REVISED
OKLAHOMA
MONTHLY SUMMARY
OCTOBER 1998

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MONTHLY SUMMARY FOR OCTOBER 1998

The bizarre weather of 1998 continued through October. Significant rainfall fell in all areas of the state, including a bit too much rain in a number of areas. According to preliminary data from the National Weather Service cooperative observing network, statewide-averaged precipitation for October was 6.71 inches, 3.64 inches greater than normal and the 5th greatest October precipitation in the state since 1892. January-through-October precipitation totaled 31.36 inches, 1.21 inches greater than normal, ranking 41st wettest on the historical list, despite the rather severe drought that persisted over most of the state through spring and summer.

October temperatures averaged 63.9 degrees across the state, 1.8 degrees greater than normal, to rank this as the 29th warmest October through the 107 years on record. The year-to-date temperature of 65.5 degrees is 2.1 degrees greater than normal, making this year, thus far, the 11th warmest on record in Oklahoma.

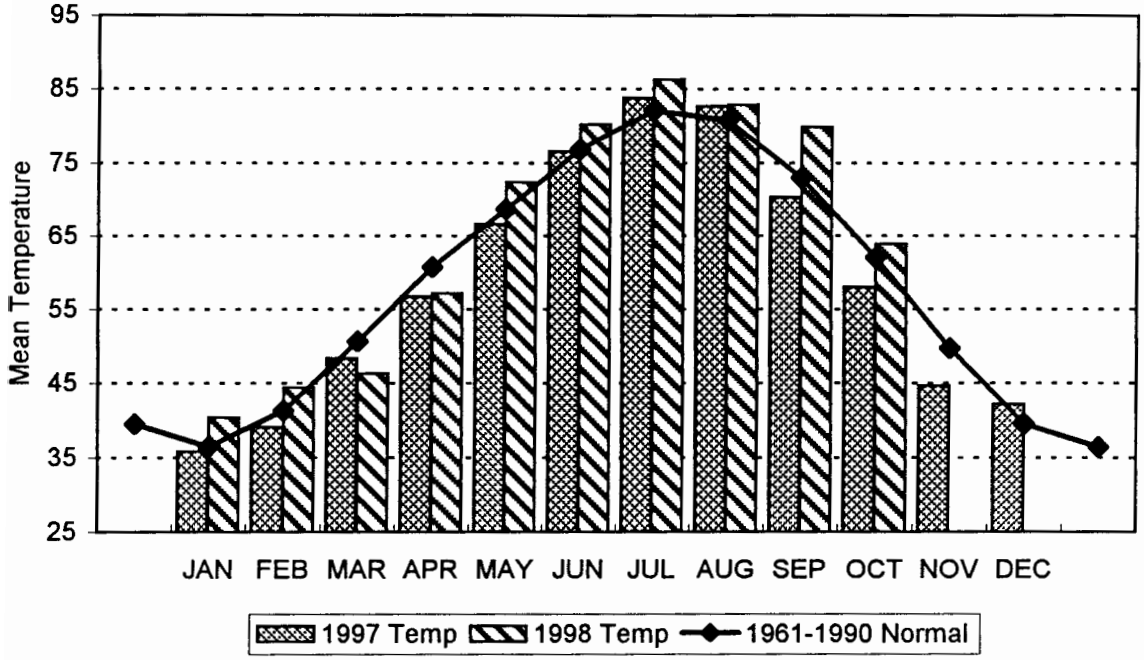
The dominant weather story on October was the record-setting 20 tornadoes in the state on the 4th. The outbreak started at 3:25 PM when an moderate tornado (F1) touched down west of Dacoma in eastern Woods County and ended when a weak tornado (F0) touched down briefly southeast of Tullahassee in Wagoner County at 12:27 AM on the 5th. The strongest storm appeared to be an F3 (severe) tornado that moved from five miles west-northwest of Little (Seminole County) northeastward through Centerview in extreme northeastern Pottawatomie County (a total path of about 10 miles). Tornadoes rated F2 (significant tornado) moved through Moore (Cleveland), along a 27-mile path from near Boley (Okfuskee) to Nuyaka (Okmulgee) injuring 4 near Haydenville (Okfuskee), south of Watonga (Blaine), and west of Prague (Lincoln). Other tornadoes were reported in the vicinity of Shawnee (Pottawatomie), Meeker (Lincoln), Pawnee (Pawnee),New Alluwe (Nowata), and Collinsville (Tulsa).

Heavy rains fell on the 1st and 2nd in several areas of the state. Mesonet sites near Blackwell and Newkirk (both in Kay County) recorded 7.06 and 6.12 inches, respectively. Lamont (Grant) reported 6.05 inches, Erick Mesonet (Beckham) noted 5.43 inches, Welty (Okfuskee) received 5.39 inches. Hardy (Kay) posted a total of 5.31 inches and 5.02 inches fell in the Durant Mesonet (Bryan) rain gauge. Another round of heavy rain from the 4th through the 6th, much of it falling on saturated ground, led to flooding in many low-lying areas, including western Kay County and along the Neosho River and Tar Creek in Miami (Ottawa). Street flooding was reported in a number of cities and towns. Red Rock (Noble) recorded 9.84 inches, bringing its total for the first week of October to 13.80 inches, exceeding its previous October monthly record. Pawnee (Pawnee) recorded 8.66 inches and the Mesonet site near Hectorville (Okmulgee) reported 8.22 inches of rain over the three day period. Observers at Kansas (Delaware), Pryor (Mayes), Spavinaw (Mayes), Wagoner (Wagoner), Smithville (McCurtain), Page (LeFlore) all reported over 7 inches of rain during the same period.

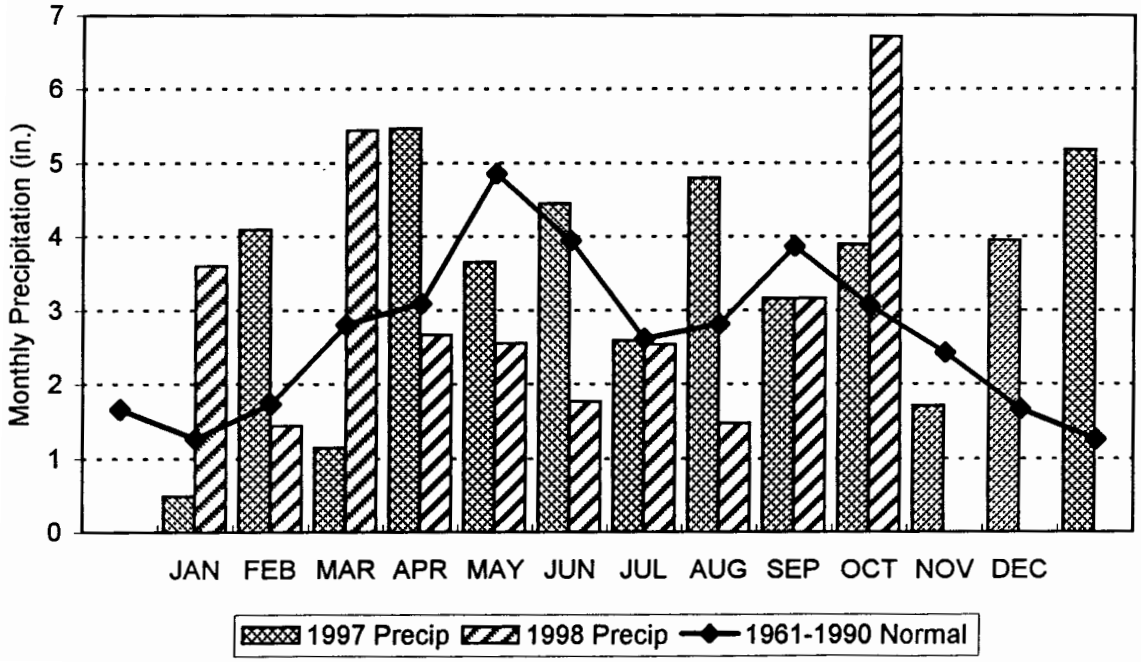
Mild autumn weather dominated most of the rest of the month, although Meeker (Lincoln) reported a 7.55-inch on the 18th and Mannford (Creek) noted 4.14 inches of rain on the same day. A major precipitation-producing storm system was moving through the state at month's end with Waynoka (Woods) reporting 7.90 inches of rain on the 30th and 31st, accompanied by reported totals of 7.81 inches at the Cherokee Mesonet site (Alfalfa), 7.62 inches at Jefferson (Grant), 7.50 inches at the Alva Mesonet site, and 7.33 inches at Fort Supply Dam (Woodward). Observers at Medford (Grant) and Vici (Dewey) and Mesonet stations in Dewey and Woodward counties (Camargo, Seiling, and Woodward) all reported two-day rainfall totals in excess of six inches.

Howard L. Johnson

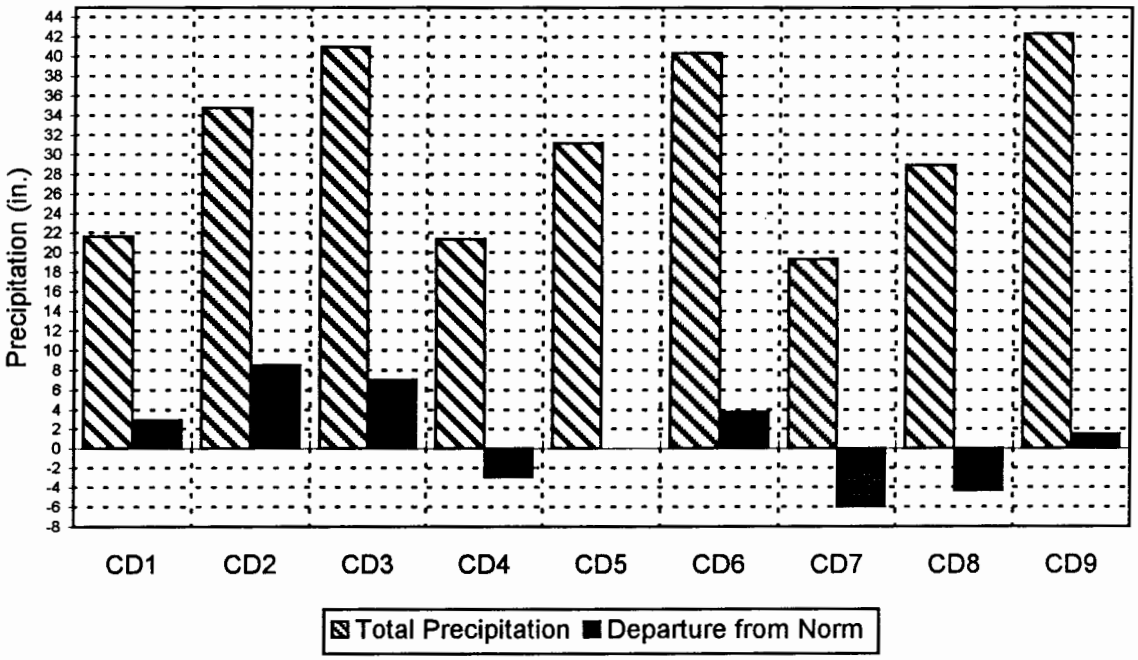
1997 and 1998 STATEWIDE TEMPERATURES
Monthly Averages



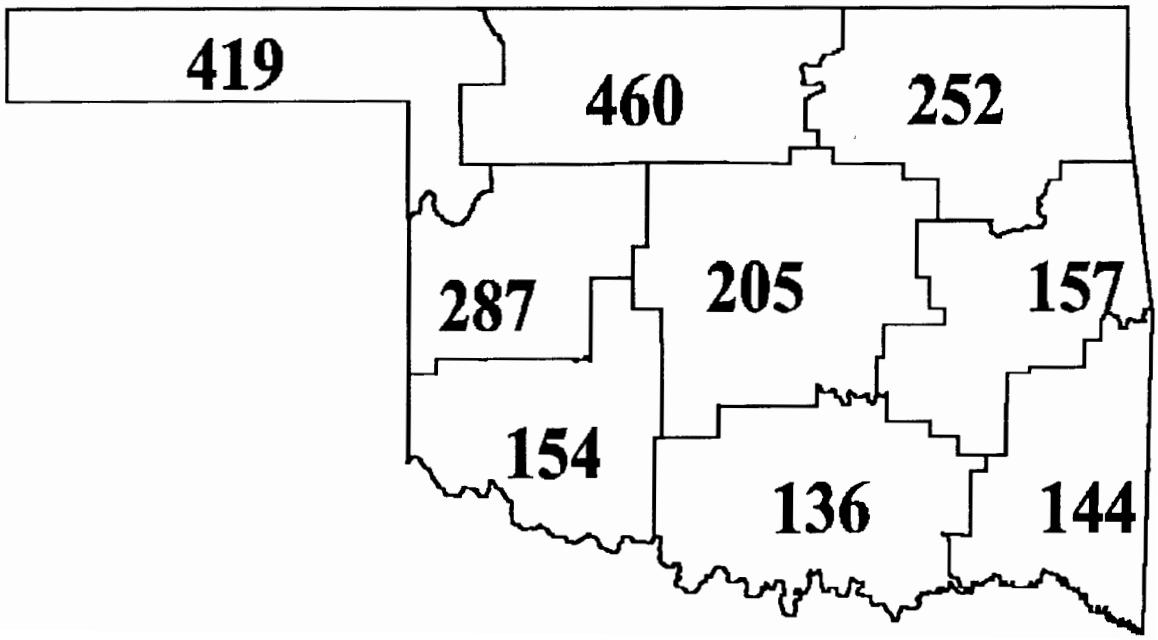
1997 and 1998 STATEWIDE PRECIPITATION
Monthly Totals



CD Averaged Precipitation
January through October 1998



CD PERCENT OF NORMAL PRECIPITATION
October 1998



EXTREME VALUES OF TEMPERATURE AND PRECIPITATION IN EACH CLIMATE DIVISION
OCTOBER, 1998

CD	MAX TEMP	DATE	LOCATION	MIN TEMP	DATE	LOCATION	24-HOUR PRECIP	DATE	LOCATION	MONTHLY PRECIP	LOCATION
1	96	15	GATE	28	22	GAGE	4.17	31	GAGE	8.41	GAGE
				28	18	KENTON					
2	98	1	PERRY	26	21	FT SUPPLY	9.84	4	RED ROCK	19.62	RED ROCK
3	90	1	BIXBY	34	23	MANNFORD	8.65	5	PAWNEE	11.98	PAWNEE
4	99	1	CORDELL	35	22	HAMMON	4.00	31	WEATHERFORD	9.98	VICI
	99	1	ERICK	35	23	HAMMON					
				35	23	TALOGA					
5	101	1	KINGFISHER	35	22	GUTHRIE	7.55	18	MEEKER	16.68	MEEKER
				35	24	GUTHRIE					
6	95	1	EUFAULA	34	21	STILWELL	7.07	5	HASKELL	10.93	HASKELL
				34	22	STILWELL					
				34	25	STILWELL					
				34	26	STILWELL					
7	100	1	ALTUS DAM	37	22	ANADARKO	2.97	31	CARNEGIE	6.41	CARNEGIE
	100	1	CHATTANOOGA	37	23	ANADARKO					
	100	1	MANGUM	37	23	WICHITA MT					
				37	24	WICHITA MT					
8	99	1	ATOKA DAM	32	14	MADILL	4.37	6	ATOKA DAM	7.51	ARDMORE
9	98	1	IDABEL	31	23	SMITHVILLE	7.05	6	PAGE	11.80	SMITHVILLE
				31	24	SMITHVILLE	7.05	6	SMITHVILLE		

TABLE OF 1997/1998 COMPARISONS

	OCTOBER Temperature (°F)		OCTOBER Precipitation (in.)	
Station	**1997**	**1998**	**1997**	**1998**
Arnett	58.0	60.1	3.14	4.22
Enid	59.0	62.7	2.74	5.87
Tulsa	62.0	63.0	1.99	9.04
Elk City	60.7	62.4	3.52	6.26
Oklahoma City	62.3	64.4	3.23	6.76
McAlester	63.5	65.3	0.78	5.66
Altus Irr Station	62.6	65.2	2.92	3.50
Ardmore	66.2	68.3	3.38	7.51
Idabel	63.0	64.9	9.18	3.61

EXTREMES

VARIABLE	STATION	DIVISON	OBSERVATION	DATE
Minimum temperature (°F)	Ft. Supply	2	26	21
Maximum temperature (°F)	Kingfisher	5	101	1
Maximum 24-hour Precipitation	Red Rock	2	9.84"	4

OCTOBER 1998 SUMMARY FOR PANHANDLE 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	60.1	31	1.3	92	1	36	19	185	-39	33	2	4.221	31	2.39	2.74	31
BEAVER	593	1	60.1	31	2.5	94	15	33	22	199	-48	46	29	6.210	31	5.02	2.42	31
BOISE CITY	908	1	59.4	30	2.2	89	1	29	18	193	-61	26	13	4.516	31	3.66	2.60	31
BUFFALO	1243	1	62.8	30	1.2	94	14	31	22	136	-21	70	19	5.381	31	3.44	3.52	31
FARGO	3070	1	*****	0	*****	****	0	****	0	******	******	******	******	5.222	31	3.58	3.94	31
GAGE	3407	1	60.5	31	0.1	89	14	28	22	192	7	52	10	8.415	31	6.86	4.17	31
GATE	3489	1	61.3	31	2	96	15	37	22	163	-42	48	20	3.841	31	2.43	2.67	31
GOODWELL	3628	1	60.3	30	3.5	95	1	34	23	179	-90	38	24	5.840	31	4.88	2.50	1
GUYMON	3835	1	60.0	26	*****	95	1	34	22	161	******	32	******	3.891	27	*****	2.08	1
HOOKER	4298	1	61.5	31	3.3	93	14	37	18	147	-93	39	10	6.840	31	5.90	3.13	1
KENTON	4766	1	58.6	27	*****	88	14	28	18	186	******	14	******	2.193	30	*****	1.84	31
LAVERNE	5045	1	*****	0	*****	****	0	****	0	******	******	******	******	4.661	31	3.25	2.84	31
RANGE	7412	1	*****	0	*****	****	0	****	0	******	******	******	******	4.782	31	*****	3.23	1
REGNIER	7534	1	*****	0	*****	****	0	****	0	******	******	******	******	4.891	31	4.13	3.27	1
TURPIN	9017	1	60.1	23	*****	93	15	36	19	146	******	33	******	5.960	23	*****	2.35	31

OCTOBER 1998 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	61.7	31	*****	87	15	36	23	148	******	45	******	8.440	31	*****	3.93	31
VANCE AFB	302	2	*****	0	*****	****	0	****	0	******	******	******	******	3.624	31	*****	1.61	2
BILLINGS	755	2	62.7	31	1.8	88	1	38	23	128	-40	56	16	10.181	31	7.45	5.70	2
BLACKWELL 2E	818	2	62.5	31	1.3	83	5	40	23	126	-30	47	8	12.251	31	9.55	4.93	2
BRAMAN	1075	2	*****	0	*****	****	0	****	0	******	******	******	******	11.940	31	*****	3.47	5
CEDARDALE	1620	2	*****	0	*****	****	0	****	0	******	******	******	******	7.260	31	*****	3.64	31
CHEROKEE	1724	2	61.8	28	*****	86	15	38	23	130	******	39	******	5.260	29	*****	3.20	2
ENID	2912	2	62.7	31	0.3	92	1	39	23	128	-10	57	1	5.870	31	2.76	3.55	2
FT SUPPLY	3304	2	59.0	31	0.1	89	14	26	21	225	14	38	16	8.041	31	6.50	4.00	30
FREEDOM	3358	2	60.5	31	-0.5	91	1	32	23	189	28	48	11	5.190	31	3.33	3.36	31
GREAT SALT P	3740	2	62.6	31	2	89	1	41	23	125	-53	49	8	14.710	31	12.65	4.47	31
HARDY	3909	2	*****	0	*****	****	0	****	0	******	******	******	******	11.830	31	*****	4.43	2
HELENA	4019	2	61.8	31	2	91	1	37	23	150	-44	50	19	8.671	31	6.58	3.68	31
JEFFERSON	4573	2	63.5	31	1.5	85	14	37	22	111	-32	63	14	15.760	31	13.11	4.27	31
LAMONT	5013	2	*****	0	*****	****	0	****	0	******	******	******	******	10.490	31	*****	5.98	2
MEDFORD	5768	2	*****	0	*****	****	0	****	0	******	******	******	******	15.540	31	*****	3.50	1
MORRISON	6065	2	*****	0	*****	****	0	****	0	******	******	******	******	9.151	31	*****	5.23	5
MUTUAL	6139	2	61.2	31	1.8	95	1	35	23	168	-35	49	20	7.360	31	5.68	3.76	2
NEWKIRK	6278	2	62.1	31	0.5	83	5	39	23	129	-18	40	-2	12.340	31	9.11	5.63	2
ORIENTA	6751	2	*****	0	*****	****	0	****	0	******	******	******	******	7.460	31	5.58	2.92	2
PERRY	7012	2	64.1	30	1.3	98	1	39	22	91	-37	64	5	9.163	30	*****	4.01	5
PONCA CITY	7201	2	64.0	30	3.3	85	4	40	22	96	-76	65	27	11.611	31	8.69	7.75	2
RED ROCK	7505	2	*****	0	*****	****	0	****	0	******	******	******	******	19.622	31	16.83	9.84	4
WAYNOKA	9404	2	61.2	31	-0.5	88	15	35	22	163	-3	44	-19	12.350	31	10.60	4.20	30
WOODWARD	9760	2	*****	0	*****	****	0	****	0	******	******	******	******	7.053	31	5.18	3.80	31

OCTOBER 1998 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	61.6	30	0.2	85	4	35	24	144	-15	41	-9	9.041	31	5.85	3.94	5
BARTLESVILLE	548	3	62.5	31	0.9	86	4	35	23	128	-22	51	6	6.280	31	2.98	2.18	5
BIXBY	782	3	63.2	31	2.7	90	1	37	24	120	-57	64	26	7.820	31	4.12	4.20	5
BURBANK	1256	3	*****	0	*****	****	0	****	0	******	******	******	******	7.920	31	4.83	3.85	2
CHELSEA	1717	3	*****	0	*****	****	0	****	0	******	******	******	******	6.320	31	*****	3.02	5
CLAREMORE	1828	3	61.8	31	1.4	86	5	37	25	151	-31	51	12	6.170	31	2.61	2.36	5
CLEVELAND 2	1902	3	61.1	30	*****	82	4	38	22	137	******	19	******	9.760	31	*****	5.26	5
FORAKER	3250	3	*****	0	*****	****	0	****	0	******	******	******	******	9.390	31	5.95	5.40	2
HOLLOW	4258	3	*****	0	*****	****	0	****	0	******	******	******	******	5.581	31	1.95	2.49	5
HOMINY	4289	3	*****	0	*****	****	0	****	0	******	******	******	******	9.912	31	6.95	5.25	5
KANSAS	4672	3	62.3	29	*****	84	5	38	22	120	******	41	******	8.712	29	*****	5.25	5
LENAPAH	5118	3	*****	0	*****	****	0	****	0	******	******	******	******	6.780	31	*****	2.66	5
MANNFORD	5522	3	62.1	31	0	85	4	34	23	147	3	58	4	10.872	31	7.79	4.14	18
MARAMEC	5540	3	*****	0	*****	****	0	****	0	******	******	******	******	10.370	31	7.35	5.30	5
PAWHUSKA	6935	3	62.3	31	1.1	84	4	35	23	140	-18	55	16	9.070	31	5.87	3.22	5
PAWNEE	6940	3	*****	0	*****	****	0	****	0	******	******	******	******	11.980	31	9.15	8.65	5
PRYOR	7309	3	62.0	28	*****	87	1	37	24	129	******	44	******	10.560	30	*****	6.20	5
RALSTON	7390	3	62.4	31	0.8	81	27	35	31	129	-13	50	13	8.500	31	5.61	4.85	5
SKIATOOK	8258	3	*****	0	*****	****	0	****	0	******	******	******	******	8.041	31	4.86	3.57	5
SPAVINAW	8380	3	65.1	31	2	85	4	42	23	82	-45	87	19	9.910	31	6.22	6.52	5
TULSA	8992	3	63.0	31	0.8	86	4	39	23	112	-32	50	-7	9.042	31	5.38	4.80	5
UPPER SPAV	9101	3	62.9	31	*****	86	4	37	23	127	******	61	******	7.874	31	*****	4.91	5
VINITA	9203	3	63.8	12	*****	84	4	41	9	40	******	26	******	7.130	19	*****	4.11	5
WAGONER	9247	3	64.4	31	1.5	84	29	38	23	89	-47	70	-1	10.650	31	6.53	4.02	5
WANN	9298	3	*****	0	*****	****	0	****	0	******	******	******	******	7.371	31	*****	2.89	5
WYNONA	9792	3	*****	0	*****	****	0	****	0	******	******	******	******	10.780	31	*****	5.12	5

OCTOBER 1998 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	62.2	31	1.8	96	1	38	23	145	-34	58	22	6.330	31	4.31	2.60	2
CLINTON	1909	4	64.0	31	1.5	86	14	38	22	108	-21	78	27	4.691	31	1.87	1.95	2
COLONY	2039	4	*****	0	*****	****	0	****	0	******	******	******	******	3.390	31	*****	1.31	3
CORDELL	2125	4	63.8	31	1.4	99	1	41	24	112	-17	76	28	9.900	31	7.38	2.70	28
ELK CITY	2849	4	62.4	28	*****	97	1	40	23	125	******	51	******	6.260	29	*****	2.83	2
ERICK	2944	4	63.3	31	1.8	99	1	38	23	119	-23	68	35	8.000	31	5.84	3.82	2
GEARY	3497	4	63.0	27	*****	85	1	48	23	88	******	35	******	5.400	29	*****	1.42	31
HAMMON	3871	4	61.3	30	1.8	96	1	35	23	167	-37	57	24	8.950	30	*****	3.49	2
LEEDEY	5090	4	*****	0	*****	****	0	****	0	******	******	******	******	6.860	31	4.96	2.73	31
MACKIE	5463	4	*****	0	*****	****	0	****	0	******	******	******	******	4.950	31	*****	2.20	31
MORAVIA	6035	4	*****	0	*****	****	0	****	0	******	******	******	******	5.600	31	3.21	2.54	2
OKEENE	6629	4	64.3	31	1.5	97	1	40	23	97	-29	75	18	4.830	31	2.38	2.30	1
RETROP	7565	4	*****	0	*****	****	0	****	0	******	******	******	******	4.920	31	*****	2.01	2
REYDON	7579	4	61.9	25	*****	95	1	38	22	120	******	44	******	5.680	26	*****	2.36	31
SAYRE	7952	4	*****	0	*****	****	0	****	0	******	******	******	******	7.660	31	5.50	3.70	2
SWEETWATER	8652	4	*****	0	*****	****	0	****	0	******	******	******	******	5.730	31	*****	2.52	31
TALOGA	8708	4	61.5	31	0.8	97	1	35	23	167	4	58	29	8.792	31	6.79	3.61	31
THOMAS	8815	4	*****	0	*****	****	0	****	0	******	******	******	******	4.990	31	*****	2.33	2
VICI	9172	4	*****	0	*****	****	0	****	0	******	******	******	******	9.981	31	8.02	3.78	30
WATONGA	9364	4	62.8	31	1.1	86	4	39	22	127	-20	59	14	4.961	31	2.58	2.25	2
WEATHERFORD	9422	4	63.5	30	2.8	86	14	40	22	101	-67	55	21	9.101	30	*****	4.00	31

OCTOBER 1998 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	******	******	******	******	4.860	31	*****	1.66	5
ARCADIA	288	5	*****	0	*****	****	0	****	0	******	******	******	******	6.741	31	*****	3.25	5
BLANCHARD	830	5	*****	0	*****	****	0	****	0	******	******	******	******	******	30	*****	86.00	4
BRISTOW	1144	5	64.6	30	1.6	95	1	36	23	98	-34	85	16	6.510	31	3.36	2.20	1
CHANDLER	1684	5	64.0	30	1.2	98	1	39	23	102	-25	72	14	10.880	30	*****	4.36	5
CHICKASHA EXP	1750	5	*****	0	*****	****	0	****	0	******	******	******	******	******	31	*****	85.00	14
COX CITY	2196	5	*****	0	*****	****	0	****	0	******	******	******	******	3.390	31	*****	0.98	18
CRESCENT	2242	5	*****	0	*****	****	0	****	0	******	******	******	******	6.190	31	*****	2.70	5
CUSHING	2318	5	63.7	30	2.1	94	2	38	21	110	-45	70	21	10.750	30	*****	5.10	5
EDMOND	2788	5	*****	0	*****	****	0	****	0	******	******	******	******	11.120	31	*****	2.80	4
EL RENO	2818	5	64.4	31	2.3	98	1	41	22	100	-37	81	35	5.500	31	2.98	1.75	5
GUTHRIE	3821	5	62.8	27	*****	97	1	35	24	123	******	64	******	7.260	27	*****	3.00	31
HENNESSEY	4055	5	62.9	29	*****	84	14	42	23	105	******	45	******	8.960	30	*****	3.50	2
INGALLS	4489	5	*****	0	*****	****	0	****	0	******	******	******	******	8.132	31	*****	3.08	5
KINGFISHER	4861	5	64.0	31	1.2	101	1	38	22	121	-4	89	33	5.160	31	2.83	1.53	2
KONAWA	4915	5	*****	0	*****	****	0	****	0	******	******	******	******	4.930	31	0.86	2.70	5
MARSHALL	5589	5	*****	0	*****	****	0	****	0	******	******	******	******	7.731	31	4.98	2.40	5
MEEKER	5779	5	62.2	29	*****	94	1	37	23	128	******	46	******	16.680	30	*****	7.55	18
MULHALL	6110	5	*****	0	*****	****	0	****	0	******	******	******	******	8.640	31	*****	3.50	17
NORMAN NWS	6386	5	63.9	31	0.6	84	4	39	22	94	-19	60	1	4.050	31	0.82	1.15	17
OKEMAH	6638	5	66.2	31	3.1	91	1	43	23	67	-59	105	38	7.651	31	3.81	2.48	6
OKLAHOMA CTY	6659	5	*****	0	*****	****	0	****	0	******	******	******	******	5.552	31	*****	1.30	18
OKLAHOMA CTY	6661	5	64.4	31	2.4	85	4	41	23	78	-60	58	14	6.761	31	3.53	1.43	4
PERKINS	7003	5	*****	0	*****	****	0	****	0	******	******	******	******	8.880	31	5.91	2.75	7
PIEDMONT	7068	5	*****	0	*****	****	0	****	0	******	******	******	******	4.950	31	*****	2.30	5
PRAGUE	7264	5	*****	0	*****	****	0	****	0	******	******	******	******	8.741	31	4.91	4.96	5
PURCELL	7327	5	64.2	31	1	99	1	38	23	108	-11	82	19	5.000	31	1.06	1.90	18
SEMINOLE	8042	5	64.2	31	-0.2	87	4	39	23	92	-3	66	-10	7.980	31	4.13	2.37	5
SHAWNEE	8110	5	*****	0	*****	****	0	****	0	******	******	******	******	7.310	31	3.24	2.77	6
STELLA	8479	5	*****	0	*****	****	0	****	0	******	******	******	******	6.011	31	*****	1.85	6
STILLWATER	8501	5	63.6	31	3.1	93	1	38	23	114	-54	70	42	8.720	31	5.89	3.05	5
STROUD	8563	5	*****	0	*****	****	0	****	0	******	******	******	******	13.052	31	*****	5.15	5
TECUMSEH	8751	5	*****	0	*****	****	0	****	0	******	******	******	******	5.780	31	*****	3.90	5
TROUSDALE	8960	5	65.0	31	*****	96	1	37	23	92	******	90	******	6.580	31	*****	2.10	5
UNION CITY	9086	5	*****	0	*****	****	0	****	0	******	******	******	******	3.661	31	0.39	1.34	5
WELTY	9479	5	*****	0	*****	****	0	****	0	******	******	******	******	12.753	31	*****	6.00	5
WEWOKA	9575	5	*****	0	*****	****	0	****	0	******	******	******	******	5.780	31	2.07	3.97	6

OCTOBER 1998 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	******	******	******	******	4.651	31	*****	2.40	6
BEGGS	631	6	*****	0	*****	****	0	****	0	******	******	******	******	10.881	31	*****	6.40	5
CALVIN	1391	6	*****	0	*****	****	0	****	0	******	******	******	******	4.020	31	-0.08	1.35	5
CHECOTAH	1711	6	*****	0	*****	****	0	****	0	******	******	******	******	6.402	31	2.17	3.13	6
CLAYTON	1858	6	*****	0	*****	****	0	****	0	******	******	******	******	4.780	31	*****	1.45	3
DEWAR	2485	6	*****	0	*****	****	0	****	0	******	******	******	******	8.554	31	4.59	3.10	6
DUSTIN	2690	6	*****	0	*****	****	0	****	0	******	******	******	******	9.170	31	*****	3.55	6
EUFAULA	2993	6	67.2	31	2.6	95	1	43	23	55	-49	123	32	5.830	31	1.71	3.45	6
HANNA	3884	6	64.9	31	1.9	88	1	36	23	94	-24	92	36	6.671	31	2.52	1.91	1
HASKELL	3956	6	*****	0	*****	****	0	****	0	******	******	******	******	10.930	31	6.86	7.07	5
HOLDENVILLE	4235	6	65.5	31	1.9	88	4	40	27	67	-50	81	8	6.290	31	2.09	1.63	1
LAKE EUFAULA	4975	6	64.3	27	*****	92	1	42	24	85	******	66	******	5.501	28	*****	3.63	6
LYONS	5437	6	*****	0	*****	****	0	****	0	******	******	******	******	8.510	31	5.03	5.93	6
MARBLE CITY	5546	6	*****	0	*****	****	0	****	0	******	******	******	******	4.610	20	*****	3.33	6
MCALESTER	5664	6	65.3	31	2.2	86	4	37	23	87	-43	96	25	5.659	31	1.08	2.06	17
MCCURTAIN	5693	6	66.6	31	2.9	89	1	38	23	73	-42	124	49	4.701	31	0.80	3.60	6
MUSKOGEE	6130	6	64.3	31	1.7	88	4	39	23	89	-45	69	9	4.553	31	0.40	2.55	5
OKMULGEE	6670	6	64.3	30	2.5	88	4	37	23	88	-69	65	11	7.892	31	3.88	3.10	5
OKTAHA	6678	6	*****	0	*****	****	0	****	0	******	******	******	******	5.300	31	*****	2.29	6
SALLISAW	7862	6	65.2	31	2	92	1	42	23	83	-42	89	20	5.620	31	1.18	2.82	6
SCIPIO	7979	6	*****	0	*****	****	0	****	0	******	******	******	******	5.680	31	*****	2.23	6
SHORT	8170	6	*****	0	*****	****	0	****	0	******	******	******	******	4.680	31	*****	2.82	6
STILWELL	8506	6	60.5	31	-0.8	83	15	34	26	163	3	22	-23	8.160	31	4.08	5.63	6
TAHLEQUAH	8677	6	63.0	31	1.2	84	4	38	23	118	-40	55	-4	6.651	31	2.44	4.02	6
WEBBERS FALL	9445	6	64.6	31	3.2	94	1	40	24	92	-61	79	38	5.790	31	1.27	3.90	6
WESTVILLE	9523	6	*****	0	*****	****	0	****	0	******	******	******	******	8.320	31	*****	5.85	6
WETUMKA	9571	6	*****	0	*****	****	0	****	0	******	******	******	******	6.831	31	2.99	2.23	5

OCTOBER 1998 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	179	7	65.2	31	0.6	99	1	41	22	85	-15	93	5	3.500	31	1.13	1.09	3
ALTUS DAM	184	7	66.6	31	4.1	100	1	45	8	61	-71	112	57	3.920	31	1.18	1.04	2
ANADARKO	224	7	63.4	31	1	98	1	37	23	123	-7	73	25	5.500	31	2.80	2.05	5
APACHE	260	7	*****	0	*****	****	0	****	0	******	******	******	******	4.930	31	2.12	1.43	5
ALTUS AFB	447	7	*****	0	*****	****	0	****	0	******	******	******	******	2.922	30	*****	0.89	3
CARNEGIE	1504	7	64.1	31	1.1	86	14	42	22	97	-22	68	12	6.410	31	4.02	2.97	31
CHATTANOOGA	1706	7	67.2	31	2.9	100	1	43	23	69	-24	137	66	3.180	31	0.46	1.53	18
DUNCAN 11 W	2668	7	*****	0	*****	****	0	****	0	******	******	******	******	3.570	31	*****	0.86	18
FREDERICK	3353	7	66.4	29	*****	93	1	40	31	68	******	108	******	3.890	29	*****	2.02	31
HEADRICK	3998	7	*****	0	*****	****	0	****	0	******	******	******	******	1.670	31	*****	0.60	18
HOBART	4204	7	64.9	30	2	88	4	40	22	80	-47	76	14	3.892	31	1.24	1.18	2
HOLLIS	4249	7	65.9	31	2.6	95	4	42	23	76	-42	103	38	2.710	31	0.54	1.06	2
LAWTON	5063	7	66.8	31	4.2	98	2	40	25	77	-54	133	77	3.190	31	0.21	1.20	18
LOOKEBA	5329	7	*****	0	*****	****	0	****	0	******	******	******	******	4.571	31	1.84	1.05	31
MANGUM	5509	7	65.9	31	2.1	100	1	41	23	87	-23	114	41	4.170	31	1.51	1.44	2
RANDLETT	7403	7	*****	0	*****	****	0	****	0	******	******	******	******	2.771	31	*****	1.33	3
ROOSEVELT	7727	7	*****	0	*****	****	0	****	0	******	******	******	******	3.400	31	0.84	1.08	2
SEDAN	8016	7	*****	0	*****	****	0	****	0	******	******	******	******	4.880	31	*****	1.22	3
SNYDER	8299	7	*****	0	*****	****	0	****	0	******	******	******	******	3.601	31	1.07	1.14	18
VINSON	9212	7	*****	0	*****	****	0	****	0	******	******	******	******	6.120	31	3.92	2.34	2
WALTERS	9278	7	66.9	31	2.3	93	2	42	24	79	-25	138	48	3.150	31	-0.09	1.11	18
WICHITA MT	9629	7	63.8	28	*****	96	1	37	24	104	******	72	******	3.580	28	*****	0.90	18
WILLOW	9668	7	*****	0	*****	****	0	****	0	******	******	******	******	4.310	31	*****	2.07	2

OCTOBER 1998 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	65.4	31	1.8	94	1	40	23	87	-41	101	17	3.962	31	-0.28	1.11	3
ALLEN	147	8	*****	0	*****	****	0	****	0	******	******	******	******	3.190	31	*****	1.20	4
ARDMORE	292	8	68.3	31	2.2	98	1	46	23	44	-35	146	33	7.510	31	3.67	2.10	17
ATOKA DAM	394	8	67.1	22	*****	99	1	41	26	44	******	91	******	7.020	22	*****	4.37	6
BOKCHITO	917	8	*****	0	*****	****	0	****	0	******	******	******	******	3.220	31	*****	1.04	17
CANEY	1437	8	*****	0	*****	****	0	****	0	******	******	******	******	6.730	31	*****	3.27	3
CENTRAHOMA	1648	8	66.4	30	*****	98	1	40	25	71	******	114	******	4.870	30	*****	1.95	3
CHICKASAW	1745	8	65.5	31	3.1	96	1	39	23	96	-32	112	64	6.661	31	2.14	2.37	18
COLEMAN	2011	8	65.1	31	*****	96	1	33	14	99	******	102	******	6.221	31	*****	2.79	6
COMANCHE	2054	8	67.3	31	*****	88	1	47	25	71	******	142	******	6.150	31	2.98	3.05	5
DAISY	2354	8	*****	0	*****	****	0	****	0	******	******	******	******	6.540	31	2.03	3.47	6
DUNCAN	2660	8	66.7	31	3.5	97	1	45	24	71	-52	125	59	3.600	31	0.24	1.03	3
ELMORE CITY	2872	8	*****	0	*****	****	0	****	0	******	******	******	******	7.030	31	*****	2.22	6
GRADY	3688	8	*****	0	*****	****	0	****	0	******	******	******	******	3.050	31	*****	1.43	18
HEALDTON	4001	8	66.6	31	2.6	98	1	41	23	81	-22	129	58	3.620	31	0.04	1.93	18
HENNEPIN	4052	8	*****	0	*****	****	0	****	0	******	******	******	******	6.710	31	*****	1.98	6
KETCHUM RAN	4780	8	*****	0	*****	****	0	****	0	******	******	******	******	5.500	31	*****	2.73	5
KINGSTON	4865	8	*****	0	*****	****	0	****	0	******	******	******	******	5.330	31	1.06	2.68	4
LEHIGH	5108	8	*****	0	*****	****	0	****	0	******	******	******	******	5.401	31	*****	3.05	6
LINDSAY	5216	8	64.2	31	0.8	92	1	38	23	105	-5	80	20	5.040	31	1.39	1.35	17
LOCO	5247	8	*****	0	*****	****	0	****	0	******	******	******	******	4.500	31	*****	1.75	18
MADILL	5468	8	65.1	30	0.1	98	1	32	14	100	11	102	13	3.760	30	*****	1.70	6
MARIETTA	5563	8	66.7	31	1.5	96	1	40	10	81	-2	133	43	3.330	31	-0.37	1.43	6
MARLOW	5581	8	67.2	30	3.8	98	1	40	22	66	-52	131	63	4.660	30	*****	1.51	18
MCGEE CREEK	5713	8	65.9	30	*****	96	1	39	23	77	******	105	******	6.040	31	*****	3.05	3
PAULS VALLEY	6926	8	65.3	31	1.3	97	1	39	23	95	-6	104	35	6.761	31	2.83	4.10	6
PONTOTOC	7214	8	*****	0	*****	****	0	****	0	******	******	******	******	6.540	31	2.33	2.54	17
TISHOMINGO	8884	8	61.0	12	*****	84	1	34	8	67	******	20	******	5.570	15	*****	2.15	5
TUSSY	9032	8	*****	0	*****	****	0	****	0	******	******	******	******	5.930	31	*****	2.08	5
WAURIKA	9395	8	69.0	31	3.9	94	1	44	23	41	-45	164	75	3.130	31	0.17	1.55	2

OCTOBER 1998 SUMMARY FOR SOUTHEAST DIVISION (CD9)

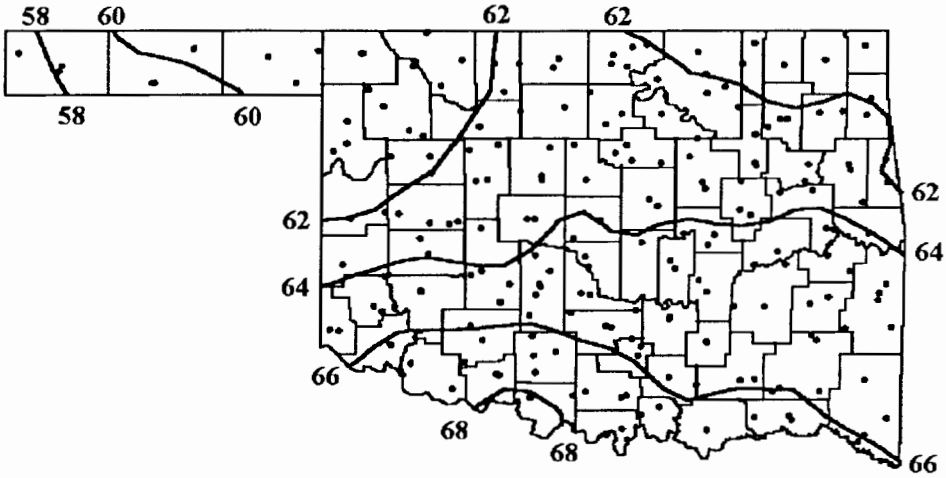
NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ANTLERS	256	9	66.4	31	3.1	90	1	38	23	68	-53	112	45	6.700	31	2.12	2.93	2
BATTIEST	567	9	63.4	29	*****	92	1	33	24	123	******	76	******	9.120	29	*****	4.76	6
BEAR MT	584	9	64.5	22	*****	95	2	35	23	70	******	58	******	6.920	22	*****	3.79	6
BENGAL	670	9	*****	0	*****	****	0	****	0	******	******	******	******	6.910	31	*****	3.83	6
BOSWELL	980	9	66.4	31	2.6	97	1	38	24	68	-38	113	44	5.511	31	1.32	2.75	3
BROKEN BOW	1162	9	*****	0	*****	****	0	****	0	******	******	******	******	3.911	31	-0.42	2.60	6
CARNASAW	1499	9	*****	0	*****	****	0	****	0	******	******	******	******	4.392	31	-0.21	3.89	6
CARTER TWR	1544	9	*****	0	*****	****	0	****	0	******	******	******	******	7.000	31	1.94	3.50	6
FANSHAWE	3065	9	*****	0	*****	****	0	****	0	******	******	******	******	8.050	31	4.16	3.38	6
HEAVENER	4008	9	*****	0	*****	****	0	****	0	******	******	******	******	5.900	31	1.83	3.77	5
HUGO	4384	9	66.8	31	2	95	1	41	25	89	-4	145	59	3.710	31	-0.53	2.03	6
IDABEL	4451	9	64.9	31	1.5	98	1	36	24	93	-23	90	25	3.610	31	-0.86	2.37	6
PAGE	6842	9	63.8	31	*****	92	2	32	24	131	******	94	******	11.270	31	*****	7.05	6
POTEAU	7254	9	64.9	31	*****	87	4	34	23	101	******	96	******	5.551	31	*****	2.47	5
SMITHVILLE	8285	9	62.4	21	*****	93	1	31	24	93	******	38	******	11.800	23	*****	7.05	6
SPIRO	8416	9	*****	0	*****	****	0	****	0	******	******	******	******	6.910	31	3.09	4.26	6
TUSKAHOMA	9023	9	*****	0	*****	****	0	****	0	******	******	******	******	******	29	*****	88.00	4
VALLIANT	9118	9	*****	0	*****	****	0	****	0	******	******	******	******	7.470	31	3.47	4.05	6
WILBURTON	9634	9	65.2	31	2.9	88	1	34	23	90	-50	97	40	8.350	31	4.04	5.06	5
WISTER	9724	9	65.0	31	*****	94	1	34	22	103	******	103	******	5.870	31	*****	3.30	6

OCTOBER 1998 CLIMATE DIVISION SUMMARY

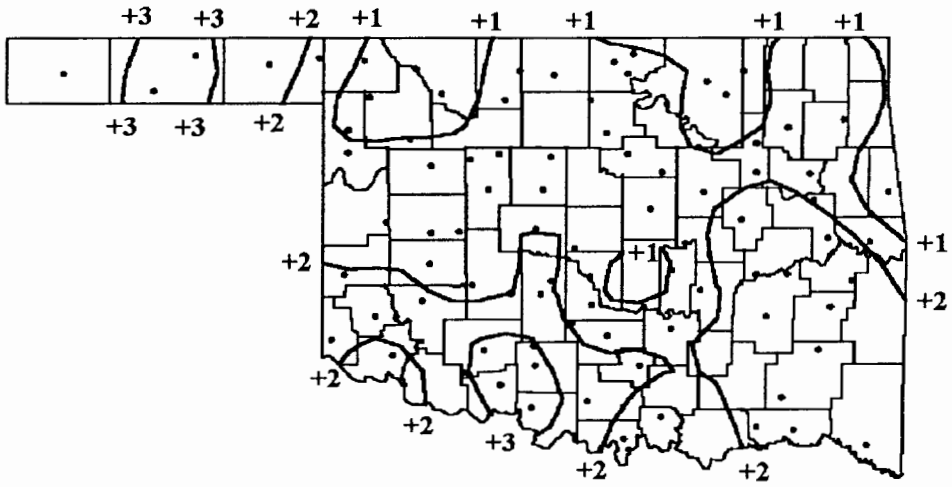
CD	MEAN TEMP	NUM STA	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAYS	DEV FROM NORM	COOL DEG DAYS	DEV FROM NORM	TOT PPT	NUM STA	DEV FROM NORM	MAX 24-HR	DAY
1	60.8	8	2.4	96	15	28	18	174	-57	44	18	5.400	12	4.11	4.17	31
2	62.1	14	1	98	1	26	21	141	-23	51	9	10.290	23	7.97	9.84	4
3	62.7	12	1.2	90	1	34	23	125	-32	55	7	8.670	23	5.25	8.65	5
4	63.0	9	1.6	99	1	35	23	127	-28	65	23	6.350	16	4.14	4.00	31
5	64.3	12	1.6	101	1	35	24	98	-30	77	20	84.780	31	81.53	86.00	4
6	64.7	11	1.9	95	1	34	26	92	-42	81	18	6.660	25	2.54	7.07	5
7	65.7	10	2.4	100	1	37	24	83	-36	105	39	3.970	20	1.32	2.97	31
8	66.3	15	2.2	99	1	32	14	79	-26	119	43	5.270	25	1.39	4.37	6
9	65.4	8	2.1	98	1	31	24	93	-26	106	38	6.320	16	1.94	88.00	4

MESONET MONTHLY SUMMARY FOR OCTOBER 1998

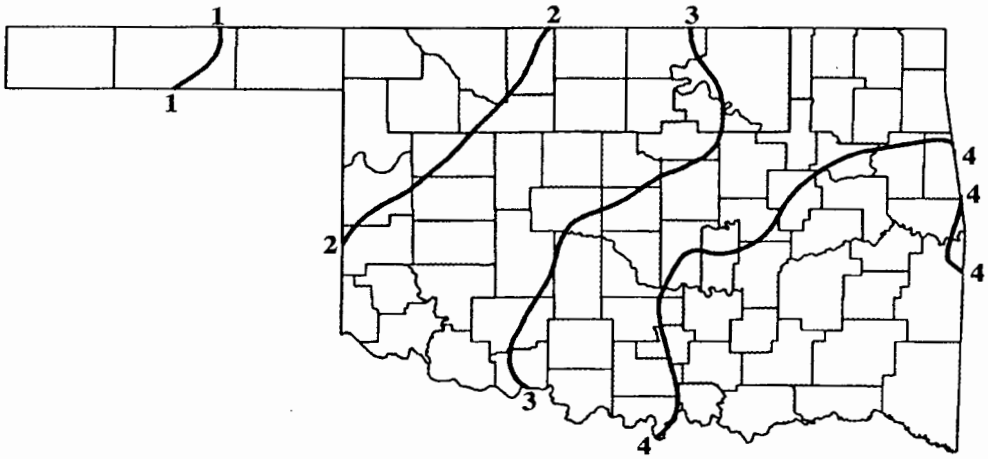
NAME	MEAN TEMP	MAX TEMP	MAX DAY	MIN TEMP	MIN DAY	HDD	CDD	PPT	TOT 24-HR	MAX DAY	NAME	TEMP	MAX TEMP	MAX DAY	MIN TEMP	MIN DAY	HDD	CDD	PPT	TOT 24-HR	MAX DAY
											PANHANDLE										
Arnett	61.0	89	4	33	22	164	39	5.84	3.04	31	Goodwell	59.0	91	14	33	18	212	27	6.77	3.40	1
Beaver	60.5	95	14	33	22	189	49	6.29	2.07	31	Hooker	59.7	93	14	35	18	195	31	7.01	3.44	1
Boise City	57.1	88	14	29	18	258	12	4.58	2.14	1	Kenton	56.5	88	14	27	18	274	11	4.75	2.43	1
Buffalo	61.5	93	14	32	22	173	64	5.00	2.20	31	Slapout	60.3	95	14	36	18	184	40	5.94	2.27	30
											NORTH CENTRAL										
Alva	61.4	87	14	38	22	152	40	12.40	4.55	31	May Ranch	60.9	88	4	39	22	165	37	6.92	3.23	31
Blackwell	62.7	83	4	41	22	117	45	14.13	4.70	2	Medford	62.3	84	14	39	22	129	44	12.90	3.80	31
Breckinridge	62.7	83	4	40	22	118	47	8.65	4.00	31	Newkirk	62.2	83	4	40	22	115	37	12.28	4.24	2
Cherokee	62.3	87	14	38	22	137	52	12.65	4.51	31	Red Rock	62.8	85	4	38	22	114	47	10.37	3.77	4
Fairview	62.4	88	14	40	22	135	55	9.99	2.70	31	Seiling	61.4	88	4	34	22	161	49	10.23	3.79	31
Freedom	61.1	88	14	35	22	171	51	7.14	3.12	30	Woodward	61.4	88	4	34	22	164	52	9.28	4.31	31
Lahoma	62.1	84	14	41	23	131	41	9.51	3.22	31											
											NORTHEAST										
Bixby	62.8	86	4	36	23	120	50	9.84	5.40	5	Nowata	60.7	85	4	34	23	165	32	6.59	2.13	4
Burbank	62.0	84	4	37	23	134	40	8.55	3.33	2	Pawnee	62.5	85	4	37	22	121	45	10.50	4.60	4
Catoosa	62.8	85	4	41	22	117	49	7.88	4.35	5	Pryor	61.5	85	4	37	23	149	41	8.63	6.01	5
Claremore	62.3	85	4	38	22	129	45	7.98	4.34	5	Skiatook	62.4	84	4	44	19	121	40	10.72	5.41	4
Copan	61.5	84	4	39	22	142	35	7.79	3.74	4	Tullahassee	63.6	87	4	39	22	104	61	7.75	4.95	5
Foraker	61.2	84	4	39	22	146	29	8.53	3.88	2	Vinita	60.3	84	4	36	23	172	27	6.93	2.80	4
Jay	61.5	83	4	35	22	152	42	6.62	5.45	5	Wynona	62.2	85	4	38	23	130	43	10.20	3.48	4
Miami	60.9	83	4	36	23	158	31	7.33	2.64	5											
											WEST CENTRAL										
Bessie	63.9	89	4	41	22	101	67	6.67	2.33	31	Putnam	61.7	90	4	38	22	150	49	9.94	3.07	31
Butler	62.9	93	4	37	22	126	62	6.68	3.15	31	Retrop	64.4	92	4	41	22	95	78	5.93	2.30	31
Camargo	61.2	91	4	33	22	165	47	9.52	4.18	31	Watonga	62.8	85	14	42	18	124	55	8.01	3.84	31
Cheyenne	62.0	90	4	39	18	138	45	10.34	4.39	31	Weatherford	63.0	86	14	42	22	116	54	7.87	3.32	31
Erick	62.6	91	4	37	22	125	52	11.33	3.64	1											
											CENTRAL										
Acme	65.6	87	1	39	22	84	102	3.66	1.64	2	Minco	63.9	86	4	43	22	89	55	8.99	3.40	31
Bowlegs	64.0	86	4	35	23	103	71	6.74	3.65	5	Ninnekah	65.2	86	4	41	23	81	88	3.80	1.44	2
Bristow	62.8	85	4	36	23	121	52	11.56	3.52	5	Norman	64.0	85	4	38	23	90	60	3.37	1.13	17
Chandler	63.8	85	4	40	23	92	54	10.83	3.18	4	Oilton	61.9	85	4	35	22	142	45	11.55	5.62	5
Chickasha	64.5	86	4	39	23	91	76	3.82	1.14	2	Okemah	63.6	85	4	37	23	103	59	7.63	3.00	5
El Reno	61.9	84	4	37	22	137	41	8.72	2.69	31	Perkins	63.6	84	4	40	22	99	55	*****	*****	1
Guthrie	63.8	85	4	43	22	96	58	8.49	1.86	5	Shawnee	63.9	84	4	41	23	93	58	7.47	2.25	5
Kingfisher	63.6	86	4	39	22	112	68	8.78	4.75	31	Spencer	63.9	85	4	38	22	88	54	4.75	1.22	5
Marena	63.0	85	4	40	23	111	51	8.40	1.84	5	Stillwater	62.8	84	4	38	22	119	51	9.02	2.06	1
Marshall	63.4	86	4	40	22	106	55	6.88	1.84	31	Washington	65.3	86	4	42	22	80	88	2.85	.98	2
											EAST CENTRAL										
Calvin	64.5	86	4	34	23	102	86	3.30	1.27	2	Preston	****	****	***	****	***	****	****	7.57	2.48	5
Cookson	62.5	84	4	39	22	130	51	7.66	5.55	5	Sallisaw	64.4	86	4	39	23	91	73	5.27	2.63	5
Eufaula	64.9	86	4	41	23	83	81	4.19	2.52	5	Stigler	64.1	87	4	37	23	102	75	4.56	2.32	5
Haskell	63.2	86	4	39	23	106	51	8.43	4.74	5	Stuart	64.6	86	4	38	23	92	81	4.74	1.68	5
Hectorville	64.0	86	4	42	23	91	60	12.21	5.48	5	Tahlequah	61.8	84	4	35	23	143	43	7.11	5.57	5
McAlester	65.2	87	4	37	23	88	95	6.97	2.38	5	Webbers Falls	64.8	88	4	39	22	88	80	5.45	3.66	5
Okmulgee	63.0	86	4	36	23	117	56	7.05	3.02	5	Westville	62.1	83	4	39	22	128	38	5.06	3.89	5
											SOUTHWEST										
Altus	66.1	92	1	42	22	75	109	4.45	1.63	2	Hollis	65.2	95	4	41	23	83	90	*****	*****	***
Apache	64.9	88	1	41	22	82	78	6.04	2.31	31	Mangum	65.2	93	4	38	22	88	94	4.68	1.68	31
Fort Cobb	64.5	86	4	42	22	86	70	5.48	2.32	31	Medicine Park	65.5	89	1	45	23	71	86	6.08	1.81	31
Grandfield	67.5	95	1	42	22	68	145	3.97	1.22	2	Tipton	67.3	93	1	42	22	63	133	3.03	1.10	2
Hinton	63.3	86	14	40	22	112	58	7.89	3.49	31	Walters	68.2	95	1	41	22	58	158	3.30	1.14	2
Hobart	64.6	88	4	40	22	89	77	6.55	2.61	31											
											SOUTH CENTRAL										
Ada	64.8	86	4	36	23	94	89	3.64	1.68	2	Lane	66.1	88	1	41	23	72	106	7.11	3.42	2
Ardmore	67.1	91	1	42	23	63	130	6.88	2.72	2	Madill	67.2	90	1	45	23	64	133	3.31	1.36	5
Burneyville	67.1	90	1	39	23	73	138	2.31	.94	2	Pauls Valley	66.6	88	1	42	23	71	120	5.87	3.50	5
Byars	65.5	85	4	42	22	80	95	5.97	3.56	5	Ringling	68.2	92	1	44	22	55	156	3.13	1.29	2
Centrahoma	65.5	87	1	37	23	89	104	5.03	2.11	2	Sulphur	66.2	88	1	40	23	78	116	4.88	2.31	2
Durant	67.2	91	1	43	23	58	127	7.73	3.75	2	Tishomingo	66.1	89	1	40	23	75	109	*****	*****	***
Ketchum Ranch	67.4	92	1	42	22	63	137	5.36	2.75	5	Waurika	68.5	93	1	45	22	52	162	3.57	1.78	2
											SOUTHEAST										
Antlers	65.2	90	1	34	23	93	101	11.33	4.83	2	Idabel	66.4	90	1	37	23	68	111	3.23	1.21	6
Broken Bow	65.5	89	1	36	23	79	94	4.33	2.01	5	Mt Herman	64.2	86	1	35	23	99	75	9.53	5.50	5
Clayton	65.4	87	1	35	23	89	102	7.19	3.78	5	Talihina	65.6	87	1	36	23	83	103	6.74	3.34	5
Cloudy	65.3	88	1	38	23	80	88	6.90	3.04	2	Wilburton	65.2	86	4	38	23	88	95	9.81	5.04	5
Hugo	66.6	89	1	40	23	61	112	4.48	1.89	2	Wister	64.5	88	4	33	23	103	88	5.75	2.91	5



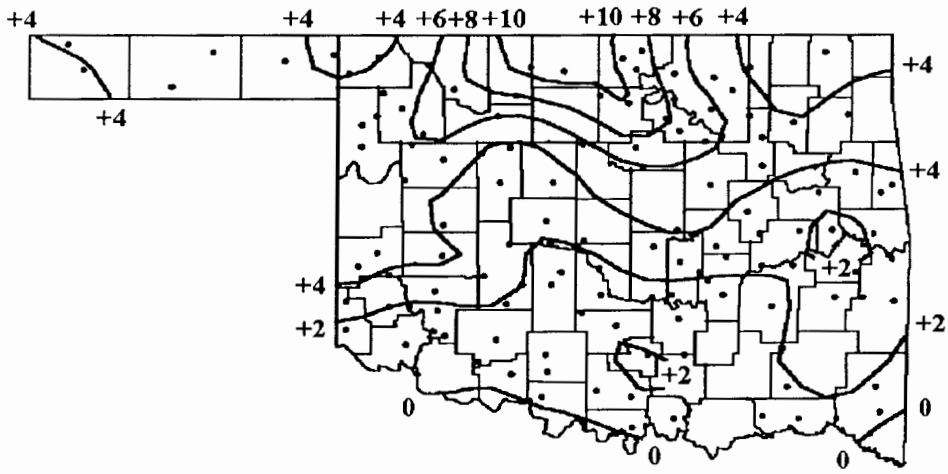
OCTOBER 1998 AVERAGE MONTHLY TEMPERATURE (°F)



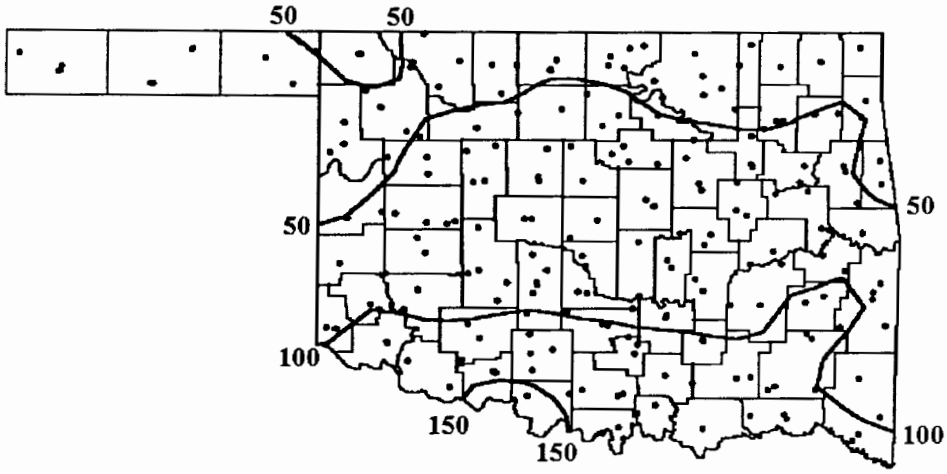
OCTOBER 1998 DEPARTURE FROM NORMAL TEMPERATURE (°F)



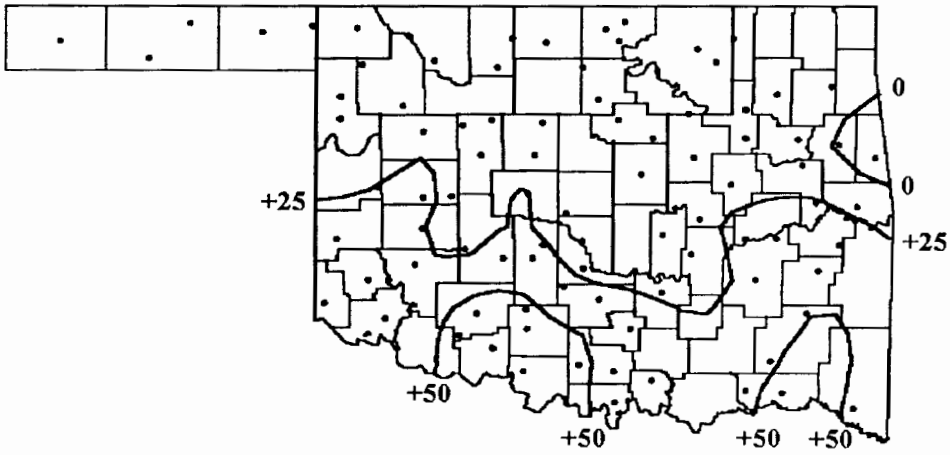
OCTOBER 1998 TOTAL PRECIPITATION (INCHES)



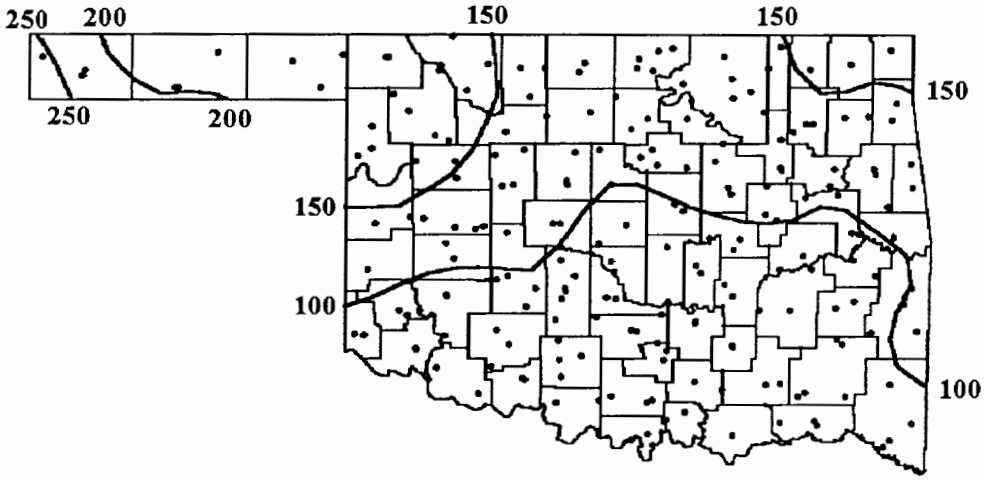
OCTOBER 1998 DEPARTURE FROM NORMAL PRECIPITATION (INCHES)



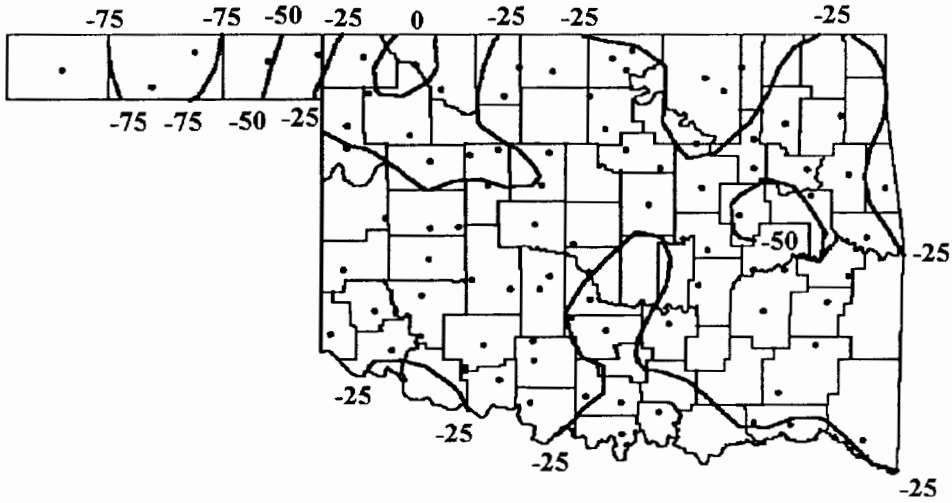
OCTOBER 1998 ACCUMULATED COOLING DEGREE DAYS (°F)



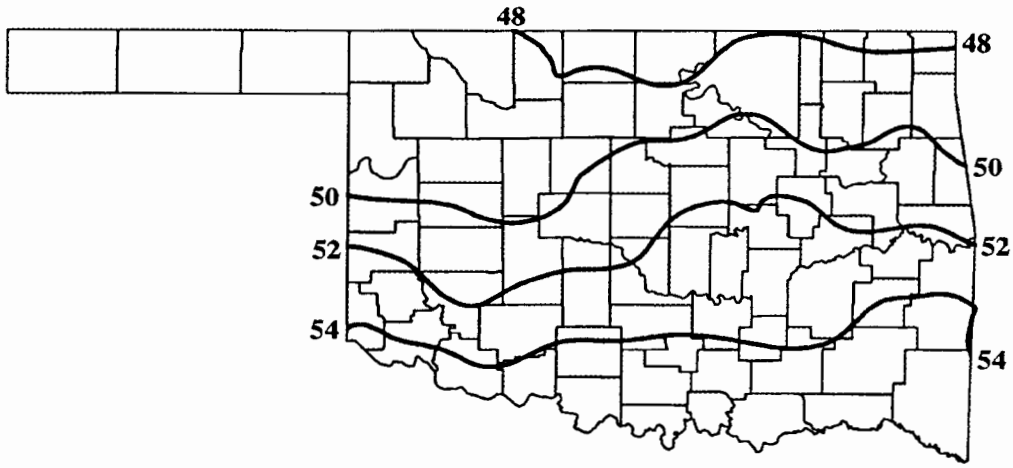
OCTOBER 1998 DEPARTURE FROM NORMAL COOLING DEGREE DAYS (°F)



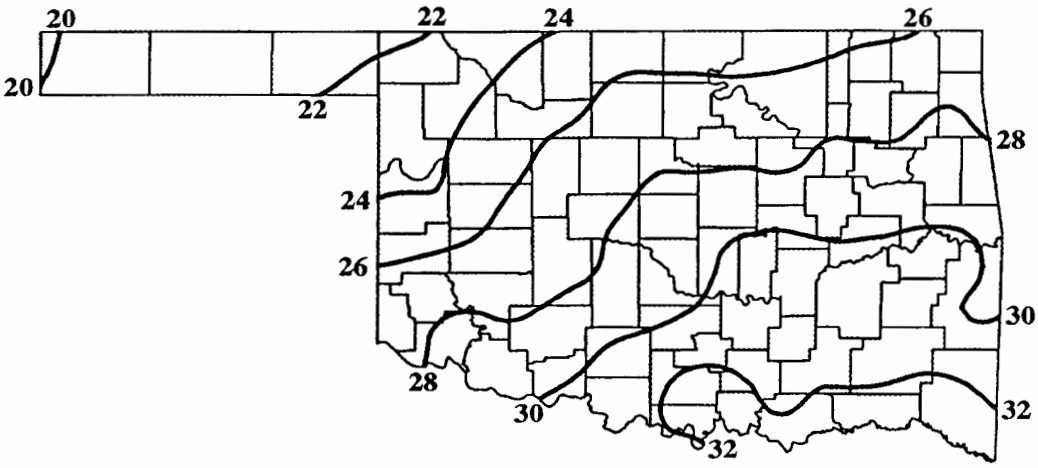
OCTOBER 1998 ACCUMULATED HEATING DEGREE DAYS (°F)



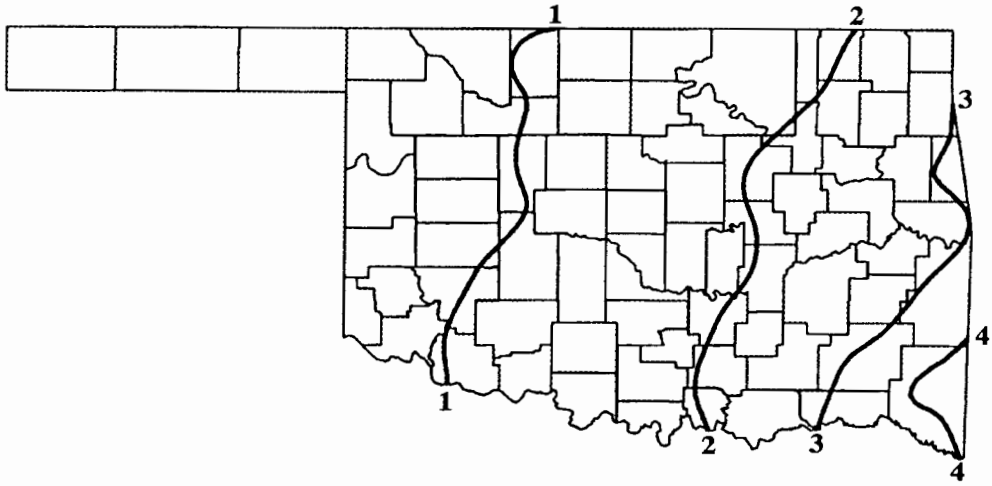
OCTOBER 1998 DEPARTURE FROM NORMAL HEATING DEGREE DAYS (°F)



DECEMBER NORMAL DAILY MAXIMUM TEMPERATURE (°F)



DECEMBER NORMAL DAILY MINIMUM TEMPERATURE (°F)



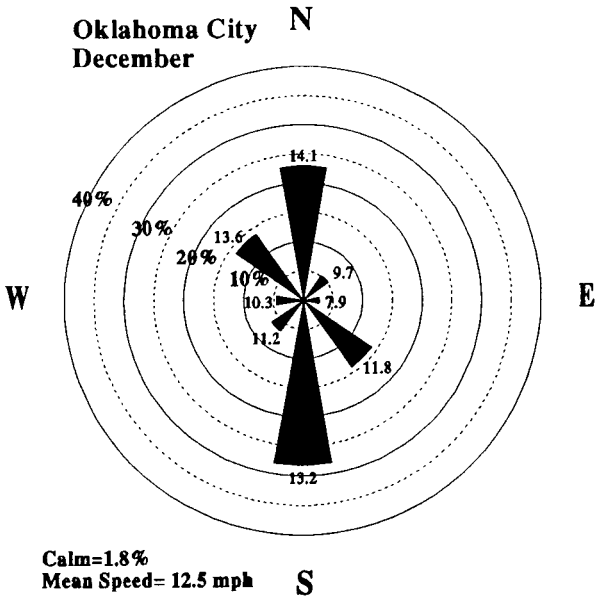
DECEMBER NORMAL MONTHLY PRECIPITATION (INCHES)

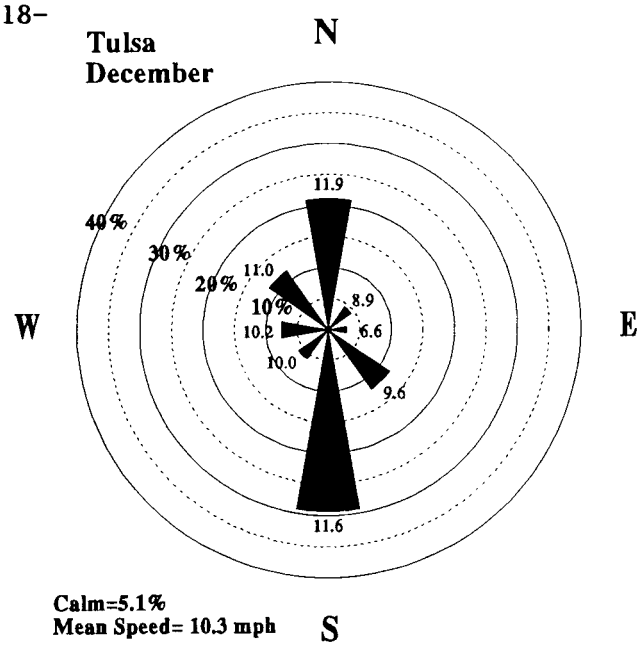
OUTLOOK FOR DECEMBER 1998 THROUGH FEBRUARY 1999

BASED ON SEASONAL OUTLOOK PROVIDED BY THE CLIMATE PREDICTION CENTER

TEMPERATURE: ABOVE NORMAL STATEWIDE

PRECIPITATION: NEAR NORMAL STATEWIDE





December Wind Roses for Oklahoma City and Tulsa. The frequency (percent) of winds from each direction is represented by length of its bar. The numbers at the ends of the bars indicate the average wind speed from that direction in miles per hour.

SUNRISE/SUNSET TIMES FOR DECEMBER 1998

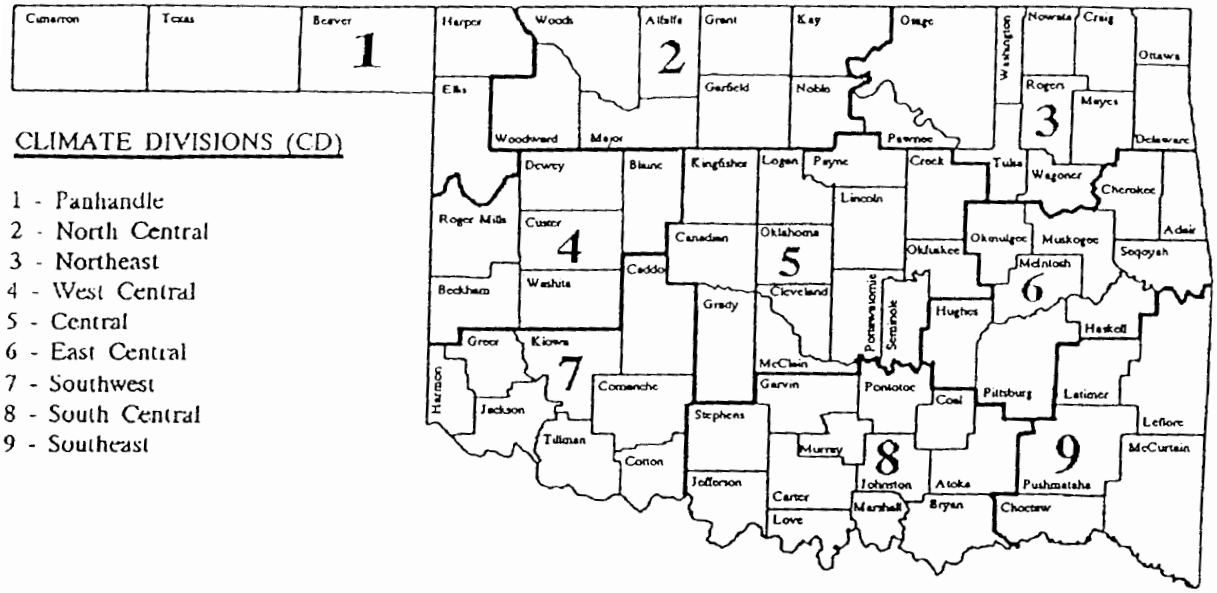
OKLAHOMA CITY

DATE	SUNRISE	SUNSET	DAYLIGHT
9812 1	7:19AM	5:21PM 6	10 hrs 1 mins
9812 2	7:20AM	5:21PM 6	10 hrs 0 mins
9812 3	7:21AM	5:21PM 6	10 hrs 0 mins
9812 4	7:22AM	5:20PM 6	9 hrs 59 mins
9812 5	7:23AM	5:20PM 6	9 hrs 58 mins
9812 6	7:23AM	5:20PM 6	9 hrs 57 mins
9812 7	7:24AM	5:20PM 6	9 hrs 56 mins
9812 8	7:25AM	5:20PM 6	9 hrs 55 mins
9812 9	7:26AM	5:21PM 6	9 hrs 55 mins
981210	7:27AM	5:21PM 6	9 hrs 54 mins
981211	7:27AM	5:21PM 6	9 hrs 54 mins
981212	7:28AM	5:21PM 6	9 hrs 53 mins
981213	7:29AM	5:21PM 6	9 hrs 53 mins
981214	7:29AM	5:21PM 6	9 hrs 52 mins
981215	7:30AM	5:22PM 6	9 hrs 52 mins
981216	7:31AM	5:22PM 6	9 hrs 51 mins
981217	7:31AM	5:22PM 6	9 hrs 51 mins
981218	7:32AM	5:23PM 6	9 hrs 51 mins
981219	7:32AM	5:23PM 6	9 hrs 51 mins
981220	7:33AM	5:23PM 6	9 hrs 50 mins
981221	7:33AM	5:24PM 6	9 hrs 50 mins
981222	7:34AM	5:24PM 6	9 hrs 50 mins
981223	7:34AM	5:25PM 6	9 hrs 50 mins
981224	7:35AM	5:25PM 6	9 hrs 50 mins
981225	7:35AM	5:26PM 6	9 hrs 50 mins
981226	7:36AM	5:26PM 6	9 hrs 51 mins
981227	7:36AM	5:27PM 6	9 hrs 51 mins
981228	7:36AM	5:27PM 6	9 hrs 51 mins
981229	7:37AM	5:28PM 6	9 hrs 51 mins
981230	7:37AM	5:29PM 6	9 hrs 52 mins
981231	7:37AM	5:29PM 6	9 hrs 52 mins

TULSA

DATE	SUNRISE	SUNSET	DAYLIGHT
9812 1	7:14AM	5:12PM 6	9 hrs 58 mins
9812 2	7:15AM	5:12PM 6	9 hrs 57 mins
9812 3	7:16AM	5:12PM 6	9 hrs 56 mins
9812 4	7:17AM	5:12PM 6	9 hrs 55 mins
9812 5	7:18AM	5:12PM 6	9 hrs 54 mins
9812 6	7:19AM	5:12PM 6	9 hrs 53 mins
9812 7	7:19AM	5:12PM 6	9 hrs 52 mins
9812 8	7:20AM	5:12PM 6	9 hrs 52 mins
9812 9	7:21AM	5:12PM 6	9 hrs 51 mins
981210	7:22AM	5:12PM 6	9 hrs 50 mins
981211	7:22AM	5:12PM 6	9 hrs 50 mins
981212	7:23AM	5:12PM 6	9 hrs 49 mins
981213	7:24AM	5:12PM 6	9 hrs 48 mins
981214	7:25AM	5:13PM 6	9 hrs 48 mins
981215	7:25AM	5:13PM 6	9 hrs 48 mins
981216	7:26AM	5:13PM 6	9 hrs 47 mins
981217	7:26AM	5:13PM 6	9 hrs 47 mins
981218	7:27AM	5:14PM 6	9 hrs 47 mins
981219	7:28AM	5:14PM 6	9 hrs 46 mins
981220	7:28AM	5:15PM 6	9 hrs 46 mins
981221	7:29AM	5:15PM 6	9 hrs 46 mins
981222	7:29AM	5:15PM 6	9 hrs 46 mins
981223	7:30AM	5:16PM 6	9 hrs 46 mins
981224	7:30AM	5:16PM 6	9 hrs 46 mins
981225	7:31AM	5:17PM 6	9 hrs 46 mins
981226	7:31AM	5:17PM 6	9 hrs 46 mins
981227	7:31AM	5:18PM 6	9 hrs 47 mins
981228	7:32AM	5:19PM 6	9 hrs 47 mins
981229	7:32AM	5:19PM 6	9 hrs 47 mins
981230	7:32AM	5:20PM 6	9 hrs 48 mins
981231	7:32AM	5:20PM 6	9 hrs 48 mins

OKLAHOMA



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 the average temperature for the day is less than 65 degrees. Daily values are summed to arrive at a monthly total. 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 the average temperature for the day exceeds 65 degrees. Daily values are summed to give a monthly total. 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 that 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
DATA COURTESY OF NATIONAL WEATHER SERVICE NORMAN

The data on this calendar is for Oklahoma City.
Normal values are calculated for the period 1961-1990.
Temperature extremes are for the period 1891-1997.
Precipitation extremes are for the period 1891-1997.

December

Day	Avg. Temp	Avg. High	Record High	Year	Lowest Max	Year	1998	Avg. Low	Highest Min	Year	Record Low	Year	1998	Avg. Ppt.	Greatest Ppt.	Year	1998
1	44.3	55.1	76	1982	20	1985		33.4	57	1933	12	1985		0.02	0.6	1913	
2	44.6	55.9	77	1975	20	1919		33.4	56	1951	10	1985		0.07	1.59	1953	
3	44.5	56.3	77	1916	15	1897		32.7	54	1913	6	1897		0.02	1.39	1947	
4	44.6	55.5	75	1954	25	1972		33.7	53	1913	6	1897		0.03	2.59	1930	
5	45.1	56.3	77	1975	31	1992		33.9	59	1980	9	1950		0.04	1	1935	
6	42.4	52.2	77	1939	19	1972		32.7	63	1980	4	1950		0.02	2.78	1892	
7	41.4	52.3	80	1966	19	1909		30.4	54	1894	5	1950		0.05	1.23	1980	
8	39.8	49.7	71	1970	17	1917		29.9	61	1946	1	1917		0.07	1	1956	
9	38.7	48.9	73	1915	15	1919		28.6	56	1946	3	1919		0.01	1.93	1911	
10	40	50.3	75	1996	22	1917		29.7	58	1965	3	1919		0.08	1.06	1960	
11	38.9	49.2	75	1939	21	1961		28.6	52	1991	5	1917		0.03	1.37	1991	
12	38	48.8	73	1973	17	1932		27.3	45	1991	6	1932		0.01	1.33	1892	
13	37.9	48	79	1921	17	1958		27.8	62	1929	4	1917		0.05	1.8	1984	
14	38.8	49.1	74	1933	10	1901		28.5	64	1948	-2	1901		0.07	1.37	1902	
15	37.3	47.4	75	1948	19	1901		27.1	59	1929	3	1989		0.06	1.53	1984	
16	38.7	50.1	73	1939	21	1932		27.4	56	1929	7	1989		0.03	0.56	1931	
17	39.4	50.4	75	1939	21	1964		28.4	45	1939	2	1979		0.06	1.68	1959	
18	39	49.5	69	1982	19	1983		28.6	47	1939	4	1924		0.03	2.2	1898	
19	39.5	49.9	75	1978	8	1924		29.1	54	1978	-2	1924		0.04	1.97	1991	
20	38.6	49.6	73	1966	15	1924		27.6	51	1890	2	1924		0.04	1.43	1991	
21	36.6	47.8	68	1966	11	1983		25.5	53	1894	-2	1983		0.03	1.26	1907	
22	38.6	49.6	75	1896	4	1989		27.6	55	1893	-4	1989		0.03	2.01	1932	
23	39.2	49.8	72	1982	10	1983		28.6	57	1965	-8	1989		0.03	1.8	1932	
24	38.1	49.1	86	1955	3	1983		27.1	54	1893	0	1983		0.09	1.47	1914	
25	37.3	47.9	73	1922	13	1983		26.7	49	1936	-1	1983		0.03	1.05	1987	
26	38.8	49.7	68	1968	18	1892		27.8	56	1936	2	1892		0.02	1.15	1940	
27	38.9	49.5	75	1946	15	1894		28.4	56	1946	3	1924		0.06	1.06	1927	
28	39.1	48.4	73	1947	21	1925		29.7	59	1984	-1	1924		0.06	1.85	1979	
29	38.4	48.8	77	1951	12	1917		28	60	1992	3	1983		0.04	0.23	1972	
30	35.7	45	74	1951	14	1990		26.3	55	1965	3	1990		0.03	0.4	1899	
31	35.5	45.4	80	1951	10	1927		25.7	55	1965	1	1968		0.09	2.55	1984	
MONTH	39.6	50.2	86	1955	3	1983		29	64	1948	-8	1989		1.4	2.78	1892	

*The most tornadoes reported in December for Oklahoma was 4 in 1971, 1975, and1982

TULSA CLIMATE CALENDAR
DATA COURTESY OF NATIONAL WEATHER SERVICE TULSA

The data on this calendar is for Tulsa.
Normal values are calculated for the period 1961-1990.
Temperature extremes are for the period 1905-1997.
Precipitation extremes are for the period 1888-1997.

December

Day	Avg. Temp	Avg. High	Record High	Year	Lowest Max	Year	1998	Avg. Low	Highest Min	Year	Record Low	Year	1998	Avg. Ppt.	Greatest Ppt.	Year	1998
1	44	53	77	1950	26	1985		34	59	1982	14	1985		0.09	1.48	1909	
2	43	53	76	1995	24	1985		33	58	1951	11	1985		0.09	1.4	1913	
3	43	53	77	1916	27	1919		33	57	1932	15	1929		0.09	0.87	1913	
4	42	52	77	1906	27	1972		32	58	1922	20	1945		0.08	1.3	1944	
5	42	52	77	1989	32	1992		32	61	1980	10	1950		0.08	1.14	1913	
6	42	52	77	1966	18	1972		32	64	1980	3	1950		0.08	1.65	1935	
7	41	51	80	1966	19	1909		31	55	1916	4	1950		0.08	1.48	1926	
8	41	51	73	1991	19	1909		31	61	1946	-3	1917		0.08	1.01	1956	
9	41	50	75	1993	22	1937		31	58	1946	0	1917		0.08	1.26	1992	
10	40	50	73	1929	22	1917		30	56	1996	3	1919		0.08	1.73	1960	
11	40	50	76	1929	27	1917		30	53	1929	4	1917		0.07	0.87	1946	
12	40	50	73	1924	19	1932		30	51	1939	3	1962		0.07	1.82	1923	
13	39	49	80	1948	19	1917		29	54	1927	4	1917		0.07	2.33	1984	
14	39	49	74	1933	20	1926		29	64	1948	4	1958		0.07	3.02	1971	
15	39	49	77	1948	19	1951		29	58	1929	-1	1989		0.07	0.72	1930	
16	39	48	77	1908	15	1932		29	52	1929	3	1989		0.07	0.85	1961	
17	38	48	78	1908	23	1964		28	61	1908	2	1932		0.07	1	1959	
18	38	48	72	1939	23	1981		28	48	1939	4	1964		0.07	0.85	1934	
19	38	48	70	1967	9	1983		28	55	1978	-1	1924		0.07	1.9	1987	
20	38	47	75	1966	17	1924		28	49	1967	3	1924		0.06	1.44	1991	
21	37	47	70	1979	15	1916		27	48	1941	0	1989		0.06	1.03	1997	
22	37	47	71	1982	7	1989		27	55	1979	-6	1989		0.06	1.51	1966	
23	37	47	73	1982	9	1983		27	60	1982	-8	1989		0.06	4.23	1932	
24	37	47	80	1955	5	1983		27	54	1982	-2	1983		0.06	2.8	1965	
25	36	46	73	1922	12	1983		26	51	1971	-2	1983		0.06	1.29	1987	
26	36	46	69	1971	23	1983		26	57	1936	9	1914		0.06	0.97	1987	
27	36	46	77	1946	27	1915		26	55	1946	8	1925		0.06	1.62	1943	
28	36	46	74	1928	20	1917		26	62	1984	0	1924		0.06	0.98	1927	
29	36	46	71	1984	12	1917		26	52	1992	3	1983		0.06	0.84	1971	
30	36	46	77	1951	20	1946		26	58	1965	2	1983		0.05	0.36	1922	
31	35	46	78	1951	18	1927		25	54	1965	0	1969		0.05	3.27	1984	
MONTH	38.9	48.8	80	1948	5	1983		39.5	89	1909	10	1976		2.16	4.23	1932	

*The average number of tornadoes reported in December for Oklahoma is .4.