OKLAHOMA

MONTHLY SUMMARY

December 1988

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DECEMBER 1988 OKLAHOMA SUMMARY

1988 ended on an unseasonably warm note, with December temperatures averaging 1 to 3.5 degrees above normal throughout the State. December 1988 ranks high in the warmest 10 of the last 40 years of record in Oklahoma. The unusual mean temperatures resulted from a large number of warmer than expected December days rather than a few extremely warm events. For instance, 1988 December maximum daily temperatures ranged from 75 to 79 degrees. Record daily December temperatures range from 80 to 89 degrees. As a result, December 1988 was a warm, but not record setting month that is typical of Oklahoma's naturally variable year-to-year climate.

Precipitation during December was notably less than normal in western and north central portions of Oklahoma. The Panhandle of the State received only 13% of its average December precipitation. Wheat farmers in these regions, encouraged by a wet September, have now seen two, and in some cases three, consecutive months of below normal fall and early winter precipitation. Moisture during these months is critical for successful wheat plant growth, development and winter survival. The January Oklahoma Crop-Weather Summary reports that dry weather during December has lowered 1989 wheat prospects. The National Weather Service 30- and 90-day precipitation outlooks for western Oklahoma do not appear to be encouraging. Normal January and below normal January through March precipitation is anticipated for northwestern Oklahoma (see 30- and 90-day outlook).

Colder temperatures and dry air moved into the State late on December 7. An upper level storm system over the southwest helped to trigger central Oklahoma's second snowfall of the season. Snow was confined mostly to a narrow band from southwestern sections into central Oklahoma. A maximum accumulation of 1.5 inches of snow was reported at Vinson, in southwestern Oklahoma. Moderate to heavy rain fell in southeastern counties and light rain fell in northeastern and southwestern sections.

A second storm passed through the State December 11. Snow accumulations were generally less than 1 inch, but did include a 3 inch snowfall at Stroud in central Oklahoma.

On December 20, winds ranging from 30 to 40 mph were reported in Tulsa. These persistent high winds fueled grass fires, knocked down Christmas lights and carried debris through the streets. Numerous other grass fires were reported across the State through the remainder of the month.

A strong winter storm accompanied by freezing rain and snow entered the State on December 27, but hazardous conditions resulting from the storm were largely confined to northeastern portions of Oklahoma. A maximum accumulation of 3 inches of snow was reported at Chelsea and Miami, Oklahoma.

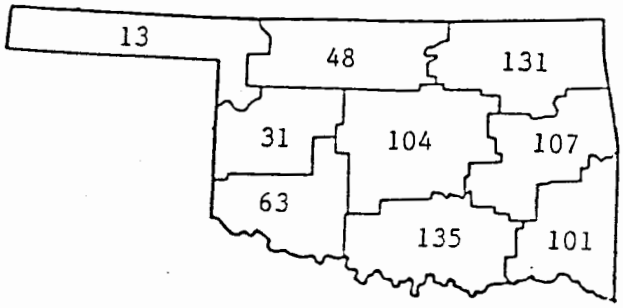
**** NEW SERVICE ****

Beginning January 15, 1989 a 24-hour message service will be available at OCS. An answering machine will be on line outside of normal business hours to receive all incoming calls. Any in-state calls received by the machine will be returned at the earliest possible time by OCS staff. Please leave a brief message with a description of the kind of climatological information you require, as well as your name, phone number and address at which you can be contacted. The answering service will be operated on a trial basis until the end of July 1989. If the response is great enough, it will be considered as a permanent part of our day-to-day client service.

OCS Business Hours

Monday-Friday
8:00 a.m. to 12 noon
1:00 p.m. to 5:00 p.m.

As part of the University of Oklahoma, OCS observes all designated University holidays.



Percent of normal precipitation by CD.
(December 1988)

TABLE OF 1987/1988 COMPARISONS

STATION	December Temperatures (F) 1987	1988	December Precipitation (in.) 1987	1988
Arnett	34.8	39.2	2.460	.040
Enid	38.1	43.1	3.260	.661
Mutual	35.1	39.5	1.700	.012
Tulsa	41.8	44.1	5.452	1.843
Elk City	38.4	43.1	1.902	.102
Oklahoma City	41.3	44.9	3.753	1.394
McAlester	44.0	45.5	8.342	2.843
Altus Irr Sta	39.9	44.6	3.270	.772
Durant	43.4	43.9	6.540	2.850
Ada	43.0	44.6	5.521	2.670
Antlers	46.8	45.7	6.880	2.740

EXTREMES

Variable	Station	Division	Observation	Date
Minimum temperature (F)	Kenton	1	2	29
Maximum temperature (F)	Pauls Valley	8	86	26
Maximum 24-hour precipitation	Quapaw	3	2.15"	22

DECEMBER 1988 SUMMARY FOR NORTHWEST DIVISION (CD1)

NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ARNEIT	332	1	39.2	31	2.0	72.	3	10.	29	800.5	-61.5	.0	.0	.040	31	-.59	.02	20
BEAVER	593	1	37.0	31	.8	73.	3	4.	29	869.5	-23.5	.0	.0	.000	31	-.45	.00	31
BOISE CITY 2 E	908	1	38.0	31	1.2	69.	18	7.	27	838.5	-35.5	.0	.0	.000	31	-.40	.00	31
BUFFALO	1243	1	40.7	31	2.2	75.	13	8.	28	752.0	-70.0	.0	.0	.120	31	-.57	.12	18
FARGO	3070	1	*****	0	*****	****	0	****	0	******	******	******	******	.010	31	-.64	.01	20
GAGE FAA APT	3407	1	40.5	31	3.7	72.	13	7.	28	759.0	-115.0	.0	.0	.043	31	-.60	.04	20
GATE	3489	1	39.8	31	*****	75.	2	9.	27	781.5	******	.0	******	.080	31	*****	.08	19
GOODWELL RES ST	3628	1	37.4	31	.7	71.	3	5.	28	856.5	-20.5	.0	.0	.092	31	-.18	.09	20
GUYMON	3835	1	38.9	29	*****	71.	2	5.	28	756.0	******	.0	******	.150	31	*****	.12	20
HOOKER	4298	1	38.0	31	1.6	71.	14	10.	29	836.0	-51.0	.0	.0	.030	31	-.36	.03	20
KENTON	4766	1	34.4	31	-2.5	74.	14	2.	29	950.0	79.0	.0	.0	.070	31	-.23	.04	15
LAVERNE	5045	1	*****	0	*****	****	0	****	0	******	******	******	******	.091	31	-.58	.09	20
OPTIMA LAKE	6740	1	37.7	24	*****	72.	3	12.	16	655.0	******	.0	******	.060	29	*****	.06	20
REGNIER	7534	1	*****	0	*****	****	0	****	0	******	******	******	******	.020	31	-.26	.01	15
TURPIN 4 SSE	9017	1	36.6	31	*****	72.	3	5.	28	880.5	******	.0	******	.070	31	*****	.07	20

DECEMBER 1988 SUMMARY FOR NORTH CENTRAL DIVISION (CD2)

NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ALVA 1 ENE	194	2	41.9	29	*****	74.	2	13.	28	669.5	******	.0	******	.210	31	-.60	.11	27
VANCE AFB	302	2	*****	0	*****	****	0	****	0	******	******	******	******	.344	30	*****	.26	27
BILLINGS	755	2	40.4	31	*****	70.	3	15.	28	762.5	******	.0	******	.641	31	-.58	.35	27
BLACKWELL 2E	818	2	40.4	31	*****	67.	2	14.	16	763.5	******	.0	******	1.162	31	*****	1.10	27
BRAMAN	1075	2	*****	0	*****	****	0	****	0	******	******	******	******	.451	31	*****	.28	27
CEDARDALE	1620	2	*****	0	*****	****	0	****	0	******	******	******	******	.021	31	*****	.01	11
CHEROKEE	1724	2	42.7	31	4.4	71.	2	14.	29	691.0	-137.0	.0	.0	.200	31	-.67	.20	20
ENID	2912	2	43.3	31	4.0	69.	2	18.	30	672.5	-124.5	.0	.0	.661	31	-.37	.51	27
FT SUPPLY DAM	3304	2	38.9	31	.8	73.	14	7.	29	809.0	-25.0	.0	.0	.030	31	-.59	.03	20
FREEDOM	3358	2	40.0	31	*****	74.	13	7.	29	775.0	******	.0	******	.001	31	*****	.00	27
GREAT SALT PLNS	3740	2	41.0	31	*****	72.	3	16.	16	743.0	******	.0	******	.240	22	*****	.14	27
HARDY	3909	2	*****	0	*****	****	0	****	0	******	******	******	******	.823	30	*****	.52	26
HELENA 1 SSE	4019	2	38.5	29	*****	71.	3	12.	29	767.5	******	.0	******	.222	29	*****	.12	27
JEFFERSON	4573	2	41.5	31	3.2	72.	2	12.	28	728.5	-99.5	.0	.0	.471	31	-.56	.20	26
LAMONT	5013	2	*****	0	*****	****	0	****	0	******	******	******	******	1.351	31	*****	.91	27
MEDFORD	5768	2	*****	0	*****	****	0	****	0	******	******	******	******	.331	31	*****	.22	26
MORRISON	6065	2	*****	0	*****	****	0	****	0	******	******	******	******	.832	31	*****	.58	27
MUTUAL	6139	2	39.5	31	1.7	72.	3	12.	29	791.0	-52.0	.0	.0	.012	31	-.65	.01	11
NEWKIRK	6278	2	41.8	31	4.2	67.	2	16.	16	719.5	-129.5	.0	.0	.382	31	-.84	.20	27
ORIENTA	6751	2	*****	0	*****	****	0	****	0	******	******	******	******	.230	31	*****	.11	27
PERRY	7012	2	44.3	31	3.9	71.	2	17.	16	643.0	-120.0	.0	.0	.781	31	-.42	.45	27
PONCA CITY FAA	7201	2	42.3	31	5.6	70.	2	18.	16	703.5	-173.5	.0	.0	.944	30	*****	.66	27
RED ROCK 1 NNE	7505	2	*****	0	*****	****	0	****	0	******	******	******	******	.420	31	-.87	.37	27
RENFROW	7556	2	*****	0	*****	****	0	****	0	******	******	******	******	.421	31	-.57	.26	27
WAYNOKA	9404	2	40.7	31	2.1	74.	2	11.	16	754.0	-64.0	.0	.0	.150	31	-.62	.15	7
WOODWARD	9760	2	*****	0	*****	****	0	****	0	******	******	******	******	.023	30	*****	.02	20

DECEMBER 1988 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	41.0	31	*****	71.	3	14.	16	742.5	******	.0	******	.872	29	*****	.51	23
BARTLESVILLE 2W	548	3	41.5	31	2.5	72.	3	14.	16	728.0	-78.0	.0	.0	1.590	31	.11	.61	27
BIXBY	782	3	40.6	31	.3	73.	4	17.	17	755.0	-11.0	.0	.0	2.160	31	.33	1.16	27
BURBANK	1256	3	*****	0	*****	****	0	****	0	******	******	******	******	1.032	31	*****	.71	27
CHELSEA 4 S	1717	3	*****	0	*****	****	0	****	0	******	******	******	******	2.090	31	*****	.82	27
CLAREMORE	1828	3	40.4	31	1.4	73.	5	15.	17	762.0	-44.0	.0	.0	3.401	31	1.55	1.52	23
CLEVELAND 5 WSW	1902	3	43.3	26	*****	73.	3	15.	17	564.5	******	.0	******	1.210	31	*****	1.00	27
FORAKER	3250	3	*****	0	*****	****	0	****	0	******	******	******	******	.800	31	-.54	.80	27
HOLLOW	4258	3	*****	0	*****	****	0	****	0	******	******	******	******	2.360	31	.47	.65	27
HOMINY	4289	3	*****	0	*****	****	0	****	0	******	******	******	******	1.951	31	.67	.88	27
HULAH DAM	4393	3	38.7	21	*****	71.	5	11.	16	553.0	******	.0	******	1.270	31	-.02	.50	27
JAY TOWER	4567	3	43.7	31	*****	72.	4	16.	28	661.5	******	.0	******	3.310	31	*****	1.72	27
KANSAS 1 ESE	4672	3	42.4	31	*****	70.	3	14.	16	701.0	******	.0	******	3.453	31	*****	1.40	23
KEYSTONE DAM	4812	3	40.3	21	*****	71.	5	14.	16	519.0	******	.0	******	2.301	24	*****	.80	7
LENAPAH	5118	3	*****	0	*****	****	0	****	0	******	******	******	******	1.780	31	*****	.83	27
MANNFORD 6 NW	5522	3	43.3	31	*****	73.	3	15.	16	674.0	******	.0	******	1.911	31	*****	.84	27
MARAMEC	5540	3	*****	0	*****	****	0	****	0	******	******	******	******	1.161	31	-.07	.50	23
MIAMI	5855	3	40.0	31	.8	68.	4	12.	29	775.0	-25.0	.0	.0	4.220	31	2.07	1.55	27
NOWATA	6485	3	41.5	31	2.5	71.	3	17.	28	730.0	-76.0	.0	.0	1.940	31	.14	.70	27
ONETA 1 WNW	6713	3	*****	0	*****	****	0	****	0	******	******	******	******	2.331	31	*****	.83	23
PAWHUSKA	6935	3	41.5	31	2.8	70.	3	14.	16	729.0	-86.0	.0	.0	1.263	31	-.09	.66	27
PAWHUSKA	6937	3	*****	0	*****	****	0	****	0	******	******	******	******	1.191	31	*****	.47	27
PAWNEE	6940	3	*****	0	*****	****	0	****	0	******	******	******	******	.660	31	-.59	.30	27
PRYOR 6 N	7309	3	39.4	30	.0	73.	4	14.	17	768.0	-26.0	.0	.0	2.541	31	.50	1.18	23
QUAPAW	7358	3	*****	0	*****	****	0	****	0	******	******	******	******	4.350	31	2.34	2.15	22
RALSTON	7390	3	42.6	31	*****	72.	2	15.	16	695.5	******	.0	******	1.103	31	-.26	.67	27
RAMONA 4 N	7394	3	*****	0	*****	****	0	****	0	******	******	******	******	1.790	31	*****	.86	26
SKIATOOK	8258	3	*****	0	*****	****	0	****	0	******	******	******	******	2.120	31	.67	.82	23
SPAVINAW	8380	3	43.3	28	*****	71.	4	12.	28	609.0	******	.0	******	2.833	29	*****	.97	27
TULSA WSO APT	8992	3	44.1	31	4.3	73.	3	20.	16	648.0	-133.0	.0	.0	1.843	31	.02	.75	27
UPPER SPAVINAW	9101	3	44.2	31	*****	70.	3	14.	29	645.5	******	.0	******	3.482	31	*****	1.20	27
VINITA 2 N	9203	3	41.5	31	2.6	68.	3	12.	28	729.0	-80.0	.0	.0	3.940	31	1.80	1.66	23
WAGONER	9247	3	44.3	31	2.9	74.	3	16.	16	641.0	-91.0	.0	.0	3.130	31	1.07	1.68	23
WANN	9298	3	*****	0	*****	****	0	****	0	******	******	******	******	1.790	31	*****	.85	27
WYNONA	9792	3	*****	0	*****	****	0	****	0	******	******	******	******	1.301	31	*****	.52	26

DECEMBER 1988 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	41.0	21	*****	70.	5	15.	16	503.0	******	.0	******	.302	21	*****	.20	27
CHEYENNE	1738	4	*****	0	*****	****	0	****	0	******	******	******	******	.001	31	*****	.00	11
CLINTON	1909	4	44.6	31	4.7	72.	2	15.	28	633.5	-144.5	.0	.0	.800	31	-.11	.30	7
COLONY	2039	4	*****	0	*****	****	0	****	0	******	******	******	******	.381	31	*****	.27	27
CORDELL	2125	4	*****	0	*****	****	0	****	0	******	******	******	******	.260	31	-.65	.12	27
ELK CITY 1 E	2849	4	43.1	31	*****	69.	2	16.	28	678.5	******	.0	******	.102	31	-.61	.05	8
ERICK 4 E	2944	4	43.0	31	2.7	72.	2	13.	28	683.0	-83.0	.0	.0	.071	31	-.61	.07	11
GEARY	3497	4	43.3	26	*****	72.	2	17.	28	563.0	******	.0	******	.000	31	-1.02	.00	31
HAMMON 1 NNE	3871	4	38.0	31	-1.0	72.	3	7.	28	835.5	29.5	.0	.0	.000	31	-.71	.00	31
LEEDEY	5090	4	*****	0	*****	****	0	****	0	******	******	******	******	.000	31	-.69	.00	31
MACKIE 4 NNW	5463	4	*****	0	*****	****	0	****	0	******	******	******	******	.000	31	*****	.00	31
MORAVIA 2 NNE	6035	4	*****	0	*****	****	0	****	0	******	******	******	******	.911	31	.11	.83	8
OKEENE	6629	4	43.3	31	3.0	72.	2	16.	28	672.5	-93.5	.0	.0	.190	31	-.67	.19	27
RETROP	7565	4	*****	0	*****	****	0	****	0	******	******	******	******	.360	31	*****	.36	8
REYDON	7579	4	42.5	31	*****	72.	2	9.	28	698.5	******	.0	******	.031	31	-.59	.03	11
SAYRE	7952	4	*****	0	*****	****	0	****	0	******	******	******	******	.001	31	-.60	.00	27
SWEETWATER 2 E	8652	4	*****	0	*****	****	0	****	0	******	******	******	******	.000	31	*****	.00	31
TALOGA	8708	4	41.0	31	2.3	72.	2	8.	28	745.0	-70.0	.0	.0	.003	31	-.63	.00	24
THOMAS	8815	4	*****	0	*****	****	0	****	0	******	******	******	******	.420	31	*****	.25	27
VICI	9172	4	*****	0	*****	****	0	****	0	******	******	******	******	.003	31	*****	.00	27
WATONGA	9364	4	42.8	31	*****	71.	2	17.	28	688.0	******	.0	******	.381	31	-.62	.20	27
WEATHERFORD	9422	4	41.6	31	1.4	71.	3	16.	16	726.0	-43.0	.0	.0	.353	31	-.51	.35	27

DECEMBER 1988 SUMMARY FOR CENTRAL DIVISION (CD5)

NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
AMBER	200	5	*****	0	*****	****	0	****	0	******	******	******	******	1.170	31	*****	.37	27
ARCADIA	288	5	*****	0	*****	****	0	****	0	******	******	******	******	.880	31	*****	.37	27
TINKER AFB	325	5	*****	0	*****	****	0	****	0	******	******	******	******	.953	30	*****	.57	27
BLANCHARD 2 SSW	830	5	44.6	31	*****	72.	2	17.	16	631.5	******	.0	******	1.851	31	*****	.56	23
BRISTOW	1144	5	43.9	31	3.1	74.	3	16.	16	653.0	-97.0	.0	.0	1.401	31	-.19	.48	27
CHANDLER	1684	5	44.8	30	3.3	73.	3	16.	16	607.0	-122.0	.0	.0	2.471	30	*****	1.00	27
CHICKASHA EX ST	1750	5	43.9	31	2.3	74.	2	18.	28	655.0	-70.0	.0	.0	1.310	31	.23	.42	7
COX CITY 1 E	2196	5	*****	0	*****	****	0	****	0	******	******	******	******	2.070	31	*****	.70	6
CRESCENT	2242	5	*****	0	*****	****	0	****	0	******	******	******	******	.460	31	*****	.22	27
CUSHING	2318	5	42.6	31	3.1	73.	4	19.	17	693.5	-97.5	.0	.0	1.230	31	-.08	.85	27
EL RENO 1 N	2818	5	48.2	31	8.1	71.	3	29.	27	521.0	-251.0	.0	.0	.320	31	-.71	.17	27
GUTHRIE	3821	5	44.8	31	4.8	74.	2	17.	16	625.0	-150.0	.0	.0	2.503	31	1.30	.90	27
HENNESSEY 2 SE	4055	5	41.9	31	2.6	70.	2	15.	16	715.5	-81.5	.0	.0	.290	31	-.70	.16	27
INGALLS	4489	5	*****	0	*****	****	0	****	0	******	******	******	******	.611	31	*****	.27	23
KINGFISHER 2 SE	4861	5	42.9	31	3.0	72.	2	16.	28	684.0	-94.0	.0	.0	.330	31	-.80	.13	11
KONAWA	4915	5	*****	0	*****	****	0	****	0	******	******	******	******	2.051	31	.19	.72	28
MARSHALL	5589	5	*****	0	*****	****	0	****	0	******	******	******	******	.570	31	-.57	.57	28
MEEKER 4 W	5779	5	44.0	31	3.2	72.	2	17.	16	650.0	-100.0	.0	.0	1.970	31	.54	.87	23
MULHALL	6110	5	*****	0	*****	****	0	****	0	******	******	******	******	.470	31	*****	.32	27
NORMAN 3 S	6386	5	*****	0	*****	****	0	****	0	******	******	******	******	1.781	31	.43	.62	27
OILTON 2 SE	6616	5	*****	0	*****	****	0	****	0	******	******	******	******	1.970	31	*****	.98	28
OKEMAH	6638	5	44.7	31	2.7	72.	3	19.	16	629.0	-84.0	.0	.0	2.760	31	.93	1.20	27
OKLAHOMA CTY WS	6661	5	44.9	31	5.0	72.	2	21.	16	623.0	-155.0	.0	.0	1.394	31	.19	.54	23
PERKINS	7003	5	*****	0	*****	****	0	****	0	******	******	******	******	.880	31	-.47	.28	27
PIEDMONT	7068	5	*****	0	*****	****	0	****	0	******	******	******	******	.730	31	*****	.33	27
PRAGUE	7264	5	*****	0	*****	****	0	****	0	******	******	******	******	2.301	31	.75	.80	22
PURCELL 5 SW	7327	5	44.0	31	3.0	73.	2	17.	28	652.5	-91.5	.0	.0	2.341	31	.88	1.00	23
SEMINOLE	8042	5	44.9	31	1.9	74.	4	19.	16	622.5	-59.5	.0	.0	2.260	31	.48	.65	28
SHAWNEE	8110	5	*****	0	*****	****	0	****	0	******	******	******	******	2.090	31	.56	.96	23
STELLA	8479	5	*****	0	*****	****	0	****	0	******	******	******	******	1.850	31	*****	.72	23
STILLWATER 2 W	8501	5	40.0	31	.2	72.	4	14.	16	773.5	-7.5	.0	.0	.960	31	-.26	.52	27
STROUD 1 N	8563	5	*****	0	*****	****	0	****	0	******	******	******	******	1.391	31	*****	.50	27
TECUMSEH	8751	5	*****	0	*****	****	0	****	0	******	******	******	******	1.531	31	*****	.59	27
TROUSDALE	8960	5	*****	0	*****	****	0	****	0	******	******	******	******	1.020	31	*****	.40	20
UNION CITY 1 SE	9086	5	*****	0	*****	****	0	****	0	******	******	******	******	.590	31	-.75	.45	27
WELTY 1 SSE	9479	5	*****	0	*****	****	0	****	0	******	******	******	******	1.380	31	*****	.45	23
WEWOKA	9575	5	*****	0	*****	****	0	****	0	******	******	******	******	2.270	31	.49	1.16	27

DECEMBER 1988 SUMMARY FOR EAST CENTRAL DIVISION (CD6)

NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ASHLAND	364	6	*****	0	*****	****	0	****	0	******	******	******	******	3.190	31	*****	1.45	28
BEGGS	631	6	*****	0	*****	****	0	****	0	******	******	******	******	2.120	31	*****	.83	27
BOYNTON	1027	6	*****	0	*****	****	0	****	0	******	******	******	******	2.500	31	*****	.90	27
CALVIN	1391	6	*****	0	*****	****	0	****	0	******	******	******	******	2.423	31	.46	.65	27
CHECOTAH	1711	6	*****	0	*****	****	0	****	0	******	******	******	******	2.302	31	.19	.84	23
DEWAR 2 NE	2485	6	*****	0	*****	****	0	****	0	******	******	******	******	1.910	31	.04	.70	31
DUSTIN	2690	6	*****	0	*****	****	0	****	0	******	******	******	******	2.470	31	*****	1.04	27
EUFAULA	2993	6	45.4	31	*****	73.	3	20.	16	606.5	******	.0	******	2.681	31	.24	.93	28
HANNA	3884	6	43.8	31	*****	73.	3	18.	16	657.0	******	.0	******	2.931	31	.83	.97	23
HARTSHORNE	3946	6	*****	0	*****	****	0	****	0	******	******	******	******	2.960	31	*****	.98	23
HASKELL	3956	6	*****	0	*****	****	0	****	0	******	******	******	******	2.580	31	.61	.85	23
HOLDENVILLE	4235	6	44.1	31	1.2	73.	3	17.	16	648.0	-37.0	.0	.0	2.050	31	.22	.80	28
LAKE EUFAULA	4975	6	43.5	31	*****	72.	4	21.	17	666.5	******	.0	******	3.060	31	*****	.90	28
LYONS 2 N	5437	6	*****	0	*****	****	0	****	0	******	******	******	******	1.000	31	-1.00	.72	22
MCALESTER FAA	5664	6	45.5	31	3.5	72.	3	18.	28	603.5	-109.5	.0	.0	2.843	31	.46	1.34	27
MCCURTAIN 1 SE	5693	6	45.5	31	*****	74.	3	19.	29	603.5	******	.0	******	2.964	31	.32	1.01	28
MUSKOGEE	6130	6	44.2	31	2.5	73.	3	17.	28	646.0	-76.0	.0	.0	2.430	31	.19	1.12	27
OKMULGEE W W	6670	6	42.7	31	.8	73.	3	17.	16	691.0	-25.0	.0	.0	2.961	31	.91	1.32	28
OKTAHA 2 NE	6678	6	*****	0	*****	****	0	****	0	******	******	******	******	1.851	31	*****	.92	23
QUINTON	7372	6	*****	0	*****	****	0	****	0	******	******	******	******	2.401	31	.04	.95	27
SALLISAW 2 NE	7862	6	42.3	31	.1	72.	3	19.	28	703.0	-4.0	.0	.0	2.002	31	-.47	.65	23
SCIPIO	7979	6	*****	0	*****	****	0	****	0	******	******	******	******	2.490	31	*****	.80	23
SCRAPER	7993	6	*****	0	*****	****	0	****	0	******	******	******	******	2.310	31	*****	.84	28
SHORT	8170	6	*****	0	*****	****	0	****	0	******	******	******	******	2.091	31	*****	.80	23
STILWELL 1 NE	8506	6	42.1	31	*****	70.	3	14.	16	708.5	******	.0	******	2.472	31	-.24	1.11	28
TAHLEQUAH	8677	6	42.8	31	2.0	71.	3	9.	28	689.5	-60.5	.0	.0	1.731	31	-.73	.79	28
WEBBERS FALLS	9445	6	42.0	31	1.6	75.	4	14.	28	714.0	-49.0	.0	.0	2.390	31	.10	.81	28
WESTVILLE	9523	6	*****	0	*****	****	0	****	0	******	******	******	******	2.350	31	*****	.97	23
WETUMKA 3 NE	9571	6	*****	0	*****	****	0	****	0	******	******	******	******	2.542	31	.65	.81	28

DECEMBER 1988 SUMMARY FOR SOUTHWEST DIVISION (CD7)

NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ALTUS IRR STA	179	7	44.6	31	1.8	73.	2	13.	28	633.5	-54.5	.0	.0	.772	31	-.10	.36	8
ALTUS DAM	184	7	43.0	31	*****	72.	3	13.	28	683.0	******	.0	******	.441	31	-.41	.17	11
ANADARKO	224	7	43.1	28	*****	73.	2	14.	16	617.0	******	3.5	******	.900	31	-.29	.33	27
APACHE	260	7	*****	0	*****	****	0	****	0	******	******	******	******	1.150	31	*****	.53	7
ALTUS AFB	447	7	*****	0	*****	****	0	****	0	******	******	******	******	.163	30	*****	.10	8
CARNEGIE 2 ENE	1504	7	43.3	31	2.2	72.	2	12.	29	674.0	-67.0	.0	.0	.180	31	-.88	.18	8
CHATTANOOGA	1706	7	44.3	31	1.9	74.	26	18.	28	642.0	-59.0	.0	.0	.761	31	-.32	.31	27
DUNCAN 12 W	2668	7	*****	0	*****	****	0	****	0	******	******	******	******	1.232	31	*****	.54	7
FREDERICK	3353	7	43.9	31	.1	75.	27	19.	28	655.5	-1.5	.0	.0	.930	31	-.09	.40	7
GRANDFIELD 4 NW	3709	7	*****	0	*****	****	0	****	0	******	******	******	******	1.500	31	.25	.43	11
HOBART FAA APT	4204	7	43.3	31	3.4	72.	2	13.	28	674.0	-104.0	.0	.0	.522	31	-.29	.34	7
HOLLIS	4249	7	43.4	29	*****	71.	26	12.	29	625.0	******	.0	******	.770	31	.04	.58	8
LAWTON	5063	7	42.9	31	.7	71.	26	20.	27	685.5	-21.5	.0	.0	1.580	31	.36	.60	10
FORT SILL	5068	7	42.6	31	*****	69.	26	21.	28	694.5	******	.0	******	1.092	31	-.13	.38	27
LOOKEBA 2 ENE	5329	7	*****	0	*****	****	0	****	0	******	******	******	******	.200	31	*****	.12	27
MANGUM RES STA	5509	7	45.4	31	3.5	72.	3	25.	15	608.0	-108.0	.0	.0	.451	31	-.97	.28	8
RANDLETT 9 E	7403	7	*****	0	*****	****	0	****	0	******	******	******	******	.841	31	*****	.67	10
ROOSEVELT	7727	7	*****	0	*****	****	0	****	0	******	******	******	******	.450	31	-.52	.23	11
SEDAN	8016	7	*****	0	*****	****	0	****	0	******	******	******	******	.030	31	*****	.03	7
SNYDER	8299	7	*****	0	*****	****	0	****	0	******	******	******	******	.550	31	-.47	.30	11
VINSON 3 WNW	9212	7	*****	0	*****	****	0	****	0	******	******	******	******	.210	31	-.57	.19	8
WALTERS	9278	7	45.1	31	1.6	73.	26	20.	28	616.0	-51.0	.0	.0	1.140	31	-.28	.26	7
WICHITA MT WLR	9629	7	42.6	31	1.4	75.	3	11.	28	693.0	-45.0	.0	.0	.530	31	-.59	.25	8
WILLOW	9668	7	*****	0	*****	****	0	****	0	******	******	******	******	.420	31	*****	.35	8

DECEMBER 1988 SUMMARY FOR SOUTH CENTRAL DIVISION (CD8)

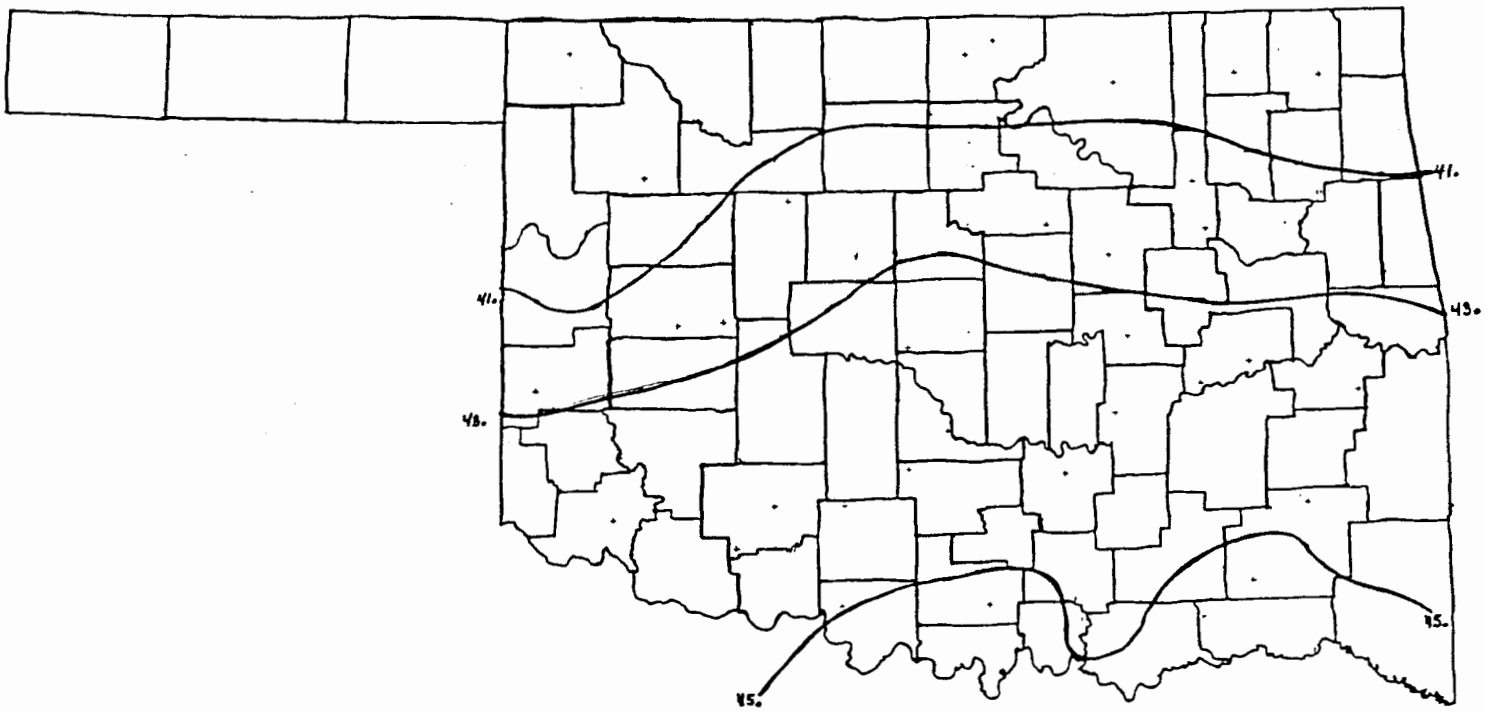
NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ADA	17	8	44.6	31	1.1	73.	2	19.	17	632.5	-34.5	.0	.0	2.670	31	.73	.75	27
ALLEN	147	8	*****	0	*****	****	0	****	0	******	******	******	******	3.400	31	*****	.95	27
ARDMORE	292	8	46.7	30	.5	72.	2	21.	16	548.5	-34.5	.0	.0	2.012	30	*****	.61	27
ATOKA DAM	394	8	44.6	27	*****	69.	3	24.	16	551.0	******	.0	******	2.430	27	*****	.62	12
BOKCHITO	917	8	*****	0	*****	****	0	****	0	******	******	******	******	1.900	31	*****	.55	28
CENTRAHOMA	1648	8	*****	0	*****	****	0	****	0	******	******	******	******	3.000	31	*****	1.20	27
CHICKASAW NRA	1745	8	42.6	31	*****	73.	3	18.	28	693.5	******	.0	******	2.770	31	*****	.93	7
COLEMAN	2011	8	*****	0	*****	****	0	****	0	******	******	******	******	3.070	31	*****	.55	28
COMANCHE	2054	8	*****	0	*****	****	0	****	0	******	******	******	******	2.952	31	*****	2.10	7
DAISY 4 ENE	2354	8	*****	0	*****	****	0	****	0	******	******	******	******	2.934	31	.27	.72	28
DUNCAN	2660	8	43.5	31	-.2	71.	27	19.	28	667.0	7.0	.0	.0	1.652	31	.30	.78	7
DURANT USDA	2678	8	43.9	31	*****	72.	3	21.	29	654.0	******	.0	******	2.850	31	.67	.76	28
ELMORE CITY	2872	8	*****	0	*****	****	0	****	0	******	******	******	******	2.022	31	*****	.85	7
FARRIS 3 WNW	3083	8	*****	0	*****	****	0	****	0	******	******	******	******	3.000	31	*****	.69	23
GRADY	3688	8	*****	0	*****	****	0	****	0	******	******	******	******	1.351	31	*****	.37	8
HEALDTON	4001	8	43.3	28	*****	72.	2	19.	29	606.5	******	.0	******	2.630	31	1.02	.74	23
HENNEPIN	4052	8	*****	0	*****	****	0	****	0	******	******	******	******	2.622	31	*****	1.10	6
KETCHUM RANCH	4780	8	*****	0	*****	****	0	****	0	******	******	******	******	1.780	31	*****	.95	7
KINGSTON	4865	8	*****	0	*****	****	0	****	0	******	******	******	******	2.840	31	.83	.85	12
LEHIGH	5108	8	*****	0	*****	****	0	****	0	******	******	******	******	3.144	31	*****	1.04	28
LINDSAY 2 W	5216	8	44.1	31	*****	71.	2	19.	16	648.0	******	.0	******	2.130	31	.66	.95	7
LOCO 6 SE	5247	8	*****	0	*****	****	0	****	0	******	******	******	******	1.690	31	*****	.93	11
MADILL	5468	8	46.3	31	1.5	73.	2	22.	29	579.5	-46.5	.0	.0	2.750	31	.78	.80	23
MARIETTA	5563	8	46.6	31	1.8	73.	2	22.	28	569.0	-57.0	.0	.0	2.703	31	1.00	.78	11
MARLOW 1 WSW	5581	8	44.5	31	*****	72.	2	16.	28	636.0	******	.0	******	2.180	31	.82	.82	7
MCGEE CREEK DAM	5713	8	44.7	31	*****	70.	4	23.	16	628.5	******	.0	******	3.030	31	*****	.70	23
OSWALT	6787	8	*****	0	*****	****	0	****	0	******	******	******	******	1.050	31	*****	1.05	24
PAULS VALLEY	6926	8	45.9	26	*****	86.	26	18.	16	499.0	******	3.0	******	1.660	31	-.05	.65	23
PONTOTOC	7214	8	*****	0	*****	****	0	****	0	******	******	******	******	2.200	31	.33	1.30	22
TISHOMINGO NWLR	8884	8	44.1	31	*****	73.	2	19.	16	647.0	******	.0	******	2.750	31	.67	.68	23
TUSSY	9032	8	*****	0	*****	****	0	****	0	******	******	******	******	2.380	31	*****	.79	7
WAURIKA	9395	8	46.2	31	1.6	74.	26	18.	27	583.5	-48.5	.5	.5	1.390	31	-.09	.46	11
WAURIKA DAM	9399	8	43.8	22	*****	73.	27	21.	28	466.5	******	.0	******	1.600	22	*****	.74	12

DECEMBER 1988 SUMMARY FOR SOUTHEAST DIVISION (CD9)

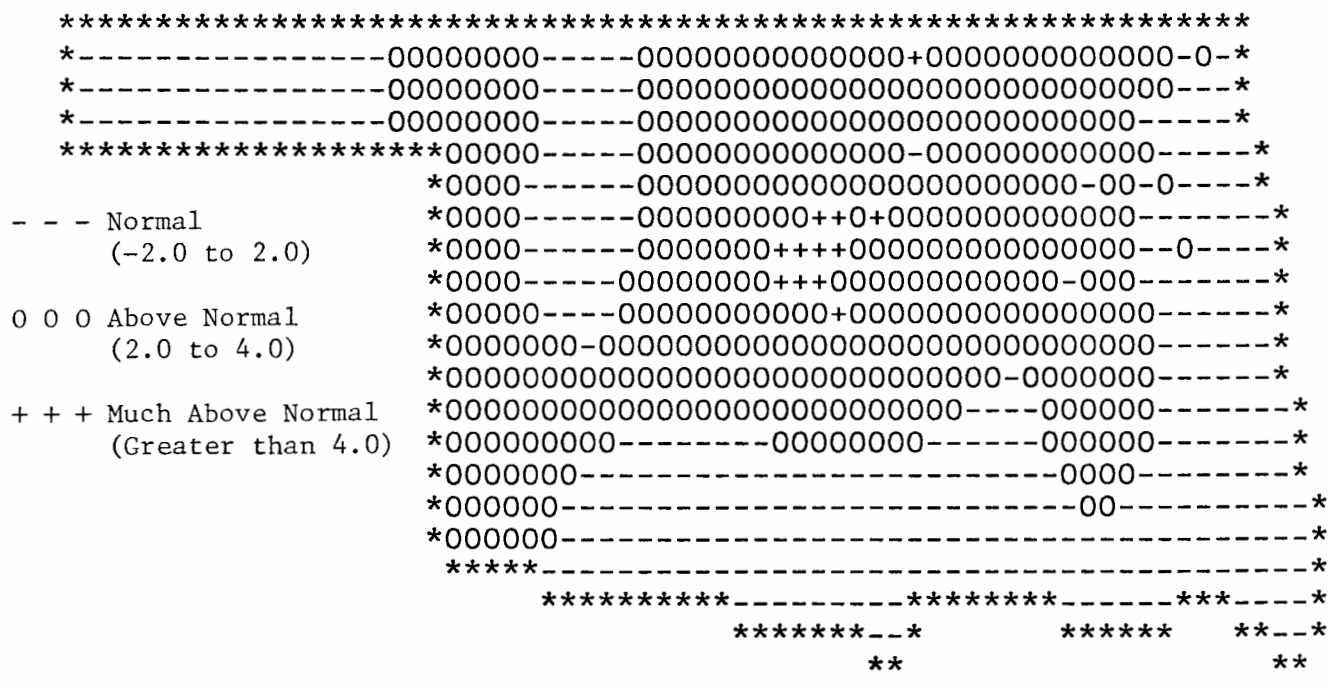
NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ANTLERS	256	9	45.7	31	2.0	71.	3	21.	18	597.5	-62.5	.0	.0	2.740	31	-.28	1.15	27
BATTIEST 1 SSW	567	9	43.6	31	*****	72.	3	18.	29	664.0	******	.0	******	4.000	31	*****	1.23	28
BEAR MT TWR	584	9	45.9	31	*****	72.	3	21.	16	591.5	******	.0	******	3.430	31	-.67	.65	28
BENGAL	670	9	*****	0	*****	****	0	****	0	******	******	******	******	3.480	31	*****	1.32	28
BOSWELL 4 NNW	980	9	46.5	31	*****	77.	12	21.	29	573.0	******	.0	******	2.623	31	-.02	.75	28
BROKEN BOW 1 N	1162	9	*****	0	*****	****	0	****	0	******	******	******	******	1.960	31	-1.86	.67	23
BROKEN BOW DAM	1168	9	44.6	31	*****	74.	4	22.	29	632.5	******	.0	******	2.520	31	*****	.75	28
CARNASAW TWR	1499	9	*****	0	*****	****	0	****	0	******	******	******	******	2.190	30	*****	.62	28
CARTER TWR	1544	9	*****	0	*****	****	0	****	0	******	******	******	******	2.860	31	-1.05	.63	28
FANSHAWE	3065	9	*****	0	*****	****	0	****	0	******	******	******	******	4.190	31	1.25	1.25	27
HEAVENER 1 SE	4008	9	*****	0	*****	****	0	****	0	******	******	******	******	2.610	31	-.61	1.50	28
HUGO	4384	9	46.6	31	.9	69.	2	24.	16	570.5	-27.5	.0	.0	3.450	31	.37	1.00	28
IDABEL	4451	9	44.8	31	-.2	70.	4	24.	30	625.0	5.0	.0	.0	2.170	31	-1.30	.56	23
POTEAU W W	7254	9	42.8	22	*****	71.	26	17.	28	489.0	******	.0	******	2.104	31	*****	.64	27
SPIRO	8416	9	*****	0	*****	****	0	****	0	******	******	******	******	2.310	31	-.48	.95	28
TUSKAHOMA	9023	9	44.8	31	*****	75.	3	17.	16	627.5	******	.0	******	3.270	31	*****	1.29	28
VALLIANT 3 W	9118	9	*****	0	*****	****	0	****	0	******	******	******	******	2.270	31	-1.33	.65	28

DECEMBER 1988 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	38.1	10	1.2	75.0	2	2.0	29	832.4	-37.6	.0	.0	.06	14	-.43	.12	20
2	41.3	13	3.0	74.0	2	7.0	29	735.1	-92.0	.0	.0	.44	20	-.54	1.10	27
3	42.0	16	2.7	74.0	3	11.0	16	711.6	-86.3	.0	.0	2.14	32	.46	2.15	22
4	42.2	9	2.4	72.0	2	7.0	28	706.7	-75.8	.0	.0	.20	21	-.59	.83	8
5	44.0	15	3.4	74.0	4	14.0	16	649.1	-105.6	.0	.0	1.40	35	.01	1.20	27
6	43.7	12	2.0	75.0	4	9.0	28	661.4	-60.9	.0	.0	2.41	29	.20	1.45	28
7	43.7	11	1.7	75.0	3	11.0	28	659.9	-52.6	.0	.0	.72	23	-.34	.67	10
8	44.8	12	.5	86.0	26	16.0	28	623.9	-16.4	.0	.0	2.42	30	.61	2.10	7
9	45.3	8	.5	77.0	12	17.0	16	610.2	-15.8	.0	.0	2.87	16	-.50	1.50	28

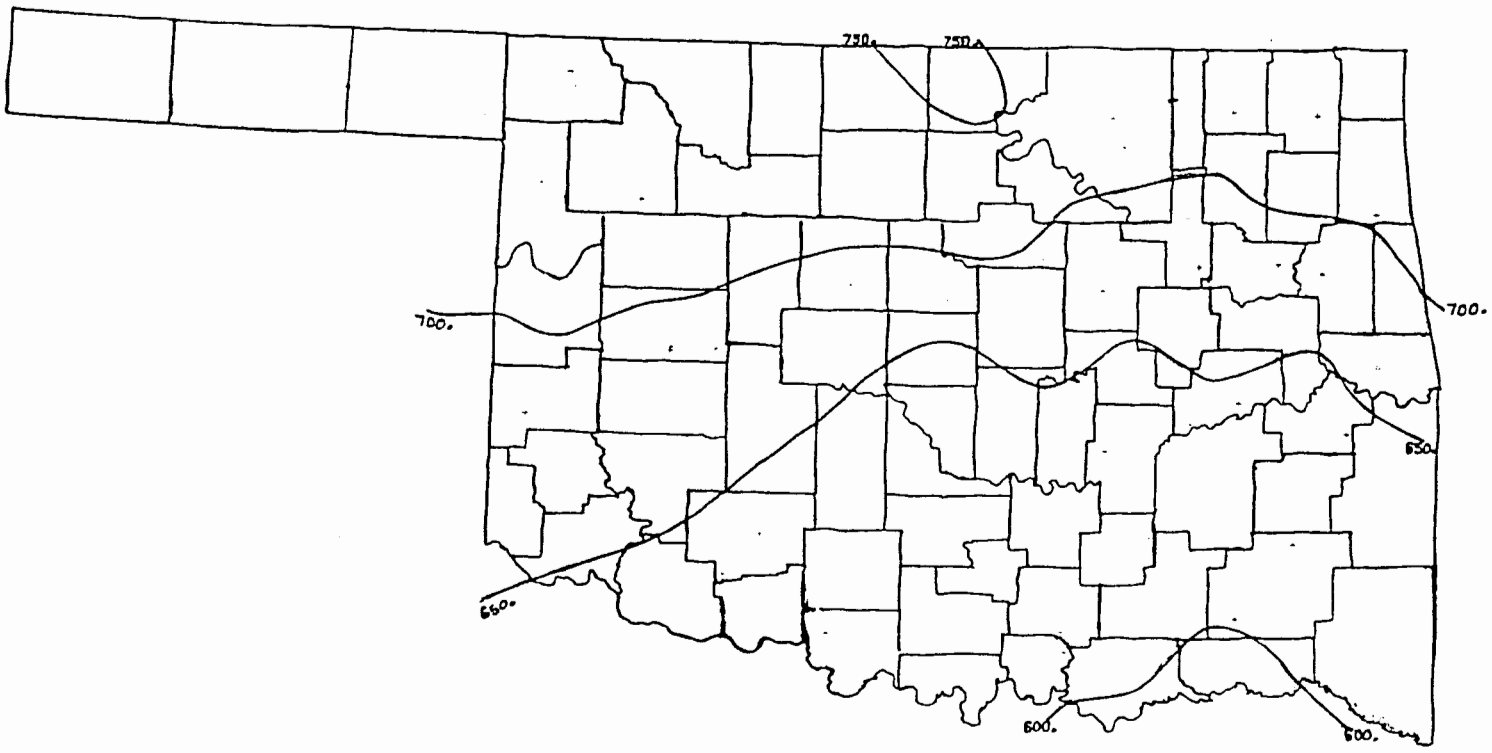


DECEMBER 1988 AVERAGE MONTHLY TEMPERATURE
(Degrees F)

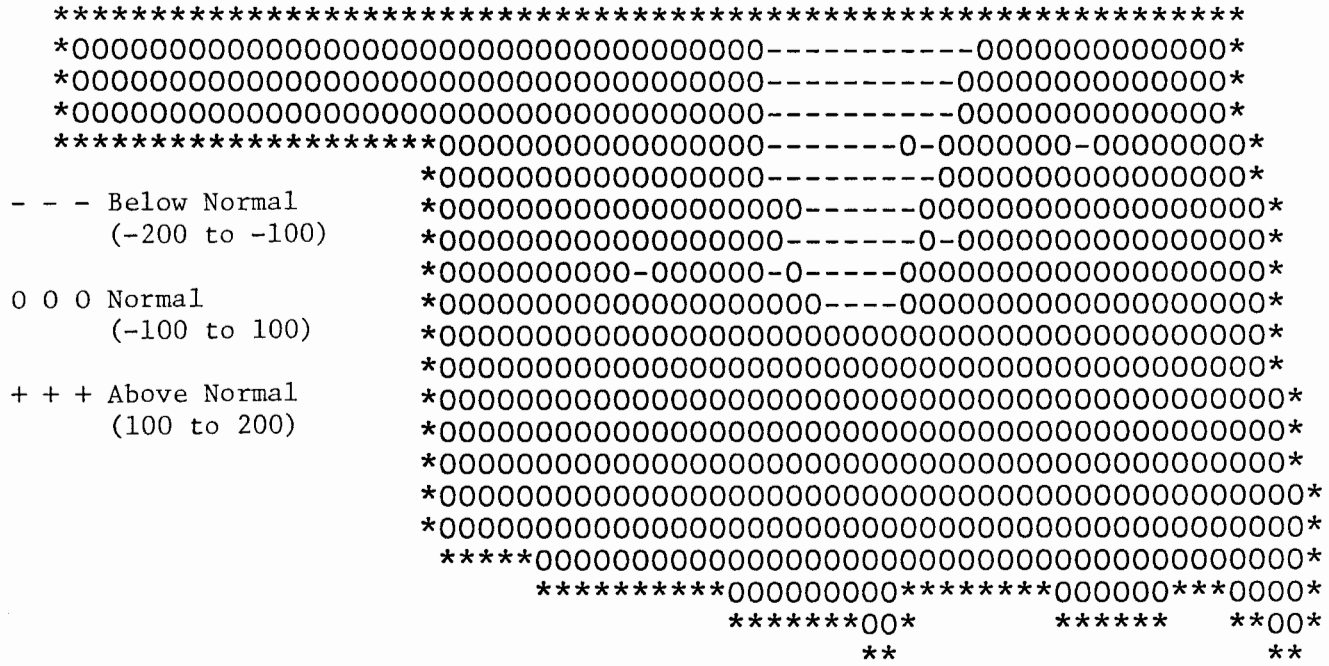


DECEMBER 1988 DEVIATION FROM NORMAL TEMPERATURES

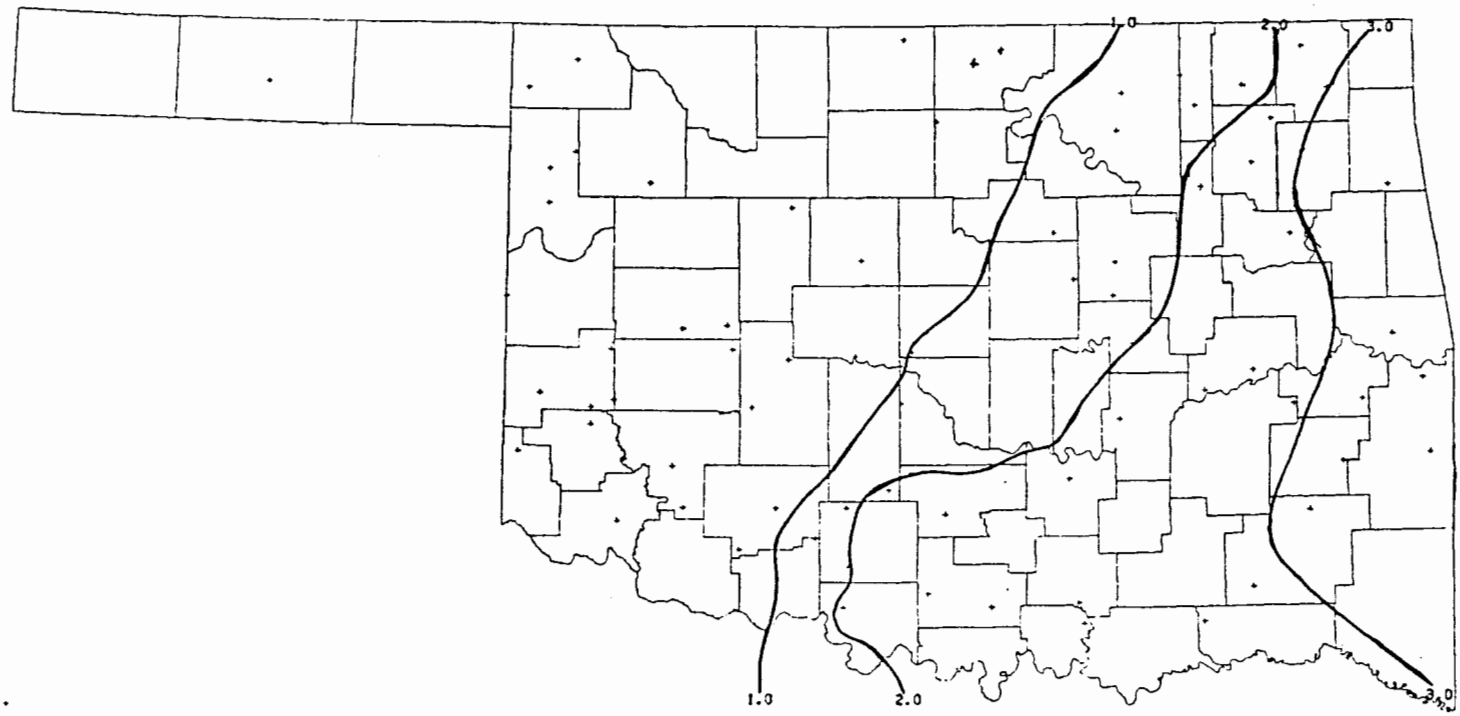
(Degrees F)



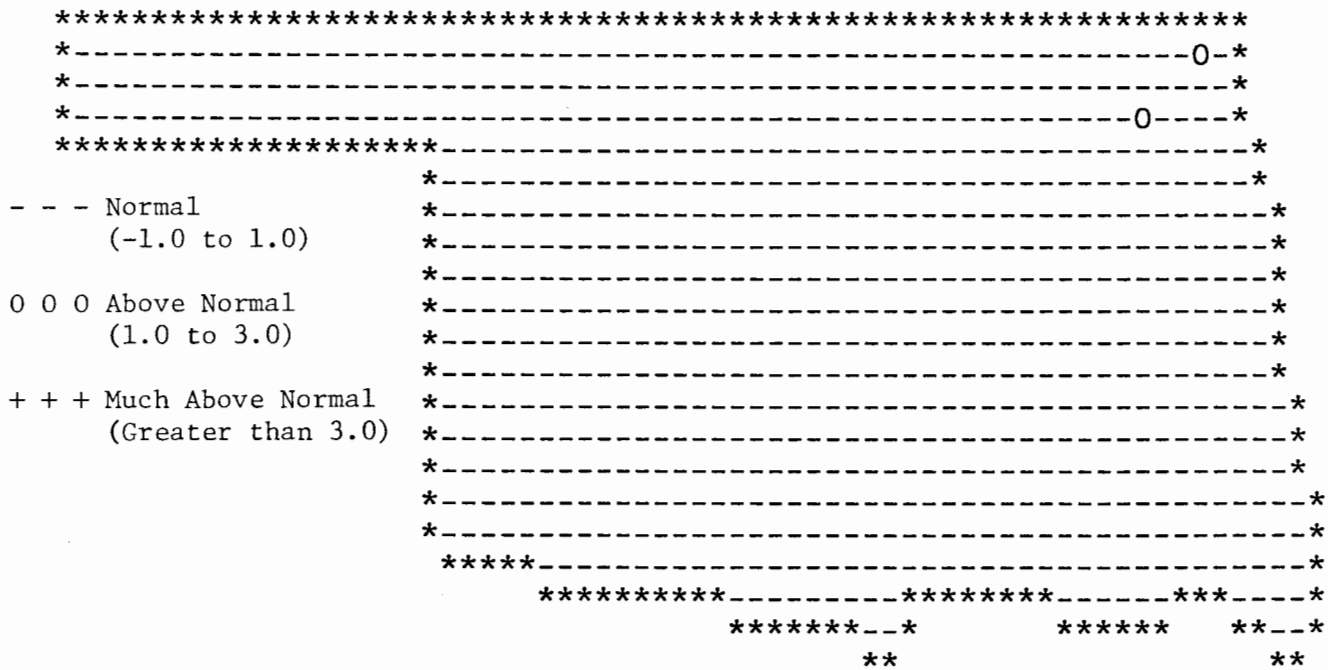
DECEMBER 1988 TOTAL HEATING DEGREE DAYS



DECEMBER 1988 DEVIATION FROM NORMAL HEATING DEGREE DAYS



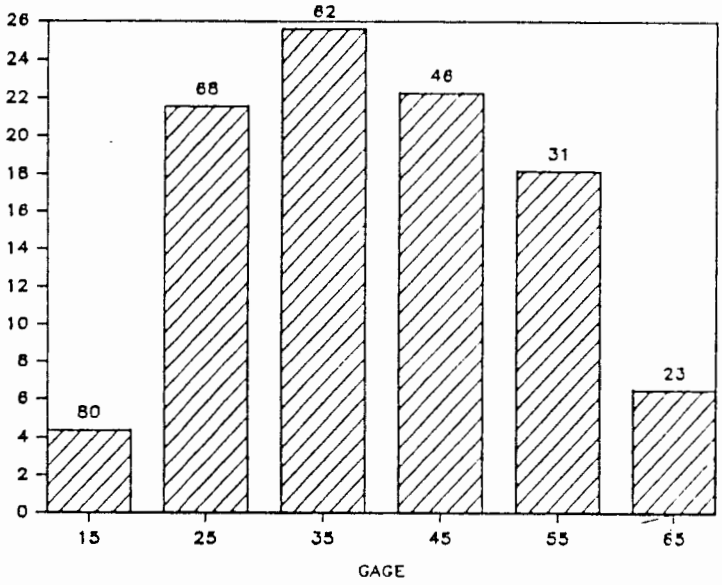
DECEMBER 1988 TOTAL PRECIPITATION
(Inches)

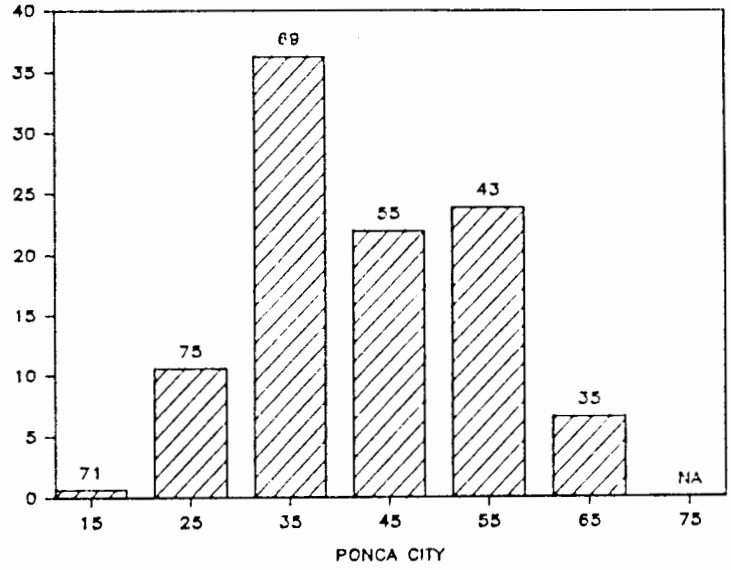


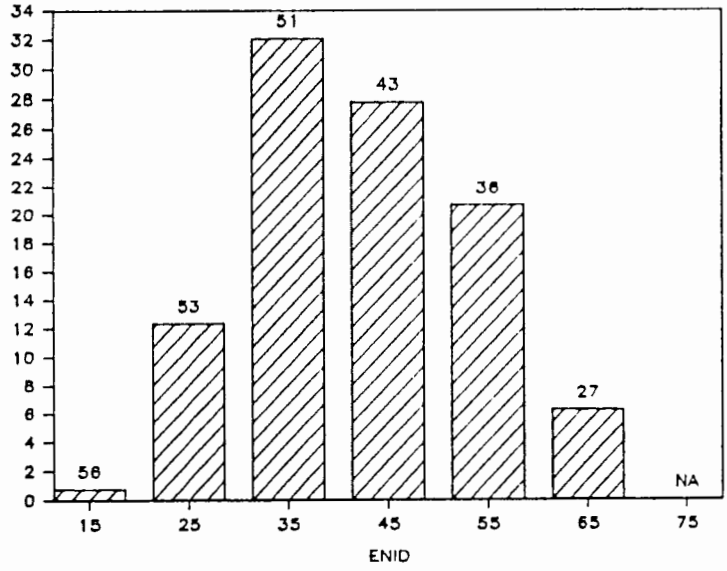
DECEMBER 1988 DEVIATION FROM NORMAL PRECIPITATION
(Inches)

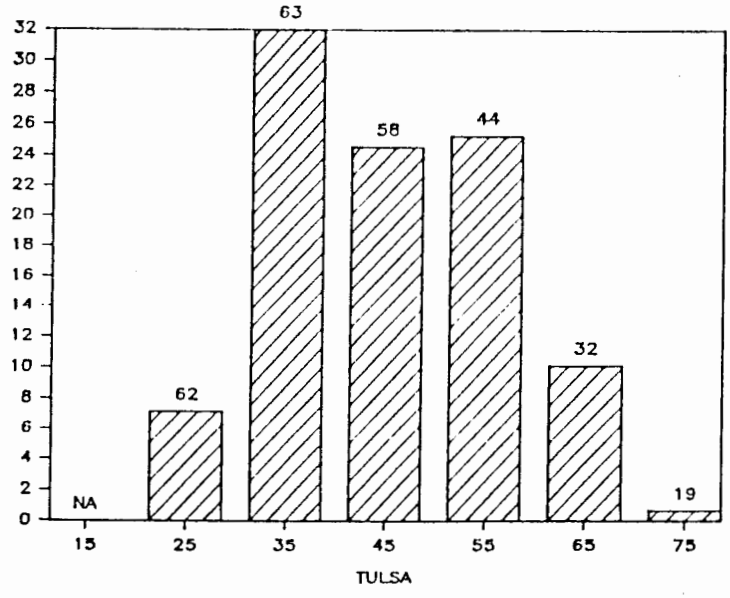
The following graphs present December 1988 hourly temperature and corresponding relative humidity information for 10 Oklahoma stations. The height of each bar represents the percentage of the hours in the month when the temperature was observed within the category given below the axis (45 = 40 to 49, 55 = 50 to 59, etc.). The number above each bar is the median relative humidity associated with the temperature category below it.

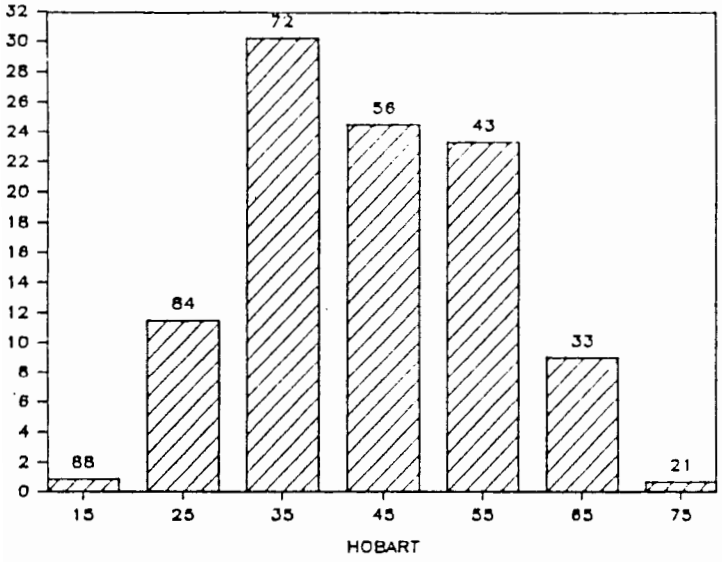
Example: Approximately 8% of Oklahoma City's hourly temperature values ranged from 60 to 69 degrees. The median relative humidity associated with this temperature class was 27%.

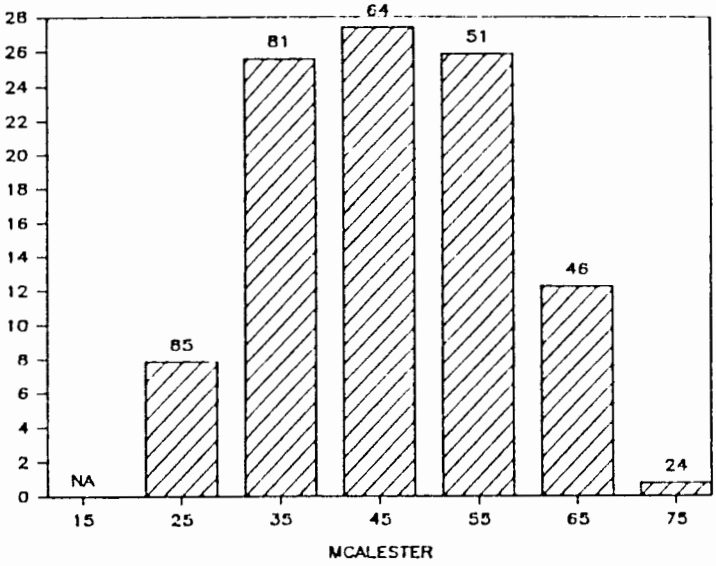


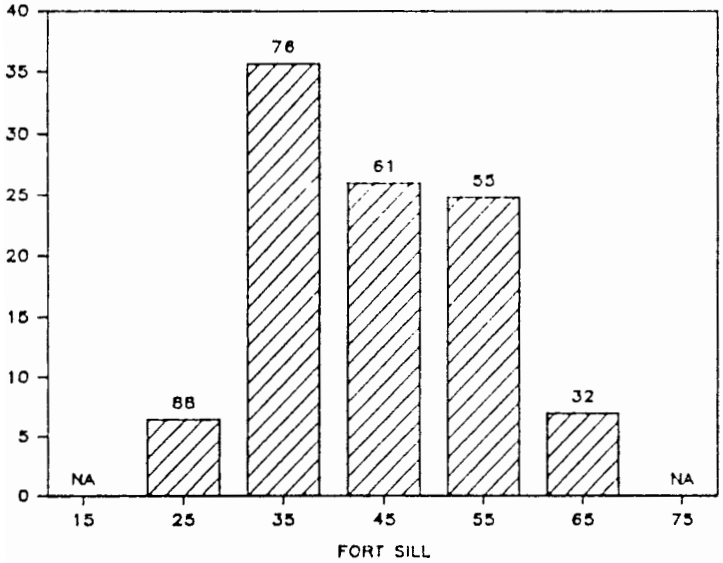


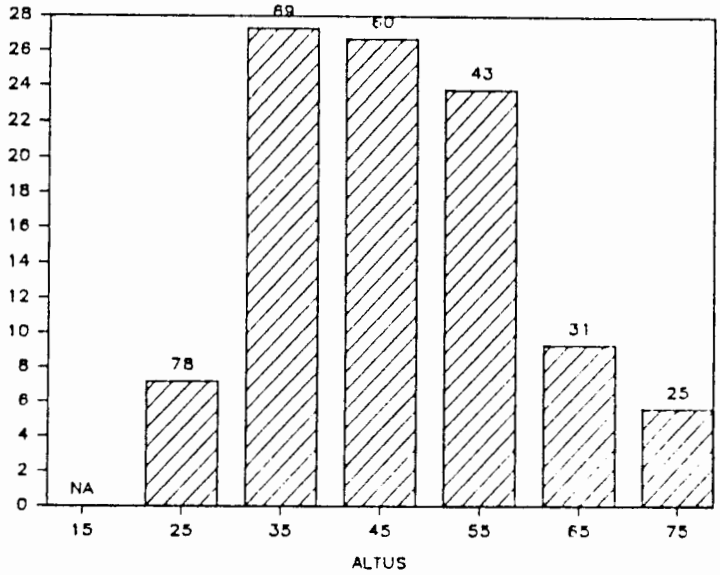


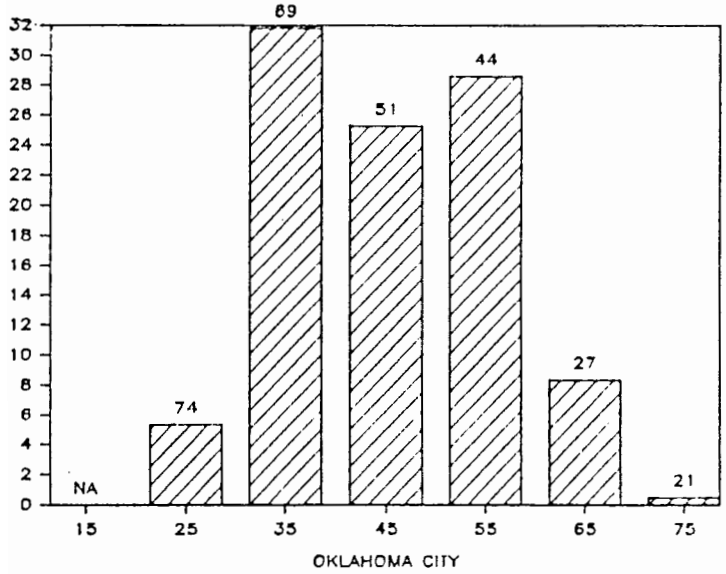


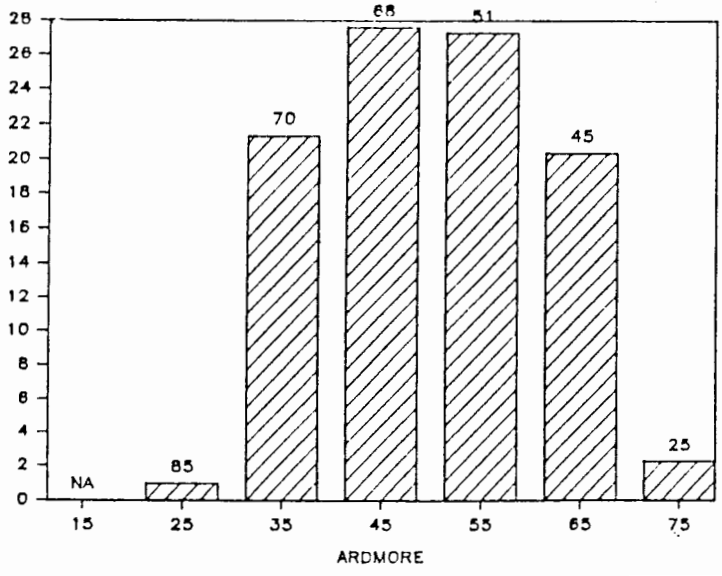

88
84
72
56
43
33
21
15
25
35
45
55
65
75
HOBART


NA
85
81
64
51
46
24
15
25
35
45
55
65
75
MCALESTER

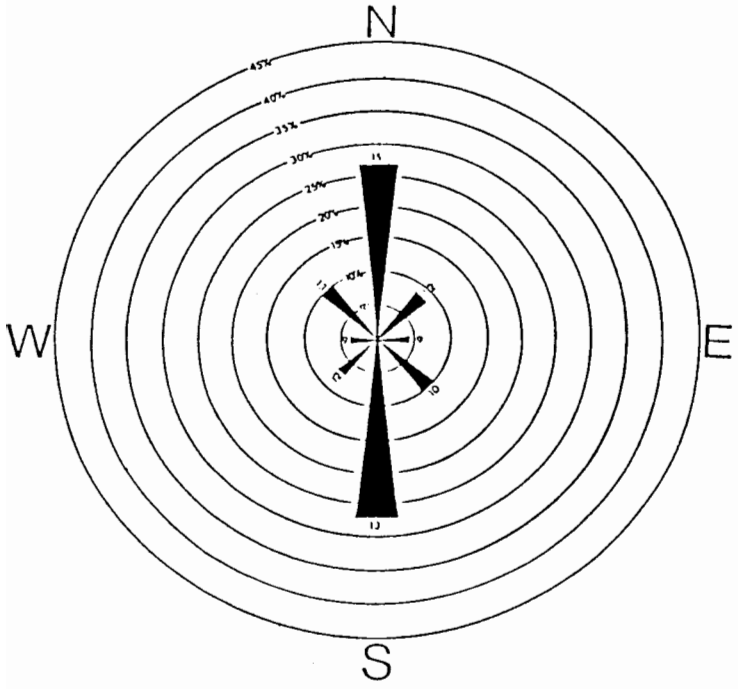

NA
88
76
61
55
32
NA
15
25
35
45
55
65
75
FORT SILL

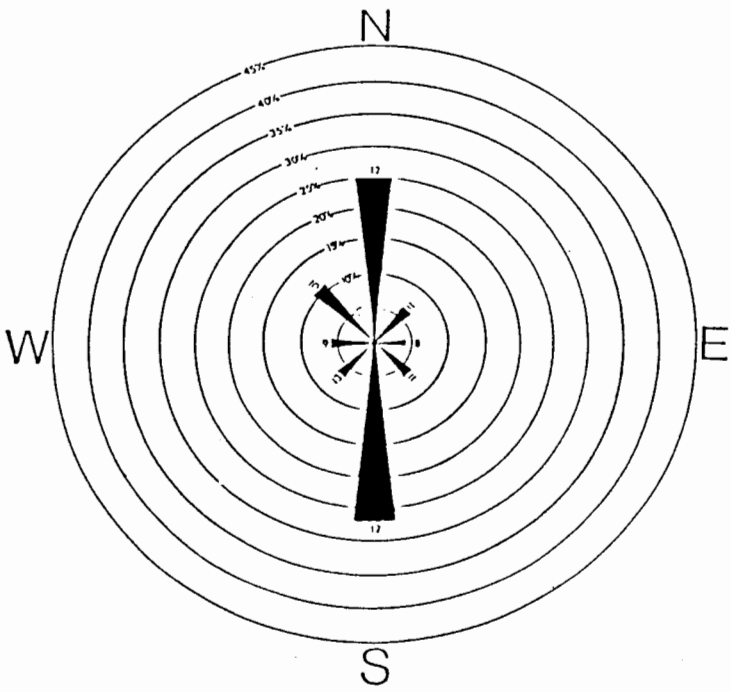

NA
78
69
60
43
31
25
15
25
35
45
55
65
75
ALTUS


NA
74
89
51
44
27
21
15
25
35
45
55
65
75
OKLAHOMA CITY


NA
85
70
68
51
45
25
15
25
35
45
55
65
75
ARDMORE

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





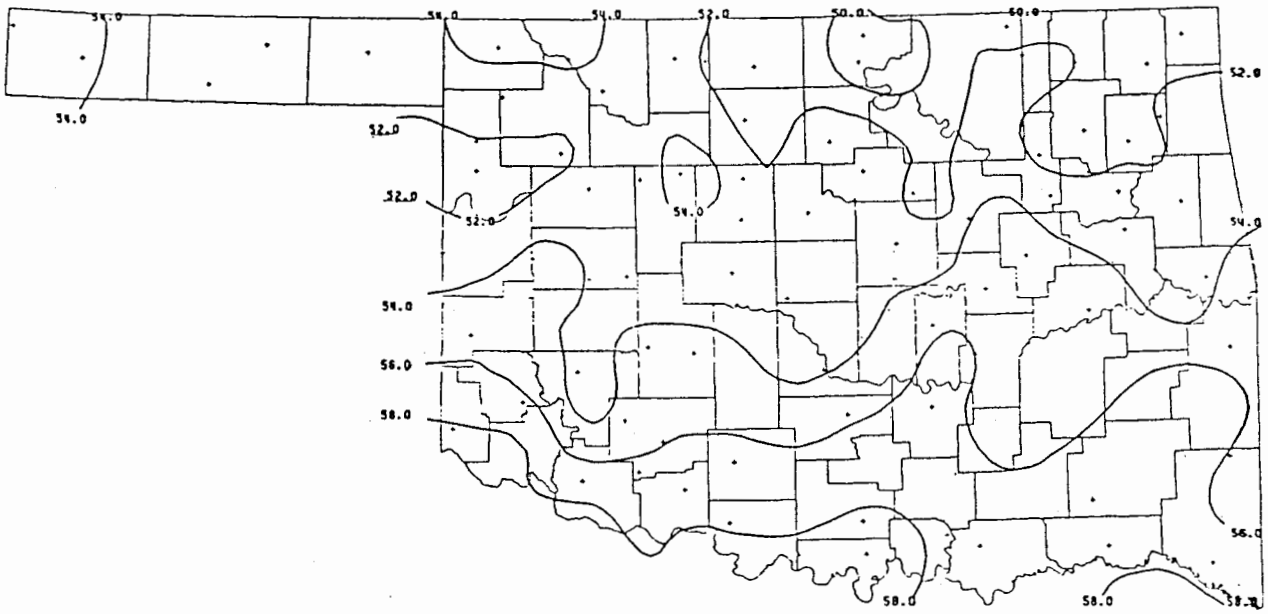
FEBRUARY 1989 SUNRISE AND SUNSET

Oklahoma City

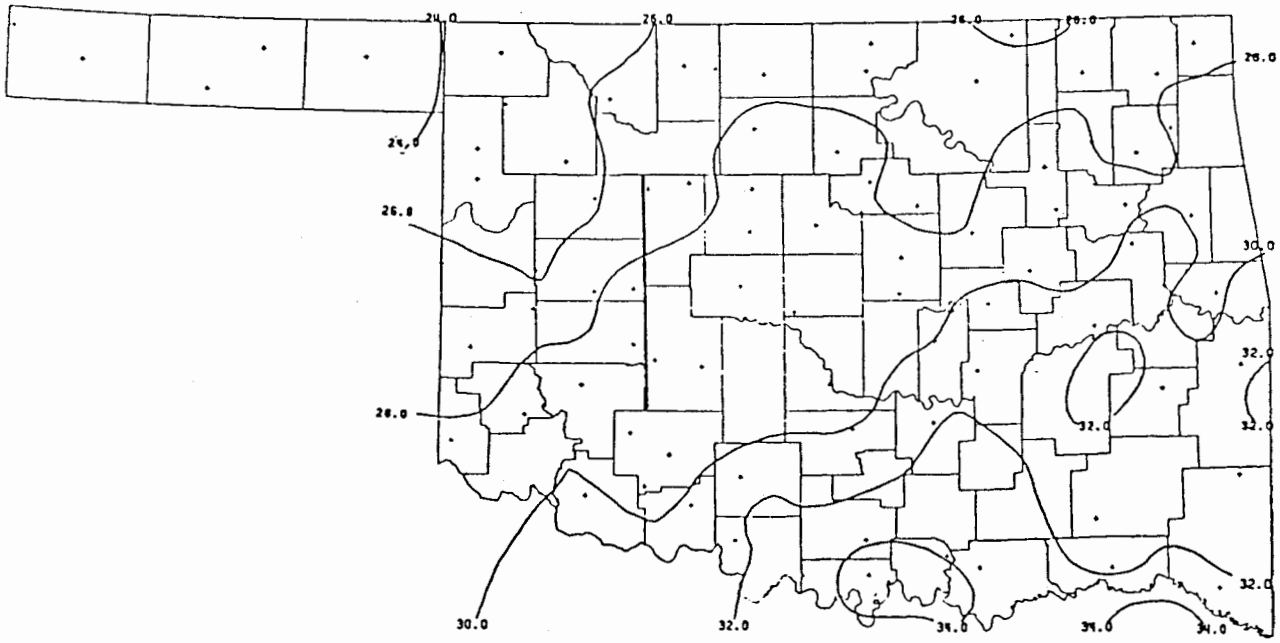
DATE	SUNRISE	SUNSET	DAYLIGHT
890201	7:30AM	5:58PM LT	10:28
890202	7:29AM	5:59PM LT	10:29
890203	7:28AM	6: 0PM LT	10:31
890204	7:28AM	6: 1PM LT	10:33
890205	7:27AM	6: 2PM LT	10:35
890206	7:26AM	6: 3PM LT	10:36
890207	7:25AM	6: 4PM LT	10:38
890208	7:24AM	6: 5PM LT	10:40
890209	7:24AM	6: 6PM LT	10:42
890210	7:23AM	6: 7PM LT	10:44
890211	7:22AM	6: 8PM LT	10:46
890212	7:21AM	6: 9PM LT	10:48
890213	7:20AM	6:10PM LT	10:50
890214	7:19AM	6:11PM LT	10:52
890215	7:18AM	6:12PM LT	10:54
890216	7:17AM	6:13PM LT	10:56
890217	7:16AM	6:13PM LT	10:58
890218	7:15AM	6:14PM LT	10:60
890219	7:14AM	6:15PM LT	11: 2
890220	7:13AM	6:16PM LT	11: 4
890221	7:11AM	6:17PM LT	11: 6
890222	7:10AM	6:18PM LT	11: 8
890223	7: 9AM	6:19PM LT	11:10
890224	7: 8AM	6:20PM LT	11:12
890225	7: 7AM	6:21PM LT	11:14
890226	7: 5AM	6:22PM LT	11:16
890227	7: 4AM	6:23PM LT	11:19
890228	7: 3AM	6:24PM LT	11:21
890229	7: 2AM	6:25PM LT	11:23

Tulsa

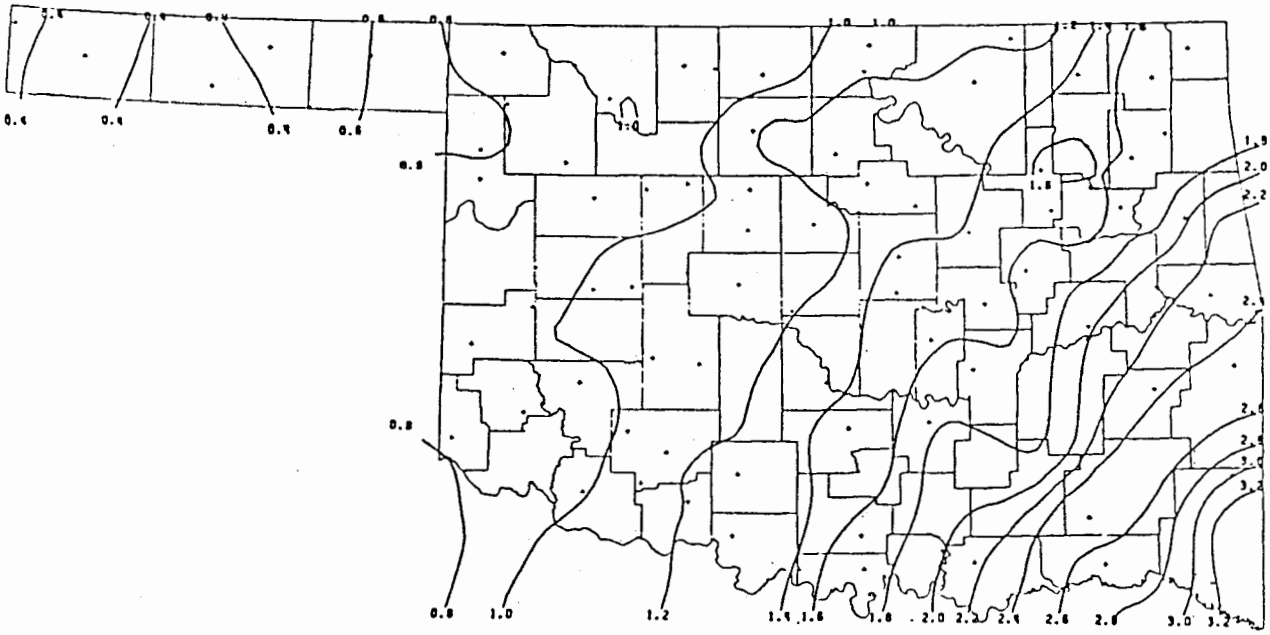
DATE	SUNRISE	SUNSET	DAYLIGHT
890201	7:25AM	5:49PM LT	10:25
890202	7:24AM	5:50PM LT	10:27
890203	7:23AM	5:51PM LT	10:28
890204	7:22AM	5:52PM LT	10:30
890205	7:22AM	5:53PM LT	10:32
890206	7:21AM	5:55PM LT	10:34
890207	7:20AM	5:56PM LT	10:36
890208	7:19AM	5:57PM LT	10:38
890209	7:18AM	5:58PM LT	10:40
890210	7:17AM	5:59PM LT	10:41
890211	7:16AM	6: 0PM LT	10:43
890212	7:15AM	6: 1PM LT	10:45
890213	7:14AM	6: 2PM LT	10:47
890214	7:13AM	6: 3PM LT	10:49
890215	7:12AM	6: 4PM LT	10:51
890216	7:11AM	6: 5PM LT	10:54
890217	7:10AM	6: 6PM LT	10:56
890218	7: 9AM	6: 7PM LT	10:58
890219	7: 8AM	6: 8PM LT	10:60
890220	7: 7AM	6: 9PM LT	11: 2
890221	7: 5AM	6:10PM LT	11: 4
890222	7: 4AM	6:11PM LT	11: 6
890223	7: 3AM	6:12PM LT	11: 8
890224	7: 2AM	6:13PM LT	11:11
890225	7: 1AM	6:13PM LT	11:13
890226	6:59AM	6:14PM LT	11:15
890227	6:58AM	6:15PM LT	11:17
890228	6:57AM	6:16PM LT	11:19
890229	6:56AM	6:17PM LT	11:22



30-YEAR MEAN FEBRUARY DAILY MAXIMUM TEMPERATURE



30-YEAR MEAN FEBRUARY DAILY MINIMUM TEMPERATURE



30-YEAR MEAN FEBRUARY PRECIPITATION

30- AND 90-DAY NATIONAL WEATHER SERVICE OUTLOOK

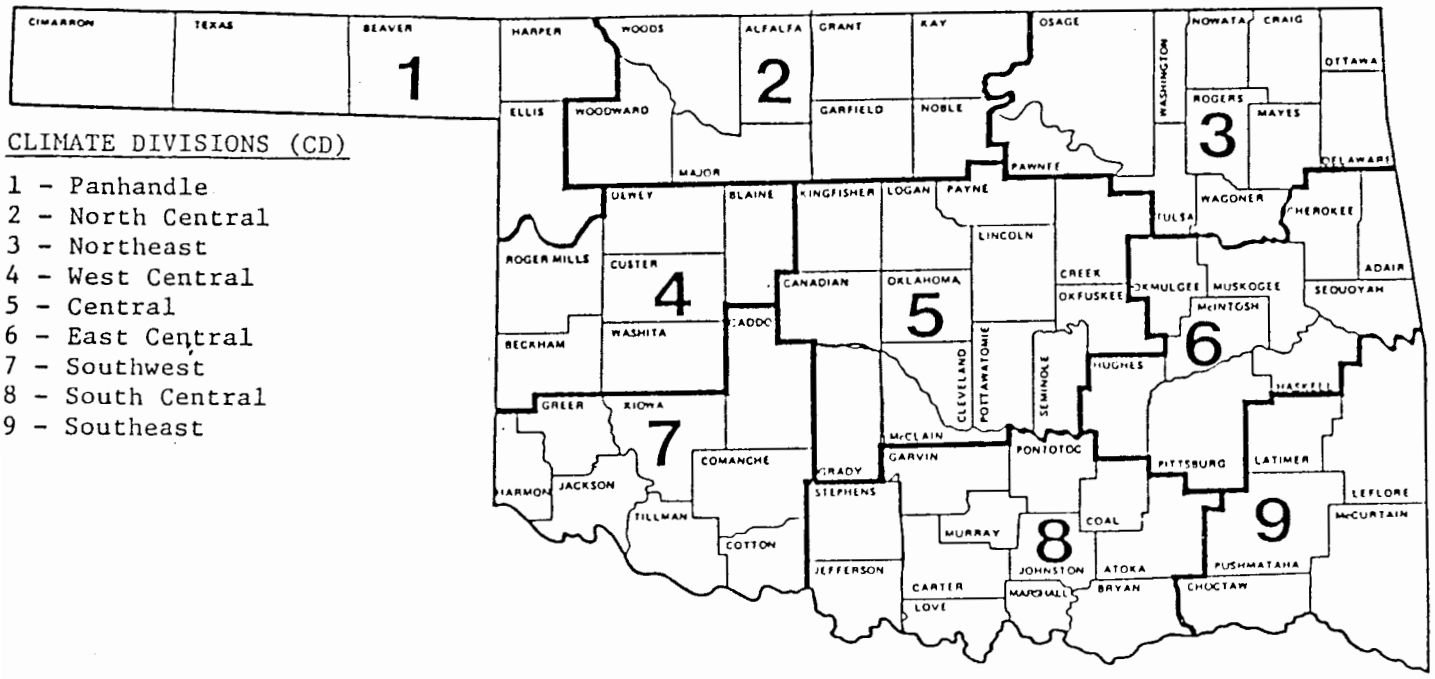
30-DAY OUTLOOK (JANUARY)

Precipitation - Near normal Statewide.
Temperature - Near normal Statewide.

90-DAY OUTLOOK (JANUARY - MARCH)

Precipitation - Below normal in northwestern Oklahoma, above normal in southeastern Oklahoma and near normal elsewhere.
Temperature - Above normal in western Oklahoma and near normal elsewhere.

O K L A H O M A



CLIMATE DIVISIONS (CD)

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

EXPLANATION OF TABLES

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

Station Name:

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

Climate Division: See the figure above.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

EXPLANATION OF MAPS

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

FEBRUARY 1989

CLIMATE CALENDAR

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

Normal	1	Actual
48.8	max	
28.1	min	
.024	pcpn	
26	HDD	
0	CDD	
Highest Max		74-1986
Lowest Max		16-1985
Lowest Min		-1-1951
Highest Min		59-1986
Greatest pcpn		1.88-1983

Normal	2	Actual
46.8	max	
26.0	min	
.012	pcpn	
28	HDD	
0	CDD	
Highest Max		75-1934
Lowest Max		24-1985
Lowest Min		3-1951
Highest Min		58-1986
Greatest pcpn		.88-1943

Normal	3	Actual
49.4	max	
26.8	min	
.075	pcpn	
27	HDD	
0	CDD	
Highest Max		78-1934
Lowest Max		19-1982
Lowest Min		8-1972
Highest Min		58-1986
Greatest pcpn		1.13-1960

Normal	4	Actual
53.5	max	
29.3	min	
.084	pcpn	
23	HDD	
0	CDD	
Highest Max		77-1962
Lowest Max		19-1982
Lowest Min		4-1936
Highest Min		58-1927
Greatest pcpn		1.32-1964

Normal	5	Actual
51.3	max	
30.2	min	
.064	pcpn	
24	HDD	
0	CDD	
Highest Max		77-1948
Lowest Max		16-1982
Lowest Min		6-1933
Highest Min		57-1938
Greatest pcpn		1.05-1987

Normal	6	Actual
47.2	max	
28.1	min	
.025	pcpn	
27	HDD	
0	CDD	
Highest Max		72-1931
Lowest Max		25-1975
Lowest Min		6-1933
Highest Min		54-1931
Greatest pcpn		.60-1979

Normal	7	Actual
47.7	max	
25.4	min	
.037	pcpn	
28	HDD	
0	CDD	
Highest Max		76-1932
Lowest Max		6-1933
Lowest Min		-5-1933
Highest Min		47-1931
Greatest pcpn		.84-1980

Normal	8	Actual
51.5	max	
28.6	min	
.045	pcpn	
25	HDD	
0	CDD	
Highest Max		73-1938
Lowest Max		12-1929
Lowest Min		-5-1933
Highest Min		53-1966
Greatest pcpn		.62-1966

Normal	9	Actual
53.7	max	
28.7	min	
.021	pcpn	
24	HDD	
0	CDD	
Highest Max		84-1932
Lowest Max		17-1929
Lowest Min		-3-1979
Highest Min		51-1932
Greatest pcpn		.24-1959

Normal	10	Actual
56.1	max	
28.9	min	
.031	pcpn	
22	HDD	
0	CDD	
Highest Max		76-1954
Lowest Max		16-1933
Lowest Min		4-1929
Highest Min		52-1932
Greatest pcpn		.50-1953

Normal	11	Actual
50.7	max	
29.8	min	
.081	pcpn	
25	HDD	
0	CDD	
Highest Max		82-1962
Lowest Max		25-1988
Lowest Min		0-1981
Highest Min		58-1930
Greatest pcpn		1.12-1977

Normal	12	Actual
53.4	max	
30.2	min	
.094	pcpn	
23	HDD	
0	CDD	
Highest Max		84-1962
Lowest Max		17-1948
Lowest Min		7-1986
Highest Min		57-1938
Greatest pcpn		2.21-1978

Normal	13	Actual
53.9	max	
30.9	min	
.037	pcpn	
22	HDD	
0	CDD	
Highest Max		82-1962
Lowest Max		30-1933
Lowest Min		12-1936
Highest Min		50-1926
Greatest pcpn		.46-1969

Normal	14	Actual
51.9	max	
32.0	min	
.069	pcpn	
23	HDD	
0	CDD	
Highest Max		81-1954
Lowest Max		21-1936
Lowest Min		1-1936
Highest Min		54-1954
Greatest pcpn		.89-1938

Normal	15	Actual
50.2	max	
29.9	min	
.047	pcpn	
25	HDD	
0	CDD	
Highest Max		81-1954
Lowest Max		25-1936
Lowest Min		9-1936
Highest Min		53-1976
Greatest pcpn		.93-1938

Normal	16	Actual
50.8	max	
28.5	min	
.023	pcpn	
25	HDD	
0	CDD	
Highest Max		75-1959
Lowest Max		17-1979
Lowest Min		7-1979
Highest Min		48-1976
Greatest pcpn		2.16-1940

Normal	17	Actual
53.0	max	
29.0	min	
.035	pcpn	
24	HDD	
0	CDD	
Highest Max		78-1970
Lowest Max		17-1936
Lowest Min		8-1936
Highest Min		50-1926
Greatest pcpn		.88-1961

Normal	18	Actual
52.7	max	
30.7	min	
.044	pcpn	
23	HDD	
0	CDD	
Highest Max		78-1986
Lowest Max		24-1936
Lowest Min		-1-1978
Highest Min		53-1971
Greatest pcpn		.88-1946

Normal	19	Actual
51.2	max	
30.0	min	
.055	pcpn	
24	HDD	
0	CDD	
Highest Max		83-1986
Lowest Max		21-1929
Lowest Min		8-1978
Highest Min		48-1930
Greatest pcpn		.68-1954

Normal	20	Actual
53.3	max	
30.3	min	
.063	pcpn	
23	HDD	
0	CDD	
Highest Max		80-1976
Lowest Max		26-1929
Lowest Min		12-1939
Highest Min		51-1930
Greatest pcpn		1.31-1965

Normal	21	Actual
49.2	max	
28.6	min	
.092	pcpn	
26	HDD	
0	CDD	
Highest Max		84-1981
Lowest Max		28-1938
Lowest Min		9-1939
Highest Min		54-1930
Greatest pcpn		1.63-1971

Normal	22	Actual
51.6	max	
29.5	min	
.047	pcpn	
24	HDD	
0	CDD	
Highest Max		83-1982
Lowest Max		24-1968
Lowest Min		11-1963
Highest Min		56-1949
Greatest pcpn		1.15-1985

Normal	23	Actual
52.9	max	
31.1	min	
.010	pcpn	
23	HDD	
0	CDD	
Highest Max		80-1930
Lowest Max		31-1928
Lowest Min		11-1965
Highest Min		51-1930
Greatest pcpn		.81-1985

Normal	24	Actual
52.8	max	
30.1	min	
.049	pcpn	
23	HDD	
0	CDD	
Highest Max		81-1956
Lowest Max		19-1960
Lowest Min		7-1965
Highest Min		58-1930
Greatest pcpn		.94-1952

Normal	25	Actual
57.0	max	
32.8	min	
.010	pcpn	
20	HDD	
0	CDD	
Highest Max		82-1986
Lowest Max		29-1935
Lowest Min		10-1960
Highest Min		50-1951
Greatest pcpn		.74-1936

Normal	26	Actual
57.9	max	
32.2	min	
.011	pcpn	
20	HDD	
0	CDD	
Highest Max		78-1986
Lowest Max		21-1934
Lowest Min		11-1934
Highest Min		59-1981
Greatest pcpn		.50-1945

Normal	27	Actual
58.7	max	
33.0	min	
.087	pcpn	
19	HDD	
0	CDD	
Highest Max		81-1976
Lowest Max		25-1962
Lowest Min		13-1934
Highest Min		61-1981
Greatest pcpn		1.32-1966

Normal	28	Actual
57.3	max	
34.0	min	
.020	pcpn	
19	HDD	
0	CDD	
Highest Max		81-1972
Lowest Max		24-1962
Lowest Min		7-1962
Highest Min		53-1932
Greatest pcpn		.88-1987