OKLAHOMA
MONTHLY SUMMMARY
MAY 1989

TABLE OF CONTENTS

MAY 1989 OKLAHOMA SUMMARY

Numerous May thunderstorms produced more than 10 days of precipitation at many stations, and several above normal monthly precipitation totals. Precipitation boosted subsoil and topsoil amounts to the adequate level for 90 and 75% of the State respectively, and enriched State pasture lands. Six confirmed tornadoes were reported during May, 14 fewer than the 30-year May mean. In spite of 100-degree readings at several stations, near-normal monthly temperatures in the 66-72 degree range resulted in very few degree-days and, consequently, an easing of energy demand.

A Rocky Mountain low pressure system moved toward the State, producing vigorous thunderstorms over western Oklahoma on May 4. Prevailing winds carrying the storms at over 40-mph amplified the storm-associated winds. The resulting 80-mph winds uprooted trees near Altus. Golfball-size hail was reported in the nearby area of Snyder.

Powerful thunderstorms on May 8 erupted along a surface front as a second low pressure system passed over northern Oklahoma. A Delaware County tornado traveled approximately 4 miles on the ground, uprooting trees and destroying or damaging several homes and farm buildings. Large hail fell in Adair County.

A dry line forced the lifting of very moist air over western Oklahoma on the 14th of May, initiating 5 days of thunderstorms (see Map 1). Hail was reported in Greer, Kiowa and McClain Counties and snowplows were used to remove hail from streets in Texas County. On May 15, violent weather developed as an upper level low pressure area intensified west of Oklahoma. The low produced upper level disturbances which moved over the State. Central Oklahoma reported 70-mph winds and dime to golfball-size hail. Hail damaged 92 vehicles and several houses in the Sapulpa area and baseball-size hail destroyed street lights in the McIntosh County city of Hanna. Atoka County reported several-inch accumulations of golfball-size hail. More hail, mostly dime-size, fell from southwestern Oklahoma storms on the 16th. Powerful winds from a thunderstorm caused an estimated $700,000 damage to a Marshall County marina on Lake Texoma. Several hours of rain produced floodwaters up to 3' deep on some Idabel roads. Oklahoma and Logan County street-flooding resulted from thunderstorms on the 17th. On May 18, the low moved over the State, bringing a mass of cold air whose destabilizing effect aided the development of 4 confirmed tornadoes. A Wagoner County tornado damaged 35 houses in the Wagoner city area. Two tornadoes struck Mays County and the fourth touched down in Rogers County.

The last confirmed May tornado occurred on the 20th when a slow-moving cold front met moist, gulf air over north-central Oklahoma. The frontal lifting produced a tornado-bearing thunderstorm in Muskogee County. No injuries or damage were reported.

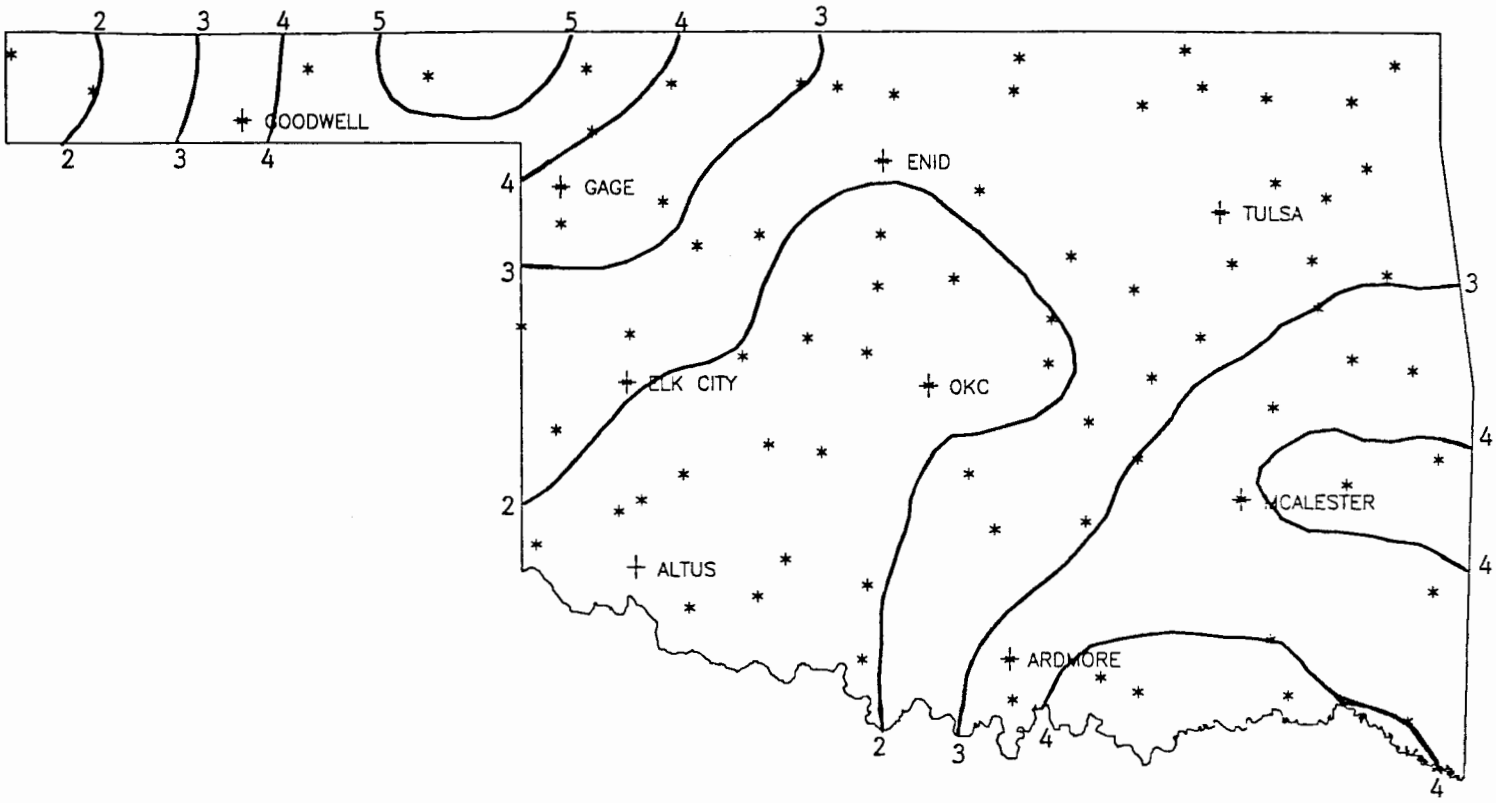
70- to 80-mph winds accompanied violent, northeastern Oklahoma frontal thunderstorms on May 22. Tulsa received hail and damage to power lines which eliminated electricity to more than 10,000 residents. Ponca City reported hail accumulations of 6 inches.

An upper level low and intense surface heating combined to produce severe thunderstorms in east central Oklahoma on May 26. Winds estimated at 80-90 mph overturned a mobile home in Muskogee County and another in Okmulgee County. Some storms produced dime to golfball-size hail.

Severe May weather and late month saturated field conditions have resulted in lowered forecasts of Oklahoma wheat production. Several counties in the State reported severe hail damage. 50,000 wheat acres were reported damaged in Garfield County alone. The numerous May hailstorms followed spring drought, a late freeze and heavy insect infestations. Rather than benefit the surviving crop, abundant late May and early June rainfall is preventing combines from entering the fields. Lodging and weed development, encouraged by these excessive rains, threaten to result in the State's lowest yielding wheat crop in 20 years.

- R. J. Sladewski

MAP 1. OKLAHOMA 5-DAY PRECIPITATION - MAY-14-18, 1989 (inches).



MAY 1989

PERCENT OF NORMAL PRECIPITATION

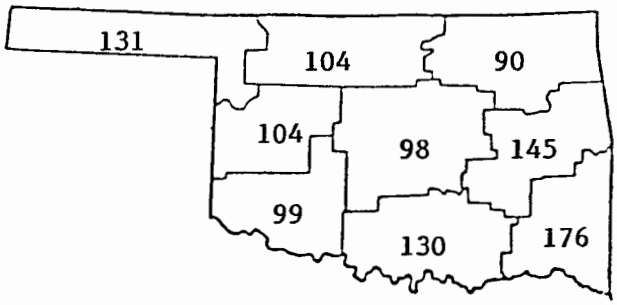


TABLE OF 1988/1989 COMPARISONS

Station	May Temperatures (F) 1988	1989	May Precipitation (in.) 1988	1989
Arnett	66.2	66.0	.48	4.38
Enid	70.4	69.0	1.05	4.80
Mutual	66.6	65.2	.35	4.59
Tulsa	70.9	69.6	1.18	3.95
Elk City	68.0	68.1	1.47	6.26
Oklahoma City	70.1	70.1	.65	3.79
McAlester	69.6	69.7	1.14	6.49
Altus Irr. Sta.	71.0	72.7	1.73	3.51
Durant	68.6	69.4	.99	10.75
Ada	71.1	70.8	.25	4.55
Antlers	70.0	70.6	.70	8.28

EXTREMES

Variable	Station	Division	Observation	Date
Minimum temperature (F)	Perry	2	31	3
Maximum temperature (F)	Altus Irr.	7	107	24
Maximum 24-hour Precipitation	Bokchito	8	4.50"	16

MAY 1989 SUMMARY FOR NORTHWEST DIVISION (CD1)

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
ARNETT	332	1	66.0	31	-.3	97.	25	39.	2	83.5	-3.5	115.0	-13.0	4.381	31	.24	1.90	17
BEAVER	593	1	66.5	31	.2	100.	25	35.	2	91.0	-3.0	138.5	4.5	8.572	31	5.31	4.50	17
BOISE CITY 2 E	908	1	65.8	31	2.6	98.	23	34.	1	105.5	-24.5	129.5	55.5	1.553	31	-.88	.50	3
BUFFALO	1243	1	69.7	31	1.2	104.	24	37.	1	45.5	-17.5	190.0	19.0	7.030	31	2.64	2.45	17
FARGO	3070	1	*****	0	*****	****	0	****	0	******	******	******	******	4.830	31	.87	2.30	18
GAGE FAA APT	3407	1	67.7	31	1.2	99.	24	40.	1	66.0	-21.0	151.0	17.0	4.031	31	.37	1.69	17
GATE	3489	1	67.8	31	*****	101.	24	44.	5	64.0	******	149.5	******	7.163	31	*****	4.81	16
GOODWELL RES ST	3628	1	64.9	31	.2	98.	25	36.	1	99.5	-19.5	97.0	-12.0	4.832	31	1.96	1.76	18
GUYMON	3835	1	66.1	26	*****	97.	29	37.	1	55.5	******	84.5	******	5.011	28	*****	3.16	18
HOOKER	4298	1	66.2	31	.8	99.	25	34.	2	96.0	-1.0	132.0	23.0	3.581	31	.15	1.46	18
KENTON	4766	1	64.2	31	.7	97.	24	33.	1	125.0	9.0	99.0	30.0	2.161	31	-.33	1.06	17
LAVERNE	5045	1	*****	0	*****	****	0	****	0	******	******	******	******	4.294	31	.90	2.30	17
OPTIMA LAKE	6740	1	66.3	30	*****	100.	25	37.	1	86.0	******	123.5	******	5.311	31	*****	1.89	18
RANGE	7412	1	*****	0	*****	****	0	****	0	******	******	******	******	5.141	31	*****	1.72	18
REGNIER	7534	1	*****	0	*****	****	0	****	0	******	******	******	******	1.520	31	-.40	.48	17
TURPIN 4 SSE	9017	1	66.1	31	*****	100.	25	35.	1	96.5	******	132.0	******	4.661	31	*****	1.50	18

MAY 1989 SUMMARY FOR NORTH CENTRAL DIVISION (CD2)

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
ALVA	193	2	68.7	31	*****	98.	24	41.	1	53.0	******	168.0	******	4.900	31	*****	1.75	16
VANCE AFB	302	2	*****	0	*****	****	0	****	0	******	******	******	******	3.567	31	*****	.75	16
BILLINGS	755	2	67.0	31	*****	93.	25	42.	1	62.5	******	126.0	******	4.891	31	.29	1.40	16
BLACKWELL 2E	818	2	67.2	31	*****	93.	24	39.	6	71.5	******	140.5	******	4.213	31	*****	1.15	18
BRAMAN	1075	2	*****	0	*****	****	0	****	0	******	******	******	******	3.793	31	*****	1.06	22
CEDARDALE	1620	2	*****	0	*****	****	0	****	0	******	******	******	******	4.212	31	*****	1.73	18
CHEROKEE	1724	2	69.9	31	1.2	98.	25	41.	2	50.0	5.0	201.0	41.0	4.940	31	1.09	2.08	15
ENID	2912	2	69.1	31	.1	96.	24	43.	1	49.5	9.5	176.0	12.0	4.800	31	-.21	1.08	4
FREEDOM	3358	2	68.7	31	*****	102.	24	38.	1	52.0	******	166.5	******	4.671	31	*****	1.70	17
GREAT SALT PLNS	3740	2	67.9	31	*****	97.	29	41.	1	69.0	******	158.5	******	3.841	31	.26	.83	18
HARDY	3909	2	*****	0	*****	****	0	****	0	******	******	******	******	7.053	31	*****	1.43	15
HELENA 1 SSE	4019	2	65.9	31	*****	95.	25	41.	10	91.5	******	120.0	******	4.563	31	.22	1.05	4
JEFFERSON	4573	2	68.7	31	.0	96.	24	40.	10	56.0	9.0	172.0	10.0	4.751	31	.83	1.12	15
LAMONT	5013	2	*****	0	*****	****	0	****	0	******	******	******	******	6.440	31	*****	2.32	16
MEDFORD	5768	2	*****	0	*****	****	0	****	0	******	******	******	******	4.470	31	*****	1.56	15
MORRISON	6065	2	*****	0	*****	****	0	****	0	******	******	******	******	5.613	31	*****	1.70	22
MUTUAL	6139	2	65.6	31	-1.5	96.	25	38.	1	100.5	21.5	118.0	-27.0	4.590	31	.27	1.63	18
NEWKIRK	6278	2	67.0	31	-1.2	91.	24	40.	6	75.0	24.0	137.0	-14.0	4.150	31	-.57	.85	22
ORIENTA	6751	2	*****	0	*****	****	0	****	0	******	******	******	******	4.300	31	*****	.91	16
PERRY	7012	2	67.5	31	-1.8	93.	25	39.	19	92.5	54.5	170.0	-2.0	5.641	31	.36	1.91	22
PONCA CITY FAA	7201	2	68.2	31	.5	93.	24	41.	10	62.5	-2.5	162.0	14.0	3.564	31	-.93	.97	22
RED ROCK 1 NNE	7505	2	*****	0	*****	****	0	****	0	******	******	******	******	3.462	31	-1.17	1.15	22
RENFROW	7556	2	*****	0	*****	****	0	****	0	******	******	******	******	3.450	31	-.38	.92	19
WAYNOKA	9404	2	68.3	31	-.8	99.	24	40.	1	64.0	16.0	166.5	-8.5	4.830	31	.39	1.50	18
WOODWARD	9760	2	*****	0	*****	****	0	****	0	******	******	******	******	4.222	31	*****	1.26	18

MAY 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	67.2	31	*****	89.	28	36.	7	77.5	******	144.5	******	4.972	31	-.30	1.36	16
BARTLESVILLE 2W	548	3	68.1	31	-.6	90.	29	36.	7	68.0	32.0	165.0	15.0	3.680	31	-.99	1.00	18
BIXBY	782	3	67.0	31	-1.6	91.	30	39.	7	88.5	45.5	151.5	-3.5	4.701	31	.05	1.67	18
BURBANK	1256	3	*****	0	*****	****	0	****	0	******	******	******	******	4.581	31	*****	1.38	17
CHELSEA 4 S	1717	3	*****	0	*****	****	0	****	0	******	******	******	******	3.160	31	*****	.98	16
CLAREMORE	1828	3	66.6	31	-1.3	89.	9	37.	8	96.0	33.0	145.5	-6.5	3.973	31	-.70	1.67	18
CLEVELAND 5 WSW	1902	3	68.5	27	*****	90.	26	42.	10	50.0	******	145.0	******	4.310	31	*****	1.18	22
FORAKER	3250	3	*****	0	*****	****	0	****	0	******	******	******	******	4.272	31	-.55	1.12	18
HOLLOW	4258	3	*****	0	*****	****	0	****	0	******	******	******	******	5.990	31	1.13	2.05	18
HOMINY	4289	3	*****	0	*****	****	0	****	0	******	******	******	******	4.410	31	-.23	1.08	22
HULAH DAM	4393	3	64.9	22	*****	89.	25	35.	8	74.5	******	73.0	******	4.310	31	.00	1.44	16
JAY TOWER	4567	3	64.8	16	*****	88.	31	40.	2	50.0	******	47.0	******	4.350	19	*****	1.74	10
KANSAS 1 ESE	4672	3	65.9	31	*****	86.	24	40.	7	87.0	******	113.5	******	4.661	31	*****	1.92	16
KEYSTONE DAM	4812	3	66.0	31	*****	90.	26	37.	7	94.5	******	126.0	******	5.060	31	*****	1.55	16
LENAPAH	5118	3	*****	0	*****	****	0	****	0	******	******	******	******	4.430	31	*****	1.13	22
MANNFORD 6 NW	5522	3	68.7	30	*****	91.	25	41.	7	55.5	******	165.0	******	4.320	31	-.47	1.10	22
MARAMEC	5540	3	*****	0	*****	****	0	****	0	******	******	******	******	5.160	31	.15	1.45	18
MIAMI	5855	3	65.9	31	-2.0	87.	29	37.	7	86.0	28.0	112.5	-35.5	4.570	31	-.46	1.22	22
NOWATA	6485	3	66.2	28	*****	88.	30	40.	6	69.0	******	101.5	******	5.591	31	.97	2.20	22
ONETA 1 WNW	6713	3	*****	0	*****	****	0	****	0	******	******	******	******	3.970	31	*****	1.24	18
PAWHUSKA	6935	3	66.9	31	-1.3	89.	24	36.	2	76.0	28.0	134.0	-13.0	4.762	31	.00	.90	22
PRYOR 6 N	7309	3	64.6	30	-3.5	87.	30	35.	2	119.5	64.5	106.5	-44.5	4.144	31	-.74	2.44	18
QUAPAW	7358	3	*****	0	*****	****	0	****	0	******	******	******	******	4.521	31	-.66	1.70	22
RALSTON	7390	3	69.7	31	*****	92.	25	39.	7	45.5	******	191.0	******	4.120	31	-.60	1.15	18
RAMONA 4 N	7394	3	*****	0	*****	****	0	****	0	******	******	******	******	2.931	31	*****	.90	15
SKIATOOK	8258	3	*****	0	*****	****	0	****	0	******	******	******	******	3.920	31	-.75	1.92	15
SPAVINAW	8380	3	68.2	31	*****	86.	30	41.	7	66.5	******	166.5	******	3.206	31	-1.85	1.19	18
TULSA WSO APT	8992	3	69.6	31	.5	91.	25	45.	7	53.0	13.0	194.5	27.5	3.952	31	-1.19	1.25	16
UPPER SPAVINAW	9101	3	70.8	31	*****	95.	31	38.	7	47.0	******	225.5	******	3.270	31	*****	.95	18
VINITA 2 N	9203	3	66.7	31	-.9	89.	28	36.	3	84.0	22.0	136.5	-6.5	4.860	31	-.49	1.61	18
WAGONER	9247	3	68.8	31	-.4	88.	30	43.	7	56.0	26.0	172.5	11.5	6.051	31	1.22	2.98	18
WANN	9298	3	*****	0	*****	****	0	****	0	******	******	******	******	5.900	31	*****	2.07	22

MAY 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	66.5	31	-2.0	95.	25	43.	1	82.0	32.0	130.0	-29.0	4.052	31	-.90	1.08	12
CHEYENNE	1738	4	*****	0	*****	****	0	****	0	******	******	******	******	3.250	31	*****	2.10	12
CLINTON	1909	4	70.4	31	1.4	101.	24	47.	6	36.5	-4.5	203.5	38.5	6.270	31	1.27	2.75	12
COLONY	2039	4	*****	0	*****	****	0	****	0	******	******	******	******	5.371	31	*****	1.90	12
CORDELL	2125	4	*****	0	*****	****	0	****	0	******	******	******	******	4.542	31	-.14	1.85	12
ELK CITY 1 E	2849	4	68.4	29	*****	97.	25	43.	1	48.0	******	148.0	******	6.260	29	*****	1.84	12
ERICK 4 E	2944	4	69.4	31	.9	99.	24	45.	1	42.0	-4.0	178.5	24.5	6.220	31	1.81	2.33	16
GEARY	3497	4	67.2	28	*****	94.	24	42.	1	60.5	******	122.0	******	4.000	28	*****	.90	12
HAMMON 1 NNE	3871	4	66.0	31	-2.3	96.	25	42.	2	86.0	23.0	116.0	-49.0	6.591	31	2.03	2.33	11
LEEDEY	5090	4	*****	0	*****	****	0	****	0	******	******	******	******	7.370	31	2.59	3.07	18
MACKIE 4 NNW	5463	4	*****	0	*****	****	0	****	0	******	******	******	******	4.160	31	*****	2.02	12
MORAVIA 2 NNE	6035	4	*****	0	*****	****	0	****	0	******	******	******	******	4.321	31	-.43	1.16	13
OKEENE	6629	4	69.6	31	.1	99.	24	41.	2	50.5	14.5	193.0	17.0	2.800	31	-2.19	.78	18
RETROP	7565	4	*****	0	*****	****	0	****	0	******	******	******	******	4.610	31	*****	1.37	13
REYDON	7579	4	68.2	31	*****	99.	24	42.	1	57.0	******	156.0	******	4.740	31	.45	1.81	12
SAYRE	7952	4	*****	0	*****	****	0	****	0	******	******	******	******	6.060	31	1.65	1.98	18
SWEETWATER 2 E	8652	4	*****	0	*****	****	0	****	0	******	******	******	******	5.520	31	*****	1.43	11
TALOGA	8708	4	67.7	31	-.2	97.	24	39.	2	62.5	6.5	145.0	-1.0	5.951	31	.82	2.35	17
THOMAS	8815	4	*****	0	*****	****	0	****	0	******	******	******	******	3.890	31	*****	1.25	12
VICI	9172	4	*****	0	*****	****	0	****	0	******	******	******	******	5.722	31	*****	2.45	17
WATONGA	9364	4	68.6	31	*****	98.	24	43.	1	55.5	******	166.5	******	3.381	31	-1.60	.76	4
WEATHERFORD	9422	4	68.6	31	-.7	101.	25	43.	1	59.0	26.0	169.5	2.5	4.980	31	.26	1.28	13

MAY 1989 SUMMARY FOR CENTRAL DIVISION (CD5)

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 24-HR DAY
AMBER	200	5	*****	0	*****	****	0	****	0	******	******	******	******	6.750	31	*****	2.49	13
ARCADIA	288	5	*****	0	*****	****	0	****	0	******	******	******	******	5.600	31	*****	1.37	17
TINKER AFB	325	5	*****	0	*****	****	0	****	0	******	******	******	******	2.736	31	*****	.99	18
BLANCHARD 2 SSW	830	5	70.3	30	*****	91.	24	46.	7	33.0	******	193.0	******	6.162	31	*****	2.02	13
BRISTOW	1144	5	69.2	31	.1	93.	25	38.	2	53.0	21.0	184.5	25.5	5.852	31	.12	1.78	22
CHANDLER	1684	5	69.3	31	.1	90.	25	43.	2	46.0	14.0	180.0	17.0	8.992	31	3.58	2.60	15
CHICKASHA EX ST	1750	5	70.8	31	.6	95.	24	40.	2	39.0	15.0	219.5	33.5	6.290	31	1.17	1.88	13
COX CITY 1 E	2196	5	*****	0	*****	****	0	****	0	******	******	******	******	4.930	31	*****	2.00	6
CRESCENT	2242	5	*****	0	*****	****	0	****	0	******	******	******	******	2.960	31	*****	1.00	4
CUSHING	2318	5	68.3	30	-.2	91.	26	46.	1	56.0	7.0	155.5	-2.5	8.830	31	3.48	2.25	22
EL RENO 1 N	2818	5	69.3	31	.6	92.	25	43.	1	46.5	9.5	181.0	29.0	5.230	31	.06	2.34	13
GUTHRIE	3821	5	70.5	31	1.2	94.	9	44.	1	37.0	3.0	207.5	40.5	3.680	31	-1.74	.98	4
HENNESSEY 2 SE	4055	5	68.2	31	-1.0	94.	8	40.	1	71.5	30.5	169.5	-2.5	3.553	31	-1.77	1.09	4
INGALLS	4489	5	*****	0	*****	****	0	****	0	******	******	******	******	7.344	31	*****	2.08	22
KINGFISHER 2 SE	4861	5	68.6	31	-.8	95.	8	43.	1	59.0	24.0	170.5	-.5	3.250	31	-1.69	.78	4
KONAWA	4915	5	*****	0	*****	****	0	****	0	******	******	******	******	2.921	31	-3.18	.80	13
MARSHALL	5589	5	*****	0	*****	****	0	****	0	******	******	******	******	3.770	31	-1.48	1.47	4
MEEKER 4 W	5779	5	69.0	31	.0	91.	25	40.	2	52.5	17.5	177.5	18.5	4.101	31	-1.54	1.12	26
MULHALL	6110	5	*****	0	*****	****	0	****	0	******	******	******	******	3.320	31	*****	1.48	4
NORMAN 3 S	6386	5	70.4	31	*****	93.	24	41.	2	35.0	******	203.0	******	5.023	31	-.87	1.32	13
OILTON 2 SE	6616	5	*****	0	*****	****	0	****	0	******	******	******	******	4.570	25	*****	1.42	21
OKEMAH	6638	5	69.9	31	.8	92.	25	44.	2	39.5	12.5	192.0	38.0	5.870	31	.85	1.41	22
OKLAHOMA CITY WS	6661	5	70.1	30	1.7	93.	24	46.	2	37.0	-4.0	189.5	42.5	3.794	31	-1.71	1.48	13
PERKINS	7003	5	*****	0	*****	****	0	****	0	******	******	******	******	10.690	31	5.49	2.98	16
PIEDMONT	7068	5	*****	0	*****	****	0	****	0	******	******	******	******	6.560	31	*****	2.03	16
PRAGUE	7264	5	*****	0	*****	****	0	****	0	******	******	******	******	4.910	31	-.35	1.56	26
PURCELL 5 SW	7327	5	70.1	31	.6	91.	25	39.	2	43.5	8.5	200.5	25.5	7.321	31	1.30	3.00	16
SEMINOLE	8042	5	71.6	31	1.2	95.	25	41.	3	30.0	7.0	236.0	45.0	4.041	31	-1.31	1.28	16
SHAWNEE	8110	5	*****	0	*****	****	0	****	0	******	******	******	******	3.450	31	-2.56	.80	13
STELLA	8479	5	*****	0	*****	****	0	****	0	******	******	******	******	4.000	31	*****	1.25	13
STILLWATER 2 W	8501	5	68.0	31	-.4	92.	25	40.	2	70.0	22.0	164.0	10.0	6.760	31	1.68	2.38	22
STROUD 1 N	8563	5	*****	0	*****	****	0	****	0	******	******	******	******	6.004	31	*****	1.91	22
TECUMSEH	8751	5	*****	0	*****	****	0	****	0	******	******	******	******	4.020	31	*****	1.43	16
TROUSDALE	8960	5	*****	0	*****	****	0	****	0	******	******	******	******	4.960	31	*****	1.26	16
UNION CITY 1 SE	9086	5	*****	0	*****	****	0	****	0	******	******	******	******	6.061	31	.16	2.19	13
WELTY 1 SSE	9479	5	*****	0	*****	****	0	****	0	******	******	******	******	7.370	31	*****	2.00	26
WEWOKA	9575	5	*****	0	*****	****	0	****	0	******	******	******	******	5.611	31	.28	1.70	15

MAY 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	******	******	******	******	7.011	31	*****	2.55	18
BEGGS	631	6	*****	0	*****	****	0	****	0	******	******	******	******	6.310	31	*****	1.18	4
BOYNTON	1027	6	*****	0	*****	****	0	****	0	******	******	******	******	12.951	31	*****	3.50	18
CALVIN	1391	6	*****	0	*****	****	0	****	0	******	******	******	******	6.781	31	.96	2.65	18
CHECOTAH	1711	6	*****	0	*****	****	0	****	0	******	******	******	******	8.390	31	3.01	2.51	18
CLAYTON 11 WNW	1858	6	*****	0	*****	****	0	****	0	******	******	******	******	5.990	31	*****	2.07	18
DEWAR 2 NE	2485	6	*****	0	*****	****	0	****	0	******	******	******	******	7.920	31	2.81	1.74	18
DUSTIN	2690	6	*****	0	*****	****	0	****	0	******	******	******	******	7.160	31	*****	1.96	18
EUFAULA	2993	6	69.3	31	*****	90.	25	44.	2	50.0	******	183.5	******	6.850	31	1.37	2.12	18
HANNA	3884	6	69.7	31	*****	90.	29	38.	7	46.5	******	192.5	******	9.230	31	3.79	3.35	18
HARTSHORNE	3946	6	*****	0	*****	****	0	****	0	******	******	******	******	10.520	31	*****	2.76	18
HASKELL	3956	6	*****	0	*****	****	0	****	0	******	******	******	******	9.461	31	4.49	3.97	20
HOLDENVILLE	4235	6	70.0	31	.3	92.	25	38.	2	40.5	17.5	197.0	28.0	5.380	31	-.22	1.44	16
LYONS 2 N	5437	6	*****	0	*****	****	0	****	0	******	******	******	******	4.380	31	-.93	1.10	17
MARBLE CITY	5546	6	*****	0	*****	****	0	****	0	******	******	******	******	9.621	31	*****	1.69	19
MCALESTER FAA	5664	6	69.7	31	.2	90.	25	41.	7	43.0	9.0	188.5	14.5	6.492	31	.87	2.11	18
MCCURTAIN 1 SE	5693	6	70.7	31	*****	91.	29	39.	7	38.5	******	214.0	******	8.962	31	3.29	1.90	22
MUSKOGEE	6130	6	68.9	31	-.6	89.	29	40.	7	55.0	23.0	176.5	4.5	6.400	31	1.37	1.96	17
OKMULGEE W W	6670	6	67.9	28	*****	91.	25	39.	2	65.0	******	145.0	******	10.232	31	5.15	2.55	26
OKTAHA 2 NE	6678	6	*****	0	*****	****	0	****	0	******	******	******	******	10.540	31	*****	2.42	18
QUINTON	7372	6	*****	0	*****	****	0	****	0	******	******	******	******	7.542	27	*****	2.25	17
SALLISAW 2 NE	7862	6	68.0	31	-1.7	90.	30	36.	7	60.5	35.5	155.0	-15.0	11.070	31	5.60	2.65	4
SCIPIO	7979	6	*****	0	*****	****	0	****	0	******	******	******	******	8.420	31	*****	3.20	18
SHORT	8170	6	*****	0	*****	****	0	****	0	******	******	******	******	10.370	31	*****	1.72	9
STILWELL 1 NE	8506	6	66.4	31	*****	87.	29	36.	7	89.5	******	131.5	******	9.080	31	3.45	1.51	26
TAHLEQUAH	8677	6	68.1	31	-.1	88.	29	37.	7	64.5	8.5	160.5	5.5	6.310	31	.84	1.06	22
WEBBERS FALLS	9445	6	67.2	31	-1.8	89.	30	39.	7	81.5	45.5	148.5	-11.5	10.150	31	4.84	1.78	4
WESTVILLE	9523	6	*****	0	*****	****	0	****	0	******	******	******	******	5.790	31	*****	1.60	9
WETUMKA 3 NE	9571	6	*****	0	*****	****	0	****	0	******	******	******	******	5.865	31	.44	1.97	22

MAY 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	72.8	31	1.2	107.	24	46.	5	18.0	.0	260.5	38.5	3.510	31	-1.14	1.22	13
ALTUS DAM	184	7	70.6	31	*****	105.	25	48.	2	31.5	******	204.0	******	3.290	31	-1.49	1.16	13
ANADARKO	224	7	70.1	26	*****	94.	24	44.	11	31.0	******	163.0	******	7.111	31	2.22	2.83	13
APACHE	260	7	*****	0	*****	****	0	****	0	******	******	******	******	5.780	31	*****	1.78	13
ALTUS AFB	447	7	*****	0	*****	****	0	****	0	******	******	******	******	2.913	31	*****	1.17	12
CARNEGIE 2 ENE	1504	7	70.8	31	.8	99.	24	45.	11	32.5	8.5	211.0	32.0	7.190	31	2.07	2.40	12
CHATTANOOGA	1706	7	72.8	31	2.0	100.	24	46.	2	18.5	.5	259.5	61.5	4.220	31	-.54	1.32	5
DUNCAN 12 W	2668	7	*****	0	*****	****	0	****	0	******	******	******	******	4.070	31	*****	1.09	13
FREDERICK	3353	7	71.2	31	-1.1	106.	25	48.	1	27.5	12.5	219.0	-22.0	5.120	31	.38	2.05	17
GRANDFIELD 4 NW	3709	7	*****	0	*****	****	0	****	0	******	******	******	******	2.760	31	-2.18	.80	12
HOBART FAA APT	4204	7	70.3	31	1.2	105.	24	44.	1	51.0	12.0	215.0	49.0	4.572	31	-.41	1.95	12
HOLLIS	4249	7	70.6	31	-1.2	105.	24	43.	1	24.0	5.0	198.5	-31.5	5.880	31	1.81	1.68	17
LAWTON	5063	7	71.0	30	.4	97.	24	47.	1	24.0	2.0	203.0	8.0	4.691	31	-1.00	1.36	11
FORT SILL	5068	7	70.9	31	*****	96.	24	51.	1	28.0	******	211.5	******	5.043	31	-.65	2.22	12
LOOKEBA 2 ENE	5329	7	*****	0	*****	****	0	****	0	******	******	******	******	5.660	31	*****	1.58	13
MANGUM RES STA	5509	7	74.6	31	3.6	105.	24	47.	3	7.5	-16.5	304.0	94.0	4.130	31	-.59	1.52	13
RANDLETT 9 E	7403	7	*****	0	*****	****	0	****	0	******	******	******	******	2.801	31	*****	.96	12
ROOSEVELT	7727	7	*****	0	*****	****	0	****	0	******	******	******	******	5.840	31	.59	1.91	13
SEDAN	8016	7	*****	0	*****	****	0	****	0	******	******	******	******	6.140	31	*****	2.00	13
SNYDER	8299	7	*****	0	*****	****	0	****	0	******	******	******	******	5.633	28	*****	2.65	15
VINSON 3 WNW	9212	7	*****	0	*****	****	0	****	0	******	******	******	******	5.730	31	1.09	1.38	13
WALTERS	9278	7	72.8	31	1.3	97.	24	48.	6	17.0	.0	259.5	40.5	3.660	31	-1.65	1.18	12
WICHITA MT WLR	9629	7	70.2	31	1.0	99.	25	42.	2	39.5	9.5	199.5	39.5	6.130	31	.89	2.20	12
WILLOW	9668	7	*****	0	*****	****	0	****	0	******	******	******	******	6.860	31	*****	1.61	5

MAY 1989 SUMMARY FOR SOUTH CENTRAL DIVISION (CD8)

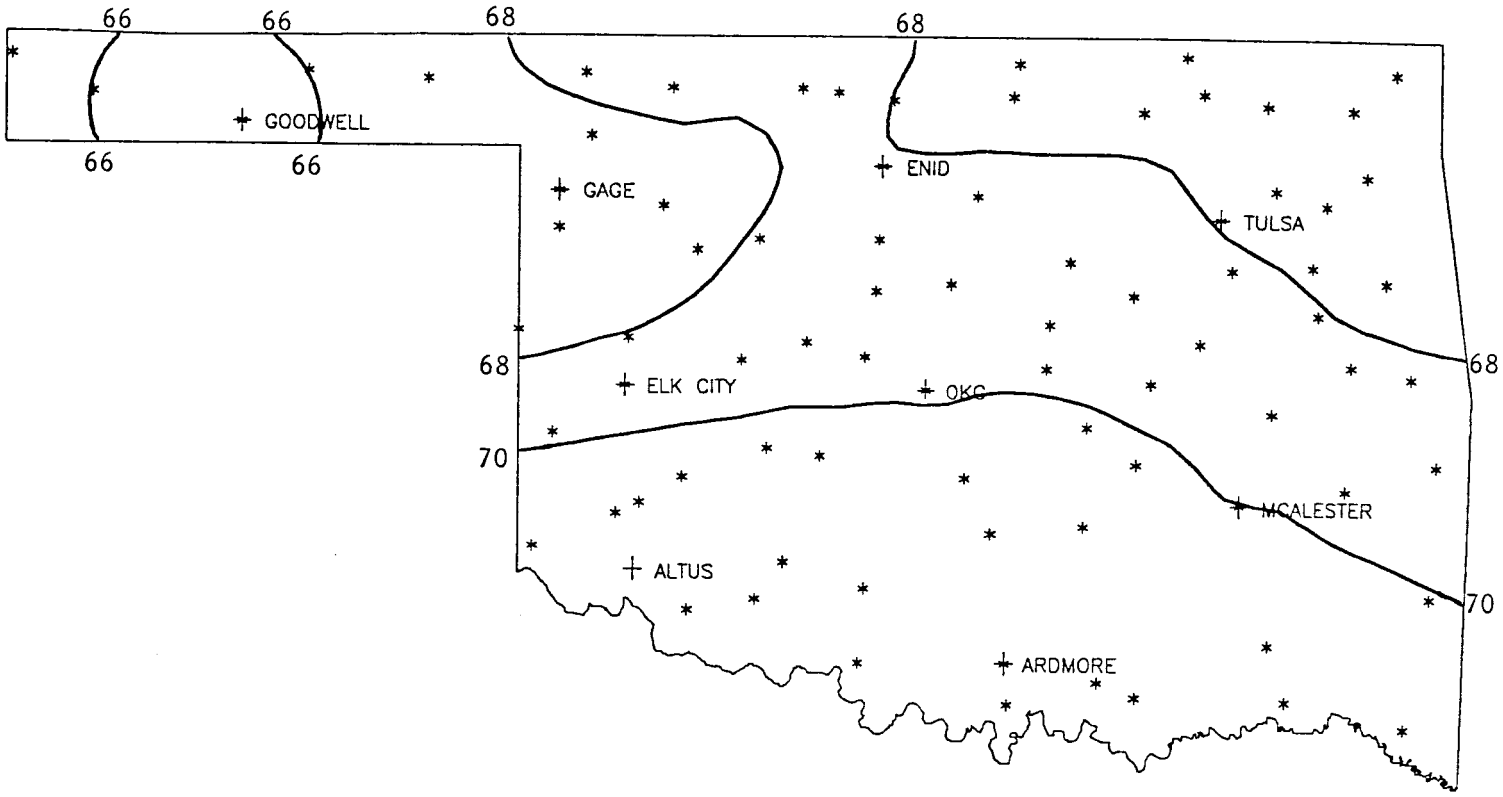
NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ADA	17	8	70.8	31	1.1	92.	25	46.	2	16.0	-7.0	196.5	28.5	4.552	31	-1.08	1.25	16
ALLEN	147	8	*****	0	*****	****	0	****	0	******	******	******	******	7.750	31	*****	2.50	17
ATOKA DAM	394	8	70.6	31	*****	93.	26	46.	7	42.5	******	216.5	******	9.220	31	*****	2.35	18
BOKCHITO	917	8	*****	0	*****	****	0	****	0	******	******	******	******	13.020	31	*****	4.50	16
CANEY	1437	8	70.6	31	*****	90.	25	50.	3	34.5	******	207.5	******	7.260	31	*****	1.30	18
CENTRAHOMA	1648	8	*****	0	*****	****	0	****	0	******	******	******	******	5.800	31	*****	1.70	18
CHICKASAW NRA	1745	8	68.5	31	*****	94.	26	44.	2	55.5	******	162.5	******	6.160	31	*****	1.95	18
COMANCHE	2054	8	*****	0	*****	****	0	****	0	******	******	******	******	6.100	31	*****	1.50	16
DAISY 4 ENE	2354	8	*****	0	*****	****	0	****	0	******	******	******	******	7.041	31	.74	2.54	18
DUNCAN	2660	8	69.4	30	-1.5	93.	26	48.	1	40.0	23.0	172.0	-28.0	4.790	31	-.83	1.19	13
DURANT USDA	2678	8	69.3	31	*****	92.	20	42.	2	48.0	******	181.5	******	10.750	31	5.75	2.55	16
ELMORE CITY	2872	8	*****	0	*****	****	0	****	0	******	******	******	******	5.161	31	*****	1.45	18
FARRIS 3 WNW	3083	8	*****	0	*****	****	0	****	0	******	******	******	******	8.150	31	*****	1.72	17
GRADY	3688	8	*****	0	*****	****	0	****	0	******	******	******	******	5.050	31	*****	1.15	13
HEALDTON	4001	8	70.9	31	*****	96.	25	40.	10	37.5	******	221.5	******	5.770	31	.92	2.15	16
HENNEPIN	4052	8	*****	0	*****	****	0	****	0	******	******	******	******	5.460	31	*****	1.40	17
KETCHUM RANCH	4780	8	*****	0	*****	****	0	****	0	******	******	******	******	5.500	31	*****	1.85	12
KINGSTON	4865	8	*****	0	*****	****	0	****	0	******	******	******	******	8.990	31	3.95	2.97	16
LEHIGH	5108	8	*****	0	*****	****	0	****	0	******	******	******	******	8.601	31	*****	2.60	18
LINDSAY 2 W	5216	8	73.3	24	*****	93.	25	45.	11	14.0	******	212.5	******	4.411	25	*****	2.05	12
LOCO 6 SE	5247	8	*****	0	*****	****	0	****	0	******	******	******	******	4.940	31	*****	1.61	16
MADILL	5468	8	71.5	31	.6	92.	19	46.	2	24.5	11.5	225.5	29.5	8.721	31	3.62	1.96	16
MARIETTA	5563	8	72.2	31	1.4	94.	25	50.	2	19.0	4.0	241.5	46.5	6.711	31	2.16	1.85	18
MARLOW 1 WSW	5581	8	71.1	31	*****	94.	19	45.	5	28.5	******	217.0	******	4.580	31	-1.43	1.37	13
MCGEE CREEK DAM	5713	8	70.3	31	*****	92.	26	42.	2	39.0	******	204.5	******	7.090	31	*****	1.59	17
OSWALT	6787	8	*****	0	*****	****	0	****	0	******	******	******	******	6.970	31	*****	2.00	16
PAULS VALLEY	6926	8	69.6	10	*****	89.	29	39.	2	19.0	******	65.0	******	5.081	31	-.38	1.85	13
PONTOTOC	7214	8	*****	0	*****	****	0	****	0	******	******	******	******	7.000	31	1.27	1.45	18
TISHOMINGO NWLR	8884	8	70.9	31	*****	92.	25	42.	2	36.0	******	220.0	******	9.170	31	4.29	2.48	27
TUSSY	9032	8	*****	0	*****	****	0	****	0	******	******	******	******	5.431	31	*****	1.54	13
WAURIKA	9395	8	73.1	31	1.2	99.	25	49.	2	14.0	1.0	265.0	38.0	3.120	31	-1.73	1.60	5
WAURIKA DAM	9399	8	70.4	31	*****	95.	26	48.	2	24.5	******	191.5	******	4.754	31	*****	1.83	5

MAY 1989 SUMMARY FOR SOUTHEAST DIVISION (CD9)

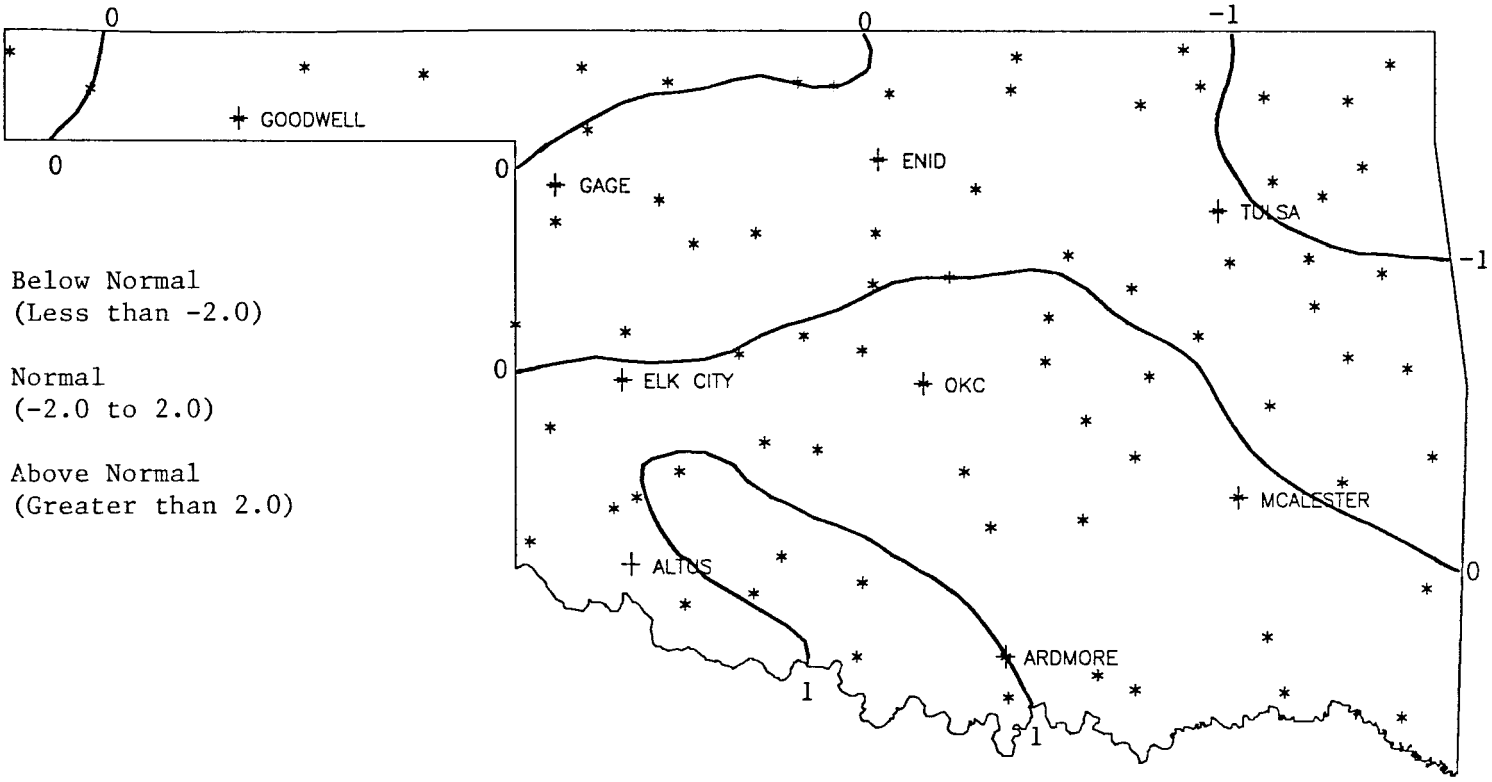
NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ANTLERS	256	9	70.8	31	1.0	92.	25	40.	6	39.0	13.0	217.5	43.5	8.280	31	2.34	2.00	17
BATTIEST 1 SSW	567	9	69.3	31	*****	89.	25	37.	7	47.5	******	180.5	******	8.933	31	*****	2.30	18
BEAR MT TWR	584	9	70.1	22	*****	89.	30	44.	7	20.5	******	133.5	******	9.741	31	4.21	1.89	27
BENGAL	670	9	*****	0	*****	****	0	****	0	******	******	******	******	11.961	31	*****	2.98	16
BOSWELL 4 NNW	980	9	71.7	31	*****	92.	25	40.	2	30.0	******	237.5	******	8.732	31	3.78	2.36	17
BROKEN BOW 1 N	1162	9	*****	0	*****	****	0	****	0	******	******	******	******	7.080	31	1.39	1.79	17
BROKEN BOW DAM	1168	9	69.6	31	*****	95.	21	40.	2	53.0	******	195.0	******	9.440	31	*****	2.20	26
CARNASAW TWR	1499	9	*****	0	*****	****	0	****	0	******	******	******	******	9.430	31	3.09	2.64	27
CARTER TWR	1544	9	*****	0	*****	****	0	****	0	******	******	******	******	11.300	31	5.36	3.45	27
FANSHAWE	3065	9	*****	0	*****	****	0	****	0	******	******	******	******	13.470	31	7.56	3.10	9
HEAVENER 1 SE	4008	9	*****	0	*****	****	0	****	0	******	******	******	******	8.140	31	2.62	1.63	4
HEE MT TWR	4017	9	*****	0	*****	****	0	****	0	******	******	******	******	8.450	31	*****	5.39	21
HUGO	4384	9	71.7	31	.4	91.	25	37.	4	26.0	17.0	234.0	29.0	9.491	31	3.83	2.02	18
JADIE TOWER	4560	9	*****	0	*****	****	0	****	0	******	******	******	******	10.550	31	*****	3.28	27
POTEAU W W	7254	9	68.9	31	*****	90.	25	37.	1	61.0	******	182.0	******	11.160	31	*****	2.37	17
SMITHVILLE 1 W	8285	9	68.0	31	*****	90.	25	32.	7	68.0	******	162.5	******	8.663	31	*****	2.57	17
SOBAL TOWER	8305	9	60.7	30	*****	79.	31	41.	2	158.5	******	28.0	******	9.820	31	3.92	1.81	18
SPIRO	8416	9	*****	0	*****	****	0	****	0	******	******	******	******	9.670	31	4.31	2.28	22
TUSKAHOMA	9023	9	70.0	31	*****	89.	26	37.	7	43.5	******	199.5	******	7.102	31	*****	1.60	18
VALLIANT 3 W	9118	9	*****	0	*****	****	0	****	0	******	******	******	******	9.313	31	3.81	2.00	17

MAY 1989 CLIMATE DIVISION SUMMARY

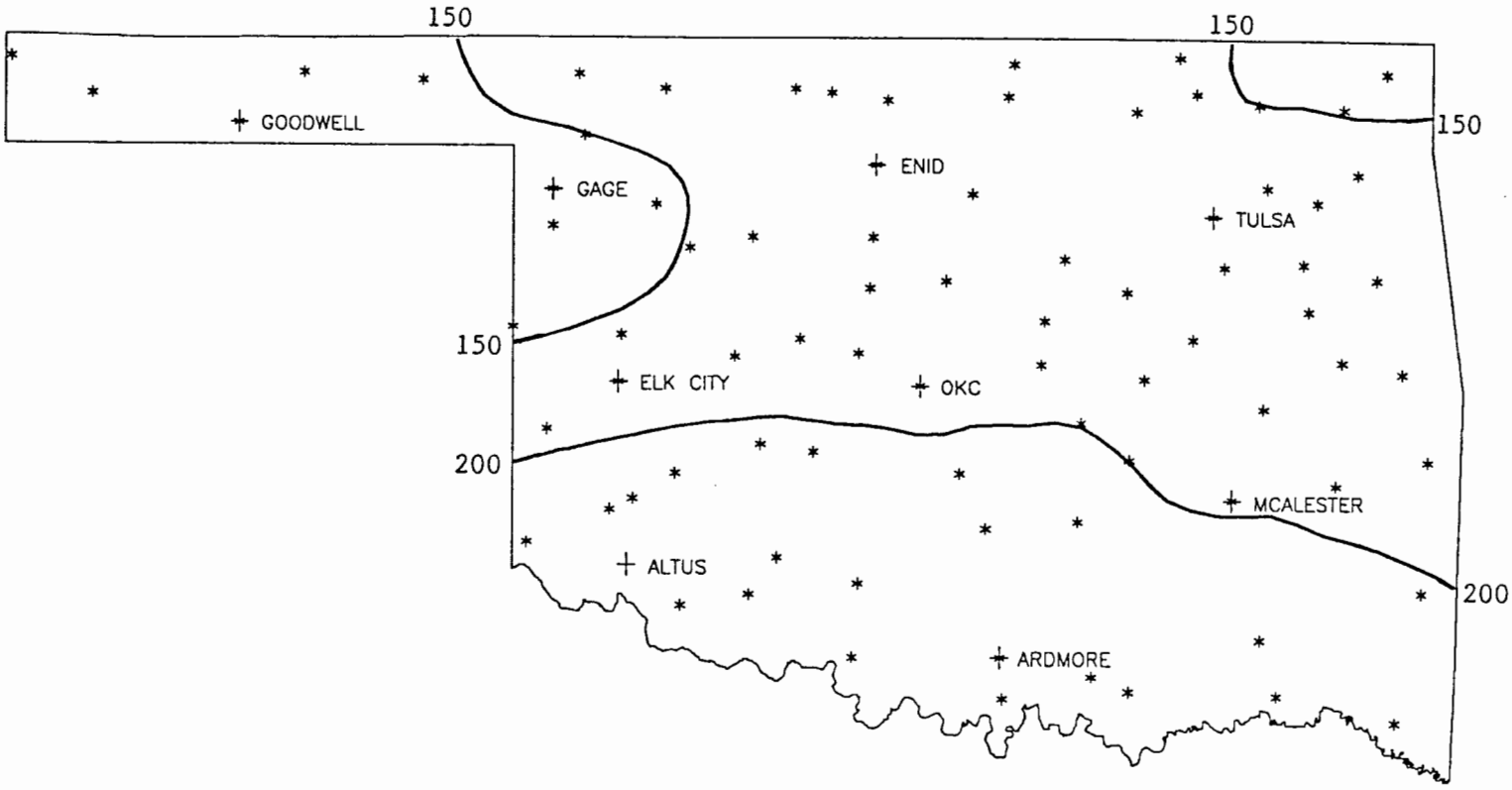
CLIMATE DIV	MEAN TEMP	NUM STA	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEGREE DAYS	DEV FROM NORM	COOL DEGREE DAYS	DEV FROM NORM	TOT PPT	NUM STA	DEV FROM NORM	MAX 24-HR	DAY
1	66.5	11	.9	104.0	24	33.0	1	87.1	-12.0	132.5	16.5	4.60	15	1.34	4.81	16
2	67.8	14	-.6	102.0	24	38.0	1	67.8	16.2	155.9	-3.8	4.60	25	.21	2.32	16
3	67.5	16	-.7	95.0	31	35.0	2	75.0	25.4	153.2	2.7	4.44	31	-.41	2.98	18
4	68.3	9	-.4	101.0	25	39.0	2	59.0	13.4	162.0	.5	4.99	20	.23	3.07	18
5	69.6	16	.4	95.0	25	38.0	2	46.8	11.6	189.0	24.1	5.35	36	-.10	3.00	16
6	68.8	10	-.5	92.0	25	36.0	7	57.0	23.2	174.8	8.6	8.13	28	2.72	3.97	20
7	71.5	12	.8	107.0	24	42.0	2	26.6	3.7	228.8	28.7	4.92	23	-.05	2.83	13
8	70.7	14	-.2	99.0	25	39.0	2	32.8	16.3	208.8	10.0	6.73	31	1.35	4.50	16
9	69.0	9	-1.6	95.0	21	32.0	7	58.5	41.0	181.8	-7.7	9.54	20	3.85	5.39	21



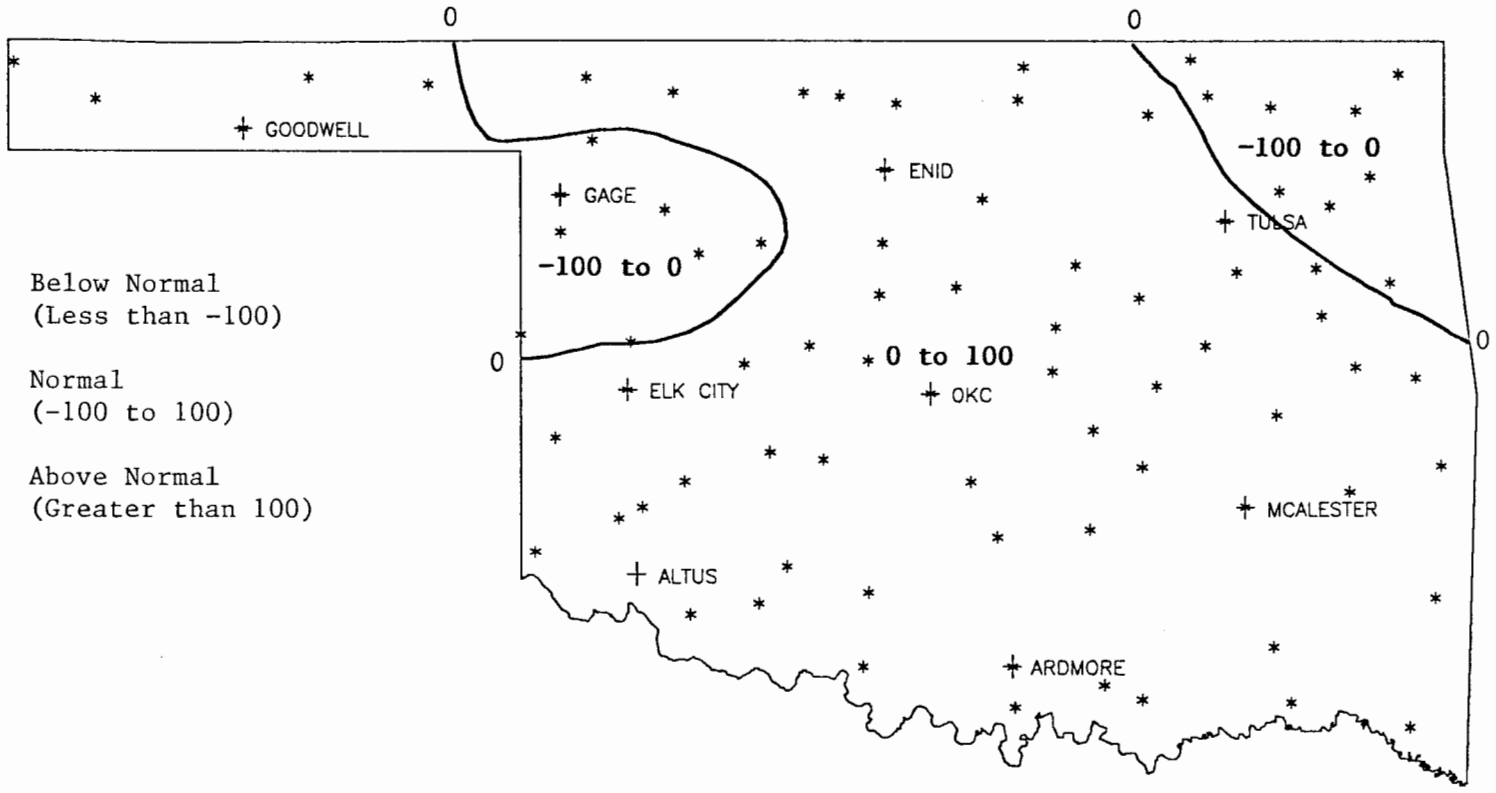
MAY 1989 AVERAGE MONTHLY TEMPERATURES
(Degrees F)



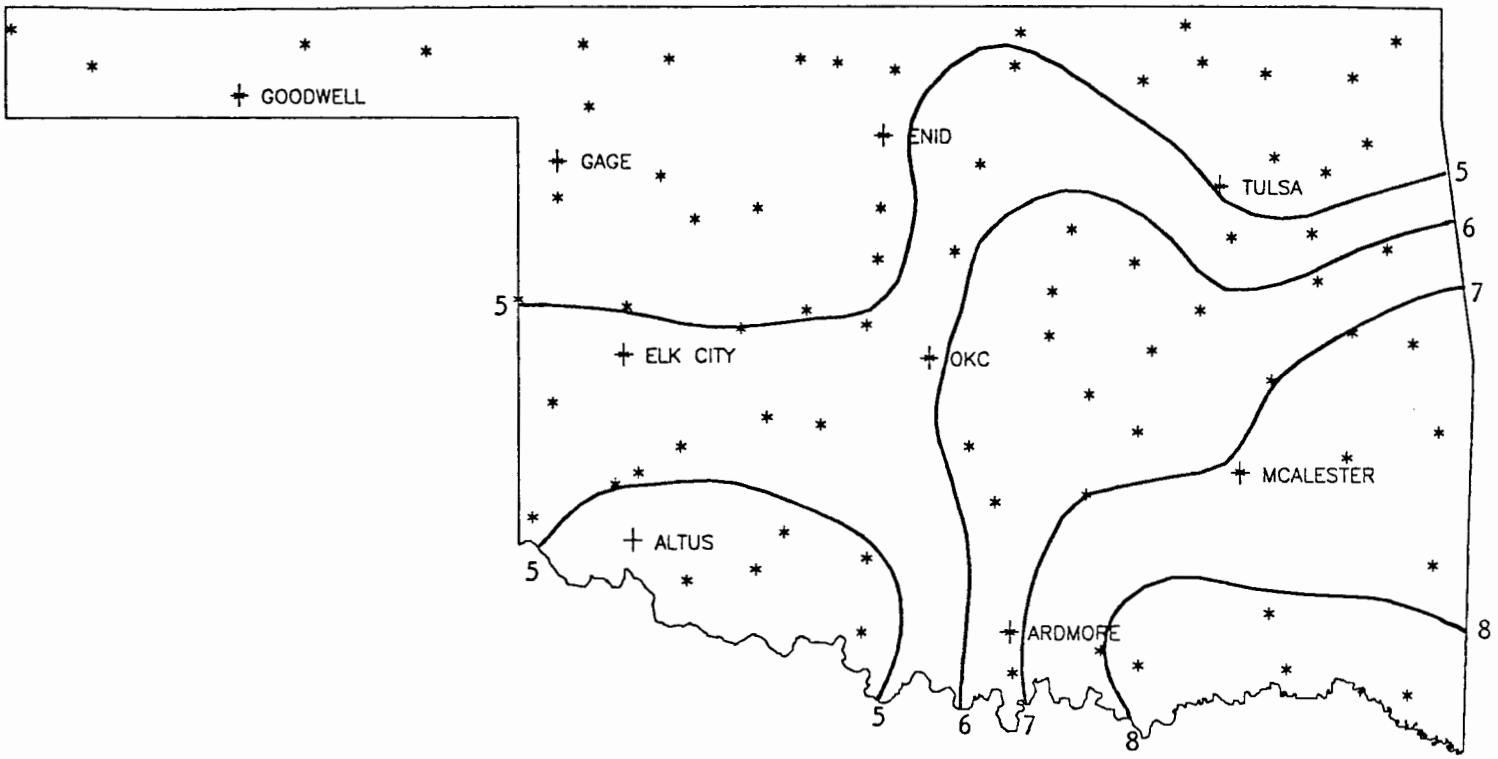
MAY 1989 DEVIATION FROM NORMAL TEMPERATURE
(Degrees F)



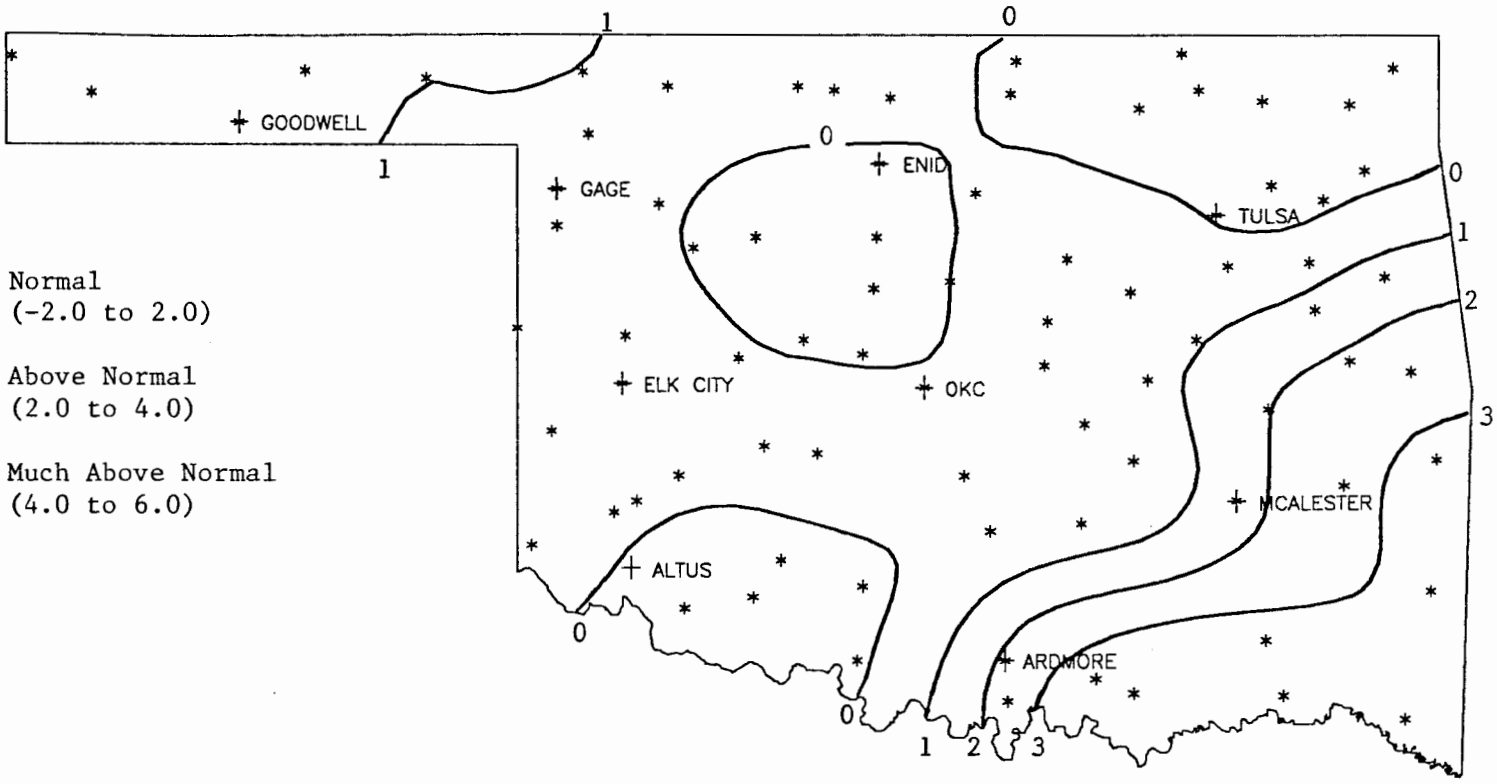
MAY 1989 COOLING DEGREE DAYS



MAY 1989 DEVIATION FROM NORMAL COOLING DEGREE DAYS

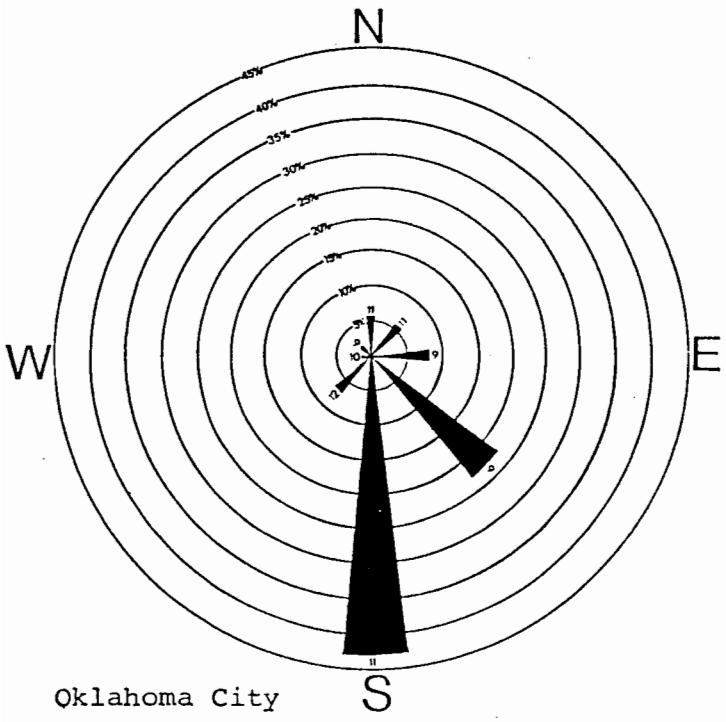


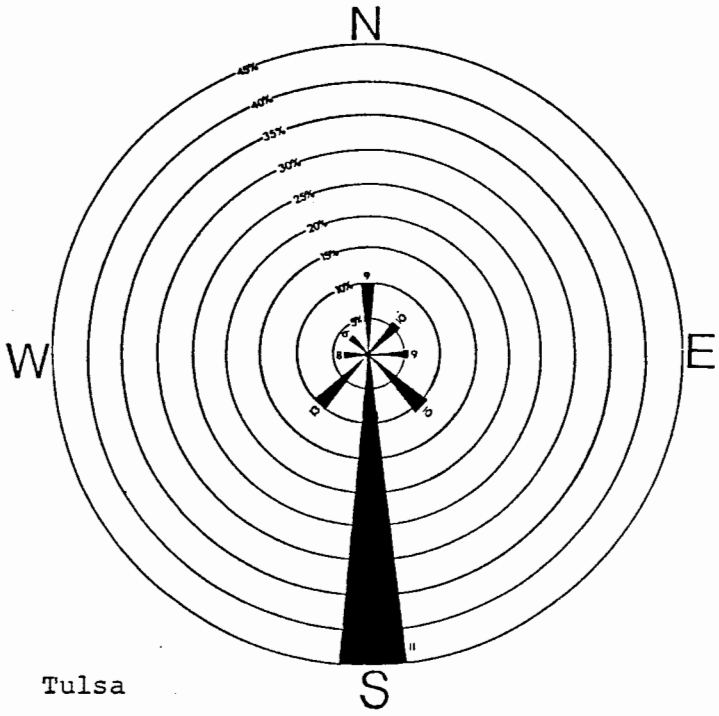
MAY 1989 TOTAL PRECIPITATION
(Inches)



MAY 1989 DEVIATION FROM NORMAL PRECIPITATION
(Inches)

July 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.





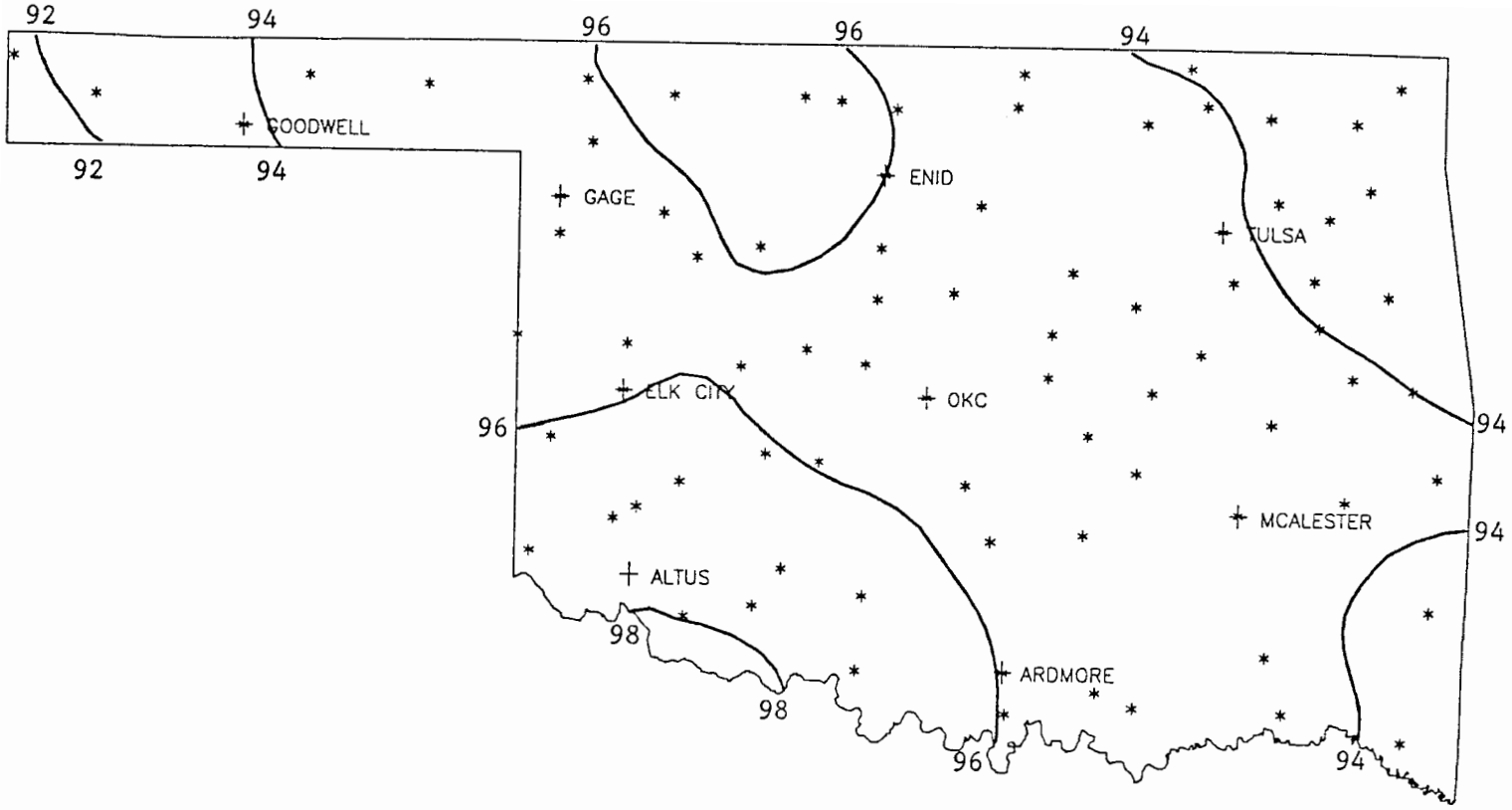
JULY 1989 SUNRISE AND SUNSET

Oklahoma City

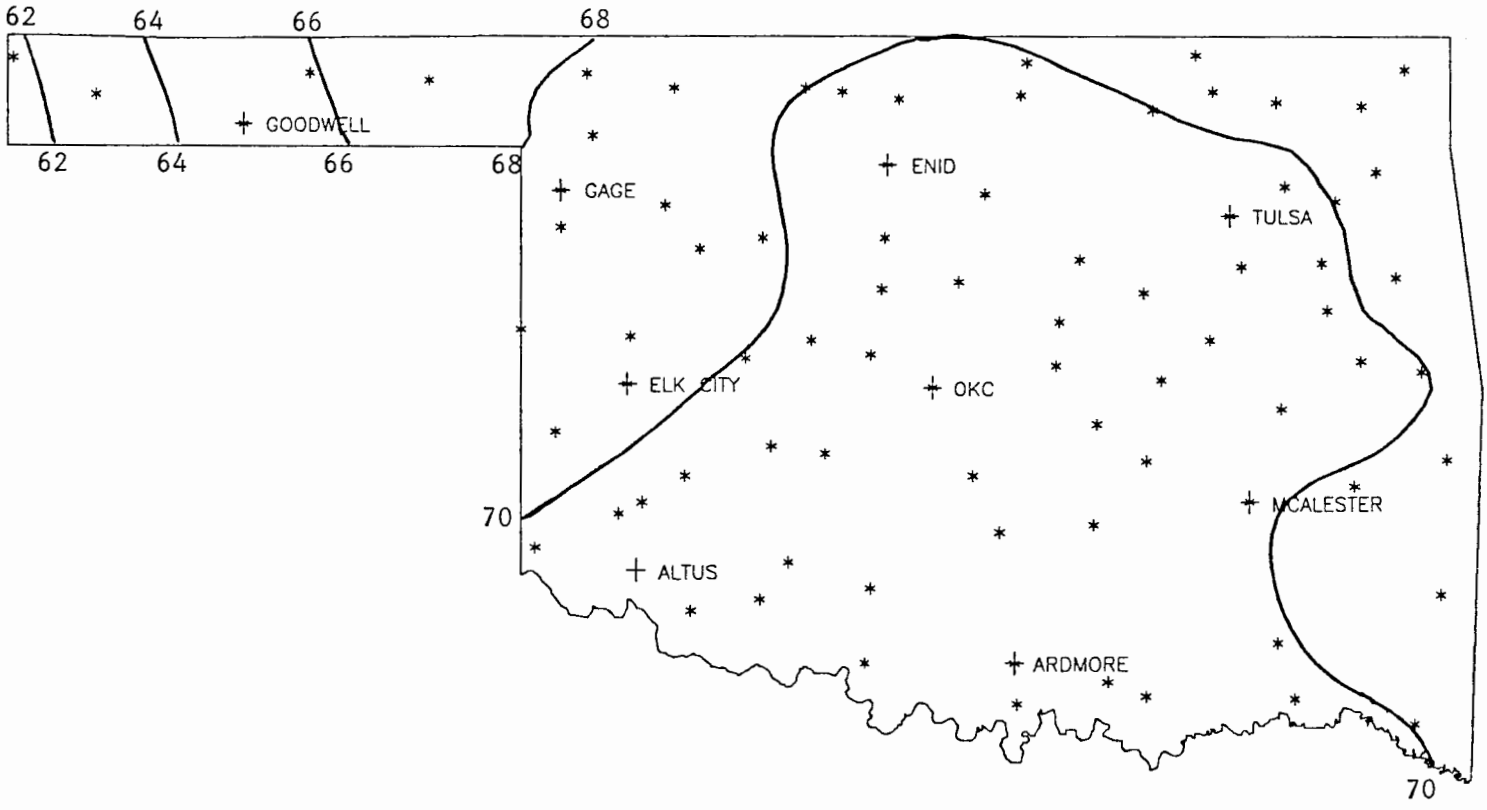
DATE	SUNRISE	SUNSET	DAYLIGHT
890701	6:21AM	8:47PM LT	14:27
890702	6:21AM	8:47PM LT	14:26
890703	6:22AM	8:47PM LT	14:26
890704	6:22AM	8:47PM LT	14:25
890705	6:22AM	8:47PM LT	14:25
890706	6:23AM	8:47PM LT	14:24
890707	6:23AM	8:47PM LT	14:23
890708	6:24AM	8:47PM LT	14:23
890709	6:24AM	8:46PM LT	14:22
890710	6:25AM	8:46PM LT	14:21
890711	6:25AM	8:46PM LT	14:20
890712	6:26AM	8:46PM LT	14:20
890713	6:27AM	8:45PM LT	14:19
890714	6:27AM	8:45PM LT	14:18
890715	6:28AM	8:45PM LT	14:17
890716	6:28AM	8:44PM LT	14:16
890717	6:29AM	8:44PM LT	14:15
890718	6:30AM	8:43PM LT	14:14
890719	6:30AM	8:43PM LT	14:13
890720	6:31AM	8:42PM LT	14:12
890721	6:32AM	8:42PM LT	14:10
890722	6:32AM	8:41PM LT	14: 9
890723	6:33AM	8:41PM LT	14: 8
890724	6:34AM	8:40PM LT	14: 7
890725	6:34AM	8:40PM LT	14: 5
890726	6:35AM	8:39PM LT	14: 4
890727	6:36AM	8:38PM LT	14: 3
890728	6:36AM	8:38PM LT	14: 1
890729	6:37AM	8:37PM LT	13:60
890730	6:38AM	8:36PM LT	13:58
890731	6:38AM	8:35PM LT	13:57

Tulsa

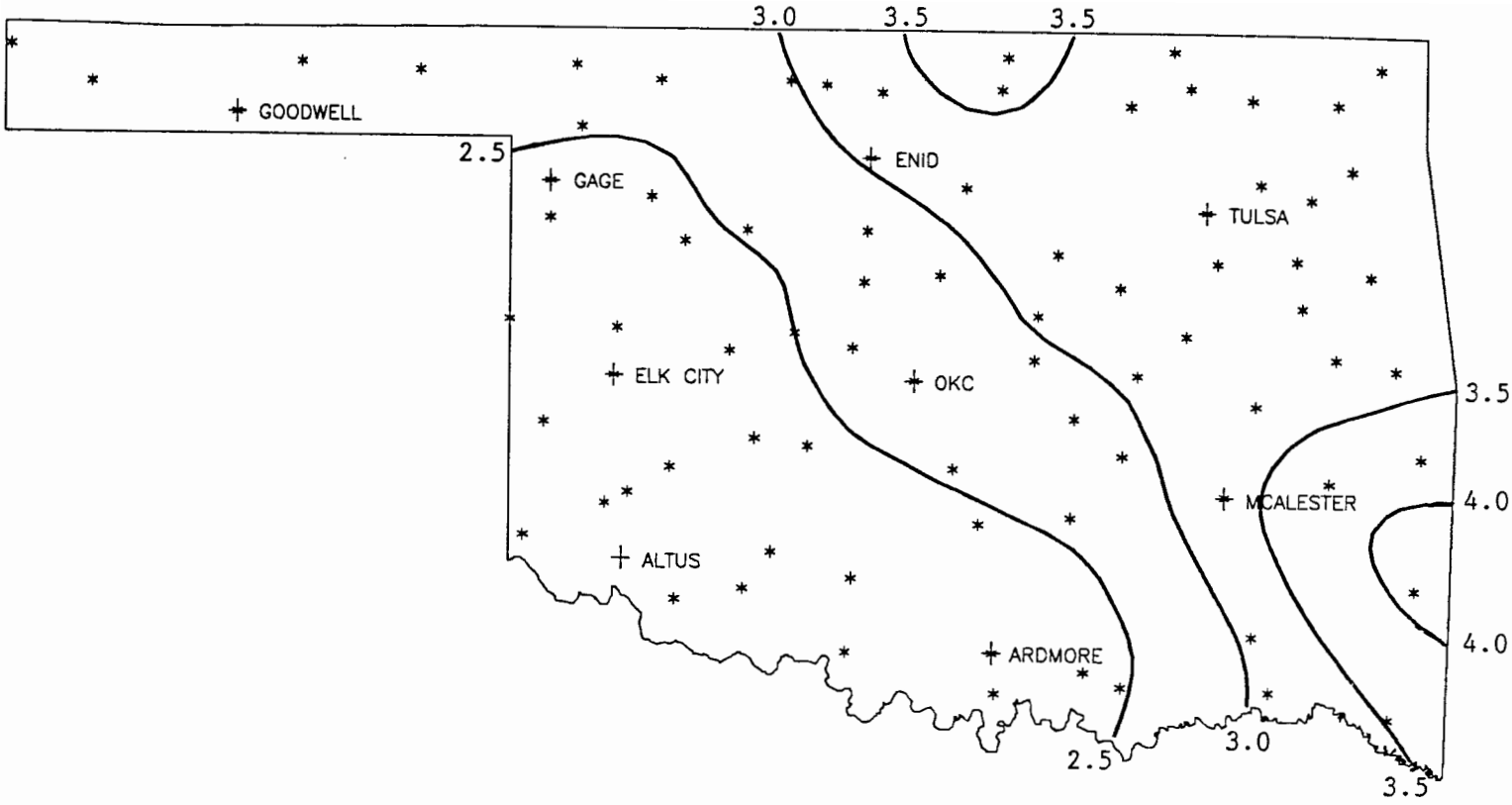
DATE	SUNRISE	SUNSET	DAYLIGHT
890701	6:12AM	8:43PM LT	14:31
890702	6:12AM	8:43PM LT	14:30
890703	6:13AM	8:43PM LT	14:30
890704	6:13AM	8:42PM LT	14:29
890705	6:14AM	8:42PM LT	14:29
890706	6:14AM	8:42PM LT	14:28
890707	6:14AM	8:42PM LT	14:28
890708	6:15AM	8:42PM LT	14:27
890709	6:16AM	8:42PM LT	14:26
890710	6:16AM	8:41PM LT	14:25
890711	6:17AM	8:41PM LT	14:25
890712	6:17AM	8:41PM LT	14:24
890713	6:18AM	8:41PM LT	14:23
890714	6:18AM	8:40PM LT	14:22
890715	6:19AM	8:40PM LT	14:21
890716	6:20AM	8:39PM LT	14:20
890717	6:20AM	8:39PM LT	14:19
890718	6:21AM	8:39PM LT	14:18
890719	6:22AM	8:38PM LT	14:17
890720	6:22AM	8:38PM LT	14:15
890721	6:23AM	8:37PM LT	14:14
890722	6:24AM	8:36PM LT	14:13
890723	6:24AM	8:36PM LT	14:12
890724	6:25AM	8:35PM LT	14:10
890725	6:26AM	8:35PM LT	14: 9
890726	6:26AM	8:34PM LT	14: 8
890727	6:27AM	8:33PM LT	14: 6
890728	6:28AM	8:32PM LT	14: 5
890729	6:28AM	8:32PM LT	14: 3
890730	6:29AM	8:31PM LT	14: 2
890731	6:30AM	8:30PM LT	14: 0



30-YEAR MEAN JULY DAILY MAXIMUM TEMPERATURE



30-YEAR MEAN JULY DAILY MINIMUM TEMPERATURE



30-YEAR MEAN JULY PRECIPITATION

30- AND 90-DAY NATIONAL WEATHER SERVICE OUTLOOK

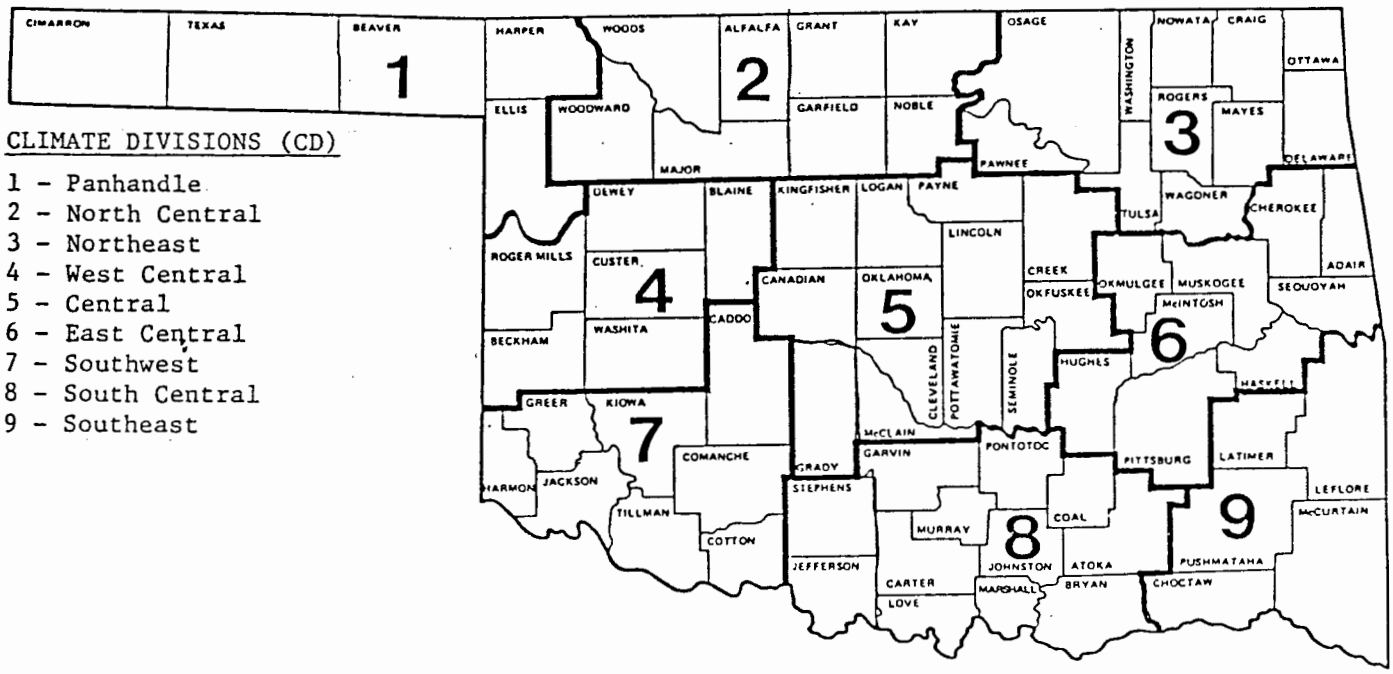
30-DAY OUTLOOK (JUNE)

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

90-DAY OUTLOOK (JUNE-AUGUST)

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

O K L A H O M A



CLIMATE DIVISIONS (CD)

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

EXPLANATION OF TABLES

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

Station Name:

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

Climate Division: See the figure above.

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

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

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

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

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

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

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.

JULY 1989

CLIMATE CALENDAR

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

Normal 1		Actual
90.3	max	
69.5	min	
.207	pcpn	
0	HDD	
15	CDD	
Highest Max		102-1980
Lowest Max		69-1951
Lowest Min		57-1951
Highest Min		78-1931
Greatest pcpn		3.35-1940

Normal 2		Actual
92.1	max	
70.4	min	
.076	pcpn	
0	HDD	
17	CDD	
Highest Max		105-1948
Lowest Max		81- 1988
Lowest Min		61-1945
Highest Min		78-1980
Greatest pcpn		1.61-1972

Normal 3		Actual
92.5	max	
71.2	min	
.068	pcpn	
0	HDD	
17	CDD	
Highest Max		103-1980
Lowest Max		80-1941
Lowest Min		62-1968
Highest Min		78-1933
Greatest pcpn		2.97-1947

Normal 4		Actual
91.1	max	
69.9	min	
.071	pcpn	
0	HDD	
16	CDD	
Highest Max		102-1934
Lowest Max		76-1972
Lowest Min		59-1940
Highest Min		80-1933
Greatest pcpn		.95-1960

Normal 5		Actual
91.1	max	
69.2	min	
.105	pcpn	
0	HDD	
15	CDD	
Highest Max		102-1966
Lowest Max		77-1958
Lowest Min		57-1942
Highest Min		80-1933
Greatest pcpn		3.21-1979

Normal 6		Actual
91.9	max	
69.7	min	
.073	pcpn	
0	HDD	
16	CDD	
Highest Max		102-1953
Lowest Max		73-1958
Lowest Min		55-1972
Highest Min		77-1986
Greatest pcpn		1.84-1929

Normal 7		Actual
92.6	max	
70.1	min	
.070	pcpn	
0	HDD	
17	CDD	
Highest Max		105-1970
Lowest Max		76-1960
Lowest Min		57-1952
Highest Min		77-1963
Greatest pcpn		1.39-1953

Normal 8		Actual
93.0	max	
70.4	min	
.036	pcpn	
0	HDD	
17	CDD	
Highest Max		105-1964
Lowest Max		82-1958
Lowest Min		57-1958
Highest Min		78-1931
Greatest pcpn		1.32-1959

Normal 9		Actual
93.1	max	
70.4	min	
.048	pcpn	
0	HDD	
17	CDD	
Highest Max		106-1964
Lowest Max		81-1961
Lowest Min		61-1952
Highest Min		80-1933
Greatest pcpn		1.88-1926

Normal 10		Actual
93.3	max	
70.2	min	
.052	pcpn	
0	HDD	
17	CDD	
Highest Max		104-1933
Lowest Max		76-1953
Lowest Min		58-1961
Highest Min		80-1933
Greatest pcpn		1.90-1945

Normal 11		Actual
93.3	max	
70.5	min	
.039	pcpn	
0	HDD	
17	CDD	
Highest Max		107-1933
Lowest Max		76-1953
Lowest Min		58-1931
Highest Min		81-1933
Greatest pcpn		.83-1940

Normal 12		Actual
92.8	max	
70.7	min	
.081	pcpn	
0	HDD	
17	CDD	
Highest Max		107-1954
Lowest Max		64-1953
Lowest Min		56-1953
Highest Min		82-1933
Greatest pcpn		1.80-1926

Normal 13		Actual
93.0	max	
70.0	min	
.124	pcpn	
0	HDD	
17	CDD	
Highest Max		106-1954
Lowest Max		73-1953
Lowest Min		56-1975
Highest Min		81-1934
Greatest pcpn		2.10-1963

Normal 14		Actual
93.2	max	
69.9	min	
.058	pcpn	
0	HDD	
17	CDD	
Highest Max		107-1954
Lowest Max		80-1926
Lowest Min		58-1926
Highest Min		80-1934
Greatest pcpn		.71-1961

Normal 15		Actual
92.5	max	
70.7	min	
.082	pcpn	
0	HDD	
17	CDD	
Highest Max		108-1936
Lowest Max		80-1952
Lowest Min		59-1967
Highest Min		82-1936
Greatest pcpn		1.70-1938

Normal 16		Actual
93.0	max	
70.9	min	
.048	pcpn	
0	HDD	
17	CDD	
Highest Max		106-1980
Lowest Max		74-1967
Lowest Min		64-1926
Highest Min		79-1939
Greatest pcpn		.61-1953

Normal 17		Actual
93.3	max	
70.7	min	
.158	pcpn	
0	HDD	
17	CDD	
Highest Max		106-1980
Lowest Max		80-1950
Lowest Min		63-1967
Highest Min		79-1943
Greatest pcpn		1.71-1959

Normal 18		Actual
93.8	max	
71.7	min	
.022	pcpn	
0	HDD	
18	CDD	
Highest Max		108-1936
Lowest Max		72-1967
Lowest Min		64-1931
Highest Min		81-1936
Greatest pcpn		.70-1931

Normal 19		Actual
93.8	max	
71.5	min	
.059	pcpn	
0	HDD	
18	CDD	
Highest Max		109-1936
Lowest Max		74-1953
Lowest Min		63-1931
Highest Min		82-1936
Greatest pcpn		.81-1953

Normal 20		Actual
93.7	max	
71.1	min	
.055	pcpn	
0	HDD	
18	CDD	
Highest Max		107-1936
Lowest Max		77-1944
Lowest Min		60-1970
Highest Min		77-1930
Greatest pcpn		1.15-1973

Normal 21		Actual
93.4	max	
71.0	min	
.136	pcpn	
0	HDD	
17	CDD	
Highest Max		107-1939
Lowest Max		78-1970
Lowest Min		54-1970
Highest Min		80-1981
Greatest pcpn		1.64-1950

Normal 22		Actual
93.3	max	
71.4	min	
.093	pcpn	
0	HDD	
18	CDD	
Highest Max		107-1974
Lowest Max		79-1960
Lowest Min		57-1970
Highest Min		79-1981
Greatest pcpn		1.00-1960

Normal 23		Actual
92.9	max	
70.5	min	
.169	pcpn	
0	HDD	
17	CDD	
Highest Max		104-1943
Lowest Max		77-1947
Lowest Min		55-1970
Highest Min		79-1943
Greatest pcpn		3.02-1960

Normal 24		Actual
93.7	max	
71.3	min	
.083	pcpn	
0	HDD	
18	CDD	
Highest Max		106-1943
Lowest Max		73-1947
Lowest Min		61-1927
Highest Min		78-1934
Greatest pcpn		2.92-1975

Normal 25		Actual
94.4	max	
72.0	min	
.079	pcpn	
0	HDD	
18	CDD	
Highest Max		106-1977
Lowest Max		78-1926
Lowest Min		66-1927
Highest Min		83-1934
Greatest pcpn		1.48-1950

Normal 26		Actual
93.8	max	
72.0	min	
.083	pcpn	
0	HDD	
18	CDD	
Highest Max		106-1978
Lowest Max		75-1959
Lowest Min		64-1933
Highest Min		78-1930
Greatest pcpn		.88-1978

Normal 27		Actual
94.2	max	
71.3	min	
.256	pcpn	
0	HDD	
18	CDD	
Highest Max		105-1986
Lowest Max		75-1959
Lowest Min		65-1933
Highest Min		78-1931
Greatest pcpn		1.88-1977

Normal 28		Actual
92.6	max	
70.8	min	
.183	pcpn	
0	HDD	
17	CDD	
Highest Max		108-1986
Lowest Max		75-1981
Lowest Min		61-1931
Highest Min		80-1946
Greatest pcpn		5.75-1981

Normal 29		Actual
93.3	max	
70.8	min	
.167	pcpn	
0	HDD	
17	CDD	
Highest Max		108-1986
Lowest Max		82-1927
Lowest Min		57-1931
Highest Min		79-1966
Greatest pcpn		2.02-1975

Normal 30		Actual
93.5	max	
71.1	min	
.043	pcpn	
0	HDD	
18	CDD	
Highest Max		108-1986
Lowest Max		79-1933
Lowest Min		57-1971
Highest Min		80-1986
Greatest pcpn		.71-1936

Normal 31		Actual
93.0	max	
70.6	min	
.055	pcpn	
0	HDD	
17	CDD	
Highest Max		107-1980
Lowest Max		83-1933
Lowest Min		53-1971
Highest Min		79-1943
Greatest pcpn		1.07-1978

JULY AVERAGES

Temperature	:	81.8
Precipitation	:	2.88"
Heating Degree Days:		0
Cooling Degree Days:		530