OKLAHOMA MONTHLY CLIMATE SUMMARY
SEPTEMBER 2002

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Oklahoma Climatological Survey

MONTHLY SUMMARY FOR SEPTEMBER 2002

September 2002

Statewide average temperature = 74.3º F
Statewide average rainfall = 2.34 inches

Oklahoma was warm and relatively dry during September. Despite some locally heavy rains, most notably in north central Oklahoma just past mid-month, the statewide-averaged monthly precipitation amounted to only 2.34 inches, 1.46 inches less than normal to rank this as the 38th driest September since record-keeping began in 1892. Monthly average temperatures were above normal in all regions of the state. The statewide-averaged temperature of 74.3 degrees (1.3 degrees above normal) is the 44th highest such September temperature of the 111 on record. The year-to-date statistics indicate that 2002 is, thus far, cooler and slightly drier than normal. The average statewide temperature, through the year's first nine months, of 63.3 degrees (0.4 degree less than normal), ranks this as 41st coolest such period on record. The statewide-averaged precipitation through the first nine months of the year (26.48 inches) is 1.77 inches below normal and ranks in the exact middle (56th of 111 years) of the historical record.

The precipitation deficit was most pronounced in east central Oklahoma where precipitation, during what is usually a wet month with local precipitation normals ranging between 4.50 an 5.50 inches, generally was three-and-a-half to five inches below normal. Elsewhere, heavy rains from the 8th to the 10th, 12th through the 14th, and on the 17th and 18th provided moisture at many locations, although monthly averages across the state's nine climate divisions were all less than the September normals.

September Normals

Statewide average temperature = 73.0º F
Statewide average rainfall = 3.80 inches

Moisture originally brought ashore when Tropical Storm Eduardo crossed the Texas Gulf Coast made it into southern Oklahoma on the 8th, producing three-inch-plus rains over the next two days at several locations. Tishomingo (Johnston County) reported a total of 3.54 inches of rain and Ketchum Ranch (Stephens) noted a total of 3.48 inches over the period.

Thunderstorms along a weak cold front produced locally heavy rain concentrated in central portions of the state from the 12th through the 14th. Kingfisher (Kingfisher) noted 4.82 inches of rain over the three-day period. Perry (Noble) received 4.50 inches and Red Rock (Noble) chimed in with 3.98 inches during the same period. Storm-total rainfall of three inches or more were reported across an area bounded by Piedmont (Canadian) and Kingfisher on the southwest and Red Rock and Pawnee (Pawnee) on the northeast.

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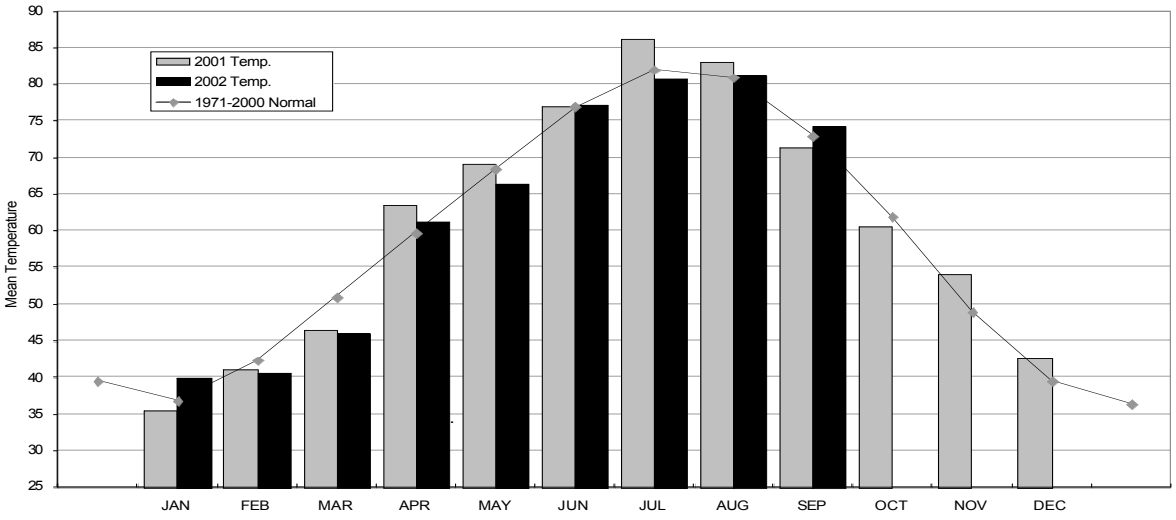
A more vigorous frontal system on the 18th and 19th produced substantial rain in addition to lowering daily maximum temperatures by as much as 37 degrees. Rainfall totals exceeding four inches were reported during the two-day period at such diverse locations as Geary (Blaine; 4.27 inches), Lamont (Grant; 4.48 inches), and Burbank (Osage; 4.00 inches). Another area of heavy storms kicked up when the system reached the state's extreme southeast on the night of the 19th and 20th, producing heavy rains at several McCurtain County reporting stations. Storm-total precipitation amounts included 5.13 inches at the Broken Bow Mesonet site, 4.29 inches at Idabel, and more than three inches at Smithville.

Several incidences of severe weather were reported with the latter two precipitation-producing systems. The Kingfisher Mesonet site recorded a maximum wind speed of 62 miles per hour on the 12th. The wind instrument atop the Burbank site recorded a peak wind speed of 64 miles per hour on the 13th. The stronger thunderstorms of the 18th produced both wind and hail of note. A wind gust of 85 miles per hour was recorded at the Hobart airport and local observers reported 80 mile-per-hour winds at Altus (Jackson) and Putnam (Dewey), as did the automated Mesonet site at Butler (Custer). The Mesonet site near Putnam recorded a peak wind speed of 74 miles per hour. Winds of 70 miles per hour or greater were also reported at Nardin (Kay) and near Karns (Canadian). Damage from strong winds were reported at numerous other locations from an area bounded by Greer and Johnston counties in the south to Major and Nowata counties across the north. The strong winds near Karns were accompanied by two-and-three-quarter-inch hail. Hailstones at Boone (Caddo) were reportedly as large as four-and-one-half inches in diameter.

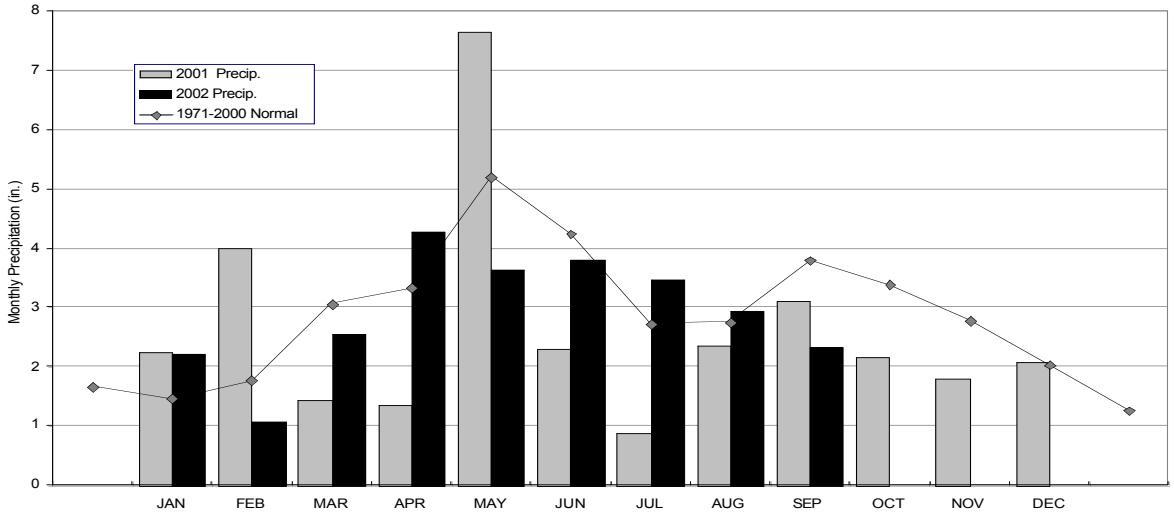
Temperatures during the month ranged from a high of 104 degrees at the Mangum Mesonet site (Greer) on the 18th to a low of 40 degrees at Fort Supply (Woodward) on 23rd and the Wister Mesonet site (LeFlore) on the 24th. Mangum's monthly top temperature on the 18th was followed by a high of only 67 degrees on the following day, due to the passage of a vigorous cold front.

Howard L. Johnson

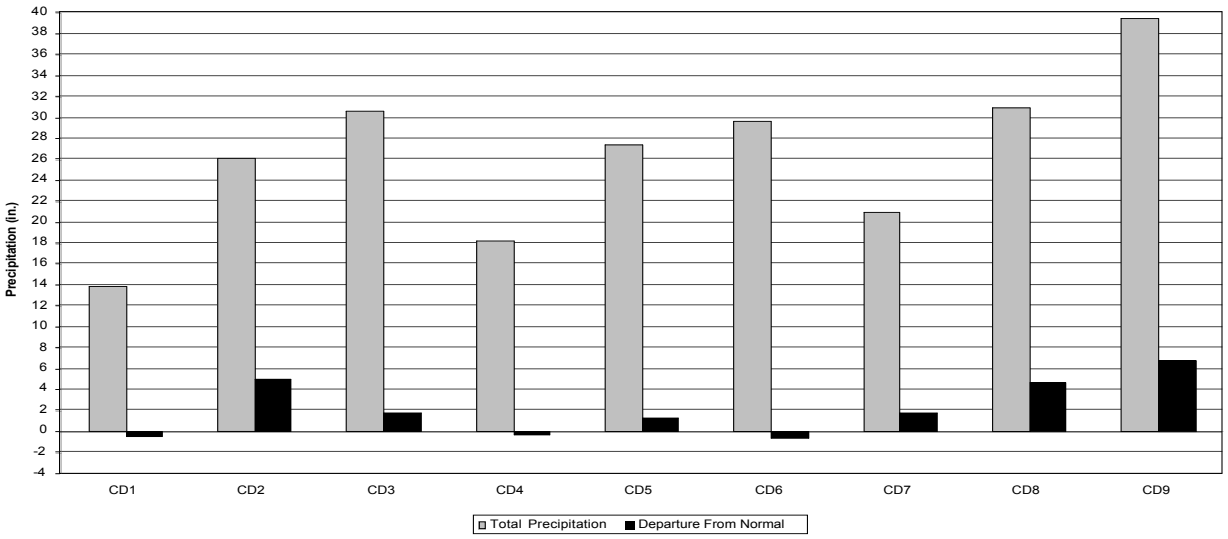
2001 AND 2002 STATEWIDE TEMPERATURES - MONTHLY AVERAGES



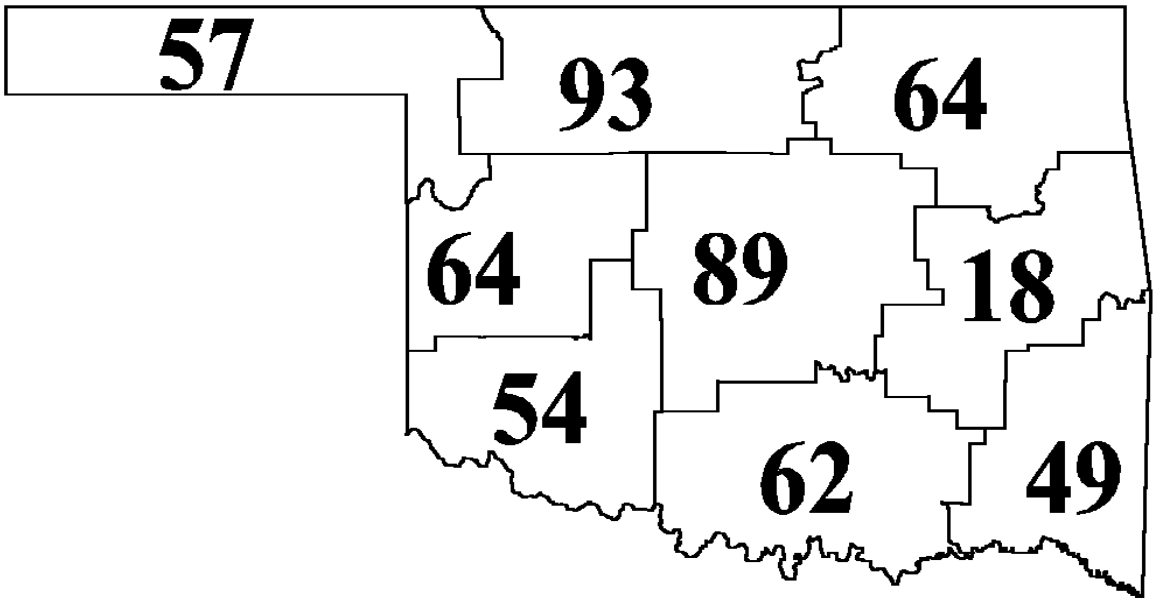
2001 AND 2002 STATEWIDE PRECIPITATION - MONTHLY TOTALS



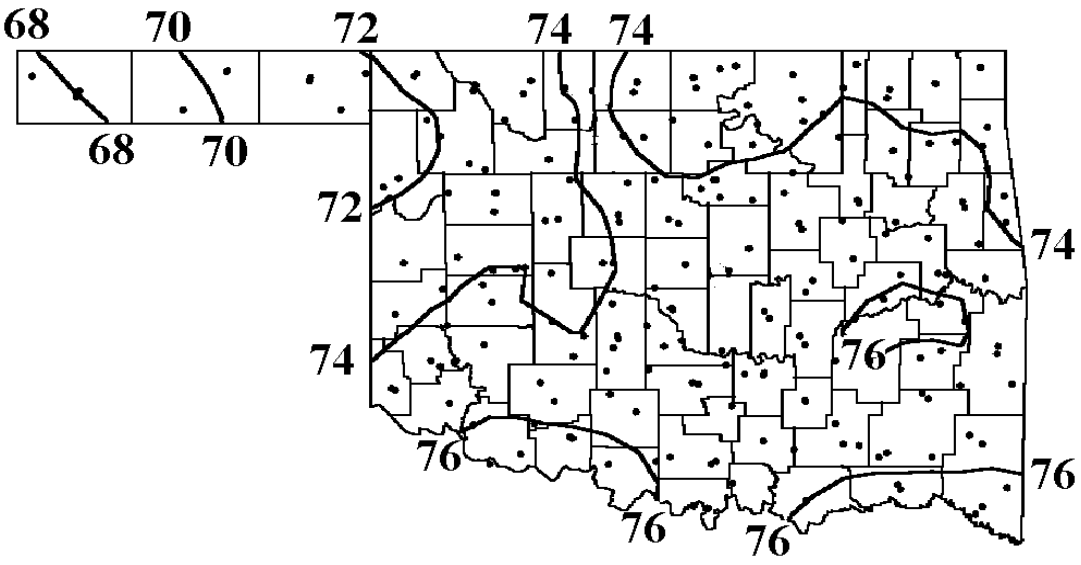
CLIMATE DIVISION AVERAGED PRECIPITATION - JANUARY THROUGH SEPTEMBER 2002



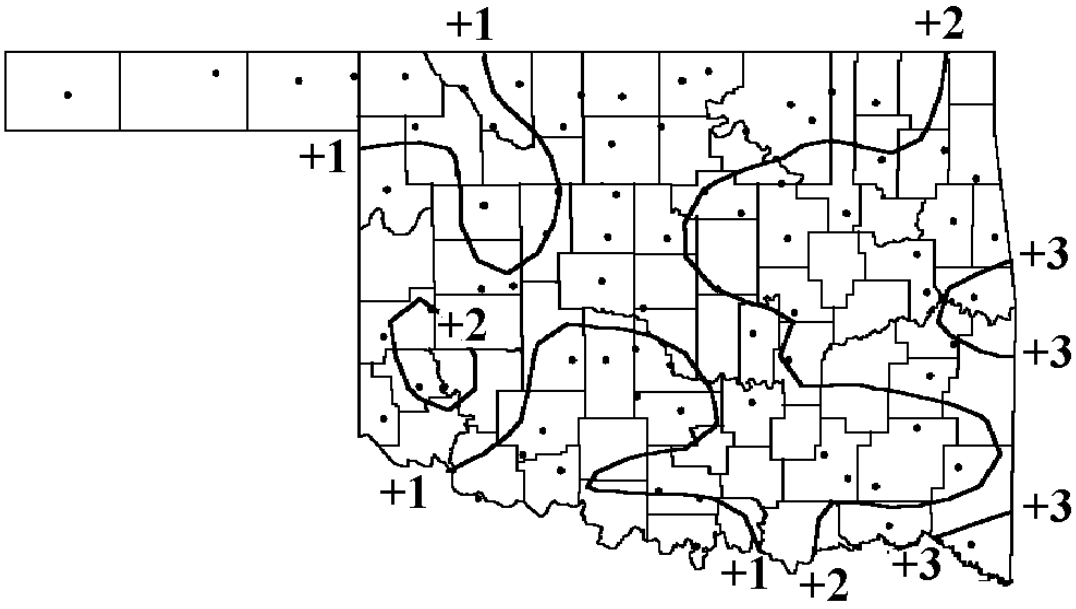
CLIMATE DIVISION PERCENT OF NORMAL PRECIPITATION - SEPTEMBER 2002



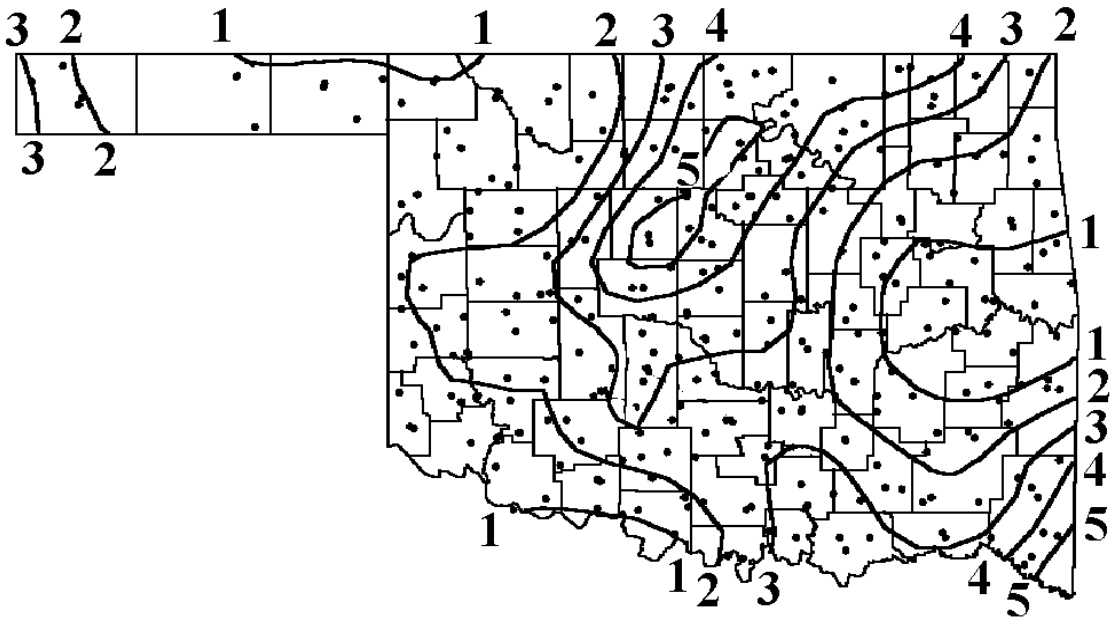
SEPTEMBER 2002 AVERAGE MONTHLY TEMPERATURE (ºF)



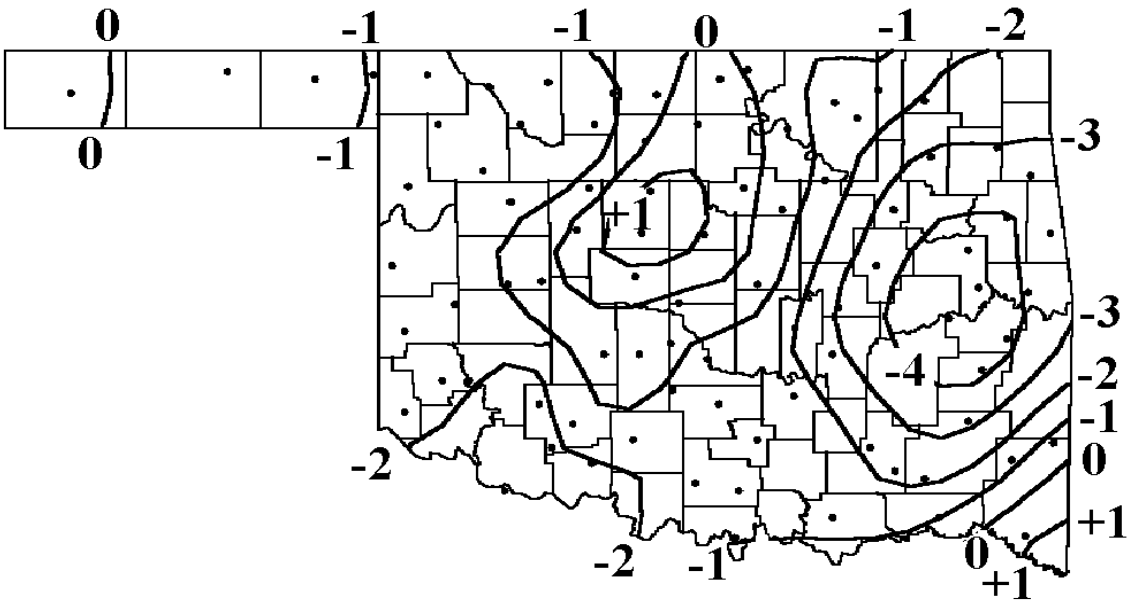
SEPTEMBER 2002 DEPARTURE FROM NORMAL TEMPERATURE (ºF)



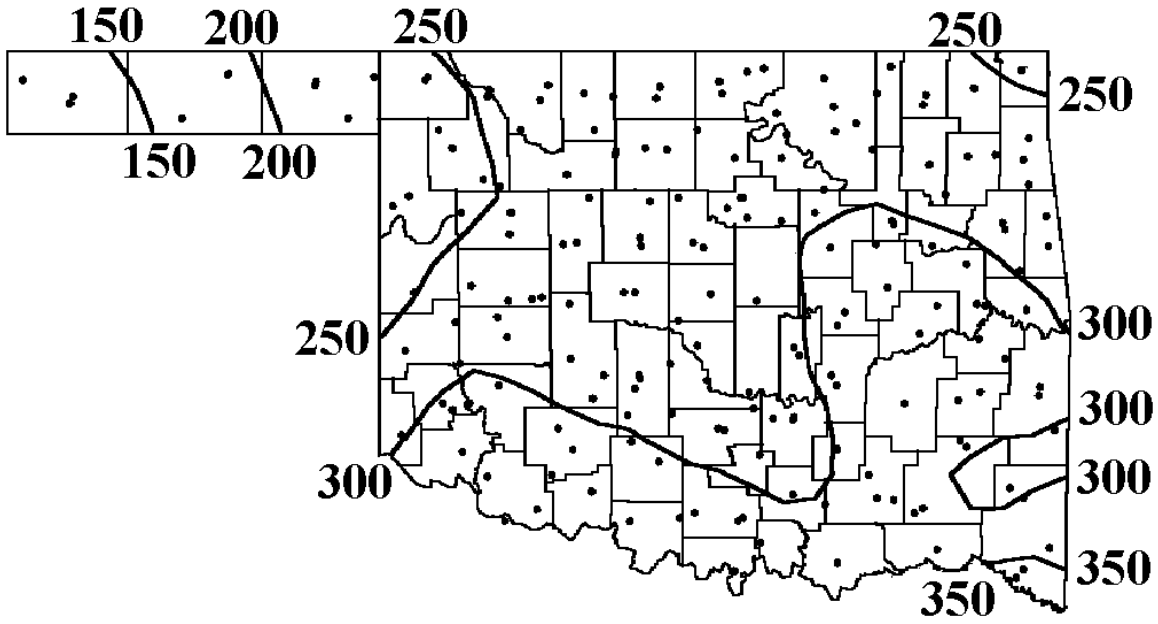
SEPTEMBER 2002 PRECIPITATION (INCHES)



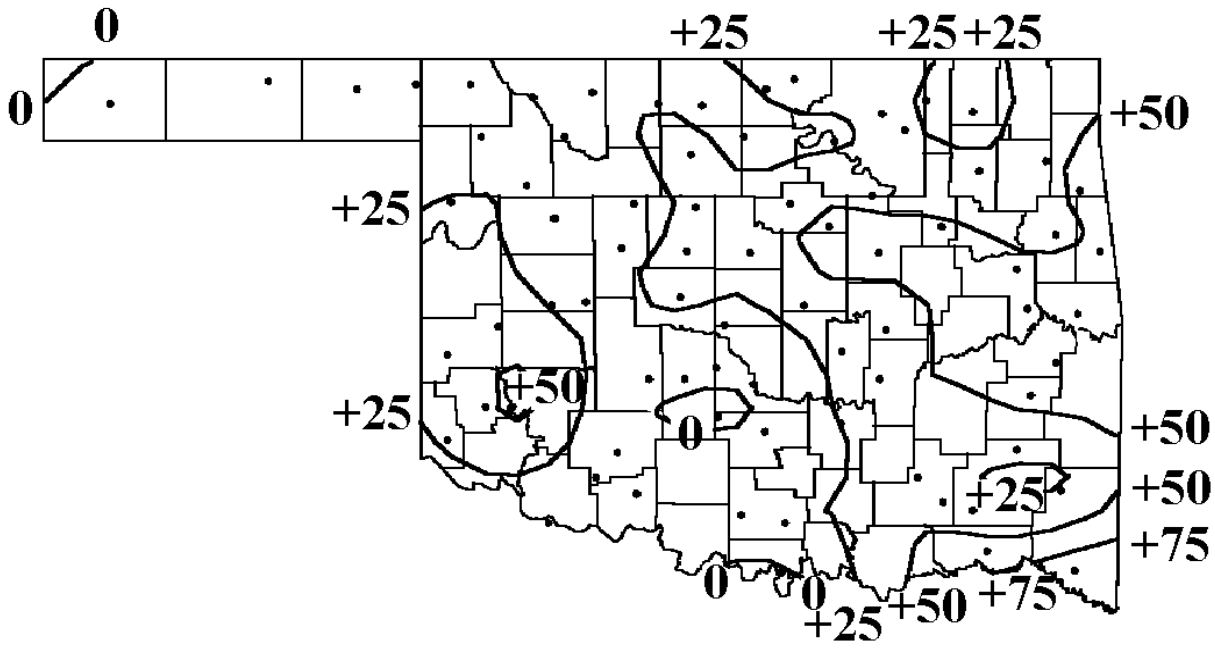
SEPTEMBER 2002 DEPARTURE FROM NORMAL PRECIPITATION (INCHES)



SEPTEMBER 2002 ACCUMULATED COOLING DEGREE DAYS (ºF)



SEPTEMBER 2002 DEPARTURE FROM NORMAL COOLING DEGREE DAYS (ºF)



SEPTEMBER 2002 SUMMARY FOR PANHANDLE CLIMATE 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	71.1	30	1.8	99	3	45	28	25	-23	207	29	0.750	30	-1.72	0.43	19
BEAVER	593	1	70.4	30	0.3	99	7	42	28	35	0	196	8	1.090	30	-0.69	0.53	14
BOISE CITY	908	1	68.9	30	0.9	93	3	43	27	21	-29	139	1	1.853	30	0.36	0.85	18
BUFFALO	1243	1	73.3	30	-0.2	100	4	44	27	19	2	268	-2	0.761	30	-1.72	0.32	15
FARGO	3070	1	*****	0	*****	****	0	****	0	******	******	******	******	0.641	30	*****	0.34	20
GAGE	3407	1	71.9	30	1.3	99	2	42	27	21	-15	227	25	1.072	30	-0.90	0.33	19
GATE	3489	1	71.7	30	0.0	99	3	46	28	26	2	226	1	1.090	30	-0.95	0.44	19
GUYMON	3835	1	70.5	25	*****	95	3	43	27	16	******	154	******	2.170	25	*****	0.67	11
HOOKER	4298	1	71.4	30	0.9	98	3	44	27	12	-24	205	4	0.891	30	-0.86	0.56	14
LAVERNE	5045	1	78.5	14	*****	98	3	61	11	0	******	189	******	1.042	30	*****	0.39	19
RANGE	7412	1	*****	0	*****	****	0	****	0	******	******	******	******	1.601	30	*****	0.75	14
REGNIER	7534	1	*****	0	*****	****	0	****	0	******	******	******	******	1.603	30	*****	0.89	10
TURPIN	9017	1	71.0	23	*****	99	4	43	27	19	******	158	******	0.800	24	*****	0.40	19

SEPTEMBER 2002 SUMMARY FOR NORTH CENTRAL CLIMATE 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	73.9	29	1.6	102	3	46	23	16	-14	274	25	1.790	30	-0.63	0.83	14
BILLINGS	755	2	72.9	30	0.6	96	4	47	24	18	-13	256	7	4.741	30	0.94	2.70	19
BLACKWELL 2E	818	2	74.0	30	1.9	97	4	50	24	6	-25	275	32	5.032	30	1.40	2.55	19
BRAMAN	1075	2	*****	0	*****	****	0	****	0	******	******	******	******	4.560	30	*****	3.06	19
CEDARDALE	1620	2	*****	0	*****	****	0	****	0	******	******	******	******	0.841	30	*****	0.42	19
CHEROKEE	1724	2	74.5	28	*****	101	4	47	25	12	******	277	******	1.181	29	*****	0.75	15
ENID	2912	2	75.1	30	2.5	99	4	50	23	10	-19	312	57	3.261	30	0.10	1.78	14
FREEDOM	3358	2	72.4	29	0.9	101	2	44	23	18	-15	231	4	0.870	30	-1.66	0.30	12
FT SUPPLY	3304	2	70.3	30	0.8	98	4	40	23	37	-9	197	16	1.652	30	-0.67	0.52	19
GREAT SALT P	3740	2	74.0	29	1.8	101	4	49	23	11	-19	271	28	1.240	30	-1.68	0.74	14
HELENA	4019	2	73.3	30	1.2	98	4	47	16	17	-11	266	27	1.072	30	-1.97	0.47	19
JEFFERSON	4573	2	73.1	30	0.6	100	4	47	23	15	-12	257	8	2.910	30	-0.48	1.88	19
LAMONT	5013	2	*****	0	*****	****	0	****	0	******	******	******	******	6.411	30	*****	4.48	19
LAHOMA	4950	2	74.8	30	*****	101	3	49	25	9	******	301	******	2.980	30	*****	1.10	19
MEDFORD	5768	2	*****	0	*****	****	0	****	0	******	******	******	******	3.370	30	*****	2.10	19
MORRISON	6065	2	*****	0	*****	****	0	****	0	******	******	******	******	4.500	30	*****	2.27	14
MUTUAL	6139	2	72.0	30	1.6	101	3	45	26	23	-15	233	32	0.741	30	-1.65	0.30	19
NEWKIRK	6278	2	73.7	30	2.2	97	4	48	23	13	-20	273	48	3.560	30	-0.33	1.95	19
ORIENTA	6751	2	*****	0	*****	****	0	****	0	******	******	******	******	1.300	30	*****	0.91	19
PERRY	7012	2	75.9	28	*****	100	4	51	24	3	******	309	******	6.780	28	*****	4.50	14
PONCA CITY	7201	2	73.6	30	0.6	96	3	48	23	8	-22	267	-1	4.680	30	1.01	2.19	13
RED ROCK	7505	2	*****	0	*****	****	0	****	0	******	******	******	******	5.160	30	*****	2.92	13
WAYNOKA	9404	2	73.1	30	0.3	100	18	44	22	26	0	268	9	0.480	30	-2.17	0.19	18

SEPTEMBER 2002 SUMMARY FOR NORTHEAST CLIMATE 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	74.1	29	2.0	96	5	45	23	8	-24	272	27	3.290	30	-1.80	1.60	14
BARTLESVILLE	548	3	74.4	30	1.7	98	5	45	23	3	-25	284	25	4.580	30	0.16	2.47	19
BIXBY	782	3	74.9	30	3.0	99	4	46	23	7	-22	304	69	0.700	30	-4.01	0.66	18
BURBANK	1256	3	*****	0	*****	****	0	****	0	******	******	******	******	5.600	30	*****	4.00	18
CHELSEA	1717	3	*****	0	*****	****	0	****	0	******	******	******	******	3.670	30	*****	1.59	19
CLAREMORE	1828	3	74.2	30	2.3	98	8	47	24	6	-31	281	39	1.510	30	-3.39	1.23	19
HOLLOW	4258	3	*****	0	*****	****	0	****	0	******	******	******	******	4.390	30	*****	2.03	19
HOMINY	4289	3	*****	0	*****	****	0	****	0	******	******	******	******	2.900	30	*****	1.30	19
KANSAS	4672	3	75.0	30	3.5	95	7	48	23	0	-34	301	74	1.450	30	-4.11	1.30	18
LENAPAH	5118	3	*****	0	*****	****	0	****	0	******	******	******	******	3.680	30	*****	2.50	19
MANNFORD	5522	3	74.9	30	2.3	96	3	49	23	4	-29	300	40	3.510	30	-0.72	1.48	19
MARAMEC	5540	3	*****	0	*****	****	0	****	0	******	******	******	******	2.640	30	*****	1.35	14
NOWATA	6485	3	74.4	29	1.4	96	5	47	23	3	-26	274	7	2.160	30	-2.92	1.70	19
PAWHUSKA	6935	3	74.4	30	1.8	96	3	46	23	6	-24	289	34	2.430	30	-2.63	2.10	14
PAWNEE	6940	3	*****	0	*****	****	0	****	0	******	******	******	******	5.290	30	*****	3.45	13
PRYOR	7309	3	76.2	21	*****	96	5	53	21	0	******	236	******	1.750	21	*****	0.91	19
RALSTON	7390	3	72.7	30	0.8	95	3	43	23	12	-26	243	2	4.101	30	-0.22	2.20	14
SPAVINAW	8380	3	76.0	30	2.0	96	7	49	25	1	-16	331	43	2.640	30	-2.36	1.12	20
TULSA	8992	3	76.3	30	2.8	98	4	49	23	1	-29	339	62	1.241	30	-3.52	0.88	19
UPPER SPAV	9101	3	73.4	30	*****	97	7	42	25	12	******	263	******	0.930	30	*****	0.48	20
VINITA	9203	3	75.5	23	*****	96	3	45	23	5	******	247	******	1.490	28	*****	1.08	19
WAGONER	9247	3	75.8	28	*****	96	4	48	25	2	******	305	******	2.020	28	*****	2.02	19
WANN	9298	3	*****	0	*****	****	0	****	0	******	******	******	******	5.790	30	*****	3.00	19

SEPTEMBER 2002 SUMMARY FOR WEST CENTRAL CLIMATE 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
CLINTON	1909	4	74.2	30	0.8	99	4	46	25	9	-12	286	15	2.361	30	-1.25	0.91	14
COLONY	2039	4	*****	0	*****	****	0	****	0	******	******	******	******	0.000	30	*****	0.00	30
CORDELL	2125	4	73.5	30	*****	100	4	46	25	17	******	273	******	1.842	30	*****	0.65	14
ELK CITY	2849	4	74.1	29	2.6	100	4	48	25	5	-25	269	46	1.911	30	-1.07	1.04	19
ERICK	2944	4	73.4	30	1.8	102	4	47	26	13	-17	264	39	1.430	30	-1.65	0.73	6
GEARY	3497	4	73.5	28	*****	98	3	52	24	4	******	243	******	5.070	28	*****	4.25	18
HAMMON	3871	4	72.4	27	*****	100	19	44	25	25	******	224	******	1.450	27	*****	0.76	19
LEEDEY	5090	4	*****	0	*****	****	0	****	0	******	******	******	******	1.360	30	*****	0.65	10
MACKIE	5463	4	*****	0	*****	****	0	****	0	******	******	******	******	2.030	30	*****	0.64	19
MORAVIA	6035	4	*****	0	*****	****	0	****	0	******	******	******	******	2.560	30	*****	0.78	14
OKEENE	6629	4	74.7	30	0.8	100	2	48	23	4	-18	295	8	1.681	30	-1.73	0.95	19
RETROP	7565	4	*****	0	*****	****	0	****	0	******	******	******	******	2.830	30	*****	1.60	9
REYDON	7579	4	71.3	28	*****	97	5	46	27	15	******	190	******	1.790	31	-0.85	0.63	6
SAYRE	7952	4	*****	0	*****	****	0	****	0	******	******	******	******	1.252	30	*****	0.46	19
SWEETWATER	8652	4	*****	0	*****	****	0	****	0	******	******	******	******	1.441	30	*****	0.66	14
TALOGA	8708	4	71.4	30	0.0	98	19	43	26	34	3	227	6	1.312	30	-1.47	0.50	14
THOMAS	8815	4	*****	0	*****	****	0	****	0	******	******	******	******	2.540	30	*****	1.20	19
VICI	9172	4	*****	0	*****	****	0	****	0	******	******	******	******	2.281	30	*****	0.80	10
WATONGA	9364	4	73.0	30	0.8	98	4	49	24	15	-14	255	11	3.751	30	0.78	1.60	14
WEATHERFORD	9422	4	74.5	30	1.2	98	4	48	25	11	-14	297	24	3.160	31	-0.11	1.31	14

SEPTEMBER 2002 SUMMARY FOR CENTRAL CLIMATE 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	******	******	******	******	2.650	30	*****	1.10	10
ARCADIA	288	5	*****	0	*****	****	0	****	0	******	******	******	******	3.280	30	*****	1.06	19
BLANCHARD	830	5	74.7	29	0.6	96	3	52	25	4	-15	284	-8	3.201	30	-0.67	1.35	19
BRISTOW	1144	5	75.4	29	3.2	96	7	46	24	4	-32	305	53	1.150	29	*****	1.15	18
CHANDLER	1684	5	73.9	26	*****	98	4	49	25	7	******	240	******	0.875	27	*****	0.70	19
CHICKASHA EX	1750	5	75.8	30	0.8	99	2	48	24	1	-14	326	12	3.440	30	-0.16	1.24	9
COX CITY	2196	5	*****	0	*****	****	0	****	0	******	******	******	******	0.680	30	*****	0.27	9
CRESCENT	2242	5	*****	0	*****	****	0	****	0	******	******	******	******	4.530	30	*****	2.23	14
CUSHING	2318	5	76.2	30	3.6	100	3	52	23	4	-22	341	88	3.340	30	-0.73	1.92	14
EDMOND	2788	5	*****	0	*****	****	0	****	0	******	******	******	******	2.560	30	*****	1.25	18
EL RENO	2818	5	74.2	30	2.1	98	4	49	24	7	-21	283	45	3.687	30	0.33	1.60	19
GUTHRIE	3821	5	73.6	30	1.5	96	4	49	25	13	-23	270	21	4.521	30	0.89	1.53	19
HENNESSEY	4055	5	73.3	30	1.2	99	3	51	28	13	-19	263	18	5.290	30	2.00	3.20	14
INGALLS	4489	5	*****	0	*****	****	0	****	0	******	******	******	******	3.100	30	*****	1.75	15
KINGFISHER	4861	5	74.6	30	2.2	99	30	50	24	9	-21	297	47	7.471	30	3.94	3.36	14
KONAWA	4915	5	*****	0	*****	****	0	****	0	******	******	******	******	2.160	30	*****	1.60	8
MARSHALL	5589	5	*****	0	*****	****	0	****	0	******	******	******	******	4.770	30	*****	3.56	14
MEEKER	5779	5	72.9	30	2.3	97	8	46	25	15	-29	253	43	4.750	30	0.44	1.73	9
MULHALL	6110	5	*****	0	*****	****	0	****	0	******	******	******	******	5.900	30	*****	3.60	14
NORMAN NWS	6386	5	73.9	30	*****	95	2	50	25	5	******	272	******	3.820	30	*****	1.62	14
OKEMAH	6638	5	76.0	30	1.3	98	3	52	24	1	-16	330	25	1.210	30	-3.77	0.93	19
OKLAHOMA CTY F.	6659	5	*****	0	*****	****	0	****	0	******	******	******	******	3.121	30	*****	1.41	14
OKLAHOMA CTY	6661	5	74.2	30	1.0	96	3	51	25	3	-28	278	7	2.941	30	-1.04	1.45	14
PIEDMONT	7068	5	*****	0	*****	****	0	****	0	******	******	******	******	6.310	30	*****	2.17	19
PRAGUE	7264	5	*****	0	*****	****	0	****	0	******	******	******	******	3.131	30	*****	1.21	9
PURCELL	7327	5	74.2	30	0.8	92	9	50	19	0	-24	275	-1	2.720	30	-1.62	2.00	19
SEMINOLE	8042	5	75.4	30	1.4	98	8	49	25	1	-19	312	24	2.302	30	-2.18	1.10	9
SHAWNEE	8110	5	*****	0	*****	****	0	****	0	******	******	******	******	5.070	30	*****	2.08	9
STELLA	8479	5	*****	0	*****	****	0	****	0	******	******	******	******	2.760	30	*****	1.30	19
STILLWATER	8501	5	74.9	30	2.1	98	4	48	25	7	-20	304	44	4.211	30	0.08	1.98	14
TECUMSEH	8751	5	*****	0	*****	****	0	****	0	******	******	******	******	3.360	30	*****	1.91	9
UNION CITY	9086	5	*****	0	*****	****	0	****	0	******	******	******	******	2.610	30	*****	1.42	19
WANETTE	9291	5	73.6	30	*****	96	4	45	25	10	******	267	******	2.050	30	*****	1.30	9
WEWOKA	9575	5	*****	0	*****	****	0	****	0	******	******	******	******	2.930	30	*****	1.56	9

SEPTEMBER 2002 SUMMARY FOR EAST CENTRAL CLIMATE 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	******	******	******	******	1.641	30	*****	0.68	19
BEGGS	631	6	*****	0	*****	****	0	****	0	******	******	******	******	1.000	30	*****	1.00	19
CALVIN	1391	6	*****	0	*****	****	0	****	0	******	******	******	******	1.300	30	*****	0.50	18
CHECOTAH	1711	6	76.9	30	*****	99	3	48	24	2	******	361	******	0.270	30	*****	0.14	19
CLAYTON	1858	6	*****	0	*****	****	0	****	0	******	******	******	******	1.440	30	*****	0.71	9
DUSTIN	2690	6	*****	0	*****	****	0	****	0	******	******	******	******	1.030	30	*****	0.80	19
HASKELL	3956	6	*****	0	*****	****	0	****	0	******	******	******	******	0.710	30	*****	0.63	19
HOLDENVILLE	4235	6	75.8	30	3.1	100	4	49	24	0	-24	325	69	1.580	30	-2.68	0.66	8
LAKE EUFAULA	4975	6	79.1	20	*****	96	8	64	17	0	******	282	******	0.201	30	-5.04	0.20	24
LYONS	5437	6	*****	0	*****	****	0	****	0	******	******	******	******	0.661	30	*****	0.50	20
MCALESTER	5664	6	76.1	30	1.9	99	3	46	24	1	-20	335	39	0.812	30	-3.85	0.34	8
MCCURTAIN	5693	6	77.5	30	3.2	99	7	49	24	0	-20	374	77	0.340	30	-4.64	0.24	20
MUSKOGEE	6130	6	75.4	30	2.4	97	6	45	22	5	-18	318	55	0.902	30	-4.07	0.78	18
OKMULGEE	6670	6	*****	0	*****	****	0	****	0	******	******	******	******	0.940	30	-3.61	0.90	20
OKTAHA	6678	6	*****	0	*****	****	0	****	0	******	******	******	******	0.801	30	*****	0.64	19
SALLISAW	7862	6	76.7	30	3.7	96	7	50	25	3	-21	353	91	0.530	30	-4.09	0.53	20
SCIPIO	7979	6	*****	0	*****	****	0	****	0	******	******	******	******	0.880	30	*****	0.37	9
SHORT	8170	6	*****	0	*****	****	0	****	0	******	******	******	******	0.670	30	*****	0.30	8
STILWELL	8506	6	73.0	30	2.5	94	12	44	23	1	-37	241	38	1.390	30	-3.48	0.69	19
TAHLEQUAH	8677	6	74.4	30	2.0	92	18	48	24	2	-33	284	31	0.850	30	-4.50	0.70	19
WEBBERS FALL	9445	6	76.1	30	2.9	100	7	43	25	6	-17	340	70	0.710	30	-4.31	0.61	20
WETUMKA	9571	6	*****	0	*****	****	0	****	0	******	******	******	******	1.031	30	*****	0.91	19

SEPTEMBER 2002 SUMMARY FOR SOUTHWEST CLIMATE 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 DAM	184	7	77.5	30	3.4	102	19	51	21	6	-13	382	91	1.350	30	-1.82	0.72	19
ANADARKO	224	7	72.4	29	0.1	97	4	45	26	17	-10	232	-14	3.120	30	-0.19	1.13	19
APACHE	260	7	*****	0	*****	****	0	****	0	******	******	******	******	1.730	30	*****	1.03	9
CHATTANOOGA	1706	7	75.4	30	0.5	100	19	51	25	3	-12	316	5	1.370	30	-1.89	0.89	19
DUNCAN 11 W	2668	7	*****	0	*****	****	0	****	0	******	******	******	******	1.431	30	*****	0.76	9
FREDERICK	3353	7	75.4	28	*****	101	2	52	24	3	******	294	******	2.130	29	*****	1.48	7
HEADRICK	3998	7	*****	0	*****	****	0	****	0	******	******	******	******	0.650	30	*****	0.65	9
HOBART	4204	7	74.9	30	0.9	100	2	50	25	5	-12	303	18	3.440	30	0.06	1.24	18
HOLLIS	4249	7	75.6	29	1.6	101	18	48	20	0	-16	307	23	1.290	30	-1.82	0.45	14
LAWTON	5063	7	75.3	29	0.5	98	4	52	25	2	-12	302	-5	3.730	30	0.36	2.30	9
LOOKEBA	5329	7	*****	0	*****	****	0	****	0	******	******	******	******	3.100	30	*****	1.90	19
MANGUM	5509	7	75.0	30	1.9	100	19	49	26	6	-14	305	43	2.311	30	-0.82	1.03	14
RANDLETT	7403	7	*****	0	*****	****	0	****	0	******	******	******	******	1.220	30	*****	0.65	9
ROOSEVELT	7727	7	*****	0	*****	****	0	****	0	******	******	******	******	2.180	30	*****	1.21	19
SEDAN	8016	7	*****	0	*****	****	0	****	0	******	******	******	******	2.360	30	*****	1.32	19
SNYDER	8299	7	*****	0	*****	****	0	****	0	******	******	******	******	1.430	30	*****	0.90	19
VINSON	9212	7	*****	0	*****	****	0	****	0	******	******	******	******	1.640	30	*****	0.82	11
WALTERS	9278	7	75.8	30	1.4	99	19	51	26	1	-22	324	20	1.150	30	-2.93	0.60	19
WICHITA MT	9629	7	74.4	27	*****	98	3	46	26	7	******	262	******	0.000	30	-4.12	0.00	30

SEPTEMBER 2002 SUMMARY FOR SOUTH CENTRAL CLIMATE 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	74.8	30	1.4	96	7	47	25	3	-18	296	26	3.320	30	-1.25	2.78	9
ALLEN	147	8	*****	0	*****	****	0	****	0	******	******	******	******	1.490	30	*****	0.72	8
ARDMORE	292	8	77.0	30	1.6	96	2	56	23	0	-12	361	39	1.510	30	-2.64	1.30	8
ATOKA DAM	394	8	75.2	30	0.7	99	5	45	25	4	-11	308	9	2.660	30	-1.87	0.89	15
BOKCHITO	917	8	*****	0	*****	****	0	****	0	******	******	******	******	3.600	30	*****	1.50	9
CANEY	1437	8	*****	0	*****	****	0	****	0	******	******	******	******	3.100	30	*****	2.60	9
CENTRAHOMA	1648	8	75.5	30	*****	97	8	50	24	0	******	314	******	2.300	30	*****	0.65	9
CHICKASAW	1745	8	76.5	21	*****	93	4	54	27	0	******	241	******	3.630	30	-1.09	2.00	9
COLEMAN	2011	8	74.4	30	*****	94	6	51	23	2	******	285	******	3.650	30	*****	1.90	9
COMANCHE	2054	8	*****	0	*****	****	0	****	0	******	******	******	******	0.540	30	*****	0.42	19
DAISY	2354	8	*****	0	*****	****	0	****	0	******	******	******	******	2.131	30	*****	0.83	9
DUNCAN	2660	8	76.5	27	*****	96	20	54	20	0	******	310	******	2.400	31	-1.59	1.54	9
DURANT	2678	8	76.3	17	*****	95	2	50	23	0	******	193	******	3.480	30	-1.26	2.95	8
ELMORE CITY	2872	8	*****	0	*****	****	0	****	0	******	******	******	******	2.250	30	*****	1.32	9
GRADY	3688	8	*****	0	*****	****	0	****	0	******	******	******	******	0.550	30	*****	0.30	19
HEALDTON	4001	8	75.2	30	1.4	97	3	49	25	1	-21	306	20	2.650	30	-1.58	1.24	10
KINGSTON	4865	8	*****	0	*****	****	0	****	0	******	******	******	******	3.930	30	*****	2.90	9
KINGSTON	4865	8	*****	0	*****	****	0	****	0	******	******	******	******	2.600	30	*****	2.10	9
LINDSAY	5216	8	73.8	29	0.7	97	3	46	24	9	-17	263	-6	2.630	31	-0.95	1.64	18
LOCO	5247	8	*****	0	*****	****	0	****	0	******	******	******	******	1.210	30	*****	0.94	9
MADILL	5468	8	76.4	27	*****	96	3	52	24	0	******	309	******	4.010	27	*****	2.94	9
MARIETTA 5 SW	5563	8	73.9	30	-0.8	95	3	46	25	7	-8	274	-30	3.450	30	-0.55	1.44	10
MARLOW	5581	8	75.7	30	*****	100	2	48	25	0	******	321	******	4.570	30	*****	2.00	10
MCGEE CREEK	5713	8	77.5	30	3.4	99	7	52	24	0	-13	376	90	1.920	30	-2.71	0.88	15
PAULS VALLEY	6926	8	73.7	30	0.2	95	4	45	25	7	-14	267	-9	1.960	30	-2.45	0.86	19
PONTOTOC	7214	8	*****	0	*****	****	0	****	0	******	******	******	******	3.710	30	*****	2.09	8
TISHOMINGO	8884	8	*****	0	*****	****	0	****	0	******	******	******	******	4.760	30	*****	1.70	8
TUSSY	9032	8	*****	0	*****	****	0	****	0	******	******	******	******	3.700	30	*****	2.50	10
WAURIKA	9395	8	77.0	30	0.2	98	18	50	24	0	-8	359	-3	0.550	30	-2.70	0.39	9

SEPTEMBER 2002 SUMMARY FOR SOUTHEAST CLIMATE DIVISION (CD9)

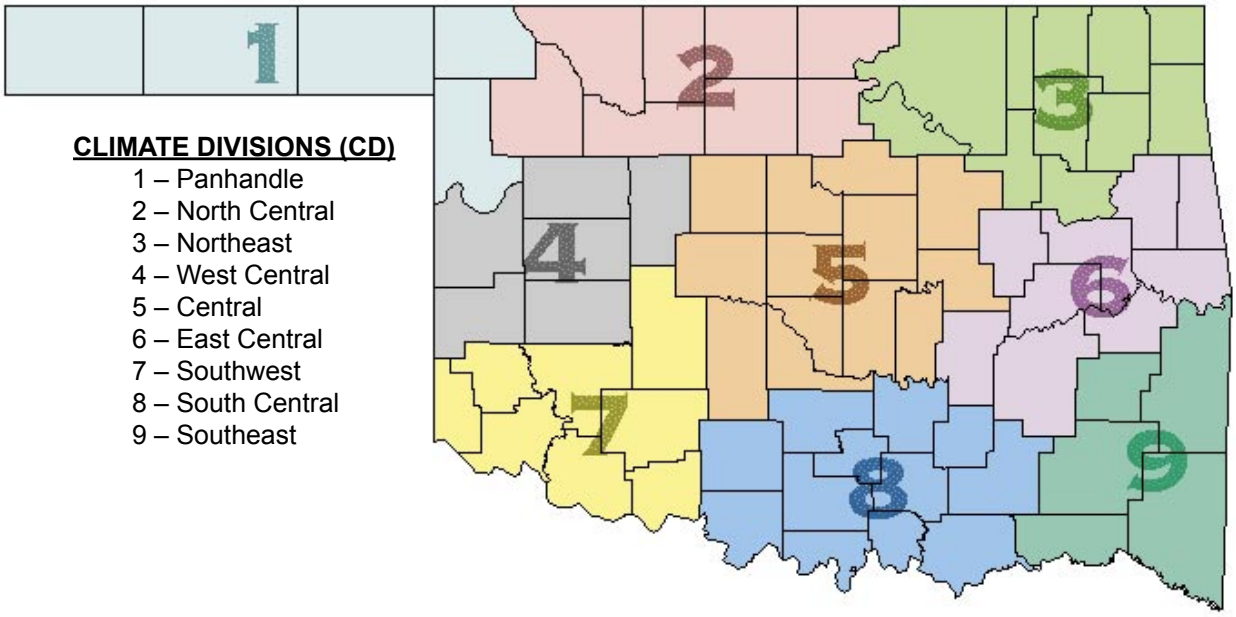
NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ANTLERS	256	9	74.2	30	0.0	97	7	44	24	3	-13	280	-11	1.581	30	-2.66	0.70	15
BATTIEST	567	9	71.5	29	0.4	95	3	41	24	16	-16	204	-9	3.021	30	-1.65	1.42	19
BENGAL	670	9	*****	0	*****	****	0	****	0	******	******	******	******	0.690	30	*****	0.40	15
BROKEN BOW	1162	9	*****	0	*****	****	0	****	0	******	******	******	******	3.930	30	*****	2.01	19
CARTER TWR	1544	9	*****	0	*****	****	0	****	0	******	******	******	******	3.010	30	*****	2.05	20
FANSHAWE	3065	9	*****	0	*****	****	0	****	0	******	******	******	******	0.530	30	*****	0.21	20
HEAVENER	4008	9	*****	0	*****	****	0	****	0	******	******	******	******	1.190	30	*****	0.56	19
HUGO	4384	9	76.9	30	3.0	98	7	49	23	0	-14	357	75	2.940	30	-0.90	1.37	9
IDABEL	4451	9	78.5	30	4.2	101	3	53	25	0	-12	405	114	5.430	30	1.34	4.93	20
PAGE	6842	9	74.5	29	*****	97	4	43	23	10	******	286	******	2.250	29	*****	1.06	20
SMITHVILLE	8285	9	73.4	27	*****	99	7	42	24	13	******	241	******	4.612	30	0.06	2.39	20
SPIRO	8416	9	*****	0	*****	****	0	****	0	******	******	******	******	0.340	30	*****	0.30	20
TUSKAHOMA	9023	9	75.5	30	1.5	98	6	42	24	6	-14	321	32	1.610	30	-3.45	0.95	15
VALLIANT	9118	9	*****	0	*****	****	0	****	0	******	******	******	******	2.910	30	*****	1.15	9
WILBURTON	9634	9	75.9	30	2.5	98	3	42	24	5	-13	332	63	0.332	30	-4.72	0.12	12
WISTER	9724	9	76.6	30	*****	98	6	42	24	6	******	355	******	0.950	30	*****	0.40	20

SEPTEMBER 2002 CLIMATE DIVISION SUMMARY

NAME	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
PANHANDLE	1	71.2	7	0.9	100	4	42	27	23	-14	210	14	1.130	11	-0.84	0.89	10
NORTH CENTRAL	2	73.3	14	1.3	102	3	40	23	16	-15	263	23	2.910	21	-0.22	4.50	14
NORTHEAST	3	74.5	12	2.1	99	4	42	25	5	-25	290	37	3.130	20	-1.78	4.00	18
WEST CENTRAL	4	73.6	8	1.4	102	4	43	26	13	-15	271	28	1.970	18	-1.12	4.25	18
CENTRAL	5	74.6	16	1.6	100	3	45	25	6	-21	291	27	3.560	32	-0.46	3.60	14
EAST CENTRAL	6	75.8	9	3.1	100	7	43	25	2	-25	325	68	0.890	22	-3.96	1.00	19
SOUTHWEST	7	75.2	8	1.5	102	19	45	26	5	-15	309	27	1.860	18	-1.56	2.30	9
SOUTH CENTRAL	8	75.3	12	1.0	100	2	45	25	3	-15	311	16	2.650	28	-1.60	2.95	8
SOUTHEAST	9	75.5	8	2.4	101	3	41	24	6	-14	317	55	2.210	15	-2.29	4.93	20

Note: The above climate division summary contains similar information to the preceding tables but are the averages or extremes over all of the stations reporting in each climate division.

CLIMATE DIVISION MAP



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

The tables appearing on the preceding pages contain the following information for each station or climate division:

Station Name: The name of the observing site.

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

Climate Division: See the figure above.

Number of Temperature Observations: These numbers 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 Temperature: The maximum daily maximum temperature observed during the current month and year and the day on which it occurred.

Minimum Daily Temperature: The minimum daily minimum temperature observed during the current month and year and the day on 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. HDD 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. See the equation to the right for the HDD calculation.

Heating Degree Days Calculation

NumDays

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

Where NumDays = the number of days in the month of interest (e.g., NumDays = 31 for January)

Deviation from Normal Heating Degree Days: The difference between the actual HDD and the normal HDD for the month. 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. CDD 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. See theequation to the right for the CDD calculation.

Cooling Degree Days Calculation

NumDays

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

Where NumDays = the number of days in the month of interest (e.g., NumDays = 30 for June)

Deviation from Normal Cooling Degree Days: The difference between the actual HDD and the normal HDD for the month. 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 a 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: The difference between the actual rainfall and the normal rainfall for the month. 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 the 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.

MESONET MONTHLY SUMMARY FOR SEPTEMBER 2002

NAME	MEAN TEMP	MAX TEMP	MAX DAY	MIN TEMP	MIN DAY	HDD	CDD	TOT PPT	MAX 24-HR	MAX DAY	NAME	MEAN TEMP	MAX TEMP	MAX DAY	MIN TEMP	MIN DAY	HDD	CDD	TOT PPT	MAX 24-HR	MAX DAY
PANHANDLE																					
Arnett	72.2	100	2	46	20	11	228	1.50	.47	9	Goodwell	69.1	94	2	43	27	32	156	*****	*****	***
Beaver	71.7	98	2	42	27	24	225	1.03	.58	13	Hooker	70.4	98	3	44	27	24	184	1.05	.57	14
Boise City	66.7	93	1	41	27	57	109	1.82	.51	19	Kenton	67.3	93	1	44	22	47	117	3.87	1.96	9
Buffalo	73.3	99	3	45	27	13	263	.92	.47	14	Slapout	71.0	98	2	44	27	20	201	1.90	.57	13
NORTH CENTRAL																					
Blackwell	73.6	98	3	47	23	8	266	5.39	2.18	18	Medford	74.0	99	3	50	16	10	280	3.32	1.84	18
Breckenridge	74.2	99	2	51	23	8	285	4.64	1.99	18	Newkirk	73.4	96	2	49	23	7	259	3.92	1.48	13
Cherokee	74.8	101	3	47	23	9	301	1.16	.75	14	Red Rock	73.3	96	3	49	24	7	255	6.25	2.70	13
Fairview	74.4	99	2	47	23	11	293	*****	*****	***	Seiling	72.6	100	18	44	25	17	246	.80	.39	18
Freedom	73.6	100	2	45	27	14	271	.71	.28	13	Woodward	73.1	100	2	46	27	14	258	1.92	1.54	10
Lahoma	73.7	99	3	50	27	9	271	3.41	1.11	14	Alva	73.9	100	3	44	23	14	281	1.06	.56	13
May Ranch	*****	***	***	***	***	****	****	*****	*****	***											
NORTHEAST																					
Bixby	74.4	97	3	46	23	5	288	.84	.65	19	Pryor	73.2	95	6	45	23	9	255	1.42	1.19	19
Burbank	73.1	96	2	47	23	8	253	5.92	2.92	18	Skiatook	74.6	96	3	51	23	1	291	2.50	.97	14
Copan	73.6	96	3	46	23	7	263	5.28	2.53	18	Vinita	73.1	97	5	45	23	9	252	2.94	1.98	19
Foraker	72.6	95	6	47	23	9	237	4.67	2.65	18	Wynona	73.3	95	6	48	23	5	253	3.11	1.43	14
Jay	73.5	97	5	44	23	12	269	1.44	1.20	19	Porter	75.1	96	3	48	23	2	305	1.16	1.15	19
Miami	73.0	96	3	44	23	12	250	1.73	1.40	19	Inola	74.5	97	3	47	23	4	290	1.21	1.08	19
Nowata	73.5	95	6	49	24	5	262	2.51	1.71	19	Claremore	74.8	96	3	47	23	2	297	1.43	1.10	19
Pawnee	73.3	94	3	49	24	6	254	4.81	2.53	14											
WEST CENTRAL																					
Bessie	74.4	98	18	51	25	6	288	2.69	1.14	9	Putnam	73.7	99	18	49	25	10	270	1.45	.85	18
Butler	74.0	101	2	46	25	10	281	2.98	1.16	18	Retrop	74.7	100	2	50	25	5	297	2.36	1.20	9
Camargo	72.6	100	2	42	25	16	244	1.09	.39	18	Watonga	73.6	97	2	50	27	12	269	1.87	.87	18
Cheyenne	72.8	98	3	49	27	10	246	3.77	1.06	10	Weatherford	74.3	98	2	51	23	9	289	3.75	1.44	18
Erick	72.7	99	3	43	25	15	245	2.09	1.06	5											
CENTRAL																					
Bowlegs	74.1	98	3	46	24	6	280	2.21	.81	19	Oilton	73.0	96	4	44	23	11	251	2.87	.99	14
Bristow	73.7	98	6	44	23	****	****	1.92	1.46	19	Okemah	75.4	100	3	48	23	2	315	1.07	.93	19
Chandler	74.2	96	3	51	23	****	****	2.54	1.01	14	Perkins	74.7	98	3	51	25	3	293	3.92	1.45	14
Chickasha	74.7	99	2	48	25	3	293	3.32	1.16	9	Shawnee	*****	***	***	***	***	****	****	*****	*****	***
El Reno	72.9	98	2	46	25	15	254	5.23	2.76	18	Spencer	74.5	97	3	48	23	7	293	3.88	1.60	18
Guthrie	74.7	96	3	52	20	3	294	6.09	2.97	14	Stillwater	73.4	97	2	47	25	9	261	4.16	1.75	14
Kingfisher	74.5	100	3	50	23	5	289	7.42	2.50	18	Washington	74.3	95	2	51	25	****	****	2.91	2.00	18
Marena	73.6	97	3	50	25	5	263	4.65	1.89	14	Ninnekah	75.0	99	2	48	25	4	303	4.03	2.51	9
Marshall	74.5	99	3	49	24	5	291	4.78	2.05	13	Acme	74.4	98	2	46	24	7	289	2.97	1.10	18
Minco	74.4	97	2	52	23	****	****	3.00	1.38	14	Norman	74.8	96	2	50	25	****	****	3.52	1.45	14
EAST CENTRAL																					
Calvin	74.9	99	3	46	24	2	299	*****	*****	***	Stigler	75.2	98	2	44	24	6	312	.40	.29	19
Cookson	74.2	95	3	43	23	9	285	1.44	.96	19	Stuart	76.5	101	3	47	24	****	****	1.25	.53	8
Eufaula	76.5	98	2	46	23	2	348	.12	.08	8	Tahlequah	74.1	94	4	47	23	4	277	1.41	1.41	19
Haskell	74.3	97	3	47	24	****	****	1.14	1.14	19	Webbers Falls	76.6	100	2	46	24	2	350	.63	.63	19
McAlester	76.1	101	3	46	24	1	334	.98	.40	8	Westville	73.4	93	4	46	23	7	261	.77	.68	19
Okmulgee	74.5	99	3	43	24	7	291	.67	.67	19	Hectorville	76.9	100	3	51	23	0	358	.92	.80	19
Sallisaw	75.4	96	2	45	23	4	315	.21	.21	19											
SOUTHWEST																					
Altus	75.1	99	18	49	25	4	307	1.57	.71	18	Medicine Park	76.0	98	2	55	24	1	333	2.57	.68	8
Fort Cobb	73.9	97	2	49	25	3	271	2.57	.91	18	Tipton	76.1	101	2	49	25	2	335	3.59	3.02	8
Hinton	74.1	98	3	51	23	7	281	4.05	1.73	18	Walters	76.7	101	2	50	25	****	****	1.39	.62	8
Hobart	74.4	99	2	49	20	6	289	3.50	1.24	18	Apache	74.3	97	2	53	23	3	282	3.49	1.10	18
Hollis	75.0	102	18	46	25	5	305	1.18	.42	10	Grandfield	77.0	102	18	51	25	0	359	.66	.43	18
Mangum	74.3	104	18	42	25	10	290	1.20	.60	18											
SOUTH CENTRAL																					
Ada	74.5	97	7	45	24	5	290	3.03	1.68	8	Madill	75.9	95	2	54	24	0	328	3.36	1.23	8
Ardmore	75.2	94	2	51	24	0	307	1.34	.67	9	Pauls Valley	75.0	94	2	50	23	1	300	1.85	.76	19
Burneyville	75.1	98	2	46	24	****	****	1.82	.93	9	Ringling	76.3	98	2	52	24	0	340	.76	.31	9
Byars	74.8	94	7	51	25	1	297	2.69	.86	9	Sulphur	74.6	93	2	49	24	1	290	2.22	1.75	9
Centrahoma	74.5	96	7	47	23	2	287	2.42	1.33	8	Tishomingo	74.5	93	6	53	24	0	286	4.55	2.31	9
Durant	76.4	95	2	51	24	0	342	3.24	1.70	8	Waurika	76.9	100	2	48	24	0	357	.99	.51	8
Ketchum Ranch	75.2	97	2	51	24	0	307	4.08	2.92	9	Vanoss	74.2	94	3	45	24	5	283	2.14	.87	9
Lane	75.7	98	6	45	24	0	320	2.18	.65	9	Bee	*****	***	***	***	***	****	****	3.24	1.36	8
SOUTHEAST																					
Antlers	74.5	98	6	41	24	4	289	2.61	1.04	14	Idabel	77.3	99	6	49	24	0	369	4.74	4.20	19
Broken Bow	76.1	100	6	46	24	0	332	5.71	4.28	19	Mt Herman	76.0	98	6	49	24	0	329	3.38	1.61	19
Clayton	75.7	99	3	43	24	2	323	1.81	.49	14	Talihina	75.9	99	3	42	24	****	****	1.77	.79	19
Cloudy	75.9	98	6	46	24	****	****	1.95	.70	8	Wilburton	75.5	99	7	41	24	6	322	.68	.32	9
Hugo	76.5	97	6	50	24	****	****	1.72	.48	8	Wister	74.8	99	3	40	24	8	301	.80	.53	19

EXTREME VALUES OF TEMPERATURE AND PRECIPITATION IN EACH CLIMATE DIVISION SEPTEMBER 2002

CD	MAX TEMP	DATE	LOCATION	MIN TEMP	DATE	LOCATION	24-HOUR PRECIP	DATE	LOCATION	MONTHLY PRECIP	LOCATION
1	100	3	BUFFALO	42	21	BEAVER	.89	10	REGNIER	2.17	GUYMON
	100	4	BUFFALO	42	27	BEAVER					
				42	28	BEAVER					
2	102	3	ALVA	40	23	FT SUPPLY	4.50	14	PERRY	6.78	PERRY
3	99	4	BIXBY	42	23	UPPER SPAV	4.00	18	BURBANK	5.79	WANN
				42	24	UPPER SPAV					
				42	25	UPPER SPAV					
4	102	4	ERICK	43	25	TALOGA	4.25	18	GEARY	5.07	GEARY
				43	26	TALOGA					
5	100	3	CUSHING	45	24	WANETTE	3.60	14	MULHALL	7.47	KINGFISHER
				45	25	WANETTE					
6	100	3	HOLDENVILLE	43	23	WEBBERS FALL	1.00	19	BEGGS	1.64	ASHLAND
	100	4	HOLDENVILLE	43	25	WEBBERS FALL					
	100	3	WEBBERS FALL								
	100	4	WEBBERS FALL								
	100	5	WEBBERS FALL								
7	102	19	ALTUS DAM	45	25	ANADARKO	2.30	9	LAWTON	3.73	LAWTON
				45	26	ANADARKO					
8	100	2	MARLOW	45	24	ATOKA DAM	2.95	8	DURANT	4.76	TISHOMINGO
				45	25	ATOKA DAM					
				45	24	PAULS VALLEY					
				45	25	PAULS VALLEY					
9	101	3	IDABEL	41	23	BATTIEST	4.93	20	IDABEL	5.43	IDABEL
				41	24	BATTIEST					

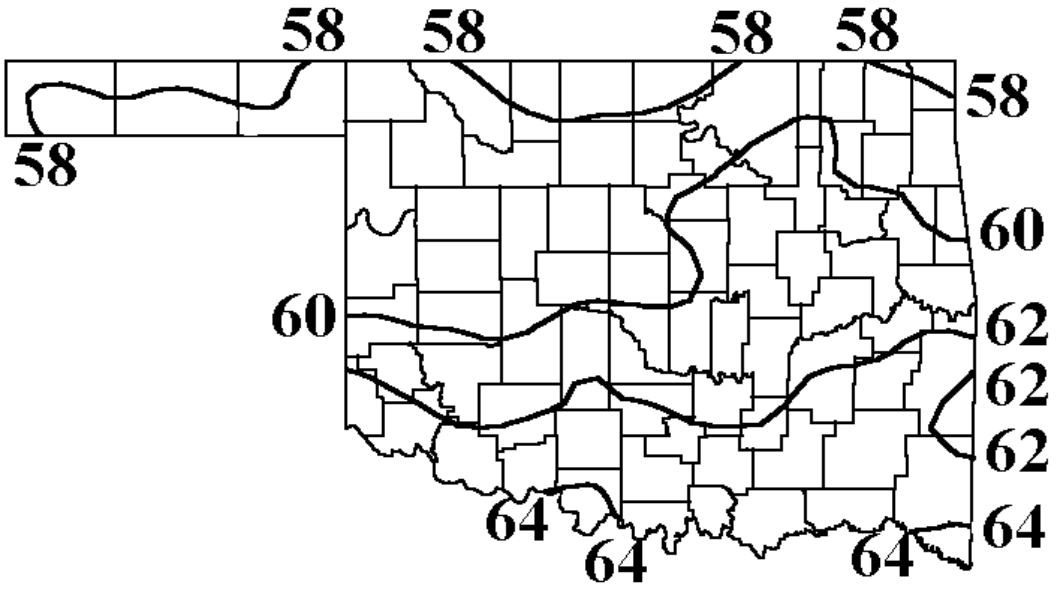
TABLE OF 2001/2002 COMPARISONS

	SEPTEMBER Temperature (F)		SEPTEMBER Precipitation (in.)	
Station	**2001**	**2002**	**2001**	**2002**
Arnett	****	71.1	****	0.750
Enid	72.4	75.1	4.83	3.261
Tulsa	71.9	76.3	1.95	1.241
Elk City	71.5	74.1	1.58	1.911
Oklahoma City	70.7	74.2	5.56	2.941
McAlester	70.8	****	7.64	****
Altus Irr Station	72.7	77.5	1.75	1.350
Ardmore	72.7	77.0	8.83	1.510
Idabel	74.1	78.5	3.51	5.430

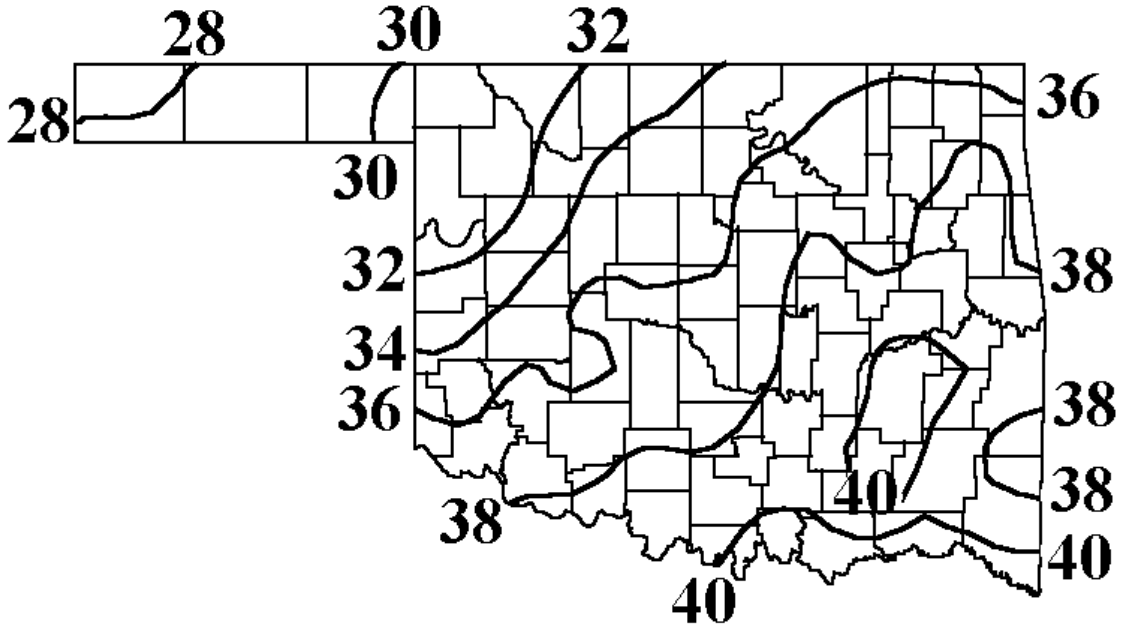
SEPTEMBER 2002 STATEWIDE EXTREMES

VARIABLE	STATION	DIVISION	OBSERVATION	DATE
Minimum temperature (F)	FT. SUPPLY	2	40	23
Maximum temperature (F)	ALVA	2	102	03
	ERICK	4	102	04
	ALTUS DAM	7	102	19
Maximum 24-hour Precipitation	PERRY	2	4.5	14

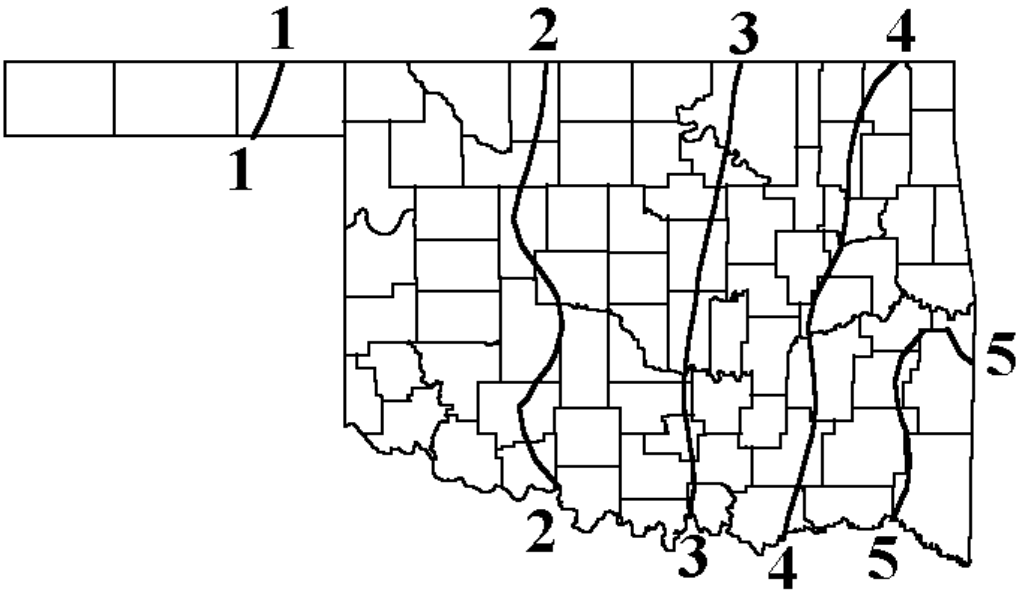
NOVEMBER NORMAL DAILY MAXIMUM TEMPERATURE (ºF)



NOVEMBER NORMAL DAILY MINIMUM TEMPERATURE (ºF)



NOVEMBER NORMAL MONTHLY PRECIPITATION (INCHES)



NOVEMBER TORNADO STATISTICS

The most tornadoes reported in **NOVEMBER** for Oklahoma was **(12)** in **1958**.

The average number of tornadoes in **NOVEMBER** for Oklahoma is **(1.4)**.

OUTLOOK FOR NOVEMBER 2002 THROUGH JANUARY 2003

BASED ON SEASONAL OUTLOOK PROVIDED BY THE CLIMATE PREDICTION CENTER

Temperature: Near Normal Temperature Statewide

Precipitation: Above Normal Precipitation Statewide

OKLAHOMA CITY CLIMATE CALENDAR

NOVEMBER

The data on this calendar are for Oklahoma City, Oklahoma.
Normal values are calculated for the period 1961-1990.
Temperature extremes are for the period 1905-2001.
Precipitation extremes are for the period 1888-2001.

Day	Avg. Temp.	Ave. High	2002	Record High	Year	Lowest Max	Year	Ave. Low	2002	Highest Min.	Year	Record Low	Year	Avg. Precip.	2002	Greatest Precip.	Year
1	55	67		83	1916	34	1951	44		65	1936	25	1991	0.08		1.05	1981
2	55	66		83	1924	26	1991	44		66	1938	19	1991	0.08		1.51	1974
3	55	66		84	1909	36	1991	43		63	1994	11	1991	0.08		1.51	1964
4	54	65		83	1921	40	1990	43		58	1916	23	1936	0.08		2.17	1986
5	54	65		87	1891	34	1951	43		64	1924	23	1951	0.08		1.23	1994
6	53	64		85	1980	39	1959	42		63	1945	20	1959	0.08		2.14	1895
7	53	64		86	1980	38	2000	42		62	1916	23	1993	0.07		1.71	1920
8	53	64		87	1980	36	2000	41		66	1966	19	1991	0.07		1.42	1895
9	52	63		82	1988	37	1950	41		61	1939	25	1955	0.07		1.15	1977
10	52	63		83	1995	33	1950	41		60	1982	20	1950	0.07		1.17	1937
11	51	62		83	1911	33	1935	40		61	1922	17	1911	0.07		1.10	1988
12	51	62		79	1910	29	1940	40		62	1902	14	1911	0.07		1.18	1922
13	51	61		80	1967	28	1986	40		61	1989	12	1940	0.07		3.22	1909
14	50	61		79	1973	29	1940	39		65	1897	14	1916	0.07		1.56	1924
15	50	60		84	1903	32	1932	39		61	1971	15	1940	0.07		2.43	1890
16	49	60		82	1941	31	1937	38		64	1958	14	1932	0.06		3.94	1931
17	49	60		80	1896	30	1903	38		61	1896	9	1894	0.06		1.70	1984
18	49	59		80	1930	35	1903	38		64	1934	13	1903	0.06		2.14	1899
19	48	59		82	1898	31	1937	37		63	1913	18	1937	0.06		4.46	1899
20	48	58		78	1989	25	1906	37		60	1990	19	1937	0.06		2.17	1994
21	47	58		80	1927	29	1926	37		58	1902	14	1898	0.06		1.48	1916
22	47	58		78	1982	27	1898	36		60	1966	15	1898	0.06		1.54	1931
23	47	57		79	1973	29	1895	36		60	1966	19	1950	0.06		1.62	1931
24	46	57		76	1990	32	1918	35		60	1966	15	1950	0.06		1.14	1973
25	46	56		84	1965	28	1993	35		62	1966	15	1993	0.06		2.01	1940
26	45	56		81	1910	31	1992	35		62	1990	13	1993	0.06		1.80	1982
27	45	56		82	1905	25	1896	34		63	1927	16	1976	0.06		1.30	1908
28	45	55		81	1949	26	1911	34		58	1927	14	1896	0.05		1.44	1908
29	44	55		80	1927	28	1897	34		64	1933	11	1911	0.05		0.67	1996
30	44	55		74	1946	32	1896	33		60	1933	13	1976	0.05		0.72	1909
MONTH	**49.6**	**60.4**		**87**	**1980**	**25**	**1906**	**38.6**		**66**	**1966**	**9**	**1894**	**1.98**		**4.46**	**1899**

DATA COURTESY OF NATIONAL WEATHER SERVICE – NORMAN
Temperatures are in degrees Fahrenheit; precipitation is in inches.

TULSA CLIMATE CALENDAR

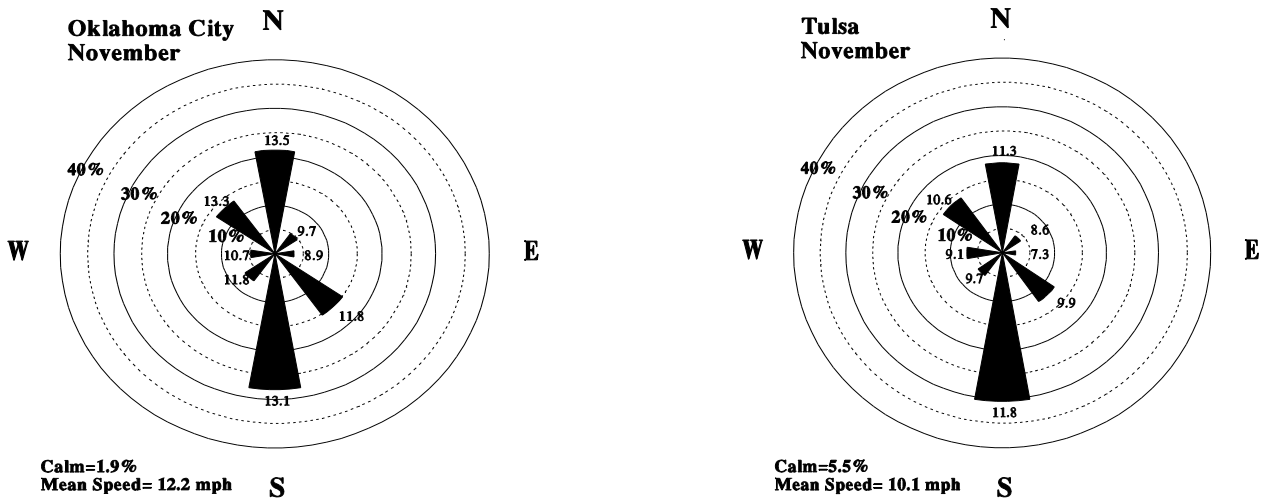
NOVEMBER

The data on this calendar are for Tulsa, Oklahoma.
Normal values are calculated for the period 1971-2000.
Temperature extremes are for the period 1905-2001.
Precipitation extremes are for the period 1888-2001.

Day	Avg. Temp.	Ave. High	2002	Record High	Year	Lowest Max	Year	Ave. Low	2002	Highest Min.	Year	Record Low	Year	Avg. Precip.	2002	Greatest Precip.	Year
1	56	67		85	1916	37	1951	45		67	2001	25	1991	0.12		2.10	1901
2	55	67		89	1909	27	1991	44		65	1983	20	1966	0.12		2.82	1974
3	55	66		88	1909	36	1991	44		67	1983	16	1991	0.12		3.20	1974
4	54	65		86	1914	39	1951	44		62	1909	21	1991	0.12		2.49	1994
5	54	65		87	1914	34	1951	43		61	1924	25	1976	0.12		1.39	1994
6	54	64		87	1945	39	1959	43		70	1924	20	1959	0.12		3.49	1996
7	53	64		85	1980	41	1991	42		65	1945	22	1991	0.12		3.67	1918
8	53	63		84	1980	41	1991	42		67	1966	16	1991	0.12		1.45	1977
9	52	63		82	1934	42	1950	41		60	1931	23	1955	0.12		0.95	1916
10	52	62		83	1995	37	1950	41		62	1949	21	1950	0.12		1.31	1937
11	51	61		85	1989	31	1986	41		60	1949	17	1950	0.12		1.57	1992
12	51	61		83	1999	31	1940	41		67	1931	15	1911	0.12		2.64	1972
13	51	61		84	1910	30	1986	40		62	1989	12	1940	0.12		1.80	1985
14	50	60		79	1989	30	1940	40		64	1913	13	1916	0.12		1.72	1909
15	50	60		82	1950	38	1976	39		63	1964	11	1940	0.12		2.50	1964
16	49	59		83	1963	28	1932	39		65	1958	14	1932	0.12		1.85	1996
17	49	59		80	1969	31	1937	39		58	1941	11	1959	0.12		1.24	1952
18	49	59		82	1930	32	1937	38		63	1934	19	1951	0.12		1.26	1964
19	48	58		81	1908	29	1906	38		64	1913	14	1937	0.12		1.70	1900
20	48	58		81	1989	28	1906	38		64	1913	16	1937	0.11		4.59	1979
21	47	57		79	1927	30	1937	37		58	1913	18	1964	0.11		1.76	1934
22	47	57		79	1966	33	1937	37		64	1913	16	1929	0.11		2.34	1931
23	47	57		78	1974	33	1970	37		63	1966	17	1970	0.11		0.80	1931
24	46	56		80	1965	35	1918	36		61	1966	14	1950	0.11		2.54	1973
25	46	56		84	1965	31	1993	36		62	1915	17	1950	0.11		1.50	1940
26	46	56		83	1965	30	1975	35		61	1927	14	1993	0.11		1.56	1982
27	45	55		77	1927	35	1985	35		62	1927	16	1938	0.11		1.13	1982
28	45	55		81	1949	26	1911	35		63	1998	13	1976	0.11		2.60	1908
29	44	54		82	1927	32	1911	34		63	1933	10	1976	0.10		2.80	1908
30	44	54		76	1933	32	1944	34		56	1933	13	1964	0.10		0.73	1981
MONTH	**49.7**	**60.0**		**89**	**1909**	**26**	**1911**	**39.3**		**70**	**1924**	**10**	**1976**	**0.12**		**4.59**	**1979**

DATA COURTESY OF NATIONAL WEATHER SERVICE – TULSA
Temperatures are in degrees Fahrenheit; precipitation is in inches.

NOVEMBER WIND ROSES



November Wind Roses for Oklahoma City and Tulsa. The frequencey (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 directon in miles per hour.

NOVEMBER SUNRISE/SUNSET TIMES FOR 2002

ALL TIMES ARE CENTRAL STANDARD TIME

OKLAHOMA CITY			TULSA		
DATE	SUNRISE	SUNSET	DATE	SUNRISE	SUNSET
11/1/02	6:52 AM	5:35 PM	11/1/02	6:47 AM	5:28 PM
11/2/02	6:53 AM	5:34 PM	11/2/02	6:47 AM	5:27 PM
11/3/02	6:54 AM	5:33 PM	11/3/02	6:48 AM	5:26 PM
11/4/02	6:55 AM	5:32 PM	11/4/02	6:49 AM	5:25 PM
11/5/02	6:56 AM	5:31 PM	11/5/02	6:50 AM	5:24 PM
11/6/02	6:57 AM	5:30 PM	11/6/02	6:51 AM	5:23 PM
11/7/02	6:58 AM	5:30 PM	11/7/02	6:52 AM	5:22 PM
11/8/02	6:59 AM	5:29 PM	11/8/02	6:53 AM	5:21 PM
11/9/02	7:00 AM	5:28 PM	11/9/02	6:54 AM	5:20 PM
11/10/02	7:01 AM	5:27 PM	11/10/02	6:55 AM	5:20 PM
11/11/02	7:02 AM	5:26 PM	11/11/02	6:56 AM	5:19 PM
11/12/02	7:03 AM	5:26 PM	11/12/02	6:57 AM	5:18 PM
11/13/02	7:04 AM	5:25 PM	11/13/02	6:59 AM	5:17 PM
11/14/02	7:05 AM	5:24 PM	11/14/02	7:00 AM	5:17 PM
11/15/02	7:06 AM	5:24 PM	11/15/02	7:01 AM	5:16 PM
11/16/02	7:07 AM	5:23 PM	11/16/02	7:02 AM	5:15 PM
11/17/02	7:08 AM	5:22 PM	11/17/02	7:03 AM	5:15 PM
11/18/02	7:08 AM	5:22 PM	11/18/02	7:04 AM	5:14 PM
11/19/02	7:09 AM	5:21 PM	11/19/02	7:05 AM	5:13 PM
11/20/02	7:10 AM	5:21 PM	11/20/02	7:06 AM	5:13 PM
11/21/02	7:11 AM	5:20 PM	11/21/02	7:07 AM	5:12 PM
11/22/02	7:12 AM	5:20 PM	11/22/02	7:08 AM	5:12 PM
11/23/02	7:13 AM	5:19 PM	11/23/02	7:09 AM	5:12 PM
11/24/02	7:14 AM	5:19 PM	11/24/02	7:09 AM	5:11 PM
11/25/02	7:15 AM	5:19 PM	11/25/02	7:10 AM	5:11 PM
11/26/02	7:16 AM	5:18 PM	11/26/02	7:11 AM	5:10 PM
11/27/02	7:17 AM	5:18 PM	11/27/02	7:12 AM	5:10 PM
11/28/02	7:18 AM	5:18 PM	11/28/02	7:13 AM	5:10 PM
11/29/02	7:19 AM	5:18 PM	11/29/02	7:14 AM	5:10 PM
11/30/02	7:20 AM	5:17 PM	11/30/02	7:15 AM	5:09 PM

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