OKLAHOMA MONTHLY CLIMATE SUMMARY
JUNE 2004

Oklahoma Climatological Survey

Overview

Oklahoma's entrance into summer appeared bleak following the driest May on record. A southward migration of the jet stream helped to reverse those fortunes however, culminating in the state's 14th wettest and 28th coolest June since 1892. The southerly dip in the jet stream – a pattern unusual for its longevity, given the season – resulted in a steady parade of upper-level storm systems and surface fronts. The active weather produced rainfall within Oklahoma on 28 out of 30 days in June. Severe weather was abundant, although no official reports of tornadoes were noted by the National Weather Service. Most of the severe activity was confined to large hail and thunderstorm-induced winds, in addition to the expected flooding with such abundant rainfall amounts. Thus far, the year's tornado count stands precisely at normal with 44, and only one confirmed "significant" tornado (rated F2 or above on the Fujita Tornado Intensity Scale).

Precipitation

A significant portion of the state was exceedingly wet during June, with portions of south central, southeastern, and northwestern Oklahoma at over 4 inches above normal. The statewide-averaged precipitation total was well over six inches, more than two inches above normal. A small percentage of the state remained slightly below normal, with deficits barely over one inch, but those areas were distinctly localized. The southeast led the pack with a regionally-averaged precipitation total of just over nine inches, more than four inches above normal. That total ranks June as the 6th wettest on record for that corner of the state. South central Oklahoma actually led the rankings with the 5th wettest June on record, nearly four inches above normal for that area as well. As far as the year-to-date precipitation total was concerned, there remained a significant deficit to overcome at the beginning of the month. The state's impressive rainfall amounts managed to accomplish just that for a large part of the state, and allowed the statewide-averaged total for January-June to finish just slightly below normal. The 43rd wettest such period included surpluses of nearly two inches for the northwestern half of the state.

Temperature

June started on a warm note, with triple-digits common in the dry air of the extreme northwest during the month's first 15 days. The intrusion of cooler air behind the cold fronts, as well as the increase in cloudiness associated with the increase in precipitation, began to take its toll on the thermometer. During the month's final half, unseasonably cool temperatures in the 80s became the norm, and dropped the final statewide-averaged temperature to nearly two degrees below normal. The only areas of the state which finished above normal were small sections of both northwestern and southeastern Oklahoma. Despite the cool June readings, however, the year-to-date statewide-averaged temperature remained just over a degree above normal.

June 2004 Statewide Extremes

Description	Extreme	Station	Date
High Temperature	105ºF	Hooker	June 14th
Low Temperature	44ºF	Kenton	June 11th
High Precipitation	12.01 in.	Burneyville	
Low Precipitation	1.72 in.	Claremore	

June Daily Highlights

June 1-4: A weak cold front greeted the state on the 1st, and the accompanying dryline provided the month's first bout with severe weather along the Red River. More widespread severe weather came on the 2nd as unstable air advanced towards a stationary front in the north. The storms that formed and rolled south produced wind gusts of at least 80 mph in Beggs, Cushing, Glencoe, and Morrison. Wind gusts at 15 other locations reached 70 mph, and hail reports of at least two inches in size occurred in Garfield, LeFlore, and Texas counties. Rainfall amounts of close to three inches were reported in southern Oklahoma. The 3rd and 4th proved more calm, with lows in the 50s and 60s, partly cloudy skies, and highs in the 70s and 80s. A few scattered showers and thunderstorms dotted the state during these two days, but amounts were generally less than an inch.

June 5-10: Another period of heavy rains and frequent severe weather. This tumultuous six day period was punctuated by a 4.17-inch rainfall total on the 7th at Pauls Valley as slow-moving thunderstorms dissipated and regenerated over the beleaguered town. Flash flooding was reported throughout that area. The rest of the period was similar, with storms forming over various frontal boundaries in other states before crossing into Oklahoma. Most of these boundaries were either stationary fronts or outflow from previous thunderstorm complexes. The highs during this period were above normal for much of the state as warm, humid air from the south moved north.

June 11-14: Another period of relative calm, this period was marked by fewer organized areas of precipitation. The 13th still saw some rainfall amounts nearing two inches in the northeast from storms which formed along an outflow boundary in Kansas and moved into Oklahoma. High temperatures were above normal, with the state's highest recorded temperature for the month, 105 degrees, occurring on the 14th at Hooker. The 14th also was notable for being one of two days during June without measurable rain being recorded within the state, according to the Oklahoma Mesonet.

June 15-22: An extended period of soggy weather barraged the state during these eight days. This period also marked the changeover from the hot and muggy regime of the first half of the month to the cool, damp weather during the latter half. Severe storms struck the Panhandle on the 15th, accompanied by severe winds and large hail. The Mesonet site at Boise City recorded a wind gust of 77 mph, and a 61 mph gust occurred at the Kenton Mesonet site. An upper-level disturbance triggered widespread showers and thunderstorms early on the 19th in western Oklahoma. Temps were well below normal that day, with highs from the mid-70s to mid-80s. The severe weather on the 21st produced severe wind gusts of 80 mph in Mooreland, and a wind gust of 74 mph was recorded by the Mesonet site in Shawnee. The 22nd saw the active weather of this period diminish, but not before dumping more than two inches of rain across eastern Oklahoma.

June 23-26: The 23rd was the second and final day in which the state received no measurable rainfall within its borders. Coincidentally, the 23rd was perhaps the most delightful day of the month. Low temperatures reached the upper 50s and low 60s, which yielded to a sunny, calm afternoon with highs in the low 80s. Tulsa broke the record for its coolest low temperature for that day with 56 degrees, besting the previous record set in 1920 by one degree. A cold front which entered the state before stalling generated showers and storms intermittently over the next three days. The moisture which fell aided fog formation on the 24th and 25th. Visibilities were reported as less than one-quarter of a mile in Ada and Durant on the 25th.

June 27-30: The month ended with more widespread precipitation. An upper-level disturbance set off additional slow-moving showers and thunderstorms, adding to the already burgeoning rainfall totals. Altus recorded the most rainfall during this period at over three inches, most of which fell on the 28th. Watonga also reported more than three inches of rainfall to bring the month to a close. The month's final day was fittingly wet, as scattered showers and thunderstorms covered almost the entire state. Some areas in and around Jefferson County reported over three inches of rain, with more general reports of two inches in the southern half of Oklahoma.

June 2004 Statewide Statistics

Temperature

	Average	Depart.	Rank (1892-2004)
Month (June)	74.7ºF	-1.8ºF	28th Coolest
Year-to-Date (Jan-Jun)	56.4ºF	1.1ºF	27th Warmest

Precipitation

	Total	Depart.	Rank (1892-2004)
Month (June)	6.61 in.	2.35 in.	14th Wettest
Year-to-Date (Jan-Jun)	19.10 in.	-0.05 in.	43th Wettest

Depart. = Departure from 30-year normal

June 2004 Severe Weather

Significant Tornadoes (F2 or greater)

No significant tornadoes were reported in the state.

Hail (2 inches in diameter or greater)

Size (in.)	Location	County	Date
2.50	Panama	LeFlore	06/02/04
2.00	4 N Garber	Garfield	06/02/04
2.00	5 W Garber	Garfield	06/02/04
2.00	6 N Texhoma	Texas	06/02/04

Wind Gusts (70 mph or greater)

Speed (m.p.h)	Location	County	Date
85	Glencoe	Payne	06/02/04
83	Beggs	Okmulgee	06/02/04
80	Mooreland	Woodward	06/21/04
80	3 W Morrison	Noble	06/02/04
80	Cushing	Payne	06/02/04
77	Boise City	Cimarron	06/15/04
76	Cushing	Payne	06/02/04
74	Shawnee	Pottawatomie	06/21/04
72	Haskell	Muskogee	06/02/04
70	Manchester	Grant	06/02/04
70	3 W Perry	Noble	06/02/04
70	Stillwater	Payne	06/02/04
70	Marshall	Logan	06/02/04
70	5 NW Tryon	Lincoln	06/02/04
70	Perkins	Payne	06/02/04
70	Arcadia	Oklahoma	06/02/04
70	1 N El Reno	Canadian	06/02/04
70	5 W Pawnee	Pawnee	06/02/04
70	Pawnee	Pawnee	06/02/04
70	Stidham	McIntosh	06/02/04
70	5 W Canadian	Pittsburg	06/02/04
70	Rock Island	LeFlore	06/02/04
70	Sallisaw	Sequoyah	06/02/04

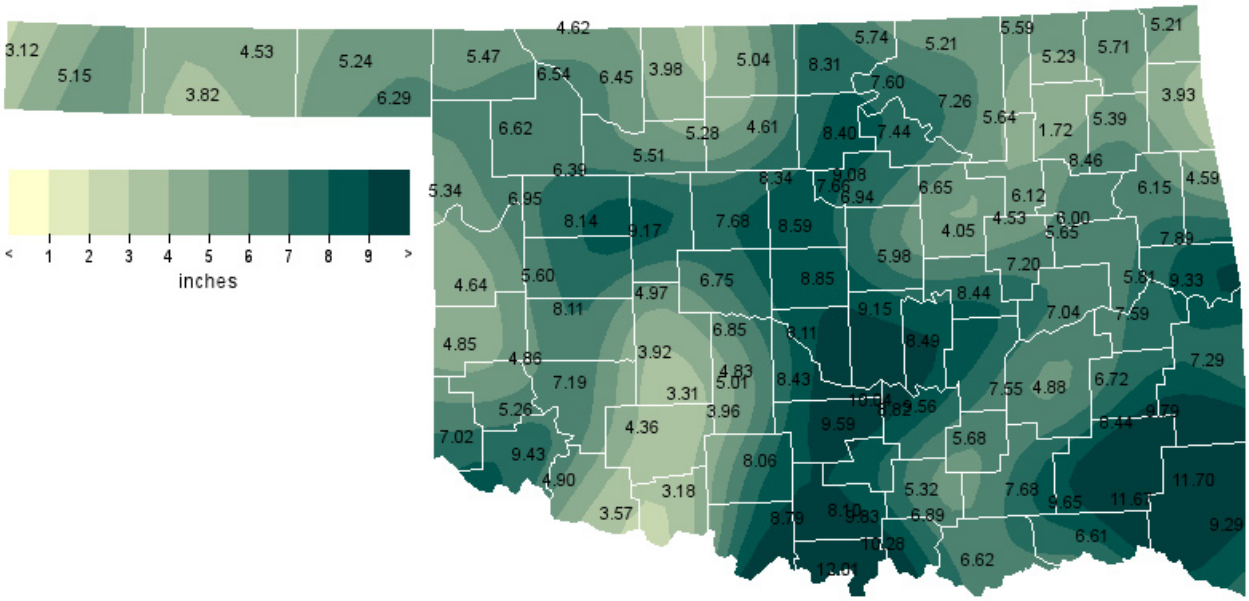
Flooding

Location	County	Date
E Ardmore	Carter	06/07/04
4 WSW Pauls Valley	Garvin	06/07/04
Maysville	Garvin	06/07/04
2 N Pauls Valley	Garvin	06/07/04
Pauls Valley	Garvin	06/07/04
Garvin	McCurtain	06/29/04

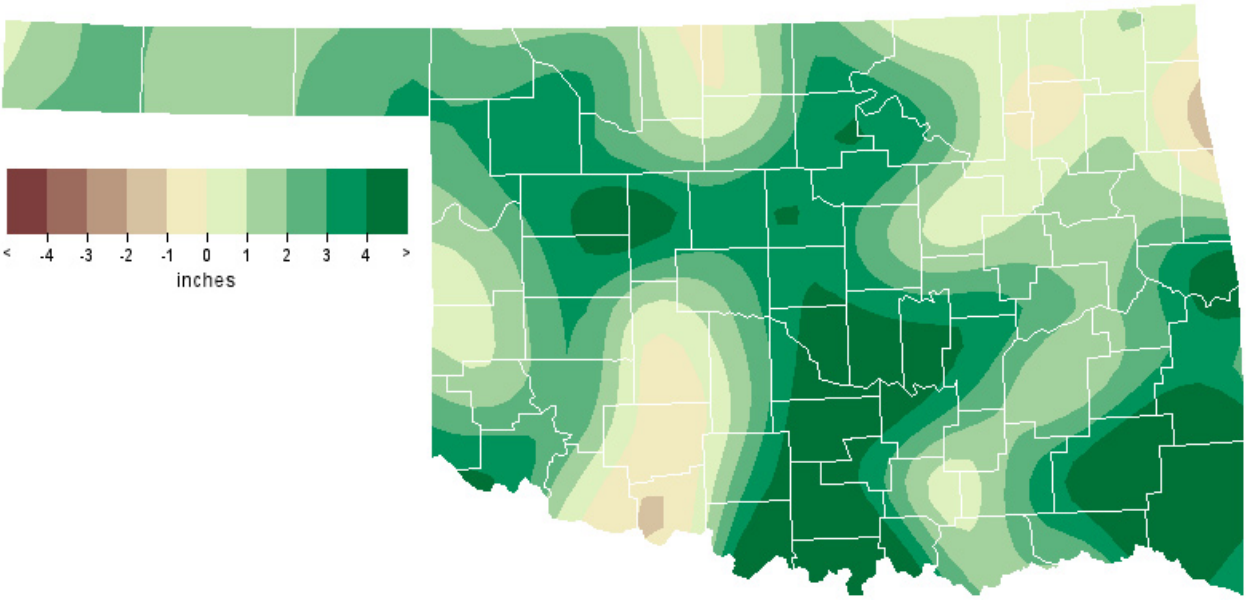
Record Event Reports

Description	Day	Location	Record	Previous Record	Year
Minimum Temperature	23	Tulsa	56 degrees	57 degrees	1920

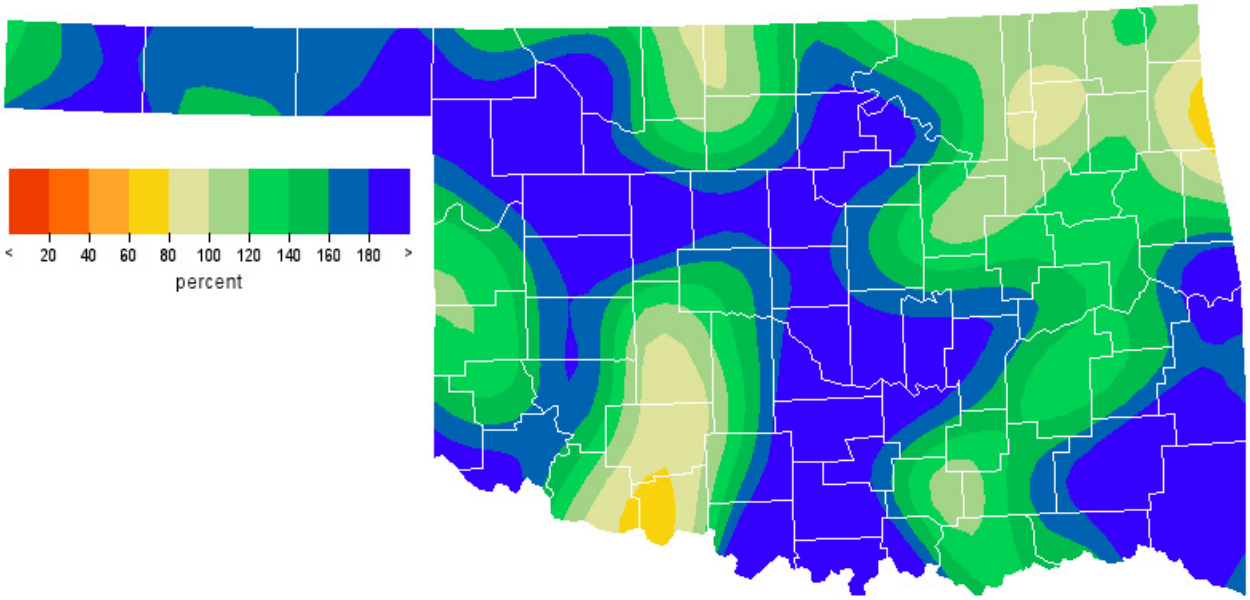
June 2004 Observed Precipitation



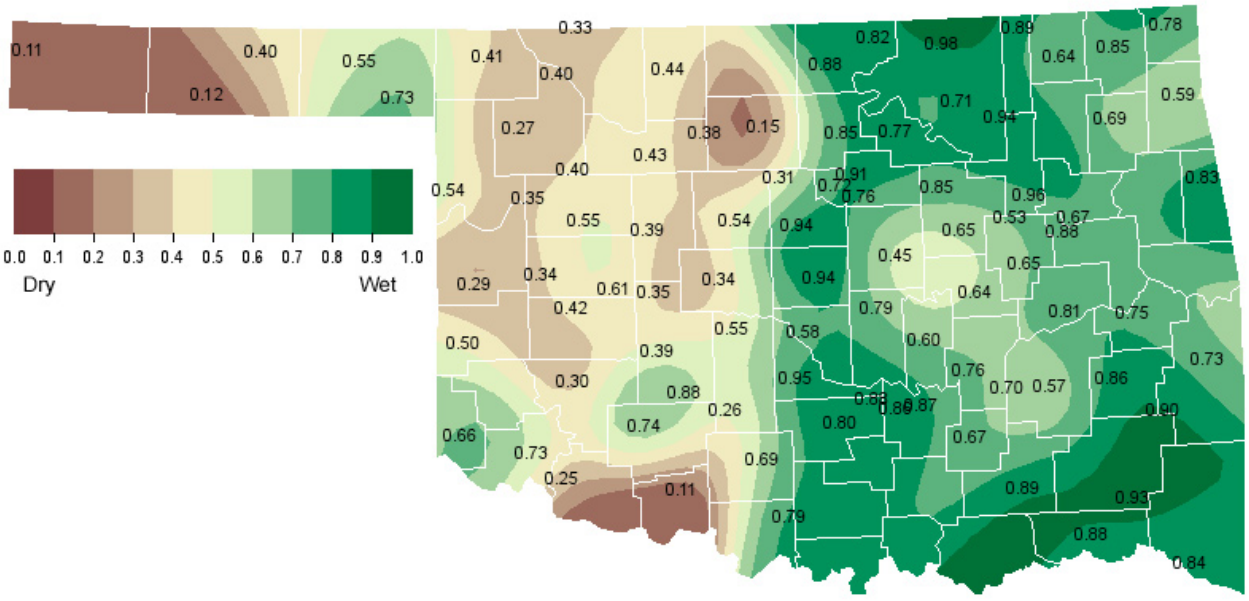
June 2004 Departure from Normal Precipitation



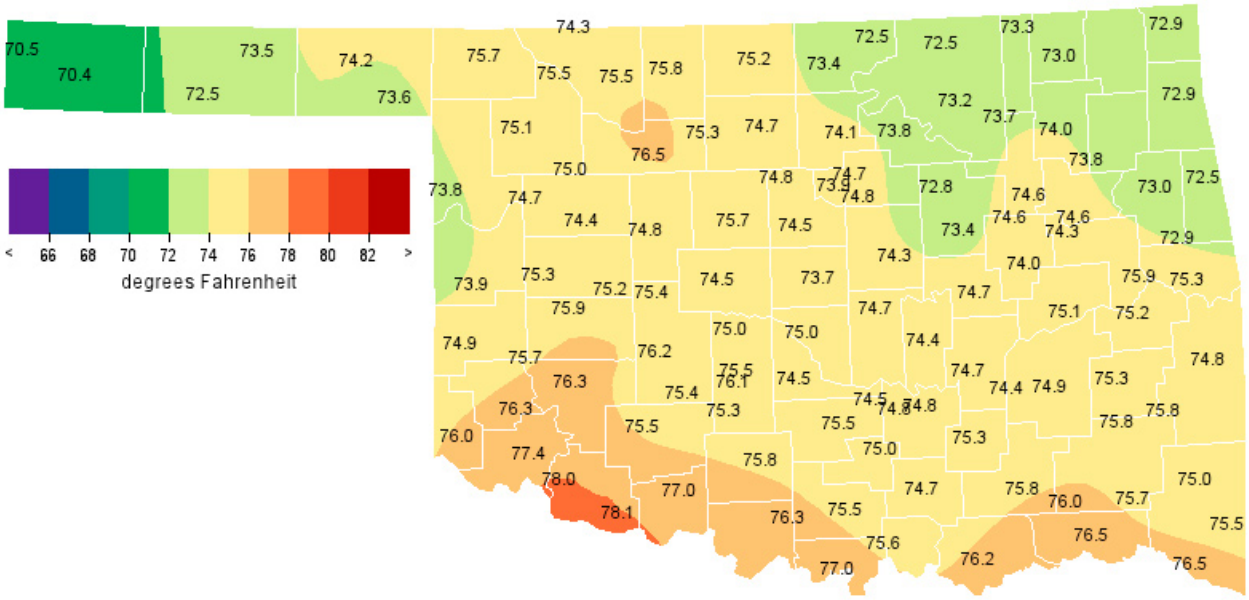
June 2004 Percent of Normal Precipitation



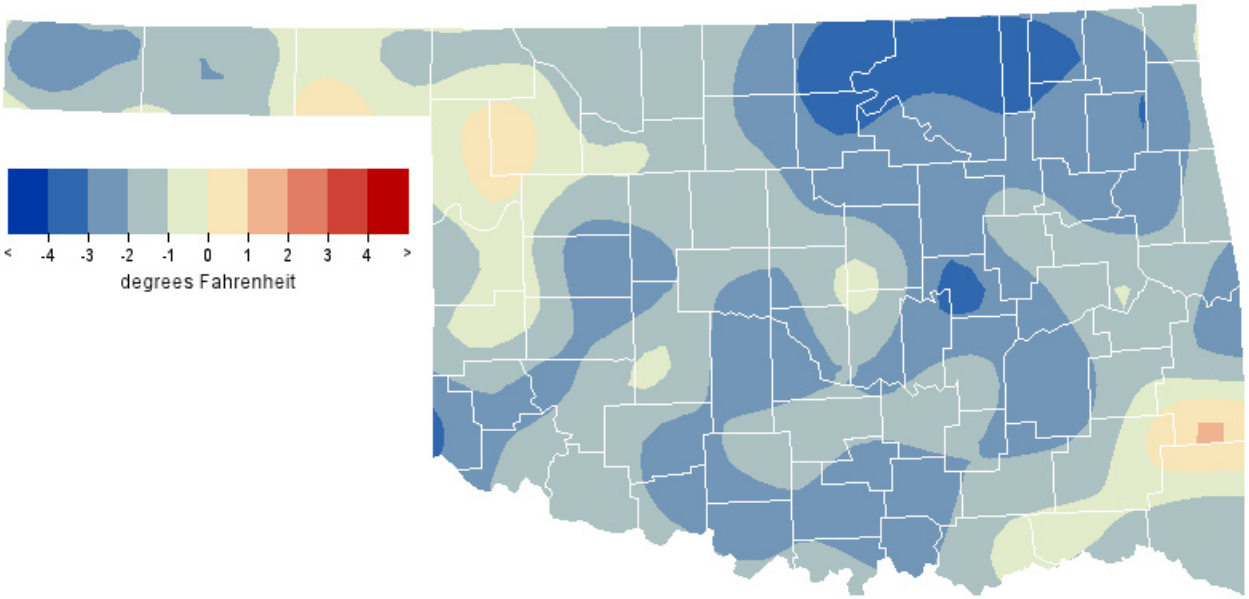
June 2004 Average Soil Moisture at 25cm



June 2004 Average Temperature



June 2004 Departure from Normal Temperature



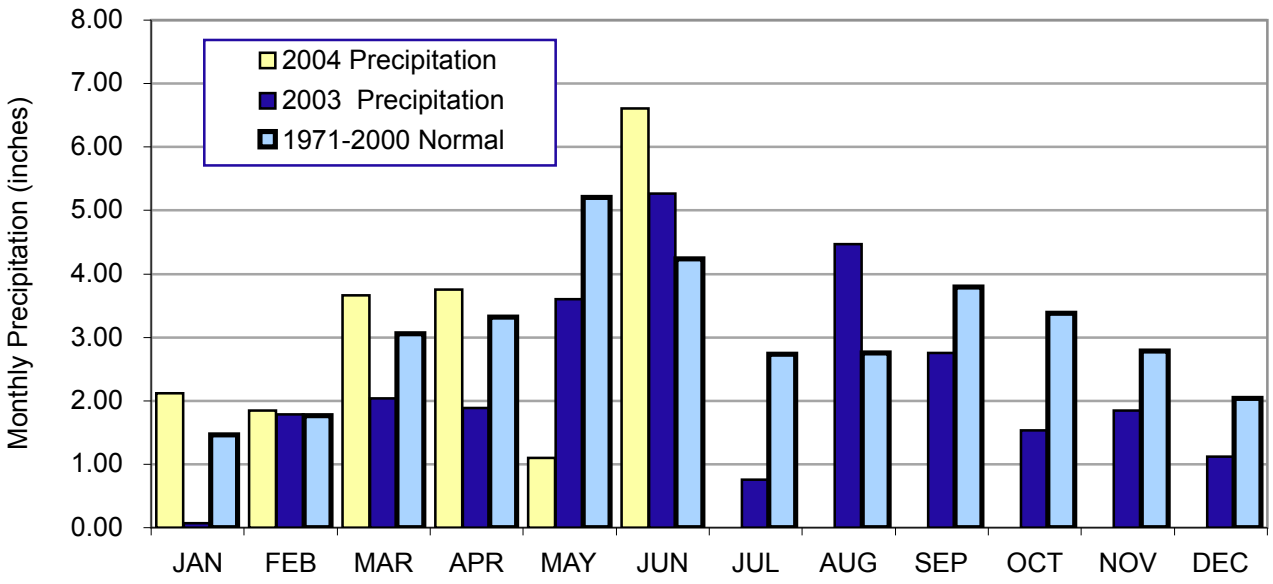
Mesonet Monthly Summary for June 2004

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
PANHANDLE										
Arnett	73.8	98	14	56	23	0	264	5.34	1.00	21
Beaver	74.2	100	14	52	1	1	279	5.24	1.06	20
Boise City	70.4	98	7	46	1	12	174	5.15	1.36	29
Buffalo	75.7	103	12	49	1	0	320	5.21	3.11	20
Goodwell	72.5	102	14	49	1	6	230	3.82	.94	26
Hooker	73.5	105	14	50	1	2	256	4.53	1.17	20
Kenton	70.5	99	7	44	11	9	175	3.12	.52	9
Slapout	73.6	99	14	53	1	1	259	6.29	1.39	30
NORTH CENTRAL										
Blackwell	73.4	93	14	53	1	0	253	8.31	1.69	27
Breckenridge	74.7	96	11	55	23	0	291	4.61	.94	20
Cherokee	75.8	101	14	54	3	0	325	3.98	1.14	20
Fairview	76.5	102	14	57	3	0	344	5.51	1.88	20
Freedom	75.4	104	12	51	1	0	311	6.54	3.81	20
Lahoma	75.3	99	11	56	24	0	308	5.28	1.42	20
May Ranch	74.3	102	12	53	1	1	279	4.62	1.84	20
Medford	75.3	98	12	57	1	0	308	5.04	1.03	9
Newkirk	72.5	90	14	56	1	0	225	5.74	1.64	9
Red Rock	74.1	93	14	56	23	0	273	8.40	1.76	22
Seiling	74.9	100	14	52	1	0	298	6.39	1.86	17
Woodward	75.1	101	14	56	3	0	303	6.62	1.78	30
Alva	75.2	100	11	52	1	****	****	6.45	2.09	20
NORTHEAST										
Bixby	74.5	91	14	56	23	0	286	6.12	1.68	2
Burbank	*****	***	***	***	***	****	****	7.60	1.87	9
Copan	73.3	90	14	55	23	0	249	5.59	1.37	13
Foraker	72.5	90	14	54	1	0	225	5.21	1.20	9
Jay	72.8	89	14	53	4	0	235	3.88	.98	22
Miami	72.8	90	14	53	23	0	235	5.21	1.96	13
Nowata	73.0	89	14	52	23	0	239	5.23	1.23	13
Pawnee	73.8	91	14	54	23	0	263	7.44	2.41	5
Pryor	*****	***	***	***	***	****	****	5.39	1.19	21
Skiatook	73.6	91	14	55	23	0	258	5.64	1.22	21
Vinita	*****	***	***	***	***	****	****	5.71	1.59	13
Wynona	73.1	90	14	55	23	0	243	7.26	1.80	27
Porter	74.6	90	14	57	23	0	289	6.00	1.35	21
Inola	73.9	90	14	55	1	0	266	8.46	1.67	22
Claremore	73.9	90	14	55	23	0	268	1.70	.76	2
WEST CENTRAL										
Bessie	75.9	97	14	57	3	0	327	8.11	2.49	18
Butler	75.4	97	14	54	23	0	312	5.60	1.31	30
Camargo	74.7	99	14	51	1	0	291	6.95	2.41	21
Cheyenne	73.9	95	14	56	3	0	267	4.64	1.91	30
Erick	74.9	96	14	56	23	0	296	4.85	.92	21
Putnam	74.4	99	14	54	1	0	283	8.14	2.06	21
Retrop	75.7	96	14	57	23	0	321	4.86	1.39	17
Watonga	74.8	97	14	57	3	0	295	9.17	2.83	21
Weatherford	75.1	97	14	58	3	0	304	*****	*****	***
CENTRAL										
Bowlegs	74.4	93	1	56	23	0	283	8.49	1.50	21
Bristow	73.4	91	17	52	23	1	253	4.05	.78	22
Chandler	74.3	91	14	56	23	0	280	5.98	1.13	9
Chickasha	75.6	97	1	54	24	0	317	4.83	1.46	9
El Reno	74.2	95	14	54	23	****	****	6.75	1.80	21
Guthrie	74.5	92	14	58	23	0	286	8.59	2.28	9
Kingfisher	75.8	97	14	54	1	****	****	7.64	2.23	21
Marena	73.9	91	14	57	23	0	266	7.66	2.11	21
Minco	75.0	94	1	58	3	0	301	6.85	1.95	21
Oilton	72.8	90	14	52	23	1	234	6.65	1.80	9
Okemah	74.6	92	1	56	4	0	289	8.44	1.82	22
Perkins	74.8	95	14	56	23	0	295	6.94	1.55	9
Shawnee	74.6	92	14	56	23	0	289	9.15	1.74	22
Spencer	73.8	89	14	54	23	0	263	8.85	2.36	9
Stillwater	74.6	92	14	54	1	0	288	9.08	2.05	21
Washington	74.5	95	1	57	1	0	285	8.43	2.78	9
Ninnekah	76.1	96	1	55	23	0	332	5.01	1.43	30
Acme	75.4	94	2	54	23	****	****	3.96	1.31	9
Norman	75.0	94	1	56	23	0	301	8.11	2.17	9
Marshall	74.9	94	14	54	1	0	296	8.34	3.26	21
EAST CENTRAL										
Calvin	74.6	91	1	54	4	1	290	5.36	1.37	30
Cookson	72.9	88	14	53	4	0	238	7.89	1.88	21
Eufaula	75.0	90	1	57	4	0	300	7.04	1.07	5
Haskell	74.4	90	17	53	1	0	282	5.65	1.67	2
McAlester	74.8	93	1	55	4	0	295	4.88	1.01	30
Okmulgee	74.0	91	1	54	23	0	270	7.20	2.29	22
Sallisaw	75.4	91	14	57	4	****	****	9.33	1.42	10
Stigler	75.3	91	18	55	4	0	308	7.59	1.17	22
Stuart	74.5	93	1	55	1	****	****	7.36	1.28	22
Tahlequah	73.0	88	14	55	4	0	240	6.15	1.45	2
Webbers Falls	75.9	93	14	57	4	0	326	5.81	1.02	2
Westville	72.4	88	14	55	4	0	223	4.59	1.33	2
Hectorville	74.6	92	14	57	4	0	289	4.53	1.03	2
SOUTHWEST										
Altus	77.1	99	1	59	1	****	****	9.43	3.35	28
Fort Cobb	76.2	96	11	57	23	0	335	3.92	2.03	21
Hinton	75.5	97	11	56	23	0	314	4.97	1.39	21
Hobart	76.3	96	14	57	23	0	341	7.19	1.52	22
Hollis	75.9	97	1	57	1	****	****	7.02	2.33	2
Mangum	76.3	98	1	54	23	0	340	5.26	1.37	28
Medicine Park	75.6	94	2	60	23	0	317	4.36	1.02	29
Tipton	78.0	99	2	59	1	0	391	4.90	1.75	28
Walters	77.0	96	1	57	1	0	360	3.18	.97	19
Apache	75.3	94	1	57	23	0	309	3.31	.90	19
Grandfield	78.1	99	2	58	23	0	393	3.57	1.40	22
SOUTH CENTRAL										
Ada	74.8	93	1	57	4	0	294	9.56	1.85	9
Burneyville	76.9	96	1	58	4	0	358	12.01	2.56	30
Byars	74.4	92	1	58	23	0	283	10.04	2.37	7
Centrahoma	75.2	91	1	55	4	****	****	5.68	1.20	30
Durant	76.3	91	17	60	4	****	****	5.96	1.14	2
Ketchum Ranch	75.8	93	1	57	23	0	324	8.06	2.49	9
Lane	75.7	90	18	58	4	****	****	7.68	1.38	28
Madill	75.7	90	1	59	4	0	321	10.28	2.45	2
Pauls Valley	75.4	94	1	59	23	0	312	9.59	4.17	7
Ringling	76.3	94	2	60	23	0	339	8.79	2.48	9
Sulphur	75.0	92	1	59	23	0	301	*****	*****	***
Tishomingo	74.9	90	1	57	1	****	****	5.31	1.52	9
Waurika	77.0	96	1	60	23	****	****	8.03	2.84	2
Vanoss	74.8	92	1	57	4	0	293	8.82	1.76	7
Bee	*****	***	***	***	***	****	****	5.99	1.17	7
Newport	75.3	93	1	60	4	****	****	8.10	1.57	9
Ardmore	75.1	92	1	60	4	****	****	9.83	2.51	30
SOUTHEAST										
Antlers	76.0	92	18	55	1	0	330	9.65	2.43	10
Clayton	75.8	93	1	55	4	****	****	8.44	1.66	16
Cloudy	75.7	90	17	57	4	0	322	11.67	2.56	16
Hugo	76.5	90	17	60	4	0	345	6.61	2.14	16
Idabel	76.5	91	18	60	1	0	345	*****	*****	***
Mt Herman	75.0	89	17	57	4	0	300	11.70	2.95	16
Talihina	75.7	91	1	55	1	0	320	9.79	2.21	19
Wilburton	75.3	93	2	55	4	0	308	6.72	1.97	2
Wister	74.8	93	1	52	1	0	295	7.29	2.42	16
Broken Bow	75.5	92	18	54	1	0	316	9.29	1.37	16

June 2004 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Jun-03
Panhandle	4.87	1.94	11th Wettest	7.70 (1962)	0.01 (1924)	5.75
North Central	5.96	2.02	16th Wettest	9.91 (1908)	0.43 (1933)	3.91
Northeast	5.77	1.15	30th Wettest	11.34 (1948)	0.08 (1933)	5.74
West Central	6.54	2.68	9th Wettest	9.25 (1989)	0.32 (1910)	4.59
Central	7.19	2.62	20th Wettest	11.34 (1908)	0.00 (1914)	4.99
East Central	6.52	1.66	25th Wettest	12.69 (1935)	0.00 (1914)	4.11
Southwest	5.19	1.03	19th Wettest	8.79 (1962)	0.56 (1933)	7.45
South Central	8.48	3.84	5th Wettest	9.35 (1945)	0.00 (1914)	5.24
Southeast	9.02	4.32	6th Wettest	11.00 (1945)	0.00 (1914)	5.83
Statewide	6.61	2.35	14th Wettest	8.73 (1908)	0.46 (1933)	5.27

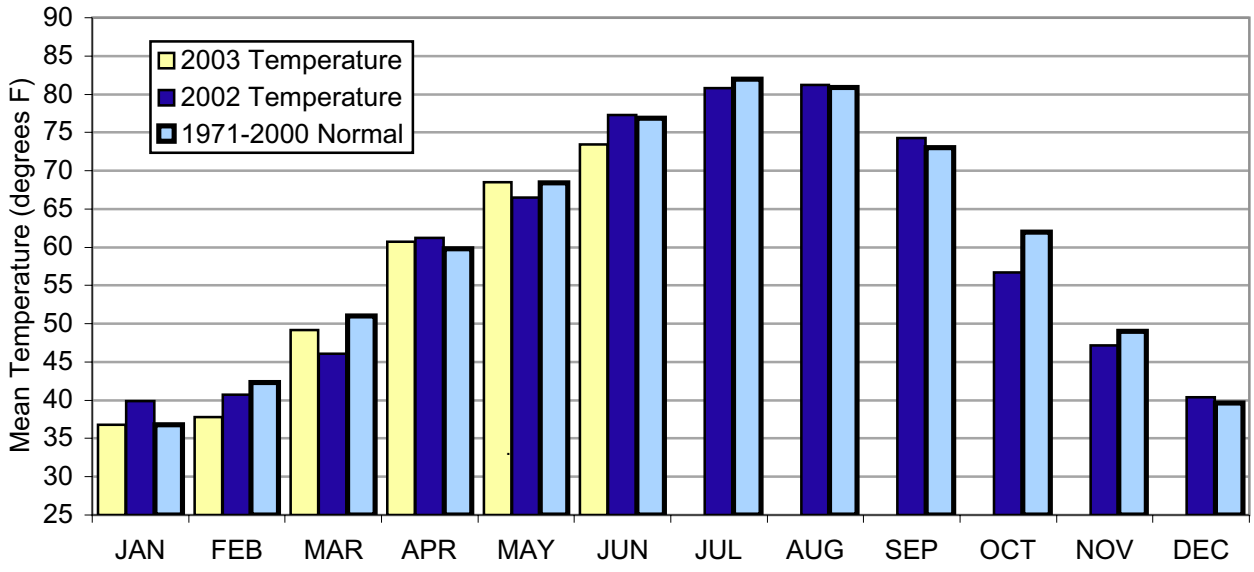
2003 and 2004 Statewide Precipitation Monthly Totals vs. Normal



June 2004 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Jun-03 (F)
Panhandle	73.0	-1.4	41st Coolest	82.0 (1953)	67.7 (1903)	70.5
North Central	74.8	-2.0	27th Coolest	85.7 (1953)	69.7 (1903)	73.2
Northeast	73.5	-2.2	22nd Coolest	83.7 (1953)	68.9 (1903)	72.5
West Central	75.0	-1.4	31st Coolest	85.6 (1953)	69.1 (1903)	73.2
Central	74.6	-2.2	23rd Coolest	84.4 (1953)	69.9 (1903)	73.8
East Central	74.4	-1.8	22nd Coolest	84.4 (1953)	69.8 (1903)	73.2
Southwest	76.5	-1.9	25th Coolest	86.7 (1953)	71.5 (1903)	75.1
South Central	75.5	-2.2	15th Coolest	85.2 (1953)	71.1 (1903)	74.9
Southeast	75.7	-0.7	32nd Coolest	83.9 (1953)	70.3 (1903)	74.2
Statewide	74.7	-1.8	28th Coolest	84.6 (1953)	69.8 (1903)	73.4

2003 and 2004 Statewide Temperature Monthly Averages vs. Normal



Mesonet Extremes for June 2004

Climate Division	High Temp (F)	Day	Station	Low Temp (F)	Day	Station	High Monthly Rainfall (inches)	Station	High Daily Rainfall (inches)	Day	Station
Panhandle	105	14th	Hooker	44	11th	Kenton	6.29	Slapout	3.11	20th	Buffalo
North Central	104	12th	Freedom	51	1st	Freedom	8.40	Red Rock	3.81	20th	Freedom
Northeast	91	14th	Pawnee	52	23rd	Nowata	8.46	Inola	2.41	5th	Pawnee
West Central	99	14th	Camargo	51	1st	Camargo	9.17	Watonga	2.83	21st	Watonga
Central	97	14th	Kingfisher	52	23rd	Oilton	9.15	Shawnee	3.26	21st	Marshall
East Central	93	1st	McAlester	53	4th	Cookson	9.33	Sallisaw	2.29	22nd	Okmulgee
Southwest	99	2nd	Grandfield	54	23rd	Mangum	9.43	Altus	3.35	28th	Altus
South Central	96	1st	Burneyville	55	4th	Centrahoma	12.01	Burneyville	4.17	7th	Pauls Valley
Southeast	93	1st	Clayton	52	1st	Wister	11.70	Mt Herman	2.95	16th	Mt Herman
Statewide	105	14th	Hooker	44	11th	Kenton	12.01	Burneyville	4.17	7th	Pauls Valley

July Climatological Outlook

July in Oklahoma means summer. By the beginning of the month, the jet stream and its accompanying weather systems have retreated to the U.S.-Canadian border. The western arm of a broad area of high pressure at the earth's surface, centered in the central Atlantic Ocean, has migrated northward and spreads across the state. Winds are persistently from the south, but not as strong as during preceding months. As a result, the seventh month of the year is the Oklahoma's warmest with an average temperature of 82 degrees and is the 4th driest month with a statewide-averaged precipitation of 2.73 inches.

Precipitation
Mean: 2.73 inches
Wettest year: 1950, 9.26 inches
Driest year: 1980, 0.41 inches
Wettest location: Carnasaw Fire Tower (McCurtain County), 4.50 inches
Driest location: Altus and Reydon, 1.77 inches
Most recorded: 18.83 inches, Wewoka, 1950

Oklahoma's hottest July, at least since record keeping began in 1892, occurred in 1954. That month produced the highest statewide-averaged temperature (88.6 degrees) of any month during the 110-year period of record. The thermometer indicated 120 degrees at Alva July 18, 1936, at Altus July 19, 1936, and at Tishomingo July 26, 1943. The lowest July statewide-averaged monthly temperature on record was 76.4 degrees in 1906. The lowest temperature ever reported in Oklahoma during July is 41 degrees at Goodwell, July 15, 1915. Humidity, vegetation, and elevation contribute to the variations in temperature across the state. The higher elevation and somewhat drier air in the panhandle lead to cooler nights and a greater range in daily temperatures than in other parts of the state. The more humid air in the southeast typically warms less in the daytime, but also retains more heat through the night. Southwestern Oklahoma suffers the most from the heat.

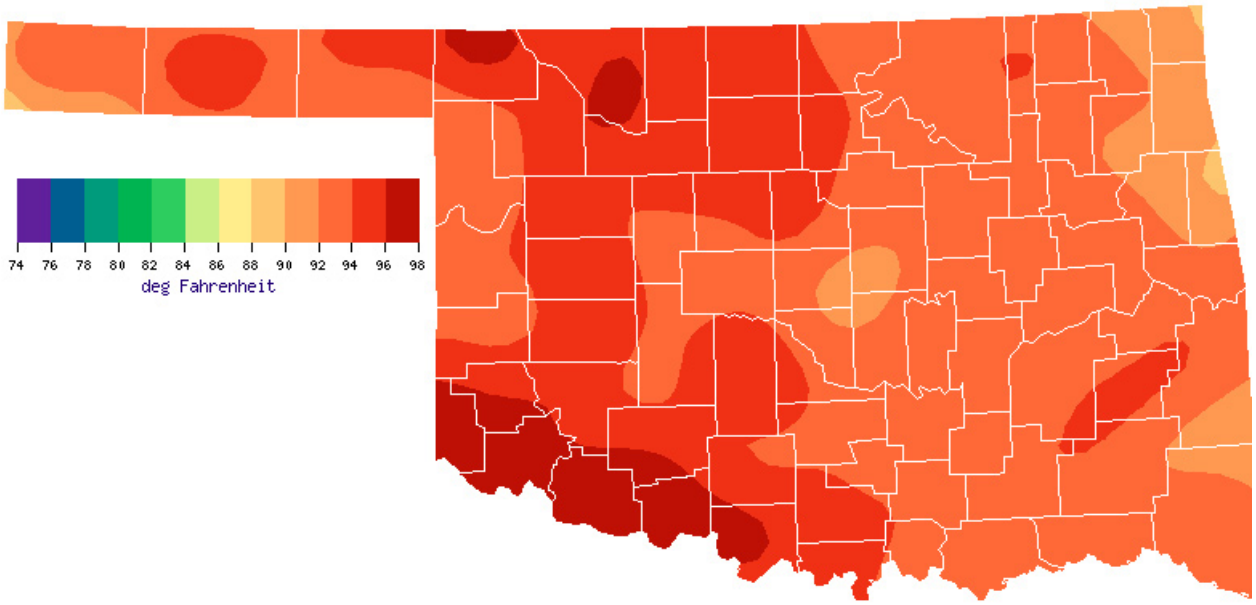
Temperature
Mean: 82.0 degrees
Hottest June: 1954, 88.6 degrees
Coolest June: 1906, 76.4 degrees
Hottest location: Waurika, 85.1 degrees
Coolest location: Boise City, 77.2 degrees
Hottest recorded: 120 degrees, Alva, July 18, 1936
Altus, July 19, 1936
Tishomingo, July 26, 1943
Coldest recorded: 41 degrees, Goodwell, July 15, 1915

July precipitation, all rainfall unless you count an occasional hailstorm, is primarily a result of localized events. While the panhandle enjoys its summer rainy season and rain certainly doesn't disappear from north central Oklahoma, the forested southeast, though drier than it is in other months, still receives more precipitation than other parts of the state. The wettest July, based on a statewide average of rainfall, was 1950 (9.26 inches). The driest July occurred in 1980 (0.41 inches).

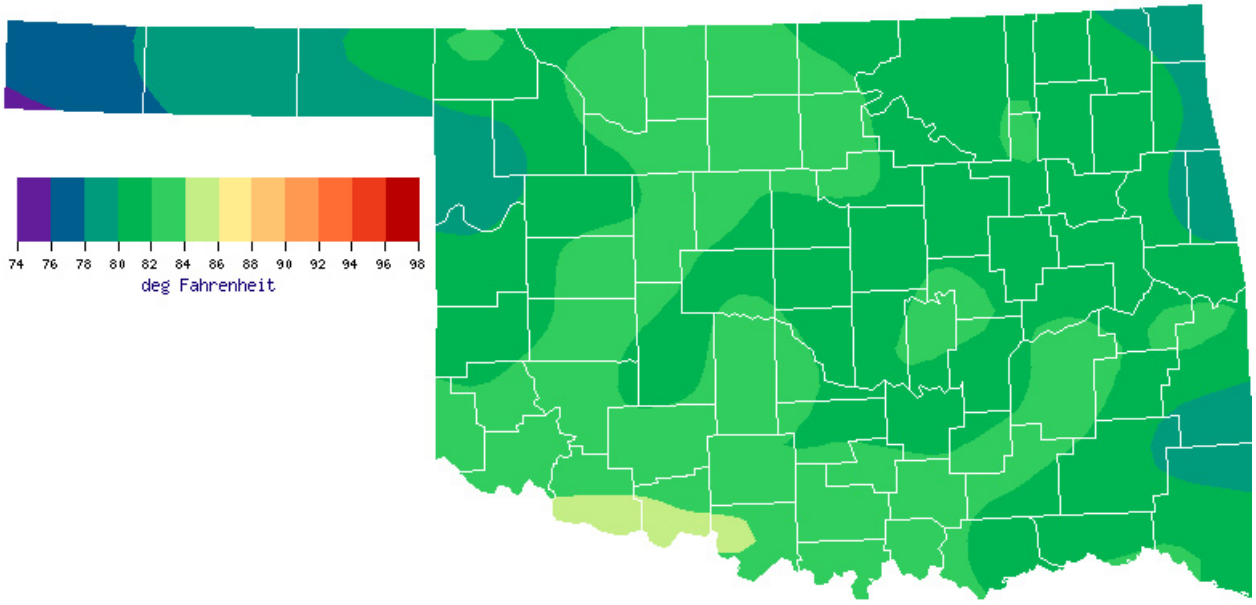
Oklahoma averages only 2.1 tornadoes in July each year. Since 1950, the July record for tornadoes is seven in 1956. Fifteen of those 52 months have been free of confirmed tornadoes. In the absence of well-organized systems, the vast majority of recorded July tornadoes have been of the weaker variety, and multiple occurrences on the same day are extremely rare. Only one fatality has been attributable to a tornado since 1950, that occurring in Murray County in 1955. Lightning, thunderstorm-induced winds, locally heavy rain, and, of course, heat are more likely to provide Oklahoma with its "weather misery" during the month.

Tornadoes
Average July Tornadoes: 2
Most: 7 (1956)

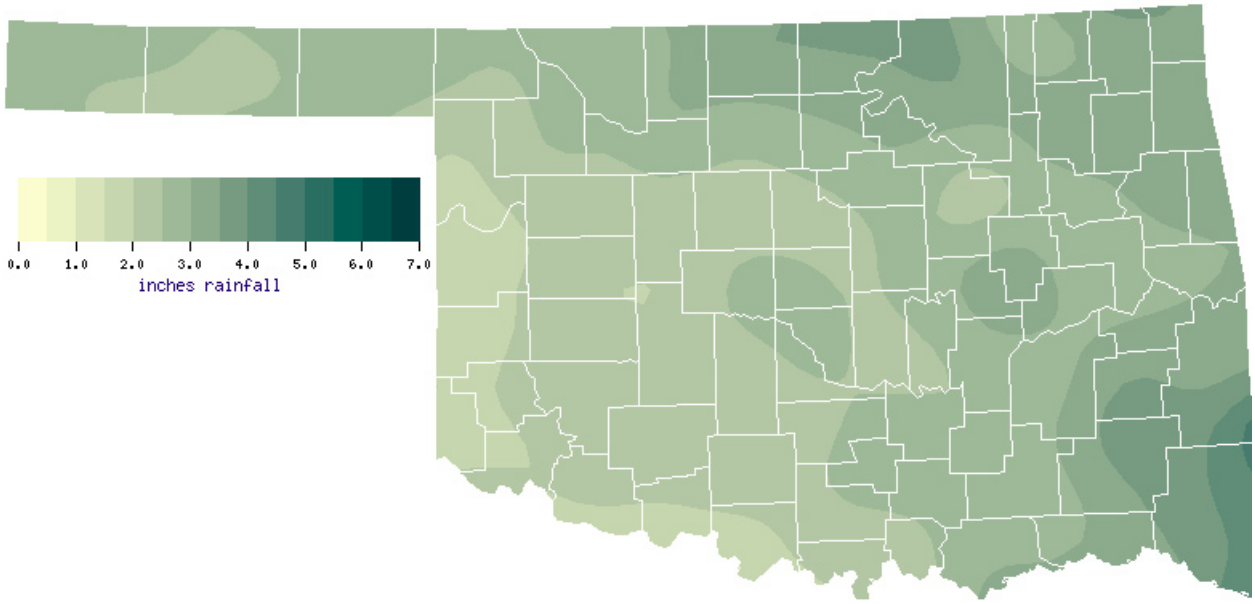
July Normal Monthly Maximum Temperature (1971-2000)



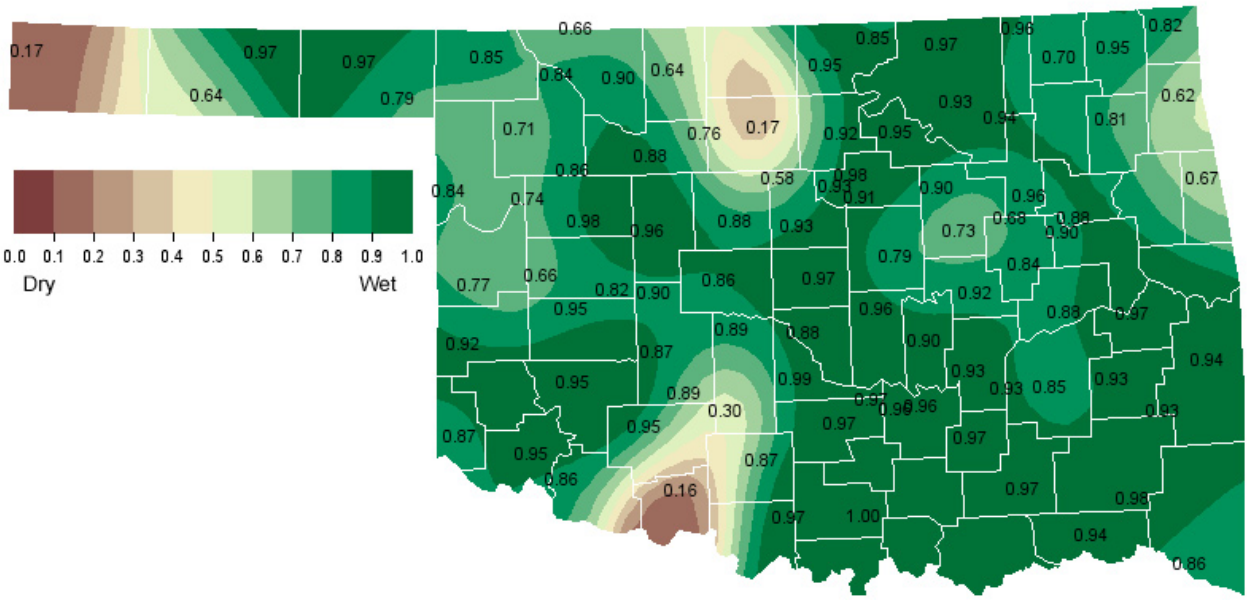
July Normal Monthly Minimum Temperature (1971-2000)



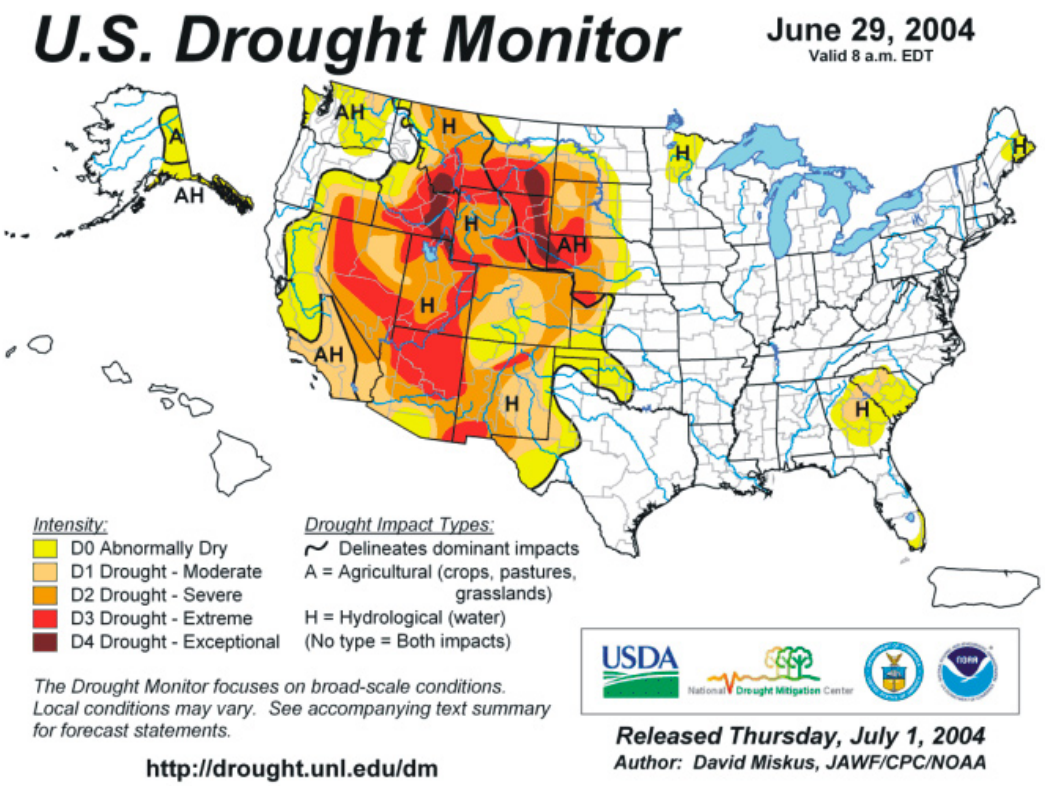
July Normal Precipitation (1971-2000)

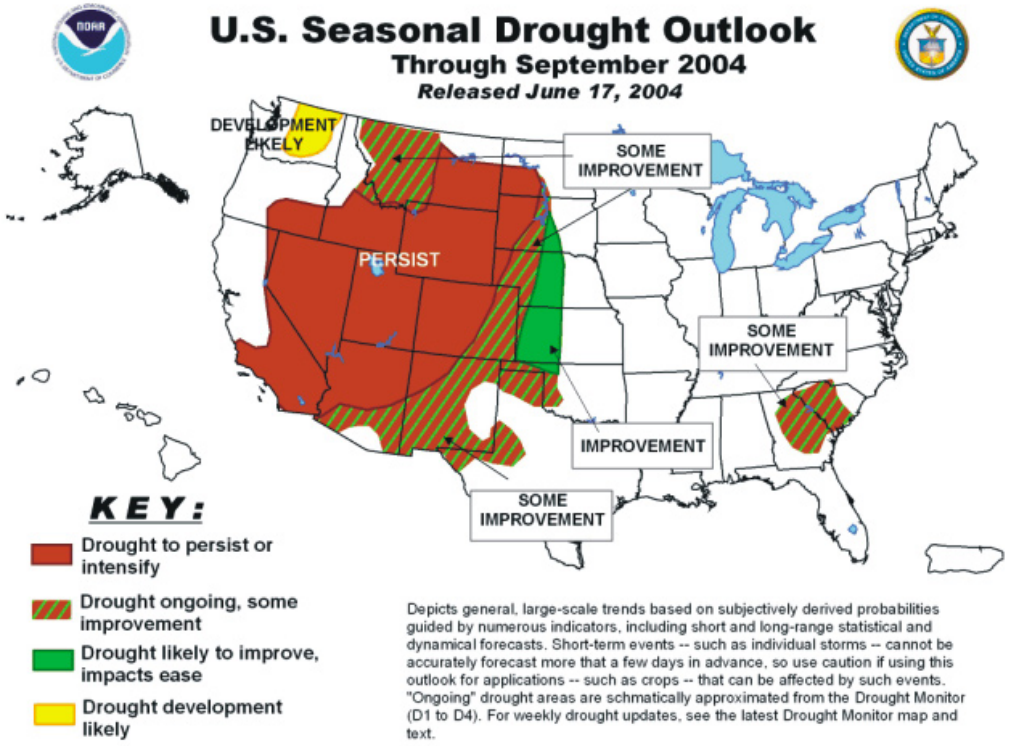


July 1, 2004 Soil Moisture Conditions at 25cm

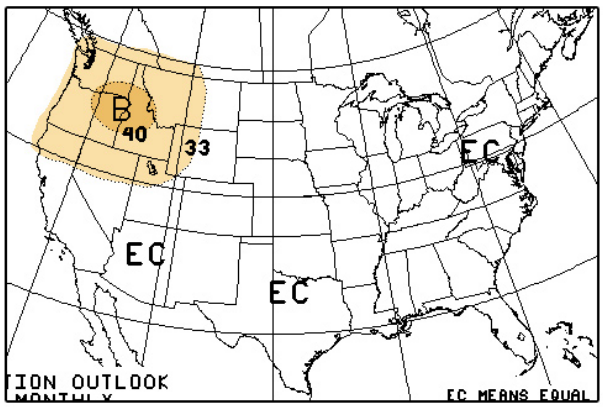


July 2004 Drought Indices





July 2004 U.S. Precipitation Forecast



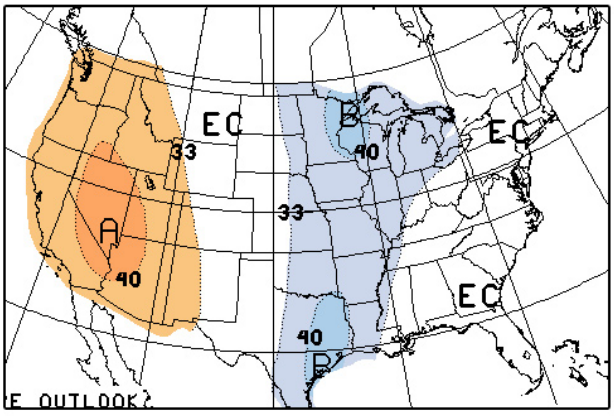
Percent Likelihood of Above or Below Average Precipitation*

5% - 10%
0% - 5%
A = Above

0% - 5%
5% - 10%
B = Below

*EC indicates no forecasted anomalies due to lack of model skill.

July 2004 U.S. Temperature Forecast



Percent Likelihood of Above and Below Average Temperatures*

10% - 20%
5% - 10%
0% - 5%
A = Above

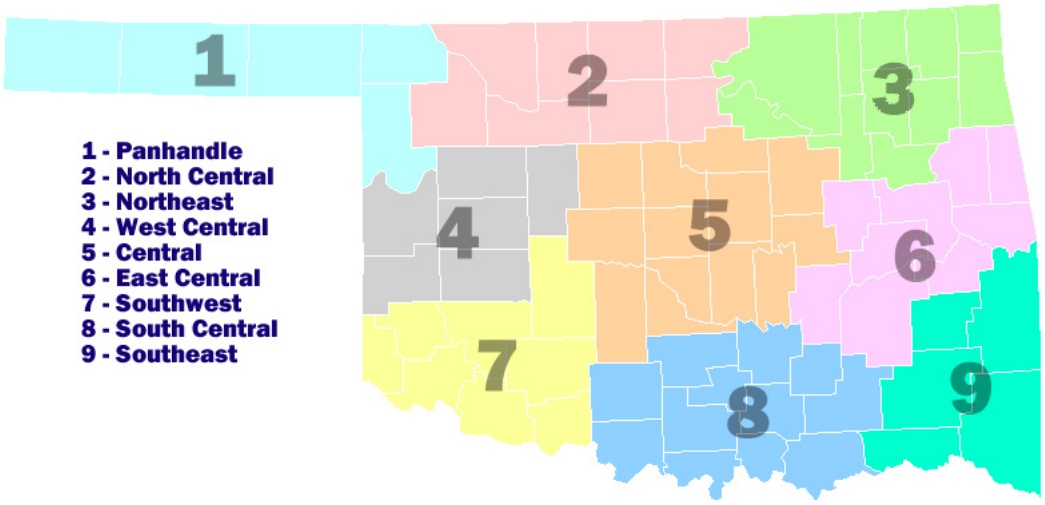
0% - 5%
5% - 10%
B = Below

*EC indicates no forecasted anomalies due to lack of model skill.

July Climate Normals

Climate Division	Max. Temperature (°F)	Min. Temperature (°F)	Avg. Temperature (°F)	Precipitation (inches)
1	94.2	65.6	79.9	2.5
2	94.9	69.4	82.2	2.98
3	92.8	69.9	81.4	3.14
4	94.4	69.2	81.8	2.1
5	93.7	70.5	82.1	2.53
6	92.7	70.1	81.5	2.97
7	96	70.1	83.1	2.12
8	94.3	71.1	82.7	2.53
9	93.4	69	81.2	3.59
Statewide	94	69.6	81.8	2.73

Oklahoma Climate Divisions



Interpretation Information

Mean Daily Temperature: Calculated from an average of the daily maximum and minimum temperatures. Daily averages are summed for each day, and then divided by the number of valid data points – typically the number of days in the month. Although this may differ from the "true" daily average, it is consistent with historical methods of observation and comparable to the normals and extremes for stations and regions of the state.

Degree Days: Degree Days are calculated each day of the month for which there is a temperature report and the mean temperature for the day is less than (Heating Degree Days) or greater than (Cooling Degree Days) 65 degrees. Daily values are summed to arrive at a monthly total. HDD/CDD are qualitative measures of how much heating/cooling was required to maintain a comfortable indoor temperature. Missing observations may result in an artificially high or low value.

Severe Weather Reports: Only the most significant events are listed. Tornadoes of F2 or greater strength (on the 0-5 Fujita scale), hail of two inches diameter or greater, and wind speeds of 70 miles per hour or above are listed. National Weather Service defines storms as severe when they produce a tornado, hail of three-quarters inch or greater, or wind speeds above 57 miles per hour (50 knots). For additional reports, contact the Oklahoma Climatological Survey, Storm Prediction Center, or your local National Weather Service forecast office.

Soil Moisture: The soil moisture variable displayed is the Fractional Water Index (FWI), measured at a depth of 25 cm. This unitless value ranges from very dry soil having a value of 0, to saturated soils having a value of 1.

Additional Resources

Sunrise / Sunset tables
U.S. Naval Observatory**:** http://aa.usno.navy.mil/data

Severe Storm Reports
Storm Prediction Center: http://spc.noaa.gov/climo/

National Climatic Data Center (more than about 4-5 months old):
http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storms

Seasonal Outlooks
Climate Prediction Center:
http://www.cpc.ncep.noaa.gov/products/OUTLOOKS_index.html

Climate Calendars and other local weather and climate information
Oklahoma Climatological Survey: http://climate.ocs.ou.edu or
http://www.ocs.ou.edu/
E-mail (ocs@ou.edu) or telephone (405/325-2541)

Oklahoma Climatological Survey

Oklahoma Climatological Survey is the State Climate Office for Oklahoma

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