OKLAHOMA
MONTHLY SUMMARY
JANUARY 1993

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MONTHLY SUMMARY FOR JANUARY 1993

An ice and sleet storm on New Year's Eve blanketed most of Oklahoma, paralyzing holiday travel and starting 1993 on a wintry note. According to preliminary data from most of the state's reporting stations, temperatures for the month ranged from below zero in the Panhandle on the morning of the 13th to the low 70s in parts of western Oklahoma on the 31st. The statewide average temperature for January, 36 degrees, was four-tenths of a degree below normal. Precipitation continued to be plentiful, averaging 2.15 inches across the state, exceeding the normal for the month by .89 inch.

The New Year's Eve storm, which continued through the first, led to the closing of many highways in all but extreme southeastern Oklahoma. More than 60 vehicles were involved in two separate chain-reaction accidents in Oklahoma City early on the morning of the 1st, as travelers found the highways to be treacherously slick. Travel to and from Oklahoma City was hindered even more when two airplanes slid off an icy runway at Will Rogers Airport.

Warmer weather, which began to return to the state by the 2nd, melted the ice but led to the development of dense fog over many areas on the 2nd and 3rd. Several locations, mainly in southern and eastern parts of the state received over an inch of precipitation during the first week of the year, led by Broken Bow which reported 1.50 inches on the 4th.

Another round of winter weather arrived late on the 7th. Episodes of mainly snow and ice in the north and rain in the south continued to affect the state through the 21st. Cherokee reported 8 inches of snow on the 9th. Buffalo reported 7.5 inches and Guymon, Alva and Grainola each chipped in with 6 inches during the same period. Ice was reported as far south as Healdton on the 10th and a reported 6 to 7 inches of snow fell at Braman on the 11th.

A storm system which crossed the state on the 14th produced sleet and freezing rain all across the northwestern one-half of the state, extending as far southeast as Pittsburg and Latimer counties. The storm produced significant rain in eastern Oklahoma. Short reported 1.53 inches of precipitation on the 14th and another 2 inches fell by the morning of the 15th. Temperatures in the northwest plunged in the wake of the cold front. Guymon reported a low of -2 on the 13th and thermometer readings in the lower single-digits were common on the 13th and 14th.

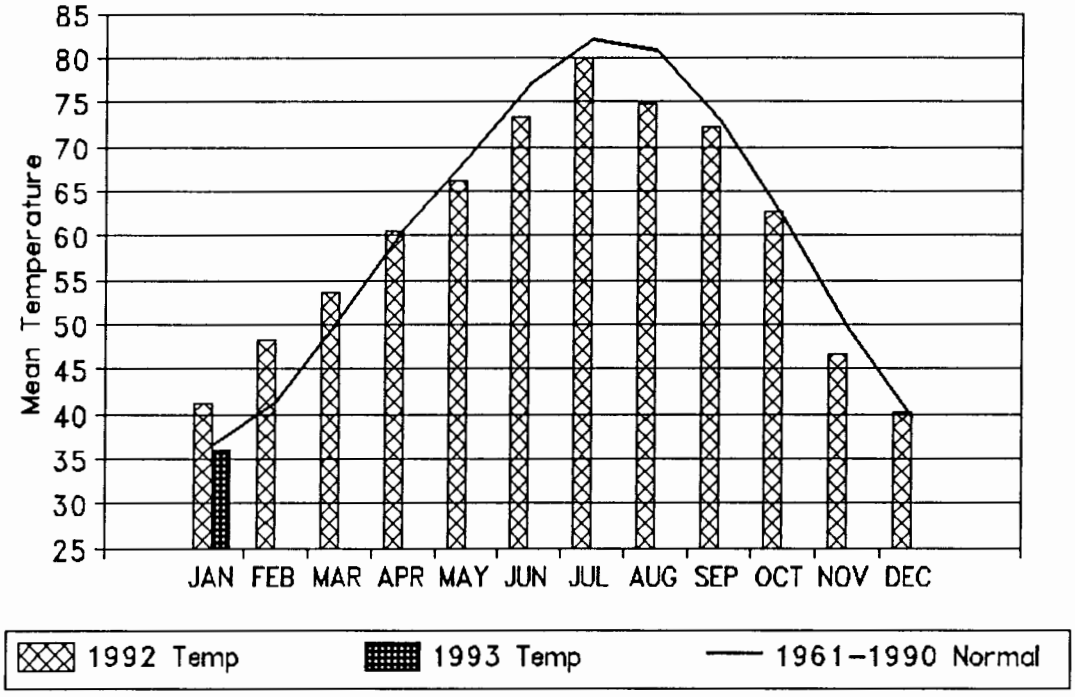
Freezing rain and snow were reported in northeastern Oklahoma on the 17th, including 3.5 inches of snow reported at Hollow and Lenapah. More ice and snow were ushered into the state on the 18th, including up to 6 inches of snow in parts of the Panhandle. Accumulations of ice were reported in Tulsa on the 19th and Wilburton reported 1.50 inches of rain. Sallisaw reported 1.59 inches on the 20th.

The weather was relatively calm during the last 10 days of the month. Fog, occurring with sub-freezing temperatures in southwestern Oklahoma on the 20th and 21st, left a thin coating of ice on grass and trees. Some light snow was reported in the Panhandle on the 23rd and again on the 26th with over 3 inches falling in the Hooker area on the latter date.

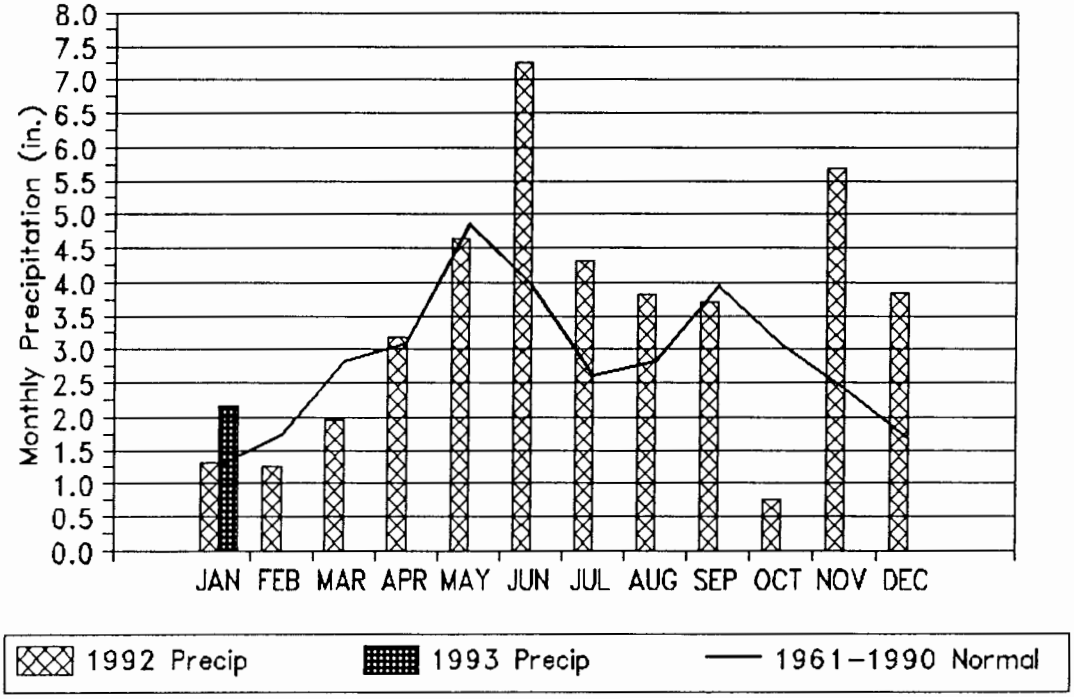
By month's end, daily maximum temperatures in the 60s were common over much of the state, although lows reached into the teens in many places in the north. Precipitation ended in all but the southeast, where it was greatly reduced during the last week of the month.

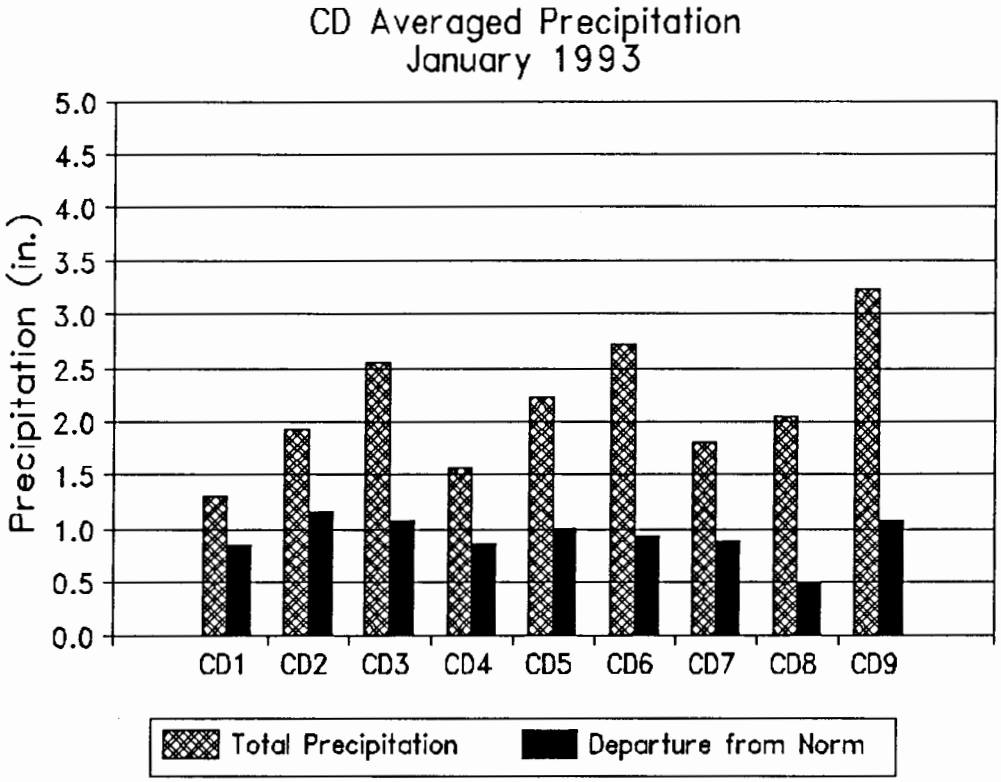
Howard L. Johnson

1992 and 1993 STATEWIDE TEMPERATURES
January Through December Averages

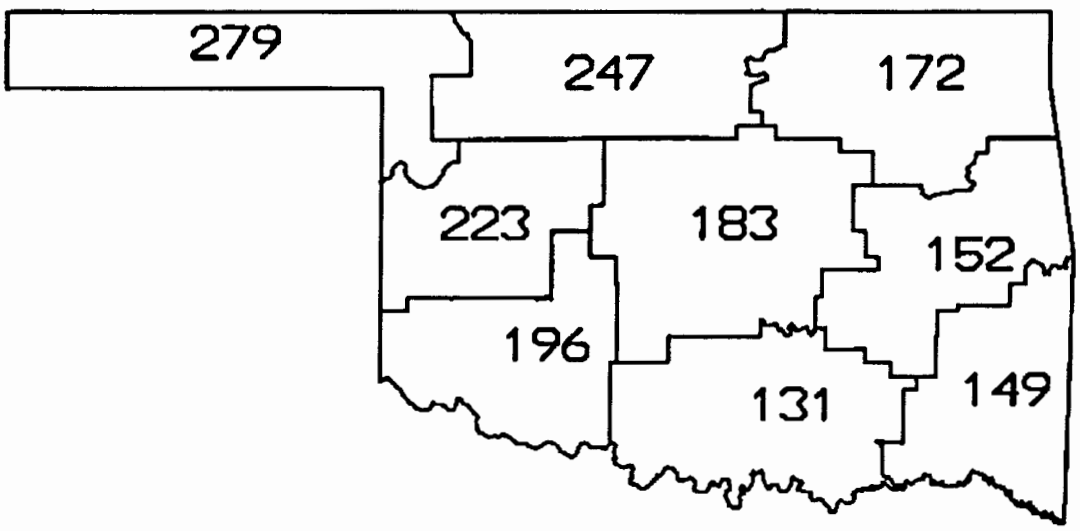


1992 and 1993 STATEWIDE PRECIPITATION
January Through December Totals





CLIMATE DIVISION PERCENT OF NORMAL PRECIPITATION



JANUARY 1993

EXTREME VALUES OF TEMPERATURE AND PRECIPITATION IN EACH CLIMATE DIVISION
JANUARY, 1993

CD	MAX TEMP	DATE	LOCATION	MIN TEMP	DATE	LOCATION	24-HOUR PRECIP	DATE	LOCATION	MONTHLY PRECIP	LOCATION
1	69	27	GAGE	-2	13	GUYMON	1.10	9	LAVERNE	1.75	FARGO
2	69	28	FT SUPPLY	2	13	FT SUPPLY	1.08	9	ALVA	2.65	PONCA CITY
	69	28	FREEDOM								
3	68	29	JAY TOWER	12	18	NOWATA	1.30	20	HOLLOW	3.43	HOLLOW
4	71	31	REYDON	11	13	TALOGA	1.21	9	OKEENE	2.30	WEATHERFORD
5	69	27	GUTHRIE	14	1	HENNESSEY	1.31	9	PERKINS	3.97	GUTHRIE
	69	28	STILLWATER								
6	69	22	MCALESTER	16	13	TAHLEQUAH	2.00	15	SHORT	6.32	SHORT
7	69	31	HOLLIS	16	13	MANGUM	1.23	2	HOLLIS	2.50	ALTUS DAM
				16	13	WICHITA MTNS					
				16	14	WICHITA MTNS					
8	68	22	PAULS VALLEY	15	13	MARLOW	1.30	20	CANEY	2.97	DAISY
9	69	22	POTEAU	17	26	POTEAU	1.50	4	BROKEN BOW	5.05	BROKEN BOW
				17	26	TUSKAHOMA	1.50	19	WILBURTON		

TABLE OF 1992/1993 COMPARISONS

Station	January Temperatures (F) 1992	1993	January Pricipitation (in.) 1992	1993
Arnett	37.8	28.9	.74	1.20
Enid	41.5	33.6	1.01	2.59
Mutual	39.2	30.1	.94	1.74
Tulsa	43.8	36.8	.79	2.29
Elk City	42.0	33.7	1.01	1.45
Oklahoma City	42.0	36.4	1.15	1.76
McAlester	43.1	41.1	1.49	2.02
Altus Irr Sta	41.9	37.9	1.45	1.54
Durant	42.6	40.0	2.73	2.23
Ada	40.7	38.3	1.69	1.39
Antlers	42.5	41.5	1.49	1.61

EXTREMES

Variable	Station	Division	Observation	Date
Minimum temperature (F)	Beaver	1	-02	13
	Guymon	1	-02	13
	Optima Lake	1	-02	13
Maximum temperature (F)	Reydon	4	71	31
Maximum 24-hour precipitation	Smithville	9	3.50"	4

JANUARY 1993 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	28.9	31	-3.6	66.	28	7.	14	1118.5	110.5	.0	.0	1.196	31	.74	.56	9
BEAVER	593	1	26.5	31	-5.1	58.	28	-2.	13	1193.5	158.5	.0	.0	1.593	31	1.19	.63	9
BOISE CITY 2 E	908	1	31.5	31	-2.7	69.	27	3.	10	1037.5	82.5	.0	.0	.702	31	.40	.25	19
BUFFALO	1243	1	30.9	31	-3.7	65.	31	1.	13	1057.0	115.0	.0	.0	.600	31	.11	.50	9
FARGO	3070	1	*****	0	*****	****	0	****	0	******	******	******	******	1.753	31	1.28	.83	9
GAGE FAA APT	3407	1	31.6	30	-2.7	69.	27	3.	13	1002.5	50.5	.0	.0	1.715	30	*****	.48	9
GATE	3489	1	27.8	30	-4.6	60.	28	1.	13	1115.0	104.0	.0	.0	1.774	31	1.22	1.00	9
GOODWELL RES ST	3628	1	29.3	31	-2.6	62.	28	0.	10	1107.5	81.5	.0	.0	.423	29	*****	.28	20
GUYMON	3835	1	30.3	22	*****	62.	27	-2.	13	763.0	******	.0	******	.780	26	*****	.25	20
HOOKER	4298	1	27.1	31	-5.8	59.	3	3.	14	1173.5	178.5	.0	.0	.966	31	.58	.49	9
KENTON	4766	1	30.9	29	*****	67.	27	3.	10	988.5	******	.0	******	.300	29	*****	.20	8
LAVERNE	5045	1	*****	0	*****	****	0	****	0	******	******	******	******	1.692	31	1.16	1.10	9
OPTIMA LAKE	6740	1	27.5	31	*****	62.	28	-2.	13	1161.5	******	.0	******	1.345	31	*****	.58	9
REGNIER	7534	1	*****	0	*****	****	0	****	0	******	******	******	******	.593	31	.29	.30	9
TURPIN 4 SSE	9017	1	25.9	31	*****	56.	4	0.	13	1212.5	******	.0	******	1.401	29	*****	.60	9

JANUARY 1993 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	31.2	31	*****	66.	31	8.	13	1047.5	******	.0	******	2.440	31	*****	1.08	9
VANCE AFB	302	2	*****	0	*****	****	0	****	0	******	******	******	******	2.265	28	*****	.85	9
BILLINGS	755	2	31.2	31	-1.6	64.	28	13.	1	1047.5	49.5	.0	.0	2.281	31	1.28	.72	9
BLACKWELL 2E	818	2	32.8	31	-.1	62.	27	14.	13	997.5	2.5	.0	.0	2.393	31	1.45	.48	9
BRAMAN	1075	2	*****	0	*****	****	0	****	0	******	******	******	******	1.570	31	*****	.52	9
CEDARDALE	1620	2	*****	0	*****	****	0	****	0	******	******	******	******	1.553	31	*****	.80	9
CHEROKEE	1724	2	32.4	31	-2.1	64.	31	9.	13	1011.0	65.0	.0	.0	.600	31	-.25	.60	2
ENID	2912	2	33.6	31	-1.5	65.	27	13.	13	972.0	45.0	.0	.0	2.590	30	*****	.93	9
FT SUPPLY DAM	3304	2	29.0	31	-3.2	69.	28	2.	13	1116.0	99.0	.0	.0	1.411	31	.96	.75	9
FREEDOM	3358	2	28.5	31	-5.5	69.	28	3.	14	1132.5	171.5	.0	.0	1.612	31	1.07	.67	9
GREAT SALT PLNS	3740	2	30.2	28	*****	61.	28	12.	14	975.0	******	.0	******	1.401	25	*****	.68	9
HARDY	3909	2	*****	0	*****	****	0	****	0	******	******	******	******	1.932	31	*****	.91	10
HELENA 1 SSE	4019	2	30.5	31	-1.3	65.	28	9.	14	1071.0	42.0	.0	.0	2.413	31	1.64	.94	9
JEFFERSON	4573	2	33.6	31	-.5	65.	27	13.	13	972.0	14.0	.0	.0	2.203	31	1.35	.76	8
LAMONT	5013	2	*****	0	*****	****	0	****	0	******	******	******	******	2.490	31	*****	.78	8
MEDFORD	5768	2	*****	0	*****	****	0	****	0	******	******	******	******	2.421	31	*****	.89	8
MORRISON	6065	2	*****	0	*****	****	0	****	0	******	******	******	******	2.430	31	*****	.80	9
MUTUAL	6139	2	30.1	31	-2.4	64.	28	7.	14	1082.5	74.5	.0	.0	1.741	31	1.14	.97	9
NEWKIRK	6278	2	31.9	31	-1.3	62.	27	12.	13	1026.0	40.0	.0	.0	1.741	31	.87	.59	9
ORIENTA	6751	2	*****	0	*****	****	0	****	0	******	******	******	******	1.230	31	.52	.78	9
PERRY	7012	2	35.7	31	-.0	67.	27	16.	13	909.5	1.5	.0	.0	2.000	31	1.06	1.05	9
PONCA CITY FAA	7201	2	34.2	28	*****	65.	27	16.	13	862.0	******	.0	******	2.652	30	*****	.61	10
RED ROCK 1 NNE	7505	2	*****	0	*****	****	0	****	0	******	******	******	******	2.460	31	1.56	.94	9
WAYNOKA	9404	2	31.7	31	-3.2	67.	27	7.	13	1032.0	99.0	.0	.0	1.730	31	1.09	.72	9
WOODWARD	9760	2	*****	0	*****	****	0	****	0	******	******	******	******	1.854	31	1.31	1.02	9

JANUARY 1993 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	34.8	31	.2	65.	27	15.	30	936.0	-6.0	.0	.0	2.754	31	1.36	.91	20
BARTLESVILLE 2W	548	3	34.9	31	.2	64.	27	15.	13	933.0	-6.0	.0	.0	2.634	31	1.36	.80	20
BIXBY	782	3	34.8	30	.8	65.	28	17.	1	905.5	-55.5	.0	.0	1.350	31	-.22	.59	9
BURBANK	1256	3	*****	0	*****	****	0	****	0	******	******	******	******	2.664	31	1.52	1.16	9
CHELSEA 4 S	1717	3	*****	0	*****	****	0	****	0	******	******	******	******	3.000	31	*****	.93	20
CLAREMORE	1828	3	34.0	31	.9	65.	29	17.	31	962.5	-26.5	.0	.0	2.850	31	1.25	.92	20
CLEVELAND 5 WSW	1902	3	37.4	26	*****	67.	27	16.	13	716.5	******	.0	******	1.900	27	*****	.90	9
FORAKER	3250	3	*****	0	*****	****	0	****	0	******	******	******	******	1.741	31	.72	.42	20
HOLLOW	4258	3	*****	0	*****	****	0	****	0	******	******	******	******	3.431	31	1.95	1.30	20
HOMINY	4289	3	*****	0	*****	****	0	****	0	******	******	******	******	2.623	31	1.37	.68	10
HULAH DAM	4393	3	32.9	19	*****	65.	28	14.	14	610.0	******	.0	******	2.530	29	*****	.74	9
JAY TOWER	4567	3	34.4	31	*****	68.	29	16.	14	948.5	******	.0	******	2.840	31	*****	.92	20
KANSAS 1 ESE	4672	3	37.4	29	*****	62.	28	15.	13	800.5	******	.0	******	2.758	31	.60	1.03	20
KEYSTONE DAM	4812	3	34.3	22	*****	65.	28	17.	25	675.5	******	.0	******	2.811	24	*****	.88	9
LENAPAH	5118	3	*****	0	*****	****	0	****	0	******	******	******	******	2.310	31	*****	1.10	20
MANNFORD 6 NW	5522	3	36.6	31	1.1	67.	27	14.	13	880.5	-34.5	.0	.0	2.820	31	1.50	.66	20
MARAMEC	5540	3	*****	0	*****	****	0	****	0	******	******	******	******	2.553	31	1.28	.84	9
MIAMI	5855	3	34.5	31	1.8	62.	29	15.	30	944.5	-56.5	.0	.0	2.720	31	.97	.80	11
NOWATA	6485	3	34.0	30	-.5	63.	31	12.	18	930.5	-15.5	.0	.0	2.421	31	.83	1.15	20
ONETA 1 WNW	6713	3	*****	0	*****	****	0	****	0	******	******	******	******	2.290	31	*****	.91	20
PAWHUSKA	6935	3	34.5	31	.4	65.	27	14.	13	944.5	-13.5	.0	.0	2.863	31	1.58	.83	9
PAWNEE	6940	3	*****	0	*****	****	0	****	0	******	******	******	******	2.302	31	1.08	.78	9
PRYOR 6 N	7309	3	33.5	31	.5	63.	29	17.	31	975.0	-17.0	.0	.0	3.379	31	1.63	1.22	20
RALSTON	7390	3	35.2	31	.5	66.	27	16.	13	923.0	-16.0	.0	.0	2.482	31	1.33	.70	9
RAMONA 4 N	7394	3	*****	0	*****	****	0	****	0	******	******	******	******	3.153	31	*****	1.00	20
SKIATOOK	8258	3	*****	0	*****	****	0	****	0	******	******	******	******	1.760	31	.39	.58	9
SPAVINAW	8380	3	38.2	31	1.7	64.	31	17.	13	829.5	-54.5	.0	.0	2.897	31	1.20	.91	20
TULSA WSO APT	8992	3	36.8	30	1.6	65.	31	17.	30	846.0	-78.0	.0	.0	2.286	31	.75	.78	20
UPPER SPAVINAW	9101	3	36.3	30	*****	60.	31	18.	13	861.0	******	.0	******	2.635	30	*****	1.15	20
VINITA 2 N	9203	3	36.2	31	2.6	62.	31	15.	13	891.5	-81.5	.0	.0	1.400	31	-.40	.39	9
WAGONER	9247	3	38.8	31	2.0	65.	31	17.	13	811.5	-62.5	.0	.0	2.383	31	.42	.95	20
WANN	9298	3	*****	0	*****	****	0	****	0	******	******	******	******	2.840	31	*****	.90	20
WYNONA	9792	3	*****	0	*****	****	0	****	0	******	******	******	******	2.512	31	*****	.70	20

JANUARY 1993 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	32.1	30	-1.1	65.	28	12.	14	987.0	1.0	.0	.0	1.820	31	1.20	.85	9
CHEYENNE	1738	4	*****	0	*****	****	0	****	0	******	******	******	******	.000	31	-.48	.00	31
CLINTON	1909	4	33.7	30	-2.9	65.	31	15.	13	940.0	60.0	.0	.0	1.902	31	.96	.83	9
COLONY	2039	4	*****	0	*****	****	0	****	0	******	******	******	******	2.221	31	*****	.68	9
CORDELL	2125	4	*****	0	*****	****	0	****	0	******	******	******	******	2.138	31	1.23	.72	2
ELK CITY 1 E	2849	4	33.7	31	-2.5	65.	31	14.	13	971.0	78.0	.0	.0	1.452	31	.76	.52	9
ERICK 4 E	2944	4	34.5	31	-2.1	67.	31	15.	13	944.5	64.5	.0	.0	1.001	31	.47	.44	9
GEARY	3497	4	36.8	31	1.2	66.	28	20.	13	875.0	-36.0	.0	.0	1.370	31	.61	1.05	9
HAMMON 1 NNE	3871	4	31.6	29	*****	65.	28	12.	14	969.5	******	.0	******	1.431	31	.75	.67	9
LEEDEY	5090	4	*****	0	*****	****	0	****	0	******	******	******	******	1.070	31	.58	.56	9
MACKIE 4 NNW	5463	4	*****	0	*****	****	0	****	0	******	******	******	******	1.020	31	*****	.39	9
MORAVIA 2 NNE	6035	4	*****	0	*****	****	0	****	0	******	******	******	******	1.312	31	.60	.46	9
OKEENE	6629	4	34.1	31	-2.1	65.	27	15.	13	957.0	64.0	.0	.0	1.410	31	.64	1.21	9
RETROP	7565	4	*****	0	*****	****	0	****	0	******	******	******	******	1.710	31	*****	.50	9
REYDON	7579	4	35.7	31	.2	71.	31	15.	13	908.0	-7.0	.0	.0	.303	31	-.16	.15	1
SAYRE	7952	4	*****	0	*****	****	0	****	0	******	******	******	******	.714	31	.24	.33	2
SWEETWATER 2 E	8652	4	*****	0	*****	****	0	****	0	******	******	******	******	1.394	31	*****	.79	1
TALOGA	8708	4	33.4	31	-1.4	67.	31	11.	13	978.5	42.5	.0	.0	1.731	31	1.03	.76	9
THOMAS	8815	4	*****	0	*****	****	0	****	0	******	******	******	******	1.280	31	*****	.58	3
VICI	9172	4	*****	0	*****	****	0	****	0	******	******	******	******	1.970	31	1.24	.86	9
WATONGA	9364	4	34.3	31	-1.1	65.	27	15.	13	951.5	33.5	.0	.0	2.214	31	1.26	.86	9
WEATHERFORD	9422	4	33.0	31	-1.3	63.	28	14.	14	993.0	41.0	.0	.0	2.304	31	1.48	.95	9

JANUARY 1993 SUMMARY FOR CENTRAL DIVISION (CD5)

NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
AMBER	200	5	*****	0	*****	****	0	****	0	******	******	******	******	1.180	31	*****	.91	9
ARCADIA	288	5	*****	0	*****	****	0	****	0	******	******	******	******	2.160	31	*****	.83	9
TINKER AFB	325	5	*****	0	*****	****	0	****	0	******	******	******	******	2.308	30	*****	.81	9
BLANCHARD 2 SSW	830	5	37.8	31	-.5	64.	31	18.	13	843.5	15.5	.0	.0	2.544	31	1.43	1.00	9
BRISTOW	1144	5	36.9	31	.1	66.	27	17.	13	870.0	-4.0	.0	.0	1.984	31	.60	.79	20
CHANDLER	1684	5	38.8	28	*****	66.	31	17.	13	733.5	******	.0	******	1.553	31	.28	.90	9
CHICKASHA EX ST	1750	5	36.5	31	-.8	64.	31	19.	13	883.0	24.0	.0	.0	2.290	31	1.26	1.10	9
COX CITY 1 E	2196	5	*****	0	*****	****	0	****	0	******	******	******	******	2.120	31	*****	.78	20
CRESCENT	2242	5	*****	0	*****	****	0	****	0	******	******	******	******	2.190	31	*****	.97	9
CUSHING	2318	5	34.0	31	-.2	65.	28	15.	1	962.0	7.0	.0	.0	1.980	31	.85	.73	9
EL RENO 1 N	2818	5	35.8	31	.1	64.	27	18.	13	904.0	-4.0	.0	.0	2.010	31	1.01	.91	9
GUTHRIE	3821	5	37.3	31	1.0	69.	27	17.	13	857.5	-32.5	.0	.0	3.973	31	2.82	1.20	9
HENNESSEY 2 SE	4055	5	34.2	30	-.9	62.	27	14.	1	924.0	-3.0	.0	.0	2.550	31	1.69	.91	9
INGALLS	4489	5	*****	0	*****	****	0	****	0	******	******	******	******	2.163	31	*****	.82	20
KINGFISHER 2 SE	4861	5	35.5	31	-.5	64.	31	16.	13	916.0	17.0	.0	.0	2.152	31	1.15	.91	9
KONAWA	4915	5	*****	0	*****	****	0	****	0	******	******	******	******	1.961	31	.45	.91	20
MARSHALL	5589	5	*****	0	*****	****	0	****	0	******	******	******	******	2.170	31	1.29	.89	9
MEEKER 4 W	5779	5	37.2	30	.5	64.	31	17.	13	834.0	-43.0	.0	.0	1.950	31	.91	.78	8
MULHALL	6110	5	*****	0	*****	****	0	****	0	******	******	******	******	2.610	31	*****	.97	9
NORMAN 3 S	6386	5	36.8	31	-1.0	65.	27	17.	13	875.0	32.0	.0	.0	2.554	31	1.23	.90	9
OILTON 2 SE	6616	5	*****	0	*****	****	0	****	0	******	******	******	******	1.960	31	*****	.78	8
OKEMAH	6638	5	38.3	31	.8	65.	31	18.	13	828.0	-25.0	.0	.0	2.220	31	.77	.96	20
OKLAHOMA CTY WS	6661	5	36.4	31	.5	64.	27	18.	13	885.5	-16.5	.0	.0	1.755	31	.63	.62	9
PERKINS	7003	5	*****	0	*****	****	0	****	0	******	******	******	******	2.330	31	1.16	1.31	9
PIEDMONT	7068	5	*****	0	*****	****	0	****	0	******	******	******	******	2.300	31	*****	.96	9
PRAGUE	7264	5	*****	0	*****	****	0	****	0	******	******	******	******	2.372	31	.94	.95	21
PURCELL 5 SW	7327	5	38.1	31	.7	65.	22	19.	13	832.5	-23.5	.0	.0	2.395	31	1.06	.85	9
SEMINOLE	8042	5	38.9	31	.1	65.	27	18.	13	808.5	-3.5	.0	.0	2.281	31	.80	1.07	20
SHAWNEE	8110	5	*****	0	*****	****	0	****	0	******	******	******	******	2.201	31	.83	.85	20
STELLA	8479	5	*****	0	*****	****	0	****	0	******	******	******	******	2.230	31	*****	.81	9
STILLWATER 2 W	8501	5	35.1	31	1.5	69.	28	15.	13	927.0	-46.0	.0	.0	2.243	31	1.09	.85	9
STROUD 1 N	8563	5	*****	0	*****	****	0	****	0	******	******	******	******	2.035	31	*****	.72	20
TECUMSEH	8751	5	*****	0	*****	****	0	****	0	******	******	******	******	2.280	31	*****	.85	20
TROUSDALE	8960	5	*****	0	*****	****	0	****	0	******	******	******	******	2.460	31	*****	.90	20
UNION CITY 1 SE	9086	5	*****	0	*****	****	0	****	0	******	******	******	******	1.642	31	.28	.94	9
WELTY 1 SSE	9479	5	*****	0	*****	****	0	****	0	******	******	******	******	2.199	31	*****	.90	20
WEWOKA	9575	5	*****	0	*****	****	0	****	0	******	******	******	******	2.850	31	1.40	1.01	20

JANUARY 1993 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	******	******	******	******	2.284	31	*****	1.10	20
BEGGS	631	6	*****	0	*****	****	0	****	0	******	******	******	******	2.330	31	*****	.96	20
BOYNTON	1027	6	*****	0	*****	****	0	****	0	******	******	******	******	2.774	31	*****	1.15	20
CALVIN	1391	6	*****	0	*****	****	0	****	0	******	******	******	******	2.354	31	.75	.94	20
CHECOTAH	1711	6	*****	0	*****	****	0	****	0	******	******	******	******	2.042	31	.41	1.17	20
CLAYTON 15 WNW	1858	6	*****	0	*****	****	0	****	0	******	******	******	******	2.601	31	*****	1.14	20
DEWAR 2 NE	2485	6	*****	0	*****	****	0	****	0	******	******	******	******	2.431	31	.85	1.09	20
DUSTIN	2690	6	*****	0	*****	****	0	****	0	******	******	******	******	1.950	31	*****	.93	20
EUFAULA	2993	6	40.7	31	1.8	67.	31	22.	13	752.0	-57.0	.0	.0	2.214	31	.38	1.22	20
HANNA	3884	6	39.0	31	1.0	66.	31	19.	13	807.5	-29.5	.0	.0	2.044	31	.31	1.10	20
HARTSHORNE	3946	6	*****	0	*****	****	0	****	0	******	******	******	******	2.760	31	*****	1.23	20
HASKELL	3956	6	*****	0	*****	****	0	****	0	******	******	******	******	2.801	31	.94	1.17	20
HOLDENVILLE	4235	6	38.2	31	-.1	65.	31	19.	13	830.0	2.0	.0	.0	2.301	31	.89	.94	20
LAKE EUFAULA	4975	6	38.1	31	*****	66.	28	20.	14	833.5	******	.0	******	1.806	31	*****	1.26	20
LYONS 2 N	5437	6	*****	0	*****	****	0	****	0	******	******	******	******	3.401	31	1.61	1.00	20
MARBLE CITY	5546	6	*****	0	*****	****	0	****	0	******	******	******	******	3.822	31	*****	1.25	20
MCALESTER FAA	5664	6	41.1	31	3.5	69.	22	20.	13	741.5	-107.5	.0	.0	2.016	31	.03	.85	19
MCCURTAIN 1 SE	5693	6	40.4	30	1.1	67.	22	20.	13	739.0	-58.0	.0	.0	3.315	31	1.15	1.40	20
MUSKOGEE	6130	6	38.9	31	1.6	65.	3	19.	13	809.5	-49.5	.0	.0	2.141	31	.34	1.03	19
OKMULGEE W W	6670	6	35.2	31	.4	64.	28	18.	14	923.5	-12.5	.0	.0	2.445	31	.82	1.05	20
OKTAHA 2 NE	6678	6	*****	0	*****	****	0	****	0	******	******	******	******	2.530	31	*****	1.28	20
QUINTON	7372	6	*****	0	*****	****	0	****	0	******	******	******	******	2.988	31	1.04	1.21	20
SALLISAW 2 NE	7862	6	38.5	31	.6	65.	31	18.	30	820.0	-20.0	.0	.0	3.875	31	1.88	1.59	20
SCIPIO	7979	6	*****	0	*****	****	0	****	0	******	******	******	******	2.230	31	*****	1.31	20
SCRAPER	7993	6	*****	0	*****	****	0	****	0	******	******	******	******	3.270	31	*****	1.05	20
SHORT	8170	6	*****	0	*****	****	0	****	0	******	******	******	******	6.325	31	*****	2.00	15
STILWELL 1 NE	8506	6	38.2	31	1.8	63.	31	17.	30	831.0	-56.0	.0	.0	3.222	31	1.14	1.14	4
TAHLEQUAH	8677	6	37.5	31	1.2	63.	31	16.	13	853.0	-37.0	.0	.0	2.494	31	.48	1.25	20
WEBBERS FALLS	9445	6	36.1	31	.8	65.	28	18.	30	895.5	-25.5	.0	.0	3.020	31	1.21	1.41	20
WESTVILLE	9523	6	*****	0	*****	****	0	****	0	******	******	******	******	3.560	31	*****	1.15	20
WETUMKA 3 NE	9571	6	*****	0	*****	****	0	****	0	******	******	******	******	2.610	31	1.12	.96	20

JANUARY 1993 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	37.9	31	-1.6	67.	31	20.	13	841.0	50.0	.0	.0	1.540	31	.70	.63	20
ALTUS DAM	184	7	32.9	25	*****	56.	28	19.	14	803.0	******	.0	******	2.500	31	1.73	.62	20
ANADARKO	224	7	36.1	31	-.3	63.	31	17.	13	895.0	8.0	.0	.0	1.943	31	.91	.94	9
APACHE	260	7	*****	0	*****	****	0	****	0	******	******	******	******	2.020	31	.92	.87	9
ALTUS AFB	447	7	*****	0	*****	****	0	****	0	******	******	******	******	1.413	30	*****	.58	1
CARNEGIE 2 ENE	1504	7	36.7	31	-.1	66.	27	18.	13	877.5	3.5	.0	.0	1.980	31	1.05	.74	9
CHATTANOOGA	1706	7	38.9	31	.2	63.	31	21.	14	808.0	-7.0	.0	.0	.962	31	.00	.68	20
DUNCAN 12 W	2668	7	*****	0	*****	****	0	****	0	******	******	******	******	1.913	31	*****	.74	8
FREDERICK	3353	7	36.1	31	-1.6	63.	28	19.	13	897.0	51.0	.0	.0	1.370	31	.46	.56	20
GRANDFIELD 4 NW	3709	7	*****	0	*****	****	0	****	0	******	******	******	******	1.690	31	.60	.84	20
HOBART FAA APT	4204	7	35.5	30	-1.5	62.	31	19.	1	883.5	15.5	.0	.0	1.952	30	*****	.50	20
HOLLIS	4249	7	35.2	28	*****	69.	31	17.	13	834.5	******	.0	******	2.080	28	*****	1.23	2
LAWTON	5063	7	36.3	31	-.5	62.	28	20.	14	890.0	16.0	.0	.0	1.882	31	.82	.70	20
FORT SILL	5068	7	38.1	31	*****	63.	31	20.	13	834.5	******	.0	******	1.677	31	*****	.60	19
LOOKEBA 2 ENE	5329	7	*****	0	*****	****	0	****	0	******	******	******	******	2.093	31	1.11	.82	9
MANGUM RES STA	5509	7	35.4	31	-2.8	64.	31	16.	13	916.5	85.5	.0	.0	2.350	31	1.60	.86	2
RANDLETT 9 E	7403	7	*****	0	*****	****	0	****	0	******	******	******	******	1.505	31	*****	.61	20
ROOSEVELT	7727	7	*****	0	*****	****	0	****	0	******	******	******	******	1.850	31	.99	.73	20
SEDAN	8016	7	*****	0	*****	****	0	****	0	******	******	******	******	1.420	31	*****	.78	2
SNYDER	8299	7	*****	0	*****	****	0	****	0	******	******	******	******	1.554	31	.65	.74	20
VINSON 3 WNW	9212	7	*****	0	*****	****	0	****	0	******	******	******	******	1.623	31	1.14	.60	1
WALTERS	9278	7	41.0	30	1.4	65.	27	21.	13	719.5	-67.5	.0	.0	1.770	31	.40	.72	9
WICHITA MT WLR	9629	7	34.3	28	*****	59.	28	16.	14	860.5	******	.0	******	2.083	31	.90	.81	20
WILLOW	9668	7	*****	0	*****	****	0	****	0	******	******	******	******	2.031	31	*****	.65	1

JANUARY 1993 SUMMARY FOR SOUTH CENTRAL DIVISION (CD8)

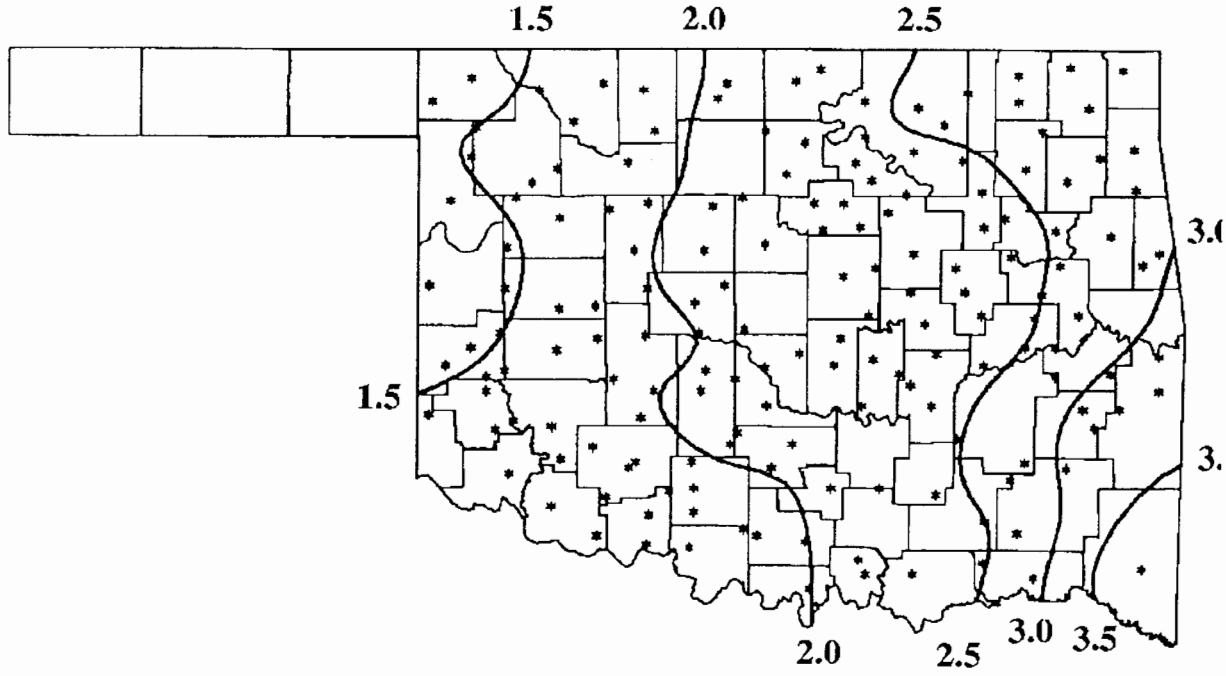
NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ADA	17	8	38.3	31	-.7	64.	27	18.	14	829.0	23.0	.0	.0	1.391	31	-.07	.42	9
ALLEN	147	8	*****	0	*****	****	0	****	0	******	******	******	******	2.400	31	*****	.90	20
ARDMORE	292	8	40.3	29	*****	64.	31	20.	13	716.5	******	.0	******	2.591	31	1.13	.50	20
ATOKA DAM	394	8	39.4	19	*****	66.	28	23.	14	485.5	******	.0	******	2.221	19	*****	1.17	20
BOKCHITO	917	8	*****	0	*****	****	0	****	0	******	******	******	******	1.750	31	*****	1.22	19
CANEY	1437	8	43.0	30	*****	65.	31	21.	13	659.0	******	.0	******	2.260	30	*****	1.30	20
CENTRAHOMA	1648	8	*****	0	*****	****	0	****	0	******	******	******	******	2.300	31	*****	1.00	20
CHICKASAW NRA	1745	8	37.6	31	.9	65.	23	19.	14	849.0	-28.0	.0	.0	2.000	31	.56	.79	20
COLEMAN	2011	8	*****	0	*****	****	0	****	0	******	******	******	******	2.050	31	*****	1.23	20
COMANCHE	2054	8	*****	0	*****	****	0	****	0	******	******	******	******	1.980	31	.75	.80	19
DAISY 4 ENE	2354	8	*****	0	*****	****	0	****	0	******	******	******	******	2.973	31	.65	1.16	20
DUNCAN	2660	8	36.9	31	-.6	63.	28	20.	14	870.0	17.0	.0	.0	2.421	31	1.23	.97	20
DURANT USDA	2678	8	40.0	31	1.8	65.	28	20.	14	775.5	-55.5	.0	.0	2.230	31	.23	1.24	20
ELMORE CITY	2872	8	*****	0	*****	****	0	****	0	******	******	******	******	1.870	31	*****	.75	19
FARRIS 3 WNW	3083	8	*****	0	*****	****	0	****	0	******	******	******	******	3.660	31	1.54	1.33	20
GRADY	3688	8	*****	0	*****	****	0	****	0	******	******	******	******	1.740	31	*****	.73	20
HEALDTON	4001	8	40.5	31	1.1	66.	22	19.	13	760.0	-34.0	.0	.0	1.721	31	.31	.65	20
HENNEPIN	4052	8	*****	0	*****	****	0	****	0	******	******	******	******	1.350	31	*****	.73	20
KETCHUM RANCH	4780	8	*****	0	*****	****	0	****	0	******	******	******	******	2.250	31	*****	.88	19
KINGSTON	4865	8	*****	0	*****	****	0	****	0	******	******	******	******	2.310	31	.36	.92	20
LEHIGH	5108	8	*****	0	*****	****	0	****	0	******	******	******	******	2.859	31	*****	1.20	20
LINDSAY 2 W	5216	8	38.4	31	.2	64.	27	20.	25	825.0	-6.0	.0	.0	1.976	31	.71	.75	20
LOCO 6 SE	5247	8	*****	0	*****	****	0	****	0	******	******	******	******	1.560	31	*****	.73	20
MADILL	5468	8	41.7	31	1.3	65.	23	21.	13	722.0	-41.0	.0	.0	1.472	31	-.38	.92	19
MARIETTA	5563	8	42.0	31	1.3	66.	23	20.	13	714.0	-39.0	.0	.0	2.090	31	.65	.76	20
MARLOW 1 WSW	5581	8	37.6	31	-.8	63.	31	15.	13	850.5	25.5	.0	.0	2.250	31	1.18	.80	20
MCGEE CREEK DAM	5713	8	*****	0	*****	****	0	****	0	******	******	******	******	2.382	31	*****	1.27	20
PAULS VALLEY	6926	8	39.2	31	.4	68.	22	18.	14	800.0	-12.0	.0	.0	1.820	31	.35	.80	20
PONTOTOC	7214	8	*****	0	*****	****	0	****	0	******	******	******	******	1.962	31	.42	.90	18
TISHOMINGO NWLR	8884	8	40.4	18	*****	64.	27	20.	13	443.5	******	.0	******	2.200	19	*****	.98	20
TUSSY	9032	8	*****	0	*****	****	0	****	0	******	******	******	******	1.840	31	*****	.83	20
WAURIKA	9395	8	41.6	31	1.1	67.	27	21.	13	725.5	-34.5	.0	.0	1.100	31	.00	.72	20
WAURIKA DAM	9399	8	39.8	19	*****	66.	29	22.	13	478.0	******	.0	******	1.561	19	*****	.85	20

JANUARY 1993 SUMMARY FOR SOUTHEAST DIVISION (CD9)

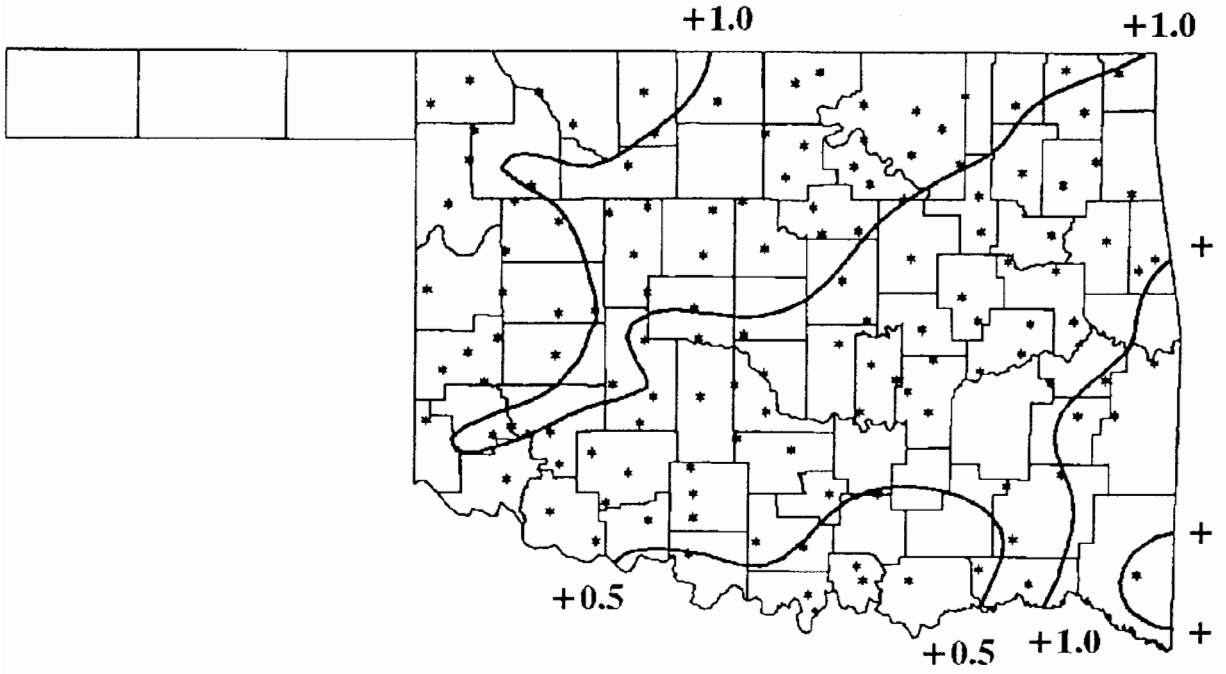
NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ANTLERS	256	9	41.5	31	1.3	66.	22	20.	26	729.0	-40.0	.0	.0	1.610	31	-.43	.47	19
BATTIEST 1 SSW	567	9	38.5	31	*****	62.	31	17.	26	823.0	******	.0	******	4.000	31	*****	1.30	4
BEAR MT TWR	584	9	40.5	31	-1.0	66.	23	23.	13	761.0	32.0	.0	.0	4.151	26	*****	1.57	4
BENGAL	670	9	*****	0	*****	****	0	****	0	******	******	******	******	3.290	31	*****	1.33	20
BOSWELL 4 NNW	980	9	41.3	31	.9	69.	4	20.	13	734.0	-29.0	.0	.0	2.063	31	.02	.91	20
BROKEN BOW 1 N	1162	9	*****	0	*****	****	0	****	0	******	******	******	******	5.050	31	2.49	1.50	4
BROKEN BOW DAM	1168	9	42.0	29	*****	66.	4	24.	27	666.5	******	.0	******	4.392	28	*****	2.18	4
CARNASAW TWR	1499	9	*****	0	*****	****	0	****	0	******	******	******	******	5.401	31	2.58	2.81	4
CARTER TWR	1544	9	*****	0	*****	****	0	****	0	******	******	******	******	1.790	31	-.80	.70	20
FANSHAWE	3065	9	*****	0	*****	****	0	****	0	******	******	******	******	3.460	31	1.28	1.40	20
HEE MT TWR	4017	9	*****	0	*****	****	0	****	0	******	******	******	******	6.010	31	3.32	2.87	4
HUGO	4384	9	42.5	30	.6	67.	23	22.	13	676.0	-40.0	.0	.0	3.330	31	1.17	.72	20
IDABEL	4451	9	40.6	31	.7	68.	24	21.	13	755.5	-22.5	.0	.0	5.273	31	2.55	2.72	4
POTEAU W W	7254	9	39.7	31	*****	69.	22	17.	27	785.0	******	.0	******	3.734	31	*****	1.35	19
SMITHVILLE 1 W	8285	9	39.7	31	1.0	68.	22	16.	26	785.5	-29.5	.0	.0	6.304	25	*****	3.50	4
SPIRO	8416	9	*****	0	*****	****	0	****	0	******	******	******	******	2.900	31	.82	1.33	20
TUSKAHOMA	9023	9	41.0	31	.7	67.	22	17.	26	742.5	-23.5	.0	.0	3.344	31	1.32	1.20	20
VALLIANT 3 W	9118	9	*****	0	*****	****	0	****	0	******	******	******	******	3.442	31	1.13	.97	4
WILBURTON 9 ENE	9634	9	39.9	31	1.5	68.	22	18.	26	779.0	-46.0	.0	.0	3.570	31	1.33	1.50	19
ZOE	9985	9	41.3	31	4.8	68.	24	21.	13	734.0	-150.0	.0	.0	5.273	31	2.69	2.72	4

JANUARY 1993 CLIMATE DIVISION SUMMARY

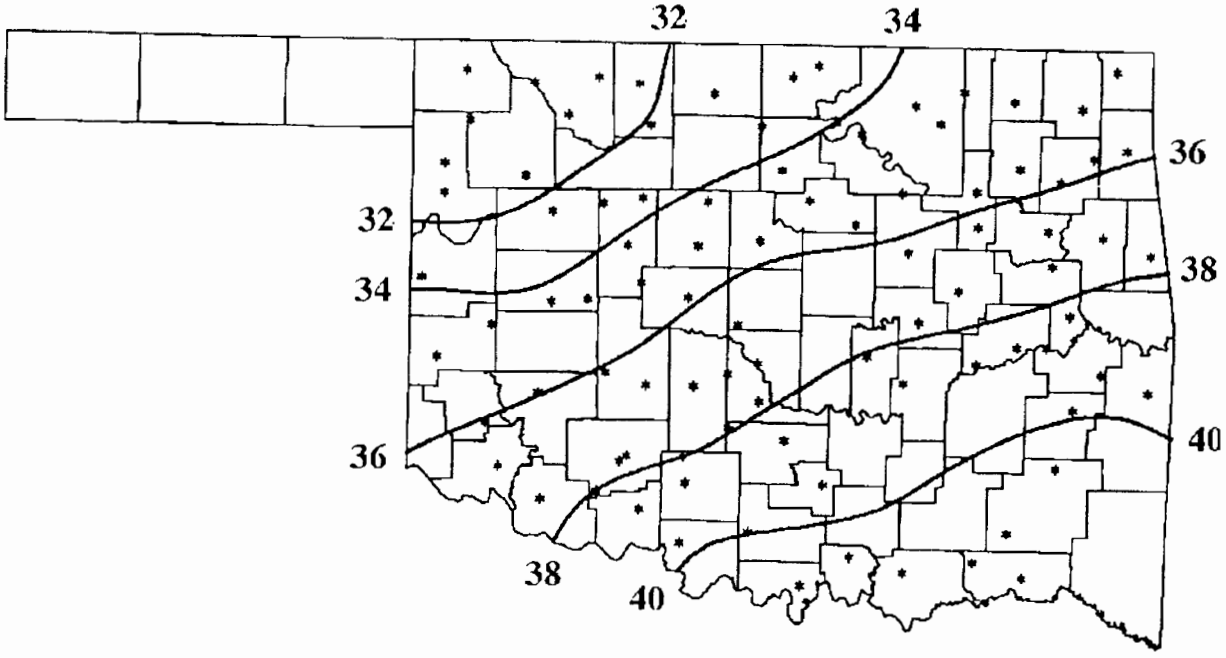
CLIMATE DIV	MEAN TEMP	NUM STA	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEGREE DAYS	DEV FROM NORM	COOL DEGREE DAYS	DEV FROM NORM	TOT PPT	NUM STA	DEV FROM NORM	MAX 24-HR	DAY
1	28.7	10	-4.3	69.0	27	-2.0	13	1117.9	125.1	.0	.0	1.22	10	.82	1.10	9
2	31.7	13	-1.9	69.0	28	2.0	13	1032.1	57.3	.0	.0	1.93	21	1.15	1.08	9
3	35.5	16	1.1	68.0	29	12.0	18	907.7	-41.8	.0	.0	2.55	29	1.09	1.30	20
4	34.1	10	-1.3	71.0	31	11.0	13	950.5	34.1	.0	.0	1.44	22	.76	1.21	9
5	36.6	15	-.1	69.0	28	14.0	1	876.7	-1.9	.0	.0	2.22	36	1.00	1.31	9
6	38.5	12	1.2	69.0	22	16.0	13	819.7	-39.7	.0	.0	2.77	31	.98	2.00	15
7	37.2	10	-.4	69.0	31	16.0	14	856.3	8.0	.0	.0	1.80	21	.88	1.23	2
8	39.7	12	.6	68.0	22	15.0	13	781.6	-21.2	.0	.0	2.08	29	.50	1.33	20
9	40.6	11	.9	69.0	22	16.0	26	755.0	-29.2	.0	.0	3.74	17	1.30	3.50	4



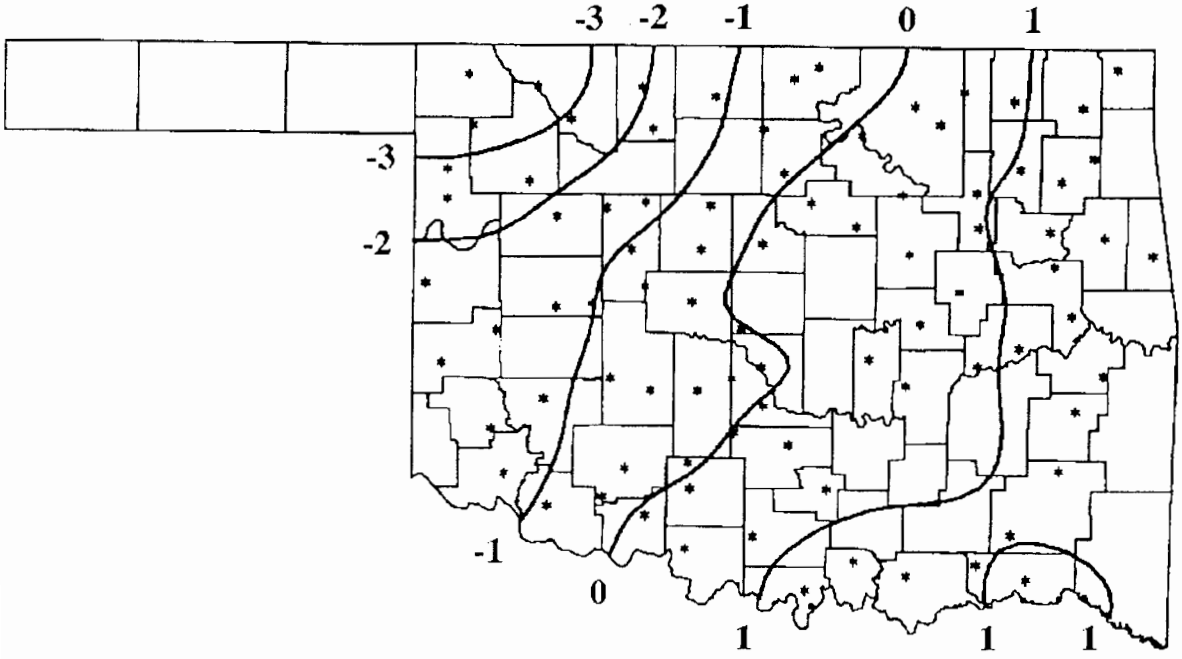
JANUARY 1993 TOTAL PRECIPITATION
(Inches)



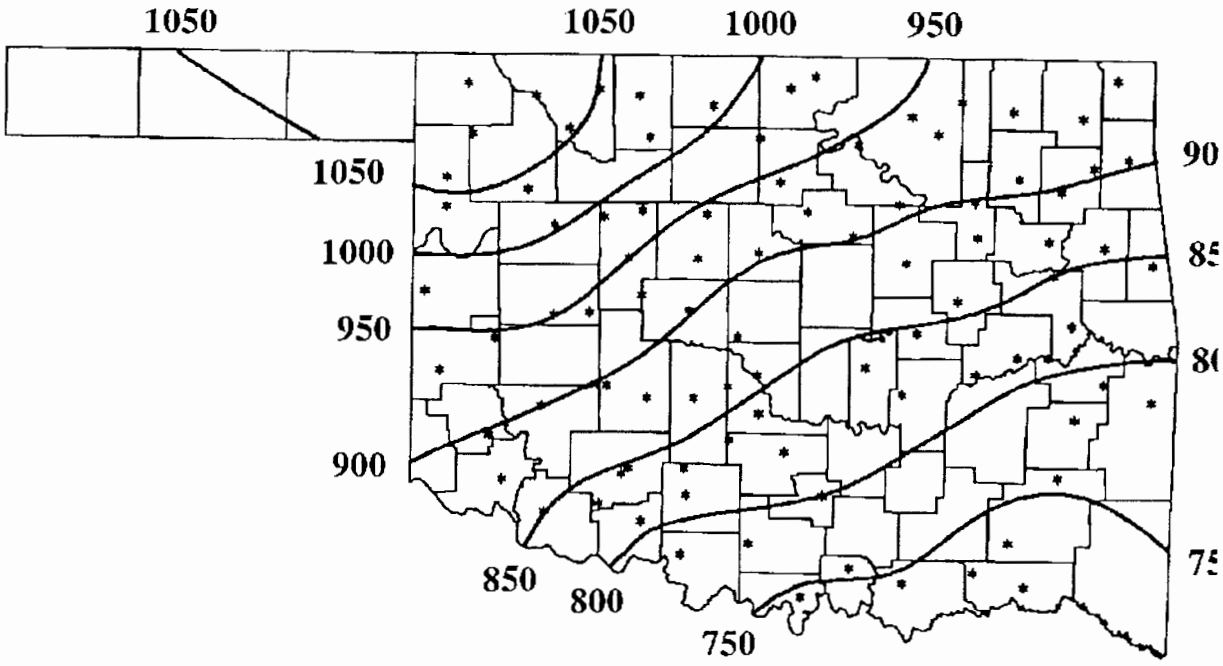
JANUARY 1993 DEVIATION FROM NORMAL PRECIPITATION
(Inches)



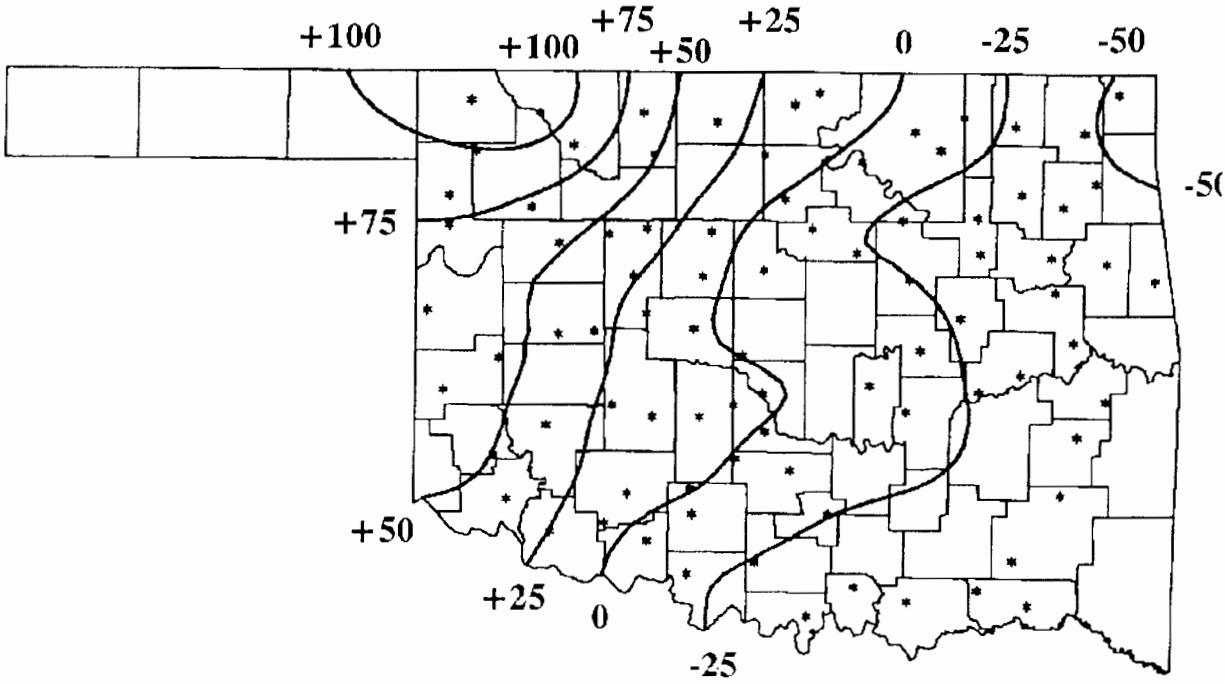
JANUARY 1993 AVERAGE MONTHLY TEMPERATURES
(Degrees F)



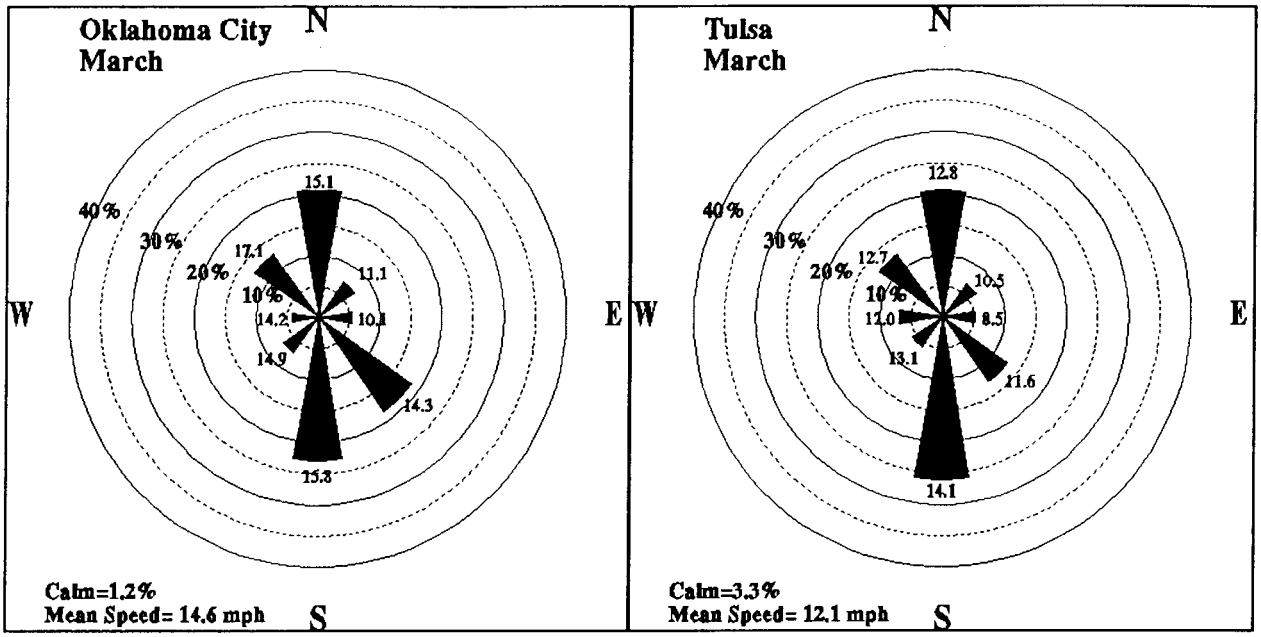
JANUARY 1993 DEVIATION FROM NORMAL TEMPERATURES
(Degrees F)



JANUARY 1993 HEATING DEGREE DAYS



JANUARY 1993 DEVIATION FROM NORMAL HEATING DEGREE DAYS



March Wind Roses for Oklahoma City and Tulsa. Percents represent the frequency of winds from each direction. The numbers at the ends of the bars indicate the average wind speed (miles per hour) from that direction.

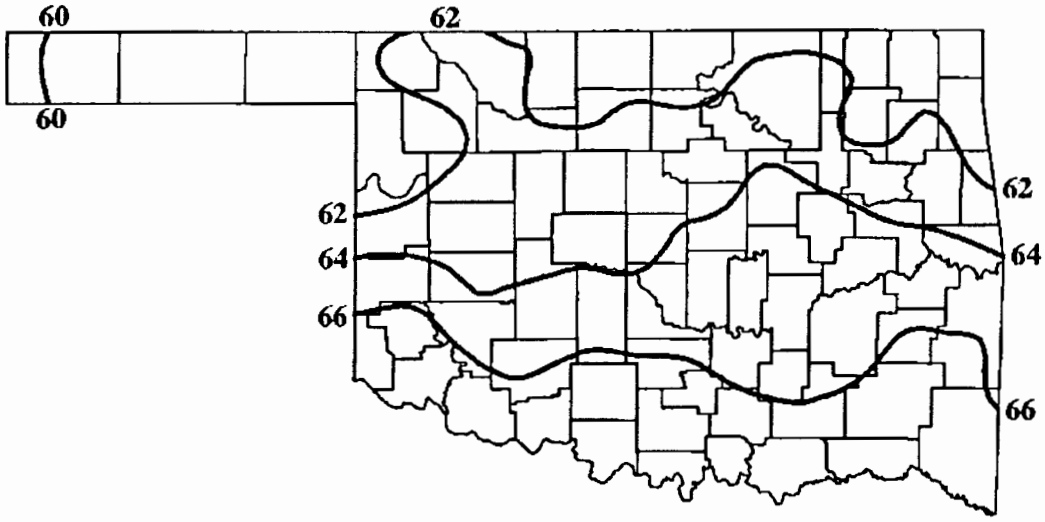
MARCH 1993 SUNRISE AND SUNSET

OKLAHOMA CITY

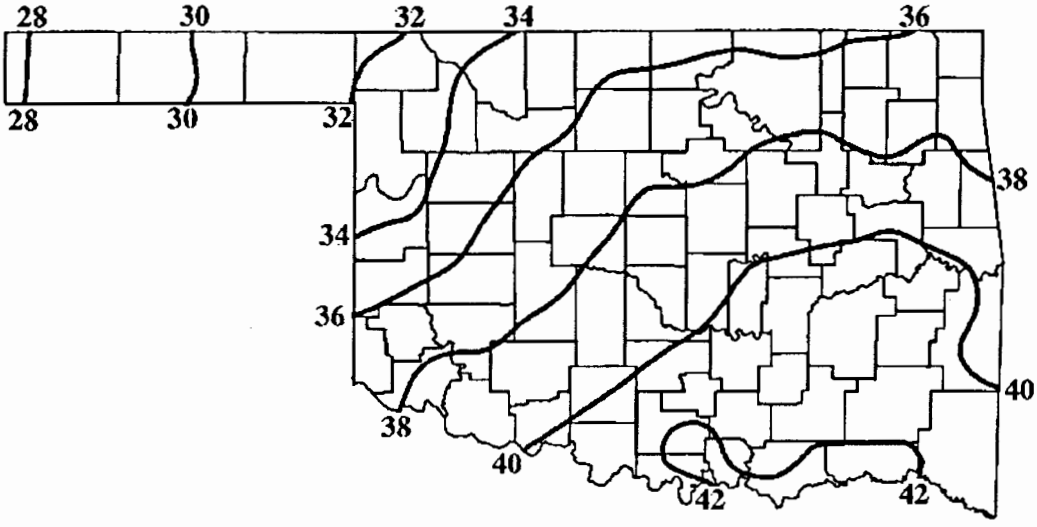
DATE	SUNRISE	SUNSET	DAYLIGHT
93 3 1	7: 2AM	6:25PM cst	11 hrs 23 mins
93 3 2	7: 0AM	6:26PM cst	11 hrs 25 mins
93 3 3	6:59AM	6:26PM cst	11 hrs 27 mins
93 3 4	6:58AM	6:27PM cst	11 hrs 29 mins
93 3 5	6:57AM	6:28PM cst	11 hrs 32 mins
93 3 6	6:55AM	6:29PM cst	11 hrs 34 mins
93 3 7	6:54AM	6:30PM cst	11 hrs 36 mins
93 3 8	6:53AM	6:31PM cst	11 hrs 38 mins
93 3 9	6:51AM	6:32PM cst	11 hrs 41 mins
93 310	6:50AM	6:33PM cst	11 hrs 43 mins
93 311	6:48AM	6:33PM cst	11 hrs 45 mins
93 312	6:47AM	6:34PM cst	11 hrs 47 mins
93 313	6:46AM	6:35PM cst	11 hrs 49 mins
93 314	6:44AM	6:36PM cst	11 hrs 52 mins
93 315	6:43AM	6:37PM cst	11 hrs 54 mins
93 316	6:41AM	6:38PM cst	11 hrs 56 mins
93 317	6:40AM	6:38PM cst	11 hrs 58 mins
93 318	6:39AM	6:39PM cst	12 hrs 1 mins
93 319	6:37AM	6:40PM cst	12 hrs 3 mins
93 320	6:36AM	6:41PM cst	12 hrs 5 mins
93 321	6:34AM	6:42PM cst	12 hrs 7 mins
93 322	6:33AM	6:43PM cst	12 hrs 10 mins
93 323	6:31AM	6:43PM cst	12 hrs 12 mins
93 324	6:30AM	6:44PM cst	12 hrs 14 mins
93 325	6:29AM	6:45PM cst	12 hrs 16 mins
93 326	6:27AM	6:46PM cst	12 hrs 19 mins
93 327	6:26AM	6:47PM cst	12 hrs 21 mins
93 328	6:24AM	6:47PM cst	12 hrs 23 mins
93 329	6:23AM	6:48PM cst	12 hrs 25 mins
93 330	6:21AM	6:49PM cst	12 hrs 28 mins
93 331	6:20AM	6:50PM cst	12 hrs 30 mins

TULSA

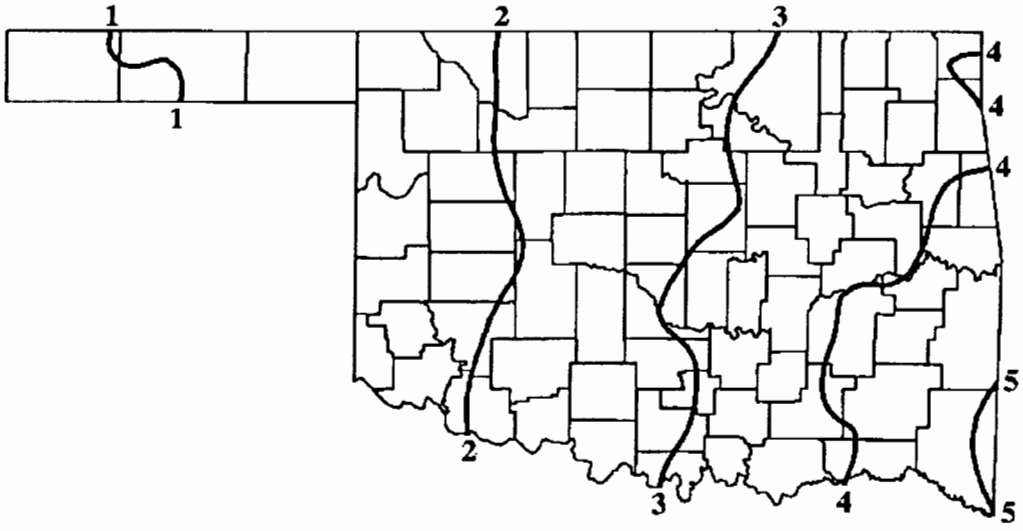
DATE	SUNRISE	SUNSET	DAYLIGHT
93 3 1	6:56AM	6:17PM cst	11 hrs 22 mins
93 3 2	6:54AM	6:18PM cst	11 hrs 24 mins
93 3 3	6:53AM	6:19PM cst	11 hrs 26 mins
93 3 4	6:52AM	6:20PM cst	11 hrs 28 mins
93 3 5	6:50AM	6:21PM cst	11 hrs 31 mins
93 3 6	6:49AM	6:22PM cst	11 hrs 33 mins
93 3 7	6:48AM	6:23PM cst	11 hrs 35 mins
93 3 8	6:46AM	6:24PM cst	11 hrs 38 mins
93 3 9	6:45AM	6:25PM cst	11 hrs 40 mins
93 310	6:43AM	6:25PM cst	11 hrs 42 mins
93 311	6:42AM	6:26PM cst	11 hrs 44 mins
93 312	6:41AM	6:27PM cst	11 hrs 47 mins
93 313	6:39AM	6:28PM cst	11 hrs 49 mins
93 314	6:38AM	6:29PM cst	11 hrs 51 mins
93 315	6:36AM	6:30PM cst	11 hrs 54 mins
93 316	6:35AM	6:31PM cst	11 hrs 56 mins
93 317	6:33AM	6:32PM cst	11 hrs 58 mins
93 318	6:32AM	6:32PM cst	12 hrs 1 mins
93 319	6:30AM	6:33PM cst	12 hrs 3 mins
93 320	6:29AM	6:34PM cst	12 hrs 5 mins
93 321	6:28AM	6:35PM cst	12 hrs 7 mins
93 322	6:26AM	6:36PM cst	12 hrs 10 mins
93 323	6:25AM	6:37PM cst	12 hrs 12 mins
93 324	6:23AM	6:38PM cst	12 hrs 14 mins
93 325	6:22AM	6:38PM cst	12 hrs 17 mins
93 326	6:20AM	6:39PM cst	12 hrs 19 mins
93 327	6:19AM	6:40PM cst	12 hrs 21 mins
93 328	6:17AM	6:41PM cst	12 hrs 24 mins
93 329	6:16AM	6:42PM cst	12 hrs 26 mins
93 330	6:14AM	6:43PM cst	12 hrs 28 mins
93 331	6:13AM	6:43PM cst	12 hrs 31 mins



March Normal Daily Maximum Temperatures (°F)



March Normal Daily Minimum Temperatures (°F)



March Normal Monthly Precipitation (inches)

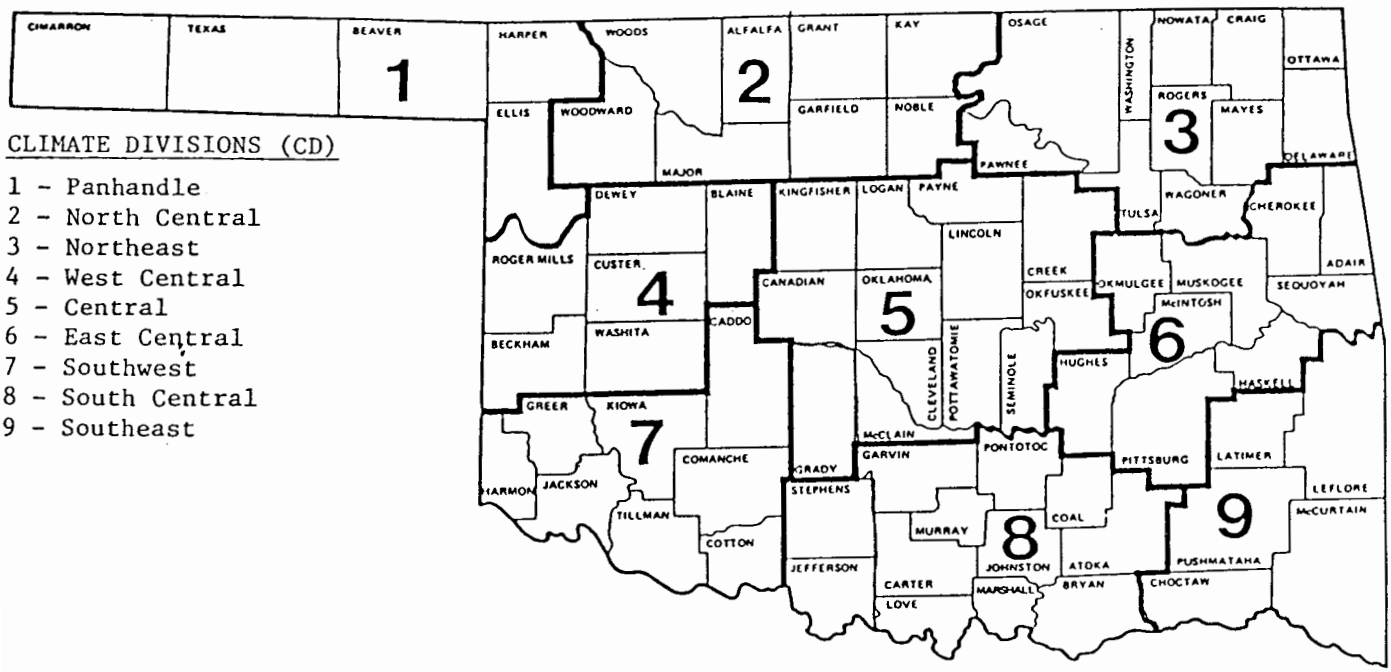
90-DAY NATIONAL WEATHER SERVICE OUTLOOK

(FEBRUARY 1993 - APRIL 1993)

Precipitation - Near Normal Panhandle
Above Normal Elsewhere

Temperature - Near Normal Northeast
Below Normal Elsewhere

O K L A H O M A



CLIMATE DIVISIONS (CD)

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

EXPLANATION OF TABLES

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

Station Name:

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

Climate Division: See the figure above.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

OKLAHOMA CITY CLIMATE CALENDAR

March 1993

The data on this calendar are for Oklahoma City. Normal values are calculated for the period 1961-1990. Extremes are found for the period of record (1891-present).

Normal 1	Actual	Normal 2	Actual	Normal 3	Actual	Normal 4	Actual	Normal 5	Actual	Normal 6	Actual	Normal 7	Actual
58.6 max		58.5 max		57.2 max		54.8 max		55.1 max		58.5 max		57.5 max	
33.5 min		35.6 min		34.5 min		31.8 min		33.0 min		34.0 min		34.7 min	
.10 ppt		.11 ppt		.12 ppt		.04 ppt		.03 ppt		.06 ppt		.05 ppt	
19 hdd		18 hdd		19 hdd		22 hdd		21 hdd		19 hdd		19 hdd	
0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd	
Highest Max	85-1976	Highest Max	88-1904	Highest Max	84-1955	Highest Max	84-1938	Highest Max	91-1991	Highest Max	83-1974	Highest Max	83-1925
Lowest Max	20-1980	Lowest Max	23-1943	Lowest Max	18-1960	Lowest Max	18-1960	Lowest Max	24-1920	Lowest Max	21-1943	Lowest Max	22-1932
Lowest Min	4-1913	Lowest Min	6-1922	Lowest Min	3-1960	Lowest Min	8-1960	Lowest Min	10-1960	Lowest Min	8-1943	Lowest Min	7-1920
Highest Min	56-1940	Highest Min	62-1976	Highest Min	59-1955	Highest Min	60-1938	Highest Min	59-1921	Highest Min	58-1911	Highest Min	61-1974
Greatest ppt	1.71-1948	Greatest ppt	2.04-1988	Greatest ppt	1.46-1985	Greatest ppt	.67-1933	Greatest ppt	2.13-1894	Greatest ppt	1.45-1973	Greatest ppt	1.33-1905

Normal 8	Actual	Normal 9	Actual	Normal 10	Actual	Normal 11	Actual	Normal 12	Actual	Normal 13	Actual	Normal 14	Actual
57.2 max		60.3 max		61.6 max		59.6 max		59.3 max		59.8 max		62.5 max	
35.0 min		36.8 min		38.1 min		38.4 min		37.1 min		36.7 min		36.7 min	
.11 ppt		.05 ppt		.14 ppt		.13 ppt		.04 ppt		.02 ppt		.07 ppt	
19 hdd		17 hdd		15 hdd		16 hdd		17 hdd		17 hdd		16 hdd	
0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd	
Highest Max	84-1911	Highest Max	89-1911	Highest Max	89-1955	Highest Max	93-1967	Highest Max	90-1967	Highest Max	90-1967	Highest Max	84-1938
Lowest Max	26-1932	Lowest Max	29-1932	Lowest Max	26-1932	Lowest Max	16-1948	Lowest Max	27-1950	Lowest Max	34-1924	Lowest Max	26-1895
Lowest Min	9-1967	Lowest Min	11-1932	Lowest Min	4-1948	Lowest Min	1-1948	Lowest Min	4-1948	Lowest Min	14-1950	Lowest Min	13-1895
Highest Min	60-1897	Highest Min	61-1986	Highest Min	61-1990	Highest Min	61-1911	Highest Min	59-1972	Highest Min	66-1918	Highest Min	56-1955
Greatest ppt	1.38-1974	Greatest ppt	.88-1913	Greatest ppt	1.48-1974	Greatest ppt	2.16-1902	Greatest ppt	1.30-1898	Greatest ppt	1.39-1922	Greatest ppt	1.04-1990

Normal 15	Actual	Normal 16	Actual	Normal 17	Actual	Normal 18	Actual	Normal 19	Actual	Normal 20	Actual	Normal 21	Actual
59.4 max		60.7 max		63.6 max		62.3 max		61.6 max		61.9 max		60.3 max	
37.7 min		38.0 min		38.4 min		39.3 min		38.9 min		38.4 min		36.7 min	
.02 ppt		.07 ppt		.07 ppt		.05 ppt		.07 ppt		.19 ppt		.04 ppt	
16 hdd		16 hdd		14 hdd		14 hdd		15 hdd		15 hdd		17 hdd	
0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd	
Highest Max	84-1943	Highest Max	84-1908	Highest Max	91-1908	Highest Max	89-1907	Highest Max	97-1907	Highest Max	92-1907	Highest Max	95-1916
Lowest Max	28-1892	Lowest Max	28-1892	Lowest Max	24-1992	Lowest Max	30-1965	Lowest Max	26-1965	Lowest Max	33-1913	Lowest Max	29-1955
Lowest Min	13-1895	Lowest Min	18-1895	Lowest Min	11-1892	Lowest Min	9-1923	Lowest Min	10-1923	Lowest Min	12-1965	Lowest Min	16-1913
Highest Min	58-1919	Highest Min	56-1945	Highest Min	58-1921	Highest Min	62-1898	Highest Min	63-1921	Highest Min	64-1935	Highest Min	64-1907
Greatest ppt	2.34-1944	Greatest ppt	1.25-1987	Greatest ppt	.85-1905	Greatest ppt	.48-1968	Greatest ppt	1.73-1903	Greatest ppt	2.18-1985	Greatest ppt	1.23-1921

Normal 22	Actual	Normal 23	Actual	Normal 24	Actual	Normal 25	Actual	Normal 26	Actual	Normal 27	Actual	Normal 28	Actual
64.4 max		63.3 max		61.4 max		61.0 max		63.1 max		65.2 max		66.2 max	
37.8 min		38.7 min		39.6 min		39.5 min		40.4 min		41.3 min		43.5 min	
.08 ppt		.19 ppt		.05 ppt		.10 ppt		.06 ppt		.10 ppt		.13 ppt	
14 hdd		14 hdd		15 hdd		15 hdd		14 hdd		12 hdd		11 hdd	
0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		1 cdd	
Highest Max	86-1951	Highest Max	88-1929	Highest Max	91-1929	Highest Max	88-1976	Highest Max	85-1972	Highest Max	90-1895	Highest Max	88-1928
Lowest Max	33-1913	Lowest Max	36-1974	Lowest Max	36-1965	Lowest Max	33-1964	Lowest Max	33-1937	Lowest Max	32-1899	Lowest Max	36-1931
Lowest Min	13-1955	Lowest Min	20-1898	Lowest Min	23-1965	Lowest Min	18-1955	Lowest Min	13-1955	Lowest Min	13-1913	Lowest Min	16-1931
Highest Min	63-1907	Highest Min	64-1907	Highest Min	64-1904	Highest Min	64-1907	Highest Min	67-1907	Highest Min	68-1907	Highest Min	62-1985
Greatest ppt	1.37-1979	Greatest ppt	2.35-1984	Greatest ppt	1.82-1920	Greatest ppt	1.65-1922	Greatest ppt	2.02-1938	Greatest ppt	2.09-1912	Greatest ppt	2.84-1988

Normal 29	Actual	Normal 30	Actual	Normal 31	Actual
63.3 max		63.3 max		68.0 max	
42.2 min		41.7 min		43.8 min	
.05 ppt		.13 ppt		.05 ppt	
13 hdd		13 hdd		10 hdd	
1 cdd		0 cdd		1 cdd	
Highest Max	87-1895	Highest Max	88-1904	Highest Max	94-1940
Lowest Max	34-1987	Lowest Max	28-1926	Lowest Max	40-1901
Lowest Min	19-1894	Lowest Min	22-1987	Lowest Min	20-1926
Highest Min	65-1963	Highest Min	65-1895	Highest Min	62-1967
Greatest ppt	.99-1897	Greatest ppt	1.82-1963	Greatest ppt	1.29-1988

MARCH AVERAGES

TEMPERATURE	:	49.4°F
PRECIPITATION	:	2.52"
HEATING DEGREE DAYS	:	492
COOLING DEGREE DAYS	:	3

TULSA CLIMATE CALENDAR

March 1993

The data on this calendar are for Tulsa. Normal values are calculated for the period 1948-1992. Temperature extremes are for the period 1905-1992; precipitation extremes are for the period 1948-1992.

Normal 1	Actual	Normal 2	Actual	Normal 3	Actual	Normal 4	Actual	Normal 5	Actual	Normal 6	Actual	Normal 7	Actual
58.0 max		58.0 max		58.0 max		56.0 max		56.0 max		59.0 max		58.0 max	
34.0 min		36.0 min		35.0 min		33.0 min		34.0 min		34.0 min		34.0 min	
.10 ppt		.06 ppt		.14 ppt		.16 ppt		.03 ppt		.07 ppt		.03 ppt	
19 hdd		18 hdd		18 hdd		20 hdd		20 hdd		18 hdd		19 hdd	
0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd	
Highest Max	81-1967	Highest Max	84-1976	Highest Max	82-1955	Highest Max	83-1938	Highest Max	88-1991	Highest Max	87-1956	Highest Max	83-1925
Lowest Max	26-1980	Lowest Max	26-1960	Lowest Max	25-1960	Lowest Max	18-1960	Lowest Max	20-1960	Lowest Max	33-1960	Lowest Max	33-1957
Lowest Min	9-1962	Lowest Min	7-1943	Lowest Min	3-1943	Lowest Min	6-1960	Lowest Min	5-1960	Lowest Min	13-1943	Lowest Min	6-1920
Highest Min	53-1974	Highest Min	59-1970	Highest Min	64-1974	Highest Min	57-1983	Highest Min	60-1956	Highest Min	52-1990	Highest Min	66-1974
Greatest ppt	1.63-1973	Greatest ppt	2.06-1988	Greatest ppt	1.45-1953	Greatest ppt	1.37-1963	Greatest ppt	.75-1989	Greatest ppt	1.57-1973	Greatest ppt	.57-1978

Normal 8	Actual	Normal 9	Actual	Normal 10	Actual	Normal 11	Actual	Normal 12	Actual	Normal 13	Actual	Normal 14	Actual
57.0 max		59.0 max		59.0 max		59.0 max		58.0 max		59.0 max		61.0 max	
35.0 min		36.0 min		37.0 min		39.0 min		37.0 min		37.0 min		37.0 min	
.10 ppt		.08 ppt		.16 ppt		.17 ppt		.07 ppt		.05 ppt		.07 ppt	
19 hdd		17 hdd		17 hdd		17 hdd		17 hdd		17 hdd		16 hdd	
0 cdd		0 cdd		0 cdd		1 cdd		1 cdd		0 cdd		0 cdd	
Highest Max	87-1925	Highest Max	88-1911	Highest Max	91-1955	Highest Max	94-1967	Highest Max	91-1967	Highest Max	92-1967	Highest Max	85-1977
Lowest Max	33-1960	Lowest Max	35-1964	Lowest Max	29-1948	Lowest Max	17-1948	Lowest Max	29-1950	Lowest Max	33-1975	Lowest Max	40-1969
Lowest Min	5-1967	Lowest Min	12-1932	Lowest Min	4-1948	Lowest Min	-1-1948	Lowest Min	-3-1948	Lowest Min	12-1948	Lowest Min	13-1975
Highest Min	63-1974	Highest Min	63-1990	Highest Min	60-1955	Highest Min	62-1967	Highest Min	63-1967	Highest Min	62-1990	Highest Min	54-1955
Greatest ppt	1.53-1958	Greatest ppt	.99-1964	Greatest ppt	1.91-1974	Greatest ppt	1.97-1990	Greatest ppt	.67-1958	Greatest ppt	.90-1953	Greatest ppt	2.09-1990

Normal 15	Actual	Normal 16	Actual	Normal 17	Actual	Normal 18	Actual	Normal 19	Actual	Normal 20	Actual	Normal 21	Actual
60.0 max		62.0 max		63.0 max		63.0 max		62.0 max		61.0 max		60.0 max	
38.0 min		38.0 min		39.0 min		41.0 min		40.0 min		40.0 min		38.0 min	
.03 ppt		.06 ppt		.14 ppt		.09 ppt		.09 ppt		.18 ppt		.08 ppt	
16 hdd		15 hdd		14 hdd		13 hdd		14 hdd		15 hdd		16 hdd	
0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd	
Highest Max	84-1921	Highest Max	86-1908	Highest Max	88-1916	Highest Max	99-1907	Highest Max	96-1907	Highest Max	92-1907	Highest Max	98-1916
Lowest Max	38-1960	Lowest Max	35-1960	Lowest Max	34-1970	Lowest Max	30-1965	Lowest Max	32-1965	Lowest Max	39-1983	Lowest Max	39-1974
Lowest Min	21-1970	Lowest Min	22-1962	Lowest Min	20-1906	Lowest Min	12-1923	Lowest Min	8-1923	Lowest Min	11-1965	Lowest Min	18-1974
Highest Min	57-1983	Highest Min	58-1982	Highest Min	55-1977	Highest Min	61-1979	Highest Min	58-1982	Highest Min	60-1991	Highest Min	63-1966
Greatest ppt	.32-1981	Greatest ppt	1.03-1970	Greatest ppt	1.45-1977	Greatest ppt	1.24-1979	Greatest ppt	1.15-1968	Greatest ppt	1.61-1962	Greatest ppt	.95-1956

Normal 22	Actual	Normal 23	Actual	Normal 24	Actual	Normal 25	Actual	Normal 26	Actual	Normal 27	Actual	Normal 28	Actual
63.0 max		64.0 max		61.0 max		60.0 max		64.0 max		66.0 max		68.0 max	
38.0 min		40.0 min		41.0 min		41.0 min		41.0 min		42.0 min		44.0 min	
.05 ppt		.28 ppt		.12 ppt		.11 ppt		.08 ppt		.08 ppt		.09 ppt	
14 hdd		13 hdd		14 hdd		14 hdd		13 hdd		11 hdd		10 hdd	
0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		0 cdd		1 cdd	
Highest Max	91-1907	Highest Max	91-1907	Highest Max	91-1929	Highest Max	88-1910	Highest Max	87-1918	Highest Max	88-1956	Highest Max	90-1963
Lowest Max	40-1952	Lowest Max	33-1974	Lowest Max	30-1965	Lowest Max	28-1965	Lowest Max	34-1955	Lowest Max	41-1948	Lowest Max	46-1970
Lowest Min	15-1955	Lowest Min	21-1968	Lowest Min	19-1966	Lowest Min	18-1955	Lowest Min	14-1955	Lowest Min	13-1913	Lowest Min	17-1931
Highest Min	57-1991	Highest Min	59-1988	Highest Min	60-1967	Highest Min	58-1967	Highest Min	70-1991	Highest Min	59-1985	Highest Min	69-1985
Greatest ppt	1.08-1948	Greatest ppt	2.50-1969	Greatest ppt	1.98-1973	Greatest ppt	.79-1967	Greatest ppt	1.07-1977	Greatest ppt	1.86-1975	Greatest ppt	1.65-1988

Normal 29	Actual	Normal 30	Actual	Normal 31	Actual
65.0 max		65.0 max		68.0 max	
43.0 min		43.0 min		44.0 min	
.08 ppt		.12 ppt		.09 ppt	
11 hdd		12 hdd		10 hdd	
1 cdd		1 cdd		1 cdd	
Highest Max	90-1967	Highest Max	86-1981	Highest Max	96-1974
Lowest Max	34-1987	Lowest Max	36-1954	Lowest Max	46-1984
Lowest Min	24-1944	Lowest Min	21-1964	Lowest Min	24-1926
Highest Min	67-1963	Highest Min	66-1967	Highest Min	62-1967
Greatest ppt	1.19-1985	Greatest ppt	1.78-1973	Greatest ppt	1.21-1957

MARCH AVERAGES

TEMPERATURE	:	49.7°F
PRECIPITATION	:	3.06"
HEATING DEGREE DAYS	:	477
COOLING DEGREE DAYS	:	6