

June followed its normal script almost to the letter with a rainy and stormy first half of the month that gave way to the beginnings of a long hot stretch of Oklahoma summer. Mother Nature did manage to throw in a nice improvisation at the end of the month with a cool front dropping temperatures into the 80s over much of the state. The previous heat was enough to end the state's streak of below normal months at four, however. According to data from the Oklahoma Mesonet, the statewide average temperature came in at 77.9 degrees, 1.4 degrees above normal to rank as the 34th warmest June since records began in 1895. Temperatures climbed into the triple-digits as early as May 3, but really got started at that level on the 10th. Freedom reached the month's highest temperature of 111 degrees on the 27th.

While the average statewide rainfall total fell 0.6 inches below normal at 3.69 inches – the 56th driest June on record – there were still parts of the state that had some hefty rainfall totals for the month. Probably the biggest surprise was the small Panhandle town of Slapout and its 5.7 inches. Okemah led the state with 8.73 inches. Other areas of the state did not fare so well. A large part of southwestern Oklahoma had less than 2 inches for the month. Northeastern Oklahoma

June 2013 Statewide Extremes

Description	Extreme	Station	Day
High Temperature	111°F	Freedom	27
Low Temperature	42°F	Boise City, Hooker	2
High Precipitation	8.73 in.	Okemah	--
Low Precipitation	1.35 in.	Altus	--

and the western Panhandle were also particularly dry during the month. June's first day was merely a continuation of the tumultuous end of May. The tornadoes thankfully ended on May 31, but the flooding rains from those storms continued into June. More than 6 inches fell across parts of east central Oklahoma with more generalized amounts from 2-4 inches. Rain fell somewhere in the state on almost every day through the ninth, and again from the 15th through the 19th.

The rains throughout the first couple of weeks allowed further reduction of drought according to the U.S. Drought Monitor report. Nearly 59 percent of the state was covered by some intensity of drought on the May 28 Drought Monitor, but that number dropped to 53 percent on the June 25 map. The

percentage of extreme-to-exceptional drought, the Monitor's two worst categories, remained virtually unchanged at 26 percent. Severe-to-exceptional drought still covers much of the western one-third of the state, and also parts of north central and south central Oklahoma.

DAILY SUMMARIES JUNE 2013

JUNE 1: Heavy rains flooded portions of central and eastern Oklahoma early in the day and broke a daily rainfall record of 5.64 inches in Oklahoma City. Even though Mt. Herman, Stigler, and Eufaula received over 4 inches of precipitation, Okemah still managed to top them at 6.51 inches. Maximum temperatures were fairly warm, ranging from 90 in Altus and

June 2013 Statewide Statistics

Temperature

	Average	Depart.	Rank (1895-2013)
Month (Jun)	79.2°F	1.4°F	34th Warmest
Year-to-Date (Jan-Jun)	54.6°F	-0.7°F	44th Coolest

Precipitation

	Average	Depart.	Rank (1895-2013)
Month (Jun)	3.69 in.	-0.57 in.	56th Driest
Year-to-Date (Jan-Jun)	19.44 in.	0.29 in.	44th Wettest

Depart. = departure from 30-year normal

Tipton to 74 in Newkirk and Foraker. Minimum temperatures ranged from 49 in the panhandle to 69 in the southeast. Wind speeds averaged between 5 and 15mph for most of the state.

JUNE 2: Temperatures were slightly cooler than the previous day with maximums ranging from 67 in the northwest to 87 in the panhandle. Minimum temperatures were between 42 at Hooker and Boise City and 59 in south-central and southeast OK. Despite the sunny afternoon skies clouding over in the northern half of the state, areas remained rain-free. Average wind speeds were less than 10mph.

JUNE 3-5: Numerous showers and thunderstorms spread through the region during this period. Some wind gusts were severe, reaching over 70mph in Ellis and Beaver County on the 3rd and Garfield County (82mph) on the 5th. Rainfall amounts were between half an inch and .86 inches (Woodward) in

the northwest on the 3rd, and between 1 and 2 inches in various areas on the 4th and 5th. Guthrie received the most precipitation (2.11 inches) on Tuesday, followed by Ninnekah (1.91 inches) on Wednesday. Compared to the previous day, maximum temperatures climbed a tad, hitting as high as 100 in Goodwell on the 3rd, 99 in multiple southwest towns on the 4th, and 92 in Altus on the 5th. The lowest maximum temperatures were generally in the upper 60s and upper 70s. Minimum temperatures were between 45 (Jay) and 64 (Kenton) on the 3rd, 53 (Boise City) and 67 (Burneyville) on the 4th, and 52 (Boise City) and 71 (Burneyville) on the 5th. Average wind speeds were gusty on Monday, reaching 22mph in the panhandle, 18mph in the southwest on Tuesday, and roughly 17mph in the southwest on Wednesday.

JUNE 6-9: Maximum temperatures started out much lower than the previous week's, with the highest temperatures only reaching the low-mid 80s in the southwest. Highs gradually climbed in the following days, however, reaching 95 degrees in Altus by the 9th. The lowest maximum temperatures were observed in Jay for most of this period, increasing from 73 on the 6th to 81 on the 9th. The lowest minimum temperatures averaged in the low 50s and the warmest minimum temperatures averaged in the 60s. Showers and thunderstorms moved through the region, visiting southern Oklahoma on Thursday, the panhandle on Friday, northwest OK on Saturday, and the western two-thirds of the state on Sunday. Many of the storms became strong-severe during the latter two days. The highest measurements of precipitation recorded each day were 2.04 in. at Grady (6th), 1.07 inches at Kenton (7th), .78 in. at Hollis (8th), and 1.47 in. at Durant (9th). Although average wind speeds were less than 10mph on the 6th, 7th, and 9th, and less than 20mph on the 8th, thunderstorm wind gusts managed to peak in the 50s and 60s.

JUNE 10-14: As a high pressure system settled over Oklahoma, skies cleared and temperatures rose. The warmest maximum temperatures were at or a little above 100 degrees. Goodwell hit 105 on the 10th and 11th, Hooker reached 103 on the 12th, Mangum got to 102 on the 13th, and Cherokee and Freedom reached 100 on the 14th. The lowest maximums recorded were in the upper 80s and low 90s. Minimum temperatures tended to range between the low 60s and upper 70s. Average wind speeds varied quite a bit around the state. The lowest wind speeds (~ 5mph) occurred in the southeast while gustier speeds (roughly 16mph - 20mph) occurred in central Oklahoma and the panhandle.

JUNE 15-16: Scattered showers and thunderstorms formed in the west on the 15th and moved eastward, bringing the strongest storms to north-central Oklahoma. On the following day, precipitation and storms moved in from the northwest. Some storms became strong-severe with multiple flooding reports in the southeast, 2 inch hail in Canadian and Comanche Counties, and wind gusts just over 70 mph in McCurtain County. Rainfall amounts ranged from a tenth of an inch to 1.68 inches in

Stillwater on the 15th, but became heavier on the 16th with areas in the southeast receiving 2 – 3 inches. Broken Bow and Mt. Herman measured the most rainfall at 3.14 inches and 2.28 inches, respectively. Maximum temperatures were between the 80s and mid – upper 90s with the warmest observations in the west. Minimum temperatures fell between 61 in Kenton and 75 in Eufaula, Ketchum Ranch, and Sallisaw. Average wind speeds were between ~3mph in the southeast and 18mph in the panhandle.

JUNE 17-19: A cold front passage produced showers and thunderstorms in western Oklahoma, as well as a slight decrease in maximum temperatures throughout the state. The highest maximum temperatures fell from the low 90s to upper 80s. Minimum temperatures averaged in the 60s. Precipitation amounts were fairly generous with most rain hit areas receiving over an inch on the 17th. Lake Carl Blackwell got the most (2.84 inches), followed by Jay (2.48 in.) and Ft. Cobb (2.28 in.). The 18th had substantially less precipitation with a few tenths of an inch in the panhandle and less than a tenth of an inch in north-central and northeast OK. Over a quarter of an inch was seen in far western and south-central Oklahoma on the 19th, along with 1 – 2 inches in the panhandle. Average wind speeds were less than 10mph on the 17th and 18th, and between 5 and 20mph on the 19th. The highest gusts reported each day occurred in Hobart at 61mph (Monday), Boise City at 57mph (Tuesday), and Altus at 52mph (Wednesday).

JUNE 20-24: Although a few sprinkles occurred in northwest and north-central Oklahoma, rainfall was negligible as a high pressure system was situated aloft. The maximum temperature range was pretty consistent, extending from 88/89 – 99/100 degrees on all three days. Minimum temperatures were in the low 60s to mid – upper 70s. Average wind speeds were swift, varying between 5 - 20 mph on the 20th, 5 – 25 mph on the 21st and 24th, and 5 – 23mph on the 22nd and 23rd. A peak wind gust of 53mph was reported in Boise City on the 22nd and 55mph in Woodward 24th.

JUNE 25: Short-lived thunderstorms passed through the I-35 corridor, bringing as much as .41 inches of rain to Blackwell. Less than a tenth of an inch, however, was more common in that vicinity. Maximum temperatures ranged from 87 in the northeast to 105 in Slapout. Minimum temperatures were between 65 in Kenton and 80 in Buffalo. It was a windy day yet again, with average wind speeds generally between 10 and 22mph. Gusts of 53mph were reported in Breckinridge.

JUNE 26: With the ridge still overhead, temperatures remained above seasonable and skies were sunny. The lowest maximum was 89 at Mt. Herman and the highest maximum was 106 at Altus. Low temperatures were between 58 at Goodwell and 80 at the new Tulsa Mesonet site. Average wind speeds were generally between 5mph in east-central and southeast OK and 15mph in west-central and southwest OK.

JUNE 27: Showers and thunderstorms made their way into central and east-central Oklahoma from Kansas. Although 1.44 inches fell in Lahoma and 1.04 inches fell in Slapout, most rain hit areas received less than a quarter inch. Some thunderstorm wind gusts became severe as they reached 90mph in Blackwell, 85mph in Edmond, and 72mph in Newkirk. While the rest of the state had relatively sunny skies, a heat advisory was also in effect. Many cities had maximum temperatures well above 100. Freedom, for example, got the hottest at 111 degrees. The lowest maximum reported was still a toasty 94 degrees at Mt. Herman and Cloudy. Minimum temperatures were between 61 in Kenton and 78 at Tulsa and the Oklahoma City West Mesonet site. Average wind speeds were less than 13mph.

JUNE 28-30: All three days started with scattered showers and thunderstorms that quickly cleared. Despite the remnants of the previous day's storms in central and north-central OK on Friday, rainfall amounts were negligible. Less than a tenth of an inch, however, did manage to make its way to the ground in western OK on Saturday, as well as less than two-tenths of an inch on Sunday. Maximum temperatures hit a little over 100 degrees in the southeast on the 25th, upper 90s on the 29th, and mid-90s on the 30th. The lowest maximums fell from the low 90s, to the upper 80s, to the upper 70s on each consecutive day. Minimums varied from 57 in Oilton to 77 in eastern and southeast Oklahoma. Average wind speeds were less than 10mph on the 28th and 29th, and less than 12mph on the 30th.

JUNE 2013 SEVERE WEATHER

Wind Gusts (70 mph or greater)

Speed (m.p.h)	Location	County	Day
76	2 SW Gage	Ellis	3
70	1 WSW Bryans Corner	Beaver	3
82	3 SE Breckenridge	Garfield	5
73	Haworth	McCurtain	16
72	8 E Newkirk	Kay	27
90	Blackwell	Kay	27
85	8 NE Edmond	Logan	27

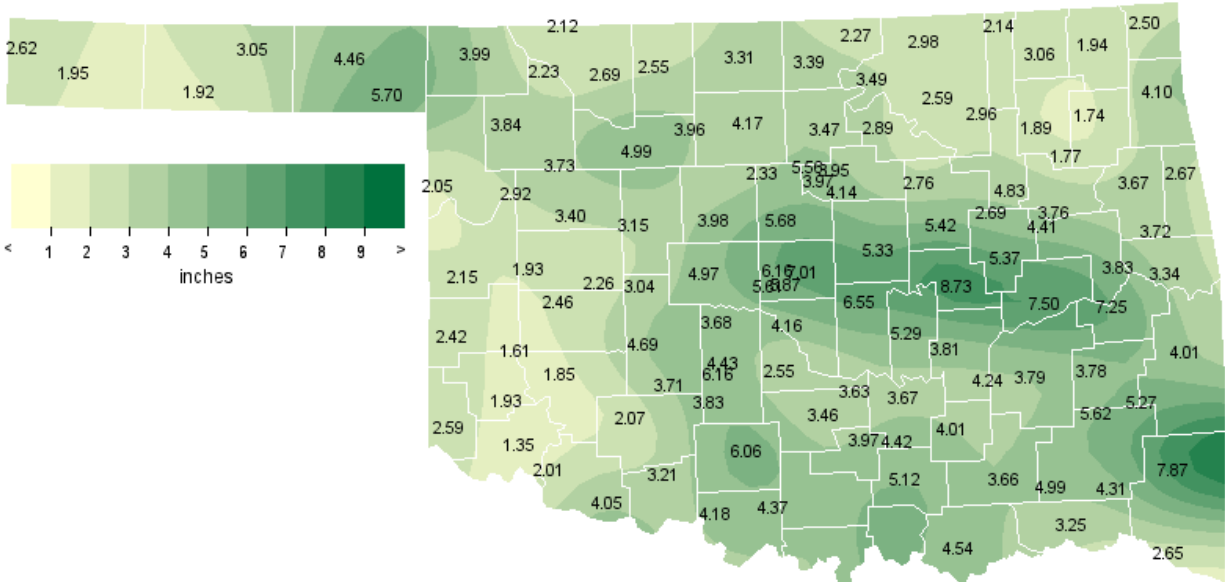
Hail (2 inches in diameter or greater)

Size (in.)	Location	County	Day
2.00	8 S Calumet	Canadian	16
2.00	Lake Lawtonka	Comanche	16

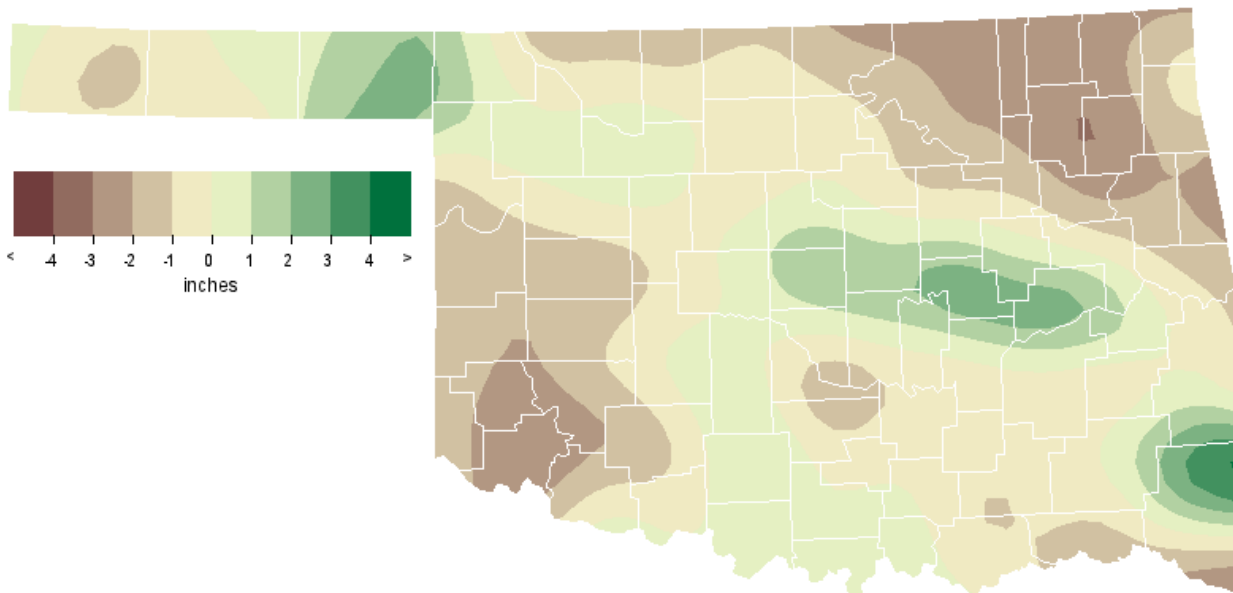
Flooding

Location	County	Day
Choctaw	Oklahoma	1
1 SW Choctaw	Oklahoma	1
N Norman	Cleveland	1
Midwest City	Oklahoma	1
Eufaula	McIntosh	1
Stigler	Haskell	1
Okemah	Okfuskee	1
Sallisaw	Sequoyah	1
Henryetta	Okmulgee	1
Clayton	Pushmataha	1
Nashoba	Pushmataha	1
1 S Okemah	Okfuskee	1
1 S Hulbert	Cherokee	1
1 E Lenapah	Nowata	1
5 S Clearview	Okfuskee	1
Talihina	Le Flore	16
Broken Bow	McCurtain	16

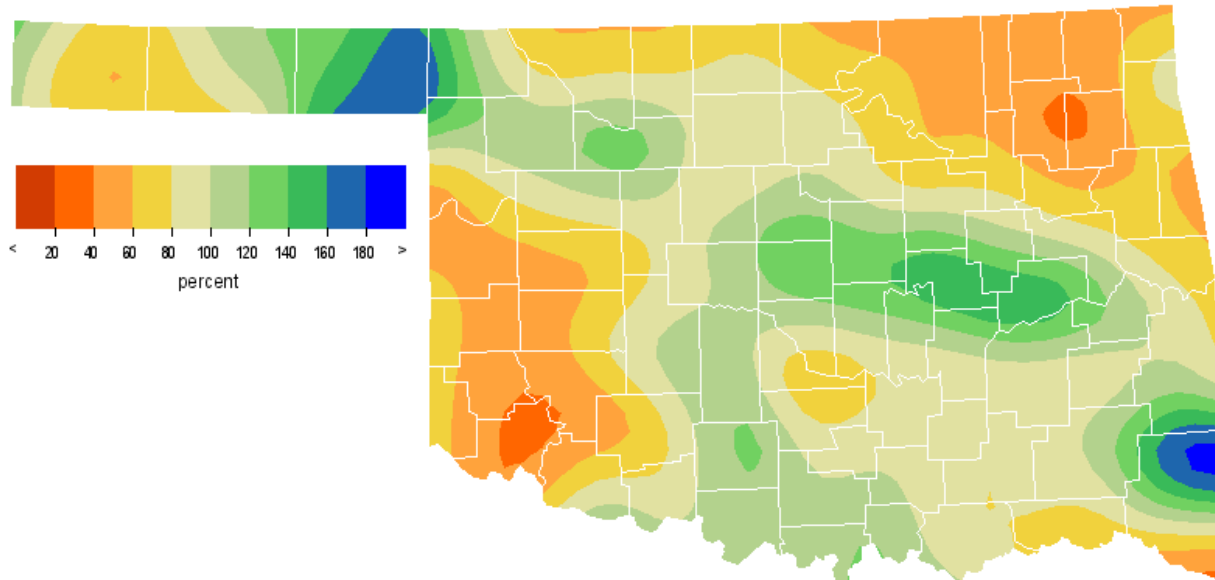
JUNE 2013 OBSERVED PRECIPITATION



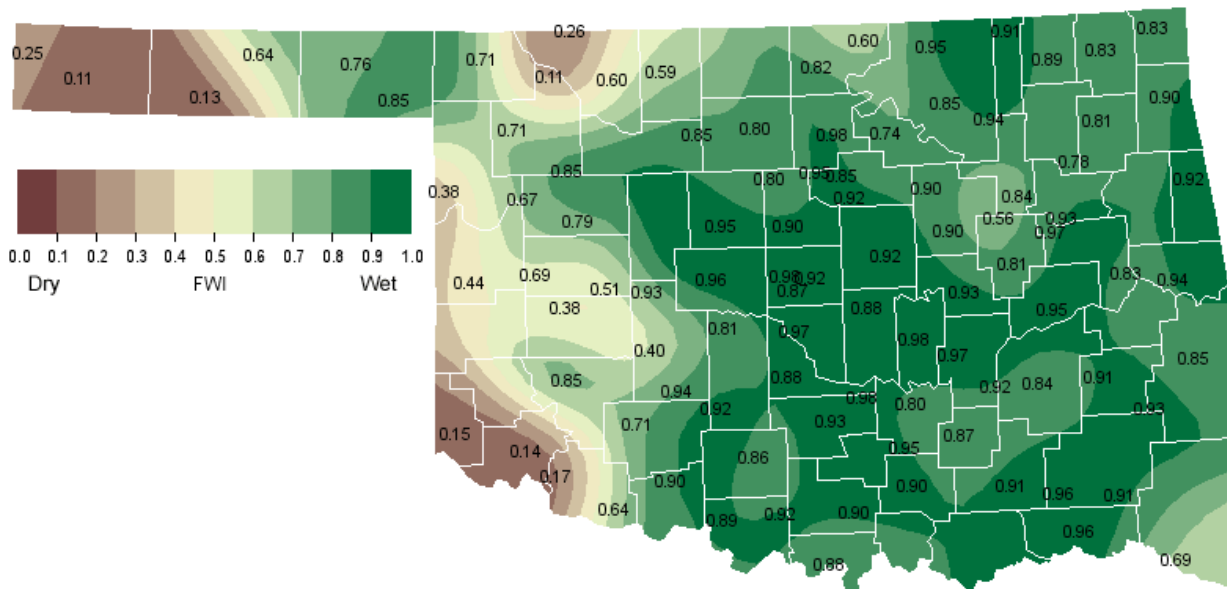
JUNE 2013 DEPARTURE FROM NORMAL PRECIPITATION



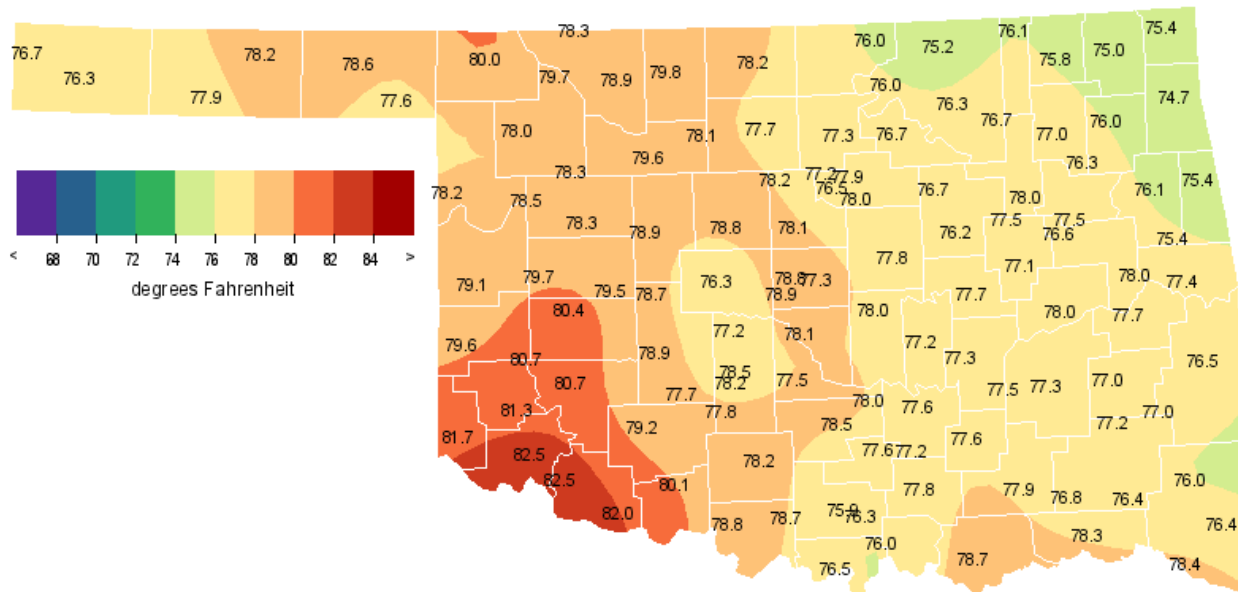
JUNE 2013 PERCENT OF NORMAL PRECIPITATION



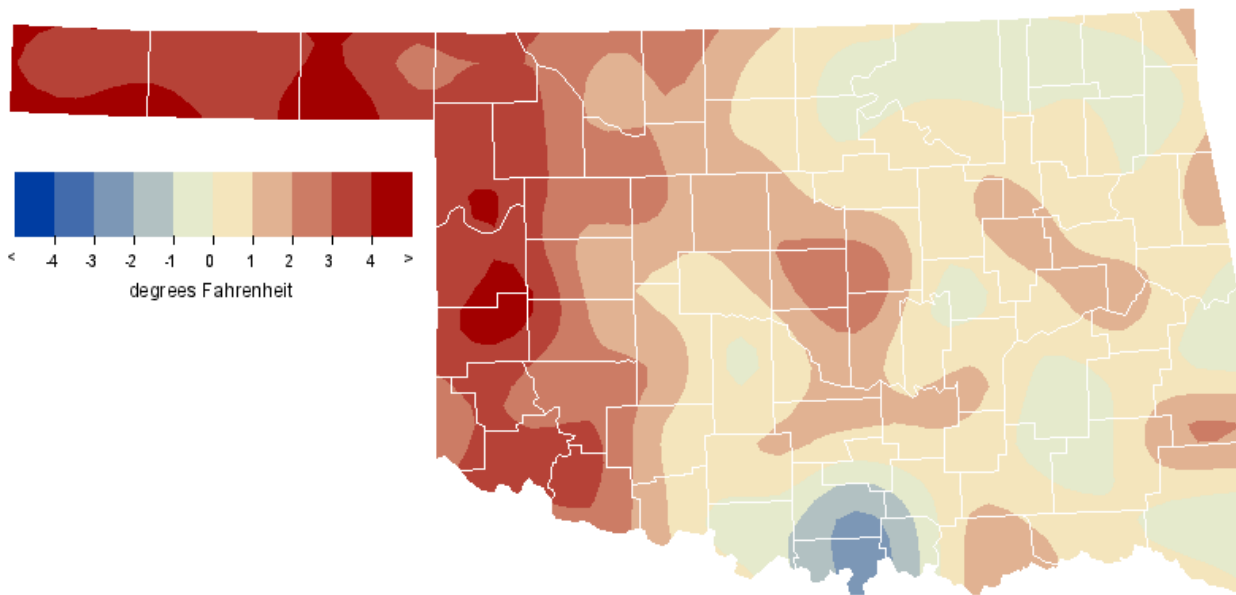
JUNE 2013 AVERAGE SOIL MOISTURE AT 25CM



JUNE 2013 AVERAGE TEMPERATURE



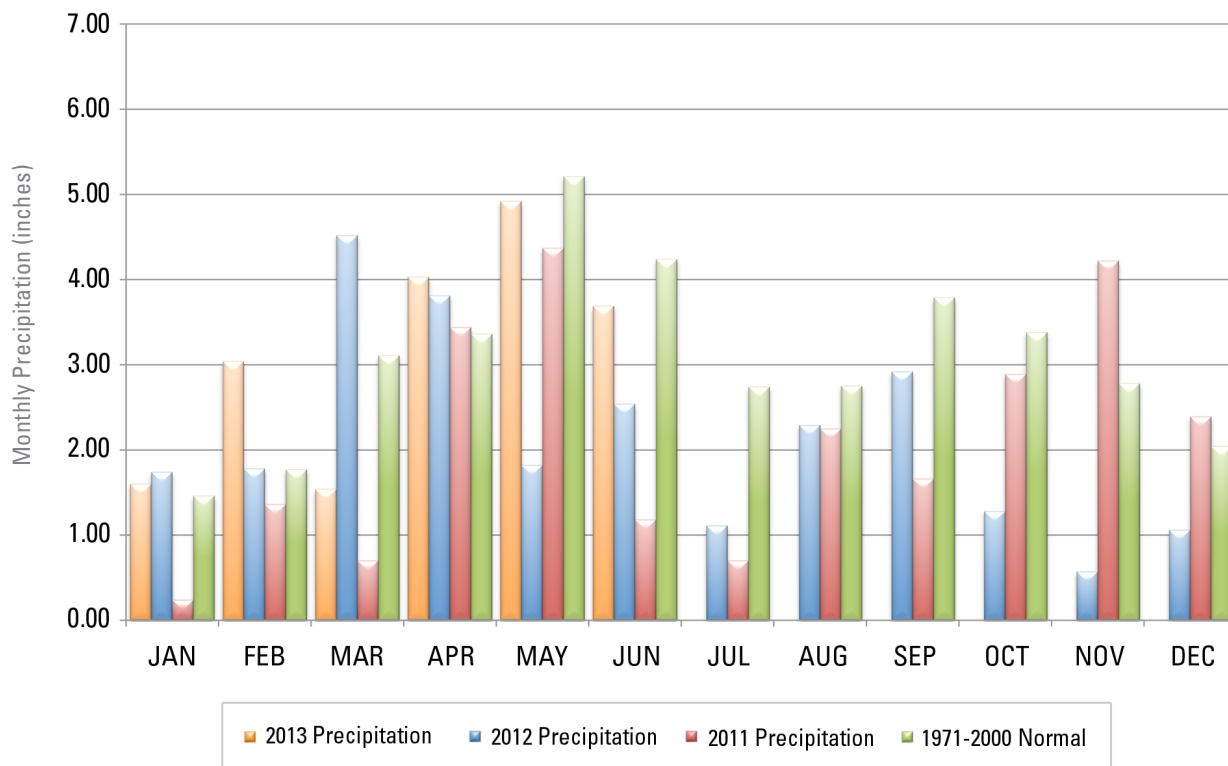
JUNE 2013 DEPARTURE FROM NORMAL TEMPERATURE



MESONET MONTHLY SUMMARY FOR JUNE 2013

NAME	MEAN TEMP	HIGH TEMP	LOW TEMP	DAY	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY	NAME	MEAN TEMP	HIGH TEMP	LOW TEMP	DAY	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY	
PANHANDLE																						
Arnett	78.3	106	27	51	2	0	398	2.05	.44	16	Goodwell	77.9	107	27	44	2	3	389	1.92	.88	19	
Beaver	78.7	108	27	44	2	5	415	4.46	1.07	19	Hooker	78.2	108	27	42	2	4	399	3.05	.93	16	
Boise City	76.3	105	27	42	2	10	348	1.95	.98	15	Kenton	76.7	105	27	45	2	8	358	2.62	1.07	7	
Buffalo	80.0	109	27	48	2	2	451	3.99	1.20	19	Slapout	77.6	106	27	47	2	3	380	5.70	1.93	19	
NORTH CENTRAL																						
Alva	78.9	109	27	48	2	2	419	2.69	1.02	5	May Ranch	78.3	108	27	49	2	3	403	2.12	1.01	5	
Blackwell	****	***	***	***	***	****	****	3.39	1.26	17	Medford	78.2	106	27	50	2	3	400	3.31	.85	5	
Breckinridge	77.7	102	27	51	2	3	384	4.17	1.64	17	Newkirk	76.0	96	27	51	2	5	335	2.27	.90	17	
Cherokee	79.8	109	27	47	2	3	446	2.55	1.04	5	Red Rock	77.3	100	27	52	3	2	372	3.47	1.04	16	
Fairview	79.6	108	27	50	2	1	438	4.99	1.52	4	Seiling	78.3	106	27	49	2	2	400	3.73	.91	16	
Freedom	79.6	111	27	49	2	1	441	2.23	.77	5	Woodward	78.0	105	27	48	2	2	391	3.84	.89	5	
Lahoma	78.1	107	27	50	2	2	396	3.96	1.44	27												
NORTHEAST																						
Bixby	78.0	100	27	51	3	1	391	4.83	1.77	16	Nowata	75.7	98	27	47	3	9	330	3.06	1.42	5	
Burbank	76.0	97	27	50	3	4	333	3.49	1.88	17	Pawnee	76.7	98	27	52	3	3	353	2.89	.91	15	
Claremore	77.0	97	27	51	3	4	362	1.89	.95	5	Porter	77.4	96	27	53	3	1	373	3.76	1.09	16	
Copan	76.1	98	27	50	3	7	340	2.14	.68	17	Pryor	76.0	96	27	49	3	5	335	1.74	.79	17	
Foraker	75.2	96	27	50	3	6	312	2.98	1.01	17	Skiatook	76.7	97	27	53	3	4	356	2.96	1.15	17	
Inola	76.4	96	27	50	3	3	345	1.77	.76	17	Vinita	75.0	95	27	48	3	8	309	1.94	.90	17	
Jay	74.7	96	27	45	3	12	303	4.10	2.48	17	Wynona	76.3	97	27	51	3	4	343	2.59	.81	5	
Miami	75.4	96	27	47	3	9	321	2.50	.90	5												
WEST CENTRAL																						
Bessie	80.4	107	27	52	2	0	462	2.46	1.37	17	Putnam	78.3	104	27	51	2	1	401	3.40	.95	5	
Butler	79.7	107	27	52	2	0	442	1.93	1.02	17	Retrop	80.8	107	27	54	2	0	473	1.61	.75	8	
Camargo	78.5	107	27	48	2	2	407	2.92	1.42	5	Watonga	79.0	107	27	52	2	2	421	3.15	.95	5	
Cheyenne	79.1	105	27	53	2	0	424	2.15	1.25	17	Weatherford	79.5	107	27	53	2	0	437	2.26	.85	17	
Erick	79.6	106	27	53	2	0	438	2.42	1.41	17												
CENTRAL																						
Acme	77.8	101	27	54	7	0	385	3.83	1.30	17	Ninnekah	78.2	102	27	54	7	0	397	6.16	1.91	5	
Bowlegs	77.2	98	27	54	3	0	365	5.29	1.83	1	Norman	78.0	98	27	56	7	0	391	4.16	1.20	4	
Bristow	76.3	97	27	48	3	3	341	5.42	1.86	5	Oilton	76.7	98	27	51	3	2	352	2.76	1.27	5	
Lake Carl Blac	77.2	98	27	53	7	1	367	5.56	2.84	17	OKC East	79.4	99	27	55	7	****	****	5.87	2.04	1	
Chandler	77.8	97	27	55	3	0	384	5.33	2.48	1	OKC North	78.7	99	27	55	2	1	412	6.16	1.82	1	
Chickasha	78.6	102	27	55	3	0	407	4.43	1.41	17	OKC West	78.9	98	27	57	7	0	416	5.61	1.48	5	
El Reno	76.3	98	27	52	2	2	342	4.97	1.39	4	Okemah	77.6	98	27	54	3	0	379	8.73	6.51	1	
Guthrie	78.1	99	27	54	2	1	393	5.68	2.11	4	Perkins	78.0	98	27	54	2	1	390	4.14	1.54	15	
Kingfisher	78.8	105	27	54	7	0	415	3.98	1.31	17	Shawnee	78.0	100	27	56	2	1	390	6.55	2.93	1	
Marena	76.6	96	27	53	3	1	349	3.97	1.52	17	Spencer	77.4	98	27	55	7	1	372	7.01	2.50	1	
Minco	77.2	100	27	53	2	1	368	3.68	1.14	17	Stillwater	77.9	99	27	54	7	1	388	3.95	1.68	15	
Marshall	78.1	101	27	52	2	2	396	2.33	1.35	17	Washington	77.5	99	27	55	7	0	375	2.55	.86	5	
EAST CENTRAL																						
Cookson	75.4	96	27	49	3	5	317	3.72	1.25	16	Sallisaw	77.4	97	27	54	3	0	371	3.34	2.32	1	
Eufaula	78.0	98	27	54	3	0	390	7.50	4.64	1	Stigler	77.6	98	27	53	3	0	378	7.25	4.53	1	
Haskell	76.7	96	27	51	3	1	351	4.41	1.08	5	Stuart	77.5	97	27	55	3	0	376	4.24	1.92	1	
Hectorville	77.5	98	27	53	3	1	376	2.69	.97	5	Tahlequah	76.0	95	27	52	7	2	333	3.67	1.52	15	
Holdenville	77.3	97	27	55	3	0	368	3.81	1.68	1	Webbers Falls	78.0	98	27	53	3	0	389	3.83	1.45	1	
McAlester	77.3	97	27	53	3	1	371	3.79	2.22	1	Westville	75.4	95	27	50	3	4	316	2.67	1.39	17	
Okmulgee	77.1	98	27	51	3	0	362	5.37	3.54	1												
SOUTHWEST																						
Altus	82.5	108	27	56	2	0	525	1.35	.55	17	Hollis	81.6	107	27	55	2	0	498	2.59	.78	8	
Apache	77.7	100	27	55	3	0	382	3.71	1.69	17	Mangum	81.3	109	27	49	2	0	488	1.93	.87	17	
Fort Cobb	78.9	103	27	55	7	0	417	4.69	2.28	17	Medicine Park	79.3	104	27	58	3	0	428	2.07	.73	4	
Grandfield	82.0	106	27	57	2	0	510	4.05	2.04	6	Tipton	82.4	107	27	57	7	0	522	2.01	.71	17	
Hinton	78.7	105	27	53	2	0	412	3.04	.94	17	Walters	****	***	***	***	***	****	****	****	****	****	****
Hobart	80.7	107	27	53	2	0	471	1.85	.65	8												
SOUTH CENTRAL																						
Ada	77.7	99	27	52	3	0	380	3.67	1.19	1	Madill	78.5	98	27	57	7	0	405	4.97	1.20	4	
Ardmore	78.9	98	27	58	3	0	418	5.55	1.25	17	Newport	78.4	98	27	58	3	0	401	4.10	1.19	6	
Burneyville	79.0	100	27	56	3	0	419	4.35	1.33	6	Pauls Valley	78.4	98	27	57	3	0	403	3.46	1.41	5	
Byars	78.0	98	27	56	3	0	390	3.63	.89	1	Ringling	78.8	99	27	57	2	0	413	4.37	1.34	6	
Centrahoma	77.6	97	27	54	7	0	378	4.01	1.87	1	Sulphur	77.6	98	27	54	7	0	379	3.97	1.02	4	
Durant	78.8	97	27	56	3	0	413	4.54	1.63	6	Tishomingo	77.8	97	27	56	7	0	385	5.12	1.64	1	
Fittstown	77.2	99	27	54	3	0	366	4.42	1.11	4	Vanoss	****	***	***	***	***	****	****	****	****	****	****
Ketchum Ranch	78.2	100	27	56	7	0	396	6.06	1.62	6	Waurika	78.8	100	27	56	2	0	414	4.18	1.53	6	
Lane	77.8	96	28	55	3	0	385	3.66	1.32	1												
SOUTHEAST																						
Aantlers	76.8	96	27	53	3	0	353	4.99	1.45	16	Idabel	78.4	98	28	56	8	0	401	2.65	.75	17	
Antlers	****	***	***	***	***	****	****	****	****	****	Mt Herman	76.0	94	28	54	8	0	330	7.87	4.04	1	
Broken Bow	76.4	97	28	53	8	0	342	4.81	3.14	16	Talihina	77.1	97	27	51	8	0	362	5.27	2.06	16	
Clayton	77.2	96	27	53	3	0	367	5.62	2.87	1	Wilburton	77.1	98	27	53	7	0	362	3.78	2.55	1	
Cloudy	76.4	95	28	54	8	0	343	4.31	1.40	1	Wister	76.5	97	27	52	3	0	345	4.01	2.65	1	
Hugo	78.2	96	28	57	3	0	397	3.25	.92	16												

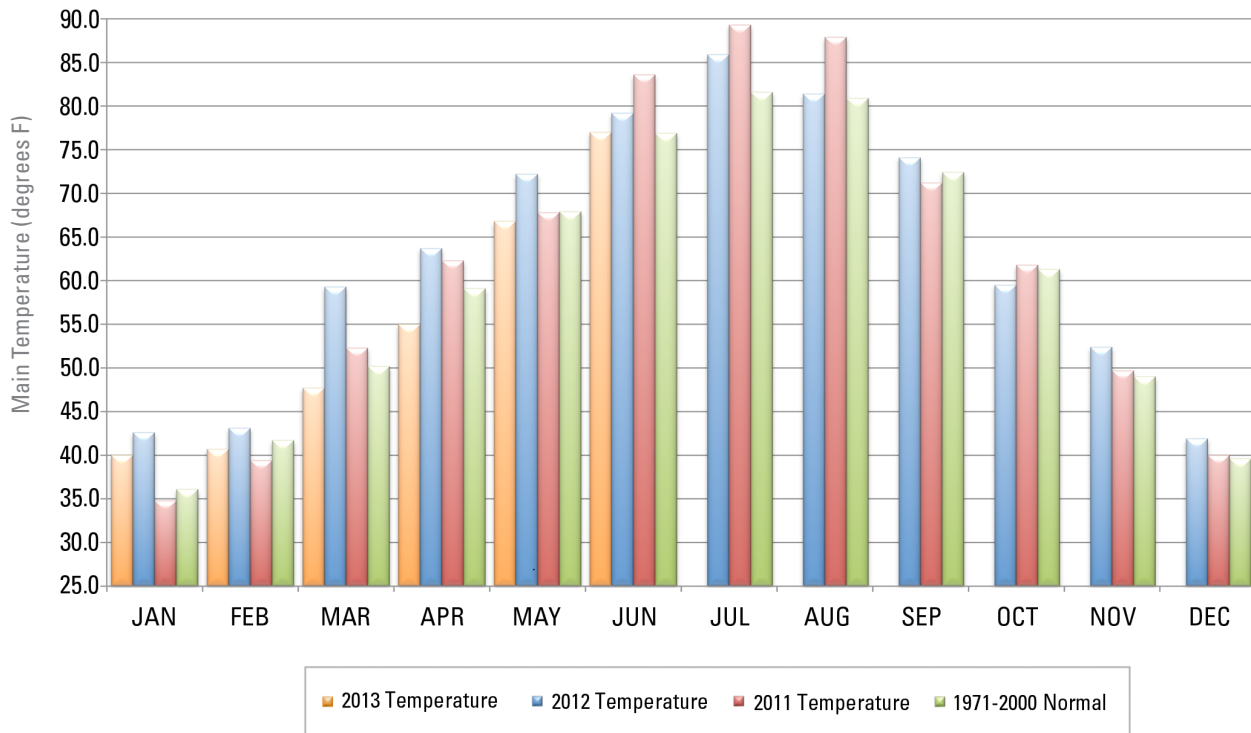
2011, 2012 AND 2013 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL



June 2013 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Jun-12
Panhandle	3.22	0.29	44th Wettest	7.70 (1962)	0.01 (1924)	1.50
North Central	3.29	-0.65	56th Driest	11.10 (2007)	0.43 (1933)	1.99
Northeast	2.84	-1.78	28th Driest	12.06 (2007)	0.08 (1933)	3.15
West Central	2.48	-1.38	40th Driest	10.48 (2007)	0.32 (1910)	2.31
Central	4.92	0.35	41st Wettest	13.65 (2007)	0.00 (1914)	2.72
East Central	4.33	-0.53	59th Wettest	12.69 (1935)	0.00 (1914)	2.91
Southwest	2.77	-1.39	43rd Driest	10.82 (2007)	0.56 (1933)	2.84
South Central	4.26	-0.38	51st Wettest	10.91 (2007)	0.00 (1914)	3.17
Southeast	4.64	-0.06	44th Wettest	11.00 (1945)	0.00 (1914)	2.24
Statewide	3.69	-0.57	56th Driest	9.84 (2007)	0.46 (1933)	2.55

2011, 2012 AND 2013 STATEWIDE TEMPERATURE MONTHLY TOTALS VS. NORMAL



June 2013 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Jun-12 (F)
Panhandle	77.9	3.5	16th Warmest	82.0 (1953)	67.7 (1903)	79.4
North Central	78.3	1.5	33rd Warmest	85.7 (1953)	69.7 (1903)	79.2
Northeast	76.2	0.5	50th Warmest	83.7 (1953)	68.9 (1903)	78.0
West Central	79.4	3.0	20th Warmest	85.7 (2011)	69.1 (1903)	80.1
Central	77.7	0.9	44th Warmest	84.4 (1953)	69.9 (1903)	78.8
East Central	77.0	0.8	47th Warmest	84.4 (1953)	69.8 (1903)	78.4
Southwest	80.5	2.1	24th Warmest	87.4 (2011)	71.5 (1903)	80.8
South Central	77.6	-0.1	58th Coolest	85.2 (1953)	71.1 (1903)	79.1
Southeast	77.0	0.6	58th Warmest	83.9 (1953)	70.3 (1903)	78.7
Statewide	77.9	1.4	34th Warmest	84.6 (1953)	69.8 (1903)	79.1

RECORD EVENT REPORTS

Description	Day	Location	Record	Previous Record	Year
Daily max rainfall	1	Oklahoma City	5.64	2.14	1982
Daily low temperature	3	Tulsa	52	52	1946

MESONET EXTREMES FOR JUNE 2013

Climate Division	High Temp (F)			Low Temp (F)			High Monthly Rainfall (inches)			High Daily Rainfall (inches)		
	Day	Station	Temp	Day	Station	Temp	Day	Station	Temp	Day	Station	
Panhandle	109	27th	Buffalo	42	2nd	Hooker	5.70	Slapout	1.93	19th	Slapout	
North Central	111	27th	Freedom	47	2nd	Cherokee	4.99	Fairview	1.64	17th	Breckinridge	
Northeast	100	27th	Bixby	45	3rd	Jay	4.83	Bixby	2.48	17th	Jay	
West Central	107	27th	Butler	48	2nd	Camargo	3.40	Putnam	1.42	5th	Camargo	
Central	105	27th	Kingfisher	48	3rd	Bristow	8.73	Okemah	6.51	1st	Okemah	
East Central	98	27th	Webbers Falls	49	3rd	Cookson	7.50	Eufaula	4.64	1st	Eufaula	
Southwest	109	27th	Mangum	49	2nd	Mangum	4.69	Fort Cobb	2.28	17th	Fort Cobb	
South Central	100	27th	Burneyville	52	3rd	Ada	6.06	Ketchum Ranch	1.87	1st	Centrahoma	
Southeast	98	27th	Wilburton	51	8th	Talihina	7.87	Mt Herman	4.04	1st	Mt Herman	
Statewide	111	27th	Freedom	42	2nd	Hooker	8.73	Okemah	6.51	1st	Okemah	

JULY 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

Mean	82 degrees
Hottest July	2011, 89.3 degrees
Coollest July	1906, 76.4 degrees
Hottest location	Waurika, 85.1 degrees
Coollest 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 1895, occurred in 2011. That month produced the highest statewide-averaged temperature (89.3 degrees) of any month for any state 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

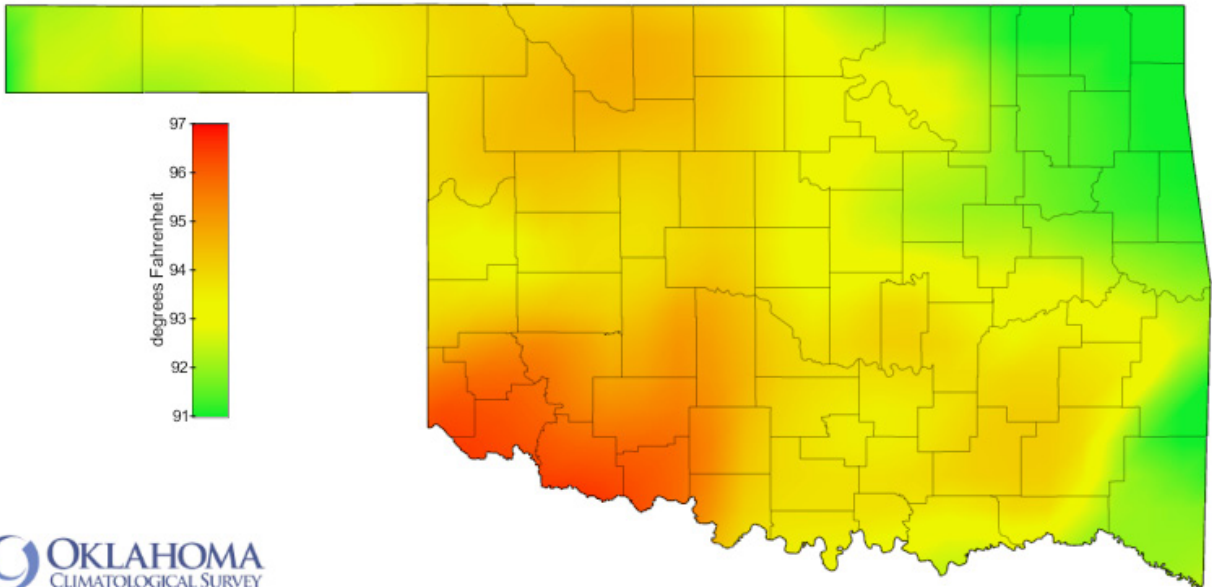
Mean	2.73 inches
Wettest July	1950, 9.26 inches
Driest July	1980, 0.41 inches
Wettest location	Carnasaw Fire Tower (McCurtain County), 4.50 inches
Driest location	Altus and Reydon, 1.77 inches
Most recorded	18.83 inches, Wewoka, 1950

Tornadoes

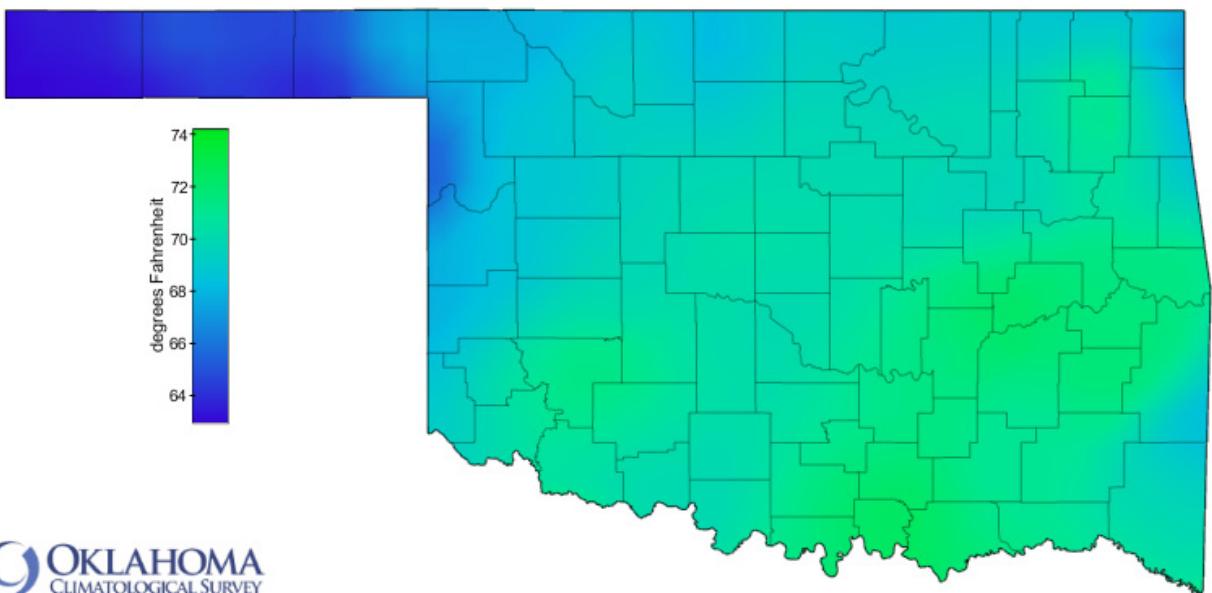
Average June Tornadoes	8.0
Most	28 (1995)

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.

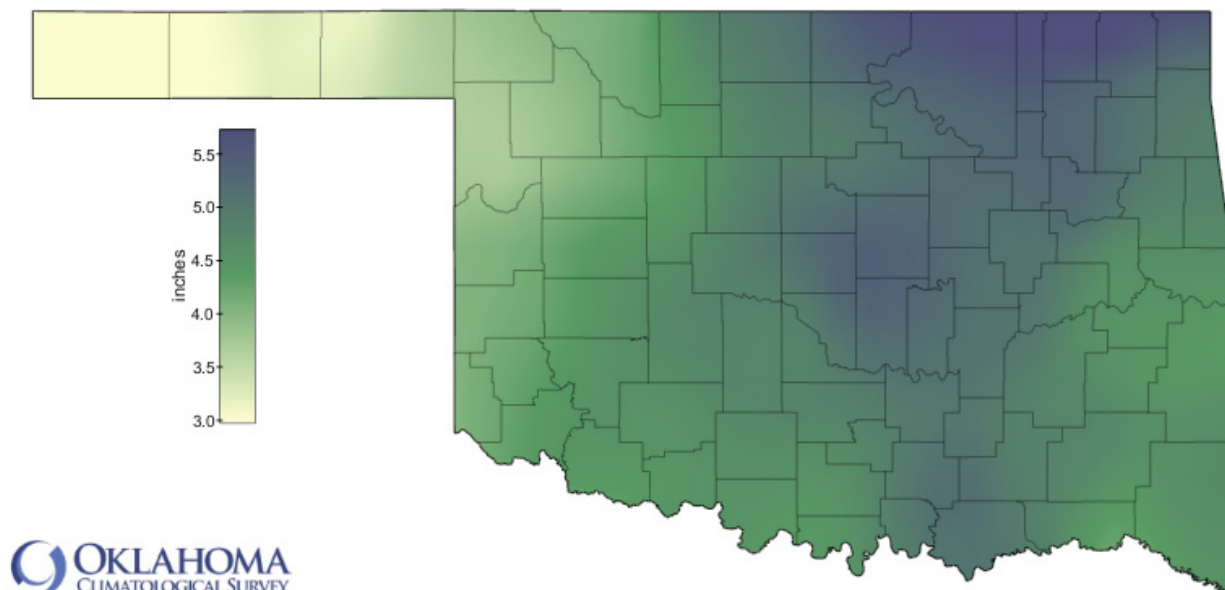
JULY NORMAL DAILY MAXIMUM TEMPERATURE (1981-2010)



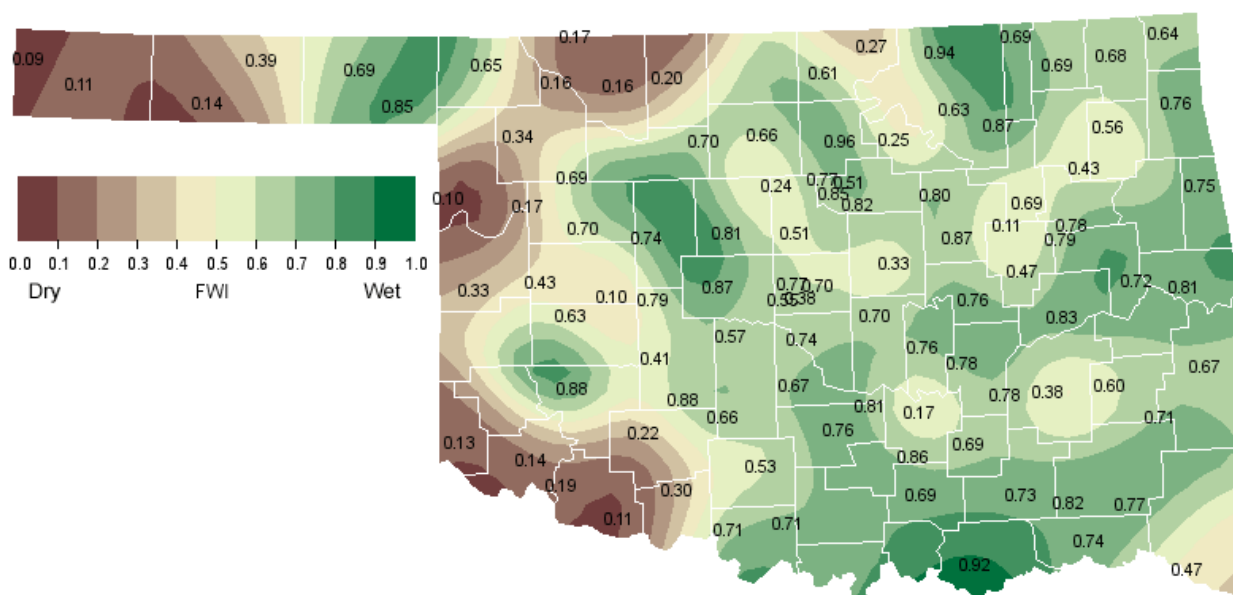
JULY NORMAL DAILY MINIMUM TEMPERATURE (1981-2010)



JULY NORMAL PRECIPITATION (1981-2010)



JULY 1, 2013 SOIL MOISTURE CONDITIONS AT 25CM



U.S. Drought Monitor

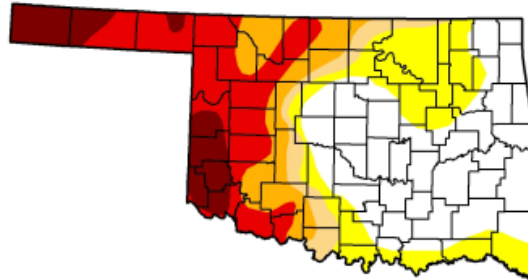
Oklahoma

July 2, 2013

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	38.46	61.54	42.17	36.89	26.45	8.69
Last Week (06/25/2013 map)	46.86	53.14	42.09	36.76	26.35	8.69
3 Months Ago (04/02/2013 map)	0.00	100.00	99.30	80.68	52.97	9.90
Start of Calendar Year (01/01/2013 map)	0.00	100.00	100.00	100.00	94.89	37.06
Start of Water Year (09/25/2012 map)	0.00	100.00	100.00	99.98	95.33	42.09
One Year Ago (06/26/2012 map)	0.32	99.68	48.03	17.00	3.90	0.00



Intensity:

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

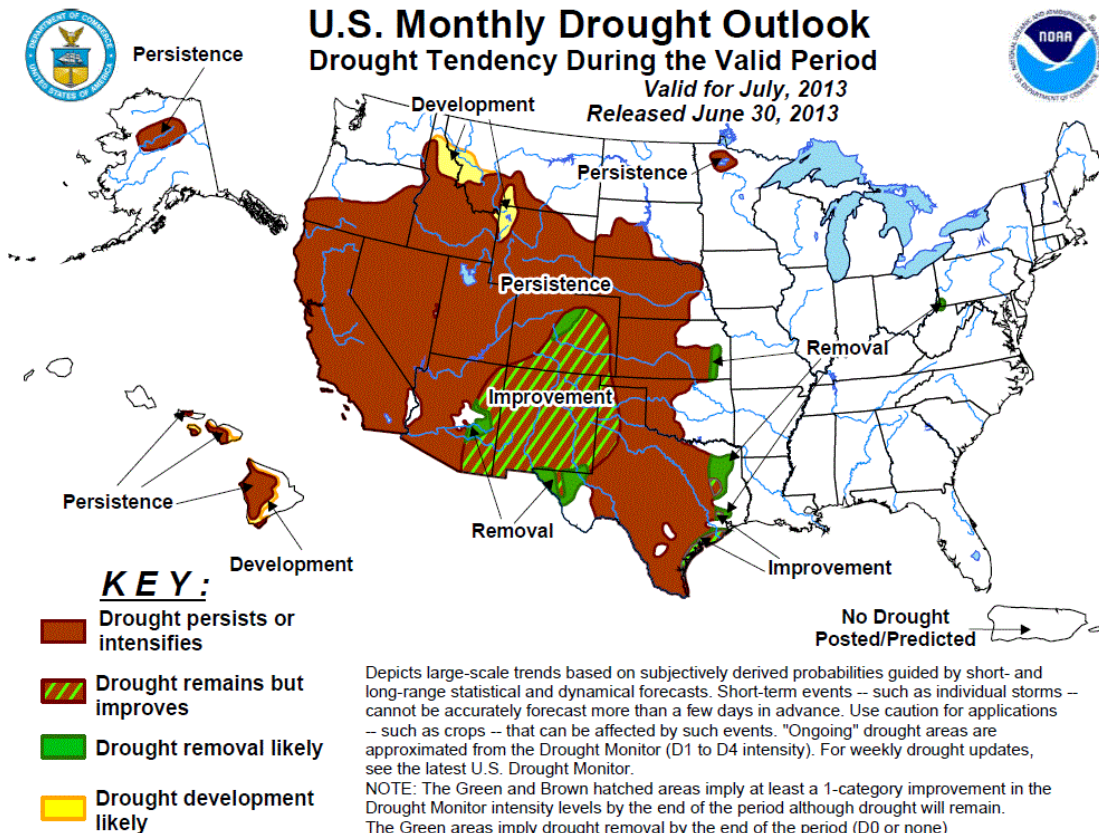
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.



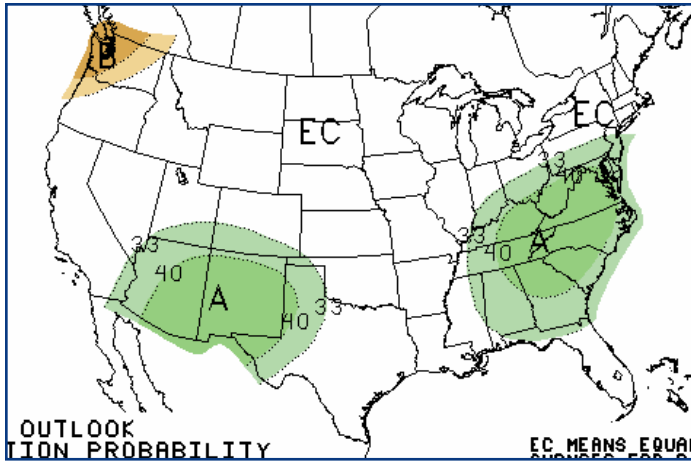
Released Wednesday, July 3, 2013

<http://droughtmonitor.unl.edu>

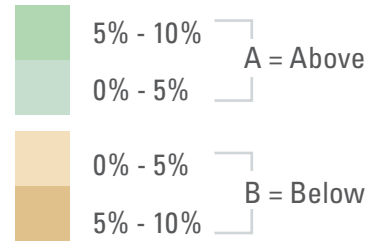
Matthew Rosencrans, NOAA/NWS/NCEP/Climate Prediction Center



JULY 2013 U.S. PRECIPITATION FORECAST

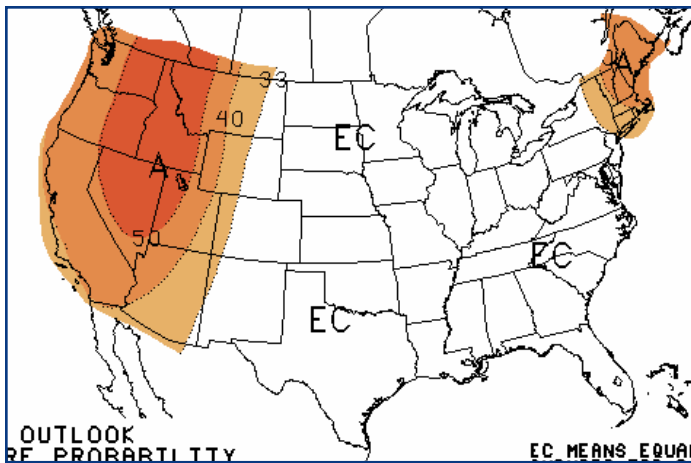


Percent Likelihood of Above or Below Average Precipitation*

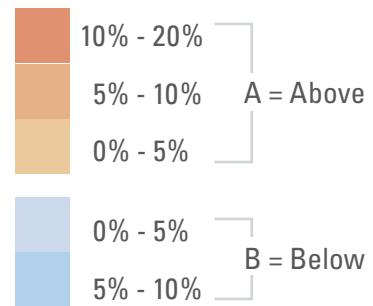


*EC indicates no forecasted anomalies due to lack of model skill.

JULY 2013 U.S. TEMPERATURE FORECAST



Percent Likelihood of Above or Below Average Temperatures*

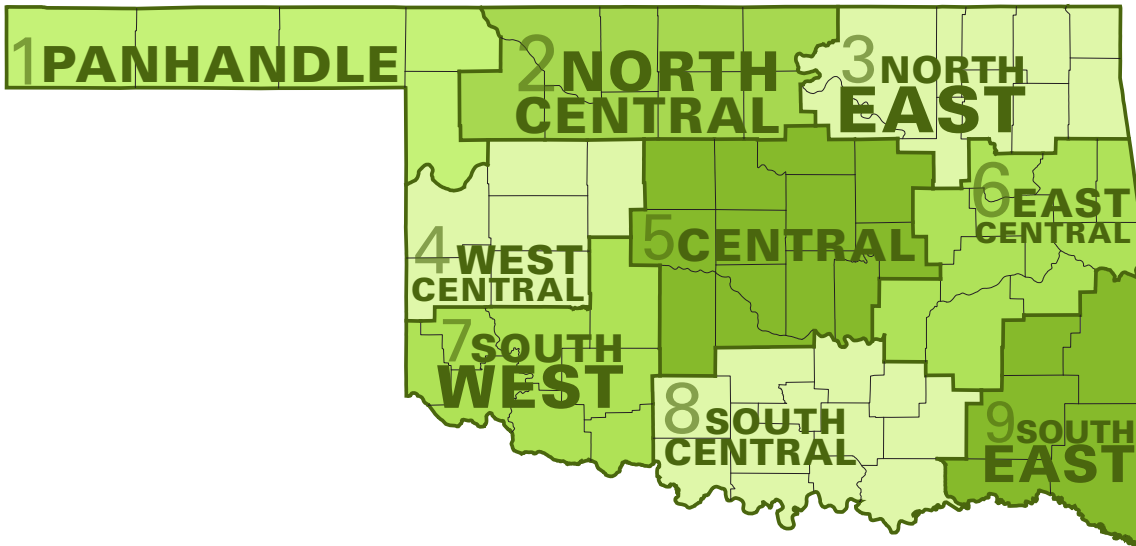


*EC indicates no forecasted anomalies due to lack of model skill.

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 June differs 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 June 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/wwwcgi.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/>



Oklahoma Climatological Survey is the State Climate Office for Oklahoma

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