OKLAHOMA MONTHLY CLIMATE SUMMARY
JUNE 2007

OKLAHOMA CLIMATOLOGICAL SURVEY

Whether falling from the skies by the lake-full or in softball-sized chunks of ice, overflowing riverbanks or transforming highways to tributaries, water was the big story during what turned out to be the wettest June in Oklahoma history. A couple of indecisive upper-level low pressure systems took turns parked over the state for most of the month to provide the main impetus for showers and storms. Those two systems were given plenty of fuel to work with by a persistent high pressure system in the southeastern U.S. which pumped abundant moisture over the state from the Gulf of Mexico. The result was a statewide average rainfall of over nine inches, more than double the normal amount. Just as during the previous month of May, flooding was the major weather hazard with more than 80 instances reported from across the state. Added to that were three tornadoes and a couple of instances of gigantic hail to round out the soggy, eventful month.

Precipitation

Four areas of the state – north central, central, southwestern and south central –had their wettest Junes on record. Central Oklahoma was the big winner, coming in with an average at just under 13 inches. The northeast experienced its second wettest June on record at just over 11 inches. The only area not significantly above normal was the Panhandle, which actually fell a little below normal to rank as the 42nd driest on record. The statewide average precipitation total was 9.10 inches, besting the previous mark of 8.73 inches sat back in 1908. The 2007 totals were in stark contrast to the previous year's mark, which came in at more than six inches less. South central Oklahoma finished with less than an inch in June 2006, compared to nearly 10 inches this June. The Oklahoma Mesonet site at Copan recorded more than 18 inches of rainfall to lead the state, including more than six inches on June 11. The year-to-date statewide average stands at more than 25 inches following June, better than six inches above normal and the sixth wettest on record. Central Oklahoma stands at more than 32 inches above normal for the January-June period, the second wettest such period on record for that region and more than 12 inches above normal.

June 2007 Statewide Extremes

Description	Extreme	Station	Date
High Temperature	100ºF	Tipton	June 19th
Low Temperature	38ºF	Boise City	June 8th
High Precipitation	18.45 in.	Copan	
Low Precipitation	1.62 in.	Goodwell	

Temperature

It stands to reason that with the abundant cloudiness and precipitation, the June sun would not be allowed to do its full work. As it worked out, June was indeed more than a degree below normal and the 31st coolest on record. The Oklahoma Mesonet recorded one triple-digit temperature for the month; 100 degrees at Tipton on the 19th. The year-to-date temperature stands at just over 55 degrees, the 48th warmest such period on record.

June Daily Highlights

June 1-2: A line of severe storms moved into the state from the northwest overnight on the first, pushing an outflow boundary ahead of them. As the outflow boundary traveled to the southwest, more intense rain-producing storms developed along the wind-shift in central Oklahoma. More than five inches fell in Stillwater with scattered amounts between 1-4 inches elsewhere in central Oklahoma. The rain continued into the night on the second, dropping another inch or so in the northeast. More storms in the northwest that evening, but amounts were generally less than an inch. Highs remained in the 80s nearly statewide.

June 3-6: The driest and most tranquil period during June, very little rain fell during these four days. Highs were generally in the 80s and 90s, with lows in the 60s and 70s. A developing upper-level storm system across the Central Plains on the sixth kicked winds up out of the south from 35-45 mph, with gusts greater than 50 mph in the west.

June 7-11: A powerful upper-level storm continued across the Northern Plains, kicking up strong southerly winds again on the seventh. A dryline was located just west of I-44 in the afternoon. Warm, humid conditions existed ahead of the dryline while hot, dry air lay behind the boundary. A few storms in northeastern Oklahoma managed to drop around an inch of rain. More storms on the morning of the eighth formed along a cold front which entered the state. Some locations had nearly an inch of rain from the storms. A sunny and mild afternoon was in store with the cooler air mass. Highs remained in the 70s and 80s. More storms for the next couple of days with amounts generally between one and two inches. The month's highest rainfall amount fell in a few hours on the morning of the eleventh at Copan. After more than two inches fell the night before, Copan saw another six inches that morning. Other areas in northeast had between 1-4 inches. Highs reached into the 80s and 90s.

June 12-15: More bouts of severe storms and heavy rainfall, courtesy of a wayward upper-level low pressure system. This period was very muggy with lows in the 60s and 70s and highs generally in the 80s and 90s. The worst of the severe weather occurred in western Oklahoma on the thirteenth into the early-morning hours of the 14th. Three weak tornadoes touched down in Major County near Orienta the evening of the 13th. No significant damage was reported. The Oklahoma Mesonet site at Erick measured a wind gust at 77 mph. Large hail reports were scattered across the state to go along with heavy rains and significant flooding. Grapefruit size hail was reported near Slapout on the 13th. The Oklahoma Mesonet site at Hobart reported 3.45 inches of rain in one hour just after midnight on the 14th. Between 3-5 inches fell in central and western Oklahoma during this four-day period.

June 16-17: The upper-level low remained in the area, but the rainfall amounts weren't quite as robust as the previous few days. Only about an inch fell at most both days, generally in central Oklahoma. High temperatures were in the 70s and low 80s.

June 18-23: More rain, of course, due to the upper-level low that remained in the area. Numerous instances of large hail were reported across western Oklahoma. Softball size hail fell near Goltry on the 19th. Low temperatures were in the 60s and 70s while highs were generally in the 80s, about 10 degrees below normal for this time of the year. The worst severe weather reported occurred on the 19th into the 20th. A wind gust of 80 mph was reported near Ringwood the evening of the 19th, along with hail to the size of golf balls elsewhere. Between 4-8 inches of rain fell in the center part of the state to go along with the flooding rainfall.

June 24-25: Another couple of days of respite from the seemingly endless flooding and stormy weather, this period saw rainfall amounts generally less than an inch scattered across the state. High temperatures were in the 80s after lows in the 60s and 70s.

June 26-28: A surface trough generated by a thunderstorm complex teamed with the meandering upper-level low pressure system to generate flooding rains throughout this three-day span. The Oklahoma Mesonet sites at Walters and Shawnee had more than five inches of rainfall on the 26th. Portions of southern and central Oklahoma saw as much as seven inches of rainfall during the period.

June 29-30: The month ended very fittingly with more showers and storms due to the ever-persistent upper-level low pressure system. The showers were much more scattered on the 30th compared to most of the month. Between 2-4 inches still fell in central and northern Oklahoma, however. High temperatures were well below average both days in the 70s and low 80s.

June 2007 Statewide Statistics

Temperature

	Average	Depart.	Rank (1895-2007)
Month (Jun)	75.0ºF	-1.5ºF	31st Coolest
Year-to-Date (Jan-Jun)	55.4ºF	0.1ºF	48th Warmest

Precipitation

	Total	Depart.	Rank (1895-2007)
Month (Jun)	9.10 in.	4.84 in.	1st Wettest
Year-to-Date (Jan-Jun)	25.45 in.	6.30 in.	6th Wettest

Depart. = Departure from 30-year normal

June 2007 Severe Weather

Significant Tornadoes (EF2 or greater)

No Significant Tornadoes Reported

Hail (2 inches in diameter or greater)

Size (in.)	Location	County	Day
2.00	5 SW Ninnekah	Grady	1
2.50	McCurtain	Haskell	9
4.00	Slapout	Beaver	13
2.50	1 N Tyrone	Texas	19
2.75	10 WNW Carrier	Alfalfa	19
2.00	Cherokee	Alfalfa	19
4.25	Goltry	Alfalfa	19

Wind Gusts (70 mph or greater)

Speed (m.p.h)	Location	County	Day
70	Copan Mesonet	Washington	1
70	Okmulgee	Okmulgee	9
77	Erick Mesonet	Beckham	13
80	4 NNW Ringwood	Major	19
75	3 W Gould	Harmon	20
71	3 W Gould	Harmon	20
71	Grandfield Mesonet	Tillman	20
70	Grandfield Mesonet	Tillman	20
77	Tipton Mesonet	Tillman	20
75	Tipton Mesonet	Tillman	20

Record Event Reports

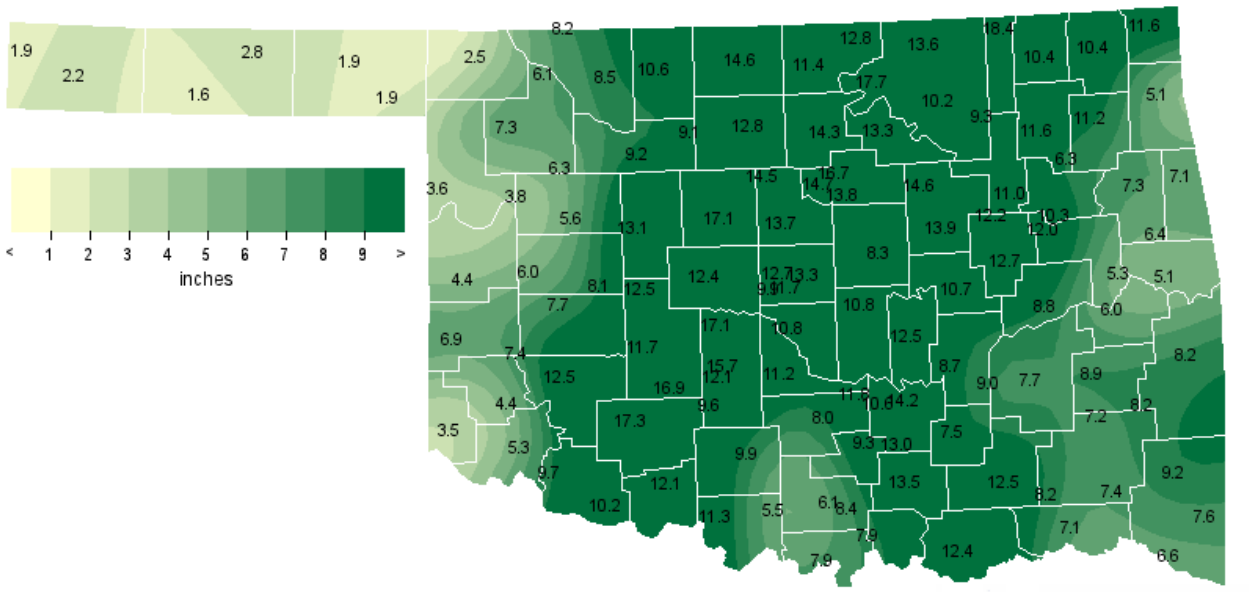
Description	Day	Location	Record	Previous Record	Year
Daily Maximum Rainfall	27	Tulsa	2.62	2.57	1904
Daily Maximum Rainfall	27	McAlester	2.36	0.86	1983

June 2007 Severe Weather

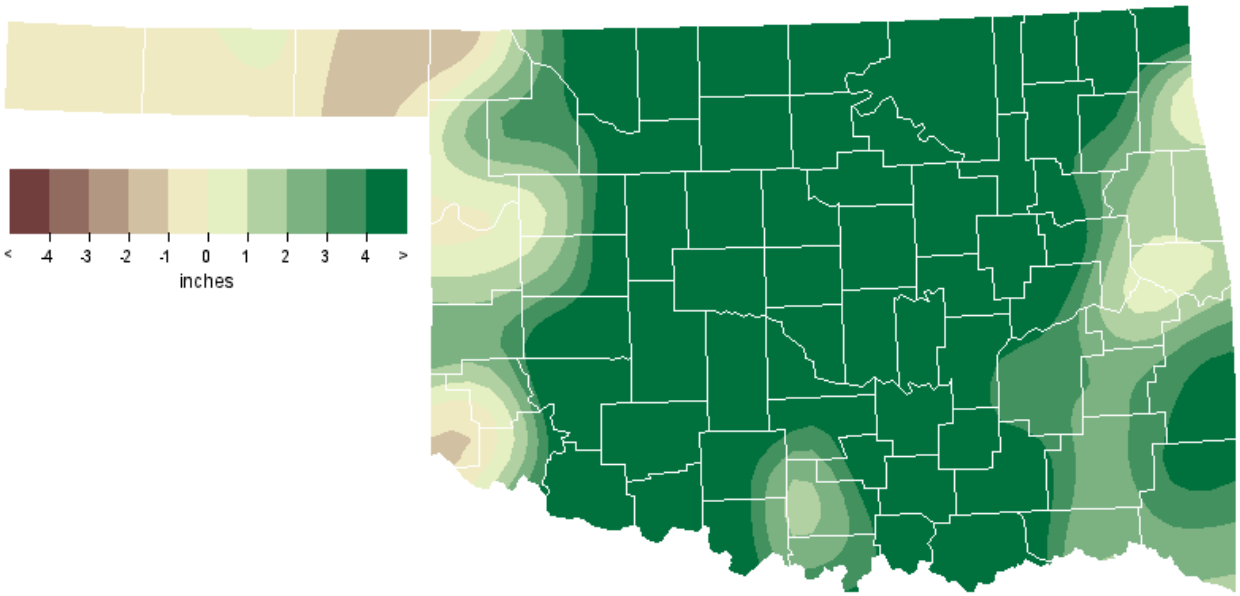
Flooding

Location	County	Day
Cleveland	Pawnee	1
Tuskahoma	Pushmataha	9
Dewey	Washington	11
Wann	Nowata	11
7 SE Guthrie	Logan	13
Fairview	Major	13
2 NNE Harrah	Oklahoma	14
4 N Hobart	Kiowa	14
4 W Hobart	Kiowa	14
7 WSW Hobart	Kiowa	14
8 E Mutual	Woodward	14
9 E Buffalo	Harper	14
Hobart	Kiowa	14
9 WNW Kellyville	Creek	15
Beggs	Okmulgee	15
Chickasha	Grady	15
E Beggs	Okmulgee	15
Mannford	Creek	15
Marlow	Stephens	15
Stratford	Garvin	15
1 S Milburn	Johnston	18
12 W Durant	Bryan	18
2 N Roff	Pontotoc	18
2 NNE Milburn	Johnston	18
4 N Roff	Pontotoc	18
5 S Ada	Pontotoc	18
5 SW Olney	Coal	18
5 W Bowlegs	Seminole	18
Bromide	Johnston	18
Durant	Bryan	18
Fitzhugh	Pontotoc	18
Konawa	Seminole	18
Maud	Pottawatomie	18
Milburn	Johnston	18
Mill Creek	Johnston	18
Ravia	Johnston	18
Roff	Pontotoc	18
Wapanucka	Johnston	18
Tulsa	Tulsa	19
1 N Pawhuska	Osage	20
Foraker	Osage	20
5 E Hobart	Kiowa	22
5 ESE Bessie	Washita	22
2 N Pharoah	Okfuskee	23
4 W Wagoner	Wagoner	23
5 W Adair	Mayes	23
Coweta	Wagoner	23
Haskell	Muskogee	23
Henryetta	Okmulgee	23
Inola	Rogers	23
Pryor	Mayes	23
3 E Piedmont	Canadian	26
3 ENE Piedmont	Canadian	26
3 N Comanche	Stephens	26
3 N Grandfield	Tillman	26
4 N Bethany	Oklahoma	26
Cookietown	Cotton	26
Duncan	Stephens	26
Earlsboro	Pottawatomie	26
Shawnee	Pottawatomie	26
Stillwater	Payne	26
Waurika	Jefferson	26
2 W Bison	Garfield	27
4 W Waukomis	Garfield	27
Bison	Garfield	27
Enid	Garfield	27
1 NW Stillwater	Payne	28
1 W Stecker	Caddo	28
3 W Hennessey	Kingfisher	28
3 W Stillwater	Payne	28
4 S Cache	Comanche	28
5 E Meers	Comanche	28
6 E Meers	Comanche	28
Alex	Grady	28
Duncan	Stephens	28
Ralston	Pawnee	28
Stillwater	Payne	28
4 N Synder	Kiowa	29
4 NNE Burbank	Osage	29
Mountain Park	Kiowa	29
Oklahoma City	Oklahoma	29
Snyder	Kiowa	29

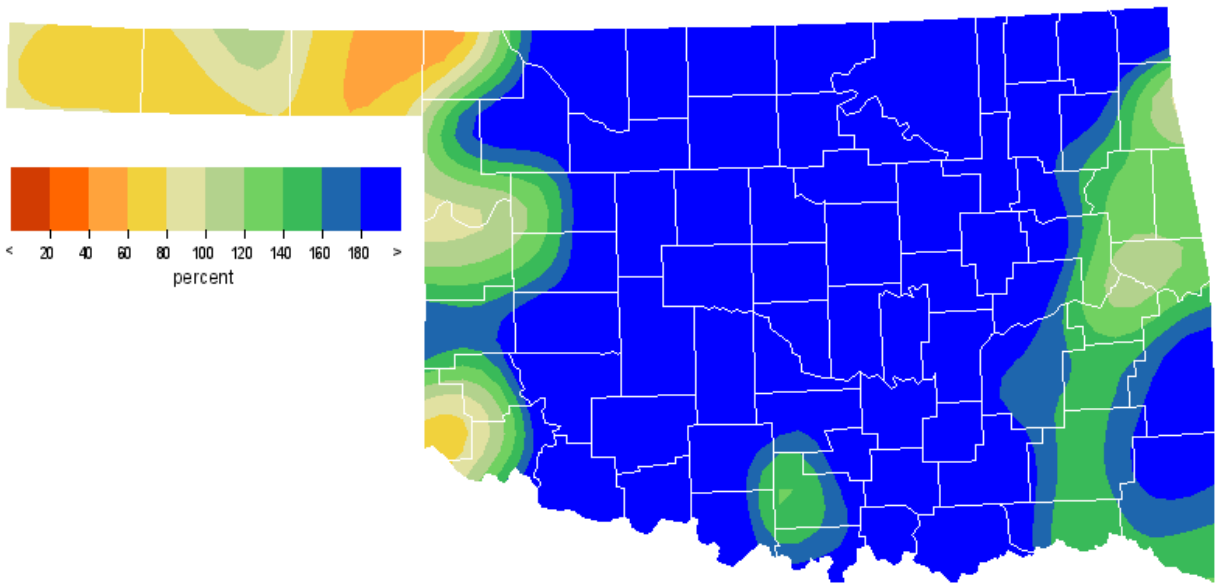
June 2007 Observed Precipitation



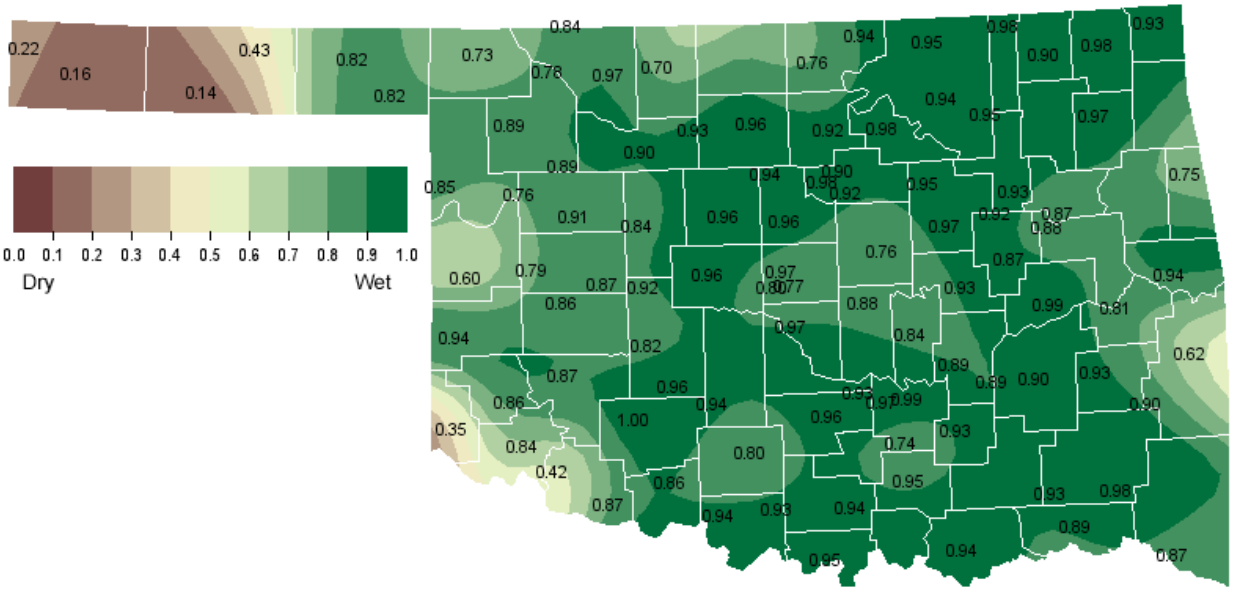
June 2007 Departure from Normal Precipitation



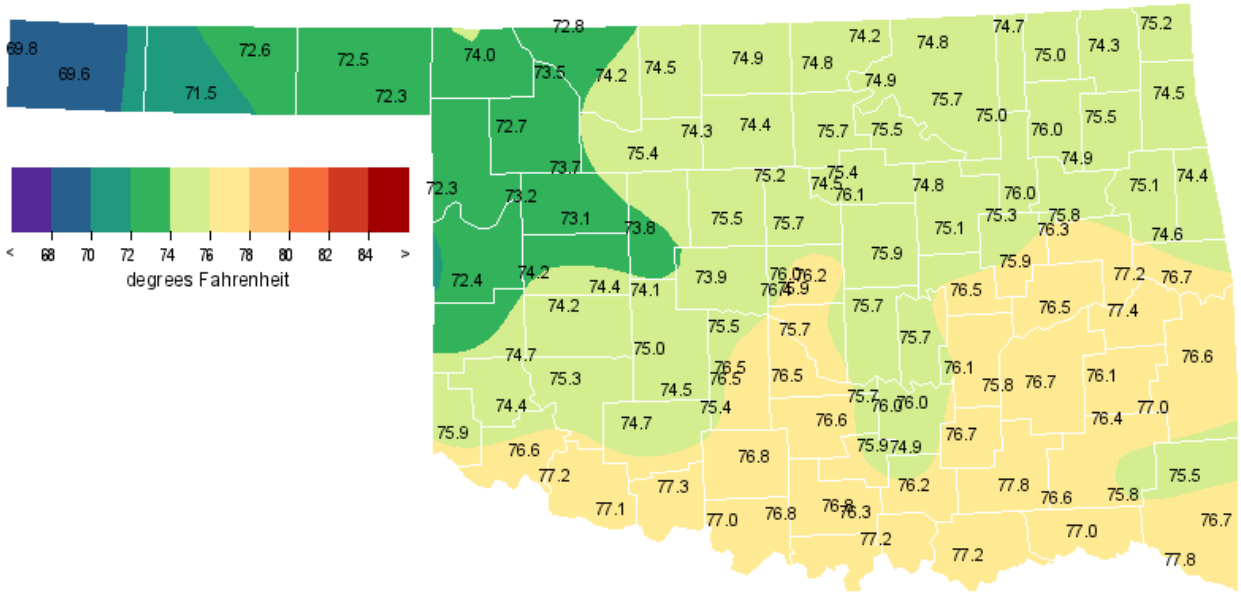
June 2007 Percent of Normal Precipitation



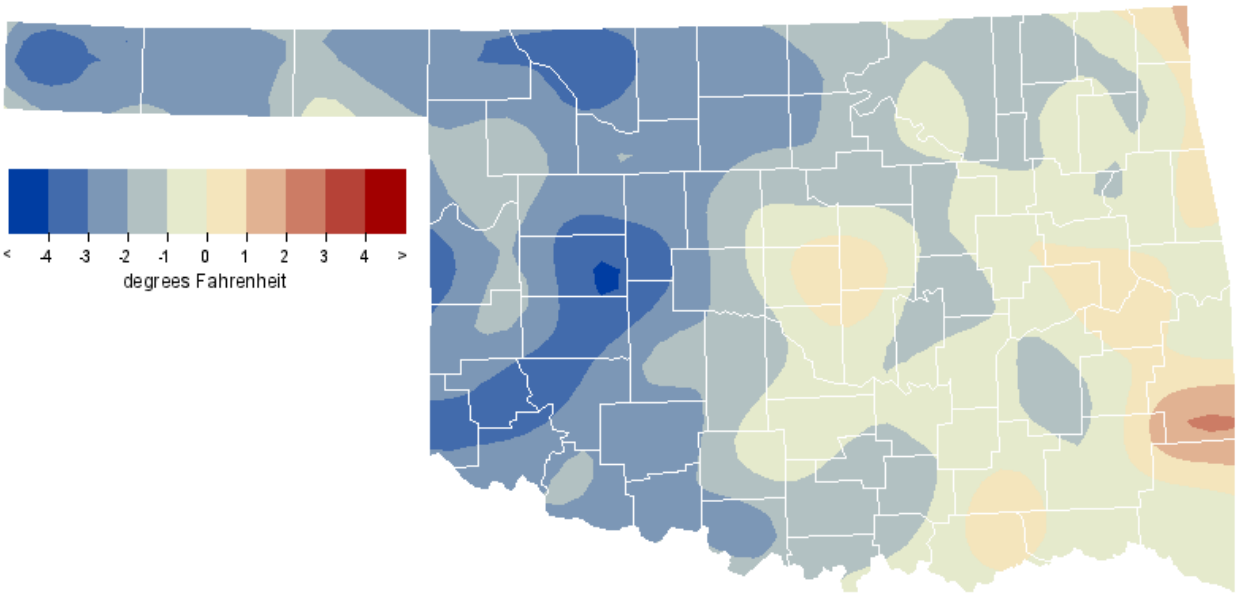
June 2007 Average Soil Moisture at 25cm



June 2007 Average Temperature



June 2007 Departure from Normal Temperature



Mesonet Monthly Summary for June 2007

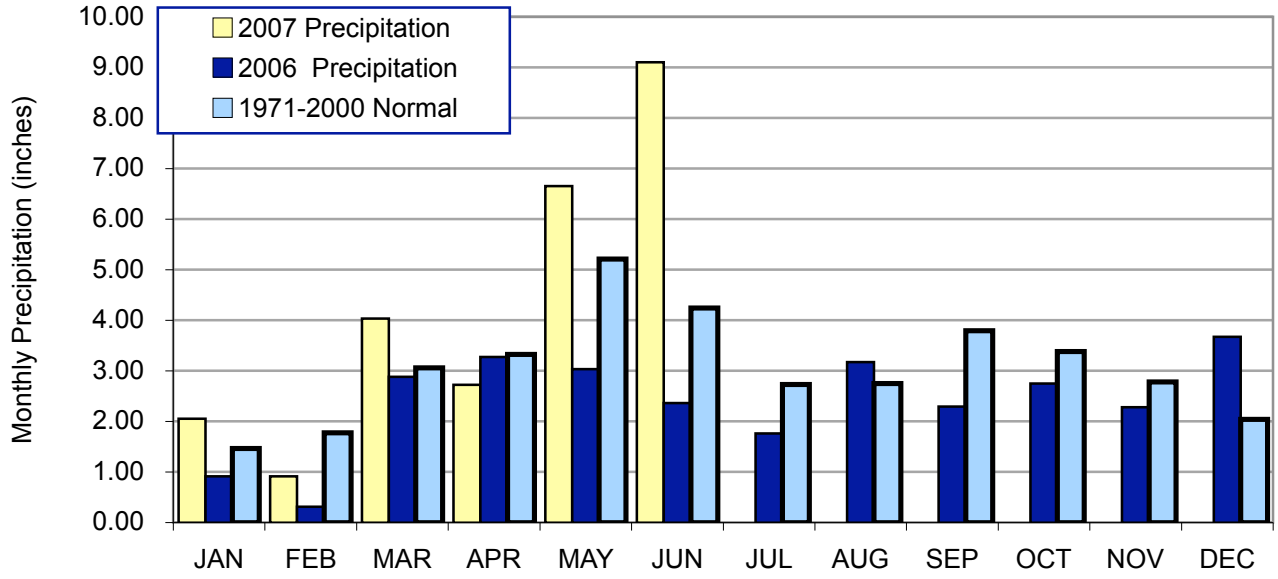
NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
PANHANDLE										
Arnett	72.3	90	19	49	8	4	221	3.63	1.55	19
Beaver	72.5	93	11	43	8	7	232	1.90	.40	9
Boise City	69.6	95	20	38	8	18	156	2.18	.86	2
Buffalo	74.0	94	11	45	8	4	276	2.49	.78	19
NORTH CENTRAL										
Alva	74.2	93	11	48	8	2	279	8.49	3.51	27
Blackwell	74.8	95	7	55	9	0	294	11.40	2.82	29
Breckinridge	74.5	93	11	54	8	0	285	12.81	2.91	13
Cherokee	74.4	93	11	49	8	1	284	10.56	2.79	27
Fairview	75.4	96	11	53	8	0	312	9.23	2.36	13
Freedom	73.5	91	11	47	8	4	259	6.09	2.15	27
Lahoma	74.4	93	7	55	8	0	281	9.08	1.83	19
NORTHEAST										
Bixby	76.1	89	19	58	9	0	332	11.02	2.14	20
Burbank	74.9	90	7	55	9	0	296	17.68	3.56	28
Claremore	76.0	90	5	57	9	0	330	11.56	3.06	23
Copan	74.6	87	25	55	9	0	289	18.45	6.05	11
Foraker	74.7	90	24	55	8	0	291	9.37	3.25	19
Inola	74.9	89	19	58	9	0	296	6.30	3.32	23
Jay	74.4	89	29	54	9	0	283	5.06	1.85	11
Miami	75.2	89	10	55	9	0	306	11.62	1.66	7
WEST CENTRAL										
Bessie	74.2	91	11	53	8	0	277	7.69	1.35	13
Butler	74.2	92	11	53	8	0	277	5.97	1.30	13
Camargo	73.2	91	19	50	8	2	249	3.81	2.00	19
Cheyenne	72.4	90	19	50	8	3	226	4.44	1.38	19
Erick	*****	***	***	***	***	****	****	6.91	2.10	13
CENTRAL										
Acme	75.3	92	7	57	5	0	310	9.57	1.69	28
Bowlegs	75.7	92	11	59	5	0	320	12.51	4.32	20
Bristow	75.1	92	12	55	8	0	304	13.93	2.66	26
Chandler	75.9	92	11	59	8	0	328	8.31	2.78	26
Chickasha	76.4	95	7	56	5	0	341	15.74	2.31	26
El Reno	73.9	91	7	54	8	0	267	12.43	2.42	29
Guthrie	75.7	92	19	55	8	0	320	13.72	2.12	19
Kingfisher	75.5	94	7	55	8	0	314	17.07	4.21	27
Marena	74.5	90	11	56	8	0	285	14.67	3.50	1
Minco	75.5	92	19	56	8	0	315	17.12	4.09	26
Marshall	75.0	94	7	56	8	0	301	14.46	2.61	29
Ninnekah	76.5	93	7	58	5	0	345	12.14	1.97	26
EAST CENTRAL										
Calvin	76.1	93	12	58	5	0	334	8.74	2.43	20
Cookson	74.6	91	19	57	9	0	289	6.39	2.01	19
Eufaula	76.5	91	19	61	8	0	344	8.77	1.54	15
Haskell	76.3	91	19	60	9	0	339	11.96	2.87	20
Hectorville	75.2	89	19	59	8	0	307	*****	*****	***
McAlester	76.6	93	12	59	5	0	349	7.65	2.28	27
Okmulgee	75.9	91	19	59	9	0	327	12.69	2.94	23
SOUTHWEST										
Altus	76.7	98	19	59	5	0	350	5.35	1.06	29
Apache	74.5	92	7	57	8	0	285	16.95	2.69	1
Fort Cobb	74.9	95	7	58	8	0	298	11.68	2.39	27
Grandfield	77.1	95	7	61	5	0	363	10.18	3.29	26
Hinton	74.1	93	7	55	8	0	272	12.55	2.28	29
Hobart	75.3	94	11	56	8	0	310	12.47	4.15	13
SOUTH CENTRAL										
Ada	76.0	91	12	60	5	0	331	14.18	4.64	18
Ardmore	76.4	92	12	61	5	0	342	8.38	1.39	20
Burneyville	*****	***	***	***	***	****	****	7.91	1.31	30
Byars	75.7	90	11	60	8	0	320	11.80	5.22	15
Centrahoma	76.7	92	12	58	5	0	351	7.54	1.60	27
Durant	77.2	92	12	62	5	0	366	12.41	1.93	18
Fittstown	74.9	90	12	60	5	0	296	13.01	2.77	18
Ketchum Ranch	76.8	92	19	60	8	0	354	9.91	2.62	20
Lane	77.8	92	12	60	5	0	383	12.50	2.26	30
SOUTHEAST										
Antlers	76.6	92	9	56	5	0	349	8.20	1.93	27
Broken Bow	76.6	92	10	56	5	0	348	7.56	3.66	20
Clayton	76.5	92	12	57	5	0	344	7.17	1.99	9
Cloudy	75.8	90	10	58	5	0	325	7.37	2.07	27
Hugo	76.9	91	11	62	5	0	357	7.07	1.82	27

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
Goodwell	71.5	94	22	40	8	9	203	1.62	.60	2
Hooker	72.5	94	19	42	8	6	232	2.80	1.26	19
Kenton	69.8	95	20	40	8	20	163	1.86	.78	26
Slapout	72.4	92	11	46	8	5	226	1.91	.66	19
May Ranch	72.9	90	11	48	8	4	241	8.16	3.10	13
Medford	74.9	95	7	51	8	0	297	14.60	3.71	29
Newkirk	74.1	92	7	55	9	0	274	12.76	2.61	29
Red Rock	75.7	91	7	55	8	0	320	14.26	2.23	28
Seiling	73.7	92	11	51	8	2	261	6.27	1.65	19
Woodward	72.8	90	11	49	8	4	237	7.28	1.97	27
Nowata	75.0	88	24	54	9	0	299	10.38	3.24	11
Pawnee	75.5	90	7	56	8	0	315	13.33	2.66	28
Porter	75.9	90	10	60	9	0	327	10.30	2.52	20
Pryor	75.5	91	19	55	9	0	315	11.21	3.83	11
Skiatook	75.0	88	24	57	8	0	301	9.30	1.87	27
Vinita	74.4	87	19	55	9	0	282	10.41	1.90	11
Wynona	75.7	89	24	57	9	0	321	10.25	1.91	29
Putnam	73.1	91	11	52	8	1	244	5.59	1.72	19
Retrop	74.7	94	19	55	8	0	290	7.37	1.31	12
Watonga	73.8	92	7	53	8	0	263	13.06	3.76	13
Weatherford	74.4	93	7	54	8	0	282	8.11	2.83	13
Norman	75.8	90	19	59	8	****	****	10.76	1.73	14
Oilton	74.7	90	12	54	9	0	291	14.64	3.91	26
OKC East	75.9	91	19	59	8	0	327	11.74	3.12	14
OKC North	75.9	92	11	57	8	0	328	12.66	2.88	26
OKC West	76.4	92	7	59	8	0	342	9.93	1.94	14
Okemah	76.5	92	19	59	5	0	344	10.74	2.50	20
Perkins	76.1	93	11	58	8	0	333	13.78	2.74	26
Shawnee	75.7	91	12	58	8	0	321	10.78	5.17	26
Spencer	76.2	92	19	57	8	0	336	13.32	2.95	26
Stillwater	75.4	92	12	57	8	0	313	16.74	5.32	1
Washington	76.6	91	19	58	8	0	347	11.17	2.29	1
Sallisaw	76.8	93	19	59	5	0	353	5.10	1.31	27
Stigler	77.4	92	19	62	5	0	371	5.97	1.23	26
Stuart	75.8	91	12	61	8	0	324	9.01	1.91	27
Tahlequah	75.1	90	19	57	5	0	304	7.29	1.84	11
Webbers Falls	77.2	93	10	60	5	0	366	5.33	.72	20
Westville	74.3	88	19	57	4	0	280	7.07	3.68	11
Hollis	75.9	99	19	56	8	0	328	3.50	.90	24
Mangum	74.4	94	19	55	5	0	283	4.39	.94	3
Medicine Park	74.7	91	19	58	8	0	290	17.32	2.95	28
Tipton	77.1	100	19	58	5	0	362	9.72	1.97	29
Walters	77.2	94	7	60	5	0	367	12.13	5.48	26
Madill	77.1	91	9	59	5	0	364	7.94	1.91	30
Newport	76.8	92	11	61	5	0	353	6.09	1.64	20
Pauls Valley	76.6	91	11	60	5	0	347	8.04	2.34	14
Ringling	76.8	91	12	61	5	0	354	5.47	1.08	20
Sulphur	75.9	91	12	57	5	0	328	9.28	2.11	20
Tishomingo	76.1	91	12	59	5	0	333	13.51	2.58	20
Vanoss	76.0	92	11	59	5	0	331	10.61	2.76	18
Waurika	77.0	92	19	61	5	0	360	11.28	4.44	26
Idabel	77.7	92	10	60	5	0	382	6.61	1.49	26
Mt Herman	75.4	89	12	57	5	0	313	9.16	2.96	26
Talihina	77.0	93	11	56	5	0	359	8.18	1.82	26
Wilburton	76.1	91	12	57	5	0	332	8.94	1.62	20
Wister	76.5	93	10	55	4	0	346	8.17	1.86	19

June 2007 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Jun-06
Panhandle	2.30	-0.63	42nd Driest	7.70 (1962)	0.01 (1924)	1.74
North Central	10.08	6.14	1st Wettest	9.91 (1908)	0.43 (1933)	2.69
Northeast	11.21	6.58	2nd Wettest	11.34 (1948)	0.08 (1933)	2.41
West Central	6.99	3.13	8th Wettest	9.25 (1989)	0.32 (1910)	3.27
Central	12.96	8.39	1st Wettest	11.34 (1908)	0.00 (1914)	2.84
East Central	8.00	3.14	15th Wettest	12.69 (1935)	0.00 (1914)	2.44
Southwest	10.57	6.41	1st Wettest	8.79 (1962)	0.56 (1933)	1.54
South Central	9.99	5.35	1st Wettest	9.35 (1945)	0.00 (1914)	0.96
Southeast	7.84	3.14	10th Wettest	11.00 (1945)	0.00 (1914)	3.62
Statewide	9.10	4.84	1st Wettest	8.73 (1908)	0.46 (1933)	2.36

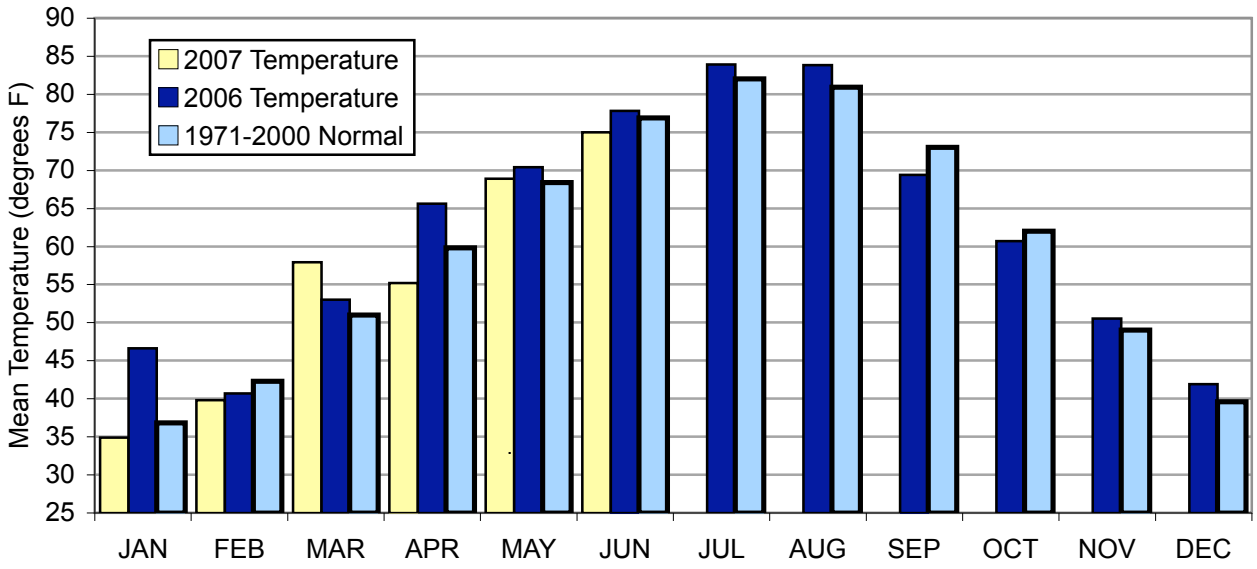
2006 and 2007 Statewide Precipitation Monthly Totals vs. Normal



June 2007 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Jun-06 (F)
Panhandle	71.8	-2.6	24th Coolest	82.0 (1953)	67.7 (1903)	77.9
North Central	74.2	-2.6	19th Coolest	85.7 (1953)	69.7 (1903)	78.4
Northeast	75.2	-0.5	47th Coolest	83.7 (1953)	68.9 (1903)	75.8
West Central	73.8	-2.6	16th Coolest	85.6 (1953)	69.1 (1903)	78.5
Central	75.7	-1.1	37th Coolest	84.4 (1953)	69.9 (1903)	77.9
East Central	76.0	-0.2	46th Coolest	84.4 (1953)	69.8 (1903)	76.1
Southwest	75.6	-2.8	15th Coolest	86.7 (1953)	71.5 (1903)	80.1
South Central	76.5	-1.2	32nd Coolest	85.2 (1953)	71.1 (1903)	79.1
Southeast	76.5	0.1	55th Coolest	83.9 (1953)	70.3 (1903)	76.0
Statewide	75.0	-1.5	31st Coolest	84.6 (1953)	69.8 (1903)	77.8

2006 and 2007 Statewide Temperature Monthly Averages vs. Normal



Mesonet Extremes for June 2007

Climate Division	High Temp (F)	Day	Station	Low Temp (F)	Day	Station	High Monthly Rainfall (inches)	Station	High Daily Rainfall (inches)	Day	Station
Panhandle	95	20th	Kenton	38	8th	Boise City	3.63	Arnett	1.55	19th	Arnett
North Central	96	11th	Fairview	47	8th	Freedom	14.60	Medford	3.71	29th	Medford
Northeast	91	19th	Pryor	54	9th	Jay	18.45	Copan	6.05	11th	Copan
West Central	94	19th	Retrop	50	8th	Cheyenne	13.06	Watonga	3.76	13th	Watonga
Central	95	7th	Chickasha	54	9th	Oilton	17.12	Minco	5.32	1st	Stillwater
East Central	93	19th	Sallisaw	57	9th	Cookson	12.69	Okmulgee	3.68	11th	Westville
Southwest	100	19th	Tipton	55	5th	Mangum	17.32	Medicine Park	5.48	26th	Walters
South Central	92	19th	Waurika	57	5th	Sulphur	14.18	Ada	5.22	15th	Byars
Southeast	93	10th	Wister	55	4th	Wister	9.16	Mt Herman	3.66	20th	Broken Bow
Statewide	100	19th	Tipton	38	8th	Boise City	18.45	Copan	6.05	11th	Copan

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

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 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).

Temperature

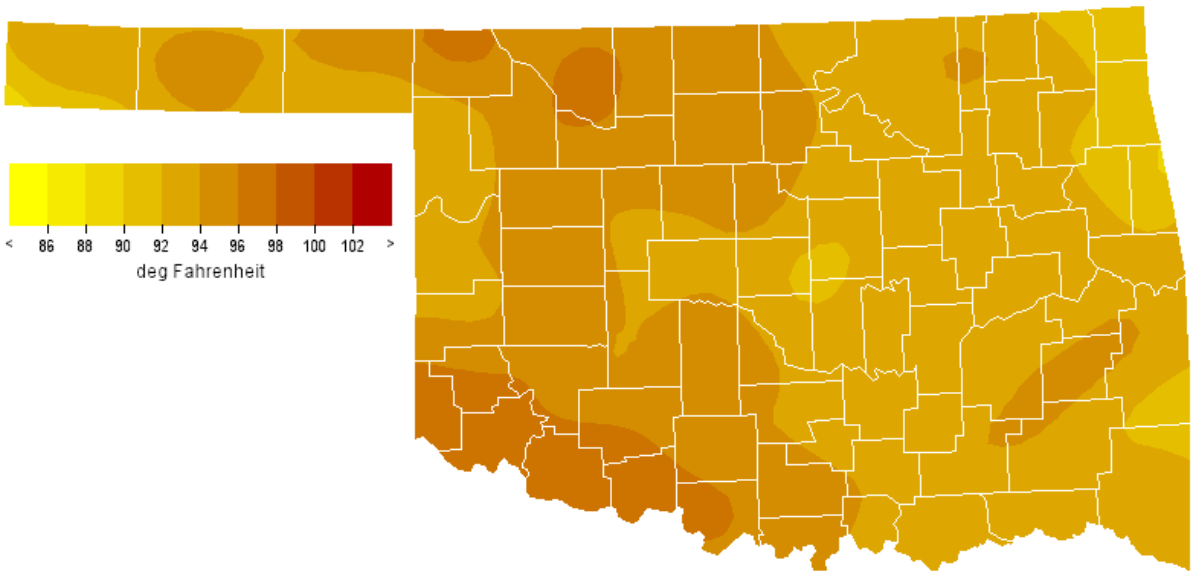
Temperature Mean: 82.0 degrees
Hottest June: 1954, 88.6 degrees
Coolest June: 1906, 76.4 degrees
Hottest location: Waurika, 85.1 degrees
Coolest location: Boise City, 77.2 degrees
Hottest recorded: 120 degrees, Alva, July 18, 1936
Altus, July 19, 1936
Tishomingo, July 26, 1943
Coldest recorded: 41 degrees,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

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.

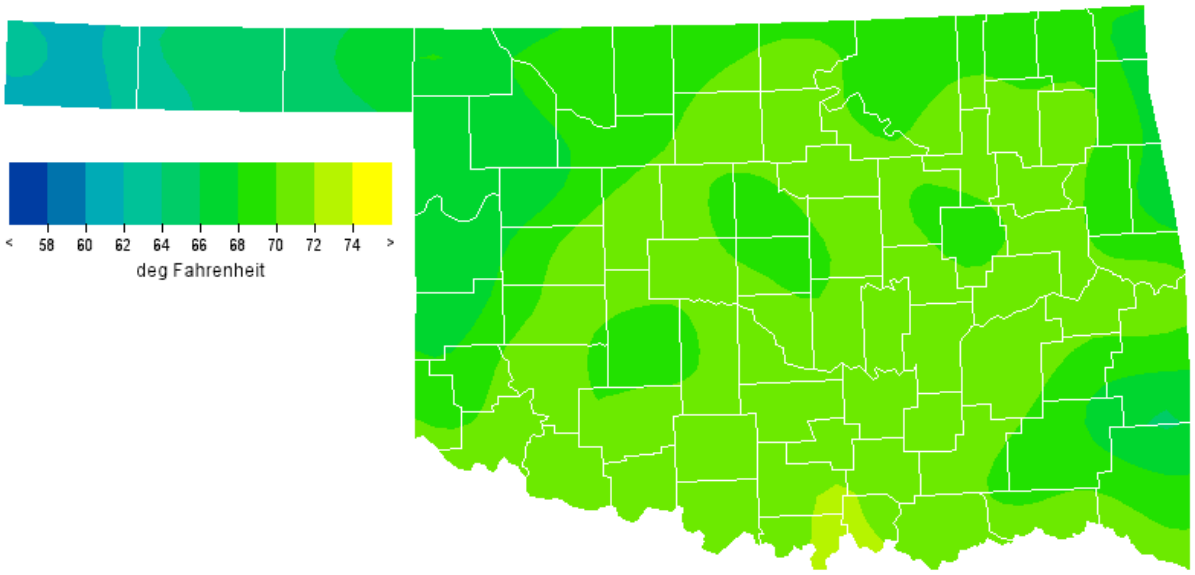
Tornadoes

Average July Tornadoes: 2
Most: 7 (1956)

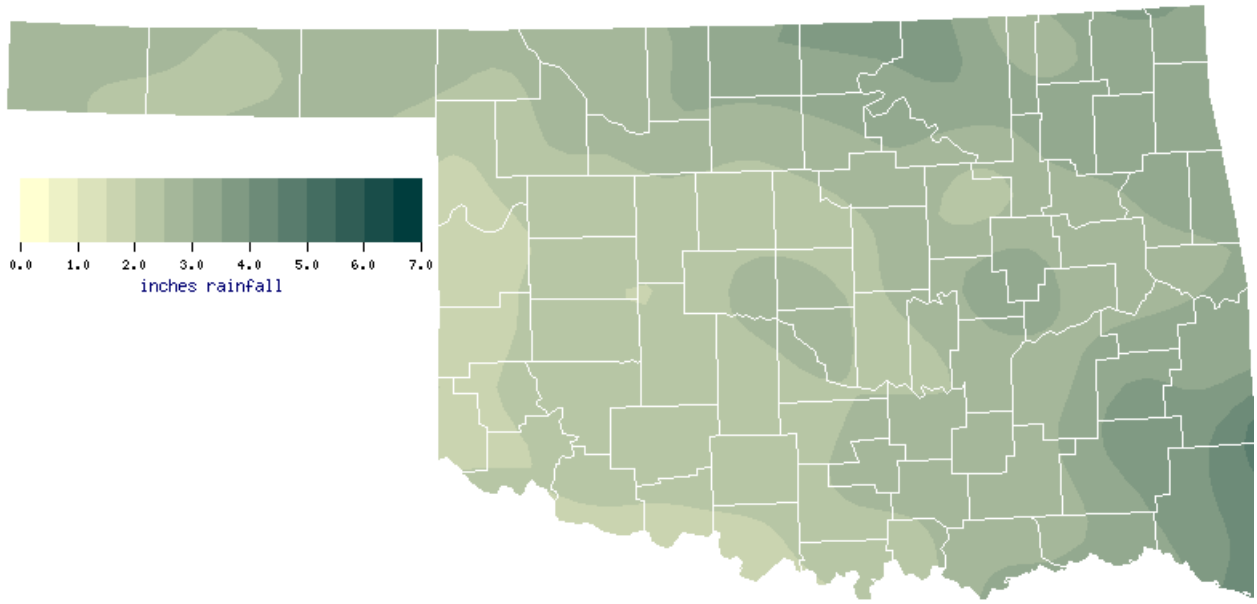
July Normal Daily Maximum Temperature (1971-2000)



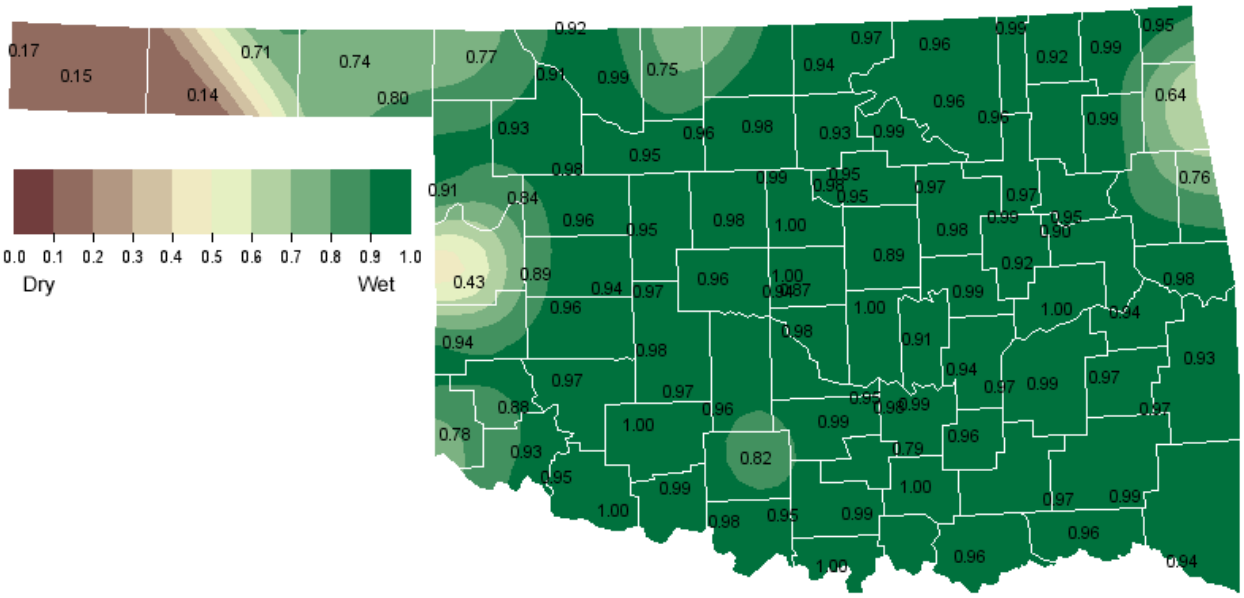
July Normal Daily Minimum Temperature (1971-2000)



July Normal Precipitation (1971-2000)



July 1, 2007 Soil Moisture Conditions at 25cm



U.S. Drought Monitor

Oklahoma

June 26, 2007
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	98.4	1.6	0.0	0.0	0.0	0.0
Last Week (06/19/2007 map)	94.2	5.8	0.0	0.0	0.0	0.0
3 Months Ago (04/03/2007 map)	77.8	22.2	0.0	0.0	0.0	0.0
Start of Calendar Year (01/02/2007 map)	31.3	68.7	39.8	24.5	18.2	0.0
Start of Water Year (10/03/2006 map)	2.7	97.3	92.7	46.2	16.6	0.0
One Year Ago (06/27/2006 map)	0.0	100.0	80.4	58.3	16.4	0.0

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

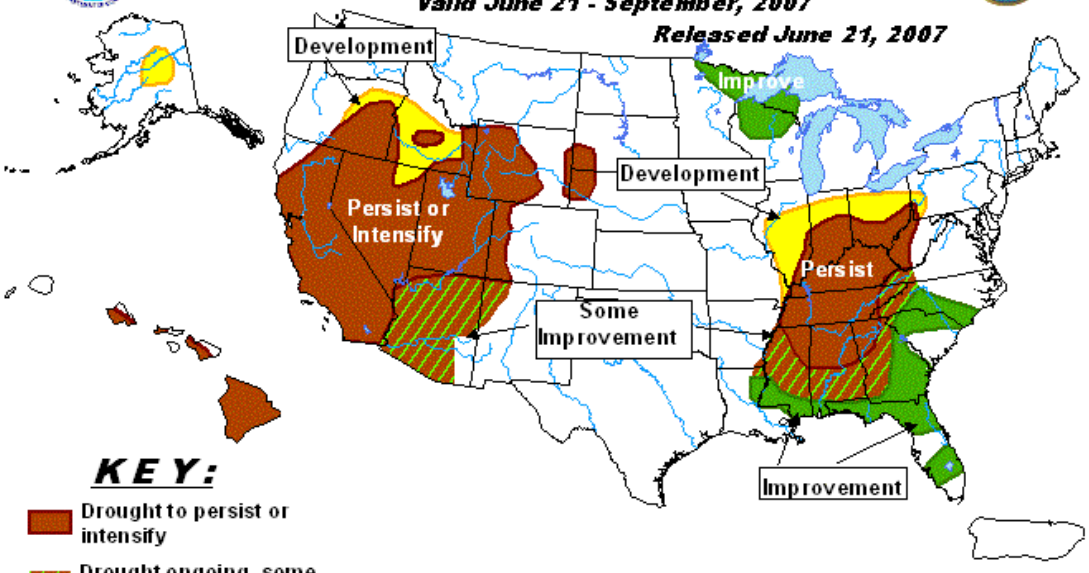
Released Thursday, June 28, 2007
Author: Douglas Le Comte, CPC/NOAA

U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid June 21 - September, 2007

Released June 21, 2007

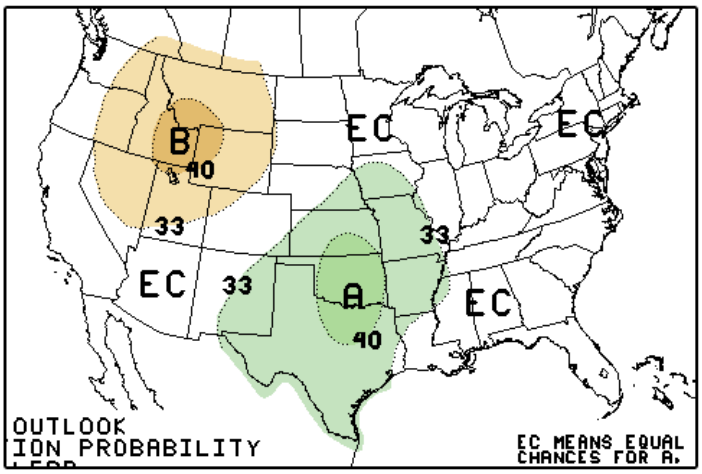


KEY:

- Drought to persist or intensify
- Drought ongoing, some improvement
- Drought likely to improve, impacts ease
- Drought development likely

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more that a few days in advance. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.

July 2007 U.S. Precipitation Forecast



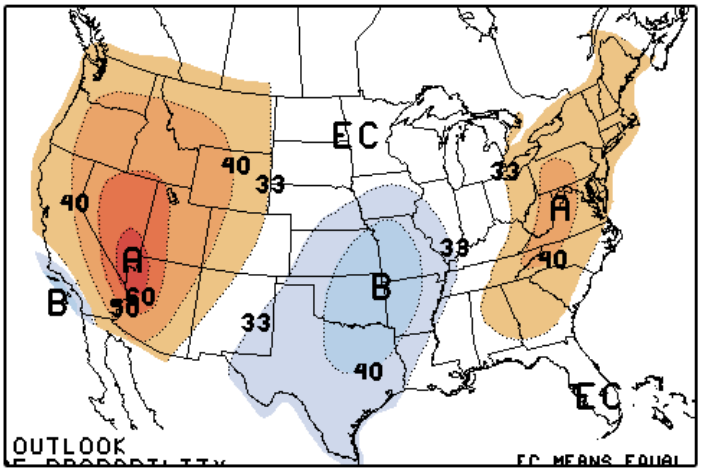
Percent Likelihood of Above or Below Average Precipitation*

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

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

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

July 2007 U.S. Temperature Forecast



Percent Likelihood of Above and Below Average Temperatures*

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

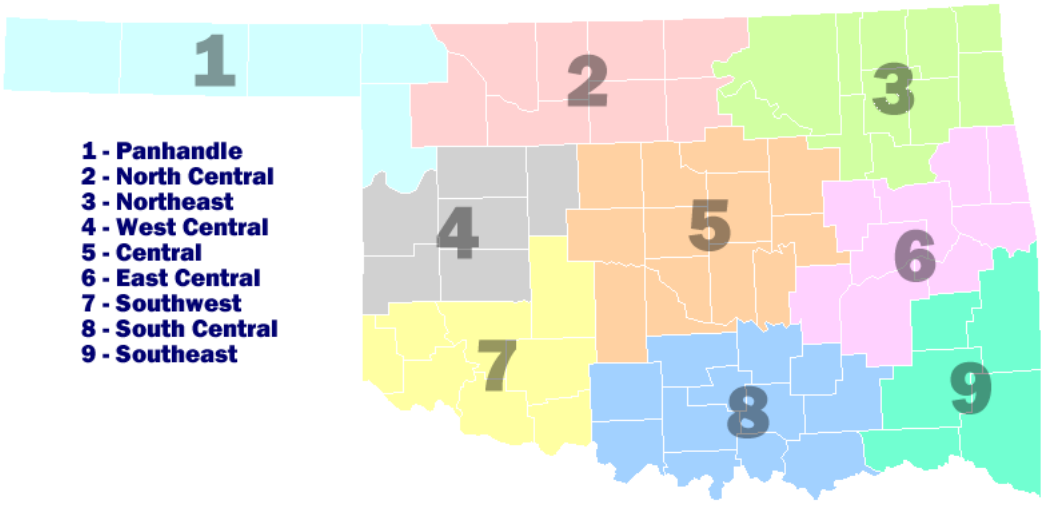
0% - 5%
5% - 10%
B = Below

*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.ocs.ou.edu or
http://www.ocs.ou.edu/
E-mail (ocs@ou.edu) or telephone (405/325-2541)

OKLAHOMA CLIMATOLOGICAL SURVEY

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