

# **OKLAHOMA MONTHLY SUMMARY FEBRUARY 1990**

## TABLE OF CONTENTS

February 1990 Oklahoma Summary.....	2
Table of February 1989/1990 Comparisons.....	5
Insolation Data Available.....	6
February 1990 Data Summary Tables.....	7
February 1990 State Map Summary.....	13
April 1990 Climatological Normals.....	16
30- and 90-Day National Weather Service Outlook.....	18
Explanation of Tables and Maps.....	19
April 1990 Climate Calendar.....	21

## FEBRUARY 1990 OKLAHOMA SUMMARY

A succession of cold fronts brought precipitation throughout the month, producing the third wettest February in Oklahoma's recorded history (see Table 1). Several stations reported record February precipitation totals (see Table 2). The wet month followed the fifth wettest January on record. These months combined to produce the 3rd greatest Statewide precipitation accumulation on record for the 2-month period (see Table 3). Above normal temperatures Statewide, including record and near record maximum temperatures, and morning lows frequently moderated by cloud cover, rank this February as the 14th warmest on record.

Oklahoma's first cold front of the month moved southeastward across the State on February 1. Three to four inch rainfall accumulations in east central and southeastern Oklahoma resulted in localized street flooding. The circulation around a powerful upper level storm to the west of the State supplied moisture ahead of a second surface cold front on February 2. These forces generated a winter storm over western and central Oklahoma. Snow mixed with freezing rain produced icy roads, which contributed to approximately 100 Oklahoma City vehicle accidents on the morning of February 3. Southeastern Oklahoma received additional rain rather than snow. The three-day 3 to 3.5 inch accumulations in the region exceeded the long-term mean precipitation total for the entire month of February.

Southerly winds and clear skies quickly returned. Temperatures rose into the 70's Statewide by the 8th. Tulsa's 76 degree reading broke its 1957, 75 degree record for the date and Guthrie tied its 1954 record of 74 degrees. High temperatures approached records across the State.

Slightly cooler air arrived on February 8 and 9 as an upper level storm system steered a cold front and its rain through the State. The greatest rainfall again occurred in extreme southeastern Oklahoma. Most stations in the remaining southeastern two-thirds of the State received between .25 and .50 inches.

Just a few days after this frontal precipitation, high winds and low humidities quickly dried grasses and heightened the wildfire danger. On February 12, devastating fires destroyed thousands of acres and several houses in central Oklahoma.

The leading edge of Oklahoma's coldest air of the month arrived with a front on February 13. Temperatures dropped from the 60's to the 40's in 2 to 3 hours. The Arctic air mass continued to drift into the State during the next 3 days. Maximum temperatures reached only into the 30's over most of the State on February 15, some 35 to 45 degrees lower than the highs of 3 days earlier. Morning lows dipped into the 20's and teens Statewide on February 16. Sleet and freezing rain iced roads in the northwestern two-thirds of the State and were blamed for a 14-car accident. Ice accumulations snapped tree limbs and power lines, causing power outages in central Oklahoma. The Statewide precipitation eased the wildfire threat appreciably.

The greatest snowfall of the month struck the Panhandle on February 19 as an intense upper level storm system pushed a surface cold front southeastward through the area. Guymon reported 8" of snow and Boise City recorded an accumulation of 12". After entering Texas, the storm system turned toward the northeast and delivered light snow to western and central Oklahoma and over one inch of rain to much of the rest of the State on February 21 and 22.

A final, powerful cold front crossed the State during the last two days of the month. Rainfall amounts exceeded 1" in all CD's except 1 and 9, pushing some monthly totals above previous records.

-R. J. Sladewski

TABLE 1

The 5 Greatest Statewide February Precipitation Amounts  
(1892-1990)

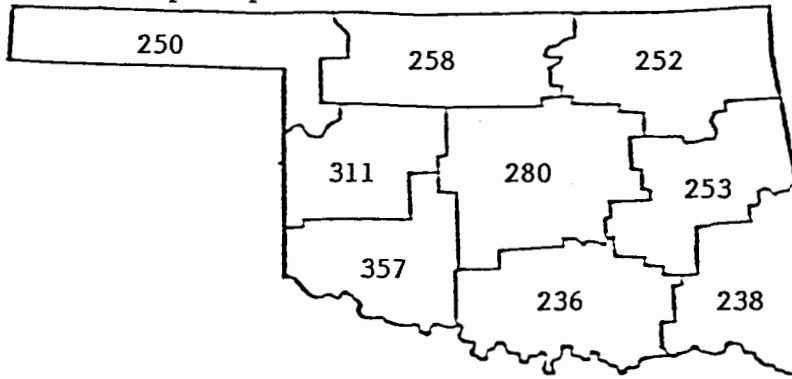
RANK	YEAR	AMOUNT
1	1938	4.66"
2	1903	4.08"
3	1990	3.94"
4	1915	3.77"
5	1987	3.71"

TABLE 2

February 1990 Record Precipitation Amounts (1948-1990)  
For Selected Oklahoma Stations

CD	Station	Previous Record		1990 Amount
		Year	Amounts	
4	Weatherford	1960	3.02"	4.19"
5	El Reno	1987	3.57"	3.79"
6	McCurtain	1966	5.39"	9.11"
7	Wichita Mt WLR	1978	2.99"	4.90"
9	Boswell 4 NNW	1950	6.95"	8.03"

Map 1. February 1990 percent of normal  
precipitation.



Oklahoma recorded its 5th wettest January and 3rd wettest February in 1990. Statewide-averages totaled 6.92 inches and ranked 1990 as the 3rd wettest January/February period on record (1898-1990).

Table 3 lists the 10 greatest January/February combined precipitation totals and the years in which they occurred. The fourth column (labeled March) provides the precipitation rank of the next month (March) of the same year. The final column shows the rank of the annual precipitation of that year.

From this table there appears to be little or no connection between March precipitation amounts during the years with very high January/February totals. Of the nine March listings, four rank in the driest and five rank in the wettest 49 years. Upon visual inspection, the annual values, however, do suggest a connection; all the annual totals, except 1916, rank in the wettest one-half. Three of these years rank in the top 10. Above average annual precipitation might be expected in these years given the first two months had already delivered much above average precipitation.

TABLE 3

Year	Jan and Feb		March	Annual Rank
	Precipitation Total	Rank	Precipitation Rank	
1949	7.53"	1	49	21
1932	7.12"	2	81	42
1990	6.92"	3	*	*
1938	6.62"	4	8	49
1987	5.93"	5	27	9
1898	5.79"	6	11	15
1985	5.39"	7	3	7
1946	5.33"	8	54	34
1916	5.25"	9	67	73
1915	5.02"	10	53	5

NOTE: Ranks run from wettest to driest  
\* Not yet available

TABLE OF 1989/1990 COMPARISONS

Station	February Temperature (F)		February Precipitation (in.)	
	1989	1990	1989	1990
Arentt	28.4	41.1	.96	2.65
Enid	*	43.9	*	3.60
Mutual	29.5	43.9	1.51	2.22
Tulsa	32.6	47.7	2.32	3.33
Elk City	32.3	44.2	1.14	2.73
Oklahoma City	33.6	47.5	2.45	4.29
McAlester	36.7	50.1	5.40	5.87
Altus Irr. Sta.	36.1	48.1	1.25	2.86
Durant	37.5	*	3.93	*
Ada	34.4	48.0	6.93	3.41
Antlers	39.3	50.7	3.84	6.85

EXTREMES

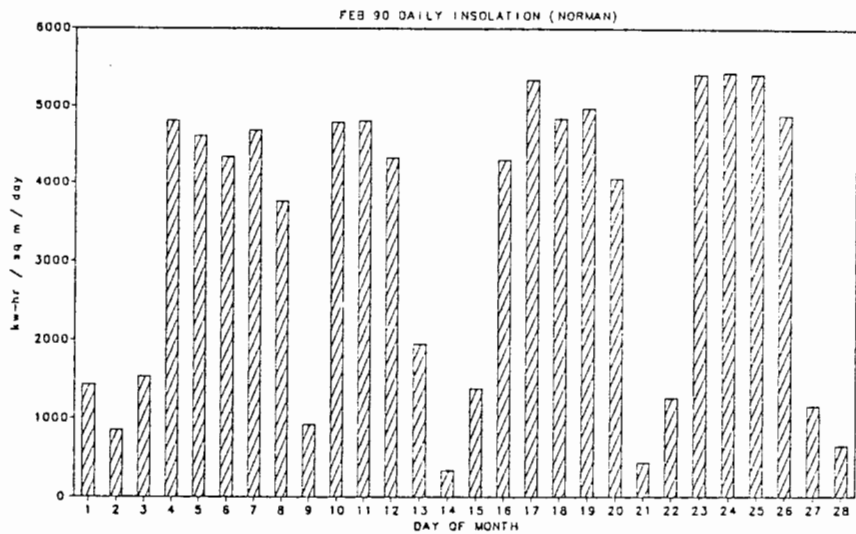
Variable	Station	Division	Observation	Date
Minimum temperatures (F)	Boise City	1	-1	16
Maximum temperatures (F)	Buffalo	1	83	12
	Altus Irr Sta	7	83	12
Maximum 24-hour precipitation	Flagpole	9	3.22"	15

INSOLATION DATA AVAILABLE

The University of Oklahoma's School of Meteorology is observing and archiving incoming solar radiation data as part of a cooperative effort with the Agricultural Research Service, USDA at Durant, OK. The observation site, operated continuously since September 1987, is located at Max Westheimer Airport in Norman. The data are representative of central Oklahoma and available through the Oklahoma Climatological Survey. The table and chart below depict the February 1990 daily observations.

February 1990 Daily Insolation Data for Norman, OK  
(Insolation units are watt-hours per square meter per day)

DATE	INSOLATION AMOUNT
1	1429.07
2	854.95
3	1535.18
4	4810.04
5	4611.98
6	4339.20
7	4686.98
8	3761.97
9	923.26
10	4791.15
11	4805.59
12	4326.70
13	1950.43
14	341.31
15	1380.34
16	4301.98
17	5344.76
18	4839.48
19	4973.10
20	4057.53
21	438.45
22	1257.65
23	5417.82
24	5440.04
25	5419.21
26	4883.93
27	1159.20
28	651.78



FEBRUARY 1990 SUMMARY FOR NORTHWEST DIVISION (CD1)

NAME	ID	CD	DEV						HEAT	DEV	COOL	DEV	TOT	NUM	FROM	MAX	24-HR	DAY
			MEAN	NUM	FROM	MAX	MIN	DAY	DEG	FROM	DEG	FROM						
ARNETT	332	1	40.7	28	2.5	77.	13	14.	17	680.0	-70.0	.0	.0	2.651	28	1.98	.87	28
BEAVER	593	1	37.4	28	-.7	79.	13	8.	17	773.0	20.0	.0	.0	2.120	28	1.54	.84	21
BOISE CITY 2 E	908	1	36.8	28	-1.5	74.	12	-1.	16	789.5	41.5	.0	.0	1.630	28	1.14	1.20	20
BUFFALO	1243	1	43.7	28	3.3	83.	12	12.	16	596.0	-93.0	.0	.0	1.480	28	.56	.63	21
FARGO	3070	1	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.591	28	1.74	.92	22
GAGE FAA APT	3407	1	42.6	28	4.3	78.	12	15.	16	627.0	-121.0	.0	.0	1.895	28	1.08	.57	22
GATE	3489	1	39.4	28	*****	82.	13	13.	16	717.5	*****	.0	*****	2.140	28	*****	.81	22
GOODWELL RES	ST3628	1	36.0	28	-2.6	75.	13	8.	16	813.0	74.0	.0	.0	.931	28	.62	.33	21
GUYMON	3835	1	37.4	27	*****	75.	12	9.	16	744.5	*****	.0	*****	1.353	28	*****	1.00	21
HOOKER	4298	1	36.3	28	-2.2	75.	13	11.	17	805.0	60.0	.0	.0	2.210	28	1.75	1.88	21
KENTON	4766	1	35.1	28	-3.5	75.	13	0.	16	836.0	97.0	.0	.0	1.460	28	1.18	.91	20
LAVERNE	5045	1	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.082	28	1.20	.70	22
OPTIMA LAKE	6740	1	36.4	28	*****	78.	13	8.	16	801.0	*****	.0	*****	1.020	28	*****	.76	21
REGNIER	7534	1	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.360	28	1.09	.79	20
TURPIN 4 SSE	9017	1	36.4	28	*****	76.	13	10.	16	800.5	*****	.0	*****	1.580	28	*****	1.00	21

FEBRUARY 1990 SUMMARY FOR NORTH CENTRAL DIVISION (CD2)

NAME	ID	CD	DEV						HEAT	DEV	COOL	DEV	TOT	NUM	FROM	MAX	24-HR	DAY
			MEAN	NUM	FROM	MAX	MIN	DAY	DEG	FROM	DEG	FROM						
ALVA	193	2	43.4	28	*****	76.	12	17.	17	604.0	*****	.0	*****	2.570	28	*****	.91	22
VANCE AFB	302	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.824	28	*****	.49	28
BILLINGS	755	2	42.5	28	*****	78.	13	15.	16	630.5	*****	.0	*****	3.442	28	2.22	1.33	28
BLACKWELL 2E	818	2	42.6	28	*****	76.	12	18.	4	628.5	*****	.0	*****	2.772	28	*****	.98	28
BRAMAN	1075	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.702	28	*****	.98	28
CHEROKEE	1724	2	43.8	28	3.8	75.	12	19.	16	595.0	-108.0	.0	.0	3.050	26	*****	1.25	21
ENID	2912	2	43.9	28	3.2	75.	12	17.	16	591.5	-88.5	.0	.0	3.600	28	2.44	1.29	22
FT SUPPLY DAM	3304	2	39.3	28	-.5	79.	13	14.	16	720.5	14.5	.0	.0	1.700	28	.85	.57	28
FREEDOM	3358	2	40.9	28	*****	79.	12	14.	17	674.0	*****	.0	*****	2.021	28	*****	.94	22
GREAT SALT PLNS	3740	2	43.3	28	*****	76.	13	21.	16	607.0	*****	.0	*****	2.921	28	2.10	1.32	22
HARDY	3909	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.203	28	*****	1.10	27
HELENA 1 SSE	4019	2	40.7	28	*****	76.	13	16.	16	680.0	*****	.0	*****	3.514	28	2.51	1.39	22
JEFFERSON	4573	2	43.1	28	3.5	76.	12	17.	16	614.5	-96.5	.0	.0	3.520	28	2.55	1.23	21
LAMONT	5013	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.050	28	*****	.98	22
MEDFORD	5768	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.930	28	*****	1.17	21
MORRISON	6065	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.570	28	*****	1.31	22
MUTUAL	6139	2	40.9	28	1.7	74.	13	17.	16	673.5	-48.5	.0	.0	2.222	28	1.29	.80	22
NEWKIRK	6278	2	43.1	28	4.2	75.	13	17.	5	612.5	-118.5	.0	.0	.991	28	-.11	.26	28
ORIENTA	6751	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.720	28	*****	1.15	22
PERRY	7012	2	39.4	28	-2.1	68.	11	18.	20	715.5	57.5	.0	.0	3.380	28	2.06	1.21	28
PONCA CITY FAA	7201	2	45.2	28	7.5	77.	12	19.	4	555.5	-208.5	.0	.0	3.610	28	2.39	1.60	28
RED ROCK 1 NNE	7505	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.300	28	1.91	1.10	28
RENFROW	7556	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.660	28	1.65	1.08	22
WAYNOKA	9404	2	42.5	28	1.9	76.	12	18.	16	630.5	-52.5	.0	.0	2.661	28	1.68	1.14	22
WOODWARD	9760	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.194	28	*****	.69	22

FEBRUARY 1990 SUMMARY FOR NORTHEAST DIVISION (CD3)

NAME	ID CD	DEV				HEAT		DEV		COOL		DEV		TOT	NUM	DEV	
		MEAN	NUM	FROM	MAX	MIN	DEG	FROM	DEG	FROM	DEG	FROM	FROM			MAX	
		TEMP	OBS	NORM	TEMP	DAY	TEMP	DAY	DEG	NORM	DAY	NORM	PPT	OBS	NORM	24-HR	DAY
BARNSDALL	535 3	44.8	28	*****	75.	12	18.	17	566.0	*****	.0	*****	4.632	28	3.20	1.46	28
BARTLESVILLE ZW	548 3	44.9	28	4.6	78.	12	15.	17	563.5	-128.5	.0	.0	3.572	28	2.12	1.12	28
BIXBY	782 3	44.0	27	3.3	77.	12	20.	16	567.5	-112.5	.0	.0	3.961	27	*****	1.15	14
BURBANK	1256 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.792	28	*****	.87	28
CHELSEA 4 S	1717 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.360	28	*****	1.11	15
CLAREMORE	1828 3	43.3	28	3.5	76.	13	20.	17	606.5	-99.5	.0	.0	4.553	28	2.93	1.13	22
CLEVELAND 5 WSW	1902 3	46.1	22	*****	77.	12	20.	16	415.5	*****	.0	*****	4.480	28	*****	1.70	28
FORAKER	3250 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.770	28	.55	1.34	28
HOLLOW	4258 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.520	28	1.97	1.07	15
HOMINY	4289 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.120	28	2.73	1.19	28
HULAH DAM	4393 3	43.6	19	*****	77.	13	14.	20	407.0	*****	.0	*****	3.472	28	2.30	.97	28
JAY TOWER	4567 3	46.5	26	*****	72.	13	20.	17	482.0	*****	.0	*****	5.630	26	*****	1.64	15
KANSAS 1 ESE	4672 3	45.6	27	*****	72.	12	19.	17	525.0	*****	.0	*****	4.021	28	*****	1.50	15
KEYSTONE DAM	4812 3	44.8	28	*****	77.	11	17.	20	567.0	*****	.0	*****	4.553	28	*****	1.22	28
LENAPAH	5118 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.271	28	*****	1.12	15
MANNFORD 6 NW	5522 3	46.4	28	*****	77.	12	18.	16	520.0	*****	.0	*****	4.471	28	3.00	1.42	28
MARAMEC	5540 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.542	28	3.14	1.36	15
MIAMI	5855 3	45.4	28	5.6	75.	9	17.	4	549.5	-156.5	.0	.0	4.080	28	2.20	1.29	15
NOWATA	6485 3	43.7	28	3.7	76.	12	19.	17	596.0	-104.0	.0	.0	3.561	28	1.92	1.10	28
ONETA 1 WNW	6713 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.471	28	*****	1.13	22
PAWHUSKA	6935 3	44.0	28	4.0	76.	12	16.	17	588.5	-111.5	.0	.0	5.681	28	4.37	1.85	28
PAWHUSKA	6937 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.150	28	*****	1.25	28
PAWNEE	6940 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.171	28	1.86	.96	22
PRYOR 6 N	7309 3	42.2	28	2.2	74.	13	16.	18	637.5	-62.5	.0	.0	3.983	28	2.20	1.27	15
RALSTON	7390 3	45.8	28	*****	78.	12	18.	16	539.0	*****	.0	*****	3.561	28	2.26	1.30	22
RAMONA 4 N	7394 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.020	28	*****	1.15	28
SKIATOOK	8258 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.410	28	1.78	1.40	22
SPAVINAW	8380 3	46.5	28	*****	71.	12	22.	17	517.5	*****	.0	*****	4.354	28	2.56	1.54	15
TULSA WSO APT	8992 3	47.7	28	7.0	76.	8	23.	17	484.0	-196.0	.0	.0	3.332	28	1.59	1.01	22
UPPER SPAVINAW	9101 3	42.4	26	*****	75.	12	9.	16	587.0	*****	.0	*****	4.642	28	*****	1.45	15
VINITA 2 N	9203 3	44.1	28	4.3	74.	13	16.	4	586.5	-119.5	.0	.0	4.060	28	2.25	1.24	15
WAGONER	9247 3	47.5	28	5.3	75.	12	23.	17	491.0	-147.0	.0	.0	4.460	28	2.57	1.28	15
WANN	9298 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.350	28	*****	.94	15
WYNONA	9792 3	46.4	28	*****	76.	8	20.	17	521.5	*****	.0	*****	4.474	28	*****	1.20	28

FEBRUARY 1990 SUMMARY FOR WEST CENTRAL DIVISION (CD4)

NAME	ID CD	DEV				HEAT		DEV		COOL		DEV		TOT	NUM	DEV	
		MEAN	NUM	FROM	MAX	MIN	DEG	FROM	DEG	FROM	DEG	FROM	FROM			MAX	
		TEMP	OBS	NORM	TEMP	DAY	TEMP	DAY	DEG	NORM	DAY	NORM	PPT	OBS	NORM	24-HR	DAY
CANTON DAM	1445 4	43.3	19	*****	75.	13	18.	16	411.5	*****	.0	*****	3.213	19	*****	.97	22
CHEYENNE	1738 4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.000	28	*****	1.02	28
CLINTON	1909 4	47.3	28	5.9	78.	12	22.	15	494.5	-166.5	.0	.0	2.850	28	1.81	1.04	28
COLONY	2039 4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.681	28	*****	.92	22
CORDELL	2125 4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.183	28	2.15	1.15	28
ELK CITY 1 E	2849 4	44.2	28	*****	77.	12	19.	16	583.5	*****	.0	*****	2.730	28	1.78	.85	22
ERICK 4 E	2944 4	44.3	16	*****	80.	12	17.	16	331.5	*****	.0	*****	1.560	28	.70	.66	28
GEARY	3497 4	44.4	27	3.3	76.	12	22.	16	556.0	-113.0	.0	.0	3.100	28	1.98	1.00	28
HAMMON 1 NNE	3871 4	43.4	28	2.5	81.	13	16.	15	605.5	-69.5	.0	.0	2.212	28	1.30	.81	28
LEEDEY	5090 4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.410	28	2.51	1.27	14
MACKIE 4 NNW	5463 4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.120	28	*****	.81	19
MORAVIA 2 NNE	6035 4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.561	28	1.60	.92	28
OKEENE	6629 4	44.1	28	2.5	77.	12	19.	16	585.5	-69.5	.0	.0	3.600	28	2.66	1.30	22
REITROP	7565 4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.760	28	*****	.87	28
REYDON	7579 4	43.8	28	*****	79.	12	15.	16	594.5	*****	.0	*****	2.412	28	1.62	.67	28
SAYRE	7952 4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.090	28	1.37	.68	28
SWEETWATER 2 E	8652 4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.310	28	*****	.68	27
TALOGA	8708 4	43.0	28	2.9	77.	11	17.	16	615.5	-81.5	.0	.0	2.842	28	1.90	.81	22
THOMAS	8815 4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.480	28	*****	.85	24
VICI	9172 4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.191	28	*****	1.09	22
WATONGA	9364 4	43.3	28	*****	76.	12	18.	16	609.0	*****	.0	*****	4.182	28	3.13	1.04	28
WEATHERFORD	9422 4	43.8	28	2.1	77.	13	20.	16	594.0	-58.0	.0	.0	4.192	28	3.20	1.20	28



FEBRUARY 1990 SUMMARY FOR CENTRAL DIVISION (CD5)

NAME	ID	CD	DEV						HEAT		DEV		COOL		DEV		TOT	NUM	FROM	MAX	24-HR	DAY
			MEAN	NUM	FROM	MAX	MIN	DAY	DEG	FROM	DEG	FROM	DEG	FROM	DEG	FROM						
AMBER	200	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.130	28	*****	1.57	28				
TINKER AFB	325	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.803	27	*****	1.20	28				
BLANCHARD 2 SSW	830	5	47.3	28	*****	78.	12	21.	16	496.0	*****	.0	*****	3.991	28	*****	1.63	28				
BRISTOW	1144	5	46.5	28	4.1	77.	12	19.	17	517.5	-115.5	.0	.0	3.113	28	1.50	.83	28				
CHANDLER	1684	5	46.9	27	4.5	76.	12	21.	16	489.5	-143.5	.0	.0	4.243	27	*****	1.30	28				
CHICKASHA EX ST1	1750	5	46.1	28	3.0	78.	12	22.	17	528.5	-84.5	.0	.0	4.932	28	3.72	1.88	28				
COX CITY 1 E	2196	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.250	28	*****	1.10	28				
CUSHING	2318	5	44.7	28	4.7	76.	13	21.	17	568.5	-131.5	.0	.0	5.042	28	3.73	1.48	28				
EL RENO 1 N	2818	5	45.0	28	3.7	76.	12	21.	16	560.0	-104.0	.0	.0	3.790	28	2.70	1.35	28				
GUTHRIE	3821	5	46.8	28	5.5	79.	12	22.	16	510.0	-154.0	.0	.0	4.670	28	3.41	1.50	28				
HENNESSEY 2 SE	4055	5	43.4	28	2.8	76.	11	21.	16	606.0	-77.0	.0	.0	3.780	28	2.62	1.34	22				
INGALLS	4489	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.357	28	*****	1.26	28				
KINGFISHER 2 SE	4861	5	44.3	28	3.1	77.	12	19.	16	579.5	-86.5	.0	.0	4.480	28	3.35	1.41	22				
KONAWA	4915	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.930	28	1.28	.75	22				
MARSHALL	5589	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.250	28	2.09	1.06	22				
MEEKER 4 W	5779	5	46.0	27	4.1	77.	12	20.	17	512.5	-134.5	.0	.0	5.230	28	3.76	1.46	27				
MULHALL	6110	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.580	28	*****	1.20	28				
NORMAN 3 S	6386	5	46.7	28	*****	78.	12	22.	17	512.5	*****	.0	*****	3.363	28	2.03	1.42	28				
OKEMAH	6638	5	47.8	28	4.7	75.	12	22.	17	481.0	-132.0	.0	.0	2.910	28	1.46	.70	15				
OKLAHOMA CTY WS	6661	5	47.5	28	6.7	77.	12	25.	16	489.0	-189.0	.0	.0	4.293	28	3.00	1.21	28				
PERKINS	7003	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.990	28	2.73	1.05	15				
PIEDMONT	7068	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.130	28	*****	1.27	28				
PRAGUE	7264	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.450	28	1.95	1.05	22				
PURCELL 5 SW	7327	5	47.2	28	5.0	78.	12	21.	16	498.0	-140.0	.0	.0	4.500	28	3.16	1.15	28				
SEMINOLE	8042	5	48.9	28	4.4	76.	12	25.	17	451.0	-123.0	.0	.0	4.350	28	2.80	1.26	1				
SHAWNEE	8110	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.621	28	1.09	.82	22				
STELLA	8479	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.460	28	*****	1.43	28				
STILLWATER 2 W	8501	5	43.7	28	3.2	79.	13	19.	17	596.0	-90.0	.0	.0	3.821	28	2.62	1.12	28				
STROUD 1 N	8563	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.591	28	*****	1.08	28				
TECUMSEH	8751	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.950	28	*****	.62	28				
TROUSDALE	8960	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.360	28	*****	.88	28				
WELTY 1 SSE	9479	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.540	28	*****	.67	22				
WEWOKA	9575	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.690	28	2.01	1.76	1				

FEBRUARY 1990 SUMMARY FOR EAST CENTRAL DIVISION (CD6)

NAME	ID	CD	DEV							HEAT		DEV		COOL		DEV		TOT	NUM	FROM	MAX	24-HR	DAY
			MEAN	NUM	FROM	MAX	MIN	DEG	FROM	DEG	FROM	DEG	FROM	PPT	OBS	NORM							
ASHLAND	364	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.942	28	*****	1.20	1					
BEGGS	631	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.180	28	*****	.98	22					
BOYNTON	1027	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.991	28	*****	1.05	22					
CALVIN	1391	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.230	28	1.33	1.10	1					
CHECOTAH	1711	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.421	28	2.55	1.14	2					
CLAYTON 11 WNW	1858	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.480	28	*****	2.02	1					
DEWAR 2 NE	2485	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.790	28	1.98	.92	22					
DUSTIN	2690	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.640	28	*****	1.15	22					
EUFULA	2993	6	48.1	28	*****	74.	12	28.	16	472.5	*****	.0	*****	5.401	28	3.33	1.70	1					
HANNA	3884	6	47.9	28	*****	75.	12	22.	17	478.0	*****	.0	*****	4.532	28	2.67	1.13	22					
HARTSHORNE	3946	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.341	28	*****	1.37	22					
HASKELL	3956	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.851	28	1.93	1.04	22					
HOLDENVILLE	4235	6	48.0	28	3.9	75.	12	22.	17	475.0	-118.0	.0	-8.0	2.800	28	1.12	.75	22					
LAKE EUFAULA	4975	6	47.5	28	*****	79.	13	23.	17	491.5	*****	2.0	*****	5.412	28	*****	1.70	15					
LYONS 2 N	5437	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.850	28	4.90	2.51	1					
MARBLE CITY	5546	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.342	28	*****	1.77	15					
MCALESTER FAA	5664	6	50.1	28	7.0	76.	11	25.	17	418.0	-195.0	.0	.0	5.872	28	3.61	1.58	15					
MCCURTAIN 1 SE	5693	6	50.2	28	*****	75.	13	23.	17	416.0	*****	2.0	*****	9.111	28	6.58	2.85	15					
MUSKOGEE	6130	6	46.7	27	3.8	74.	12	22.	17	495.0	-124.0	.0	.0	4.820	28	2.71	1.07	14					
OKMULGEE W W	6670	6	46.1	19	*****	76.	13	21.	6	360.0	*****	.0	*****	3.800	28	2.01	1.67	28					
OKTAHA 2 NE	6678	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.071	28	*****	.96	2					
QUINTON	7372	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.012	28	3.91	1.79	15					
SALLISAW 2 NE	7862	6	48.0	28	4.6	75.	12	20.	19	475.5	-129.5	.5	.5	6.512	28	4.03	2.50	15					
SCIPIO	7979	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.490	28	*****	2.08	1					
SCRAPER	7993	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.470	28	*****	1.60	15					
SHORT	8170	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	7.460	28	*****	2.50	15					
STILWELL 1 NE	8506	6	47.3	28	*****	73.	12	17.	17	495.0	*****	.0	*****	6.201	28	3.63	1.82	15					
TAHLEQUAH	8677	6	46.5	28	4.4	73.	13	20.	17	517.0	-124.0	.0	.0	4.960	28	2.54	1.27	15					
WEBBERS FALLS	9445	6	45.8	28	5.0	74.	13	22.	17	537.5	-140.5	.0	.0	5.540	28	3.23	1.63	2					
WESTVILLE	9523	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.870	28	*****	1.77	2					
WEIUMKA 3 NE	9571	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.342	28	1.74	.91	22					

FEBRUARY 1990 SUMMARY FOR SOUTHWEST DIVISION (CD7)

NAME	ID	CD	DEV							HEAT		DEV		COOL		DEV		TOT	NUM	FROM	MAX	24-HR	DAY
			MEAN	NUM	FROM	MAX	MIN	DEG	FROM	DEG	FROM	DEG	FROM	PPT	OBS	NORM							
ALTUS IRR STA	179	7	48.2	28	3.8	83.	12	20.	4	471.0	-106.0	.0	.0	2.860	28	1.94	1.40	28					
ALTUS DAM	184	7	46.6	28	*****	82.	13	22.	17	517.5	*****	3.0	*****	3.280	28	2.34	1.58	28					
ANADARKO	224	7	44.7	23	*****	78.	12	18.	17	468.0	*****	.0	*****	2.861	25	*****	.82	21					
APACHE	260	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.790	28	*****	2.05	28					
ALTUS AFB	447	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.672	28	*****	.47	28					
CARNEGIE 2 ENE	1504	7	46.0	28	3.4	79.	12	21.	4	531.5	-95.5	.0	.0	4.001	28	2.85	1.00	21					
CHATTANOOGA	1706	7	48.7	27	4.4	79.	12	21.	14	440.5	-139.5	.0	.0	3.960	27	*****	1.74	28					
DUNCAN 12 W	2668	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.690	28	*****	1.55	28					
FREDERICK	3353	7	48.2	22	*****	79.	13	24.	16	369.5	*****	.0	*****	3.020	22	*****	1.95	28					
GRANDFIELD 4 NW3709	7	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.820	28	2.64	1.95	28					
HOBART FAA APT	4204	7	46.1	28	4.9	78.	12	21.	4	529.0	-137.0	.0	.0	2.931	28	2.02	1.24	28					
HOLLIS	4249	7	46.7	28	2.4	82.	12	17.	5	513.0	-67.0	.0	.0	2.951	28	2.18	1.20	27					
LAWTON	5063	7	47.0	28	3.3	78.	12	25.	15	503.5	-92.5	.0	.0	4.611	28	3.44	2.85	27					
FORT SILL	5068	7	47.5	28	*****	78.	12	27.	16	489.0	*****	.0	*****	4.633	28	3.46	1.22	28					
LOOKEBA 2 ENE	5329	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.790	28	*****	1.52	28					
MANGUM RES STA	5509	7	48.6	28	4.7	80.	11	22.	16	461.0	-130.0	.5	.5	2.640	28	1.78	1.25	28					
RANDLETT 9 E	7403	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.181	28	*****	2.16	28					
ROOSEVELT	7727	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.790	28	2.83	2.00	28					
SEDAN	8016	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.970	28	*****	2.12	28					
VINSON 3 WNW	9212	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.670	28	2.01	.82	28					
WALTERS	9278	7	49.6	28	4.6	80.	12	23.	16	431.5	-128.5	.0	.0	4.371	28	3.10	1.79	28					
WICHITA MT WLR	9629	7	45.5	28	2.7	77.	13	22.	18	546.0	-76.0	.0	.0	4.900	28	3.73	2.25	28					
WILLOW	9668	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.900	28	*****	1.07	28					

FEBRUARY 1990 SUMMARY FOR SOUTH CENTRAL DIVISION (CD8)

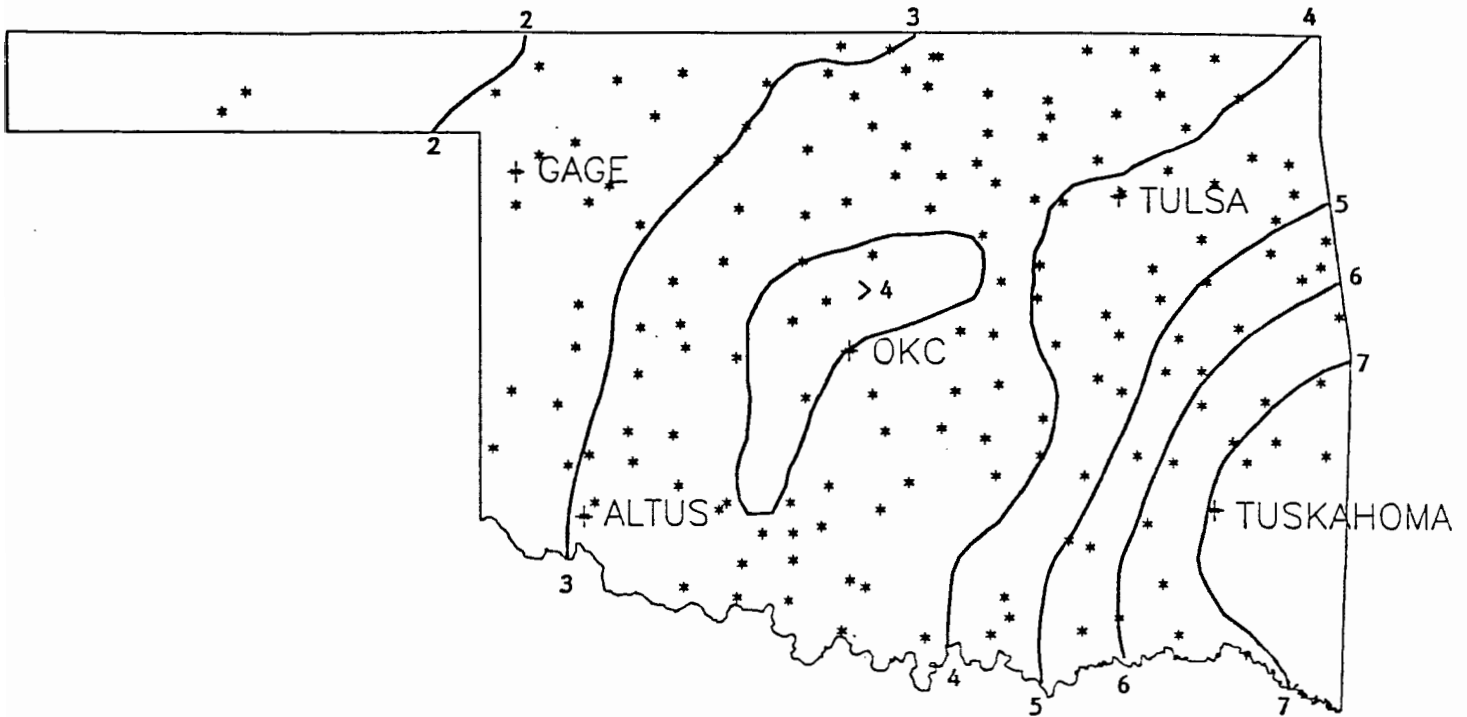
NAME	ID	CD	DEV						HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY	
			MEAN TEMP	NUM OBS	FROM NORM	MAX TEMP	MIN TEMP	DAY										
ADA	17	8	48.0	28	3.3	75.	12	24.	17	475.0	-93.0	.0	.0	3.410	28	1.53	.81	22
ALLEN	147	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.650	28	*****	1.30	15
ATOKA DAM	394	8	48.2	28	*****	76.	14	23.	17	471.5	*****	.0	*****	4.620	28	*****	1.73	1
BOKCHITO	917	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.400	28	*****	2.50	1
CANEY	1437	8	49.7	28	*****	75.	12	30.	23	427.5	*****	.0	*****	4.490	28	*****	2.00	1
CENTRAHOMA	1648	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.130	28	*****	1.00	15
CHICKASAW NRA	1745	8	47.2	28	*****	75.	14	25.	17	497.5	*****	.0	*****	4.020	28	*****	1.22	1
COLEMAN	2011	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.960	28	*****	1.45	1
COMANCHE	2054	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.440	28	*****	1.55	28
DAISY 4 ENE	2354	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.763	28	4.07	2.02	1
DUNCAN	2660	8	47.3	28	2.4	79.	13	24.	17	495.5	-74.5	.0	-8.0	4.040	28	2.83	1.57	28
DURANT USDA	2678	8	48.9	28	*****	77.	14	22.	18	451.5	*****	1.5	*****	4.320	28	2.07	1.72	1
ELMORE CITY	2872	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.132	28	*****	1.10	1
FARRIS 3 WNW	3083	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.880	28	*****	2.84	1
GRADY	3688	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.210	28	*****	1.10	28
HEALDTON	4001	8	49.2	28	*****	78.	13	23.	17	443.0	*****	1.0	*****	3.950	28	2.60	1.18	1
HENNEPIN	4052	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.380	28	*****	1.05	28
KETCHUM RANCH	4780	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.900	28	*****	1.81	28
KINGSTON	4865	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.691	28	1.43	1.45	1
LEHIGH	5108	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.083	28	*****	1.35	15
LINDSAY 2 W	5216	8	48.2	26	*****	78.	12	21.	17	437.0	*****	.0	*****	2.621	26	*****	1.10	28
LOCO 6 SE	5247	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.350	28	*****	1.15	28
MADILL	5468	8	50.4	28	4.5	76.	13	24.	17	408.5	-131.5	1.0	-4.0	4.490	28	2.37	1.33	1
MARLETTA	5563	8	51.2	28	5.1	77.	13	26.	17	389.0	-147.0	1.5	-4.5	3.013	28	1.24	1.00	1
MARLOW 1 WSW	5581	8	49.0	28	*****	79.	12	19.	16	449.0	*****	.0	*****	3.852	28	2.65	1.56	28
MC GEE CREEK DAM	5713	8	49.9	28	*****	76.	14	24.	17	423.5	*****	.0	*****	6.990	28	*****	2.65	1
OSWALT	6787	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.171	28	*****	1.50	22
PAULS VALLEY	6926	8	48.7	28	4.2	78.	12	20.	15	457.0	-117.0	.0	.0	2.830	28	1.34	.83	28
PONTOTOC	7214	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.670	28	4.74	2.27	26
TISHOMINGO NWLR	8884	8	48.8	28	*****	77.	11	22.	17	455.0	*****	.0	*****	4.290	28	2.24	1.42	1
TUSSY	9032	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.300	28	*****	1.05	28
WAURIKA	9395	8	50.0	28	3.8	80.	12	23.	17	421.0	-111.0	.0	-5.0	3.450	28	2.15	.84	22
WAURIKA DAM	9399	8	49.7	20	*****	80.	13	25.	16	305.5	*****	.0	*****	3.723	21	*****	1.57	28

FEBRUARY 1990 SUMMARY FOR SOUTHEAST DIVISION (CD9)

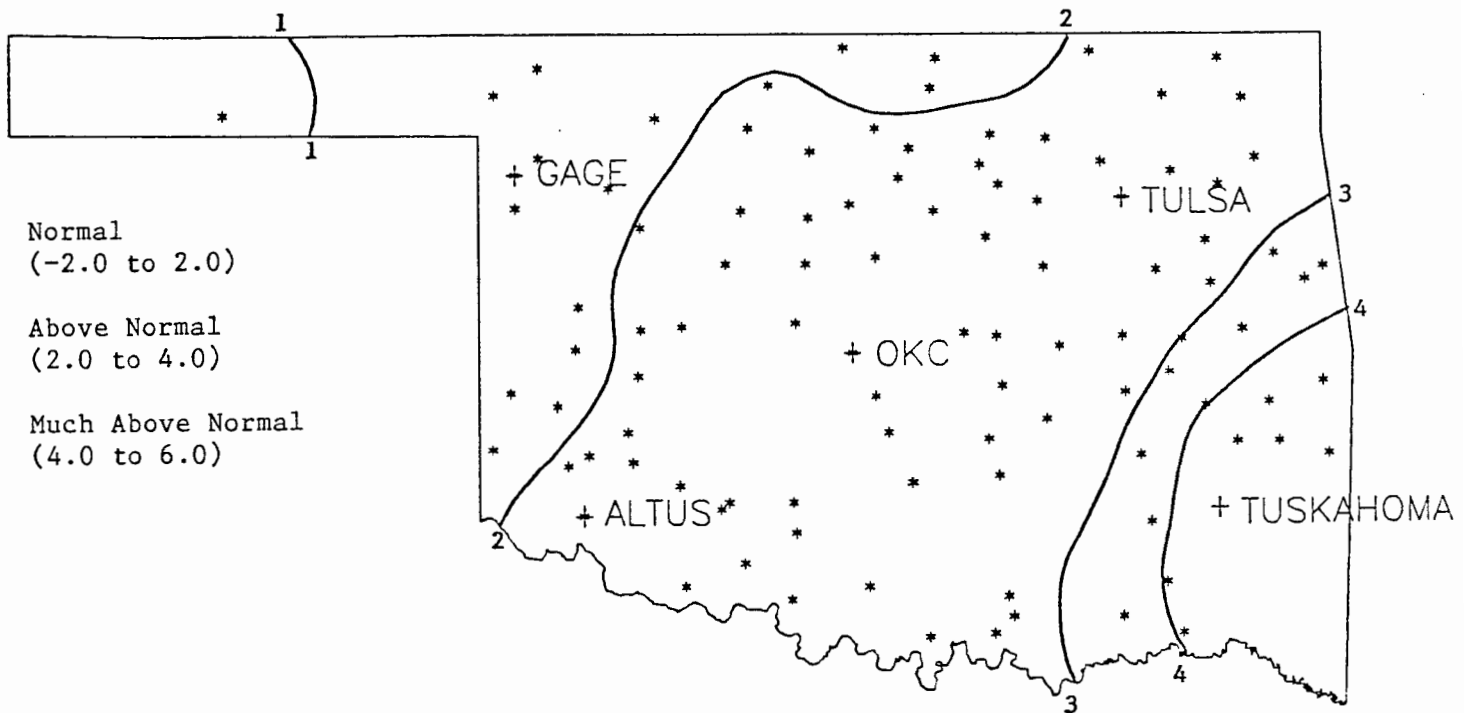
NAME	ID	CD	DEV						HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY	
			MEAN TEMP	NUM OBS	FROM NORM	MAX TEMP	MIN TEMP	DAY										
ANILERS	256	9	50.7	28	5.8	76.	13	22.	18	401.5	-161.5	.5	.5	6.850	28	4.10	2.36	1
BATTIEST 1 SSW	567	9	50.2	28	*****	75.	11	20.	17	414.0	*****	.0	*****	6.910	28	*****	2.45	2
BEAR MT TWR	584	9	52.1	28	*****	78.	11	23.	17	360.5	*****	.0	*****	6.280	27	*****	2.08	1
BENGAL	670	9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	7.870	28	*****	2.51	15
BOSWELL 4 NNW	980	9	52.2	28	*****	76.	11	27.	17	359.0	*****	1.0	*****	8.030	28	5.25	2.76	15
BROKEN BOW 1 N	1162	9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.691	28	1.40	1.70	1
BROKEN BOW DAM	1168	9	49.8	28	*****	77.	13	23.	16	425.0	*****	.0	*****	3.660	28	*****	1.50	1
CARNASAW TWR	1499	9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.810	28	1.48	1.82	1
FANSHAWE	3065	9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	8.030	28	5.24	2.65	15
FLAGPOLE TWR	3169	9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.860	28	*****	3.22	15
HEAVENER 1 SE	4008	9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	7.330	28	4.61	1.76	2
HEE MT TWR	4017	9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.380	28	*****	1.41	2
HUGO	4384	9	51.9	28	5.0	76.	11	26.	17	365.5	-147.5	.0	-6.0	6.451	28	3.68	2.80	2
IDABEL	4451	9	50.3	28	4.0	76.	14	25.	5	414.0	-110.0	1.0	1.0	4.680	28	1.26	1.30	1
POTEAU W W	7254	9	47.7	27	*****	76.	13	22.	16	468.0	*****	.0	*****	6.010	27	*****	1.64	14
SMITHVILLE 1 W	8285	9	47.7	28	*****	74.	13	16.	17	485.0	*****	.0	*****	3.950	28	*****	1.50	1
SOBAL TOWER	8305	9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.330	28	1.48	2.32	1
SPIRO	8416	9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.990	28	4.29	2.03	15
TUSKAHOMA	9023	9	50.1	28	*****	76.	13	20.	17	417.5	*****	.5	*****	8.910	28	*****	2.86	15
VALLIANT 3 W	9118	9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.130	28	2.86	2.36	22
WILBURTON 9 ENE	9634	9	49.1	28	5.1	76.	11	23.	17	445.0	-143.0	.0	.0	7.852	28	5.23	2.70	14

FEBRUARY 1990 CLIMATE DIVISION SUMMARY

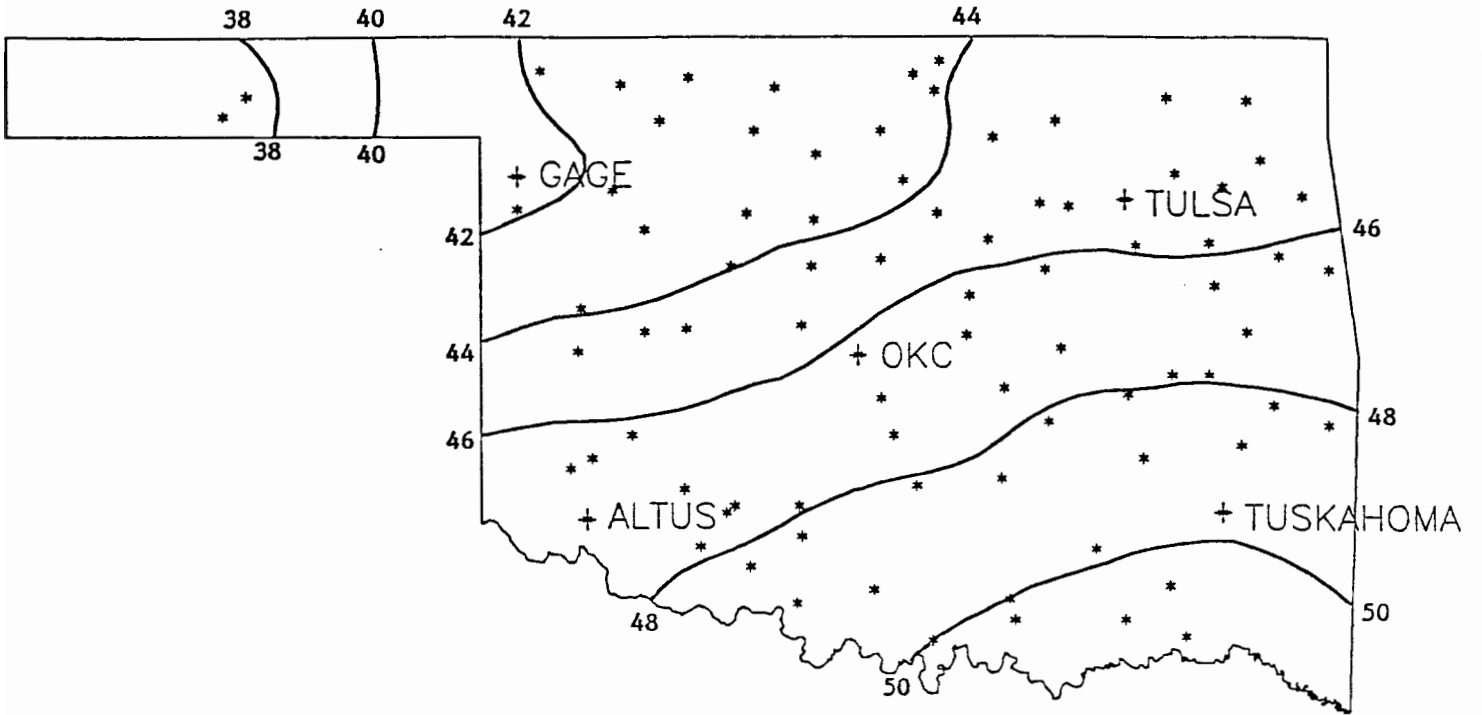
CLIMATE DIV	MEAN TEMP	NUM STA	DEV			HEAT			DEV			TOT PPT	NUM STA	DEV		24-HR DAY
			FROM NORM	MAX TEMP	MIN DAY TEMP	DEGREE DAY	DEGREE DAYS	FROM NORM	DEGREE DAYS	FROM NORM	MAX 24-HR					
1	38.2	12	-.4	83.0	12	-1.0	16	748.6	9.7	.0	.0	1.77	15	1.17	1.88	21
2	42.3	15	2.5	79.0	12	14.0	17	635.5	-70.9	.0	.0	2.84	24	1.77	1.60	28
3	45.1	17	5.0	78.0	12	9.0	16	554.5	-143.2	.0	.0	3.97	32	2.42	1.85	28
4	44.1	9	2.9	81.0	13	15.0	16	582.0	-84.0	.0	.0	2.78	21	1.84	1.30	22
5	46.2	16	4.4	79.0	13	19.0	17	524.7	-124.7	.0	.0	3.82	31	2.46	1.88	28
6	47.8	11	5.1	79.0	13	17.0	17	479.2	-144.4	.4	-.7	5.15	31	3.08	2.85	15
7	47.3	11	3.6	83.0	12	17.0	5	494.0	-103.4	.3	-.6	3.67	20	2.64	2.85	27
8	49.0	14	3.6	80.0	13	19.0	16	447.5	-105.9	.4	-3.6	4.19	31	2.41	2.84	1
9	50.2	11	4.6	78.0	11	16.0	17	414.1	-132.9	.3	-1.2	6.25	19	3.27	3.22	15



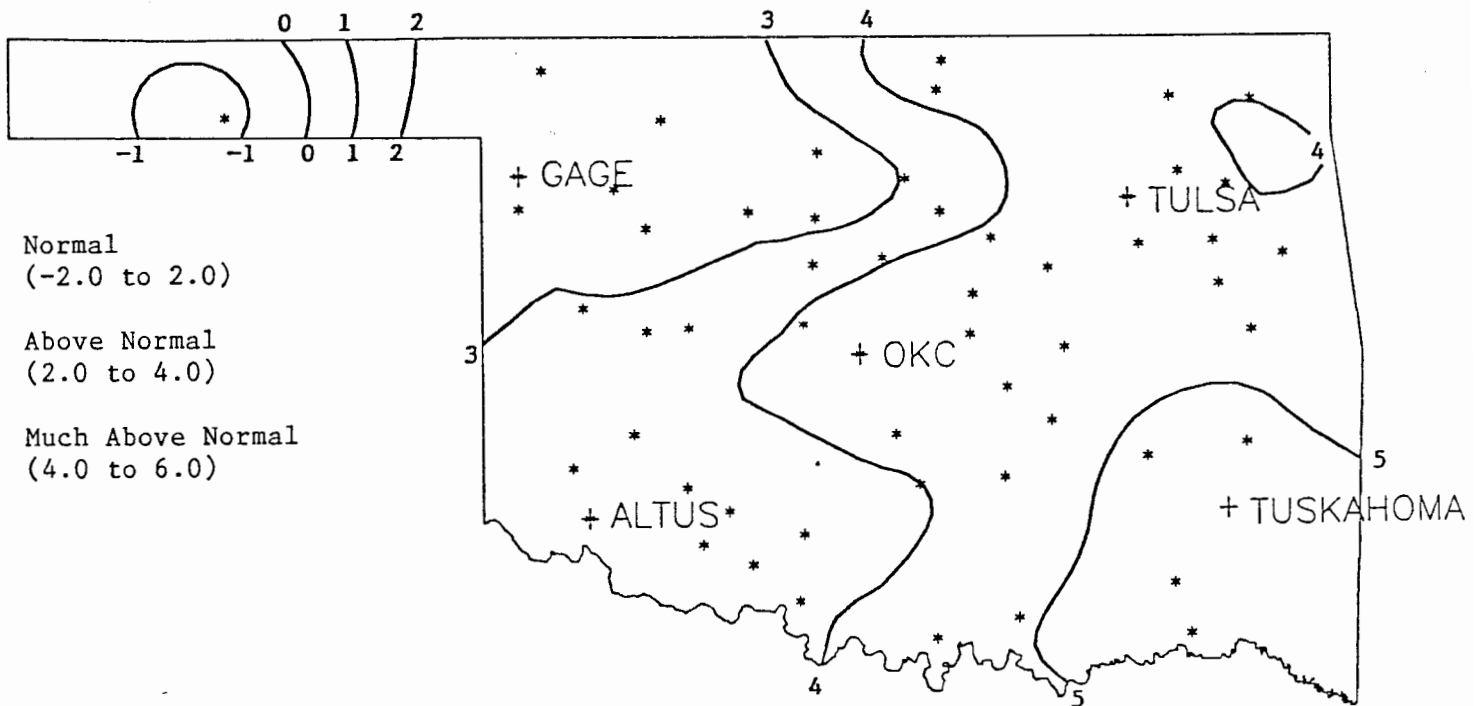
FEBRUARY 1990 TOTAL PRECIPITATION  
(Inches)



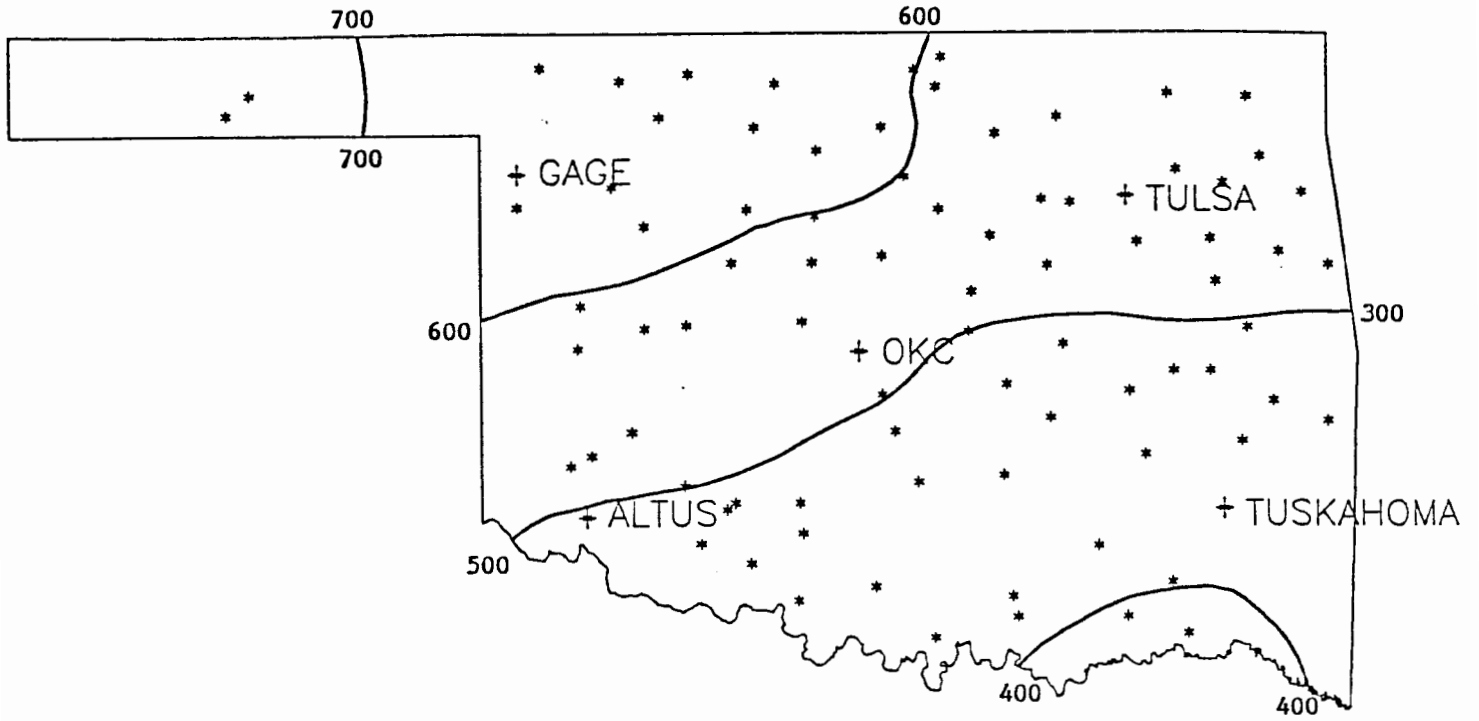
FEBRUARY 1990 DEVIATION FROM NORMAL PRECIPITATION  
(Inches)



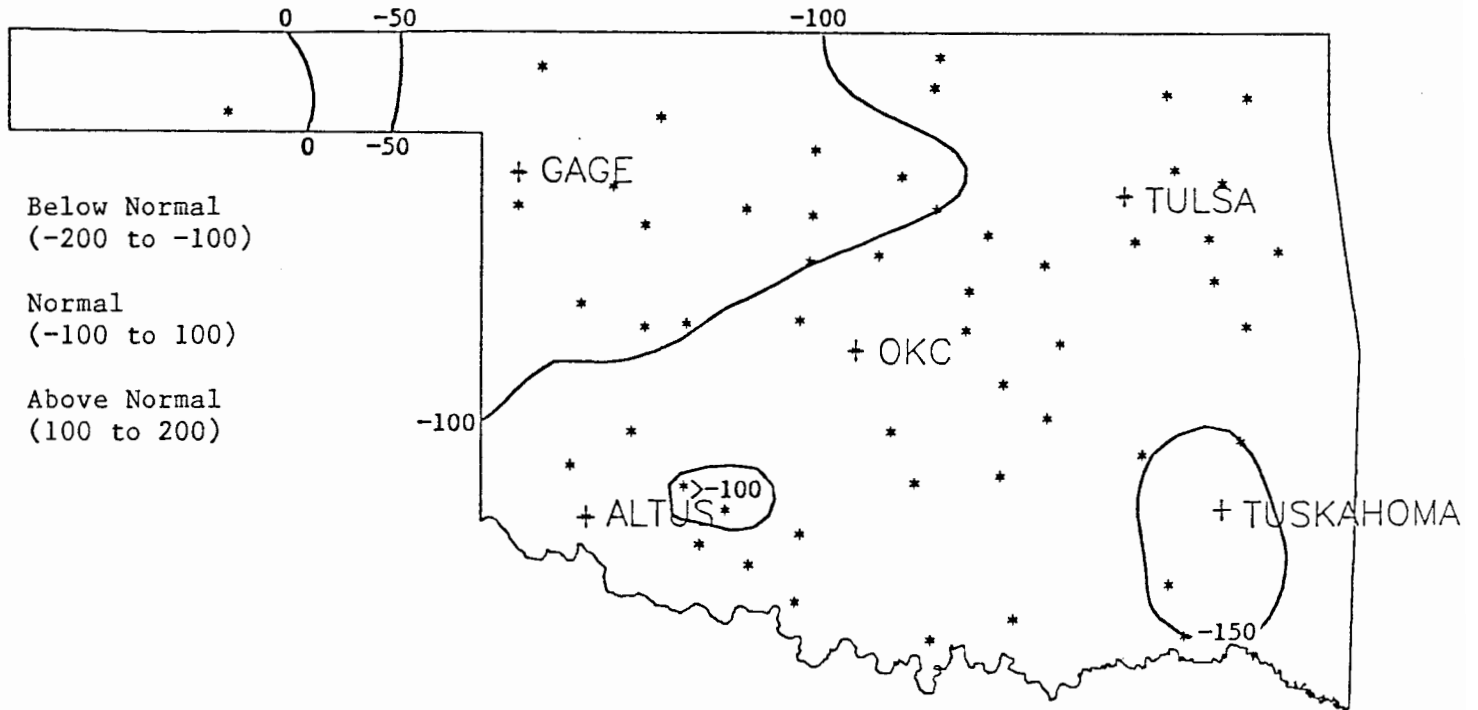
FEBRUARY 1990 AVERAGE MONTHLY TEMPERATURES  
(Degrees F)



FEBRUARY 1990 DEVIATION FROM NORMAL TEMPERATURES  
(Degrees F)

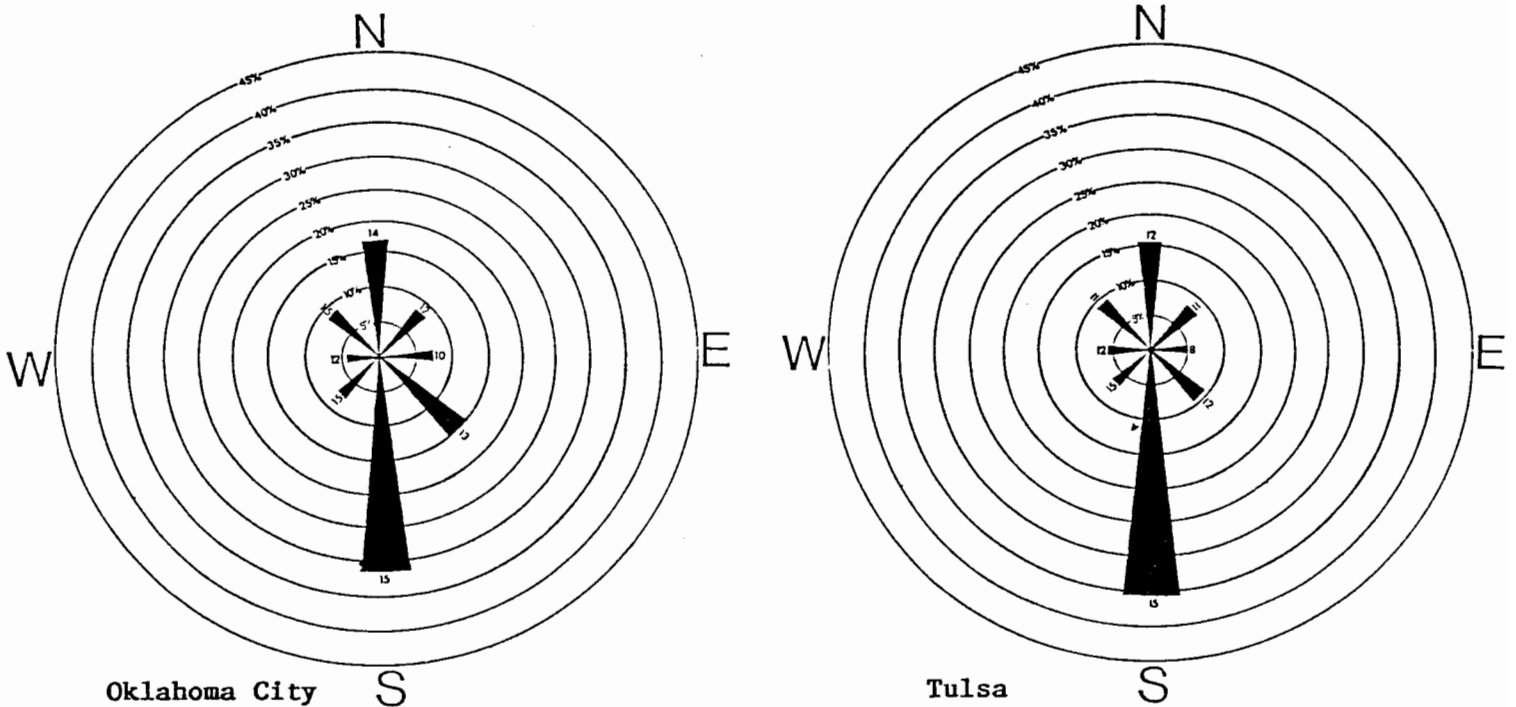


FEBRUARY 1990 HEATING DEGREE DAYS



FEBRUARY 1990 DEVIATION FROM NORMAL HEATING DEGREE DAYS

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



APRIL 1990 SUNRISE AND SUNSET \*

Oklahoma City

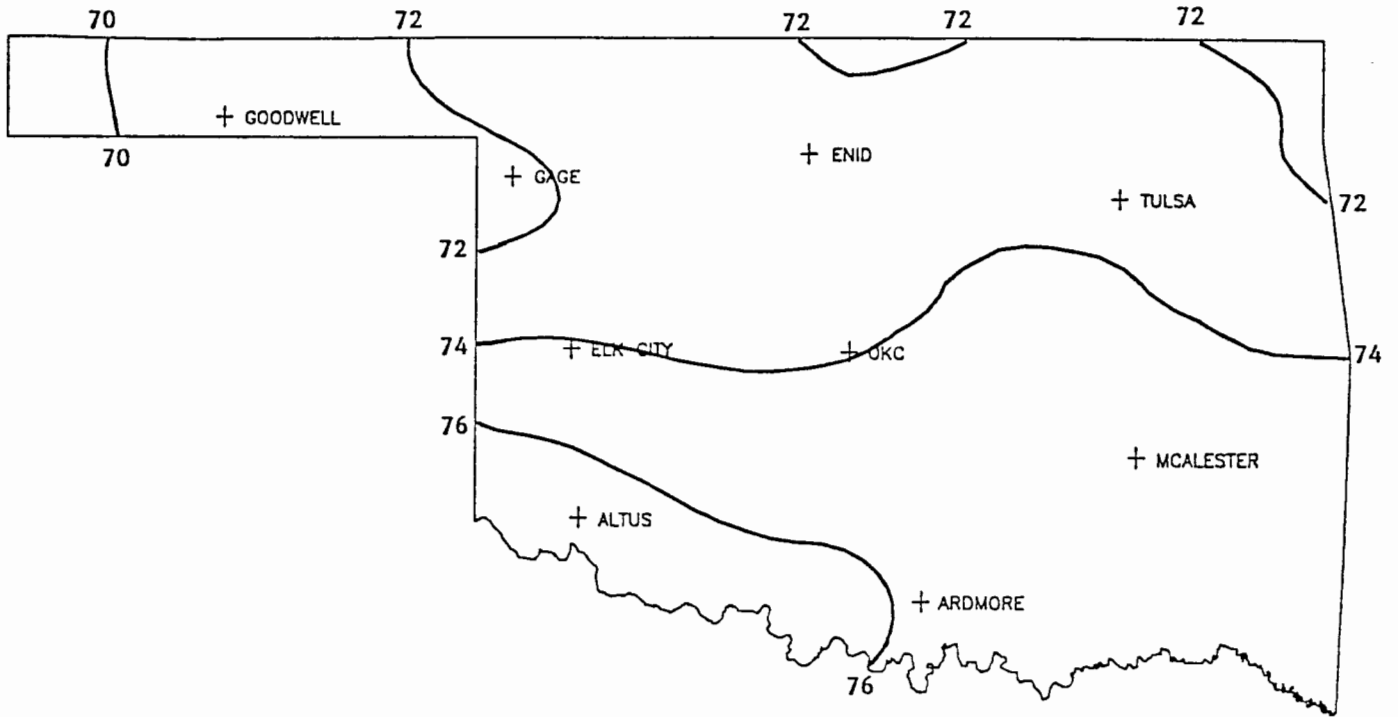
DATE	SUNRISE	SUNSET	DAYLIGHT
900401	7:19AM	7:51PM LT	12:32
900402	7:17AM	7:51PM LT	12:34
900403	7:16AM	7:52PM LT	12:36
900404	7:14AM	7:53PM LT	12:39
900405	7:13AM	7:54PM LT	12:41
900406	7:12AM	7:55PM LT	12:43
900407	7:10AM	7:55PM LT	12:45
900408	7: 9AM	7:56PM LT	12:47
900409	7: 7AM	7:57PM LT	12:50
900410	7: 6AM	7:58PM LT	12:52
900411	7: 5AM	7:58PM LT	12:54
900412	7: 3AM	7:59PM LT	12:56
900413	7: 2AM	8: 0PM LT	12:58
900414	7: 1AM	8: 1PM LT	13: 0
900415	6:59AM	8: 2PM LT	13: 2
900416	6:58AM	8: 2PM LT	13: 4
900417	6:57AM	8: 3PM LT	13: 7
900418	6:55AM	8: 4PM LT	13: 9
900419	6:54AM	8: 5PM LT	13:11
900420	6:53AM	8: 6PM LT	13:13
900421	6:52AM	8: 6PM LT	13:15
900422	6:50AM	8: 7PM LT	13:17
900423	6:49AM	8: 8PM LT	13:19
900424	6:48AM	8: 9PM LT	13:21
900425	6:47AM	8:10PM LT	13:23
900426	6:46AM	8:10PM LT	13:25
900427	6:45AM	8:11PM LT	13:27
900428	6:44AM	8:12PM LT	13:28
900429	6:42AM	8:13PM LT	13:30
900430	6:41AM	8:14PM LT	13:32

Tulsa

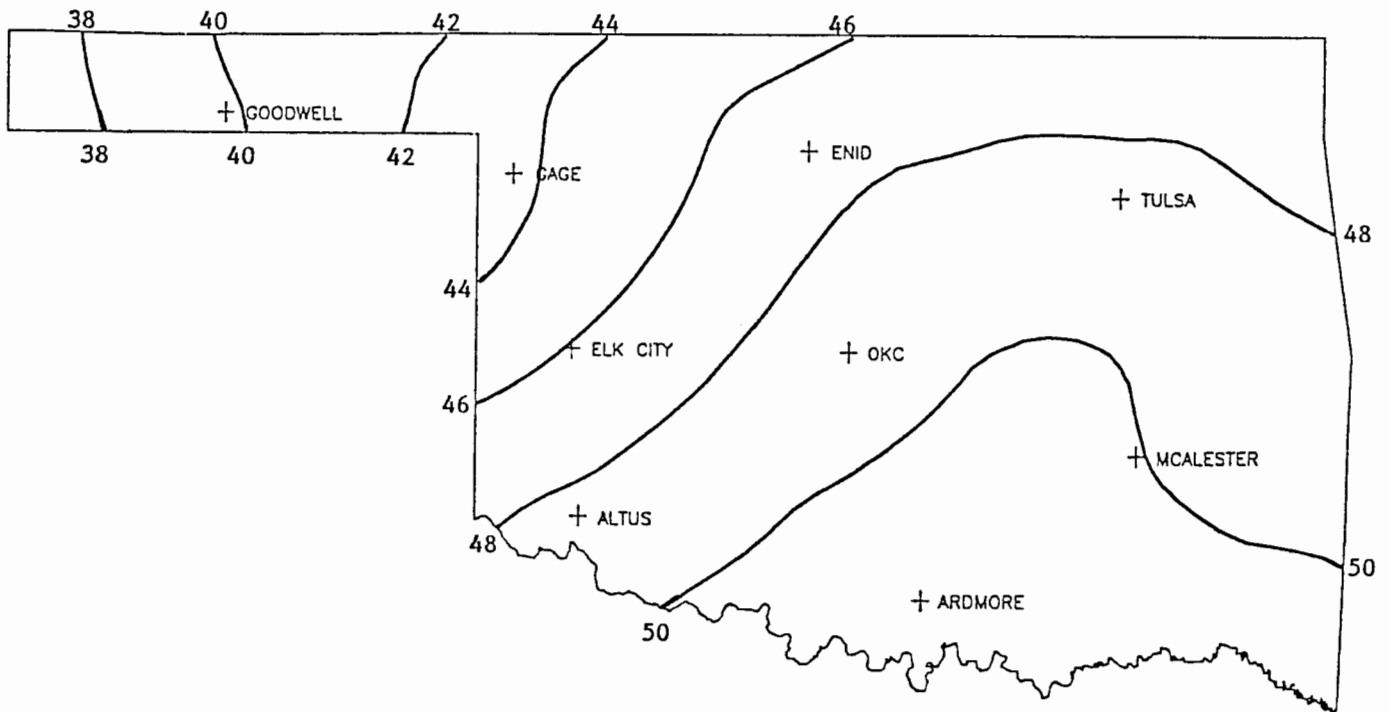
DATE	SUNRISE	SUNSET	DAYLIGHT
900401	7:11AM	7:44PM LT	12:33
900402	7:10AM	7:45PM LT	12:35
900403	7: 8AM	7:46PM LT	12:37
900404	7: 7AM	7:47PM LT	12:40
900405	7: 6AM	7:47PM LT	12:42
900406	7: 4AM	7:48PM LT	12:44
900407	7: 3AM	7:49PM LT	12:46
900408	7: 1AM	7:50PM LT	12:49
900409	7: 0AM	7:51PM LT	12:51
900410	6:59AM	7:52PM LT	12:53
900411	6:57AM	7:52PM LT	12:55
900412	6:56AM	7:53PM LT	12:57
900413	6:54AM	7:54PM LT	12:60
900414	6:53AM	7:55PM LT	13: 2
900415	6:52AM	7:56PM LT	13: 4
900416	6:50AM	7:57PM LT	13: 6
900417	6:49AM	7:57PM LT	13: 8
900418	6:48AM	7:58PM LT	13:10
900419	6:46AM	7:59PM LT	13:13
900420	6:45AM	8: 0PM LT	13:15
900421	6:44AM	8: 1PM LT	13:17
900422	6:43AM	8: 1PM LT	13:19
900423	6:41AM	8: 2PM LT	13:21
900424	6:40AM	8: 3PM LT	13:23
900425	6:39AM	8: 4PM LT	13:25
900426	6:38AM	8: 5PM LT	13:27
900427	6:37AM	8: 6PM LT	13:29
900428	6:35AM	8: 6PM LT	13:31
900429	6:34AM	8: 7PM LT	13:33
900430	6:33AM	8: 8PM LT	13:35

\* Daylight Savings Time

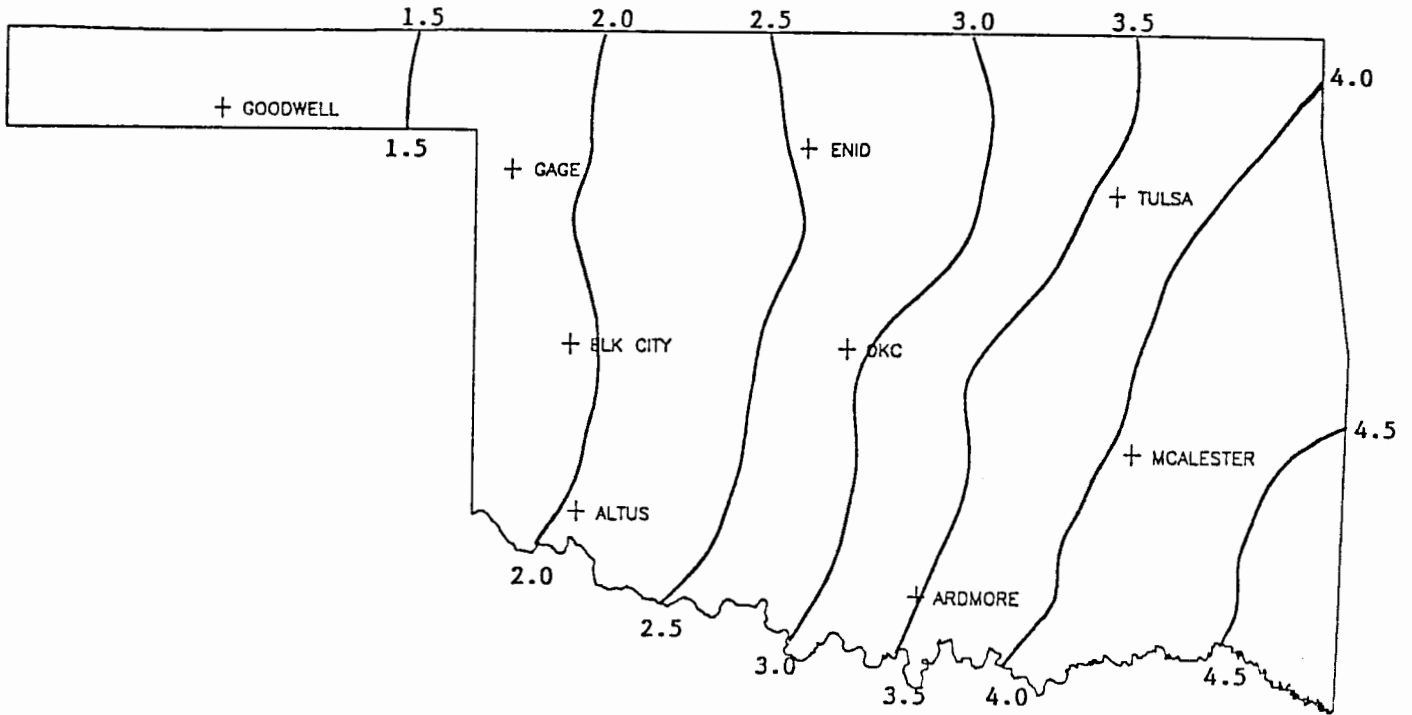




30-YEAR MEAN APRIL DAILY MAXIMUM TEMPERATURE



30-YEAR MEAN APRIL DAILY MINIMUM TEMPERATURE



30-YEAR MEAN APRIL PRECIPITATION

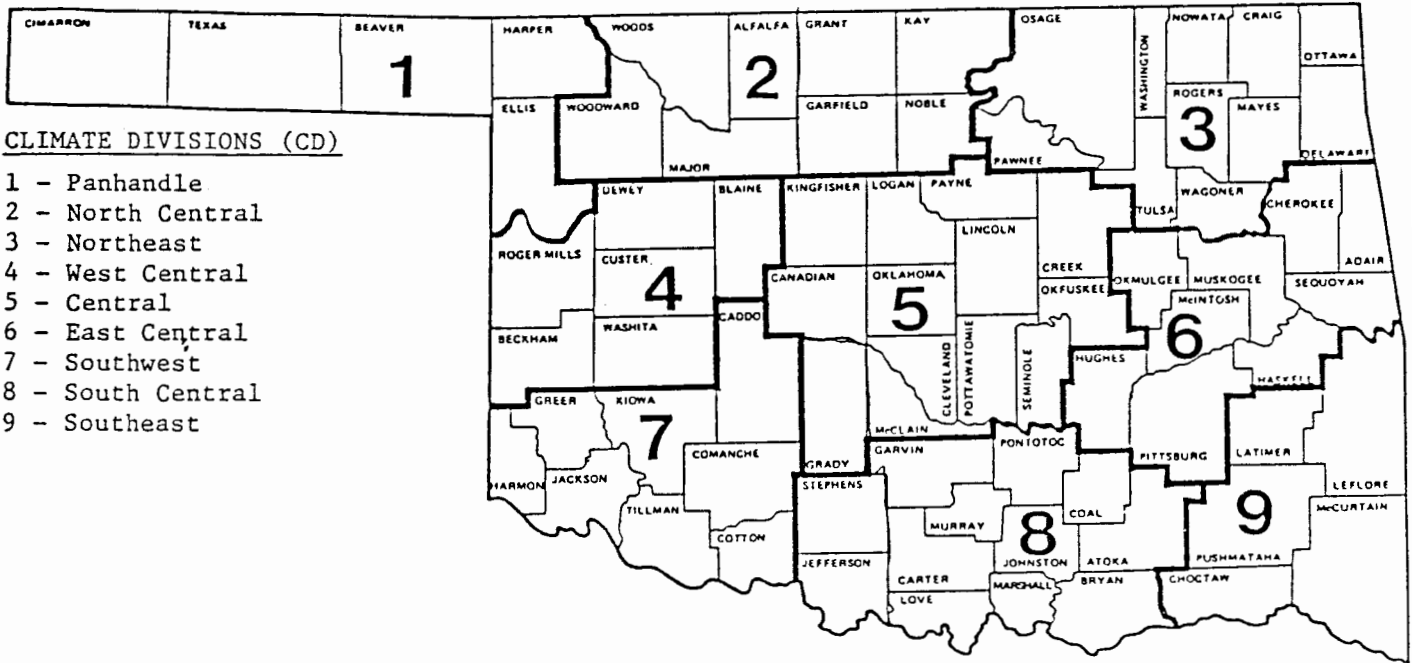
30- and 90-DAY NATIONAL WEATHER SERVICE OUTLOOK

**30-DAY OUTLOOK (MARCH)**

Precipitation - Near Normal Statewide  
Temperature - Above Normal Statewide

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

Precipitation - Near Normal Statewide  
Temperature - Near Normal Statewide



CLIMATE DIVISIONS (CD)

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

**EXPLANATION OF TABLES**

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

Station Name:

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

Climate Division: See the figure above.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

### EXPLANATION OF MAPS

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

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

**APRIL 1990**  
**CLIMATE CALENDAR**

1		2		3		4		5		6		7	
Normal	67.3	Normal	69.7	Normal	67.9	Normal	65.5	Normal	66.7	Normal	71.8	Normal	70.3
Actual	—	Actual	—	Actual	—	Actual	—	Actual	—	Actual	—	Actual	—
max	44.1	max	45.3	max	44.1	max	42.2	max	42.0	max	44.7	max	46.6
min	—	min	—	min	—	min	—	min	—	min	—	min	—
pcpn	.020	pcpn	.079	pcpn	.096	pcpn	.023	pcpn	.147	pcpn	.009	pcpn	.050
HDD	10	HDD	8	HDD	9	HDD	12	HDD	11	HDD	8	HDD	7
CDD	1	CDD	1	CDD	1	CDD	1	CDD	1	CDD	2	CDD	1
Highest Max	92-1946	Highest Max	87-1946	Highest Max	89-1950	Highest Max	89-1942	Highest Max	87-1959	Highest Max	87-1954	Highest Max	94-1954
Lowest Max	45-1938	Lowest Max	43-1949	Lowest Max	43-1944	Lowest Max	43-1970	Lowest Max	47-1983	Lowest Max	44-1940	Lowest Max	38-1938
Lowest Min	28-1972	Lowest Min	20-1936	Lowest Min	21-1975	Lowest Min	29-1945	Lowest Min	26-1970	Lowest Min	27-1938	Lowest Min	27-1938
Highest Min	68-1946	Highest Min	67-1940	Highest Min	66-1934	Highest Min	68-1929	Highest Min	65-1978	Highest Min	68-1932	Highest Min	65-1946
Greatest pcpn	.84-1988	Greatest pcpn	.94-1956	Greatest pcpn	1.29-1986	Greatest pcpn	1.31-1947	Greatest pcpn	3.39-1953	Greatest pcpn	1.24-1940	Greatest pcpn	1.76-1942
8		9		10		11		12		13		14	
Normal	68.3	Normal	68.7	Normal	68.9	Normal	70.5	Normal	69.5	Normal	68.8	Normal	70.7
Actual	—	Actual	—	Actual	—	Actual	—	Actual	—	Actual	—	Actual	—
max	47.2	max	45.0	max	46.2	max	47.2	max	47.4	max	45.9	max	46.1
min	—	min	—	min	—	min	—	min	—	min	—	min	—
pcpn	.099	pcpn	.054	pcpn	.089	pcpn	.043	pcpn	.098	pcpn	.093	pcpn	.080
HDD	8	HDD	9	HDD	8	HDD	7	HDD	8	HDD	9	HDD	8
CDD	1	CDD	1	CDD	1	CDD	1	CDD	2	CDD	1	CDD	1
Highest Max	84-1977	Highest Max	90-1930	Highest Max	91-1934	Highest Max	90-1972	Highest Max	100-1972	Highest Max	94-1936	Highest Max	92-1936
Lowest Max	44-1942	Lowest Max	44-1973	Lowest Max	45-1958	Lowest Max	47-1926	Lowest Max	35-1957	Lowest Max	43-1957	Lowest Max	46-1928
Lowest Min	28-1938	Lowest Min	28-1938	Lowest Min	28-1973	Lowest Min	29-1940	Lowest Min	23-1957	Lowest Min	20-1957	Lowest Min	28-1957
Highest Min	62-1978	Highest Min	66-1927	Highest Min	66-1965	Highest Min	66-1972	Highest Min	70-1972	Highest Min	67-1981	Highest Min	68-1972
Greatest pcpn	1.30-1947	Greatest pcpn	2.91-1944	Greatest pcpn	1.40-1979	Greatest pcpn	1.10-1974	Greatest pcpn	3.11-1967	Greatest pcpn	1.29-1947	Greatest pcpn	2.06-1945
15		16		17		18		19		20		21	
Normal	71.9	Normal	73.5	Normal	75.0	Normal	74.0	Normal	74.0	Normal	72.7	Normal	74.0
Actual	—	Actual	—	Actual	—	Actual	—	Actual	—	Actual	—	Actual	—
max	47.7	max	49.3	max	51.2	max	52.2	max	52.4	max	51.7	max	51.4
min	—	min	—	min	—	min	—	min	—	min	—	min	—
pcpn	.055	pcpn	.089	pcpn	.050	pcpn	.090	pcpn	.165	pcpn	.157	pcpn	.030
HDD	6	HDD	5	HDD	4	HDD	4	HDD	4	HDD	5	HDD	4
CDD	1	CDD	2	CDD	2	CDD	2	CDD	2	CDD	2	CDD	2
Highest Max	90-1940	Highest Max	92-1940	Highest Max	92-1987	Highest Max	94-1987	Highest Max	94-1987	Highest Max	91-1961	Highest Max	90-1965
Lowest Max	54-1961	Lowest Max	54-1950	Lowest Max	52-1939	Lowest Max	48-1953	Lowest Max	54-1983	Lowest Max	50-1959	Lowest Max	45-1959
Lowest Min	20-1928	Lowest Min	34-1953	Lowest Min	30-1953	Lowest Min	30-1953	Lowest Min	33-1953	Lowest Min	33-1966	Lowest Min	34-1927
Highest Min	66-1982	Highest Min	66-1937	Highest Min	67-1963	Highest Min	66-1964	Highest Min	68-1948	Highest Min	69-1985	Highest Min	70-1961
Greatest pcpn	1.67-1947	Greatest pcpn	1.08-1970	Greatest pcpn	2.16-1941	Greatest pcpn	2.97-1942	Greatest pcpn	1.48-1929	Greatest pcpn	2.07-1937	Greatest pcpn	.78-1938
22		23		24		25		26		27		28	
Normal	74.9	Normal	74.7	Normal	75.5	Normal	73.8	Normal	74.0	Normal	75.0	Normal	72.9
Actual	—	Actual	—	Actual	—	Actual	—	Actual	—	Actual	—	Actual	—
max	52.1	max	52.5	max	51.5	max	52.1	max	52.6	max	53.1	max	52.3
min	—	min	—	min	—	min	—	min	—	min	—	min	—
pcpn	.147	pcpn	.079	pcpn	.075	pcpn	.086	pcpn	.089	pcpn	.115	pcpn	.116
HDD	4	HDD	4	HDD	3	HDD	4	HDD	4	HDD	3	HDD	4
CDD	2	CDD	3	CDD	2	CDD	2	CDD	2	CDD	3	CDD	2
Highest Max	95-1955	Highest Max	89-1989	Highest Max	88-1989	Highest Max	91-1939	Highest Max	90-1989	Highest Max	91-1959	Highest Max	87-1951
Lowest Max	55-1928	Lowest Max	52-1931	Lowest Max	52-1947	Lowest Max	54-1947	Lowest Max	56-1965	Lowest Max	57-1979	Lowest Max	57-1966
Lowest Min	34-1959	Lowest Min	40-1959	Lowest Min	38-1968	Lowest Min	40-1977	Lowest Min	40-1945	Lowest Min	39-1988	Lowest Min	37-1979
Highest Min	69-1961	Highest Min	68-1961	Highest Min	66-1961	Highest Min	65-1949	Highest Min	68-1975	Highest Min	69-1970	Highest Min	70-1970
Greatest pcpn	1.41-1985	Greatest pcpn	.96-1945	Greatest pcpn	1.67-1948	Greatest pcpn	1.09-1966	Greatest pcpn	1.50-1963	Greatest pcpn	1.20-1986	Greatest pcpn	1.97-1960
29		30		31									
Normal	75.3	Normal	74.5	Normal	74.5								
Actual	—	Actual	—	Actual	—								
max	52.7	max	52.5	max	52.5								
min	—	min	—	min	—								
pcpn	.236	pcpn	.200	pcpn	.200								
HDD	3	HDD	3	HDD	3								
CDD	2	CDD	3	CDD	2								
Highest Max	92-1936	Highest Max	93-1948	Highest Max	93-1948								
Lowest Max	58-1971	Lowest Max	56-1960	Lowest Max	56-1960								
Lowest Min	39-1956	Lowest Min	38-1984	Lowest Min	38-1984								
Highest Min	68-1933	Highest Min	68-1936	Highest Min	68-1936								
Greatest pcpn	2.87-1974	Greatest pcpn	2.13-1970	Greatest pcpn	2.13-1970								

**APRIL AVERAGES**

Temperature : 60.2  
 Precipitation : 2.76"  
 Heating Degree Days: 186  
 Cooling Degree Days: 50