OKLAHOMA MONTHLY CLIMATE SUMMARY
NOVEMBER 2002

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Oklahoma Climatological Survey

MONTHLY SUMMARY FOR NOVEMBER 2002

November 2002

Statewide average temperature = 47.2º F
Statewide average rainfall = 0.66 inches

November Normals

Statewide average temperature = 49.0º F
Statewide average rainfall = 2.78 inches

While November 2002 capped a notably cool autumn with below-normal temperatures across the state, the month's lack of substantial rainfall left the most significant impact on Oklahomans. Dry conditions prevailed, especially in eastern Oklahoma, for the vast majority of the month.

November rainfall averaged across the state was 0.66 inch, 2.12 inches less than the established normal for the month. The month was the driest November since 1995, observing less than one-quarter of normal rainfall. The month entered the record books as the 22nd driest November since modern record keeping began in 1892, a span of 111 years. The state's rainfall for the autumn months of September through November finished in the middle of history's pack. The seasonal total of 8.15 inches, 1.80 inches below normal, was the 57th driest on record. The year-to-date precipitation of 32.29 inches is 2.11 inches less than the normal for the first eleven months. This value also ranks near the middle, at 58th driest.

The statewide-averaged temperature of 47.2 degrees, 1.8 degrees less than normal, tied for the 28th coolest November on record. The average temperature for autumn was 59.4 degrees, 2.3 degrees less than normal. The season was the 9th coolest autumn on record, and coolest since 1996. The cooler-than-normal year of 2002 continued, as the year-to-date average temperature of 61.2 degrees was 1.0 degrees below normal for the first eleven months. This marked the 15th coolest such period on record and coolest since 1997.

The day-to-day weather in November was largely uneventful. No outstanding single weather event left its mark on the state's history. No warnings were issued for severe weather, flooding or flash flooding in any county. However, the dry, windy weather that dominated the month fostered the subtle creep of increasing fire danger across most of the state. A red flag fire alert was issued on the 23rd, in response to heightened fire danger. Eastern Oklahoma, which observed less-than-normal rainfall in September and October, continued to experience some short-term droughty conditions. Crop stress, poor forage conditions and increased fire danger impaired parts of the region throughout November. Although autumn rainfall for much of eastern Oklahoma was less than half of normal, long-term drought symptoms such as reservoir loss and poor streamflow did not appear.

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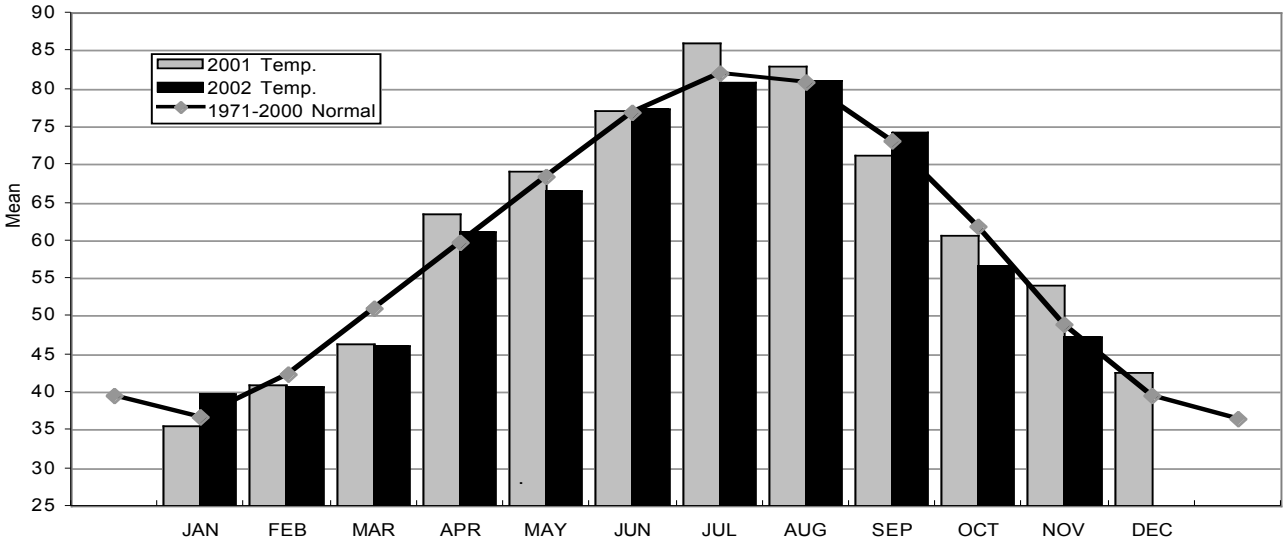
Light rain, drizzle and fog occurred across most of the state during the first four days of the month. Some locations in northern Oklahoma observed a few flakes of snow. Skies began to clear on the 5th, and significant precipitation was fleeting for the remainder of the month. Scattered showers brought minimal rainfall to western Oklahoma on the 12th and 13th, but rainfall totals were generally less than one-tenth of an inch. Light precipitation visited the southeast on the 26th, with totals generally less than one-quarter inch.

The first four days of the month, much like the final week of October, were overcast, damp and cold. The following weeks generally oscillated between invasions of cold air and subsequent recovery, yielding a sampling of cold, dry days and warm, dry days. The recovery episodes provided some of the state's delightful Indian Summer weather, with crisp mornings and warm, sunny afternoons. Tulsa set a new record high of 84 degrees on the 9th, and Oklahoma City tied its mark of 82 degrees on that afternoon. The high temperature of 87 degrees on the 9th at the Mangum Mesonet station marked the state's highest of the month.

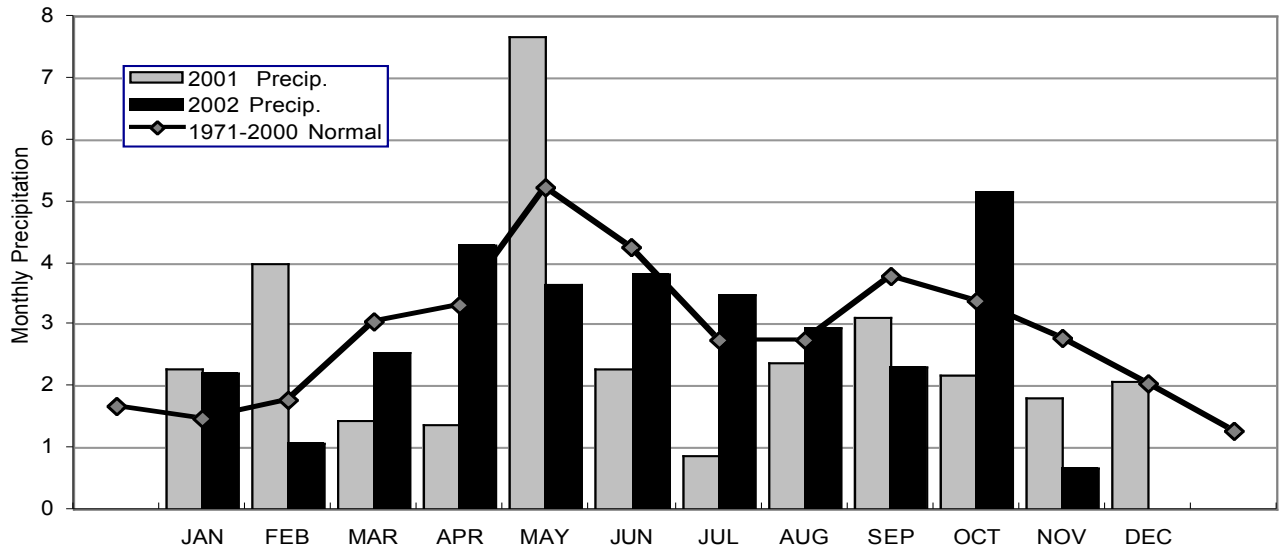
Cold fronts traversed the state late on the 10th, on the 15th, and again on the 24th. The last front was reinforced by a secondary surge of cold air on the 26th. The morning of the 27th was the coldest of the autumn season across most of the state. Fort Supply's observation of 7 degrees on that date was the minimum value observed in Oklahoma. The 27th also brought a freeze to those stations in southern Oklahoma that hadn't yet observed one. By the end of the month, all of the state's cooperative stations had observed freezing temperatures.

Derek S. Arndt

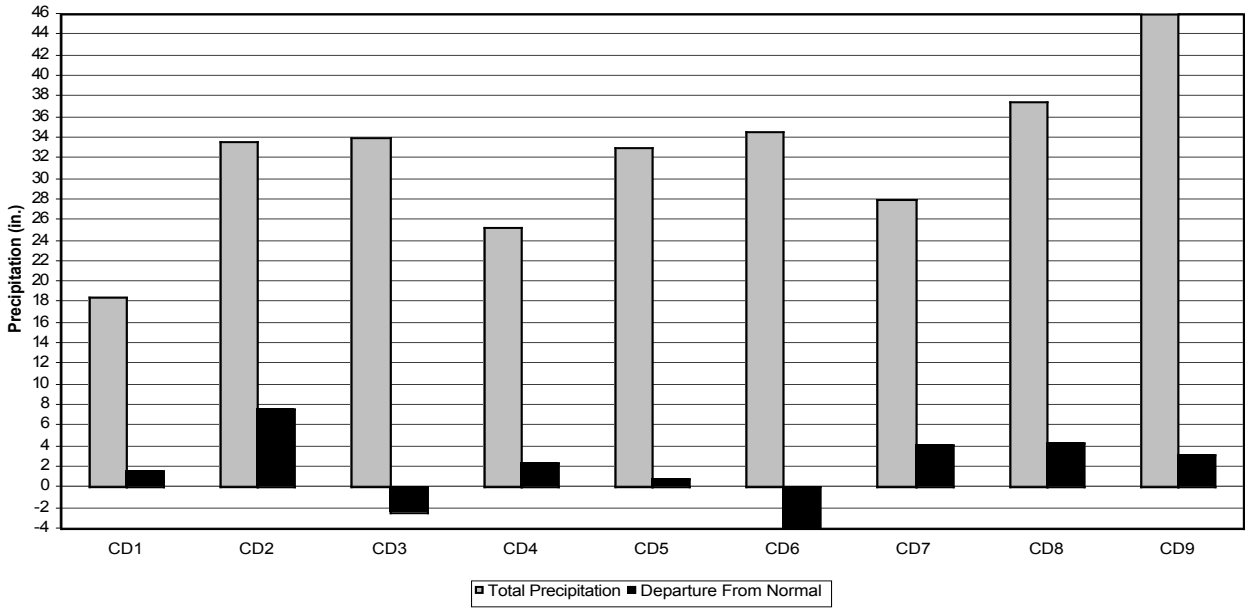
2001 AND 2002 STATEWIDE TEMPERATURES - MONTHLY AVERAGES



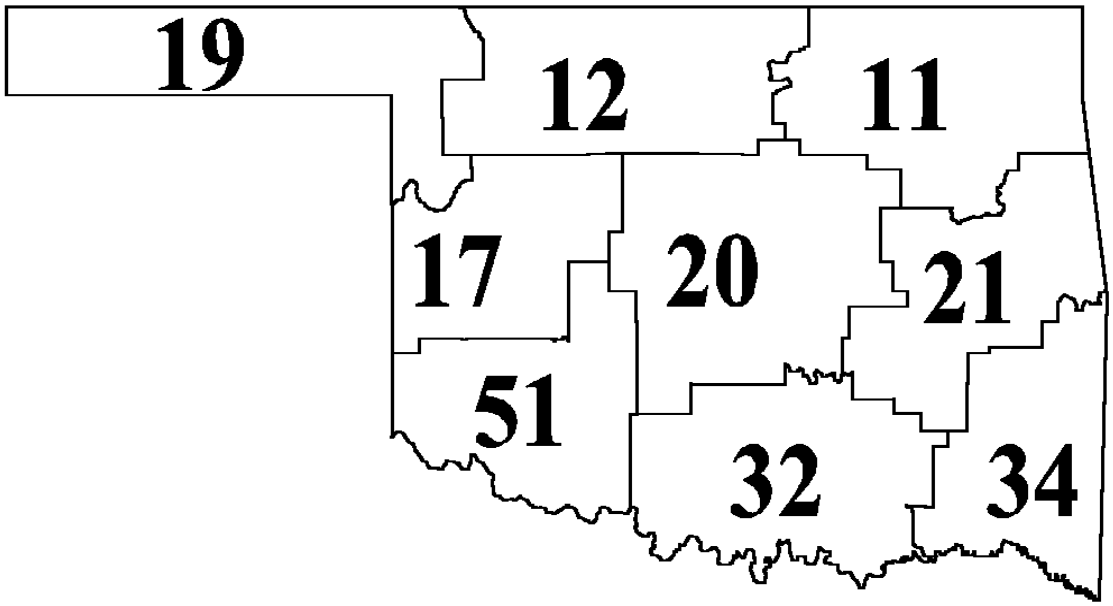
2001 AND 2002 STATEWIDE PRECIPITATION - MONTHLY TOTALS



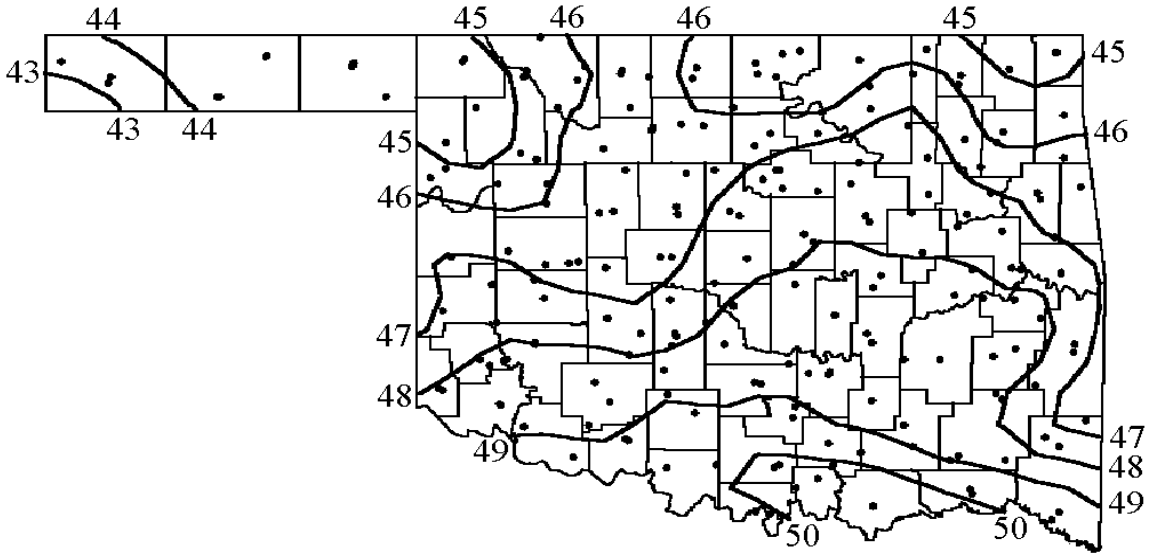
CLIMATE DIVISION AVERAGED PRECIPITATION - JANUARY THROUGH NOVEMBER 2002



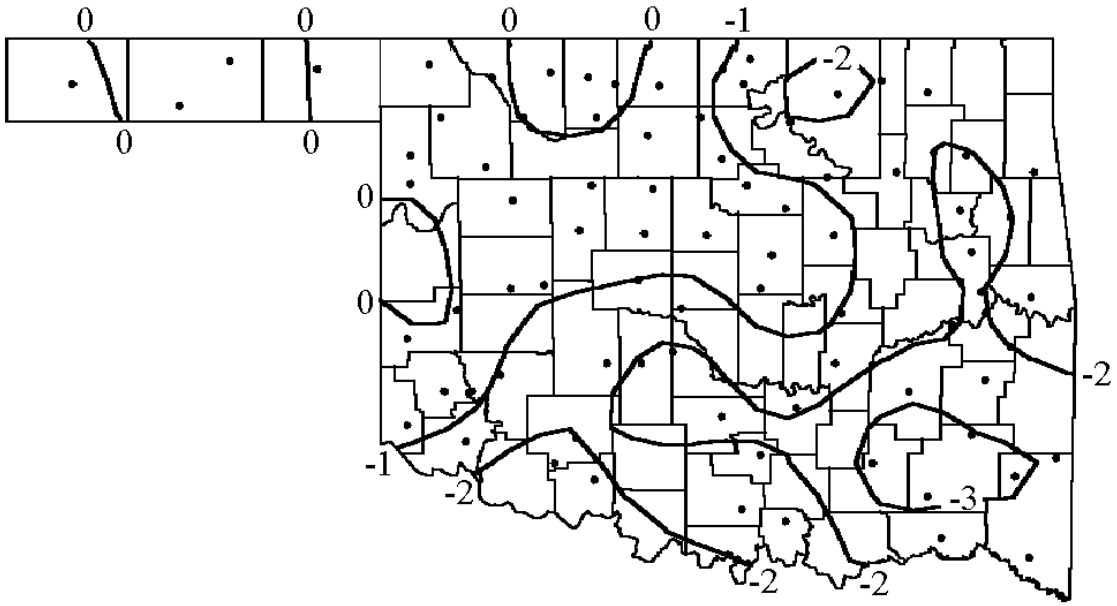
CLIMATE DIVISION PERCENT OF NORMAL PRECIPITATION - NOVEMBER 2002



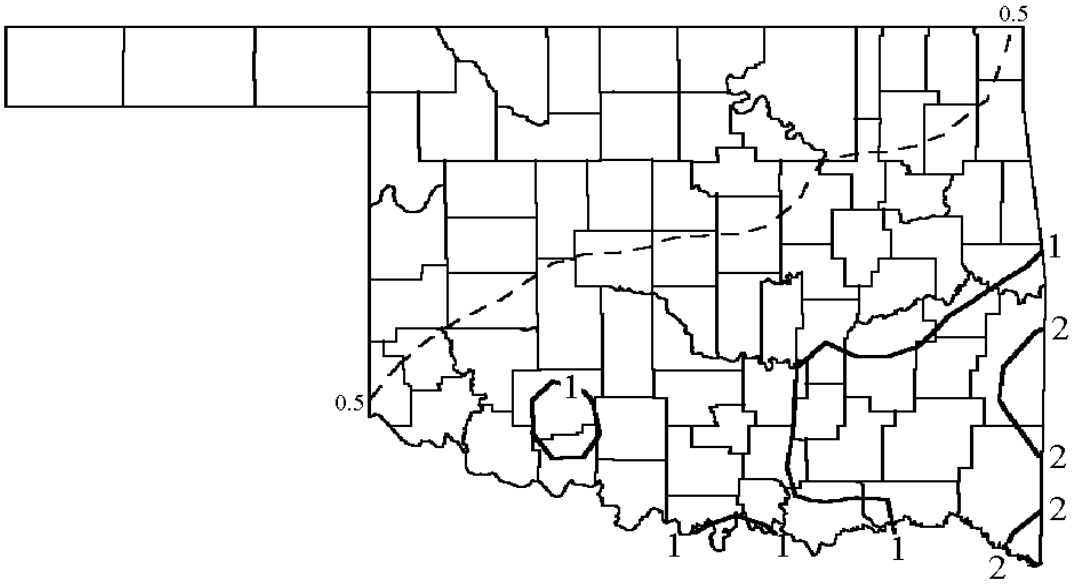
NOVEMBER 2002 AVERAGE MONTHLY TEMPERATURE (ºF)



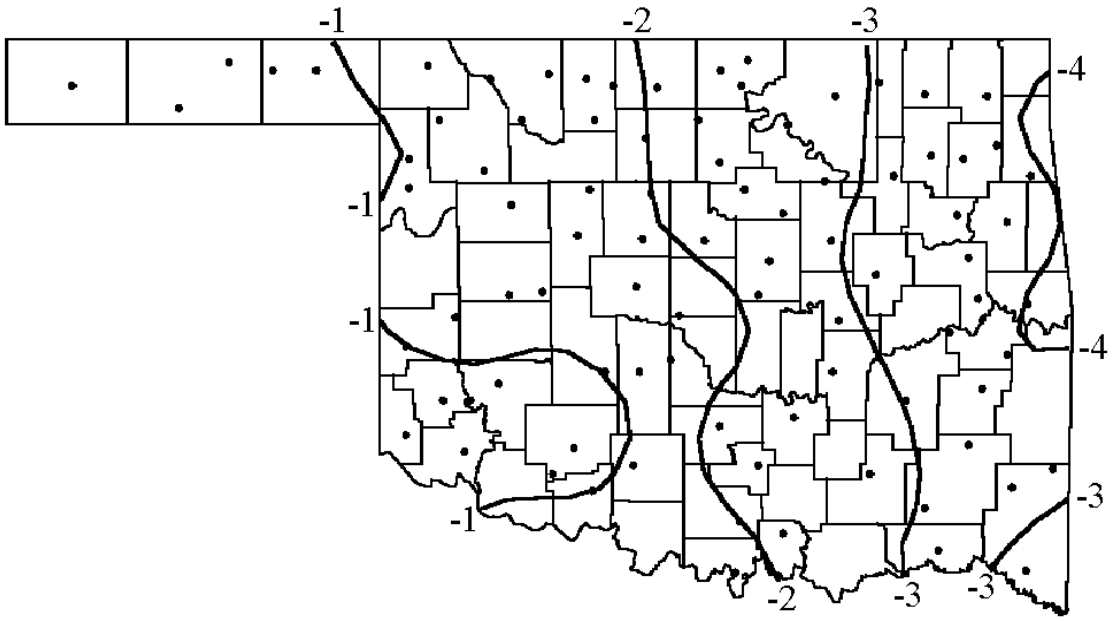
NOVEMBER 2002 DEPARTURE FROM NORMAL TEMPERATURE (ºF)



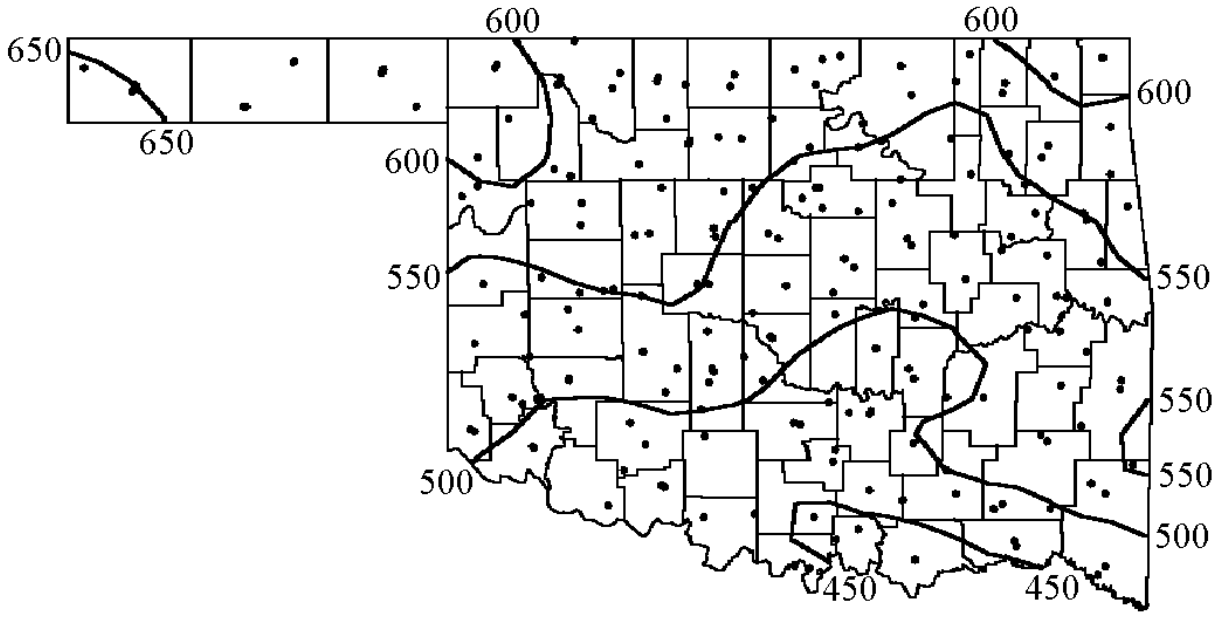
NOVEMBER 2002 PRECIPITATION (INCHES)



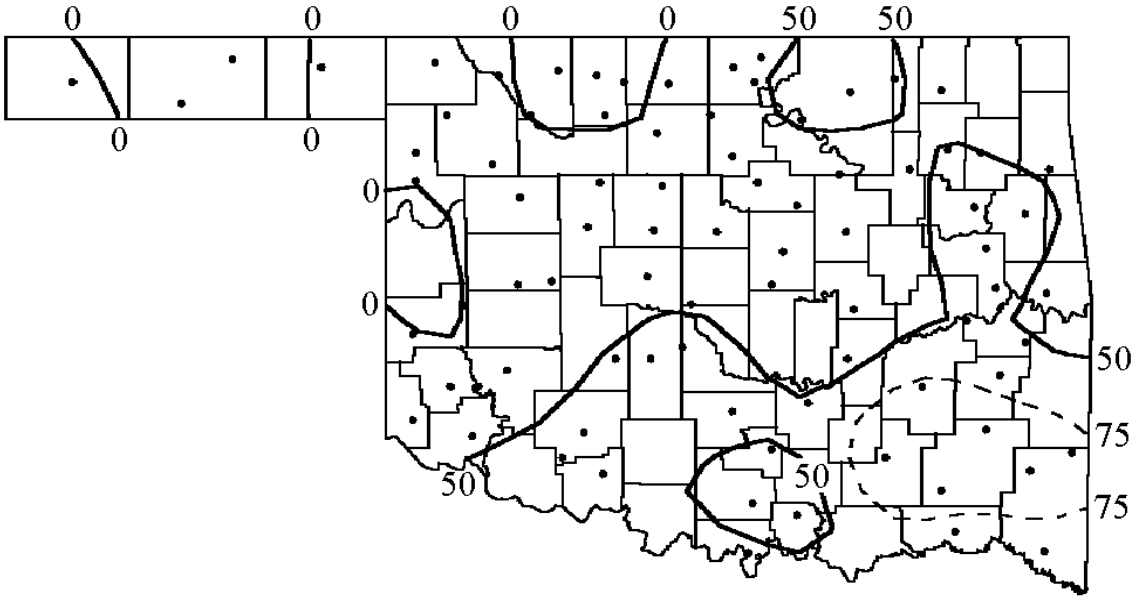
NOVEMBER 2002 DEPARTURE FROM NORMAL PRECIPITATION (INCHES)



NOVEMBER 2002 ACCUMULATED HEATING DEGREE DAYS (ºF)



NOVEMBER 2002 DEPARTURE FROM NORMAL HEATING DEGREE DAYS (ºF)



NOVEMBER 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	44.6	30	0.1	80	10	12	28	612	-5	0	0	0.320	30	-1.12	0.14	2
BEAVER	593	1	43.5	30	-0.1	78	10	10	28	659	14	13	13	0.210	30	-0.90	0.12	12
BOISE CITY	908	1	43.7	30	-0.3	76	9	12	27	640	10	0	0	0.004	30	-0.71	0.00	10
BUFFALO	1243	1	45.0	30	-1.9	80	10	15	28	600	54	0	-1	0.192	30	-1.41	0.06	12
FARGO	3070	1	*****	0	*****	****	0	****	0	******	******	******	******	0.290	30	*****	0.23	12
GAGE	3407	1	44.3	30	-0.5	81	9	8	27	620	12	0	0	0.232	30	-0.87	0.09	2
GATE	3489	1	43.7	25	*****	78	10	14	27	533	******	0	******	0.360	25	*****	0.17	12
GOODWELL	3628	1	44.8	30	0.4	79	10	13	27	606	-13	1	1	0.040	30	-0.57	0.04	12
GUYMON	3835	1	43.8	23	*****	78	11	13	29	488	******	0	******	0.400	30	*****	0.40	12
HOOKER	4298	1	45.7	29	1.1	79	9	14	27	560	-53	0	0	0.112	30	-0.68	0.08	1
LAVERNE	5045	1	47.2	23	*****	82	9	13	27	410	******	2	******	0.170	30	*****	0.09	1
TURPIN	9017	1	42.3	24	*****	79	11	13	27	544	******	0	******	0.210	30	-0.53	0.21	12

NOVEMBER 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	45.9	30	1.0	79	10	17	27	575	-31	1	1	0.170	30	-1.51	0.11	2
BILLINGS	755	2	45.9	30	-0.8	81	10	22	26	574	24	0	0	0.321	30	-2.25	0.17	3
BLACKWELL 2E	818	2	45.6	30	-0.3	79	10	22	26	583	8	0	0	0.350	30	-2.22	0.18	3
BRAMAN	1075	2	*****	0	*****	****	0	****	0	******	******	******	******	0.422	30	*****	0.32	4
CEDARDALE	1620	2	*****	0	*****	****	0	****	0	******	******	******	******	0.320	30	*****	0.23	2
CHEROKEE	1724	2	46.7	30	1.6	80	10	17	27	552	-45	2	2	0.053	30	-1.78	0.05	2
ENID	2912	2	46.7	30	0.6	81	9	22	27	552	-17	2	2	0.260	30	-2.08	0.15	2
FT SUPPLY	3304	2	43.3	30	-0.6	80	10	7	27	651	18	0	0	0.180	30	-1.18	0.07	11
FREEDOM	3358	2	44.4	30	-0.3	82	9	12	27	619	8	0	0	0.100	30	-1.55	0.10	2
GREAT SALT P	3740	2	47.0	29	0.8	79	11	21	26	522	-43	1	1	0.270	30	-1.85	0.14	2
HELENA	4019	2	45.2	30	-0.6	82	10	17	28	596	18	2	2	0.451	30	-1.59	0.30	2
JEFFERSON	4573	2	44.7	30	-1.3	82	10	19	28	610	39	1	1	0.241	30	-2.07	0.14	2
LAMONT	5013	2	*****	0	*****	****	0	****	0	******	******	******	******	0.270	30	*****	0.15	2
LAHOMA	4950	2	47.5	30	*****	83	10	19	27	527	******	2	******	0.300	30	*****	0.22	2
MEDFORD	5768	2	*****	0	*****	****	0	****	0	******	******	******	******	0.270	30	*****	0.15	2
MORRISON	6065	2	*****	0	*****	****	0	****	0	******	******	******	******	0.280	30	*****	0.14	3
MUTUAL	6139	2	45.0	30	0.2	80	10	13	28	601	-6	0	0	0.301	30	-1.23	0.27	2
NEWKIRK	6278	2	44.2	30	-1.4	76	10	20	26	625	44	0	0	0.220	30	-2.56	0.12	2
ORIENTA	6751	2	*****	0	*****	****	0	****	0	******	******	******	******	0.201	31	*****	0.13	2
PERRY	7012	2	47.1	29	-0.6	81	10	24	26	519	-3	1	-1	0.220	30	-2.21	0.12	3
PONCA CITY	7201	2	45.3	30	-2.1	77	9	20	25	592	64	0	-1	0.044	30	-2.55	0.04	2
RED ROCK	7505	2	*****	0	*****	****	0	****	0	******	******	******	******	0.300	30	*****	0.30	2
WAYNOKA	9404	2	46.2	30	0.0	82	9	13	26	565	-2	2	2	0.231	30	-1.33	0.11	1
WOODWARD	9760	2	*****	0	*****	****	0	****	0	******	******	******	******	0.161	30	*****	0.13	3

NOVEMBER 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
BARTLESVILLE	548	3	46.5	30	-2.3	82	9	17	27	559	68	4	1	0.290	30	-2.92	0.25	3
BIXBY	782	3	47.4	28	*****	83	9	22	28	498	******	4	******	0.700	28	*****	0.31	2
BURBANK	1256	3	*****	0	*****	****	0	****	0	******	******	******	******	0.250	30	*****	0.25	2
CHELSEA	1717	3	*****	0	*****	****	0	****	0	******	******	******	******	0.420	30	*****	0.28	3
CLAREMORE	1828	3	45.0	30	-2.9	80	10	18	28	599	80	0	-4	0.230	30	-3.82	0.12	3
HOMINY	4289	3	*****	0	*****	****	0	****	0	******	******	******	******	0.340	30	*****	0.24	3
KANSAS	4672	3	47.4	30	-1.6	77	9	20	27	533	48	4	-1	0.720	30	-3.98	0.32	3
LENAPAH	5118	3	*****	0	*****	****	0	****	0	******	******	******	******	0.250	30	*****	0.21	3
MANNFORD	5522	3	48.1	29	-1.3	81	9	20	28	497	22	5	0	0.510	30	-2.85	0.30	3
MARAMEC	5540	3	*****	0	*****	****	0	****	0	******	******	******	******	0.650	30	*****	0.50	2
NOWATA	6485	3	48.2	29	-1.1	79	9	19	27	491	15	4	-1	0.450	30	-3.35	0.23	3
PAWHUSKA	6935	3	46.2	30	-2.2	80	9	22	25	569	68	5	3	0.321	30	-2.96	0.32	3
PAWNEE	6940	3	*****	0	*****	****	0	****	0	******	******	******	******	0.270	30	*****	0.15	4
PRYOR	7309	3	45.6	29	-2.1	79	10	20	28	564	44	2	1	0.540	30	-3.73	0.31	3
RALSTON	7390	3	44.6	30	-2.5	81	9	17	28	612	74	0	0	0.341	30	-2.37	0.34	3
SPAVINAW	8380	3	48.7	28	*****	76	9	18	27	456	******	0	******	0.450	30	-4.02	0.22	3
TULSA	8992	3	48.7	30	-1.0	84	9	23	27	498	30	8	2	0.481	30	-2.99	0.41	2
UPPER SPAV	9101	3	47.5	27	*****	78	9	17	27	474	******	1	******	0.534	28	*****	0.40	3
VINITA	9203	3	46.0	26	*****	75	9	15	27	495	******	0	******	0.541	31	-3.96	0.36	2
WAGONER	9247	3	48.1	30	-2.5	79	9	17	28	514	74	6	-2	0.860	31	-3.35	0.60	2
WANN	9298	3	*****	0	*****	****	0	****	0	******	******	******	******	0.270	30	*****	0.18	3

NOVEMBER 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	46.3	30	-1.2	82	10	16	27	560	33	0	0	0.301	30	-1.55	0.22	2
CORDELL	2125	4	46.8	30	*****	84	10	16	28	546	******	0	******	0.381	30	*****	0.25	2
ELK CITY	2849	4	47.3	30	0.7	83	10	16	28	531	-21	0	0	0.240	30	-1.41	0.14	2
ERICK	2944	4	46.3	30	-0.3	83	10	15	28	560	6	0	0	0.300	30	-1.04	0.14	12
GEARY	3497	4	48.5	26	*****	81	9	16	26	428	******	0	******	0.440	28	*****	0.24	2
HAMMON	3871	4	45.1	27	*****	82	10	12	27	537	******	0	******	0.200	27	*****	0.16	2
LEEDEY	5090	4	*****	0	*****	****	0	****	0	******	******	******	******	0.330	30	*****	0.23	4
MORAVIA	6035	4	*****	0	*****	****	0	****	0	******	******	******	******	0.390	30	*****	0.22	2
OKEENE	6629	4	48.6	30	0.1	82	10	18	27	497	2	5	5	0.382	30	-1.69	0.38	2
SAYRE	7952	4	*****	0	*****	****	0	****	0	******	******	******	******	0.290	30	*****	0.07	5
TALOGA	8708	4	44.3	30	-0.9	82	9	12	29	622	28	0	0	0.212	30	-1.77	0.15	2
THOMAS	8815	4	*****	0	*****	****	0	****	0	******	******	******	******	0.040	30	*****	0.02	2
WATONGA	9364	4	45.7	30	-0.7	81	10	16	28	578	19	0	0	0.380	30	-1.73	0.17	3
WEATHERFORD	9422	4	47.1	30	-0.6	82	10	16	27	537	16	0	0	0.491	30	-1.25	0.23	2

NOVEMBER 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	******	******	******	******	0.645	30	*****	0.37	3
ARCADIA	288	5	*****	0	*****	****	0	****	0	******	******	******	******	0.510	30	*****	0.26	2
BLANCHARD	830	5	47.5	30	-3.1	83	9	22	28	529	91	3	0	0.751	30	-1.44	0.27	4
BRISTOW	1144	5	48.8	30	-0.8	82	9	16	27	494	26	6	0	0.670	30	-2.73	0.31	2
CHANDLER	1684	5	47.3	30	-1.4	82	10	22	28	534	43	3	1	0.510	30	-2.44	0.31	2
CHICKASHA EXP	1750	5	49.1	30	-1.9	84	9	18	27	484	59	6	3	0.711	30	-1.42	0.32	2
COX CITY	2196	5	*****	0	*****	****	0	****	0	******	******	******	******	0.440	30	*****	0.22	2
CUSHING	2318	5	49.2	30	0.4	83	10	27	27	480	-13	6	2	0.010	30	-2.92	0.01	5
EDMOND	2788	5	*****	0	*****	****	0	****	0	******	******	******	******	0.520	30	*****	0.25	1
EL RENO	2818	5	46.3	30	-0.9	81	10	17	27	562	27	0	0	0.252	30	-1.89	0.25	3
GUTHRIE	3821	5	46.8	30	-0.8	83	10	21	28	546	22	1	1	0.631	30	-2.17	0.28	3
HENNESSEY	4055	5	45.4	30	-0.6	81	10	18	28	589	20	0	0	0.250	30	-2.02	0.13	3
INGALLS	4489	5	*****	0	*****	****	0	****	0	******	******	******	******	0.340	30	*****	0.24	2
KINGFISHER	4861	5	46.6	30	-0.4	82	10	18	28	553	12	0	0	0.430	30	-1.95	0.22	2
KONAWA	4915	5	*****	0	*****	****	0	****	0	******	******	******	******	0.640	30	*****	0.58	1
MARSHALL	5589	5	*****	0	*****	****	0	****	0	******	******	******	******	0.090	30	*****	0.09	2
MEEKER	5779	5	47.2	30	0.0	83	10	18	28	538	1	3	3	0.850	30	-2.03	0.43	3
MULHALL	6110	5	*****	0	*****	****	0	****	0	******	******	******	******	0.000	30	*****	0.00	30
NORMAN NWS	6386	5	47.7	30	*****	83	9	19	27	526	******	5	******	0.791	30	*****	0.58	2
OKLAHOMA CTY F.	6659	5	*****	0	*****	****	0	****	0	******	******	******	******	0.780	30	*****	0.58	2
OKEMAH	6638	5	51.0	30	-0.8	82	9	27	27	426	21	6	-3	1.040	30	-2.54	0.65	3
OKLAHOMA CTY	6661	5	47.4	30	-1.5	82	9	18	27	534	52	5	2	0.750	30	-1.36	0.61	2
PERKINS	7003	5	*****	0	*****	****	0	****	0	******	******	******	******	0.000	30	*****	0.00	30
PIEDMONT	7068	5	*****	0	*****	****	0	****	0	******	******	******	******	0.370	30	*****	0.18	2
PRAGUE	7264	5	*****	0	*****	****	0	****	0	******	******	******	******	0.860	30	*****	0.47	3
SEMINOLE	8042	5	48.1	28	*****	83	10	21	28	477	******	2	******	1.440	28	*****	0.80	5
SHAWNEE	8110	5	*****	0	*****	****	0	****	0	******	******	******	******	0.850	30	*****	0.46	2
STELLA	8479	5	*****	0	*****	****	0	****	0	******	******	******	******	0.830	30	*****	0.45	2
STILLWATER	8501	5	47.7	30	-1.0	83	10	25	25	521	29	2	1	0.251	30	-2.32	0.22	3
TECUMSEH	8751	5	*****	0	*****	****	0	****	0	******	******	******	******	0.550	30	*****	0.55	2
UNION CITY	9086	5	*****	0	*****	****	0	****	0	******	******	******	******	0.731	30	*****	0.35	3
WANETTE	9291	5	48.3	28	*****	83	10	17	27	469	******	3	******	0.940	28	*****	0.40	2
WEWOKA	9575	5	*****	0	*****	****	0	****	0	******	******	******	******	0.842	30	*****	0.35	3

NOVEMBER 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	******	******	******	******	1.070	30	*****	0.73	3
BEGGS	631	6	*****	0	*****	****	0	****	0	******	******	******	******	0.950	30	*****	0.59	3
CALVIN	1391	6	*****	0	*****	****	0	****	0	******	******	******	******	2.200	30	*****	0.80	30
CHECOTAH	1711	6	48.8	30	*****	79	9	21	27	491	******	6	******	0.921	30	*****	0.60	3
CLAYTON	1858	6	*****	0	*****	****	0	****	0	******	******	******	******	1.400	30	*****	0.55	3
DEWAR	2485	6	*****	0	*****	****	0	****	0	******	******	******	******	1.122	30	*****	0.62	3
DUSTIN	2690	6	*****	0	*****	****	0	****	0	******	******	******	******	0.100	30	*****	0.10	1
DEWAR	2485	6	*****	0	*****	****	0	****	0	******	******	******	******	1.122	30	*****	0.62	3
HASKELL	3956	6	*****	0	*****	****	0	****	0	******	******	******	******	1.010	30	*****	0.80	3
HOLDENVILLE	4235	6	48.1	30	-1.2	84	9	22	30	511	35	4	2	0.760	30	-2.61	0.64	2
LAKE EUFAULA	4975	6	48.0	30	-1.3	78	10	24	27	513	35	3	-3	0.361	30	-3.75	0.22	5
LYONS	5437	6	*****	0	*****	****	0	****	0	******	******	******	******	0.741	30	*****	0.55	3
MCALESTER	5664	6	48.3	30	-3.3	80	9	22	27	507	93	6	-3	1.053	30	-2.93	0.58	2
MCCURTAIN	5693	6	50.2	29	-2.0	77	10	21	28	439	43	9	-3	1.201	30	-4.07	0.70	3
MUSKOGEE	6130	6	46.7	30	-2.4	80	9	18	30	551	71	3	-1	0.953	30	-3.14	0.60	2
OKMULGEE	6670	6	*****	0	*****	****	0	****	0	******	******	******	******	0.130	30	-3.83	0.13	4
OKTAHA	6678	6	*****	0	*****	****	0	****	0	******	******	******	******	0.920	30	*****	0.49	3
SALLISAW	7862	6	48.3	30	-1.0	78	10	24	29	504	27	3	-2	0.770	30	-4.32	0.40	3
SHORT	8170	6	*****	0	*****	****	0	****	0	******	******	******	******	0.810	30	*****	0.50	3
TAHLEQUAH	8677	6	47.3	30	-2.2	78	9	19	27	536	65	4	-1	1.002	30	-3.65	0.80	3
WEBBERS FALL	9445	6	46.9	30	-2.8	80	10	19	28	547	82	4	0	0.890	30	-3.51	0.60	3
WETUMKA	9571	6	*****	0	*****	****	0	****	0	******	******	******	******	0.831	30	*****	0.42	3

NOVEMBER 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	179	7	48.1	30	-1.5	85	9	17	27	508	44	1	-1	0.690	30	-0.81	0.16	3
ALTUS DAM	184	7	49.3	30	0.0	85	10	17	28	474	-6	1	-2	0.780	30	-0.84	0.37	3
ANADARKO	224	7	45.5	30	-1.9	81	10	16	28	584	57	0	0	0.731	30	-1.17	0.38	3
CHATTANOOGA	1706	7	47.3	30	-2.3	83	10	18	27	530	66	0	-1	0.750	30	-1.02	0.38	2
DUNCAN 11 W	2668	7	*****	0	*****	****	0	****	0	******	******	******	******	0.710	30	*****	0.49	2
FREDERICK	3353	7	48.6	28	*****	85	9	23	27	464	******	3	******	0.430	28	*****	0.13	4
HOBART	4204	7	47.4	29	-1.7	84	9	15	27	512	34	3	2	0.695	30	-0.92	0.51	2
HOLLIS	4249	7	48.6	30	-0.6	85	9	14	27	497	21	4	3	0.630	30	-0.60	0.21	3
LAWTON	5063	7	48.7	30	-2.0	84	10	23	27	490	56	2	-2	3.110	30	1.22	2.02	3
LOOKEBA	5329	7	*****	0	*****	****	0	****	0	******	******	******	******	0.420	30	*****	0.25	1
MANGUM	5509	7	48.2	30	-0.2	84	10	17	28	506	6	1	1	0.741	30	-0.63	0.33	3
RANDLETT	7403	7	*****	0	*****	****	0	****	0	******	******	******	******	1.020	30	*****	0.51	3
ROOSEVELT	7727	7	*****	0	*****	****	0	****	0	******	******	******	******	1.090	30	*****	0.60	3
SEDAN	8016	7	*****	0	*****	****	0	****	0	******	******	******	******	0.850	30	*****	0.46	3
SNYDER	8299	7	*****	0	*****	****	0	****	0	******	******	******	******	0.640	30	*****	0.46	2
VINSON	9212	7	*****	0	*****	****	0	****	0	******	******	******	******	0.340	30	*****	0.20	2
WALTERS	9278	7	48.1	30	-1.8	84	10	20	27	508	53	2	-2	1.000	30	-1.23	0.60	2
WICHITA MT	9629	7	46.9	26	*****	83	10	17	27	470	******	0	******	0.690	29	*****	0.41	2

NOVEMBER 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	49.0	30	-1.7	82	9	20	28	483	47	2	-4	0.990	30	-2.15	0.56	3
ALLEN	147	8	*****	0	*****	****	0	****	0	******	******	******	******	1.400	30	*****	0.65	3
ARDMORE	292	8	52.2	30	0.0	85	9	27	27	392	-3	7	-2	0.710	30	-1.97	0.51	2
ATOKA DAM	394	8	47.6	30	-3.9	83	10	20	28	527	114	5	-1	1.290	30	-2.25	0.45	25
BOKCHITO	917	8	*****	0	*****	****	0	****	0	******	******	******	******	0.800	30	*****	0.55	18
CANEY	1437	8	*****	0	*****	****	0	****	0	******	******	******	******	1.360	30	*****	0.42	4
CENTRAHOMA	1648	8	49.1	27	*****	83	10	25	27	434	******	5	******	0.900	27	*****	0.55	3
CHICKASAW	1745	8	47.8	29	-2.6	83	10	20	29	500	57	2	-1	0.740	30	-2.33	0.32	3
COLEMAN	2011	8	50.0	30	*****	81	9	22	26	453	******	4	******	1.510	30	*****	0.73	2
DAISY	2354	8	*****	0	*****	****	0	****	0	******	******	******	******	1.662	30	*****	0.62	5
DUNCAN	2660	8	48.6	26	*****	83	11	20	28	428	******	0	******	1.000	30	-1.34	0.51	4
ELMORE CITY	2872	8	*****	0	*****	****	0	****	0	******	******	******	******	0.900	30	*****	0.42	3
GRADY	3688	8	*****	0	*****	****	0	****	0	******	******	******	******	0.680	30	*****	0.43	2
HEALDTON	4001	8	51.4	25	*****	85	10	22	30	345	******	4	******	0.960	29	*****	0.82	3
HENNEPIN	4052	8	*****	0	*****	****	0	****	0	******	******	******	******	0.850	30	*****	0.41	3
KETCHUM RAN	4780	8	*****	0	*****	****	0	****	0	******	******	******	******	0.940	31	*****	0.60	2
LINDSAY	5216	8	47.7	28	*****	84	9	20	27	487	******	2	******	0.700	28	*****	0.28	1
LOCO	5247	8	*****	0	*****	****	0	****	0	******	******	******	******	0.750	30	*****	0.37	2
MADILL	5468	8	50.9	30	-0.5	85	11	26	28	429	14	7	1	0.640	30	-2.47	0.38	5
MARIETTA 5 SW	5563	8	48.7	30	-2.8	86	10	20	29	496	85	7	1	1.390	30	-1.34	0.58	5
MARLOW	5581	8	49.9	30	*****	85	9	15	27	459	******	7	******	0.550	30	*****	0.28	2
MCGEE CREEK	5713	8	49.9	26	*****	81	10	26	30	396	******	4	******	1.320	27	*****	0.51	3
PAULS VALLEY	6926	8	47.4	30	-2.3	84	10	18	28	530	69	1	-1	0.422	30	-2.51	0.16	3
PONTOTOC	7214	8	*****	0	*****	****	0	****	0	******	******	******	******	0.780	30	*****	0.30	2
TISHOMINGO	8884	8	*****	0	*****	****	0	****	0	******	******	******	******	0.930	30	*****	0.50	1
TUSSY	9032	8	*****	0	*****	****	0	****	0	******	******	******	******	0.001	30	*****	0.00	12
WAURIKA	9395	8	50.4	30	-3.0	85	9	22	27	439	82	1	-8	0.750	30	-1.15	0.43	2

NOVEMBER 2002 SUMMARY FOR SOUTHEAST CLIMATE DIVISION (CD9)

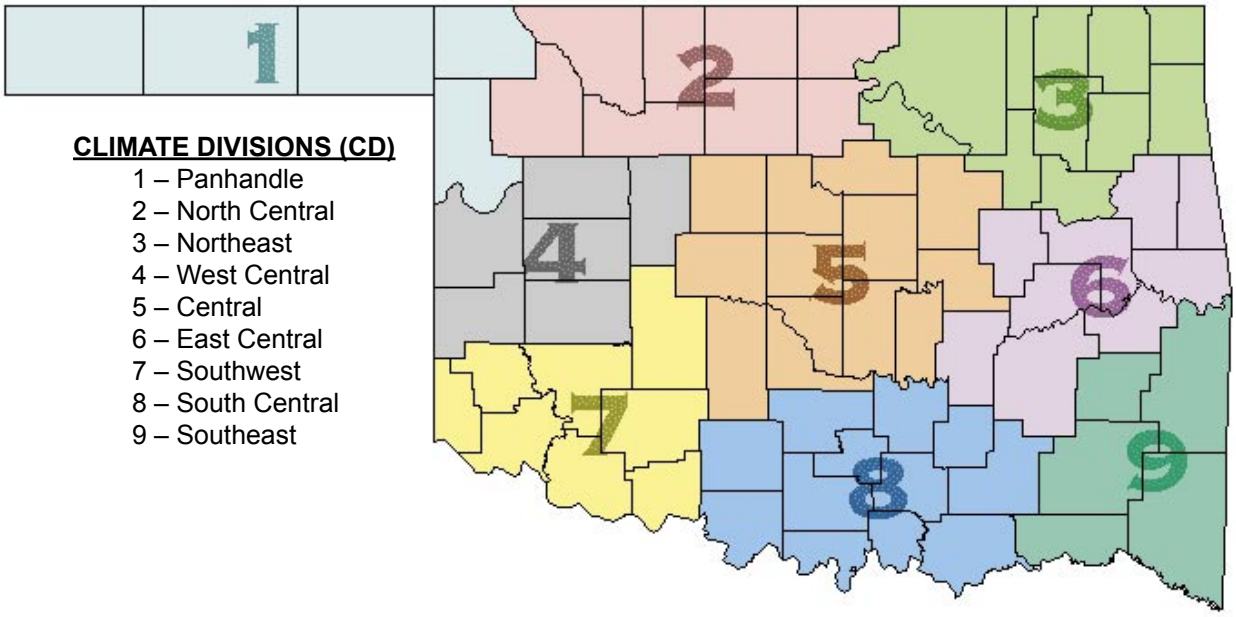
NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ANTLERS	256	9	48.0	30	-4.1	81	10	21	28	516	120	5	-3	1.132	30	-2.97	0.60	3
BATTIEST	567	9	44.6	30	-3.8	77	9	18	28	612	109	0	-3	1.580	30	-3.47	0.61	2
BENGAL	670	9	*****	0	*****	****	0	****	0	******	******	******	******	1.770	30	*****	0.83	3
BROKEN BOW	1162	9	*****	0	*****	****	0	****	0	******	******	******	******	1.520	30	*****	1.23	3
CARTER TWR	1544	9	*****	0	*****	****	0	****	0	******	******	******	******	1.170	30	*****	0.47	5
FANSHAWE	3065	9	*****	0	*****	****	0	****	0	******	******	******	******	1.620	30	*****	1.07	3
HEAVENER	4008	9	*****	0	*****	****	0	****	0	******	******	******	******	3.310	30	*****	0.53	19
HUGO	4384	9	49.8	30	-1.6	81	11	23	28	455	40	0	-6	0.990	30	-3.71	0.81	5
IDABEL	4451	9	49.8	30	-2.0	79	10	27	29	462	60	7	1	2.763	30	-2.50	1.76	3
PAGE	6842	9	45.7	19	*****	70	22	26	15	367	******	0	******	1.821	19	*****	1.09	25
SMITHVILLE	8285	9	45.4	30	-2.9	77	10	18	28	589	87	0	0	2.144	30	-3.02	0.87	3
SPIRO	8416	9	*****	0	*****	****	0	****	0	******	******	******	******	1.370	30	*****	0.71	3
TUSKAHOMA	9023	9	49.3	30	-2.6	79	9	18	28	479	75	8	-1	1.130	30	-3.85	0.69	3
VALLIANT	9118	9	*****	0	*****	****	0	****	0	******	******	******	******	1.240	30	*****	0.96	3
WILBURTON	9634	9	48.5	30	-2.6	77	9	18	29	501	77	5	-2	1.590	30	-3.72	0.78	2
WISTER	9724	9	48.0	30	*****	77	10	17	28	512	******	0	******	1.840	30	*****	1.65	3

NOVEMBER 2002 CLIMATE DIVISION SUMMARY

	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	44.5	7	-0.1	82	9	8	27	614	-1	2	2	0.200	11	-0.84	0.40	12
NORTH CENTRAL	2	45.7	16	-0.1	83	10	7	27	579	2	1	1	0.250	24	-1.84	0.32	4
NORTHEAST	3	46.8	10	-2.1	84	9	15	27	543	55	4	-1	0.430	19	-3.39	0.60	2
WEST CENTRAL	4	46.6	8	-0.3	84	10	12	29	554	9	1	1	0.310	12	-1.50	0.38	2
CENTRAL	5	47.7	14	-1.1	84	9	16	27	522	33	3	1	0.550	31	-2.14	0.80	5
EAST CENTRAL	6	48.1	9	-1.8	84	9	18	30	511	50	4	-1	0.920	22	-3.40	0.80	3
SOUTHWEST	7	47.9	9	-1.3	85	9	14	27	512	35	1	0	0.890	16	-0.85	2.02	3
SOUTH CENTRAL	8	49.4	10	-1.6	86	10	15	27	471	45	4	-1	0.920	23	-1.97	0.82	3
SOUTHEAST	9	47.9	8	-2.8	81	11	17	28	516	80	3	-2	1.680	15	-3.26	1.76	3

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

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

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 NOVEMBER 2002

NAME	MEAN MAX TEMP	MAX TEMP	MAX DAY	MIN TEMP	MIN DAY	HDD	CDD	TOT PPT	MAX 24-HR	MAX DAY
PANHANDLE										
Arnett	46.0	81	9	13	27	572	2	.24	.12	2
Beaver	44.3	79	9	10	27	620	0	.17	.10	11
Boise City	41.8	76	9	10	27	695	0	.26	.18	2
Buffalo	44.3	78	7	12	27	620	0	.12	.06	11
NORTH CENTRAL										
Blackwell	45.3	78	9	20	25	****	****	.31	.26	2
Breckenridge	45.9	80	9	19	27	573	1	.18	.16	2
Cherokee	46.1	79	9	19	27	568	0	.16	.14	2
Fairview	47.5	82	9	18	27	529	4	.21	.14	2
Freedom	45.8	80	9	14	27	576	1	.13	.06	2
Lahoma	45.9	81	9	19	27	575	1	.26	.22	2
May Ranch	45.9	80	9	17	27	572	0	.10	.07	2
NORTHEAST										
Bixby	46.2	73	7	20	27	****	****	.62	.51	2
Burbank	*****	***	***	***	***	****	****	*****	*****	***
Copan	45.8	80	9	22	25	576	1	.24	.15	2
Foraker	45.5	80	9	19	25	585	1	.36	.29	2
Jay	45.2	77	9	15	27	598	4	.46	.29	2
Miami	44.8	78	9	16	27	611	5	.52	.27	2
Nowata	44.8	79	9	14	27	606	1	.40	.28	2
Pawnee	47.2	81	9	21	28	541	5	.26	.22	2
WEST CENTRAL										
Bessie	48.2	83	9	18	27	505	2	.40	.28	2
Butler	46.9	83	9	14	27	544	1	.22	.17	2
Camargo	45.2	82	9	14	27	594	0	.37	.19	2
Cheyenne	47.8	81	9	17	27	519	3	.31	.14	2
Erick	46.2	83	9	13	27	566	3	.28	.07	4
CENTRAL										
Bowlegs	48.4	82	9	19	27	504	6	.82	.61	2
Bristow	46.6	82	9	15	27	557	6	.66	.57	2
Chandler	48.3	82	9	21	27	508	6	.56	.53	2
Chickasha	47.3	81	9	19	27	536	5	.49	.31	2
El Reno	46.2	82	9	16	27	565	2	.55	.42	2
Guthrie	48.2	82	9	20	27	511	6	.59	.51	2
Kingfisher	46.7	82	9	19	27	553	4	.31	.23	2
Marena	47.6	82	9	24	27	526	5	.26	.23	2
Marshall	46.3	83	9	20	27	566	4	.16	.12	2
Minco	47.5	82	9	20	27	530	4	.82	.73	2
EAST CENTRAL										
Calvin	48.1	83	9	21	28	513	7	.87	.74	2
Cookson	46.3	77	9	16	27	564	3	.67	.54	2
Eufaula	49.3	80	9	24	27	****	****	.72	.50	2
Haskell	47.3	80	9	21	27	536	5	1.03	.82	2
McAlester	48.3	81	9	21	27	508	7	1.08	.65	2
Okmulgee	47.2	83	9	16	27	541	7	1.08	.87	2
Sallisaw	47.4	78	9	19	28	534	5	.72	.47	2
SOUTHWEST										
Altus	48.7	85	9	17	27	495	5	.62	.20	2
Fort Cobb	47.6	83	9	17	27	527	4	.78	.66	2
Hinton	46.9	81	9	16	27	544	2	.70	.57	2
Hobart	47.2	84	9	15	27	538	3	.96	.72	2
Hollis	48.0	85	9	15	27	515	5	*****	*****	***
Mangum	47.3	87	9	13	27	535	3	*****	*****	***
SOUTH CENTRAL										
Ada	49.3	84	9	20	27	477	7	.84	.73	2
Ardmore	51.3	85	9	23	27	****	****	.71	.48	2
Burneyville	49.8	86	9	18	28	463	7	.92	.48	2
Byars	49.7	82	9	22	27	463	5	.98	.80	2
Centrahoma	48.3	84	9	21	27	508	7	.84	.43	2
Durant	51.6	83	9	26	28	408	7	.89	.41	2
Ketchum Ranch	49.0	82	9	21	27	****	****	.95	.77	2
Lane	49.2	82	9	22	28	480	7	1.25	.37	4
Madill	50.7	85	9	22	28	438	7	1.00	.40	2
SOUTHEAST										
Antlers	48.1	82	9	18	28	515	7	1.02	.34	4
Broken Bow	*****	***	***	***	***	****	****	*****	*****	***
Clayton	48.5	80	9	20	28	502	5	*****	*****	***
Cloudy	49.0	80	9	22	28	483	3	1.08	.41	2
Hugo	50.7	81	9	25	28	436	7	.89	.36	2

NAME	MEAN MAX TEMP	MAX TEMP	MAX DAY	MIN TEMP	MIN DAY	HDD	CDD	TOT PPT	MAX 24-HR	MAX DAY
Goodwell	43.9	78	9	12	26	634	0	.11	.06	2
Hooker	43.7	78	9	11	27	640	0	.09	.06	2
Kenton	43.2	78	7	14	26	653	0	.24	.11	2
Slapout	45.2	80	9	12	27	594	1	.24	.10	11
Medford	45.8	80	9	20	27	577	1	.21	.18	2
Newkirk	45.7	77	9	19	25	580	1	.35	.27	2
Red Rock	46.5	81	9	22	25	558	4	.36	.29	2
Seiling	46.0	81	9	13	27	571	1	.25	.16	2
Woodward	*****	***	***	***	***	****	****	.18	.10	2
Alva	45.7	81	9	14	27	580	2	.25	.17	2
Pryor	44.9	77	9	16	27	607	5	.44	.31	2
Skiatook	47.9	80	9	24	25	519	5	.43	.34	2
Vinita	44.6	78	9	15	27	613	3	.42	.26	2
Wynona	46.6	82	9	22	25	****	****	.33	.27	2
Porter	48.4	81	9	22	27	504	6	1.00	.81	2
Inola	46.3	82	9	17	27	563	3	.54	.41	2
Claremore	47.8	81	9	20	27	522	6	.49	.41	2
Putnam	46.2	82	9	15	27	565	1	.37	.15	2
Retrop	48.1	84	9	17	27	510	3	.38	.22	2
Watonga	46.7	80	9	17	27	552	2	.29	.20	2
Weatherford	46.2	81	9	18	27	567	1	*****	*****	***
Oilton	45.9	82	9	14	27	577	3	.45	.43	2
Okemah	47.5	81	9	20	27	529	5	1.01	.82	2
Perkins	47.5	81	9	24	27	530	5	.34	.32	2
Shawnee	48.7	81	9	22	27	494	5	.88	.65	2
Spencer	48.2	82	9	18	27	508	6	.56	.43	2
Stillwater	46.6	82	9	23	30	553	1	.22	.20	2
Washington	48.9	84	9	21	27	488	6	.62	.45	2
Ninnekah	47.9	83	9	18	27	517	5	.51	.29	2
Acme	48.1	84	9	14	27	514	6	.61	.32	2
Norman	48.2	82	9	19	27	510	6	.70	.58	2
Stigler	47.9	79	9	19	28	519	6	1.01	.72	2
Stuart	49.4	83	9	23	27	474	6	.88	.63	2
Tahlequah	46.2	78	9	17	27	568	5	.86	.69	2
Webbers Falls	47.8	80	9	19	28	522	6	.64	.53	2
Westville	46.5	77	9	20	27	559	4	.81	.71	2
Hectorville	49.2	83	9	23	27	481	7	.80	.68	2
Medicine Park	50.1	84	9	21	27	450	4	.60	.32	2
Tipton	48.6	86	9	16	27	****	****	.65	.27	1
Walters	49.2	85	9	19	27	481	7	.99	.75	2
Apache	47.7	82	9	17	27	523	3	.51	.28	2
Grandfield	49.6	82	9	18	27	468	6	.84	.45	2
Pauls Valley	50.5	85	9	21	27	443	8	.75	.64	2
Ringling	49.5	84	9	19	27	472	7	.81	.63	2
Sulphur	48.1	84	9	17	27	512	6	.73	.64	2
Tishomingo	49.3	85	9	22	27	477	6	.84	.33	2
Waurika	50.3	85	9	21	28	449	8	.83	.58	2
Vanoss	49.4	83	9	18	27	475	6	.95	.84	2
Bee	50.3	85	9	21	28	****	****	.88	.30	2
Newport	51.3	85	9	22	27	417	6	1.08	.58	2
Idabel	50.2	82	9	24	28	449	6	1.96	.92	3
Mt Herman	48.8	78	9	23	28	489	3	1.59	.46	2
Talihina	47.9	79	9	18	28	519	6	1.78	.47	2
Wilburton	47.7	79	9	17	28	****	****	1.19	.73	2
Wister	46.4	78	9	16	28	563	6	1.81	.81	2

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

CD	MAX TEMP	DATE	LOCATION	MIN TEMP	DATE	LOCATION	24-HOUR PRECIP	DATE	LOCATION	MONTHLY PRECIP	LOCATION
1	82	9	LAVERNE	8	27	GAGE	.40	12	GUYMON	.40	GUYMON
2	83	10	LAHOMA	7	27	FT SUPPLY	.32	4	BRAMAN	.45	HELENA
3	84	9	TULSA	15	27	VINITA	.60	2	WAGONER	.86	WAGONER
4	84	10	CORDELL	12	27	HAMMON	.38	2	OKEENE	.49	WEATHERFORD
				12	29	TALOGA					
5	84	9	CHICKASHA EX	16	27	BRISTOW	.80	5	SEMINOLE	1.44	SEMINOLE
6	84	9	HOLDENVILLE	18	30	MUSKOGEE	.80	30	CALVIN	2.20	CALVIN
							.80	3	HASKELL		
							.80	3	TAHLEQUAH		
7	85	9	ALTUS	14	27	HOLLIS	2.02	3	LAWTON	3.11	LAWTON
	85	10	ALTUS DAM								
	85	9	FREDERICK								
	85	9	HOLLIS								
8	86	10	MARIETTA	15	27	MARLOW	.82	3	HEALDTON	1.66	DAISY
9	81	10	ANTLERS	17	28	WISTER	1.76	3	IDABEL	3.31	HEAVENER
	81	11	HUGO								

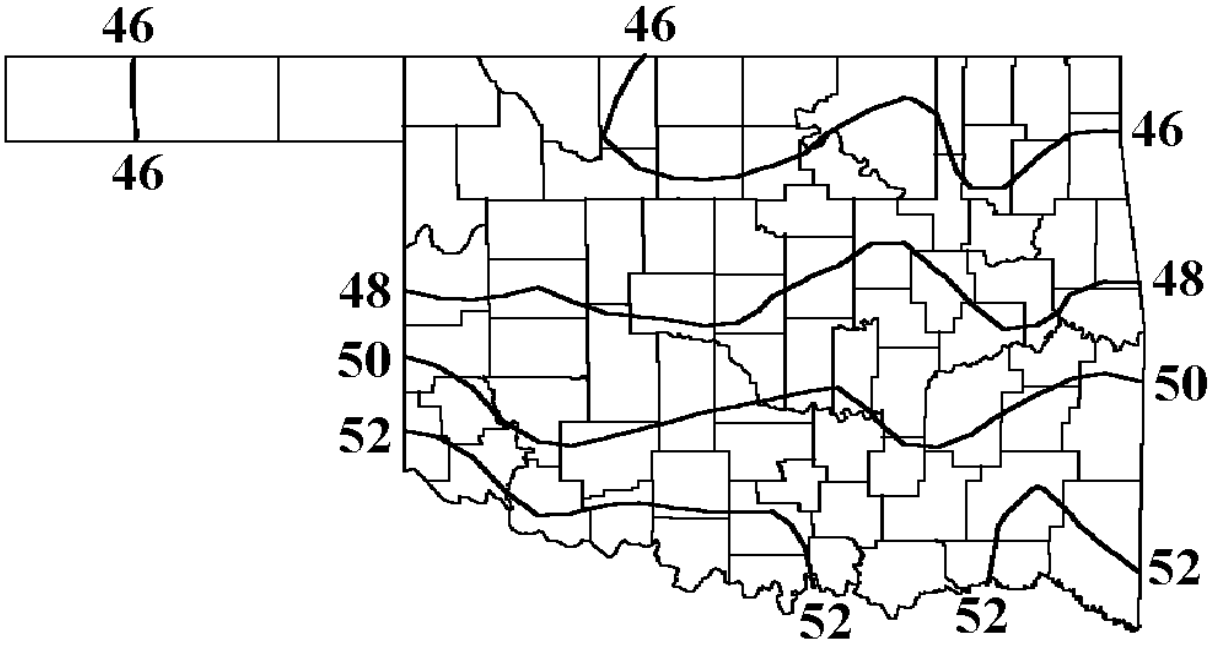
TABLE OF 2001/2002 COMPARISONS

	NOVEMBER Temperature (F)		NOVEMBER Precipitation (in.)	
Station	**2001**	**2002**	**2001**	**2002**
Arnett	51.0	44.6	0.62	0.32
Enid	53.9	46.7	1.20	0.26
Tulsa	55.2	48.7	3.44	0.48
Elk City	53.6	47.3	1.47	0.24
Oklahoma City	53.8	47.4	1.06	0.75
McAlester	56.2	48.3	1.26	1.05
Altus Irr Station	56.0	48.1	2.10	0.69
Ardmore	57.0	52.2	0.84	0.71
Idabel	58.1	49.8	3.67	0.99

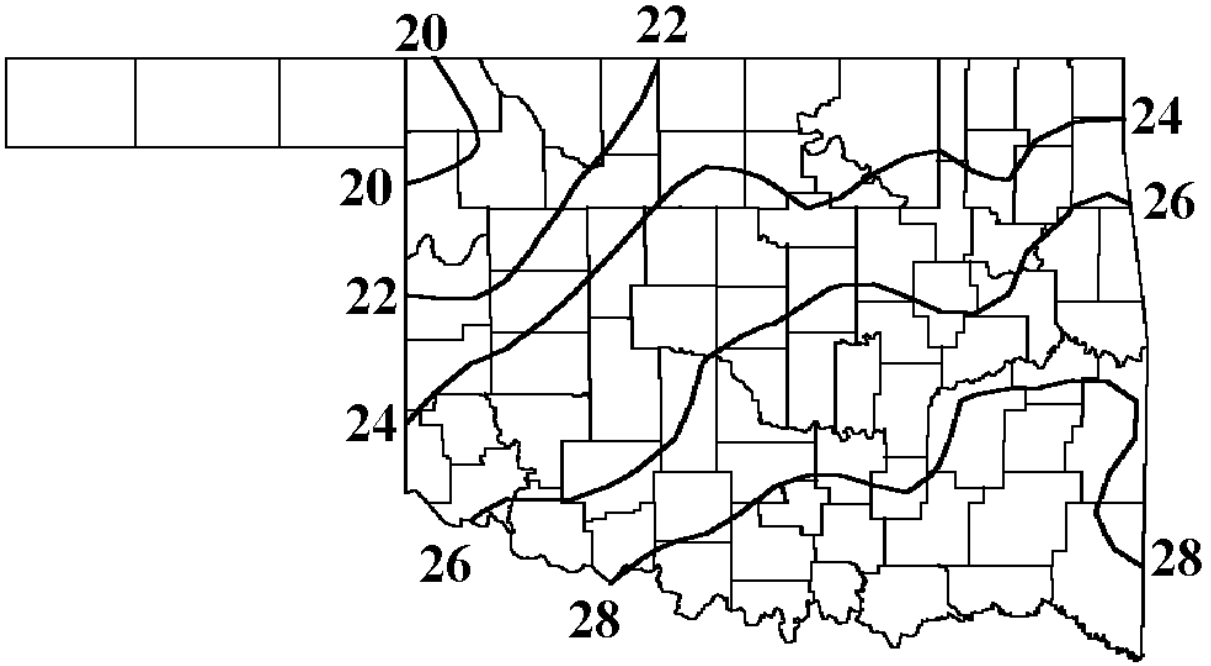
NOVEMBER 2002 STATEWIDE EXTREMES

VARIABLE	STATION	DIVISION	OBSERVATION	DATE
Minimum temperature (F)	FT. SUPPLY	2	07	27
Maximum temperature (F)	MARIETTA	8	86	10
Maximum 24-hour Precipitation	LAWTON	7	2.02	3

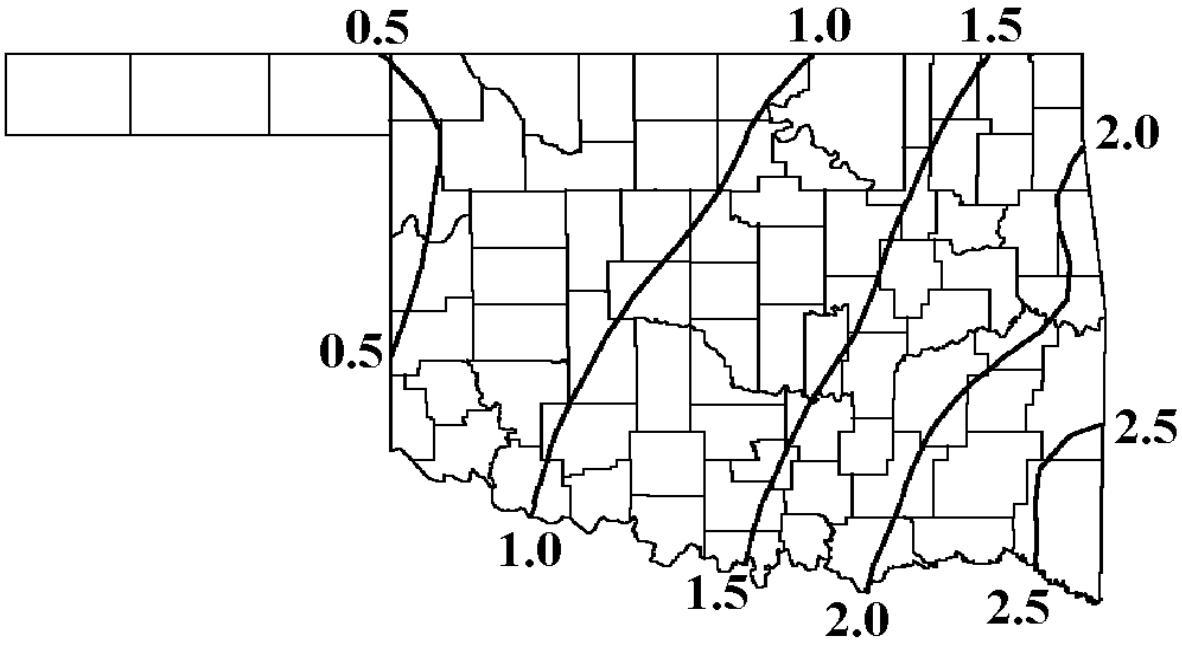
JANUARY NORMAL DAILY MAXIMUM TEMPERATURE (ºF)



JANUARY NORMAL DAILY MINIMUM TEMPERATURE (ºF)



JANUARY NORMAL MONTHLY PRECIPITATION (INCHES)



JANUARY TORNADO STATISTICS

The most tornadoes reported in **JANUARY** for Oklahoma was **(4)** in **1967**.

The average number of tornadoes in **JANUARY** for Oklahoma is **(0.2)**.

OUTLOOK FOR JANUARY 2003 THROUGH MARCH 2003

BASED ON SEASONAL OUTLOOK PROVIDED BY THE CLIMATE PREDICTION CENTER

Temperature: Near Normal Temperature Statewide

Precipitation: Near Normal Precipitation Statewide

OKLAHOMA CITY CLIMATE CALENDAR

JANUARY

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	2003	Record High	Year	Lowest Max	Year	Ave. Low	2003	Highest Min.	Year	Record Low	Year	Avg. Precip.	2003	Greatest Precip.	Year
1	36	47		74	1910	13	1979	25		51	1966	2	1928	0.04		0.63	1892
2	36	47		78	1997	13	1911	25		56	1950	-2	1911	0.04		1.01	1951
3	36	47		78	1997	10	1919	25		56	1997	-9	1911	0.04		1.03	1908
4	36	47		72	1927	11	1959	25		60	1955	-7	1947	0.04		2.02	1998
5	36	46		71	1927	18	1924	25		48	1946	-2	1959	0.04		1.00	1962
6	36	46		68	1921	14	1909	25		52	1907	-2	1912	0.04		1.02	1934
7	36	46		73	1965	15	1913	25		61	1907	-3	1912	0.04		0.93	1944
8	36	46		71	1923	11	1937	25		49	1949	-4	1988	0.03		1.45	1939
9	35	46		70	1902	9	1977	25		49	1900	-2	1977	0.03		0.62	1993
10	35	46		75	1990	13	1962	25		45	1898	-3	1977	0.03		0.66	1905
11	35	46		77	1911	2	1918	25		50	1898	-7	1918	0.03		1.10	1916
12	35	46		73	1935	6	1912	25		51	1960	-7	1912	0.03		0.78	1927
13	35	46		74	1996	11	1905	25		51	1952	-4	1916	0.03		0.79	1992
14	35	46		75	1928	12	1905	25		50	1928	-1	1905	0.03		0.46	1898
15	35	46		77	1914	14	1930	25		53	1969	-2	1905	0.03		0.65	1949
16	35	46		76	1894	11	1930	25		57	1990	0	1930	0.03		0.70	1990
17	36	46		73	1894	8	1930	25		52	1894	-9	1930	0.03		1.16	1926
18	36	46		74	1951	8	1892	25		48	1895	-9	1930	0.03		1.07	1968
19	36	47		75	1914	12	1962	25		54	1904	-11	1892	0.04		2.76	1894
20	36	47		80	1986	18	1984	25		53	1921	1	1985	0.04		1.29	1904
21	36	47		71	1967	12	1954	25		56	1921	-3	1930	0.04		1.40	1932
22	36	47		79	1967	16	1962	25		50	1921	-8	1930	0.04		0.39	1920
23	36	47		75	1909	13	1963	25		51	1967	-1	1963	0.04		1.16	1921
24	36	47		81	1950	8	1894	25		51	1944	-8	1894	0.04		0.37	1949
25	36	47		77	1952	15	1905	25		58	1944	-3	1894	0.04		1.26	1949
26	36	47		72	1953	12	1897	26		54	1911	0	1902	0.04		1.25	1916
27	37	48		72	1914	17	1961	26		56	1914	3	1963	0.04		0.78	2001
28	37	48		78	1893	21	1948	26		60	1968	5	1948	0.04		0.59	2001
29	37	48		76	1911	13	1966	26		51	1982	-1	1895	0.04		1.84	1982
30	37	48		74	1917	16	1949	26		55	1988	-1	1895	0.04		1.34	1982
31	37	48		83	1911	6	1918	26		52	1911	-1	1979	0.04		1.98	1923
MONTH	**35.9**	**46.7**		**83**	**1911**	**2**	**1918**	**25.2**		**61**	**1907**	**-11**	**1892**	**1.13**		**2.76**	**1894**

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

TULSA CLIMATE CALENDAR

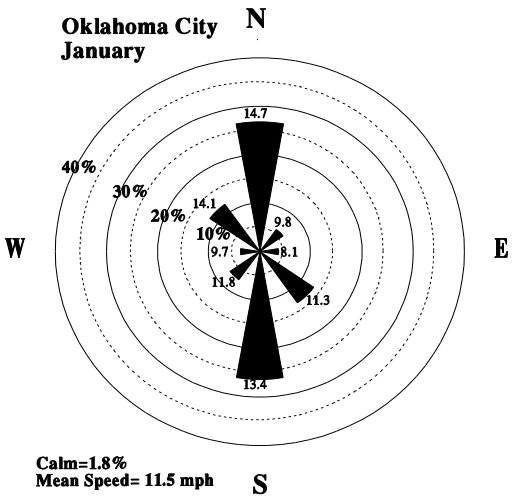
JANUARY

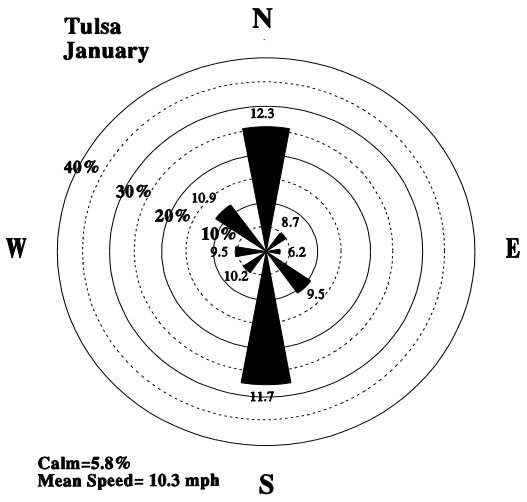
The data on this calendar are for Tulsa, Oklahoma.
Normal values are calculated for the period 1971-2000.
Temperature extremes are for the period 1905-2002.
Precipitation extremes are for the period 1888-2002.

Day	Avg. Temp.	Ave. High	2003	Record High	Year	Lowest Max	Year	Ave. Low	2003	Highest Min.	Year	Record Low	Year	Avg. Precip.	2003	Greatest Precip.	Year
1	36	47		73	1910	13	1974	26		59	1910	0	1928	0.06		0.70	1925
2	36	46		76	1997	10	1911	26		56	1997	2	2001	0.06		0.90	1951
3	36	46		75	1997	14	1959	26		58	1997	-2	1919	0.06		1.12	1971
4	36	46		70	1956	12	1959	26		63	1955	-8	1947	0.06		1.96	1932
5	36	46		73	1984	16	1940	26		55	1916	-7	1947	0.06		1.28	1929
6	36	46		69	1907	15	1913	26		53	1907	0	1912	0.05		0.93	1910
7	36	46		77	1965	15	1968	26		64	1907	-5	1912	0.05		1.05	1935
8	36	46		71	1923	17	1970	26		51	1939	-5	1988	0.05		1.92	1907
9	36	46		69	1909	10	1977	26		46	1939	0	1977	0.05		0.94	1930
10	36	46		75	1911	13	1962	26		48	1916	-5	1977	0.05		1.70	1922
11	36	46		80	1911	2	1918	26		52	1911	-6	1977	0.05		1.95	1905
12	36	46		74	2000	3	1912	26		57	1960	-13	1918	0.05		2.10	1916
13	36	46		75	1907	11	1916	26		51	1959	-12	1916	0.05		1.50	1927
14	36	46		75	1952	13	1979	26		51	1953	-4	1916	0.05		0.65	1937
15	36	46		69	1914	18	1972	26		53	1980	0	1905	0.05		0.76	1949
16	36	46		78	1938	14	1930	26		55	1935	1	1930	0.05		1.90	1932
17	36	46		73	1952	10	1930	26		55	1973	-3	1930	0.05		0.50	1926
18	36	46		72	1951	12	1940	26		53	1923	-14	1930	0.05		0.88	1968
19	36	46		75	1951	14	1970	26		48	1954	-5	1943	0.05		1.50	1980
20	36	46		77	1986	15	1984	26		51	1923	-3	1985	0.05		1.63	1904
21	36	46		75	1957	15	1935	26		57	1957	-1	1918	0.05		2.20	1916
22	36	46		78	1909	16	1962	26		57	1909	-16	1930	0.05		0.84	1999
23	37	47		78	1909	12	1963	26		54	1967	-8	1930	0.05		1.42	1953
24	37	47		79	1950	15	1940	26		51	1919	-4	1906	0.05		0.67	1938
25	37	47		74	1952	18	1940	27		55	1944	2	1940	0.05		1.89	1989
26	37	47		71	1911	20	1957	27		55	1944	7	1963	0.05		0.62	1967
27	37	47		74	1914	21	1948	27		55	1999	1	1963	0.05		1.01	1916
28	37	47		82	1909	21	1972	27		59	1968	3	1948	0.05		1.07	2001
29	38	48		76	1947	14	1966	27		50	1988	-2	1949	0.05		1.43	1939
30	38	48		74	1931	15	1949	27		58	1988	-6	1949	0.05		1.73	1975
31	38	49.0		76	1989	7	1918	28		48	1923	-5	1979	0.05		2.13	1983
MONTH	**36.4**	**46.5**		**82**	**1909**	**2**	**1918**	**26.3**		**64**	**1907**	**-16**	**1930**	**0.05**		**2.13**	**1983**

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

JANUARY WIND ROSES





January 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.

JANUARY SUNRISE/SUNSET TIMES FOR 2003

ALL TIMES ARE CENTRAL STANDARD TIME

OKLAHOMA CITY			TULSA		
DATE	SUNRISE	SUNSET	DATE	SUNRISE	SUNSET
1/1/03	7:39 AM	5:28 PM	1/1/03	7:35 AM	5:20 PM
1/2/03	7:40 AM	5:29 PM	1/2/03	7:35 AM	5:21 PM
1/3/03	7:40 AM	5:30 PM	1/3/03	7:35 AM	5:22 PM
1/4/03	7:40 AM	5:30 PM	1/4/03	7:35 AM	5:22 PM
1/5/03	7:40 AM	5:31 PM	1/5/03	7:35 AM	5:23 PM
1/6/03	7:40 AM	5:32 PM	1/6/03	7:35 AM	5:24 PM
1/7/03	7:40 AM	5:33 PM	1/7/03	7:35 AM	5:25 PM
1/8/03	7:40 AM	5:34 PM	1/8/03	7:35 AM	5:26 PM
1/9/03	7:40 AM	5:35 PM	1/9/03	7:35 AM	5:27 PM
1/10/03	7:40 AM	5:36 PM	1/10/03	7:35 AM	5:28 PM
1/11/03	7:40 AM	5:37 PM	1/11/03	7:35 AM	5:29 PM
1/12/03	7:40 AM	5:38 PM	1/12/03	7:35 AM	5:30 PM
1/13/03	7:39 AM	5:39 PM	1/13/03	7:35 AM	5:31 PM
1/14/03	7:39 AM	5:39 PM	1/14/03	7:34 AM	5:32 PM
1/15/03	7:39 AM	5:40 PM	1/15/03	7:34 AM	5:33 PM
1/16/03	7:39 AM	5:41 PM	1/16/03	7:34 AM	5:34 PM
1/17/03	7:38 AM	5:42 PM	1/17/03	7:33 AM	5:35 PM
1/18/03	7:38 AM	5:43 PM	1/18/03	7:33 AM	5:36 PM
1/19/03	7:38 AM	5:44 PM	1/19/03	7:33 AM	5:37 PM
1/20/03	7:37 AM	5:45 PM	1/20/03	7:32 AM	5:38 PM
1/21/03	7:37 AM	5:46 PM	1/21/03	7:32 AM	5:39 PM
1/22/03	7:36 AM	5:47 PM	1/22/03	7:31 AM	5:40 PM
1/23/03	7:36 AM	5:48 PM	1/23/03	7:31 AM	5:41 PM
1/24/03	7:35 AM	5:50 PM	1/24/03	7:30 AM	5:42 PM
1/25/03	7:35 AM	5:51 PM	1/25/03	7:30 AM	5:43 PM
1/26/03	7:34 AM	5:52 PM	1/26/03	7:29 AM	5:44 PM
1/27/03	7:33 AM	5:53 PM	1/27/03	7:28 AM	5:45 PM
1/28/03	7:33 AM	5:54 PM	1/28/03	7:28 AM	5:46 PM
1/29/03	7:32 AM	5:55 PM	1/29/03	7:27 AM	5:47 PM
1/30/03	7:31 AM	5:56 PM	1/30/03	7:26 AM	5:48 PM
1/31/03	7:31 AM	5:57 PM	1/31/03	12:00 AM	5:49 PM

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