OKLAHOMA
MONTHLY SUMMARY
MARCH 1991

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Coming on the heals of the fourth driest February on record, the 1.97 inches of precipitation which fell in March seemed a welcome change. Despite periods of heavy rain however, March ended 0.46 inch below normal. The period January-March recorded just 3.70 inches of precipitation, 1.35 inches below normal and only 29 percent of the total for the same period last year. The warmth of the first part of this year continued into March, with numerous record maximum temperatures set during the first part of the month. Preliminary data indicate that the average temperature of 53.9 degrees was 4.0 degrees above normal, the 22nd warmest on record. The first three months of the year are also listed as the 22nd warmest and 27th driest in one hundred years of record-keeping in Oklahoma.

March began with record heat and some much-needed rainfall. Temperatures on the 1st climbed as high as 90 degrees at Chandler, a record for the date. The passage of a cold front through Oklahoma that evening brought rainfall in excess of one inch to locations in eastern Oklahoma. It also produced 0.30 inch of precipitation at Buffalo, the heaviest since January 10. Up to six inches of snow were also recorded across counties in the panhandle. Cold air covered much of the state for the next few days, with many areas being held to maximum temperatures in the 30's and 40's.

Warm air surged back into the state on the 5th, as maximum temperatures once again climbed to the 90's. Stations in many parts of the state set record temperatures on the 5th-6th, including Waurika, Mangum, Tishomingo and Carnegie, all at 94 degrees. Rain from the early part of the month was not enough to prevent the combination of warm temperatures and high winds from spreading grass fires across large regions of the state. A grass fire spread across a region over six miles in length near Erick on the 5th, and 6,000 acres were burned in Kay County from the 9th to 11th.

A cold front passed through the state on the 12th, but instead of bringing rain, only strong winds and dust from Kansas came in its wake. The winds helped to spread a fire over 2,000 acres in the Wichita Mountains Wildlife Refuge. Governor Walters issued a statewide ban on outdoor burning on the 12th across all 77 counties in Oklahoma.

As springtime approached, so did stormy weather. A front passed through Oklahoma on the 16th, bringing with it widespread rain. The burning ban was lifted on the 20th, as more storms moved through the state. March 21st, the first full day of spring, certainly exhibited spring-like weather. Several damaging tornadoes ripped across southern Oklahoma, including one which caused extensive damage in Ada. Other tornadoes were reported near Ardmore and Atoka.

Much of the heaviest rain during the period fell across southern and eastern Oklahoma. Central portions of the state, which generally had remained dry, erupted in wildfires on the 22nd. Winds gusting in excess of 60 miles per hour fanned flames from grass fires, causing extensive damage. The fires in the northeastern Oklahoma City area were reportedly the worst in twenty years.

The springtime storms were not yet finished. Another storm pattern developed in northwestern Oklahoma on the 26th. A single "supercell" thunderstorm developed over Woodward County near 4:00 p.m. Just after dark it began producing tornadoes across Grant and Kay Counties, causing nearly $3 million in damages. The storm continued to produce tornadoes into eastern Kansas. The strongest tornadoes were rated at F3 (moderate strength), on a scale of 0-5.

The old saying of "March comes in like a lion and goes out like a lamb" proved reasonably accurate this year. The high winds and heat at the beginning of the month, and storms late in the month, gave way to mild temperatures and dry conditions at the end of March.

Mark A. Shafer

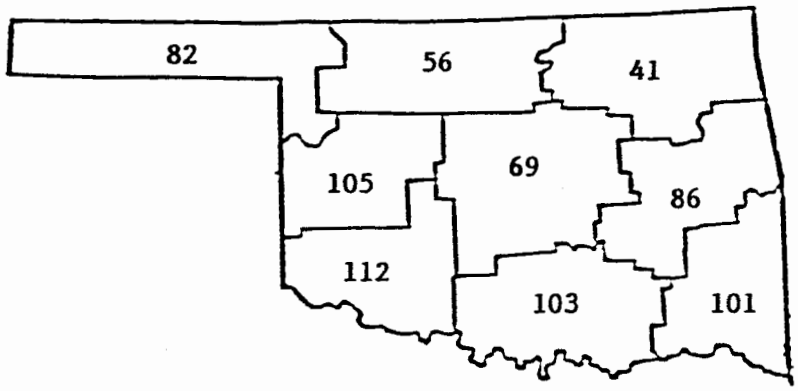
TABLE OF 1990/1991 COMPARISONS

Station	March Temperature (F) 1990	1991	March Precipitation (in.) 1990	1991
Arnett	47.1	49.1	1.43	.82
Enid	51.0	50.7	4.07	1.28
Mutual	46.5	50.0	1.87	1.25
Tulsa	53.8	56.4	7.21	1.02
Elk City	51.0	54.8	1.73	1.67
Oklahoma City	53.2	55.3	4.76	1.59
McAlester	54.9	55.7	7.40	2.38
Altus Irr Sta	53.6	56.0	4.06	1.59
Durant	53.9	55.0	9.83	2.74
Ada	52.1	55.1	8.59	2.09
Antlers	55.8	56.5	8.29	4.56

EXTREMES

Variable	Station	Division	Observation	Date
Minimum temperatures (F)	Buffalo	1	15	3
Maximum temperatures (F)	Carnegie	7	94	5
	Mangum	7	94	5
	Tishomingo	8	94	5
	Waurika	8	94	5
	Waurika Dam	8	94	6
Maximum 24-hour precipitation	Tuskahoma	9	3.35"	22

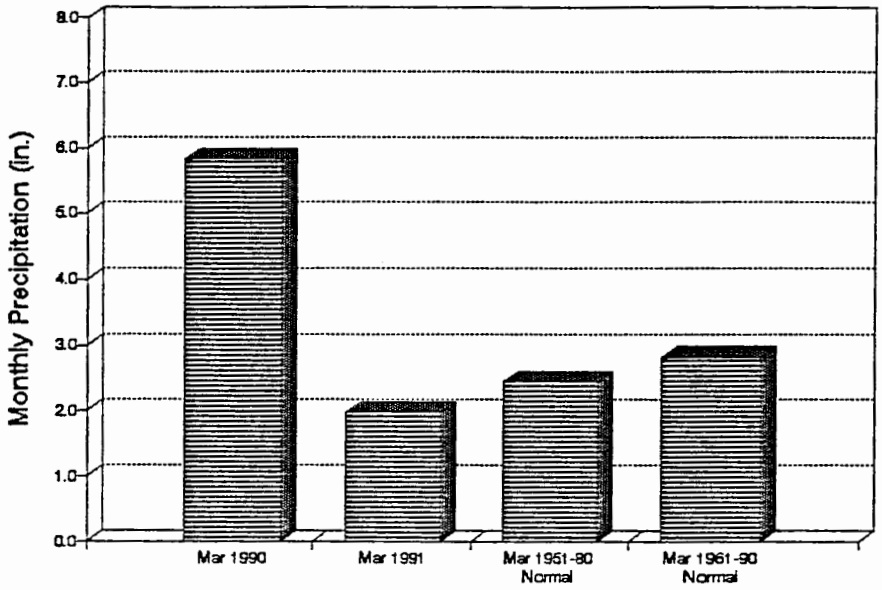
March 1991 percent of normal precipitation.



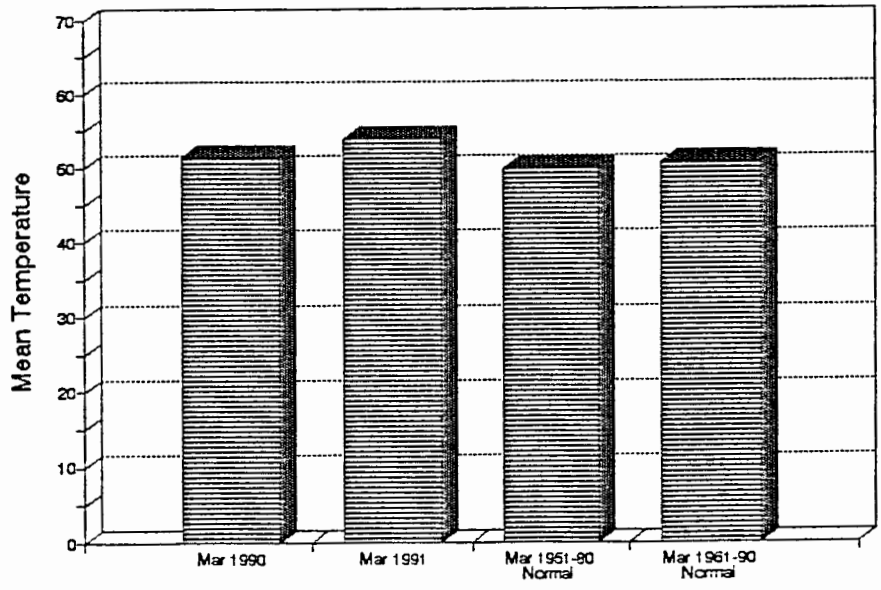
EXTREME VALUES OF TEMPERATURE AND PRECIPITATION IN EACH CLIMATE DIVISION
MARCH, 1991

CD	MAX TEMP	DATE	LOCATION	MIN TEMP	DATE	LOCATION	MONTHLY PRECIP	LOCATION	24-HOUR PRECIP	DATE	LOCATION
1	91	5	GAGE	15	3	BUFFALO	1.40	BUFFALO	.57	29	FARGO
									.57	17	LAVERNE
2	91	6	BILLINGS	18	8	FREEDOM	1.76	HARDY	.92	26	HARDY
3	90	5	MANNFORD	21	7	BARTLESVILLE	2.29	CLAREMORE	1.00	1	KANSAS
	90	5	RALSTON								
4	93	26	ERICK	21	8	ERICK	2.16	WATONGA	1.54	24	LEEDEY
	93	6	WEATHERFORD								
5	92	5	NORMAN	22	14	HENNESSEY	3.18	STELLA	1.48	22	KONAWA
				22	8	STILLWATER					
6	90	5	HOLDENVILLE	25	8	TAHLEQUAH	4.13	CLAYTON	2.10	22	EUFAULA
7	94	5	CARNEGIE	22	8	CARNEGIE	3.34	APACHE	2.26	29	APACHE
	94	5	MANGUM								
8	94	5	WAURIKA	25	10	LINDSAY	5.62	DAISY	2.90	22	CANEY
				25	8	MARLOW					
9	91	5	BOSWELL	22	10	TUSKAHOMA	7.15	TUSKAHOMA	3.35	22	TUSKAHOMA

Comparison of Monthly Precipitation
Statewide Average for Oklahoma



Comparison of Monthly Temperature
Statewide Average for Oklahoma



MARCH 1991 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	49.1	31	3.7	87.	6	21.	15	491.5	-122.5	.0	-6.0	.824	31	-.48	.54	29
BEAVER	593	1	47.8	31	2.5	88.	27	20.	14	534.5	-82.5	2.5	-3.5	1.104	31	-.07	.48	17
BOISE CITY 2 E	908	1	46.0	31	1.9	78.	26	15.	8	588.5	-59.5	.0	.0	.656	31	-.16	.50	30
BUFFALO	1243	1	52.9	31	4.9	89.	5	15.	3	388.0	-153.0	13.5	-.5	1.400	31	-.31	.30	26
FARGO	3070	1	*****	0	*****	****	0	****	0	******	******	******	******	1.001	31	-.29	.57	29
GAGE FAA APT	3407	1	52.4	31	6.5	91.	5	19.	8	402.0	-197.0	12.0	5.0	.874	31	-.31	.45	29
GATE	3489	1	50.1	31	*****	87.	26	18.	3	469.5	******	7.5	******	1.812	31	*****	.76	3
GOODWELL RES ST	3628	1	46.9	31	2.1	84.	6	19.	14	560.0	-72.0	.0	-6.0	1.063	31	.28	.44	17
GUYMON	3835	1	48.6	27	*****	87.	5	20.	14	447.5	******	4.5	******	.721	29	*****	.37	29
HOOKER	4298	1	47.3	31	2.1	86.	6	17.	14	548.0	-73.0	.0	-7.0	1.300	31	.07	.43	17
KENTON	4766	1	45.7	31	1.7	78.	26	15.	8	597.5	-53.5	.0	.0	.940	31	.18	.40	30
LAVERNE	5045	1	*****	0	*****	****	0	****	0	******	******	******	******	1.251	31	-.29	.57	17
OPTIMA LAKE	6740	1	48.7	29	*****	87.	27	21.	3	475.5	******	1.5	******	.952	31	*****	.33	29
RANGE	7412	1	*****	0	*****	****	0	****	0	******	******	******	******	.733	31	*****	.40	28
REGNIER	7534	1	*****	0	*****	****	0	****	0	******	******	******	******	.943	31	.26	.40	30
TURPIN 4 SSE	9017	1	47.6	28	*****	86.	6	18.	14	487.5	******	.0	******	.620	30	*****	.25	29

MARCH 1991 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	52.3	31	*****	90.	5	22.	14	404.5	******	9.5	******	.980	31	*****	.54	17
VANCE AFB	302	2	*****	0	*****	****	0	****	0	******	******	******	******	1.253	31	*****	.81	17
BILLINGS	755	2	50.3	31	*****	91.	6	20.	7	457.5	******	3.0	******	1.510	31	-.56	.89	17
BLACKWELL 2E	818	2	52.0	31	*****	88.	5	21.	7	414.5	******	13.0	******	1.202	31	*****	.75	17
BRAMAN	1075	2	*****	0	*****	****	0	****	0	******	******	******	******	.782	31	*****	.76	17
CHEROKEE	1724	2	53.1	31	4.9	89.	5	20.	14	380.5	-152.5	12.0	.0	.970	31	-.96	.35	28
ENID	2912	2	51.4	31	2.3	87.	5	24.	14	431.5	-75.5	8.5	-5.5	1.280	31	-.61	.88	17
FT SUPPLY DAM	3304	2	49.2	31	1.7	88.	6	21.	3	490.0	-68.0	1.0	-14.0	.930	31	-.33	.49	29
FREEDOM	3358	2	51.9	31	*****	88.	5	18.	8	416.0	******	9.0	******	1.321	31	*****	.66	17
GREAT SALT PLNS	3740	2	53.3	31	*****	86.	6	22.	14	376.0	******	14.0	******	1.220	24	*****	.75	17
HARDY	3909	2	*****	0	*****	****	0	****	0	******	******	******	******	1.762	31	*****	.92	26
HELENA 1 SSE	4019	2	48.6	31	*****	88.	6	21.	14	507.5	******	.0	******	.454	31	-1.47	.27	3
JEFFERSON	4573	2	52.9	31	4.8	90.	5	19.	7	394.0	-139.0	19.0	10.0	.702	31	-1.23	.66	16
LAMONT	5013	2	*****	0	*****	****	0	****	0	******	******	******	******	1.163	31	*****	.80	17
MEDFORD	5768	2	*****	0	*****	****	0	****	0	******	******	******	******	.943	31	*****	.73	16
MORRISON	6065	2	*****	0	*****	****	0	****	0	******	******	******	******	.840	31	*****	.48	17
MUTUAL	6139	2	50.0	31	3.2	90.	6	22.	14	468.0	-106.0	2.0	-7.0	1.250	31	-.33	.72	17
NEWKIRK	6278	2	53.3	31	5.8	87.	5	23.	7	380.0	-174.0	18.0	7.0	.432	31	-1.55	.25	17
ORIENTA	6751	2	*****	0	*****	****	0	****	0	******	******	******	******	1.070	31	*****	.60	17
PERRY	7012	2	55.9	31	6.0	90.	5	26.	3	313.0	-170.0	32.0	17.0	1.290	31	-1.07	.65	17
PONCA CITY FAA	7201	2	53.3	31	6.8	88.	5	24.	7	385.5	-194.5	24.0	17.0	1.604	31	-.50	.73	17
RED ROCK 1 NNE	7505	2	*****	0	*****	****	0	****	0	******	******	******	******	1.011	31	-1.24	.65	17
RENFROW	7556	2	*****	0	*****	****	0	****	0	******	******	******	******	1.600	31	-.31	.90	27
WAYNOKA	9404	2	52.0	31	3.2	88.	5	20.	8	408.5	-109.5	7.0	-9.0	1.000	31	-.63	.59	17
WOODWARD	9760	2	*****	0	*****	****	0	****	0	******	******	******	******	1.114	31	*****	.67	17

MARCH 1991 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	53.7	31	*****	87.	5	24.	10	367.0	******	16.5	******	.344	31	-2.77	.16	27
BARTLESVILLE 2W	548	3	54.1	31	5.3	88.	5	21.	7	361.5	-154.5	22.5	8.5	.795	31	-1.93	.68	17
BIXBY	782	3	51.7	31	2.9	87.	6	27.	9	427.0	-87.0	15.5	3.5	1.961	31	-.73	.61	22
BURBANK	1256	3	*****	0	*****	****	0	****	0	******	******	******	******	.852	31	*****	.52	16
CHELSEA 4 S	1717	3	*****	0	*****	****	0	****	0	******	******	******	******	1.200	31	*****	.42	17
CLAREMORE	1828	3	51.3	31	3.2	86.	6	26.	10	436.5	-97.5	13.0	3.0	2.294	31	-.87	.87	22
CLEVELAND 5 WSW	1902	3	56.7	26	*****	89.	5	27.	8	250.0	******	34.5	******	1.290	27	*****	.60	29
FORAKER	3250	3	*****	0	*****	****	0	****	0	******	******	******	******	.900	31	-1.49	.75	16
HOMINY	4289	3	*****	0	*****	****	0	****	0	******	******	******	******	1.133	31	-1.69	.44	17
HULAH DAM	4393	3	53.9	21	*****	84.	27	20.	8	254.0	******	20.0	******	.621	31	-2.02	.52	17
JAY TOWER	4567	3	51.2	30	*****	80.	26	26.	4	417.5	******	4.0	******	1.460	30	*****	.50	1
KANSAS 1 ESE	4672	3	53.3	31	*****	79.	5	26.	4	374.0	******	10.0	******	2.221	31	*****	1.00	1
KEYSTONE DAM	4812	3	53.4	24	*****	86.	6	26.	4	291.5	******	14.0	******	1.680	22	*****	.74	27
LENAPAH	5118	3	*****	0	*****	****	0	****	0	******	******	******	******	1.020	31	*****	.60	17
MANNFORD 6 NW	5522	3	56.0	31	*****	90.	5	27.	8	316.5	******	38.5	******	1.320	31	-1.25	.44	29
MARAMEC	5540	3	*****	0	*****	****	0	****	0	******	******	******	******	1.091	31	-1.36	.54	29
MIAMI	5855	3	51.0	30	2.8	80.	25	26.	9	430.0	-101.0	11.5	1.5	1.240	30	*****	.48	17
NOWATA	6485	3	53.1	30	4.7	84.	5	27.	7	372.0	-152.0	16.0	6.0	1.030	30	*****	.53	17
ONETA 1 WNW	6713	3	*****	0	*****	****	0	****	0	******	******	******	******	2.030	31	*****	.45	17
PAWHUSKA	6935	3	53.6	31	5.0	87.	5	23.	8	371.0	-150.0	18.0	6.0	.732	31	-1.95	.55	17
PAWNEE	6940	3	*****	0	*****	****	0	****	0	******	******	******	******	1.171	31	-1.31	.62	29
PRYOR 6 N	7309	3	50.7	31	2.2	82.	6	24.	4	452.0	-75.0	9.0	-6.0	.932	31	-2.18	.44	17
RALSTON	7390	3	55.3	31	*****	90.	5	23.	10	328.5	******	27.5	******	.951	31	-1.57	.57	17
RAMONA 4 N	7394	3	*****	0	*****	****	0	****	0	******	******	******	******	.770	31	*****	.48	17
SKIATOOK	8258	3	*****	0	*****	****	0	****	0	******	******	******	******	1.110	31	-1.72	.54	27
SPAVINAW	8380	3	55.2	31	*****	80.	26	27.	4	322.5	******	17.5	******	1.243	31	-1.89	.62	27
TULSA WSO APT	8992	3	56.4	31	7.1	88.	5	30.	3	300.0	-200.0	34.0	20.0	1.024	31	-2.12	.38	17
UPPER SPAVINAW	9101	3	56.6	31	*****	85.	26	30.	8	298.0	******	37.0	******	1.093	31	*****	.41	17
VINITA 2 N	9203	3	52.8	31	4.7	81.	5	24.	8	394.0	-140.0	16.0	6.0	1.150	31	-2.39	.41	17
WAGONER	9247	3	54.0	31	3.5	80.	26	29.	31	347.5	-118.5	7.0	-9.0	.932	31	-2.46	.53	17
WANN	9298	3	*****	0	*****	****	0	****	0	******	******	******	******	.801	31	*****	.77	17
WYNONA	9792	3	*****	0	*****	****	0	****	0	******	******	******	******	.665	31	*****	.50	17

MARCH 1991 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	50.4	31	1.3	90.	6	22.	4	460.5	-47.5	6.5	-8.5	1.541	28	*****	.75	17
CHEYENNE	1738	4	*****	0	*****	****	0	****	0	******	******	******	******	1.110	31	*****	.64	29
CLINTON	1909	4	55.0	31	5.5	92.	5	24.	3	320.0	-173.0	10.5	-2.5	1.761	31	.06	.75	17
COLONY	2039	4	*****	0	*****	****	0	****	0	******	******	******	******	1.530	31	*****	.78	17
CORDELL	2125	4	*****	0	*****	****	0	****	0	******	******	******	******	1.522	31	-.11	.73	29
ELK CITY 1 E	2849	4	54.3	29	*****	90.	5	25.	14	313.5	******	4.5	******	1.673	30	*****	.83	29
ERICK 4 E	2944	4	52.9	31	3.4	89.	5	21.	8	376.5	-114.5	1.5	-9.5	1.720	31	.31	1.04	29
GEARY	3497	4	52.5	30	3.2	90.	5	24.	14	385.5	-113.5	9.5	-2.5	1.790	30	*****	.89	17
HAMMON 1 NNE	3871	4	49.9	31	1.0	90.	6	22.	9	469.5	-45.5	2.5	-13.5	.661	31	-.90	.55	17
LEEDEY	5090	4	*****	0	*****	****	0	****	0	******	******	******	******	1.920	31	.58	1.54	24
MORAVIA 2 NNE	6035	4	*****	0	*****	****	0	****	0	******	******	******	******	1.570	31	.04	.84	29
OKEENE	6629	4	53.3	31	3.4	91.	5	23.	14	376.0	-106.0	13.5	-.5	2.070	31	.25	.65	3
RETROP	7565	4	*****	0	*****	****	0	****	0	******	******	******	******	1.410	31	*****	.55	17
REYDON	7579	4	53.5	31	*****	89.	5	24.	14	362.5	******	6.0	******	1.481	31	.08	1.18	29
SAYRE	7952	4	*****	0	*****	****	0	****	0	******	******	******	******	1.742	31	.46	1.19	29
SWEETWATER 2 E	8652	4	*****	0	*****	****	0	****	0	******	******	******	******	1.571	31	*****	1.25	28
TALOGA	8708	4	52.0	31	3.7	91.	5	20.	8	411.0	-117.0	8.5	-1.5	1.300	31	-.32	.75	17
THOMAS	8815	4	*****	0	*****	****	0	****	0	******	******	******	******	1.690	31	*****	.75	17
VICI	9172	4	*****	0	*****	****	0	****	0	******	******	******	******	2.150	31	*****	1.12	17
WATONGA	9364	4	53.8	31	*****	90.	5	24.	14	363.0	******	14.5	******	2.162	31	.38	.80	17
WEATHERFORD	9422	4	52.5	31	2.6	93.	6	25.	14	397.0	-85.0	11.0	-3.0	1.312	31	-.28	.71	17

MARCH 1991 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	******	******	******	******	1.510	31	*****	.87	17
ARCADIA	288	5	*****	0	*****	****	0	****	0	******	******	******	******	1.110	31	*****	.54	17
TINKER AFB	325	5	*****	0	*****	****	0	****	0	******	******	******	******	1.536	31	*****	.80	17
BLANCHARD 2 SSW	830	5	55.5	31	*****	91.	5	27.	14	312.0	******	18.0	******	1.433	31	*****	.81	17
BRISTOW	1144	5	55.2	31	4.7	89.	5	28.	8	326.5	-139.5	22.5	5.5	1.561	31	-.99	.65	3
CHANDLER	1684	5	55.5	30	4.8	90.	5	28.	14	313.5	-147.5	27.0	10.0	1.000	30	*****	.45	17
CHICKASHA EX ST	1750	5	55.0	31	3.4	93.	5	24.	8	330.5	-104.5	19.5	.5	1.511	31	-.43	.94	17
COX CITY 1 E	2196	5	*****	0	*****	****	0	****	0	******	******	******	******	1.632	31	*****	.80	17
CRESCENT	2242	5	*****	0	*****	****	0	****	0	******	******	******	******	1.280	31	*****	.57	17
CUSHING	2318	5	52.4	29	*****	89.	6	28.	14	376.0	******	10.5	******	.400	29	*****	.22	29
EL RENO 1 N	2818	5	54.3	31	4.8	91.	5	24.	14	350.0	-143.0	17.0	4.0	1.870	31	.02	.99	16
GUTHRIE	3821	5	56.2	31	6.4	90.	5	26.	14	300.5	-183.5	28.5	15.5	1.772	31	-.24	.85	17
HENNESSEY 2 SE	4055	5	52.2	31	3.3	90.	5	22.	14	398.0	-114.0	2.5	-10.5	1.260	31	-.60	.72	17
INGALLS	4489	5	*****	0	*****	****	0	****	0	******	******	******	******	.762	31	*****	.36	17
KINGFISHER 2 SE	4861	5	54.2	31	4.6	91.	5	23.	14	354.0	-136.0	18.0	6.0	1.330	31	-.43	.67	17
KONAWA	4915	5	*****	0	*****	****	0	****	0	******	******	******	******	2.390	31	-.50	1.48	22
MARSHALL	5589	5	*****	0	*****	****	0	****	0	******	******	******	******	1.100	31	-.89	.90	19
MEEKER 4 W	5779	5	54.8	31	4.7	90.	5	26.	14	335.5	-139.5	19.5	6.5	2.070	31	-.36	.53	21
MULHALL	6110	5	*****	0	*****	****	0	****	0	******	******	******	******	1.101	31	*****	.59	17
NORMAN 3 S	6386	5	55.6	31	*****	92.	5	28.	14	309.5	******	19.0	******	2.352	31	.02	.88	17
OILTON 2 SE	6616	5	*****	0	*****	****	0	****	0	******	******	******	******	1.020	31	*****	.32	16
OKEMAH	6638	5	55.7	31	4.6	88.	5	29.	3	305.5	-144.5	17.5	-1.5	1.970	31	-.73	.62	27
OKLAHOMA CTY WS	6661	5	55.3	31	6.2	91.	5	28.	14	317.0	-189.0	17.0	4.0	1.593	31	-.48	.90	17
PERKINS	7003	5	*****	0	*****	****	0	****	0	******	******	******	******	1.080	31	-1.33	.33	17
PIEDMONT	7068	5	*****	0	*****	****	0	****	0	******	******	******	******	1.790	31	*****	.73	17
PRAGUE	7264	5	*****	0	*****	****	0	****	0	******	******	******	******	1.660	31	-.85	.50	17
PURCELL 5 SW	7327	5	54.7	31	4.3	91.	5	25.	10	339.0	-136.0	19.0	-4.0	1.771	31	-.60	.96	17
SEMINOLE	8042	5	56.1	31	3.7	90.	5	28.	14	300.0	-111.0	24.5	3.5	1.420	31	-1.16	.45	17
SHAWNEE	8110	5	*****	0	*****	****	0	****	0	******	******	******	******	1.780	31	-.73	.80	17
STELLA	8479	5	*****	0	*****	****	0	****	0	******	******	******	******	3.180	31	*****	.91	22
STILLWATER 2 W	8501	5	52.7	31	3.9	88.	6	22.	8	393.0	-122.0	11.0	-1.0	.981	31	-1.21	.38	17
STROUD 1 N	8563	5	*****	0	*****	****	0	****	0	******	******	******	******	1.622	31	*****	.65	3
TECUMSEH	8751	5	*****	0	*****	****	0	****	0	******	******	******	******	1.151	31	*****	.38	22
TROUSDALE	8960	5	*****	0	*****	****	0	****	0	******	******	******	******	1.520	30	*****	.56	22
UNION CITY 1 SE	9086	5	*****	0	*****	****	0	****	0	******	******	******	******	2.362	31	-.01	1.02	17
WELTY 1 SSE	9479	5	*****	0	*****	****	0	****	0	******	******	******	******	1.950	31	*****	.70	3
WEWOKA	9575	5	*****	0	*****	****	0	****	0	******	******	******	******	1.400	31	-1.32	.62	21

MARCH 1991 SUMMARY FOR EAST CENTRAL DIVISION (CD6)

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
ASHLAND	364	6	*****	0	*****	****	0	****	0	******	******	******	******	2.641	31	*****	1.30	17
BEGGS	631	6	*****	0	*****	****	0	****	0	******	******	******	******	1.960	31	*****	.84	3
BOYNTON	1027	6	*****	0	*****	****	0	****	0	******	******	******	******	2.310	31	*****	.77	17
CALVIN	1391	6	*****	0	*****	****	0	****	0	******	******	******	******	2.953	31	-.43	1.42	22
CHECOTAH	1711	6	*****	0	*****	****	0	****	0	******	******	******	******	2.021	31	-1.32	1.04	17
CLAYTON 11 WNW	1858	6	*****	0	*****	****	0	****	0	******	******	******	******	4.130	31	*****	1.50	27
DEWAR 2 NE	2485	6	*****	0	*****	****	0	****	0	******	******	******	******	1.861	31	-1.26	.71	22
DUSTIN	2690	6	*****	0	*****	****	0	****	0	******	******	******	******	2.060	31	*****	.76	17
EUFAULA	2993	6	55.5	31	*****	84.	5	31.	4	311.5	******	18.0	******	3.671	31	-.30	2.10	22
HANNA	3884	6	54.9	31	*****	87.	5	27.	10	333.5	******	20.5	******	3.700	31	.01	1.89	22
HARTSHORNE	3946	6	*****	0	*****	****	0	****	0	******	******	******	******	3.812	31	*****	1.70	22
HASKELL	3956	6	*****	0	*****	****	0	****	0	******	******	******	******	1.540	31	-1.63	.64	17
HOLDENVILLE	4235	6	54.6	31	2.9	90.	5	29.	14	339.5	-90.5	17.0	-1.0	2.600	31	-.38	.93	22
LAKE EUFAULA	4975	6	54.3	31	*****	86.	6	30.	15	351.0	******	18.5	******	3.540	31	*****	1.55	22
LYONS 2 N	5437	6	*****	0	*****	****	0	****	0	******	******	******	******	4.100	31	.16	1.03	1
MARBLE CITY	5546	6	*****	0	*****	****	0	****	0	******	******	******	******	4.083	31	*****	1.30	22
MCALESTER FAA	5664	6	55.7	31	4.4	89.	5	28.	4	313.0	-128.0	25.0	8.0	2.380	31	-1.47	1.01	17
MCCURTAIN 1 SE	5693	6	56.9	31	*****	83.	21	27.	15	288.0	******	38.0	******	3.030	31	-.88	.75	27
MUSKOGEE	6130	6	55.1	31	4.0	81.	5	30.	9	323.5	-124.5	18.0	1.0	2.080	31	-1.16	.87	17
OKMULGEE W W	6670	6	51.4	31	.1	87.	6	27.	11	430.5	-17.5	10.0	-13.0	2.172	31	-.86	.66	3
OKTAHA 2 NE	6678	6	*****	0	*****	****	0	****	0	******	******	******	******	2.091	31	*****	.98	17
QUINTON	7372	6	*****	0	*****	****	0	****	0	******	******	******	******	2.850	31	-.84	.98	22
SALLISAW 2 NE	7862	6	54.2	31	2.9	85.	5	25.	8	348.5	-93.5	12.5	-5.5	4.032	31	.23	1.30	22
SCIPIO	7979	6	*****	0	*****	****	0	****	0	******	******	******	******	3.550	31	*****	1.88	22
SCRAPER	7993	6	*****	0	*****	****	0	****	0	******	******	******	******	2.910	31	*****	.87	17
SHORT	8170	6	*****	0	*****	****	0	****	0	******	******	******	******	4.070	31	*****	1.23	17
STILWELL 1 NE	8506	6	53.8	31	*****	80.	5	25.	30	359.5	******	11.5	******	3.433	31	-.27	1.20	22
TAHLEQUAH	8677	6	53.8	30	3.8	83.	5	25.	8	348.0	-132.0	13.0	-2.0	2.871	31	-.77	1.00	17
WEBBERS FALLS	9445	6	52.4	31	3.2	82.	6	26.	15	399.0	-102.0	9.5	-1.5	3.540	31	-.05	1.60	22
WESTVILLE	9523	6	*****	0	*****	****	0	****	0	******	******	******	******	3.340	31	*****	1.23	22
WETUMKA 3 NE	9571	6	*****	0	*****	****	0	****	0	******	******	******	******	2.653	31	-.47	.80	22

MARCH 1991 SUMMARY FOR SOUTHWEST DIVISION (CD7)

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
ALTUS IRR STA	179	7	56.0	31	3.5	93.	5	27.	8	291.0	-116.0	10.5	-8.5	1.590	31	.31	1.06	29
ALTUS DAM	184	7	54.4	31	*****	91.	6	24.	9	348.0	******	20.5	******	1.620	31	.32	.85	29
APACHE	260	7	*****	0	*****	****	0	****	0	******	******	******	******	3.340	31	*****	2.26	29
ALTUS AFB	447	7	*****	0	*****	****	0	****	0	******	******	******	******	1.796	31	*****	1.05	29
CARNEGIE 2 ENE	1504	7	54.5	30	3.7	94.	5	22.	8	330.0	-125.0	13.5	-.5	1.720	30	*****	.94	29
CHATTANOOGA	1706	7	55.2	29	*****	93.	5	26.	10	294.0	******	9.5	******	1.431	30	*****	.91	16
DUNCAN 12 W	2668	7	*****	0	*****	****	0	****	0	******	******	******	******	2.681	31	*****	1.30	22
FREDERICK	3353	7	54.0	31	.2	91.	5	28.	14	346.0	-31.0	4.5	-24.5	.560	31	-1.14	.56	16
GRANDFIELD 4 NW	3709	7	*****	0	*****	****	0	****	0	******	******	******	******	.940	31	-.83	.69	17
HOBART FAA APT	4204	7	54.1	31	4.8	93.	5	24.	8	350.5	-146.5	12.5	2.5	2.163	31	.89	.97	29
HOLLIS	4249	7	55.5	29	*****	90.	5	26.	31	284.5	******	9.5	******	.370	29	*****	.22	17
LAWTON	5063	7	53.9	31	1.9	92.	5	29.	15	346.0	-78.0	.5	-20.5	1.230	31	-.60	.93	16
FORT SILL	5068	7	55.0	31	*****	93.	5	30.	14	321.5	******	11.5	******	1.814	31	-.02	.91	16
LOOKEBA 2 ENE	5329	7	*****	0	*****	****	0	****	0	******	******	******	******	2.380	31	*****	1.10	29
MANGUM RES STA	5509	7	54.1	31	2.2	94.	5	25.	8	344.5	-81.5	7.0	-13.0	.940	31	-.24	.47	29
RANDLETT 9 E	7403	7	*****	0	*****	****	0	****	0	******	******	******	******	.941	31	*****	.61	17
ROOSEVELT	7727	7	*****	0	*****	****	0	****	0	******	******	******	******	2.153	31	.83	1.30	29
SEDAN	8016	7	*****	0	*****	****	0	****	0	******	******	******	******	2.530	31	*****	1.75	29
VINSON 3 WNW	9212	7	*****	0	*****	****	0	****	0	******	******	******	******	1.161	31	-.12	.52	29
WALTERS	9278	7	56.7	31	3.6	92.	5	27.	8	276.5	-116.5	18.5	-5.5	.961	31	-1.17	.67	16
WICHITA MT WLR	9629	7	52.8	31	1.9	88.	6	23.	8	384.5	-72.5	7.5	-12.5	1.302	31	-.59	.85	18
WILLOW	9668	7	*****	0	*****	****	0	****	0	******	******	******	******	1.712	31	*****	1.20	29

MARCH 1991 SUMMARY FOR SOUTH CENTRAL DIVISION (CD8)

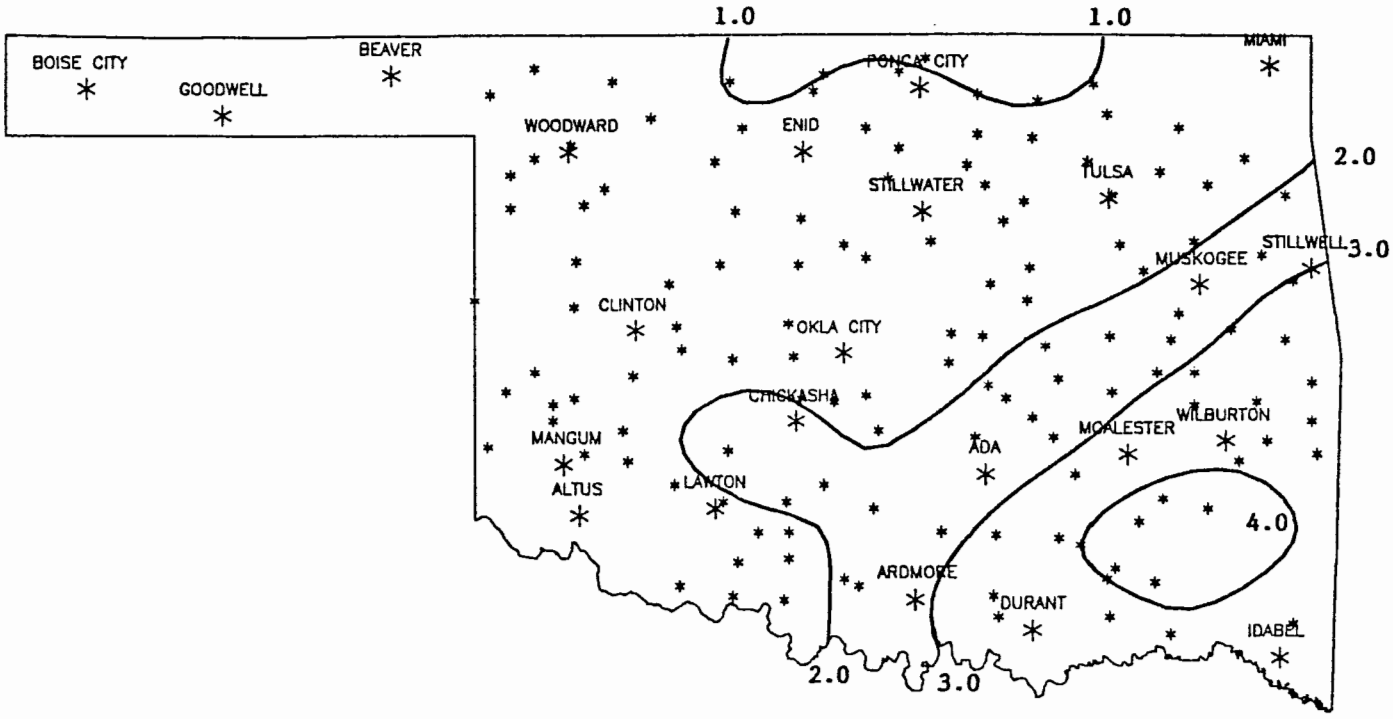
NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ADA	17	8	54.6	31	2.2	90.	6	28.	14	329.5	-83.5	7.0	-16.0	2.090	31	-.81	.85	17
ALLEN	147	8	*****	0	*****	****	0	****	0	******	******	******	******	1.800	31	*****	1.10	17
ARDMORE	292	8	57.4	31	2.3	93.	5	31.	3	260.0	-80.0	25.5	-7.5	3.841	31	.89	1.10	22
ATOKA DAM	394	8	55.3	30	*****	90.	6	30.	15	308.5	******	18.5	******	5.130	31	*****	2.78	22
BOKCHITO	917	8	*****	0	*****	****	0	****	0	******	******	******	******	3.750	31	*****	1.65	27
CANEY	1437	8	56.5	31	*****	86.	5	31.	4	275.0	******	12.5	******	3.840	31	*****	2.90	22
CENTRAHOMA	1648	8	*****	0	*****	****	0	****	0	******	******	******	******	3.000	31	*****	1.50	16
CHICKASAW NRA	1745	8	53.9	31	*****	91.	6	26.	8	361.0	******	15.5	******	2.410	31	*****	1.11	17
COMANCHE	2054	8	*****	0	*****	****	0	****	0	******	******	******	******	1.070	31	*****	.60	16
DAISY 4 ENE	2354	8	*****	0	*****	****	0	****	0	******	******	******	******	5.622	31	1.78	2.86	22
DUNCAN	2660	8	54.5	31	1.5	91.	6	29.	14	334.5	-61.5	9.0	-15.0	1.650	31	-.49	.80	17
DURANT USDA	2678	8	55.2	31	*****	92.	6	30.	30	318.0	******	15.5	******	2.740	31	-.53	1.16	22
ELMORE CITY	2872	8	*****	0	*****	****	0	****	0	******	******	******	******	1.133	31	*****	.58	13
FARRIS 3 WNW	3083	8	*****	0	*****	****	0	****	0	******	******	******	******	2.290	31	*****	.97	27
GRADY	3688	8	*****	0	*****	****	0	****	0	******	******	******	******	3.630	31	*****	1.52	22
HEALDTON	4001	8	55.9	31	*****	92.	5	27.	10	302.0	******	20.0	******	3.250	31	.79	2.12	22
HENNEPIN	4052	8	*****	0	*****	****	0	****	0	******	******	******	******	.852	31	*****	.85	17
KETCHUM RANCH	4780	8	*****	0	*****	****	0	****	0	******	******	******	******	1.320	31	*****	.70	16
KINGSTON	4865	8	*****	0	*****	****	0	****	0	******	******	******	******	2.823	31	-.34	2.03	22
LEHIGH	5108	8	*****	0	*****	****	0	****	0	******	******	******	******	4.603	31	*****	2.15	22
LINDSAY 2 W	5216	8	55.2	30	*****	89.	5	25.	10	311.5	******	17.0	******	1.493	30	*****	.49	16
LOCO 6 SE	5247	8	*****	0	*****	****	0	****	0	******	******	******	******	1.341	31	*****	.82	17
MADILL	5468	8	57.5	31	3.9	92.	5	29.	9	264.0	-114.0	32.5	7.5	3.090	31	.08	1.92	21
MARIETTA	5563	8	58.1	31	4.3	93.	5	32.	14	245.5	-125.5	30.5	6.5	3.761	31	1.01	1.85	22
MARLOW 1 WSW	5581	8	56.7	31	*****	93.	5	25.	8	280.0	******	23.5	******	4.411	31	2.41	1.57	29
MCGEE CREEK DAM	5713	8	54.5	31	*****	90.	6	30.	4	339.0	******	14.0	******	4.671	31	*****	2.35	22
PAULS VALLEY	6926	8	55.7	31	3.1	92.	5	25.	8	306.5	-98.5	18.0	-3.0	1.522	31	-.78	.82	22
PONTOTOC	7214	8	*****	0	*****	****	0	****	0	******	******	******	******	3.650	31	.36	2.01	21
TISHOMINGO NWLR	8884	8	54.8	29	*****	94.	5	24.	10	319.0	******	22.0	******	4.010	31	.84	2.60	22
TUSSY	9032	8	*****	0	*****	****	0	****	0	******	******	******	******	.920	31	*****	.51	16
WAURIKA	9395	8	58.0	31	3.8	94.	5	28.	8	246.0	-118.0	29.5	-.5	.820	31	-1.12	.73	16
WAURIKA DAM	9399	8	55.1	29	*****	94.	6	31.	14	299.0	******	11.5	******	1.312	29	*****	.63	17

MARCH 1991 SUMMARY FOR SOUTHEAST DIVISION (CD9)

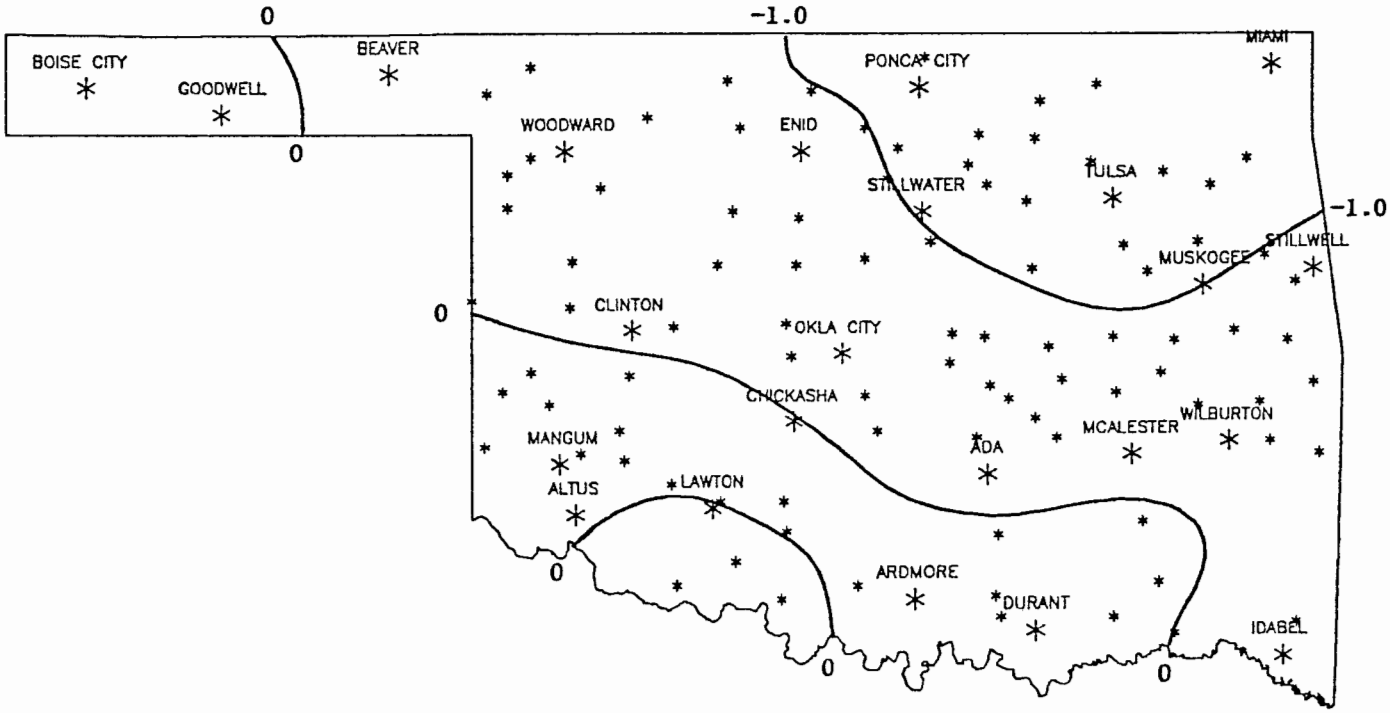
NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ANTLERS	256	9	56.3	31	3.5	90.	5	27.	10	296.0	-102.0	25.5	5.5	4.560	31	.99	1.40	21
BATTIEST 1 SSW	567	9	53.8	31	*****	82.	5	23.	10	355.0	******	9.0	******	6.192	31	*****	1.78	22
BEAR MT TWR	584	9	58.3	29	*****	84.	5	30.	31	217.0	******	22.0	******	3.901	29	*****	1.42	1
BENGAL	670	9	*****	0	*****	****	0	****	0	******	******	******	******	4.450	31	*****	1.14	27
BOSWELL 4 NNW	980	9	59.3	31	*****	91.	5	32.	15	223.0	******	47.5	******	2.874	31	-.45	.91	22
BROKEN BOW 1 N	1162	9	*****	0	*****	****	0	****	0	******	******	******	******	2.480	31	-1.99	.90	1
BROKEN BOW DAM	1168	9	54.7	31	*****	86.	6	28.	10	331.0	******	11.0	******	2.770	31	*****	1.08	1
CARNASAW TWR	1499	9	*****	0	*****	****	0	****	0	******	******	******	******	2.490	31	-2.16	.90	1
CARTER TWR	1544	9	*****	0	*****	****	0	****	0	******	******	******	******	2.740	31	-1.83	1.28	1
FANSHAWE	3065	9	*****	0	*****	****	0	****	0	******	******	******	******	3.490	31	-.93	.97	27
FLAGPOLE TWR	3169	9	*****	0	*****	****	0	****	0	******	******	******	******	5.140	31	*****	1.75	21
HEAVENER 1 SE	4008	9	*****	0	*****	****	0	****	0	******	******	******	******	2.660	31	-1.49	.72	1
HEE MT TWR	4017	9	*****	0	*****	****	0	****	0	******	******	******	******	4.620	31	*****	1.78	22
HUGO	4384	9	57.8	31	3.2	86.	5	32.	15	252.5	-94.5	30.5	6.5	4.403	31	.60	1.22	1
POTEAU W W	7254	9	53.5	31	*****	82.	25	25.	15	364.5	******	8.5	******	3.530	31	*****	1.70	21
SMITHVILLE 1 W	8285	9	54.1	31	*****	83.	5	21.	10	352.5	******	13.5	******	6.233	31	*****	1.75	27
SPIRO	8416	9	*****	0	*****	****	0	****	0	******	******	******	******	3.680	31	-.46	.81	22
TUSKAHOMA	9023	9	56.2	31	*****	86.	5	22.	10	302.5	******	30.0	******	7.151	31	*****	3.35	22
VALLIANT 3 W	9118	9	*****	0	*****	****	0	****	0	******	******	******	******	2.782	31	-1.43	1.50	1
WILBURTON 9 ENE	9634	9	55.0	31	3.2	84.	5	24.	10	332.0	-95.0	22.0	4.0	3.701	31	-.38	1.45	26

MARCH 1991 CLIMATE DIVISION SUMMARY

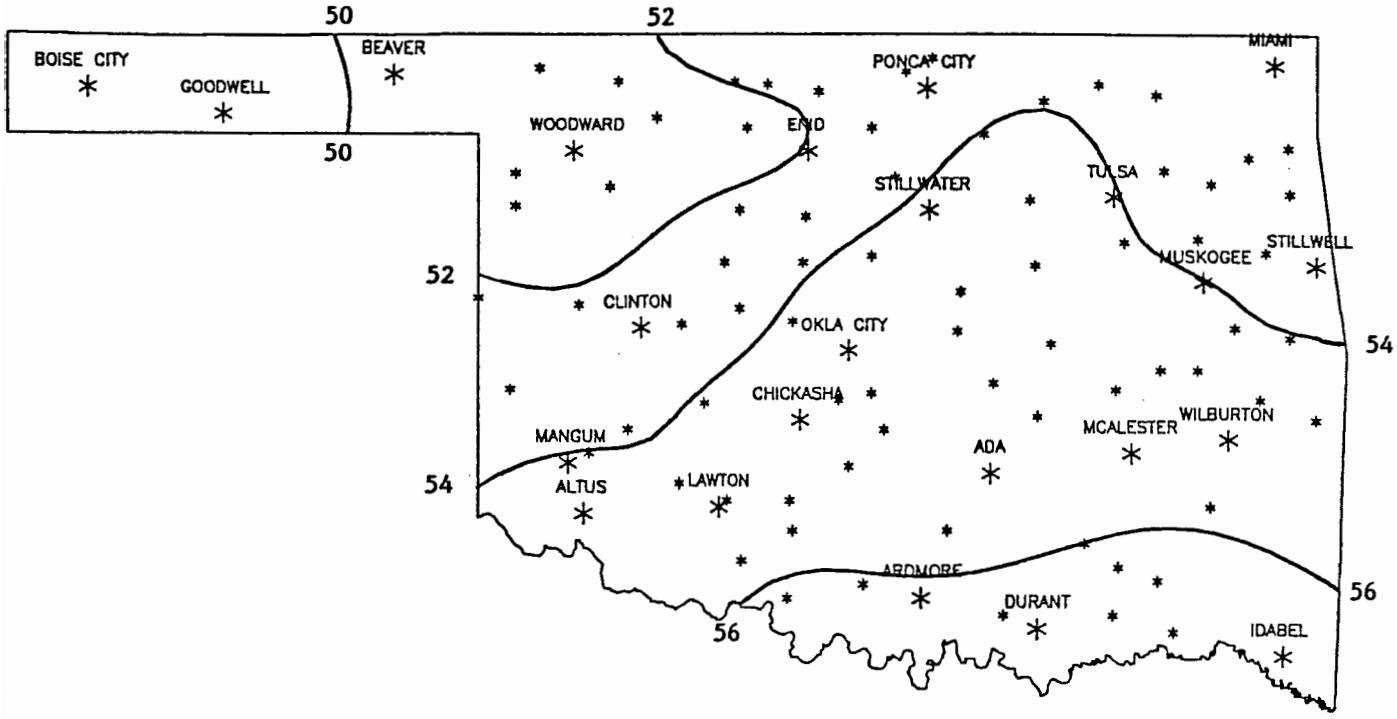
CLIMATE DIV	MEAN TEMP	NUM STA	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEGREE DAYS	DEV FROM NORM	COOL DEGREE DAYS	DEV FROM NORM	TOT PPT	NUM STA	DEV FROM NORM	MAX 24-HR	DAY
1	48.7	9	3.4	91.0	5	15.0	8	508.8	-106.5	3.9	-1.8	1.06	14	-.07	.76	3
2	52.0	15	3.9	91.0	6	18.0	8	415.1	-122.6	11.5	-.5	1.10	24	-.80	.92	26
3	53.5	17	5.0	90.0	5	20.0	8	371.5	-150.7	18.4	6.4	1.12	27	-1.78	1.00	1
4	52.6	10	3.3	93.0	6	20.0	8	392.1	-107.6	8.4	-4.7	1.59	18	.02	1.54	24
5	54.9	15	4.8	93.0	5	22.0	8	332.3	-146.6	18.7	2.8	1.60	34	-.71	1.48	22
6	54.4	12	3.6	90.0	5	25.0	8	345.5	-110.3	17.6	.6	2.97	31	-.54	2.10	22
7	54.5	10	2.7	94.0	5	22.0	8	333.9	-92.2	10.6	-9.0	1.67	19	.13	2.26	29
8	55.9	15	2.4	94.0	6	24.0	10	298.7	-82.3	19.2	-6.5	2.83	30	.07	2.90	22
9	55.6	9	2.6	91.0	5	21.0	10	312.1	-78.6	21.9	1.3	4.00	19	-.15	3.35	22



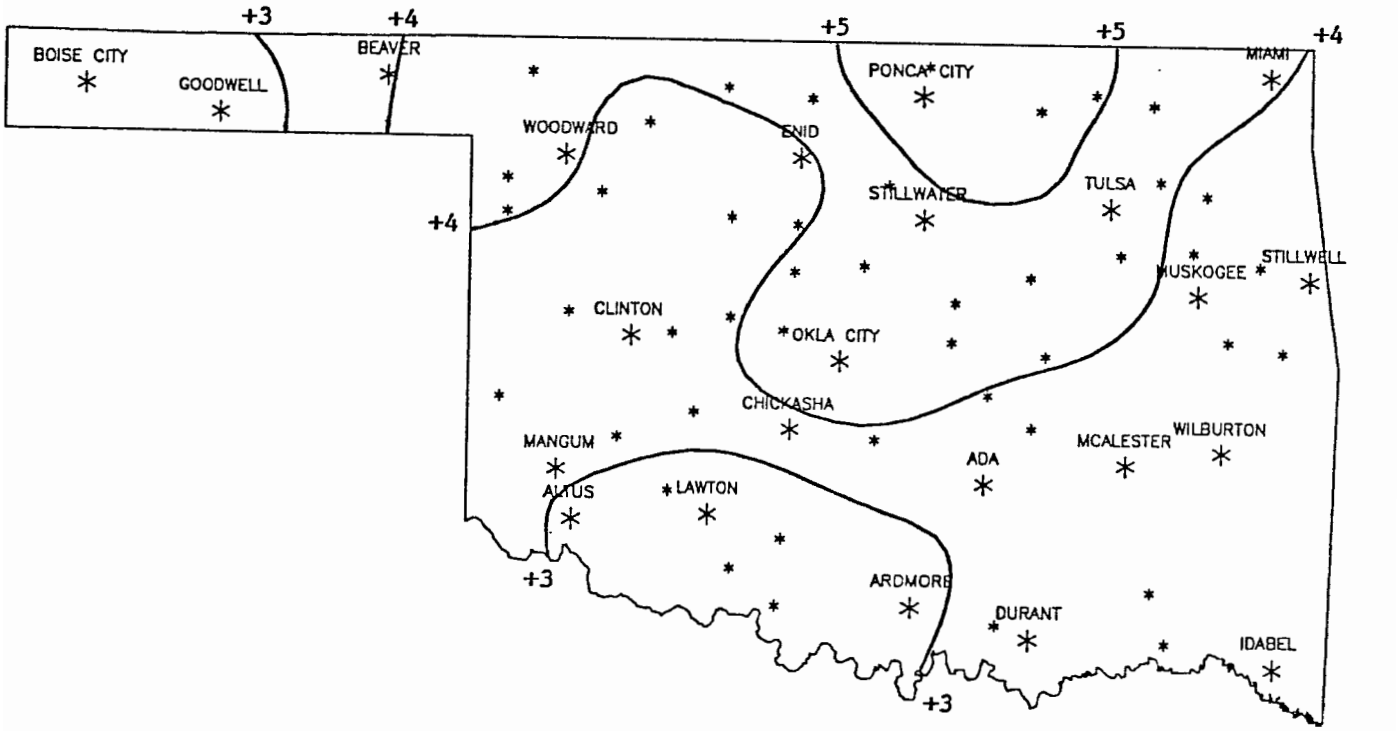
MARCH 1991 TOTAL PRECIPITATION
(Inches)



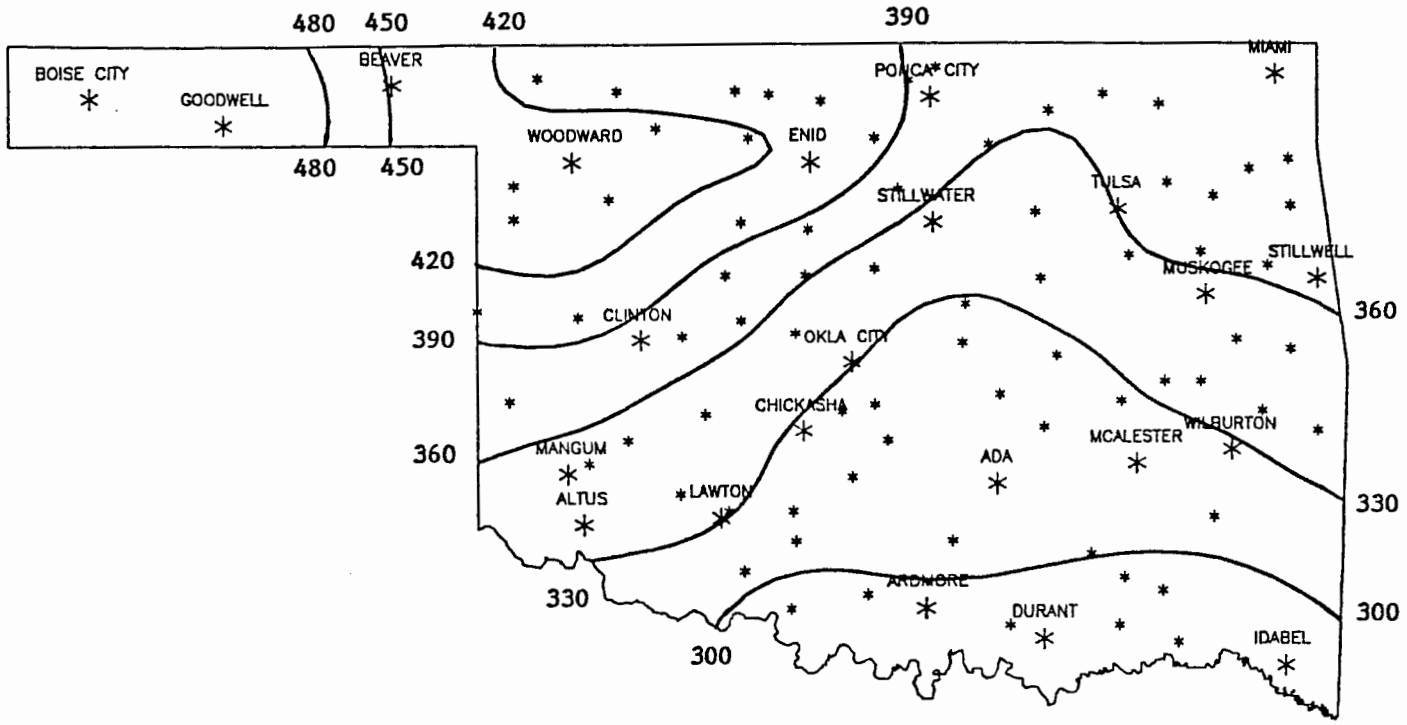
MARCH 1991 DEVIATION FROM NORMAL PRECIPITATION
(Inches)



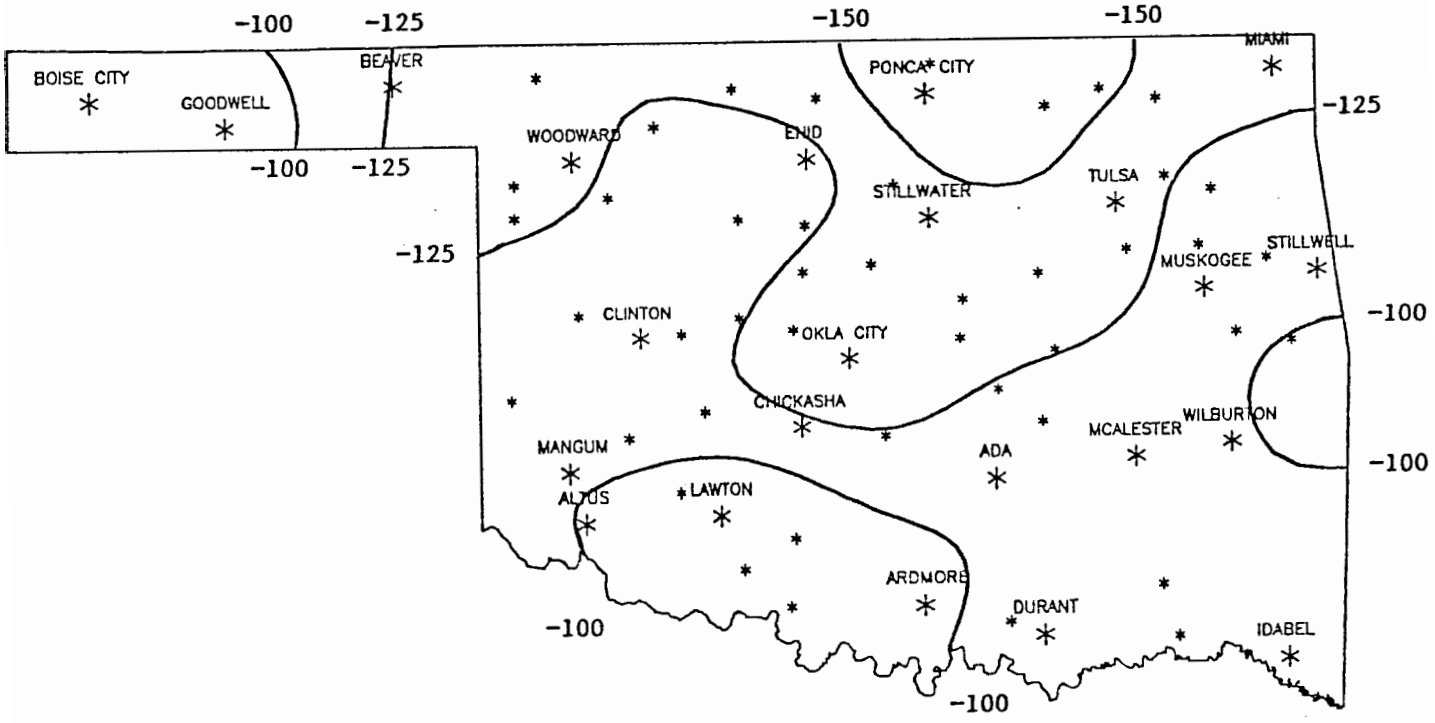
MARCH 1991 AVERAGE MONTHLY TEMPERATURES
(Degrees F)



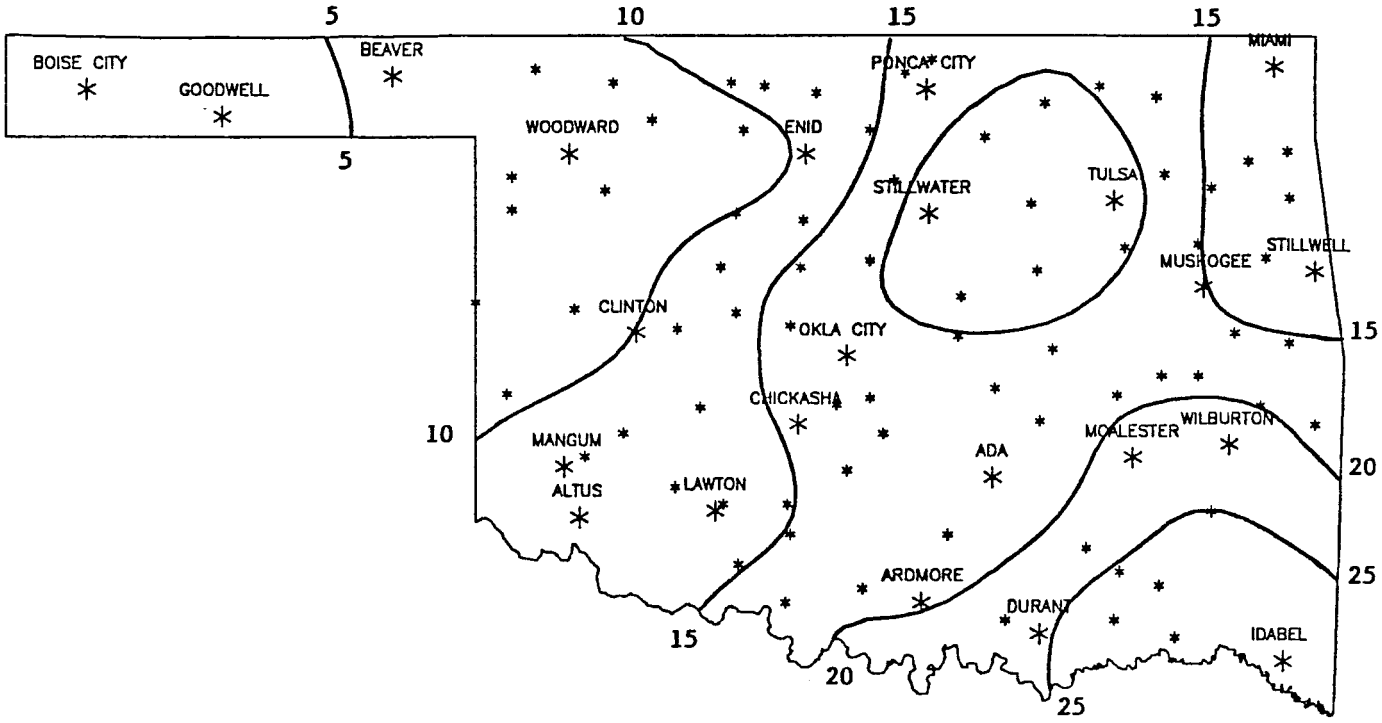
MARCH 1991 DEVIATION FROM NORMAL TEMPERATURES
(Degrees F)



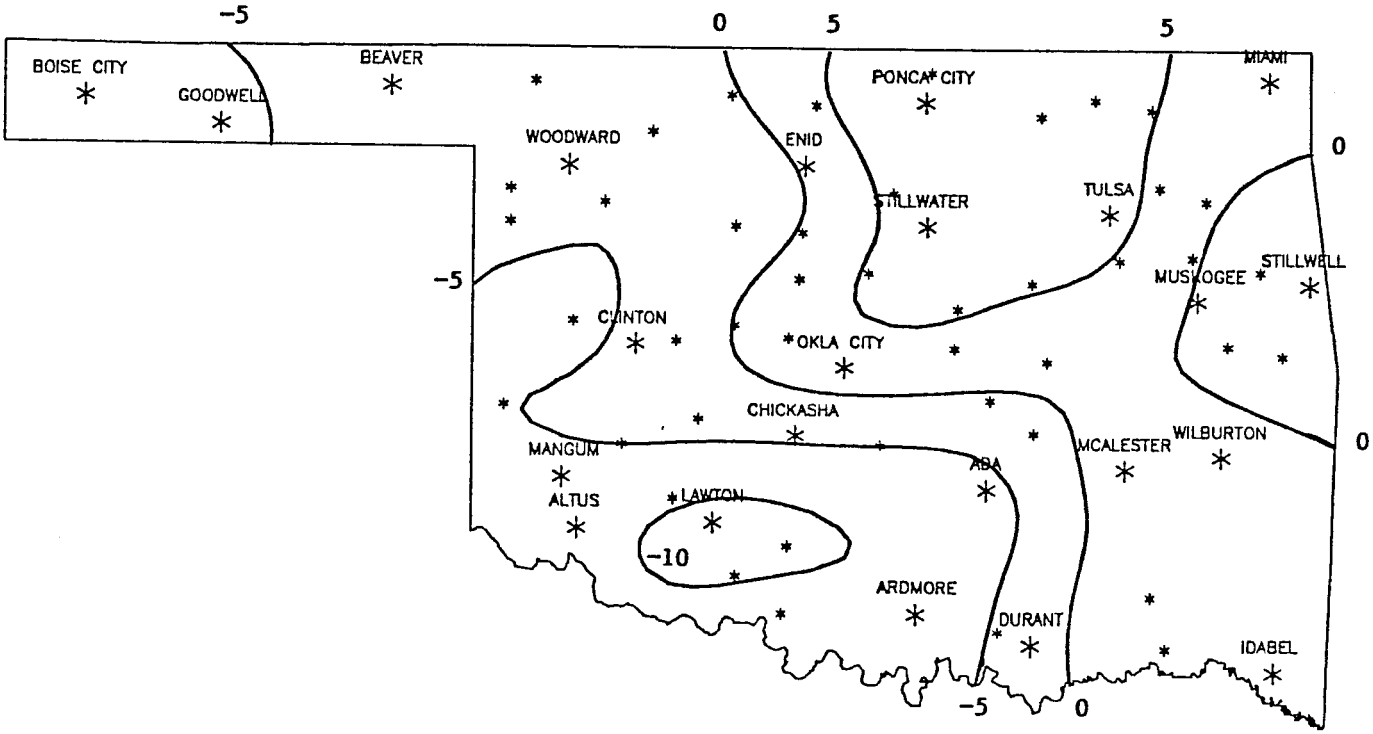
MARCH 1991 HEATING DEGREE DAYS



MARCH 1991 DEVIATION FROM NORMAL HEATING DEGREE DAYS

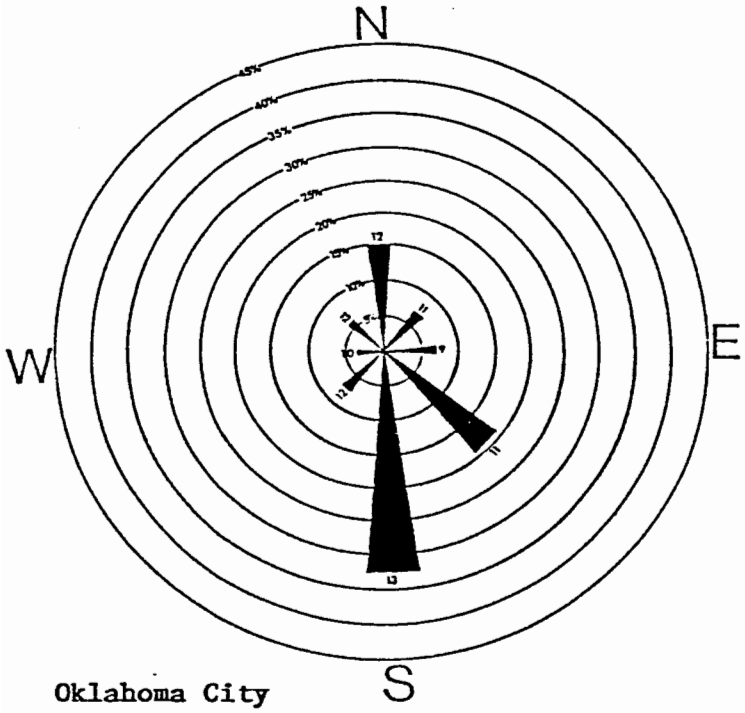


MARCH 1991 COOLING DEGREE DAYS

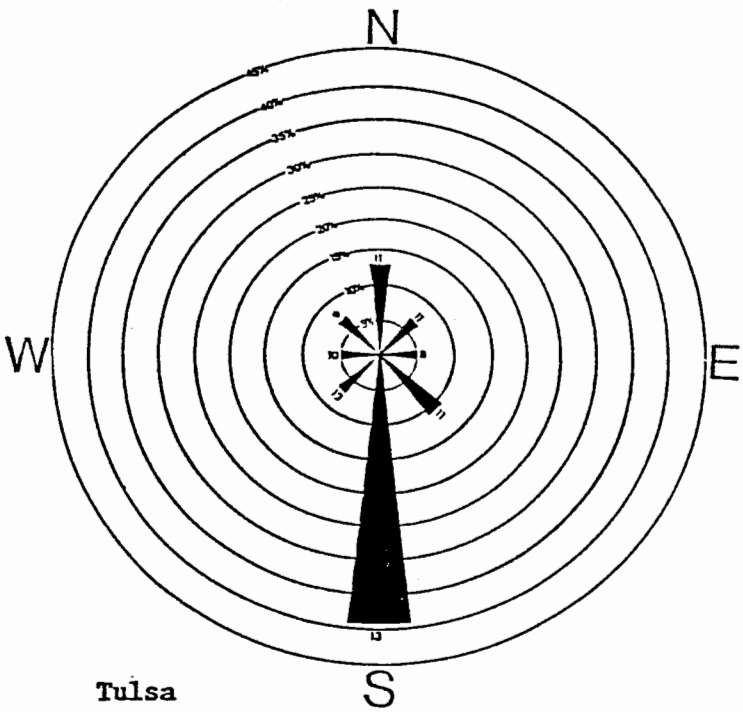


MARCH 1991 DEVIATION FROM NORMAL COOLING DEGREE DAYS

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 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.



Oklahoma City



Tulsa

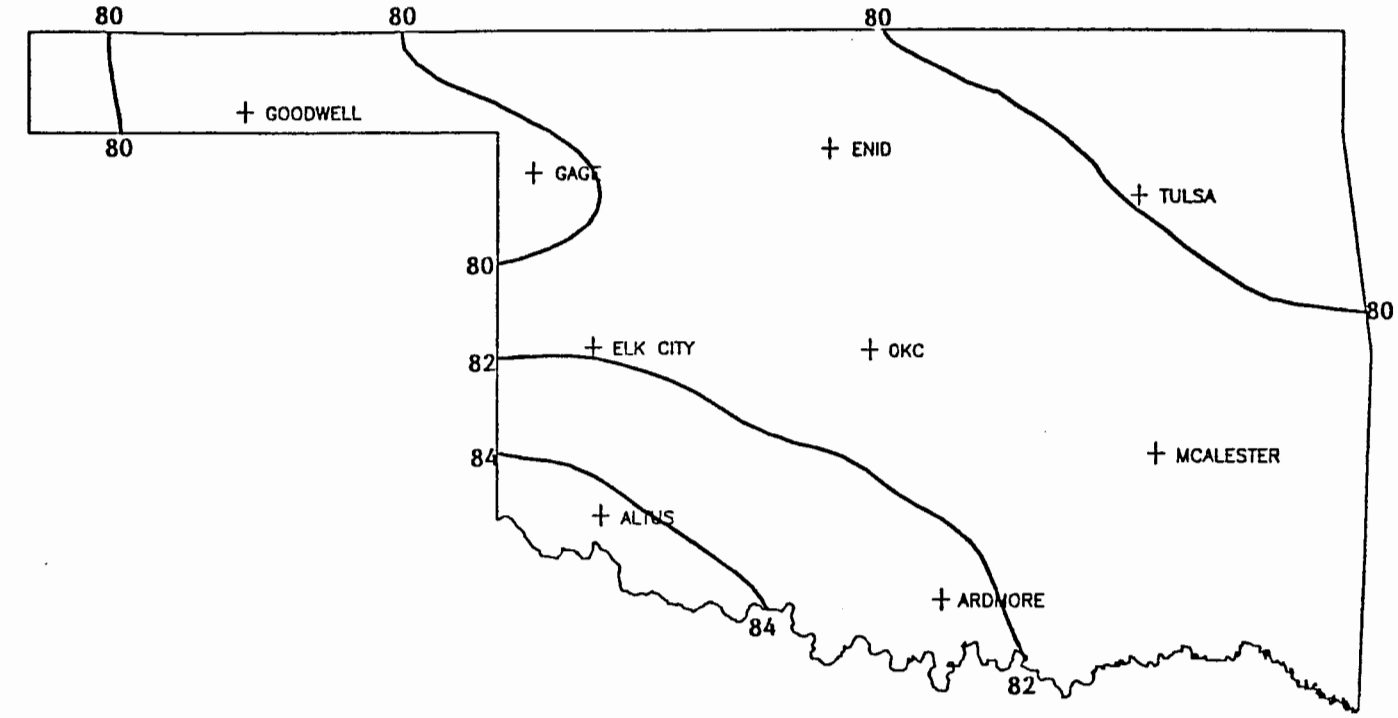
MAY 1991 SUNRISE AND SUNSET

Oklahoma City

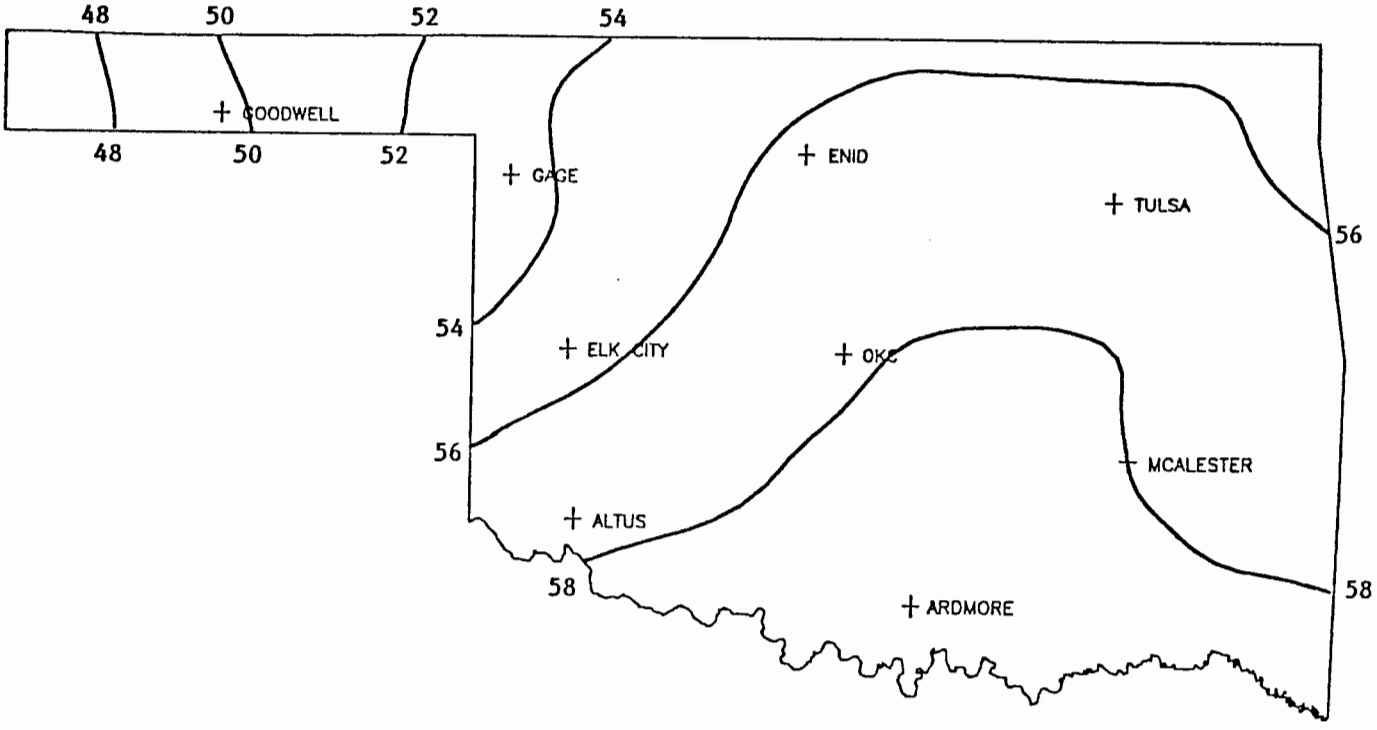
DATE	SUNRISE	SUNSET	DAYLIGHT
910501	6:40AM	8:14PM LT	13:34
910502	6:39AM	8:15PM LT	13:36
910503	6:38AM	8:16PM LT	13:38
910504	6:37AM	8:17PM LT	13:40
910505	6:36AM	8:18PM LT	13:41
910506	6:35AM	8:18PM LT	13:43
910507	6:34AM	8:19PM LT	13:45
910508	6:33AM	8:20PM LT	13:47
910509	6:33AM	8:21PM LT	13:48
910510	6:32AM	8:22PM LT	13:50
910511	6:31AM	8:22PM LT	13:52
910512	6:30AM	8:23PM LT	13:53
910513	6:29AM	8:24PM LT	13:55
910514	6:28AM	8:25PM LT	13:56
910515	6:28AM	8:25PM LT	13:58
910516	6:27AM	8:26PM LT	13:59
910517	6:26AM	8:27PM LT	14: 1
910518	6:26AM	8:28PM LT	14: 2
910519	6:25AM	8:28PM LT	14: 4
910520	6:24AM	8:29PM LT	14: 5
910521	6:24AM	8:30PM LT	14: 6
910522	6:23AM	8:31PM LT	14: 7
910523	6:23AM	8:31PM LT	14: 9
910524	6:22AM	8:32PM LT	14:10
910525	6:22AM	8:33PM LT	14:11
910526	6:21AM	8:33PM LT	14:12
910527	6:21AM	8:34PM LT	14:13
910528	6:20AM	8:35PM LT	14:15
910529	6:20AM	8:35PM LT	14:16
910530	6:19AM	8:36PM LT	14:17
910531	6:19AM	8:37PM LT	14:18

TULSA

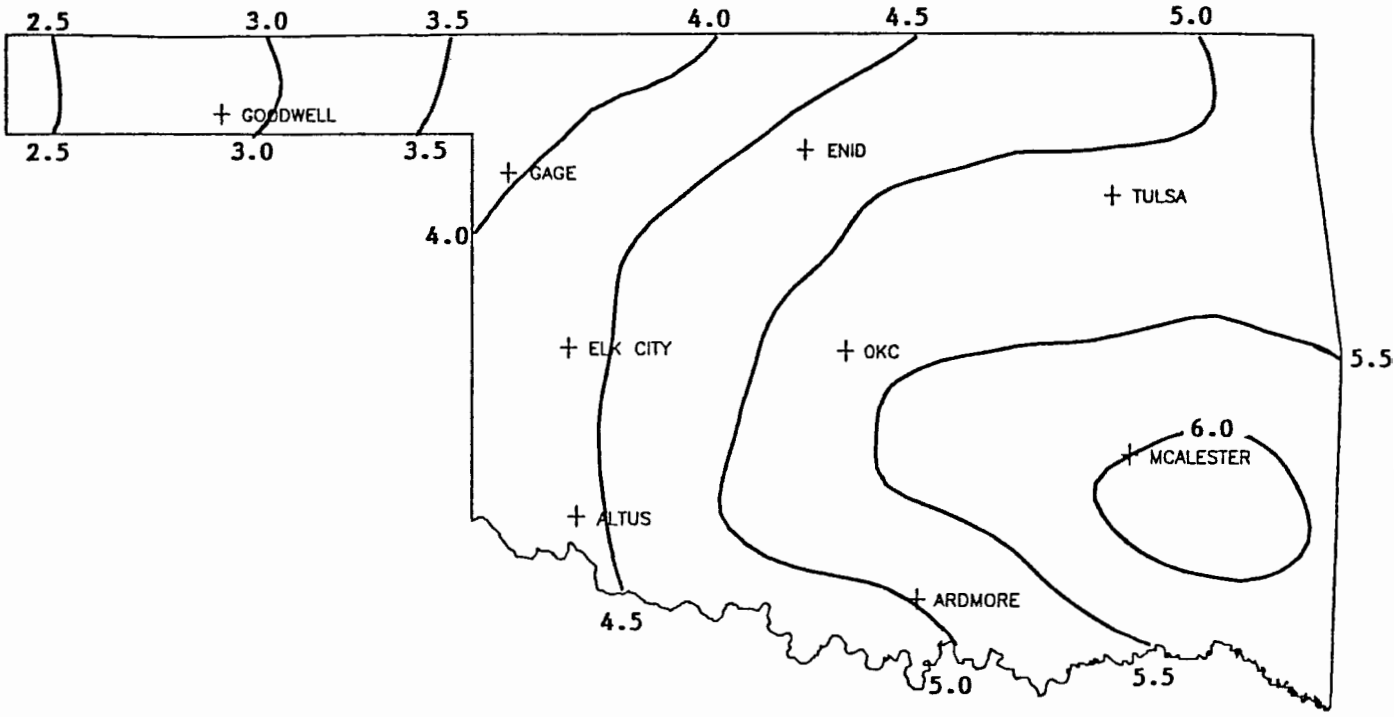
DATE	SUNRISE	SUNSET	DAYLIGHT
910501	6:32AM	8: 9PM LT	13:37
910502	6:31AM	8:10PM LT	13:39
910503	6:30AM	8:11PM LT	13:41
910504	6:29AM	8:11PM LT	13:42
910505	6:28AM	8:12PM LT	13:44
910506	6:27AM	8:13PM LT	13:46
910507	6:26AM	8:14PM LT	13:48
910508	6:25AM	8:15PM LT	13:50
910509	6:24AM	8:15PM LT	13:51
910510	6:23AM	8:16PM LT	13:53
910511	6:22AM	8:17PM LT	13:55
910512	6:22AM	8:18PM LT	13:56
910513	6:21AM	8:19PM LT	13:58
910514	6:20AM	8:19PM LT	14: 0
910515	6:19AM	8:20PM LT	14: 1
910516	6:18AM	8:21PM LT	14: 3
910517	6:18AM	8:22PM LT	14: 4
910518	6:17AM	8:23PM LT	14: 6
910519	6:16AM	8:23PM LT	14: 7
910520	6:16AM	8:24PM LT	14: 8
910521	6:15AM	8:25PM LT	14:10
910522	6:14AM	8:26PM LT	14:11
910523	6:14AM	8:26PM LT	14:12
910524	6:13AM	8:27PM LT	14:14
910525	6:13AM	8:28PM LT	14:15
910526	6:12AM	8:28PM LT	14:16
910527	6:12AM	8:29PM LT	14:17
910528	6:11AM	8:30PM LT	14:18
910529	6:11AM	8:31PM LT	14:20
910530	6:11AM	8:31PM LT	14:21
910531	6:10AM	8:32PM LT	14:22



30-YEAR MEAN MAY DAILY MAXIMUM TEMPERATURE



30-YEAR MEAN MAY DAILY MINIMUM TEMPERATURE



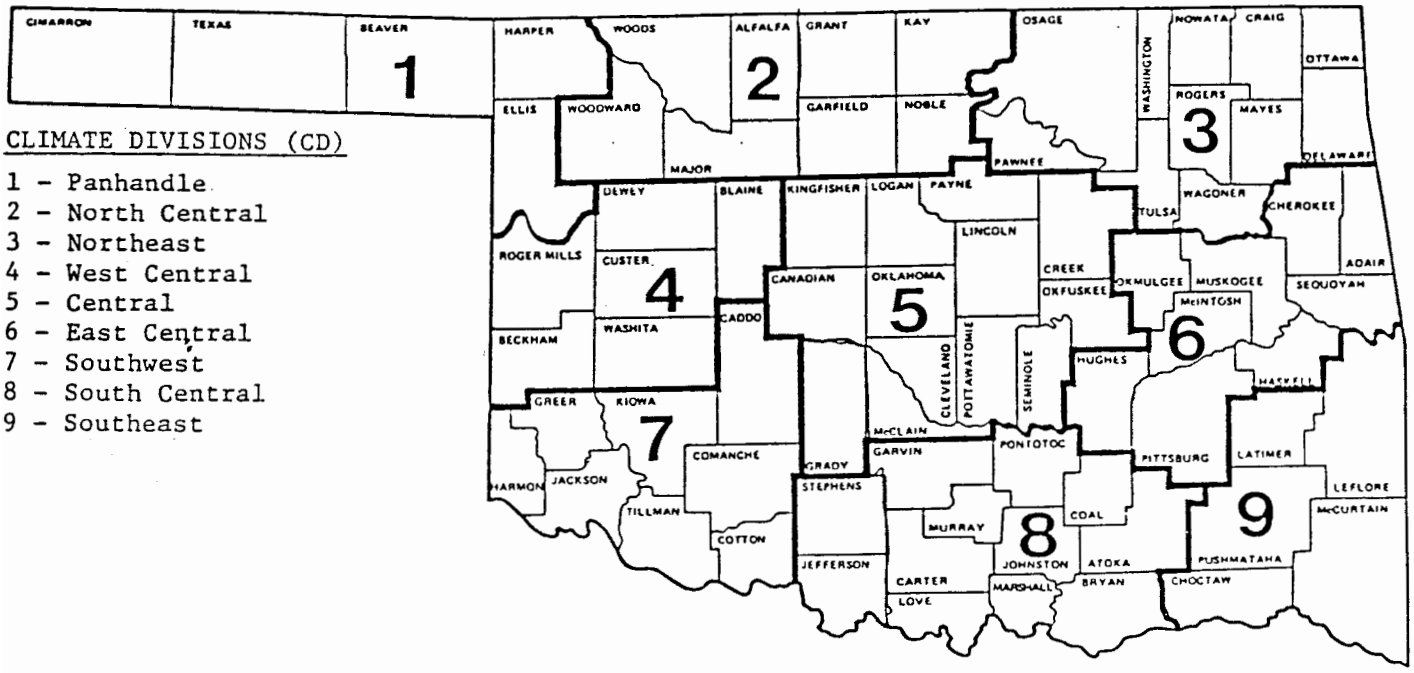
30-YEAR MEAN MAY PRECIPITATION

90-DAY NATIONAL WEATHER SERVICE OUTLOOK

(April-June 1991)

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:

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

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.

MAY 1991

CLIMATE CALENDAR

The data on this calendar are for Oklahoma City. Normal values are calculated for the period 1948-1988. Extremes are found for the period of record (1924-present).

Normal 1	Actual	Normal 2	Actual	Normal 3	Actual	Normal 4	Actual	Normal 5	Actual	Normal 6	Actual	Normal 7	Actual
73.4 max		74.3 max		74.7 max		77.2 max		77.4 max		77.2 max		77.1 max	
52.9 min		52.4 min		54.0 min		54.2 min		57.5 min		56.1 min		55.2 min	
.089 ppt		.122 ppt		.099 ppt		.117 ppt		.155 ppt		.101 ppt		.059 ppt	
3 hdd		3 hdd		3 hdd		2 hdd		1 hdd		2 hdd		2 hdd	
2 cdd		2 cdd		3 cdd		3 cdd		4 cdd		4 cdd		3 cdd	
Highest Max	93-1948	Highest Max	94-1943	Highest Max	92-1940	Highest Max	90-1943	Highest Max	94-1940	Highest Max	94-1954	Highest Max	88-1934
Lowest Max	53-1966	Lowest Max	52-1954	Lowest Max	49-1978	Lowest Max	44-1935	Lowest Max	50-1935	Lowest Max	61-1960	Lowest Max	58-1972
Lowest Min	39-1963	Lowest Min	39-1961	Lowest Min	32-1954	Lowest Min	36-1954	Lowest Min	40-1935	Lowest Min	37-1944	Lowest Min	42-1938
Highest Min	65-1959	Highest Min	69-1959	Highest Min	70-1949	Highest Min	70-1949	Highest Min	69-1940	Highest Min	70-1986	Highest Min	71-1927
Greatest Ppt	1.63-1954	Greatest Ppt	2.99-1990	Greatest Ppt	2.48-1979	Greatest Ppt	1.71-1941	Greatest Ppt	1.58-1967	Greatest Ppt	2.61-1930	Greatest Ppt	1.60-1968

Normal 8	Actual	Normal 9	Actual	Normal 10	Actual	Normal 11	Actual	Normal 12	Actual	Normal 13	Actual	Normal 14	Actual
78.0 max		77.9 max		75.8 max		77.0 max		77.2 max		77.2 max		78.0 max	
55.0 min		56.5 min		56.7 min		56.3 min		55.9 min		56.5 min		55.6 min	
.114 ppt		.153 ppt		.323 ppt		.075 ppt		.157 ppt		.184 ppt		.148 ppt	
2 hdd		2 hdd		2 hdd		3 hdd		2 hdd		2 hdd		2 hdd	
4 cdd		4 cdd		4 cdd		4 cdd		4 cdd		4 cdd		4 cdd	
Highest Max	92-1989	Highest Max	90-1927	Highest Max	96-1967	Highest Max	93-1963	Highest Max	90-1986	Highest Max	95-1984	Highest Max	92-1952
Lowest Max	50-1943	Lowest Max	55-1943	Lowest Max	53-1954	Lowest Max	54-1954	Lowest Max	60-1966	Lowest Max	49-1953	Lowest Max	55-1934
Lowest Min	38-1938	Lowest Min	44-1969	Lowest Min	42-1946	Lowest Min	37-1981	Lowest Min	39-1979	Lowest Min	39-1971	Lowest Min	41-1953
Highest Min	70-1927	Highest Min	70-1963	Highest Min	71-1963	Highest Min	70-1933	Highest Min	72-1956	Highest Min	68-1974	Highest Min	69-1990
Greatest Ppt	3.09-1959	Greatest Ppt	3.37-1943	Greatest Ppt	1.43-1934	Greatest Ppt	4.30-1929	Greatest Ppt	3.11-1967	Greatest Ppt	2.58-1983	Greatest Ppt	2.48-1986

Normal 15	Actual	Normal 16	Actual	Normal 17	Actual	Normal 18	Actual	Normal 19	Actual	Normal 20	Actual	Normal 21	Actual
78.8 max		80.8 max		79.2 max		80.3 max		80.6 max		79.2 max		81.3 max	
57.2 min		58.4 min		58.9 min		58.6 min		58.3 min		58.9 min		59.8 min	
.141 ppt		.188 ppt		.350 ppt		.109 ppt		.233 ppt		.291 ppt		.154 ppt	
1 hdd		1 hdd		1 hdd		1 hdd		1 hdd		1 hdd		1 hdd	
5 cdd		6 cdd		5 cdd		6 cdd		6 cdd		5 cdd		7 cdd	
Highest Max	90-1931	Highest Max	92-1966	Highest Max	96-1966	Highest Max	95-1956	Highest Max	96-1973	Highest Max	94-1990	Highest Max	95-1953
Lowest Max	47-1945	Lowest Max	56-1945	Lowest Max	63-1935	Lowest Max	65-1957	Lowest Max	66-1955	Lowest Max	63-1942	Lowest Max	56-1968
Lowest Min	39-1942	Lowest Min	41-1945	Lowest Min	39-1945	Lowest Min	45-1976	Lowest Min	46-1971	Lowest Min	43-1981	Lowest Min	47-1942
Highest Min	71-1990	Highest Min	75-1974	Highest Min	74-1974	Highest Min	72-1938	Highest Min	71-1933	Highest Min	73-1933	Highest Min	73-1953
Greatest Ppt	2.73-1980	Greatest Ppt	1.81-1986	Greatest Ppt	3.17-1951	Greatest Ppt	1.05-1951	Greatest Ppt	3.35-1955	Greatest Ppt	2.74-1979	Greatest Ppt	1.60-1987

Normal 22	Actual	Normal 23	Actual	Normal 24	Actual	Normal 25	Actual	Normal 26	Actual	Normal 27	Actual	Normal 28	Actual
80.9 max		80.5 max		80.3 max		82.0 max		81.4 max		81.5 max		81.1 max	
60.7 min		60.4 min		61.0 min		61.4 min		60.4 min		59.4 min		61.2 min	
.184 ppt		.211 ppt		.122 ppt		.156 ppt		.307 ppt		.389 ppt		.210 ppt	
0 hdd		1 hdd		0 hdd		0 hdd		1 hdd		0 hdd		0 hdd	
6 cdd		6 cdd		6 cdd		7 cdd		7 cdd		6 cdd		7 cdd	
Highest Max	98-1939	Highest Max	99-1939	Highest Max	94-1939	Highest Max	93-1990	Highest Max	95-1953	Highest Max	96-1927	Highest Max	91-1926
Lowest Max	58-1963	Lowest Max	60-1935	Lowest Max	63-1947	Lowest Max	69-1976	Lowest Max	57-1950	Lowest Max	64-1976	Lowest Max	62-1932
Lowest Min	42-1931	Lowest Min	48-1963	Lowest Min	42-1935	Lowest Min	47-1947	Lowest Min	49-1968	Lowest Min	43-1961	Lowest Min	43-1947
Highest Min	74-1953	Highest Min	72-1953	Highest Min	72-1989	Highest Min	72-1937	Highest Min	71-1953	Highest Min	76-1927	Highest Min	71-1942
Greatest Ppt	2.62-1975	Greatest Ppt	3.09-1952	Greatest Ppt	1.90-1957	Greatest Ppt	1.49-1968	Greatest Ppt	2.00-1959	Greatest Ppt	5.38-1987	Greatest Ppt	2.33-1987

Normal 29	Actual	Normal 30	Actual	Normal 31	Actual
82.5 max		83.1 max		81.9 max	
61.3 min		62.5 min		62.8 min	
.304 ppt		.188 ppt		.216 ppt	
0 hdd		0 hdd		0 hdd	
8 cdd		8 cdd		8 cdd	
Highest Max	94-1985	Highest Max	104-1985	Highest Max	98-1928
Lowest Max	62-1947	Lowest Max	66-1975	Lowest Max	69-1964
Lowest Min	39-1947	Lowest Min	45-1947	Lowest Min	48-1975
Highest Min	73-1989	Highest Min	74-1974	Highest Min	74-1949
Greatest Ppt	5.63-1970	Greatest Ppt	2.30-1929	Greatest Ppt	1.64-1968

MAY AVERAGES

Temperature	:	68.4°F
Precipitation	:	5.65"
Heating Degree Days	:	40
Cooling Degree Days	:	158