OKLAHOMA
MONTHLY SUMMARY
OCTOBER 1991

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OCTOBER 1991 OKLAHOMA SUMMARY

October 1991 was characterized by extremes of precipitation, ranging from drought conditions early in the month to record rainfalls and flash flooding late in the month. Buoyed by record rainfalls, southeast Oklahoma reported more than three times its normal rainfall for the month. Rainfall was not as abundant in the northwest and north central regions, where rainfall continued below normal as has been the case virtually every month this year. Overall, the state-averaged total of 4.55 inches was 1.79 inches above normal, placing the month as the 19th wettest October on record. A cold wave at the end of the month counteracted the effects of a warm start, bringing monthly averaged temperatures to near-normal. Preliminary data show an average temperature of 63.1 degrees. The year-to-date stands as the 21st warmest, 0.9 degrees above normal, and the 33rd wettest with a total of 31.56 inches of precipitation.

Warm, dry conditions prevailed for most of the month. October began with maximum temperatures in the 80's and 90's statewide. A strong cold front swept across Oklahoma on the 4th, dropping temperatures briefly into the 60's and bringing frost to parts of northern Oklahoma. A series of weak fronts held temperatures across northern Oklahoma to the 60's and 70's for the next week, although heat remained entrenched along the Red River where maximum temperatures climbed back into the 90's.

Another strong front swept through the state on the 18th. Southerly winds in advance of the front, pushed temperatures as high as 98 degrees at Buffalo on the 17th and 97 at Freedom on the 18th. The air behind the front was sharply colder. Buffalo reported a low of 29 degrees on the 19th and the maximum temperature reached only 55 degrees at Freedom on the 20th.

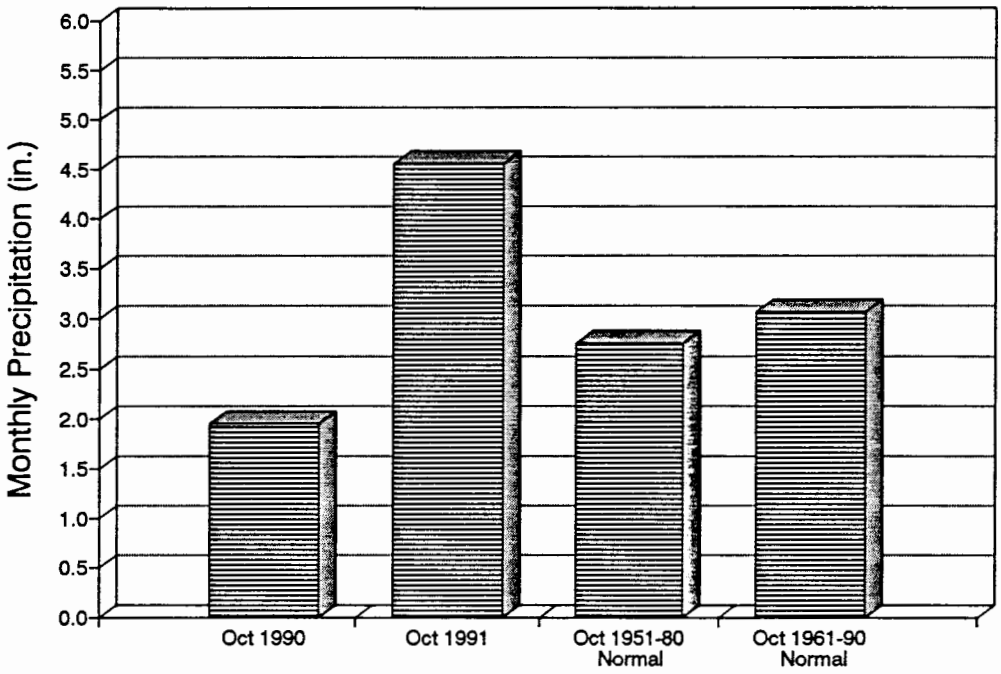
The cold air moved quickly eastward, allowing southerly winds to bring warm temperatures to the state once again. Every reporting station showed maximum temperatures above 80 degrees on the 23rd, and Buffalo climbed to 99 degrees. None of these fronts had brought significant precipitation, leading to consideration of a burning ban due to the warm, windy conditions.

But even as Oklahoma was enjoying the warmth of Indian Summer, a Canadian cold air mass was beginning to move southward. The first of two fronts swept through the state on the 25th, dropping temperatures to more seasonable levels, with 50's and 60's and lows in the 30's. The front brought heavy rainfall, flash flooding and several tornadoes to east and southeast Oklahoma. Daily rainfall reports in excess of five inches were widespread. Antlers reported an all-time daily record of 8.58 inches on the 25th, as was also the case with the 8.38 inches which fell at Tuskahoma. Boswell set a record for October with 7.90 inches on the 25th. The rains continued for several days, bringing monthly totals at several stations to record levels.

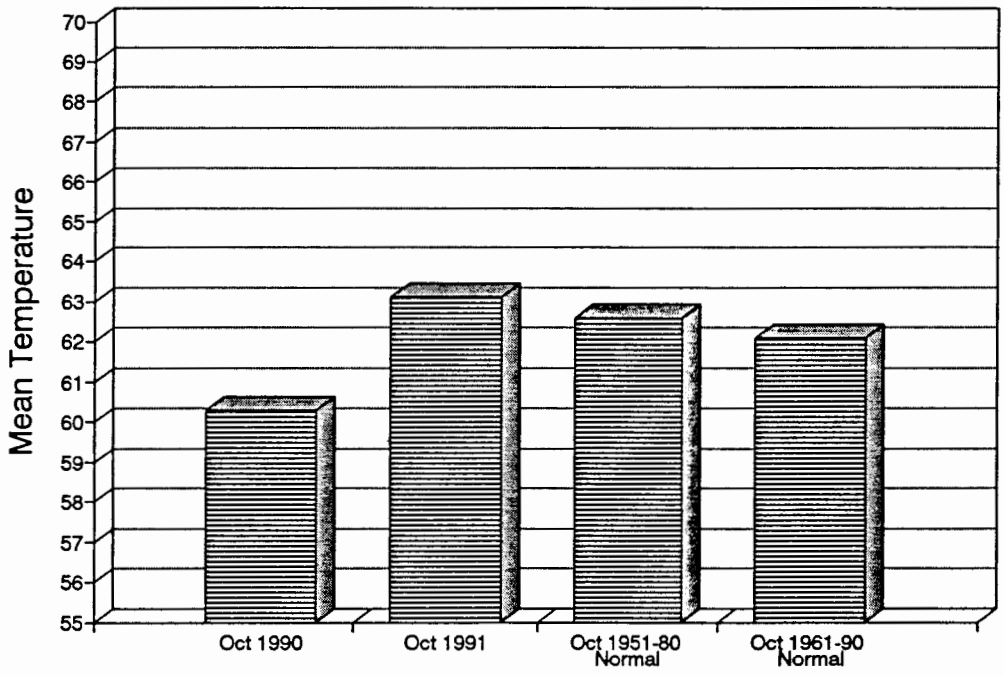
Another wave of storms hit the state on the 28th, in advance of an even stronger cold front. The cold air mass sent an early chill throughout the entire state, with temperatures falling below freezing across most of the state. Guymon reported a minimum temperature of 16 degrees on the 31st, and the maximum temperature at Gage was held to 25 degrees that afternoon. The warmest reading in the state was 54 degrees at Hugo. The National Weather Service issued a winter storm warning for 14 counties across northwest Oklahoma on the 30th, as freezing rain and sleet covered much of the state in ice, with two inches of sleet being reported in Dewey County. The Panhandle was also covered by as much as five inches of snow on top of the ice. At the end of the month, the freezing rain and snow were still falling, causing headaches for many young trick-or-treaters.

Mark A. Shafer

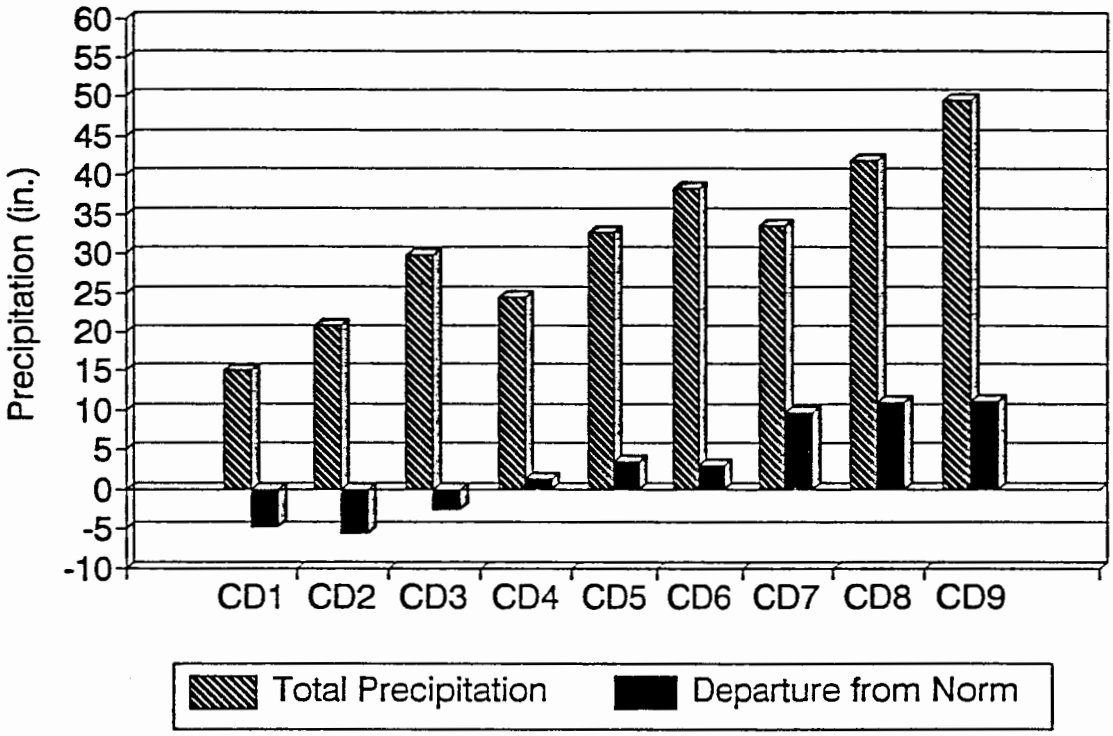
Comparison of Monthly Precipitation
Statewide Average for Oklahoma



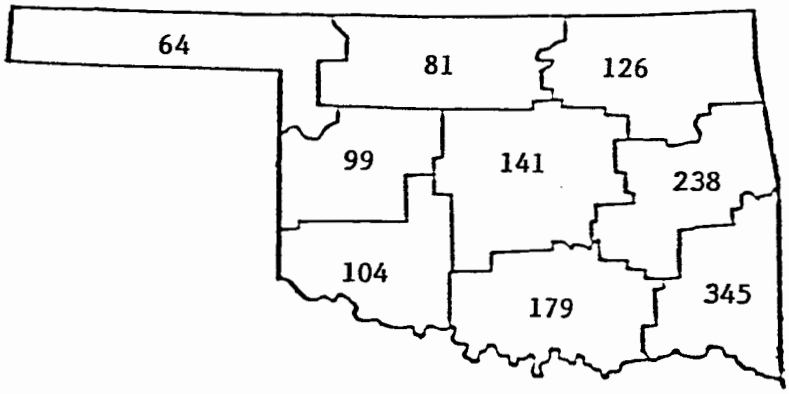
Comparison of Monthly Temperature
Statewide Average for Oklahoma



CD Averaged Precipitation
Jan-Oct 1991



OCTOBER 1991 PERCENT OF NORMAL PRECIPITATION.



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

CD	MAX TEMP	DATE	LOCATION	MIN TEMP	DATE	LOCATION	MONTHLY PRECIP	LOCATION	24-HOUR PRECIP	DATE	LOCATION
1	99	23	BUFFALO	16	31	GUYMON	1.41	ARNETT	1.09	28	LAVERNE
2	97 97	18 17	FT SUPPLY FREEDOM	21	31	FT SUPPLY	3.75	MORRISON	1.57	26	VANCE AFB
3	93 93	11 11	RALSTON TULSA	32 32	30 30	MANNFORD PAWHUSKA	6.42	BIXBY	3.03	26	MANNFORD
4	94	12	WEATHERFORD	23 23	31 31	ELK CITY HAMMON	3.11	ERICK	2.06	28	SAYRE
5	96	11	NORMAN	27 27 27	31 31 31	HENNESSEY KINGFISHER OKLAHOMA CTY	6.93	WEWOKA	3.50	25	OILTON
6	92 92	11 11	MCALESTER MCCURTAIN	35	31	HOLDENVILLE	11.44	BOYNTON	5.60	25	MARBLE CITY
7	95 95 95 95 95	17 11 11 11 17	ALTUS CARNEGIE CHATTANOOGA HOLLIS MANGUM	23	31	HOLLIS	3.91	FORT SILL	2.81	28	CHATTANOOGA
8	95	11	MARLOW	27	31	ADA	11.46	BOKCHITO	5.00	25	DAISY
9	95	11	BOSWELL	32	31	POTEAU	16.96	TUSKAHOMA	8.58	25	ANTLERS

TABLE OF 1990/1991 COMPARISONS

Station	October Temperature (F) 1990	1991	October Precipitation (in.) 1990	1991
Arnett	56.0	58.7	.86	1.41
Enid	60.8	63.1	1.65	.57
Mutual	57.8	59.6	.77	1.66
Tulsa	61.8	65.2	2.15	4.54
Elk City	60.4	61.2	1.08	2.11
Oklahoma City	61.3	62.6	1.27	3.98
McAlester	61.9	65.2	3.42	10.05
Altus Irr Sta	62.7	62.6	.87	2.73
Durant	61.7	65.6	3.01	9.03
Ada	60.6	63.4	1.49	4.69
Antlers	62.4	64.6	8.45	15.53

EXTREMES

Variable	Station	Division	Observation	Date
Minimum temperature (F)	Boise City	1	12	31
Maximum temperature (F)	Buffalo	1	99	23
	Gate	1	99	4
Maximum 24-hour precipitation	Antlers	9	8.58"	25

OCTOBER 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	58.7	31	-1.1	92.	18	20.	31	248.5	41.5	53.5	7.5	1.412	31	-.40	.95	28
BEAVER	593	1	58.8	31	-.4	97.	4	17.	31	256.5	37.5	63.0	23.0	.850	31	-.37	.81	28
BOISE CITY 2 E	908	1	57.0	31	-.4	91.	16	12.	31	267.5	18.5	18.0	4.0	1.510	31	.68	.86	27
BUFFALO	1243	1	62.0	31	-.1	99.	23	22.	31	212.0	57.0	120.5	55.5	.550	31	-1.40	.55	28
FARGO	3070	1	*****	0	*****	****	0	****	0	******	******	******	******	1.180	31	-.49	.72	28
GAGE FAA APT	3407	1	60.5	31	.8	97.	17	23.	31	235.5	33.5	95.5	57.5	.954	31	-.64	.69	28
GATE	3489	1	60.6	31	*****	99.	4	19.	31	231.0	******	96.0	******	1.730	31	*****	1.15	27
GOODWELL RES ST	3628	1	57.8	31	-.6	94.	18	15.	31	272.0	41.0	48.0	21.0	.591	30	*****	.59	28
GUYMON	3835	1	60.0	29	*****	95.	16	16.	31	221.5	******	76.0	******	.370	30	*****	.31	31
HOOKER	4298	1	57.7	31	-1.1	95.	17	16.	31	272.0	46.0	47.0	13.0	1.010	31	-.10	.52	31
LAVERNE	5045	1	*****	0	*****	****	0	****	0	******	******	******	******	1.402	31	-.11	1.09	28
OPTIMA LAKE	6740	1	58.9	31	*****	96.	4	16.	31	243.0	******	53.0	******	1.130	31	*****	.65	28
REGNIER	7534	1	*****	0	*****	****	0	****	0	******	******	******	******	.470	31	-.29	.40	31
TURPIN 4 SSE	9017	1	57.5	31	*****	95.	4	16.	31	273.0	******	41.5	******	1.020	31	*****	.60	28

OCTOBER 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	62.5	31	*****	95.	3	23.	30	185.5	******	108.0	******	1.820	31	*****	1.12	31
VANCE AFB	302	2	*****	0	*****	****	0	****	0	******	******	******	******	1.852	30	*****	1.57	26
BILLINGS	755	2	62.3	31	*****	92.	4	31.	31	162.5	******	79.5	******	2.200	31	-.27	1.10	28
BLACKWELL 2E	818	2	63.2	31	*****	93.	3	32.	29	152.0	******	97.0	******	1.440	31	*****	.76	28
BRAMAN	1075	2	*****	0	*****	****	0	****	0	******	******	******	******	1.220	31	*****	.74	28
CEDARDALE	1620	2	*****	0	*****	****	0	****	0	******	******	******	******	1.620	31	*****	.90	31
CHEROKEE	1724	2	63.8	31	1.6	93.	4	25.	31	158.0	7.0	121.0	57.0	.560	30	*****	.56	28
ENID	2912	2	63.1	31	.2	90.	3	26.	31	165.0	31.0	105.5	36.5	.570	31	-2.24	.29	31
FT SUPPLY DAM	3304	2	59.8	31	-1.5	97.	18	21.	31	233.5	69.5	73.5	24.5	1.131	31	-.30	.70	28
FREEDOM	3358	2	61.0	31	*****	97.	17	24.	31	213.0	******	89.0	******	1.840	31	*****	.94	31
GREAT SALT PLNS	3740	2	62.0	31	*****	95.	4	25.	30	204.5	******	110.5	******	1.840	31	-.19	1.25	31
HARDY	3909	2	*****	0	*****	****	0	****	0	******	******	******	******	2.200	31	*****	1.40	31
HELENA 1 SSE	4019	2	61.0	31	*****	93.	4	25.	31	203.0	******	79.0	******	2.040	31	-.08	1.43	31
JEFFERSON	4573	2	62.5	31	.1	94.	3	23.	30	170.0	26.0	93.0	30.0	1.760	31	-.79	.75	27
LAMONT	5013	2	*****	0	*****	****	0	****	0	******	******	******	******	2.110	31	*****	.75	28
MEDFORD	5768	2	*****	0	*****	****	0	****	0	******	******	******	******	1.600	31	*****	.69	27
MORRISON	6065	2	*****	0	*****	****	0	****	0	******	******	******	******	3.750	31	*****	1.48	28
MUTUAL	6139	2	59.6	31	-1.3	92.	3	22.	31	227.5	52.5	61.0	13.0	1.660	31	.14	.91	28
NEWKIRK	6278	2	63.0	31	1.1	91.	12	29.	31	167.0	10.0	104.0	43.0	1.652	31	-1.12	1.05	28
ORIENTA	6751	2	*****	0	*****	****	0	****	0	******	******	******	******	.600	31	*****	.60	28
PERRY	7012	2	65.4	30	1.9	92.	11	30.	31	119.0	-6.0	131.5	52.5	3.280	31	.65	1.52	28
PONCA CITY FAA	7201	2	64.2	30	3.3	92.	11	34.	31	148.5	-30.5	125.0	74.0	2.173	31	-.43	1.34	28
RED ROCK 1 NNE	7505	2	*****	0	*****	****	0	****	0	******	******	******	******	2.600	31	.13	1.43	28
WAYNOKA	9404	2	61.4	31	-.8	94.	2	23.	31	202.0	44.0	90.5	19.5	1.710	31	.00	.97	31
WOODWARD	9760	2	*****	0	*****	****	0	****	0	******	******	******	******	1.460	31	*****	.82	28

OCTOBER 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	62.3	31	*****	91.	11	33.	31	158.5	******	74.5	******	4.041	31	.97	2.62	28
BARTLESVILLE 2W	548	3	62.8	31	1.2	92.	11	33.	30	149.5	-10.5	81.5	27.5	3.610	31	.40	2.42	28
BIXBY	782	3	61.9	31	.2	91.	12	36.	31	157.0	-15.0	61.0	-9.0	6.420	31	3.26	2.78	26
BURBANK	1256	3	*****	0	*****	****	0	****	0	******	******	******	******	2.610	31	*****	1.00	28
CHELSEA 4 S	1717	3	*****	0	*****	****	0	****	0	******	******	******	******	4.550	31	*****	1.32	28
CLAREMORE	1828	3	61.9	31	.5	91.	12	36.	31	154.5	-25.5	57.0	-11.0	3.890	31	.47	1.74	26
CLEVELAND 5 WSW	1902	3	66.4	28	*****	91.	11	34.	29	72.0	******	110.5	******	3.660	31	*****	1.91	26
FORAKER	3250	3	*****	0	*****	****	0	****	0	******	******	******	******	2.270	31	-.83	1.10	28
HOLLOW	4258	3	*****	0	*****	****	0	****	0	******	******	******	******	2.881	28	*****	2.15	29
HOMINY	4289	3	*****	0	*****	****	0	****	0	******	******	******	******	4.661	31	1.71	2.22	26
JAY TOWER	4567	3	61.0	28	*****	86.	4	34.	31	152.5	******	41.5	******	3.290	31	*****	1.50	26
KANSAS 1 ESE	4672	3	62.2	28	*****	85.	11	35.	31	120.0	******	41.5	******	6.193	31	*****	2.60	25
KEYSTONE DAM	4812	3	62.6	31	*****	88.	12	30.	30	137.5	******	63.5	******	6.291	31	*****	2.68	26
LENAPAH	5118	3	*****	0	*****	****	0	****	0	******	******	******	******	2.590	31	*****	1.23	28
MANNFORD 6 NW	5522	3	64.2	31	*****	91.	11	32.	30	127.5	******	103.0	******	6.000	31	3.36	3.03	26
MARAMEC	5540	3	*****	0	*****	****	0	****	0	******	******	******	******	3.580	31	.42	2.07	26
MIAMI	5855	3	60.5	31	-.9	86.	12	33.	31	182.0	8.0	44.0	-19.0	3.850	31	.11	1.62	24
NOWATA	6485	3	63.8	30	2.0	94.	12	35.	31	119.0	-38.0	82.0	24.0	3.720	31	.42	1.41	28
ONETA 1 WNW	6713	3	*****	0	*****	****	0	****	0	******	******	******	******	6.030	31	*****	2.25	25
PAWHUSKA	6935	3	62.9	31	1.4	92.	11	32.	30	154.0	-7.0	89.5	36.5	3.080	31	.15	1.44	28
PAWNEE	6940	3	*****	0	*****	****	0	****	0	******	******	******	******	3.220	31	.50	1.86	26
PRYOR 6 N	7309	3	60.1	31	-1.3	87.	4	35.	31	193.5	26.5	40.5	-14.5	3.824	31	.05	2.00	28
RALSTON	7390	3	64.4	31	*****	93.	11	33.	30	137.0	******	119.0	******	2.441	31	-.25	1.15	26
RAMONA 4 N	7394	3	*****	0	*****	****	0	****	0	******	******	******	******	3.500	31	*****	1.90	28
SKIATOOK	8258	3	*****	0	*****	****	0	****	0	******	******	******	******	5.600	31	2.41	2.40	28
SPAVINAW	8380	3	64.4	31	*****	91.	24	35.	31	121.0	******	103.0	******	3.001	31	-.65	1.20	26
TULSA WSO APT	8992	3	65.2	31	2.6	93.	11	36.	31	120.0	-26.0	126.0	54.0	4.542	31	1.13	2.48	26
UPPER SPAVINAW	9101	3	62.2	31	*****	86.	12	34.	30	153.0	******	67.5	******	3.533	31	*****	1.60	26
VINITA 2 N	9203	3	62.1	31	.9	88.	11	34.	6	157.0	-19.0	66.0	8.0	3.320	31	-.40	1.15	28
WAGONER	9247	3	63.6	31	.5	87.	3	36.	31	125.0	-16.0	81.5	-.5	5.510	31	2.41	1.97	26
WANN	9298	3	*****	0	*****	****	0	****	0	******	******	******	******	2.720	31	*****	1.50	28
WYNONA	9792	3	*****	0	*****	****	0	****	0	******	******	******	******	3.373	31	*****	1.77	28

OCTOBER 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	61.6	29	*****	89.	4	25.	31	173.5	******	75.0	******	1.910	31	-.17	1.22	31
CHEYENNE	1738	4	*****	0	*****	****	0	****	0	******	******	******	******	.730	31	*****	.73	28
CLINTON	1909	4	63.3	31	1.1	93.	17	25.	30	148.5	3.5	96.5	38.5	2.050	31	-.65	1.05	31
COLONY	2039	4	*****	0	*****	****	0	****	0	******	******	******	******	2.240	31	*****	.92	31
CORDELL	2125	4	*****	0	*****	****	0	****	0	******	******	******	******	2.260	31	-.32	1.17	31
ELK CITY 1 E	2849	4	61.2	28	*****	93.	11	23.	31	175.0	******	67.5	******	2.110	29	*****	1.39	28
ERICK 4 E	2944	4	60.8	31	-1.0	93.	11	24.	31	188.0	43.0	59.0	14.0	3.110	31	.91	1.50	28
GEARY	3497	4	61.5	30	-1.1	91.	11	26.	31	172.5	32.5	66.0	.0	2.260	30	*****	.97	26
HAMMON 1 NNE	3871	4	60.6	31	-.7	92.	18	23.	31	202.0	32.0	65.5	9.5	1.950	31	.05	1.10	27
LEEDEY	5090	4	*****	0	*****	****	0	****	0	******	******	******	******	.400	31	-1.36	.40	31
MACKIE 4 NNW	5463	4	*****	0	*****	****	0	****	0	******	******	******	******	1.680	31	*****	.94	27
MORAVIA 2 NNE	6035	4	*****	0	*****	****	0	****	0	******	******	******	******	2.030	31	-.39	1.10	28
OKEENE	6629	4	63.0	31	-.4	90.	11	25.	31	165.5	43.5	102.0	29.0	2.060	31	-.06	1.30	31
RETROP	7565	4	*****	0	*****	****	0	****	0	******	******	******	******	2.720	31	*****	1.80	28
REYDON	7579	4	64.0	29	*****	91.	17	26.	29	114.5	******	85.0	******	1.510	29	*****	.81	27
SAYRE	7952	4	*****	0	*****	****	0	****	0	******	******	******	******	2.700	31	.57	2.06	28
SWEETWATER 2 E	8652	4	*****	0	*****	****	0	****	0	******	******	******	******	2.060	31	*****	1.42	28
TALOGA	8708	4	59.8	31	-1.2	91.	11	24.	31	222.5	54.5	62.5	18.5	1.790	31	-.07	.92	28
THOMAS	8815	4	*****	0	*****	****	0	****	0	******	******	******	******	2.020	31	*****	1.25	31
VICI	9172	4	*****	0	*****	****	0	****	0	******	******	******	******	1.910	31	*****	1.06	31
WATONGA	9364	4	65.0	31	*****	92.	11	26.	31	138.5	******	138.0	******	2.700	31	.48	.92	31
WEATHERFORD	9422	4	61.9	31	-.8	94.	12	27.	31	174.0	40.0	79.0	16.0	2.600	31	-.13	1.24	31

OCTOBER 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	******	******	******	******	3.910	31	*****	2.90	28
TINKER AFB	325	5	*****	0	*****	****	0	****	0	******	******	******	******	3.201	31	*****	1.62	28
BLANCHARD 2 SSW	830	5	64.4	31	*****	92.	11	30.	31	126.5	******	107.5	******	2.914	31	*****	2.00	28
BRISTOW	1144	5	63.9	31	.6	90.	11	34.	31	122.0	-14.0	88.0	3.0	4.701	31	2.16	2.72	26
CHANDLER	1684	5	63.3	29	*****	90.	11	31.	31	132.5	******	83.5	******	4.900	31	2.47	2.73	26
CHICKASHA EX ST	1750	5	62.9	31	-.3	94.	11	33.	31	158.5	30.5	93.0	21.0	3.370	31	.66	2.88	28
COX CITY 1 E	2196	5	*****	0	*****	****	0	****	0	******	******	******	******	3.690	31	*****	3.06	28
CRESCENT	2242	5	*****	0	*****	****	0	****	0	******	******	******	******	3.880	31	*****	2.18	26
CUSHING	2318	5	63.0	30	.6	89.	13	33.	31	136.0	-14.0	77.0	8.0	4.430	31	1.75	2.00	26
EL RENO 1 N	2818	5	63.2	31	.8	91.	11	28.	31	153.5	13.5	99.0	40.0	4.050	31	1.17	2.30	26
GUTHRIE	3821	5	65.4	31	2.4	91.	11	30.	31	124.5	-14.5	138.0	61.0	3.790	31	1.13	1.62	28
HENNESSEY 2 SE	4055	5	62.7	31	-.1	94.	11	27.	31	161.5	20.5	91.5	18.5	2.360	31	.25	1.14	26
INGALLS	4489	5	*****	0	*****	****	0	****	0	******	******	******	******	4.613	31	*****	2.77	26
KINGFISHER 2 SE	4861	5	62.7	31	-.2	90.	11	27.	31	159.5	30.5	89.5	25.5	2.560	31	.12	1.21	26
KONAWA	4915	5	*****	0	*****	****	0	****	0	******	******	******	******	4.010	31	.42	1.32	26
MARSHALL	5589	5	*****	0	*****	****	0	****	0	******	******	******	******	2.120	31	-.48	.94	26
MEEKER 4 W	5779	5	63.2	29	*****	90.	11	30.	31	141.5	******	88.0	******	4.840	29	*****	2.40	27
MULHALL	6110	5	*****	0	*****	****	0	****	0	******	******	******	******	3.470	31	*****	1.70	26
NORMAN 3 S	6386	5	64.3	31	*****	96.	11	33.	31	131.0	******	110.5	******	3.051	31	.42	2.32	28
OILTON 2 SE	6616	5	*****	0	*****	****	0	****	0	******	******	******	******	6.180	31	*****	3.50	25
OKEMAH	6638	5	64.7	31	1.2	91.	11	34.	31	113.5	-11.5	104.5	25.5	3.760	31	.89	2.18	26
OKLAHOMA CTY WS	6661	5	62.6	31	.3	92.	11	27.	31	155.0	10.0	80.5	19.5	3.981	31	1.27	1.38	28
PERKINS	7003	5	*****	0	*****	****	0	****	0	******	******	******	******	3.610	31	.46	2.22	26
PIEDMONT	7068	5	*****	0	*****	****	0	****	0	******	******	******	******	3.380	31	*****	1.81	26
PRAGUE	7264	5	*****	0	*****	****	0	****	0	******	******	******	******	4.000	31	1.13	2.30	28
PURCELL 5 SW	7327	5	64.2	31	1.3	92.	11	33.	31	121.5	-13.5	97.0	27.0	4.101	31	.92	3.35	28
SEMINOLE	8042	5	64.4	31	-.2	92.	11	34.	30	114.0	14.0	96.5	8.5	4.920	31	2.07	2.39	26
SHAWNEE	8110	5	*****	0	*****	****	0	****	0	******	******	******	******	3.750	31	.55	2.58	28
STELLA	8479	5	*****	0	*****	****	0	****	0	******	******	******	******	3.730	31	*****	2.83	28
STILLWATER 2 W	8501	5	63.3	31	1.4	92.	12	32.	31	136.5	-21.5	84.0	22.0	4.261	31	1.36	2.25	26
STROUD 1 N	8563	5	*****	0	*****	****	0	****	0	******	******	******	******	6.042	31	*****	3.27	26
TECUMSEH	8751	5	*****	0	*****	****	0	****	0	******	******	******	******	4.101	31	*****	2.37	27
TROUSDALE	8960	5	*****	0	*****	****	0	****	0	******	******	******	******	2.900	31	*****	1.70	28
UNION CITY 1 SE	9086	5	*****	0	*****	****	0	****	0	******	******	******	******	3.700	31	.61	2.06	28
WELTY 1 SSE	9479	5	*****	0	*****	****	0	****	0	******	******	******	******	4.051	31	*****	2.23	28
WEWOKA	9575	5	*****	0	*****	****	0	****	0	******	******	******	******	6.930	31	3.95	3.12	26

OCTOBER 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	******	******	******	******	6.420	31	*****	2.62	28
BEGGS	631	6	*****	0	*****	****	0	****	0	******	******	******	******	4.200	31	*****	2.15	26
BOYNTON	1027	6	*****	0	*****	****	0	****	0	******	******	******	******	11.440	31	*****	5.00	26
CALVIN	1391	6	*****	0	*****	****	0	****	0	******	******	******	******	11.092	31	7.38	4.68	25
CHECOTAH	1711	6	*****	0	*****	****	0	****	0	******	******	******	******	10.383	31	6.94	3.87	26
CLAYTON 11 WNW	1858	6	*****	0	*****	****	0	****	0	******	******	******	******	10.450	31	*****	5.12	25
DEWAR 2 NE	2485	6	*****	0	*****	****	0	****	0	******	******	******	******	7.360	31	4.10	4.86	26
DUSTIN	2690	6	*****	0	*****	****	0	****	0	******	******	******	******	6.500	31	*****	2.42	26
EUFAULA	2993	6	64.8	30	*****	88.	11	36.	30	107.5	******	103.0	******	8.240	30	*****	2.40	25
HANNA	3884	6	63.6	31	*****	90.	11	37.	31	124.0	******	80.5	******	9.391	31	6.12	2.73	25
HARTSHORNE	3946	6	*****	0	*****	****	0	****	0	******	******	******	******	8.800	31	*****	3.16	25
HASKELL	3956	6	*****	0	*****	****	0	****	0	******	******	******	******	6.710	31	3.64	2.61	26
HOLDENVILLE	4235	6	63.9	31	-.2	91.	11	35.	31	120.0	5.0	86.0	-1.0	4.760	31	1.22	1.32	26
LAKE EUFAULA	4975	6	64.2	31	*****	90.	19	38.	31	111.0	******	85.5	******	9.850	31	*****	2.94	25
LYONS 2 N	5437	6	*****	0	*****	****	0	****	0	******	******	******	******	7.870	31	4.79	2.00	24
MARBLE CITY	5546	6	*****	0	*****	****	0	****	0	******	******	******	******	10.131	31	*****	5.60	25
MCALESTER FAA	5664	6	65.2	31	2.0	92.	11	39.	31	108.5	-24.5	114.0	36.0	10.050	31	6.15	4.16	25
MCCURTAIN 1 SE	5693	6	64.3	31	*****	92.	11	37.	16	123.5	******	102.0	******	6.461	31	3.15	2.78	25
MUSKOGEE	6130	6	63.5	30	.6	89.	12	37.	31	119.5	-20.5	75.5	.5	10.070	31	6.73	3.90	25
OKMULGEE W W	6670	6	61.2	29	*****	90.	12	36.	31	163.5	******	52.0	******	4.342	31	1.45	1.88	26
OKTAHA 2 NE	6678	6	*****	0	*****	****	0	****	0	******	******	******	******	8.380	31	*****	3.61	26
QUINTON	7372	6	*****	0	*****	****	0	****	0	******	******	******	******	9.473	31	5.86	3.65	25
SALLISAW 2 NE	7862	6	62.8	31	-.6	88.	11	36.	16	115.0	-11.0	47.5	-28.5	5.903	31	2.04	3.65	25
SCIPIO	7979	6	*****	0	*****	****	0	****	0	******	******	******	******	10.860	31	*****	3.77	25
SCRAPER	7993	6	*****	0	*****	****	0	****	0	******	******	******	******	7.160	31	*****	3.70	25
SHORT	8170	6	*****	0	*****	****	0	****	0	******	******	******	******	8.600	31	*****	4.52	25
STILWELL 1 NE	8506	6	62.8	31	*****	85.	18	37.	31	129.0	******	59.5	******	7.603	31	4.32	3.20	25
TAHLEQUAH	8677	6	63.4	31	1.5	88.	18	36.	30	122.0	-47.0	71.0	-2.0	8.390	31	5.00	3.50	26
WEBBERS FALLS	9445	6	62.4	29	*****	89.	19	38.	6	125.5	******	49.0	******	10.370	31	6.62	3.26	25
WESTVILLE	9523	6	*****	0	*****	****	0	****	0	******	******	******	******	7.610	31	*****	3.45	25
WETUMKA 3 NE	9571	6	*****	0	*****	****	0	****	0	******	******	******	******	6.172	31	3.04	3.75	26

OCTOBER 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	64.2	31	-.4	95.	17	27.	31	131.0	24.0	105.0	10.0	2.730	31	.18	1.95	28
ALTUS DAM	184	7	64.1	31	*****	94.	13	28.	31	151.0	******	123.0	******	2.210	31	-.49	1.40	28
ANADARKO	224	7	62.7	30	-.4	92.	11	29.	31	137.5	10.5	68.5	.5	2.610	31	-.03	1.44	28
APACHE	260	7	*****	0	*****	****	0	****	0	******	******	******	******	3.050	31	*****	2.19	28
ALTUS AFB	447	7	*****	0	*****	****	0	****	0	******	******	******	******	2.770	31	*****	1.84	28
CARNEGIE 2 ENE	1504	7	63.0	30	-.2	95.	11	30.	31	156.5	30.5	98.0	27.0	2.360	31	.17	1.05	28
CHATTANOOGA	1706	7	65.2	31	.9	95.	11	31.	31	113.5	12.5	119.0	40.0	3.130	31	.36	2.81	28
DUNCAN 12 W	2668	7	*****	0	*****	****	0	****	0	******	******	******	******	3.182	31	*****	2.72	27
FREDERICK	3353	7	63.0	31	-2.6	94.	13	28.	31	143.0	50.0	82.0	-30.0	3.400	31	.94	2.04	28
GRANDFIELD 4 NW	3709	7	*****	0	*****	****	0	****	0	******	******	******	******	3.450	31	.61	2.85	27
HOBART FAA APT	4204	7	62.5	31	.1	93.	11	29.	31	172.0	30.0	95.0	34.0	2.621	31	.10	1.17	28
HOLLIS	4249	7	62.3	30	-1.7	95.	11	23.	31	163.5	53.5	82.5	3.5	1.100	30	*****	1.02	28
HOLLISTER	4250	7	*****	0	*****	****	0	****	0	******	******	******	******	2.020	31	*****	1.72	28
LAWTON	5063	7	63.0	31	-1.0	93.	12	30.	31	137.0	22.0	73.5	-10.5	3.340	31	.49	2.57	28
FORT SILL	5068	7	62.8	31	*****	93.	11	27.	31	152.0	******	84.0	******	3.911	31	1.06	2.71	28
LOOKEBA 2 ENE	5329	7	*****	0	*****	****	0	****	0	******	******	******	******	2.780	31	*****	1.59	28
MANGUM RES STA	5509	7	63.3	31	-.5	95.	17	26.	31	138.0	20.0	85.0	4.0	2.210	31	-.41	1.13	28
RANDLETT 9 E	7403	7	*****	0	*****	****	0	****	0	******	******	******	******	3.731	31	*****	2.54	28
ROOSEVELT	7727	7	*****	0	*****	****	0	****	0	******	******	******	******	2.380	31	-.10	1.43	28
SEDAN	8016	7	*****	0	*****	****	0	****	0	******	******	******	******	2.140	31	*****	1.53	28
SNYDER	8299	7	*****	0	*****	****	0	****	0	******	******	******	******	1.982	31	-.38	1.45	28
VINSON 3 WNW	9212	7	*****	0	*****	****	0	****	0	******	******	******	******	1.650	31	-.62	.88	28
WALTERS	9278	7	64.9	31	.1	94.	11	32.	31	107.5	-8.5	104.0	-6.0	2.750	31	-.17	2.35	28
WICHITA MT WLR	9629	7	60.9	29	*****	91.	14	28.	31	162.5	******	44.0	******	2.220	31	-.51	1.97	27
WILLOW	9668	7	*****	0	*****	****	0	****	0	******	******	******	******	2.060	31	*****	.82	31

OCTOBER 1991 SUMMARY FOR SOUTH CENTRAL DIVISION (CD8)

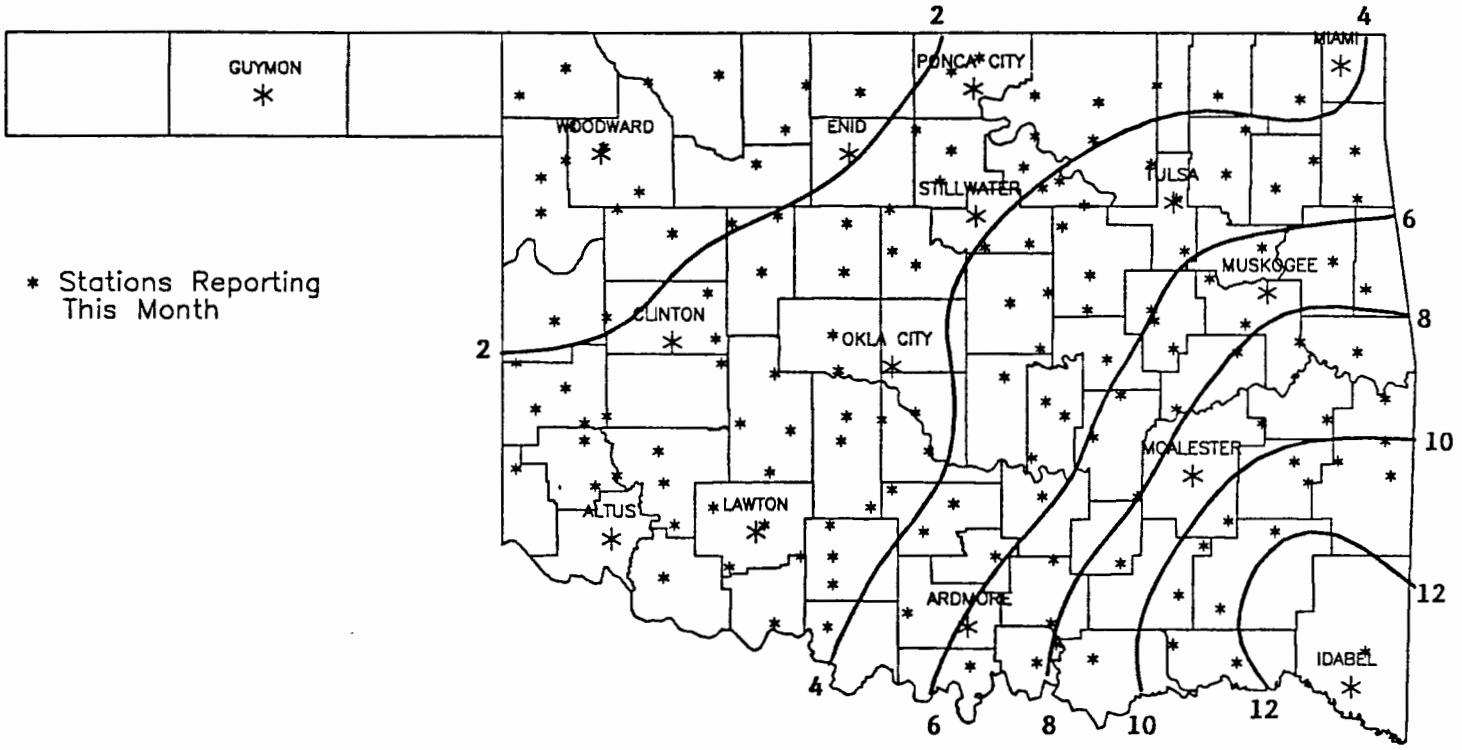
NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ADA	17	8	63.4	31	-1.0	90.	11	27.	31	128.5	9.5	78.5	-21.5	4.690	31	.77	1.25	26
ALLEN	147	8	*****	0	*****	****	0	****	0	******	******	******	******	9.400	31	*****	2.20	26
ARDMORE	292	8	65.3	31	-1.6	92.	11	36.	30	113.0	44.0	123.0	-5.0	8.260	31	4.86	4.25	28
ATOKA DAM	394	8	65.8	23	*****	91.	14	42.	31	69.5	******	88.0	******	8.670	23	*****	4.60	28
BOKCHITO	917	8	*****	0	*****	****	0	****	0	******	******	******	******	11.460	31	*****	4.50	25
CANEY	1437	8	64.7	31	*****	90.	12	39.	31	105.5	******	96.0	******	6.710	31	*****	1.60	28
CHICKASAW NRA	1745	8	64.6	31	*****	92.	12	35.	31	102.5	******	91.0	******	4.880	31	*****	1.72	28
COLEMAN	2011	8	*****	0	*****	****	0	****	0	******	******	******	******	6.870	31	*****	3.00	28
COMANCHE	2054	8	*****	0	*****	****	0	****	0	******	******	******	******	3.850	31	*****	3.35	28
DAISY 4 ENE	2354	8	*****	0	*****	****	0	****	0	******	******	******	******	9.950	31	6.14	5.00	25
DUNCAN	2660	8	63.9	31	-.9	94.	12	33.	31	119.0	14.0	85.0	-14.0	4.222	31	1.27	3.80	28
DURANT USDA	2678	8	65.6	31	*****	94.	12	38.	31	87.0	******	107.0	******	9.030	31	5.56	3.02	25
ELMORE CITY	2872	8	*****	0	*****	****	0	****	0	******	******	******	******	3.301	31	*****	1.28	27
FARRIS 3 WNW	3083	8	*****	0	*****	****	0	****	0	******	******	******	******	10.550	31	*****	6.00	25
GRADY	3688	8	*****	0	*****	****	0	****	0	******	******	******	******	4.340	31	*****	1.69	28
HEALDTON	4001	8	63.6	31	*****	92.	11	31.	31	136.0	******	93.0	******	3.120	31	.00	1.66	28
HENNEPIN	4052	8	*****	0	*****	****	0	****	0	******	******	******	******	3.310	31	*****	1.37	28
KETCHUM RANCH	4780	8	*****	0	*****	****	0	****	0	******	******	******	******	4.780	31	*****	3.50	28
KINGSTON	4865	8	*****	0	*****	****	0	****	0	******	******	******	******	7.270	31	3.63	1.82	28
LEHIGH	5108	8	*****	0	*****	****	0	****	0	******	******	******	******	9.990	31	*****	3.50	25
LINDSAY 2 W	5216	8	63.3	31	*****	92.	11	32.	31	134.5	******	81.0	******	3.502	31	.43	2.92	28
LOCO 6 SE	5247	8	*****	0	*****	****	0	****	0	******	******	******	******	3.080	31	*****	1.41	28
MADILL	5468	8	65.2	31	-.1	93.	11	37.	31	104.5	11.5	110.5	8.5	5.630	31	2.06	1.63	26
MARIETTA	5563	8	66.4	31	1.0	92.	11	35.	31	91.5	-.5	136.0	31.0	7.870	31	4.84	4.10	28
MARLOW 1 WSW	5581	8	65.1	31	*****	95.	11	31.	31	117.0	******	121.5	******	3.540	31	.59	3.05	28
MCGEE CREEK DAM	5713	8	65.9	31	*****	91.	12	39.	6	77.5	******	105.5	******	7.750	31	*****	2.35	25
PAULS VALLEY	6926	8	64.9	31	.6	94.	11	34.	31	109.5	4.5	107.5	24.5	3.252	31	-.32	1.45	27
PONTOTOC	7214	8	*****	0	*****	****	0	****	0	******	******	******	******	9.071	31	5.29	3.35	27
TISHOMINGO NWLR	8884	8	64.6	31	*****	94.	13	36.	31	122.0	******	109.5	******	7.250	31	3.62	3.47	28
TUSSY	9032	8	*****	0	*****	****	0	****	0	******	******	******	******	3.310	31	*****	2.01	28
WAURIKA	9395	8	65.8	31	.3	94.	11	32.	31	108.5	14.5	133.0	24.0	2.691	31	.00	2.15	27
WAURIKA DAM	9399	8	64.3	29	*****	93.	12	34.	31	108.0	******	88.0	******	3.352	29	*****	2.71	28

OCTOBER 1991 SUMMARY FOR SOUTHEAST DIVISION (CD9)

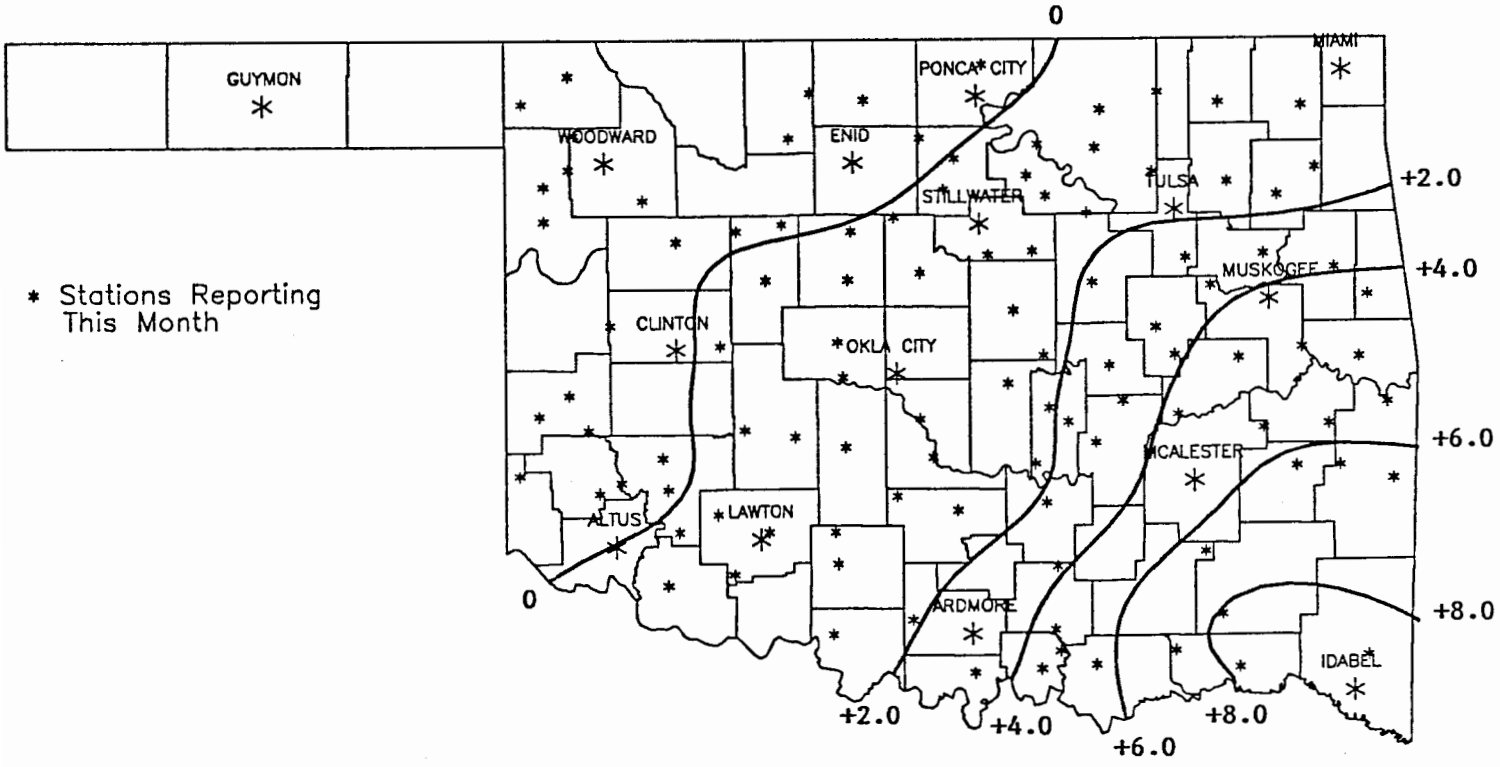
NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ANTLERS	256	9	64.6	31	1.1	92.	11	37.	16	98.5	-25.5	87.5	9.5	15.530	31	11.62	8.58	25
BATTIEST 1 SSW	567	9	62.4	31	*****	89.	11	36.	16	126.5	******	47.0	******	10.220	31	*****	3.80	25
BEAR MT TWR	584	9	67.7	31	*****	93.	12	43.	16	46.5	******	130.5	******	15.520	30	*****	8.06	25
BENGAL	670	9	*****	0	*****	****	0	****	0	******	******	******	******	12.211	31	*****	4.95	25
BOSWELL 4 NNW	980	9	65.4	31	*****	95.	11	37.	6	97.5	******	109.5	******	14.010	31	10.31	7.90	25
BROKEN BOW 1 N	1162	9	*****	0	*****	****	0	****	0	******	******	******	******	12.950	31	9.12	4.46	28
BROKEN BOW DAM	1168	9	64.0	31	*****	91.	23	38.	17	93.5	******	63.0	******	13.780	31	*****	5.15	25
CARNASAW TWR	1499	9	*****	0	*****	****	0	****	0	******	******	******	******	12.230	31	8.09	4.84	24
FANSHAWE	3065	9	*****	0	*****	****	0	****	0	******	******	******	******	13.040	31	9.96	4.60	25
FLAGPOLE TWR	3169	9	*****	0	*****	****	0	****	0	******	******	******	******	11.960	31	*****	5.50	25
HEAVENER 1 SE	4008	9	*****	0	*****	****	0	****	0	******	******	******	******	9.742	31	6.44	3.85	29
HEE MT TWR	4017	9	*****	0	*****	****	0	****	0	******	******	******	******	8.940	31	*****	4.12	25
HUGO	4384	9	66.9	31	1.7	93.	11	40.	31	67.5	-26.5	126.0	25.0	11.210	31	7.27	4.00	29
IDABEL	4451	9	65.2	31	1.1	94.	12	34.	17	74.0	-41.0	79.5	-7.5	8.815	31	4.98	5.40	29
JADIE TOWER	4560	9	*****	0	*****	****	0	****	0	******	******	******	******	7.480	31	*****	4.55	29
POTEAU W W	7254	9	63.1	31	*****	91.	12	34.	16	122.0	******	63.0	******	12.040	31	*****	3.63	24
SMITHVILLE 1 W	8285	9	61.6	31	*****	88.	12	32.	16	144.0	******	37.5	******	7.942	31	*****	3.34	29
SPIRO	8416	9	*****	0	*****	****	0	****	0	******	******	******	******	8.720	31	5.41	3.26	25
TUSKAHOMA	9023	9	65.2	31	*****	94.	11	34.	16	97.0	******	102.5	******	16.963	31	*****	8.38	25
VALLIANT 3 W	9118	9	*****	0	*****	****	0	****	0	******	******	******	******	10.980	31	7.36	3.97	29
WILBURTON 9 ENE	9634	9	63.5	31	.7	92.	11	35.	16	121.5	-19.5	76.0	3.0	9.631	31	6.08	3.75	24

OCTOBER 1991 CLIMATE DIVISION SUMMARY

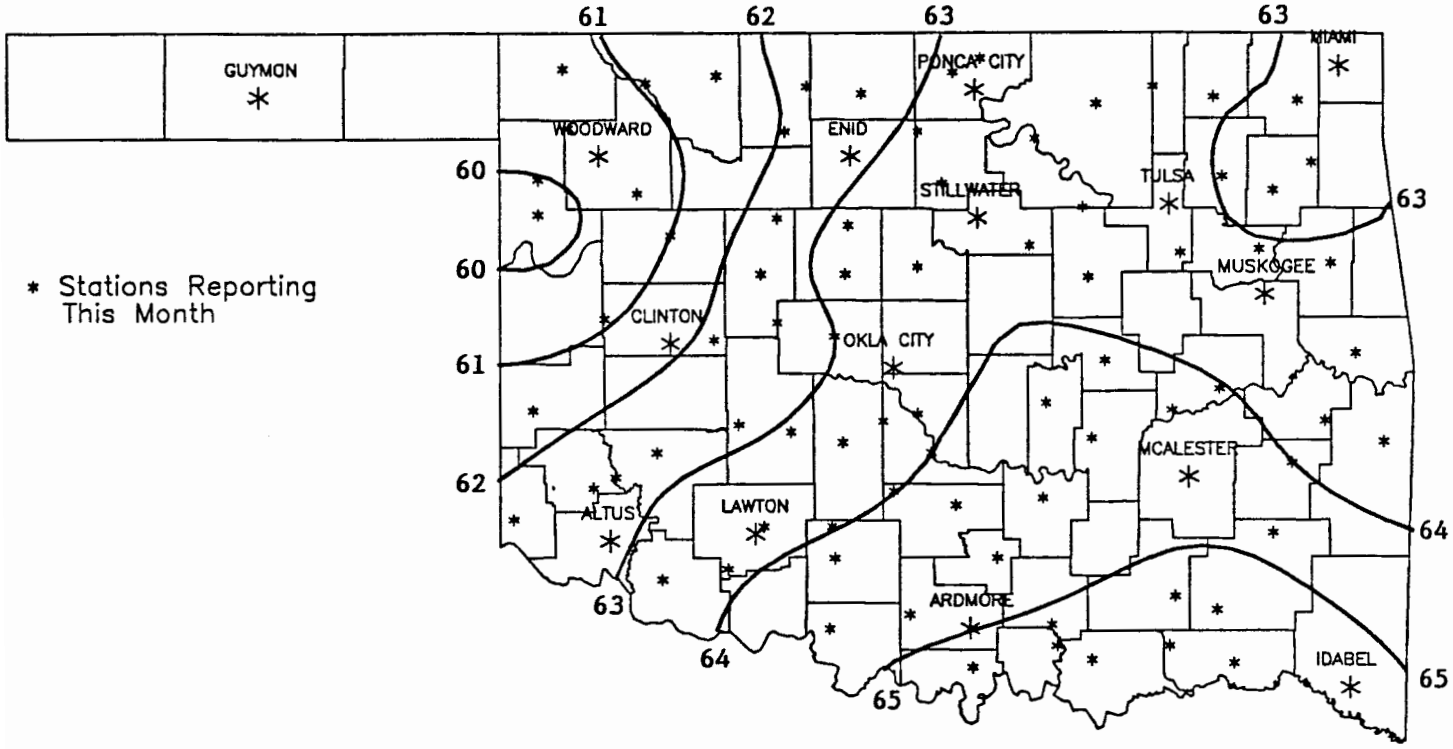
CLIMATE DIV	MEAN TEMP	NUM STA	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEGREE DAYS	DEV FROM NORM	COOL DEGREE DAYS	DEV FROM NORM	TOT PPT	NUM STA	DEV FROM NORM	MAX 24-HR	DAY
1	59.0	10	-.4	99.0	4	12.0	31	251.1	38.4	63.6	25.9	1.10	12	-.24	1.15	27
2	62.3	15	.3	97.0	17	21.0	31	180.7	26.6	97.9	36.2	1.84	23	-.39	1.57	26
3	62.8	16	1.0	94.0	12	30.0	30	146.6	-16.8	78.7	15.4	4.03	31	.81	3.03	26
4	62.0	8	-.2	94.0	12	23.0	31	176.4	30.3	83.6	24.1	2.05	19	-.14	2.06	28
5	63.7	14	.8	96.0	11	27.0	31	136.7	.6	96.9	24.8	3.95	35	1.14	3.50	25
6	63.8	10	.9	92.0	11	35.0	31	118.0	-21.0	82.4	7.2	8.23	30	4.82	5.60	25
7	63.4	12	-.4	95.0	17	23.0	31	141.9	24.2	93.3	10.7	2.70	24	.11	2.85	27
8	64.8	15	-.4	95.0	11	27.0	31	110.4	13.7	105.2	1.5	6.10	30	2.72	6.00	25
9	64.5	11	.6	95.0	11	32.0	16	99.0	-19.5	83.8	-.9	11.42	20	7.72	8.58	25



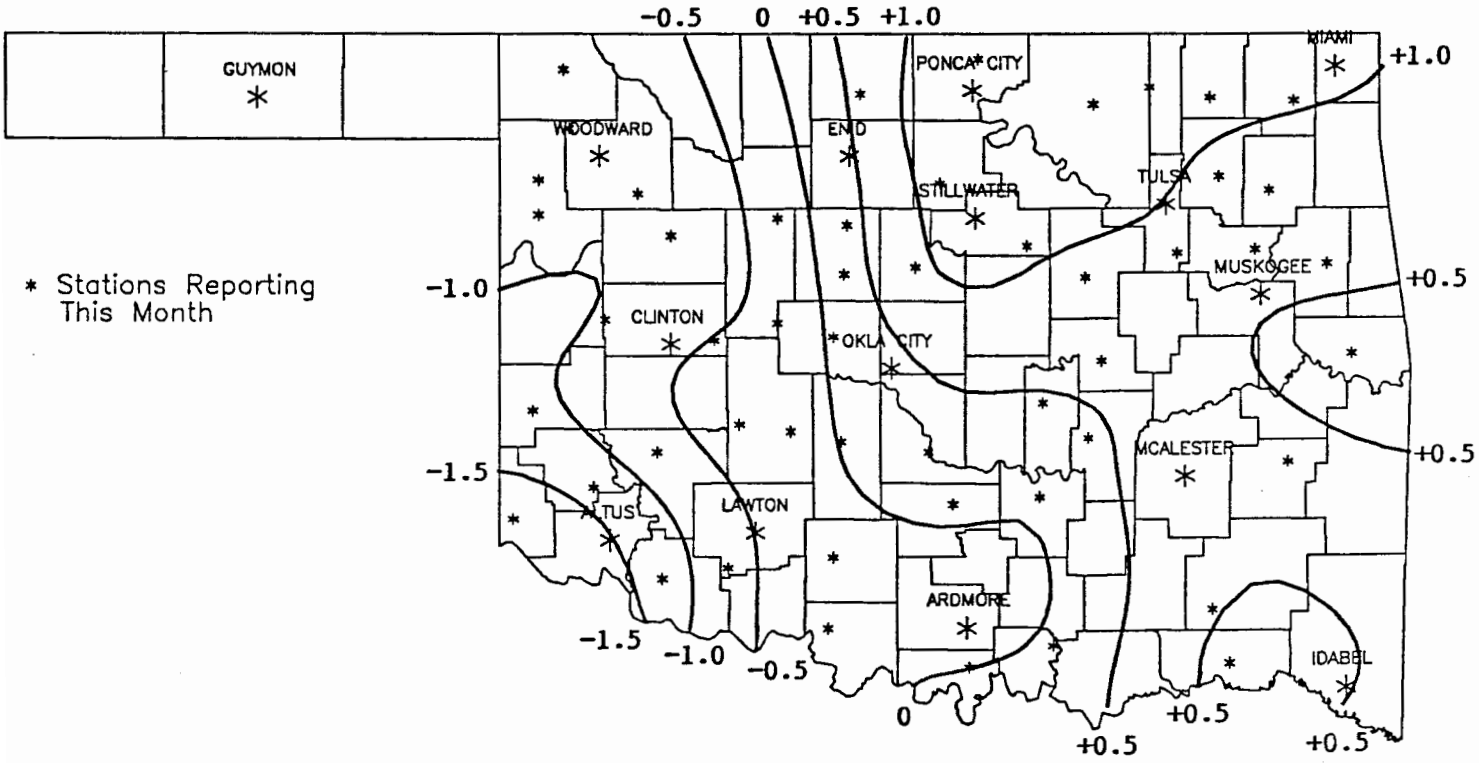
OCTOBER 1991 TOTAL PRECIPITATION
(Inches)



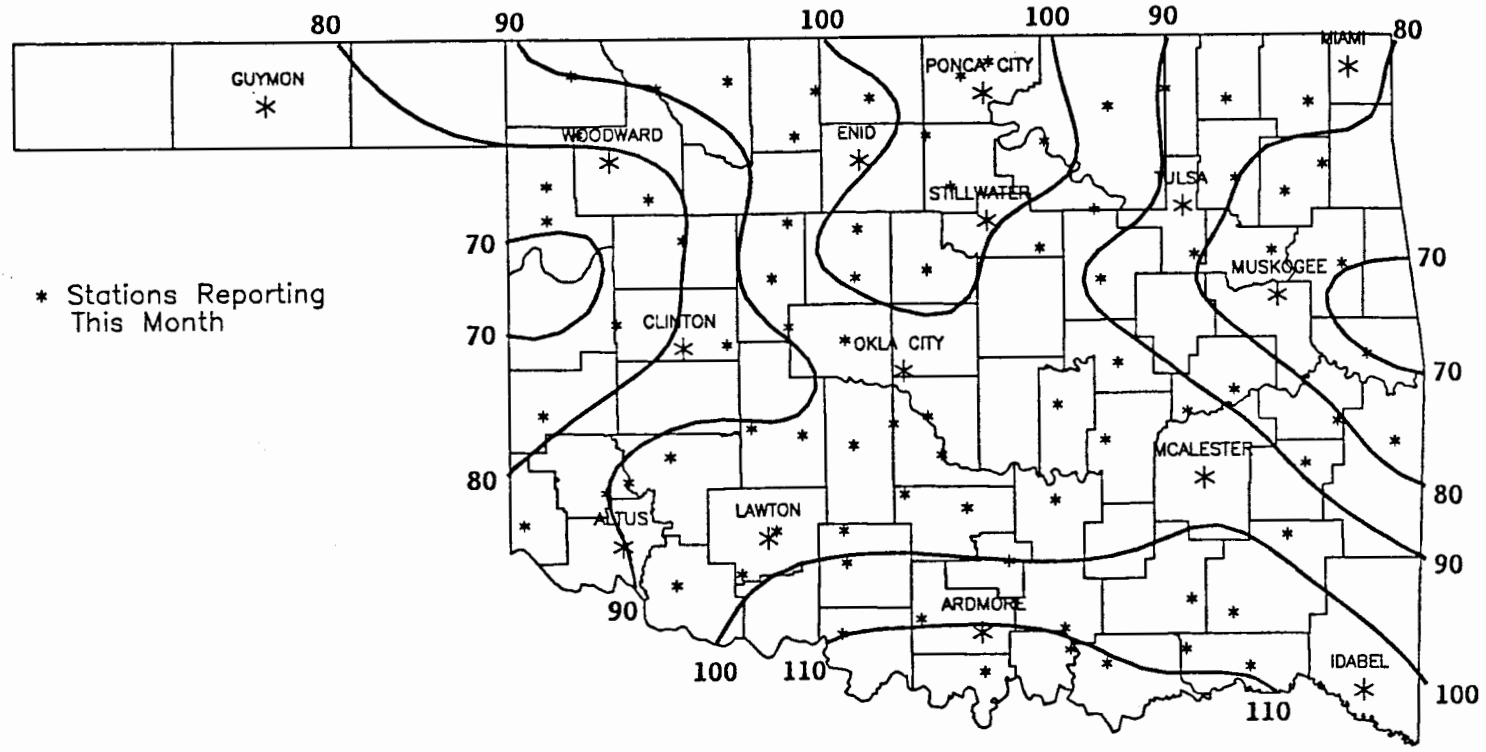
OCTOBER 1991 DEVIATION FROM NORMAL PRECIPITATION
(Inches)



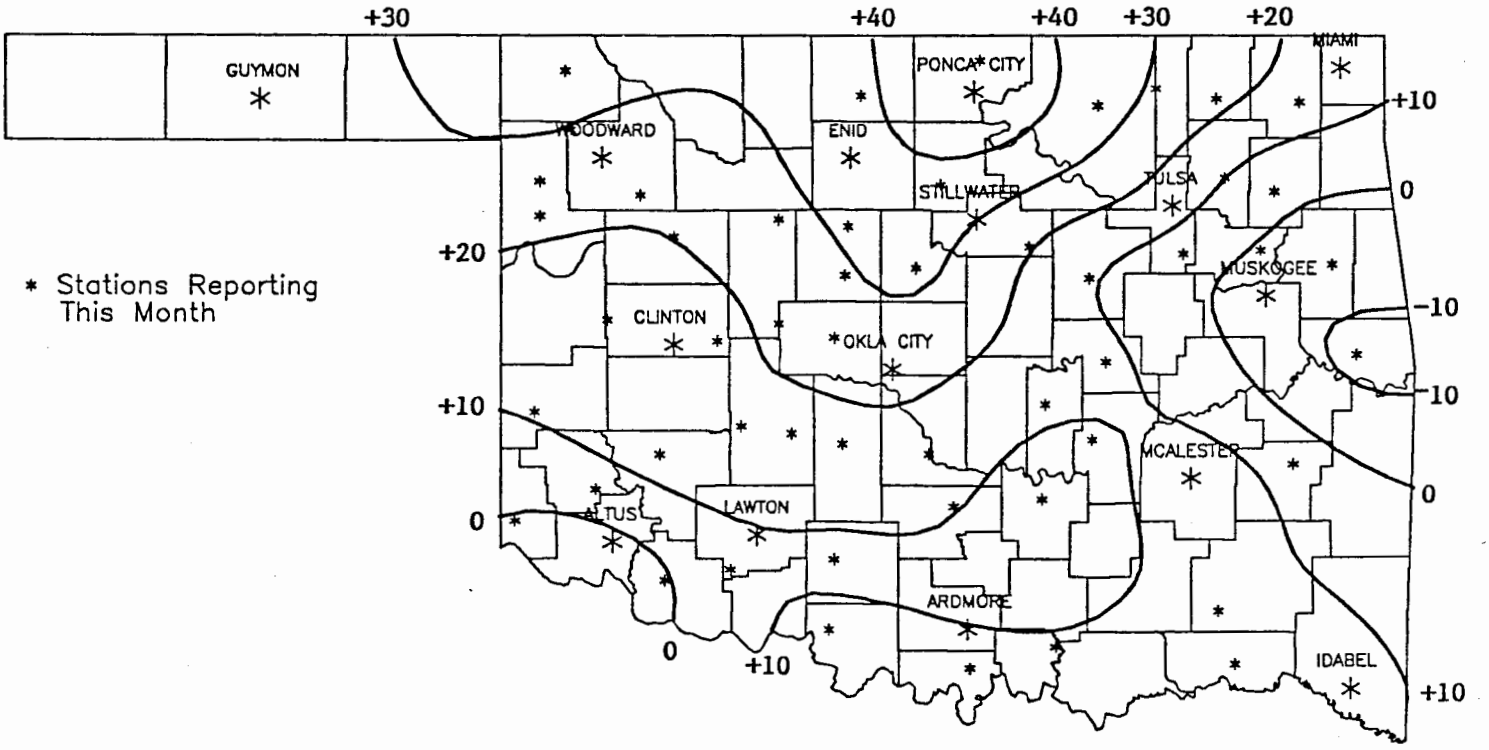
OCTOBER 1991 AVERAGE MONTHLY TEMPERATURES
(Degrees F)



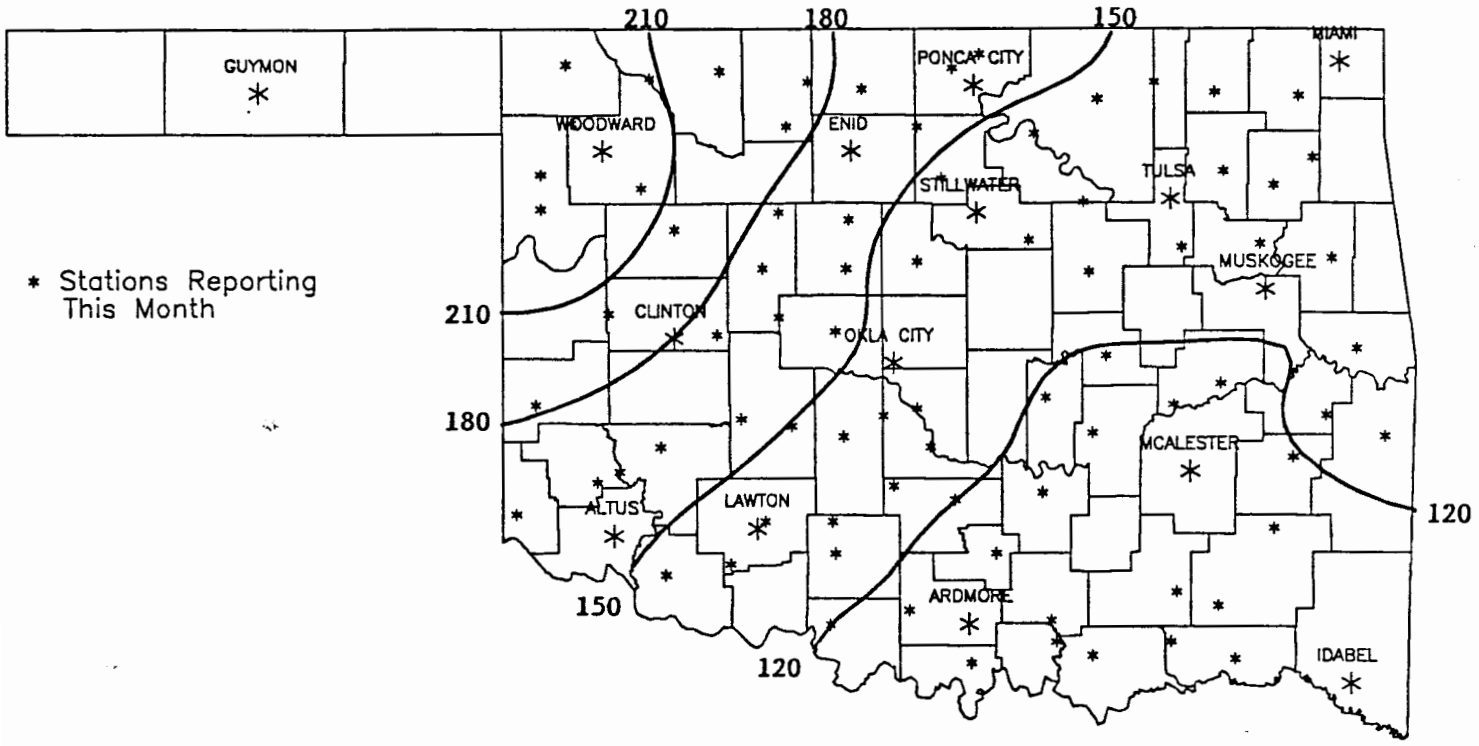
OCTOBER 1991 DEVIATION FROM NORMAL TEMPERATURES
(Degrees F)



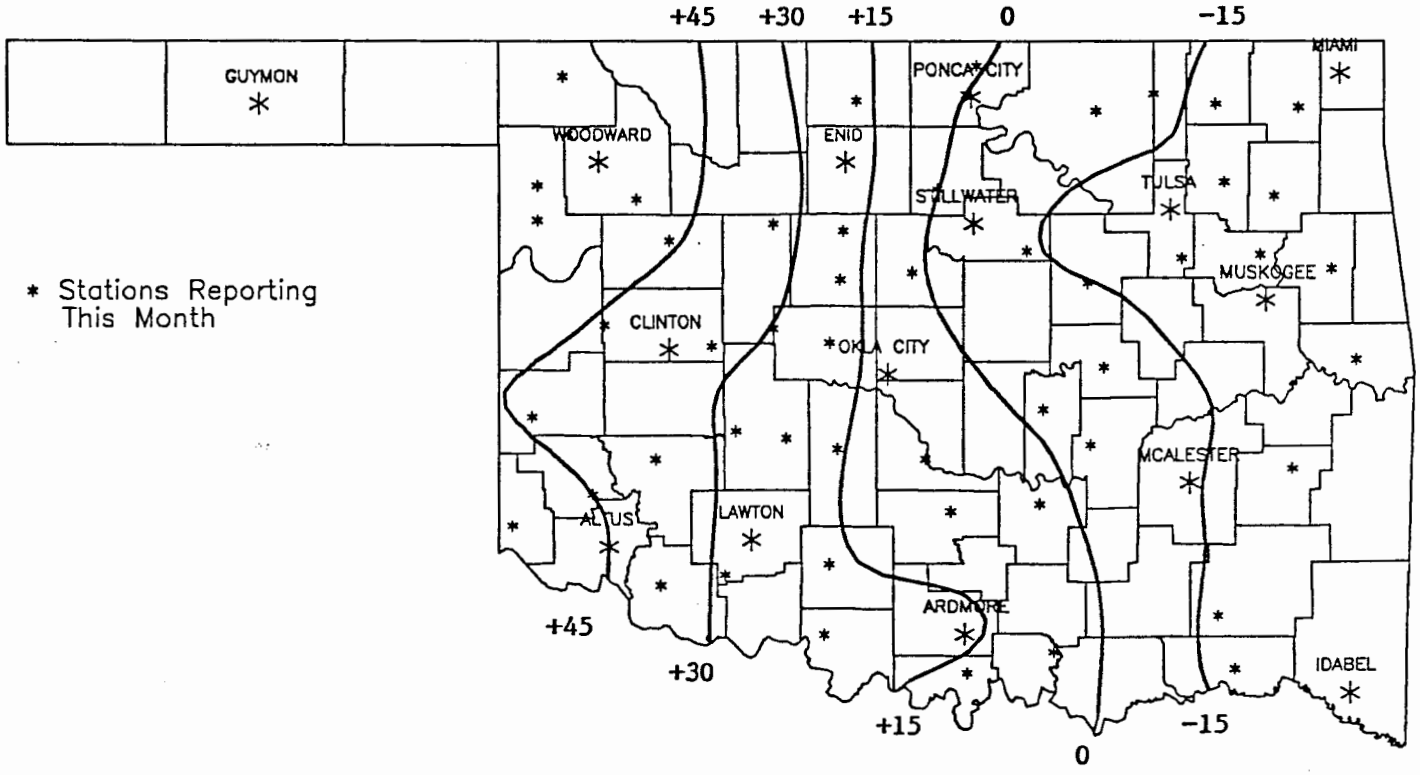
OCTOBER 1991 COOLING DEGREE DAYS



OCTOBER 1991 DEVIATION FROM NORMAL COOLING DEGREE DAYS

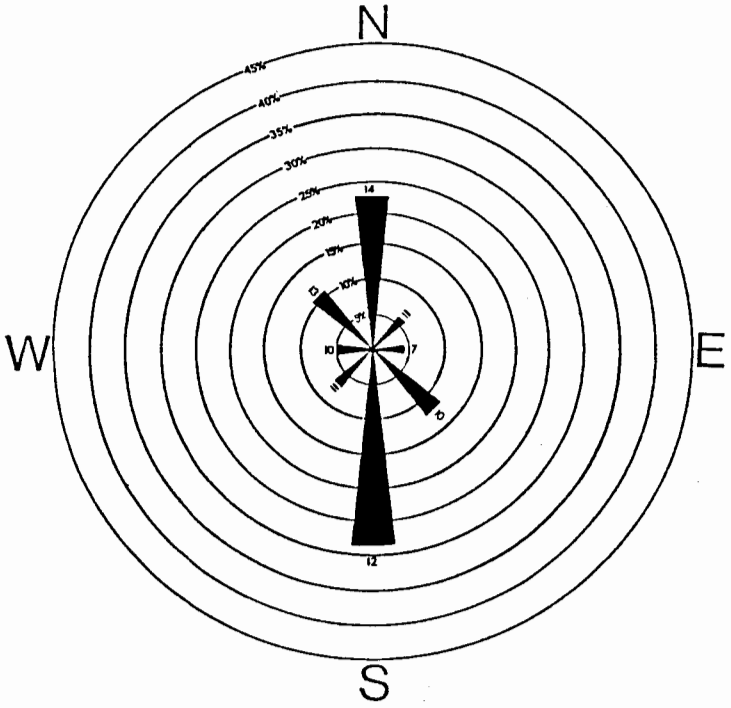


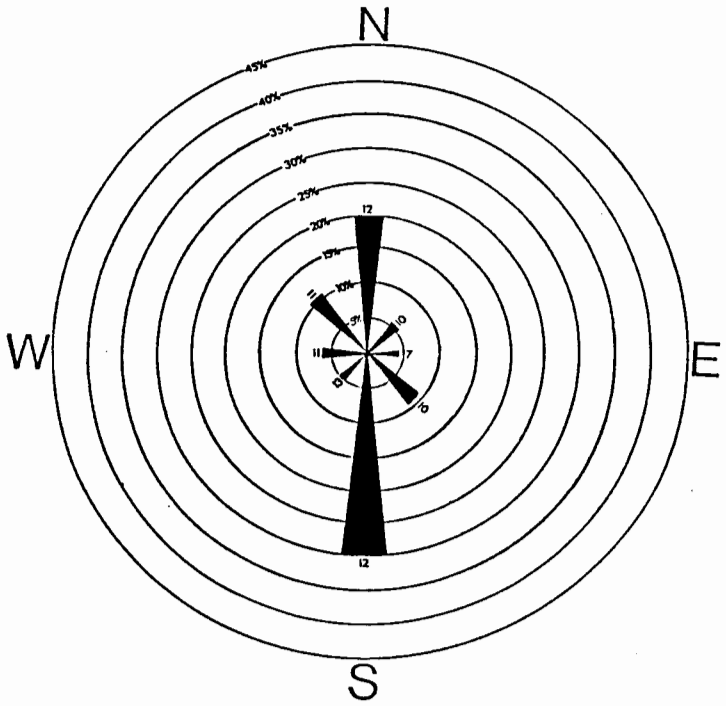
OCTOBER 1991 HEATING DEGREE DAYS



OCTOBER 1991 DEVIATION FROM NORMAL HEATING DEGREE DAYS

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





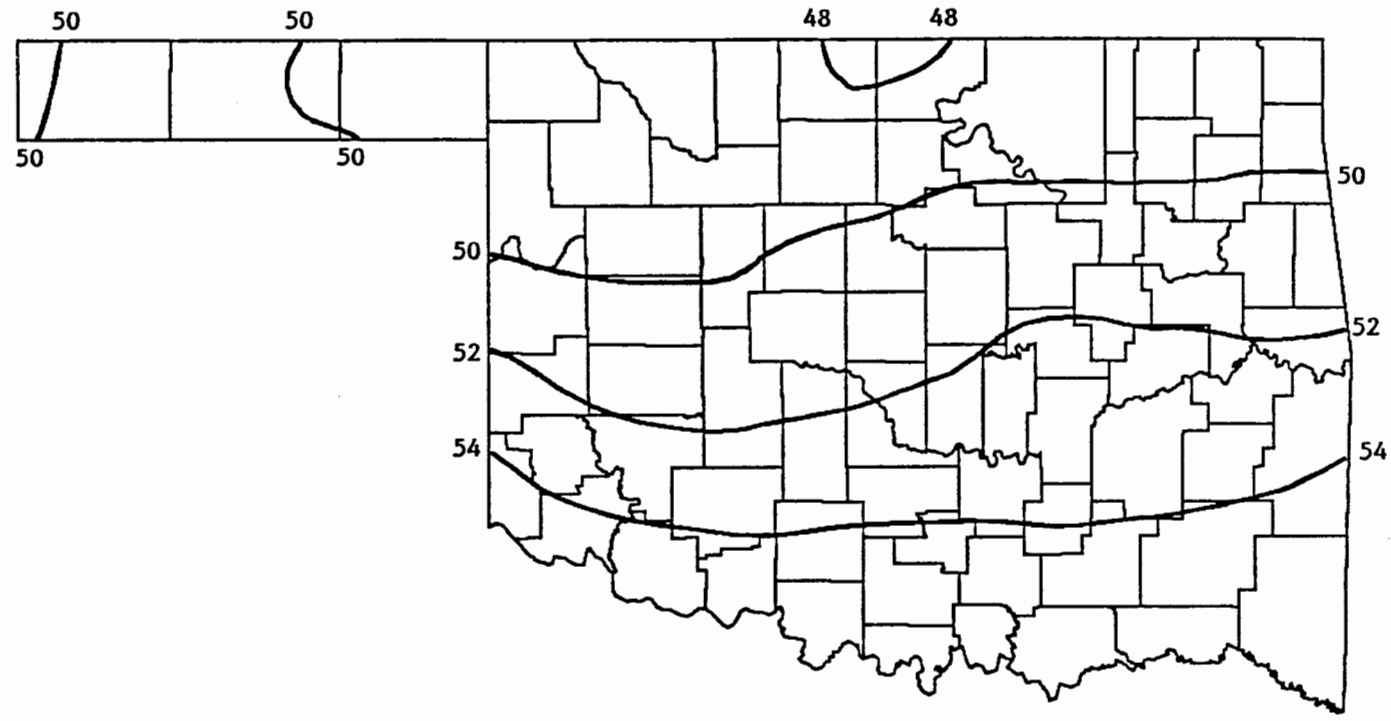
DECEMBER 1991 SUNRISE AND SUNSET

Oklahoma City

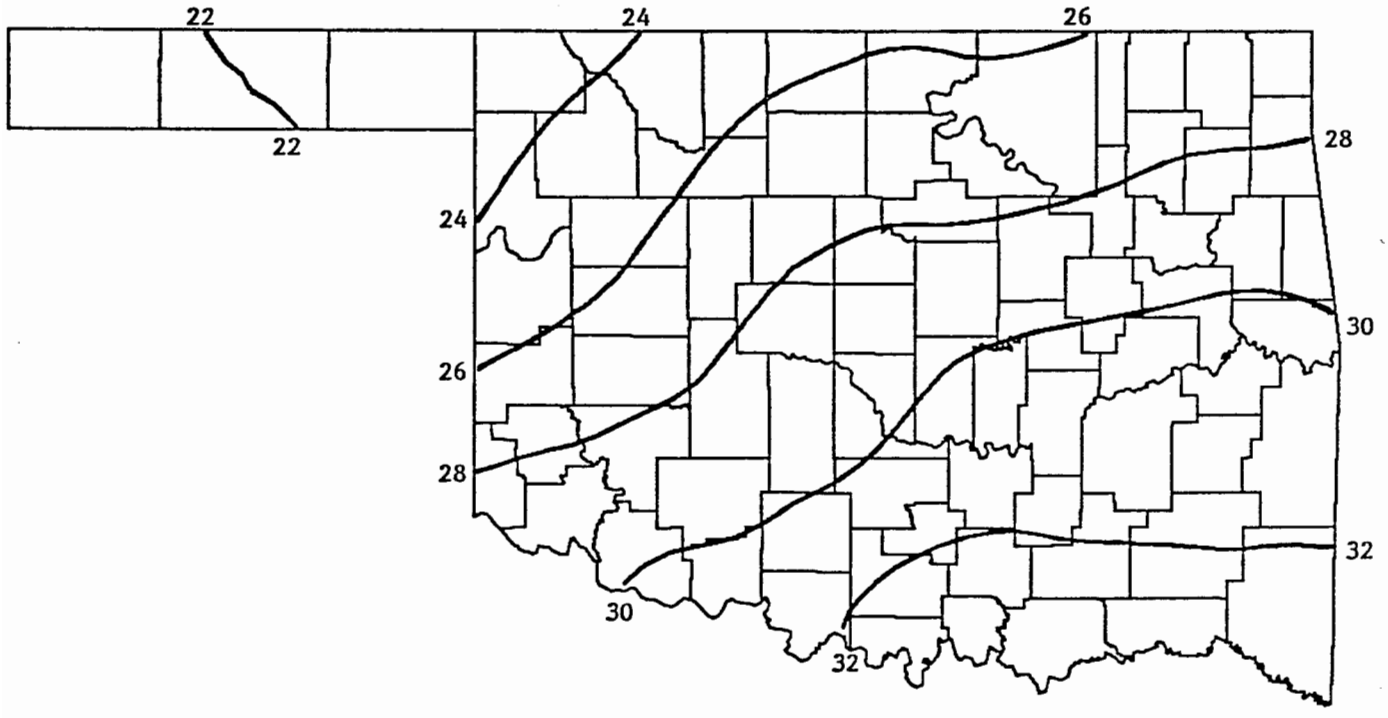
DATE	SUNRISE	SUNSET	DAYLIGHT
911201	7:19AM	5:21PM LT	10: 1
911202	7:20AM	5:21PM LT	10: 0
911203	7:21AM	5:21PM LT	9:60
911204	7:22AM	5:20PM LT	9:59
911205	7:23AM	5:20PM LT	9:58
911206	7:23AM	5:20PM LT	9:57
911207	7:24AM	5:20PM LT	9:56
911208	7:25AM	5:20PM LT	9:55
911209	7:26AM	5:21PM LT	9:55
911210	7:27AM	5:21PM LT	9:54
911211	7:27AM	5:21PM LT	9:54
911212	7:28AM	5:21PM LT	9:53
911213	7:29AM	5:21PM LT	9:53
911214	7:29AM	5:21PM LT	9:52
911215	7:30AM	5:22PM LT	9:52
911216	7:31AM	5:22PM LT	9:51
911217	7:31AM	5:22PM LT	9:51
911218	7:32AM	5:23PM LT	9:51
911219	7:32AM	5:23PM LT	9:51
911220	7:33AM	5:23PM LT	9:50
911221	7:33AM	5:24PM LT	9:50
911222	7:34AM	5:24PM LT	9:50
911223	7:34AM	5:25PM LT	9:50
911224	7:35AM	5:25PM LT	9:50
911225	7:35AM	5:26PM LT	9:50
911226	7:36AM	5:26PM LT	9:51
911227	7:36AM	5:27PM LT	9:51
911228	7:36AM	5:27PM LT	9:51
911229	7:37AM	5:28PM LT	9:51
911230	7:37AM	5:29PM LT	9:52
911231	7:37AM	5:29PM LT	9:52

Tulsa

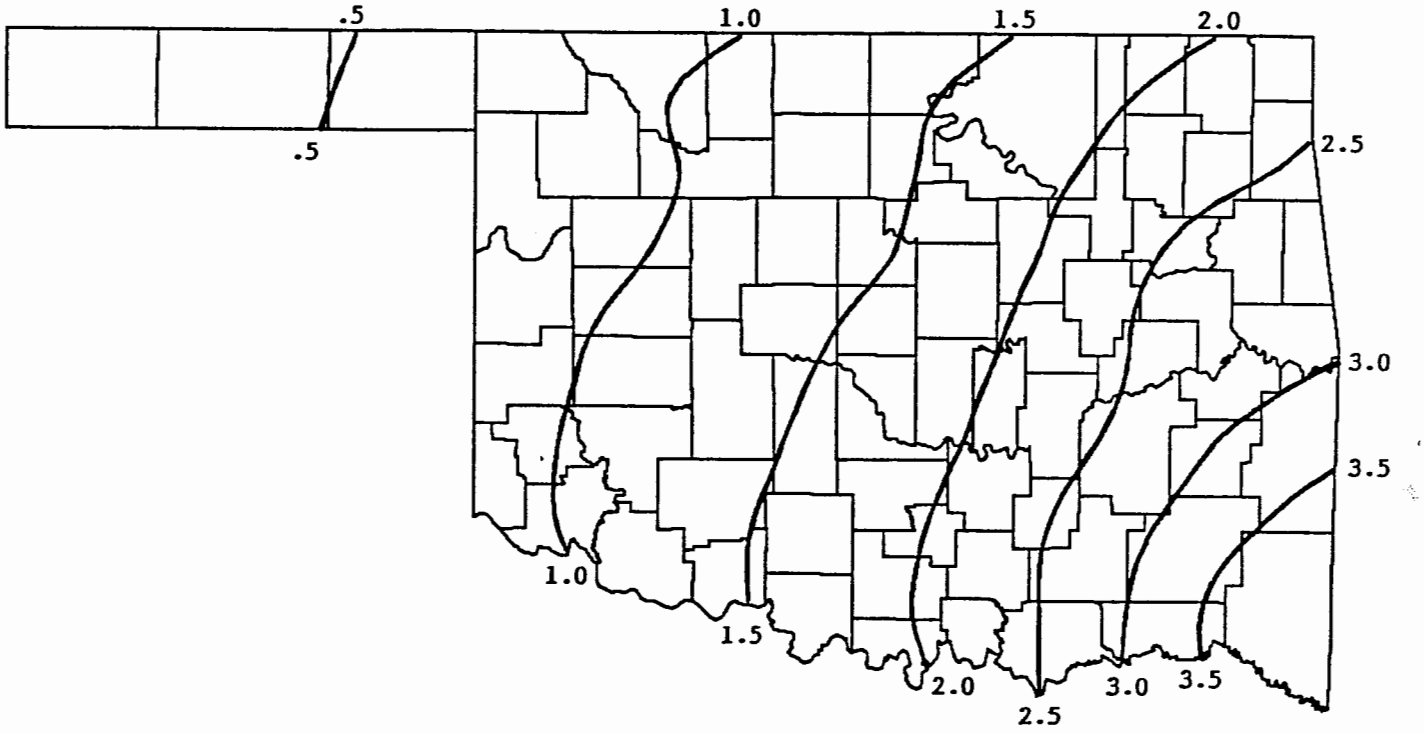
DATE	SUNRISE	SUNSET	DAYLIGHT
911201	7:14AM	5:12PM LT	9:58
911202	7:15AM	5:12PM LT	9:57
911203	7:16AM	5:12PM LT	9:56
911204	7:17AM	5:12PM LT	9:55
911205	7:18AM	5:12PM LT	9:54
911206	7:19AM	5:12PM LT	9:53
911207	7:19AM	5:12PM LT	9:52
911208	7:20AM	5:12PM LT	9:52
911209	7:21AM	5:12PM LT	9:51
911210	7:22AM	5:12PM LT	9:50
911211	7:22AM	5:12PM LT	9:50
911212	7:23AM	5:12PM LT	9:49
911213	7:24AM	5:12PM LT	9:48
911214	7:25AM	5:13PM LT	9:48
911215	7:25AM	5:13PM LT	9:48
911216	7:26AM	5:13PM LT	9:47
911217	7:26AM	5:13PM LT	9:47
911218	7:27AM	5:14PM LT	9:47
911219	7:28AM	5:14PM LT	9:46
911220	7:28AM	5:15PM LT	9:46
911221	7:29AM	5:15PM LT	9:46
911222	7:29AM	5:15PM LT	9:46
911223	7:30AM	5:16PM LT	9:46
911224	7:30AM	5:16PM LT	9:46
911225	7:31AM	5:17PM LT	9:46
911226	7:31AM	5:17PM LT	9:46
911227	7:31AM	5:18PM LT	9:47
911228	7:32AM	5:19PM LT	9:47
911229	7:32AM	5:19PM LT	9:47
911230	7:32AM	5:20PM LT	9:48
911231	7:32AM	5:20PM LT	9:48



30-YEAR MEAN DECEMBER MAXIMUM TEMPERATURE



30-YEAR MEAN DECEMBER DAILY MINIMUM TEMPERATURE



30-YEAR MEAN DECEMBER PRECIPITATION

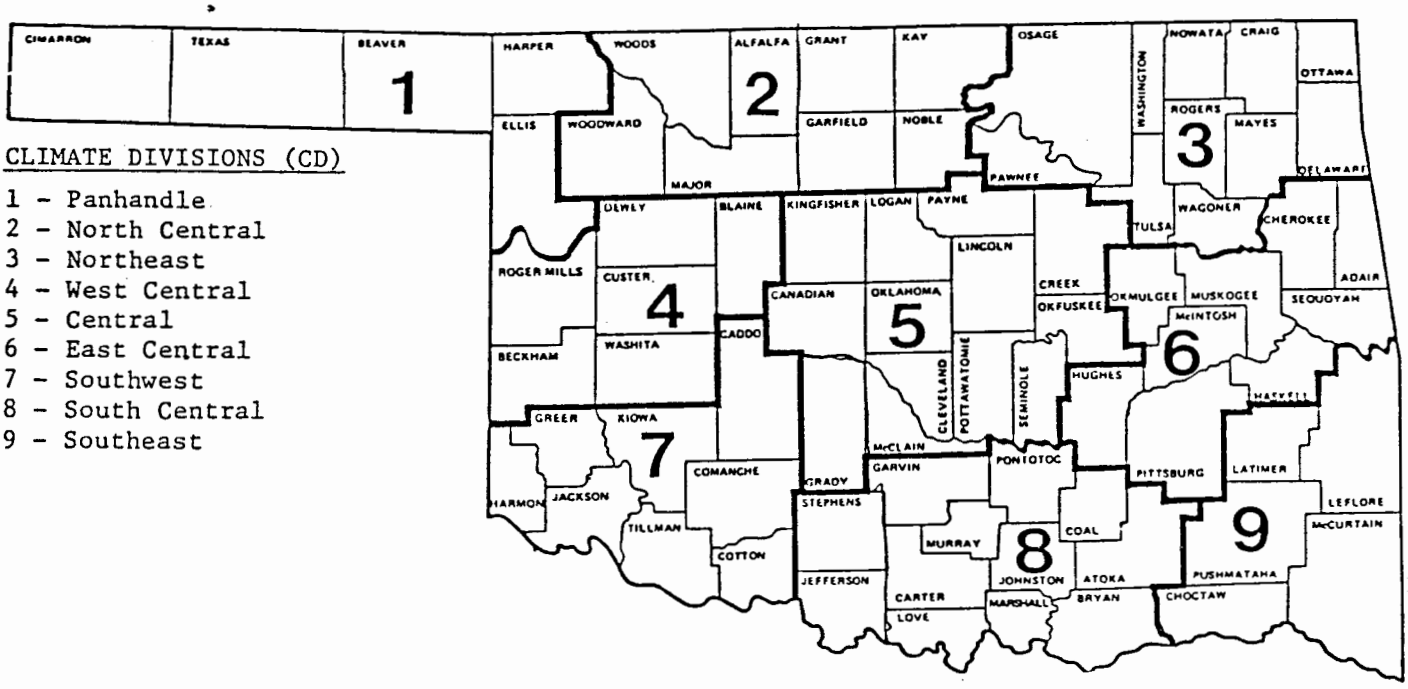
90-DAY NATIONAL WEATHER SERVICE OUTLOOK

(November 1991 - January 1992)

Precipitation - Above Normal Southeast
Near Normal Elsewhere

Temperature - Below 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

December 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
55.0 max		56.0 max		57.0 max		55.0 max		56.0 max		52.0 max		53.0 max	
33.0 min		33.0 min		33.0 min		34.0 min		34.0 min		32.0 min		31.0 min	
.018 ppt		.067 ppt		.024 ppt		.031 ppt		.044 ppt		.020 ppt		.051 ppt	
21 hdd		20 hdd		20 hdd		20 hdd		20 hdd		23 hdd		23 hdd	
0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd	
Highest Max	76-1983	Highest Max	77-1975	Highest Max	74-1975	Highest Max	75-1954	Highest Max	77-1975	Highest Max	77-1939	Highest Max	80-1966
Lowest Max	20-1985	Lowest Max	24-1985	Lowest Max	30-1978	Lowest Max	25-1972	Lowest Max	32-1937	Lowest Max	19-1972	Lowest Max	24-1950
Lowest Min	12-1985	Lowest Min	10-1985	Lowest Min	17-1978	Lowest Min	16-1978	Lowest Min	10-1950	Lowest Min	5-1950	Lowest Min	5-1950
Highest Min	57-1933	Highest Min	56-1951	Highest Min	52-1961	Highest Min	51-1956	Highest Min	59-1980	Highest Min	63-1980	Highest Min	62-1980
Greatest Ppt	.57-1958	Greatest Ppt	1.59-1953	Greatest Ppt	1.39-1947	Greatest Ppt	2.59-1930	Greatest Ppt	1.00-1935	Greatest Ppt	1.99-1926	Greatest Ppt	1.23-1980

Normal 8	Actual	Normal 9	Actual	Normal 10	Actual	Normal 11	Actual	Normal 12	Actual	Normal 13	Actual	Normal 14	Actual
50.0 max		48.0 max		50.0 max		49.0 max		49.0 max		48.0 max		49.0 max	
30.0 min		29.0 min		30.0 min		29.0 min		27.0 min		28.0 min		28.0 min	
.073 ppt		.011 ppt		.079 ppt		.030 ppt		.011 ppt		.053 ppt		.078 ppt	
25 hdd		26 hdd		25 hdd		26 hdd		27 hdd		27 hdd		26 hdd	
0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd	
Highest Max	71-1970	Highest Max	71-1939	Highest Max	72-1939	Highest Max	75-1939	Highest Max	73-1973	Highest Max	77-1948	Highest Max	74-1933
Lowest Max	26-1927	Lowest Max	21-1932	Lowest Max	24-1972	Lowest Max	21-1961	Lowest Max	17-1932	Lowest Max	17-1958	Lowest Max	18-1926
Lowest Min	7-1927	Lowest Min	10-1976	Lowest Min	11-1977	Lowest Min	8-1932	Lowest Min	6-1932	Lowest Min	6-1958	Lowest Min	6-1958
Highest Min	61-1946	Highest Min	56-1946	Highest Min	58-1965	Highest Min	52-1946	Highest Min	47-1984	Highest Min	62-1929	Highest Min	64-1948
Greatest Ppt	1.50-1980	Greatest Ppt	.85-1943	Greatest Ppt	1.06-1960	Greatest Ppt	1.07-1946	Greatest Ppt	1.19-1928	Greatest Ppt	.41-1928	Greatest Ppt	1.52-1984

Normal 15	Actual	Normal 16	Actual	Normal 17	Actual	Normal 18	Actual	Normal 19	Actual	Normal 20	Actual	Normal 21	Actual
48.0 max		51.0 max		51.0 max		50.0 max		50.0 max		50.0 max		49.0 max	
27.0 min		28.0 min		28.0 min		29.0 min		29.0 min		28.0 min		27.0 min	
.066 ppt		.029 ppt		.043 ppt		.032 ppt		.044 ppt		.042 ppt		.028 ppt	
27 hdd		25 hdd		25 hdd		25 hdd		25 hdd		26 hdd		27 hdd	
0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd	
Highest Max	75-1948	Highest Max	73-1939	Highest Max	75-1939	Highest Max	69-1982	Highest Max	75-1978	Highest Max	73-1966	Highest Max	68-1966
Lowest Max	26-1926	Lowest Max	21-1932	Lowest Max	21-1965	Lowest Max	19-1983	Lowest Max	9-1983	Lowest Max	21-1983	Lowest Max	11-1983
Lowest Min	3-1989	Lowest Min	7-1989	Lowest Min	2-1979	Lowest Min	5-1964	Lowest Min	3-1983	Lowest Min	4-1983	Lowest Min	-2-1983
Highest Min	59-1929	Highest Min	56-1929	Highest Min	45-1939	Highest Min	47-1939	Highest Min	54-1978	Highest Min	50-1967	Highest Min	51-1941
Greatest Ppt	.69-1959	Greatest Ppt	.56-1931	Greatest Ppt	1.68-1959	Greatest Ppt	.83-1933	Greatest Ppt	1.10-1987	Greatest Ppt	.43-1972	Greatest Ppt	.83-1942

Normal 22	Actual	Normal 23	Actual	Normal 24	Actual	Normal 25	Actual	Normal 26	Actual	Normal 27	Actual	Normal 28	Actual
52.0 max		51.0 max		49.0 max		48.0 max		50.0 max		50.0 max		48.0 max	
29.0 min		30.0 min		28.0 min		27.0 min		28.0 min		28.0 min		30.0 min	
.028 ppt		.032 ppt		.094 ppt		.029 ppt		.018 ppt		.062 ppt		.065 ppt	
24 hdd		24 hdd		26 hdd		27 hdd		26 hdd		26 hdd		26 hdd	
0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd	
Highest Max	70-1933	Highest Max	70-1955	Highest Max	86-1955	Highest Max	71-1950	Highest Max	68-1968	Highest Max	75-1946	Highest Max	72-1947
Lowest Max	4-1989	Lowest Max	10-1983	Lowest Max	3-1983	Lowest Max	13-1983	Lowest Max	25-1983	Lowest Max	26-1983	Lowest Max	23-1983
Lowest Min	-4-1989	Lowest Min	-8-1989	Lowest Min	0-1983	Lowest Min	-1-1983	Lowest Min	11-1983	Lowest Min	15-1938	Lowest Min	8-1983
Highest Min	47-1979	Highest Min	57-1965	Highest Min	50-1955	Highest Min	49-1936	Highest Min	56-1936	Highest Min	56-1946	Highest Min	56-1984
Greatest Ppt	2.01-1932	Greatest Ppt	1.80-1932	Greatest Ppt	1.34-1965	Greatest Ppt	1.05-1987	Greatest Ppt	1.15-1940	Greatest Ppt	1.06-1927	Greatest Ppt	1.85-1979

Normal 29	Actual	Normal 30	Actual	Normal 31	Actual
48.0 max		46.0 max		46.0 max	
28.0 min		27.0 min		26.0 min	
.034 ppt		.027 ppt		.097 ppt	
26 hdd		28 hdd		29 hdd	
0 cdd		0 cdd		0 cdd	
Highest Max	76-1951	Highest Max	88-1927	Highest Max	79-1951
Lowest Max	20-1983	Lowest Max	14-1990	Lowest Max	17-1978
Lowest Min	3-1983	Lowest Min	3-1990	Lowest Min	1-1927
Highest Min	63-1984	Highest Min	55-1965	Highest Min	55-1965
Greatest Ppt	.23-1972	Greatest Ppt	.30-1974	Greatest Ppt	1.03-1984

DECEMBER AVERAGES

Temperature	:	**39.9°F**
Precipitation	:	**1.36"**
Heating Degree Days	:	**771**
Cooling Degree Days	:	**0**

TULSA CLIMATE CALENDAR

December 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
55.0 max		56.0 max		56.0 max		55.0 max		56.0 max		51.0 max		52.0 max	
34.0 min		34.0 min		33.0 min		34.0 min		34.0 min		31.0 min		31.0 min	
.020 ppt		.030 ppt		.040 ppt		.050 ppt		.070 ppt		.060 ppt		.040 ppt	
20 hdd		20 hdd		20 hdd		20 hdd		20 hdd		24 hdd		24 hdd	
0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd	
Highest Max 77-1950		Highest Max 76-1956		Highest Max 77-1916		Highest Max 77-1906		Highest Max 77-1989		Highest Max 77-1966		Highest Max 80-1965	
Lowest Max 26-1985		Lowest Max 24-1985		Lowest Max 33-1964		Lowest Max 27-1972		Lowest Max 32-1972		Lowest Max 18-1972		Lowest Max 26-1950	
Lowest Min 14-1985		Lowest Min 11-1985		Lowest Min 15-1929		Lowest Min 20-1945		Lowest Min 10-1950		Lowest Min 3-1950		Lowest Min 4-1950	
Highest Min 59-1982		Highest Min 58-1951		Highest Min 49-1962		Highest Min 55-1960		Highest Min 61-1980		Highest Min 64-1980		Highest Min 53-1980	
Greatest Ppt .51-1982		Greatest Ppt .73-1953		Greatest Ppt .84-1973		Greatest Ppt .82-1960		Greatest Ppt 1.11-1975		Greatest Ppt 1.15-1974		Greatest Ppt .77-1980	

Normal 8	Actual	Normal 9	Actual	Normal 10	Actual	Normal 11	Actual	Normal 12	Actual	Normal 13	Actual	Normal 14	Actual
50.0 max		48.0 max		50.0 max		50.0 max		48.0 max		47.0 max		49.0 max	
30.0 min		29.0 min		29.0 min		30.0 min		28.0 min		27.0 min		28.0 min	
.080 ppt		.040 ppt		.200 ppt		.040 ppt		.020 ppt		.070 ppt		.150 ppt	
25 hdd		26 hdd		25 hdd		25 hdd		27 hdd		28 hdd		26 hdd	
0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd	
Highest Max 73-1966		Highest Max 73-1915		Highest Max 73-1929		Highest Max 76-1929		Highest Max 73-1924		Highest Max 80-1948		Highest Max 74-1933	
Lowest Max 24-1978		Lowest Max 23-1977		Lowest Max 23-1972		Lowest Max 29-1976		Lowest Max 20-1962		Lowest Max 22-1958		Lowest Max 25-1963	
Lowest Min -3-1917		Lowest Min 0-1917		Lowest Min 3-1919		Lowest Min 4-1917		Lowest Min 3-1962		Lowest Min 4-1917		Lowest Min 4-1958	
Highest Min 46-1987		Highest Min 46-1984		Highest Min 54-1965		Highest Min 50-1965		Highest Min 43-1977		Highest Min 44-1975		Highest Min 64-1948	
Greatest Ppt 1.01-1956		Greatest Ppt 1.12-1971		Greatest Ppt 1.73-1960		Greatest Ppt .49-1954		Greatest Ppt .33-1972		Greatest Ppt 2.33-1984		Greatest Ppt 3.02-1971	

Normal 15	Actual	Normal 16	Actual	Normal 17	Actual	Normal 18	Actual	Normal 19	Actual	Normal 20	Actual	Normal 21	Actual
48.0 max		50.0 max		50.0 max		49.0 max		50.0 max		49.0 max		48.0 max	
28.0 min		28.0 min		29.0 min		29.0 min		29.0 min		28.0 min		27.0 min	
.040 ppt		.050 ppt		.030 ppt		.040 ppt		.110 ppt		.050 ppt		.030 ppt	
27 hdd		26 hdd		25 hdd		26 hdd		25 hdd		27 hdd		27 hdd	
0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd	
Highest Max 77-1948		Highest Max 77-1908		Highest Max 78-1908		Highest Max 72-1939		Highest Max 70-1967		Highest Max 75-1966		Highest Max 70-1979	
Lowest Max 19-1951		Lowest Max 21-1989		Lowest Max 23-1964		Lowest Max 23-1981		Lowest Max 9-1983		Lowest Max 19-1983		Lowest Max 17-1963	
Lowest Min -1-1989		Lowest Min 3-1989		Lowest Min 2-1932		Lowest Min 4-1964		Lowest Min -1-1924		Lowest Min 3-1924		Lowest Min 0-1989	
Highest Min 47-1957		Highest Min 48-1977		Highest Min 46-1957		Highest Min 44-1978		Highest Min 55-1978		Highest Min 49-1967		Highest Min 44-1979	
Greatest Ppt .64-1984		Greatest Ppt .85-1961		Greatest Ppt 1.05-1990		Greatest Ppt .55-1973		Greatest Ppt 1.90-1987		Greatest Ppt 1.05-1984		Greatest Ppt .47-1949	

Normal 22	Actual	Normal 23	Actual	Normal 24	Actual	Normal 25	Actual	Normal 26	Actual	Normal 27	Actual	Normal 28	Actual
50.0 max		50.0 max		48.0 max		47.0 max		48.0 max		48.0 max		47.0 max	
29.0 min		30.0 min		27.0 min		27.0 min		28.0 min		29.0 min		29.0 min	
.050 ppt		.050 ppt		.140 ppt		.050 ppt		.040 ppt		.120 ppt		.020 ppt	
25 hdd		25 hdd		27 hdd		28 hdd		27 hdd		26 hdd		27 hdd	
0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd	
Highest Max 71-1982		Highest Max 73-1982		Highest Max 80-1955		Highest Max 73-1922		Highest Max 69-1971		Highest Max 77-1946		Highest Max 74-1928	
Lowest Max 7-1983		Lowest Max 9-1983		Lowest Max 5-1983		Lowest Max 12-1983		Lowest Max 23-1983		Lowest Max 29-1983		Lowest Max 25-1983	
Lowest Min -6-1989		Lowest Min -8-1989		Lowest Min -2-1983		Lowest Min -2-1983		Lowest Min 9-1914		Lowest Min 8-1925		Lowest Min 0-1924	
Highest Min 55-1979		Highest Min 60-1982		Highest Min 54-1982		Highest Min 51-1971		Highest Min 54-1971		Highest Min 47-1984		Highest Min 62-1984	
Greatest Ppt 1.51-1966		Greatest Ppt .71-1973		Greatest Ppt 2.80-1965		Greatest Ppt 1.29-1987		Greatest Ppt .97-1987		Greatest Ppt 1.26-1954		Greatest Ppt .30-1954	

Normal 29	Actual	Normal 30	Actual	Normal 31	Actual
49.0 max		46.0 max		46.0 max	
28.0 min		27.0 min		26.0 min	
.070 ppt		.050 ppt		.130 ppt	
26 hdd		28 hdd		29 hdd	
0 cdd		0 cdd		0 cdd	
Highest Max 71-1984		Highest Max 77-1951		Highest Max 78-1951	
Lowest Max 22-1983		Lowest Max 16-1990		Lowest Max 19-1976	
Lowest Min 3-1983		Lowest Min 2-1983		Lowest Min 0-1969	
Highest Min 51-1972		Highest Min 58-1965		Highest Min 54-1965	
Greatest Ppt .88-1990		Greatest Ppt .35-1974		Greatest Ppt 3.27-1984	

DECEMBER AVERAGES

Temperature	:	**39.6°F**
Precipitation	:	**1.98"**
Heating Degree Days	:	**781**
Cooling Degree Days	:	**0**