Oklahoma Monthly Climate Summary

AUGUST 2009

OKLAHOMA CLIMATOLOGICAL SURVEY

The summer doldrums were absent during August with plenty of rainfall and relatively cool weather on tap for Oklahoma. Abundant rains in the north central parts of the state propelled the month to finish as the 25th wettest since 1895. The rains and a few unusually strong fronts helped cool things down from the normal August heat – the month finished as the 21st coolest on record. With the rain came a goodly amount of severe weather, mostly flooding and high wind reports. Cloud-to-ground lightning strikes were especially prevalent with the August storms. The summer season finished a little cool and wet as well, and ranked as the 40th coolest and 48th wettest on record.

PRECIPITATION

All areas of the state were above normal save for the southwest corner. The Tipton Mesonet site in that region recorded the lowest August total with 0.42 inches. Medford in north central Oklahoma led the way with 10.77 inches. Similar but somewhat lesser amounts in that area led to the 11th wettest August on record for north central Oklahoma since 1895. Southwestern and south central Oklahoma experienced their 54th and 57th driest on record, respectively. Statewide, the average total was nearly 4 inches, a surplus of more than an inch.

August 2009 Statewide Extremes

Description	Extreme	Station	Day
High Temperature	107°F	Walters	25
Low Temperature	45°F	Nowata	31
High Precipitation	10.77 in.	Medford	--
Low Precipitation	0.42 in.	Tipton	--

TEMPERATURE

The eastern half of the state pushed the statewide average to more than a degree below normal, especially the northeastern quarter at more than four degrees below normal in some areas. That region's average temperature for the month was the 12th coolest on record. The northwest was the warmest section of the state at about a half of a degree below normal. Summer's first two months were just a tad above normal and the 49th warmest since 1895. For the January-July period, the temperature amounted to the 35th warmest on record.

AUGUST DAILY HIGHLIGHTS

AUGUST 1-6: A cold front on the month's first day kicked off a round of showers and storms in central Oklahoma, which then tracked to the southeast. High temperatures were a bit cooler than normal in the 80s and 90s. Areas in northern Oklahoma struggled to reach 80 degrees. Lows the next morning reflected the drier, cooler air after the cold front and dipped into the 50s and 60s. Temperatures warmed over the next few days back into the 90s and 100s. A few showers and storms struck on the third, then on the fifth and sixth along a stationary front. Central Oklahoma saw 1-2 inches during this six-day period with similar amounts in localized areas of southeastern and east central Oklahoma.

August 2009 Statewide Statistics

Temperature

	Average	Depart.	Rank (1895-2009)
Month (August)	78.3°F	-2.1°F	21st Coolest
Season-to-Date (Jun-Aug)	79.0°F	-0.5°F	40th Coolest
Year-to-Date (Jan-Aug)	62.2°F	0.3°F	41st Warmest

Precipitation

	Average	Depart.	Rank (1895-2009)
Month (August)	3.85 in.	1.08 in.	25th Wettest
Season-to-Date (Jun-Aug)	10.37 in.	0.6 in.	48th Wettest
Year-to-Date (Jan-Aug)	24.51 in.	-0.15 in.	49th Wettest

Depart. = departure from 30-year normal

AUGUST 7-9: Very little rain fell over these three days. A ridge of high pressure built over the state and temperatures began to rise into the triple-digits once again. This muggy period finally produced some rain in the northwest with the arrival of an upper-level storm system.

AUGUST 10-15: A cold front on the 10th kicked off a round of showers and storms that would later become severe. Strong winds of over 70 mph were scattered around northwestern Oklahoma while flooding rains fell in the northeast. The storms lasted overnight before finally ending on the 11th. The

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cold front helped keep temperatures below normal with highs mainly in the 80s during this period. Rainfall amounts were highest across the northeastern half of the state with 2-3 inches common through a large area.

AUGUST 16-20: A cold front triggered very heavy rainfall during this four-day period. Medford recorded more than 8 inches of precipitation over this time. Somewhat lesser but still significant amounts from 4-7 inches were scattered throughout northwestern and north central Oklahoma. Many of the storms contained intense lightning to go along with winds of over 75 mph and large hail. Temperatures were mild north of the front where highs held in the 70s and 80s – south of the boundary highs rose into the 90s with a few 100s.

AUGUST 21-25: A dry period compared to the rest of the month, these five days were dominated by high pressure and scorching temperatures. Triple-digits were widespread and the month's highest temperature, 107 degrees, occurred at Walters on the 25th.

AUGUST 26-27: An upper-level trough approached from the west and set off a round of showers and storms overnight on the 26th. Chickasha recorded over 2 inches of rainfall in central Oklahoma. Surrounding stations received similar but lesser amounts. More storms fired along a cold front on the 27th. These storms were not the rain-producers that the previous day's storms were, but they did exhibit an impressive display of lightning. Temperatures cooled quite dramatically following the front's passage and high temperatures were mainly in the 80s and low 90s.

AUGUST 28-31: A cool and somewhat drier end to the month was in store for the remaining four days. Temperatures were mostly below average during this time with lows in the 60s and highs in the 80s. Mixed in with those numbers were some lows in the 50s and highs in the 70s. The Mesonet site at Nowata recorded a low temperature of 45 degrees on the 31st, the lowest temperature recorded in Nowata on record during August.

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AUGUST 2009 SEVERE WEATHER

Hail (2 inches in diameter or greater)

Size (in.)	Location	County	Day
2.50	7 WNW Turpin	Texas	2
2.75	12 SSE Selman	Harper	19
2.00	Commerce	Ottawa	19
2.00	Seiling	Dewey	26

Wind Gusts (70 mph or greater)

Speed (m.p.h)	Location	County	Day
73	1 SSW Cherokee	Alfalfa	10
71	Enid	Garfield	10
74	3 SSW Freedom	Woodward	10
75	4 N Enid	Garfield	16
70	Quapaw	Ottawa	19
70	Commerce	Ottawa	19
76	4 NNW Fort Cobb	Caddo	26
72	2 SSE Chickasha	Grady	27

Flooding

Location	County	Day
Tulsa	Tulsa	10
Mannford	Creek	10
Carrier	Garfield	16
10 NW Enid	Garfield	17
3 SW Medford	Grant	17
Blackwell	Kay	17
1 E Geary	Canadian	17
Lequire	Haskell	20
10 ENE Canadian	Pittsburg	20
Bokoshe	LeFlore	20

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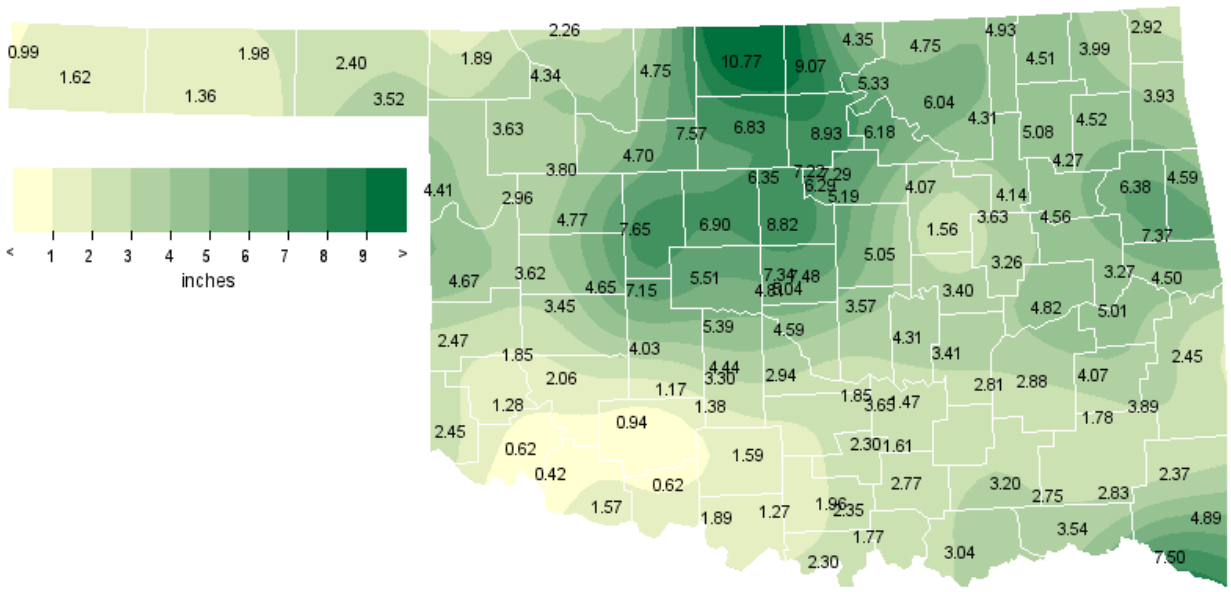
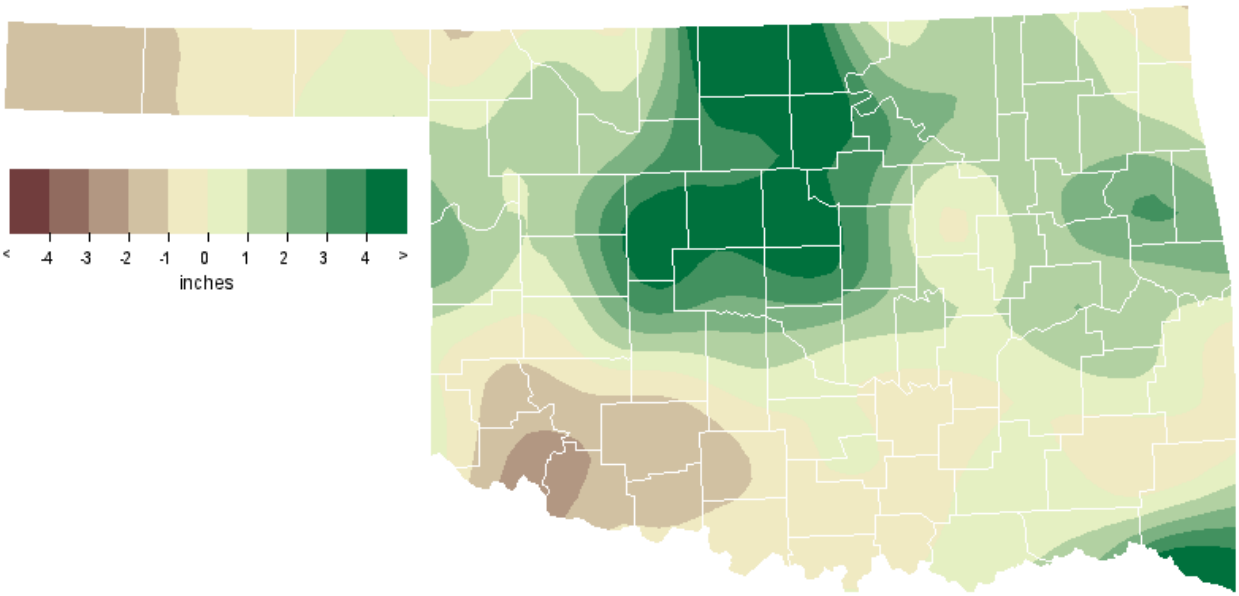
AUGUST 2009 OBSERVED PRECIPITATION



AUGUST 2009 DEPARTURE FROM NORMAL PRECIPITATION



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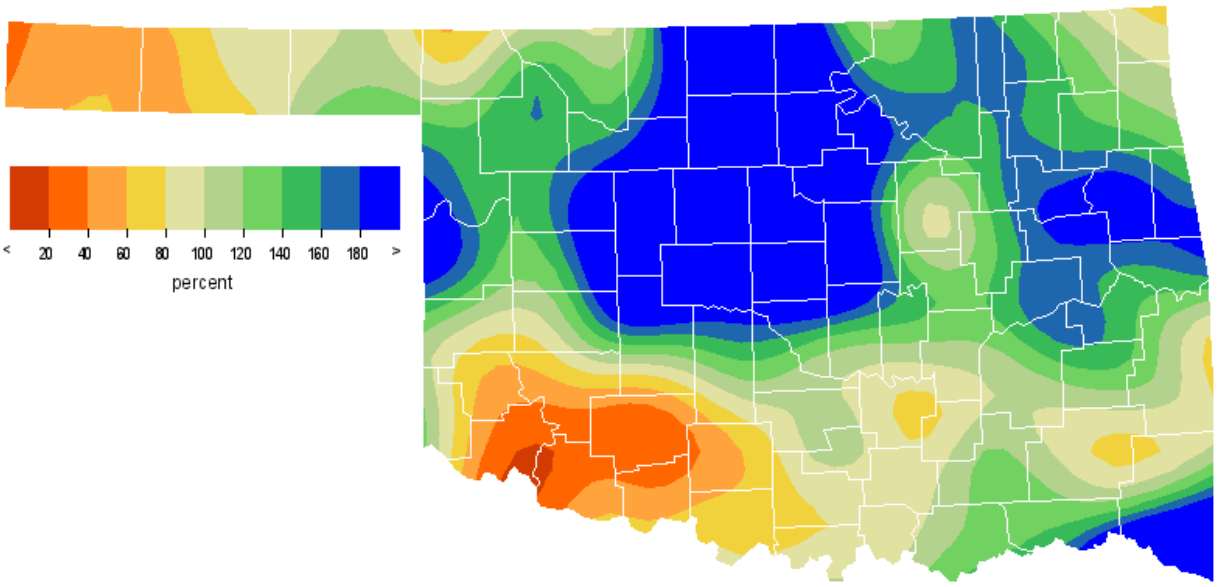
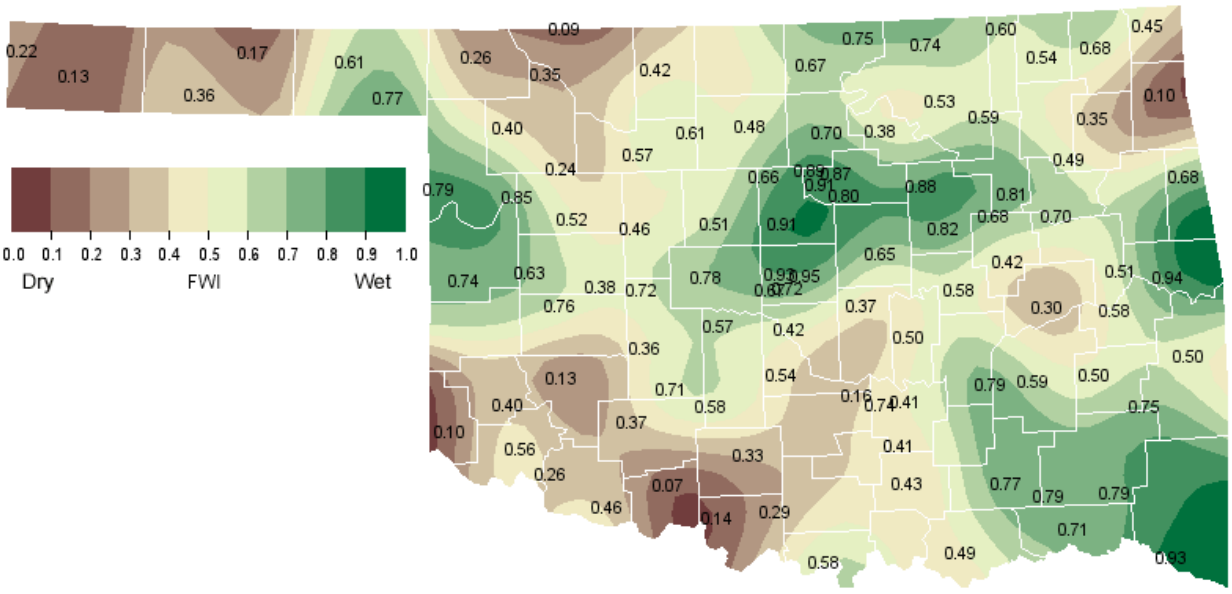
AUGUST 2009 PERCENT OF NORMAL PRECIPITATION



AUGUST 2009 AVERAGE SOIL MOISTURE AT 25CM



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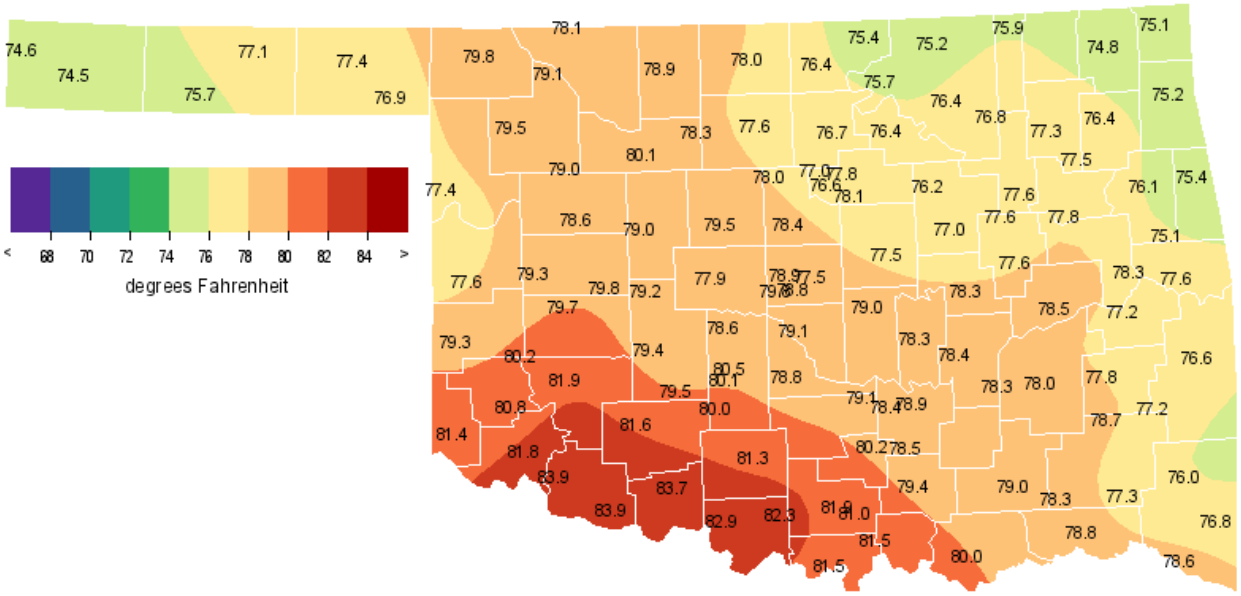
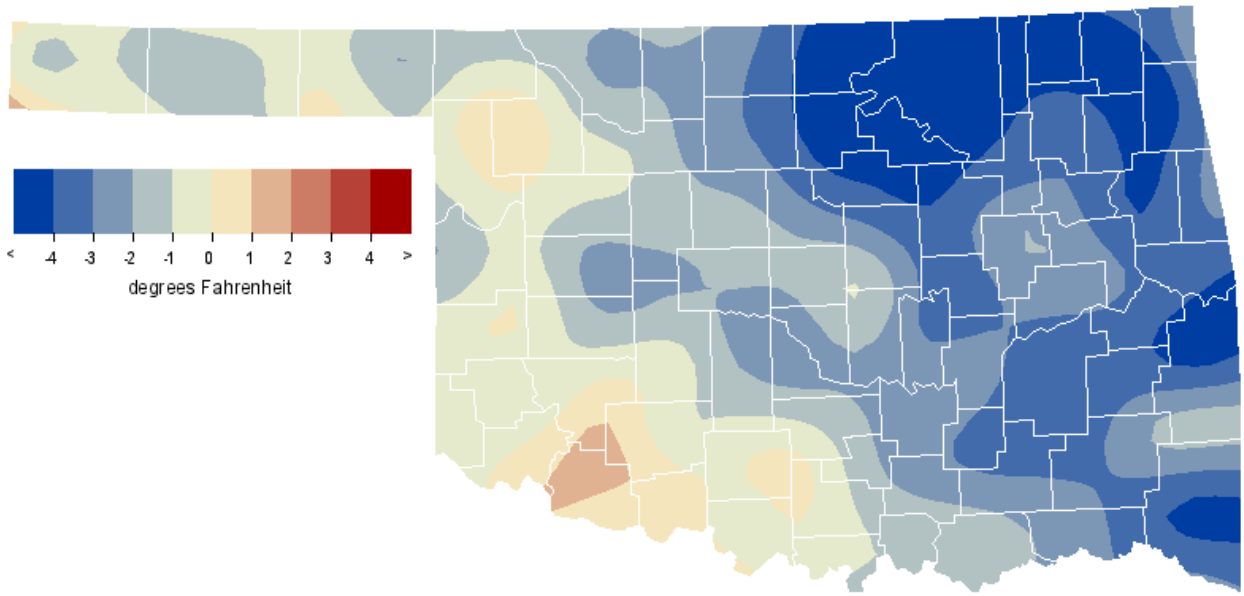
AUGUST 2009 AVERAGE TEMPERATURE



AUGUST 2009 DEPARTURE FROM NORMAL TEMPERATURE



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MESONET MONTHLY SUMMARY FOR AUGUST 2009

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
PANHANDLE										
Arnett	77.4	99	4	56	30	0	386	4.41	2.10	18
Beaver	77.4	102	8	52	28	1	386	2.40	1.77	18
Boise City	74.4	99	23	53	19	0	292	1.62	.93	26
Buffalo	79.8	105	3	55	2	0	460	1.89	.85	18
NORTH CENTRAL										
Alva	78.6	103	8	55	2	****	****	4.09	2.24	18
Blackwell	76.4	101	4	50	31	3	358	9.07	5.37	17
Breckinridge	77.6	104	4	52	31	2	392	6.83	1.85	18
Cherokee	78.9	104	4	55	2	0	432	4.75	1.67	10
Fairview	80.1	105	4	56	30	0	467	4.70	1.66	18
Freedom	79.2	105	3	53	30	0	439	4.34	1.90	18
Lahoma	78.3	102	4	55	31	0	413	7.57	1.90	10
NORTHEAST										
Bixby	77.6	100	10	51	31	2	393	4.14	1.50	10
Burbank	75.7	97	3	49	31	3	335	5.33	1.94	17
Claremore	77.3	98	4	50	31	2	383	5.08	1.78	10
Copan	75.9	99	4	48	31	5	343	4.93	1.62	10
Foraker	75.1	98	10	48	31	5	319	4.75	1.96	17
Inola	77.5	102	4	51	31	1	387	4.27	2.07	10
Jay	75.2	99	4	48	31	6	321	3.93	1.38	20
Miami	75.1	96	4	47	31	8	321	2.92	1.85	20
WEST CENTRAL										
Bessie	79.7	100	17	59	30	0	456	3.45	2.12	18
Butler	79.4	101	17	59	21	0	445	3.62	2.64	18
Camargo	*****	***	***	***	***	****	****	2.96	1.81	18
Cheyenne	77.6	98	4	58	30	0	392	4.67	2.60	18
Erick	79.2	100	5	57	29	0	442	2.47	1.49	18
CENTRAL										
Acme	80.0	102	25	56	31	0	464	1.38	.55	26
Bowlegs	78.3	99	10	52	31	0	411	4.31	2.73	10
Bristow	77.0	99	10	46	31	3	375	1.56	.43	19
Lake Carl Blac	77.0	98	3	50	31	3	376	7.22	2.07	10
Chandler	77.4	96	4	53	31	1	386	5.05	1.06	20
Chickasha	80.5	104	25	57	31	0	482	4.44	2.42	26
El Reno	77.9	100	4	54	31	1	401	5.51	2.24	18
Guthrie	78.4	99	3	56	31	0	414	8.82	1.91	11
Kingfisher	79.6	104	4	57	31	0	452	6.90	1.89	18
Marena	76.7	97	4	51	31	2	364	6.29	1.49	10
Minco	78.7	100	25	57	31	0	424	5.39	1.70	3
Marshall	78.0	101	4	53	31	1	404	6.35	1.26	18
EAST CENTRAL										
Cookson	75.2	95	4	52	31	1	316	7.37	2.71	20
Eufaula	78.5	98	4	53	31	0	419	4.82	1.98	20
Haskell	77.5	101	4	52	31	****	****	.86	.55	20
Hectorville	77.6	98	10	54	31	0	391	3.63	2.15	10
Holdenville	78.3	97	4	51	31	0	413	3.41	1.46	10
McAlester	78.0	94	4	53	31	0	403	2.88	1.12	5
Okmulgee	77.6	100	4	50	31	1	392	3.26	2.26	10
SOUTHWEST										
Altus	81.8	102	5	61	21	0	520	.62	.30	6
Apache	79.6	100	25	58	31	0	451	1.17	.56	19
Fort Cobb	79.4	101	5	59	31	0	446	4.03	1.88	26
Grandfield	83.9	104	5	60	31	0	586	1.57	1.19	1
Hinton	79.2	100	4	58	31	0	439	7.15	3.11	18
Hobart	81.9	103	5	61	30	0	525	2.06	.76	26
SOUTH CENTRAL										
Ada	78.8	97	4	52	31	0	429	1.47	.68	11
Ardmore	81.0	101	25	58	31	0	495	2.35	1.01	27
Burneyville	81.5	104	25	56	31	0	512	2.30	1.39	27
Byars	79.0	99	25	52	31	0	435	1.85	.59	27
Centrahoma	*****	***	***	***	***	****	****	*****	*****	***
Durant	80.0	96	25	58	31	0	464	3.04	.96	5
Fittstown	78.5	97	25	56	31	0	419	1.61	.67	11
Ketchum Ranch	81.2	104	25	57	31	0	502	1.59	.89	26
Lane	78.9	94	3	57	31	0	430	3.20	1.02	11
SOUTHEAST										
Antlers	78.3	94	17	54	31	0	413	2.75	1.21	11
Broken Bow	76.8	92	4	57	23	0	364	4.89	2.03	11
Clayton	78.6	95	4	54	31	0	423	1.78	.88	11
Cloudy	77.3	91	4	58	31	0	381	2.83	1.72	11
Hugo	78.8	93	3	61	31	0	427	3.54	1.74	1

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
Goodwell	75.8	100	8	54	28	0	333	1.36	.65	17
Hooker	77.2	102	8	55	31	0	379	1.98	.91	31
Kenton	74.7	98	23	53	29	0	299	.99	.46	26
Slapout	76.9	99	8	53	30	1	369	3.52	2.11	18
May Ranch	78.1	104	3	53	30	0	407	2.26	.63	10
Medford	78.0	102	4	53	31	1	405	10.77	5.78	17
Newkirk	75.3	97	4	51	31	4	324	4.35	1.87	17
Red Rock	76.7	99	4	51	31	2	365	8.93	2.99	18
Seiling	79.1	104	4	54	30	0	437	3.80	1.46	18
Woodward	79.4	104	4	56	30	0	447	3.63	2.27	18
Nowata	75.9	100	4	45	31	****	****	4.51	1.29	10
Pawnee	76.3	96	4	51	31	3	355	6.18	2.84	17
Porter	77.7	100	10	52	31	1	395	4.56	2.06	10
Pryor	76.4	99	4	48	31	3	356	4.52	2.49	10
Skiatook	76.7	97	4	52	31	2	366	4.31	1.19	10
Vinita	74.8	97	4	46	31	8	310	3.99	1.41	18
Wynona	76.5	97	7	52	31	2	358	6.04	2.73	17
Putnam	78.7	101	4	57	30	0	424	4.77	3.33	18
Retrop	80.1	101	5	60	30	0	469	1.85	1.51	18
Watonga	78.9	103	4	56	30	0	432	7.65	3.23	17
Weatherford	79.9	102	4	59	30	0	461	4.65	2.91	18
Ninnekah	80.2	102	25	57	31	0	471	3.30	1.21	26
Norman	79.1	98	4	57	31	0	437	4.59	1.33	18
Oilton	76.3	96	10	46	31	6	355	4.07	1.33	18
OKCE	78.8	98	4	58	31	0	427	5.04	1.16	10
OKCN	78.8	99	4	56	31	0	429	7.34	1.64	26
OKCW	79.8	99	4	60	31	0	459	*****	1.49	10
Okemah	78.3	100	4	50	31	1	413	3.40	2.47	10
Perkins	78.2	98	10	53	31	0	408	5.19	1.28	18
Shawnee	79.0	98	4	52	31	1	434	3.57	.78	10
Spencer	77.5	97	4	55	31	1	388	7.48	1.67	11
Stillwater	77.8	99	4	52	31	1	399	7.29	1.87	10
Washington	78.8	100	25	55	31	0	428	2.94	1.32	3
Sallisaw	77.6	96	10	53	31	0	390	4.50	2.63	20
Stigler	77.2	96	10	51	31	1	380	5.01	1.91	20
Stuart	78.3	94	4	55	31	0	412	2.81	2.24	11
Tahlequah	76.1	98	5	52	31	1	345	6.38	1.73	10
Webbers Falls	78.3	99	10	54	31	0	411	3.27	1.52	20
Westville	75.4	97	4	52	31	2	324	4.59	1.27	5
Hollis	81.4	104	5	61	31	0	508	2.45	1.09	18
Mangum	80.9	103	25	55	29	0	491	1.28	.76	18
Medicine Park	81.6	104	26	60	31	0	515	.94	.24	6
Tipton	83.9	106	24	60	29	0	585	.42	.21	26
Walters	83.6	107	25	58	31	0	576	.62	.28	27
Madill	81.5	101	5	59	29	0	512	1.77	.38	18
Newport	81.8	104	25	60	31	0	522	1.96	.83	5
Pauls Valley	*****	***	***	***	***	****	****	*****	*****	***
Ringling	82.2	104	25	58	31	0	534	1.27	.61	5
Sulphur	80.2	102	25	56	31	0	471	2.30	1.17	27
Tishomingo	79.4	98	4	58	31	0	445	2.77	1.27	5
Vanoss	78.5	98	25	54	31	0	417	3.65	1.16	27
Waurika	82.9	106	25	59	31	0	554	1.89	1.28	27
Idabel	78.6	93	3	61	31	0	422	7.50	2.84	20
Mt Herman	76.1	90	4	56	31	0	343	2.37	.58	1
Talihina	77.2	94	17	54	31	0	378	3.89	1.65	20
Wilburton	77.7	95	4	52	31	0	395	4.07	1.33	20
Wister	76.7	95	4	52	31	0	362	2.45	1.31	20

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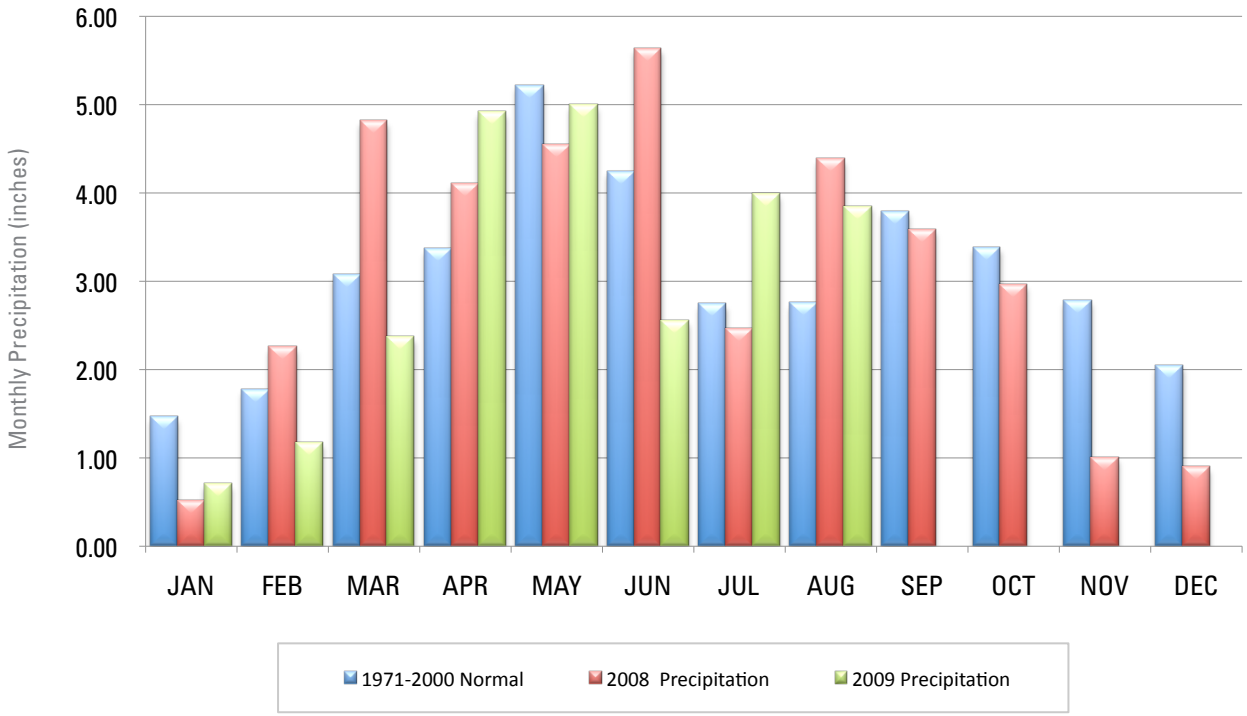
2008 AND 2009 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL



August 2009 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Aug-08
Panhandle	2.27	-0.24	55th Driest	5.68 (1977)	0.47 (1913)	5.17
North Central	5.92	2.87	11th Wettest	7.69 (1974)	0.09 (1913)	1.53
Northeast	4.63	1.45	26th Wettest	8.03 (1964)	0.02 (2000)	4.81
West Central	4.01	1.29	23rd Wettest	7.25 (2005)	0.05 (1913)	3.49
Central	5.09	2.46	13th Wettest	7.21 (1906)	0.03 (2000)	4.50
East Central	4.33	1.46	28th Wettest	6.89 (1915)	0.00 (2000)	6.63
Southwest	2.03	-0.66	54th Driest	8.01 (1996)	0.00 (1913)	6.40
South Central	2.20	-0.34	57th Driest	8.46 (1915)	0.01 (2000)	4.68
Southeast	3.61	0.90	43rd Wettest	8.73 (1915)	0.19 (1943)	5.29
Statewide	3.85	1.08	25th Wettest	6.54 (1906)	0.14 (2000)	4.68

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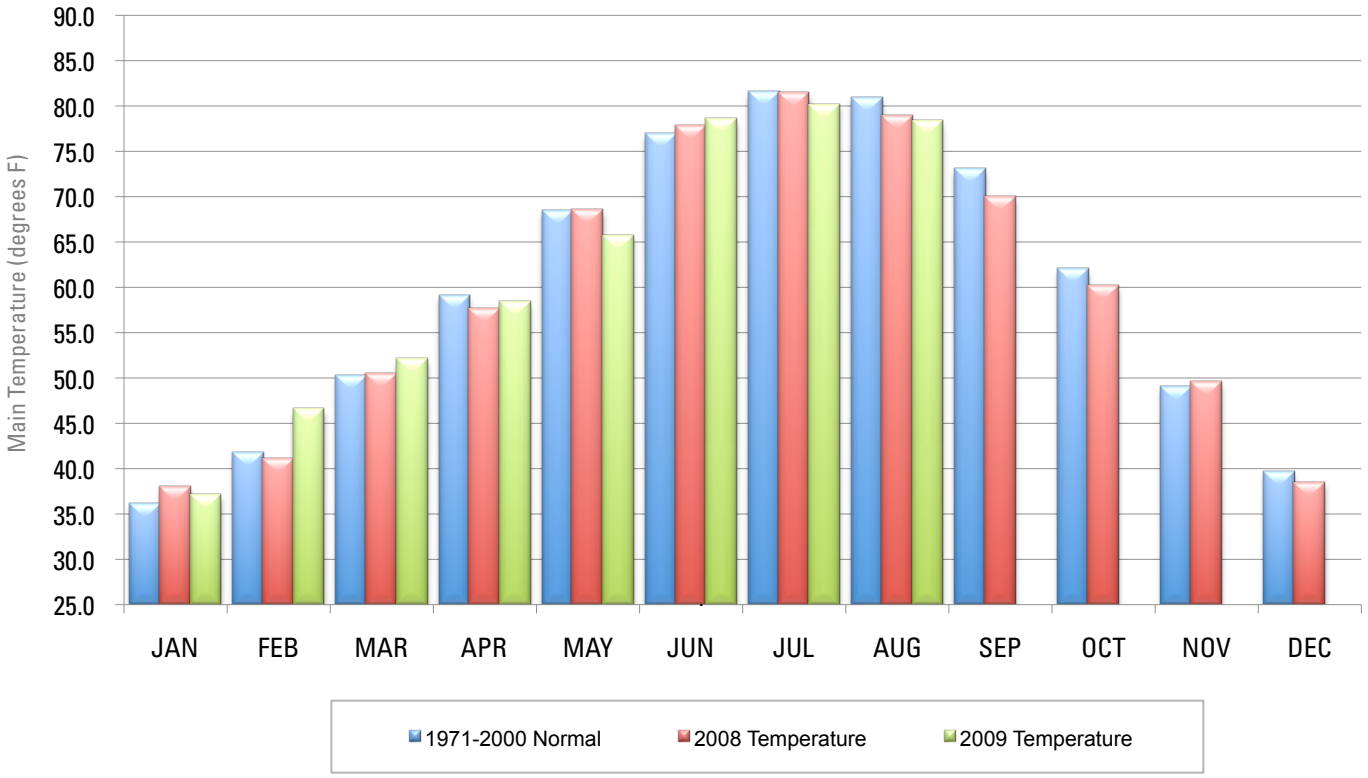
2008 AND 2009 STATEWIDE TEMPERATURE MONTHLY TOTALS VS. NORMAL



August 2009 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Aug-08 (F)
Panhandle	76.7	-1.1	33rd Coolest	83.1 (1983)	71.3 (1915)	76.4
North Central	78.1	-2.6	20th Coolest	88.9 (1936)	72.3 (1915)	78.6
Northeast	76.3	-3.5	10th Coolest	88.4 (1936)	71.7 (1915)	78.3
West Central	79.2	-1.0	35th Coolest	87.4 (1936)	72.9 (1915)	78.7
Central	78.4	-2.6	21st Coolest	88.3 (1936)	73.1 (1915)	79.1
East Central	77.3	-3.1	17th Coolest	88.0 (1936)	73.0 (1915)	79.2
Southwest	81.6	-0.2	51st Coolest	88.1 (1952)	75.4 (1915)	80.4
South Central	80.4	-1.4	34th Coolest	87.6 (1934)	75.5 (1915)	80.2
Southeast	77.6	-2.7	17th Coolest	87.3 (1943)	74.5 (1915)	78.0
Statewide	78.3	-2.1	21st Coolest	87.2 (1936)	73.2 (1915)	78.8

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RECORD EVENT REPORTS

Description	Day	Location	Record	Previous Record	Year
Low Temperature	2	Bartlesville	51	57	1971
Daily Rainfall	11	Oklahoma City	1.45	1.18	1977
Low Temperature (tied)	31	McAlester	55	55	1967
Low Temperature	31	Bartlesville	47	48	1915

MESONET EXTREMES FOR AUGUST 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	105	3rd	Buffalo	52	28th	Beaver	4.41	Arnett	2.11	18th	Slapout
North Central	105	4th	Fairview	50	31st	Blackwell	10.77	Medford	5.78	17th	Medford
Northeast	102	4th	Inola	46	31st	Vinita	6.18	Pawnee	2.84	17th	Pawnee
West Central	103	4th	Watonga	56	30th	Watonga	7.65	Watonga	3.33	18th	Putnam
Central	104	4th	Kingfisher	46	31st	Bristow	8.82	Guthrie	2.73	10th	Bowlegs
East Central	100	4th	Okmulgee	50	31st	Okmulgee	7.37	Cookson	2.71	20th	Cookson
Southwest	107	25th	Walters	55	29th	Mangum	7.15	Hinton	3.11	18th	Hinton
South Central	106	25th	Waurika	52	31st	Byars	3.65	Vanoss	1.39	27th	Burneyville
Southeast	95	4th	Wister	52	31st	Wilburton	7.50	Idabel	2.84	20th	Idabel
Statewide	107	25th	Walters	46	31st	Vinita	10.77	Medford	5.78	17th	Medford

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SEPTEMBER OUTLOOK

Summer's heat fades as precipitation increases across most of Oklahoma during September. The statewide-averaged normal temperature for the month, 73.0 degrees, makes September the 4th warmest month of the year. As such, climatologists consider it to be the first month of the autumn transitional season. Monthly precipitation decreases in extreme northwestern portions of the state, even as the rest of the state enjoys a second rainy season. Normal monthly precipitation, averaged statewide, is 3.80 inches, an increase of more than one inch over either of the two previous months. An increasing frequency of fronts, bringing cooler air from the northern plains, leads to the lower temperatures, an effect that often isn't apparent before the middle of the month.

Temperature

Mean	73.0 degrees
Hottest September	1931, 79.8 degrees
Coolest September	1974, 64.7 degrees
Hottest location	Waurika, 76.8 degrees
Coolest location	Boise City, 68.0 degrees
Hottest recorded	115 degrees, Alva, September 3, 1939 and 1947
Coldest recorded	25 degrees, Boise City, September 30, 1985

Freezes are uncommon in September, but stations in the extreme northwest experience a freeze before the end of September in about 10 percent of years. The earliest reported freeze is September 15, in 1993 at Freedom (28 degrees), Gage (30 degrees), and Hammon (30 degrees), and in 1947 at Kenton (31 degrees). Hot weather is most evident in the southwest. Chattanooga averages 16 days in September with a high temperature of 90 degrees or more, including four days in which the temperature reaches 100 degrees or more. Conversely, Kansas and Stilwell each average only six September days with the high temperature in the 90s. Triple digit temperatures occur only about once every third year at Miami, Kenton, and Boise City.

Statewide-averaged precipitation has varied between 0.27 inch in 1956 and 7.86 inches in 1945. Wyandotte recorded 16.82 inches in September 1945 to hold the monthly state record. The record daily precipitation at a regular reporting station is the 10.42 inches reported at Barnsdall on September 29, 1986. Snow is rare in September, But Boise City reported 4 inches for the month in 1984 and Kenton recorded 3 inches on September 17, 1971, the earliest snowfall in the state since at least 1910.

Tornadoes are slightly more frequent in September, averaging 2.1 each year, than they are during the previous two months. The most tornadoes reported in the state during September is 16 in 1992. No tornadoes were reported in the state during September in 18 of 52 years from 1950 through 2001 (the period of comprehensive records). Two people killed in Pottawattomie County on September 14, 1957 are the only tornado-related deaths recorded in September during that period.

Floods present a more common weather hazard than tornadoes in September. Residual moisture from tropical disturbances, usually from the Gulf of Mexico but occasionally from the Pacific Ocean, interacts with slow moving frontal systems in the state from time-to-time during the autumn months. Widespread heavy downpours are the typical result, frequently leading to flooding on larger rivers and streams. On other occasions, a frontal system will stall within the state and successive thunderstorms will form along the frontal boundary and follow each other along a narrow path, thereby producing intense rain over a limited area and causing dangerous flash flooding.

Precipitation

Mean	3.80 inches
Wettest September	1945, 7.86 inches
Driest September	1956, 0.27 inches
Wettest location	Kansas, 5.56 inches
Driest location	Regnier, 1.44 inches
Most recorded	16.82 inches, Wyandotte, 1945

Tornadoes

Average September Tornadoes	2.1
Most	16 (1992)

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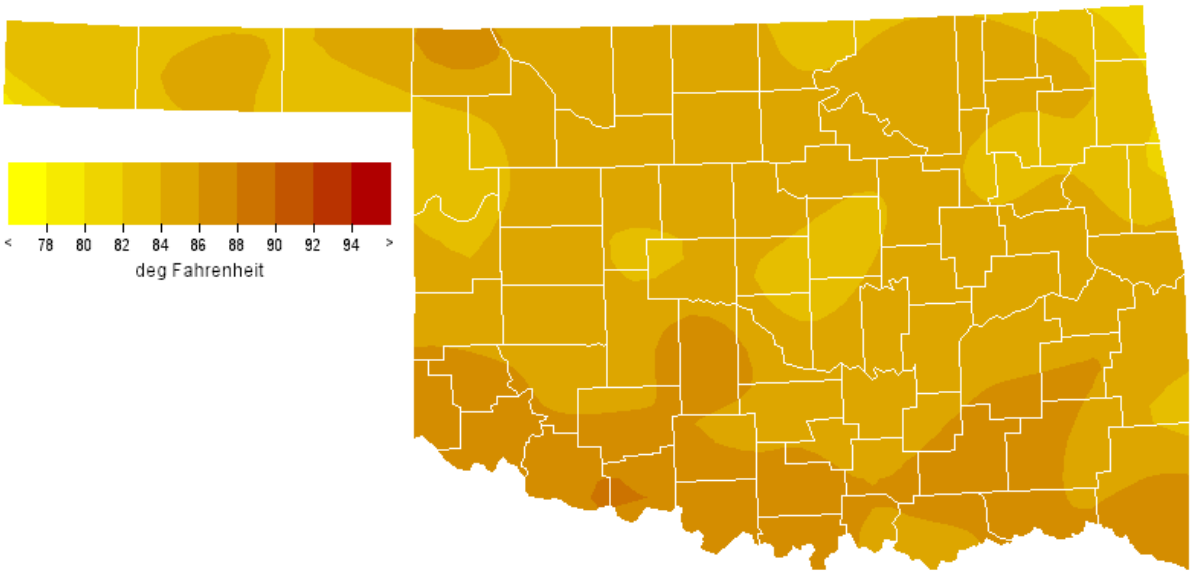
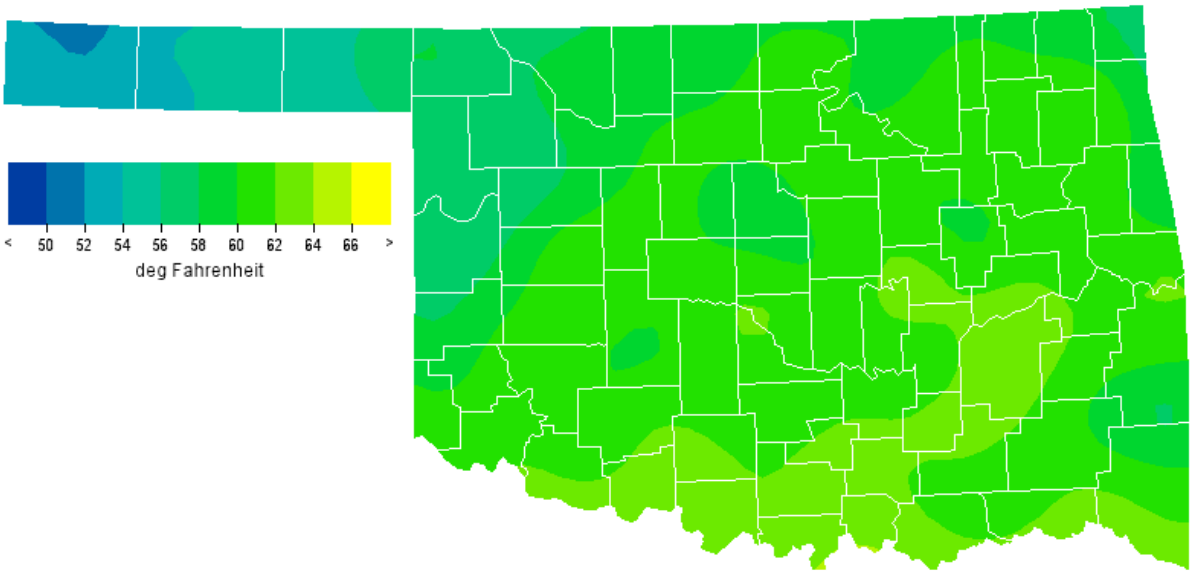
SEPTEMBER NORMAL DAILY MAXIMUM TEMPERATURE (1971-2000)



SEPTEMBER NORMAL DAILY MINIMUM TEMPERATURE (1971-2000)



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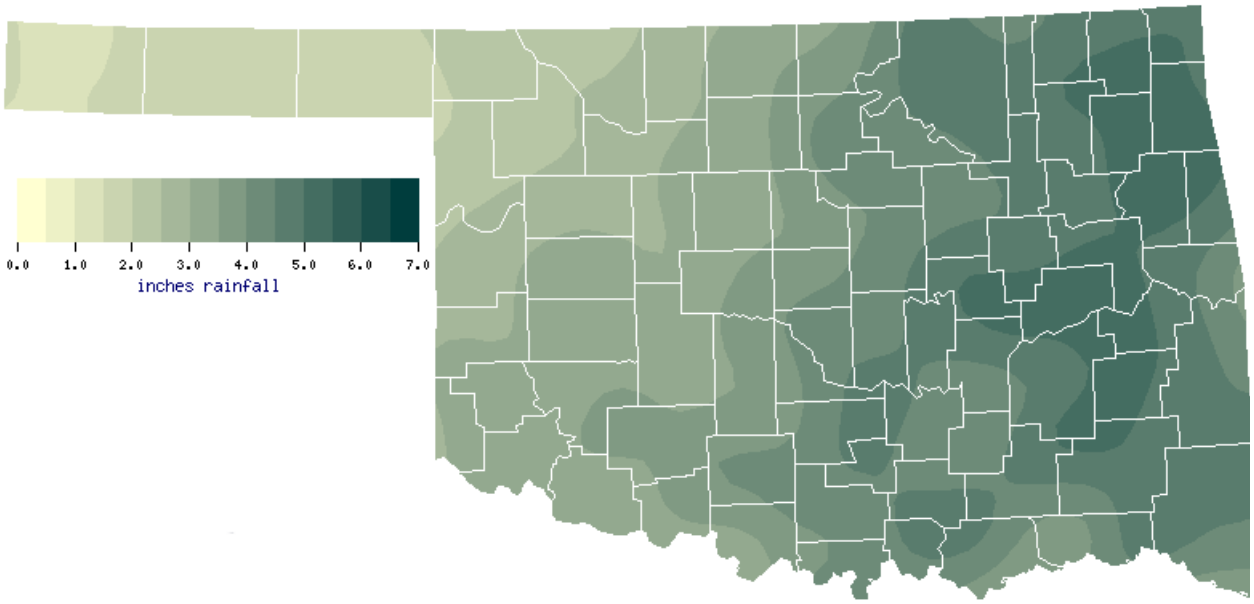
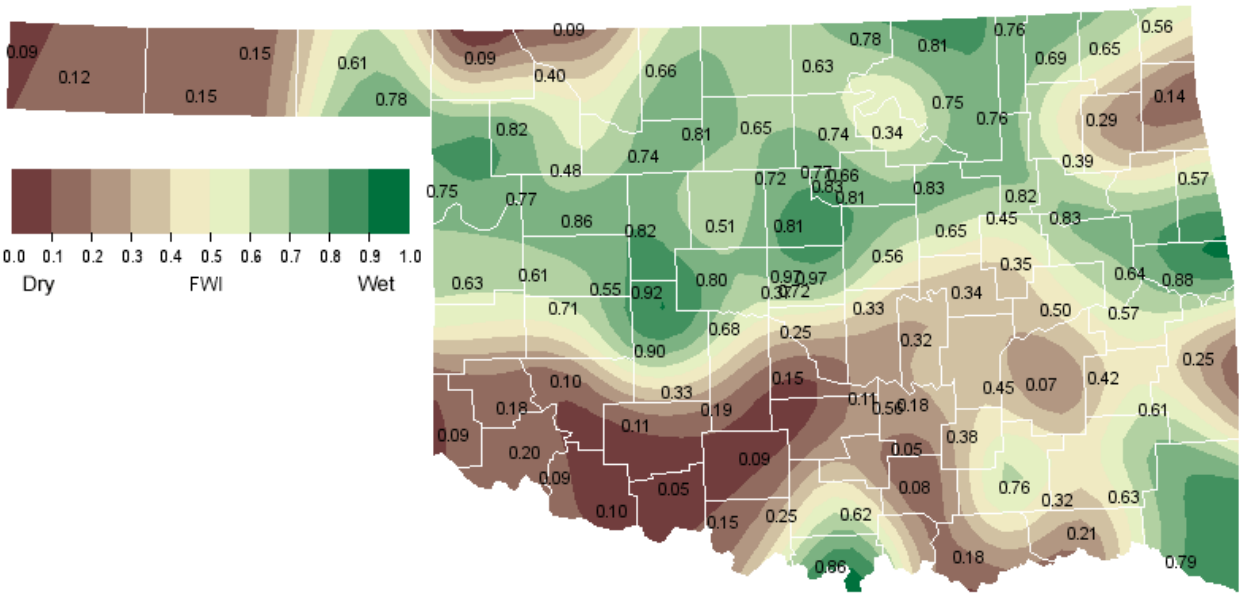
SEPTEMBER NORMAL PRECIPITATION (1971-2000)



SEPTEMBER 1, 2009 SOIL MOISTURE CONDITIONS AT 25CM



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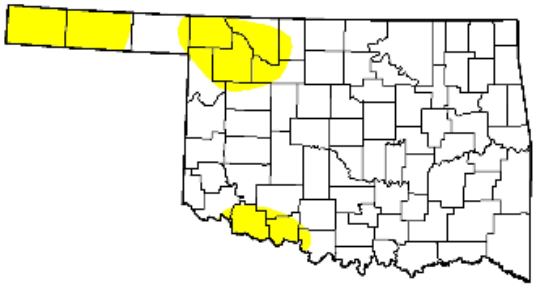
SEPTEMBER 2009 DROUGHT INDICES

U.S. Drought Monitor
Oklahoma

September 1, 2009
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	84.5	15.5	0.0	0.0	0.0	0.0
Last Week (08/25/2009 map)	85.2	14.8	2.8	0.0	0.0	0.0
3 Months Ago (06/09/2009 map)	54.3	45.7	8.1	0.0	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 (09/02/2008 map)	72.0	28.0	5.8	3.5	0.0	0.0



Intensity:

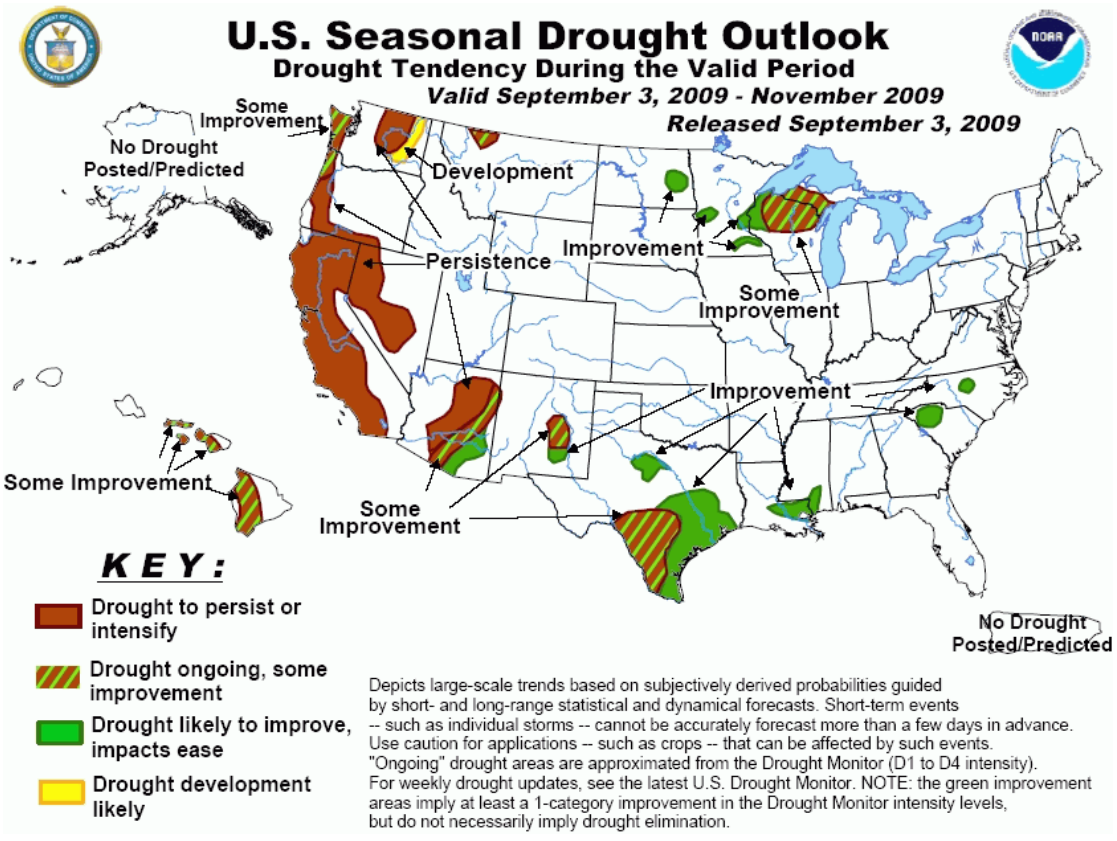
- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

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, September 3, 2009
Author: Brad Rippey, U.S. Department of Agriculture



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 than 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.

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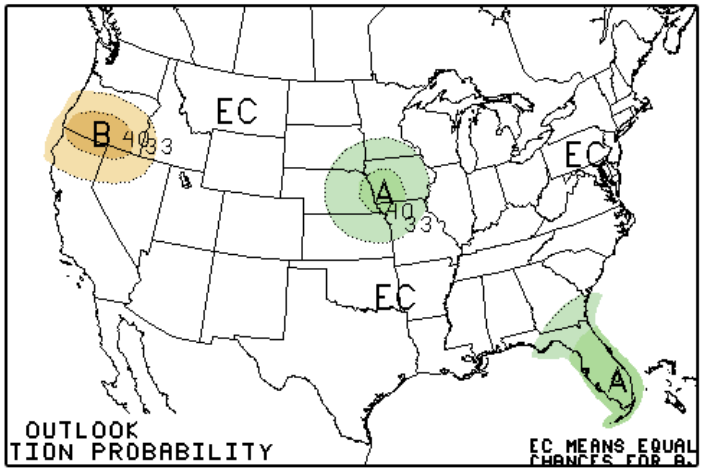
SEPTEMBER 2009 U.S. PRECIPITATION FORECAST



Percent Likelihood of Above or Below Average Precipitation*

- 5% - 10%
- 0% - 5%

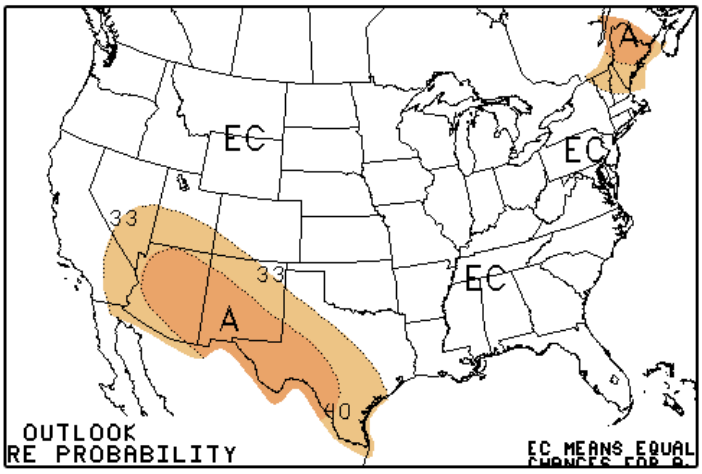
A = Above

- 0% - 5%
- 5% - 10%

B = Below

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

SEPTEMBER 2009 U.S. TEMPERATURE FORECAST



Percent Likelihood of Above or 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.

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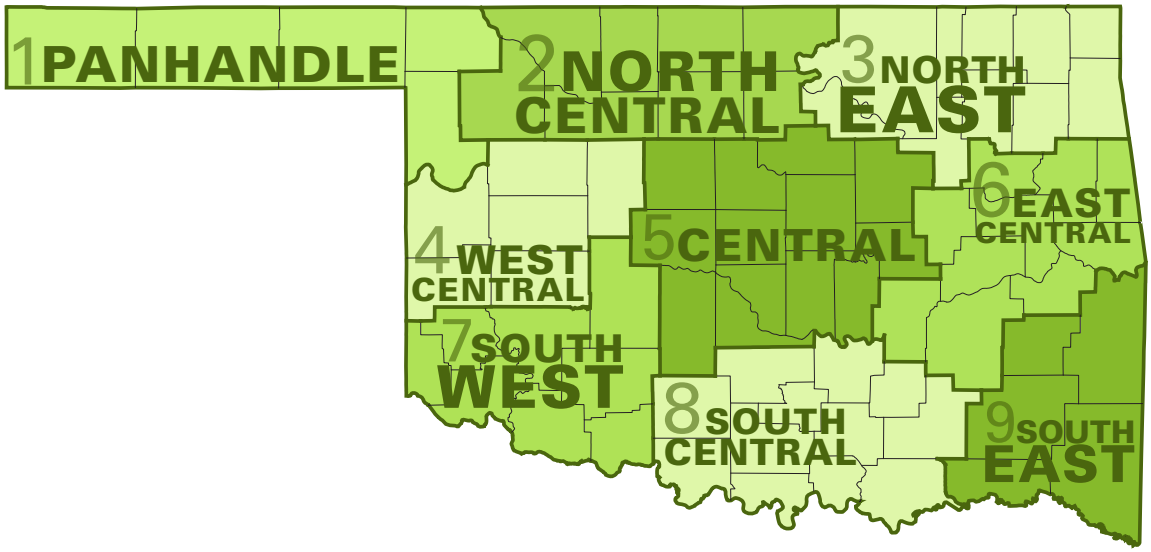
SEPTEMBER CLIMATE NORMALS

Climate Division	Max. Temperature (°F)	Min. Temperature (°F)	Avg. Temperature (°F)	Precipitation (inches)
1	84.5	55.6	70.1	1.86
2	84.8	59.2	72.0	3.13
3	84.1	60.5	72.3	4.83
4	84.7	59.5	72.1	2.95
5	84.8	61.0	72.9	4.03
6	84.5	61.3	72.9	4.88
7	86.4	61.0	73.7	3.34
8	86.2	62.3	74.3	4.27
9	85.9	60.9	73.4	4.52
Statewide	85.1	60.3	72.7	3.9

Oklahoma Climate Divisions



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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/

OKLAHOMA CLIMATOLOGICAL SURVEY

Oklahoma Climatological Survey is the State Climate Office for Oklahoma

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