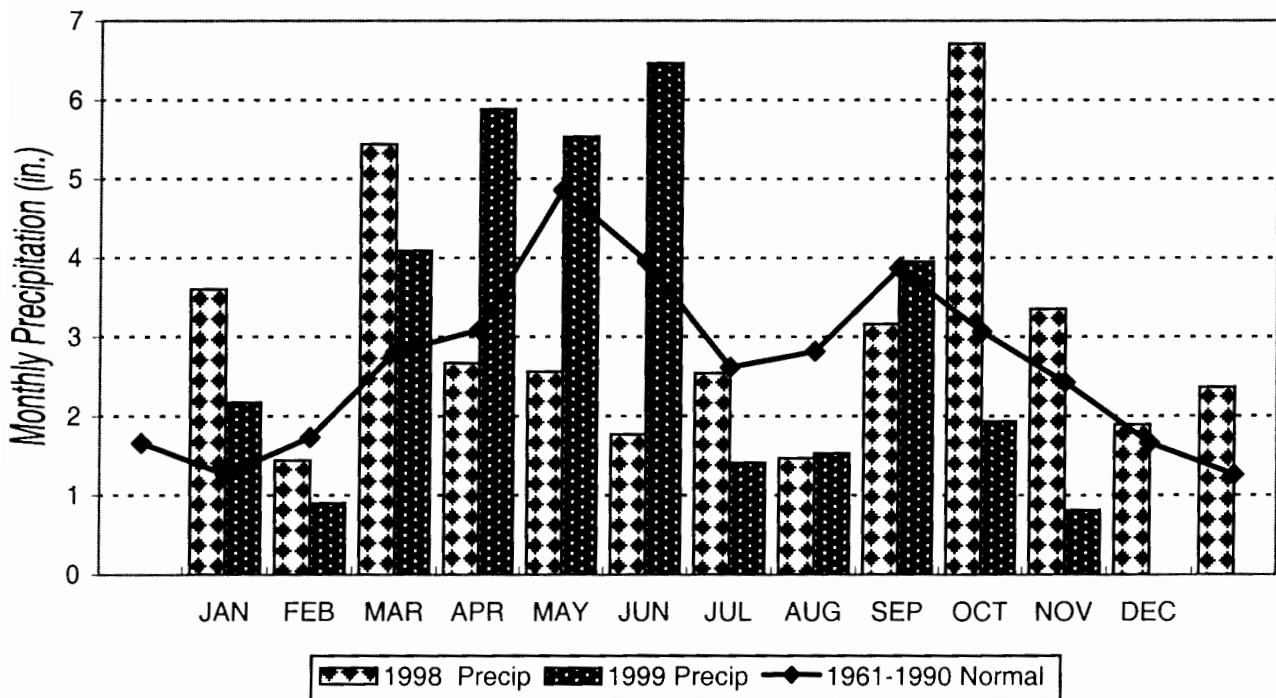
The rain-producing system of the 22<sup>nd</sup> and 23<sup>rd</sup> produced all of the state's severe weather during the month. Strong winds and hail were reported over much of eastern Oklahoma on the evening of the 22<sup>nd</sup>. One-and-three-quarter-inch hail was reported in Okfuskee and Choctaw counties. Observers in Tulsa and Wagoner counties reported wind speeds as great as 75 miles per hour. Spotters in Tulsa, Rogers, and Choctaw counties reported small tornadoes on that evening.

Howard L. Johnson

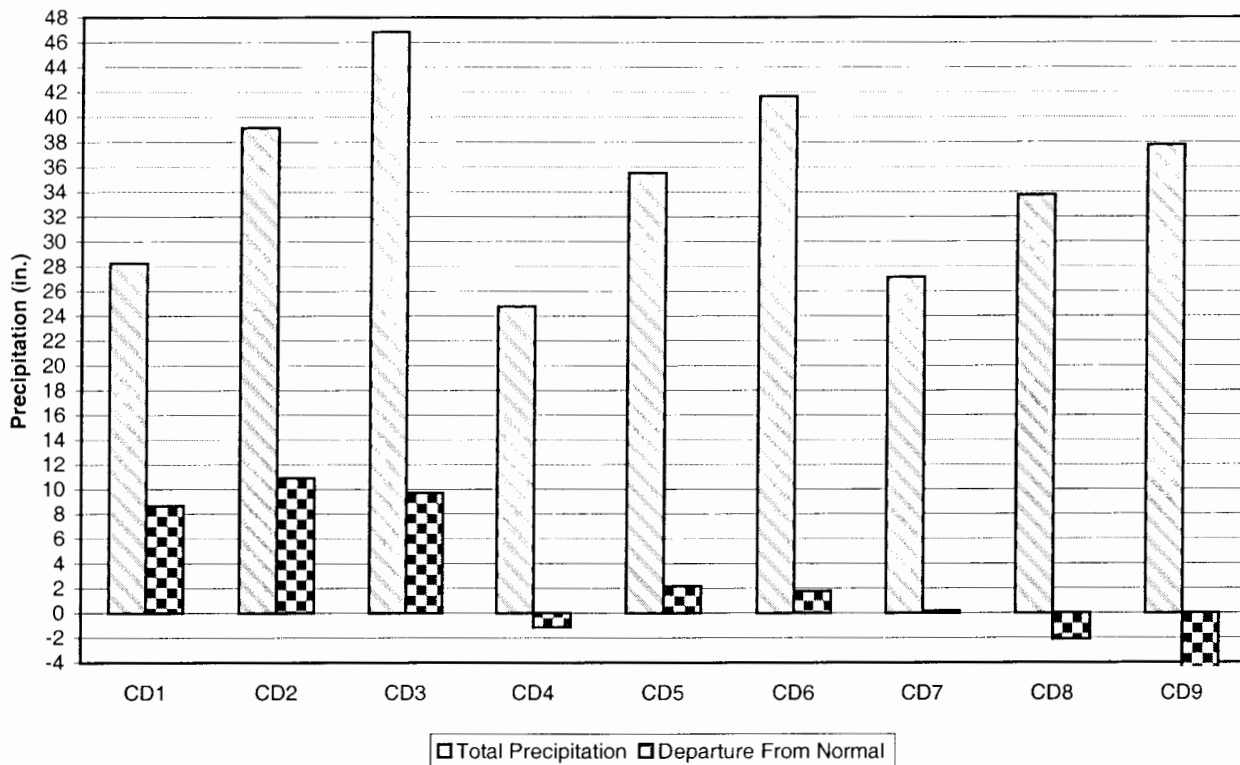
### 1998 and 1999 STATEWIDE TEMPERATURES Monthly Averages



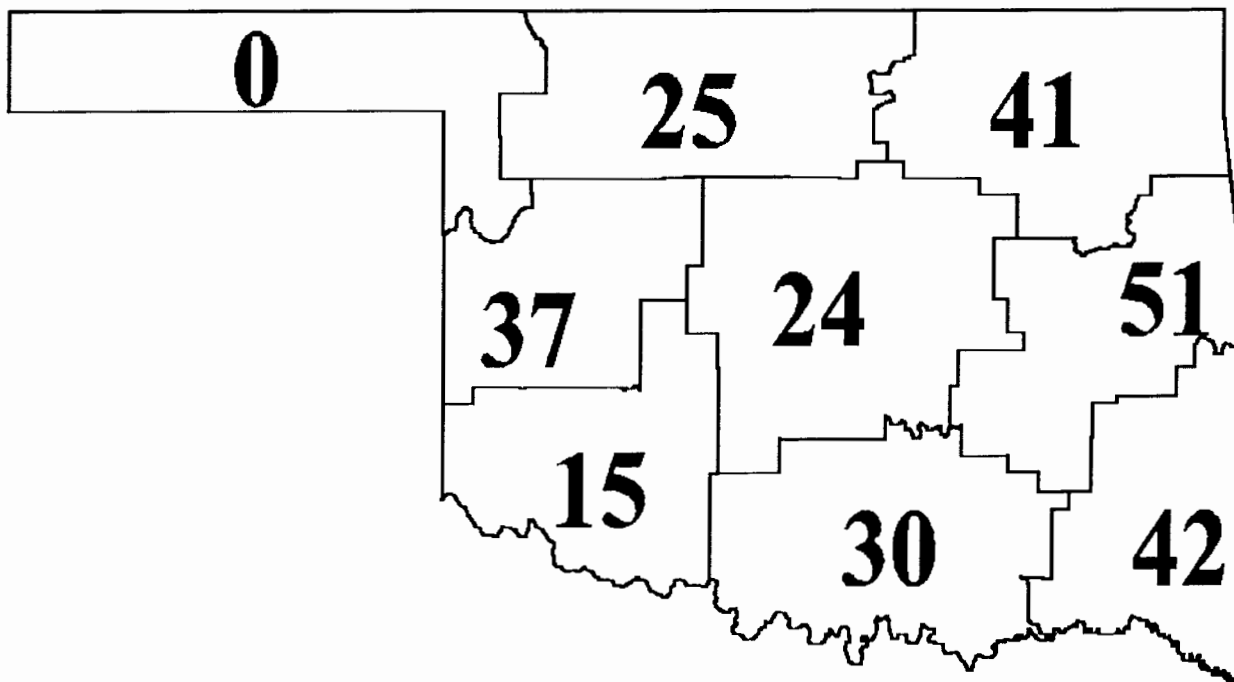
### 1998 and 1999 STATEWIDE PRECIPITATION Monthly Totals



### CD Averaged Precipitation January through November 1999



### CD PERCENT OF NORMAL PRECIPITATION December 1999



**EXTREME VALUES OF TEMPERATURE AND PRECIPITATION IN EACH CLIMATE DIVISION  
NOVEMBER, 1999**

| CD | MAX<br>TEMP | DATE     | LOCATION                 | MIN<br>TEMP | DATE     | LOCATION               | 24-HOUR<br>PRECIP | DATE | LOCATION     | MONTHLY<br>PRECIP | LOCATION     |
|----|-------------|----------|--------------------------|-------------|----------|------------------------|-------------------|------|--------------|-------------------|--------------|
| 1  | 89          | 12       | BUFFALO                  | 15          | 24       | GAGE                   | .03               | 24   | REGNIER      | .03               | REGNIER      |
| 2  | 86          | 13       | FREEDOM                  | 15<br>15    | 23<br>24 | FT SUPPLY<br>FT SUPPLY | 1.52              | 23   | GREAT SALT P | 1.54              | GREAT SALT P |
| 3  | 87          | 30       | CLEVELAND                | 19          | 25       | RALSTON                | 2.95              | 23   | CLAREMORE    | 3.09              | CLAREMORE    |
| 4  | 83          | 15       | TALOGA                   | 18          | 25       | HAMMON                 | 2.90              | 23   | OKEENE       | 2.90              | OKEENE       |
| 5  | 89          | 13       | BRISTOW                  | 21<br>21    | 26<br>27 | GUTHRIE<br>GUTHRIE     | 1.75              | 23   | WEWOKA       | 2.65              | WELTY        |
| 6  | 87          | 14       | STILWELL                 | 25          | 3        | HANNA                  | 2.36              | 23   | CLAYTON      | 2.69              | MARBLE CITY  |
| 7  | 87          | 16       | FREDERICK                | 21<br>21    | 25<br>26 | ANADARKO<br>ANADARKO   | .78               | 23   | ALTUS DAM    | .78               | ALTUS DAM    |
| 8  | 87<br>87    | 15<br>14 | CENTRAHOMA<br>TISHOMINGO | 23          | 4        | CENTRAHOMA             | 2.39              | 23   | MCGEE CREEK  | 3.18              | ATOKA DAM    |
| 9  | 86<br>86    | 13<br>1  | IDABEL<br>WISTER         | 20          | 25       | POTEAU                 | 2.61              | 23   | IDABEL       | 2.80              | IDABEL       |

**TABLE OF 1998/1999 COMPARISONS**

**NOVEMBER  
Temperature (°F)**

**NOVEMBER  
Precipitation (in.)**

| <b>Station</b>    | <b>1998</b> | <b>1999</b> | <b>1998</b> | <b>1999</b> |
|-------------------|-------------|-------------|-------------|-------------|
| Arnett            | 48.7        | 53.0        | 3.38        | 0.00        |
| Enid              | 50.6        | 56.3        | 4.86        | 0.29        |
| Tulsa             | 53.4        | 57.6        | 1.72        | 1.32        |
| Elk City          | 50.9        | 55.2        | 2.89        | 0.04        |
| Oklahoma City     | 53.2        | 56.8        | 3.09        | 0.06        |
| McAlester         | 54.8        | 58.9        | 3.04        | 0.76        |
| Altus Irr Station | 52.3        | 56.2        | 2.30        | 0.11        |
| Ardmore           | 55.1        | 60.6        | 1.16        | 0.12        |
| Idabel            | 54.1        | 60.0        | 3.75        | 2.80        |

**EXTREMES**

| <b>VARIABLE</b>                  | <b>STATION</b> | <b>DIVISON</b> | <b>OBSERVATION</b> | <b>DATE</b> |
|----------------------------------|----------------|----------------|--------------------|-------------|
| Minimum temperature (°F)         | Gage           | 1              | 15                 | 24          |
|                                  | Ft. Supply     | 2              | 15                 | 23          |
|                                  | Ft. Supply     | 2              | 15                 | 24          |
| Maximum temperature (°F)         | Buffalo        | 1              | 89                 | 12          |
|                                  | Bristow        | 5              | 89                 | 13          |
| Maximum 24-hour<br>Precipitation | Claremore      | 3              | 2.95"              | 23          |

NOVEMBER 1999 SUMMARY FOR PANHANDLE DIVISION (CD1)

| NAME       | ID   | CD | MEAN TEMP | NUM OBS | DEV FROM NORM | MAX TEMP | DAY | MIN TEMP | DAY | HEAT DEG DAY | DEV FROM NORM | COOL DEG DAY | DEV FROM NORM | TOT PPT | NUM OBS | DEV FROM NORM | MAX 24-HR | DAY |
|------------|------|----|-----------|---------|---------------|----------|-----|----------|-----|--------------|---------------|--------------|---------------|---------|---------|---------------|-----------|-----|
| ARNETT     | 332  | 1  | 53.0      | 30      | 7.3           | 82       | 19  | 24       | 26  | 359          | -221          | 0            | 0             | 0.000   | 30      | -1            | 0         | 30  |
| BEAVER     | 593  | 1  | 50.2      | 30      | 6.0           | 85       | 10  | 18       | 24  | 444          | -180          | 0            | 0             | 0.000   | 30      | -1            | 0         | 30  |
| BOISE CITY | 908  | 1  | 50.3      | 30      | 5.6           | 82       | 14  | 18       | 25  | 440          | -170          | 0            | 0             | 0.001   | 30      | -1            | 0         | 24  |
| BUFFALO    | 1243 | 1  | 54.0      | 30      | 6.9           | 89       | 12  | 19       | 25  | 335          | -202          | 6            | 6             | 0.000   | 30      | -2            | 0         | 30  |
| FARGO      | 3070 | 1  | *****     | 0*      | ****          | ****     | 0   | ****     | 0   | *****        | *****         | *****        | *****         | 0.001   | 30      | -1            | 0         | 1   |
| GAGE       | 3407 | 1  | 51.9      | 28*     | ****          | 84       | 13  | 15       | 24  | 371          | *****         | 4            | *****         | 0.002   | 28      | *****         | 0         | 23  |
| GATE       | 3489 | 1  | 53.5      | 28*     | ****          | 86       | 12  | 25       | 25  | 325          | *****         | 4            | *****         | 0.001   | 30      | -1            | 0         | 23  |
| GOODWELL   | 3628 | 1  | 51.3      | 30      | 7.5           | 85       | 10  | 21       | 26  | 413          | -224          | 0            | 0             | 0.000   | 30      | -1            | 0         | 30  |
| GUYMON     | 3835 | 1  | 52.0      | 29*     | ****          | 84       | 10  | 24       | 24  | 377          | *****         | 0            | *****         | 0.000   | 29      | *****         | 0         | 30  |
| HOOKER     | 4298 | 1  | 51.9      | 29      | 7.3           | 85       | 9   | 20       | 25  | 384          | -228          | 4            | 4             | 0.000   | 29      | *****         | 0         | 30  |
| KENTON     | 4766 | 1  | 49.3      | 28*     | ****          | 84       | 13  | 18       | 26  | 439          | *****         | 0            | *****         | 0.002   | 29      | *****         | 0         | 24  |
| LAVERNE    | 5045 | 1  | *****     | 0*      | ****          | ****     | 0   | ****     | 0   | *****        | *****         | *****        | *****         | 0.001   | 30      | -1            | 0         | 23  |
| RANGE      | 7412 | 1  | *****     | 0*      | ****          | ****     | 0   | ****     | 0   | *****        | *****         | *****        | *****         | 0.000   | 30      | *****         | 0         | 30  |
| REGNIER    | 7534 | 1  | *****     | 0*      | ****          | ****     | 0   | ****     | 0   | *****        | *****         | *****        | *****         | 0.030   | 30      | -1            | 0         | 24  |
| TURPIN     | 9017 | 1  | 50.2      | 22*     | ****          | 84       | 9   | 22       | 26  | 326          | *****         | 0            | *****         | 0.000   | 23      | *****         | 0         | 30  |

NOVEMBER 1999 SUMMARY FOR NORTH CENTRAL DIVISION (CD2)

| NAME         | ID   | CD | MEAN TEMP | NUM OBS | DEV FROM NORM | MAX TEMP | DAY | MIN TEMP | DAY | HEAT DEG DAY | DEV FROM NORM | COOL DEG DAY | DEV FROM NORM | TOT PPT | NUM OBS | DEV FROM NORM | MAX 24-HR | DAY |
|--------------|------|----|-----------|---------|---------------|----------|-----|----------|-----|--------------|---------------|--------------|---------------|---------|---------|---------------|-----------|-----|
| ALVA         | 193  | 2  | 54.2      | 30*     | ****          | 85       | 14  | 22       | 26  | 328          | *****         | 3            | *****         | 0.060   | 30      | *****         | 0         | 23  |
| VANCE AFB    | 302  | 2  | *****     | 0*      | ****          | ****     | 0   | ****     | 0   | *****        | *****         | *****        | *****         | 0.140   | 30      | *****         | 0         | 23  |
| BILLINGS     | 755  | 2  | 54.7      | 29      | 7.3           | 81       | 14  | 22       | 29  | 304          | -224          | 5            | 5             | 0.500   | 30      | -2            | 0         | 23  |
| BLACKWELL 2E | 818  | 2  | 54.8      | 30      | 7.2           | 81       | 14  | 27       | 26  | 306          | -216          | 0            | 0             | 0.451   | 30      | -2            | 0         | 23  |
| BRAMAN       | 1075 | 2  | *****     | 0*      | ****          | ****     | 0   | ****     | 0   | *****        | *****         | *****        | *****         | 1.130   | 30      | *****         | 1         | 23  |
| CEDARDALE    | 1620 | 2  | *****     | 0*      | ****          | ****     | 0   | ****     | 0   | *****        | *****         | *****        | *****         | 0.031   | 30      | *****         | 0         | 23  |
| CHEROKEE     | 1724 | 2  | 51.2      | 28*     | ****          | 84       | 14  | 25       | 26  | 387          | *****         | 0            | *****         | 0.850   | 29      | *****         | 1         | 23  |
| ENID         | 2912 | 2  | 56.3      | 30      | 7.7           | 80       | 15  | 25       | 25  | 267          | -225          | 6            | 6             | 0.290   | 30      | -2            | 0         | 22  |
| FT SUPPLY    | 3304 | 2  | 51.3      | 30      | 5.8           | 84       | 13  | 15       | 24  | 411          | -175          | 0            | 0             | 0.001   | 30      | -1            | 0         | 22  |
| FREEDOM      | 3358 | 2  | 51.1      | 29      | 4.1           | 86       | 13  | 17       | 25  | 405          | -136          | 2            | 2             | 0.020   | 30      | -1            | 0         | 22  |
| GREAT SALT P | 3740 | 2  | 54.8      | 30      | 8.0           | 84       | 14  | 26       | 25  | 309          | -237          | 3            | 3             | 1.540   | 30      | 0             | 2         | 23  |
| HARDY        | 3909 | 2  | *****     | 0*      | ****          | ****     | 0   | ****     | 0   | *****        | *****         | *****        | *****         | 0.501   | 30      | *****         | 0         | 23  |
| HELENA       | 4019 | 2  | 53.7      | 30      | 7.7           | 82       | 14  | 25       | 25  | 339          | -232          | 1            | 1             | 1.360   | 30      | 0             | 1         | 23  |
| JEFFERSON    | 4573 | 2  | 55.1      | 30      | 7.1           | 84       | 13  | 24       | 25  | 300          | -210          | 3            | 3             | 0.930   | 30      | -1            | 1         | 22  |
| LAMONT       | 5013 | 2  | *****     | 0*      | ****          | ****     | 0   | ****     | 0   | *****        | *****         | *****        | *****         | 0.330   | 30      | *****         | 0         | 23  |
| MEDFORD      | 5768 | 2  | *****     | 0*      | ****          | ****     | 0   | ****     | 0   | *****        | *****         | *****        | *****         | 1.041   | 30      | *****         | 1         | 21  |
| MORRISON     | 6065 | 2  | *****     | 0*      | ****          | ****     | 0   | ****     | 0   | *****        | *****         | *****        | *****         | 0.100   | 30      | *****         | 0         | 23  |
| MUTUAL       | 6139 | 2  | 53.3      | 30      | 7.0           | 84       | 14  | 21       | 25  | 353          | -212          | 0            | 0             | 0.000   | 30      | -1            | 0         | 30  |
| NEWKIRK      | 6278 | 2  | 54.6      | 30      | 6.6           | 80       | 14  | 26       | 26  | 315          | -195          | 4            | 4             | 0.300   | 30      | -2            | 0         | 23  |
| ORIENTA      | 6751 | 2  | *****     | 0*      | ****          | ****     | 0   | ****     | 0   | *****        | *****         | *****        | *****         | 1.060   | 30      | -1            | 1         | 23  |
| PERRY        | 7012 | 2  | 57.6      | 30      | 8.0           | 84       | 13  | 27       | 25  | 245          | -218          | 22           | 22            | 0.150   | 30      | -2            | 0         | 23  |
| PONCA CITY   | 7201 | 2  | 56.6      | 29      | 9.3           | 82       | 13  | 27       | 25  | 264          | -267          | 22           | 22            | 0.451   | 29      | *****         | 0         | 23  |
| RED ROCK     | 7505 | 2  | *****     | 0*      | ****          | ****     | 0   | ****     | 0   | *****        | *****         | *****        | *****         | 0.200   | 30      | -2            | 0         | 23  |
| WAYNOKA      | 9404 | 2  | 56.5      | 27*     | ****          | 85       | 14  | 23       | 25  | 231          | *****         | 1            | *****         | 0.000   | 27      | *****         | 0         | 28  |
| WOODWARD     | 9760 | 2  | *****     | 0*      | ****          | ****     | 0   | ****     | 0   | *****        | *****         | *****        | *****         | 0.001   | 30      | -1            | 0         | 23  |

**NOVEMBER 1999 SUMMARY FOR NORTHEAST DIVISION (CD3)**

| NAME         | ID   | CD | MEAN TEMP | NUM OBS | DEV       |          | MIN DAY | MIN TEMP | MIN DAY | HEAT DEG DAY | DEV FROM NORM | COOL DEG DAY | DEV FROM NORM | TOT PPT | NUM OBS | DEV       |           | DAY |
|--------------|------|----|-----------|---------|-----------|----------|---------|----------|---------|--------------|---------------|--------------|---------------|---------|---------|-----------|-----------|-----|
|              |      |    |           |         | FROM NORM | MAX TEMP |         |          |         |              |               |              |               |         |         | FROM NORM | MAX 24-HR |     |
| BARNSDALL    | 535  | 3  | 56.9      | 30      | 7.8       | 86       | 24      | 23       | 25      | 254          | -223          | 10           | 10            | 0.321   | 30      | -3        | 0         | 1   |
| BARTLESVILLE | 548  | 3  | 56.1      | 30      | 6.9       | 85       | 13      | 24       | 25      | 276          | -199          | 8            | 8             | 0.580   | 30      | -2        | 1         | 23  |
| BIXBY        | 782  | 3  | 56.3      | 30      | 7.9       | 84       | 14      | 29       | 3       | 263          | -236          | 3            | 3             | 2.631   | 30      | -1        | 2         | 22  |
| BURBANK      | 1256 | 3  | *****     | 0*      | ****      | ****     | 0       | ****     | 0       | *****        | *****         | *****        | *****         | 0.100   | 30      | -2        | 0         | 22  |
| CHELSEA      | 1717 | 3  | *****     | 0*      | ****      | ****     | 0       | ****     | 0       | *****        | *****         | *****        | *****         | 2.830   | 30      | *****     | 2         | 23  |
| CLAREMORE    | 1828 | 3  | 58.6      | 9*      | ****      | 80       | 7       | 27       | 3       | 63           | *****         | 6            | *****         | 3.090   | 30      | 0         | 3         | 23  |
| CLEVELAND 2  | 1902 | 3  | 58.9      | 27*     | ****      | 87       | 30      | 31       | 30      | 173          | *****         | 8            | *****         | 0.111   | 27      | *****     | 0         | 1   |
| FORAKER      | 3250 | 3  | *****     | 0*      | ****      | ****     | 0       | ****     | 0       | *****        | *****         | *****        | *****         | 0.220   | 30      | -2        | 0         | 23  |
| HOLLOW       | 4258 | 3  | *****     | 0*      | ****      | ****     | 0       | ****     | 0       | *****        | *****         | *****        | *****         | 0.000   | 30      | -4        | 0         | 30  |
| HOMINY       | 4289 | 3  | *****     | 0*      | ****      | ****     | 0       | ****     | 0       | *****        | *****         | *****        | *****         | 0.121   | 30      | -3        | 0         | 23  |
| KANSAS       | 4672 | 3  | 57.2      | 28*     | ****      | 80       | 13      | 30       | 3       | 224          | *****         | 7            | *****         | 2.771   | 29      | *****     | 2         | 1   |
| LENAPAH      | 5118 | 3  | *****     | 0*      | ****      | ****     | 0       | ****     | 0       | *****        | *****         | *****        | *****         | 1.630   | 30      | *****     | 1         | 23  |
| MANNFORD     | 5522 | 3  | 58.7      | 30      | 8.8       | 84       | 13      | 24       | 25      | 211          | -243          | 23           | 23            | 0.440   | 30      | -2        | 0         | 1   |
| MARAMEC      | 5540 | 3  | *****     | 0*      | ****      | ****     | 0       | ****     | 0       | *****        | *****         | *****        | *****         | 0.120   | 30      | -3        | 0         | 1   |
| NOWATA       | 6485 | 3  | 58.3      | 30      | 9.0       | 85       | 12      | 27       | 25      | 218          | -253          | 19           | 19            | 1.940   | 30      | -1        | 2         | 23  |
| PAWHUSKA     | 6935 | 3  | 56.6      | 30      | 8.0       | 83       | 14      | 24       | 25      | 265          | -228          | 14           | 14            | 0.710   | 30      | -2        | 1         | 23  |
| PAWNEE       | 6940 | 3  | *****     | 0*      | ****      | ****     | 0       | ****     | 0       | *****        | *****         | *****        | *****         | 0.440   | 30      | -2        | 0         | 1   |
| PRYOR        | 7309 | 3  | 57.4      | 28*     | ****      | 83       | 14      | 27       | 3       | 219          | *****         | 5            | *****         | 2.860   | 30      | -1        | 2         | 23  |
| RALSTON      | 7390 | 3  | 54.1      | 29      | 5.0       | 83       | 13      | 19       | 25      | 319          | -158          | 3            | 3             | 0.330   | 30      | -2        | 0         | 23  |
| SKIATOOK     | 8258 | 3  | *****     | 0*      | ****      | ****     | 0       | ****     | 0       | *****        | *****         | *****        | *****         | 1.970   | 30      | -1        | 2         | 23  |
| SPAVINAW     | 8380 | 3  | 60.3      | 30      | 9.0       | 82       | 14      | 31       | 24      | 172          | -243          | 31           | 31            | 1.840   | 30      | -2        | 1         | 23  |
| TULSA        | 8992 | 3  | 57.6      | 30      | 7.7       | 83       | 13      | 28       | 25      | 244          | -210          | 22           | 22            | 1.321   | 30      | -2        | 1         | 22  |
| UPPER SPAV   | 9101 | 3  | 56.6      | 27*     | ****      | 82       | 13      | 26       | 3       | 231          | *****         | 5            | *****         | 1.781   | 28      | *****     | 1         | 23  |
| VINITA       | 9203 | 3  | 57.6      | 30      | 9.1       | 81       | 13      | 29       | 25      | 239          | -257          | 18           | 18            | 2.610   | 30      | -1        | 2         | 23  |
| WAGONER      | 9247 | 3  | 58.8      | 30      | 7.8       | 83       | 13      | 29       | 3       | 210          | -216          | 24           | 24            | 1.840   | 30      | -2        | 2         | 22  |
| WANN         | 9298 | 3  | *****     | 0*      | ****      | ****     | 0       | ****     | 0       | *****        | *****         | *****        | *****         | 1.020   | 30      | *****     | 1         | 23  |
| WYNONA       | 9792 | 3  | *****     | 0*      | ****      | ****     | 0       | ****     | 0       | *****        | *****         | *****        | *****         | 0.140   | 30      | *****     | 0         | 1   |

**NOVEMBER 1999 SUMMARY FOR WEST CENTRAL DIVISION (CD4)**

| NAME        | ID   | CD | MEAN TEMP | NUM OBS | DEV       |          | MIN DAY | MIN TEMP | MIN DAY | HEAT DEG DAY | DEV FROM NORM | COOL DEG DAY | DEV FROM NORM | TOT PPT | NUM OBS | DEV       |           | DAY |
|-------------|------|----|-----------|---------|-----------|----------|---------|----------|---------|--------------|---------------|--------------|---------------|---------|---------|-----------|-----------|-----|
|             |      |    |           |         | FROM NORM | MAX TEMP |         |          |         |              |               |              |               |         |         | FROM NORM | MAX 24-HR |     |
| CANTON DAM  | 1445 | 4  | 54.0      | 30      | 7.0       | 81       | 14      | 23       | 25      | 334          | -207          | 2            | 2             | 1.940   | 30      | 0         | 2         | 23  |
| CLINTON     | 1909 | 4  | 53.8      | 30      | 4.3       | 81       | 13      | 24       | 25      | 335          | -130          | 0            | 0             | 1.381   | 30      | 0         | 1         | 23  |
| COLONY      | 2039 | 4  | *****     | 0*      | ****      | ****     | 0       | ****     | 0       | *****        | *****         | *****        | *****         | 0.370   | 30      | *****     | 0         | 23  |
| CORDELL     | 2125 | 4  | 54.8      | 30      | 5.6       | 80       | 14      | 26       | 26      | 306          | -169          | 0            | 0             | 1.270   | 30      | 0         | 1         | 23  |
| ELK CITY    | 2849 | 4  | 55.2      | 29      | 6.6       | 82       | 13      | 28       | 25      | 283          | -209          | 0            | 0             | 0.040   | 29      | *****     | 0         | 23  |
| ERICK       | 2944 | 4  | 54.7      | 30      | 5.8       | 82       | 19      | 22       | 24      | 310          | -173          | 0            | 0             | 0.000   | 30      | -1        | 0         | 30  |
| GEARY       | 3497 | 4  | 55.2      | 30      | 6.7       | 79       | 13      | 26       | 23      | 296          | -199          | 2            | 2             | 0.000   | 30      | -2        | 0         | 30  |
| HAMMON      | 3871 | 4  | 52.0      | 30      | 5.5       | 82       | 13      | 18       | 25      | 392          | -167          | 0            | 0             | 0.000   | 30      | -2        | 0         | 30  |
| LEEDEY      | 5090 | 4  | *****     | 0*      | ****      | ****     | 0       | ****     | 0       | *****        | *****         | *****        | *****         | 0.000   | 30      | -2        | 0         | 30  |
| MACKIE      | 5463 | 4  | *****     | 0*      | ****      | ****     | 0       | ****     | 0       | *****        | *****         | *****        | *****         | 0.000   | 30      | *****     | 0         | 30  |
| MORAVIA     | 6035 | 4  | *****     | 0*      | ****      | ****     | 0       | ****     | 0       | *****        | *****         | *****        | *****         | 0.050   | 30      | -1        | 0         | 23  |
| OKEENE      | 6629 | 4  | 56.0      | 30      | 6.7       | 82       | 12      | 26       | 25      | 277          | -194          | 6            | 6             | 2.900   | 30      | 1         | 3         | 23  |
| RETROP      | 7565 | 4  | *****     | 0*      | ****      | ****     | 0       | ****     | 0       | *****        | *****         | *****        | *****         | 0.080   | 30      | *****     | 0         | 23  |
| REYDON      | 7579 | 4  | 55.1      | 30      | 7.5       | 82       | 13      | 23       | 25      | 302          | -221          | 4            | 4             | 0.000   | 30      | -1        | 0         | 30  |
| SAYRE       | 7952 | 4  | *****     | 0*      | ****      | ****     | 0       | ****     | 0       | *****        | *****         | *****        | *****         | 0.000   | 30      | -1        | 0         | 30  |
| SWEETWATER  | 8652 | 4  | *****     | 0*      | ****      | ****     | 0       | ****     | 0       | *****        | *****         | *****        | *****         | 0.000   | 30      | *****     | 0         | 30  |
| TALOGA      | 8708 | 4  | 52.9      | 30      | 5.5       | 83       | 15      | 19       | 25      | 363          | -166          | 0            | 0             | 0.050   | 30      | -2        | 0         | 23  |
| THOMAS      | 8815 | 4  | *****     | 0*      | ****      | ****     | 0       | ****     | 0       | *****        | *****         | *****        | *****         | 1.260   | 30      | *****     | 1         | 23  |
| VICI        | 9172 | 4  | *****     | 0*      | ****      | ****     | 0       | ****     | 0       | *****        | *****         | *****        | *****         | 2.100   | 30      | 1         | 1         | 8   |
| WATONGA     | 9364 | 4  | 56.1      | 30      | 7.7       | 81       | 13      | 25       | 25      | 278          | -221          | 10           | 10            | 1.610   | 30      | 0         | 2         | 22  |
| WEATHERFORD | 9422 | 4  | 54.6      | 28*     | ****      | 80       | 11      | 27       | 25      | 292          | *****         | 1            | *****         | 0.730   | 28      | *****     | 1         | 22  |

## NOVEMBER 1999 SUMMARY FOR CENTRAL DIVISION (CD5)

| NAME          | ID   | CD | MEAN TEMP | NUM OBS | DEV       |          | MIN TEMP | DAY  | HEAT    |           | DEV     |           | COOL    |           | TOT PPT | NUM OBS | DEV       |    | DAY |
|---------------|------|----|-----------|---------|-----------|----------|----------|------|---------|-----------|---------|-----------|---------|-----------|---------|---------|-----------|----|-----|
|               |      |    |           |         | FROM NORM | MAX TEMP |          |      | DEG DAY | FROM NORM | DEG DAY | FROM NORM | DEG DAY | FROM NORM |         |         | MAX 24-HR |    |     |
| AMBER         | 200  | 5  | ****      | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 0.080     | 30      | ****    | 0         | 1  |     |
| ARCADIA       | 288  | 5  | ****      | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 0.030     | 30      | ****    | 0         | 1  |     |
| BLANCHARD     | 830  | 5  | 59.3      | 30      | 8.0       | 82       | 13       | 28   | 25      | 192       | -222    | 20        | 20      | 0.400     | 30      | -2      | 0         | 1  |     |
| BRISTOW       | 1144 | 5  | 58.6      | 30      | 8.1       | 89       | 13       | 26   | 25      | 217       | -223    | 25        | 20      | 1.520     | 30      | -1      | 1         | 1  |     |
| CHANDLER      | 1684 | 5  | 57.5      | 30      | 6.6       | 84       | 14       | 25   | 26      | 241       | -183    | 17        | 17      | 0.120     | 30      | -2      | 0         | 1  |     |
| CHICKASHA EXP | 1750 | 5  | 57.5      | 30      | 6.7       | 84       | 13       | 23   | 25      | 227       | -200    | 2         | 2       | 0.520     | 30      | -1      | 0         | 1  |     |
| COX CITY      | 2196 | 5  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 0.650     | 30      | ****    | 1         | 1  |     |
| CRESCENT      | 2242 | 5  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 0.250     | 30      | ****    | 0         | 23 |     |
| CUSHING       | 2318 | 5  | 58.3      | 30      | 9.0       | 82       | 14       | 30   | 25      | 225       | -247    | 23        | 23      | 0.150     | 30      | -2      | 0         | 1  |     |
| EDMOND        | 2788 | 5  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 0.000     | 30      | ****    | 0         | 30 |     |
| EL RENO       | 2818 | 5  | 55.9      | 30      | 7.0       | 81       | 14       | 26   | 26      | 278       | -205    | 6         | 6       | 0.100     | 30      | -2      | 0         | 23 |     |
| GUTHRIE       | 3821 | 5  | 58.5      | 27 *    | ****      | 83       | 13       | 21   | 27      | 193       | *****   | 16        | *****   | 1.480     | 28      | ****    | 1         | 1  |     |
| HENNESSEY     | 4055 | 5  | 55.0      | 26 *    | ****      | 80       | 13       | 25   | 25      | 262       | *****   | 2         | *****   | 0.200     | 28      | ****    | 0         | 23 |     |
| INGALLS       | 4489 | 5  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 0.850     | 30      | ****    | 1         | 1  |     |
| KINGFISHER    | 4861 | 5  | 56.3      | 30      | 6.7       | 85       | 13       | 23   | 25      | 276       | -186    | 16        | 16      | 0.490     | 30      | -1      | 0         | 23 |     |
| KONAWA        | 4915 | 5  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 0.670     | 30      | -2      | 1         | 23 |     |
| MARSHALL      | 5589 | 5  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 0.260     | 30      | -2      | 0         | 23 |     |
| MEEKER        | 5779 | 5  | 55.0      | 29      | 4.6       | 87       | 17       | 25   | 26      | 295       | -144    | 5         | 5       | 0.360     | 29      | ****    | 0         | 1  |     |
| MULHALL       | 6110 | 5  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 0.280     | 30      | ****    | 0         | 1  |     |
| NORMAN NWS    | 6386 | 5  | 56.8      | 30      | 5.7       | 81       | 13       | 25   | 25      | 253       | -165    | 7         | 7       | 0.021     | 30      | -2      | 0         | 22 |     |
| OKEMAH        | 6638 | 5  | 60.0      | 30      | 8.8       | 84       | 13       | 31   | 3       | 176       | -239    | 27        | 27      | 2.090     | 30      | -1      | 1         | 23 |     |
| OKLAHOMA CTY  | 6659 | 5  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 0.170     | 30      | ****    | 0         | 1  |     |
| OKLAHOMA CTY  | 6661 | 5  | 56.8      | 30      | 7.2       | 81       | 13       | 26   | 25      | 256       | -207    | 8         | 8       | 0.060     | 30      | -2      | 0         | 22 |     |
| PERKINS       | 7003 | 5  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 0.240     | 30      | -2      | 0         | 1  |     |
| PIEDMONT      | 7068 | 5  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 0.090     | 30      | ****    | 0         | 23 |     |
| PRAGUE        | 7264 | 5  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 0.950     | 30      | -2      | 1         | 23 |     |
| SEMINOLE      | 8042 | 5  | 56.8      | 13 *    | ****      | 79       | 7        | 29   | 3       | 108       | *****   | 1         | *****   | 0.960     | 15      | ****    | 1         | 22 |     |
| SHAWNEE       | 8110 | 5  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 0.850     | 30      | -2      | 1         | 23 |     |
| STELLA        | 8479 | 5  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 0.371     | 30      | ****    | 0         | 1  |     |
| STILLWATER    | 8501 | 5  | 56.0      | 30      | 7.5       | 84       | 13       | 26   | 26      | 279       | -216    | 8         | 8       | 0.300     | 30      | -2      | 0         | 1  |     |
| STROUD        | 8563 | 5  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 0.430     | 30      | ****    | 0         | 23 |     |
| TECUMSEH      | 8751 | 5  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 0.500     | 30      | ****    | 1         | 23 |     |
| TROUSDALE     | 8960 | 5  | 57.1      | 30 *    | ****      | 82       | 14       | 28   | 25      | 243       | *****   | 6         | *****   | 0.870     | 30      | ****    | 1         | 1  |     |
| UNION CITY    | 9086 | 5  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 0.080     | 30      | -2      | 0         | 1  |     |
| WELTY         | 9479 | 5  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 2.650     | 30      | ****    | 2         | 1  |     |
| WEWOKA        | 9575 | 5  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 2.100     | 30      | -1      | 2         | 23 |     |

## NOVEMBER 1999 SUMMARY FOR EAST CENTRAL DIVISION (CD6)

| NAME         | ID   | CD | MEAN TEMP | NUM OBS | DEV       |          | MIN TEMP | DAY  | HEAT    |           | DEV     |           | COOL    |           | TOT PPT | NUM OBS | DEV       |    | DAY |
|--------------|------|----|-----------|---------|-----------|----------|----------|------|---------|-----------|---------|-----------|---------|-----------|---------|---------|-----------|----|-----|
|              |      |    |           |         | FROM NORM | MAX TEMP |          |      | DEG DAY | FROM NORM | DEG DAY | FROM NORM | DEG DAY | FROM NORM |         |         | MAX 24-HR |    |     |
| ASHLAND      | 364  | 6  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 0.830     | 30      | ****    | 1         | 23 |     |
| BEGGS        | 631  | 6  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 1.880     | 30      | ****    | 1         | 23 |     |
| CALVIN       | 1391 | 6  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 0.670     | 30      | -2      | 1         | 19 |     |
| CHECOTAH     | 1711 | 6  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 1.090     | 30      | -2      | 1         | 23 |     |
| CLAYTON      | 1858 | 6  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 2.400     | 30      | ****    | 2         | 23 |     |
| DEWAR        | 2485 | 6  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 1.850     | 30      | -1      | 1         | 23 |     |
| DUSTIN       | 2690 | 6  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 1.861     | 30      | ****    | 1         | 23 |     |
| EUFAULA      | 2993 | 6  | 60.7      | 30      | 8.0       | 82       | 13       | 37   | 30      | 163       | -212    | 35        | 30      | 1.980     | 30      | -1      | 1         | 1  |     |
| HANNA        | 3884 | 6  | 57.8      | 30      | 6.1       | 83       | 13       | 25   | 3       | 226       | -173    | 10        | 10      | 1.960     | 30      | -2      | 1         | 1  |     |
| HASKELL      | 3956 | 6  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 2.050     | 30      | -1      | 1         | 23 |     |
| LAKE EUFAULA | 4975 | 6  | 58.4      | 29 *    | ****      | 81       | 15       | 34   | 3       | 207       | *****   | 15        | *****   | 1.630     | 30      | ****    | 1         | 2  |     |
| LYONS        | 5437 | 6  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 2.400     | 30      | -1      | 1         | 23 |     |
| MARBLE CITY  | 5546 | 6  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 2.690     | 30      | ****    | 2         | 23 |     |
| MCALESTER    | 5664 | 6  | 58.9      | 30      | 7.1       | 83       | 14       | 26   | 3       | 211       | -193    | 27        | 20      | 0.762     | 30      | -3      | 1         | 22 |     |
| MCCURTAIN    | 5693 | 6  | 59.7      | 30      | 7.0       | 84       | 13       | 28   | 3       | 197       | -179    | 39        | 33      | 1.880     | 30      | -2      | 2         | 23 |     |
| MUSKOGEE     | 6130 | 6  | 57.6      | 29      | 6.7       | 84       | 13       | 28   | 3       | 224       | -203    | 10        | 10      | 0.860     | 30      | -3      | 1         | 22 |     |
| OKMULGEE     | 6670 | 6  | 56.8      | 30      | 7.3       | 84       | 13       | 27   | 30      | 254       | -212    | 7         | 7       | 2.280     | 30      | -1      | 2         | 22 |     |
| OKTAHA       | 6678 | 6  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 1.240     | 30      | ****    | 1         | 23 |     |
| SALLISAW     | 7862 | 6  | 58.3      | 30      | 6.7       | 82       | 14       | 33   | 3       | 211       | -192    | 9         | 9       | 2.030     | 30      | -2      | 1         | 23 |     |
| SCIPIO       | 7979 | 6  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 2.080     | 30      | ****    | 1         | 23 |     |
| SHORT        | 8170 | 6  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 2.530     | 30      | ****    | 1         | 1  |     |
| STILWELL     | 8506 | 6  | 57.5      | 30      | 7.5       | 87       | 14       | 26   | 3       | 230       | -221    | 6         | 6       | 2.300     | 30      | -1      | 1         | 23 |     |
| TAHLEQUAH    | 8677 | 6  | 57.5      | 30      | 7.3       | 81       | 13       | 28   | 3       | 231       | -218    | 6         | 1       | 2.120     | 30      | -1      | 1         | 23 |     |
| WEBBERS FALL | 9445 | 6  | 57.4      | 30      | 7.2       | 84       | 14       | 29   | 4       | 236       | -209    | 8         | 8       | 1.780     | 30      | -2      | 1         | 23 |     |
| WETUMKA      | 9571 | 6  | *****     | 0 *     | ****      | ****     | 0        | **** | 0       | *****     | *****   | *****     | *****   | 1.751     | 30      | -1      | 1         | 23 |     |



## NOVEMBER 1999 SUMMARY FOR SOUTHWEST DIVISION (CD7)

| NAME        | ID   | CD | MEAN TEMP | NUM OBS | DEV       |          | MIN DAY | MAX DAY | HEAT DEG DAY | DEV FROM NORM | COOL DEG DAY | DEV FROM NORM | TOT PPT | NUM OBS | DEV FROM NORM | MAX 24-HR | DAY |    |
|-------------|------|----|-----------|---------|-----------|----------|---------|---------|--------------|---------------|--------------|---------------|---------|---------|---------------|-----------|-----|----|
|             |      |    |           |         | FROM NORM | MAX TEMP |         |         |              |               |              |               |         |         |               |           |     |    |
| ALTUS       | 179  | 7  | 56.2      | 30      | 4.1       | 83       | 18      | 24      | 25           | 266           | -122         | 1             | 1       | 0.110   | 30            | -1        | 0   | 1  |
| ALTUS DAM   | 184  | 7  | 57.1      | 30      | 7.5       | 82       | 14      | 25      | 25           | 244           | -219         | 6             | 6       | 0.780   | 30            | -1        | 1   | 23 |
| ANADARKO    | 224  | 7  | 54.0      | 30      | 4.1       | 81       | 14      | 21      | 26           | 332           | -122         | 1             | 1       | 0.130   | 30            | -2        | 0   | 23 |
| APACHE      | 260  | 7  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 0.000   | 30            | -2        | 0   | 30 |
| ALTUS AFB   | 447  | 7  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 0.010   | 30            | ****      | 0   | 1  |
| CARNEGIE    | 1504 | 7  | 56.3      | 30      | 6.2       | 82       | 11      | 26      | 25           | 263           | -184         | 2             | 2       | 0.081   | 30            | -2        | 0   | 22 |
| CHATTANOOGA | 1706 | 7  | 55.5      | 27 *    | ****      | 83       | 19      | 26      | 26           | 258           | *****        | 0             | *****   | 0.000   | 27            | ****      | 0   | 30 |
| DUNCAN 11 W | 2668 | 7  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 0.580   | 30            | ****      | 1   | 1  |
| FREDERICK   | 3353 | 7  | 57.3      | 28 *    | ****      | 87       | 16      | 31      | 30           | 221           | *****        | 4             | *****   | 0.000   | 30            | -2        | 0   | 30 |
| HEADRICK    | 3998 | 7  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 0.020   | 30            | ****      | 0   | 23 |
| HOBART      | 4204 | 7  | 56.3      | 28 *    | ****      | 80       | 18      | 28      | 25           | 248           | *****        | 3             | *****   | 0.291   | 29            | ****      | 0   | 23 |
| HOLLIS      | 4249 | 7  | 56.2      | 29      | 5.6       | 84       | 18      | 23      | 25           | 255           | -178         | 0             | 0       | 0.000   | 29            | ****      | 0   | 30 |
| LAWTON      | 5063 | 7  | 56.8      | 30      | 6.3       | 82       | 14      | 30      | 27           | 248           | -184         | 4             | 4       | 0.080   | 30            | -2        | 0   | 1  |
| LOOKEBA     | 5329 | 7  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 0.200   | 30            | -2        | 0   | 22 |
| MANGUM      | 5509 | 7  | 55.4      | 29      | 4.6       | 83       | 19      | 25      | 26           | 280           | -147         | 1             | 1       | 0.000   | 30            | -1        | 0   | 30 |
| RANDLETT    | 7403 | 7  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 0.490   | 30            | ****      | 0   | 1  |
| ROOSEVELT   | 7727 | 7  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 0.060   | 30            | -1        | 0   | 23 |
| SEDAN       | 8016 | 7  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 0.310   | 30            | ****      | 0   | 19 |
| SNYDER      | 8299 | 7  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 0.221   | 30            | -1        | 0   | 1  |
| VINSON      | 9212 | 7  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 0.080   | 30            | -1        | 0   | 23 |
| WALTERS     | 9278 | 7  | 56.0      | 30      | 3.6       | 80       | 15      | 28      | 25           | 270           | -114         | 1             | 1       | 0.630   | 30            | -1        | 1   | 1  |
| WICHITA MT  | 9629 | 7  | 56.1      | 25 *    | ****      | 83       | 10      | 23      | 26           | 224           | *****        | 2             | *****   | 0.251   | 26            | ****      | 0   | 1  |
| WILLOW      | 9668 | 7  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 0.500   | 30            | ****      | 1   | 23 |

## NOVEMBER 1999 SUMMARY FOR SOUTH CENTRAL DIVISION (CD8)

| NAME         | ID   | CD | MEAN TEMP | NUM OBS | DEV       |          | MIN DAY | MAX DAY | HEAT DEG DAY | DEV FROM NORM | COOL DEG DAY | DEV FROM NORM | TOT PPT | NUM OBS | DEV FROM NORM | MAX 24-HR | DAY |    |
|--------------|------|----|-----------|---------|-----------|----------|---------|---------|--------------|---------------|--------------|---------------|---------|---------|---------------|-----------|-----|----|
|              |      |    |           |         | FROM NORM | MAX TEMP |         |         |              |               |              |               |         |         |               |           |     |    |
| ADA          | 17   | 8  | 58.7      | 30      | 6.6       | 82       | 14      | 30      | 25           | 209           | -185         | 19            | 13      | 0.860   | 30            | -2        | 1   | 23 |
| ARDMORE      | 292  | 8  | 60.6      | 29      | 6.1       | 85       | 15      | 34      | 2            | 159           | -164         | 30            | 23      | 0.120   | 29            | ****      | 0   | 23 |
| ALLEN        | 147  | 8  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 0.750   | 30            | ****      | 1   | 23 |
| ATOKA DAM    | 394  | 8  | 59.0      | 19 *    | ****      | 84       | 15      | 27      | 3            | 123           | *****        | 9             | *****   | 3.181   | 19            | ****      | 2   | 23 |
| BOKCHITO     | 917  | 8  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 2.000   | 30            | ****      | 2   | 23 |
| CANEY        | 1437 | 8  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 0.610   | 30            | ****      | 1   | 23 |
| CENTRAHOMA   | 1648 | 8  | 59.2      | 28 *    | ****      | 87       | 15      | 23      | 4            | 178           | *****        | 16            | *****   | 0.750   | 28            | ****      | 1   | 23 |
| CHICKASAW    | 1745 | 8  | 57.6      | 30      | 7.0       | 83       | 15      | 26      | 3            | 227           | -206         | 6             | 6       | 0.590   | 30            | -2        | 0   | 23 |
| COLEMAN      | 2011 | 8  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 1.630   | 30            | ****      | 2   | 23 |
| COMANCHE     | 2054 | 8  | 58.9      | 30 *    | ****      | 81       | 14      | 33      | 24           | 190           | *****        | 8             | *****   | 0.000   | 30            | -2        | 0   | 30 |
| DAISY        | 2354 | 8  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 1.760   | 30            | -2        | 2   | 23 |
| DUNCAN       | 2660 | 8  | 57.7      | 28 *    | ****      | 80       | 15      | 29      | 25           | 208           | *****        | 3             | *****   | 0.120   | 28            | ****      | 0   | 1  |
| ELMORE CITY  | 2872 | 8  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 0.120   | 30            | ****      | 0   | 23 |
| GRADY        | 3688 | 8  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 0.000   | 30            | ****      | 0   | 30 |
| HEALDTON     | 4001 | 8  | 57.5      | 30      | 5.2       | 84       | 15      | 28      | 4            | 230           | -156         | 6             | 6       | 0.560   | 30            | -2        | 1   | 23 |
| HENNEPIN     | 4052 | 8  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 1.050   | 30            | ****      | 1   | 1  |
| KETCHUM RAN  | 4780 | 8  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 0.220   | 30            | ****      | 0   | 1  |
| KINGSTON     | 4865 | 8  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 0.800   | 30            | -2        | 1   | 22 |
| LEHIGH       | 5108 | 8  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 1.651   | 30            | ****      | 1   | 23 |
| LINDSAY      | 5216 | 8  | 55.5      | 30      | 4.3       | 80       | 14      | 25      | 25           | 285           | -126         | 2             | 2       | 0.000   | 30            | -2        | 0   | 30 |
| LOCO         | 5247 | 8  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 0.590   | 30            | ****      | 1   | 1  |
| MADILL       | 5468 | 8  | 59.3      | 29      | 5.5       | 85       | 15      | 29      | 3            | 187           | -156         | 20            | 14      | 1.000   | 29            | ****      | 1   | 23 |
| MARIETTA     | 5563 | 8  | 58.0      | 30      | 4.4       | 84       | 15      | 25      | 4            | 218           | -131         | 8             | 1       | 0.750   | 30            | -2        | 0   | 23 |
| MARLOW       | 5581 | 8  | 58.4      | 30      | 6.9       | 82       | 10      | 24      | 25           | 211           | -194         | 13            | 13      | 0.470   | 30            | -2        | 0   | 1  |
| MCGEE CREEK  | 5713 | 8  | 58.6      | 30 *    | ****      | 85       | 15      | 28      | 3            | 207           | *****        | 14            | *****   | 2.390   | 30            | ****      | 2   | 23 |
| PAULS VALLEY | 6926 | 8  | 56.0      | 30      | 3.9       | 83       | 13      | 28      | 25           | 275           | -118         | 3             | 3       | 1.440   | 30            | -1        | 1   | 1  |
| PONTOTOC     | 7214 | 8  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 0.860   | 30            | -2        | 1   | 22 |
| TISHOMINGO   | 8884 | 8  | 57.9      | 27 *    | ****      | 87       | 14      | 25      | 3            | 212           | *****        | 21            | *****   | 0.810   | 30            | -2        | 1   | 18 |
| TUSSY        | 9032 | 8  | *****     | 0 *     | ****      | ****     | 0       | ****    | 0            | *****         | *****        | *****         | *****   | 0.000   | 30            | ****      | 0   | 30 |
| WAURIKA      | 9395 | 8  | 59.3      | 30      | 6.2       | 83       | 14      | 29      | 25           | 182           | -181         | 10            | 4       | 0.000   | 30            | -2        | 0   | 30 |

NOVEMBER 1999 SUMMARY FOR SOUTHEAST DIVISION (CD9)

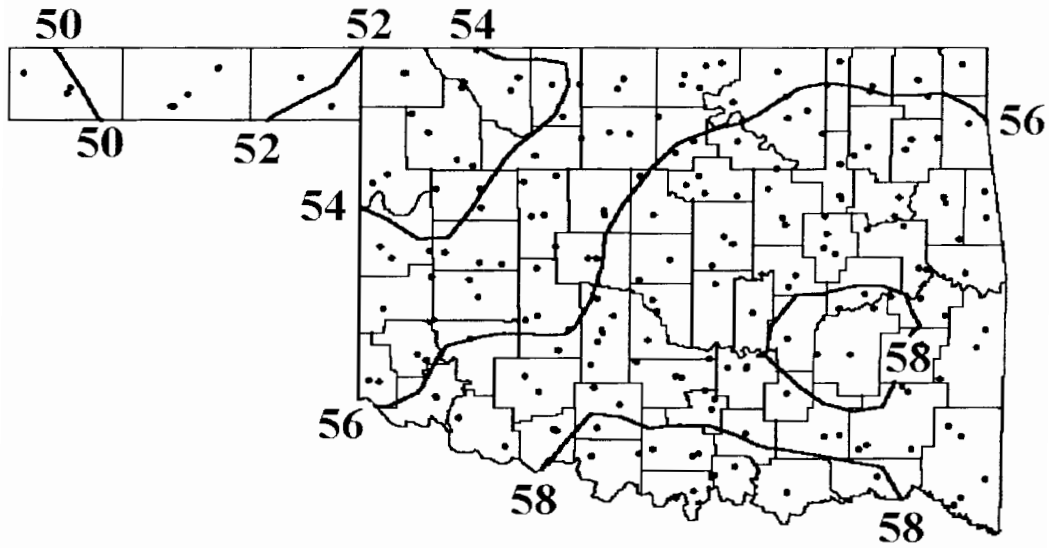
| NAME       | ID   | CD | MEAN TEMP | NUM OBS | DEV FROM NORM | MAX TEMP | DAY | MIN TEMP | DAY | HEAT DEG DAY | DEV FROM NORM | COOL DEG DAY | DEV FROM NORM | TOT PPT | NUM OBS | DEV FROM NORM | MAX 24-HR | DAY |
|------------|------|----|-----------|---------|---------------|----------|-----|----------|-----|--------------|---------------|--------------|---------------|---------|---------|---------------|-----------|-----|
| ANTLERS    | 256  | 9  | 57.7      | 30      | 4.7           | 84       | 14  | 25       | 4   | 225          | -142          | 5            | -1            | 1.600   | 30      | -2            | 1         | 22  |
| BATTIEST   | 567  | 9  | 57.7      | 29 *    | ****          | 85       | 15  | 31       | 4   | 215          | *****         | 2            | *****         | 1.200   | 30      | *****         | 1         | 23  |
| BENGAL     | 670  | 9  | *****     | 0 *     | ****          | ****     | 0   | ****     | 0   | *****        | *****         | *****        | *****         | 2.780   | 30      | *****         | 2         | 23  |
| BROKEN BOW | 1162 | 9  | *****     | 0 *     | ****          | ****     | 0   | ****     | 0   | *****        | *****         | *****        | *****         | 2.060   | 30      | -2            | 2         | 23  |
| CARNASAW   | 1499 | 9  | *****     | 0 *     | ****          | ****     | 0   | ****     | 0   | *****        | *****         | *****        | *****         | 1.871   | 30      | -3            | 2         | 23  |
| CARTER TWR | 1544 | 9  | *****     | 0 *     | ****          | ****     | 0   | ****     | 0   | *****        | *****         | *****        | *****         | 1.140   | 30      | -3            | 1         | 23  |
| FANSHAWE   | 3065 | 9  | *****     | 0 *     | ****          | ****     | 0   | ****     | 0   | *****        | *****         | *****        | *****         | 1.650   | 30      | -3            | 1         | 23  |
| HEAVENER   | 4008 | 9  | *****     | 0 *     | ****          | ****     | 0   | ****     | 0   | *****        | *****         | *****        | *****         | 1.850   | 30      | -2            | 2         | 23  |
| IDABEL     | 4451 | 9  | 60.0      | 30      | 7.5           | 86       | 13  | 28       | 4   | 171          | -209          | 21           | 16            | 2.801   | 30      | -1            | 3         | 23  |
| PAGE       | 6842 | 9  | 57.8      | 25 *    | ****          | 83       | 15  | 25       | 3   | 190          | *****         | 9            | *****         | 1.930   | 25      | *****         | 2         | 23  |
| POTEAU     | 7254 | 9  | 57.0      | 30 *    | ****          | 84       | 14  | 20       | 25  | 246          | *****         | 7            | *****         | 1.441   | 30      | *****         | 1         | 22  |
| SPIRO      | 8416 | 9  | *****     | 0 *     | ****          | ****     | 0   | ****     | 0   | *****        | *****         | *****        | *****         | 2.040   | 30      | -2            | 1         | 23  |
| TUSKAHOMA  | 9023 | 9  | 59.1      | 30      | 6.2           | 85       | 14  | 23       | 3   | 204          | -166          | 26           | 20            | 2.050   | 30      | -2            | 2         | 23  |
| VALLIANT   | 9118 | 9  | *****     | 0 *     | ****          | ****     | 0   | ****     | 0   | *****        | *****         | *****        | *****         | 1.370   | 30      | -3            | 1         | 23  |
| WILBURTON  | 9634 | 9  | 57.0      | 30      | 5.7           | 84       | 14  | 24       | 3   | 245          | -170          | 6            | 6             | 1.460   | 30      | -3            | 1         | 22  |
| WISTER     | 9724 | 9  | 56.8      | 30 *    | ****          | 86       | 1   | 24       | 3   | 250          | *****         | 2            | *****         | 1.410   | 30      | *****         | 1         | 23  |

NOVEMBER 1999 CLIMATE DIVISION SUMMARY

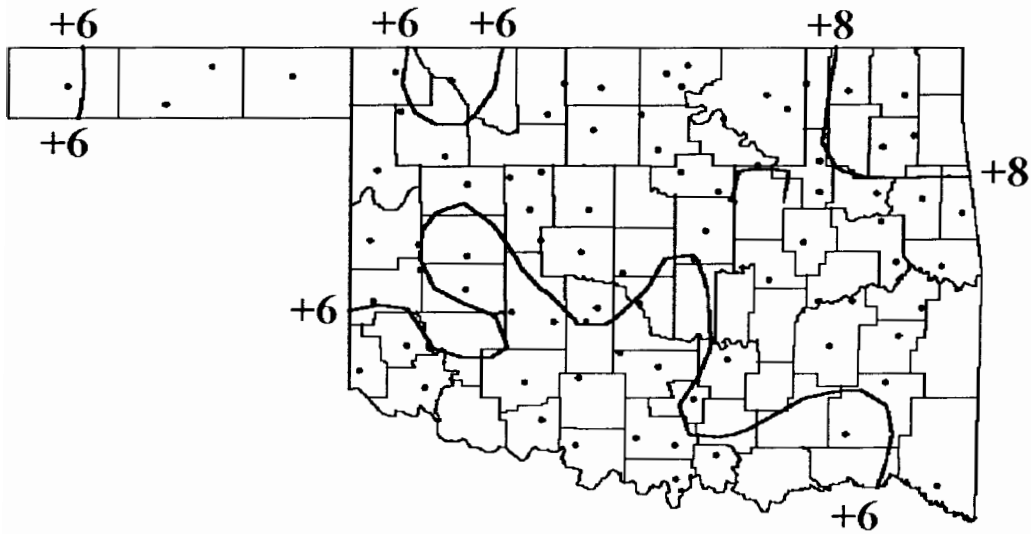
| CD | MEAN TEMP | NUM OBS | DEV FROM NORM | MAX TEMP | DAY | MIN TEMP | DAY | HEAT DEG DAY | DEV FROM NORM | COOL DEG DAY | DEV FROM NORM | TOT PPT | NUM OBS | DEV FROM NORM | MAX 24-HR | DAY |
|----|-----------|---------|---------------|----------|-----|----------|-----|--------------|---------------|--------------|---------------|---------|---------|---------------|-----------|-----|
| 1  | 51.8      | 7       | 6.7           | 89       | 12  | 15       | 24  | 393          | -205          | 1            | 1             | 0.000   | 10      | -1            | 0         | 24  |
| 2  | 54.5      | 13      | 7.0           | 86       | 13  | 15       | 24  | 319          | -208          | 5            | 5             | 0.460   | 22      | -1            | 2         | 23  |
| 3  | 57.4      | 11      | 8.1           | 87       | 30  | 19       | 25  | 243          | -229          | 16           | 16            | 1.210   | 24      | -2            | 3         | 23  |
| 4  | 54.5      | 11      | 6.3           | 83       | 15  | 18       | 25  | 316          | -187          | 2            | 2             | 0.680   | 19      | -1            | 3         | 23  |
| 5  | 57.3      | 13      | 7.0           | 89       | 13  | 21       | 27  | 243          | -198          | 13           | 13            | 0.570   | 32      | -2            | 2         | 23  |
| 6  | 58.2      | 11      | 7.1           | 87       | 14  | 25       | 3   | 217          | -202          | 15           | 13            | 1.800   | 25      | -2            | 2         | 23  |
| 7  | 56.0      | 8       | 5.3           | 87       | 16  | 21       | 26  | 269          | -161          | 2            | 2             | 0.230   | 19      | -1            | 1         | 23  |
| 8  | 58.2      | 12      | 5.7           | 87       | 14  | 23       | 4   | 215          | -166          | 11           | 8             | 0.800   | 25      | -2            | 2         | 23  |
| 9  | 57.9      | 7       | 5.5           | 86       | 1   | 20       | 25  | 222          | -161          | 10           | 6             | 1.780   | 15      | -2            | 3         | 23  |

MESONET MONTHLY SUMMARY FOR NOVEMBER 1999

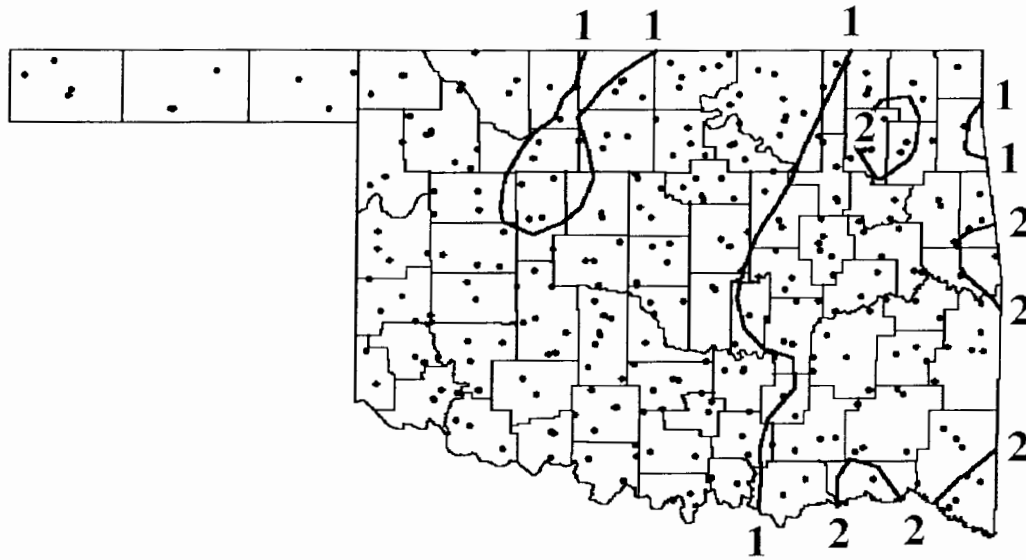
| NAME          | MEAN MAX |      |     | MIN  |     |     | TOT MAX |       |       | NAME | MEAN MAX      |      |      | MIN |      |     | TOT MAX |     |       |       |     |
|---------------|----------|------|-----|------|-----|-----|---------|-------|-------|------|---------------|------|------|-----|------|-----|---------|-----|-------|-------|-----|
|               | TEMP     | TEMP | DAY | TEMP | DAY | HDD | COO     | PPT   | 24-HR |      | DAY           | TEMP | TEMP | DAY | TEMP | DAY | HDD     | COO | PPT   | 24-HR | DAY |
| Arnett        | 54.0     | 83   | 13  | 24   | 24  | 331 | 2       | 0.00  | 0.00  | 1    | Goodwell      | 51.1 | 83   | 9   | 21   | 24  | 418     | 0   | 0.00  | 0.00  | 1   |
| Beaver        | 51.5     | 86   | 9   | 19   | 24  | 408 | 2       | 0.00  | 0.00  | 1    | Hooker        | 50.9 | 84   | 9   | 15   | 25  | 423     | 0   | 0.00  | 0.00  | 1   |
| Boise City    | 48.8     | 82   | 13  | 18   | 25  | 436 | 0       | 0.04  | 0.04  | 24   | Kenton        | 49.0 | 82   | 13  | 18   | 25  | 479     | 0   | 0.04  | 0.04  | 24  |
| Buffalo       | 52.1     | 85   | 11  | 19   | 25  | 389 | 3       | 0.00  | 0.00  | 1    | Slapout       | 53.0 | 84   | 9   | 20   | 25  | 362     | 4   | 0.00  | 0.00  | 1   |
| NORTH CENTRAL |          |      |     |      |     |     |         |       |       |      |               |      |      |     |      |     |         |     |       |       |     |
| Alva          | 53.5     | 85   | 13  | 22   | 24  | 347 | 2       | 0.15  | 0.12  | 22   | May Ranch     | 54.7 | 83   | 13  | 27   | 24  | 315     | 7   | 0.08  | 0.06  | 9   |
| Blackwell     | 54.6     | 80   | 11  | 26   | 25  | 315 | 3       | 0.46  | 0.45  | 22   | Medford       | 53.8 | 81   | 13  | 26   | 25  | 303     | 0   | 1.01  | 1.00  | 22  |
| Breckenridge  | 54.2     | 80   | 13  | 25   | 25  | 295 | 4       | 0.42  | 0.42  | 22   | Newkirk       | 55.3 | 81   | 13  | 27   | 24  | 301     | 10  | 0.38  | 0.37  | 22  |
| Cherokee      | 52.6     | 84   | 13  | 25   | 25  | 373 | 2       | 0.96  | 0.96  | 22   | Red Rock      | 55.9 | 82   | 13  | 23   | 25  | 288     | 15  | 0.04  | 0.02  | 22  |
| Fairview      | 54.8     | 83   | 13  | 26   | 25  | 315 | 9       | 1.70  | 1.70  | 22   | Seiling       | 53.5 | 83   | 12  | 22   | 25  | 350     | 4   | 0.02  | 0.02  | 22  |
| Freedom       | 53.6     | 84   | 13  | 20   | 24  | 346 | 4       | 0.03  | 0.02  | 9    | Woodward      | 54.9 | 83   | 13  | 23   | 24  | 312     | 9   | 0.00  | 0.00  | 1   |
| Lahoma        | 53.8     | 80   | 13  | 25   | 25  | 335 | 0       | 1.33  | 1.33  | 22   |               |      |      |     |      |     |         |     |       |       |     |
| NORTHEAST     |          |      |     |      |     |     |         |       |       |      |               |      |      |     |      |     |         |     |       |       |     |
| Bixby         | 56.8     | 84   | 13  | 29   | 3   | 232 | 10      | 1.70  | 1.67  | 22   | Miami         | 55.2 | 81   | 13  | 28   | 3   | 303     | 8   | 1.53  | 1.44  | 22  |
| Burbank       | 55.2     | 83   | 13  | 23   | 25  | 304 | 8       | 0.09  | 0.09  | 22   | Nowata        | 54.5 | 83   | 12  | 25   | 25  | 325     | 9   | 1.82  | 1.81  | 22  |
| Catoosa       | 57.6     | 83   | 12  | 29   | 25  | 219 | 18      | 2.08  | 1.90  | 22   | Pawnee        | 57.3 | 83   | 12  | 24   | 25  | 255     | 24  | 0.17  | 0.17  | 22  |
| Claremore     | 56.7     | 84   | 12  | 28   | 25  | 238 | 13      | 1.60  | 1.52  | 22   | Pryor         | 55.7 | 83   | 13  | 28   | 3   | 257     | 6   | 2.84  | 2.71  | 22  |
| Copan         | 55.4     | 84   | 12  | 24   | 25  | 302 | 14      | ***** | ***** | ***  | Skiatook      | 57.8 | 82   | 12  | 33   | 25  | 237     | 20  | 0.97  | 0.97  | 22  |
| Foraker       | 55.5     | 83   | 12  | 27   | 25  | 294 | 10      | 0.15  | 0.15  | 22   | Vinita        | 54.7 | 82   | 13  | 27   | 3   | 315     | 5   | 1.93  | 1.91  | 22  |
| Jay           | 55.5     | 81   | 13  | 27   | 25  | 229 | 11      | ***** | ***** | ***  | Wynona        | 56.6 | 83   | 12  | 25   | 25  | 240     | 12  | 0.03  | 0.03  | 22  |
| WEST CENTRAL  |          |      |     |      |     |     |         |       |       |      |               |      |      |     |      |     |         |     |       |       |     |
| Bessie        | 56.1     | 82   | 12  | 27   | 25  | 274 | 8       | 0.92  | 0.92  | 22   | Putnam        | 55.0 | 81   | 12  | 26   | 25  | 300     | 1   | 0.14  | 0.14  | 22  |
| Butler        | 54.4     | 83   | 12  | 20   | 24  | 322 | 3       | 0.03  | 0.03  | 22   | Retrop        | 56.0 | 82   | 12  | 27   | 24  | 263     | 3   | 0.27  | 0.27  | 22  |
| Camargo       | 52.8     | 83   | 12  | 19   | 25  | 367 | 2       | 0.00  | 0.00  | 1    | Watonga       | 55.5 | 79   | 13  | 29   | 25  | 262     | 4   | 1.97  | 1.97  | 22  |
| Cheyenne      | 56.2     | 81   | 12  | 27   | 24  | 244 | 7       | 0.00  | 0.00  | 1    | Weatherford   | 54.7 | 77   | 11  | 30   | 24  | 308     | 0   | 1.11  | 1.11  | 22  |
| Erick         | 53.5     | 83   | 12  | 19   | 24  | 347 | 1       | 0.01  | 0.01  | 22   |               |      |      |     |      |     |         |     |       |       |     |
| CENTRAL       |          |      |     |      |     |     |         |       |       |      |               |      |      |     |      |     |         |     |       |       |     |
| Acme          | 57.2     | 82   | 10  | 22   | 25  | 225 | 14      | 0.03  | 0.03  | 22   | Minco         | 55.9 | 81   | 13  | 28   | 24  | 277     | 4   | 0.03  | 0.03  | 22  |
| Bowlegs       | 57.2     | 82   | 10  | 26   | 3   | 220 | 10      | 0.80  | 0.79  | 22   | Ninnekah      | 56.7 | 82   | 13  | 23   | 25  | 258     | 9   | 0.03  | 0.03  | 22  |
| Bristow       | 56.0     | 83   | 12  | 25   | 3   | 279 | 8       | 1.50  | 1.48  | 22   | Norman        | 56.4 | 81   | 10  | 27   | 25  | 235     | 4   | 0.00  | 0.00  | 1   |
| Chandler      | 57.8     | 82   | 12  | 27   | 25  | 236 | 19      | 0.07  | 0.06  | 22   | Oilton        | 56.3 | 82   | 12  | 22   | 25  | 256     | 20  | 0.08  | 0.07  | 22  |
| Chickasha     | 55.7     | 82   | 10  | 22   | 25  | 285 | 5       | 0.04  | 0.03  | 22   | Okenah        | 57.3 | 82   | 13  | 28   | 3   | 242     | 12  | 1.58  | 1.57  | 22  |
| El Reno       | 54.4     | 81   | 13  | 21   | 25  | 292 | 7       | 0.06  | 0.06  | 22   | Perkins       | 57.2 | 82   | 13  | 26   | 25  | 250     | 16  | 0.10  | 0.10  | 22  |
| Guthrie       | 57.2     | 81   | 11  | 25   | 25  | 229 | 19      | 0.04  | 0.03  | 22   | Shawnee       | 57.0 | 80   | 12  | 29   | 25  | 250     | 9   | 0.24  | 0.24  | 22  |
| Kingfisher    | 54.5     | 81   | 12  | 23   | 25  | 320 | 5       | 0.41  | 0.40  | 22   | Spencer       | 57.9 | 81   | 13  | 25   | 25  | 211     | 26  | 0.02  | 0.02  | 22  |
| Marena        | 57.1     | 82   | 11  | 27   | 25  | 226 | 13      | 0.03  | 0.02  | 22   | Stillwater    | 55.7 | 82   | 12  | 23   | 25  | 258     | 7   | 0.00  | 0.00  | 1   |
| Marshall      | 55.5     | 82   | 13  | 23   | 25  | 294 | 9       | 0.19  | 0.17  | 22   | Washington    | 57.4 | 82   | 13  | 30   | 25  | 239     | 11  | 0.00  | 0.00  | 1   |
| EAST CENTRAL  |          |      |     |      |     |     |         |       |       |      |               |      |      |     |      |     |         |     |       |       |     |
| Calvin        | 57.6     | 83   | 10  | 25   | 3   | 234 | 12      | 0.74  | 0.64  | 22   | Preston       | 59.8 | 84   | 13  | 33   | 3   | 195     | 37  | 1.74  | 1.73  | 22  |
| Cookson       | 57.2     | 81   | 11  | 27   | 3   | 252 | 16      | 1.70  | 1.27  | 22   | Sallisaw      | 56.8 | 83   | 13  | 27   | 3   | 250     | 5   | 1.10  | 0.54  | 22  |
| Eufaula       | 58.9     | 83   | 13  | 33   | 3   | 209 | 26      | 1.46  | 1.18  | 22   | Stigler       | 57.0 | 83   | 13  | 26   | 3   | 249     | 7   | 1.61  | 1.18  | 22  |
| Haskell       | 56.5     | 83   | 12  | 28   | 3   | 263 | 7       | 1.45  | 1.44  | 22   | Stuart        | 58.9 | 83   | 12  | 29   | 3   | 208     | 25  | 0.94  | 0.87  | 22  |
| Hectorville   | 58.6     | 82   | 12  | 32   | 3   | 219 | 27      | 1.91  | 1.89  | 22   | Tahlequah     | 56.3 | 81   | 11  | 27   | 3   | 266     | 7   | ***** | ***** | *** |
| McAlester     | 58.1     | 83   | 13  | 26   | 3   | 229 | 21      | 0.93  | 0.93  | 22   | Webbers Falls | 57.3 | 84   | 13  | 28   | 3   | 240     | 10  | 1.74  | 1.29  | 22  |
| Okmulgee      | 56.9     | 84   | 13  | 27   | 3   | 228 | 9       | 1.40  | 1.39  | 22   | Westville     | 56.9 | 80   | 13  | 30   | 3   | 253     | 10  | 1.45  | 0.50  | 23  |
| SOUTHWEST     |          |      |     |      |     |     |         |       |       |      |               |      |      |     |      |     |         |     |       |       |     |
| Altus         | 56.5     | 82   | 13  | 23   | 25  | 259 | 4       | 0.00  | 0.00  | 1    | Hollis        | 55.3 | 84   | 18  | 21   | 25  | 289     | 0   | 0.00  | 0.00  | 1   |
| Apache        | 55.9     | 80   | 10  | 28   | 25  | 247 | 1       | 0.05  | 0.05  | 22   | Mangum        | 54.3 | 82   | 13  | 20   | 25  | 323     | 1   | 0.01  | 0.01  | 22  |
| Fort Cobb     | 55.9     | 80   | 10  | 26   | 25  | 275 | 2       | 0.02  | 0.02  | 22   | Medicine Park | 57.7 | 80   | 13  | 34   | 25  | 210     | 13  | 0.00  | 0.00  | 1   |
| Grandfield    | 57.6     | 84   | 14  | 27   | 24  | 234 | 13      | 0.01  | 0.01  | 1    | Tipton        | 56.8 | 83   | 18  | 24   | 25  | 255     | 8   | 0.00  | 0.00  | 1   |
| Hinton        | 55.2     | 79   | 11  | 26   | 24  | 266 | 3       | 0.27  | 0.27  | 22   | Walters       | 57.4 | 83   | 14  | 27   | 25  | 235     | 7   | 0.00  | 0.00  | 1   |
| Hobart        | 55.4     | 80   | 13  | 27   | 25  | 259 | 0       | 0.28  | 0.28  | 22   |               |      |      |     |      |     |         |     |       |       |     |
| SOUTH CENTRAL |          |      |     |      |     |     |         |       |       |      |               |      |      |     |      |     |         |     |       |       |     |
| Ada           | 58.3     | 84   | 14  | 27   | 3   | 224 | 23      | 0.97  | 0.96  | 22   | Madill        | 59.0 | 86   | 14  | 24   | 3   | 204     | 23  | 0.41  | 0.41  | 22  |
| Ardmore       | 59.2     | 86   | 14  | 31   | 3   | 196 | 22      | 0.28  | 0.28  | 22   | Pauls Valley  | 58.1 | 82   | 13  | 29   | 25  | 222     | 14  | 0.20  | 0.20  | 22  |
| Burneyville   | 59.0     | 85   | 14  | 27   | 3   | 204 | 25      | 0.33  | 0.33  | 22   | Ringling      | 58.5 | 85   | 14  | 30   | 25  | 208     | 13  | 0.04  | 0.04  | 22  |
| Byars         | 59.0     | 82   | 14  | 33   | 24  | 180 | 25      | 0.91  | 0.77  | 22   | Sulphur       | 57.4 | 83   | 14  | 25   | 3   | 234     | 5   | 0.40  | 0.39  | 22  |
| Centrahoma    | 57.7     | 87   | 14  | 23   | 3   | 226 | 13      | 0.53  | 0.53  | 22   | Tishomingo    | 56.7 | 86   | 14  | 22   | 3   | 227     | 3   | 0.63  | 0.63  | 22  |
| Durant        | 59.3     | 85   | 14  | 30   | 3   | 196 | 26      | 0.97  | 0.95  | 22   | Vanoss        | 58.3 | 83   | 14  | 28   | 25  | 225     | 25  | 0.41  | 0.39  | 22  |
| Ketchum Ranch | 58.2     | 83   | 14  | 30   | 25  | 219 | 14      | 0.00  | 0.00  | 1    | Waurika       | 58.9 | 85   | 14  | 29   | 25  | 201     | 19  | 0.00  | 0.00  | 1   |
| Lane          | 57.4     | 85   | 14  | 25   | 3   | 235 | 7       | 1.43  | 1.40  | 22   |               |      |      |     |      |     |         |     |       |       |     |
| SOUTHEAST     |          |      |     |      |     |     |         |       |       |      |               |      |      |     |      |     |         |     |       |       |     |
| Antlers       | 56.4     | 85   | 14  | 20   | 3   | 266 | 8       | 2.29  | 1.93  | 22   | Idabel        | 57.0 | 84   | 11  | 25   | 3   | 247     | 8   | 1.78  | 1.65  | 23  |
| Broken Bow    | 55.8     | 85   | 14  | 24   | 3   | 280 | 4       | 2.90  | 2.77  | 23   | Mt Herman     | 55.8 | 83   | 14  | 26   | 3   | 277     | 2   | 0.87  | 0.51  | 23  |
| Clayton       | 58.0     | 85   | 14  | 24   | 3   | 218 | 16      | 1.28  | 0.75  | 23   | Talihina      | 56.8 | 86   | 14  | 23   | 3   | 230     | 9   | 1.58  | 0.84  | 23  |
| Cloudy        | 56.8     | 84   | 14  | 24   | 3   | 254 | 6       | 1.51  | 0.81  | 22   | Wilburton     | 57.4 | 84   | 11  | 23   | 3   | 241     | 13  | 2.44  | 2.18  | 22  |
| Hugo          | 59.0     | 84   | 14  | 28   | 3   | 203 | 24      | 2.68  | 2.01  | 22   | Wister        | 54.6 | 85   | 14  | 22   | 3   | 316     | 4   | 1.32  | 0.94  | 23  |



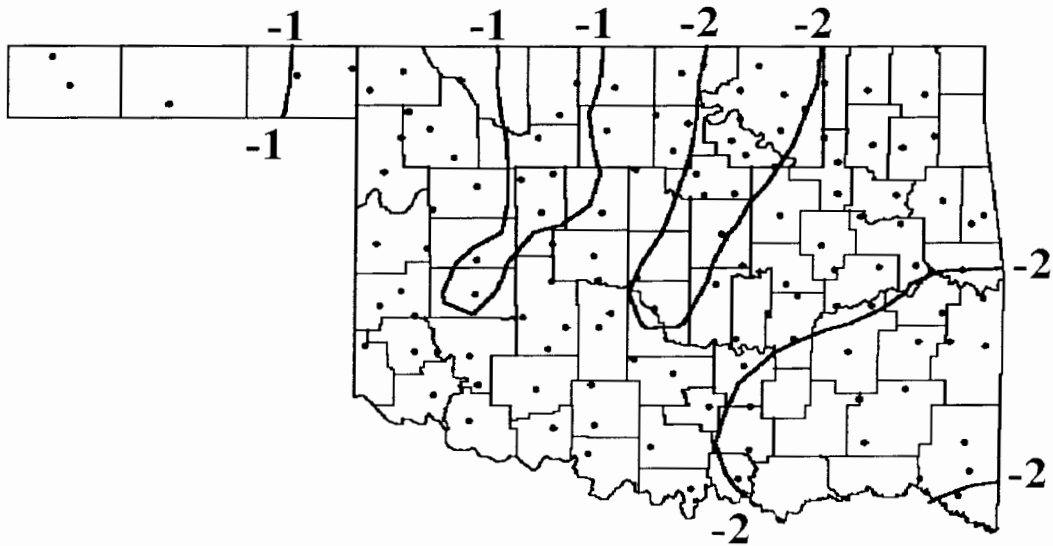
DECEMBER 1999 AVERAGE MONTHLY TEMPERATURE (F)



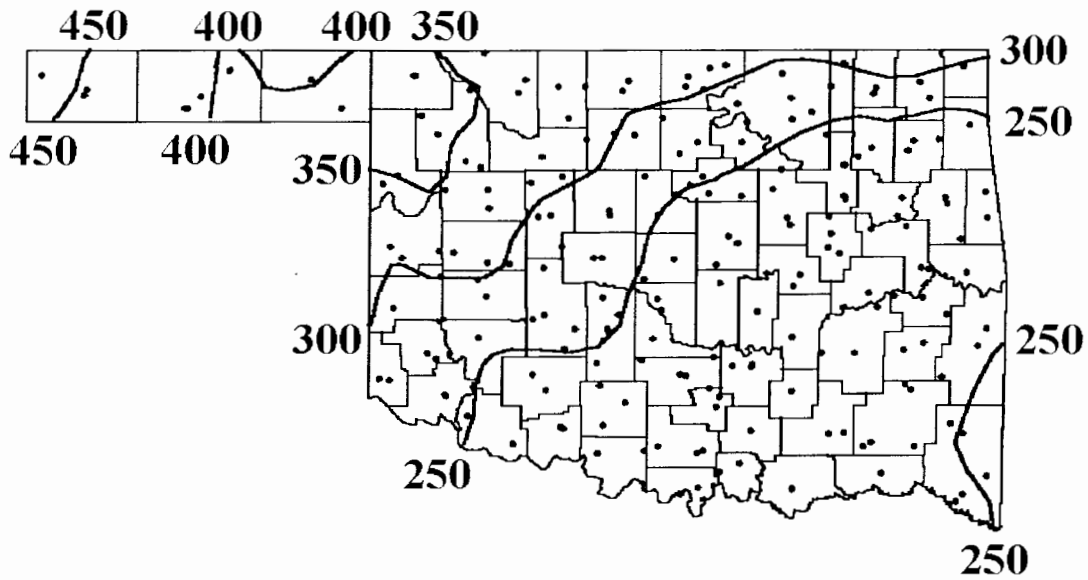
DECEMBER 1999 DEPARTURE FROM NORMAL TEMPERATURE (F)



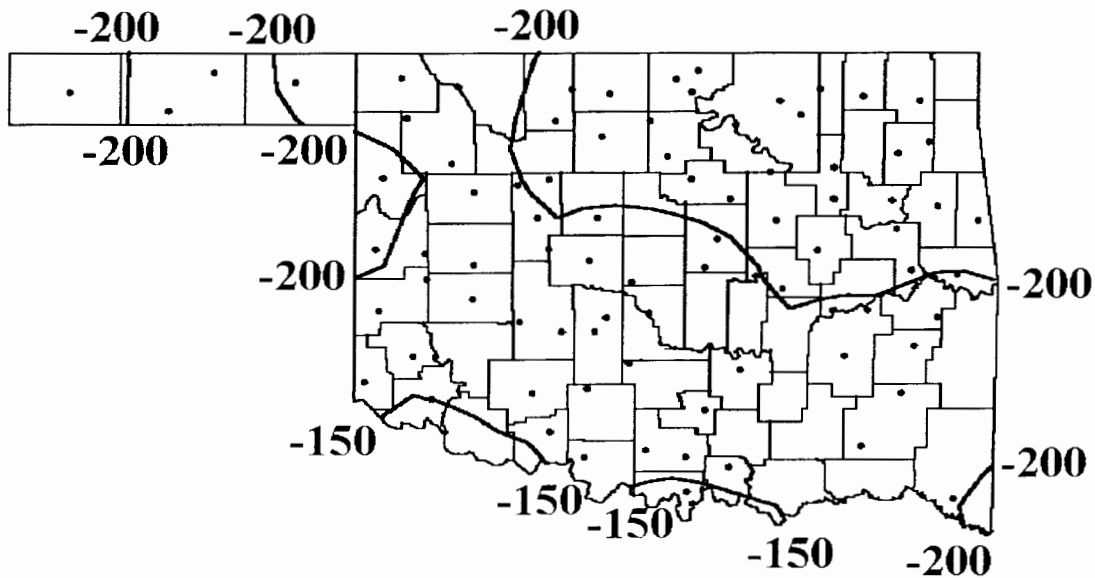
DECEMBER 1999 TOTAL PRECIPITATION (INCHES)



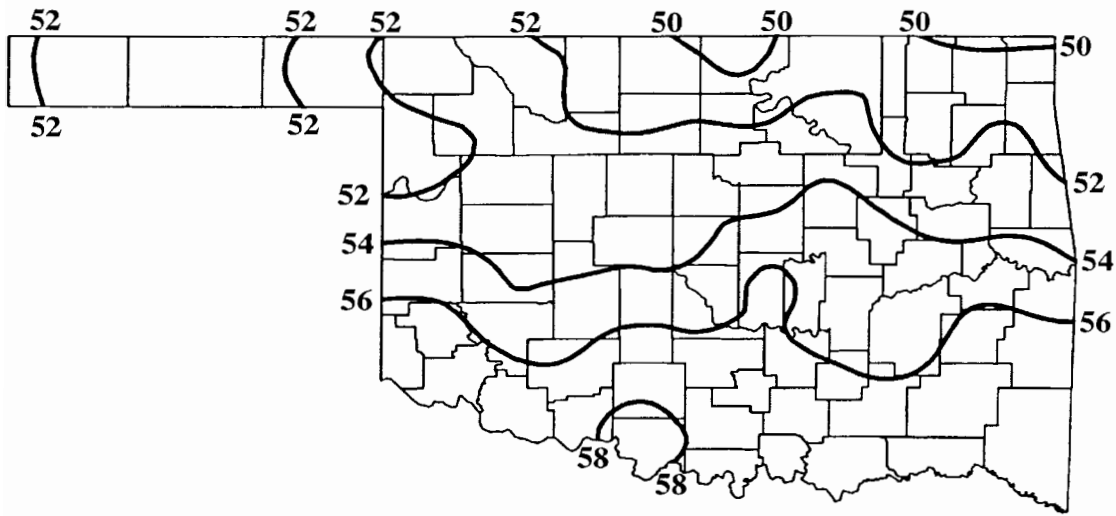
DECEMBER 1999 DEPARTURE FROM NORMAL PRECIPITATION (INCHES)



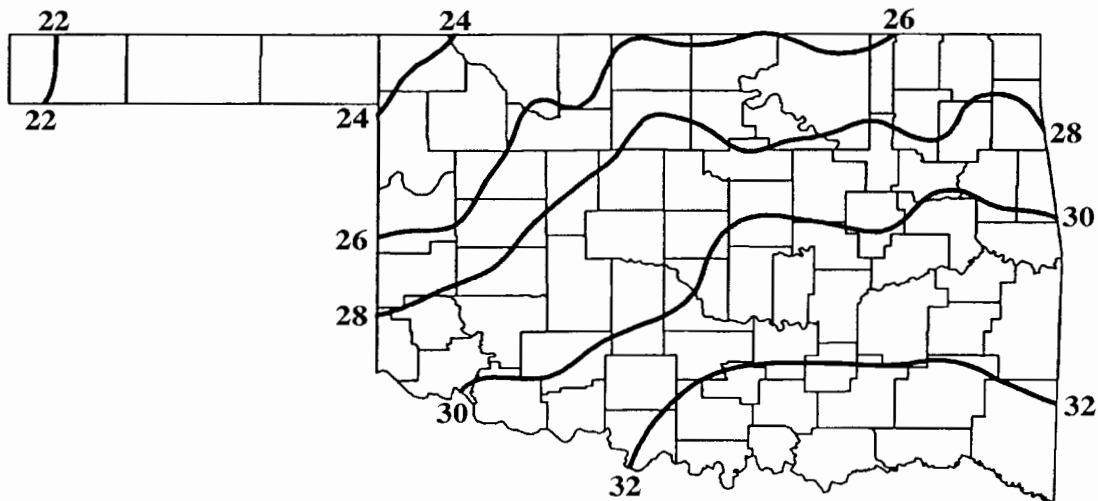
DECEMBER 1999 ACCUMULATED HEATING DEGREE DAYS (F)



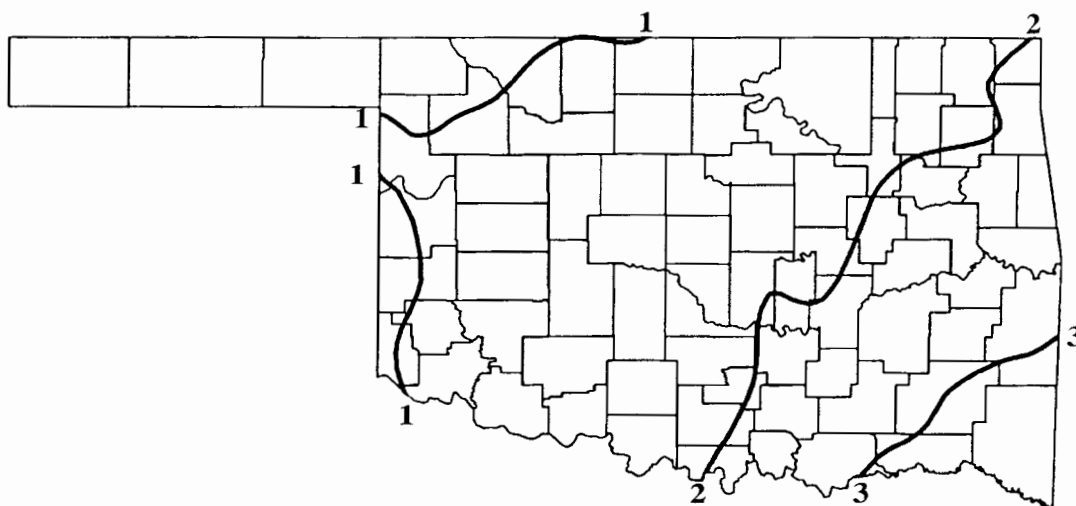
DECEMBER 1999 DEPARTURE FROM NORMAL HEATING DEGREE DAYS (F)



FEBRUARY NORMAL DAILY MAXIMUM TEMPERATURE (°F)



FEBRUARY NORMAL DAILY MINIMUM TEMPERATURES (°F)



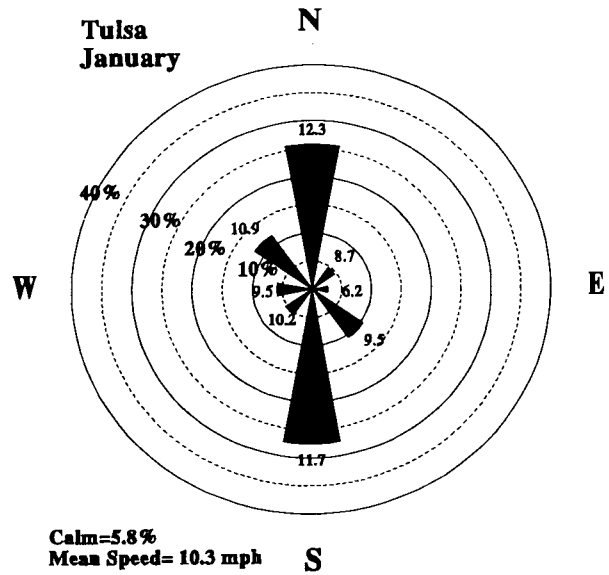
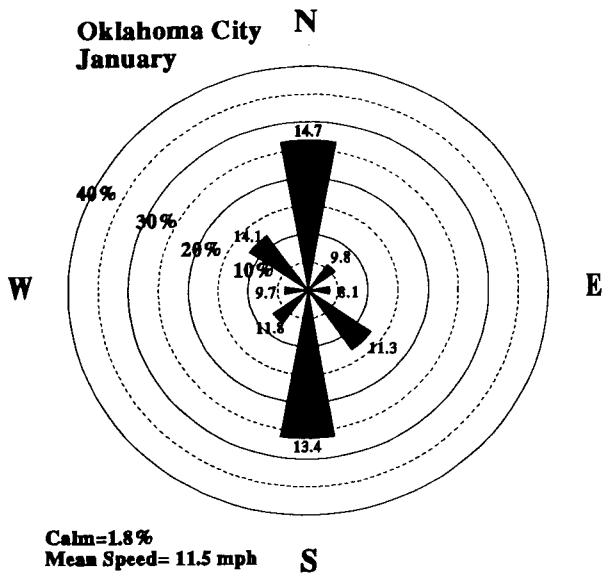
**FEBRUARY NORMAL MONTHLY PRECIPITATION (INCHES)**

**OUTLOOK FOR JANUARY 2000 THROUGH MARCH 2000**  
BASED ON SEASONAL OUTLOOK PROVIDED BY THE CLIMATE PREDICTION CENTER

**TEMPERATURE: ABOVE NORMAL TEMPERATURE STATEWIDE**

**PRECIPITATION: NEAR NORMAL PRECIPITATION STATEWIDE**





**January Wind Roses for Oklahoma City and Tulsa.** The frequency (percent) of winds from each direction is represented by length of its bar. The numbers at the ends of the bars indicate the average wind speed from that direction in miles per hour.

**JANUARY SUNRISE/SUNSET TIMES FOR 2000**

ALL TIMES ARE CENTRAL STANDARD TIME

**OKLAHOMA CITY**

**TULSA**

| <u>DATE</u> | <u>SUNRISE</u> | <u>SUNSET</u> |
|-------------|----------------|---------------|
| 1/1/00      | 739            | 1728          |
| 1/2/00      | 740            | 1729          |
| 1/3/00      | 740            | 1729          |
| 1/4/00      | 740            | 1730          |
| 1/5/00      | 740            | 1731          |
| 1/6/00      | 740            | 1732          |
| 1/7/00      | 740            | 1733          |
| 1/8/00      | 740            | 1734          |
| 1/9/00      | 740            | 1735          |
| 1/10/00     | 740            | 1735          |
| 1/11/00     | 740            | 1736          |
| 1/12/00     | 740            | 1737          |
| 1/13/00     | 739            | 1738          |
| 1/14/00     | 739            | 1739          |
| 1/15/00     | 739            | 1740          |
| 1/16/00     | 739            | 1741          |
| 1/17/00     | 738            | 1742          |
| 1/18/00     | 738            | 1743          |
| 1/19/00     | 738            | 1744          |
| 1/20/00     | 737            | 1745          |
| 1/21/00     | 737            | 1746          |
| 1/22/00     | 736            | 1747          |
| 1/23/00     | 736            | 1748          |
| 1/24/00     | 735            | 1749          |
| 1/25/00     | 735            | 1750          |
| 1/26/00     | 734            | 1751          |
| 1/27/00     | 734            | 1752          |
| 1/28/00     | 733            | 1753          |
| 1/29/00     | 732            | 1754          |
| 1/30/00     | 732            | 1755          |
| 1/31/00     | 731            | 1756          |

| <u>DATE</u> | <u>SUNRISE</u> | <u>SUNSET</u> |
|-------------|----------------|---------------|
| 1/1/00      | 735            | 1720          |
| 1/2/00      | 735            | 1721          |
| 1/3/00      | 735            | 1721          |
| 1/4/00      | 735            | 1722          |
| 1/5/00      | 735            | 1723          |
| 1/6/00      | 735            | 1724          |
| 1/7/00      | 735            | 1725          |
| 1/8/00      | 735            | 1726          |
| 1/9/00      | 735            | 1727          |
| 1/10/00     | 735            | 1727          |
| 1/11/00     | 735            | 1728          |
| 1/12/00     | 735            | 1729          |
| 1/13/00     | 735            | 1730          |
| 1/14/00     | 734            | 1731          |
| 1/15/00     | 734            | 1732          |
| 1/16/00     | 734            | 1733          |
| 1/17/00     | 734            | 1734          |
| 1/18/00     | 733            | 1735          |
| 1/19/00     | 733            | 1736          |
| 1/20/00     | 732            | 1737          |
| 1/21/00     | 732            | 1738          |
| 1/22/00     | 731            | 1739          |
| 1/23/00     | 731            | 1740          |
| 1/24/00     | 730            | 1741          |
| 1/25/00     | 730            | 1743          |
| 1/26/00     | 729            | 1744          |
| 1/27/00     | 729            | 1745          |
| 1/28/00     | 728            | 1746          |
| 1/29/00     | 727            | 1747          |
| 1/30/00     | 727            | 1748          |
| 1/31/00     | 726            | 1749          |



**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 a 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 the 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.

OKLAHOMA CITY CLIMATE CALENDAR  
 DATA COURTESY OF NATIONAL WEATHER SERVICE NORMAN

MONTH January

The data on this calendar is for Tulsa.  
 Normal values are calculated for the period 1961-1990.  
 Temperature extremes are for the period 181905-1999.  
 Precipitation extremes are for the period 1888-1999.

| Day   | Avg. Temp | High | Record High | Year | Lowest Max | Year | 1999 | Avg. Low | Highest Min | Year | Record Low | Year | 1999 | Avg. Ppt. | Greatest Ppt. | Year | 1999 |
|-------|-----------|------|-------------|------|------------|------|------|----------|-------------|------|------------|------|------|-----------|---------------|------|------|
| 1     | 35        | 45   | 73          | 1910 | 13         | 1974 |      | 25       | 59          | 1910 | 0          | 1928 |      | 0.05      | 0.70          | 1925 |      |
| 2     | 35        | 45   | 76          | 1997 | 10         | 1911 |      | 25       | 56          | 1997 | 2          | 1911 |      | 0.05      | 0.90          | 1951 |      |
| 3     | 35        | 45   | 75          | 1997 | 14         | 1959 |      | 25       | 58          | 1997 | -2         | 1919 |      | 0.05      | 1.12          | 1971 |      |
| 4     | 35        | 45   | 70          | 1956 | 12         | 1959 |      | 25       | 63          | 1955 | -8         | 1947 |      | 0.05      | 1.96          | 1932 |      |
| 5     | 35        | 45   | 73          | 1984 | 16         | 1940 |      | 25       | 55          | 1916 | -7         | 1947 |      | 0.05      | 1.28          | 1929 |      |
| 6     | 35        | 45   | 69          | 1907 | 15         | 1913 |      | 25       | 53          | 1907 | 0          | 1912 |      | 0.05      | 0.93          | 1910 |      |
| 7     | 35        | 45   | 77          | 1965 | 15         | 1968 |      | 25       | 64          | 1907 | -5         | 1912 |      | 0.05      | 1.05          | 1935 |      |
| 8     | 35        | 45   | 71          | 1923 | 17         | 1970 |      | 25       | 51          | 1939 | -5         | 1988 |      | 0.05      | 1.92          | 1907 |      |
| 9     | 35        | 45   | 69          | 1909 | 10         | 1977 |      | 25       | 46          | 1939 | 0          | 1977 |      | 0.05      | 0.94          | 1930 |      |
| 10    | 35        | 45   | 75          | 1911 | 13         | 1962 |      | 25       | 48          | 1916 | -5         | 1977 |      | 0.05      | 1.70          | 1922 |      |
| 11    | 35        | 45   | 80          | 1911 | -2         | 1918 |      | 24       | 52          | 1911 | -6         | 1977 |      | 0.05      | 1.95          | 1905 |      |
| 12    | 35        | 45   | 73          | 1960 | 3          | 1912 |      | 24       | 57          | 1960 | -13        | 1918 |      | 0.05      | 2.10          | 1916 |      |
| 13    | 35        | 45   | 75          | 1907 | 11         | 1916 |      | 24       | 51          | 1959 | -12        | 1916 |      | 0.05      | 1.50          | 1927 |      |
| 14    | 35        | 45   | 75          | 1952 | 13         | 1979 |      | 24       | 51          | 1953 | -4         | 1916 |      | 0.05      | 0.65          | 1937 |      |
| 15    | 35        | 45   | 69          | 1914 | 18         | 1972 |      | 24       | 53          | 1980 | 0          | 1905 |      | 0.05      | 0.76          | 1949 |      |
| 16    | 35        | 45   | 78          | 1938 | 14         | 1930 |      | 24       | 55          | 1935 | 1          | 1930 |      | 0.04      | 1.90          | 1932 |      |
| 17    | 35        | 45   | 73          | 1952 | 10         | 1930 |      | 24       | 55          | 1973 | -3         | 1930 |      | 0.05      | 0.50          | 1926 |      |
| 18    | 35        | 45   | 72          | 1951 | 12         | 1940 |      | 25       | 53          | 1923 | -14        | 1930 |      | 0.05      | 0.88          | 1968 |      |
| 19    | 35        | 45   | 75          | 1951 | 14         | 1970 |      | 25       | 48          | 1954 | -5         | 1943 |      | 0.05      | 1.50          | 1980 |      |
| 20    | 35        | 45   | 77          | 1986 | 15         | 1984 |      | 25       | 51          | 1923 | -3         | 1985 |      | 0.05      | 1.63          | 1904 |      |
| 21    | 35        | 45   | 75          | 1957 | 15         | 1935 |      | 25       | 57          | 1957 | -1         | 1918 |      | 0.05      | 2.20          | 1916 |      |
| 22    | 35        | 45   | 78          | 1909 | 16         | 1962 |      | 25       | 57          | 1909 | -16        | 1930 |      | 0.05      | 0.84          | 1999 |      |
| 23    | 35        | 46   | 78          | 1909 | 12         | 1963 |      | 25       | 54          | 1967 | -8         | 1906 |      | 0.05      | 1.42          | 1953 |      |
| 24    | 35        | 46   | 79          | 1950 | 15         | 1940 |      | 25       | 51          | 1919 | -4         | 1906 |      | 0.05      | 0.67          | 1938 |      |
| 25    | 35        | 46   | 74          | 1952 | 18         | 1940 |      | 25       | 55          | 1944 | 2          | 1940 |      | 0.05      | 1.89          | 1989 |      |
| 26    | 36        | 46   | 71          | 1911 | 20         | 1957 |      | 25       | 55          | 1944 | 7          | 1963 |      | 0.05      | 0.62          | 1967 |      |
| 27    | 36        | 46   | 74          | 1914 | 21         | 1948 |      | 25       | 55          | 1999 | 1          | 1963 |      | 0.05      | 1.01          | 1916 |      |
| 28    | 36        | 46   | 82          | 1909 | 21         | 1972 |      | 26       | 59          | 1968 | 3          | 1948 |      | 0.05      | 0.69          | 1989 |      |
| 29    | 36        | 47   | 76          | 1947 | 14         | 1966 |      | 26       | 50          | 1988 | -2         | 1949 |      | 0.05      | 1.43          | 1939 |      |
| 30    | 36        | 47   | 74          | 1931 | 15         | 1949 |      | 26       | 58          | 1988 | -6         | 1949 |      | 0.05      | 1.73          | 1975 |      |
| 31    | 36        | 47   | 76          | 1989 | 7          | 1918 |      | 26       | 48          | 1923 | -5         | 1979 |      | 0.05      | 2.13          | 1983 |      |
| MONTH | 35.2      | 45.4 | 82          | 1909 | -2         | 1918 |      | 24.9     | 64          | 1907 | -16        | 1930 |      | 1.54      | 2.20          | 1916 |      |

\*The most tornadoes reported in January for Oklahoma is 0.2.

OKLAHOMA CITY CLIMATE CALENDAR  
 DATA COURTESY OF NATIONAL WEATHER SERVICE NORMAN

MONTH January

The data on this calendar is for Oklahoma City.  
 Normal values are calculated for the period 1961-1990.  
 Temperature extremes are for the period 1891-1999.  
 Precipitation extremes are for the period 1891-1999.

| Day   | Avg. Temp | High | Record High | Year | Lowest Max | Year | 1999 | Avg. | Low | Highest Min | Year | Record Low | Year | 1999 | Avg. Ppt. | Greatest Ppt. | Year | 1999 |
|-------|-----------|------|-------------|------|------------|------|------|------|-----|-------------|------|------------|------|------|-----------|---------------|------|------|
| 1     | 36        | 47   | 74          | 1910 | 2          | 1928 |      | 25   | 51  | 1966        | 13   | 1979       |      | 0.04 | 0.63      | 1892          |      |      |
| 2     | 36        | 47   | 78          | 1997 | -2         | 1911 |      | 25   | 56  | 1950        | 13   | 1911       |      | 0.04 | 1.01      | 1951          |      |      |
| 3     | 36        | 47   | 78          | 1997 | -9         | 1911 |      | 25   | 56  | 1997        | 10   | 1919       |      | 0.04 | 1.03      | 1908          |      |      |
| 4     | 36        | 47   | 72          | 1927 | -7         | 1947 |      | 25   | 60  | 1955        | 11   | 1959       |      | 0.04 | 2.02      | 1998          |      |      |
| 5     | 36        | 46   | 71          | 1927 | -2         | 1959 |      | 25   | 48  | 1946        | 18   | 1924       |      | 0.04 | 1.00      | 1962          |      |      |
| 6     | 36        | 46   | 68          | 1921 | -2         | 1912 |      | 25   | 52  | 1907        | 14   | 1909       |      | 0.04 | 1.02      | 1934          |      |      |
| 7     | 36        | 46   | 73          | 1965 | -3         | 1912 |      | 25   | 61  | 1907        | 15   | 1913       |      | 0.04 | 0.93      | 1944          |      |      |
| 8     | 36        | 46   | 71          | 1923 | -4         | 1988 |      | 25   | 49  | 1949        | 11   | 1937       |      | 0.03 | 1.45      | 1939          |      |      |
| 9     | 35        | 46   | 70          | 1902 | -2         | 1977 |      | 25   | 49  | 1900        | 9    | 1977       |      | 0.03 | 0.62      | 1993          |      |      |
| 10    | 35        | 46   | 75          | 1990 | -3         | 1977 |      | 25   | 45  | 1898        | 13   | 1962       |      | 0.03 | 0.66      | 1905          |      |      |
| 11    | 35        | 46   | 77          | 1911 | -7         | 1918 |      | 25   | 50  | 1898        | 2    | 1918       |      | 0.03 | 1.10      | 1916          |      |      |
| 12    | 35        | 46   | 73          | 1935 | -7         | 1912 |      | 25   | 51  | 1960        | 6    | 1912       |      | 0.03 | 0.78      | 1927          |      |      |
| 13    | 35        | 46   | 74          | 1996 | -4         | 1916 |      | 25   | 51  | 1952        | 11   | 1905       |      | 0.03 | 0.79      | 1992          |      |      |
| 14    | 35        | 46   | 75          | 1928 | -1         | 1905 |      | 25   | 50  | 1928        | 12   | 1905       |      | 0.03 | 0.46      | 1898          |      |      |
| 15    | 35        | 46   | 77          | 1914 | -2         | 1905 |      | 25   | 53  | 1969        | 14   | 1930       |      | 0.03 | 0.65      | 1949          |      |      |
| 16    | 35        | 46   | 76          | 1894 | 0          | 1930 |      | 25   | 57  | 1990        | 11   | 1930       |      | 0.03 | 0.70      | 1990          |      |      |
| 17    | 36        | 46   | 73          | 1894 | -9         | 1930 |      | 25   | 52  | 1894        | 8    | 1930       |      | 0.03 | 1.16      | 1926          |      |      |
| 18    | 36        | 46   | 74          | 1951 | -9         | 1930 |      | 25   | 48  | 1895        | 8    | 1892       |      | 0.03 | 1.07      | 1968          |      |      |
| 19    | 36        | 47   | 75          | 1914 | -11        | 1892 |      | 25   | 54  | 1904        | 12   | 1962       |      | 0.04 | 2.76      | 1894          |      |      |
| 20    | 36        | 47   | 80          | 1986 | 1          | 1985 |      | 25   | 53  | 1921        | 18   | 1984       |      | 0.04 | 1.29      | 1904          |      |      |
| 21    | 36        | 47   | 71          | 1967 | -3         | 1930 |      | 25   | 56  | 1921        | 12   | 1954       |      | 0.04 | 1.40      | 1932          |      |      |
| 22    | 36        | 47   | 79          | 1967 | -8         | 1930 |      | 25   | 50  | 1921        | 16   | 1962       |      | 0.04 | 0.39      | 1920          |      |      |
| 23    | 36        | 47   | 75          | 1909 | -1         | 1963 |      | 25   | 51  | 1967        | 13   | 1963       |      | 0.04 | 1.16      | 1921          |      |      |
| 24    | 36        | 47   | 81          | 1950 | -8         | 1894 |      | 25   | 51  | 1944        | 8    | 1894       |      | 0.04 | 0.37      | 1949          |      |      |
| 25    | 36        | 47   | 77          | 1952 | -3         | 1894 |      | 25   | 58  | 1944        | 15   | 1905       |      | 0.04 | 1.26      | 1949          |      |      |
| 26    | 36        | 47   | 72          | 1953 | 0          | 1902 |      | 26   | 54  | 1911        | 12   | 1897       |      | 0.04 | 1.25      | 1916          |      |      |
| 27    | 37        | 48   | 72          | 1914 | 3          | 1963 |      | 26   | 56  | 1914        | 17   | 1961       |      | 0.04 | 0.62      | 1985          |      |      |
| 28    | 37        | 48   | 78          | 1893 | 5          | 1948 |      | 26   | 60  | 1968        | 21   | 1948       |      | 0.04 | 0.44      | 1989          |      |      |
| 29    | 37        | 48   | 76          | 1911 | -1         | 1895 |      | 26   | 51  | 1982        | 13   | 1966       |      | 0.04 | 1.84      | 1982          |      |      |
| 30    | 37        | 48   | 74          | 1917 | -1         | 1895 |      | 26   | 55  | 1988        | 16   | 1949       |      | 0.04 | 1.34      | 1982          |      |      |
| 31    | 37        | 48   | 83          | 1911 | -1         | 1979 |      | 26   | 52  | 1911        | 6    | 1918       |      | 0.04 | 1.98      | 1923          |      |      |
| MONTH | 35.9      | 46.7 | 83          | 1911 | -11        | 1892 |      | 25.2 | 61  | 1907        | 2    | 1918       |      | 1.13 | 2.76      | 1894          |      |      |

\*The most tornadoes reported in January for Oklahoma was (4) in 1957 and 1967