

# **OKLAHOMA MONTHLY SUMMARY DECEMBER 1990**

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## DECEMBER 1990 OKLAHOMA SUMMARY

The year 1990 ended much as it began, with Oklahoma caught in the midst of a brutal cold snap. The extreme cold late in the month offset a warm beginning, leaving December 1990 as the 15th coolest on record. Preliminary data show an average temperature for December of 36.6 degrees, which was 4.1 degrees below normal. The year was knocked down another notch, from the 19th to the 20th warmest since records began in 1892. Nearly continuous precipitation in the latter half of December brought the state-averaged precipitation total to 1.91 inches. This was 0.4 inch above normal, which was enough to raise the year to the 7th wettest on record. The annual total of 43.50 inches was an incredible 11.04 inches above normal.

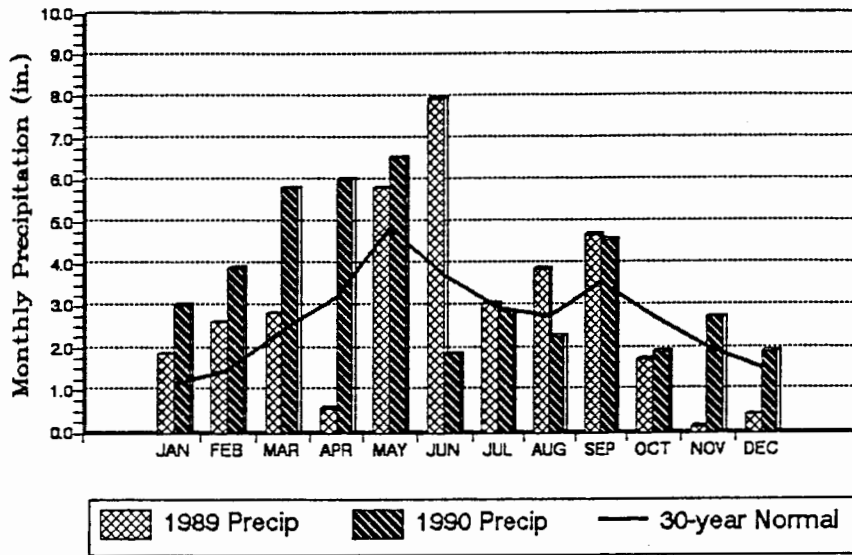
The warmth of late November carried over into the first two weeks of December. Maximum temperatures climbed into the 60's and 70's across much of Oklahoma, with 50's prevailing in northwestern portions. The first of three strong cold fronts passed through the state on the 13th. Maximum temperatures dropped to the 40's, except for the southeast which remained in the 60's. The front also marked a change from the dry conditions of late November and early December. Precipitation was recorded somewhere in the state on every day, except for Christmas Day, from December 12-31. A weak cold front passed through Oklahoma on the 17th. Although temperatures were largely unaffected by the frontal passage, heavy rainfall was recorded at numerous locations. Sub-freezing nighttime temperatures caused water on roadways and bridges to freeze, contributing to several automobile accidents.

December 21 marked the winter solstice - the official start of winter, but winter weather arrived a day early. A powerful cold front ripped through the state on the 20th, dropping maximum temperatures to the single digits and plunging minimum temperatures below zero. Strong winds associated with the front pushed wind-chill indices below -30 degrees across northern Oklahoma. The deep freeze lasted until Christmas Day, with many areas experiencing sub-zero minimum temperatures from Dec 21-25. Readings as low as -8 degrees were recorded at Goodwell on the 22nd and Waynoka on the 24th. Goodwell recorded four consecutive days below zero, from December 21-24. Maximum temperatures did not fare much better. Stillwater struggled to a maximum temperature of 0 degrees on the 23rd. The warmest reading in Oklahoma for the day was 24 degrees recorded at Clinton. Light snow and freezing rain accompanied the front. The cold air and slick roads combined to make travel virtually impossible over most of the state.

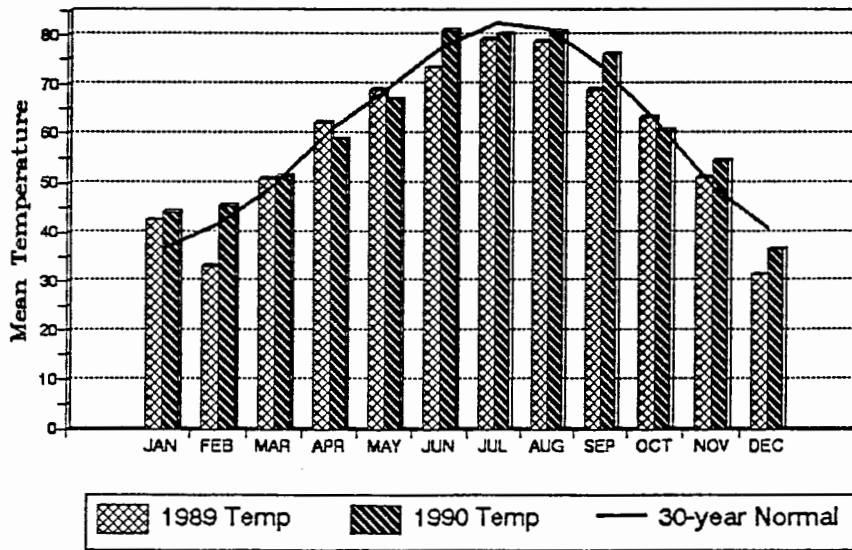
Temperatures moderated briefly after Christmas, as maximum temperatures climbed back into the 30's and 40's. However, minimum temperatures remained in the single digits or teens across most of the state. The higher temperatures did little to alleviate the icy conditions, as any daytime melting quickly re-froze in the evenings. Another front pushed into the state on the 29th, bringing with it rainfall totals in excess of one inch, including the month's heaviest rainfall of 2.74 inches at Tahlequah on the 30th. Much of the rain fell on frozen ground, coating roads, bridges, walkways and yards with a layer of ice. Traffic once again became snarled, and numerous accidents were reported. Behind the front temperatures again fell below zero, including -8 degrees recorded at Enid on the 30th and Goodwell on the 31st.

-Mark A. Shafer

### Comparison of Monthly Precipitation Statewide Average for Oklahoma



### Comparison of Monthly Temperature Statewide Average for Oklahoma



December 1990 percent of normal precipitation.

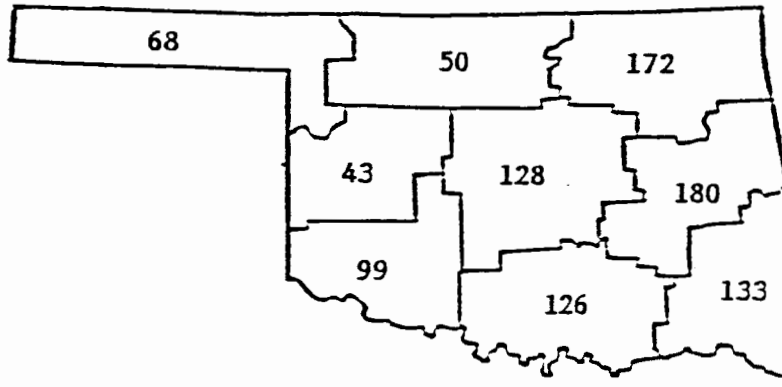


TABLE OF 1989/1990 COMPARISONS

STATION	December Temperatures (F)		December Precipitation (in.)	
	1989	1990	1989	1990
Arnett	28.7	30.7	.23	.25
Enid	30.3	33.8	.12	.43
Mutual	29.3	30.6	.66	.30
Tulsa	32.2	39.3	.26	3.72
Elk City	32.5	36.5	.19	.44
Oklahoma City	33.3	37.1	.32	1.51
McAlester	35.2	40.8	.70	4.26
Altus Irr Sta	34.5	36.8	.06	.85
Durant	34.6	41.0	.46	2.93
Ada	34.8	38.0	.33	2.44
Antlers	35.5	42.1	.30	2.36

EXTREMES

Variable	Station	Division	Observation	Date
Minimum temperature (F)	Kenton	1	-16	23
Maximum temperature (F)	Marietta	8	77	12
Maximum 24-hour precipitation	Tahlequah	6	2.74"	30

DECEMBER 1990 SUMMARY FOR NORTHWEST DIVISION (CD1)

NAME	ID	CD	DEV						HEAT		DEV		COOL		DEV		TOT	NUM	FROM	MAX	24-HR	DAY
			MEAN	NUM	FROM	MAX	MIN	DAY	DEG	FROM	DEG	FROM	DEG	FROM	PPT	OBS						
ARNETT	332	1	30.2	31	-7.0	67.	11	-5.	23	1078.5	216.5	.0	.0	.252	31	-.38	.12	23				
BEAVER	593	1	29.3	31	-6.9	71.	15	-5.	23	1106.0	213.0	.0	.0	.302	31	-.15	.10	16				
BOISE CITY 2 E	908	1	30.3	31	-6.5	70.	11	-11.	22	1076.0	202.0	.0	.0	.357	31	-.04	.20	18				
BUFFALO	1243	1	34.4	31	-4.1	72.	8	-2.	22	948.0	126.0	.0	.0	.612	31	-.08	.40	17				
FARGO	3070	1	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.384	31	-.27	.24	17				
GAGE FAA APT	3407	1	32.3	31	-4.5	69.	8	-5.	23	1014.0	140.0	.0	.0	.250	31	-.39	.21	17				
GATE	3489	1	31.7	31	*****	73.	15	-4.	23	1033.5	*****	.0	*****	.605	31	*****	.32	17				
GOODWELL RES	ST3628	1	30.0	31	-6.7	70.	12	-8.	31	1084.0	207.0	.0	.0	.138	31	-.13	.04	17				
GUYMON	3835	1	31.0	28	*****	70.	10	-7.	22	953.0	*****	.0	*****	.243	29	*****	.12	17				
HOOKER	4298	1	29.8	31	-6.6	69.	15	-7.	22	1090.5	203.5	.0	.0	.217	31	-.17	.12	16				
KENTON	4766	1	29.0	31	-7.9	73.	12	-16.	23	1117.0	246.0	.0	.0	.354	31	.05	.15	17				
LAVERNE	5045	1	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.783	31	.11	.65	17				
OPTIMA LAKE	6740	1	32.0	29	*****	70.	15	-6.	22	957.5	*****	.0	*****	.255	30	*****	.15	17				
RANGE	7412	1	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.407	31	*****	.20	20				
REGNIER	7534	1	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.143	31	-.14	.08	17				
TURPIN 4 SSE	9017	1	31.2	27	*****	70.	15	-5.	24	913.0	*****	.0	*****	.330	27	*****	.24	17				

DECEMBER 1990 SUMMARY FOR NORTH CENTRAL DIVISION (CD2)

NAME	ID	CD	DEV						HEAT		DEV		COOL		DEV		TOT	NUM	FROM	MAX	24-HR	DAY
			MEAN	NUM	FROM	MAX	MIN	DAY	DEG	FROM	DEG	FROM	DEG	FROM	PPT	OBS						
ALVA	193	2	34.4	31	*****	69.	9	-2.	22	950.0	*****	.0	*****	.470	31	*****	.28	17				
VANCE AFB	302	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.626	31	*****	.28	17				
BILLINGS	755	2	33.5	31	*****	69.	12	-3.	31	975.0	*****	.0	*****	.516	31	-.70	.43	17				
BLACKWELL 2E	818	2	33.8	30	*****	67.	9	-3.	22	937.0	*****	.0	*****	.875	31	*****	.38	17				
BRAMAN	1075	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.248	31	*****	.24	17				
CHEROKEE	1724	2	32.6	31	-5.7	66.	9	-6.	30	1003.0	175.0	.0	.0	.100	31	-.77	.10	16				
ENLD	2912	2	34.1	31	-5.2	68.	11	-8.	30	958.5	161.5	.0	.0	.430	31	-.60	.33	17				
FT SUPPLY DAM	3304	2	32.0	31	-6.1	70.	9	-3.	30	1022.0	188.0	.0	.0	.300	31	-.32	.19	17				
FREEDOM	3358	2	32.3	31	*****	71.	8	-5.	24	1015.0	*****	.0	*****	.461	31	*****	.19	16				
GREAT SALT PLNS	3740	2	33.3	31	*****	70.	10	-1.	31	982.0	*****	.0	*****	.293	21	*****	.23	17				
HARDY	3909	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.741	31	*****	.48	16				
HELENA 1 SSE	4019	2	30.5	31	*****	69.	10	-2.	25	1069.5	*****	.0	*****	.464	31	-.48	.23	17				
JEFFERSON	4573	2	33.7	31	-4.6	67.	9	-2.	31	969.0	141.0	.0	.0	.454	31	-.58	.24	16				
LAMONT	5013	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.643	31	*****	.40	17				
MEDFORD	5768	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.472	31	*****	.25	16				
MORRISON	6065	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.890	31	*****	.56	17				
MUTUAL	6139	2	31.4	31	-6.4	70.	9	-3.	23	1041.5	198.5	.0	.0	.302	31	-.36	.10	21				
NEWKIRK	6278	2	34.2	31	-3.4	68.	9	-2.	30	953.5	104.5	.0	.0	.175	31	-1.05	.10	17				
ORIENTA	6751	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.520	31	*****	.22	17				
PERRY	7012	2	38.9	22	*****	71.	8	2.	22	575.0	*****	.0	*****	.501	25	*****	.41	17				
PONCA CITY FAA	7201	2	35.0	31	-1.7	70.	9	2.	31	931.0	54.0	.0	.0	.933	31	-.34	.32	17				
RED ROCK 1 NNE	7505	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.703	31	-.59	.62	17				
RENFROW	7556	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.510	31	-.48	.31	16				
WAYNOKA	9404	2	32.3	31	-6.3	71.	8	-8.	24	1014.0	196.0	.0	.0	.300	31	-.47	.22	17				
WOODWARD	9760	2	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.357	31	*****	.18	17				

DECEMBER 1990 SUMMARY FOR NORTHEAST DIVISION (CD3)

NAME	ID	CD	DEV						HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV			
			MEAN TEMP	NUM OBS	FROM NORM	MAX TEMP	MIN TEMP	DAY							FROM	MAX		
BARNSDALL	535	3	35.2	31	*****	70.	9	0.	31	925.0	*****	.0	*****	1.787	29	*****	.50	18
BARTLESVILLE 2W	548	3	36.0	31	-3.0	70.	9	1.	31	900.5	94.5	.0	.0	1.504	31	.02	.57	18
BIXBY	782	3	36.7	31	-3.6	70.	13	5.	31	876.5	110.5	.0	.0	3.060	31	1.23	1.47	18
BURBANK	1256	3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.597	31	*****	.41	17
CHELSEA 4 S	1717	3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.590	31	*****	1.01	18
CLAREMORE	1828	3	36.3	31	-2.7	69.	13	0.	25	888.5	82.5	.0	.0	3.774	31	1.92	.93	18
CLEVELAND 5 WSW	1902	3	38.9	28	*****	71.	9	0.	31	732.0	*****	.0	*****	1.241	31	*****	1.03	18
FORAKER	3250	3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.692	31	-.65	.66	17
HOMINY	4289	3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.605	31	.33	.66	18
JAY TOWER	4567	3	46.0	20	*****	68.	13	6.	21	381.0	*****	.0	*****	4.330	20	*****	2.40	17
KANSAS 1 ESE	4672	3	37.2	31	*****	68.	12	2.	24	861.5	*****	.0	*****	6.264	31	*****	1.72	30
KEYSTONE DAM	4812	3	36.2	31	*****	71.	10	0.	30	893.5	*****	.0	*****	2.914	21	*****	1.19	17
LENAPAH	5118	3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.250	30	*****	.70	17
MANNFORD 6 NW	5522	3	37.6	31	*****	73.	10	0.	31	850.5	*****	.0	*****	2.140	31	.72	.60	3
MARAMEC	5540	3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.194	30	*****	.42	17
MIAMI	5855	3	35.0	27	*****	66.	11	2.	24	811.0	*****	.0	*****	3.020	31	.87	1.32	18
NOWATA	6485	3	35.4	31	-3.6	67.	12	1.	30	919.0	113.0	.0	.0	1.772	26	*****	1.10	17
ONETA 1 WNW	6713	3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.623	31	*****	.91	30
PAWHUSKA	6935	3	35.2	31	-3.5	70.	9	-2.	31	923.5	108.5	.0	.0	1.026	31	-.32	.50	17
PAWNEE	6940	3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.021	31	-.23	.52	17
PRYOR 6 N	7309	3	35.2	31	-4.2	68.	13	0.	24	923.0	129.0	.0	.0	4.506	31	2.47	1.04	30
RALSTON	7390	3	36.4	31	*****	73.	9	-1.	31	885.5	*****	.0	*****	.994	31	-.37	.40	18
RAMONA 4 N	7394	3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.620	31	*****	.88	30
SKIATOOK	8258	3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.190	31	.74	.99	18
SPAVINAW	8380	3	40.5	30	*****	69.	12	4.	30	733.5	*****	.0	*****	5.776	30	*****	1.63	30
TULSA WSO APT	8992	3	39.3	31	-.5	70.	12	6.	30	795.5	14.5	.0	.0	3.725	31	1.90	.89	29
UPPER SPAVINAW	9101	3	39.2	29	*****	69.	12	4.	30	749.5	*****	.0	*****	7.084	31	*****	1.90	18
VINITA 2 N	9203	3	36.6	31	-2.3	67.	12	3.	30	880.0	71.0	.0	.0	3.730	31	1.59	.89	30
WAGONER	9247	3	39.3	31	-2.1	72.	12	5.	30	796.0	64.0	.0	.0	3.833	31	1.77	1.39	30
WANN	9298	3	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.472	31	*****	.46	18
WYNONA	9792	3	37.0	31	*****	70.	12	2.	30	867.5	*****	.0	*****	2.810	31	*****	1.90	17

DECEMBER 1990 SUMMARY FOR WEST CENTRAL DIVISION (CD4)

NAME	ID	CD	DEV						HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV			
			MEAN TEMP	NUM OBS	FROM NORM	MAX TEMP	MIN TEMP	DAY							FROM	MAX		
CANTON DAM	1445	4	34.1	20	*****	68.	10	-2.	24	618.0	*****	.0	*****	.321	20	*****	.25	17
CHEYENNE	1738	4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.000	31	*****	.00	31
CLINTON	1909	4	36.0	31	-3.9	68.	8	-4.	22	898.5	120.5	.0	.0	.240	31	-.67	.15	16
COLONY	2039	4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.492	31	*****	.25	15
CORDELL	2125	4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.403	31	-.51	.30	16
ELK CITY 1 E	2849	4	35.7	29	*****	66.	8	0.	22	849.0	*****	.0	*****	.440	29	*****	.17	16
ERICK 4 E	2944	4	34.5	31	-5.8	68.	10	-2.	23	945.0	179.0	.0	.0	.522	31	-.16	.22	16
GEARY	3497	4	35.1	31	-5.1	66.	8	2.	31	926.0	157.0	.0	.0	.330	31	-.69	.33	16
HAMMON 1 NNE	3871	4	31.4	31	-7.6	67.	11	-2.	24	1041.5	235.5	.0	.0	.140	31	-.57	.06	16
LEEDEY	5090	4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.100	31	-.59	.06	23
MACKIE 4 NNW	5463	4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.310	31	*****	.12	16
MORAVIA 2 NNE	6035	4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.423	31	-.38	.29	16
OKEENE	6629	4	34.6	31	-5.7	70.	9	0.	31	942.5	176.5	.0	.0	.500	31	-.36	.40	17
RETROP	7565	4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.410	31	*****	.28	16
REYDON	7579	4	34.5	31	*****	69.	10	-3.	23	945.0	*****	.0	*****	.175	31	-.44	.17	16
SAYRE	7952	4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.532	31	-.07	.20	14
TALOGA	8708	4	32.2	31	-6.5	67.	8	-3.	24	1018.0	203.0	.0	.0	.254	31	-.38	.18	17
THOMAS	8815	4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.200	31	*****	.11	17
VICI	9172	4	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.252	31	*****	.10	23
WATONGA	9364	4	35.5	31	*****	69.	9	4.	22	915.0	*****	.0	*****	.218	31	-.78	.10	17
WEATHERFORD	9422	4	33.3	31	-6.9	69.	9	0.	23	982.5	213.5	.0	.0	.313	31	-.55	.18	16

DECEMBER 1990 SUMMARY FOR CENTRAL DIVISION (CD5)

NAME	ID	CD	DEV						HEAT		DEV		COOL		DEV		TOT	NUM	FROM	MAX	24-HR	DAY
			MEAN	NUM	FROM	MAX	MIN	DAY	DEG	FROM	DEG	FROM	DEG	FROM	PPT	OBS						
AMBER	200	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.360	31	*****	.58	17				
ARCADIA	288	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.360	31	*****	.50	17				
TINKER AFB	325	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.033	31	*****	.96	18				
BLANCHARD 2 SSW	830	5	37.3	31	*****	68.	9	2.	23	857.5	*****	.0	*****	1.682	31	*****	.67	18				
BRISTOW	1144	5	37.5	31	-3.3	70.	9	3.	31	852.0	102.0	.0	.0	2.932	31	1.34	1.10	18				
CHANDLER	1684	5	37.5	31	-4.0	70.	10	2.	31	853.5	124.5	.0	.0	1.812	31	.42	.98	17				
CHICKASHA EX ST1750	5	5	36.3	31	-5.3	68.	9	2.	23	890.0	165.0	.0	.0	1.580	31	.50	.57	17				
COX CITY 1 E	2196	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.193	31	*****	.44	17				
CRESCENT	2242	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.830	31	*****	.53	17				
CUSHING	2318	5	35.8	31	-3.7	70.	11	1.	31	905.0	114.0	.0	.0	1.252	29	*****	.60	17				
EL RENO 1 N	2818	5	35.5	31	-4.6	67.	9	2.	31	914.0	142.0	.0	.0	.820	31	-.21	.44	17				
GUTHRIE	3821	5	37.7	31	-2.3	72.	9	1.	31	846.0	71.0	.0	.0	2.105	31	.90	.80	17				
HENNESSEY 2 SE	4055	5	34.1	31	-5.2	67.	9	-1.	31	958.5	161.5	.0	.0	.560	31	-.43	.43	17				
INGALLS	4489	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.416	31	*****	.24	17				
KINGFISHER 2 SE4861	5	5	35.2	31	-4.7	69.	9	1.	31	922.5	144.5	.0	.0	.530	31	-.60	.26	17				
KONAWA	4915	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.343	31	.48	.90	17				
MARSHALL	5589	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.650	31	-.49	.46	17				
MEEKER 4 W	5779	5	37.3	31	-3.5	69.	10	2.	31	858.0	108.0	.0	.0	1.340	31	-.09	.52	17				
MULHALL	6110	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.730	31	*****	.45	17				
NORMAN 3 S	6386	5	37.3	30	*****	69.	9	3.	31	832.0	*****	.0	*****	2.613	31	1.26	.88	18				
OILTON 2 SE	6616	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.430	31	*****	.59	17				
OKEMAH	6638	5	38.3	31	-3.7	70.	12	4.	30	828.0	115.0	.0	.0	3.131	31	1.30	1.10	30				
OKLAHOMA CITY WS6661	5	5	37.1	31	-2.8	68.	9	3.	23	865.5	87.5	.0	.0	1.513	31	.31	.82	18				
PERKINS	7003	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.080	31	-.27	.61	18				
PIEDMONT	7068	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.810	31	*****	.33	17				
PRAGUE	7264	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.480	28	*****	.74	31				
PURCELL 5 SW	7327	5	37.0	31	-4.0	69.	9	4.	31	868.0	124.0	.0	.0	3.102	31	1.64	.85	18				
SEMINOLE	8042	5	39.3	31	-3.7	71.	12	6.	31	797.5	115.5	.0	.0	2.130	31	.35	1.35	18				
SHAWNEE	8110	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.441	31	.91	.82	17				
STELLA	8479	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.030	31	*****	.66	30				
STILLWATER 2 W	8501	5	36.1	31	-3.7	75.	10	-3.	23	896.5	115.5	.0	.0	.993	31	-.23	.70	17				
STROUD 1 N	8563	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.671	31	*****	.87	18				
TECUMSEH	8751	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.350	31	*****	1.18	18				
TROUSDALE	8960	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.860	31	*****	.71	17				
UNION CITY 1 SE9086	5	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.031	31	-.31	.48	17				
WELTY 1 SSE	9479	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.153	31	*****	.85	30				
WENOKA	9575	5	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.850	31	1.07	.87	16				

DECEMBER 1990 SUMMARY FOR EAST CENTRAL DIVISION (CD6)

NAME	ID	CD	DEV						MIN	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	DEV NUM OBS	DEV FROM NORM	DEV MAX	24-HR DAY
			MEAN TEMP	NUM OBS	FROM NORM	MAX TEMP	DAY	DAY										
ASHLAND	364	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.513	31	*****	.86	3
BEGGS	631	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.501	31	*****	1.05	18
BOYNTON	1027	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.743	31	*****	.97	30
CALVIN	1391	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.272	31	1.31	1.62	29
CHECOTAH	1711	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.425	31	2.31	1.80	30
CLAYTON 11 WNW	1858	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.650	31	*****	1.20	17
DEWAR 2 NE	2485	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.050	31	1.18	.77	17
DUSTIN	2690	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.600	31	*****	.98	17
EUFULA	2993	6	41.0	31	*****	72.	12	8.	23	745.0	*****	.0	*****	3.484	31	1.04	1.25	30
HANNA	3884	6	38.7	31	*****	71.	12	5.	31	816.0	*****	.0	*****	3.570	31	1.47	1.37	30
HARTSHORNE	3946	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.101	31	*****	1.41	30
HASKELL	3956	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.851	31	1.88	1.32	30
HOLDENVILLE	4235	6	41.1	25	*****	71.	12	6.	23	597.0	*****	.0	*****	2.770	25	*****	1.13	25
LAKE EUFAULA	4975	6	40.4	31	*****	74.	13	7.	23	761.5	*****	.0	*****	3.085	30	*****	1.20	3
LYONS 2 N	5437	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.711	31	3.71	1.19	2
MARBLE CITY	5546	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.341	31	*****	1.68	3
MCALESTER FAA	5664	6	40.8	31	-1.2	73.	12	7.	24	750.5	37.5	.0	.0	4.262	31	1.88	1.03	30
MCCURTAIN 1 SE	5693	6	41.5	31	*****	73.	12	9.	31	729.5	*****	.0	*****	4.100	31	1.46	1.10	3
MUSKOGEE	6130	6	37.7	31	-4.0	70.	12	5.	30	846.5	124.5	.0	.0	4.100	31	1.86	1.12	29
OKMULGEE W W	6670	6	37.7	31	-4.2	70.	13	5.	31	847.0	131.0	.0	.0	2.183	31	.13	1.04	18
OKTAHA 2 NE	6678	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.465	31	*****	.95	3
QUINTON	7372	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.335	31	1.98	1.38	3
SALLISAW 2 NE	7862	6	39.0	31	-3.2	71.	12	9.	31	807.0	100.0	.0	.0	3.891	31	1.42	1.35	3
SCIPIO	7979	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.630	31	*****	.80	30
SCRAPER	7993	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	6.850	31	*****	1.70	30
SHORT	8170	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.071	31	*****	1.47	3
STILWELL 1 NE	8506	6	39.2	31	*****	69.	12	6.	31	800.5	*****	.0	*****	5.553	31	2.84	1.41	30
TAHLEQUAH	8677	6	38.5	31	-2.3	71.	12	2.	31	823.0	73.0	.0	.0	6.122	31	3.66	2.74	30
WEBBERS FALLS	9445	6	38.8	31	-1.6	72.	13	7.	31	813.5	50.5	.0	.0	4.371	31	2.08	1.39	3
WESTVILLE	9523	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.760	31	*****	1.43	3
WETUMKA 3 NE	9571	6	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.526	31	.64	.85	17

DECEMBER 1990 FOR SUMMARY FOR SOUTHWEST DIVISION (CD7)

NAME	ID	CD	DEV						MIN	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	DEV NUM OBS	DEV FROM NORM	DEV MAX	24-HR DAY
			MEAN TEMP	NUM OBS	FROM NORM	MAX TEMP	DAY	DAY										
ALTUS IRR STA	179	7	36.8	31	-6.0	69.	11	4.	22	874.5	186.5	.0	.0	.850	31	-.02	.46	16
ALTUS DAM	184	7	35.4	31	*****	69.	10	4.	23	916.5	*****	.0	*****	.510	31	-.34	.38	16
ANADARKO	224	7	34.5	30	-6.7	68.	9	0.	31	915.0	177.0	.0	.0	1.501	31	.31	.78	17
APACHE	260	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.600	31	*****	.82	18
ALTUS AFB	447	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.782	30	*****	.37	17
CARNEGIE 2 ENE	1504	7	35.6	31	-5.5	70.	9	1.	31	911.5	170.5	.0	.0	.761	29	*****	.60	17
CHATTANOOGA	1706	7	36.6	30	-5.8	69.	11	5.	24	852.0	151.0	.0	.0	1.102	30	*****	.32	17
DUNCAN 12 W	2668	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.314	31	*****	.50	17
FREDERICK	3353	7	34.3	31	-9.5	69.	11	3.	22	952.5	295.5	.0	.0	.950	31	-.07	.45	16
GRANDFIELD 4 NW3709	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.130	31	-.12	.38	16	
HOBART FAA APT	4204	7	36.4	30	-3.5	66.	12	3.	22	857.5	79.5	.0	.0	.754	31	-.06	.35	17
HOLLIS	4249	7	36.1	31	-6.1	71.	9	3.	23	897.0	190.0	.0	.0	.490	31	-.24	.39	16
LAWTON	5063	7	35.6	31	-6.6	69.	10	3.	22	910.5	203.5	.0	.0	2.281	31	1.06	1.14	31
FORT SILL	5068	7	37.3	31	*****	69.	11	5.	22	859.5	*****	.0	*****	1.047	31	-.17	.44	29
LOOKEBA 2 ENE	5329	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.670	31	*****	.33	17
MANGUM RES STA	5509	7	35.6	31	-6.3	70.	9	3.	23	912.0	196.0	.0	.0	.800	31	.04	.75	17
RANDLETT 9 E	7403	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.850	31	*****	.50	16
ROOSEVELT	7727	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.820	31	-.15	.42	16
SEDAN	8016	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.962	31	*****	.36	17
VINSON 3 WNW	9212	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.443	31	-.34	.20	16
WALTERS	9278	7	38.2	31	-5.3	70.	11	5.	24	832.0	165.0	.0	.0	1.131	31	-.29	.59	16
WICHITA MT WLR	9629	7	34.7	31	-6.5	66.	13	1.	24	938.0	200.0	.0	.0	1.470	31	.35	1.02	17
WILLOW	9668	7	*****	0	*****	****	0	****	0	*****	*****	*****	*****	.471	31	*****	.30	16



DECEMBER 1990 SUMMARY FOR SOUTH CENTRAL DIVISION (CD8)

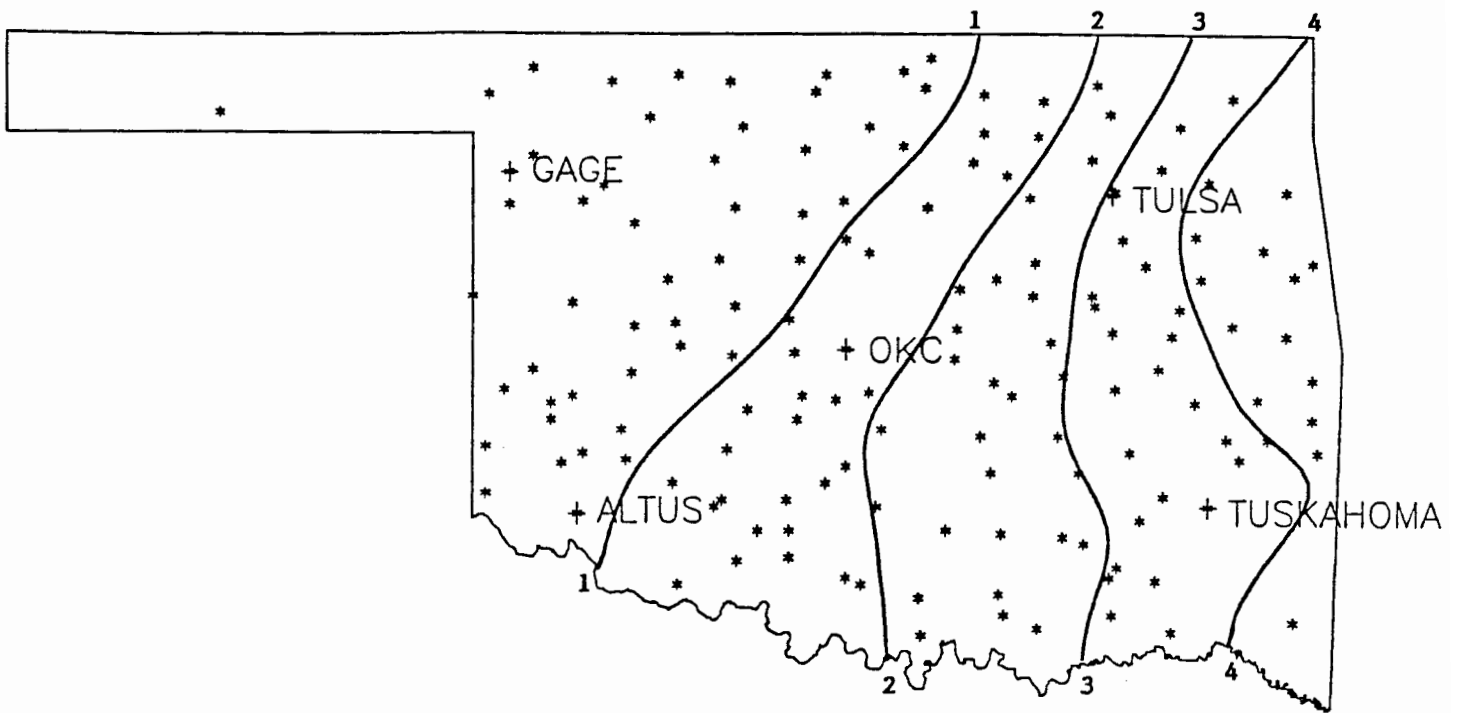
NAME	ID CD	DEV							HEAT		DEV		COOL		DEV		TOT PPT	NUM OBS	FROM NORM	MAX	24-HR DAY
		MEAN TEMP	NUM OBS	FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	DEG DAY	FROM NORM	DEG DAY	FROM NORM	DEG DAY	FROM NORM							
ADA	17 8	38.0	31	-5.5	71.	12	4.	23	838.0	171.0	.0	.0	2.440	31	.50	.77	17				
ALLEN	147 8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.350	31	*****	.80	17				
ARDMORE	292 8	40.1	31	-6.1	74.	12	5.	24	771.0	188.0	.0	.0	2.220	31	.51	.78	29				
ATOKA DAM	394 8	40.9	31	*****	75.	13	10.	31	747.5	*****	.0	*****	2.372	31	*****	.66	17				
BOKCHITO	917 8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.200	31	*****	1.25	18				
CENTRAHOMA	1648 8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.000	31	*****	.70	28				
CHICKASAW NRA	1745 8	38.8	31	*****	74.	13	5.	31	812.0	*****	.0	*****	2.520	31	*****	.82	17				
COLEMAN	2011 8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.650	31	*****	.60	16				
COMANCHE	2054 8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.680	31	*****	.90	17				
DAISY 4 ENE	2354 8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.723	31	.06	.70	18				
DUNCAN	2660 8	37.3	31	-6.4	69.	12	4.	23	859.5	199.5	.0	.0	1.880	31	.53	.45	17				
DURANT USDA	2678 8	40.8	31	*****	76.	13	8.	31	749.5	*****	.0	*****	2.930	31	.75	.83	17				
ELMORE CITY	2872 8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.653	31	*****	.82	30				
FARRIS 3 WNW	3083 8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.970	31	*****	.81	18				
GRADY	3688 8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.750	31	*****	.44	17				
HEALDTON	4001 8	39.0	31	*****	73.	12	5.	23	806.5	*****	.0	*****	2.071	31	.46	.47	16				
HENNEPIN	4052 8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.720	31	*****	.83	17				
KEICHUM RANCH	4780 8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.260	31	*****	.88	29				
KINGSTON	4865 8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.420	31	.41	.48	16				
LEHIGH	5108 8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.636	31	*****	.83	30				
LINDSAY 2 W	5216 8	37.0	31	*****	67.	12	4.	23	867.0	*****	.0	*****	2.134	31	.66	.60	17				
LOCO 6 SE	5247 8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.892	31	*****	.50	16				
MADILL	5468 8	40.8	31	-4.0	75.	12	8.	23	749.5	123.5	.0	.0	1.850	31	-.12	.69	15				
MARIETTA	5563 8	40.8	31	-4.0	77.	12	7.	23	750.0	124.0	.0	.0	1.621	31	-.08	.45	16				
MARLOW 1 WSW	5581 8	37.9	31	*****	69.	11	3.	31	841.5	*****	.0	*****	1.530	31	.17	.41	30				
MCGEE CREEK DAM	5713 8	40.6	31	*****	75.	13	8.	31	757.0	*****	.0	*****	3.050	31	*****	.74	18				
PAULS VALLEY	6926 8	38.0	31	-4.8	71.	12	5.	31	836.5	148.5	.0	.0	1.703	31	-.01	.70	17				
PONOTOC	7214 8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.700	31	.83	.74	29				
TISHOMINGO NWLR	8884 8	39.7	30	*****	75.	12	7.	22	760.0	*****	.0	*****	2.680	31	.60	1.06	30				
TUSSY	9032 8	*****	0	*****	****	0	****	0	*****	*****	*****	*****	1.962	31	*****	.78	16				
WAURIKA	9395 8	39.6	31	-5.0	72.	12	6.	23	787.5	155.5	.0	.0	1.370	31	-.11	.41	16				

DECEMBER 1990 SUMMARY FOR SOUTHEAST DIVISION (CD9)

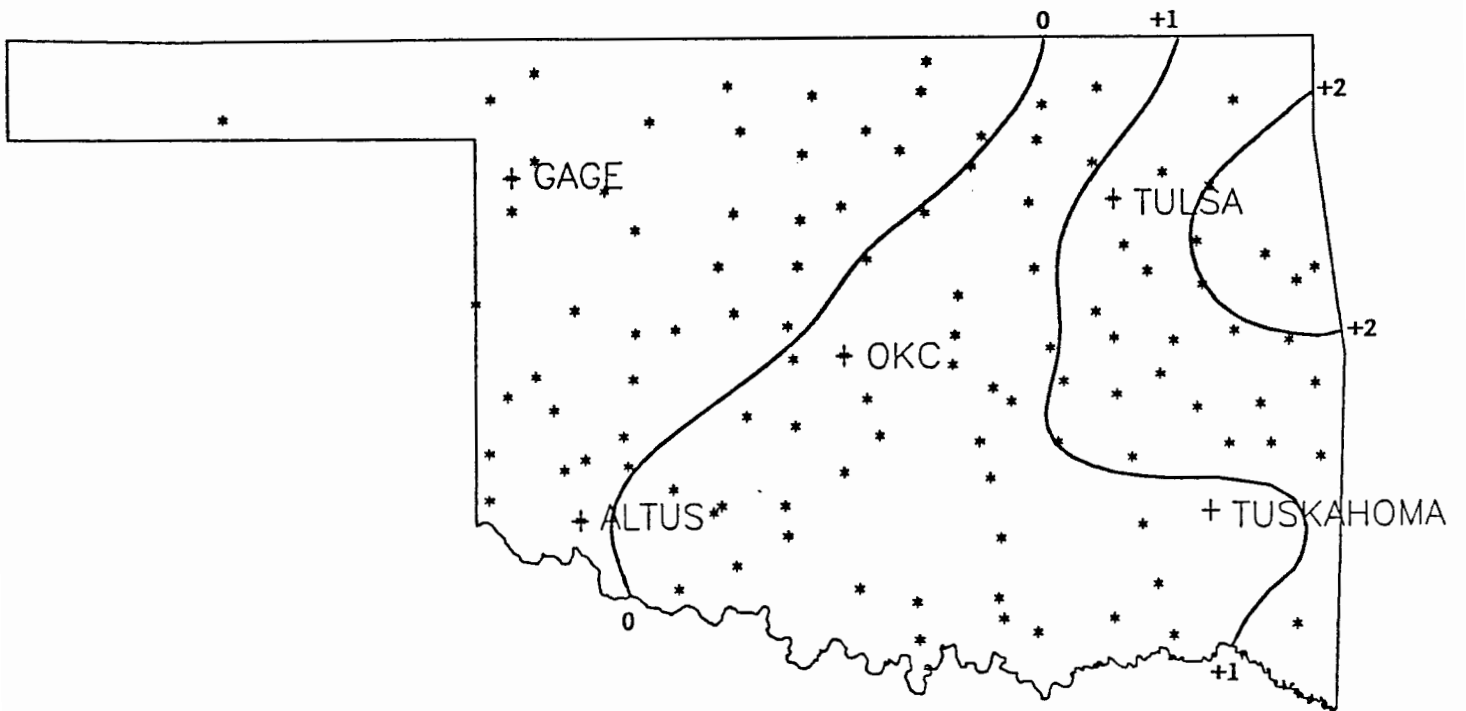
NAME	ID CD	DEV							HEAT		DEV		COOL		DEV		TOT PPT	NUM OBS	FROM NORM	MAX	24-HR DAY
		MEAN TEMP	NUM OBS	FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	DEG DAY	FROM NORM	DEG DAY	FROM NORM	DEG DAY	FROM NORM							
ANTILERS	256 9	42.1	31	-1.6	76.	22	8.	24	709.5	49.5	.0	.0	2.360	31	-.66	.49	17				
BATTIEST 1 SSW	567 9	39.5	30	*****	71.	11	4.	23	764.0	*****	.0	*****	4.110	29	*****	.90	3				
BENGAL	670 9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.661	31	*****	.97	18				
BOSWELL 4 NNW	980 9	43.7	31	*****	76.	12	9.	31	660.0	*****	.5	*****	3.710	31	1.07	.91	17				
BROKEN BOW 1 N	1162 9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.740	31	1.92	1.10	21				
BROKEN BOW DAM	1168 9	41.0	31	*****	75.	13	8.	25	743.0	*****	.0	*****	5.220	31	*****	1.03	21				
CARNASAW TWR	1499 9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.580	31	1.68	1.18	21				
CARTER TWR	1544 9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.260	31	1.35	1.10	3				
FANSHAW	3065 9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.800	31	1.86	1.00	18				
FLAGPOLE TWR	3169 9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	3.860	31	*****	1.12	31				
HEAVENER 1 SE	4008 9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	2.811	31	-.41	.75	18				
HEE MT TWR	4017 9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.613	31	*****	.90	3				
HUGO	4384 9	42.5	31	-3.2	75.	12	9.	24	696.5	98.5	.0	.0	4.090	31	1.01	.95	3				
JADIE TOWER	4560 9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	7.200	31	*****	1.93	2				
POTEAU W W	7254 9	39.7	31	*****	73.	13	8.	31	784.5	*****	.0	*****	4.783	31	*****	.94	18				
SMITHVILLE 1 W	8285 9	39.0	31	*****	73.	12	4.	24	807.0	*****	.0	*****	3.932	31	*****	.88	3				
SOBAL TOWER	8305 9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.010	31	.49	.86	17				
SPIRO	8416 9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	4.350	31	1.56	.97	18				
TUSKAHOMA	9023 9	41.9	31	*****	75.	12	4.	24	717.5	*****	1.0	*****	3.842	31	*****	.88	18				
VALLIANT 3 W	9118 9	*****	0	*****	****	0	****	0	*****	*****	*****	*****	5.050	31	1.45	1.27	3				
WILBURTON 9 ENE	9634 9	40.3	31	-2.6	73.	12	6.	31	764.5	79.5	.0	.0	3.452	31	.58	1.05	17				

DECEMBER 1990 CLIMATE DIVISION SUMMARY

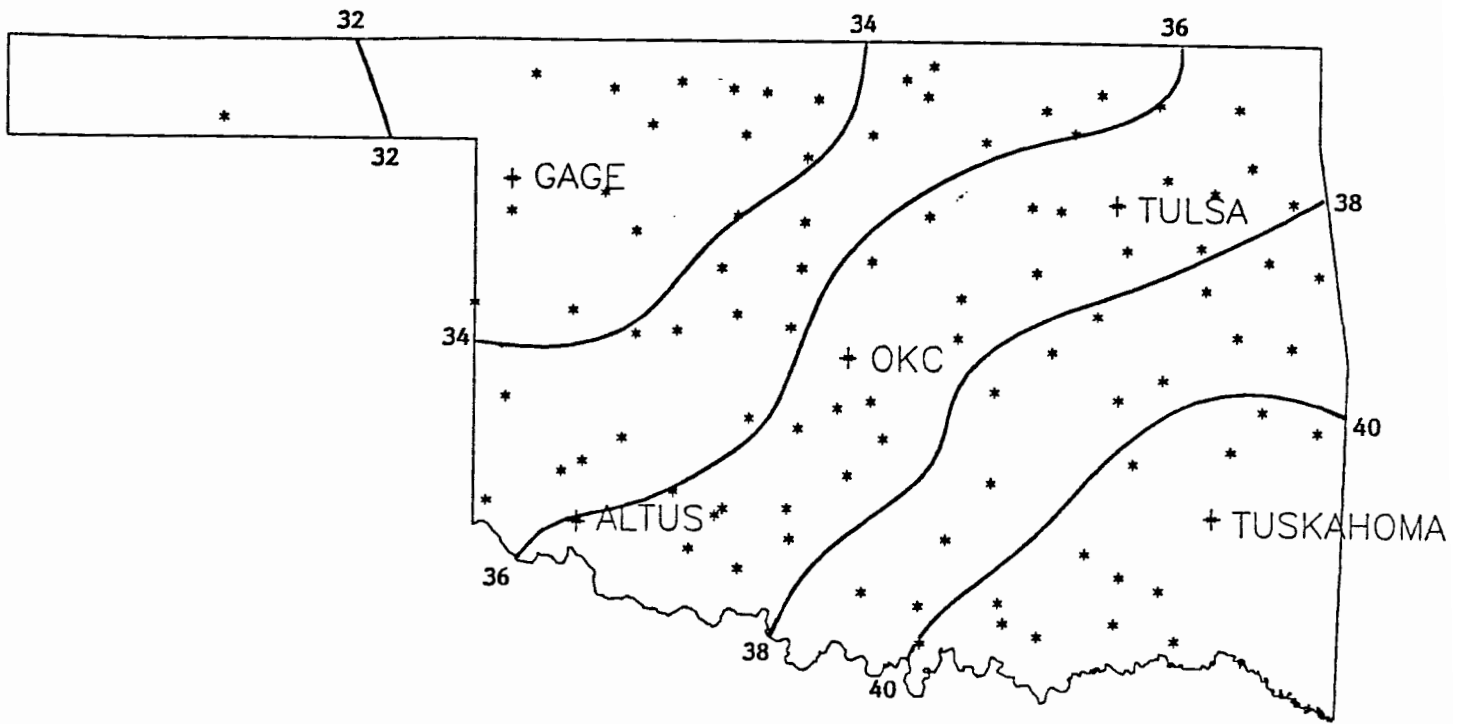
CLIMATE DIV	MEAN TEMP	NUM STA	DEV			HEAT			DEV	COOL		DEV		DEV		
			FROM NORM	MAX TEMP	MIN DAY TEMP	DEGREE DAY	DEGREE DAYS	FROM NORM	DEGREE DAYS	FROM NORM	TOT PPT	NUM STA	FROM NORM	MAX 24-HR DAY		
1	30.8	9	-6.2	73.0	12	-16.0	23	1060.8	190.8	.0	.0	.37	13	-.12	.65	17
2	33.1	14	-5.3	71.0	8	-8.0	24	987.2	160.9	.0	.0	.50	23	-.49	.62	17
3	36.9	16	-2.6	73.0	9	-2.0	31	870.0	78.5	.0	.0	2.76	24	1.10	2.40	17
4	34.1	9	-5.6	70.0	9	-4.0	22	957.1	174.6	.0	.0	.31	19	-.48	.40	17
5	36.8	16	-3.8	75.0	10	-3.0	23	871.5	116.9	.0	.0	1.70	35	.31	1.35	18
6	39.4	11	-2.3	74.0	13	2.0	31	794.5	72.3	.0	.0	4.04	29	1.83	2.74	30
7	35.9	13	-6.1	71.0	9	.0	31	894.5	182.0	.0	.0	1.00	20	-.02	1.14	31
8	39.3	15	-5.1	77.0	12	3.0	31	795.5	155.2	.0	.0	2.22	31	.42	1.25	18
9	41.1	9	-3.0	76.0	12	4.0	24	738.5	90.8	.2	.2	4.47	20	1.19	1.93	2



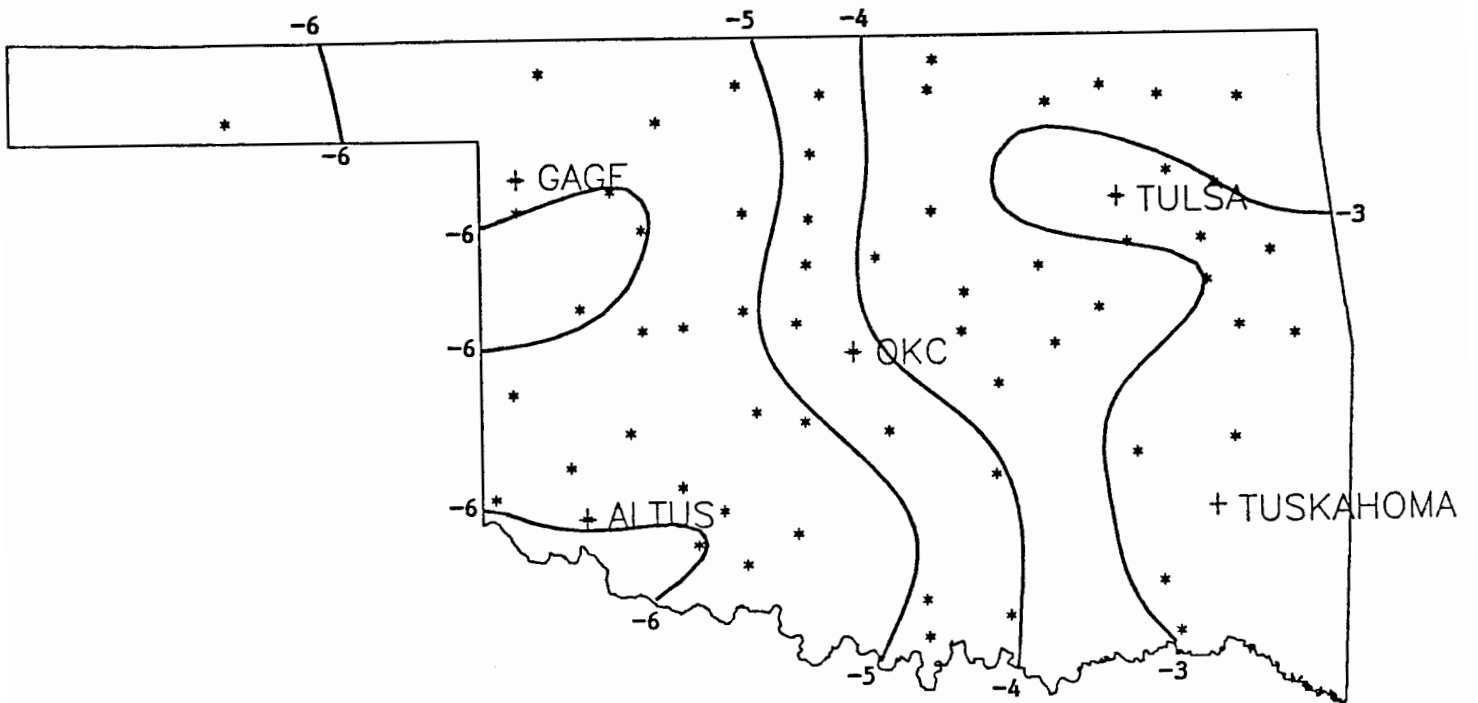
DECEMBER 1990 TOTAL PRECIPITATION  
(Inches)



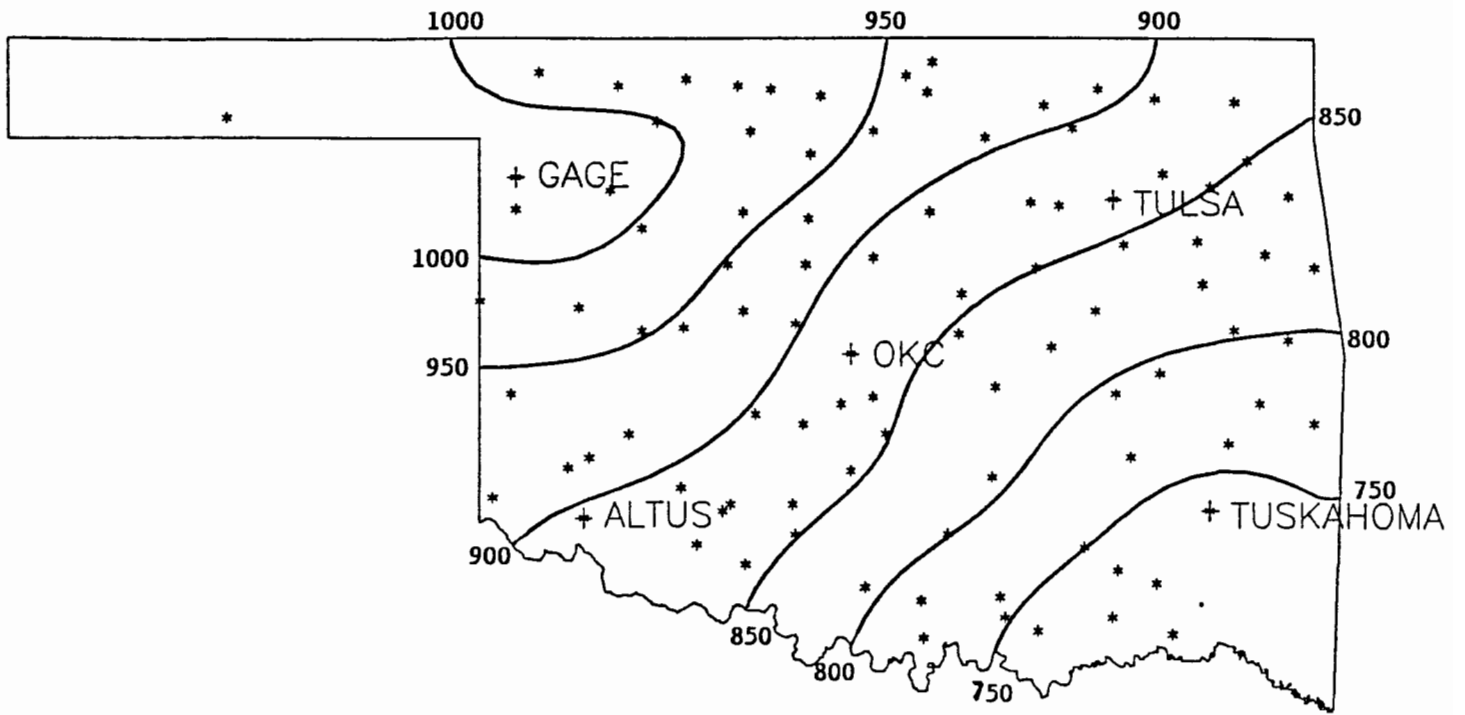
DECEMBER 1990 DEVIATION FROM NORMAL PRECIPITATION  
(Inches)



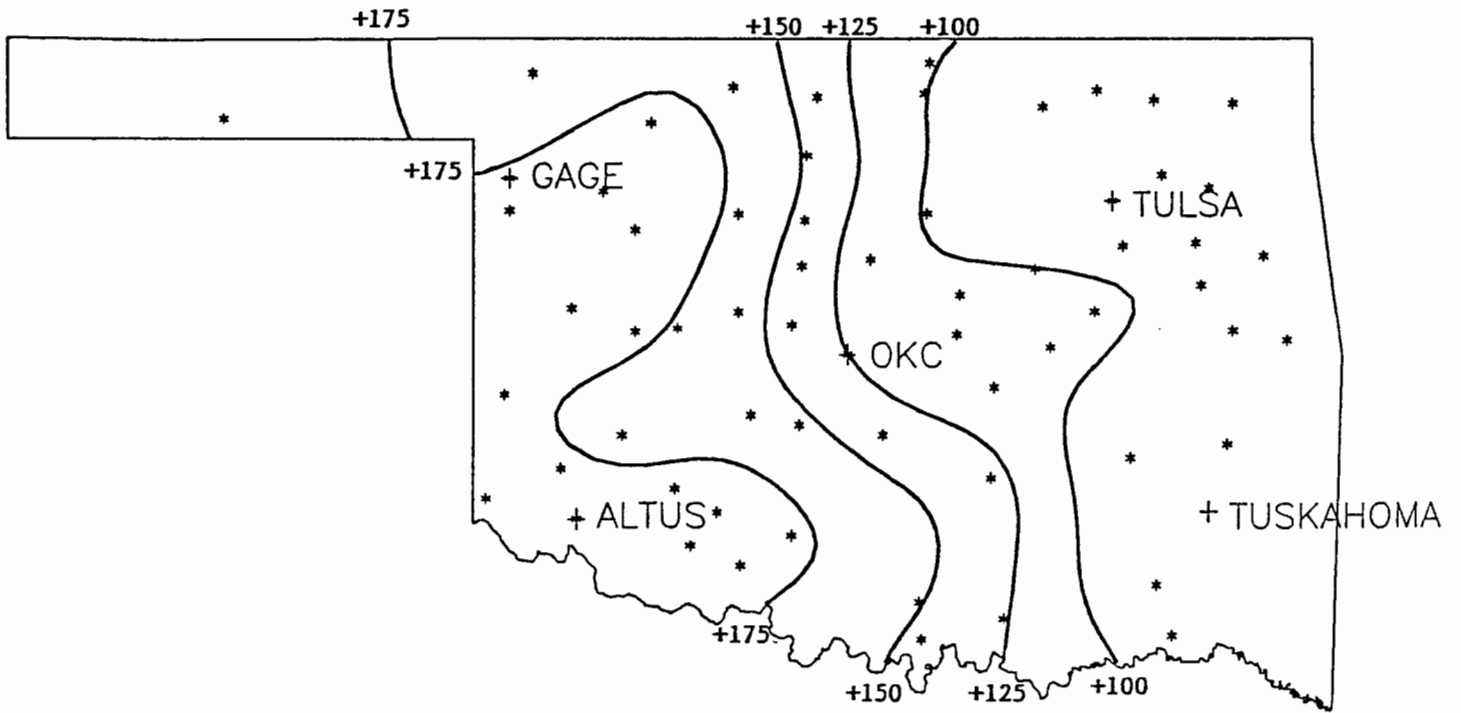
DECEMBER 1990 AVERAGE MONTHLY TEMPERATURES  
(Degrees F)



DECEMBER 1990 DEVIATION FROM NORMAL TEMPERATURES  
(Degrees F)

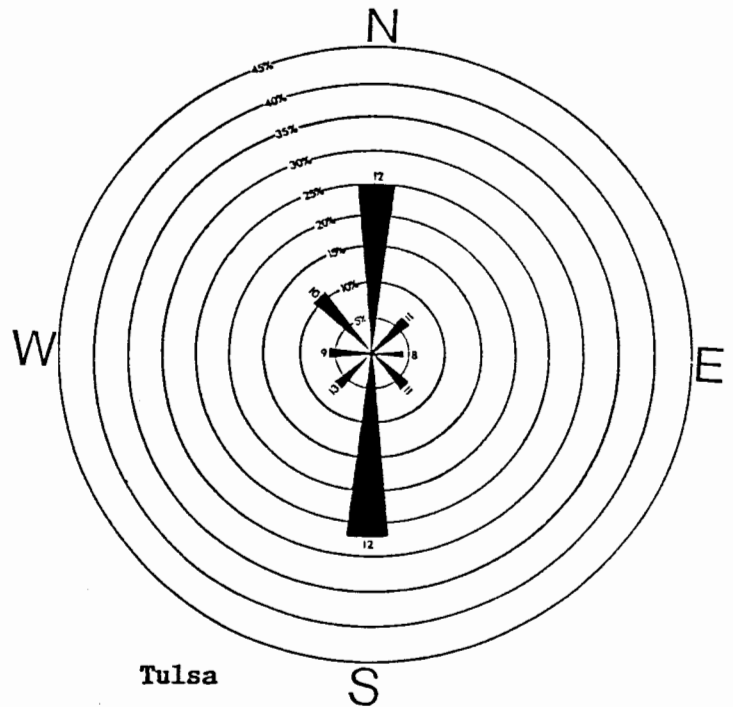
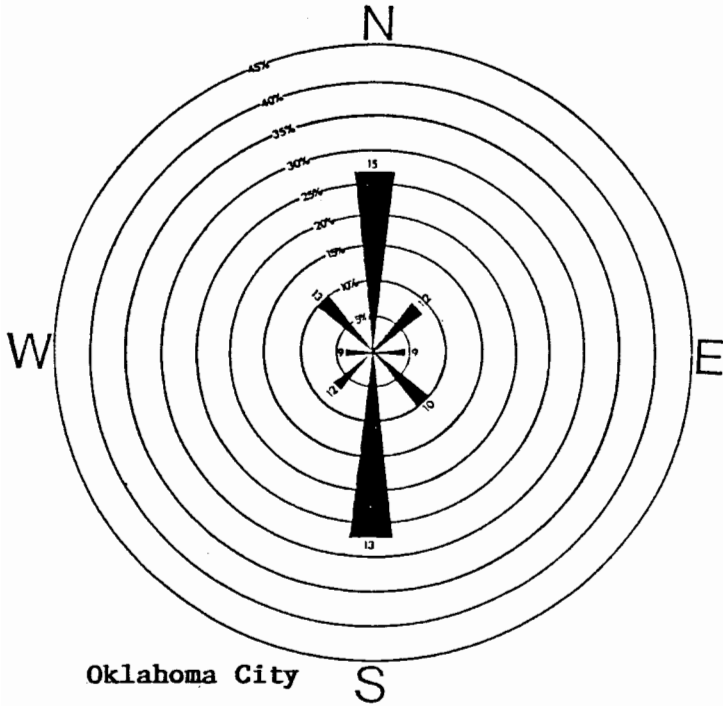


DECEMBER 1990 HEATING DEGREE DAYS



DECEMBER 1990 DEVIATION FROM NORMAL HEATING DEGREE DAYS

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



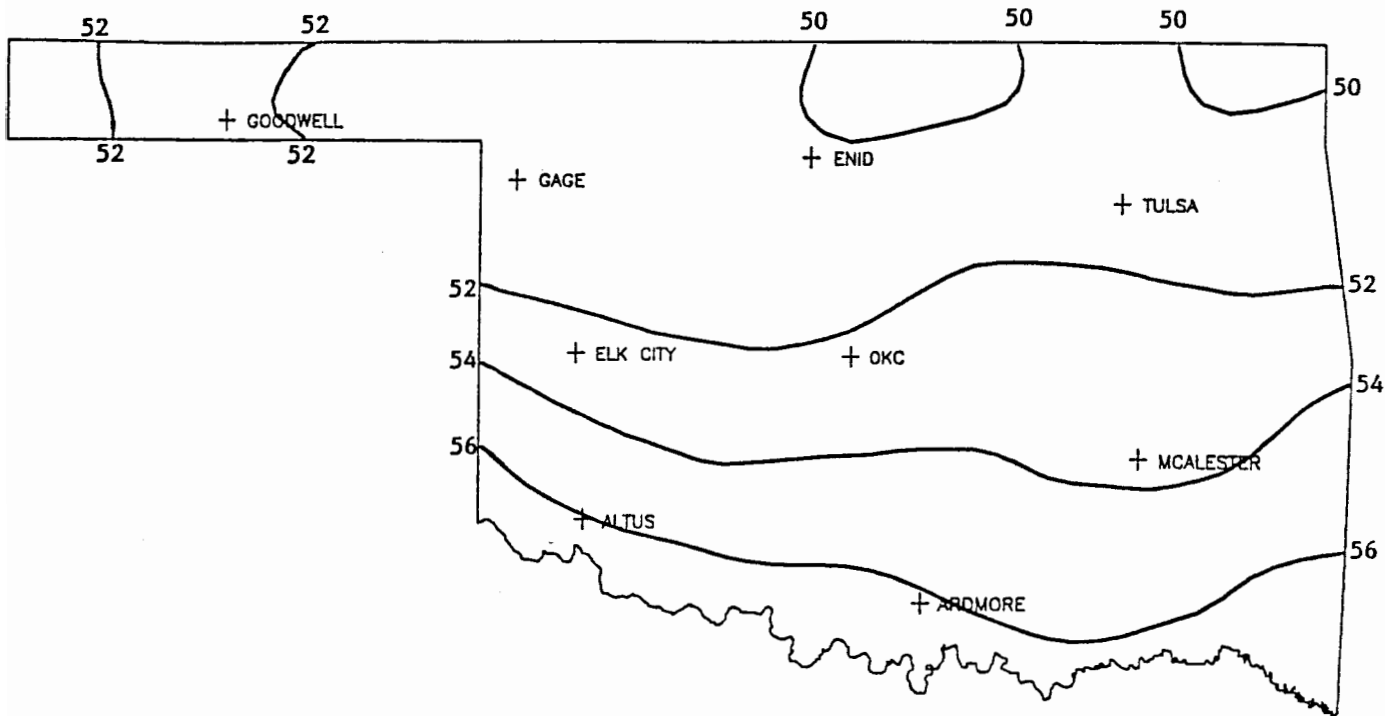
FEBRUARY 1991 SUNRISE AND SUNSET

Oklahoma City

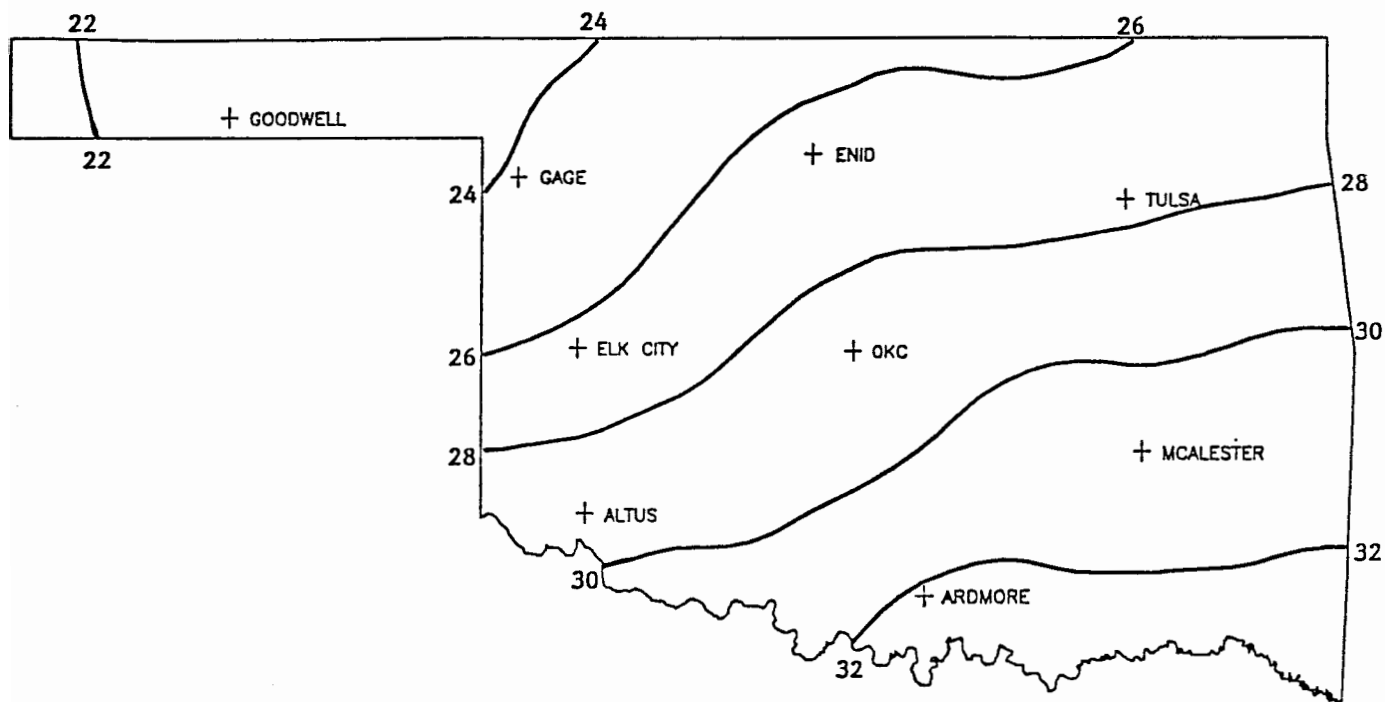
DATE	SUNRISE	SUNSET	DAYLIGHT
910201	7:30AM	5:58PM LT	10:28
910202	7:29AM	5:59PM LT	10:29
910203	7:28AM	6: 0PM LT	10:31
910204	7:28AM	6: 1PM LT	10:33
910205	7:27AM	6: 2PM LT	10:35
910206	7:26AM	6: 3PM LT	10:36
910207	7:25AM	6: 4PM LT	10:38
910208	7:24AM	6: 5PM LT	10:40
910209	7:24AM	6: 6PM LT	10:42
910210	7:23AM	6: 7PM LT	10:44
910211	7:22AM	6: 8PM LT	10:46
910212	7:21AM	6: 9PM LT	10:48
910213	7:20AM	6:10PM LT	10:50
910214	7:19AM	6:11PM LT	10:52
910215	7:18AM	6:12PM LT	10:54
910216	7:17AM	6:13PM LT	10:56
910217	7:16AM	6:13PM LT	10:58
910218	7:15AM	6:14PM LT	10:60
910219	7:14AM	6:15PM LT	11: 2
910220	7:13AM	6:16PM LT	11: 4
910221	7:11AM	6:17PM LT	11: 6
910222	7:10AM	6:18PM LT	11: 8
910223	7: 9AM	6:19PM LT	11:10
910224	7: 8AM	6:20PM LT	11:12
910225	7: 7AM	6:21PM LT	11:14
910226	7: 5AM	6:22PM LT	11:16
910227	7: 4AM	6:23PM LT	11:19
910228	7: 3AM	6:24PM LT	11:21
910229	7: 2AM	6:25PM LT	11:23

Tulsa

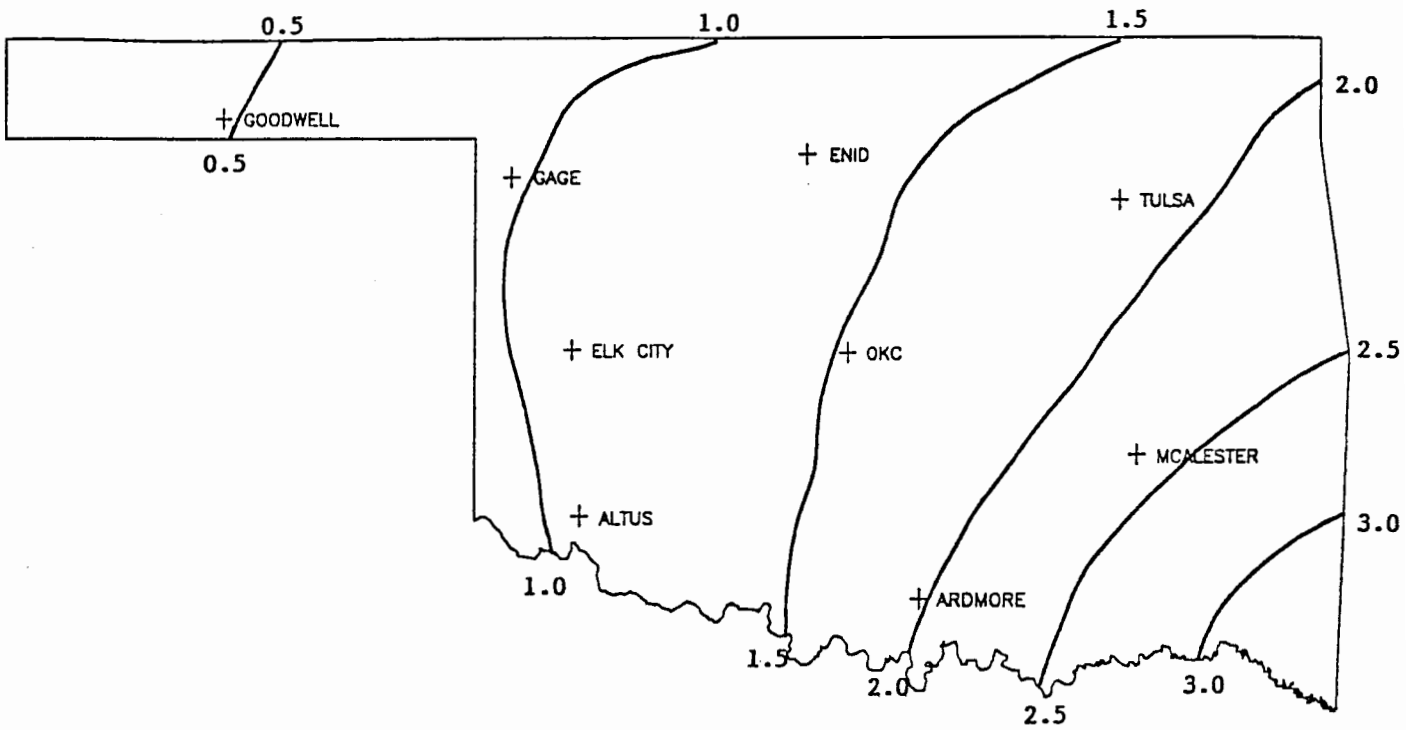
DATE	SUNRISE	SUNSET	DAYLIGHT
910201	7:25AM	5:49PM LT	10:25
910202	7:24AM	5:50PM LT	10:27
910203	7:23AM	5:51PM LT	10:28
910204	7:22AM	5:52PM LT	10:30
910205	7:22AM	5:54PM LT	10:32
910206	7:21AM	5:55PM LT	10:34
910207	7:20AM	5:56PM LT	10:36
910208	7:19AM	5:57PM LT	10:38
910209	7:18AM	5:58PM LT	10:40
910210	7:17AM	5:59PM LT	10:42
910211	7:16AM	6: 0PM LT	10:43
910212	7:15AM	6: 1PM LT	10:45
910213	7:14AM	6: 2PM LT	10:47
910214	7:13AM	6: 3PM LT	10:50
910215	7:12AM	6: 4PM LT	10:52
910216	7:11AM	6: 5PM LT	10:54
910217	7:10AM	6: 6PM LT	10:56
910218	7: 9AM	6: 7PM LT	10:58
910219	7: 8AM	6: 8PM LT	10:60
910220	7: 7AM	6: 9PM LT	11: 2
910221	7: 5AM	6:10PM LT	11: 4
910222	7: 4AM	6:11PM LT	11: 6
910223	7: 3AM	6:12PM LT	11: 8
910224	7: 2AM	6:13PM LT	11:11
910225	7: 1AM	6:13PM LT	11:13
910226	6:59AM	6:14PM LT	11:15
910227	6:58AM	6:15PM LT	11:17
910228	6:57AM	6:16PM LT	11:19
910229	6:56AM	6:17PM LT	11:22



30-YEAR MEAN FEBRUARY DAILY MAXIMUM TEMPERATURE



30-YEAR MEAN FEBRUARY DAILY MINIMUM TEMPERATURE



30-YEAR MEAN FEBRUARY PRECIPITATION

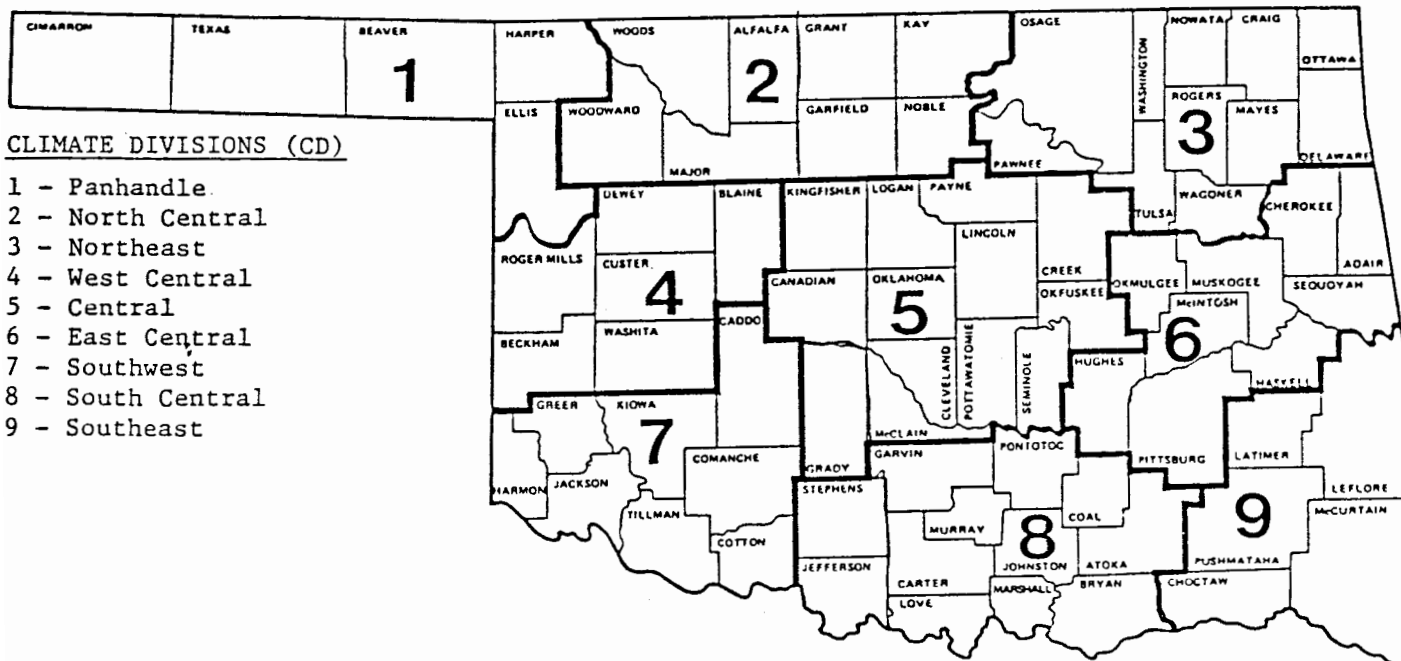
90-DAY NATIONAL WEATHER SERVICE OUTLOOK

(JANUARY-MARCH 1991)

Precipitation - Near Normal Statewide

Temperature - Above Normal Statewide





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:

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

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.

**FEBRUARY 1991**  
**CLIMATE CALENDAR**

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).

1		2		3		4		5		6		7	
Normal	47.9	Normal	45.9	Normal	48.2	Normal	50.3	Normal	48.0	Normal	45.2	Normal	47.0
max	27.5	max	26.3	max	27.1	max	29.2	max	28.9	max	26.3	max	25.0
min	-.028	min	-.027	min	.058	min	.071	min	.092	min	.023	min	-.056
pcpn	27	pcpn	29	pcpn	27	pcpn	25	pcpn	26	pcpn	29	pcpn	29
HDD	0	HDD	0	HDD	0	HDD	0	HDD	0	HDD	0	HDD	0
CDD	74-1986	CDD	75-1934	CDD	78-1934	CDD	77-1948	CDD	77-1948	CDD	72-1931	CDD	76-1932
Highest Max	16-1985	Highest Max	24-1985	Highest Max	13-1989	Highest Max	15-1989	Highest Max	16-1982	Highest Max	23-1989	Highest Max	6-1933
Lowest Max	-1-1951	Lowest Max	3-1951	Lowest Max	0-1989	Lowest Max	2-1989	Lowest Max	3-1989	Lowest Max	6-1933	Lowest Max	-5-1933
Lowest Min	59-1986	Lowest Min	58-1986	Lowest Min	58-1927	Lowest Min	57-1938	Lowest Min	54-1931	Lowest Min	54-1931	Lowest Min	47-1931
Highest Min	1.88-1983	Highest Min	.88-1943	Highest Min	1.13-1960	Highest Min	1.32-1964	Highest Min	1.03-1967	Highest Min	.60-1979	Highest Min	47-1931
Greatest pcpn		Greatest pcpn		Greatest pcpn		Greatest pcpn		Greatest pcpn		Greatest pcpn		Greatest pcpn	
Greatest pcpn	1.88-1983	Greatest pcpn	.88-1943	Greatest pcpn	1.13-1960	Greatest pcpn	1.32-1964	Greatest pcpn	1.03-1967	Greatest pcpn	.60-1979	Greatest pcpn	.84-1980†
Normal	48.6	Normal	50.9	Normal	52.8	Normal	48.6	Normal	51.7	Normal	53.5	Normal	53.1
max	27.9	max	27.8	max	27.0	max	27.7	max	28.4	max	30.0	max	32.0
min	-.059	min	-.036	min	.027	min	.063	min	.078	min	.027	min	-.070
pcpn	27	pcpn	25	pcpn	25	pcpn	27	pcpn	25	pcpn	23	pcpn	22
HDD	0	HDD	0	HDD	0	HDD	0	HDD	0	HDD	0	HDD	0
CDD	73-1938	CDD	84-1932	CDD	84-1932	CDD	82-1962	CDD	84-1962	CDD	82-1962	CDD	81-1954
Highest Max	12-1929	Highest Max	17-1929	Highest Max	17-1929	Highest Max	16-1933	Highest Max	17-1948	Highest Max	30-1933	Highest Max	21-1936
Lowest Max	-5-1933	Lowest Max	-3-1979	Lowest Max	4-1929	Lowest Max	0-1981	Lowest Max	7-1986	Lowest Max	12-1936	Lowest Max	1-1936
Lowest Min	53-1966	Lowest Min	51-1932	Lowest Min	52-1932	Lowest Min	58-1930	Lowest Min	57-1938	Lowest Min	50-1926	Lowest Min	54-1954
Highest Min	.62-1966	Highest Min	.24-1959	Highest Min	.50-1953	Highest Min	1.12-1977	Highest Min	2.21-1978	Highest Min	.47-1989	Highest Min	.89-1938
Greatest pcpn		Greatest pcpn		Greatest pcpn		Greatest pcpn		Greatest pcpn		Greatest pcpn		Greatest pcpn	
Greatest pcpn	.62-1966	Greatest pcpn	.24-1959	Greatest pcpn	.50-1953	Greatest pcpn	1.12-1977	Greatest pcpn	2.21-1978	Greatest pcpn	.47-1989	Greatest pcpn	.89-1938
Normal	51.2	Normal	52.0	Normal	54.2	Normal	54.6	Normal	54.1	Normal	54.8	Normal	51.3
max	30.5	max	29.9	max	30.0	max	32.3	max	31.8	max	31.5	max	30.4
min	-.049	min	-.019	min	.028	min	.041	min	.054	min	.081	min	-.083
pcpn	24	pcpn	24	pcpn	23	pcpn	21	pcpn	22	pcpn	22	pcpn	24
HDD	0	HDD	0	HDD	0	HDD	0	HDD	0	HDD	0	HDD	0
CDD	81-1954	CDD	75-1959	CDD	78-1970	CDD	78-1986	CDD	83-1986	CDD	80-1976	CDD	84-1981
Highest Max	25-1936	Highest Max	17-1979	Highest Max	17-1936	Highest Max	24-1936	Highest Max	21-1929	Highest Max	26-1929	Highest Max	28-1938
Lowest Max	9-1936	Lowest Max	7-1979	Lowest Max	8-1936	Lowest Max	-1-1978	Lowest Max	8-1978	Lowest Max	12-1939	Lowest Max	9-1939
Lowest Min	53-1976	Lowest Min	48-1976	Lowest Min	50-1926	Lowest Min	53-1971	Lowest Min	48-1930	Lowest Min	51-1930	Lowest Min	54-1930
Highest Min	.93-1938	Highest Min	2.16-1940	Highest Min	.88-1961	Highest Min	.88-1946	Highest Min	.68-1954	Highest Min	1.31-1985	Highest Min	54-1930
Greatest pcpn		Greatest pcpn		Greatest pcpn		Greatest pcpn		Greatest pcpn		Greatest pcpn		Greatest pcpn	
Greatest pcpn	.93-1938	Greatest pcpn	2.16-1940	Greatest pcpn	.88-1961	Greatest pcpn	.88-1946	Greatest pcpn	.68-1954	Greatest pcpn	1.31-1985	Greatest pcpn	1.63-1971
Normal	54.5	Normal	54.5	Normal	53.6	Normal	57.3	Normal	58.3	Normal	58.8	Normal	57.5
max	31.7	max	33.0	max	31.9	max	33.9	max	34.0	max	34.3	max	34.4
min	-.067	min	-.032	min	.052	min	.016	min	.032	min	.070	min	-.045
pcpn	22	pcpn	21	pcpn	22	pcpn	19	pcpn	19	pcpn	18	pcpn	19
HDD	0	HDD	0	HDD	0	HDD	0	HDD	0	HDD	0	HDD	0
CDD	83-1982	CDD	80-1930	CDD	81-1956	CDD	82-1986	CDD	78-1986	CDD	81-1976	CDD	81-1972
Highest Max	24-1968	Highest Max	31-1928	Highest Max	19-1960	Highest Max	29-1935	Highest Max	21-1934	Highest Max	25-1962	Highest Max	24-1962
Lowest Max	11-1963	Lowest Max	11-1965	Lowest Max	7-1965	Lowest Max	10-1960	Lowest Max	11-1934	Lowest Max	13-1934	Lowest Max	7-1962
Lowest Min	56-1949	Lowest Min	51-1930	Lowest Min	58-1930	Lowest Min	50-1951	Lowest Min	59-1981	Lowest Min	61-1981	Lowest Min	53-1932
Highest Min	1.15-1985	Highest Min	.81-1985	Highest Min	.94-1952	Highest Min	.74-1936	Highest Min	.50-1945	Highest Min	1.32-1966	Highest Min	.98-1990
Greatest pcpn		Greatest pcpn		Greatest pcpn		Greatest pcpn		Greatest pcpn		Greatest pcpn		Greatest pcpn	
Greatest pcpn	1.15-1985	Greatest pcpn	.81-1985	Greatest pcpn	.94-1952	Greatest pcpn	.74-1936	Greatest pcpn	.50-1945	Greatest pcpn	1.32-1966	Greatest pcpn	.98-1990

**FEBRUARY AVERAGES**

Temperature : 41.1°F  
Precipitation : 1.43"  
Heating Degree Days: 688  
Cooling Degree Days: 0