

# OKLAHOMA

## MONTHLY SUMMARY

### September 1988

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### SEPTEMBER 1988 OKLAHOMA SUMMARY

Above normal precipitation over most of the State during September (see Map 1) provided moisture vitally needed for agriculture. Early in the month Agriculture Department reports indicated that 93% of the topsoil and 80% of the subsoil moisture supplies throughout the State were inadequate. These figures improved to 25% and 40% by the end of the month. The rain also aided pasture and row crop development. The portion of the cotton crop rated in good or excellent condition rose from 35% to 60% during the wet month. Abundant rainfall and below normal temperatures combined to produce a marked improvement over August drought conditions (see drought condition update).

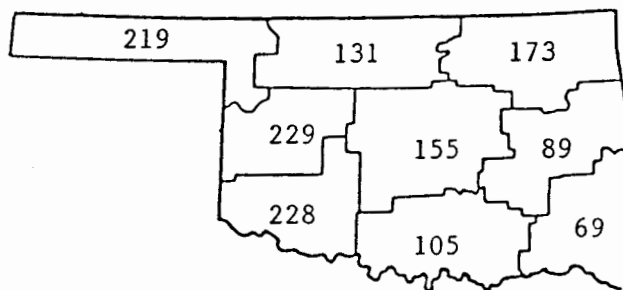
The first rain of the month arrived as a low pressure system moved through the State on September 2. With the exception of north central Oklahoma, at least one station in each Climate Division received over 1" of rain from the system. The associated cold front moved through the State on the 3rd and the cooler air mass behind it helped to produce weekly temperature averages which were several degrees below normal during the first week of the month.

Another cold front dominated the State's weather from September 12-15 as it moved northwest to southeast across the State. On the 14th, several Panhandle stations recorded over 1.5" of rain. The following day, strong thunderstorms generated 50-mph winds and over 3 inches of rain in northeastern Oklahoma. The 5.18" and 4.30" of rain recorded at Maramec and Ralston on the 16th exceeded their long-term mean precipitation totals for the entire month of September. Lighter rainfall in the south and west was sufficient to facilitate winter wheat seed-bed preparation and to relieve cotton irrigation demands.

Soils at some locations became saturated on the 17th as frontal precipitation totals exceeded 2 inches in 24-hours. By the 18th, 2-day precipitation totals exceeded 4 inches at many locations and flooding resulted along Kingfisher and Cache Creeks when the remnants of Hurricane Gilbert combined with the existing storm system.

Vigorous thunderstorms, supported by a strong upper-level disturbance and a sharp temperature contrast along a frontal boundary, produced hail in central and southern Oklahoma on September 23. Strong winds accompanied by baseball-size hail destroyed 2 mobile homes and several small buildings in Haskell County. Unseasonably cool air behind the front produced high temperatures in the 60's and 70's in the northern two-thirds of the State, about 10 degrees below normal.

Southerly winds, driven by a strong low pressure system west of Oklahoma, began delivering warmer and slightly more humid air to the State by September 26. The system strengthened as it approached Oklahoma and on the 28th a cold front and thunderstorms with golfball-size hail and 50-mph winds struck central Oklahoma. Cool wet weather remained through the end of the month as the upper level low persisted over the State.



Map 1. Percent of Normal Precipitation by CD.  
(September)

DROUGHT CONDITION UPDATE

<u>Area</u>	<u>Drought Severity</u>	<u>(1 Oct) PDI</u>	<u>(3 Sept) Change From Last Summary</u>	<u>(1 Oct) Inches of Rainfall Needed To End Drought</u>
Northwest	ND	4.11	-	-
North Central	Mild	-1.12	-	1.87
Northeastern	Moderate	-2.03	+ .6	7.10
West Central	ND	3.33	-	-
Central	Moderate	-2.02	+ .64	6.00
East Central	Moderate	-2.50	+ .31	8.48
Southwest	ND	1.55	-	-
South Central	Moderate	-2.03	+ .68	6.33
Southeast	Severe	-3.10	+ .04	10.34

\* ND = No Drought at this time  
Mild = PDI = -1.0 to -2.0  
Moderate = PDI = -2.0 to -3.0  
Severe = PDI = -3.0 to -4.0  
Extreme = PDI = Less than -4.0  
PDI = Palmer Drought Index

TABLE OF 1987/1988 COMPARISONS

Station	September Temperatures (F)		September Precipitation (in.)	
	1987	1988	1987	1988
Arnett	69.5	68.8	4.420	4.722
Enid	72.6	*	5.410	*
Mutual	70.1	70.1	2.190	2.230
Tulsa	72.9	73.4	3.521	5.352
Elk City	70.9	71.6	3.172	10.871
Oklahoma City	72.9	73.7	4.612	3.941
McAlester	72.8	75.3	5.241	2.500
Altus Irr. Sta.	74.3	74.4	*	5.960
Durant	72.5	75.1	5.880	3.280
Ada	72.8	74.9	6.470	3.660
Antlers	73.2	*	2.610	*

EXTREMES

<u>Variable</u>	<u>Station</u>	<u>Division</u>	<u>Observation</u>	<u>Date</u>
Minimum temperature (F)	Turpin	1	37	29
	Kenton	1	37	29
Maximum temperature (F)	Alva	2	101	8
	Maximum 24-hour precipitation	Carnegie	7	5.76"

SEPTEMBER 1988 SUMMARY FOR NORTHWEST DIVISION (CD1)

NAME	ID	CD	DEV						HEAT	DEV	COOL	DEV	TOT	NUM	FROM	MAX	24-HR	DAY
			MEAN	NUM	FROM	MAX	MIN	DAY	DEG	FROM	DEG	FROM						
ARNETT	332	1	68.8	30	-2.2	94.	10	43.	30	41.0	10.0	153.5	-54.5	4.722	30	2.81	1.64	15
BEAVER	593	1	68.7	30	-2.3	98.	8	41.	25	43.5	12.5	153.0	-55.0	4.260	30	2.74	1.47	3
BUFFALO	1243	1	72.2	30	-1.0	99.	7	43.	24	16.0	-3.0	230.5	-34.5	3.400	30	.60	2.05	15
FARGO	3070	1	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.400	30	2.58	1.77	15
GAGE FAA APT	3407	1	70.4	30	-.9	95.	10	43.	24	27.0	1.0	189.5	-25.5	3.460	30	1.86	1.75	15
GATE	3489	1	70.0	30	*****	98.	7	44.	24	28.5	*****	178.5	*****	2.230	30	*****	.60	1
GOODWELL RES	ST3628	1	66.3	30	-3.2	96.	8	40.	24	63.5	24.5	102.0	-72.0	4.442	30	3.17	1.54	2
GUYMON	3835	1	68.8	28	*****	97.	7	42.	24	37.0	*****	142.0	*****	5.854	30	*****	2.20	2
KENTON	4766	1	65.3	30	-3.6	93.	8	37.	29	87.5	55.5	96.0	-53.0	3.050	30	1.54	1.39	14
LAVERNE	5045	1	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.840	30	.83	.90	16
OPTIMA LAKE	6740	1	67.9	29	*****	98.	8	41.	24	45.5	*****	130.0	*****	3.000	29	*****	1.19	2
TURPIN 4 SSE	9017	1	66.4	30	*****	98.	8	37.	29	75.0	*****	116.0	*****	3.730	30	*****	1.22	14

SEPTEMBER 1988 SUMMARY FOR NORTH CENTRAL DIVISION (CD2)

NAME	ID	CD	DEV						HEAT	DEV	COOL	DEV	TOT	NUM	FROM	MAX	24-HR	DAY
			MEAN	NUM	FROM	MAX	MIN	DAY	DEG	FROM	DEG	FROM						
ALVA 1 ENE	194	2	71.5	30	-1.7	101.	8	38.	30	20.0	.0	214.5	-51.5	1.440	30	-1.03	.65	15
VANCE AFB	302	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.822	30	*****	2.53	18
BILLINGS	755	2	73.1	30	*****	98.	10	45.	30	11.5	*****	255.0	*****	4.932	30	.71	3.12	19
BLACKWELL 2E	818	2	72.9	30	*****	97.	12	44.	30	12.5	*****	250.0	*****	5.142	30	*****	3.22	19
BRAMAN	1075	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.182	30	*****	1.34	19
CEDARDALE	1620	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.341	30	*****	1.54	16
CHEROKEE	1724	2	74.5	29	1.0	100.	9	45.	30	10.0	-5.0	284.5	14.5	1.560	30	-1.11	.54	18
FT SUPPLY DAM	3304	2	68.0	30	-4.2	92.	10	44.	30	41.5	16.5	130.5	-110.5	4.850	30	2.88	1.14	2
FREEDOM	3358	2	71.4	30	*****	98.	8	40.	30	23.0	*****	214.5	*****	1.011	30	*****	.42	15
GREAT SALT PLNS	3740	2	72.5	30	*****	99.	10	45.	30	12.5	*****	236.5	*****	2.380	23	*****	1.25	19
HARDY	3909	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.154	30	*****	2.60	18
HELENA 1 SSE	4019	2	71.2	30	*****	97.	10	47.	30	18.0	*****	205.0	*****	3.061	30	.19	2.00	19
JEFFERSON	4573	2	73.9	30	.3	98.	9	43.	30	9.5	-5.5	276.5	3.5	2.881	30	-.25	1.13	18
LAMONT	5013	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.140	30	*****	4.10	19
MEDFORD	5768	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.321	30	*****	1.00	18
MORRISON	6065	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	8.691	30	*****	3.12	18
MUTUAL	6139	2	70.1	30	-2.2	99.	11	43.	30	30.5	12.5	182.5	-54.5	2.230	30	-.25	.91	15
NEWKIRK	6278	2	73.5	30	.7	96.	12	46.	30	8.0	-14.0	263.5	7.5	6.160	30	2.62	4.30	19
ORIENTA	6751	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.220	30	*****	1.92	19
PERRY	7012	2	75.3	30	1.1	100.	10	47.	30	5.0	-10.0	315.0	24.0	6.130	30	2.39	2.82	18
PONCA CITY FAA	7201	2	74.4	28	*****	96.	13	48.	30	8.5	*****	271.0	*****	1.360	28	*****	.97	16
RED ROCK 1 NNE	7505	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.380	30	2.66	2.35	18
RENFROW	7556	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.741	30	-1.47	.90	19
WAYNOKA	9404	2	72.2	30	-1.2	98.	8	44.	30	19.5	3.5	235.5	-32.5	2.260	30	-.24	.49	16
WOODWARD	9760	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.191	30	*****	1.19	15

SEPTEMBER 1988 SUMMARY FOR NORTHEAST DIVISION (CD3)

NAME	ID CD	DEV							HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
		MEAN TEMP	NUM OBS	FROM NORM	MAX TEMP	MIN DAY	TEMP DAY	DAY									
BARNSDALL	535 3	72.1	30	*****	98.	12	49.	30	13.0	*****	227.0	*****	6.992	30	2.27	3.20	16
BARTLESVILLE ZW	548 3	72.8	30	.0	99.	12	48.	6	9.5	-8.5	245.0	-7.0	7.550	30	3.42	2.29	17
BIXBY	782 3	72.1	29	-.6	96.	13	50.	21	10.0	-11.0	216.0	-36.0	6.350	30	2.00	1.52	19
BURBANK	1256 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	7.811	30	*****	4.26	18
CHELSEA 4 S	1717 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	9.290	30	*****	2.12	18
CLAREMORE	1828 3	72.4	30	-.3	97.	13	50.	21	7.0	-19.0	228.5	-28.5	7.771	30	3.89	2.00	19
CLEVELAND 5 WSW	1902 3	73.4	28	*****	99.	12	49.	30	11.5	*****	248.0	*****	8.200	30	*****	4.08	16
FORAKER	3250 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	8.620	30	4.54	2.69	19
HOLLOW	4258 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	7.520	30	2.68	2.79	16
HOMINY	4289 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	7.221	30	2.74	3.27	16
HULAH DAM	4393 3	71.6	21	*****	98.	13	45.	6	9.5	*****	149.0	*****	9.630	30	5.80	3.52	18
JAY TOWER	4567 3	74.1	30	*****	98.	13	50.	20	2.5	*****	275.5	*****	6.840	30	*****	1.45	16
KANSAS 1 ESE	4672 3	71.5	30	*****	93.	12	52.	29	5.5	*****	200.5	*****	4.522	30	*****	2.07	19
KEYSTONE DAM	4812 3	71.6	30	*****	95.	13	47.	20	19.5	*****	217.0	*****	7.212	30	*****	2.10	19
LENAPAH	5118 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.730	30	*****	1.45	16
MANFORD 6 NW	5522 3	73.1	29	*****	99.	12	48.	30	12.5	*****	247.5	*****	4.970	29	*****	1.27	16
MARAMEC	5540 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	9.660	30	5.74	5.18	16
MIAMI	5855 3	71.9	30	-.7	96.	12	49.	6	7.0	-20.0	213.5	-41.5	10.780	30	6.18	3.31	16
NOWATA	6485 3	73.2	30	.3	98.	13	52.	25	9.5	-11.5	254.0	-4.0	9.020	30	4.71	3.60	16
ONETA 1 WNW	6713 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.660	30	*****	1.81	18
PAWHUSKA	6935 3	72.6	30	.0	97.	12	49.	30	10.5	-13.5	239.0	-13.0	9.521	30	5.41	3.47	16
PAWHUSKA	6937 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	8.311	30	*****	3.18	16
PAWNEE	6940 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	7.660	30	3.29	2.50	18
PRYOR 6 N	7309 3	71.7	30	-.9	98.	13	47.	7	8.5	-15.5	209.0	-43.0	9.301	30	5.14	2.00	19
QUAPAW	7358 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	10.020	30	5.22	2.40	18
RALSTON	7390 3	73.7	30	*****	100.	12	42.	30	7.0	*****	266.5	*****	10.320	30	6.46	4.30	16
RAMONA 4 N	7394 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	7.050	30	*****	1.81	24
SKIATOOK	8258 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	7.180	30	2.85	2.30	16
SPAVINAW	8380 3	74.2	30	*****	94.	13	53.	20	3.0	*****	279.0	*****	4.692	30	.31	1.90	19
TULSA WSO APT	8992 3	73.4	30	-.4	96.	13	54.	25	12.5	-5.5	265.0	-17.0	5.352	30	.98	1.28	19
UPPER SPAVINAW	9101 3	76.0	30	*****	100.	12	42.	20	.0	*****	330.5	*****	7.081	30	*****	2.50	19
VINITA 2 N	9203 3	73.3	30	1.0	96.	12	46.	6	3.0	-24.0	251.5	5.5	9.030	30	4.28	3.19	18
WAGONER	9247 3	74.7	30	.8	95.	12	52.	20	1.0	-16.0	292.5	8.5	4.291	30	.20	2.34	19
WANN	9298 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.780	30	*****	1.81	16
WYNGONA	9792 3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	7.615	30	*****	3.25	16

SEPTEMBER 1988 SUMMARY FOR WEST CENTRAL DIVISION (CD4)

NAME	ID CD	DEV							HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
		MEAN TEMP	NUM OBS	FROM NORM	MAX TEMP	MIN DAY	TEMP DAY	DAY									
CANTON DAM	1445 4	71.4	28	*****	95.	13	44.	30	7.5	*****	186.0	*****	4.300	28	*****	2.82	19
CHEYENNE	1738 4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.021	30	*****	2.47	15
CLINTON	1909 4	73.6	30	.0	98.	10	46.	30	3.0	-13.0	261.5	-12.5	8.210	30	5.21	5.36	19
COLONY	2039 4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.530	30	*****	2.25	19
CORDELL	2125 4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.940	30	2.14	1.96	19
ELK CITY 1 E	2849 4	71.5	27	*****	92.	9	44.	30	12.0	*****	187.5	*****	10.871	27	*****	5.70	19
ERICK 4 E	2944 4	71.4	30	-1.7	97.	25	43.	30	16.0	3.0	207.5	-48.5	8.030	30	5.22	2.36	3
GEARY	3497 4	72.2	30	-1.6	93.	12	44.	30	12.0	-7.0	228.0	-55.0	6.000	30	2.78	2.90	19
HAMMON 1 NNE	3871 4	69.0	30	-3.5	95.	10	42.	30	37.5	15.5	157.5	-89.5	4.340	30	1.63	1.25	16
LEEDEY	5090 4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.500	30	1.27	1.17	15
MACKIE 4 NNW	5463 4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.630	30	*****	1.70	3
MORAVIA 2 NNE	6035 4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	10.870	30	8.10	3.80	19
OKEENE	6629 4	73.2	30	-1.1	95.	12	46.	30	12.5	-4.5	257.5	-38.5	5.390	30	2.46	3.79	19
RETROP	7565 4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	8.430	30	*****	3.90	19
REYDON	7579 4	71.0	29	*****	92.	9	43.	30	12.5	*****	186.5	*****	6.751	29	*****	3.00	2
SAYRE	7952 4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	10.700	30	8.26	4.67	19
SWEETWATER 2 E	8652 4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	8.240	30	*****	3.48	2
TALOGA	8708 4	71.6	30	-1.0	97.	9	47.	24	8.5	-10.5	205.0	-42.0	3.590	30	.96	1.32	19
THOMAS	8815 4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	10.030	30	*****	5.70	19
VICI	9172 4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.612	30	*****	1.38	16
WATONGA	9364 4	72.8	30	*****	95.	12	45.	30	12.0	*****	245.5	*****	5.251	30	2.30	2.76	19
WEATHERFORD	9422 4	72.3	30	-1.3	99.	10	45.	30	17.0	2.0	237.5	-38.5	6.980	30	3.70	3.13	19

SEPTEMBER 1988 SUMMARY FOR CENTRAL DIVISION (CD5)

NAME	ID	CD	DEV						HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV			
			MEAN TEMP	NUM OBS	FROM NORM	MAX TEMP	MIN DAY	TEMP DAY							FROM NORM	MAX 24-HR	DAY	
AMBER	200	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.730	30	*****	2.32	30
ARCADIA	288	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.170	30	*****	.97	19
TINKER AFB	325	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.470	28	*****	2.84	23
BLANCHARD 2 SSW	830	5	74.2	30	*****	94.	13	51.	30	3.0	*****	280.0	*****	6.120	30	*****	1.86	24
BRISTOW	1144	5	73.6	30	-.1	97.	12	49.	20	10.5	-11.5	269.0	-14.0	3.631	30	-.37	1.55	19
CHANDLER	1684	5	74.1	30	-.0	96.	12	49.	30	12.5	-5.5	284.5	-6.5	5.651	30	1.86	1.20	15
CHICKASHA EX ST1750	5	5	72.3	30	-1.7	95.	9	48.	30	8.5	-4.5	226.0	-54.0	5.960	30	2.48	1.76	24
COX CITY 1 E	2196	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	9.780	28	*****	3.00	19
CRESCENT	2242	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	7.180	30	*****	3.55	19
CUSHING	2318	5	73.2	29	-.4	96.	13	52.	25	8.0	-12.0	245.0	-33.0	3.780	30	-.11	.85	19
EL RENO 1 N	2818	5	72.9	30	-.5	96.	9	46.	30	10.5	-4.5	247.0	-20.0	4.890	30	1.28	2.32	17
GUTHRIE	3821	5	74.8	30	.7	98.	12	47.	30	10.0	-5.0	304.5	16.5	6.440	30	2.46	2.40	18
HENNESSEY 2 SE	4055	5	73.3	30	-.7	97.	12	47.	30	10.5	-3.5	258.0	-23.0	8.920	30	5.53	3.59	19
INGALLS	4489	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	8.990	30	*****	2.55	16
KINGFISHER 2 SE4861	5	5	73.3	30	-.8	97.	12	47.	30	11.0	-3.0	261.5	-28.5	9.740	30	6.14	3.91	18
KONAWA	4915	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.720	30	-.40	1.90	19
MARSHALL	5589	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.030	30	2.52	2.80	19
MEEKER 4 W	5779	5	72.3	29	-1.4	94.	12	49.	30	15.5	-1.5	226.0	-52.0	5.260	30	1.40	1.16	15
MULHALL	6110	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.660	30	*****	2.19	18
NORMAN 3 S	6386	5	74.2	30	*****	98.	10	50.	30	8.0	*****	284.0	*****	7.832	30	4.10	2.00	19
OILTON 2 SE	6616	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.600	30	*****	.91	16
OKEMAH	6638	5	73.7	30	-.4	95.	11	52.	30	7.5	-9.5	268.0	-22.0	4.751	30	.95	2.30	19
OKLAHOMA CTY WS6661	5	5	73.7	30	.4	94.	14	51.	30	14.0	-1.0	274.5	10.5	3.941	30	.53	1.47	23
PERKINS	7003	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	7.890	30	3.67	1.96	16
PIEDMONT	7068	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.660	30	*****	2.30	18
PRAGUE	7264	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.332	30	.54	2.24	19
PURCELL 5 SW	7327	5	73.4	30	-.8	94.	13	47.	30	5.0	-7.0	256.0	-32.0	7.393	30	3.42	3.40	19
SEMINOLE	8042	5	75.8	30	.6	97.	13	52.	30	4.0	-6.0	329.0	13.0	5.840	30	1.82	2.85	19
SHAWNEE	8110	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.700	30	.96	2.45	19
STELLA	8479	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.900	30	*****	1.96	19
STILLWATER 2 W	8501	5	72.2	30	-.9	98.	13	47.	30	21.5	3.5	238.0	-23.0	7.782	30	3.85	3.03	18
STROUD 1 N	8563	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.141	30	*****	1.38	24
TECUMSEH	8751	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.051	30	*****	2.51	19
TROUSDALE	8960	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.050	30	*****	3.21	19
UNION CITY 1 SE9086	5	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.310	30	2.55	2.19	18
WELTY 1 SSE	9479	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.731	30	*****	1.95	19
WEWOKA	9575	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.890	30	.77	1.86	19

SEPTEMBER 1988 SUMMARY FOR EAST CENTRAL DIVISION (CD6)

NAME	ID	CD	DEV				MIN		HEAT	DEV	COOL	DEV	DEV					
			MEAN	NUM	FROM	MAX	DAY	TEMP	DAY	DEG	FROM	DEG	FROM	TOT	NUM	FROM	MAX	
			TEMP	OBS	NORM	TEMP	DAY	TEMP	DAY	DAY	NORM	DAY	NORM	PPT	OBS	NORM	24-HR	DAY
ASHLAND	364	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.430	30	*****	.70	18
BEGGS	631	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.530	30	*****	2.04	19
BOYNTON	1027	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.750	30	*****	1.90	19
CALVIN	1391	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.611	30	-.71	1.40	19
CHECOTAH	1711	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.481	30	.02	1.30	19
DEWAR 2 NE	2485	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.980	30	.67	1.44	19
DUSTIN	2690	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.250	30	*****	1.52	19
EUFULA	2993	6	74.7	30	*****	93.	12	54.	20	1.0	*****	292.0	*****	3.020	30	-1.18	1.03	3
HANNA	3884	6	73.9	30	*****	95.	12	49.	21	.5	*****	268.0	*****	5.130	30	.97	1.44	18
HARTSHORNE	3946	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.811	30	*****	.53	24
HASKELL	3956	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.630	30	2.66	2.72	19
HOLDENVILLE	4235	6	75.0	30	.4	97.	12	49.	20	5.0	-6.0	306.0	7.0	4.480	30	.48	1.44	18
LYONS 2 N	5437	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.011	30	-.25	2.50	19
MCALESTER FAA	5664	6	75.3	30	1.2	95.	16	51.	20	.5	-15.5	311.0	19.0	2.500	30	-2.46	1.20	18
MCCURTAIN 1 SE	5693	6	75.7	30	*****	94.	22	48.	20	.0	*****	320.5	*****	4.880	30	.42	3.35	3
MUSKOGEE	6130	6	74.6	28	*****	96.	14	49.	20	1.0	*****	270.0	*****	3.560	30	-.56	1.70	19
OKMULGEE W W	6670	6	71.9	30	-1.6	97.	12	49.	20	9.0	-7.0	217.0	-54.0	5.652	30	1.85	2.24	19
OKTAHA 2 NE	6678	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.760	30	*****	1.91	3
QUINTON	7372	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.681	30	.27	1.46	24
SALLISAW 2 NE	7862	6	75.0	30	.8	97.	13	48.	20	.0	-10.0	300.5	14.5	4.271	30	-.14	1.20	24
SCIPIO	7979	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.490	30	*****	.90	18
SCRAPER	7993	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.090	30	*****	2.05	19
SHORT	8170	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.901	30	*****	1.15	24
STILWELL 1 NE	8506	6	73.4	30	*****	94.	14	48.	20	5.5	*****	256.5	*****	4.422	30	.11	1.13	19
TAHLEQUAH	8677	6	73.8	30	.9	94.	14	48.	20	3.0	-21.0	268.5	7.5	3.020	30	-1.32	1.31	19
WEBBERS FALLS	9445	6	73.1	30	-.4	96.	13	49.	21	1.5	-13.5	245.5	-24.5	3.070	30	-1.27	1.21	24
WESTVILLE	9523	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.071	30	*****	1.67	20
WETUMKA 3 NE	9571	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.051	31	2.03	1.82	19

SEPTEMBER 1988 SUMMARY FOR SOUTHWEST DIVISION (CD7)

NAME	ID	CD	DEV				MIN		HEAT	DEV	COOL	DEV	DEV					
			MEAN	NUM	FROM	MAX	DAY	TEMP	DAY	DEG	FROM	DEG	FROM	TOT	NUM	FROM	MAX	
			TEMP	OBS	NORM	TEMP	DAY	TEMP	DAY	DAY	NORM	DAY	NORM	PPT	OBS	NORM	24-HR	DAY
ALTUS IRR STA	179	7	74.4	30	-1.0	98.	9	46.	30	6.5	-.5	288.0	-31.0	5.960	30	3.11	3.00	19
ALTUS DAM	184	7	74.1	30	*****	95.	13	48.	30	8.0	*****	280.5	*****	7.450	30	4.71	2.22	19
ANADARKO	224	7	72.3	30	-2.3	96.	9	42.	30	13.5	.5	231.0	-67.0	6.690	29	*****	2.83	18
APACHE	260	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.250	30	*****	1.65	19
ALTUS AFB	447	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.182	29	*****	3.20	18
CARNEGIE 2 ENE	1504	7	74.1	30	-.3	97.	9	43.	30	8.0	-6.0	282.0	-14.0	7.730	30	4.37	5.76	18
CHATTANOOGA	1706	7	74.9	27	*****	97.	12	48.	30	3.5	*****	269.5	*****	6.600	27	*****	1.89	19
DUNCAN 12 W	2668	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.940	30	*****	2.56	19
FREDERICK	3353	7	74.2	30	-2.4	96.	12	52.	30	4.0	-3.0	280.0	-75.0	7.240	30	4.24	3.80	19
GRANDFIELD 4 NW3709	7	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	7.710	30	4.26	2.52	14
HOBART FAA APT	4204	7	73.1	30	-.7	94.	10	46.	30	12.5	-3.5	256.0	-24.0	6.912	30	4.04	4.07	18
HOLLIS	4249	7	72.8	30	-2.5	98.	9	45.	30	6.5	.5	242.0	-73.0	6.790	30	4.11	4.28	18
LAWTON	5063	7	74.1	30	-1.0	95.	9	52.	30	1.0	-5.0	273.0	-36.0	5.540	30	2.56	1.40	18
FORT SILL	5068	7	73.0	30	*****	94.	9	50.	30	10.0	*****	250.0	*****	6.102	30	3.12	1.90	18
LOOKEBA 2 ENE	5329	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.020	30	*****	3.10	18
MANGUM RES STA	5509	7	74.9	30	.0	99.	12	44.	30	4.0	-2.0	301.0	-2.0	5.570	30	1.34	1.80	18
RANDLETT 9 E	7403	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.182	30	*****	2.20	19
ROOSEVELT	7727	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	8.900	30	6.12	2.17	3
SEDAN	8016	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.570	30	*****	2.06	18
SNYDER	8299	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	9.391	30	6.58	3.22	18
VINSON 3 WNW	9212	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.820	30	3.95	4.02	19
WALTERS	9278	7	74.9	30	-1.3	95.	12	50.	30	2.5	-10.5	299.0	-50.0	10.290	30	7.03	3.70	14
WICHITA MT WLR	9629	7	72.0	26	*****	100.	10	44.	30	9.0	*****	191.0	*****	2.700	27	*****	1.45	14
WILLOW	9668	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	9.430	30	*****	3.99	19

SEPTEMBER 1988 SUMMARY FOR SOUTH CENTRAL DIVISION (CD8)

NAME	ID	CD	DEV				HEAT		DEV		COOL		DEV		TOT	NUM	FROM	MAX	24-HR	DAY
			MEAN	NUM	FROM	MAX	MIN	DEG	FROM	DEG	FROM	DEG	FROM	PPT						
ADA	17	8	74.9	30	.3	96.	14	52.	30	3.5	-8.5	301.5	1.5	3.660	30	-.35	1.62	19		
ALLEN	147	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.400	30	*****	2.00	18		
ARDMORE	292	8	76.2	30	-1.0	94.	13	54.	30	1.5	1.5	336.5	-34.5	1.420	30	-2.51	.40	18		
ATOKA DAM	394	8	77.4	30	*****	97.	14	56.	24	.0	*****	371.5	*****	2.130	30	*****	.80	6		
BOKCHITO	917	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.290	30	*****	1.15	24		
CANEY	1437	8	75.4	30	*****	95.	15	58.	20	1.5	*****	315.0	*****	2.170	30	*****	.60	18		
CENTRAHOMA	1648	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.000	30	*****	.60	17		
CHICKASAW NRA	1745	8	74.3	30	*****	96.	14	49.	26	9.5	*****	287.0	*****	3.680	30	*****	1.55	19		
COMANCHE	2054	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	7.031	30	*****	3.02	3		
DAISY 4 ENE	2354	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.130	30	-2.57	1.42	18		
DUNCAN	2660	8	73.7	30	-2.0	92.	13	50.	30	6.0	-2.0	267.5	-61.5	7.640	30	3.99	2.60	19		
DURANT USDA	2678	8	75.1	30	*****	95.	14	54.	25	1.0	*****	305.0	*****	3.280	30	-2.33	.86	6		
ELMORE CITY	2872	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.801	30	*****	2.50	19		
FARRIS 3 WNW	3083	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.400	30	*****	.97	16		
GRADY	3688	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.280	30	*****	1.32	19		
HEALDTON	4001	8	73.8	30	*****	93.	10	49.	30	3.0	*****	267.0	*****	7.210	30	3.12	2.42	3		
HENNEPIN	4052	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.271	30	*****	1.48	2		
KINGSTON	4865	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.620	30	-1.05	1.25	18		
LEHIGH	5108	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.490	30	*****	.72	18		
LINDSAY 2 W	5216	8	72.7	30	*****	94.	12	49.	30	7.0	*****	238.0	*****	7.181	30	3.38	2.54	19		
LOCO 6 SE	5247	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	8.551	30	*****	4.61	3		
MADILL	5468	8	75.7	30	-.2	94.	13	54.	25	2.0	-5.0	324.0	-10.0	3.210	30	-1.39	.94	3		
MARIETTA	5563	8	76.6	30	.7	97.	13	54.	30	1.0	-9.0	349.0	12.0	3.720	30	-.27	1.27	3		
MARLOW 1 WSW	5581	8	74.3	30	*****	96.	12	47.	30	4.5	*****	284.5	*****	7.570	30	3.91	3.05	19		
MCGEE CREEK DAM	5713	8	75.9	30	*****	97.	16	50.	6	1.5	*****	328.0	*****	2.870	30	*****	.90	3		
OSWALT	6787	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.800	30	*****	2.30	3		
PAULS VALLEY	6926	8	75.4	24	*****	96.	12	50.	30	3.5	*****	253.5	*****	2.351	30	-1.32	.70	3		
PONTOTOC	7214	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.000	30	-2.12	2.00	19		
TISHOMINGO NWLR	8884	8	75.8	29	*****	97.	13	49.	6	.0	*****	314.0	*****	3.290	30	-1.58	2.27	18		
TUSSY	9032	8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.701	30	*****	2.01	19		
WAURIKA	9395	8	75.6	30	-.9	95.	12	48.	30	3.0	-3.0	319.5	-31.5	4.641	30	1.24	2.39	19		
WAURIKA DAM	9399	8	74.7	29	*****	95.	2	52.	30	5.5	*****	286.0	*****	6.200	29	*****	2.61	3		

SEPTEMBER 1988 SUMMARY FOR SOUTHEAST DIVISION (CD9)

NAME	ID	CD	DEV				HEAT		DEV		COOL		DEV		TOT	NUM	FROM	MAX	24-HR	DAY
			MEAN	NUM	FROM	MAX	MIN	DEG	FROM	DEG	FROM	DEG	FROM	PPT						
BATTIEST 1 SSW	567	9	72.8	27	*****	93.	23	49.	7	2.5	*****	213.5	*****	1.610	27	*****	.70	30		
BEAR MT TWR	584	9	75.2	30	*****	95.	23	51.	8	2.0	*****	309.0	*****	2.690	30	-2.55	1.14	30		
BENGAL	670	9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.221	30	*****	2.48	3		
BOSWELL 4 NNW	980	9	76.1	30	*****	98.	13	51.	6	1.5	*****	333.0	*****	2.462	30	-2.45	1.20	18		
BROKEN BOW DAM	1168	9	74.6	30	*****	96.	24	53.	29	.0	*****	288.5	*****	1.390	30	*****	.55	30		
FANSHAWE	3065	9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.280	30	-.40	2.18	24		
HEAVENER 1 SE	4008	9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.380	30	-1.14	1.60	24		
HUGO	4384	9	77.7	30	1.9	97.	23	55.	7	1.5	1.5	383.0	55.0	1.621	30	-3.53	.71	30		
IDABEL	4451	9	74.7	30	-.2	94.	24	54.	11	.0	-6.0	291.5	-11.5	.660	30	-3.87	.30	30		
POTEAU W W	7254	9	73.3	30	*****	95.	14	48.	20	5.5	*****	254.5	*****	4.392	30	*****	1.63	2		
SMITHVILLE 1 W	8285	9	71.5	30	*****	94.	23	45.	28	11.5	*****	206.0	*****	1.220	30	*****	.56	30		
SPIRO	8416	9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.140	30	-1.89	.67	3		
TUSKAHOMA	9023	9	74.9	30	*****	96.	22	48.	20	1.5	*****	298.0	*****	1.991	30	*****	1.05	3		
VALLIANT 3 W	9118	9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.970	30	-1.01	1.77	3		



SEPTEMBER 1988 CLIMATE DIVISION SUMMARY

CLIMATE	MEAN	DEV			HEAT			DEV	COOL			DEV	DEV			
		NUM	FROM	MAX	MIN	DEGREE	FROM		DEGREE	FROM	TOT		NUM	FROM	MAX	
DIV	TEMP	STA	NORM	TEMP	DAY	TEMP	DAY	DAYS	NORM	DAYS	NORM	PPT	STA	NORM	24-HR	DAY
1	68.4	9	-2.4	99.0	7	37.0	29	47.5	17.8	149.9	-53.3	3.85	11	2.05	2.20	2
2	72.3	13	-.7	101.0	8	38.0	30	17.0	-2.3	235.7	-25.3	4.04	23	.94	4.30	19
3	73.0	18	.2	100.0	12	42.0	20	7.9	-15.0	247.6	-9.5	7.61	34	3.30	5.18	16
4	71.9	9	-1.5	99.0	10	42.0	30	14.6	-2.4	220.7	-47.5	6.49	19	3.70	5.70	19
5	73.6	16	-.3	98.0	13	46.0	30	10.0	-5.7	265.7	-16.8	5.90	35	2.10	3.91	18
6	74.2	10	.3	97.0	13	48.0	20	2.6	-13.0	278.5	-3.2	4.13	28	-.14	3.35	3
7	73.8	11	-1.2	100.0	10	42.0	30	7.0	-3.0	271.1	-40.4	7.04	20	3.96	5.76	18
8	75.1	16	-.8	97.0	13	47.0	30	3.2	-4.3	305.9	-29.7	4.09	31	-.16	4.61	3
9	74.8	8	-.6	98.0	13	45.0	28	2.9	-.1	295.4	-20.1	2.72	13	-2.03	2.48	3

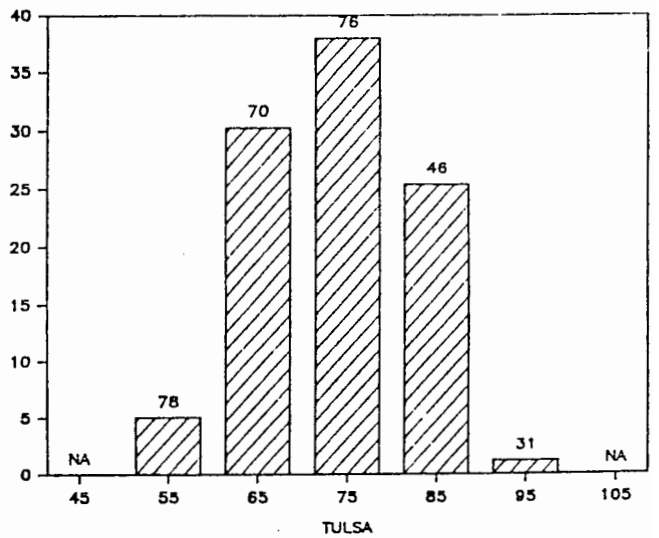
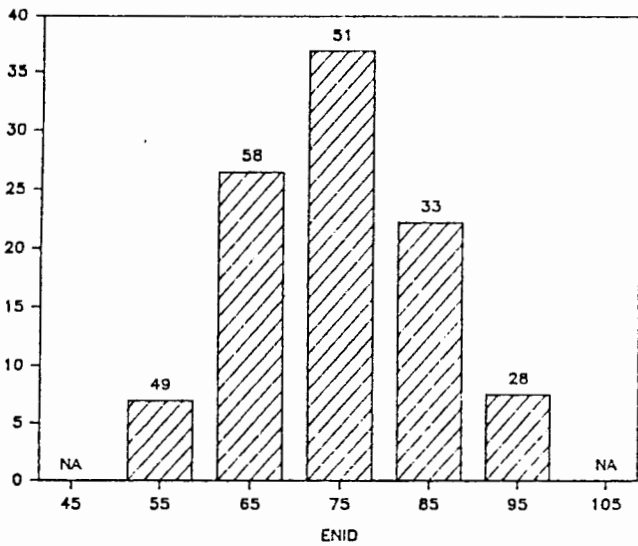
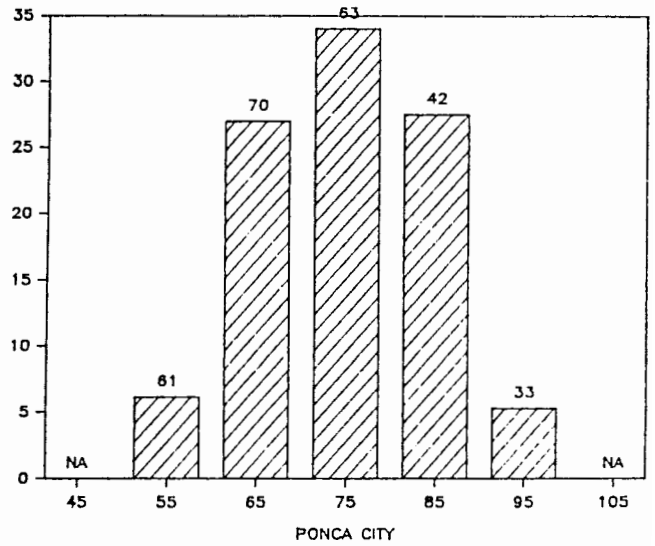
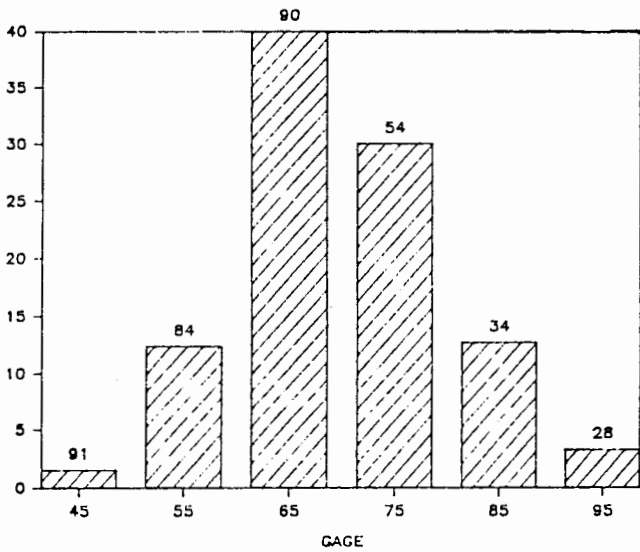


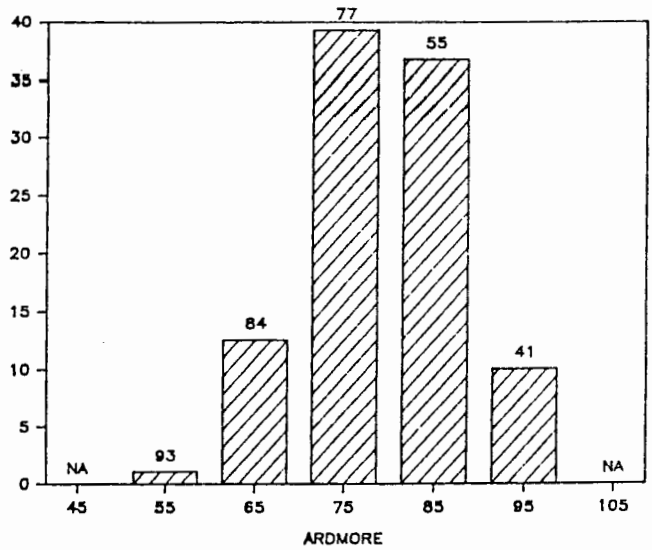
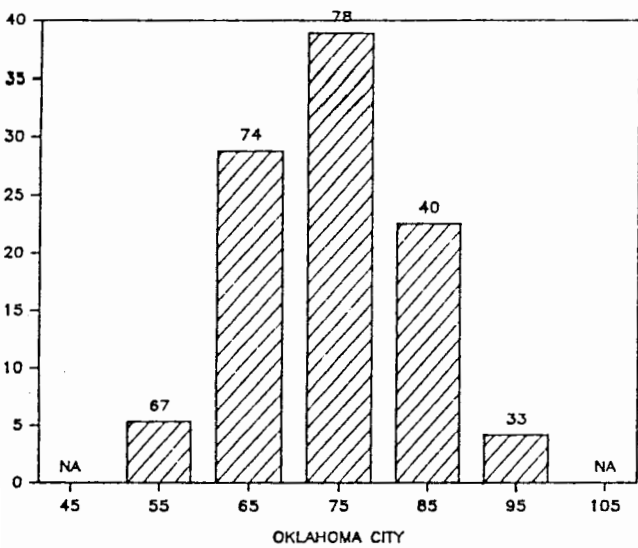
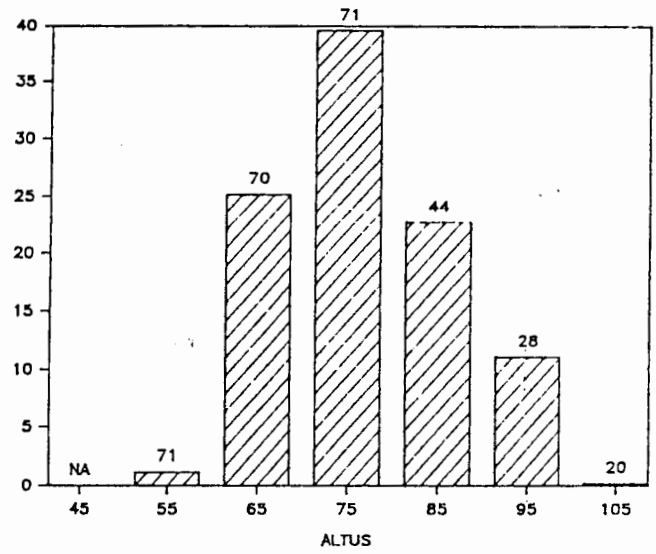
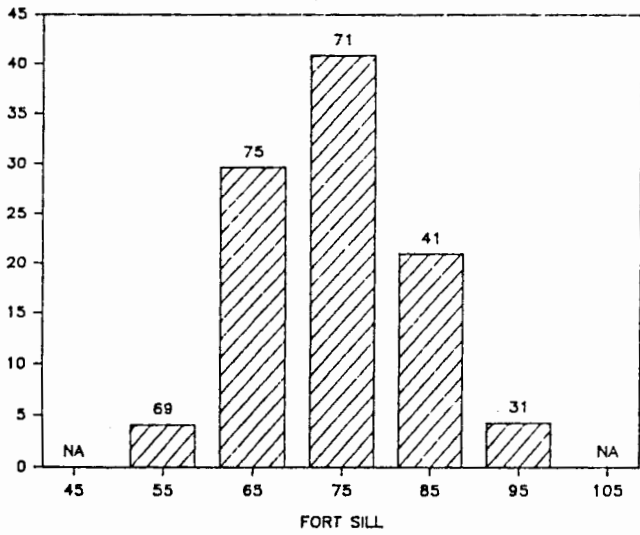
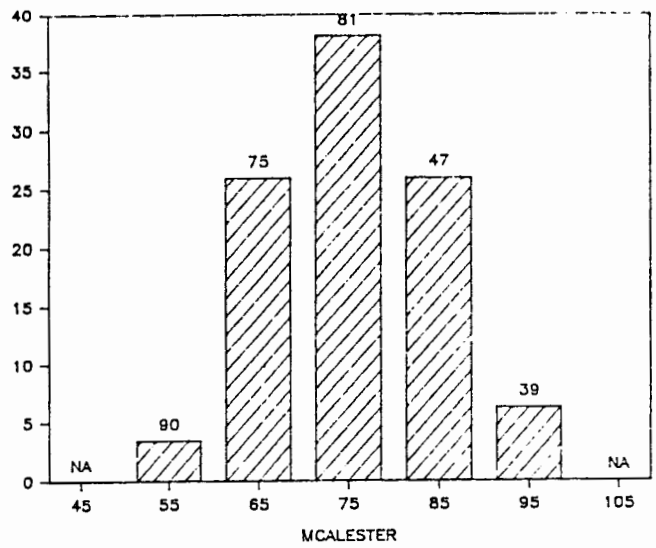
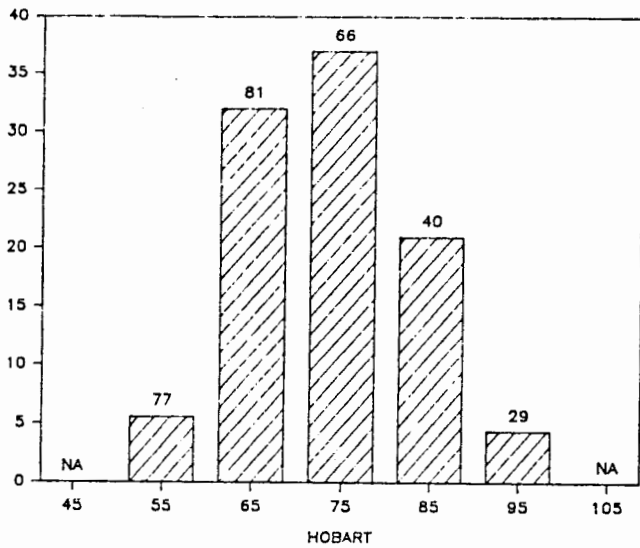




The following graphs present September, 1988 hourly temperature and corresponding relative humidity information for 10 Oklahoma stations. The height of each bar represents the percentage of the hours in the month when the temperature was observed within the category given below the axis (45 = 40 to 49,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

Example: Approximately 29% of Oklahoma City's hourly temperature values ranged from 60 to 69 degrees. The median relative humidity associated with this temperature class was 74%.





NATIONAL WEATHER SERVICE 30 AND 90-DAY OUTLOOK

30-DAY OUTLOOK (OCTOBER)

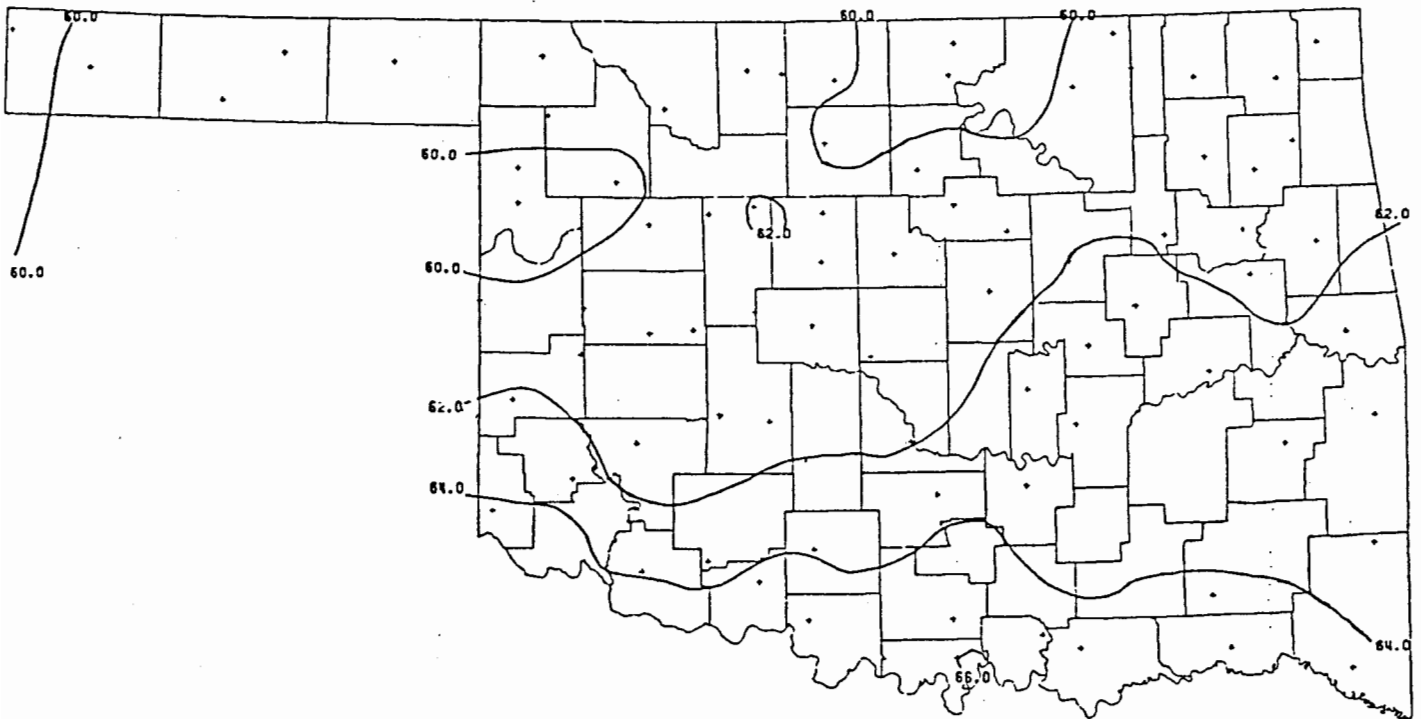
Precipitation - Near normal Statewide (see table below).  
Temperature - Near normal Statewide.

90-DAY OUTLOOK (OCTOBER - DECEMBER)

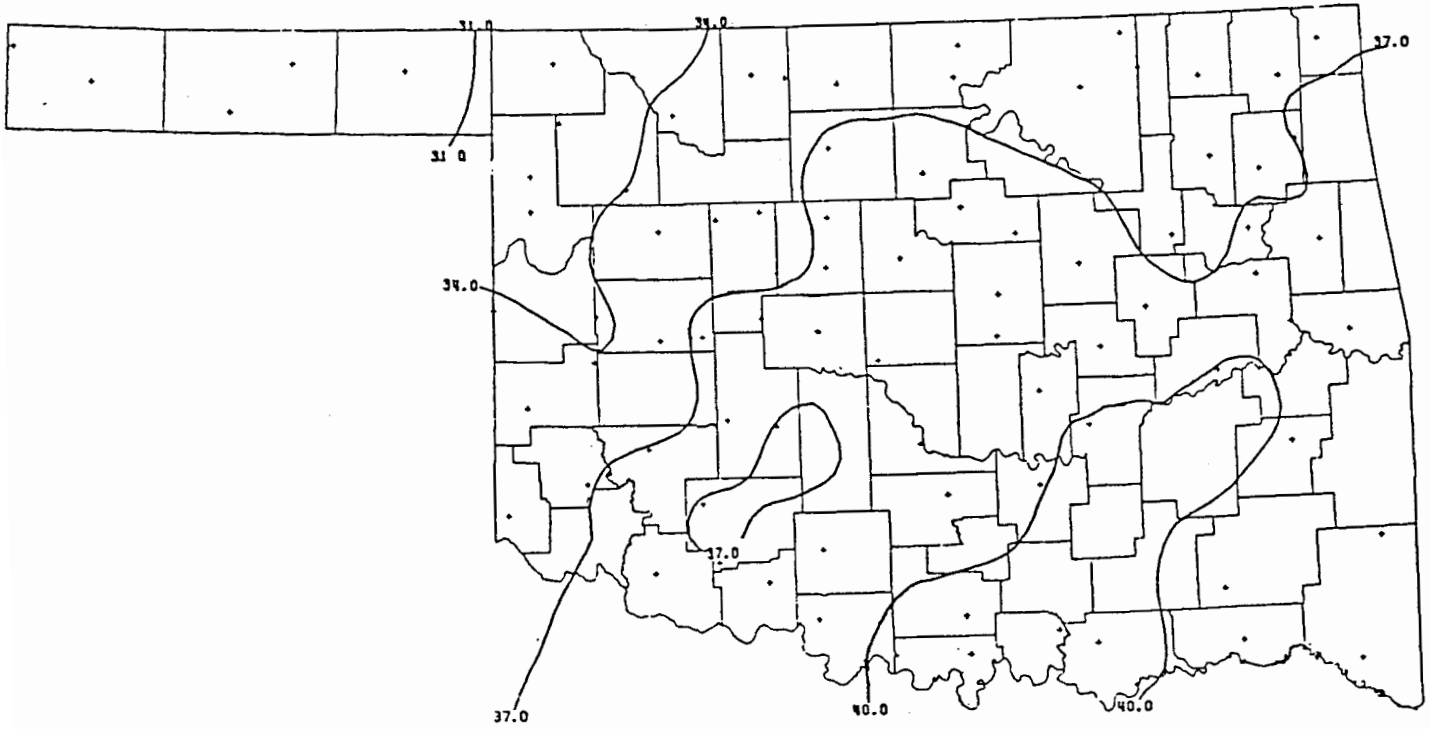
Precipitation - Above normal Statewide.  
Temperature - Below normal Statewide.

NORMALS FOR OCTOBER

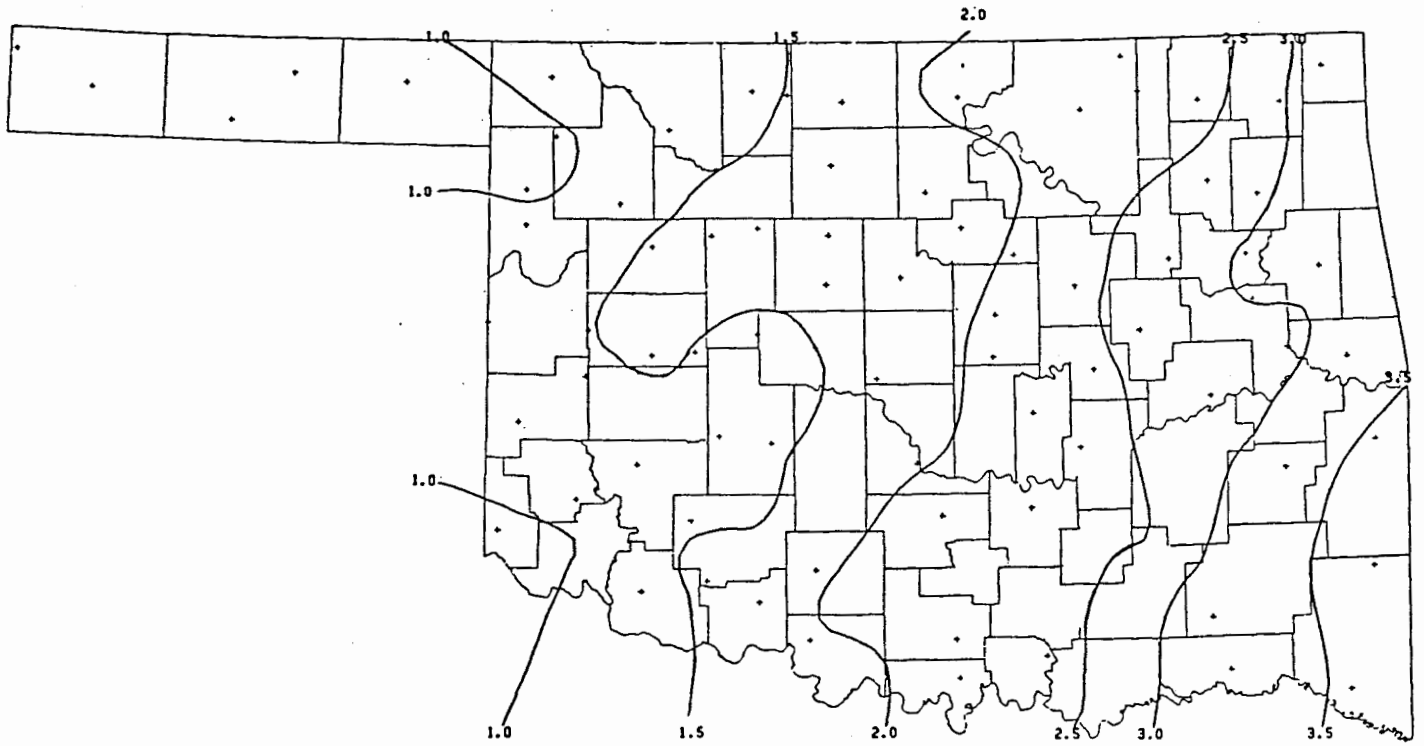
<u>DIVISION</u>	<u>MAXIMUM TEMPERATURES</u>	<u>MINIMUM TEMPERATURES</u>	<u>RAINFALL (IN INCHES)</u>
Panhandle	75	43	1.30
North Central	75	48	2.13
Northeast	75	48	3.32
West Central	76	48	2.24
Central	76	50	2.76
East Central	76	50	3.46
Southwest	78	50	2.61
South Central	78	52	3.34
Southeast	77	50	3.76



30-YEAR MEAN NOVEMBER DAILY MAXIMUM TEMPERATURE



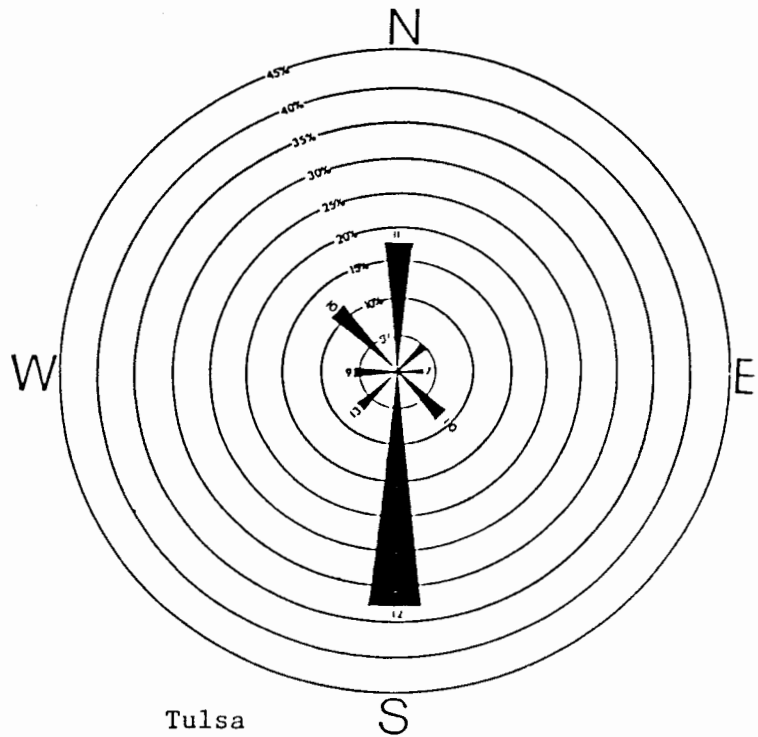
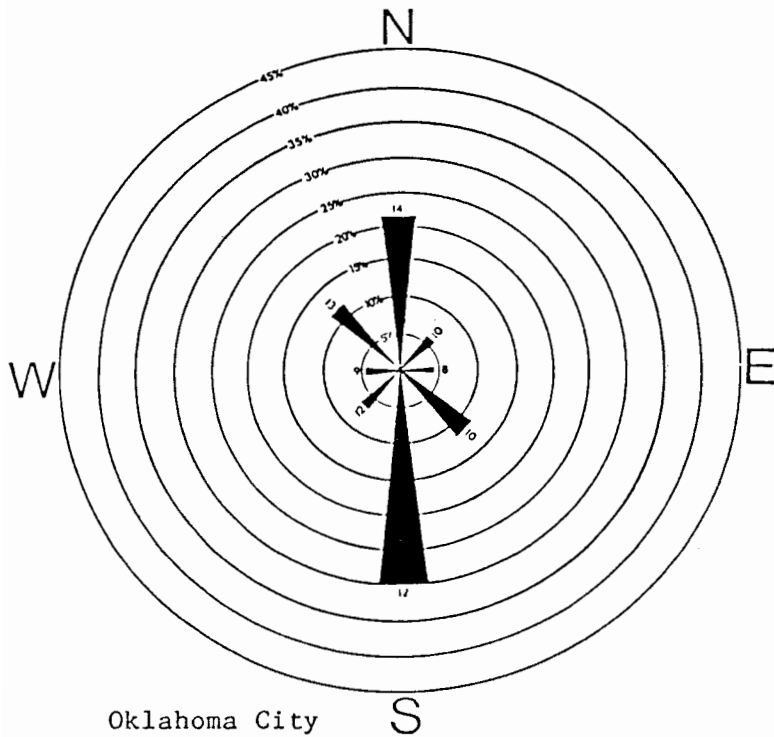
30-YEAR MEAN NOVEMBER DAILY MINIMUM TEMPERATURE



30-YEAR NOVEMBER PRECIPITATION



November 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 of 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.



NOVEMBER 1988 SUNRISE AND SUNSET

Oklahoma City

DATE	SUNRISE	SUNSET	HOURS OF DAYLIGHT
881101	6:48AM	5:40PM LT	10:52
881102	6:49AM	5:39PM LT	10:51
881103	6:50AM	5:39PM LT	10:49
881104	6:51AM	5:38PM LT	10:47
881105	6:51AM	5:37PM LT	10:46
881106	6:52AM	5:36PM LT	10:44
881107	6:53AM	5:36PM LT	10:42
881108	6:54AM	5:35PM LT	10:41
881109	6:55AM	5:34PM LT	10:39
881110	6:56AM	5:34PM LT	10:38
881111	6:57AM	5:33PM LT	10:36
881112	6:58AM	5:32PM LT	10:35
881113	6:59AM	5:32PM LT	10:33
881114	7: 0AM	5:31PM LT	10:32
881115	7: 0AM	5:31PM LT	10:30
881116	7: 1AM	5:30PM LT	10:29
881117	7: 2AM	5:30PM LT	10:28
881118	7: 3AM	5:29PM LT	10:26
881119	7: 4AM	5:29PM LT	10:25
881120	7: 5AM	5:29PM LT	10:24
881121	7: 6AM	5:28PM LT	10:22
881122	7: 7AM	5:28PM LT	10:21
881123	7: 8AM	5:28PM LT	10:20
881124	7: 8AM	5:27PM LT	10:19
881125	7: 9AM	5:27PM LT	10:18
881126	7:10AM	5:27PM LT	10:17
881127	7:11AM	5:27PM LT	10:16
881128	7:12AM	5:27PM LT	10:15
881129	7:13AM	5:27PM LT	10:14
881130	7:14AM	5:26PM LT	10:13

Tulsa

DATE	SUNRISE	SUNSET	HOURS OF DAYLIGHT
881101	6:46AM	5:29PM LT	10:43
881102	6:47AM	5:28PM LT	10:41
881103	6:48AM	5:27PM LT	10:39
881104	6:49AM	5:26PM LT	10:37
881105	6:50AM	5:25PM LT	10:35
881106	6:51AM	5:24PM LT	10:33
881107	6:52AM	5:23PM LT	10:31
881108	6:53AM	5:23PM LT	10:30
881109	6:54AM	5:22PM LT	10:28
881110	6:55AM	5:21PM LT	10:26
881111	6:56AM	5:20PM LT	10:24
881112	6:57AM	5:20PM LT	10:23
881113	6:58AM	5:19PM LT	10:21
881114	6:59AM	5:18PM LT	10:19
881115	7: 0AM	5:18PM LT	10:18
881116	7: 1AM	5:17PM LT	10:16
881117	7: 2AM	5:17PM LT	10:15
881118	7: 3AM	5:16PM LT	10:13
881119	7: 4AM	5:16PM LT	10:12
881120	7: 5AM	5:15PM LT	10:10
881121	7: 6AM	5:15PM LT	10: 9
881122	7: 7AM	5:14PM LT	10: 7
881123	7: 8AM	5:14PM LT	10: 6
881124	7: 9AM	5:14PM LT	10: 5
881125	7:10AM	5:13PM LT	10: 3
881126	7:11AM	5:13PM LT	10: 2
881127	7:12AM	5:13PM LT	10: 1
881128	7:13AM	5:12PM LT	9: 60
881129	7:13AM	5:12PM LT	9: 59
881130	7:14AM	5:12PM LT	9: 58

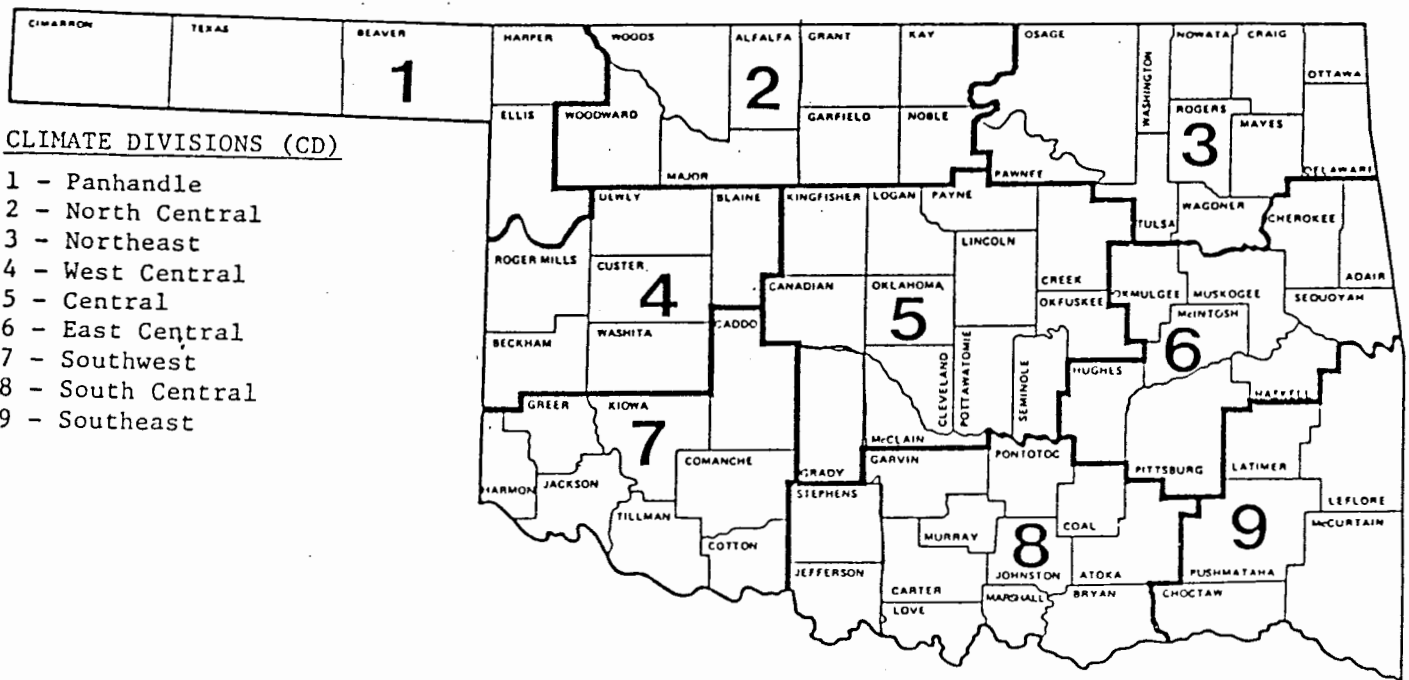
NOVEMBER 1988

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).

1		2		3		4		5		6		7	
Normal	Actual	Normal	Actual	Normal	Actual	Normal	Actual	Normal	Actual	Normal	Actual	Normal	Actual
66.5 max 44.2 min .063 pcpn	84-1982 35-1951 29-1966 68-1982 1.03-1981	62.6 max 41.2 min .123 pcpn	81-1978 31-1951 22-1966 62-1983 1.51-1951	59.8 max 40.0 min .119 pcpn	82-1931 40-1951 21-1936 61-1959 1.51-1964	62.3 max 40.1 min .056 pcpn	81-1978 47-1956 23-1936 56-1964 2.17-1986	60.6 max 40.5 min .065 pcpn	81-1945 35-1951 23-1951 59-1965 .99-1946	61.6 max 41.0 min .033 pcpn	85-1945 39-1959 20-1959 59-1965 .68-1978	61.9 max 39.6 min .030 pcpn	Highest Max 86-1980 Lowest Max 44-1968 Lowest Min 26-1959 Highest Min 61-1966 Greatest pcpn 1.03-1944
62.4 max 39.7 min .041 pcpn	87-1980 40-1953 23-1955 66-1966 .23-1981	61.3 max 38.3 min .021 pcpn	82-1934 37-1958 25-1955 60-1984 1.15-1977	62.9 max 38.1 min .012 pcpn	81-1980 33-1950 20-1950 58-1964 1.17-1937	63.6 max 39.4 min .006 pcpn	79-1949 43-1968 19-1950 63-1982 .37-1940	64.4 max 39.6 min .059 pcpn	78-1938 33-1976 19-1986 58-1951 .89-1957	64.2 max 41.3 min .036 pcpn	80-1967 28-1986 12-1940 61-1973 1.51-1985	62.4 max 40.7 min .025 pcpn	Highest Max 79-1973 Lowest Max 30-1959 Lowest Min 15-1939 Highest Min 63-1973 Greatest pcpn 1.13-1985
63.1 max 40.3 min .112 pcpn	80-1965 37-1978 15-1940 61-1971 1.70-1968	59.5 max 40.3 min .033 pcpn	82-1941 33-1955 14-1932 64-1958 3.94-1931	59.1 max 37.3 min .041 pcpn	77-1966 32-1959 11-1959 54-1975 1.70-1984	53.4 max 37.5 min .068 pcpn	80-1930 37-1972 17-1951 57-1979 1.37-1964	60.1 max 37.1 min .153 pcpn	78-1979 34-1972 18-1937 60-1977 1.70-1934	58.8 max 35.1 min .064 pcpn	79-1982 35-1972 19-1937 59-1979 1.74-1979	58.6 max 35.9 min .030 pcpn	Highest Max 80-1927 Lowest Max 31-1964 Lowest Min 20-1964 Highest Min 53-1966 Greatest pcpn 1.17-1931
58.2 max 35.4 min .033 pcpn	70-1966 38-1957 18-1926 60-1966 1.54-1931	58.0 max 34.9 min .030 pcpn	79-1973 35-1970 19-1950 60-1966 1.62-1931	55.6 max 35.0 min .092 pcpn	76-1942 36-1950 15-1950 60-1966 .77-1944	60.8 max 36.6 min .025 pcpn	84-1965 39-1982 20-1950 62-1966 2.01-1940	58.1 max 34.9 min .097 pcpn	79-1970 32-1952 13-1975 50-1966 .87-1935	52.5 max 32.0 min .033 pcpn	76-1927 33-1958 16-1976 56-1960 1.3-1982	49.1 max 30.1 min .010 pcpn	Highest Max 81-1949 Lowest Max 30-1952 Lowest Min 15-1976 Highest Min 48-1962 Greatest pcpn .54-1968
51.9 max 29.0 min .008 pcpn	80-1927 34-1974 13-1976 51-1975 61-1930	53.5 max 30.7 min .005 pcpn	74-1933 38-1983 13-1976 56-1970 .47-1985	Normal	Actual	Normal	Actual	Normal	Actual	Normal	Actual	Normal	Actual

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.