

OKLAHOMA MONTHLY SUMMARY REVISED DECEMBER 1999

TABLE OF CONTENTS

December 1999 Oklahoma Summary.....	2
Table of December 1998/1999 Comparisons.....	5
December 1999 Data Summary Tables.....	6
December 1999 Mesonet Summary.....	11
December 1999 State Map Summary.....	12
December Climatological Normals.....	15
90 - Day National Weather Service Outlook.....	16
February Wind Roses – February 2000 Sunrise/Sunset Tables.....	17
Explanation of Tables.....	18
February Oklahoma City Climate Calendar.....	20
February Tulsa Climate Calendar.....	21

MONTHLY SUMMARY FOR DECEMBER 1999

December 1999 was both warmer and wetter than normal in Oklahoma. Temperatures averaged 43.1 degrees across the state, exceeding the normal monthly temperature by 3.6 degrees and ranking 21st on the 108-year-long list of December temperatures. The statewide-averaged precipitation for the month was 3.14 inches, 1.48 inches greater than normal, to rank this as Oklahoma's 14th wettest December since 1892. December statistics were consistent with the annual values. Based on preliminary data, 1999 was the 19th warmest (temperature of 61.6 degrees, 1.3 degrees greater than normal) and 29th wettest (total precipitation 37.79 inches, 3.55 inches greater than normal) year since 1892.

The vast majority of the precipitation occurred with three winter storm systems during the first half of the month. Thunderstorms from the 2nd through the 4th produced over 4 inches of precipitation at Frederick (Tillman County) and Hollow (Craig). The system spawned three tornadoes (one near Perry in Noble County and the other two near Guthrie in Logan County) bringing the state's total number of tornadoes in 1999 to 146. Chelsea (Rogers), Kansas (Delaware), Pawhuska (Osage), Tulsa (Tulsa), and Red Rock (Noble) each recorded at least 3.35 inches of precipitation as the system passed. In the wake of the system, Arnett (Ellis) and Laverne (Harper) each reported 10 inches of snow as northwestern Oklahoma received its first significant snowfall of the season.

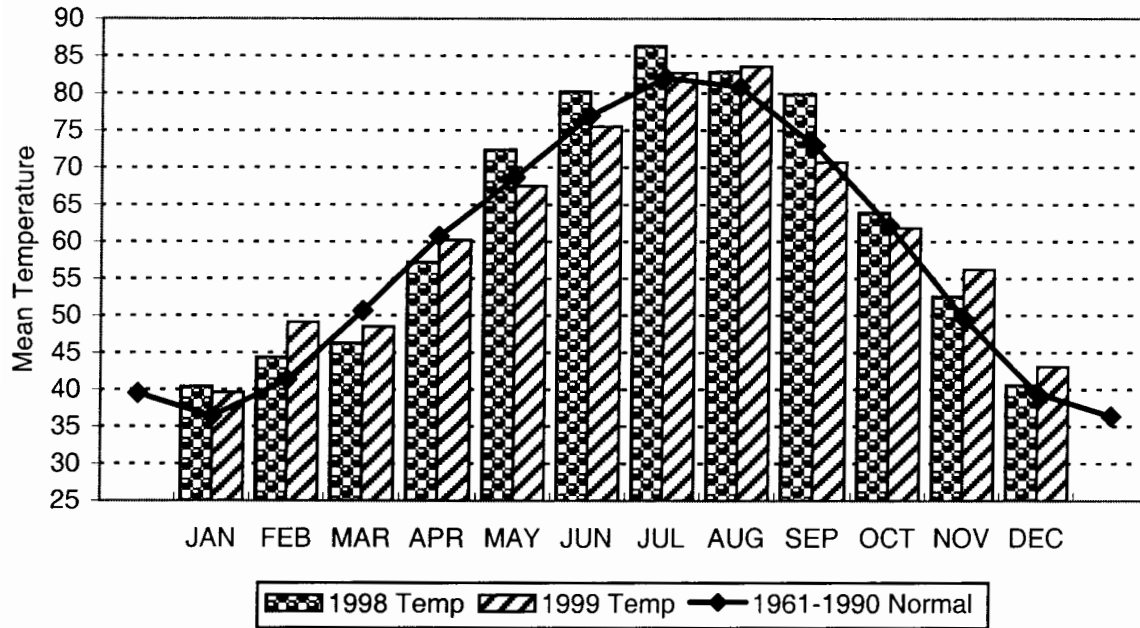
Headrick (Jackson) and Red Rock each reported over three inches of precipitation from the 7th through the 9th. Mulhall (Logan), Piedmont (Canadian), and Stillwater (Payne), each recorded 2.75 inches or more over the period. Rain fell mixed with snow or sleet in western Oklahoma. The month's final weather-producing event, on the 11th and 12th, produced 3.42 inches of rain at Colony (Washita), and substantial rains in McCurtain County (3.75 inches at Battiest and west of Broken Bow, 3.53 inches at Carter Tower, and 3.15 inches at Hochatown).

Hail and strong wind reports were somewhat limited during the month. Thunderstorms on the 9th produced several reports of large hail in southwestern Oklahoma. A state highway near Hydro (Caddo) was flooded for a short time on the 9th. Significant peak winds, as reported by the Oklahoma Mesonet, were confined to the first half of the month. The greatest peak winds reported were: Cheyenne (Roger Mills), 59 miles per hour on the 14th; Durant (Bryan), 55 miles per hour on the 3rd; and Boise City (Cimarron), 55 miles per hour on the 14th. Other reports of 50 mile-per-hour or greater winds occurred on the 4th and the 9th.

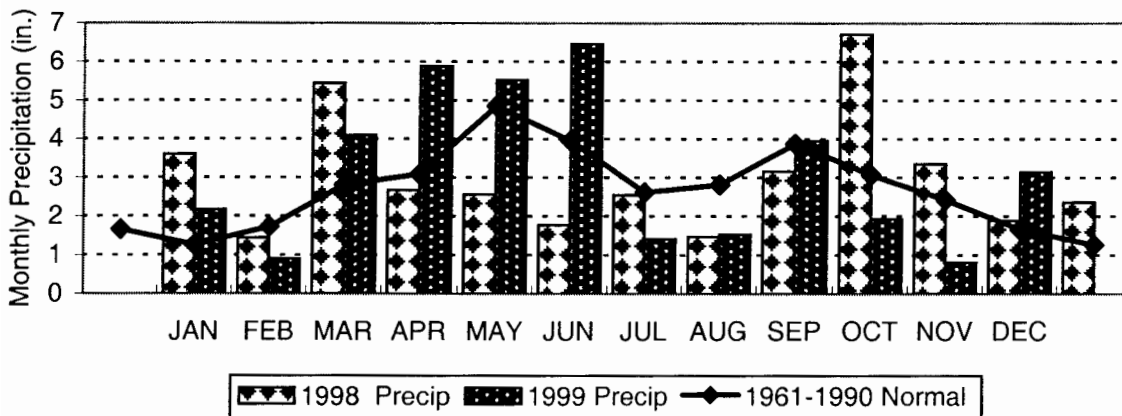
The state's weather was uncharacteristically tranquil after the 15th. Only occasional light rain or dustings of snow were reported and there were no dramatic temperature swings from the 15th through the end of the month.

Howard L. Johnson

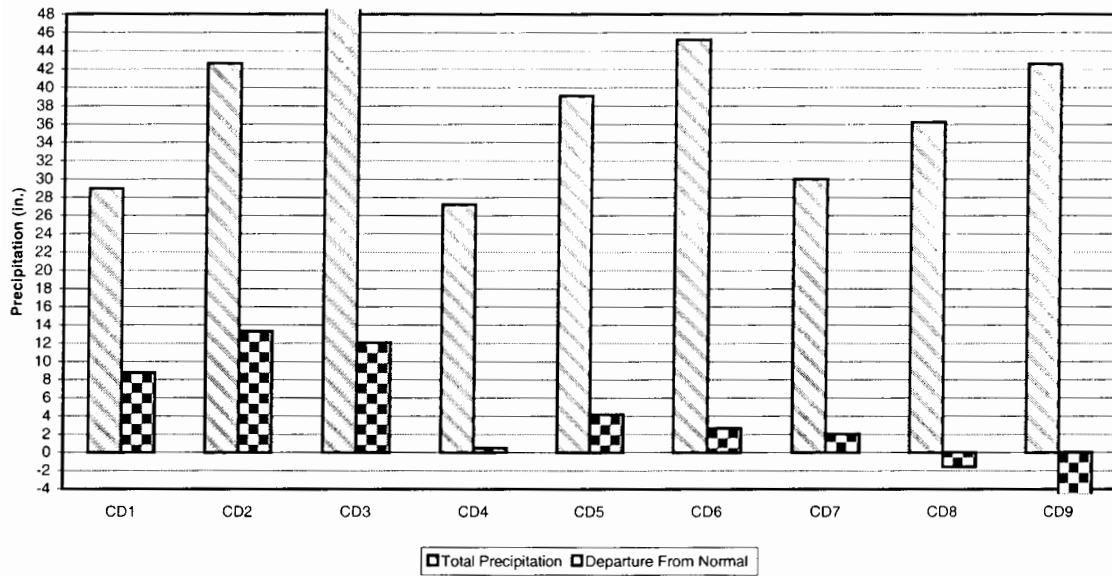
1998 and 1999 STATEWIDE TEMPERATURES Monthly Averages



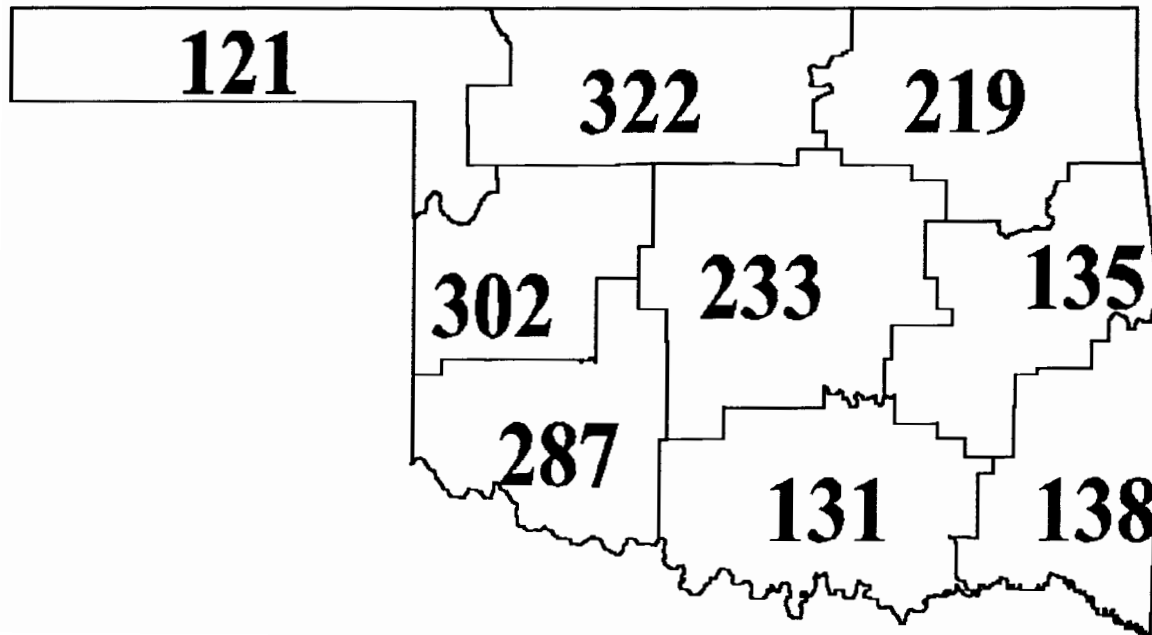
1998 and 1999 STATEWIDE PRECIPITATION Monthly Totals



CD Averaged Precipitation January through December 1999



CD PERCENT OF NORMAL PRECIPITATION December 1999



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

CD	MAX TEMP	DATE	LOCATION	MIN TEMP	DATE	LOCATION	24-HOUR PRECIP	DATE	LOCATION	MONTHLY PRECIP	LOCATION
1	77	2	GOODWELL	10	13	KENTON	1.48	5	ARNETT	1.78	ARNETT
				10	21	KENTON					
2	75	28	FREEDOM	12	5	FREEDOM	1.87	9	PERRY	6.65	RED ROCK
	75	28	WAYNOKA	12	6	FREEDOM					
3	73	4	BIXBY	12	21	BARTLESVILLE	2.81	4	HOLLOW	5.44	HOLLOW
	73	29	MANNFORD	12	21	RALSTON					
	73	3	WAGONER								
4	75	29	ELK CITY	15	21	HAMMON	2.73	11	COLONY	6.43	COLONY
	75	29	TALOGA								
5	73	29	BRISTOW	11	21	CUSHING	2.38	8	MULHALL	5.06	STILLWATER
	73	3	CHICKASHA EX								
	73	28	CHICKASHA EX								
	73	3	OKEMAH								
	73	3	SEMINOLE								
6	77	3	STILWELL	16	21	STILWELL	2.50	12	MCCURTAIN	5.73	STILWELL
7	76	4	CHATTANOOGA	17	21	MANGUM	4.20	3	FREDERICK	5.52	FREDERICK
	76	4	LAWTON								
8	78	2	WAURIKA	18	22	CENTRAHOMA	2.81	12	DAISY	5.69	TISHOMINGO
				18	23	CENTRAHOMA					
9	77	3	POTEAU	16	22	WISTER	3.45	12	BATTIEST	6.98	BATTIEST
	77	4	WISTER	16	23	WISTER					

TABLE OF 1998/1999 COMPARISONS

**DECEMBER
Temperature (°F)**

**DECEMBER
Precipitation (in.)**

Station	1998	1999	1998	1999
Arnett	36.4	37.8	0.80	1.78
Enid	39.1	41.5	1.92	3.23
Tulsa	40.8	43.4	1.57	5.11
Elk City	39.4	41.9	0.72	1.57
Oklahoma City	41.6	43.2	1.63	3.71
McAlester	42.5	45.9	2.38	1.95
Altus Irr Station	40.8	43.1	0.53	3.19
Ardmore	44.9	47.9	2.63	1.57
Idabel	44.8	49.3	5.65	4.51

EXTREMES

VARIABLE	STATION	DIVISON	OBSERVATION	DATE
Minimum temperature (°F)	Kenton	1	10	13
	Kenton	1	10	21
Maximum temperature (°F)	Waurika	8	78	2
Maximum 24-hour Precipitation	Frederick	7	4.20"	3

DECEMBER 1999 SUMMARY FOR PANHANDLE DIVISION (CD1)

NAME	ID	CD	MEAN TEMP	NUM OBS	DEV		MIN TEMP	DAY	HEAT DEG	DEV FROM	COOL DEG	DEV FROM	TOT PPT	NUM OBS	DEV		DAY	
					FROM NORM	MAX TEMP									FROM NORM	MAX 24-HR		
ARNETT	332	1	37.8	31	2	72	29	14	6	844	-74	0	0	1.781	31	1.01	1.48	5
BEAVER	593	1	37.6	31	4	72	30	16	22	848	-113	0	0	0.370	31	-0.22	0.37	5
BOISE CITY	908	1	38.5	31	3	76	1	13	22	820	-88	0	0	0.303	31	-0.08	0.30	4
BUFFALO	1243	1	40.7	31	4	76	27	12	7	754	-111	0	0	0.400	31	-0.40	0.40	4
FARGO	3070	1	*****	0	*****	****	0	****	0	*****	*****	*****	*****	0.781	31	0.01	0.78	5
GAGE	3407	1	39.3	28	*****	74	29	16	20	721	*****	0	*****	0.025	29	*****	0.02	4
GATE	3489	1	39.5	31	5	74	30	18	7	791	-139	0	0	1.210	31	0.51	1.08	5
GOODWELL	3628	1	38.8	31	5	77	2	11	22	813	-152	0	0	0.320	31	0.04	0.17	5
HOOKER	4298	1	40.3	31	5	73	28	18	22	765	-165	0	0	0.460	31	0.05	0.36	4
KENTON	4766	1	37.1	26	*****	73	2	10	21	726	*****	0	*****	0.051	30	*****	0.03	4
LAVERNE	5045	1	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.463	31	0.73	1.43	5
RANGE	7412	1	*****	0	*****	****	0	****	0	*****	*****	*****	*****	0.341	31	*****	0.30	4
REGNIER	7534	1	*****	0	*****	****	0	****	0	*****	*****	*****	*****	0.073	31	-0.26	0.07	4
TURPIN	9017	1	37.9	26	*****	72	29	16	13	705	*****	0	*****	0.400	26	*****	0.40	6

DECEMBER 1999 SUMMARY FOR NORTH CENTRAL DIVISION (CD2)

NAME	ID	CD	MEAN TEMP	NUM OBS	DEV		MIN TEMP	DAY	HEAT DEG	DEV FROM	COOL DEG	DEV FROM	TOT PPT	NUM OBS	DEV		DAY	
					FROM NORM	MAX TEMP									FROM NORM	MAX 24-HR		
ALVA	193	2	39.2	31	*****	74	29	15	6	800	*****	0	*****	2.900	31	*****	1.78	5
VANCE AFB	302	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.631	29	*****	0.90	9
BILLINGS	755	2	40.0	31	4	70	29	18	21	776	-124	0	0	4.490	31	3.12	1.55	4
BLACKWELL 2E	818	2	40.1	31	4	69	30	19	22	772	-112	0	0	3.521	31	2.17	1.23	4
BRAMAN	1075	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.791	31	*****	1.47	5
CEDARDALE	1620	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.421	31	*****	1.01	5
CHEROKEE	1724	2	38.7	31	1	72	29	13	6	816	-43	0	0	2.850	31	1.72	1.30	9
ENID	2912	2	41.5	31	4	71	29	23	21	727	-110	0	0	3.230	31	2.09	1.37	4
FT SUPPLY	3304	2	36.7	30	2	74	28	14	20	851	-89	0	0	0.683	31	-0.04	0.65	4
FREEDOM	3358	2	37.6	30	1	75	28	12	6	822	-65	0	0	2.010	31	1.20	0.90	8
GREAT SALT P	3740	2	40.4	31	5	72	29	16	21	764	-148	0	0	3.630	31	2.81	1.38	4
HARDY	3909	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.182	31	*****	1.20	4
HELENA	4019	2	39.2	31	4	73	29	18	6	800	-127	0	0	3.373	31	2.39	1.40	4
JEFFERSON	4573	2	41.5	31	5	72	28	19	21	729	-140	0	0	4.352	31	3.16	1.54	3
LAMONT	5013	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.080	31	*****	1.35	4
MEDFORD	5768	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.370	31	*****	1.30	8
MORRISON	6065	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.700	31	*****	1.68	9
MUTUAL	6139	2	39.3	31	4	72	29	15	6	797	-119	0	0	2.350	31	1.61	1.15	5
NEWKIRK	6278	2	39.5	31	3	68	30	20	22	791	-90	0	0	3.951	31	2.52	1.23	5
ORIENTA	6751	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.330	31	2.52	1.42	4
PERRY	7012	2	42.4	31	4	70	30	22	22	700	-112	0	0	5.690	31	4.36	1.87	9
PONCA CITY	7201	2	41.6	30	6	70	29	19	14	703	-202	0	0	4.464	31	3.05	1.15	9
RED ROCK	7505	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.650	31	5.31	1.75	3
WAYNOKA	9404	2	39.8	25	*****	75	28	15	8	630	*****	0	*****	0.750	25	*****	0.75	3
WOODWARD	9760	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.001	31	0.16	0.95	5

DECEMBER 1999 SUMMARY FOR NORTHEAST DIVISION (CD3)

NAME	ID	CD	MEAN TEMP	NUM OBS	DEV		MIN	DAY	HEAT DEG	DEV FROM	COOL DEG	DEV FROM	TOT PPT	NUM OBS	DEV		DAY	
					FROM NORM	MAX TEMP									FROM NORM	MAX 24-HR		
BARNSDALL	535	3	42.1	31	4	71	29	14	21	709	-126	0	0	3.143	31	1.24	1.04	4
BARTLESVILLE	548	3	41.8	30	4	71	29	12	21	698	-137	0	0	3.890	31	2.26	1.08	5
BIXBY	782	3	42.9	31	5	73	4	20	21	684	-147	0	0	3.670	31	1.71	0.91	5
BURBANK	1256	3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.130	31	3.63	2.47	9
CHELSEA	1717	3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.030	31	*****	2.40	4
CLAREMORE	1828	3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.290	31	2.11	1.79	4
CLEVELAND 2	1902	3	41.6	28	*****	69	29	17	21	655	*****	0	*****	5.320	29	*****	2.18	4
FORAKER	3250	3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.690	31	3.19	1.56	9
HOLLOW	4258	3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.440	31	3.41	2.81	4
HOMINY	4289	3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.340	31	2.77	1.65	4
KANSAS	4672	3	43.5	26	*****	71	3	17	21	560	*****	0	*****	5.153	28	*****	2.50	5
LENAPAH	5118	3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.510	31	*****	2.15	4
MANNFORD	5522	3	44.2	31	5	73	29	17	21	645	-165	0	0	3.680	31	1.89	0.94	9
MARAMEC	5540	3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.890	31	2.41	1.17	9
NOWATA	6485	3	43.6	29	*****	69	30	14	21	620	*****	0	*****	4.250	30	*****	1.57	5
PAWHUSKA	6935	3	42.4	31	5	71	29	14	21	702	-147	0	0	4.221	31	2.55	2.10	4
PAWNEE	6940	3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.670	31	3.14	1.40	4
PRYOR	7309	3	41.5	28	*****	71	4	16	22	659	*****	0	*****	3.561	29	*****	1.03	5
RALSTON	7390	3	41.3	31	3	72	29	12	21	736	-104	0	0	4.470	31	2.91	1.50	9
SKIATOOK	8258	3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.980	31	3.32	1.50	4
SPAVINAW	8380	3	45.9	31	6	72	3	18	21	594	-170	0	0	3.770	31	1.27	1.09	5
TULSA	8992	3	43.4	31	5	70	29	18	21	671	-139	0	0	5.113	31	2.95	1.71	9
UPPER SPAV	9101	3	44.5	30	*****	72	3	18	21	616	*****	0	*****	3.273	30	*****	1.58	5
VINITA	9203	3	50.8	8	*****	67	3	21	6	114	*****	0	*****	5.020	10	*****	1.42	9
WAGONER	9247	3	45.1	30	5	73	3	18	21	598	-158	0	0	3.251	31	0.81	1.18	4
WANN	9298	3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.830	31	*****	1.38	4
WYNONA	9792	3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.641	31	*****	1.78	4

DECEMBER 1999 SUMMARY FOR WEST CENTRAL DIVISION (CD4)

NAME	ID	CD	MEAN TEMP	NUM OBS	DEV		MIN	DAY	HEAT DEG	DEV FROM	COOL DEG	DEV FROM	TOT PPT	NUM OBS	DEV		DAY	
					FROM NORM	MAX TEMP									FROM NORM	MAX 24-HR		
CANTON DAM	1445	4	40.5	31	4	73	29	20	6	761	-132	0	0	3.150	31	2.33	1.12	4
CLINTON	1909	4	41.4	31	2	73	29	20	21	732	-65	0	0	2.561	31	1.57	1.44	9
COLONY	2039	4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.430	31	*****	2.73	11
CORDELL	2125	4	41.9	31	3	73	29	23	21	717	-86	0	0	1.841	31	0.94	0.85	4
ELK CITY	2849	4	41.9	31	3	75	29	21	21	718	-98	0	0	1.570	31	0.80	0.70	5
ERICK	2944	4	41.3	31	2	74	29	19	21	735	-72	0	0	0.660	31	-0.05	0.59	5
GEARY	3497	4	41.7	31	3	72	28	22	21	723	-103	0	0	4.900	31	3.96	1.95	3
HAMMON	3871	4	39.0	29	*****	74	29	15	21	753	*****	0	*****	1.740	30	*****	0.76	5
LEEDEY	5090	4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.030	31	0.39	0.87	5
MACKIE	5463	4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.110	31	*****	0.69	5
MORAVIA	6035	4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.260	31	0.44	0.60	5
OKEENE	6629	4	42.3	31	3	70	28	21	21	705	-105	0	0	4.140	31	3.09	1.40	4
RETROP	7565	4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.631	31	*****	0.70	5
REYDON	7579	4	40.4	28	*****	73	30	18	20	689	*****	0	*****	1.820	28	*****	1.40	5
SAYRE	7952	4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	0.980	31	0.39	0.40	5
SWEETWATER	8652	4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	0.981	31	*****	0.73	5
TALOGA	8708	4	39.4	31	2	75	29	18	21	795	-65	0	0	2.611	31	1.93	0.73	4
THOMAS	8815	4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.460	31	*****	0.90	4
VICI	9172	4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	0.451	31	-0.41	0.45	4
WATONGA	9364	4	42.6	31	5	72	28	23	21	694	-140	0	0	4.191	31	3.13	1.33	10
WEATHERFORD	9422	4	41.1	31	4	71	28	22	21	742	-124	0	0	2.670	31	1.78	1.00	3

DECEMBER 1999 SUMMARY FOR CENTRAL DIVISION (CD5)

NAME	ID	CD	MEAN TEMP	NUM OBS	DEV			MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV		
					FROM NORM	MAX TEMP	DAY									FROM NORM	MAX 24-HR	DAY
AMBER	200	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.890	31	*****	1.43	9
ARCADIA	288	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.630	31	*****	1.10	8
BLANCHARD	830	5	45.2	31	4	72	3	17	20	614	-121	0	0	3.592	31	2.00	1.55	9
BRISTOW	1144	5	44.9	30	5	73	29	17	6	604	-168	0	0	4.290	31	2.22	1.31	4
CHANDLER	1684	5	43.3	29	*****	72	30	21	6	631	*****	0	*****	2.990	29	*****	0.80	9
CHICKASHA EXP	1750	5	45.7	31	5	73	28	22	25	598	-162	0	0	3.461	31	2.20	1.53	9
COX CITY	2196	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.990	31	*****	1.00	10
CRESCENT	2242	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.480	31	*****	2.37	9
CUSHING	2318	5	42.2	26	*****	71	30	11	21	593	*****	0	*****	3.450	30	*****	1.25	9
EDMOND	2788	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.820	31	*****	1.27	8
EL RENO	2818	5	42.8	31	4	70	29	24	22	690	-123	0	0	4.710	31	3.67	2.00	9
GUTHRIE	3821	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.590	31	1.09	1.60	9
HENNESSEY	4055	5	40.4	29	*****	67	29	21	21	715	*****	0	*****	4.710	30	*****	1.40	4
INGALLS	4489	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.590	31	*****	1.38	4
KINGFISHER	4861	5	42.7	31	4	72	30	21	20	692	-111	0	0	4.251	31	3.06	1.84	9
KONAWA	4915	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.100	31	0.22	1.00	9
MARSHALL	5589	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.660	31	3.51	1.84	4
MEEKER	5779	5	40.6	29	*****	69	30	19	22	708	*****	0	*****	3.460	31	2.04	1.13	10
MULHALL	6110	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.880	31	*****	2.38	8
NORMAN NWS	6386	5	43.4	31	2	70	3	21	6	669	-75	0	0	3.052	31	1.47	1.54	9
OKEMAH	6638	5	46.6	31	6	73	3	23	6	569	-181	0	0	2.910	31	0.91	0.87	9
OKLAHOMA CTY	6659	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.093	31	*****	1.53	9
OKLAHOMA CTY	6661	5	43.2	31	4	70	29	21	21	676	-122	0	0	3.713	31	2.31	1.30	9
PERKINS	7003	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.890	31	0.36	1.34	4
PIEDMONT	7068	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.840	31	*****	2.16	9
PRAGUE	7264	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.471	31	1.65	1.05	3
SEMINOLE	8042	5	43.7	31	2	73	4	21	7	660	-53	0	0	4.090	31	2.27	1.40	3
SHAWNEE	8110	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.680	31	1.80	1.33	4
STELLA	8479	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.571	31	*****	1.11	9
STILLWATER	8501	5	42.9	31	6	72	30	21	22	686	-170	0	0	5.060	31	3.76	1.68	9
STROUD	8563	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.391	31	*****	1.01	9
TECUMSEH	8751	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.850	31	*****	1.27	4
TROUSDALE	8960	5	43.5	28	*****	73	4	19	22	601	*****	0	*****	4.510	28	*****	1.20	4
UNION CITY	9086	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.171	31	1.82	1.61	9
WELTY	9479	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.430	31	*****	0.84	3
WEWOKA	9575	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.730	31	1.83	1.55	4

DECEMBER 1999 SUMMARY FOR EAST CENTRAL DIVISION (CD6)

NAME	ID	CD	MEAN TEMP	NUM OBS	DEV			MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV		
					FROM NORM	MAX TEMP	DAY									FROM NORM	MAX 24-HR	DAY
ASHLAND	364	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.460	31	*****	1.08	12
BEGGS	631	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.080	31	*****	1.08	4
CHECOTAH	1711	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.370	31	0.92	1.50	5
CLAYTON	1858	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.250	31	*****	2.44	12
DEWAR	2485	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.132	31	1.04	1.28	5
DUSTIN	2690	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.460	31	*****	0.94	5
EUFULA	2993	6	46.4	30	4	73	4	24	21	557	-128	0	0	3.200	30	*****	1.00	13
HANNA	3884	6	48.5	31	7	74	3	21	6	511	-219	0	0	2.060	31	-0.38	0.69	9
HASKELL	3956	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.000	31	0.72	1.07	5
LAKE EUFAULA	4975	6	44.3	31	*****	73	4	22	22	643	*****	1	*****	3.222	31	*****	1.32	5
LYONS	5437	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.402	31	1.65	1.57	5
MARBLE CITY	5546	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.270	31	*****	1.00	5
MCALESTER	5664	6	45.9	31	5	75	3	20	28	593	-145	0	0	1.952	31	-0.67	0.73	4
MCCURTAIN	5693	6	46.4	31	4	75	3	19	22	576	-123	0	0	4.851	31	2.03	2.50	12
MUSKOGEE	6130	6	43.6	31	3	75	3	20	28	664	-92	0	0	2.762	31	-0.14	1.21	4
OKMULGEE	6670	6	44.0	27	*****	74	3	19	23	568	*****	0	*****	3.812	27	*****	1.83	4
OKTAHA	6678	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.580	31	*****	1.32	5
SALLISAW	7862	6	43.9	31	3	74	4	22	22	655	-81	0	0	4.280	31	1.47	1.96	12
SCIPIO	7979	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.990	31	*****	0.76	12
SHORT	8170	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.420	31	*****	2.00	12
STILWELL	8506	6	42.6	31	3	77	3	16	21	695	-81	0	0	5.730	31	2.57	2.10	4
TAHLEQUAH	8677	6	44.2	31	5	70	3	17	21	644	-141	0	0	3.740	31	0.74	1.90	5
WEBBERS FALI.	9445	6	41.8	18	*****	69	31	19	29	418	*****	0	*****	3.090	25	*****	1.30	5
WETUMKA	9571	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.821	31	1.70	1.28	5

DECEMBER 1999 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	179	7	43.1	31	1	75	28	23	15	678	-41	0	0	3.190	31	2.28	1.42	9
ALTUS DAM	184	7	43.7	31	4	75	29	22	6	662	-123	0	0	2.540	31	1.68	1.24	9
ANADARKO	224	7	41.1	31	2	71	3	20	6	740	-48	0	0	3.240	31	2.04	1.30	9
APACHE	260	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.700	31	2.54	1.67	9
ALTUS AFB	447	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.270	30	*****	1.86	10
CARNEGIE	1504	7	42.8	31	3	71	28	23	20	687	-91	0	0	4.790	31	3.73	1.70	3
CHATTANOOGA	1706	7	42.8	27	*****	76	4	23	22	600	*****	0	*****	2.700	27	*****	1.44	10
DUNCAN 11 W	2668	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.690	31	*****	0.63	9
FREDERICK	3353	7	44.0	26	*****	73	29	25	22	545	*****	0	*****	5.520	28	*****	4.20	3
HEADRICK	3998	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.760	31	*****	2.02	9
HOBART	4204	7	42.7	29	*****	73	28	24	20	646	*****	0	*****	4.250	31	3.41	2.72	9
HOLLIS	4249	7	43.1	31	2	74	28	19	20	680	-71	0	0	1.230	31	0.55	0.83	10
LAWTON	5063	7	44.0	31	4	76	4	24	10	653	-126	0	0	3.041	31	1.79	1.40	9
LOOKEBA	5329	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.601	31	3.58	2.00	9
MANGUM	5509	7	43.5	31	3	75	29	17	21	667	-84	0	0	1.500	31	0.71	1.50	14
RANDLETT	7403	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.870	31	*****	0.84	9
ROOSEVELT	7727	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.210	31	2.24	1.76	9
SEDAN	8016	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.350	31	*****	2.25	4
SNYDER	8299	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.650	31	2.67	1.37	10
VINSON	9212	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	0.510	31	-0.19	0.35	5
WALTERS	9278	7	43.0	28	*****	74	4	21	6	616	*****	0	*****	1.710	29	*****	0.73	9
WICHITA MT	9629	7	43.7	30	5	72	29	20	6	638	-184	0	0	2.650	30	*****	0.85	9
WILLOW	9668	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.150	31	*****	0.47	5

DECEMBER 1999 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	44.2	31	2	71	29	21	7	646	-62	0	0	2.100	31	0.12	1.12	9
ALLEN	147	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.400	31	*****	0.70	5
ARDMORE	292	8	47.9	30	3	71	30	26	6	512	-117	0	0	1.571	31	-0.28	0.74	9
ATOKA DAM	394	8	46.0	19	*****	72	30	22	22	361	*****	0	*****	3.941	20	*****	1.74	13
BOKCHITO	917	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.180	31	*****	2.00	12
CANEY	1437	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.940	31	*****	2.09	12
CENTRAHOMA	1648	8	45.4	30	*****	74	4	18	23	589	*****	2	*****	2.250	30	*****	1.20	12
CHICKASAW	1745	8	43.0	30	2	72	4	19	22	660	-91	0	0	1.610	30	*****	0.65	4
COLEMAN	2011	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.330	31	*****	1.55	12
COMANCHE	2054	8	46.7	30	*****	73	3	24	6	548	*****	0	*****	1.450	31	-0.15	0.70	4
DAISY	2354	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.270	31	2.36	2.81	12
DUNCAN	2660	8	44.7	30	3	73	5	23	6	610	-126	0	0	1.990	31	0.50	0.73	4
ELMORE CITY	2872	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.190	31	*****	0.68	3
GRADY	3688	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	0.740	31	*****	0.48	12
HEALDTON	4001	8	44.8	30	3	74	4	20	7	605	-100	0	0	1.030	30	*****	0.50	4
HENNEPIN	4052	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.670	31	*****	0.62	9
KETCHUM RAN	4780	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.960	31	*****	0.85	4
KINGSTON	4865	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.840	31	0.72	1.75	11
LEHIGH	5108	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.103	31	*****	1.40	12
LINDSAY	5216	8	42.4	27	*****	72	3	21	6	610	*****	0	*****	1.800	27	*****	0.98	3
LOCO	5247	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.010	31	*****	0.42	9
MADILL	5468	8	46.8	31	3	74	4	22	22	567	-90	3	3	3.301	31	1.29	1.45	12
MARIETTA	5563	8	47.1	31	3	76	4	19	23	555	-103	1	1	1.850	31	0.00	1.05	12
MARLOW	5581	8	44.3	31	3	73	3	19	6	641	-89	0	0	2.452	31	1.06	0.90	4
MCGEE CREEK	5713	8	45.2	29	*****	74	4	23	28	574	*****	1	*****	5.290	29	*****	2.54	12
PAULS VALLEY	6926	8	42.6	31	1	73	4	19	6	694	-25	0	0	2.080	31	0.28	0.78	3
PONTOTOC	7214	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.180	31	0.32	0.91	11
TISHOMINGO	8884	8	47.4	30	5	74	3	20	22	531	-158	2	2	5.690	31	3.56	2.80	2
TUSSY	9032	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.120	31	*****	1.10	8
WAURIKA	9395	8	46.8	31	3	78	2	21	22	567	-104	2	2	0.950	31	-0.60	0.47	4

DECEMBER 1999 SUMMARY FOR SOUTHEAST DIVISION (CD9)

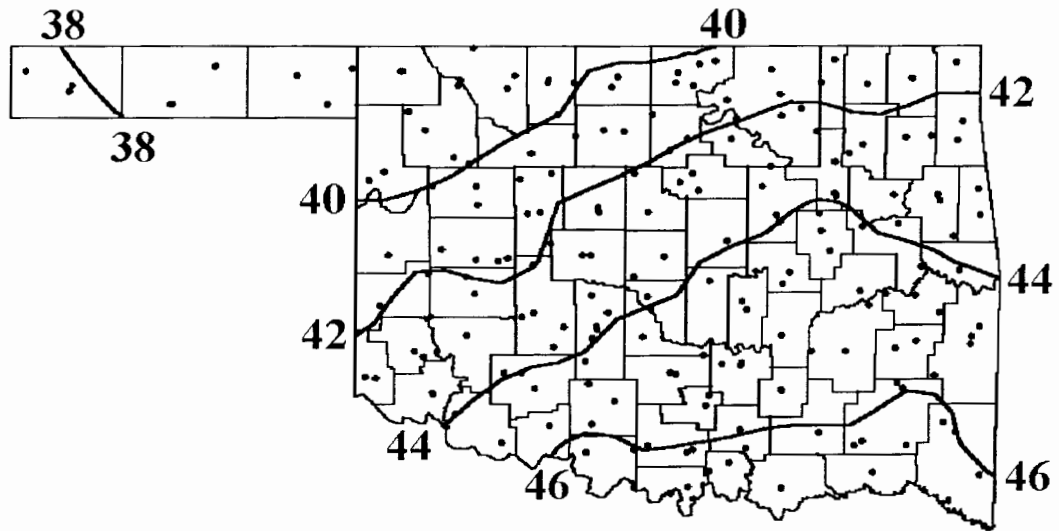
NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ANTLERS	256	9	45.9	31	3	75	3	17	23	593	-87	0	0	4.400	31	1.52	2.60	12
BATTIEST	567	9	48.1	31	*****	75	4	28	24	529	*****	4	*****	6.980	31	*****	3.45	12
BENGAL	670	9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.390	31	*****	2.78	12
BROKEN BOW	1162	9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.650	31	0.67	2.47	12
CARNASAW	1499	9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.730	31	0.62	2.67	12
CARTER TWR	1544	9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.620	31	0.50	3.39	12
FANSHAWE	3065	9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.010	31	2.80	2.52	12
HEAVENER	4008	9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.820	31	1.33	2.49	11
IDABEL	4451	9	49.3	12	*****	75	5	26	7	189	*****	0	*****	4.510	31	0.83	2.36	12
PAGE	6842	9	42.2	20	*****	68	31	18	23	457	*****	0	*****	2.640	22	*****	2.64	10
POTEAU	7254	9	44.8	31	*****	77	3	18	22	627	*****	1	*****	4.771	31	*****	2.20	11
SPIRO	8416	9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.750	31	1.69	2.51	12
TUSKAHOMA	9023	9	46.6	31	3	75	3	17	22	572	-104	1	1	4.750	31	1.93	2.22	12
VALLIANT	9118	9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.750	31	0.04	2.70	12
WILBURTON	9634	9	45.4	31	4	75	3	17	22	609	-111	0	0	4.600	31	1.61	2.31	11
WISTER	9724	9	44.4	31	*****	77	4	16	23	647	*****	7	*****	4.860	31	*****	2.50	12

DECEMBER 1999 CLIMATE DIVISION SUMMARY

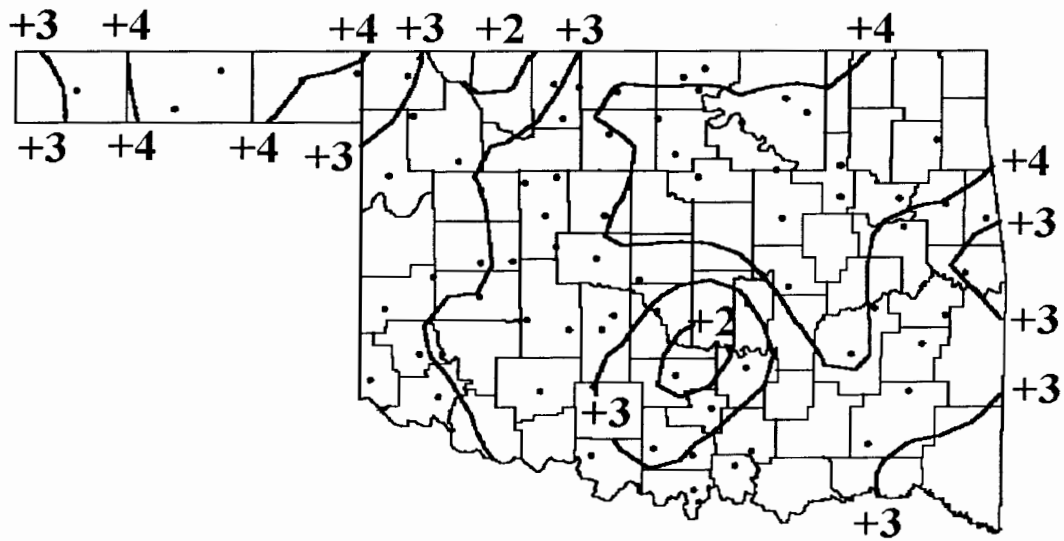
CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
1	39.0	7	4	77	2	10	21	805	-120	0	0	0.680	11	0.12	1.48	5
2	39.8	14	3	75	28	12	6	775	-108	0	0	3.480	23	2.40	1.87	9
3	43.3	10	5	73	3	12	21	665	-158	0	0	4.320	21	2.35	2.81	4
4	41.4	10	3	75	29	15	21	732	-103	0	0	2.350	19	1.53	2.73	11
5	44.1	10	4	73	4	11	21	646	-131	0	0	3.570	32	2.04	2.38	8
6	45.1	9	4	77	3	16	21	615	-134	0	0	3.520	21	0.91	2.50	12
7	43.1	8	3	76	4	17	21	675	-85	0	0	2.900	18	1.89	4.20	3
8	45.5	13	3	78	2	18	23	594	-106	1	1	2.470	24	0.59	2.81	12
9	45.8	6	3	77	4	16	23	596	-91	2	2	4.910	15	1.45	3.45	12

MESONET MONTHLY SUMMARY FOR DECEMBER 1999

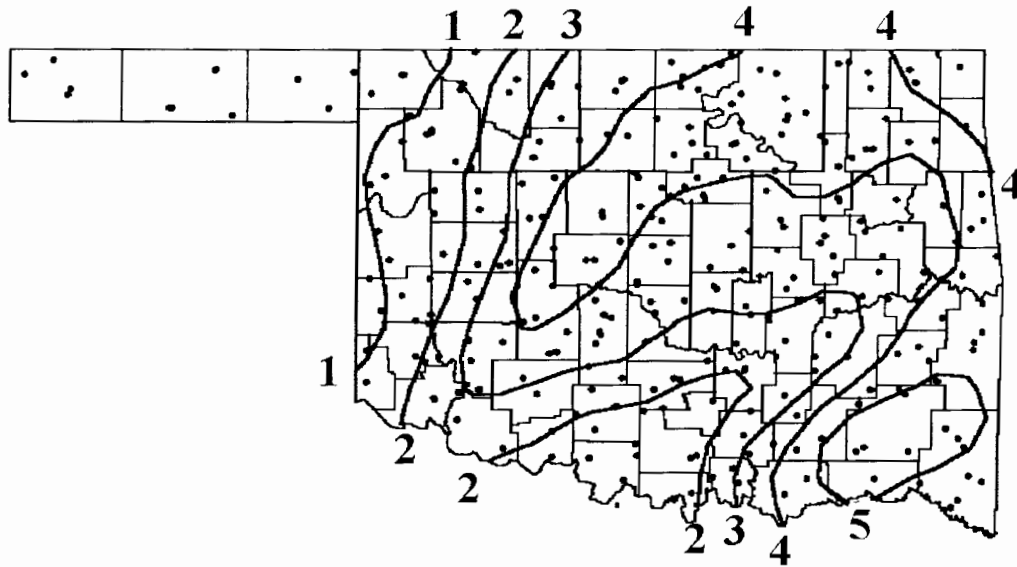
NAME	MEAN TEMP	MAX TEMP	MIN DAY	MIN TEMP	DAY	HDD	CDD	TOT PPT	MAX 24-HR	DAY	NAME	MEAN TEMP	MAX TEMP	MIN DAY	MIN TEMP	DAY	HDD	CDD	TOT PPT	MAX 24-HR	DAY											
PANHANDLE																																
Arnett	39.5	74	28	14	6	791	0	0.78	0.42	4	Goodwell	38.5	75	1	16	15	767	0	0.27	0.18	4											
Beaver	38.6	73	28	15	13	819	0	0.35	0.23	4	Hooker	38.4	73	1	15	13	825	0	0.27	0.26	4											
Boise City	36.4	76	1	11	15	886	0	0.14	0.11	5	Kenton	36.8	74	1	11	12	875	0	0.01	0.01	17											
Buffalo	39.0	75	28	10	6	806	0	0.80	0.41	4	Slapout	39.1	73	28	15	21	802	0	0.58	0.19	4											
NORTH CENTRAL																																
Alva	38.9	75	28	14	6	808	0	2.86	1.63	4	May Ranch	40.5	74	29	19	21	760	0	0.70	0.45	4											
Blackwell	41.0	69	29	18	21	743	0	2.98	1.40	4	Medford	40.0	70	28	19	21	773	0	3.80	1.99	4											
Breckenridge	40.7	68	2	21	21	754	0	3.96	1.67	4	Newkirk	40.5	69	29	16	21	758	0	3.98	1.89	4											
Cherokee	39.2	72	28	13	6	801	0	3.66	1.95	4	Red Rock	42.0	71	29	18	21	713	0	5.45	1.98	9											
Fairview	41.2	72	28	21	21	737	0	3.82	2.04	4	Seiling	40.0	73	28	18	6	773	0	1.80	1.09	4											
Freedom	39.2	75	28	16	6	800	0	1.07	0.60	4	Woodward	40.8	73	28	18	6	751	0	0.84	0.43	4											
Lahoma	40.2	70	28	20	21	768	0	3.78	1.83	4																						
NORTHEAST																																
Bixby	43.9	72	3	20	21	654	0	3.97	1.58	9	Miami	41.5	67	2	14	21	729	0	6.06	2.51	4											
Burbank	41.4	71	29	15	21	731	0	5.66	2.35	9	Nowata	40.5	68	29	13	21	760	0	3.85	2.30	4											
Catoosa	43.6	71	29	16	21	643	0	4.60	1.58	4	Pawnee	42.7	72	29	17	21	690	0	3.95	1.68	9											
Claremore	42.9	71	29	14	21	664	0	4.55	1.53	4	Pryor	42.1	71	3	14	21	709	0	3.72	1.26	4											
Copan	41.0	70	29	14	21	745	0	4.21	2.19	4	Skiatook	43.1	71	29	18	21	679	0	4.07	1.49	9											
Foraker	41.2	70	29	14	21	737	0	5.61	2.36	9	Vinita	40.8	68	3	13	21	751	0	5.27	2.33	4											
Jay	42.3	71	3	11	21	703	0	5.21	2.50	9	Wynona	42.0	71	29	15	21	713	0	4.30	1.93	4											
WEST CENTRAL																																
Bessie	43.3	75	28	22	20	674	0	1.80	1.03	4	Putnam	41.4	73	28	22	21	732	0	1.86	0.90	4											
Butler	41.6	75	28	20	20	724	0	1.92	1.24	4	Retrop	43.2	74	28	22	20	674	0	1.48	0.60	4											
Camargo	40.1	75	28	15	6	771	0	1.59	0.73	4	Watonga	42.2	72	28	23	20	707	0	3.36	1.47	4											
Cheyenne	42.7	73	28	19	20	691	0	0.85	0.42	4	Weatherford	41.1	72	28	21	21	740	0	2.37	1.14	4											
Erick	40.7	74	28	16	20	753	0	1.09	0.80	4																						
CENTRAL																																
Acme	44.5	73	3	22	6	636	0	2.93	1.84	9	Minco	43.0	71	28	22	6	682	0	3.44	1.23	9											
Bowlegs	44.6	73	3	18	6	631	0	3.90	2.07	9	Nimnekah	43.8	72	3	22	6	658	0	3.65	2.33	9											
Bristow	43.1	72	3	18	21	679	0	4.22	1.82	9	Norman	43.8	70	2	20	6	657	0	2.81	1.59	9											
Chandler	44.1	71	3	21	21	649	0	4.40	2.11	9	Oilton	42.1	71	29	15	21	708	0	3.96	1.97	9											
Chickasha	43.1	72	2	22	25	678	0	3.35	1.84	9	Okemah	44.3	71	3	20	6	642	0	3.40	1.61	4											
El Reno	41.5	72	28	18	6	729	0	5.80	2.18	8	Perkins	43.6	71	29	21	21	664	0	3.66	1.75	9											
Guthrie	43.4	71	29	22	21	671	0	5.30	2.52	9	Shawnee	44.1	70	3	22	6	648	0	3.63	1.30	9											
Kingfisher	42.0	69	2	22	21	714	0	4.37	1.60	4	Spencer	44.0	70	3	22	6	652	0	3.18	1.67	9											
Marena	43.0	71	29	19	21	682	0	3.64	1.44	9	Stillwater	42.5	73	29	20	21	698	0	4.80	2.06	9											
Marshall	41.9	70	2	21	20	717	0	4.32	1.73	4	Washington	44.8	72	3	21	6	625	0	3.39	1.89	9											
EAST CENTRAL																																
Calvin	45.0	72	3	21	22	621	0	1.75	0.69	4	Preston	45.6	73	3	20	21	583	0	4.27	1.66	4											
Cookson	43.5	73	3	15	21	668	0	3.91	1.26	4	Sallisaw	44.1	76	3	20	22	649	0	3.84	1.03	11											
Eufaula	46.0	74	3	22	21	588	0	2.64	0.96	9	Nowata	44.5	75	3	19	22	635	0	4.22	1.31	4											
Haskell	43.3	72	3	19	21	673	0	3.61	1.31	9	Stuart	46.1	73	3	21	6	585	0	1.85	0.54	12											
Hectorville	45.0	72	3	21	21	600	0	3.37	1.48	4	Tahlequah	43.0	72	3	17	21	683	0	*****	*****	***											
McAlester	45.6	74	3	19	28	602	0	2.84	0.96	4	Webbers Falls	44.4	76	3	21	21	640	0	3.63	1.70	4											
Okmulgee	44.0	74	3	19	28	649	0	3.65	1.85	4	Westville	43.3	72	3	17	21	673	0	4.66	1.72	4											
SOUTHWEST																																
Altus	43.8	74	2	25	6	656	0	2.96	1.24	8	Hollis	42.4	74	28	19	15	699	0	*****	*****	22											
Apache	43.5	71	3	24	6	667	0	3.50	2.05	9	Mangum	41.9	75	28	17	20	715	0	1.38	0.51	9											
Fort Cobb	43.2	72	28	24	6	676	0	4.32	1.72	8	Medicine Park	45.5	72	3	26	21	606	0	2.53	0.97	9											
Grandfield	45.0	79	3	21	20	620	0	1.98	1.44	9	Tipton	44.1	75	28	23	15	647	0	2.37	0.93	9											
Hinton	42.2	73	28	24	20	707	0	5.74	1.84	9	Walters	45.5	77	3	21	6	605	0	2.04	1.49	9											
Hobart	42.4	73	28	24	20	702	0	4.44	2.37	8																						
SOUTH CENTRAL																																
Ada	45.2	73	3	21	6	612	0	1.74	0.86	4	Madill	47.0	74	3	19	22	560	1	2.33	0.83	11											
Ardmore	47.1	74	3	22	6	554	0	1.31	0.46	9	Pauls Valley	45.7	73	3	22	6	599	0	1.60	0.70	9											
Burneyville	46.7	75	3	18	6	567	0	1.12	0.51	11	Ringling	46.1	75	3	20	6	585	0	0.93	0.36	9											
Byars	45.1	71	3	20	21	596	0	2.64	1.36	4	Sulphur	44.6	73	3	18	6	632	0	1.25	0.53	9											
Centrahoma	44.8	75	3	16	6	626	1	2.34	0.64	12	Tishomingo	45.4	74	3	18	22	609	1	2.31	0.76	9											
Durant	47.7	76	3	24	22	536	1	4.59	1.30	11	Vanoss	45.4	73	3	19	6	608	0	1.39	0.64	9											
Ketchum Ranch	45.9	74	3	22	6	591	0	1.88	0.84	9	Waurika	46.6	76	3	22	6	571	1	1.21	0.56	4											
Lane	45.9	76	3	20	22	593	0	5.93	2.15	4																						
SOUTHEAST																																
Antlers	45.5	77	3	16	22	607	1	7.18	1.71	4	Idabel	47.4	78	3	22	28	515	5	4.31	1.67	11											
Broken Bow	46.0	78	3	19	22	592	5	4.73	1.32	11	Mt Herman	45.1	73	3	19	22	615	0	5.29	2.32	11											
Clayton	45.7	75	3	20	22	598	0	4.80	1.31	12	Talihina	45.4	76	3	17	22	608	0	4.55	1.37	11											
Cloudy	46.0	76	3	20	22	589	1	6.41	2.58	11	Wilburton	45.1	75	3	18	22	618	0	4.59	1.38	4											
Hugo	47.9	78	3	25	6	535	3	5.68	2.40	11	Wister	43.7	76	3	15	22	659	0	5.08	1.39	11											



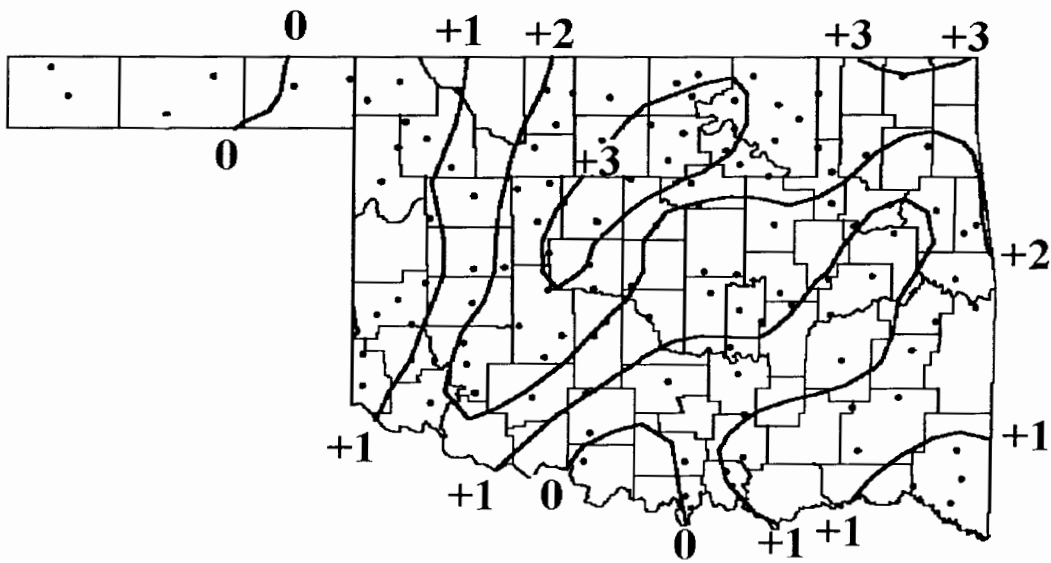
DECEMBER 1999 AVERAGE MONTHLY TEMPERATURE (F)



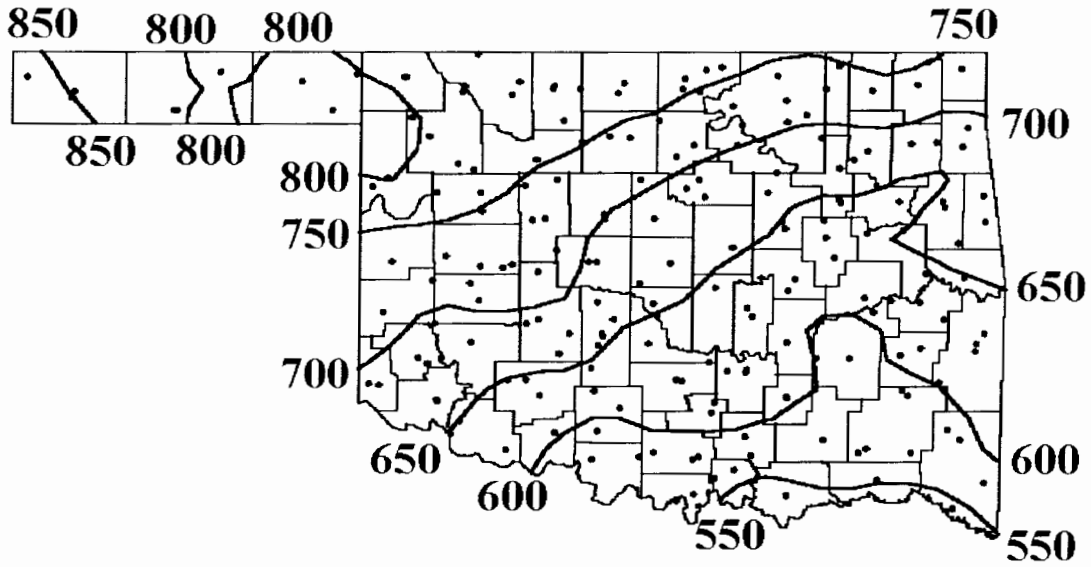
DECEMBER 1999 DEPARTURE FROM NORMAL TEMPERATURE (F)



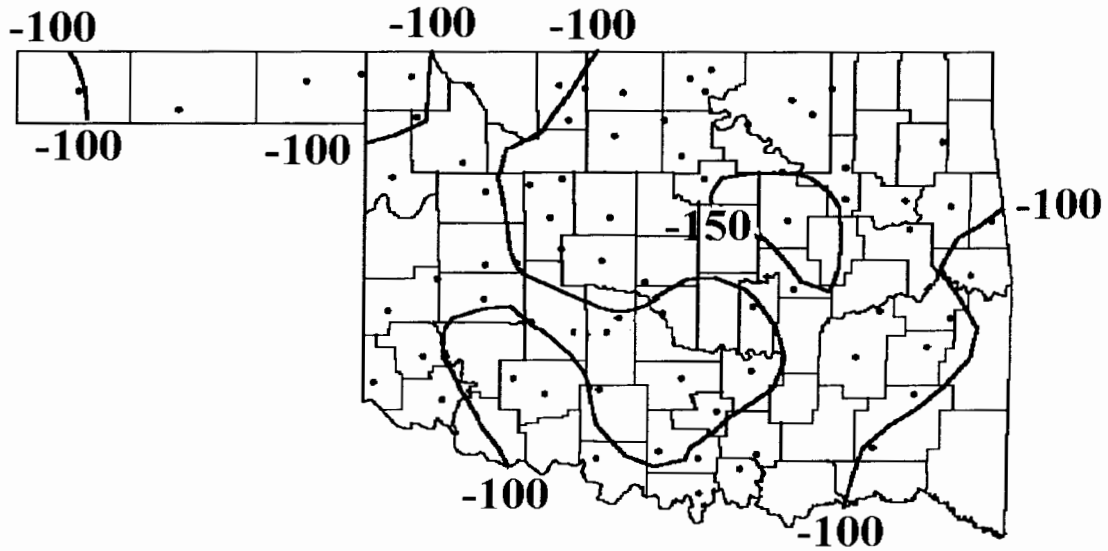
DECEMBER 1999 TOTAL PRECIPITATION (INCHES)



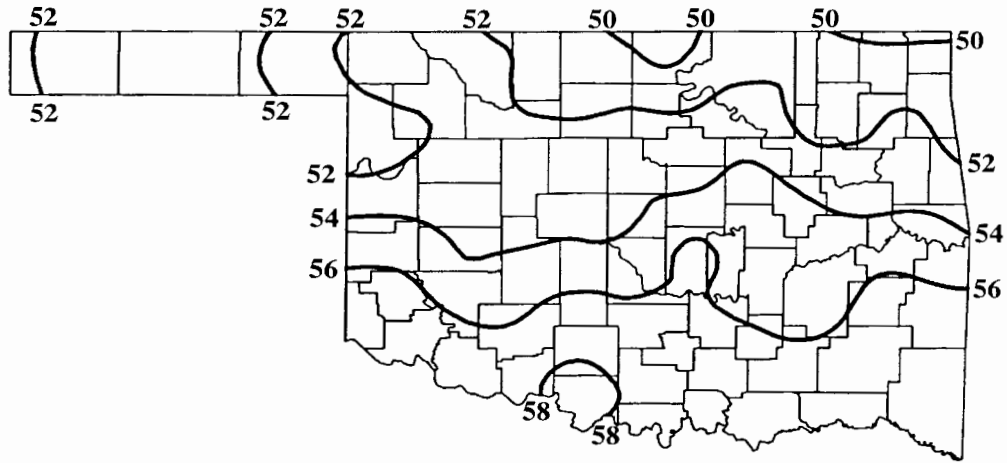
DECEMBER 1999 DEPARTURE FROM NORMAL PRECIPITATION (INCHES)



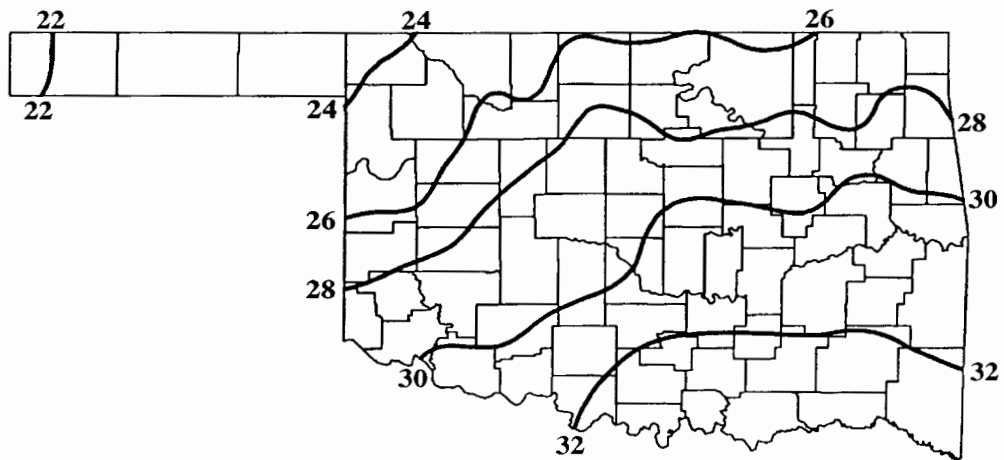
DECEMBER 1999 ACCUMULATED HEATING DEGREE DAYS (F)



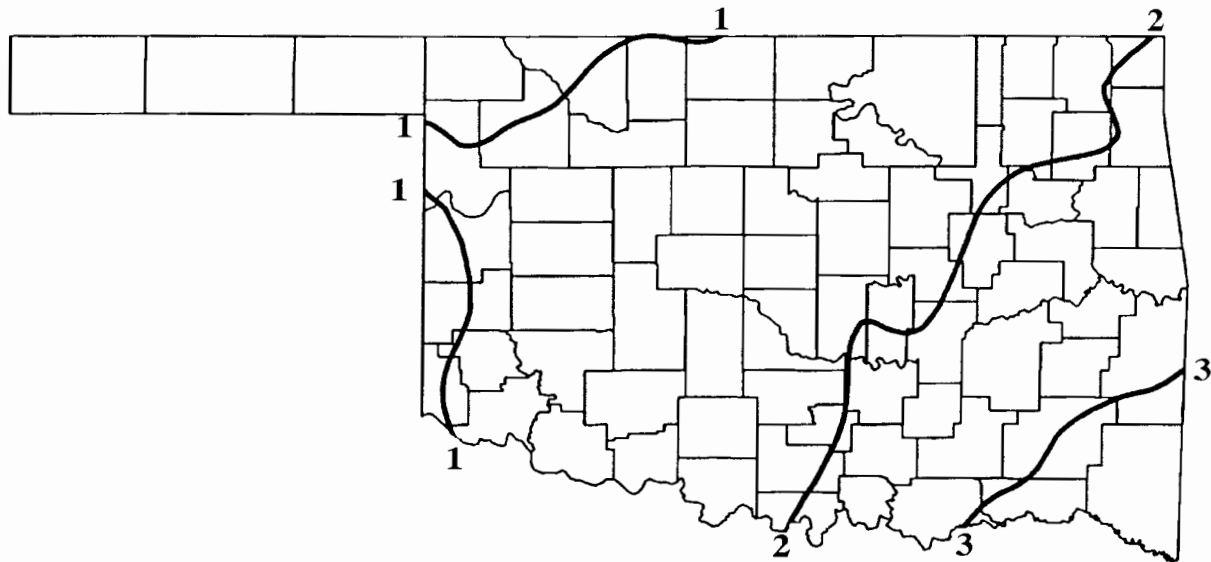
DECEMBER 1999 DEPARTURE FROM NORMAL HEATING DEGREE DAYS (F)



FEBRUARY NORMAL DAILY MAXIMUM TEMPERATURE (F)



FEBRUARY NORMAL DAILY MINIMUM TEMPERATURE (F)



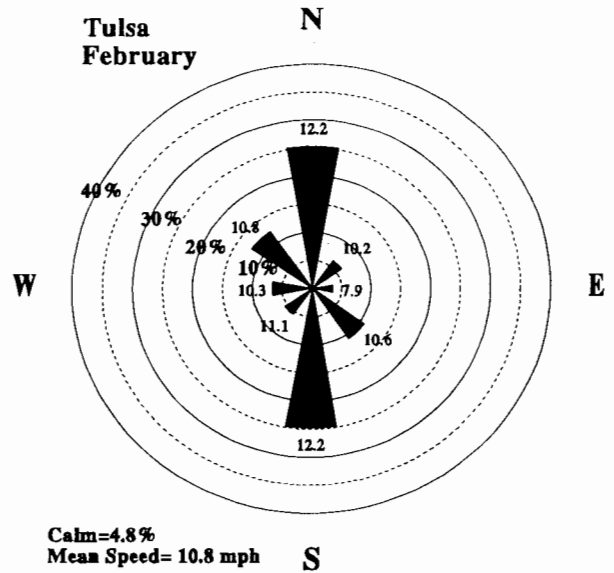
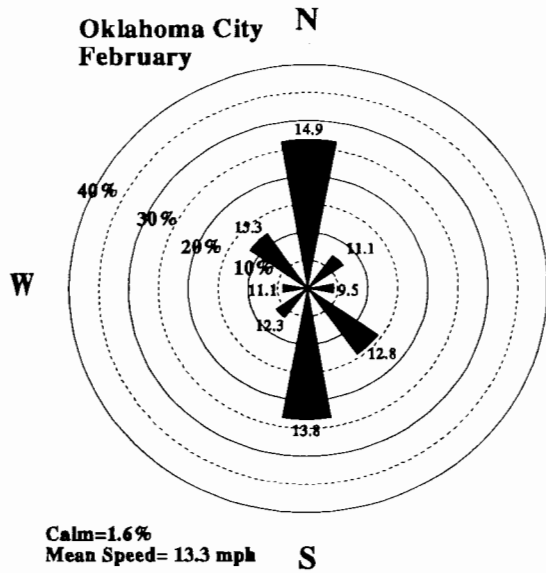
FEBRUARY NORMAL MONTHLY PRECIPITATION (INCHES)

OUTLOOK FOR FEBRUARY 2000 THROUGH APRIL 2000

BASED ON SEASONAL OUTLOOK PROVIDED BY THE CLIMATE PREDICTION CENTER

TEMPERATURE: ABOVE NORMAL TEMPERATURE STATEWIDE

PRECIPITATION: BELOW NORMAL PRECIPITATION STATEWIDE



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

FEBRUARY SUNRISE/SUNSET TIMES FOR 2000
ALL TIMES ARE CENTRAL STANDARD TIME

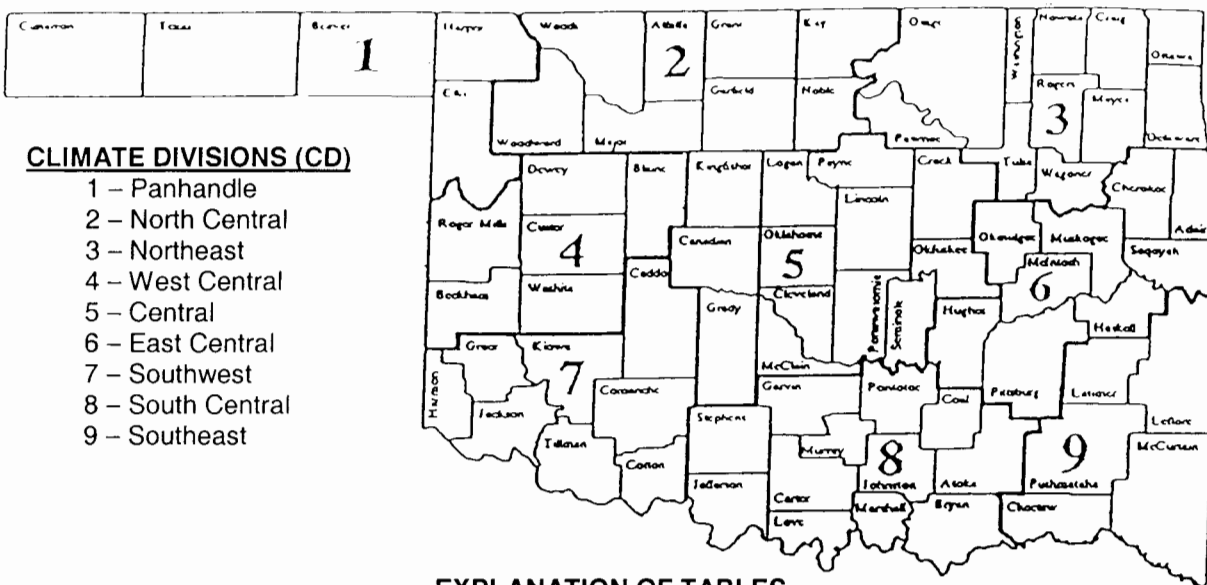
OKLAHOMA CITY

DATE	SUNRISE	SUNSET
2/1/00	730	1758
2/2/00	729	1759
2/3/00	729	1800
2/4/00	728	1801
2/5/00	727	1802
2/6/00	726	1803
2/7/00	725	1804
2/8/00	724	1805
2/9/00	723	1806
2/10/00	722	1807
2/11/00	721	1808
2/12/00	720	1809
2/13/00	719	1810
2/14/00	718	1811
2/15/00	717	1812
2/16/00	716	1813
2/17/00	715	1814
2/18/00	714	1815
2/19/00	713	1816
2/20/00	712	1817
2/21/00	711	1818
2/22/00	709	1818
2/23/00	708	1819
2/24/00	707	1820
2/25/00	706	1821
2/26/00	704	1822
2/27/00	703	1823
2/28/00	702	1824
2/29/00	701	1825

TULSA

DATE	SUNRISE	SUNSET
2/1/00	725	1750
2/2/00	724	1751
2/3/00	723	1752
2/4/00	723	1753
2/5/00	722	1754
2/6/00	721	1755
2/7/00	720	1756
2/8/00	719	1757
2/9/00	718	1758
2/10/00	717	1759
2/11/00	716	1800
2/12/00	715	1801
2/13/00	714	1802
2/14/00	713	1803
2/15/00	712	1804
2/16/00	711	1805
2/17/00	710	1806
2/18/00	708	1807
2/19/00	707	1808
2/20/00	706	1809
2/21/00	705	1810
2/22/00	704	1811
2/23/00	702	1812
2/24/00	701	1813
2/25/00	700	1814
2/26/00	659	1815
2/27/00	657	1816
2/28/00	656	1817
2/29/00	655	1818

OKLAHOMA



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 the average temperature for the day is less than 65 degrees. Daily values are summed to arrive at a monthly total. 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 2000 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 the average temperature for the day exceeds 65 degrees. Daily values are summed to give a monthly total. 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 a mean precipitation, this value is the sum of all precipitation reported during the month at a station. If snow occurred, it is to be melted and its water equivalent recorded.

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

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

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

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

OKLAHOMA CITY CLIMATE CALENDAR
 DATA COURTESY OF NATIONAL WEATHER SERVICE NORMAN

MONTH: FEBRUARY

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

Day	Avg. Temp	Avg. High	Record High	Year	Lowest Max	Year	1999	Avg. Low	Highest Min	Year	Record Low	Year	1999	Avg. Ppt.	Greatest Ppt.	Year	1999
1	37	48	90	1911	-2	1951		27	59	1986	14	1918		0.04	0.71	1990	
2	38	49	77	1995	-4	1895		27	58	1986	10	1905		0.04	0.88	1943	
3	38	49	78	1962	0	1996		27	58	1986	7	1905		0.04	1.13	1960	
4	38	49	77	1962	-3	1996		27	58	1927	15	1989		0.04	1.32	1964	
5	38	49	77	1942	3	1989		27	57	1938	16	1982		0.04	1.05	1987	
6	39	50	73	1904	3	1895		27	54	1931	16	1905		0.05	1.38	1892	
7	39	50	76	1937	-8	1895		28	50	1894	6	1933		0.05	0.84	1980	
8	39	50	76	1999	-5	1933		28	53	1966	12	1929		0.05	0.62	1966	
9	39	50	84	1932	-3	1979		28	51	1932	16	1899		0.05	2.10	1898	
10	40	51	79	1922	4	1929		28	52	1999	16	1933		0.05	0.50	1953	
11	40	51	82	1962	-12	1899		29	57	1938	15	1899		0.05	1.12	1977	
12	40	51	84	1962	-17	1899		29	57	1962	2	1905		0.05	2.21	1978	
13	40	52	82	1962	-11	1905		29	54	1976	21	1905		0.05	0.76	1908	
14	41	52	81	1954	1	1936		29	55	1954	18	1951		0.05	0.89	1938	
15	41	52	81	1954	7	1909		30	53	1976	17	1909		0.06	0.93	1938	
16	41	52	81	1927	4	1903		30	63	1911	15	1903		0.06	2.15	1940	
17	41	53	79	1991	5	1900		30	50	1926	17	1936		0.06	0.88	1961	
18	42	53	78	1986	-1	1978		30	53	1971	24	1936		0.06	0.88	1946	
19	42	53	83	1986	7	1903		31	54	1997	21	1929		0.06	0.69	1994	
20	42	54	84	1981	9	1918		31	55	1894	25	1918		0.06	1.55	1997	
21	43	54	82	1996	9	1939		31	58	1922	25	1911		0.06	1.63	1985	
22	43	54	92	1996	11	1963		31	55	1985	24	1968		0.07	1.15	1985	
23	43	55	88	1918	7	1910		32	52	1956	21	1914		0.07	0.81	1985	
24	44	55	87	1918	7	1965		32	58	1930	19	1960		0.07	0.94	1952	
25	44	55	84	1917	10	1960		32	56	1944	27	1960		0.07	0.74	1936	
26	44	56	82	1996	10	1891		33	59	1981	21	1934		0.07	1.34	1903	
27	44	56	83	1918	12	1962		33	56	1981	25	1962		0.07	1.32	1966	
28	45	56	90	1904	7	1962		33	62	1904	19	1922		0.07	0.98	1990	
29			81	1972	13	1960		33	58	1932	22	1960		0.07	0.42	1948	
MONTH	40.9	52.1	92	1996	-17	1899		29.6	63	1911	2	1905		1.56	2.21	1978	

*The most tornadoes reported in February for Oklahoma was 6 in 1975.

TULSA CLIMATE CALENDAR
 DATA COURTESY OF NATIONAL WEATHER SERVICE TULSA

MONTH: FEBRUARY

The data on this calendar is for Tulsa.
 Normal values are calculated for the period 1961-1990.
 Temperature extremes are for the period 1905-1999.
 Precipitation extremes are for the period 1888-1999.

Day	Avg. Temp	Avg. High	Record High	Year	Lowest Max	Year	1999	Avg. Low	Highest Min	Year	Record Low	Year	1999	Avg. Ppt.	Greatest Ppt.	Year	1999
1	37	47	90	1911	15	1951		26	53	1986	-7	1979		0.05	0.78	1923	
2	37	47	77	1995	16	1917		26	56	1986	0	1917		0.05	0.69	1943	
3	37	48	79	1934	8	1996		27	59	1986	-5	1996		0.06	0.53	1960	
4	37	48	77	1962	11	1905		27	57	1927	-11	1996		0.06	2.27	1971	
5	38	48	75	1942	16	1905		27	60	1938	4	1979		0.06	1.36	1964	
6	38	48	73	1999	21	1989		27	59	1928	4	1985		0.06	0.64	1999	
7	38	49	78	1909	27	1985		28	68	1927	0	1933		0.06	0.76	1980	
8	38	49	75	1957	11	1933		28	58	1966	-5	1933		0.06	1.32	1944	
9	39	49	82	1932	20	1994		28	55	1938	-3	1979		0.06	0.79	1908	
10	39	49	81	1922	23	1986		28	63	1932	-3	1929		0.06	0.80	1905	
11	39	50	77	1951	21	1981		28	54	1915	-3	1981		0.06	1.18	1977	
12	39	50	86	1962	10	1905		29	57	1938	0	1905		0.07	1.78	1978	
13	40	50	84	1962	18	1905		29	59	1938	-15	1905		0.07	0.70	1946	
14	40	51	80	1910	23	1951		29	59	1954	-10	1905		0.07	1.01	1951	
15	40	51	80	1976	17	1909		29	60	1976	3	1905		0.07	1.74	1938	
16	41	51	78	1976	16	1979		30	51	1927	3	1920		0.07	1.03	1938	
17	41	52	79	1907	18	1936		30	63	1911	9	1993		0.07	1.37	1961	
18	41	52	78	1930	26	1978		30	60	1971	2	1936		0.07	1.35	1974	
19	41	52	77	1981	24	1929		31	54	1997	9	1978		0.08	1.31	1955	
20	42	53	83	1981	21	1918		31	55	1997	9	1918		0.08	1.94	1997	
21	42	53	82	1996	28	1968		31	55	1922	7	1939		0.08	1.43	1913	
22	42	53	90	1996	28	1968		32	57	1985	1	1963		0.08	2.99	1985	
23	43	54	81	1982	15	1910		32	51	1992	10	1910		0.08	1.40	1985	
24	43	54	85	1918	24	1965		32	64	1930	8	1965		0.08	0.86	1952	
25	43	54	82	1917	31	1960		32	60	1944	10	1965		0.09	0.94	1908	
26	44	55	79	1996	20	1934		33	61	1996	11	1960		0.09	1.25	1984	
27	44	55	81	1976	23	1962		33	59	1981	13	1962		0.09	1.12	1950	
28	45	56	82	1972	22	1962		33	53	1976	6	1962		0.09	2.00	1987	
29	45	56	82	1972	21	1960		33	57	1972	15	1960		0.09	0.20	1948	
MONTH	40.4	51.2	90	1911	8	1996		29.6	68	1927	-15	1905		2.06	2.99	1985	

*The average number of tornadoes reported in February for Oklahoma is 0.8.