OKLAHOMA MONTHLY SUMMARY

MARCH 1989

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MARCH 1989 OKLAHOMA SUMMARY

Although Oklahoma experienced both cold and warm extremes this month, undulating temperatures produced monthly averages only slightly above normal Statewide. CD-1 recorded below normal precipitation. All other CD's reported above-normal precipitation for the third consecutive month.

A strong cold front, whose characteristics and path are depicted in Figure 1, interacted with a mass of warm, moist air over Oklahoma on the 3rd to produce violent, cold and snowy weather. Seven weather-related deaths were reported. Central Oklahoma recorded brief hail before temperatures quickly dropped below freezing. Snow fell Statewide on March 5. Stations within about a 100 mile wide southwest to northeast swath through central Oklahoma reported the greatest snow accumulations, ranging from 8" at Stilwell, Tahlequah and Eufaula to 16" at Pauls Valley. The heavy snowfall collapsed the roofs of some 150 northeastern Oklahoma poultry houses, killing 3,000,000 chickens (about 15% of the State's total). Damage was estimated at $20 million. Snow damage exceeded $500,000 at marinas on State lakes. Cold weather persisted through the 7th of March, producing single-digit, monthly low temperatures in all CD's except 9.

Southerly winds restored near-normal, 50 to 60 degree temperatures to the State on the 9th after 5 consecutive overnight freezes. Temperatures climbed into the 80's Statewide on the 11th and 12th, reaching the 90's and breaking records in the western two-thirds of Oklahoma (see Table 1). The warm, relatively dry air mass began setting the stage for an impressive Oklahoma weather event. While colder air aloft created instability, a steep pressure gradient developed around a low pressure system northwest of the State. Southerly winds of 20 to 30 mph associated with the low pressure system, and an approaching front raised dust and topsoil to produce a duststorm. The blowing dust reduced visibility to one mile in sections of northern Oklahoma. Winds gusting to 40 mph also spurred grass fires which destroyed an estimated 600 acres of grasslands in Osage and Washington Counties.

90 degree temperatures accompanied another unseasonably warm air mass on March 17. Higher than normal temperatures persisted until a cold front and high pressure system replaced the warmer air on the 20th and 21st. The new cold air mass produced a Statewide freeze. Despite a sharp contrast in air mass temperatures, dry atmospheric conditions limited most precipitation amounts to less than .20". The precipitation fell as snow in the southern two-thirds of Oklahoma.

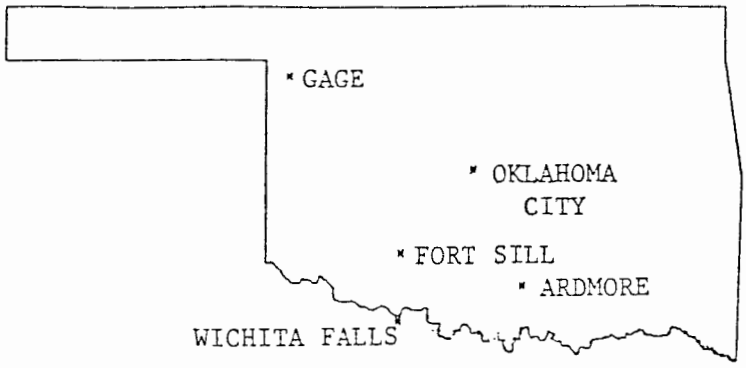
On the 24-27th of March warm, moist air flowed from the Gulf of Mexico northward toward Oklahoma, driven by a strengthening upper level low pressure system west of the State. Severe weather developed on the 27th as a cold front displaced this Gulf air mass. Two confirmed tornadoes in Greer County overturned trailer homes. 65 mph winds destroyed roofs in Woodward County. Hail reports included golfball-size at Lawton, 1-1/2" at Bartlesville and pea-size at Bristow. The National Weather Service issued flash flood warnings for several west central Oklahoma counties as a squall line moved very slowly through the area. The storms became nearly stationary on March 28 over southeastern Oklahoma, another region covered by flash flood watches. Heavener recorded over 4" of rain from the system and most stations outside of CD-1 reported more than 1.5" of precipitation.

FIGURE 1.

The charts below depict the March 3rd cold front impacts on temperature and wind direction. The front's progression can be traced by reading the local time (on the x-axis) at which the front passed each station, as evidenced by the sharp temperature drops and wind shifts (first at Gage 11:00 a.m., and finally at Ardmore 9:00 p.m.)

The temperature drop is steepest at Oklahoma City, where diurnal cooling at sunset coincided with the frontal cooling. The gradual nature of Gage's temperature swing is likely due to the partially offsetting mid-day solar heating.

A blatant shift from southerly to northerly winds occurred at each station with an evident delay between stations. This delay reflects the northwest to southeast progression of the front.



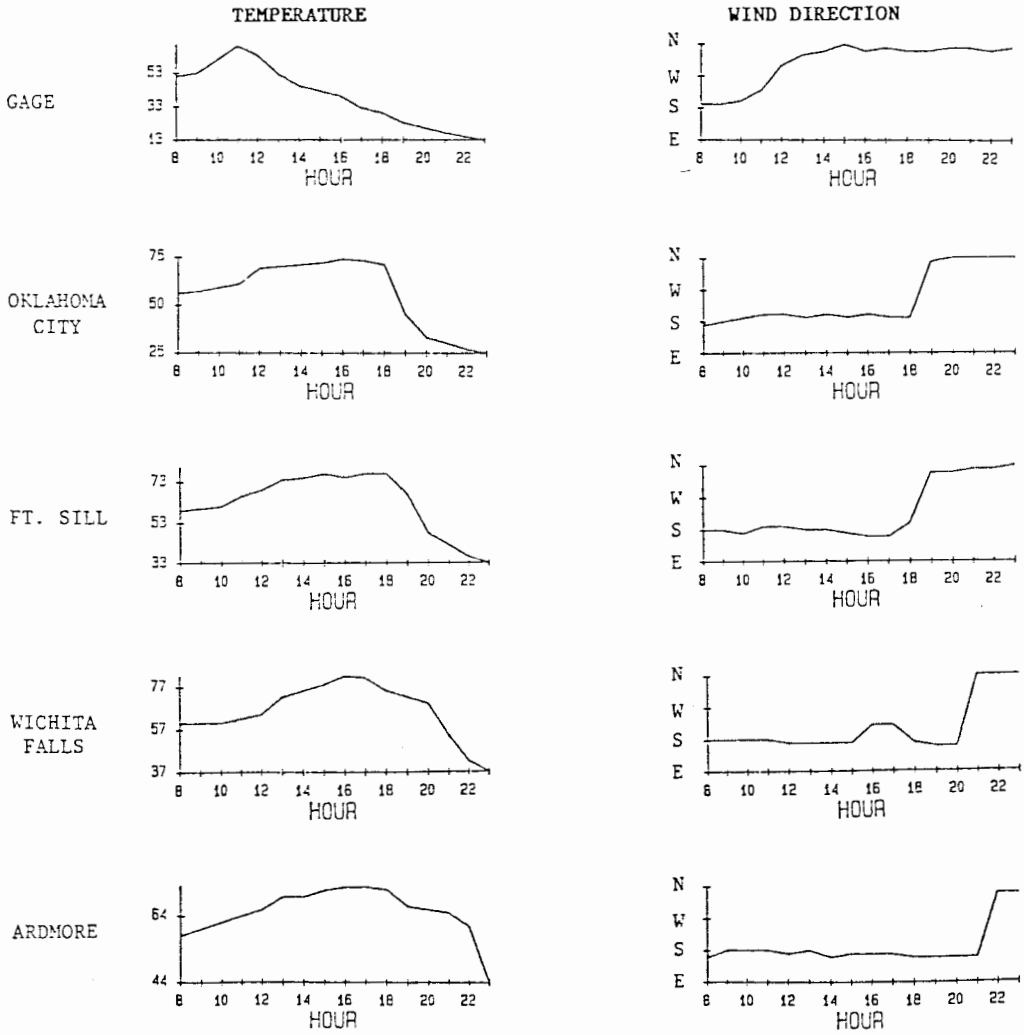


Table 1. Record-breaking high temperatures on March 10-12, 1989 for selected stations in the western two-thirds of Oklahoma. (Period: 1948-1989)

		1989 RECORD		PREVIOUS RECORD	
CD	STATION	DATE	TEMP	TEMP	YEAR
1	Gage	10	94	84	1967
2	Mutual	12	92	88	1967
4	Weatherford	11	91*	91	1967
4	Taloga	11	90*	90	1967
7	Altus	12	95	93	1982
8	Waurika	12	91	90	1967

* Ties Record

TABLE OF 1988/1989 COMPARISONS

	March Temperatures (F)		March Precipitation (in.)	
Station	1988	1989	1988	1989
Arnett	43.4	*	3.141	*
Enid	47.9	*	3.611	*
Mutual	42.1	49.2	3.183	2.290
Tulsa	50.3	50.5	6.523	3.143
Elk City	48.5	51.5	4.026	4.601
Oklahoma City	50.6	52.3	6.881	2.724
McAlester	52.2	52.2	3.615	4.082
Altus Irr. Sta.	53.0	56.7	2.080	2.360
Durant	51.5	*	4.130	*
Ada	52.1	51.8	5.171	3.320
Antlers	54.2	54.3	3.510	3.640

EXTREMES

Variable	Station	Division	Observation	Date
Minimum temperature (F)	Hammon	4	-5	4
Maximum temperature (F)	Mangum Rs. St.	7	98	25
Maximum 24-hour precipitation	Elk City	4	3.96"	28

MARCH 1989 SUMMARY FOR NORTHWEST 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	48.3	31	2.9	93.	11	5.	5	532.5	-81.5	14.5	8.5	1.330	31	.03	1.05	28
BEAVER	593	1	47.4	31	2.1	93.	11	5.	6	556.0	-61.0	10.5	4.5	.802	31	-.37	.58	28
BOISE CITY 2 E	908	1	49.7	31	5.6	88.	11	3.	5	474.0	-174.0	1.0	1.0	.130	31	-.69	.07	1
BUFFALO	1243	1	50.4	31	2.4	95.	11	6.	5	465.5	-75.5	13.5	-.5	1.720	31	.01	.45	26
FARGO	3070	1	*****	0	*****	****	0	****	0	******	******	******	******	1.961	31	.67	1.42	28
GAGE FAA APT	3407	1	51.2	30	5.3	94.	10	7.	5	428.0	-171.0	14.5	7.5	1.342	31	.16	1.14	28
GATE	3489	1	49.4	31	*****	95.	10	5.	4	502.0	******	19.5	******	.852	31	*****	.42	27
GOODWELL RES ST	3628	1	47.0	31	2.2	92.	11	4.	5	562.5	-69.5	3.5	-2.5	.253	31	-.53	.18	30
GUYMON	3835	1	49.7	31	*****	92.	10	4.	5	485.5	******	11.0	******	.162	31	*****	.14	30
HOOKER	4298	1	46.1	31	.9	92.	10	4.	5	592.5	-28.5	5.5	-1.5	.190	31	-1.04	.09	30
KENTON	4766	1	49.0	31	5.0	88.	10	3.	6	495.0	-156.0	.5	.5	.071	31	-.69	.06	1
LAVERNE	5045	1	*****	0	*****	****	0	****	0	******	******	******	******	2.301	31	.76	1.71	28
OPTIMA LAKE	6740	1	49.4	28	*****	93.	11	5.	6	444.5	******	8.5	******	.393	31	*****	.28	28
REGNIER	7534	1	*****	0	*****	****	0	****	0	******	******	******	******	.012	31	-.67	.01	1
TURPIN 4 SSE	9017	1	47.2	30	*****	92.	11	5.	5	540.5	******	6.0	******	.640	31	*****	.53	28

MARCH 1989 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 1 ENE	194	2	49.5	31	2.1	93.	10	9.	5	488.0	-70.0	6.0	-6.0	2.680	31	1.06	1.26	30
VANCE AFB	302	2	*****	0	*****	****	0	****	0	******	******	******	******	2.791	30	*****	1.81	28
BILLINGS	755	2	49.3	31	*****	87.	12	12.	6	492.5	******	5.5	******	4.711	31	2.64	2.25	28
BLACKWELL 2E	818	2	49.5	31	*****	85.	11	12.	6	483.5	******	4.5	******	2.482	31	*****	1.12	28
BRAMAN	1075	2	*****	0	*****	****	0	****	0	******	******	******	******	2.935	31	*****	1.12	28
CEDARDALE	1620	2	*****	0	*****	****	0	****	0	******	******	******	******	1.971	31	*****	1.12	28
CHEROKEE	1724	2	50.7	31	2.5	90.	10	11.	5	454.5	-78.5	12.5	.5	3.250	31	1.32	1.75	30
FT SUPPLY DAM	3304	2	47.9	31	.4	95.	11	9.	5	555.5	-2.5	25.5	10.5	1.881	31	.62	1.02	28
FREEDOM	3358	2	49.2	31	*****	97.	10	8.	5	493.5	******	3.5	******	2.680	31	*****	1.03	27
GREAT SALT PLNS	3740	2	49.5	31	*****	90.	11	13.	7	500.0	******	19.5	******	3.642	31	1.81	1.62	30
HARDY	3909	2	*****	0	*****	****	0	****	0	******	******	******	******	2.721	31	*****	1.52	27
HELENA 1 SSE	4019	2	47.9	31	*****	87.	12	11.	7	533.5	******	4.5	******	2.251	31	.33	1.11	28
JEFFERSON	4573	2	49.7	31	1.6	88.	10	12.	6	482.0	-51.0	8.0	-1.0	3.270	31	1.34	1.14	27
LAMONT	5013	2	*****	0	*****	****	0	****	0	******	******	******	******	2.650	31	*****	1.16	28
MEDFORD	5768	2	*****	0	*****	****	0	****	0	******	******	******	******	3.120	31	*****	1.23	29
MORRISON	6065	2	*****	0	*****	****	0	****	0	******	******	******	******	1.160	31	*****	.73	30
MUTUAL	6139	2	49.2	31	2.4	92.	12	10.	6	502.5	-71.5	12.0	3.0	2.290	31	.71	1.38	28
NEWKIRK	6278	2	50.1	31	2.6	85.	11	12.	5	467.5	-86.5	7.0	-4.0	1.210	31	-.77	.60	30
ORIENTA	6751	2	*****	0	*****	****	0	****	0	******	******	******	******	2.090	31	*****	1.03	28
PERRY	7012	2	53.4	31	3.5	86.	12	13.	6	380.0	-103.0	20.5	5.5	3.240	31	.88	2.06	28
PONCA CITY FAA	7201	2	51.2	31	4.7	87.	11	15.	5	444.0	-136.0	16.5	9.5	3.241	31	1.14	1.92	28
RED ROCK 1 NNE	7505	2	*****	0	*****	****	0	****	0	******	******	******	******	4.420	31	2.17	2.30	28
RENFROW	7556	2	*****	0	*****	****	0	****	0	******	******	******	******	2.570	31	.66	.96	28
WAYNOKA	9404	2	50.4	31	1.6	91.	10	9.	5	465.0	-53.0	11.5	-4.5	1.580	31	-.05	.87	28
WOODWARD	9760	2	*****	0	*****	****	0	****	0	******	******	******	******	1.212	31	*****	.89	29

MARCH 1989 SUMMARY FOR NORTHEAST DIVISION (CD3)

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
BARNSDALL	535	3	49.4	31	*****	84.	17	7.	7	492.5	******	9.5	******	3.033	31	-.08	1.26	28
BARTLESVILLE ZW	548	3	49.9	31	1.1	84.	17	11.	7	480.0	-36.0	10.5	-3.5	2.610	31	-.11	1.31	28
BIXBY	782	3	47.0	31	-1.8	84.	12	2.	7	562.0	48.0	4.5	-7.5	1.400	31	-1.29	1.20	28
BURBANK	1256	3	*****	0	*****	****	0	****	0	******	******	******	******	4.242	31	*****	2.76	27
CHELSEA 4 S	1717	3	*****	0	*****	****	0	****	0	******	******	******	******	4.260	31	*****	1.24	6
CLAREMORE	1828	3	47.5	31	-.6	83.	18	7.	8	549.0	15.0	7.0	-3.0	5.674	31	2.51	1.97	6
CLEVELAND 5 WSW	1902	3	52.8	27	*****	87.	11	12.	6	351.5	******	22.5	******	3.960	27	*****	1.83	28
FORAKER	3250	3	*****	0	*****	****	0	****	0	******	******	******	******	4.321	31	1.93	3.17	28
HOLLOW	4258	3	*****	0	*****	****	0	****	0	******	******	******	******	3.400	31	.26	1.02	28
HOMINY	4289	3	*****	0	*****	****	0	****	0	******	******	******	******	3.801	31	.98	1.78	28
HULAH DAM	4393	3	44.8	23	*****	83.	13	10.	6	464.5	******	.0	******	4.310	23	*****	2.38	28
JAY TOWER	4567	3	51.4	27	*****	82.	27	19.	6	381.5	******	13.0	******	6.900	28	*****	2.30	4
KANSAS 1 ESE	4672	3	49.9	31	*****	82.	12	13.	7	476.5	******	8.0	******	4.753	31	*****	1.60	6
KEYSTONE DAM	4812	3	46.6	23	*****	87.	13	11.	7	423.5	******	.0	******	4.632	23	*****	2.25	28
LENAPAH	5118	3	*****	0	*****	****	0	****	0	******	******	******	******	3.490	31	*****	1.06	28
MANNFORD 6 NW	5522	3	52.6	31	*****	88.	11	8.	7	413.0	******	29.5	******	4.410	31	1.84	2.12	28
MARAMEC	5540	3	*****	0	*****	****	0	****	0	******	******	******	******	5.613	31	3.16	2.71	28
MIAMI	5855	3	48.7	29	*****	82.	25	7.	7	481.5	******	7.5	******	2.490	31	-.95	.73	4
NOWATA	6485	3	47.4	31	-1.0	78.	12	12.	8	548.5	24.5	2.5	-7.5	4.190	31	.92	1.57	28
ONETA 1 WNW	6713	3	*****	0	*****	****	0	****	0	******	******	******	******	2.912	31	*****	1.53	28
PAWHUSKA	6935	3	49.7	31	1.1	84.	11	14.	7	485.5	-35.5	10.5	-1.5	3.372	31	.69	1.61	28
PAWHUSKA	6937	3	*****	0	*****	****	0	****	0	******	******	******	******	3.490	31	*****	1.66	28
PAWNEE	6940	3	*****	0	*****	****	0	****	0	******	******	******	******	3.501	31	1.02	1.95	28
PRYOR 6 N	7309	3	45.9	31	-2.6	81.	18	3.	7	598.5	71.5	6.5	-8.5	4.282	31	1.17	2.00	31
QUAPAW	7358	3	*****	0	*****	****	0	****	0	******	******	******	******	1.191	31	-2.13	.50	30
RALSTON	7390	3	51.5	31	*****	88.	11	15.	7	430.5	******	10.5	******	3.171	31	.65	2.00	28
RAMONA 4 N	7394	3	*****	0	*****	****	0	****	0	******	******	******	******	3.660	31	*****	1.65	28
SKIATOOK	8258	3	*****	0	*****	****	0	****	0	******	******	******	******	3.330	31	.50	1.23	28
SPAVINAW	8380	3	50.5	31	*****	80.	12	13.	7	458.5	******	8.5	******	4.312	31	1.18	1.47	6
TULSA WSO APT	8992	3	50.5	31	1.2	84.	17	12.	7	465.5	-34.5	15.0	1.0	3.143	31	.00	.94	31
UPPER SPAVINAW	9101	3	52.5	31	*****	88.	12	10.	7	420.0	******	33.5	******	2.664	31	*****	.88	31
VINITA 2 N	9203	3	48.2	31	.1	80.	25	1.	7	531.0	-3.0	10.0	.0	3.430	31	-.11	.95	28
WAGONER	9247	3	51.6	31	1.1	84.	12	7.	7	433.5	-32.5	19.0	3.0	3.320	31	-.07	.83	28
WANN	9298	3	*****	0	*****	****	0	****	0	******	******	******	******	2.680	31	*****	1.10	28

MARCH 1989 SUMMARY FOR WEST CENTRAL DIVISION (CD4)

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
CANTON DAM	1445	4	49.1	26	*****	89.	13	9.	6	417.0	******	4.0	******	2.741	26	*****	2.10	28
CHEYENNE	1738	4	*****	0	*****	****	0	****	0	******	******	******	******	1.830	30	*****	1.50	28
CLINTON	1909	4	53.9	31	4.4	91.	11	9.	4	369.5	-123.5	24.5	11.5	3.200	31	1.50	2.48	28
COLONY	2039	4	*****	0	*****	****	0	****	0	******	******	******	******	1.981	31	*****	1.24	28
CORDELL	2125	4	*****	0	*****	****	0	****	0	******	******	******	******	2.171	31	.54	1.40	28
ELK CITY 1 E	2849	4	51.5	31	*****	91.	17	9.	5	436.5	******	19.0	******	4.601	31	3.08	3.96	28
ERICK 4 E	2944	4	51.5	31	2.0	93.	11	10.	5	428.0	-63.0	9.5	-1.5	2.700	31	1.29	2.03	28
GEARY	3497	4	50.4	28	*****	89.	12	13.	6	426.0	******	17.5	******	3.520	28	*****	2.62	28
HAMMON 1 NNE	3871	4	48.2	31	-.7	90.	18	-5.	4	532.5	17.5	12.5	-3.5	4.630	31	3.07	3.90	28
LEEDEY	5090	4	*****	0	*****	****	0	****	0	******	******	******	******	4.280	31	2.94	3.23	28
MACKIE 4 NNW	5463	4	*****	0	*****	****	0	****	0	******	******	******	******	1.330	31	*****	1.00	28
MORAVIA 2 NNE	6035	4	*****	0	*****	****	0	****	0	******	******	******	******	1.641	31	.11	.90	28
OKEENE	6629	4	50.9	31	1.0	90.	11	12.	6	454.0	-28.0	17.5	3.5	2.330	31	.51	1.72	28
RETROP	7565	4	*****	0	*****	****	0	****	0	******	******	******	******	1.850	31	*****	1.10	28
REYDON	7579	4	52.1	30	*****	93.	11	7.	5	415.0	******	27.5	******	1.251	31	-.15	1.22	27
SAYRE	7952	4	*****	0	*****	****	0	****	0	******	******	******	******	2.890	31	1.61	2.41	28
SWEETWATER 2 E	8652	4	*****	0	*****	****	0	****	0	******	******	******	******	1.973	31	*****	1.26	27
TALOGA	8708	4	49.4	31	1.1	90.	11	9.	5	492.0	-36.0	8.0	-2.0	2.761	31	1.14	1.89	28
THOMAS	8815	4	*****	0	*****	****	0	****	0	******	******	******	******	3.750	31	*****	3.13	28
VICI	9172	4	*****	0	*****	****	0	****	0	******	******	******	******	3.030	31	*****	1.73	28
WATONGA	9364	4	51.0	31	*****	90.	11	12.	6	456.5	******	21.0	******	3.121	31	1.34	2.42	28
WEATHERFORD	9422	4	50.9	31	1.0	91.	18	11.	6	461.5	-20.5	25.0	11.0	1.842	31	.25	.95	27

MARCH 1989 SUMMARY FOR CENTRAL DIVISION (CD5)

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
AMBER	200	5	*****	0	*****	****	0	****	0	******	******	******	******	1.210	31	*****	.89	28
ARCADIA	288	5	*****	0	*****	****	0	****	0	******	******	******	******	2.560	31	*****	1.40	28
TINKER AFB	325	5	*****	0	*****	****	0	****	0	******	******	******	******	2.974	31	*****	1.59	28
BLANCHARD 2 SSW	830	5	52.5	31	*****	87.	17	11.	5	409.0	******	23.0	******	1.695	31	*****	.69	6
BRISTOW	1144	5	51.6	29	*****	86.	12	4.	7	401.5	******	14.0	******	2.450	29	*****	1.05	28
CHANDLER	1684	5	52.1	31	1.4	86.	11	12.	6	417.0	-44.0	17.0	.0	1.780	31	-.51	.83	28
CHICKASHA EX ST	1750	5	53.0	31	1.4	89.	17	11.	7	386.0	-49.0	15.0	-4.0	2.010	31	.07	1.10	28
COX CITY 1 E	2196	5	*****	0	*****	****	0	****	0	******	******	******	******	2.970	31	*****	1.75	5
CRESCENT	2242	5	*****	0	*****	****	0	****	0	******	******	******	******	3.600	31	*****	2.80	28
CUSHING	2318	5	49.1	31	.7	87.	12	13.	6	499.0	-33.0	5.5	-11.5	3.391	31	.92	2.32	28
EL RENO 1 N	2818	5	52.2	31	2.7	89.	11	13.	6	421.5	-71.5	24.5	11.5	2.730	31	.88	1.63	28
GUTHRIE	3821	5	53.7	31	3.9	90.	11	14.	6	385.5	-98.5	34.5	21.5	3.231	31	1.22	1.15	4
HENNESSEY 2 SE	4055	5	49.9	31	1.0	88.	11	13.	6	480.5	-31.5	11.0	-2.0	3.970	31	2.11	2.65	28
INGALLS	4489	5	*****	0	*****	****	0	****	0	******	******	******	******	3.914	31	*****	2.90	28
KINGFISHER 2 SE	4861	5	51.1	31	1.5	92.	11	13.	5	453.5	-36.5	24.0	12.0	2.550	31	.79	1.97	28
KONAWA	4915	5	*****	0	*****	****	0	****	0	******	******	******	******	2.020	31	-.87	.48	28
MARSHALL	5589	5	*****	0	*****	****	0	****	0	******	******	******	******	3.350	31	1.36	2.43	28
MEEKER 4 W	5779	5	52.2	30	2.1	90.	13	6.	7	405.5	-69.5	22.0	9.0	1.350	30	*****	.84	28
MULHALL	6110	5	*****	0	*****	****	0	****	0	******	******	******	******	2.350	30	*****	1.68	28
NORMAN 3 S	6386	5	52.3	31	*****	88.	17	11.	7	416.0	******	21.0	******	1.813	31	-.52	1.07	28
OILTON 2 SE	6616	5	*****	0	*****	****	0	****	0	******	******	******	******	3.590	31	*****	2.05	28
OKEMAH	6638	5	52.3	31	1.2	85.	11	13.	6	404.5	-45.5	9.5	-9.5	2.741	31	.04	1.00	6
OKLAHOMA CTY WS	6661	5	52.3	31	3.2	87.	17	13.	5	414.5	-91.5	22.0	9.0	2.724	31	.65	1.55	28
PERKINS	7003	5	*****	0	*****	****	0	****	0	******	******	******	******	2.260	31	-.15	1.67	28
PIEDMONT	7068	5	*****	0	*****	****	0	****	0	******	******	******	******	2.420	31	*****	1.65	28
PRAGUE	7264	5	*****	0	*****	****	0	****	0	******	******	******	******	1.953	31	-.56	.90	6
PURCELL 5 SW	7327	5	52.1	31	1.7	87.	17	3.	7	413.5	-61.5	15.0	-8.0	1.212	31	-1.16	.45	28
SEMINOLE	8042	5	53.8	31	1.4	86.	12	7.	7	368.0	-43.0	20.0	-1.0	3.420	31	.84	1.70	5
SHAWNEE	8110	5	*****	0	*****	****	0	****	0	******	******	******	******	2.010	31	-.50	.98	6
STELLA	8479	5	*****	0	*****	****	0	****	0	******	******	******	******	1.940	31	*****	.89	6
STILLWATER 2 W	8501	5	48.8	31	-.0	87.	12	13.	6	511.0	-4.0	8.0	-4.0	3.742	31	1.55	2.08	28
STROUD 1 N	8563	5	*****	0	*****	****	0	****	0	******	******	******	******	2.001	31	*****	.85	28
TECUMSEH	8751	5	*****	0	*****	****	0	****	0	******	******	******	******	.800	31	*****	.45	6
TROUSDALE	8960	5	*****	0	*****	****	0	****	0	******	******	******	******	1.880	31	*****	1.55	6
UNION CITY 1 SE	9086	5	*****	0	*****	****	0	****	0	******	******	******	******	2.071	31	-.30	1.39	28
WELTY 1 SSE	9479	5	*****	0	*****	****	0	****	0	******	******	******	******	1.890	31	*****	.95	28
WEWOKA	9575	5	*****	0	*****	****	0	****	0	******	******	******	******	2.790	31	.07	.66	6

MARCH 1989 SUMMARY FOR EAST CENTRAL DIVISION (CD6)

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
ASHLAND	364	6	*****	0	*****	****	0	****	0	******	******	******	******	2.832	31	*****	1.20	28
BEGGS	631	6	*****	0	*****	****	0	****	0	******	******	******	******	2.060	31	*****	.90	6
BOYNTON	1027	6	*****	0	*****	****	0	****	0	******	******	******	******	5.470	31	*****	2.00	6
CALVIN	1391	6	*****	0	*****	****	0	****	0	******	******	******	******	2.592	31	-.79	.82	28
CHECOTAH	1711	6	*****	0	*****	****	0	****	0	******	******	******	******	4.234	31	.89	1.81	28
DEWAR 2 NE	2485	6	*****	0	*****	****	0	****	0	******	******	******	******	2.460	31	-.66	.97	6
DUSTIN	2690	6	*****	0	*****	****	0	****	0	******	******	******	******	2.330	31	*****	.65	28
EUFAULA	2993	6	52.0	31	*****	83.	12	16.	7	413.0	******	11.0	******	4.360	31	.39	1.51	28
HANNA	3884	6	51.4	31	*****	83.	12	4.	7	430.5	******	8.0	******	2.132	31	-1.56	.91	28
HARTSHORNE	3946	6	*****	0	*****	****	0	****	0	******	******	******	******	4.480	31	*****	1.46	28
HASKELL	3956	6	*****	0	*****	****	0	****	0	******	******	******	******	2.921	31	-.25	1.10	6
HOLDENVILLE	4235	6	51.7	31	-.0	84.	11	9.	7	419.0	-11.0	6.0	-12.0	3.340	31	.36	.65	6
LAKE EUFAULA	4975	6	50.9	31	*****	86.	13	12.	7	454.5	******	18.0	******	3.360	31	*****	1.78	28
LYONS 2 N	5437	6	*****	0	*****	****	0	****	0	******	******	******	******	3.361	31	-.58	1.48	30
MCALESTER FAA	5664	6	52.2	31	.9	82.	12	11.	7	419.5	-21.5	21.5	4.5	4.082	31	.23	1.15	28
MCCURTAIN 1 SE	5693	6	54.4	31	*****	86.	11	18.	5	361.5	******	33.5	******	5.312	31	1.40	2.48	28
MUSKOGEE	6130	6	51.7	31	.6	84.	12	16.	5	424.0	-24.0	13.0	-4.0	4.140	31	.90	1.59	28
OKMULGEE W W	6670	6	50.8	31	-.5	85.	13	12.	8	448.0	.0	6.5	-16.5	3.212	31	.18	1.15	28
OKTAHA 2 NE	6678	6	*****	0	*****	****	0	****	0	******	******	******	******	4.211	31	*****	1.51	28
QUINTON	7372	6	*****	0	*****	****	0	****	0	******	******	******	******	5.011	31	1.32	1.63	27
SALLISAW 2 NE	7862	6	52.1	31	.8	85.	12	17.	7	405.5	-36.5	5.0	-13.0	6.501	31	2.70	1.83	6
SCIPIO	7979	6	*****	0	*****	****	0	****	0	******	******	******	******	2.710	31	*****	1.25	28
SCRAPER	7993	6	*****	0	*****	****	0	****	0	******	******	******	******	4.230	31	*****	1.42	6
SHORT	8170	6	*****	0	*****	****	0	****	0	******	******	******	******	6.061	31	*****	1.25	18
STILWELL 1 NE	8506	6	51.1	31	*****	82.	12	17.	8	440.5	******	9.0	******	7.961	31	4.26	2.06	30
TAHLEQUAH	8677	6	51.5	31	1.5	83.	12	12.	7	425.5	-54.5	8.5	-6.5	4.651	31	1.01	1.36	5
WEBBERS FALLS	9445	6	48.9	31	-.3	83.	13	2.	7	502.5	1.5	3.5	-7.5	5.181	31	1.59	1.97	28
WESTVILLE	9523	6	*****	0	*****	****	0	****	0	******	******	******	******	5.130	31	*****	1.45	28
WETUMKA 3 NE	9571	6	*****	0	*****	****	0	****	0	******	******	******	******	2.421	31	-.70	.70	28

MARCH 1989 SUMMARY FOR SOUTHWEST DIVISION (CD7)

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
ALTUS IRR STA	179	7	56.5	31	4.0	95.	12	16.	6	323.5	-83.5	61.0	42.0	2.360	31	1.08	1.21	28
ALTUS DAM	184	7	52.8	31	*****	93.	18	11.	5	420.0	******	40.5	******	1.210	31	-.09	.73	28
ANADARKO	224	7	50.8	29	*****	90.	17	10.	7	428.0	******	16.5	******	2.200	29	*****	1.38	28
APACHE	260	7	*****	0	*****	****	0	****	0	******	******	******	******	1.710	31	*****	.81	28
ALTUS AFB	447	7	*****	0	*****	****	0	****	0	******	******	******	******	2.264	31	*****	1.47	28
CARNEGIE 2 ENE	1504	7	53.2	31	2.4	92.	11	13.	7	391.0	-64.0	25.5	11.5	1.880	31	.23	1.46	28
CHATTANOOGA	1706	7	54.1	31	1.8	91.	12	14.	5	356.5	-55.5	18.5	-.5	1.490	31	-.25	.82	28
DUNCAN 12 W	2668	7	*****	0	*****	****	0	****	0	******	******	******	******	1.561	31	*****	.48	28
FREDERICK	3353	7	53.1	31	-.7	94.	13	15.	5	399.5	22.5	31.5	2.5	2.130	31	.43	1.35	27
GRANDFIELD 4 NW	3709	7	*****	0	*****	****	0	****	0	******	******	******	******	2.520	31	.75	1.05	28
HOBART FAA APT	4204	7	54.6	29	*****	92.	17	12.	6	338.0	******	35.5	******	1.364	31	.09	.90	28
HOLLIS	4249	7	53.0	31	.7	96.	11	12.	5	391.5	-21.5	20.0	.0	1.530	31	.48	1.16	29
FORT SILL	5068	7	54.3	31	*****	92.	17	19.	5	363.5	******	31.0	******	2.194	31	.36	1.16	26
LOOKEBA 2 ENE	5329	7	*****	0	*****	****	0	****	0	******	******	******	******	1.740	31	*****	1.13	28
MANGUM RES STA	5509	7	58.2	31	6.3	98.	25	17.	5	260.0	-166.0	48.5	28.5	1.030	31	-.15	.68	28
RANDLETT 9 E	7403	7	*****	0	*****	****	0	****	0	******	******	******	******	1.690	31	*****	1.00	6
ROOSEVELT	7727	7	*****	0	*****	****	0	****	0	******	******	******	******	1.580	31	.26	.86	28
SEDAN	8016	7	*****	0	*****	****	0	****	0	******	******	******	******	1.710	31	*****	1.22	28
SNYDER	8299	7	*****	0	*****	****	0	****	0	******	******	******	******	1.951	31	.52	1.00	27
VINSON 3 WNW	9212	7	*****	0	*****	****	0	****	0	******	******	******	******	2.331	28	*****	1.46	28
WALTERS	9278	7	53.2	31	.1	92.	12	8.	7	393.0	.0	27.5	3.5	.903	31	-1.23	.58	28
WICHITA MT WLR	9629	7	51.9	31	1.0	96.	13	9.	7	437.5	-19.5	31.0	11.0	2.171	31	.28	1.17	27
WILLOW	9668	7	*****	0	*****	****	0	****	0	******	******	******	******	1.562	31	*****	.72	28

MARCH 1989 SUMMARY FOR SOUTH CENTRAL DIVISION (CD8)

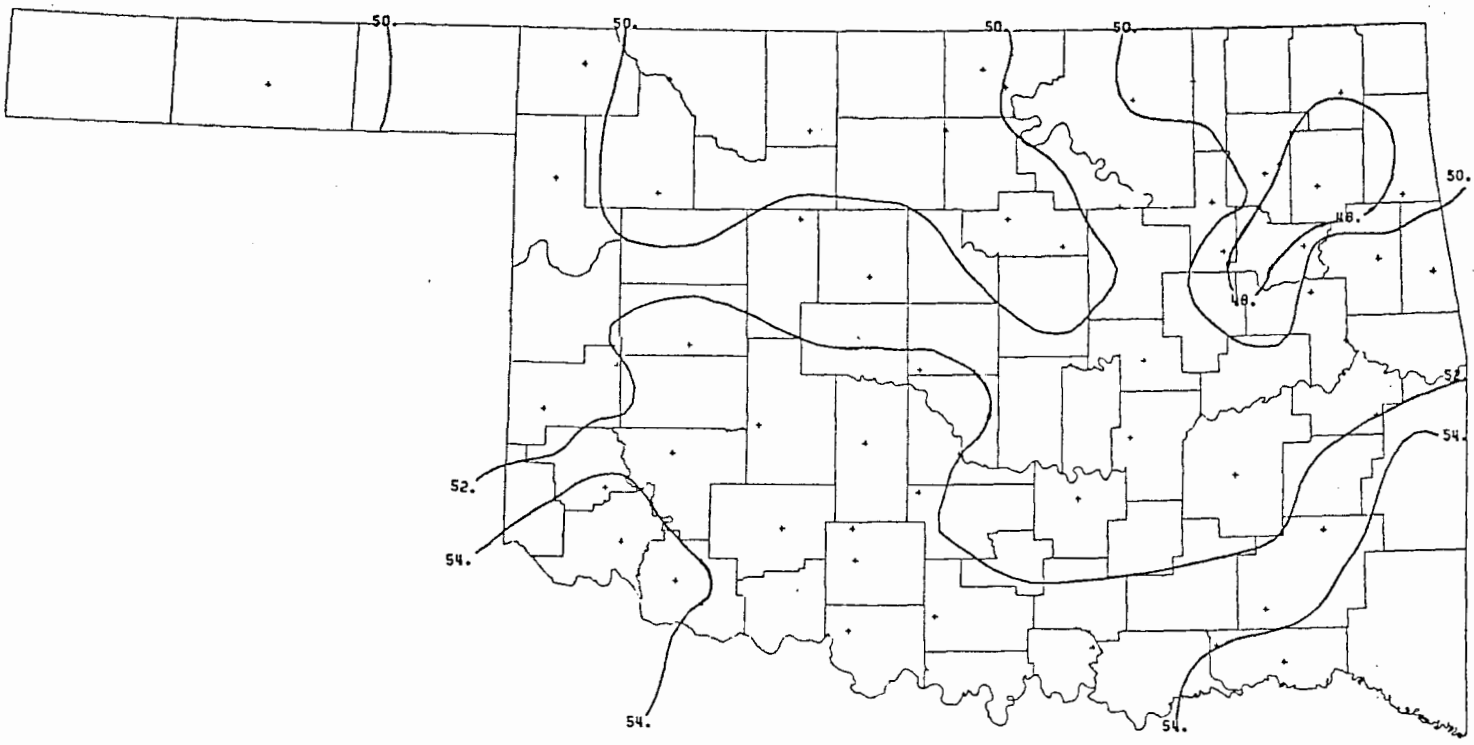
NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	MAX DAY	MIN TEMP	MIN DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	MAX DAY
ADA	17	8	52.2	31	-.2	84.	12	5.	7	402.5	-10.5	5.5	-17.5	3.320	31	.42	1.20	6
ALLEN	147	8	*****	0	*****	****	0	****	0	******	******	******	******	2.450	31	*****	.70	28
ARDMORE	292	8	53.6	29	*****	84.	13	13.	7	347.5	******	18.0	******	2.080	29	*****	.60	5
ATOKA DAM	394	8	51.7	31	*****	88.	15	18.	6	426.0	******	13.0	******	2.032	31	*****	.97	28
BOKCHITO	917	8	*****	0	*****	****	0	****	0	******	******	******	******	3.500	31	*****	2.00	28
CANEY	1437	8	53.1	31	*****	83.	12	17.	7	390.0	******	20.5	******	6.860	31	*****	3.40	28
CENTRAHOMA	1648	8	*****	0	*****	****	0	****	0	******	******	******	******	3.180	31	*****	1.45	29
CHICKASAW NRA	1745	8	51.0	31	*****	86.	13	10.	6	442.5	******	7.0	******	3.450	31	*****	1.18	28
COLEMAN	2011	8	*****	0	*****	****	0	****	0	******	******	******	******	3.400	31	*****	1.20	7
COMANCHE	2054	8	*****	0	*****	****	0	****	0	******	******	******	******	1.731	31	*****	.60	28
DAISY 4 ENE	2354	8	*****	0	*****	****	0	****	0	******	******	******	******	5.794	31	1.95	1.80	5
DUNCAN	2660	8	51.2	31	-1.8	88.	18	10.	6	443.0	47.0	14.0	-10.0	1.952	31	-.19	.93	6
DURANT USDA	2678	8	52.1	31	*****	83.	13	15.	7	404.5	******	3.5	******	5.840	30	*****	1.92	5
ELMORE CITY	2872	8	*****	0	*****	****	0	****	0	******	******	******	******	.632	31	*****	.43	28
FARRIS 3 WNW	3083	8	*****	0	*****	****	0	****	0	******	******	******	******	4.550	31	*****	1.56	28
GRADY	3688	8	*****	0	*****	****	0	****	0	******	******	******	******	2.150	31	*****	.75	28
HEALDTON	4001	8	53.0	31	*****	88.	12	1.	7	395.5	******	24.0	******	2.351	31	-.11	.88	28
KETCHUM RANCH	4780	8	*****	0	*****	****	0	****	0	******	******	******	******	1.982	31	*****	1.00	28
LEHIGH	5108	8	*****	0	*****	****	0	****	0	******	******	******	******	4.064	31	*****	1.42	30
LINDSAY 2 W	5216	8	52.0	31	*****	86.	17	2.	7	418.5	******	14.0	******	2.112	31	-.15	1.05	5
LOCO 6 SE	5247	8	*****	0	*****	****	0	****	0	******	******	******	******	1.180	31	*****	.59	28
MADILL	5468	8	53.2	31	-.4	83.	14	14.	7	382.0	4.0	17.5	-7.5	4.880	31	1.87	1.55	30
MARIETTA	5563	8	54.1	31	.3	85.	12	14.	7	357.0	-14.0	20.0	-4.0	4.202	31	1.45	1.39	28
MARLOW 1 WSW	5581	8	54.0	31	*****	88.	17	8.	7	370.0	******	28.5	******	1.930	31	-.07	.54	6
MCGEE CREEK DAM	5713	8	52.5	31	*****	83.	18	18.	7	397.0	******	10.5	******	5.210	31	*****	1.74	28
OSWALT	6787	8	*****	0	*****	****	0	****	0	******	******	******	******	2.450	31	*****	1.70	28
PAULS VALLEY	6926	8	52.8	31	.2	87.	12	0.	7	401.5	-3.5	23.0	2.0	2.251	31	-.05	1.30	6
PONTOTOC	7214	8	*****	0	*****	****	0	****	0	******	******	******	******	4.700	31	1.41	1.50	4
TISHOMINGO NWLR	8884	8	53.4	24	*****	83.	14	10.	7	286.0	******	7.0	******	4.350	31	1.18	1.16	28
TUSSY	9032	8	*****	0	*****	****	0	****	0	******	******	******	******	.910	31	*****	.47	28
WAURIKA	9395	8	54.5	31	.3	91.	12	5.	7	359.5	-4.5	34.5	4.5	.331	31	-1.61	.23	28
WAURIKA DAM	9399	8	54.1	27	*****	91.	13	12.	7	313.0	******	18.5	******	1.702	27	*****	.85	6

MARCH 1989 SUMMARY FOR SOUTHEAST DIVISION (CD9)

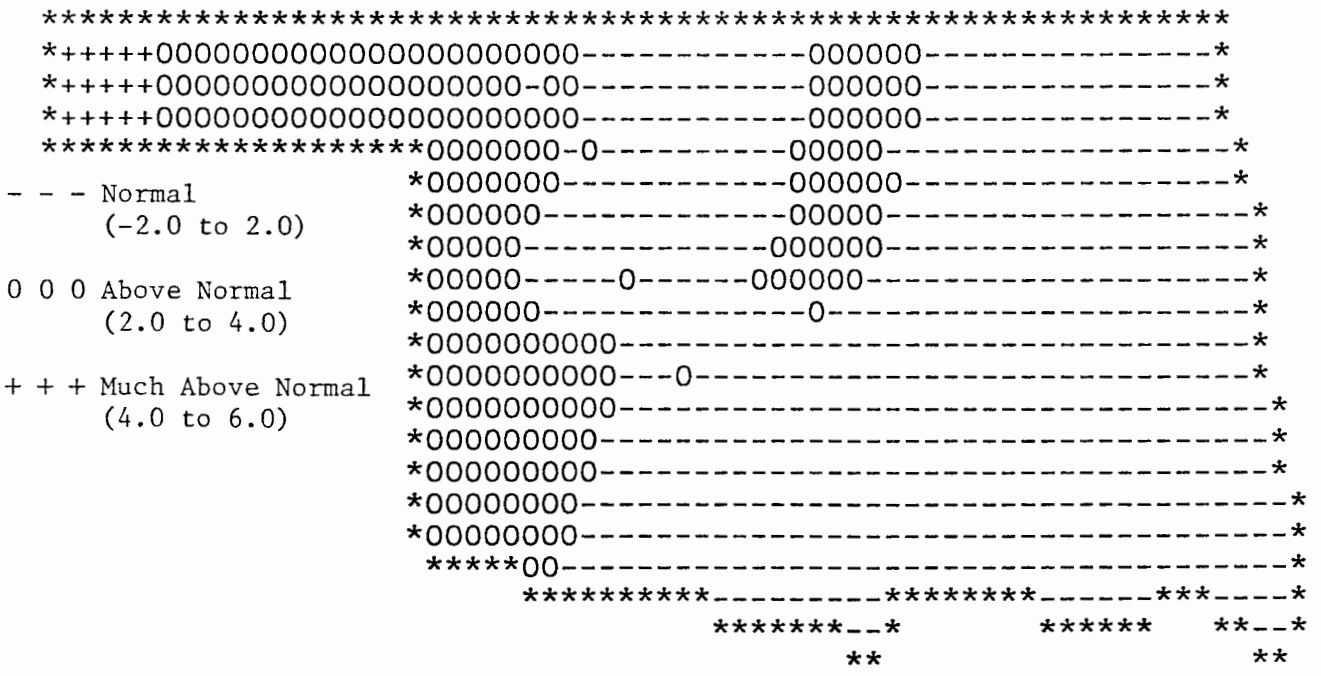
NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	MAX DAY	MIN TEMP	MIN DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	MAX DAY
ANTLERS	256	9	53.9	31	1.1	83.	14	18.	7	356.0	-42.0	11.5	-8.5	3.640	31	.07	2.25	28
BATTIEST 1 SSW	567	9	52.4	31	*****	83.	14	19.	7	396.0	******	5.5	******	3.982	31	*****	1.45	6
BEAR MT TWR	584	9	55.3	22	*****	83.	14	26.	22	221.5	******	7.5	******	4.650	26	*****	1.22	5
BENGAL	670	9	*****	0	*****	****	0	****	0	******	******	******	******	6.160	31	*****	1.70	28
BOSWELL 4 NNW	980	9	54.4	31	*****	86.	14	16.	7	349.0	******	20.5	******	2.004	31	-1.32	1.00	28
BROKEN BOW 1 N	1162	9	*****	0	*****	****	0	****	0	******	******	******	******	4.430	31	-.04	1.60	5
BROKEN BOW DAM	1168	9	52.1	31	*****	85.	15	22.	7	407.5	******	7.0	******	4.260	31	*****	1.34	27
CARNASAW TWR	1499	9	*****	0	*****	****	0	****	0	******	******	******	******	4.030	31	-.62	1.38	27
CARTER TWR	1544	9	*****	0	*****	****	0	****	0	******	******	******	******	3.230	31	-1.34	1.45	5
FANSHAWE	3065	9	*****	0	*****	****	0	****	0	******	******	******	******	5.660	31	1.24	1.90	28
HEAVENER 1 SE	4008	9	*****	0	*****	****	0	****	0	******	******	******	******	5.890	31	1.74	3.40	28
HEE MT TWR	4017	9	*****	0	*****	****	0	****	0	******	******	******	******	4.370	31	*****	1.42	5
HUGO	4384	9	55.9	31	1.3	85.	14	20.	7	308.5	-38.5	26.5	2.5	5.510	31	1.71	1.52	26
IDABEL	4451	9	53.1	31	-.8	83.	13	21.	6	382.5	18.5	15.0	-5.0	7.023	31	2.66	2.05	27
JADIE TOWER	4560	9	*****	0	*****	****	0	****	0	******	******	******	******	5.440	31	*****	2.05	29
POTEAU W W	7254	9	53.1	31	*****	86.	12	19.	7	381.5	******	11.5	******	7.271	31	*****	2.78	27
SMITHVILLE 1 W	8285	9	51.0	31	*****	83.	12	17.	8	433.5	******	.5	******	4.263	31	*****	1.38	20
SOBAL TOWER	8305	9	49.1	31	*****	77.	12	18.	5	494.0	******	.0	******	5.431	31	1.29	1.70	26
SPIRO	8416	9	*****	0	*****	****	0	****	0	******	******	******	******	6.080	31	1.94	1.97	5
TUSKAHOMA	9023	9	54.2	31	*****	86.	11	15.	7	366.5	******	31.0	******	6.902	31	*****	2.14	28
VALLIANT 3 W	9118	9	*****	0	*****	****	0	****	0	******	******	******	******	4.371	31	.16	1.37	5

MARCH 1989 CLIMATE DIVISION SUMMARY

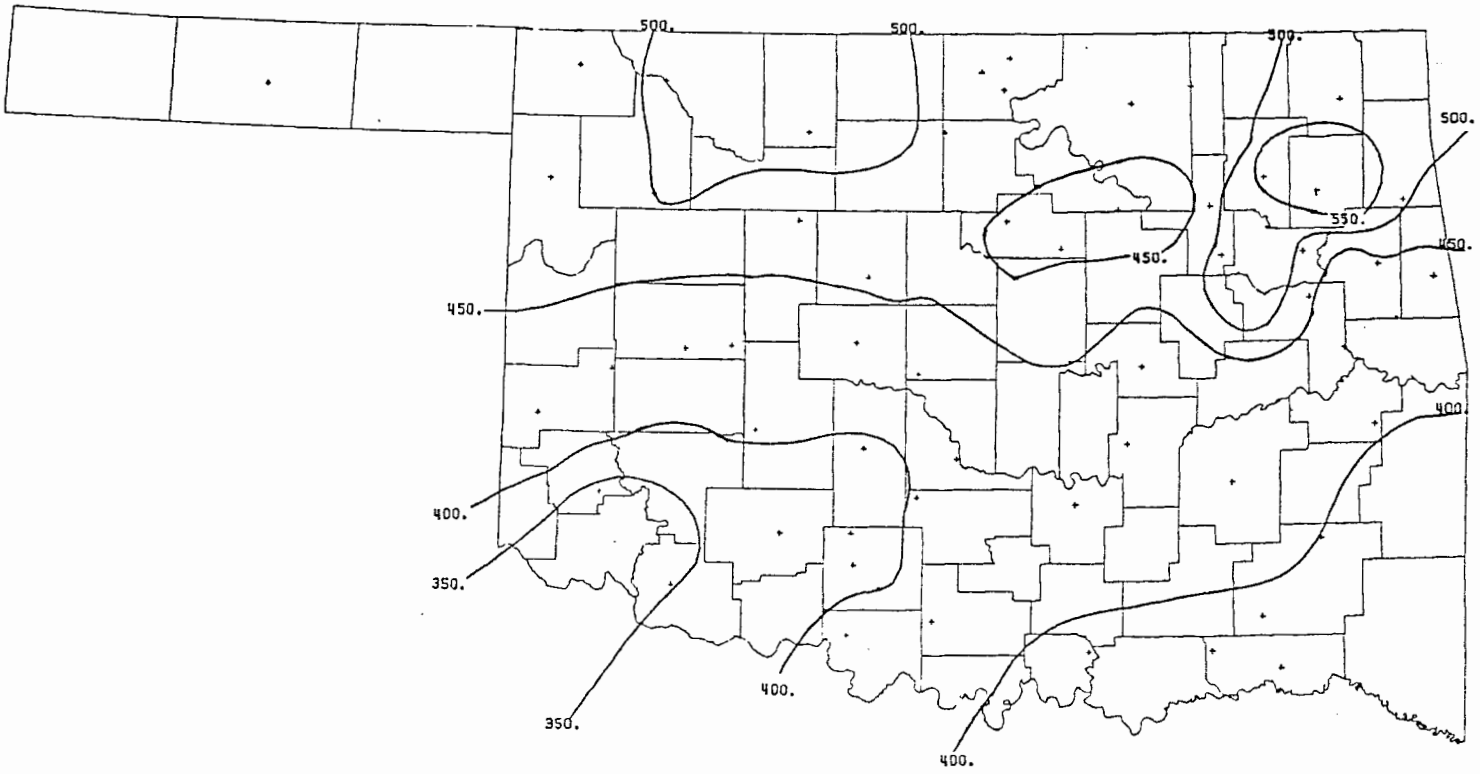
CLIMATE DIV	MEAN TEMP	NUM STA	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEGREE DAYS	DEV FROM NORM	COOL DEGREE DAYS	DEV FROM NORM	TOT PPT	NUM STA	DEV FROM NORM	MAX 24-HR	DAY
1	48.7	11	3.3	95.0	10	3.0	6	512.2	-103.2	9.1	3.3	.81	15	-.32	1.71	28
2	49.8	14	2.0	97.0	10	8.0	5	481.6	-61.9	11.2	-.6	2.64	24	.75	2.30	28
3	49.6	15	1.1	88.0	12	1.0	7	489.6	-32.5	12.3	.2	3.54	30	.60	3.17	28
4	51.0	9	1.7	93.0	11	-5.0	4	449.5	-50.3	18.3	5.2	2.70	19	1.13	3.96	28
5	51.8	15	1.8	92.0	11	3.0	7	425.7	-53.3	18.1	2.3	2.51	34	.20	2.90	28
6	51.6	12	.7	86.0	11	2.0	7	428.7	-27.0	12.0	-5.0	4.03	29	.52	2.48	28
7	54.0	10	2.2	98.0	25	8.0	7	373.6	-54.5	33.5	14.7	1.74	21	.20	1.47	28
8	52.7	14	-.9	91.0	13	.0	7	399.3	18.3	16.8	-8.9	3.03	29	.30	3.40	28
9	52.9	10	-.9	86.0	11	15.0	7	387.5	17.8	12.9	-8.4	5.00	20	.83	3.40	28



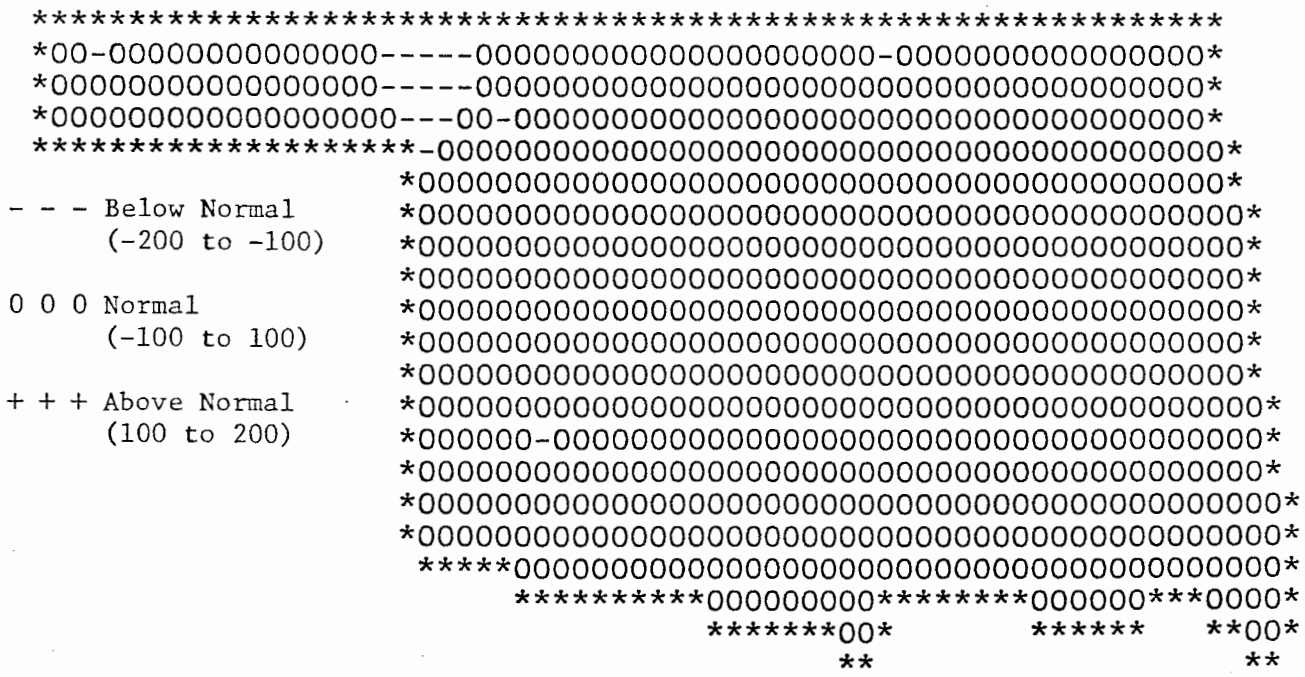
MARCH 1989 AVERAGE MONTHLY TEMPERATURE
(Degrees F)



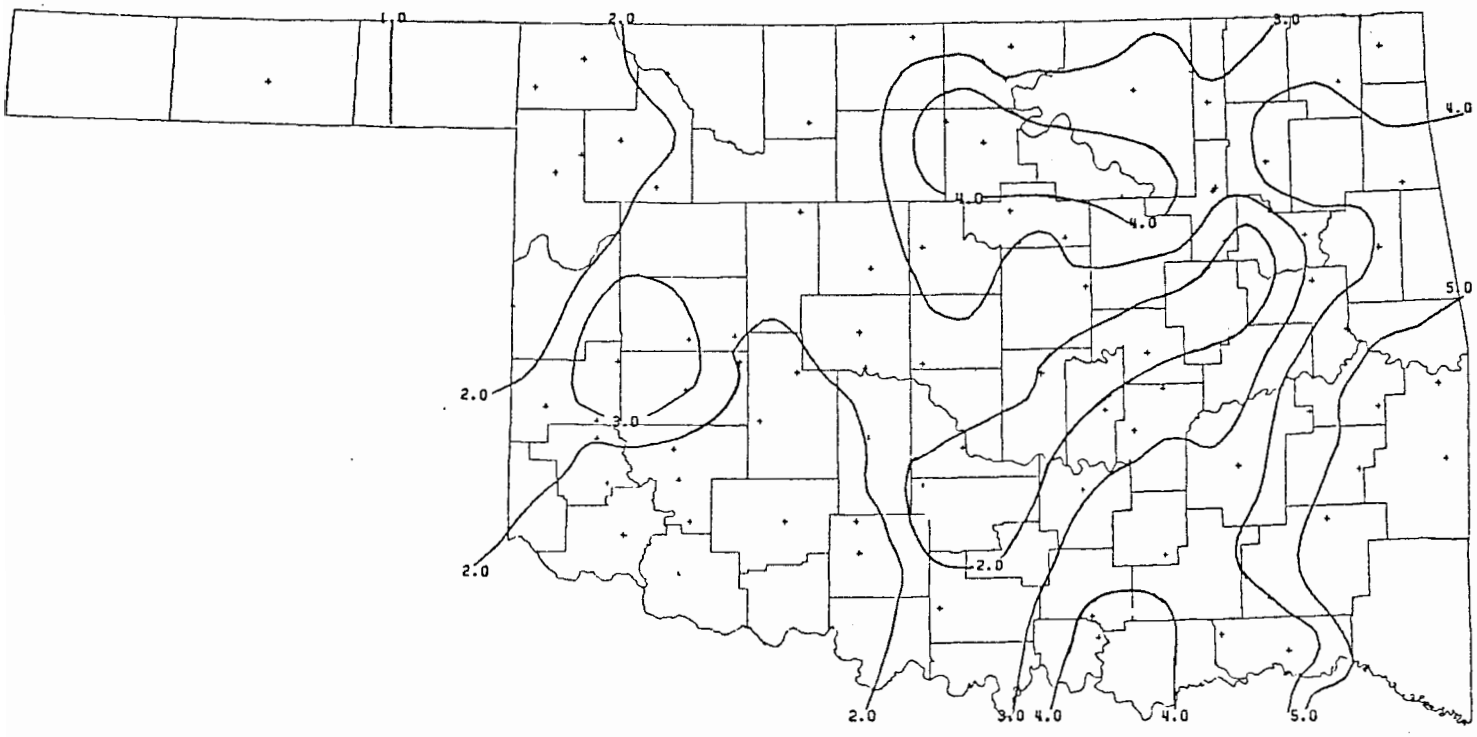
MARCH 1989 DEVIATION FROM NORMAL TEMPERATURES
(Degrees F)



MARCH 1989 TOTAL HEATING DEGREE DAYS



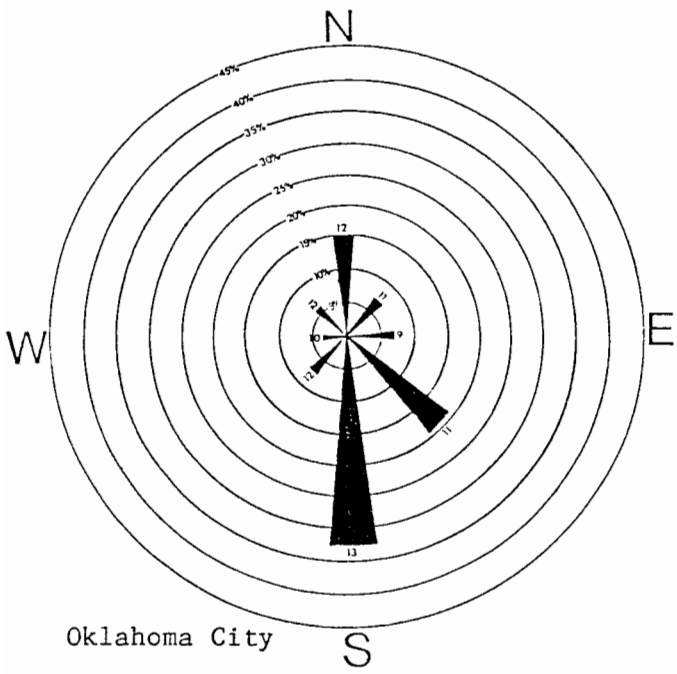
MARCH 1989 DEVIATION FROM NORMAL HEATING DEGREE DAYS



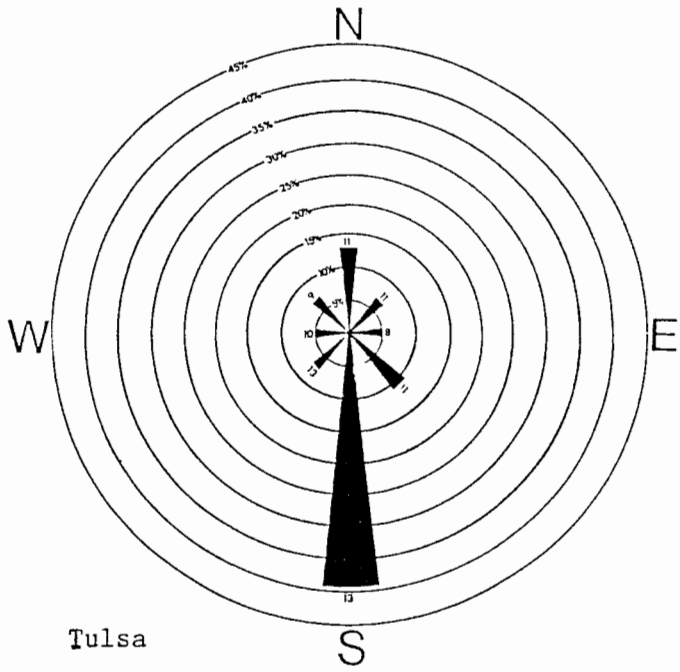
MARCH 1989 TOTAL PRECIPITATION
(Inches)

MARCH 1989 DEVIATION FROM NORMAL PRECIPITATION
(Inches)

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



Oklahoma City



Tulsa

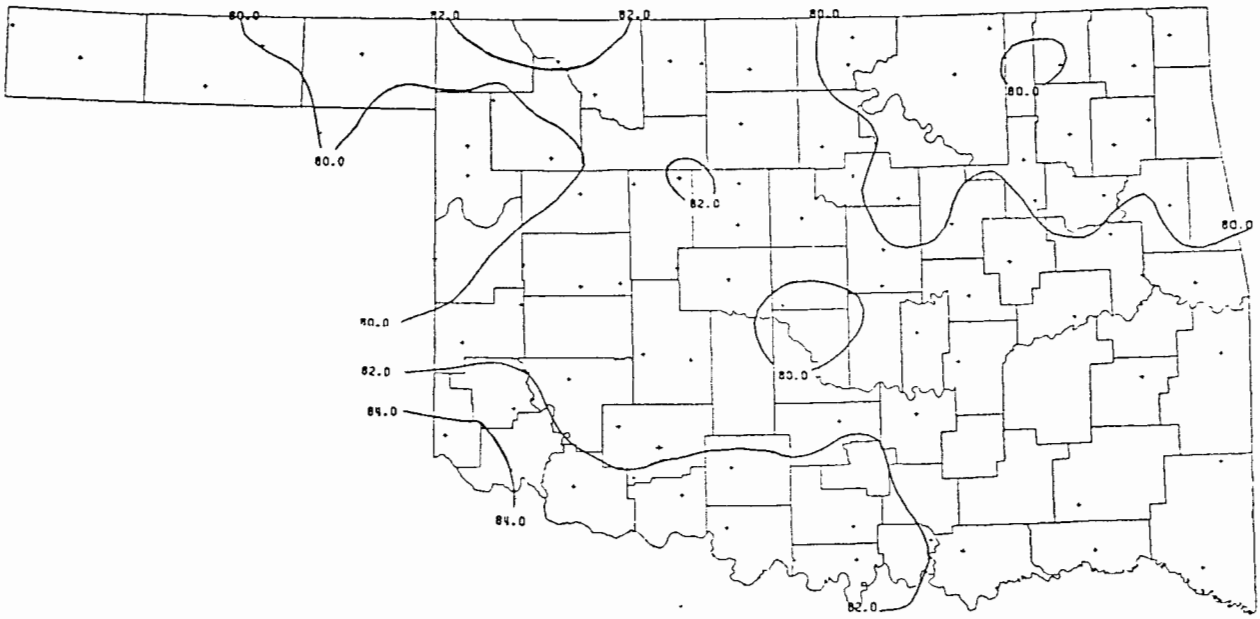
MAY 1989 SUNRISE AND SUNSET

Oklahoma City

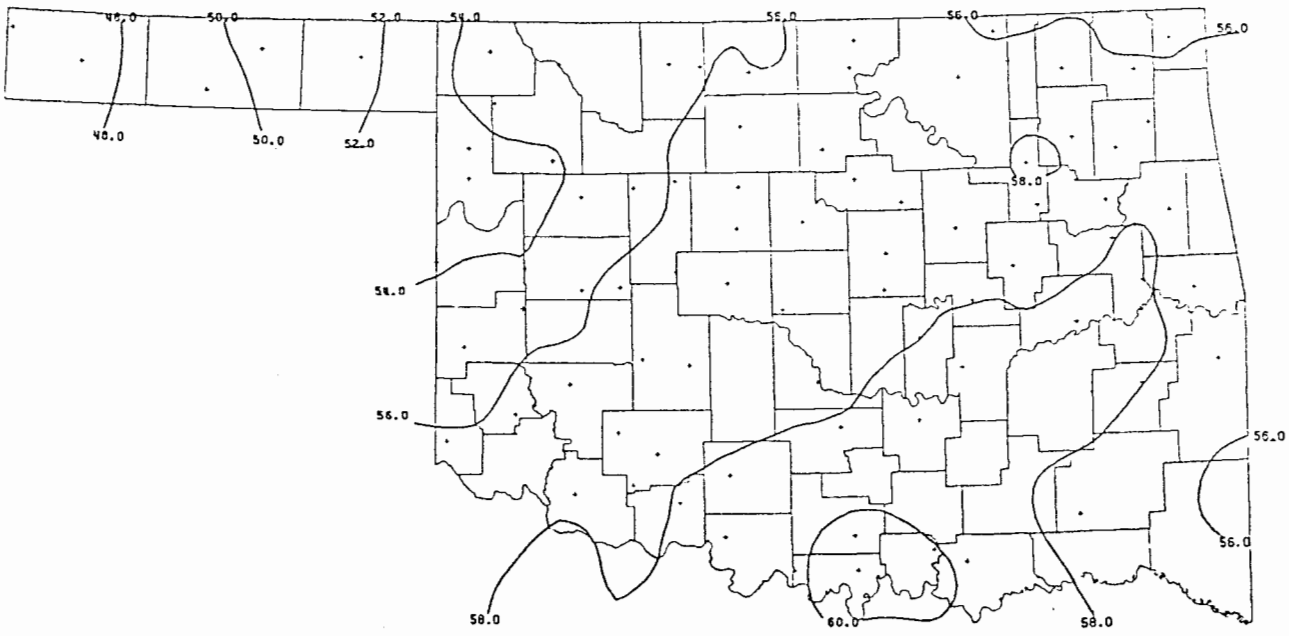
DATE	SUNRISE	SUNSET	DAYLIGHT
890501	6:40AM	8:14PM LT	13:34
890502	6:39AM	8:15PM LT	13:36
890503	6:38AM	8:16PM LT	13:38
890504	6:37AM	8:17PM LT	13:40
890505	6:36AM	8:18PM LT	13:41
890506	6:35AM	8:18PM LT	13:43
890507	6:34AM	8:19PM LT	13:45
890508	6:33AM	8:20PM LT	13:47
890509	6:33AM	8:21PM LT	13:48
890510	6:32AM	8:22PM LT	13:50
890511	6:31AM	8:22PM LT	13:52
890512	6:30AM	8:23PM LT	13:53
890513	6:29AM	8:24PM LT	13:55
890514	6:28AM	8:25PM LT	13:56
890515	6:28AM	8:25PM LT	13:58
890516	6:27AM	8:26PM LT	13:59
890517	6:26AM	8:27PM LT	14: 1
890518	6:26AM	8:28PM LT	14: 2
890519	6:25AM	8:28PM LT	14: 4
890520	6:24AM	8:29PM LT	14: 5
890521	6:24AM	8:30PM LT	14: 6
890522	6:23AM	8:31PM LT	14: 7
890523	6:23AM	8:31PM LT	14: 9
890524	6:22AM	8:32PM LT	14:10
890525	6:22AM	8:33PM LT	14:11
890526	6:21AM	8:33PM LT	14:12
890527	6:21AM	8:34PM LT	14:13
890528	6:20AM	8:35PM LT	14:15
890529	6:20AM	8:35PM LT	14:16
890530	6:19AM	8:36PM LT	14:17
890531	6:19AM	8:37PM LT	14:18

Tulsa

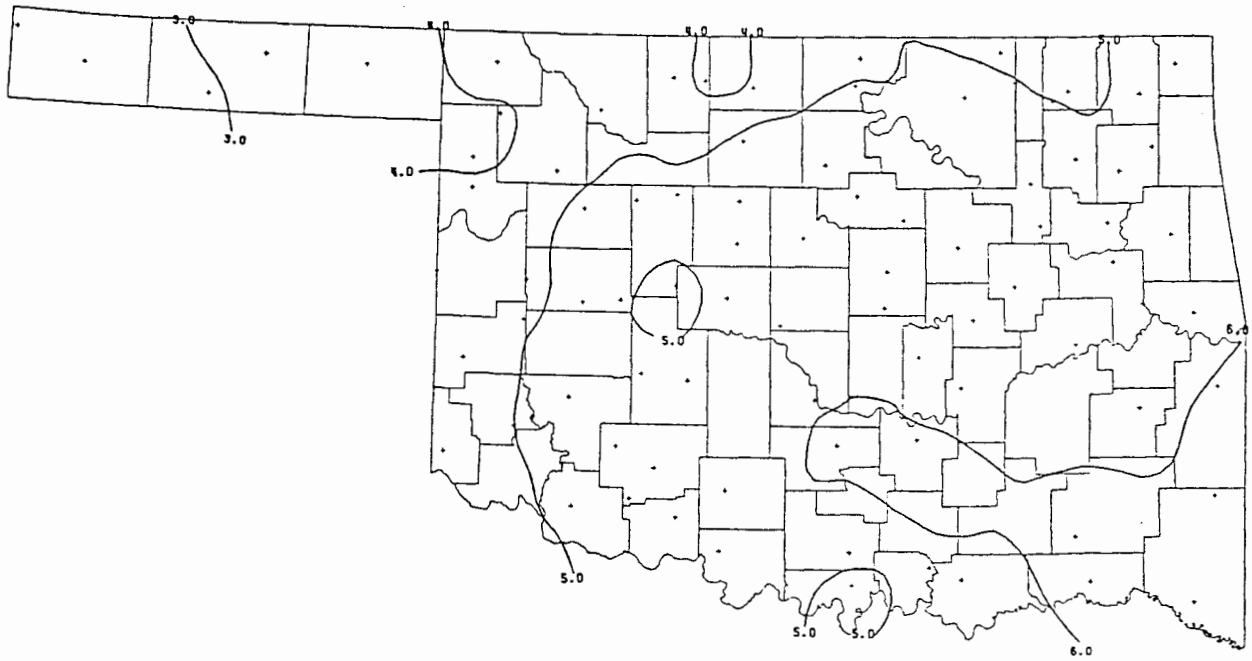
DATE	SUNRISE	SUNSET	DAYLIGHT
890501	6:32AM	8: 9PM LT	13:37
890502	6:31AM	8:10PM LT	13:39
890503	6:30AM	8:11PM LT	13:41
890504	6:29AM	8:11PM LT	13:42
890505	6:28AM	8:12PM LT	13:44
890506	6:27AM	8:13PM LT	13:46
890507	6:26AM	8:14PM LT	13:48
890508	6:25AM	8:15PM LT	13:50
890509	6:24AM	8:15PM LT	13:51
890510	6:23AM	8:16PM LT	13:53
890511	6:22AM	8:17PM LT	13:55
890512	6:22AM	8:18PM LT	13:56
890513	6:21AM	8:19PM LT	13:58
890514	6:20AM	8:19PM LT	13:60
890515	6:19AM	8:20PM LT	14: 1
890516	6:18AM	8:21PM LT	14: 3
890517	6:18AM	8:22PM LT	14: 4
890518	6:17AM	8:23PM LT	14: 6
890519	6:16AM	8:23PM LT	14: 7
890520	6:16AM	8:24PM LT	14: 8
890521	6:15AM	8:25PM LT	14:10
890522	6:14AM	8:26PM LT	14:11
890523	6:14AM	8:26PM LT	14:12
890524	6:13AM	8:27PM LT	14:14
890525	6:13AM	8:28PM LT	14:15
890526	6:12AM	8:28PM LT	14:16
890527	6:12AM	8:29PM LT	14:17
890528	6:11AM	8:30PM LT	14:18
890529	6:11AM	8:31PM LT	14:20
890530	6:11AM	8:31PM LT	14:21
890531	6:10AM	8:32PM LT	14:22



30-YEAR MEAN MAY DAILY MAXIMUM TEMPERATURE



30-YEAR MEAN MAY DAILY MINIMUM TEMPERATURE



30-YEAR MEAN MAY PRECIPITATION

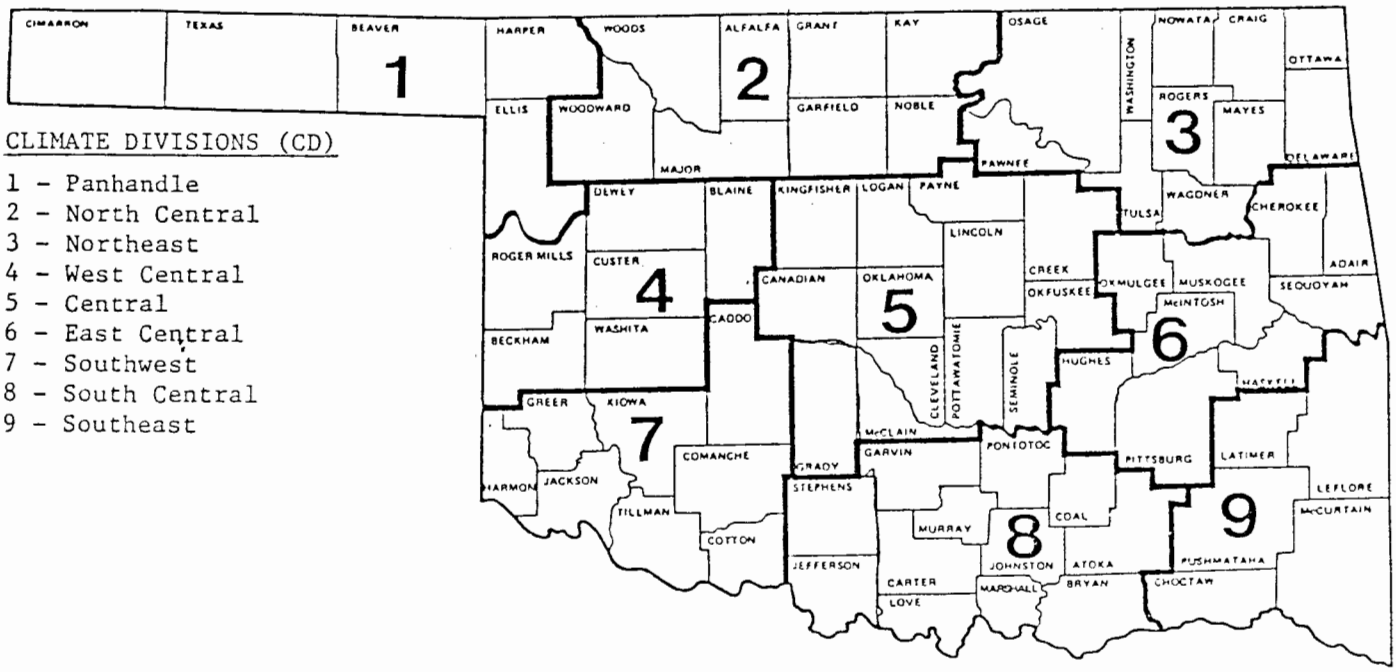
30- AND 90-DAY NATIONAL WEATHER SERVICE OUTLOOK

30-DAY OUTLOOK (APRIL)

Precipitation - Below Normal Statewide.
Temperature - Near Normal Statewide

90-DAY OUTLOOK (APRIL-JUNE)

Precipitation - Slight Chance of Above Normal.
Temperature - Above Normal Southern One-Half.
Slight Chance of Above Normal Elsewhere.



CLIMATE DIVISIONS (CD)

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

EXPLANATION OF TABLES

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

Station Name:

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

Climate Division: See the figure above.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

EXPLANATION OF MAPS

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

MAY 1989

CLIMATE CALENDAR

The data on this calendar are for Oklahoma City. Normal values are calculated for the period 1950-1979. Extremes are found for the period of record (1924-present).

Normal	1	Actual
71.9	max	
51.5	min	
.108	pcpn	
4	HDD	
1	CDD	
Highest Max		93-1948
Lowest Max		53-1966
Lowest Min		39-1963
Highest Min		65-1959
Greatest pcpn		1.63-1954

Normal	2	Actual
73.3	max	
51.5	min	
.156	pcpn	
4	HDD	
2	CDD	
Highest Max		94-1943
Lowest Max		52-1954
Lowest Min		39-1961
Highest Min		69-1959
Greatest pcpn		1.53-1975

Normal	3	Actual
74.7	max	
53.0	min	
.125	pcpn	
4	HDD	
3	CDD	
Highest Max		92-1940
Lowest Max		49-1978
Lowest Min		32-1954
Highest Min		70-1949
Greatest pcpn		2.48-1979

Normal	4	Actual
76.1	max	
53.8	min	
.125	pcpn	
3	HDD	
3	CDD	
Highest Max		90-1943
Lowest Max		44-1935
Lowest Min		36-1954
Highest Min		70-1949
Greatest pcpn		1.71-1941

Normal	5	Actual
76.0	max	
56.7	min	
.150	pcpn	
2	HDD	
4	CDD	
Highest Max		94-1940
Lowest Max		50-1935
Lowest Min		40-1935
Highest Min		69-1940
Greatest pcpn		1.58-1967

Normal	6	Actual
77.5	max	
55.3	min	
.128	pcpn	
2	HDD	
4	CDD	
Highest Max		94-1954
Lowest Max		61-1960
Lowest Min		37-1944
Highest Min		70-1986
Greatest pcpn		2.61-1930

Normal	7	Actual
77.6	max	
55.0	min	
.059	pcpn	
2	HDD	
4	CDD	
Highest Max		88-1934
Lowest Max		58-1972
Lowest Min		42-1938
Highest Min		71-1927
Greatest pcpn		1.60-1968

Normal	8	Actual
78.5	max	
55.2	min	
.135	pcpn	
2	HDD	
4	CDD	
Highest Max		91-1933
Lowest Max		50-1943
Lowest Min		38-1938
Highest Min		70-1927
Greatest pcpn		3.09-1959

Normal	9	Actual
77.9	max	
57.2	min	
.169	pcpn	
2	HDD	
4	CDD	
Highest Max		90-1927
Lowest Max		55-1943
Lowest Min		44-1969
Highest Min		70-1963
Greatest pcpn		3.37-1943

Normal	10	Actual
74.8	max	
57.2	min	
.316	pcpn	
2	HDD	
4	CDD	
Highest Max		96-1967
Lowest Max		53-1954
Lowest Min		42-1946
Highest Min		71-1963
Greatest pcpn		1.43-1934

Normal	11	Actual
75.6	max	
55.7	min	
.098	pcpn	
3	HDD	
4	CDD	
Highest Max		93-1963
Lowest Max		54-1954
Lowest Min		37-1981
Highest Min		70-1933
Greatest pcpn		4.30-1929

Normal	12	Actual
75.2	max	
55.1	min	
.108	pcpn	
2	HDD	
3	CDD	
Highest Max		90-1986
Lowest Max		60-1966
Lowest Min		39-1979
Highest Min		72-1956
Greatest pcpn		3.11-1967

Normal	13	Actual
76.2	max	
55.4	min	
.152	pcpn	
3	HDD	
4	CDD	
Highest Max		95-1984
Lowest Max		49-1953
Lowest Min		39-1971
Highest Min		68-1974
Greatest pcpn		2.58-1983

Normal	14	Actual
78.0	max	
55.3	min	
.108	pcpn	
2	HDD	
4	CDD	
Highest Max		92-1952
Lowest Max		55-1934
Lowest Min		41-1953
Highest Min		68-1974
Greatest pcpn		2.48-1986

Normal	15	Actual
78.8	max	
57.0	min	
.059	pcpn	
1	HDD	
4	CDD	
Highest Max		90-1931
Lowest Max		47-1945
Lowest Min		39-1942
Highest Min		70-1948
Greatest pcpn		2.73-1980

Normal	16	Actual
81.4	max	
58.5	min	
.142	pcpn	
0	HDD	
6	CDD	
Highest Max		92-1966
Lowest Max		56-1945
Lowest Min		41-1945
Highest Min		75-1974
Greatest pcpn		1.81-1986

Normal	17	Actual
79.4	max	
58.8	min	
.299	pcpn	
1	HDD	
5	CDD	
Highest Max		96-1966
Lowest Max		63-1935
Lowest Min		39-1945
Highest Min		74-1974
Greatest pcpn		3.17-1951

Normal	18	Actual
80.5	max	
58.8	min	
.116	pcpn	
1	HDD	
6	CDD	
Highest Max		95-1956
Lowest Max		65-1957
Lowest Min		45-1976
Highest Min		72-1938
Greatest pcpn		1.05-1951

Normal	19	Actual
81.0	max	
58.6	min	
.275	pcpn	
1	HDD	
6	CDD	
Highest Max		96-1973
Lowest Max		66-1955
Lowest Min		46-1971
Highest Min		71-1933
Greatest pcpn		3.35-1955

Normal	20	Actual
79.8	max	
59.1	min	
.335	pcpn	
1	HDD	
6	CDD	
Highest Max		93-1956
Lowest Max		63-1942
Lowest Min		43-1981
Highest Min		73-1933
Greatest pcpn		2.74-1979

Normal	21	Actual
81.9	max	
60.4	min	
.142	pcpn	
1	HDD	
7	CDD	
Highest Max		95-1953
Lowest Max		56-1968
Lowest Min		47-1942
Highest Min		73-1953
Greatest pcpn		1.60-1987

Normal	22	Actual
81.8	max	
60.9	min	
.208	pcpn	
1	HDD	
7	CDD	
Highest Max		98-1939
Lowest Max		58-1963
Lowest Min		42-1931
Highest Min		74-1953
Greatest pcpn		2.62-1975

Normal	23	Actual
80.4	max	
60.5	min	
.190	pcpn	
1	HDD	
6	CDD	
Highest Max		99-1939
Lowest Max		60-1935
Lowest Min		48-1963
Highest Min		72-1953
Greatest pcpn		3.09-1952

Normal	24	Actual
79.9	max	
61.0	min	
.123	pcpn	
0	HDD	
6	CDD	
Highest Max		94-1939
Lowest Max		63-1947
Lowest Min		42-1935
Highest Min		72-1939
Greatest pcpn		1.90-1957

Normal	25	Actual
82.0	max	
61.6	min	
.168	pcpn	
0	HDD	
7	CDD	
Highest Max		93-1962
Lowest Max		69-1976
Lowest Min		47-1947
Highest Min		72-1937
Greatest pcpn		1.49-1968

Normal	26	Actual
81.9	max	
60.1	min	
.352	pcpn	
1	HDD	
7	CDD	
Highest Max		95-1953
Lowest Max		57-1950
Lowest Min		49-1968
Highest Min		71-1953
Greatest pcpn		2.00-1959

Normal	27	Actual
81.4	max	
59.1	min	
.222	pcpn	
1	HDD	
6	CDD	
Highest Max		96-1927
Lowest Max		64-1976
Lowest Min		43-1961
Highest Min		76-1927
Greatest pcpn		5.38-1987

Normal	28	Actual
81.4	max	
60.9	min	
.192	pcpn	
0	HDD	
6	CDD	
Highest Max		91-1926
Lowest Max		62-1932
Lowest Min		43-1947
Highest Min		71-1942
Greatest pcpn		2.33-1987

Normal	29	Actual
83.1	max	
60.9	min	
.328	pcpn	
0	HDD	
8	CDD	
Highest Max		94-1985
Lowest Max		62-1947
Lowest Min		39-1947
Highest Min		73-1974
Greatest pcpn		5.63-1970

Normal	30	Actual
83.3	max	
62.6	min	
.194	pcpn	
0	HDD	
8	CDD	
Highest Max		104-1985
Lowest Max		66-1975
Lowest Min		45-1947
Highest Min		74-1974
Greatest pcpn		2.30-1929

Normal	31	Actual
82.2	max	
62.8	min	
.235	pcpn	
0	HDD	
8	CDD	
Highest Max		98-1928
Lowest Max		69-1964
Lowest Min		48-1975
Highest Min		74-1949
Greatest pcpn		1.64-1968