OKLAHOMA
MONTHLY SUMMARY
AUGUST 1991

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AUGUST 1991 OKLAHOMA SUMMARY

West central and southwest Oklahoma both recorded more than 150% of their normal monthly precipitation in August, led primarily by heavy rains in the middle and at the end of the month. The dry spell continued across northeast Oklahoma which received only 71% of its normal precipitation. Preliminary figures show a statewide average of 2.52 inches of rain fell across the state during August, which is 0.24 inch below normal. The year-to-date total of 21.78 inches lags the long-term average by 0.80 inch.

August began in the midst of a heat wave, but despite the early heat every region of the state reported below normal temperatures for the month. The monthly average temperature of 80.1 degrees ranked as the 36th coolest among 100 years on record. The statewide average was 1.1 degrees below normal. The year-to-date stands 1.4 degrees above normal, the 18th warmest on record. The summer of 1991 ended with no significant departures from the long-term averages in either temperature or precipitation.

Temperatures at the beginning of the month soared above the 100 degree mark each of the first nine days in August. Readings in excess of 100 degrees were received from all regions of the state. Strong storms ripped across northwest and central portions of the state on the 4th, causing damage to trees and several buildings. A cold front, which provided the focus for thunderstorm development, stalled over northwest Oklahoma from the 3rd to the 5th, bringing a brief respite to the area. As the front retreated northward on the 5th, heat once again returned statewide.

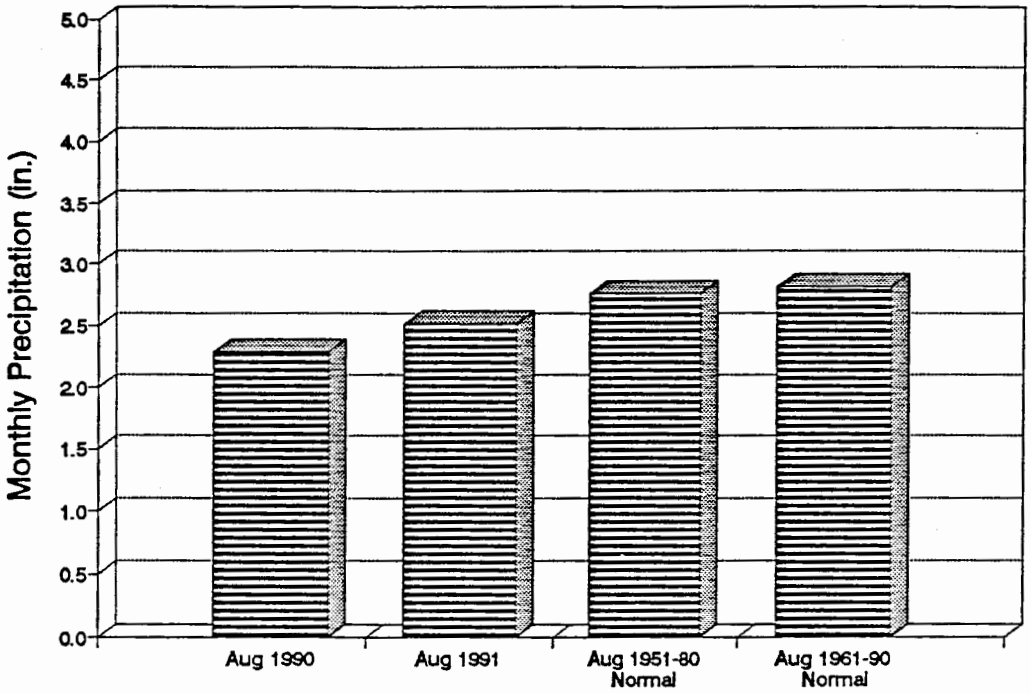
A strong cold front, which swept through Oklahoma on the 9th, brought an abrupt end to the heat wave. Oklahoma City's maximum temperature of 100 degrees on the 9th was followed by a relatively cool high of 88 degrees the next day. The front divided the state for several days. Maximum temperatures behind the front remained in the 70's, while stations ahead of the front continued to report temperatures in the 90's. A second surge of cool air on the 14th, reinforcing the original air mass, kept maximum temperatures at Cushing, Goodwell and the Wichita Mountains to only 70 degrees.

The front also provided a focus for development of thunderstorms, which dropped over two inches of rain in many areas of the south and east. Madill reported 3.65 inches on the 13th, and Marble City reported 2.92 inches on the 14th. The grip of the cool air mass eased on the 16th, as temperatures in several parts of the state peaked above 100 degrees. The passage of several weak cold fronts kept temperatures in the 80's at several locations while others remained near 100 degrees. Frequent thunderstorms brought rain and cloud cover, contributing to some cooler temperatures. Precipitation in excess of two inches was reported at Antlers on the 17th and Stilwell and Laverne on the 20th, leading to localized flooding and minor damage.

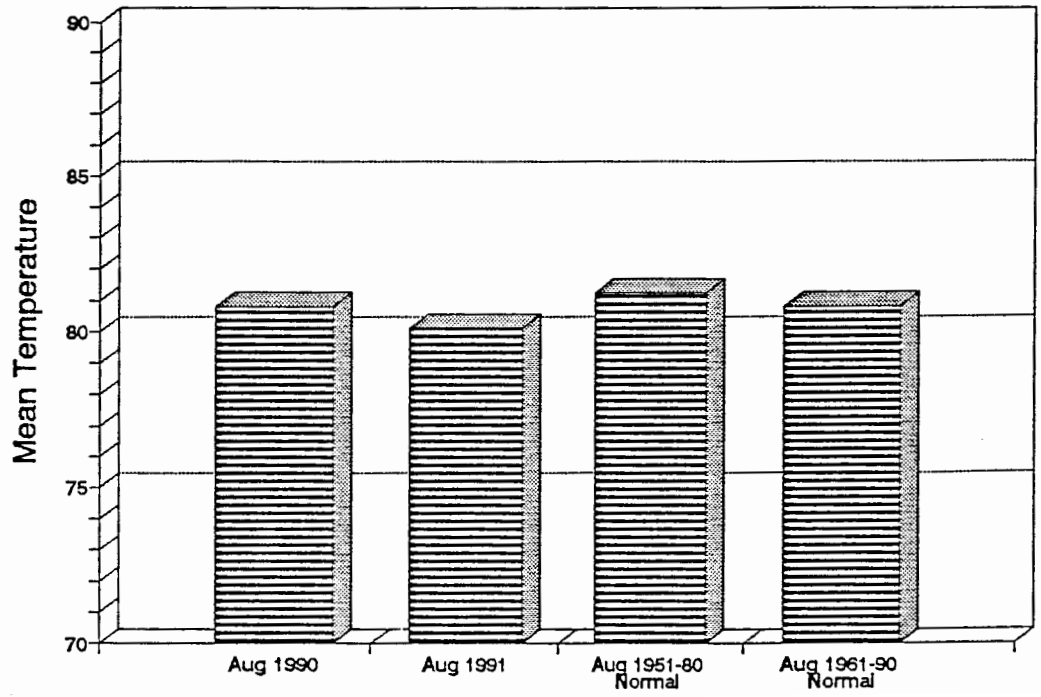
Abundant moisture raised humidity values across the state, making the temperatures, although cooler, often unbearable. The high humidity also contributed to daily fog and haze at many places. Tulsa was placed under an ozone alert late in the month, and people were urged to avoid unnecessary driving. Renewed thunderstorm activity late in the month helped to clear the air. A final heavy rain event occurred from the 27th through 31st across western and central Oklahoma as a result of an upper air disturbance. Rainfall totals exceeding three inches were reported during the period, including 4.20 inches at Anadarko on the 29th. Temperatures across northwest Oklahoma dropped behind a cold front as it began moving across the state on the 31st.

Mark A. Shafer

Comparison of Monthly Precipitation
Statewide Average for Oklahoma

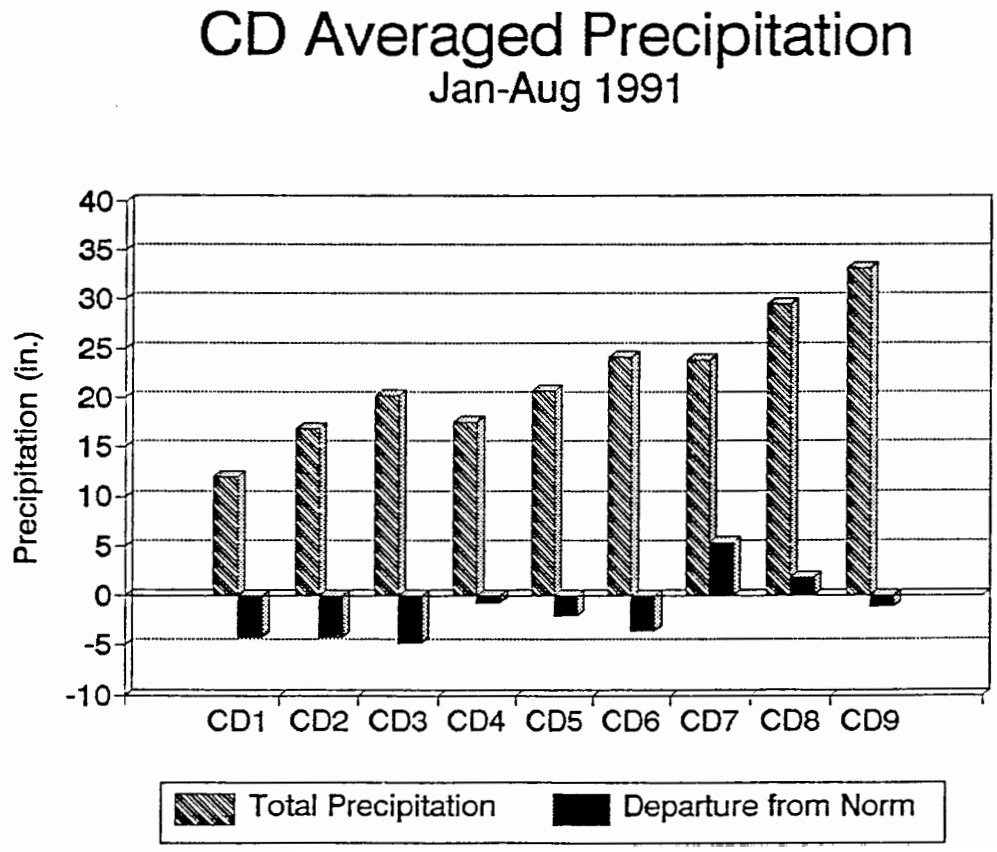


Comparison of Monthly Temperature
Statewide Average for Oklahoma



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

CD	MAX TEMP	DATE	LOCATION	MIN TEMP	DATE	LOCATION	MONTHLY PRECIP	LOCATION	24-HOUR PRECIP	DATE	LOCATION
1	109	1	BUFFALO	52	14	GOODWELL	4.41	LAVERNE	2.39	21	LAVERNE
2	107	2	ALVA	54	14	JEFFERSON	7.73	ALVA	3.36	31	ALVA
	107	2	SALT PLAINS								
	107	8	JEFFERSON								
3	106	8	MANNFORD	51	21	RALSTON	5.44	KANSAS	1.96	30	PAWHUSKA
4	106	8	CLINTON	54	14	TALOGA	6.33	CANTON	3.55	30	COLONY
5	106	8	GUTHRIE	57	14	HENNESSEY	4.92	SEMINOLE	2.44	30	SEMINOLE
6	104	7	TAHLEQUAH	55	20	STILWELL	4.68	TAHLEQUAH	2.92	14	MARBLE CITY
7	104	8	CARNEGIE	59	11	CARNEGIE	5.41	LOOKEBA	2.80	30	CARNEGIE
8	101	8	MARIETTA	60	19	CHICKASAW	5.75	MADILL	3.65	13	MADILL
				60	19	PAULS VALLEY					
9	103	6	POTEAU	57	19	POTEAU	4.18	ANTLERS	2.43	17	ANTLERS



AUGUST 1991 PERCENT OF NORMAL PRECIPITATION.

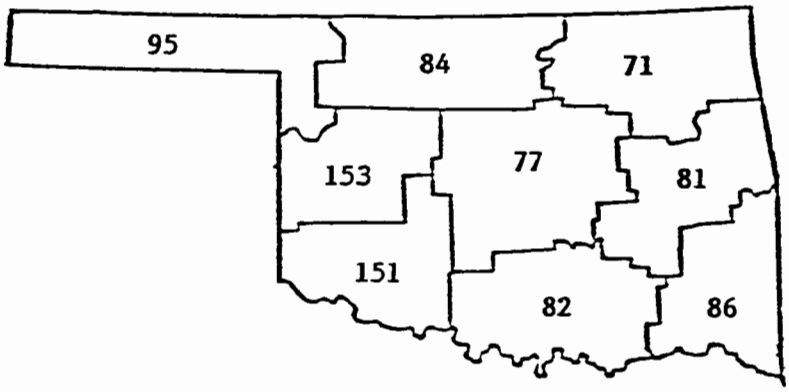


TABLE OF 1990/1991 COMPARISONS

Station	August Temperature (F) 1990	1991	August Precipitation (in.) 1990	1991
Arnett	77.2	76.9	3.53	3.08
Enid	*	81.8	*	2.28
Mutual	79.9	79.6	1.79	2.39
Tulsa	83.9	83.2	1.83	1.17
Elk City	79.5	79.8	4.39	4.00
Oklahoma City	81.8	81.4	3.34	2.65
McAlester	81.7	80.1	2.51	2.18
Altus Irr Sta	81.0	80.0	5.16	1.98
Durant	81.7	80.5	2.15	2.00
Ada	80.8	79.7	1.99	1.45
Antlers	81.8	79.7	1.38	4.18

EXTREMES

Variable	Station	Division	Observation	Date
Minimum temperature (F)	Kenton	1	51	30
	Vinita	3	51	20
Maximum temperature (F)	Buffalo	1	109	1
Maximum 24-hour precipitation	Anadarko	7	4.20"	29

AUGUST 1991 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
ARNETT	332	1	76.9	31	-2.4	98.	9	57.	14	.5	.5	368.0	-75.0	3.083	31	.67	1.86	21
BEAVER	593	1	79.0	31	-.6	101.	3	52.	14	1.5	1.5	435.0	-18.0	2.000	31	-.81	1.49	13
BOISE CITY 2 E	908	1	75.0	31	-.7	93.	1	58.	14	.0	.0	309.0	-23.0	3.420	31	1.04	1.87	12
BUFFALO	1243	1	81.1	31	-.7	109.	1	57.	14	.0	.0	500.0	-21.0	4.040	31	.70	2.00	3
FARGO	3070	1	*****	0	*****	****	0	****	0	******	******	******	******	1.131	31	-1.34	.40	21
GAGE FAA APT	3407	1	78.6	31	-1.5	102.	1	55.	14	.0	.0	422.5	-45.5	1.782	31	-.64	.55	9
GATE	3489	1	79.1	31	*****	101.	2	60.	14	.0	******	438.5	******	5.580	31	*****	2.63	20
GOODWELL RES ST	3628	1	76.9	31	-.5	99.	3	52.	14	4.0	4.0	373.0	-11.0	.770	31	-1.60	.42	5
GUYMON	3835	1	78.7	29	*****	101.	2	56.	14	.0	******	396.5	******	.741	29	*****	.26	5
HOOKER	4298	1	77.4	31	-.8	99.	3	56.	15	1.0	1.0	385.0	-24.0	1.690	30	*****	1.10	4
KENTON	4766	1	73.9	31	-2.6	100.	1	51.	30	.0	.0	275.0	-82.0	3.100	31	.60	1.10	4
LAVERNE	5045	1	*****	0	*****	****	0	****	0	******	******	******	******	4.411	31	1.44	2.39	21
OPTIMA LAKE	6740	1	78.0	31	*****	101.	3	53.	14	2.0	******	405.5	******	.920	31	*****	.51	4
REGNIER	7534	1	*****	0	*****	****	0	****	0	******	******	******	******	2.940	31	1.03	1.04	6
TURPIN 4 SSE	9017	1	78.1	31	*****	101.	3	55.	14	.5	******	408.0	******	1.790	30	*****	1.44	5

AUGUST 1991 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	193	2	81.4	31	*****	107.	2	58.	12	.0	******	507.0	******	7.730	31	*****	3.36	31
VANCE AFB	302	2	*****	0	*****	****	0	****	0	******	******	******	******	2.810	31	*****	1.45	31
BILLINGS	755	2	81.3	31	*****	104.	9	60.	14	.0	******	506.0	******	.665	31	-2.23	.58	14
BLACKWELL 2E	818	2	81.3	31	*****	105.	1	57.	14	.0	******	506.5	******	2.181	31	*****	.98	29
BRAMAN	1075	2	*****	0	*****	****	0	****	0	******	******	******	******	1.670	31	*****	.76	31
CEDARDALE	1620	2	*****	0	*****	****	0	****	0	******	******	******	******	3.740	31	*****	1.21	21
CHEROKEE	1724	2	81.9	31	-.3	104.	2	60.	10	.0	.0	523.5	-9.5	2.740	31	.16	1.00	16
ENID	2912	2	81.8	31	-.3	103.	1	60.	14	.0	.0	520.0	-10.0	2.280	31	-1.08	1.23	30
FT SUPPLY DAM	3304	2	79.1	31	-1.3	101.	2	57.	14	.0	.0	436.5	-40.5	1.180	31	-1.34	.35	14
FREEDOM	3358	2	79.6	30	*****	104.	1	57.	14	.0	******	437.0	******	2.081	31	*****	.69	14
GREAT SALT PLNS	3740	2	81.8	31	*****	107.	2	61.	15	.0	******	520.0	******	1.181	24	*****	.27	14
HARDY	3909	2	*****	0	*****	****	0	****	0	******	******	******	******	4.380	30	*****	2.31	29
HELENA 1 SSE	4019	2	80.4	31	*****	103.	4	59.	14	.0	******	477.0	******	2.910	31	.30	1.59	17
JEFFERSON	4573	2	81.3	31	-.8	107.	8	54.	14	.0	.0	506.0	-24.0	1.831	31	-1.42	.76	31
LAMONT	5013	2	*****	0	*****	****	0	****	0	******	******	******	******	.753	31	*****	.45	14
MEDFORD	5768	2	*****	0	*****	****	0	****	0	******	******	******	******	1.250	31	*****	.41	29
MORRISON	6065	2	*****	0	*****	****	0	****	0	******	******	******	******	1.290	31	*****	.62	14
MUTUAL	6139	2	79.6	31	-1.4	105.	9	56.	15	1.0	1.0	453.5	-42.5	2.390	31	.19	.90	21
NEWKIRK	6278	2	80.9	28	*****	102.	1	60.	14	.0	******	445.0	******	1.901	28	*****	.90	30
ORIENTA	6751	2	*****	0	*****	****	0	****	0	******	******	******	******	5.430	31	*****	2.40	30
PERRY	7012	2	82.6	31	.5	103.	2	59.	14	.0	.0	544.5	14.5	1.510	31	-1.82	.70	14
PONCA CITY FAA	7201	2	82.3	30	1.4	103.	1	58.	14	.0	.0	520.5	27.5	1.271	31	-2.09	.80	29
RED ROCK 1 NNE	7505	2	*****	0	*****	****	0	****	0	******	******	******	******	1.960	31	-.98	1.16	14
WAYNOKA	9404	2	79.1	31	-3.0	102.	2	58.	14	.0	.0	437.0	-93.0	4.900	31	2.20	1.14	21
WOODWARD	9760	2	*****	0	*****	****	0	****	0	******	******	******	******	.971	31	*****	.33	4

AUGUST 1991 SUMMARY FOR NORTHEAST DIVISION (CD3)

NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
BARNSDALL	535	3	80.4	31	*****	102.	8	56.	20	.0	******	478.0	******	2.141	31	-1.03	1.00	9
BARTLESVILLE 2W	548	3	80.3	31	-.3	104.	8	55.	20	.0	.0	474.5	-9.5	.993	31	-2.03	.42	14
BIXBY	782	3	78.6	31	-1.7	98.	9	58.	21	.0	.0	422.0	-52.0	1.910	31	-.88	.92	28
BURBANK	1256	3	*****	0	*****	****	0	****	0	******	******	******	******	3.363	31	*****	1.53	29
CHELSEA 4 S	1717	3	*****	0	*****	****	0	****	0	******	******	******	******	1.910	31	*****	1.23	14
CLAREMORE	1828	3	79.8	31	-.5	101.	9	56.	21	.0	.0	457.5	-16.5	2.050	31	-.86	.66	14
CLEVELAND 5 WSW	1902	3	81.5	27	*****	105.	8	57.	14	.0	******	445.5	******	.590	31	*****	.31	29
FORAKER	3250	3	*****	0	*****	****	0	****	0	******	******	******	******	1.202	31	-2.31	.61	30
HOMINY	4289	3	*****	0	*****	****	0	****	0	******	******	******	******	1.161	31	-1.87	.56	9
HULAH DAM	4393	3	80.5	21	*****	104.	9	53.	20	.0	******	325.5	******	2.050	31	-.98	1.45	13
JAY TOWER	4567	3	79.2	31	*****	102.	9	56.	20	.0	******	441.0	******	2.220	31	*****	.90	21
KANSAS 1 ESE	4672	3	78.4	31	*****	101.	2	59.	20	.0	******	415.5	******	5.443	31	*****	1.35	3
KEYSTONE DAM	4812	3	80.6	30	*****	102.	9	58.	20	.0	******	468.5	******	.934	31	*****	.32	14
LENAPAH	5118	3	*****	0	*****	****	0	****	0	******	******	******	******	1.580	31	*****	.35	13
MANNFORD 6 NW	5522	3	81.7	31	*****	106.	8	57.	14	.0	******	518.5	******	1.060	31	-2.02	.49	21
MARAMEC	5540	3	*****	0	*****	****	0	****	0	******	******	******	******	.920	31	-2.00	.41	31
MIAMI	5855	3	79.9	31	-.0	102.	1	52.	20	.0	.0	461.5	-.5	1.530	31	-1.98	.49	9
NOWATA	6485	3	81.5	30	.7	104.	8	56.	20	.0	.0	494.0	4.0	2.941	31	-.45	.98	13
ONETA 1 WNW	6713	3	*****	0	*****	****	0	****	0	******	******	******	******	1.830	31	*****	.92	21
PAWHUSKA	6935	3	79.9	31	-.6	101.	8	55.	20	.0	.0	460.5	-20.5	3.010	31	-.33	1.96	30
PAWNEE	6940	3	*****	0	*****	****	0	****	0	******	******	******	******	1.301	31	-1.71	.33	21
PRYOR 6 N	7309	3	78.7	31	-1.6	103.	9	53.	21	.0	.0	425.5	-48.5	3.293	31	-.11	1.90	14
RALSTON	7390	3	82.2	31	*****	105.	6	58.	14	.0	******	534.0	******	1.572	31	-1.35	.55	30
RAMONA 4 N	7394	3	*****	0	*****	****	0	****	0	******	******	******	******	2.950	31	*****	.97	13
SKIATOOK	8258	3	*****	0	*****	****	0	****	0	******	******	******	******	1.260	31	-1.60	.46	30
SPAVINAW	8380	3	81.2	31	*****	101.	8	61.	20	.0	******	503.0	******	4.340	31	.74	1.21	14
TULSA WSO APT	8992	3	83.2	31	1.5	102.	8	63.	14	.0	.0	564.5	46.5	1.171	31	-1.84	.73	31
UPPER SPAVINAW	9101	3	80.2	31	*****	102.	6	52.	20	.0	******	472.0	******	3.951	31	*****	1.00	31
VINITA 2 N	9203	3	80.1	31	.3	104.	8	51.	20	.0	.0	467.5	8.5	1.510	30	*****	.49	13
WAGONER	9247	3	80.8	31	-.3	100.	8	60.	20	.0	.0	490.0	-9.0	3.590	31	.74	1.16	21
WANN	9298	3	*****	0	*****	****	0	****	0	******	******	******	******	1.620	31	*****	.90	29
WYNONA	9792	3	*****	0	*****	****	0	****	0	******	******	******	******	1.914	31	*****	1.18	30

AUGUST 1991 SUMMARY FOR WEST CENTRAL DIVISION (CD4)

NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
CANTON DAM	1445	4	79.8	30	-1.8	102.	9	56.	14	1.5	1.5	447.0	-71.0	6.331	31	4.08	1.89	30
CHEYENNE	1738	4	*****	0	*****	****	0	****	0	******	******	******	******	1.860	31	*****	.48	21
CLINTON	1909	4	80.7	31	-1.3	106.	8	57.	14	.0	.0	487.0	-40.0	3.152	31	.36	1.14	30
COLONY	2039	4	*****	0	*****	****	0	****	0	******	******	******	******	5.920	31	*****	3.55	30
CORDELL	2125	4	*****	0	*****	****	0	****	0	******	******	******	******	3.261	31	.63	1.35	30
ELK CITY 1 E	2849	4	79.8	22	*****	100.	4	60.	10	.0	******	325.0	******	4.002	31	1.67	1.06	30
ERICK 4 E	2944	4	77.9	31	-2.7	99.	3	60.	15	.0	.0	399.0	-85.0	3.545	31	1.43	1.74	21
GEARY	3497	4	80.3	31	-1.6	101.	8	60.	14	.0	.0	473.0	-51.0	4.520	31	2.33	1.50	31
HAMMON 1 NNE	3871	4	78.3	31	-2.8	100.	9	57.	15	.0	.0	411.5	-87.5	3.731	31	1.29	1.05	21
LEEDEY	5090	4	*****	0	*****	****	0	****	0	******	******	******	******	3.700	31	1.12	1.44	21
MACKIE 4 NNW	5463	4	*****	0	*****	****	0	****	0	******	******	******	******	2.860	31	*****	1.32	17
MORAVIA 2 NNE	6035	4	*****	0	*****	****	0	****	0	******	******	******	******	1.830	31	-.23	.95	13
OKEENE	6629	4	80.3	31	-2.2	102.	8	57.	14	.0	.0	475.5	-67.5	3.510	31	.94	1.17	17
RETROP	7565	4	*****	0	*****	****	0	****	0	******	******	******	******	2.840	31	*****	1.01	30
REYDON	7579	4	77.3	23	*****	96.	16	56.	14	.0	******	283.5	******	3.090	23	*****	1.35	17
SAYRE	7952	4	*****	0	*****	****	0	****	0	******	******	******	******	3.250	31	1.20	1.34	5
SWEETWATER 2 E	8652	4	*****	0	*****	****	0	****	0	******	******	******	******	3.210	31	*****	1.35	13
TALOGA	8708	4	78.6	31	-2.1	101.	8	54.	14	.0	.0	421.0	-66.0	4.061	31	1.62	1.45	30
THOMAS	8815	4	*****	0	*****	****	0	****	0	******	******	******	******	2.810	31	*****	.85	5
VICI	9172	4	*****	0	*****	****	0	****	0	******	******	******	******	2.240	31	*****	.90	16
WATONGA	9364	4	80.8	31	*****	101.	8	56.	14	.0	******	490.5	******	4.511	31	2.46	1.70	21
WEATHERFORD	9422	4	80.7	31	-.9	104.	9	59.	14	.0	.0	486.5	-28.5	4.591	31	1.90	1.68	30

AUGUST 1991 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	******	******	******	******	1.560	31	*****	.71	30
TINKER AFB	325	5	*****	0	*****	****	0	****	0	******	******	******	******	1.802	30	*****	.73	5
BLANCHARD 2 SSW	830	5	80.4	31	*****	98.	8	62.	15	.0	******	476.5	******	1.812	31	*****	.80	21
BRISTOW	1144	5	79.6	31	-1.6	101.	8	58.	15	.0	.0	453.5	-48.5	1.981	31	-.64	.65	13
CHANDLER	1684	5	81.0	31	-.8	101.	1	62.	18	.0	.0	495.5	-25.5	1.560	31	-.69	.62	14
CHICKASHA EX ST	1750	5	80.2	31	-1.0	99.	8	59.	15	.0	.0	472.5	-29.5	3.750	31	1.23	1.38	30
COX CITY 1 E	2196	5	*****	0	*****	****	0	****	0	******	******	******	******	2.200	31	*****	1.45	30
CRESCENT	2242	5	*****	0	*****	****	0	****	0	******	******	******	******	1.190	31	*****	.49	21
CUSHING	2318	5	80.5	30	-.9	101.	9	61.	14	.0	.0	466.0	-42.0	1.100	30	*****	.51	14
EL RENO 1 N	2818	5	80.4	29	*****	101.	8	59.	15	.0	******	446.5	******	1.420	31	-.88	.73	21
GUTHRIE	3821	5	83.4	31	1.3	106.	8	61.	14	.0	.0	569.0	39.0	1.530	31	-.85	.70	21
HENNESSEY 2 SE	4055	5	82.3	31	.0	105.	8	57.	14	.0	.0	536.5	.5	.950	31	-1.74	.36	21
INGALLS	4489	5	*****	0	*****	****	0	****	0	******	******	******	******	.905	31	*****	.52	14
KINGFISHER 2 SE	4861	5	81.0	31	-1.4	102.	8	59.	10	.0	.0	495.0	-44.0	2.420	31	.03	1.22	5
KONAWA	4915	5	*****	0	*****	****	0	****	0	******	******	******	******	2.810	31	.35	1.37	30
MARSHALL	5589	5	*****	0	*****	****	0	****	0	******	******	******	******	1.690	31	-1.06	.78	30
MEEKER 4 W	5779	5	79.9	29	*****	98.	9	60.	18	.0	******	432.0	******	2.050	30	*****	.76	4
MULHALL	6110	5	*****	0	*****	****	0	****	0	******	******	******	******	1.591	31	*****	.60	14
NORMAN 3 S	6386	5	81.4	31	*****	101.	19	61.	15	.0	******	508.5	******	2.004	31	-.56	.64	14
OILTON 2 SE	6616	5	*****	0	*****	****	0	****	0	******	******	******	******	1.970	31	*****	1.03	31
OKLAHOMA CTY WS	6661	5	81.4	31	.3	100.	8	63.	10	.0	.0	507.5	8.5	2.652	31	.25	1.23	21
OKEMAH	6638	5	81.3	31	.1	101.	8	63.	15	.0	.0	506.0	4.0	1.590	31	-1.01	.43	9
PERKINS	7003	5	*****	0	*****	****	0	****	0	******	******	******	******	.580	31	-2.03	.33	14
PIEDMONT	7068	5	*****	0	*****	****	0	****	0	******	******	******	******	2.900	31	*****	.80	31
PRAGUE	7264	5	*****	0	*****	****	0	****	0	******	******	******	******	2.551	31	.04	2.00	29
PURCELL 5 SW	7327	5	80.0	31	-1.9	99.	8	58.	16	.0	.0	463.5	-60.5	2.030	30	*****	.60	31
SEMINOLE	8042	5	81.4	31	-1.2	100.	8	62.	15	.0	.0	507.5	-38.5	4.920	31	2.04	2.44	30
SHAWNEE	8110	5	*****	0	*****	****	0	****	0	******	******	******	******	.871	31	-2.03	.37	13
STELLA	8479	5	*****	0	*****	****	0	****	0	******	******	******	******	1.530	31	*****	.62	5
STILLWATER 2 W	8501	5	81.1	31	.1	103.	9	58.	14	.0	.0	499.0	3.0	1.410	31	-1.42	.51	14
STROUD 1 N	8563	5	*****	0	*****	****	0	****	0	******	******	******	******	1.102	31	*****	.49	9
TECUMSEH	8751	5	*****	0	*****	****	0	****	0	******	******	******	******	1.693	31	*****	.90	30
TROUSDALE	8960	5	*****	0	*****	****	0	****	0	******	******	******	******	2.300	31	*****	.85	31
UNION CITY 1 SE	9086	5	*****	0	*****	****	0	****	0	******	******	******	******	2.230	31	-.32	.89	21
WELTY 1 SSE	9479	5	*****	0	*****	****	0	****	0	******	******	******	******	1.770	31	*****	.68	5
WEWOKA	9575	5	*****	0	*****	****	0	****	0	******	******	******	******	1.800	31	-1.05	.85	30

AUGUST 1991 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	******	******	******	******	.862	31	*****	.83	14
BEGGS	631	6	*****	0	*****	****	0	****	0	******	******	******	******	3.090	31	*****	1.59	27
BOYNTON	1027	6	*****	0	*****	****	0	****	0	******	******	******	******	1.420	31	*****	.62	30
CALVIN	1391	6	*****	0	*****	****	0	****	0	******	******	******	******	.482	31	-2.10	.17	14
CHECOTAH	1711	6	*****	0	*****	****	0	****	0	******	******	******	******	.631	31	-2.07	.22	30
DEWAR 2 NE	2485	6	*****	0	*****	****	0	****	0	******	******	******	******	4.500	31	1.89	2.45	30
DUSTIN	2690	6	*****	0	*****	****	0	****	0	******	******	******	******	1.700	31	*****	.61	31
EUFAULA	2993	6	81.4	31	*****	97.	8	66.	18	.0	******	509.5	******	.491	31	-2.24	.22	21
HANNA	3884	6	79.3	31	*****	97.	8	60.	20	.0	******	443.5	******	.540	31	-2.28	.23	28
HARTSHORNE	3946	6	*****	0	*****	****	0	****	0	******	******	******	******	2.481	31	*****	1.95	30
HASKELL	3956	6	*****	0	*****	****	0	****	0	******	******	******	******	1.291	31	-1.04	.47	13
HOLDENVILLE	4235	6	80.5	31	-1.4	99.	8	63.	18	.0	.0	480.0	-44.0	.810	31	-1.85	.24	14
LAKE EUFAULA	4975	6	80.5	31	*****	99.	9	62.	20	.0	******	479.0	******	1.431	31	*****	.71	14
LYONS 2 N	5437	6	*****	0	*****	****	0	****	0	******	******	******	******	4.381	31	1.51	1.85	21
MARBLE CITY	5546	6	*****	0	*****	****	0	****	0	******	******	******	******	3.783	31	*****	2.92	14
MCALESTER FAA	5664	6	80.1	31	-1.6	97.	7	62.	19	.0	.0	467.5	-50.5	2.182	31	-1.07	.97	8
MCCURTAIN 1 SE	5693	6	80.0	31	*****	102.	8	59.	20	.0	******	465.0	******	2.072	31	-.94	.90	14
MUSKOGEE	6130	6	80.4	31	-1.1	100.	9	59.	21	.0	.0	477.0	-35.0	1.501	31	-1.53	.60	29
OKMULGEE W W	6670	6	78.1	31	-2.7	99.	9	56.	21	.0	.0	405.5	-84.5	3.161	31	.53	1.69	30
OKTAHA 2 NE	6678	6	*****	0	*****	****	0	****	0	******	******	******	******	2.890	31	*****	2.29	30
QUINTON	7372	6	*****	0	*****	****	0	****	0	******	******	******	******	2.072	31	-1.03	1.17	18
SALLISAW 2 NE	7862	6	79.3	31	-1.7	99.	8	55.	20	.0	.0	442.5	-53.5	5.093	30	*****	3.13	14
SCIPIO	7979	6	*****	0	*****	****	0	****	0	******	******	******	******	.930	31	*****	.43	22
SCRAPER	7993	6	*****	0	*****	****	0	****	0	******	******	******	******	3.130	31	*****	.79	2
SHORT	8170	6	*****	0	*****	****	0	****	0	******	******	******	******	3.080	31	*****	2.36	13
STILWELL 1 NE	8506	6	78.4	31	*****	101.	1	55.	20	.0	******	416.5	******	4.241	31	.89	2.42	21
TAHLEQUAH	8677	6	79.9	31	.0	104.	7	58.	20	.0	.0	462.0	.0	4.681	31	1.62	2.50	13
WEBBERS FALLS	9445	6	80.1	31	-.6	102.	9	57.	20	.0	.0	467.0	-20.0	1.681	31	-1.20	.83	30
WESTVILLE	9523	6	*****	0	*****	****	0	****	0	******	******	******	******	4.010	31	*****	2.40	21
WETUMKA 3 NE	9571	6	*****	0	*****	****	0	****	0	******	******	******	******	3.052	31	.63	.90	21

AUGUST 1991 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	80.5	31	-2.6	101.	4	63.	15	.0	.0	479.5	-81.5	1.980	31	-.26	.72	17
ALTUS DAM	184	7	80.7	31	*****	101.	5	63.	16	.0	******	486.0	******	3.020	31	.89	1.07	12
ANADARKO	224	7	79.8	29	*****	98.	8	59.	11	.0	******	428.5	******	5.461	30	*****	4.20	29
APACHE	260	7	*****	0	*****	****	0	****	0	******	******	******	******	3.630	31	*****	2.29	30
ALTUS AFB	447	7	*****	0	*****	****	0	****	0	******	******	******	******	2.571	30	*****	.90	7
CARNEGIE 2 ENE	1504	7	80.2	30	-2.1	104.	8	59.	11	.0	.0	456.0	-80.0	4.160	31	2.03	2.80	30
CHATTANOOGA	1706	7	80.7	31	-2.6	99.	8	64.	15	.0	.0	485.5	-81.5	3.320	31	.71	1.36	14
DUNCAN 12 W	2668	7	*****	0	*****	****	0	****	0	******	******	******	******	3.270	31	*****	2.15	30
FREDERICK	3353	7	79.1	30	-5.5	96.	9	64.	15	.0	.0	421.5	-186.5	3.420	31	.96	1.60	17
GRANDFIELD 4 NW	3709	7	*****	0	*****	****	0	****	0	******	******	******	******	3.860	31	1.47	1.41	17
HOBART FAA APT	4204	7	79.8	30	-2.3	100.	8	60.	14	.0	.0	444.5	-85.5	2.350	31	.47	1.06	30
HOLLIS	4249	7	79.3	28	*****	100.	5	60.	15	.0	******	400.5	******	3.840	29	*****	1.65	14
LAWTON	5063	7	80.3	31	-2.4	98.	9	65.	15	.0	.0	474.5	-74.5	1.251	28	*****	.50	21
FORT SILL	5068	7	79.8	31	*****	97.	8	64.	15	.0	******	459.0	******	4.211	31	2.06	1.56	29
LOOKEBA 2 ENE	5329	7	*****	0	*****	****	0	****	0	******	******	******	******	5.410	31	*****	2.18	30
MANGUM RES STA	5509	7	79.0	31	-3.6	100.	4	61.	15	.0	.0	434.0	-112.0	2.490	31	.44	1.05	12
RANDLETT 9 E	7403	7	*****	0	*****	****	0	****	0	******	******	******	******	3.342	31	*****	1.64	30
ROOSEVELT	7727	7	*****	0	*****	****	0	****	0	******	******	******	******	3.050	31	.91	.80	14
SEDAN	8016	7	*****	0	*****	****	0	****	0	******	******	******	******	4.340	31	*****	2.36	30
SNYDER	8299	7	*****	0	*****	****	0	****	0	******	******	******	******	3.503	31	1.29	1.08	14
VINSON 3 WNW	9212	7	*****	0	*****	****	0	****	0	******	******	******	******	2.061	31	-.20	1.53	14
WALTERS	9278	7	80.2	31	-3.5	98.	8	63.	15	.0	.0	471.0	-109.0	2.971	31	.40	1.83	30
WICHITA MT WLR	9629	7	78.0	29	*****	96.	19	59.	15	.0	******	377.0	******	3.690	31	1.65	1.65	30
WILLOW	9668	7	*****	0	*****	****	0	****	0	******	******	******	******	3.490	31	*****	1.07	14

AUGUST 1991 SUMMARY FOR SOUTH CENTRAL DIVISION (CD8)

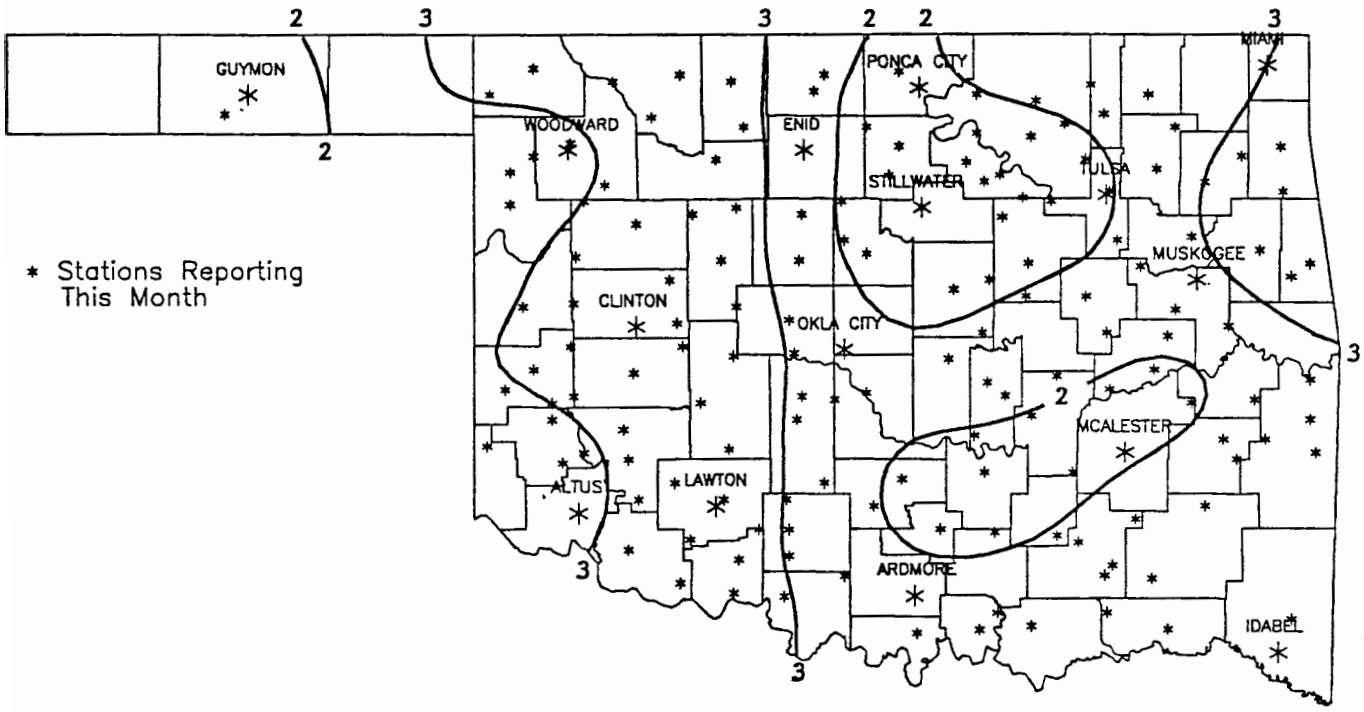
NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ADA	17	8	79.7	31	-2.0	97.	30	62.	16	.0	.0	456.5	-61.5	1.450	31	-1.64	.54	30
ALLEN	147	8	*****	0	*****	****	0	****	0	******	******	******	******	1.150	31	*****	1.15	3
ARDMORE	292	8	80.9	31	-3.1	96.	20	64.	15	.0	.0	494.0	-95.0	.820	31	-1.71	.42	21
ATOKA DAM	394	8	82.3	31	*****	100.	8	63.	15	.0	******	537.0	******	1.920	31	*****	.71	27
BOKCHITO	917	8	*****	0	*****	****	0	****	0	******	******	******	******	1.320	31	*****	1.32	30
CANEY	1437	8	81.4	31	*****	99.	1	63.	15	.0	******	508.0	******	3.050	31	*****	1.25	14
CENTRAHOMA	1648	8	*****	0	*****	****	0	****	0	******	******	******	******	.500	31	*****	.50	30
CHICKASAW NRA	1745	8	79.1	31	*****	98.	20	60.	19	.0	******	436.5	******	1.110	31	*****	.45	30
COLEMAN	2011	8	*****	0	*****	****	0	****	0	******	******	******	******	1.050	31	*****	.90	30
COMANCHE	2054	8	*****	0	*****	****	0	****	0	******	******	******	******	2.350	31	*****	2.35	31
DAISY 4 ENE	2354	8	*****	0	*****	****	0	****	0	******	******	******	******	3.881	31	.37	1.78	18
DUNCAN	2660	8	79.7	31	-3.3	96.	19	64.	16	.0	.0	454.5	-103.5	3.040	31	.69	2.36	30
DURANT USDA	2678	8	80.3	31	*****	98.	21	62.	19	.0	******	473.5	******	2.000	31	-.47	1.08	14
ELMORE CITY	2872	8	*****	0	*****	****	0	****	0	******	******	******	******	1.120	31	*****	.67	30
FARRIS 3 WNW	3083	8	*****	0	*****	****	0	****	0	******	******	******	******	1.890	31	*****	.79	27
GRADY	3688	8	*****	0	*****	****	0	****	0	******	******	******	******	4.820	30	*****	2.20	29
HENNEPIN	4052	8	*****	0	*****	****	0	****	0	******	******	******	******	1.850	31	*****	1.03	30
KETCHUM RANCH	4780	8	*****	0	*****	****	0	****	0	******	******	******	******	2.860	31	*****	2.30	30
KINGSTON	4865	8	*****	0	*****	****	0	****	0	******	******	******	******	2.210	31	-.28	1.47	30
LEHIGH	5108	8	*****	0	*****	****	0	****	0	******	******	******	******	2.012	31	*****	.90	31
LOCO 6 SE	5247	8	*****	0	*****	****	0	****	0	******	******	******	******	3.623	31	*****	2.04	30
MADILL	5468	8	80.0	31	-3.1	96.	19	63.	15	.0	.0	464.0	-97.0	5.752	31	3.32	3.65	13
MARIETTA	5563	8	81.5	31	-1.4	101.	8	63.	15	.0	.0	511.5	-43.5	2.550	31	-.03	1.39	30
MARLOW 1 WSW	5581	8	80.4	31	*****	98.	19	62.	26	.0	******	477.0	******	4.210	31	1.79	3.20	30
MCGEE CREEK DAM	5713	8	80.9	29	*****	100.	20	62.	15	.0	******	461.0	******	1.491	31	*****	.80	27
PAULS VALLEY	6926	8	80.2	31	-2.9	100.	19	60.	19	.0	.0	472.5	-88.5	1.052	31	-1.27	.45	30
PONTOTOC	7214	8	*****	0	*****	****	0	****	0	******	******	******	******	1.250	31	-1.46	.53	31
TISHOMINGO NWLR	8884	8	80.1	30	*****	100.	8	61.	19	.0	******	452.5	******	3.192	30	*****	2.26	14
TUSSY	9032	8	*****	0	*****	****	0	****	0	******	******	******	******	1.430	31	*****	.60	29
WAURIKA	9395	8	80.7	31	-3.1	98.	8	63.	24	.0	.0	487.5	-95.5	3.261	31	.71	1.50	30
WAURIKA DAM	9399	8	80.3	31	*****	97.	9	62.	15	.0	******	475.0	******	3.130	29	*****	1.96	30

AUGUST 1991 SUMMARY FOR SOUTHEAST DIVISION (CD9)

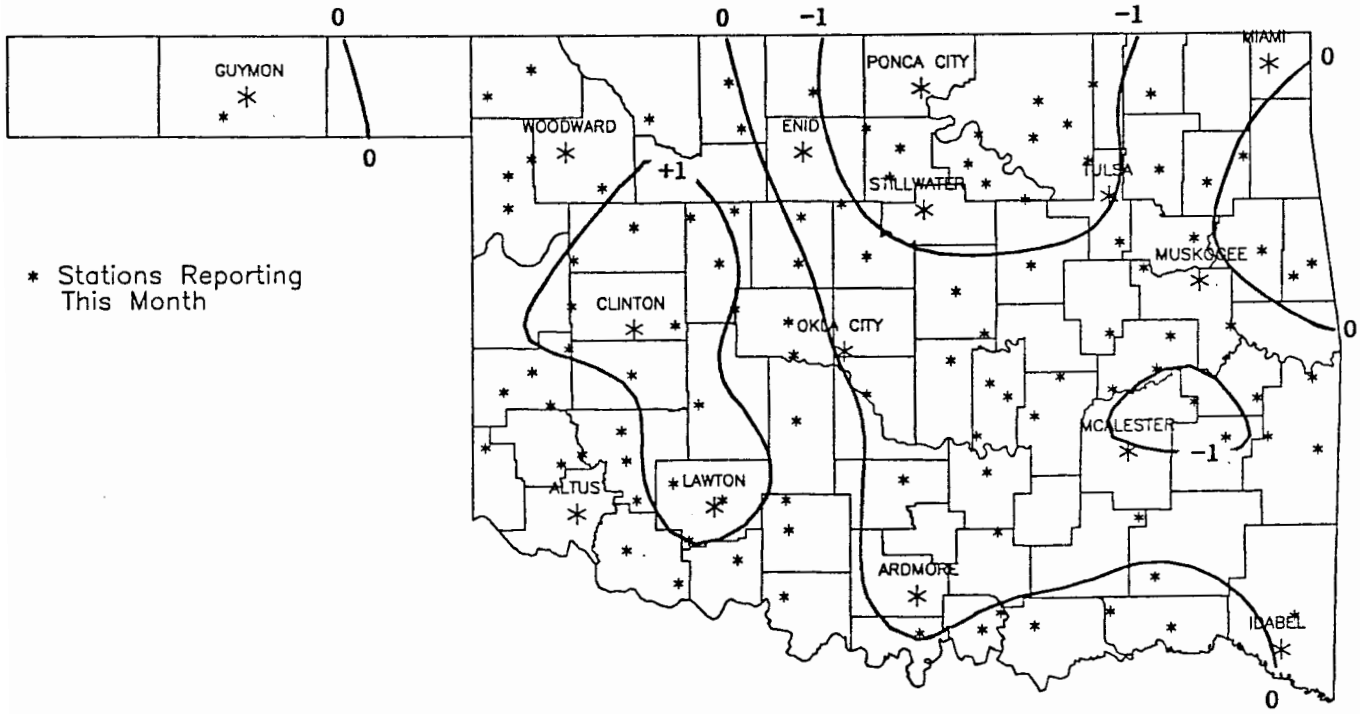
NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ANTLERS	256	9	79.7	31	-1.4	97.	7	61.	11	.0	.0	456.5	-42.5	4.180	31	.95	2.43	17
BATTIEST 1 SSW	567	9	76.7	31	*****	94.	8	60.	20	.0	******	364.0	******	4.310	31	*****	1.42	14
BEAR MT TWR	584	9	81.4	31	*****	99.	6	63.	15	.0	******	509.5	******	4.920	31	1.34	2.38	31
BENGAL	670	9	*****	0	*****	****	0	****	0	******	******	******	******	3.500	31	*****	1.85	18
BOSWELL 4 NNW	980	9	79.9	31	*****	97.	6	62.	15	.0	******	461.5	******	1.651	31	-1.03	.83	30
BROKEN BOW 1 N	1162	9	*****	0	*****	****	0	****	0	******	******	******	******	2.890	31	-.07	1.01	31
BROKEN BOW DAM	1168	9	79.7	31	*****	100.	7	62.	15	.0	******	457.0	******	3.360	31	*****	1.68	30
CARNASAW TWR	1499	9	*****	0	*****	****	0	****	0	******	******	******	******	4.130	31	1.03	2.15	30
CARTER TWR	1544	9	*****	0	*****	****	0	****	0	******	******	******	******	6.960	31	3.29	2.87	30
FANSHAWE	3065	9	*****	0	*****	****	0	****	0	******	******	******	******	2.360	31	-.71	.76	14
FLAGPOLE TWR	3169	9	*****	0	*****	****	0	****	0	******	******	******	******	2.220	31	*****	1.04	14
HEAVENER 1 SE	4008	9	*****	0	*****	****	0	****	0	******	******	******	******	1.980	31	-1.37	.70	28
HEE MT TWR	4017	9	*****	0	*****	****	0	****	0	******	******	******	******	3.740	31	*****	.98	30
HUGO	4384	9	79.8	31	-2.4	95.	9	64.	15	.0	.0	459.0	-74.0	4.121	31	.68	1.33	13
IDABEL	4451	9	79.6	31	-1.7	99.	9	60.	16	.0	.0	453.0	-52.0	2.686	30	*****	1.25	31
JADIE TOWER	4560	9	*****	0	*****	****	0	****	0	******	******	******	******	2.530	31	*****	1.37	14
POTEAU W W	7254	9	78.9	31	*****	103.	6	57.	19	.0	******	431.0	******	3.062	31	*****	.93	8
SMITHVILLE 1 W	8285	9	76.1	31	*****	95.	1	58.	16	.0	******	343.5	******	3.432	31	*****	1.60	14
SPIRO	8416	9	*****	0	*****	****	0	****	0	******	******	******	******	2.870	31	.27	.95	14
TUSKAHOMA	9023	9	79.3	31	*****	99.	4	60.	19	.0	******	443.0	******	1.541	31	*****	.53	14
VALLIANT 3 W	9118	9	*****	0	*****	****	0	****	0	******	******	******	******	3.170	31	.41	1.51	31
WILBURTON 9 ENE	9634	9	79.5	31	-1.4	101.	8	59.	15	.0	.0	449.0	-44.0	1.482	31	-1.85	.70	17

AUGUST 1991 CLIMATE DIVISION SUMMARY

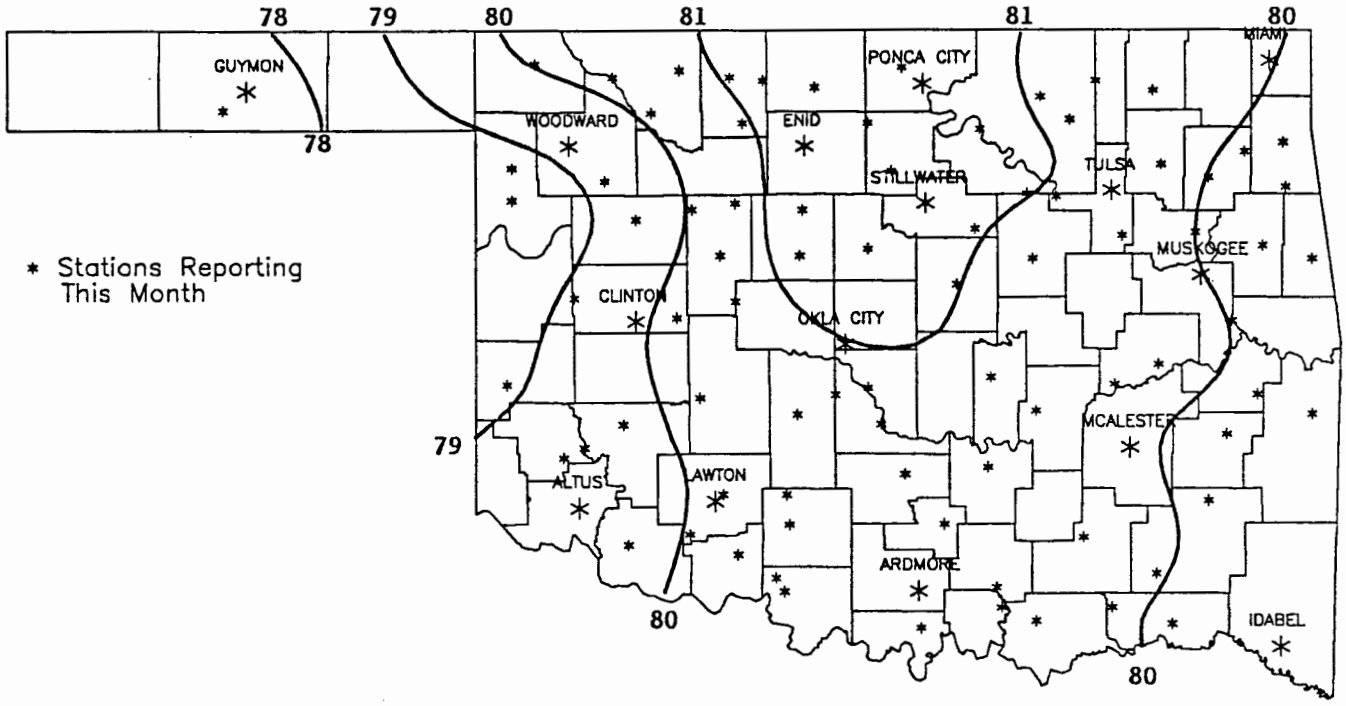
CLIMATE DIV	MEAN TEMP	NUM STA	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEGREE DAYS	DEV FROM NORM	COOL DEGREE DAYS	DEV FROM NORM	TOT PPT	NUM STA	DEV FROM NORM	MAX 24-HR	DAY
1	77.6	11	-.9	109.0	1	51.0	30	.9	.9	392.7	-28.2	2.76	12	.19	2.63	20
2	81.0	14	-.6	107.0	8	54.0	14	.1	.1	492.5	-20.6	2.43	22	-.50	3.36	31
3	80.4	18	-.1	106.0	8	51.0	20	.0	.0	474.9	-5.1	2.12	31	-1.03	1.96	30
4	79.7	9	-1.8	106.0	8	54.0	14	.2	.2	454.6	-57.6	3.61	21	1.25	3.55	30
5	81.1	14	-.6	106.0	8	57.0	14	.0	.0	496.9	-18.5	1.91	32	-.66	2.44	30
6	79.8	12	-1.2	104.0	7	55.0	20	.0	.0	459.6	-38.8	2.30	29	-.55	3.13	14
7	80.0	10	-2.8	104.0	8	59.0	15	.0	.0	461.1	-92.1	3.38	20	1.15	4.20	29
8	80.5	14	-2.6	101.0	8	60.0	19	.0	.0	478.6	-82.1	2.15	28	-.46	3.65	13
9	79.2	11	-2.2	103.0	6	57.0	19	.0	.0	438.8	-68.7	3.26	21	.15	2.87	30



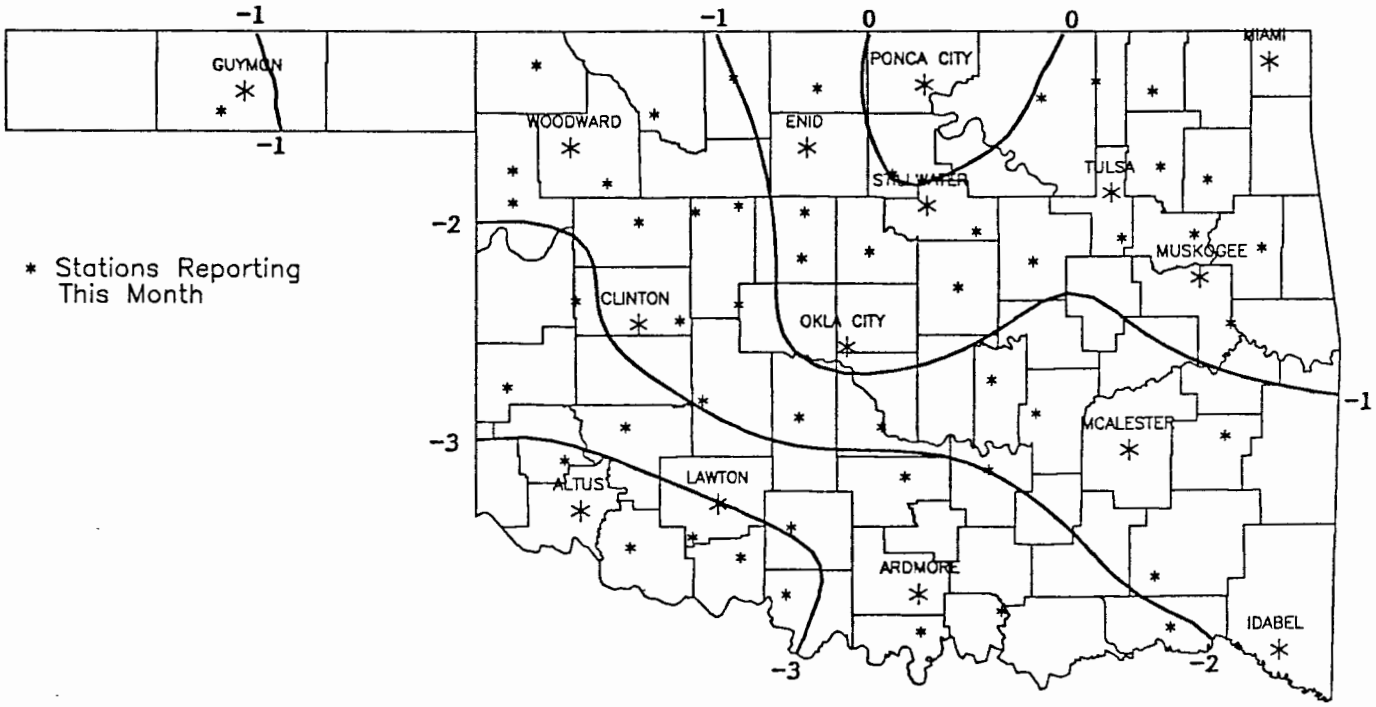
AUGUST 1991 TOTAL PRECIPITATION
(Inches)



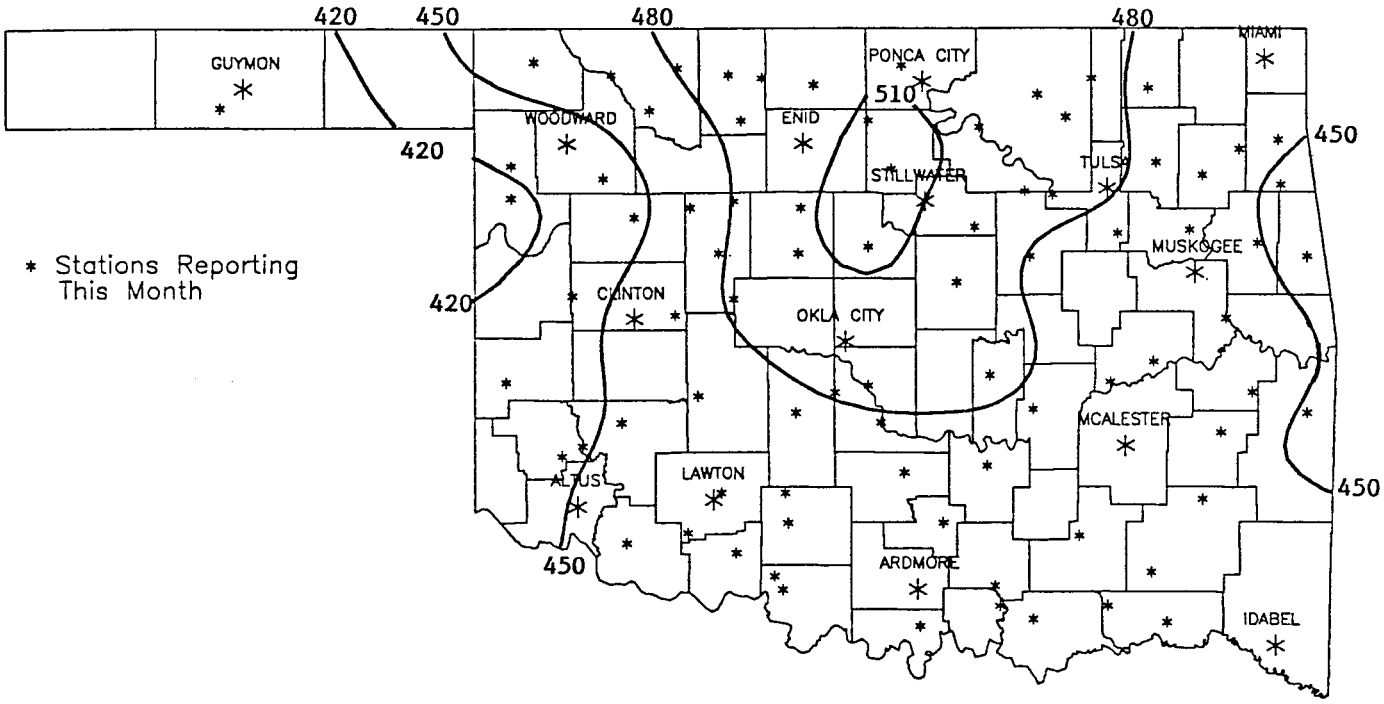
AUGUST 1991 DEVIATION FROM NORMAL PRECIPITATION
(Inches)



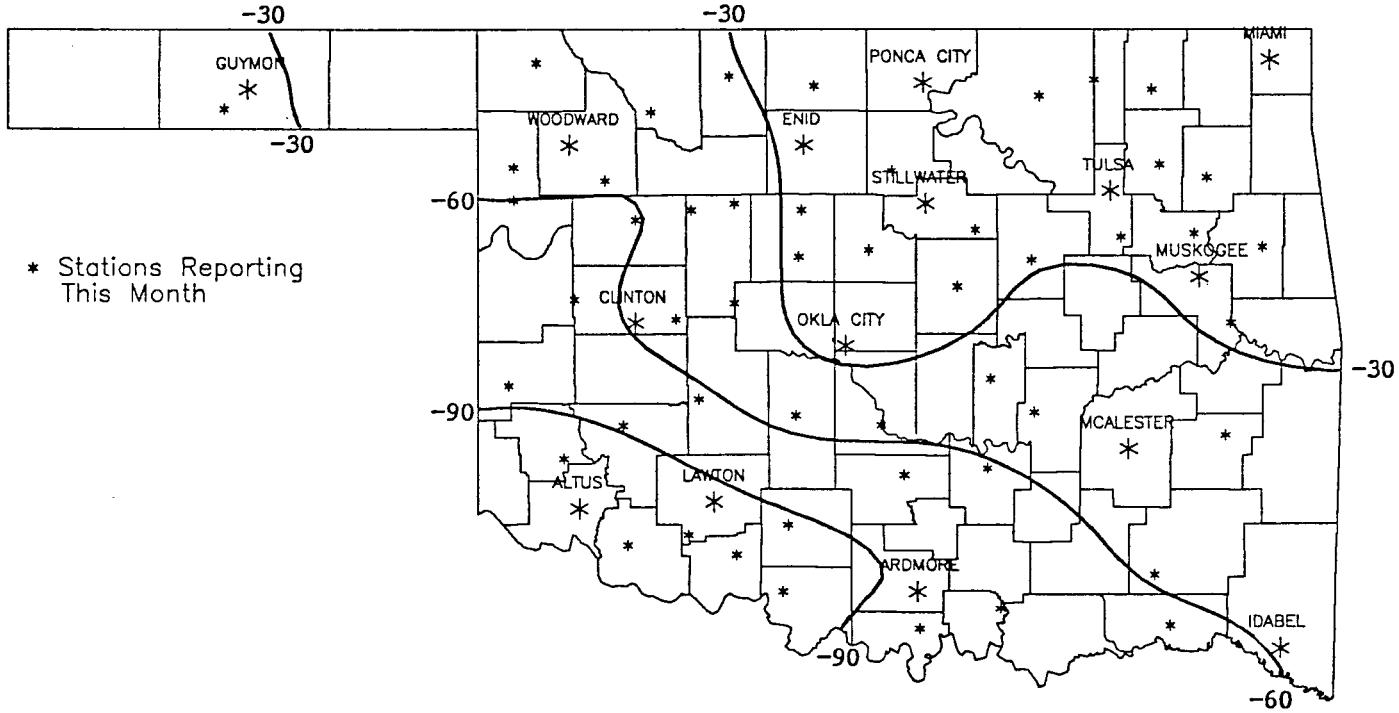
AUGUST 1991 AVERAGE MONTHLY TEMPERATURES
(Degrees F)



AUGUST 1991 DEVIATION FROM NORMAL TEMPERATURES
(Degrees F)

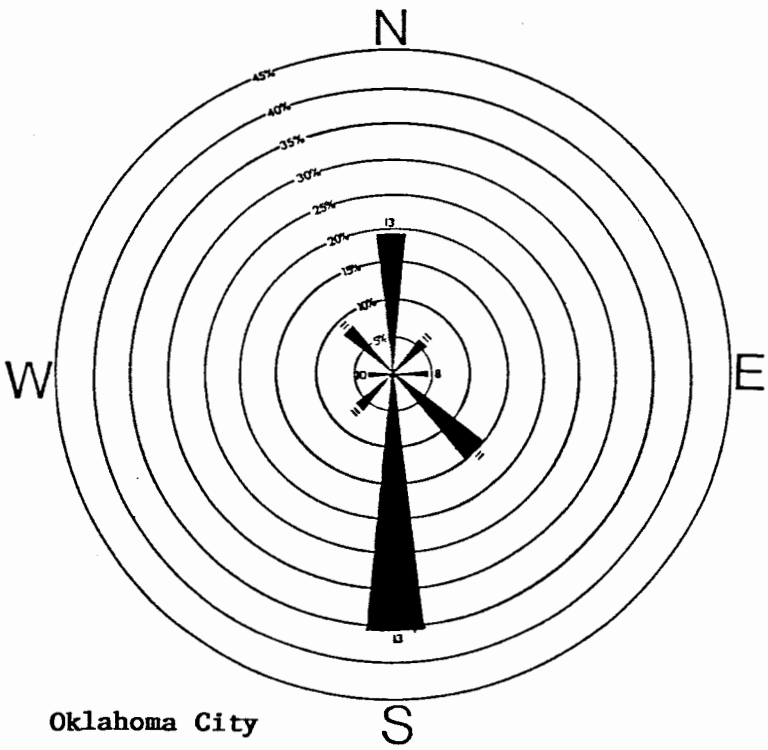


AUGUST 1991 COOLING DEGREE DAYS

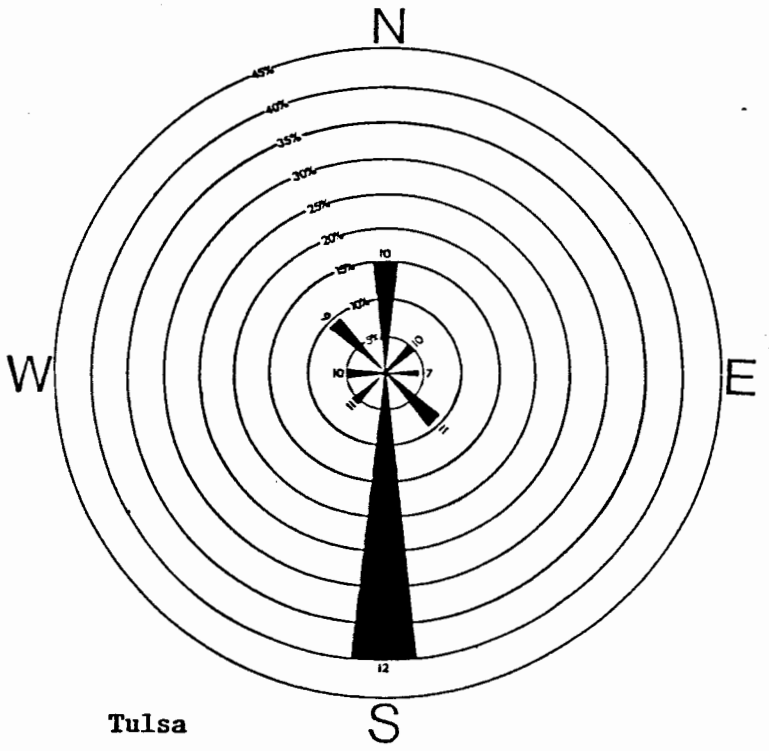


AUGUST 1991 DEVIATION FROM NORMAL COOLING DEGREE DAYS

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



Oklahoma City



Tulsa

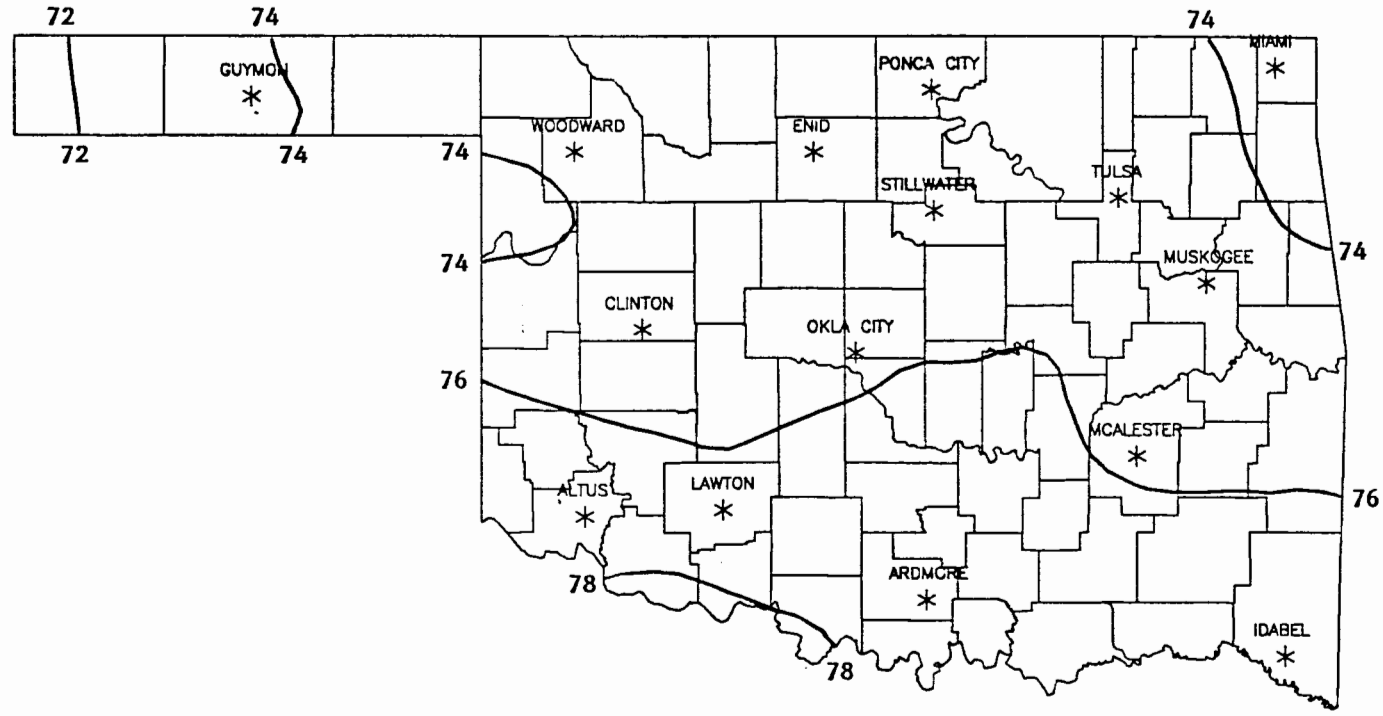
OCTOBER 1991 SUNRISE AND SUNSET

Oklahoma City

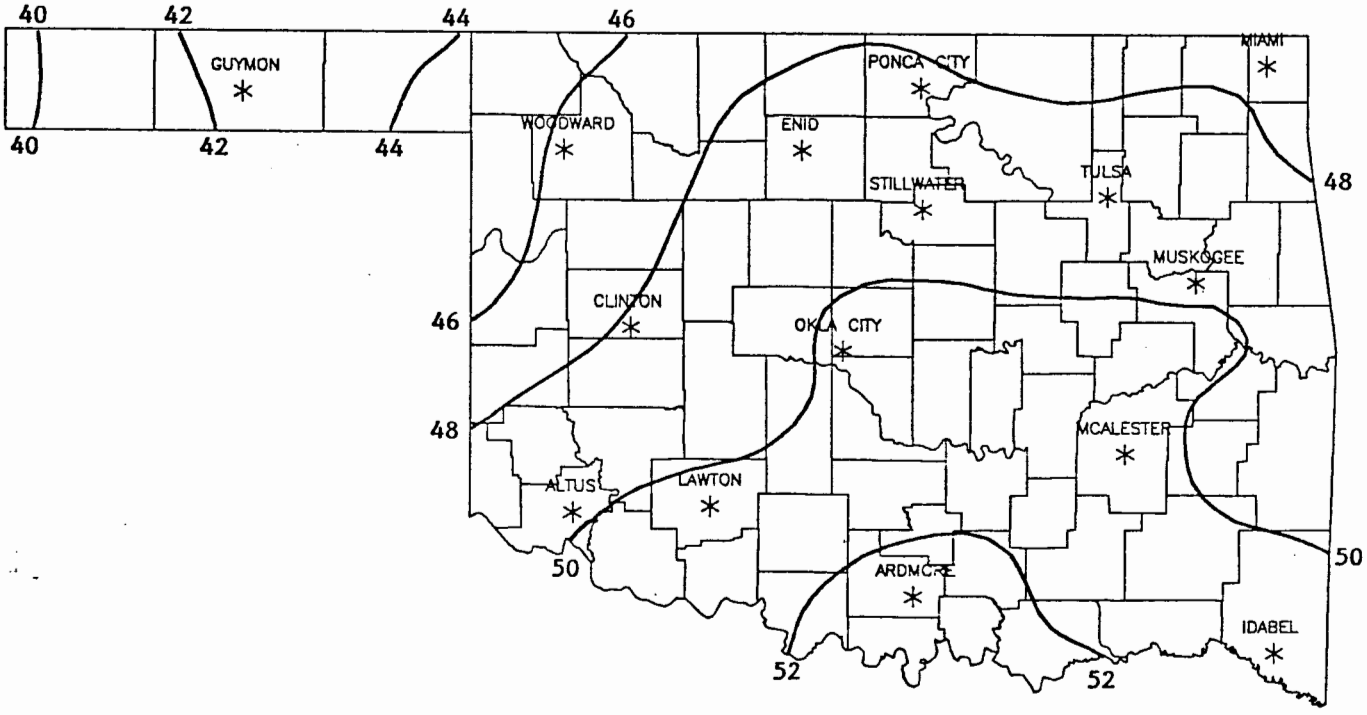
DATE	SUNRISE	SUNSET	DAYLIGHT
911001	7:24AM	7:16PM LT	11:52
911002	7:24AM	7:14PM LT	11:50
911003	7:25AM	7:13PM LT	11:48
911004	7:26AM	7:11PM LT	11:46
911005	7:27AM	7:10PM LT	11:43
911006	7:28AM	7: 9PM LT	11:41
911007	7:28AM	7: 7PM LT	11:39
911008	7:29AM	7: 6PM LT	11:37
911009	7:30AM	7: 5PM LT	11:35
911010	7:31AM	7: 3PM LT	11:32
911011	7:32AM	7: 2PM LT	11:30
911012	7:32AM	7: 1PM LT	11:28
911013	7:33AM	6:59PM LT	11:26
911014	7:34AM	6:58PM LT	11:24
911015	7:35AM	6:57PM LT	11:22
911016	7:36AM	6:55PM LT	11:19
911017	7:37AM	6:54PM LT	11:17
911018	7:38AM	6:53PM LT	11:15
911019	7:39AM	6:52PM LT	11:13
911020	7:39AM	6:50PM LT	11:11
911021	7:40AM	6:49PM LT	11: 9
911022	7:41AM	6:48PM LT	11: 7
911023	7:42AM	6:47PM LT	11: 5
911024	7:43AM	6:46PM LT	11: 3
911025	7:44AM	6:45PM LT	11: 1
911026	7:45AM	6:44PM LT	10:59
911027	7:46AM	6:43PM LT	10:57
911028	7:47AM	6:42PM LT	10:55
911029	7:48AM	6:40PM LT	10:53
911030	7:49AM	6:39PM LT	10:51
911031	7:50AM	6:38PM LT	10:49

Tulsa

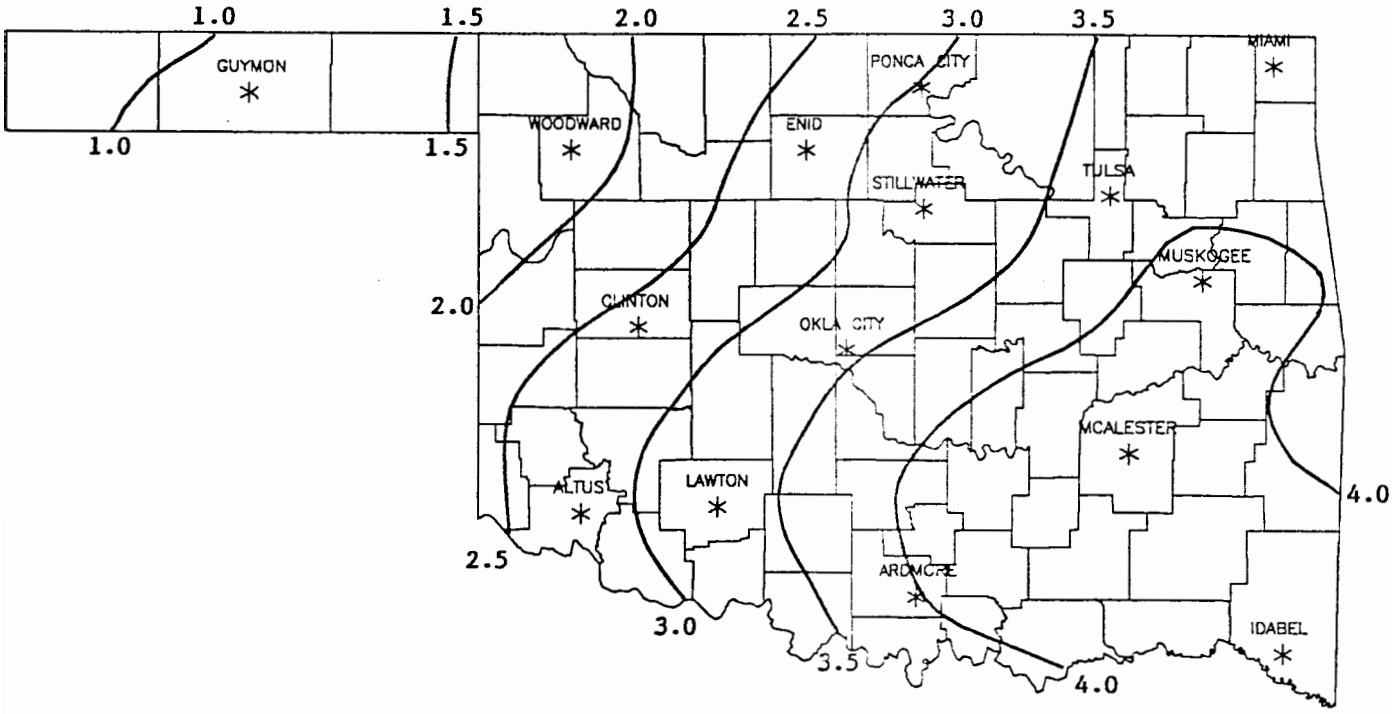
DATE	SUNRISE	SUNSET	DAYLIGHT
911001	7:17AM	7: 9PM LT	11:52
911002	7:18AM	7: 7PM LT	11:49
911003	7:19AM	7: 6PM LT	11:47
911004	7:19AM	7: 4PM LT	11:45
911005	7:20AM	7: 3PM LT	11:43
911006	7:21AM	7: 1PM LT	11:40
911007	7:22AM	7: 0PM LT	11:38
911008	7:23AM	6:59PM LT	11:36
911009	7:24AM	6:57PM LT	11:34
911010	7:24AM	6:56PM LT	11:31
911011	7:25AM	6:55PM LT	11:29
911012	7:26AM	6:53PM LT	11:27
911013	7:27AM	6:52PM LT	11:25
911014	7:28AM	6:51PM LT	11:23
911015	7:29AM	6:49PM LT	11:20
911016	7:30AM	6:48PM LT	11:18
911017	7:31AM	6:47PM LT	11:16
911018	7:32AM	6:45PM LT	11:14
911019	7:32AM	6:44PM LT	11:12
911020	7:33AM	6:43PM LT	11: 9
911021	7:34AM	6:42PM LT	11: 7
911022	7:35AM	6:40PM LT	11: 5
911023	7:36AM	6:39PM LT	11: 3
911024	7:37AM	6:38PM LT	11: 1
911025	7:38AM	6:37PM LT	10:59
911026	7:39AM	6:36PM LT	10:57
911027	7:40AM	6:35PM LT	10:55
911028	7:41AM	6:34PM LT	10:53
911029	7:42AM	6:33PM LT	10:51
911030	7:43AM	6:32PM LT	10:49
911031	7:44AM	6:31PM LT	10:47



30-YEAR MEAN OCTOBER DAILY MAXIMUM TEMPERATURE



30-YEAR MEAN OCTOBER DAILY MINIMUM TEMPERATURE



30-YEAR MEAN OCTOBER PRECIPITATION

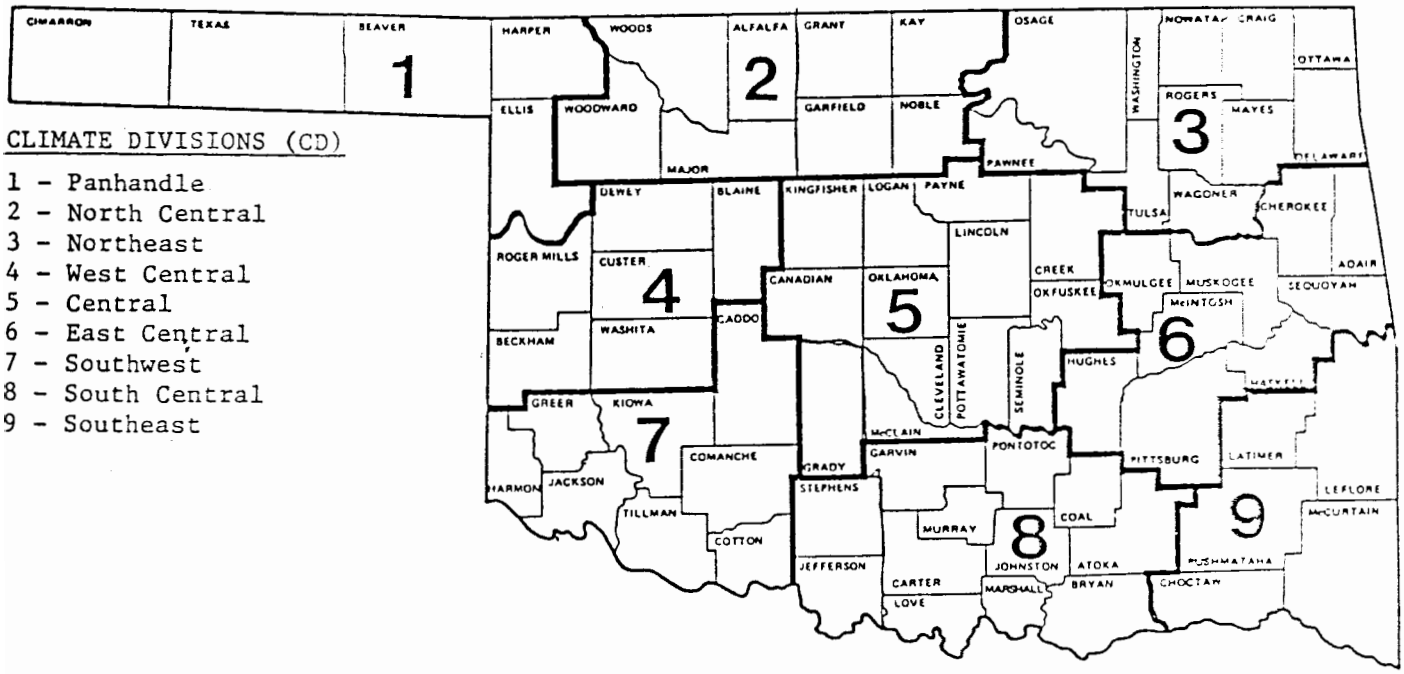
90-DAY NATIONAL WEATHER SERVICE OUTLOOK

(September-November 1991)

Precipitation - Near Normal Statewide

Temperature - Near Normal Statewide

O K L A H O M A



CLIMATE DIVISIONS (CD)

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

EXPLANATION OF TABLES

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

Station Name:

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

Climate Division: See the figure above.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

OKLAHOMA CITY CLIMATE CALENDAR

October 1991

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

Normal 1	Actual	Normal 2	Actual	Normal 3	Actual	Normal 4	Actual	Normal 5	Actual	Normal 6	Actual	Normal 7	Actual
80.0 max		81.0 max		79.0 max		78.0 max		77.0 max		75.0 max		76.0 max	
55.0 min		55.0 min		56.0 min		56.0 min		55.0 min		54.0 min		52.0 min	
.090 ppt		.270 ppt		.170 ppt		.110 ppt		.090 ppt		.050 ppt		.080 ppt	
2 hdd		2 hdd		2 hdd		2 hdd		2 hdd		3 hdd		3 hdd	
5 cdd		5 cdd		5 cdd		4 cdd		4 cdd		3 cdd		2 cdd	
Highest Max	97-1938	Highest Max	96-1938	Highest Max	96-1951	Highest Max	96-1931	Highest Max	95-1917	Highest Max	94-1931	Highest Max	91-1975
Lowest Max	61-1958	Lowest Max	61-1958	Lowest Max	56-1959	Lowest Max	58-1959	Lowest Max	53-1988	Lowest Max	58-1952	Lowest Max	58-1976
Lowest Min	38-1958	Lowest Min	41-1975	Lowest Min	40-1975	Lowest Min	43-1975	Lowest Min	38-1932	Lowest Min	40-1976	Lowest Min	42-1951
Highest Min	71-1926	Highest Min	72-1954	Highest Min	73-1954	Highest Min	71-1940	Highest Min	75-1881	Highest Min	72-1931	Highest Min	73-1933
Greatest Ppt	2.28-1959	Greatest Ppt	4.52-1955	Greatest Ppt	1.59-1955	Greatest Ppt	2.22-1955	Greatest Ppt	1.71-1970	Greatest Ppt	1.38-1983	Greatest Ppt	1.11-1967

Normal 8	Actual	Normal 9	Actual	Normal 10	Actual	Normal 11	Actual	Normal 12	Actual	Normal 13	Actual	Normal 14	Actual
76.0 max		78.0 max		77.0 max		76.0 max		77.0 max		77.0 max		76.0 max	
54.0 min		53.0 min		53.0 min		52.0 min		54.0 min		54.0 min		53.0 min	
.050 ppt		.080 ppt		.040 ppt		.110 ppt		.050 ppt		.070 ppt		.090 ppt	
3 hdd		3 hdd		3 hdd		4 hdd		4 hdd		3 hdd		3 hdd	
4 cdd		4 cdd		3 cdd		3 cdd		4 cdd		4 cdd		3 cdd	
Highest Max	94-1979	Highest Max	96-1965	Highest Max	95-1965	Highest Max	94-1979	Highest Max	94-1978	Highest Max	90-1939	Highest Max	93-1938
Lowest Max	50-1976	Lowest Max	54-1990	Lowest Max	49-1985	Lowest Max	51-1987	Lowest Max	47-1988	Lowest Max	52-1969	Lowest Max	55-1937
Lowest Min	35-1976	Lowest Min	38-1970	Lowest Min	35-1979	Lowest Min	36-1952	Lowest Min	34-1987	Lowest Min	37-1988	Lowest Min	32-1951
Highest Min	70-1928	Highest Min	70-1973	Highest Min	71-1973	Highest Min	69-1972	Highest Min	70-1926	Highest Min	71-1966	Highest Min	68-1928
Greatest Ppt	.88-1970	Greatest Ppt	2.09-1961	Greatest Ppt	.94-1985	Greatest Ppt	1.72-1938	Greatest Ppt	1.02-1981	Greatest Ppt	1.08-1957	Greatest Ppt	2.45-1951

Normal 15	Actual	Normal 16	Actual	Normal 17	Actual	Normal 18	Actual	Normal 19	Actual	Normal 20	Actual	Normal 21	Actual
74.0 max		75.0 max		74.0 max		73.0 max		72.0 max		72.0 max		72.0 max	
52.0 min		50.0 min		50.0 min		50.0 min		48.0 min		49.0 min		49.0 min	
.090 ppt		.070 ppt		.070 ppt		.160 ppt		.150 ppt		.240 ppt		.160 ppt	
4 hdd		4 hdd		5 hdd		5 hdd		6 hdd		6 hdd		5 hdd	
2 cdd		2 cdd		2 cdd		1 cdd		1 cdd		1 cdd		1 cdd	
Highest Max	92-1962	Highest Max	89-1972	Highest Max	96-1972	Highest Max	91-1952	Highest Max	90-1927	Highest Max	93-1979	Highest Max	90-1976
Lowest Max	55-1970	Lowest Max	57-1969	Lowest Max	53-1970	Lowest Max	50-1989	Lowest Max	50-1989	Lowest Max	49-1972	Lowest Max	46-1950
Lowest Min	38-1974	Lowest Min	31-1977	Lowest Min	33-1976	Lowest Min	34-1948	Lowest Min	29-1989	Lowest Min	26-1976	Lowest Min	32-1982
Highest Min	68-1928	Highest Min	67-1934	Highest Min	68-1934	Highest Min	67-1934	Highest Min	69-1941	Highest Min	72-1979	Highest Min	68-1941
Greatest Ppt	1.80-1953	Greatest Ppt	1.25-1981	Greatest Ppt	1.43-1942	Greatest Ppt	2.34-1960	Greatest Ppt	4.98-1983	Greatest Ppt	5.45-1983	Greatest Ppt	3.70-1972

Normal 22	Actual	Normal 23	Actual	Normal 24	Actual	Normal 25	Actual	Normal 26	Actual	Normal 27	Actual	Normal 28	Actual
71.0 max		69.0 max		69.0 max		68.0 max		70.0 max		69.0 max		67.0 max	
49.0 min		49.0 min		46.0 min		46.0 min		46.0 min		46.0 min		45.0 min	
.130 ppt		.070 ppt		.060 ppt		.060 ppt		.040 ppt		.090 ppt		.070 ppt	
5 hdd		6 hdd		8 hdd		8 hdd		7 hdd		8 hdd		9 hdd	
1 cdd		1 cdd		0 cdd		0 cdd		1 cdd		1 cdd		0 cdd	
Highest Max	85-1927	Highest Max	89-1927	Highest Max	89-1927	Highest Max	86-1927	Highest Max	88-1977	Highest Max	84-1950	Highest Max	87-1950
Lowest Max	42-1936	Lowest Max	48-1936	Lowest Max	48-1949	Lowest Max	43-1957	Lowest Max	42-1936	Lowest Max	46-1936	Lowest Max	47-1980
Lowest Min	35-1990	Lowest Min	36-1966	Lowest Min	33-1980	Lowest Min	29-1957	Lowest Min	26-1957	Lowest Min	22-1957	Lowest Min	31-1957
Highest Min	65-1941	Highest Min	67-1934	Highest Min	68-1939	Highest Min	68-1939	Highest Min	71-1939	Highest Min	66-1940	Highest Min	65-1961
Greatest Ppt	2.16-1953	Greatest Ppt	1.30-1949	Greatest Ppt	.72-1974	Greatest Ppt	1.40-1932	Greatest Ppt	.66-1973	Greatest Ppt	3.19-1984	Greatest Ppt	.99-1974

Normal 29	Actual	Normal 30	Actual	Normal 31	Actual
69.0 max		69.0 max		68.0 max	
47.0 min		46.0 min		47.0 min	
.050 ppt		.200 ppt		.130 ppt	
7 hdd		8 hdd		8 hdd	
1 cdd		1 cdd		1 cdd	
Highest Max	88-1950	Highest Max	86-1968	Highest Max	84-1950
Lowest Max	45-1928	Lowest Max	47-1967	Lowest Max	40-1941
Lowest Min	28-1980	Lowest Min	28-1980	Lowest Min	30-1949
Highest Min	67-1961	Highest Min	66-1977	Highest Min	64-1950
Greatest Ppt	1.61-1941	Greatest Ppt	2.84-1974	Greatest Ppt	.86-1987

OCTOBER AVERAGES

Temperature	:	62.2°F
Precipitation	:	3.19"
Heating Degree Days	:	148
Cooling Degree Days	:	70

TULSA CLIMATE CALENDAR

October 1991

The data on this calendar are for Tulsa. Normal values are calculated for the period 1948-1987. Temperature extremes are for the period 1905-1990; precipitation extremes are for the period 1948-1990.

Normal 1	Actual	Normal 2	Actual	Normal 3	Actual	Normal 4	Actual	Normal 5	Actual	Normal 6	Actual	Normal 7	Actual
81.0 max		81.0 max		80.0 max		80.0 max		78.0 max		77.0 max		77.0 max	
54.0 min		56.0 min		56.0 min		56.0 min		55.0 min		53.0 min		53.0 min	
.080 ppt		.180 ppt		.050 ppt		.120 ppt		.180 ppt		.120 ppt		.050 ppt	
2 hdd		2 hdd		2 hdd		2 hdd		2 hdd		3 hdd		3 hdd	
5 cdd		5 cdd		5 cdd		5 cdd		4 cdd		3 cdd		3 cdd	
Highest Max	97-1910	Highest Max	96-1978	Highest Max	95-1963	Highest Max	97-1931	Highest Max	95-1947	Highest Max	98-1939	Highest Max	98-1979
Lowest Max	62-1985	Lowest Max	65-1961	Lowest Max	63-1959	Lowest Max	64-1950	Lowest Max	50-1988	Lowest Max	57-1988	Lowest Max	52-1988
Lowest Min	38-1985	Lowest Min	39-1975	Lowest Min	39-1987	Lowest Min	39-1968	Lowest Min	37-1964	Lowest Min	35-1932	Lowest Min	33-1952
Highest Min	66-1971	Highest Min	73-1954	Highest Min	74-1983	Highest Min	70-1954	Highest Min	73-1981	Highest Min	68-1990	Highest Min	67-1970
Greatest Ppt	2.95-1986	Greatest Ppt	5.45-1959	Greatest Ppt	1.46-1990	Greatest Ppt	2.17-1955	Greatest Ppt	2.17-1970	Greatest Ppt	3.24-1951	Greatest Ppt	1.12-1962

Normal 8	Actual	Normal 9	Actual	Normal 10	Actual	Normal 11	Actual	Normal 12	Actual	Normal 13	Actual	Normal 14	Actual
77.0 max		78.0 max		77.0 max		78.0 max		76.0 max		77.0 max		77.0 max	
53.0 min		53.0 min		52.0 min		52.0 min		54.0 min		54.0 min		53.0 min	
.060 ppt		.030 ppt		.030 ppt		.170 ppt		.180 ppt		.090 ppt		.190 ppt	
3 hdd		3 hdd		4 hdd		4 hdd		3 hdd		3 hdd		3 hdd	
3 cdd		4 cdd		3 cdd		3 cdd		4 cdd		4 cdd		3 cdd	
Highest Max	97-1979	Highest Max	97-1963	Highest Max	95-1963	Highest Max	94-1979	Highest Max	94-1978	Highest Max	92-1963	Highest Max	92-1963
Lowest Max	56-1990	Lowest Max	53-1990	Lowest Max	58-1987	Lowest Max	50-1987	Lowest Max	49-1986	Lowest Max	54-1986	Lowest Max	59-1974
Lowest Min	32-1952	Lowest Min	32-1917	Lowest Min	30-1925	Lowest Min	30-1906	Lowest Min	32-1921	Lowest Min	32-1917	Lowest Min	34-1937
Highest Min	72-1979	Highest Min	70-1973	Highest Min	72-1973	Highest Min	69-1962	Highest Min	71-1962	Highest Min	71-1956	Highest Min	69-1968
Greatest Ppt	1.61-1970	Greatest Ppt	.91-1968	Greatest Ppt	.61-1949	Greatest Ppt	2.20-1973	Greatest Ppt	3.37-1969	Greatest Ppt	1.30-1981	Greatest Ppt	1.85-1984

Normal 15	Actual	Normal 16	Actual	Normal 17	Actual	Normal 18	Actual	Normal 19	Actual	Normal 20	Actual	Normal 21	Actual
75.0 max		74.0 max		75.0 max		74.0 max		73.0 max		74.0 max		74.0 max	
52.0 min		50.0 min		49.0 min		49.0 min		48.0 min		49.0 min		49.0 min	
.100 ppt		.060 ppt		.040 ppt		.140 ppt		.080 ppt		.300 ppt		.150 ppt	
4 hdd		5 hdd		5 hdd		5 hdd		6 hdd		5 hdd		5 hdd	
3 cdd		2 cdd		2 cdd		2 cdd		2 cdd		2 cdd		2 cdd	
Highest Max	91-1963	Highest Max	93-1917	Highest Max	90-1947	Highest Max	91-1932	Highest Max	89-1910	Highest Max	91-1979	Highest Max	92-1973
Lowest Max	60-1970	Lowest Max	58-1976	Lowest Max	52-1966	Lowest Max	51-1989	Lowest Max	50-1976	Lowest Max	53-1972	Lowest Max	53-1954
Lowest Min	38-1966	Lowest Min	32-1966	Lowest Min	30-1976	Lowest Min	29-1948	Lowest Min	27-1917	Lowest Min	30-1976	Lowest Min	30-1917
Highest Min	69-1968	Highest Min	69-1965	Highest Min	66-1988	Highest Min	66-1979	Highest Min	73-1979	Highest Min	76-1979	Highest Min	66-1963
Greatest Ppt	1.36-1967	Greatest Ppt	.68-1984	Greatest Ppt	.97-1983	Greatest Ppt	1.94-1960	Greatest Ppt	1.73-1983	Greatest Ppt	4.96-1971	Greatest Ppt	2.98-1974

Normal 22	Actual	Normal 23	Actual	Normal 24	Actual	Normal 25	Actual	Normal 26	Actual	Normal 27	Actual	Normal 28	Actual
73.0 max		70.0 max		69.0 max		69.0 max		71.0 max		70.0 max		69.0 max	
50.0 min		49.0 min		46.0 min		46.0 min		46.0 min		46.0 min		45.0 min	
.160 ppt		.090 ppt		.050 ppt		.110 ppt		.060 ppt		.110 ppt		.120 ppt	
5 hdd		6 hdd		8 hdd		8 hdd		7 hdd		8 hdd		8 hdd	
1 cdd		1 cdd		1 cdd		1 cdd		1 cdd		1 cdd		0 cdd	
Highest Max	88-1963	Highest Max	92-1939	Highest Max	88-1921	Highest Max	91-1939	Highest Max	90-1950	Highest Max	88-1922	Highest Max	86-1922
Lowest Max	57-1984	Lowest Max	50-1981	Lowest Max	50-1972	Lowest Max	48-1957	Lowest Max	46-1957	Lowest Max	51-1970	Lowest Max	43-1980
Lowest Min	31-1911	Lowest Min	26-1937	Lowest Min	24-1917	Lowest Min	31-1925	Lowest Min	27-1957	Lowest Min	27-1957	Lowest Min	23-1925
Highest Min	63-1953	Highest Min	67-1985	Highest Min	65-1963	Highest Min	65-1963	Highest Min	59-1974	Highest Min	64-1984	Highest Min	61-1950
Greatest Ppt	1.20-1953	Greatest Ppt	1.24-1970	Greatest Ppt	.63-1984	Greatest Ppt	1.43-1954	Greatest Ppt	.73-1970	Greatest Ppt	1.35-1973	Greatest Ppt	2.45-1974

Normal 29	Actual	Normal 30	Actual	Normal 31	Actual
69.0 max		70.0 max		69.0 max	
46.0 min		48.0 min		49.0 min	
.140 ppt		.190 ppt		.180 ppt	
8 hdd		7 hdd		7 hdd	
1 cdd		1 cdd		1 cdd	
Highest Max	90-1950	Highest Max	90-1937	Highest Max	87-1950
Lowest Max	46-1976	Lowest Max	46-1967	Lowest Max	48-1951
Lowest Min	23-1913	Lowest Min	15-1917	Lowest Min	21-1925
Highest Min	66-1961	Highest Min	64-1977	Highest Min	68-1982
Greatest Ppt	1.28-1967	Greatest Ppt	1.73-1974	Greatest Ppt	3.12-1981

OCTOBER AVERAGES

Temperature	:	62.6°F
Precipitation	:	3.59"
Heating Degree Days	:	146
Cooling Degree Days	:	78