OKLAHOMA MONTHLY CLIMATE SUMMARY
JUNE 2009

OKLAHOMA CLIMATOLOGICAL SURVEY

The month was dry and warm, behaving more like July than June. The statewide average temperature was more than 2 degrees above normal to finish as the 26th warmest June since 1895. The statewide average precipitation finished nearly 2 inches below normal to rank as the 27th driest. The month was not entirely without rainfall, however, and June rains normally come with severe weather. Estimated winds of 100 mph were reported near McAlester on the 10th along with winds of 85 mph at two other locations. Stillwater was hit by a batch of storms that had formed into a bow echo, blasting Oklahoma State University with baseball size hail and 60 mph winds. Several instances of damaging heat bursts occurred with dying thunderstorms and a microburst struck Harrah and other parts of eastern Oklahoma County. A very fast-forming storm developed over east Norman and quickly dropped an EF-1 tornado that damaged homes.

Precipitation

Central Oklahoma was the driest region of the state with a deficit that ballooned to nearly 3 inches, their 18th driest June on record. Only a few select locations that received hit-and-miss thunderstorms came out ahead for the month. The rains were more plentiful along the Kansas and Arkansas borders down through southeastern Oklahoma. The far southeastern corner was parched, however, with Broken Bow recording less than an inch of rainfall to finish at more than 4 inches below normal. Jay led the state with more than 6 inches of rainfall and Seiling brought up the rear with less than a half of an inch. For the year, the statewide average precipitation total was more than 2 inches below normal to rank the January-June period as the 50th driest. South central and southeastern Oklahoma both remained above normal for the year while the remainder of the state stayed on the dry side. The Panhandle, central and west central portions of the state were particularly dry for that period and were ranked as the 16th-, 37th- and 24th-driest on record, respectively.

June 2009 Statewide Extremes

Description	Extreme	Station	Day
High Temperature	106ºF	Fairview, Grandfield	27
Low Temperature	43ºF	Boise City	8
High Precipitation	6.58 in.	Jay	
Low Precipitation	0.46 in.	Seiling	

Temperature

A strip from the northwest down through central Oklahoma was the warmest area of the state during June. Central Oklahoma was nearly 3 degrees above normal and ranked as the 17th warmest on record for that area. The Oklahoma Mesonet site at Fairview led the state with an average temperature of 82.2 degrees. Boise City was the coolest at 71.9 degrees. For the year thus far, the statewide average temperature was just a bit more than a degree above normal and ranked as the 29th warmest on record.

June Daily Highlights

June 1-3: An upper-level disturbance approaching from the west combined with daytime heating to produce a few showers and storms in south central Oklahoma on the first. Large hail propelled some of the storms past severe limits. Highs rose into the 80s and 90s during the months first two days. As the storm system passed and a cold front crossed the state on the third, heavier rains fell in south central Oklahoma – more than 3 inches was recorded in some locales. Dry and stable air followed the front and high temperatures for the day remained in the 70s for the most part.

June 4-5: Unseasonably cool both mornings with lows in the 40s and 50s on the fourth to 50s and 60s on the fifth. Highs rebounded into the 70s and 80s on the fourth to 80s and 90s on the fifth. A few light showers were scattered across the state on the fifth with very little accumulations.

June 6-11: Showers and storms died overnight on the sixth in the northwest, creating several heat bursts. Lows were in the 60s and 70s before rebounding into the 90s. The state's first triple-digit readings of the year were found at Altus, Beaver and Hollis. Altus and Beaver registered 101 degrees, while Hollis had 100 degrees as its top mark. The period was warm and muggy from that point on with several severe weather occurrences. A stationary front which then turned into a warm front provided a focus for storms. Strong winds accompanied storms in the north on the ninth – an 81-mph gust was estimated in Ponca City that evening to go along with nickel size hail. The most severe storms occurred on the 10th with 100 mph winds estimated with a storm near McAlester, and 85 mph winds in Pontotoc County. Wind damage was widespread in southern Oklahoma with lots of roof damage and power outages. Two weak tornadoes touched down in Haskell County. The surface low pressure system which helped to set off the severe weather moved to the northeast on the 11th and things calmed a bit. The day was muggy with highs in the 80s.

June 12-15: Another stationary front allowed for more storm development on the 12th. A large storm complex moved southeast out of Kansas into northern Oklahoma in the morning and developed into a bow echo. Baseball size hail and winds of 60 mph battered Stillwater, shattering windows across the town and causing power outages. Those storms continued to march east with winds of up to 85 mph measured by the Oklahoma Mesonet site at Inola. After those storms exited the state, more storms popped up that evening, including a very fast-forming storm that dropped an EF-1 tornado on the east side of Norman. The twister damaged roofs and fences in a two-mile long stretch. Straight-line winds also damaged homes in east Norman. Those storms also headed east with winds of greater than 75 mph near Krebs to go along with baseball size hail. More storms on the 13th, this time in the Panhandle. Baseball size hail and 70 mph winds struck several Panhandle locations. An approaching upper wave kicked off more storms late on the 14th and into the 15th. The weather finally calmed on the 15th leaving hot and humid conditions behind, although more severe storms were found in the Oklahoma Panhandle.

June 16-20: This four-day period was hot and humid with a few storms popping up at times. Northern Oklahoma received heavy rains on the 20th and cloudiness kept the temperatures down somewhat on the 19th and 20th with no triple-digit temperatures recorded by the Mesonet.

June 21-27: An upper-level ridge moved into position over Oklahoma and combined with a surface high over the Gulf of Mexico to give Oklahoma July-like weather in June. Temperatures soared into the 100s each day in northwestern and north central Oklahoma each of these days with Fairview recording 104 degrees or better five out of the seven days. The month's highest temperature of 106 degrees was set at Fairview and Grandfield on the 27th. That day also saw storms form along a cold front that had sagged into northwestern Oklahoma. Nearly an inch fell along the Oklahoma-Kansas border.

June 28-30: The month ended on a hot note, albeit a bit cooler than the previous seven days, and with a few more storms scattered around. Most of the rainfall amounts were less than an inch. A microburst struck eastern Oklahoma County on the 30th, damaging homes in Harrah with straight-line winds. High winds also damaged homes and property in northeastern Oklahoma on the 30th.

June 2009 Statewide Statistics

Temperature

	Average	Depart.	Rank (1895-2009)
Month (Jun)	78.6ºF	2.1ºF	26th Warmest
Year-to-Date (Jan-Jun)	56.4ºF	1.1ºF	29th Warmest

Precipitation

	Total	Depart.	Rank (1895-2009)
Month (Jun)	2.55 in.	-1.71 in.	27th Driest
Year-to-Date (Jan-Jun)	16.68 in.	-2.47 in.	50th Driest

Depart. = Departure from 30-year normal

June 2009 Severe Weather

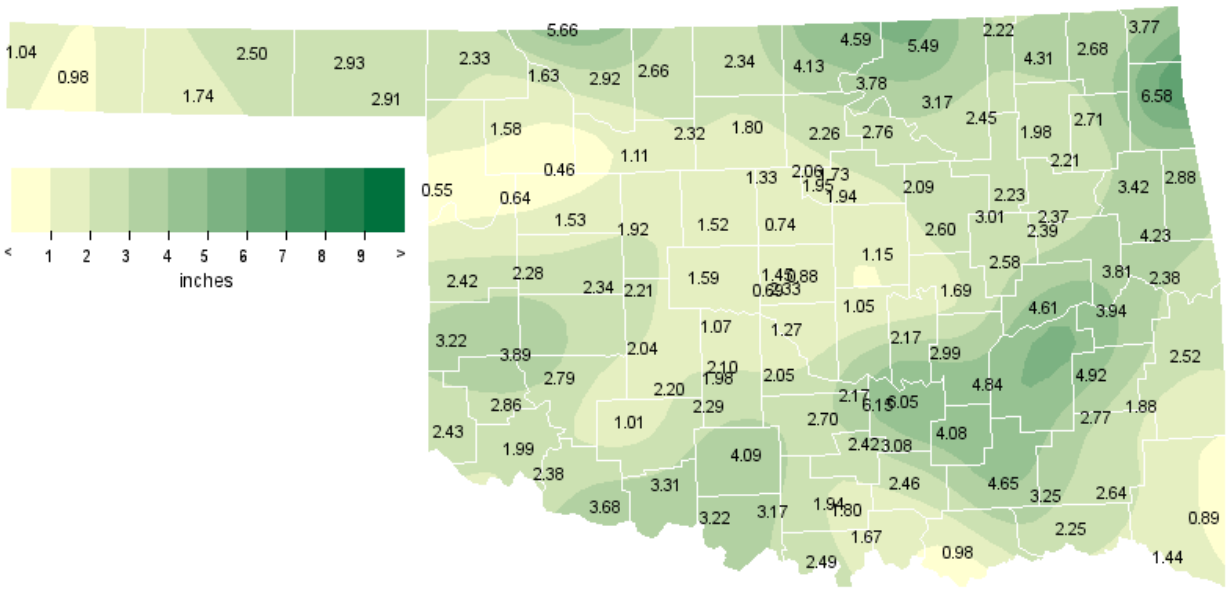
Hail (2 inches in diameter or greater)

Size (in.)	Location	County	Day
3.00	6 N Stillwater	Payne	12
3.00	Stillwater	Payne	12
3.00	3 NW Stillwater	Payne	12
2.75	3 NW Stillwater	Payne	12
2.75	8 SW Tahlequah	Cherokee	12
2.75	2 E Spiro	LeFlore	12
2.75	Pocola	LeFlore	12
2.75	Spiro	LeFlore	12
2.75	2 E Spiro	LeFlore	12
2.50	Stillwater	Payne	12
2.00	6 N Stillwater	Payne	12
2.75	Krebs	Pittsburg	13
2.75	Hooker	Texas	13
2.50	10 E Guymon	Texas	13
2.50	Hooker	Texas	13
2.50	Forgan	Beaver	13
3.00	6 N Darrouzett	Beaver	15
2.75	5 W Slapout	Beaver	15

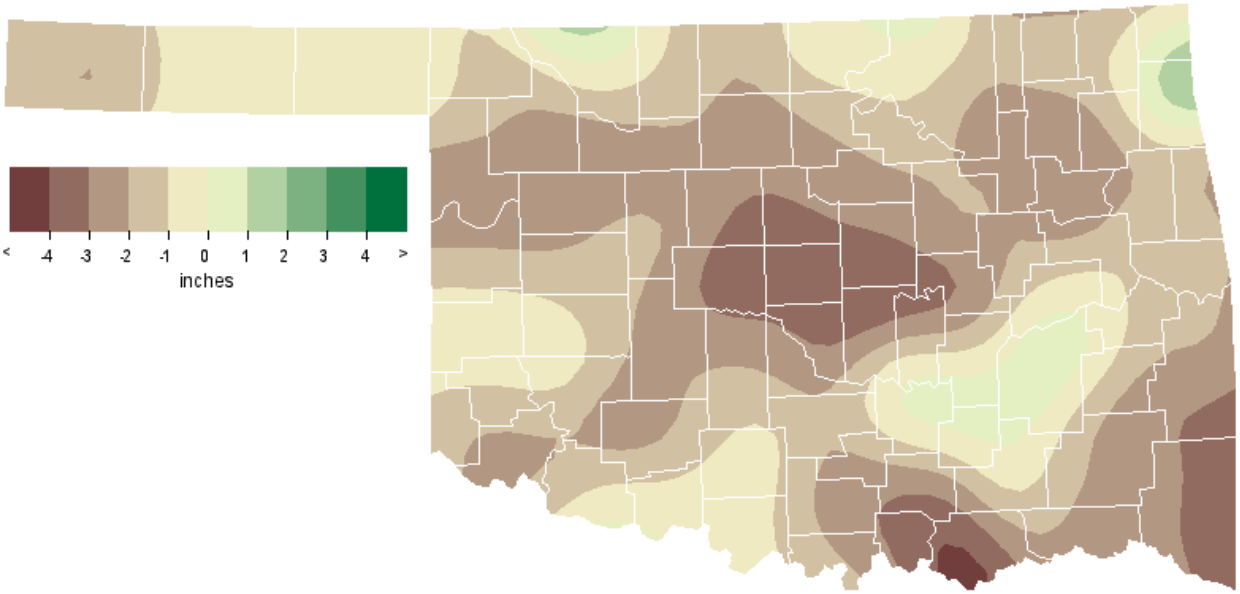
Wind Gusts (70 mph or greater)

Speed (m.p.h)	Location	County	Day
71	6 SSW Washington	McClain	7
81	Ponca City	Kay	9
100	7 NE McAlester	Pittsburg	10
85	1 W Fitzhugh	Pontotoc	10
80	Velma	Stephens	10
70	Kinta	Haskell	10
85	3 SSE Inola	Rogers	12
70	1 E Claremore	Rogers	12
75	Krebs	Pittsburg	13
70	Knowles	Beaver	17
70	2 SW Balko	Beaver	17
70	2 N Canton	Blaine	28

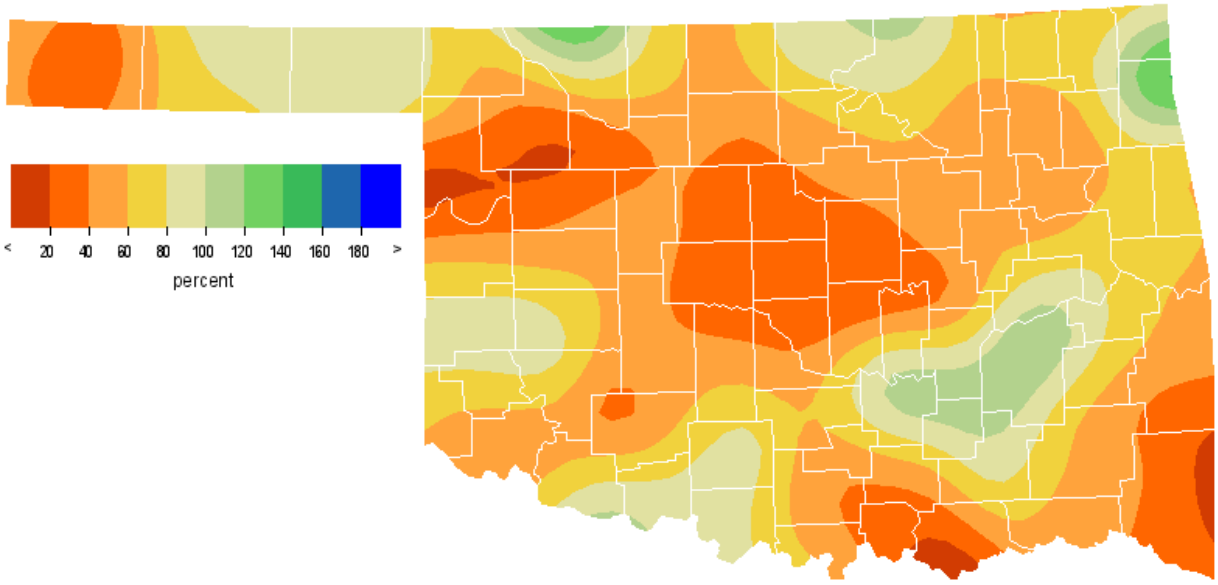
June 2009 Observed Precipitation



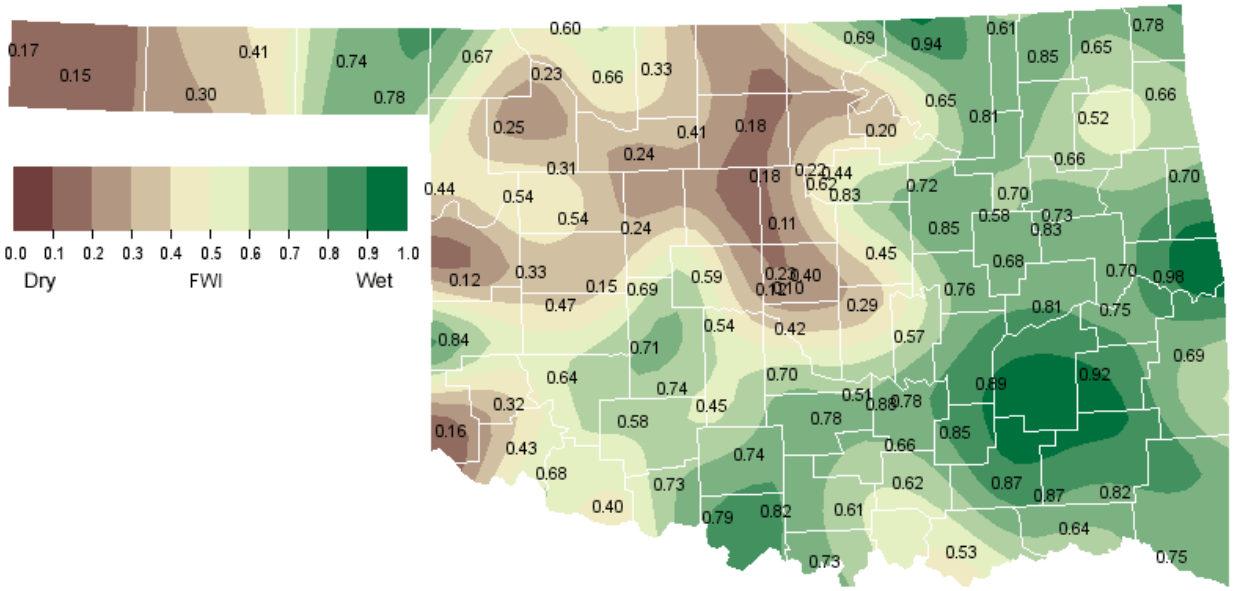
June 2009 Departure from Normal Precipitation



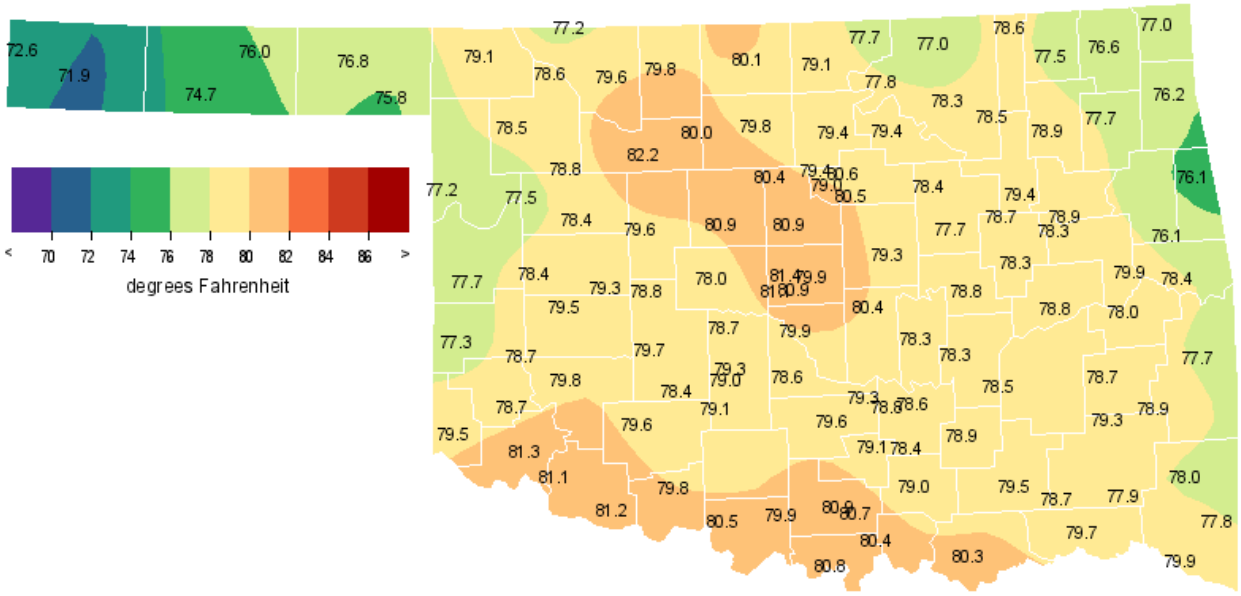
June 2009 Percent of Normal Precipitation



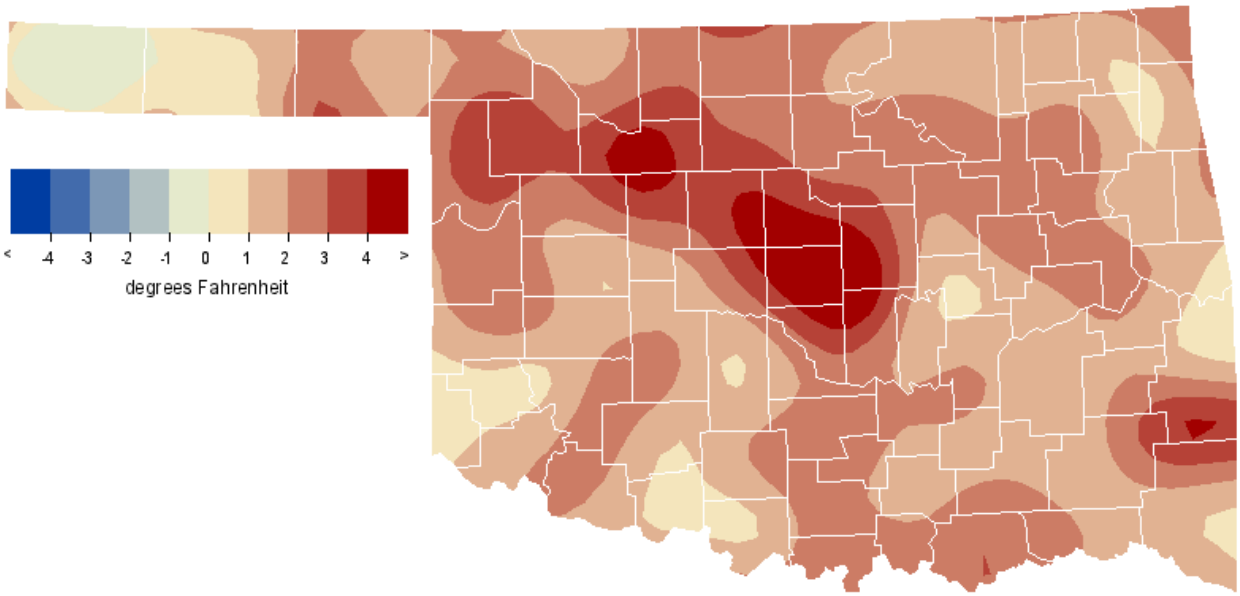
June 2009 Average Soil Moisture at 25cm



June 2009 Average Temperature



June 2009 Departure from Normal Temperature



Mesonet Monthly Summary for June 2009

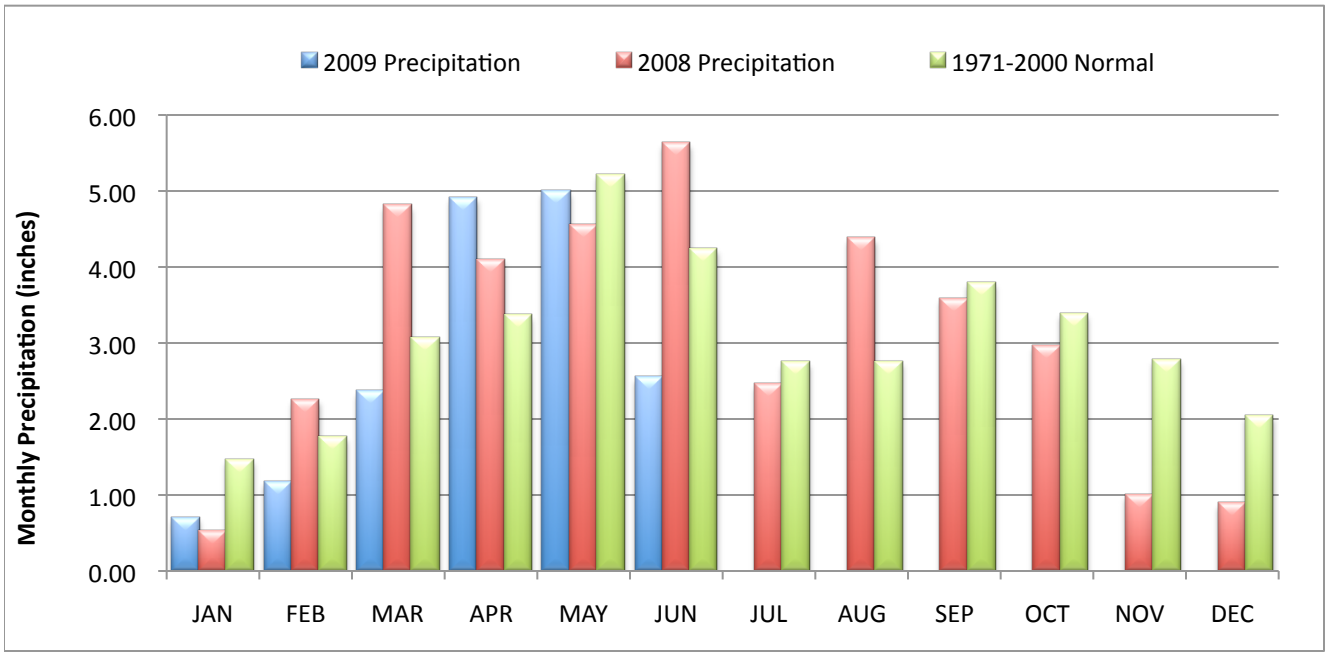
NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
PANHANDLE										
Arnett	77.2	101	27	50	4	0	366	.55	.24	10
Beaver	76.8	104	17	47	4	0	355	2.93	1.50	13
Boise City	72.0	98	25	43	8	16	225	.98	.70	20
Buffalo	79.1	104	17	48	4	0	423	2.33	1.09	20
NORTH CENTRAL										
Alva	79.6	104	17	50	4	0	438	2.92	1.02	20
Blackwell	79.1	101	27	53	4	0	422	4.13	1.13	12
Breckinridge	79.9	104	27	51	4	0	446	1.80	.80	12
Cherokee	79.8	102	17	50	4	0	443	2.66	1.21	20
Fairview	82.1	106	27	52	4	0	514	1.11	.33	20
Freedom	78.7	102	17	48	4	1	410	1.63	.66	12
Lahoma	80.0	104	27	51	4	0	449	2.32	.81	12
NORTHEAST										
Bixby	79.3	98	27	53	5	0	429	2.23	1.14	12
Burbank	77.9	100	27	52	4	1	388	3.78	1.31	2
Claremore	78.9	100	27	54	4	0	417	1.98	1.00	12
Copan	78.6	100	27	52	4	3	411	2.22	.81	2
Foraker	77.1	98	25	53	4	2	365	5.49	1.98	2
Inola	*****	***	***	***	***	****	****	2.21	1.14	12
Jay	76.2	95	27	49	5	3	338	6.58	2.65	12
Miami	77.0	97	27	51	5	3	363	3.77	2.11	9
WEST CENTRAL										
Bessie	79.4	103	27	52	4	0	432	*****	*****	***
Butler	78.4	101	27	50	4	0	403	2.28	.51	28
Camargo	77.4	102	27	48	4	1	375	.64	.23	10
Cheyenne	77.7	100	27	52	4	1	381	2.42	1.04	30
Erick	77.3	103	27	51	4	0	369	3.22	1.27	2
CENTRAL										
Acme	79.2	102	27	53	4	0	425	2.29	1.40	3
Bowlegs	78.4	100	27	54	4	0	401	2.17	1.31	3
Bristow	77.7	98	27	52	5	1	383	2.60	1.49	12
Lake Carl Blac	79.4	103	27	50	4	1	434	2.06	.85	12
Chandler	79.4	100	27	54	5	0	431	1.15	.36	28
Chickasha	79.4	102	27	53	4	0	432	2.10	.50	15
El Reno	77.9	101	27	45	4	4	392	1.59	.47	10
Guthrie	80.9	104	25	51	4	0	476	.74	.27	28
Kingfisher	80.9	106	27	50	4	0	476	1.52	.57	10
Marena	79.0	101	27	52	4	0	421	1.95	.93	12
Minco	78.7	100	27	52	4	0	413	1.07	.24	19
Marshall	80.3	104	27	50	4	0	460	1.33	.47	10
EAST CENTRAL										
Cookson	76.0	94	27	49	5	2	333	4.23	1.34	12
Eufaula	78.9	97	27	55	5	0	416	4.61	2.30	10
Haskell	78.3	98	24	52	5	0	400	2.39	1.15	12
Hectorville	78.8	98	27	54	5	0	413	3.01	1.14	12
Holdenville	78.3	96	27	55	4	0	399	2.99	2.02	10
McAlester	78.7	97	27	53	5	****	****	*****	1.50	13
Okmulgee	78.3	97	26	53	5	0	400	2.58	1.26	12
SOUTHWEST										
Altus	81.3	105	27	54	4	0	489	1.99	.42	10
Apache	78.5	100	27	52	4	0	404	2.20	.91	19
Fort Cobb	79.7	102	27	54	4	0	441	2.04	1.41	2
Grandfield	81.1	106	27	55	4	0	484	3.68	1.05	10
Hinton	78.9	103	27	51	4	1	417	2.21	.69	10
Hobart	79.9	104	27	51	4	0	447	2.79	1.12	2
SOUTH CENTRAL										
Ada	78.6	99	27	54	5	0	408	6.05	3.03	3
Ardmore	80.6	101	27	58	5	0	469	1.80	1.11	3
Burneyville	80.8	103	27	53	5	0	473	2.49	1.17	13
Byars	79.3	99	27	55	4	0	428	2.17	1.26	3
Centrahoma	79.0	98	27	54	5	0	419	4.08	1.83	13
Durant	80.2	100	27	60	5	0	456	.98	.36	10
Fittstown	78.4	100	27	54	5	0	402	3.08	2.14	3
Ketchum Ranch	*****	***	***	***	***	****	****	4.09	1.40	10
Lane	79.4	97	27	55	5	0	433	4.65	2.44	3
SOUTHEAST										
Antlers	78.7	99	27	52	5	0	411	3.25	1.53	13
Broken Bow	77.8	99	27	53	5	0	383	.89	.38	3
Clayton	79.3	100	27	52	5	0	430	2.77	.91	3
Cloudy	78.0	96	27	56	5	0	389	2.64	.96	14
Hugo	79.7	97	27	56	5	0	441	2.25	1.00	10

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
Goodwell	74.7	99	17	45	4	3	293	1.74	1.56	20
Hooker	76.0	102	25	47	4	0	331	2.50	1.79	20
Kenton	72.5	98	26	44	8	14	240	1.04	.72	20
Slapout	75.8	101	17	50	8	0	325	2.91	1.57	20
May Ranch	77.2	100	17	49	4	1	366	5.66	2.03	20
Medford	80.1	103	26	52	4	0	453	2.34	.89	12
Newkirk	77.7	98	25	53	4	0	380	4.59	.97	12
Red Rock	79.4	102	25	51	4	0	432	2.26	1.49	12
Seiling	78.8	103	27	49	4	0	414	.46	.17	10
Woodward	78.5	101	27	48	4	1	405	1.58	.87	27
Nowata	77.5	97	27	51	4	4	378	4.31	1.87	2
Pawnee	79.4	101	27	53	4	0	431	2.76	1.26	12
Porter	78.9	98	24	54	5	0	416	2.37	1.13	12
Pryor	77.7	97	27	51	5	1	382	2.71	1.47	12
Skiatook	78.5	98	27	55	4	0	404	2.45	1.26	12
Vinita	76.6	96	27	49	5	4	352	2.68	.91	12
Wynona	78.3	99	27	55	4	0	398	3.17	.99	12
Putnam	78.4	101	27	50	4	0	402	1.53	.42	19
Retrop	78.7	102	27	52	4	0	410	3.89	1.85	2
Watonga	79.6	102	27	52	4	0	437	1.92	.56	10
Weatherford	79.3	102	27	52	4	0	430	2.34	.63	10
Ninnekah	79.1	102	27	55	4	0	422	1.98	.47	2
Norman	79.9	100	27	54	4	0	447	1.27	.50	28
Oilton	78.4	99	27	48	4	5	408	2.09	.91	14
OKC East	80.8	102	27	56	4	0	475	2.33	1.11	3
OKC North	81.4	102	27	55	4	0	492	1.45	.35	15
OKC West	81.1	101	27	59	4	0	483	.69	.20	2
Okemah	78.8	100	27	55	5	0	414	1.69	.86	3
Perkins	80.4	102	27	56	4	0	463	1.94	1.04	12
Shawnee	80.4	101	27	53	4	0	462	1.05	.52	3
Spencer	79.9	100	27	52	4	0	446	.88	.24	3
Stillwater	80.6	104	26	52	4	0	469	1.73	.63	12
Washington	78.6	100	27	54	4	0	407	2.05	1.06	3
Sallisaw	78.4	98	24	53	5	0	403	2.38	.81	12
Stigler	78.1	97	27	54	5	0	392	3.94	1.11	13
Stuart	78.6	97	27	54	5	0	407	4.84	2.32	2
Tahlequah	*****	***	***	***	***	****	****	3.42	1.40	3
Webbers Falls	80.0	98	27	55	5	0	450	3.81	1.26	12
Westville	76.2	95	26	51	5	1	336	2.88	1.43	3
Hollis	79.5	104	27	53	4	0	434	2.43	.98	10
Mangum	78.6	105	27	49	4	0	409	2.86	.77	30
Medicine Park	79.6	103	27	57	4	0	439	1.01	.28	2
Tipton	81.1	106	27	54	4	0	484	2.38	.91	2
Walters	79.7	103	27	54	4	0	442	3.31	1.17	10
Madill	80.4	101	27	55	5	0	462	1.67	.83	13
Newport	80.8	103	27	57	5	0	473	1.94	.91	2
Pauls Valley	79.6	100	27	57	4	0	438	2.70	.89	2
Ringling	80.0	101	27	58	5	0	450	3.17	1.97	3
Sulphur	79.1	99	27	55	5	0	423	2.42	1.30	3
Tishomingo	79.0	100	27	56	5	0	419	2.46	1.54	3
Vanoss	78.8	99	27	54	5	0	415	6.15	2.59	3
Waurika	80.5	103	27	58	5	0	465	3.22	.88	3
Idabel	79.9	100	27	55	5	0	447	1.44	.82	3
Mt Herman	78.0	96	23	52	5	0	389	*****	*****	***
Talihina	79.0	100	25	51	5	0	420	1.88	.73	14
Wilburton	78.7	97	27	53	5	0	412	4.92	2.44	3
Wister	77.7	100	27	51	5	0	380	2.52	.83	10

June 2009 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Jun-08
Panhandle	1.87	-1.06	34th Driest	7.70 (1962)	0.01 (1924)	1.78
North Central	2.57	-1.37	37th Driest	11.10 (2007)	0.43 (1933)	7.26
Northeast	3.25	-1.37	31st Driest	12.06 (2007)	0.08 (1933)	11.12
West Central	2.28	-1.58	35th Driest	10.48 (2007)	0.32 (1910)	5.42
Central	1.66	-2.92	18th Driest	13.65 (2007)	0.00 (1914)	6.87
East Central	3.42	-1.44	37th Driest	12.69 (1935)	0.00 (1914)	6.74
Southwest	2.45	-1.71	35th Driest	10.82 (2007)	0.56 (1933)	2.79
South Central	3.12	-1.52	42nd Driest	10.91 (2007)	0.00 (1914)	4.59
Southeast	2.51	-2.19	28th Driest	11.00 (1945)	0.00 (1914)	6.36
Statewide	2.55	-1.71	27th Driest	9.84 (2007)	0.46 (1933)	5.98

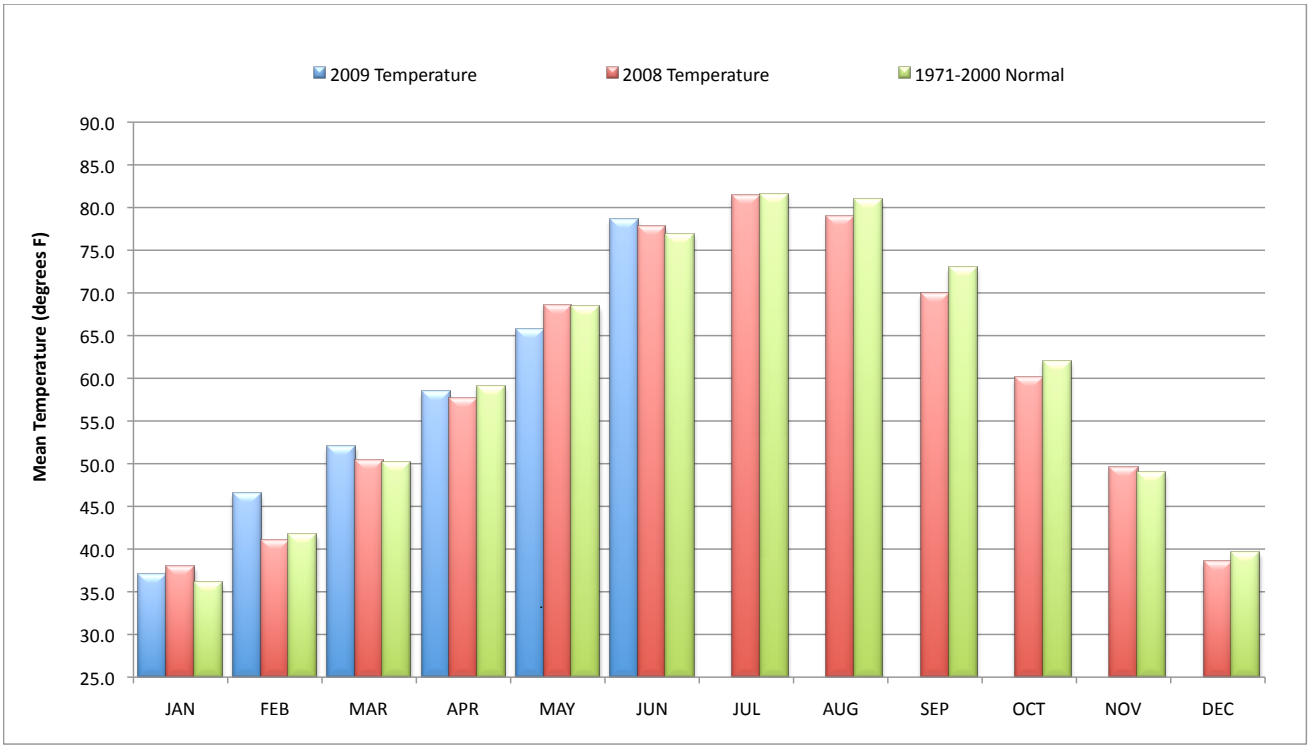
2008 and 2009 Statewide Precipitation Monthly Totals vs. Normal



June 2009 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Jun-08 (F)
Panhandle	75.5	1.1	37th Warmest	82.0 (1953)	67.7 (1903)	76.0
North Central	79.3	2.5	21st Warmest	85.7 (1953)	69.7 (1903)	77.2
Northeast	78.0	2.3	22nd Warmest	83.7 (1953)	68.9 (1903)	76.5
West Central	78.5	2.1	28th Warmest	85.6 (1953)	69.1 (1903)	78.6
Central	79.6	2.8	17th Warmest	84.4 (1953)	69.9 (1903)	78.1
East Central	78.1	1.9	24th Warmest	84.4 (1953)	69.8 (1903)	78.1
Southwest	79.8	1.4	30th Warmest	86.7 (1953)	71.5 (1903)	81.4
South Central	79.7	2.0	23rd Warmest	85.2 (1953)	71.1 (1903)	79.6
Southeast	78.7	2.3	23rd Warmest	83.9 (1953)	70.3 (1903)	77.5
Statewide	78.6	2.1	26th Warmest	84.6 (1953)	69.8 (1903)	78.1

2008 and 2009 Statewide Temperature Monthly Averages vs. Normal



Mesonet Extremes for June 2009

Climate Division	High Temp (F)	Day	Station	Low Temp (F)	Day	Station	High Monthly Rainfall (inches)	Station	High Daily Rainfall (inches)	Day	Station
Panhandle	104	17th	Buffalo	43	8th	Boise City	2.93	Beaver	1.79	20th	Hooker
North Central	106	27th	Fairview	48	4th	Woodward	5.66	May Ranch	2.03	20th	May Ranch
Northeast	101	27th	Pawnee	49	5th	Jay	6.58	Jay	2.65	12th	Jay
West Central	103	27th	Erick	48	4th	Camargo	3.89	Retrop	1.85	2nd	Retrop
Central	106	27th	Kingfisher	45	4th	El Reno	2.60	Bristow	1.49	12th	Bristow
East Central	98	24th	Sallisaw	49	5th	Cookson	4.84	Stuart	2.32	2nd	Stuart
Southwest	106	27th	Grandfield	49	4th	Mangum	3.68	Grandfield	1.41	2nd	Fort Cobb
South Central	103	27th	Newport	53	5th	Burneyville	6.15	Vanoss	3.03	3rd	Ada
Southeast	100	25th	Talihina	51	5th	Wister	4.92	Wilburton	2.44	3rd	Wilburton
Statewide	106	27th	Fairview	43	8th	Boise City	6.58	Jay	3.03	3rd	Ada

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.

Temperature
Temperature Mean: 82.0 degrees
Hottest July: 1954, 88.6 degrees
Coolest July: 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

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 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.

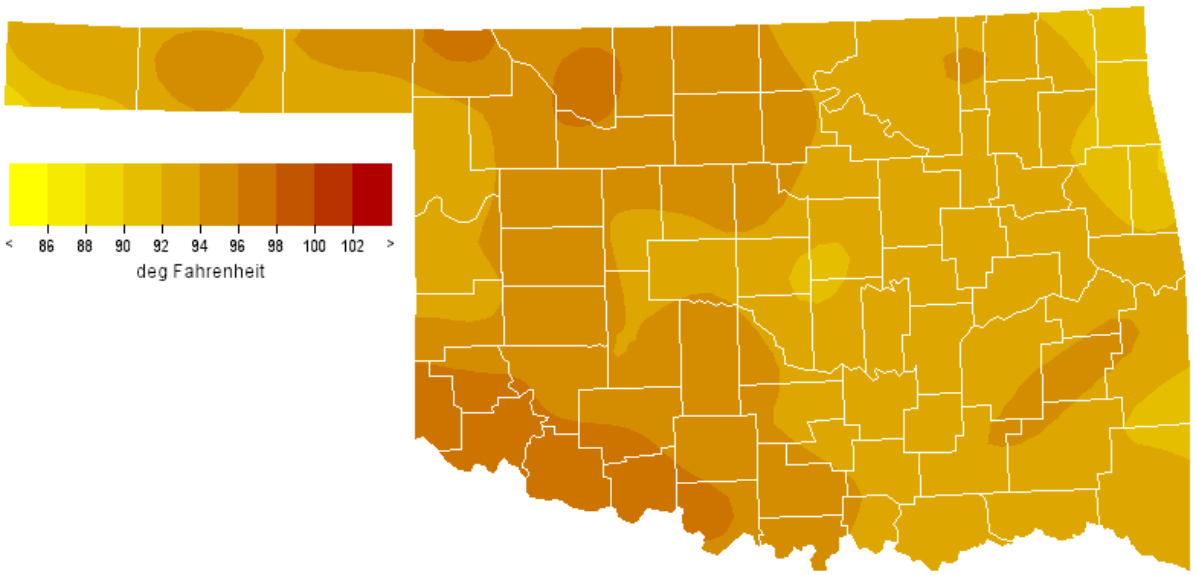
July precipitation, all rainfall unless you count an occasional hailstorm, is primarily a result of localized events. While the panhandle enjoys its summer rainy season and rain certainly doesn't disappear from north central Oklahoma, the forested southeast, though drier than it is in other months, still 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).

Precipitation
Precipitation Mean: 2.73 inches
Wettest July: 1950, 9.26 inches
Driest July: 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

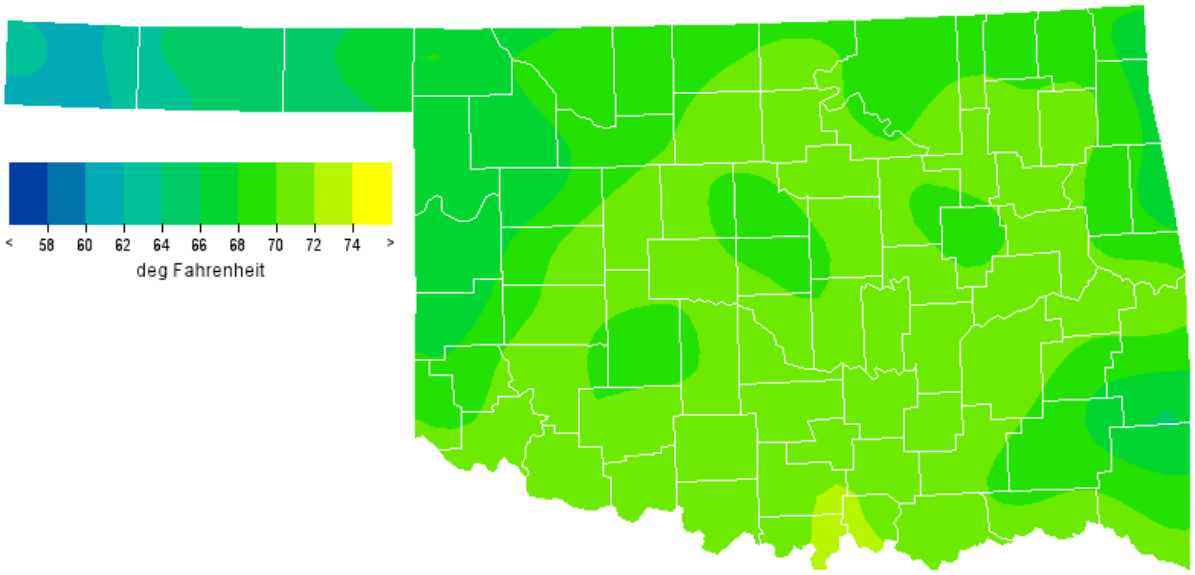
Oklahoma averages only 2.1 tornadoes in July each year. Since 1950, the July record for tornadoes is seven in 1956. Fifteen of those 52 months have been free of confirmed tornadoes. In the absence of well-organized systems, the vast majority of recorded July tornadoes have been of the weaker variety, 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)

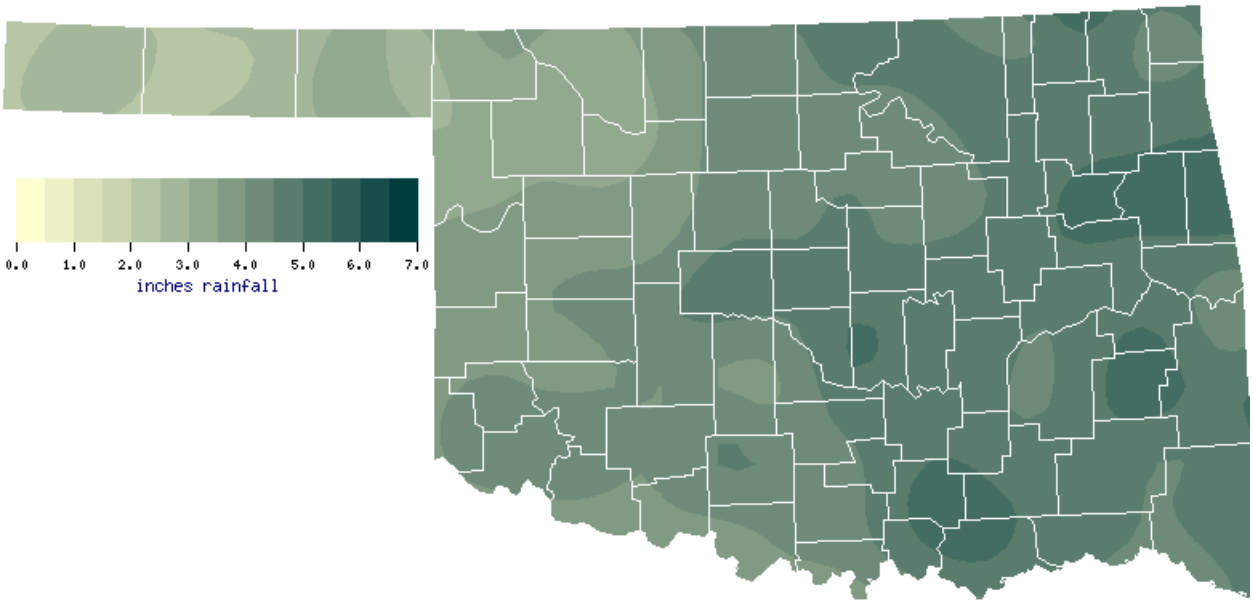
July Normal Daily Maximum Temperature (1971-2000)



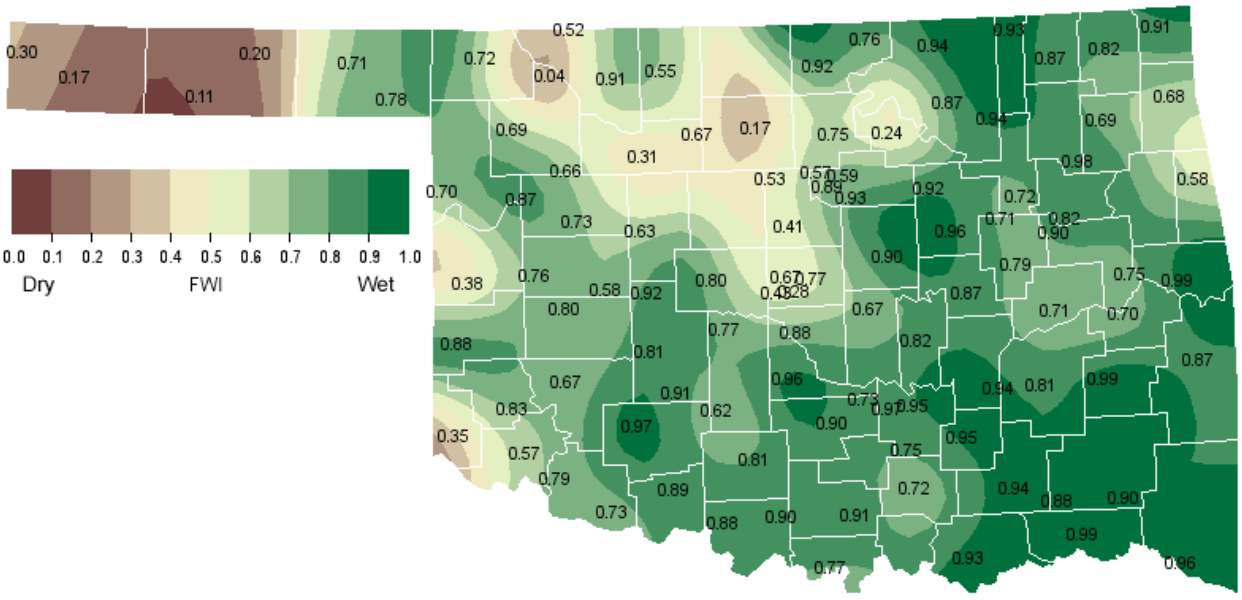
July Normal Daily Minimum Temperature (1971-2000)



July Normal Precipitation (1971-2000)



July 1, 2008 Soil Moisture Conditions at 25cm



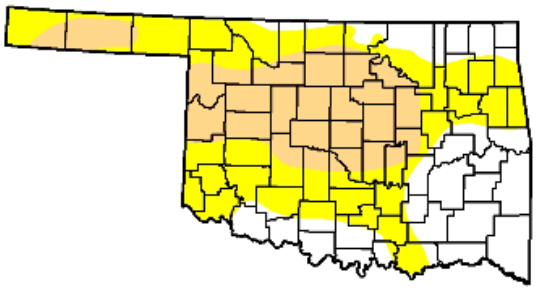
July 2009 Drought Indices

U.S. Drought Monitor
Oklahoma

June 30, 2009
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	31.5	68.5	29.6	0.0	0.0	0.0
Last Week (06/23/2009 map)	48.9	51.1	23.4	0.0	0.0	0.0
3 Months Ago (04/07/2009 map)	33.2	66.8	43.8	20.8	0.0	0.0
Start of Calendar Year (01/06/2009 map)	41.6	58.4	12.0	3.4	0.0	0.0
Start of Water Year (10/07/2008 map)	84.4	15.6	5.0	3.5	0.0	0.0
One Year Ago (07/01/2008 map)	75.5	24.5	18.0	8.6	6.8	5.3



Intensity:

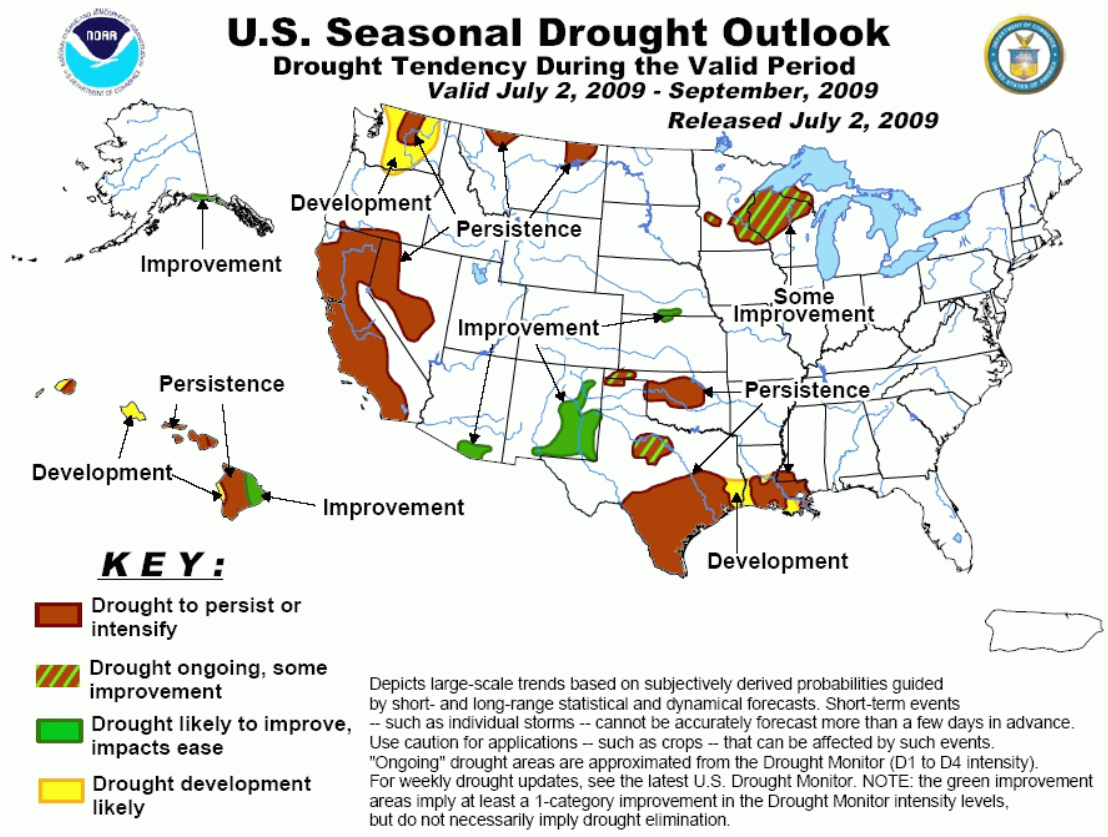
- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements

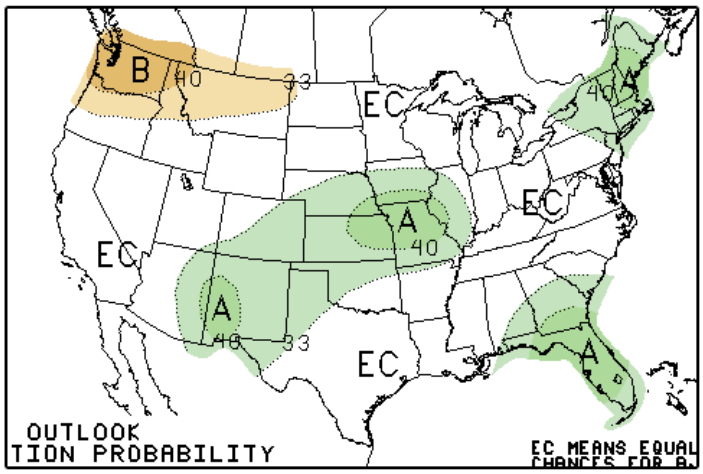
http://drought.unl.edu/dm

USDA · National Drought Mitigation Center

Released Thursday, July 2, 2009
Author: R. Tinker, CPC/NOAA



July 2009 U.S. Precipitation Forecast



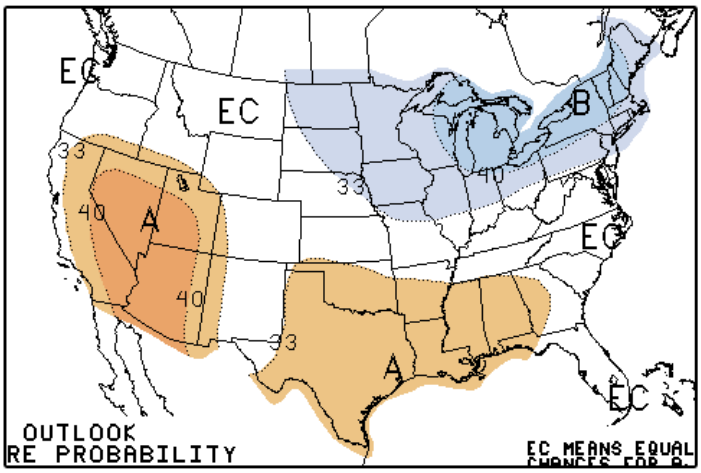
Percent Likelihood
of Above or Below
Average Precipitation*

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

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

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

July 2009 U.S. Temperature Forecast



Percent Likelihood
of Above and Below
Average Temperatures*

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

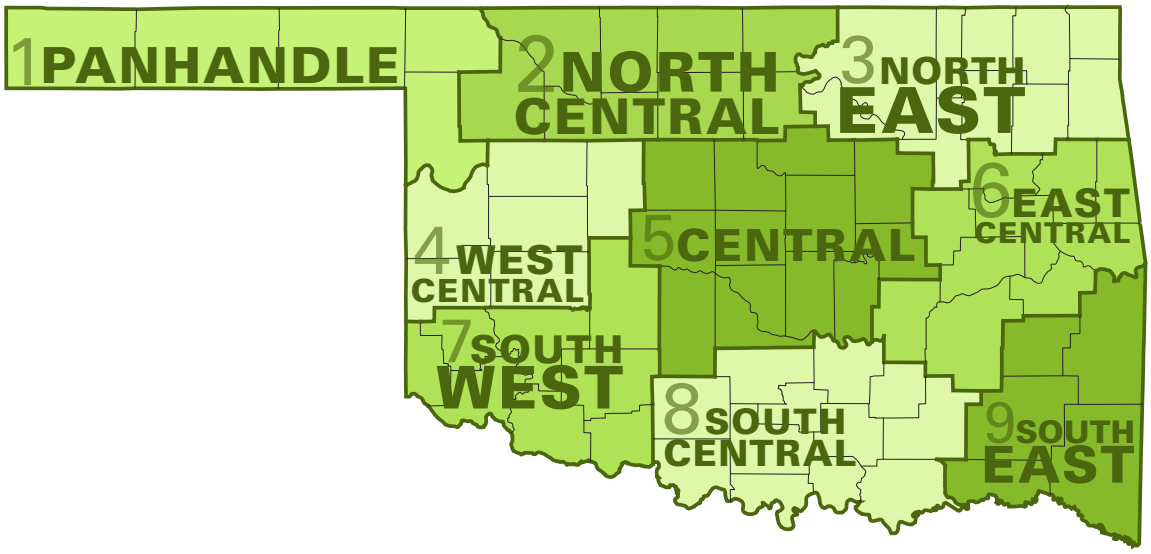
0% - 5%
5% - 10%
B = Below

*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	2.50
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	2.10
5	93.7	70.5	82.1	2.53
6	92.7	70.1	81.5	2.97
7	96.0	70.1	83.1	2.12
8	94.3	71.1	82.7	2.53
9	93.4	69.0	81.2	3.59
Statewide	94.0	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.mesonet.org or
http://climate.ok.gov/
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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