Oklahoma Monthly Climate Summary

SEPTEMBER 2012

OKLAHOMA CLIMATOLOGICAL SURVEY

Hopes for drought relief were starting to fade as September wound down, only to be saved by a slow-moving soaker of a storm system during the month's last week. The storm system's prodigious moisture output was aided by a stationary front and in part by the remnants of Hurricane Miriam, spawned in the Pacific Ocean during the previous week. Totals of 2-4 inches were widespread across central and southern Oklahoma according to the Oklahoma Mesonet, mainly south of Interstate 40. The Mesonet site at Byars in Garvin County recorded 6.02 inches during the event. Unfortunately, not everybody shared in the drought-relieving moisture. Totals of less than an inch were common across the northern third of the state. Despite the attempted recovery at the end, September still finished nearly an inch below normal with a statewide average of 2.9 inches according to data from the Oklahoma Mesonet. The Mesonet site at May Ranch in Woods County had the lowest total with 0.74 inches during September while Byars in Garvin County led the state with 7.5 inches. When compared to normal, much of eastern and northern Oklahoma had deficits of 1-3 inches during September. The statewide average deficit for May-September climbed to more than 8 inches and ranked as one of the five driest such stretches on record, dating back to 1895.

The month was also on the warm side with an average temperature of 74.1 degrees, 1.7 degrees above normal. That ranks as the 36th warmest September on record. The highest temperature of the month, 111 degrees, came from the National Weather Service (NWS) site at Ralston on Sept. 4 and the lowest reading was a frigid 37 degrees recorded at Boise City and Kenton on Sept. 15 and 16, respectively. Oklahoma remains on course for its warmest year on record with a January-September statewide average temperature of 66.9 degrees, 4 degrees above normal. That bests the previous record of 66.3 degrees for the first nine months of the year from 1954 and keeps that year's record annual mark of 62.8 degrees within reach. September became the 25th month out of the last 30 to finish warmer than normal, a streak that began with April 2010.

Severe weather was a bit more widespread during September after a benign August, although tornadoes remained absent. According to preliminary data from the NWS, no tornadoes have touched down in Oklahoma since June 1. That's a record low total matched only by a similar June-September shutout in 2003. Accurate tornado statistics data back to 1950. Several instances of wind gusting to over 70 mph were reported during the month, including an 80 mph gust near Crowder on Sept. 26.

September ended with more than 42 percent of the state covered by exceptional drought in the latest U.S. Drought Monitor map. Exceptional drought is the worst such designation possible. More than 95 percent of Oklahoma was in the worst two drought categories, extreme and exceptional, and 100 percent remained in severe-to-exceptional drought.

September 2012 Statewide Extremes

Description	Extreme	Station	Day
High Temperature	109°F	Blackwell	7
Low Temperature	37°F	Boise City, Kenton	15, 16
High Precipitation	7.46 in.	Byars	--
Low Precipitation	0.74 in.	May Ranch	--

September 2012 Statewide Statistics

Temperature

	Average	Depart.	Rank (1895-2012)
Month (September)	74.1°F	1.7°F	36th Warmest
Year-to-Date (Jan-Sept)	67.0°F	4.1°F	1st Warmest

Precipitation

	Average	Depart.	Rank (1895-2012)
Month (September)	2.92 in.	-0.89 in.	56th Driest
Year-to-Date (Jan-Sept)	23.63 in.	-4.84 in.	33rd Driest

Depart. = departure from 30-year normal

SEPTEMBER DAILY HIGHLIGHTS

SEPTEMBER 1-3: The early September skies worked to clear out any remnants of Hurricane Isaac. With the sunny skies across much of Oklahoma, the maximum temperatures remained relatively high, huddling just above 105. Average temperatures were in the mid-80s, and the minimum temperatures ranged in the mid-60s to upper-70s. Labor Day was an exceptionally hot day, with a record daily maximum temperature of 110 in Bartlesville. This Bartlesville temperature reading marked an all-time high for the month of September and the warmest temperature recorded so late in the season. Winds remained calm from the first to the third of the month, averaging between 5 and 10 mph. Rainfall measurements were negligible.

SEPTEMBER 4-7: Severe thunderstorms moved into Oklahoma, starting in the panhandle and moving east. High winds were associated with the migrating storms, producing damaging gusts of 81 mph in Gage on the fourth, 78 mph in Ardmore on the fifth, and 84 mph in Vinita on the seventh. Hail fell in many regions of the state during this period, but Nowata measured the largest hail stone at 2.75 inches Although areas of western Oklahoma and far east-northeast Oklahoma received a decent amount of rainfall from the storms (1.13 inches in Miami and Retrop, and 1.18 inches in Butler), the majority of the state received little to no rain. Much of Oklahoma experienced maximum temperatures above 100; statewide average temperatures ranged in the 70s to 90s. The lowest temperatures of 56 and 57 were observed in the panhandle on the seventh.

SEPTEMBER 5-9: A slight rainy period continued for much of Oklahoma as a cold front moved through, carrying thunderstorms along the way. As the front moved south-southeast, over an inch of rain was recorded in Foraker, Blackwell, and Hinton, with nearly two inches accumulating in Webbers Falls and McAlester on the eighth. The top two wind gusts associated with the storms were recorded in Butler and Lane, measuring at 66 and 69 mph, respectively. Although maximum temperatures remained above 100 for the majority of Oklahoma, the panhandle experienced a drop in minimum and maximum temperatures, ranging from 57 to 85.

SEPTEMBER 8-12: As the storms leveled off throughout Oklahoma, so did the maximum temperatures. A cold front pushed through, leaving behind highs in the mid-80s on Saturday. A slight warming trend continued through the 12th, but the maximum temperature was only measured at 102 in Hooker on the 11th. Record breaking daily minimum temperatures were reported at 50 in Oklahoma City on the 9th and 45 in Bartlesville on the 10th. The first half of the week showed rather pleasant conditions with maximum temperatures averaging approximately 90 degrees, and statewide average wind speeds wavering around 10 mph. However, peak wind gusts between 40 and 50 mph were observed in the panhandle on the 11th and 12th.

SEPTEMBER 13-16: Scattered showers and isolated thunderstorms returned to the state. Precipitation moved west with the cold front, dropping temperatures in northwest Oklahoma 40 degrees below the previous day's measurements. Most towns were lucky if they reached above 80 for their high. Minimum temperatures generally ranged in the 40s and 50s, but made it up into the 60s as the days progressed. The lowest temperature measured between the 13th and 16th was 37 in Kenton and Boise City. Although the showers eased as the days continued, isolated storms left 1 to 2.5 inches of rainfall in the northern two-thirds of the state. On the 14th, Cookson and Jay reported 2.5 and 2.49 inches, respectively. The 13th and 14th also had higher wind speed averages, fluctuating from 5 to 20 mph. Gusts as high as 42 mph were seen in Tahlequah, Haskell, and Stuart. In the succeeding two days, winds died down and averaged between 5 and 10 mph.

SEPTEMBER 17-20: Dense fog persisted over central and southern Oklahoma. Visibility was near zero during the earliest hours of the 17th, but increased to just below one half mile later in the morning. Although skies remained sunny throughout much of the state, the highest maximum temperatures remained in the 80s on the 17th and 18th, and mid-upper 90s on the 19th and 20th. Lows dropped to the 40s and 50s, with the lowest minimum temperature of 40 degrees occurring on the 18th in Boise City. The highest wind gusts were measured between 30 and 40 mph in various portions of the state; however, average wind speeds remained fairly light at 5 to 15 mph.

SEPTEMBER 21-24: Happy Autumn! The skies were mostly clear as Oklahoma celebrated the first days of fall, except for a few scattered showers in northeast and southwest Oklahoma whose rainfall amounts were trivial. The extreme variations of temperature across the state were most likely driven by the passing of a cold and warm front during this four day period. It is easy to recognize this when viewing the statewide high temperatures that ranged from the 70s to the upper 90s. McAlester received two new records during this short time: record daily high temperature of 99 on the 21st and record daily high temperature of 94 on the 24th. Minimum temperatures also varied, with the lowest being 41 in Kenton on the 23rd and the highest minimum temperature measuring 71 at the Oklahoma City North Mesonet station on the 21st. Wind speeds roughly averaged between 5 and 15 mph, with peak gusts in the 30s and 40s.

SEPTEMBER 25-30: The last six days of September were on the defensive side as they experienced numerous severe weather events. Showers and severe thunderstorms left behind precipitation amounts as high as 4.93 inches in Stigler on the 29th and over 2 inches in a number of other regions on the 26th and 27th. Associated with the latter were flood reports from Hughes, Pittsburg, McIntosh, and Haskell counties. Two-inch hail was observed in Homestead on the 25th, along with Hanna and Grove on the 26th. The 26th also measured the largest hail size during this time at 3 inches in Mustang. Average wind speeds were relatively high on the 25th (~10 to 20 mph), but managed to die down in the days that followed. Six reports of thunderstorm wind gusts above 70 mph occurred between the 25th and 27th, with the highest being 80 mph at Altus Air Force Base on the 25th and 80 mph at Crowder on the 26th. Although the first few days in this period had maximum temperatures reaching into the 90s, they managed to drop all the way down into the 70s on the 29th and 30th. The highest maximum temperature only hit 76 on the 29th in the very northeast portion of Oklahoma. Despite this drop in highs, the lowest minimum temperatures were able to stay in the upper-40s and 50s.

Wind Gusts (70 mph or greater)

Speed (m.p.h.)	Location	County	Day
71	Gage	Ellis	4
81	Gage	Ellis	4
78	7 WNW Ardmore	Carter	5
71	4 SE Hobart	Kiowa	5
76	Tinker Air Force Base	Oklahoma	7
84	Vinita	Craig	7
72	5 SW Butler	Custer	25
80	Altus Air Force Base	Jackson	25
70	7 NW Velma	Stephens	26
80	Crowder	Pittsburg	26
73	McAlester	Pittsburg	26
71	3 SSE Boise City	Cimarron	27

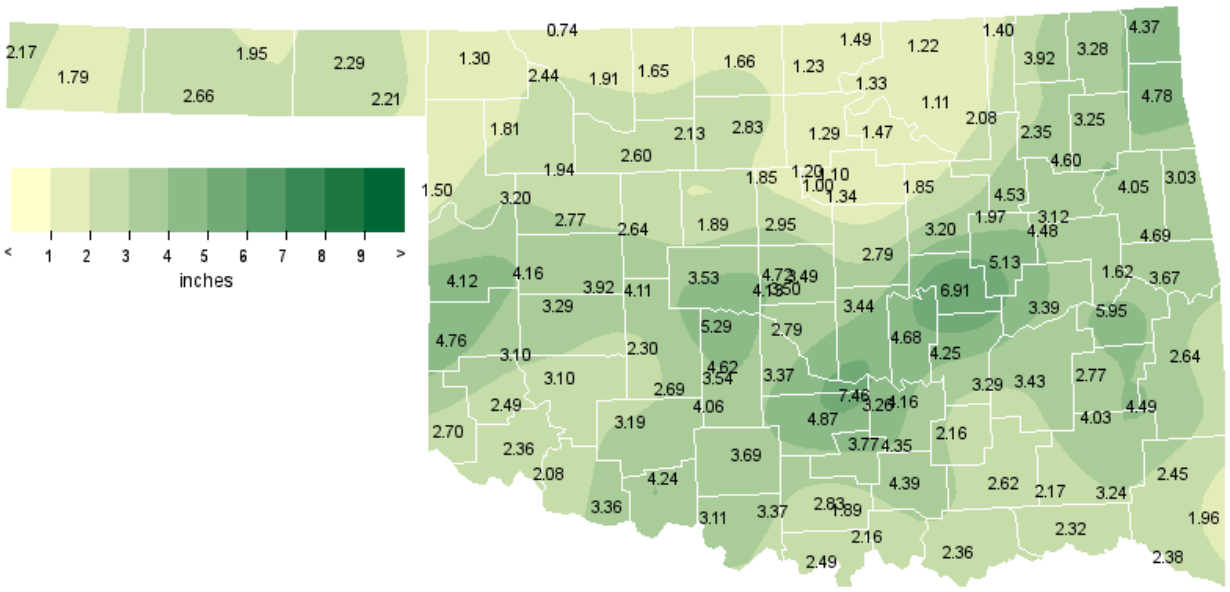
Hail (2 in. diameter or greater)

Size (in.)	Location	County	Day
2.75	3 N Nowata	Nowata	7
2.00	1 SSE Homestead	Blaine	25
3.00	5 WNW Mustang	Canadian	26
2.00	2 E Hanna	McIntosh	26
2.00	3 N Grove	Delaware	26

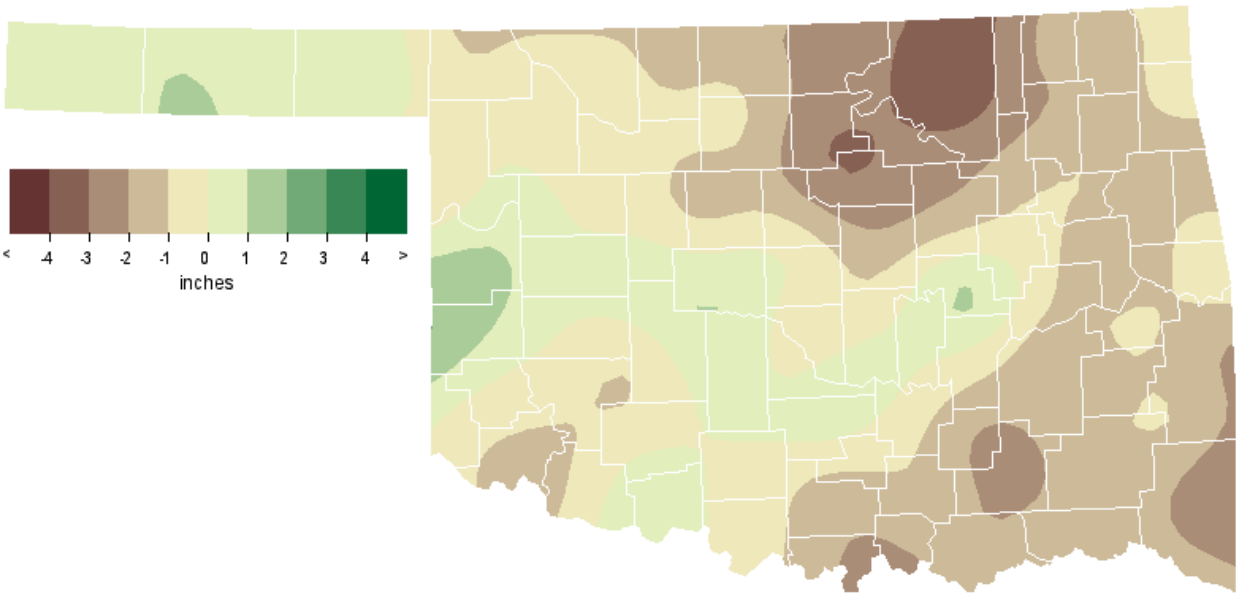
Flooding

Location	County	Day
1 ENE Wetumka	Hughes	26
Crowder	Pittsburg	26
10 W Raiford	McIntosh	26
4 NW Hanna	McIntosh	26
Stigler	Haskell	26

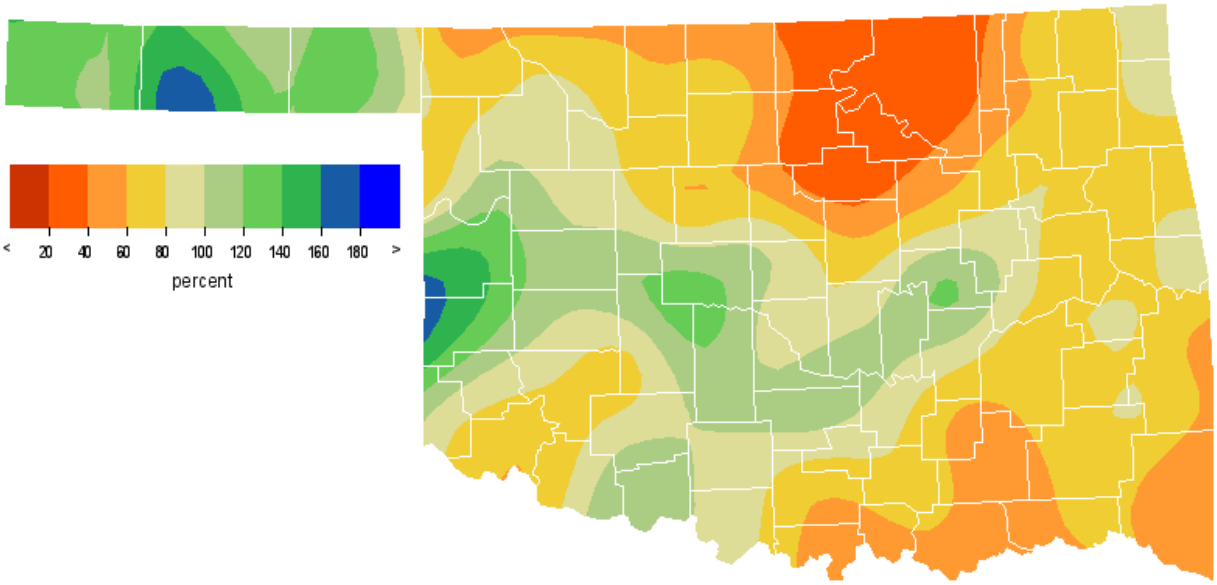
SEPTEMBER 2012 OBSERVED PRECIPITATION



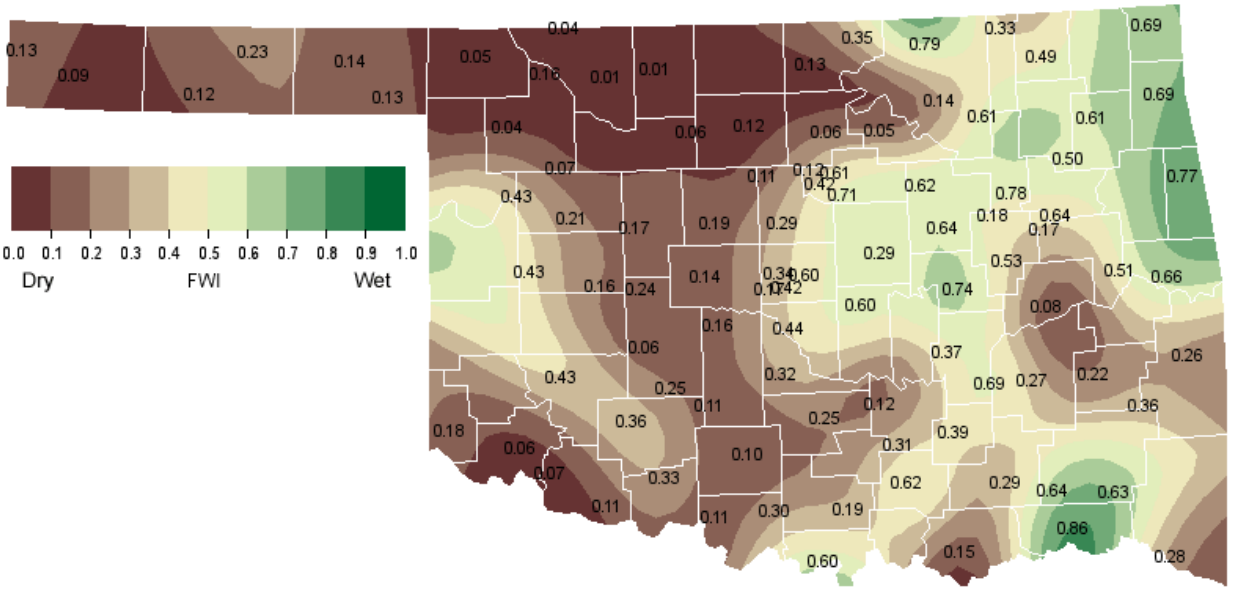
SEPTEMBER 2012 DEPARTURE FROM NORMAL PRECIPITATION



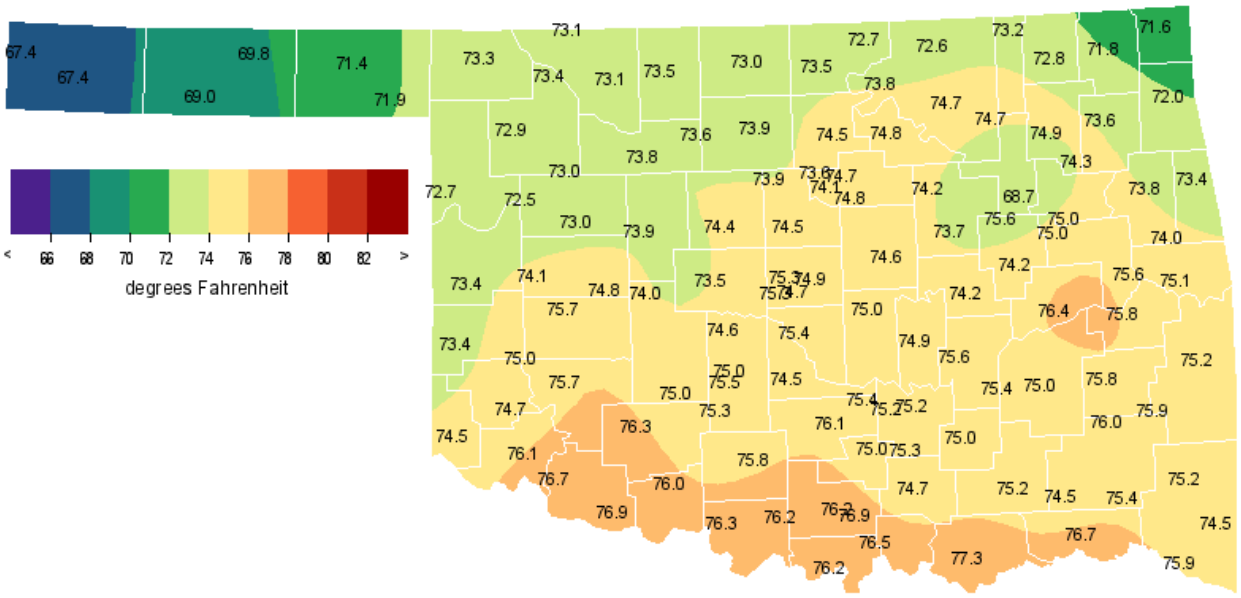
SEPTEMBER 2012 PERCENT OF NORMAL PRECIPITATION



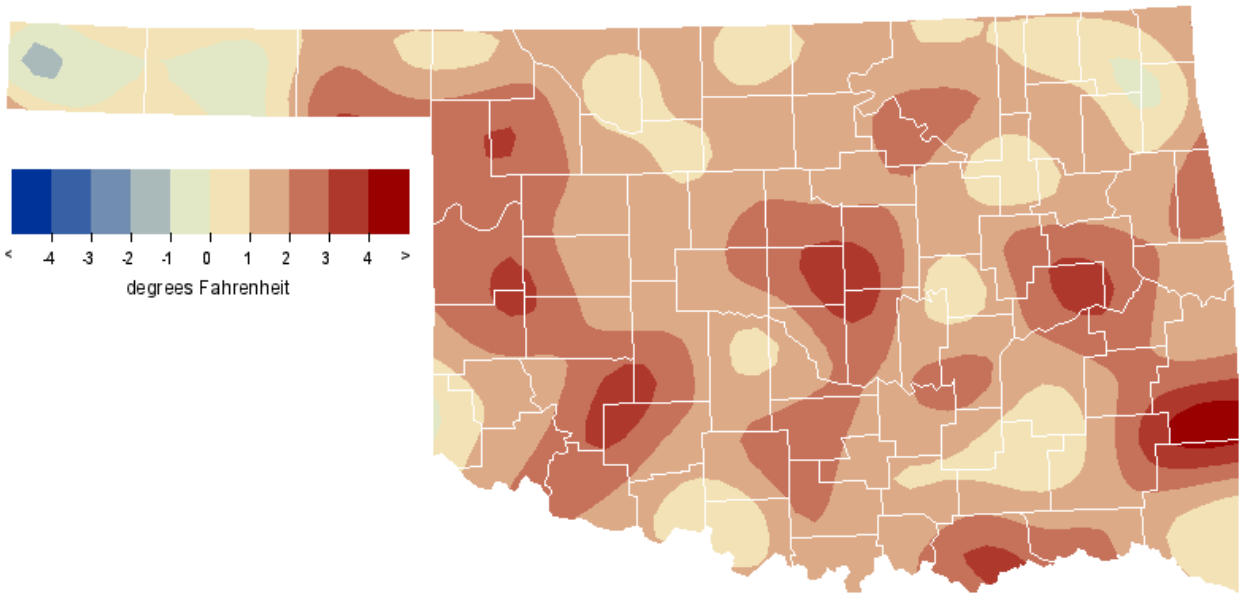
SEPTEMBER 2012 AVERAGE SOIL MOISTURE AT 25CM



SEPTEMBER 2012 AVERAGE TEMPERATURE



SEPTEMBER 2012 DEPARTURE FROM NORMAL TEMPERATURE

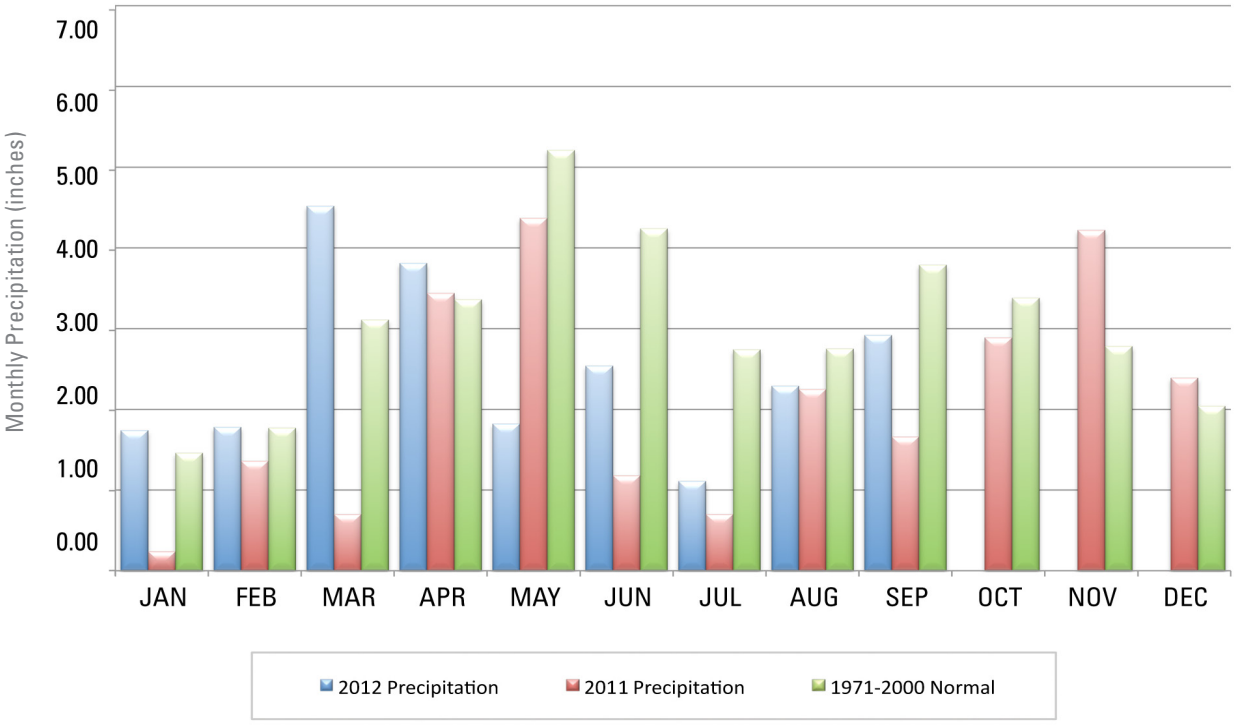


MESONET MONTHLY SUMMARY FOR SEPTEMBER 2012

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
PANHANDLE										
Arnett	72.6	104	4	47	18	21	250	1.50	.51	4
Beaver	71.4	105	3	43	18	25	216	2.29	.68	13
Boise City	67.4	98	2	37	15	51	123	1.79	.77	27
Buffalo	73.3	108	3	48	18	12	261	1.30	.49	13
NORTH CENTRAL										
Alva	73.1	108	3	47	18	15	257	1.91	1.04	27
Blackwell	73.5	109	3	46	18	12	267	1.23	.43	13
Breckinridge	74.0	108	3	49	10	14	283	2.83	1.06	26
Cherokee	73.5	108	3	49	18	11	266	1.65	1.13	13
Fairview	73.8	106	2	49	30	17	281	2.60	1.09	5
Freedom	73.5	107	3	46	18	13	267	2.44	1.04	26
Lahoma	73.6	107	3	50	18	15	274	2.13	.62	13
NORTHEAST										
Bixby	*****	***	***	***	***	****	****	4.53	1.51	13
Burbank	73.9	107	3	48	10	11	277	1.33	.48	13
Claremore	74.9	105	3	51	18	8	304	2.35	.77	15
Copan	73.3	105	3	49	18	15	265	1.40	.78	14
Foraker	72.7	105	3	47	18	18	248	1.22	.59	14
Inola	74.2	104	7	50	9	5	282	4.60	2.00	29
Jay	72.1	102	3	51	10	12	224	4.78	2.49	14
Miami	71.6	102	3	48	23	18	215	4.37	2.03	14
WEST CENTRAL										
Bessie	75.6	105	4	51	18	9	328	3.29	1.14	29
Butler	74.1	105	2	50	18	12	286	4.16	1.18	5
Camargo	72.5	105	3	48	18	16	239	3.20	1.48	27
Cheyenne	73.4	101	4	50	18	22	275	4.12	1.24	13
Erick	73.4	104	4	50	18	18	269	4.76	1.38	29
CENTRAL										
Acme	75.3	106	7	47	9	9	320	4.06	.91	30
Bowlegs	74.9	107	7	48	9	6	304	4.68	1.41	29
Bristow	73.7	108	7	47	9	6	267	3.20	1.13	13
Lake Carl Blac	73.6	105	3	47	9	9	266	1.20	.49	13
Chandler	74.5	104	7	51	9	9	293	2.79	1.33	27
Chickasha	74.9	105	7	46	9	7	305	4.62	1.25	29
El Reno	73.6	105	2	45	9	13	269	3.53	2.25	26
Guthrie	74.5	103	3	52	18	10	296	2.95	1.21	26
Kingfisher	74.4	106	3	49	9	10	292	1.89	.61	26
Marena	74.1	103	3	50	18	10	283	1.00	.28	27
Minco	74.5	103	4	52	18	11	297	5.29	1.84	26
Marshall	73.9	105	3	49	9	11	278	1.85	.59	13
EAST CENTRAL										
Cookson	74.1	104	4	49	9	6	278	4.69	2.50	14
Eufaula	76.3	106	7	54	9	4	344	3.39	.95	14
Haskell	75.0	105	7	50	9	5	304	4.48	1.90	29
Hectorville	75.6	105	7	55	23	6	324	1.97	.50	27
Holdenville	75.5	106	7	52	9	5	321	4.25	1.12	27
McAlester	74.9	104	7	48	19	5	303	3.43	1.00	27
Okmulgee	74.1	106	7	48	9	6	279	5.13	1.84	29
SOUTHWEST										
Altus	76.1	106	7	52	9	6	338	2.36	.84	26
Apache	75.0	105	7	53	9	8	306	2.69	1.07	27
Fort Cobb	*****	***	***	***	***	****	****	2.30	.88	29
Grandfield	76.8	106	7	54	9	5	360	3.36	.90	29
Hinton	74.0	104	4	52	18	11	282	4.11	1.24	29
Hobart	75.7	105	7	51	9	8	328	3.10	.98	25
SOUTH CENTRAL										
Ada	75.2	107	7	47	9	6	312	4.16	2.01	29
Ardmore	76.9	105	7	52	9	2	360	1.89	.90	29
Burneyville	76.1	106	7	46	19	3	338	2.49	1.24	29
Byars	75.5	105	7	54	9	9	323	7.46	2.76	29
Centrahoma	75.0	104	7	46	19	3	304	2.16	1.02	29
Durant	77.2	105	7	52	19	1	368	2.36	.66	29
Fittstown	75.2	105	7	50	9	5	312	4.35	2.99	29
Ketchum Ranch	75.8	107	7	52	9	6	329	3.69	1.26	29
Lane	75.1	103	7	47	19	0	304	2.62	.80	27
SOUTHEAST										
Antlers	74.5	102	7	43	19	4	290	2.17	.62	29
Antlers	*****	***	***	***	***	****	****	*****	*****	***
Broken Bow	74.5	102	6	46	19	2	286	1.96	.55	8
Clayton	76.1	103	7	46	19	3	335	4.03	2.86	27
Cloudy	75.4	104	7	48	19	2	315	3.24	.87	13
Hugo	76.7	102	7	50	19	2	353	2.32	.65	29

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
Goodwell	69.0	102	3	41	14	36	158	2.66	.59	27
Hooker	69.8	104	3	42	18	27	171	1.95	.82	26
Kenton	67.4	99	11	37	16	48	121	2.17	1.56	27
Slapout	71.9	104	3	47	14	20	228	2.21	.86	26
May Ranch	73.1	106	3	49	18	12	256	.74	.47	13
Medford	72.9	107	3	47	18	19	257	1.66	1.00	13
Newkirk	72.7	106	3	48	18	15	247	1.49	.57	13
Red Rock	74.5	107	3	50	18	9	294	1.29	.40	13
Seiling	72.9	105	3	48	9	15	252	1.94	1.42	13
Woodward	72.9	104	3	47	18	18	254	1.81	.79	13
Nowata	72.7	106	3	47	10	13	245	3.92	2.28	14
Pawnee	74.8	106	3	51	9	9	303	1.47	.40	13
Porter	75.0	104	7	51	9	5	304	3.12	.99	14
Pryor	73.6	104	3	49	10	7	264	3.25	1.31	14
Skiatook	74.7	105	3	50	23	10	301	2.08	1.16	14
Vinita	71.8	104	3	48	18	17	220	3.28	1.99	14
Wynona	74.7	108	3	51	9	8	298	1.11	.26	13
Putnam	73.1	104	4	47	18	18	262	2.77	.88	5
Retrop	74.9	105	4	52	18	11	309	3.10	1.13	5
Watonga	73.9	104	4	50	18	16	284	2.64	.62	13
Weatherford	74.7	105	4	50	18	11	303	3.92	1.81	26
Ninnekah	75.4	106	7	47	9	7	320	3.54	1.06	29
Norman	75.4	105	7	54	9	10	320	2.79	.89	26
Oilton	74.3	103	3	49	9	10	288	1.85	.68	13
OKC East	74.7	104	7	52	9	10	300	3.50	1.39	26
OKC North	75.3	102	7	54	18	10	319	4.72	2.95	26
OKC West	75.3	103	2	55	9	10	320	4.13	1.57	26
Okemah	74.2	107	7	47	9	6	282	6.91	2.53	26
Perkins	74.8	104	3	53	9	9	303	1.34	.46	26
Shawnee	75.0	104	7	53	18	9	309	3.44	.99	26
Spencer	74.9	103	7	53	18	12	308	3.49	2.25	26
Stillwater	74.6	105	3	50	9	9	296	1.10	.36	13
Washington	74.5	105	7	49	19	9	296	3.37	1.05	29
Sallisaw	75.0	103	6	50	19	1	302	3.67	1.43	29
Stigler	75.8	105	7	48	19	1	326	5.95	4.93	29
Stuart	75.4	105	7	52	9	4	315	3.29	1.22	13
Tahlequah	73.8	103	7	49	9	6	269	4.05	1.45	14
Webbers Falls	75.6	106	7	50	19	0	317	1.62	.51	29
Westville	73.4	102	3	51	9	5	257	3.03	1.34	14
Hollis	74.5	105	7	51	19	10	295	2.70	.97	26
Mangum	74.7	106	4	47	9	9	299	2.49	.96	27
Medicine Park	76.3	105	7	55	14	8	348	3.19	.98	26
Tipton	76.6	106	7	54	19	5	354	2.08	.59	27
Walters	*****	***	***	***	***	****	****	*****	*****	***
Madill	76.5	106	7	48	19	2	346	2.16	.81	30
Newport	76.2	105	5	54	19	4	341	2.83	1.08	29
Pauls Valley	76.1	107	7	50	9	7	341	4.87	2.10	29
Ringling	76.2	107	7	52	9	5	341	3.37	1.34	29
Sulphur	75.0	106	7	45	9	6	307	3.77	1.94	29
Tishomingo	74.8	104	7	49	19	4	299	4.39	1.60	29
Vanoss	75.2	107	7	46	9	7	313	3.26	1.65	29
Waurika	76.2	109	7	53	19	3	340	3.11	1.12	29
Idabel	76.0	104	6	48	19	1	330	2.38	.51	13
Mt Herman	75.2	102	6	49	9	3	309	2.45	.62	29
Talihina	75.9	104	7	46	19	2	330	4.49	1.42	27
Wilburton	75.8	104	7	46	9	2	325	2.77	1.69	29
Wister	75.1	105	4	46	19	1	306	2.64	.94	27

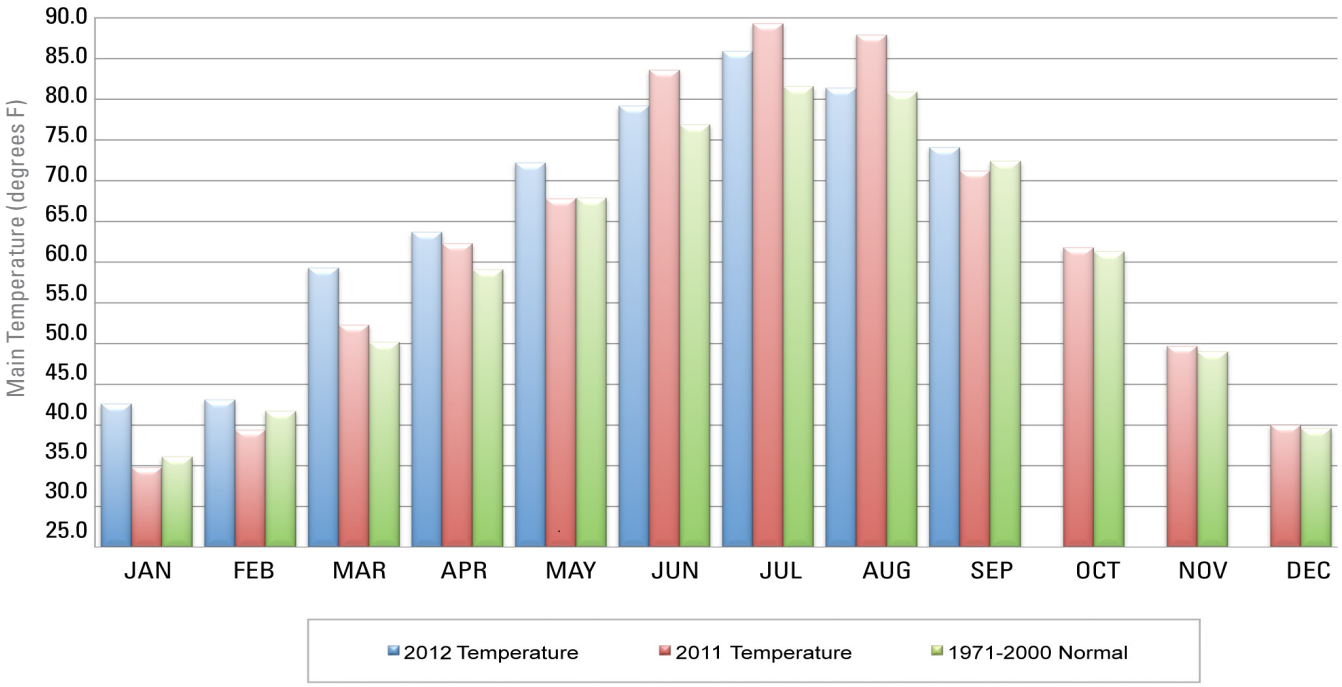
2011 AND 2012 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL



September 2012 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Sept-11
Panhandle	1.98	0.10	35th Wettest	4.57 (1985)	0.05 (1956)	0.83
North Central	1.82	-1.31	36th Driest	7.08 (1945)	0.04 (2000)	2.03
Northeast	2.85	-1.93	44th Driest	12.42 (1986)	0.13 (1948)	2.67
West Central	3.55	0.52	29th Wettest	8.64 (1986)	0.02 (2000)	1.08
Central	3.22	-0.89	56th Wettest	10.68 (1945)	0.19 (1956)	1.79
East Central	3.77	-1.19	55th Driest	10.40 (1970)	0.23 (1948)	1.56
Southwest	2.97	-0.42	46th Wettest	8.68 (1936)	0.00 (1898)	0.90
South Central	3.47	-0.87	57th Wettest	9.98 (1936)	0.00 (1909)	1.37
Southeast	2.85	-1.73	48th Driest	11.75 (1974)	0.29 (1948)	1.02
Statewide	2.92	-0.89	56th Driest	7.86 (1945)	0.27 (1956)	1.52

2011 AND 2012 STATEWIDE TEMPERATURE MONTHLY TOTALS VS. NORMAL



September 2012 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Sept-11 (F)
Panhandle	70.4	1.0	45th Warmest	76.2 (1931)	62.4 (1974)	70.3
North Central	73.4	1.3	46th Warmest	80.8 (1931)	64.0 (1974)	70.0
Northeast	73.2	1.5	39th Warmest	79.1 (1931)	63.4 (1974)	68.7
West Central	74.0	2.1	29th Warmest	80.4 (1931)	64.4 (1974)	71.8
Central	74.6	1.8	35th Warmest	81.3 (1931)	65.0 (1974)	71.2
East Central	75.0	2.3	30th Warmest	80.5 (1939)	65.1 (1974)	70.6
Southwest	75.6	1.9	35th Warmest	81.2 (1931)	66.4 (1974)	73.4
South Central	75.8	1.7	38th Warmest	81.3 (1998)	66.3 (1974)	73.5
Southeast	75.5	2.4	31st Warmest	81.2 (1939)	65.9 (1974)	72.0
Statewide	74.1	1.7	36th Warmest	79.8 (1931)	64.7 (1974)	71.2

RECORD EVENT REPORTS

Description	Day	Location	Record	Previous Record	Year
Daily High Temperature	3	Bartlesville	110	109	2000
All Time High Temperature on Record for Month of September	3	Bartlesville	110	-	-
Warmest Temp Ever Recorded So Late in the Season	3	Bartlesville	110	-	-
High Minimum Temperature	4	Tulsa	81	79	1947
Daily High Temperature	7	Oklahoma City	105	102	1998
Daily High Temperature	7	McAlester	107	102	1998
Daily Minimum Temperature	9	Oklahoma City	50	51	1962
Daily Minimum Temperature	10	Bartlesville	45	45	2001
Daily High Temperature	21	McAlester	99	97	1980
Daily High Temperature	24	McAlester	94	93	1954
Daily Maximum Rainfall	26	Oklahoma City	1.78	1.74	1973
Daily Maximum Rainfall	29	McAlester	0.75	0.66	1985

MESONET EXTREMES FOR SEPTEMBER 2012

Climate Division	High Temp (F)	Day	Station	Low Temp (F)	Day	Station	High Monthly Rainfall (inches)	Station	High Daily Rainfall (inches)	Day	Station
Panhandle	108	3rd	Buffalo	37	15th	Boise City	2.66	Goodwell	1.56	27th	Kenton
North Central	109	3rd	Blackwell	46	18th	Blackwell	2.83	Breckinridge	1.42	13th	Seiling
Northeast	108	3rd	Wynona	47	10th	Nowata	4.78	Jay	2.49	14th	Jay
West Central	105	2nd	Butler	47	18th	Putnam	4.76	Erick	1.81	26th	Weatherford
Central	108	7th	Bristow	45	9th	El Reno	6.91	Okemah	2.95	26th	Oklahoma City North
East Central	106	7th	Eufaula	48	9th	Okmulgee	5.95	Stigler	4.93	29th	Stigler
Southwest	106	7th	Grandfield	47	9th	Mangum	4.24	Walters	1.27	29th	Walters
South Central	109	7th	Waurika	45	9th	Sulphur	7.46	Byars	2.99	29th	Fittstown
Southeast	105	4th	Wister	43	19th	Antlers	4.49	Talihina	2.86	27th	Clayton
Statewide	109	7th	Waurika	37	15th	Boise City	7.46	Byars	4.93	29th	Stigler

OCTOBER OUTLOOK

October typically brings Oklahoma some of its most pleasant weather. Days are usually pleasantly warm and nights typically are refreshingly cool. On the occasions that the weather does turn nasty, however, the result too often is flood, as October seems to be a favored time for extreme precipitation events. The year's tenth month is Oklahoma's 6th warmest and 4th wettest, according to the most recently compiled statewide normals. From 1971 through 2000, the period from which current normals of temperature and precipitation were calculated, Oklahoma's October average temperature was 62.0 degrees Fahrenheit and the average reporting station received a monthly precipitation of 3.38 inches.

October is given to wide extremes of precipitation. The larger monthly figures are usually impacted by one or two very large events. Remnants of tropical storms or hurricanes, usually from the Gulf of Mexico, but occasionally originating in the Pacific Ocean, occasionally bring widespread heavy rains to the state during October. At other times, mid-latitude storm systems have stalled over the state and, taking advantage of moisture borne from the Gulf by the prevailing southerly winds, produced prodigious amounts of rain. In many other years, October is virtually without rain. Monthly precipitation totals include a statewide-averaged high of 11.32 inches in 1941, the largest total ever recorded for Oklahoma (any month), and a low of 0.14 inch, attained in 1952. The remnants of Hurricane Norma provided enough rain over a three-day period in October 1981 to give Madill the greatest monthly precipitation total (25.80 inches) ever recorded at a recognized reporting station in Oklahoma (all months). A thoroughly extra-tropical thunderstorm system inundated Enid with 15.68 inches of rain in about 12 hours (12 inches in just 3 hours) on October 11, 1973. That total, reported the following morning, is the state's greatest 24-hour precipitation in any month, as measured at an official reporting station.

The normal precipitation pattern across Oklahoma in October returns to its familiar configuration with eastern stations receiving substantially more rainfall than those in the west. Normal monthly precipitation across the state during October ranges from 6.22 inches at Smithville to 0.99 inches at Kenton. Snowfall is not common during October, but Regnier, Kenton, and Boise City each average receiving about one inch of snow during the month. Those averages were inflated by a freak snowstorm on October 25 and 26, 1997 that dropped 15 inches of snow on Kenton. As many as 15,000 head of cattle across the panhandle died during that snowstorm.

Severe thunderstorms, apart from the floods, historically have been little more than footnotes in October for most of the state's history. However, recent occurrences have altered that notion somewhat. Reasonably comprehensive and well-documented tornado records in the state date from 1950. During those 54 years, 123 October tornadoes have been identified in Oklahoma, an average of 2.3 per year. There were no October tornadoes reported during 23 of those years. However, 25 tornadoes were reported in the state on October 4, 1998 and 19 more were reported on October 9, 2001. Those two days account for over one-third of the tornadoes reported (and confirmed) within the state in October during that 54-year period. The state's monthly total of 27 tornadoes during October 1998 represents the most tornadoes ever reported within any state during an October.

Temperature

Mean	62.0 degrees
Warmest October	1963, 69.9 degrees
Coolest October	1925 & 2009, 54.4 degrees
Hottest recorded	110 degrees, Waukomis, October 2, 1898
Coldest recorded	6 degrees, Kenton, October 30, 1993
Hottest Location	Waurika, 663 degrees
Coolest Location	Turpin, 56.6 degrees

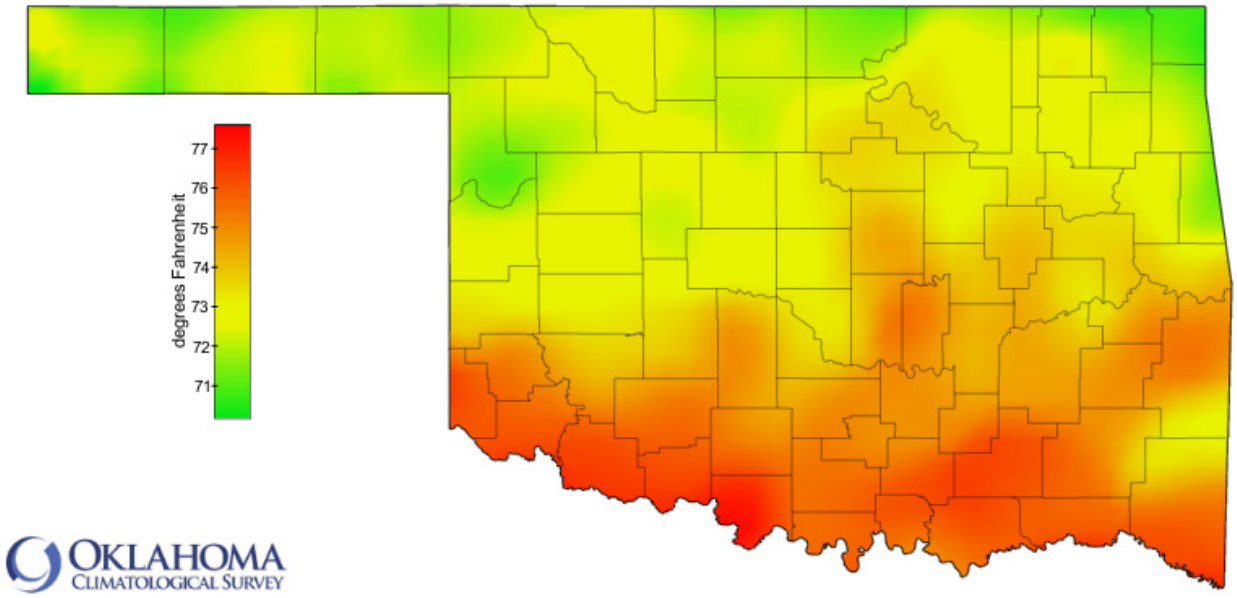
Precipitation

Mean	3.38 inches
Wettest Year	1941, 11.32 inches
Driest Year	1917, 0.21 inches
Wettest location	Smithville, 6.22 inches
Driest location	Kenton, 0.99 inches
Most recorded	25.80 inches, Madill, 1981

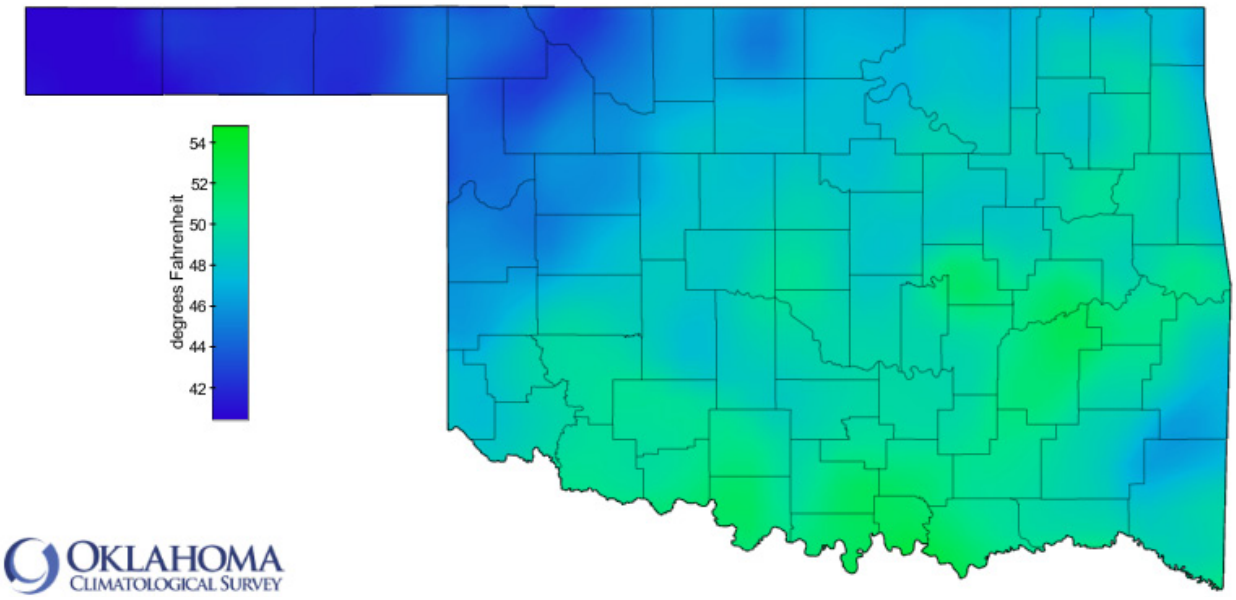
Tornadoes

Average October Tornadoes	2.1
Most	27 (1998)

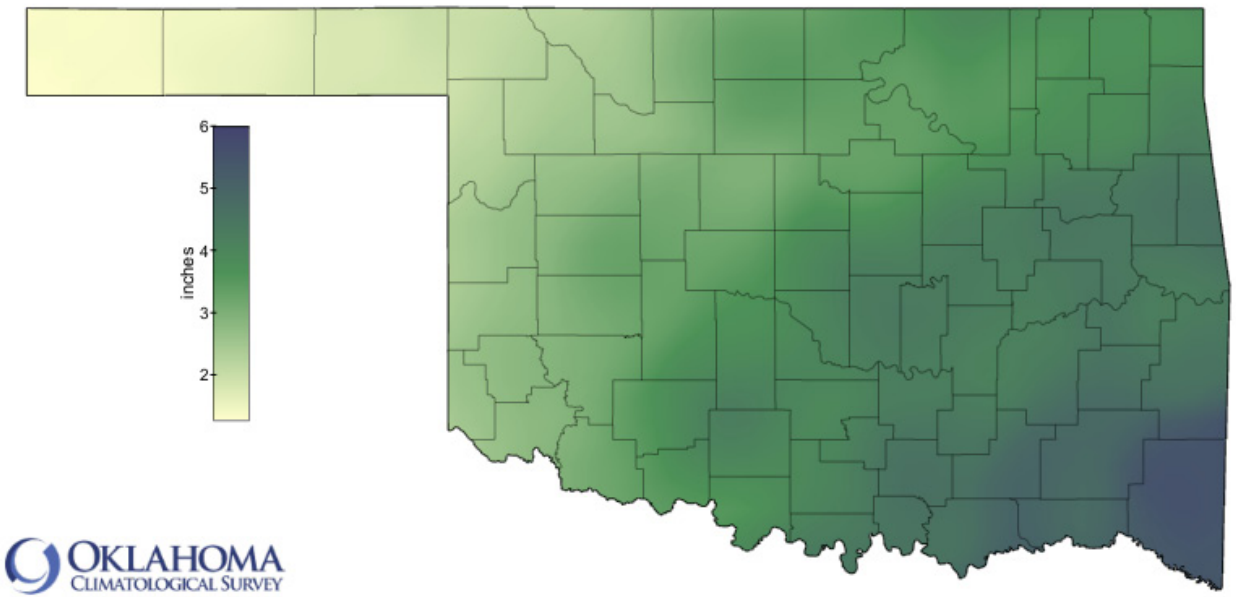
OCTOBER NORMAL DAILY MAXIMUM TEMPERATURE (1981-2010)



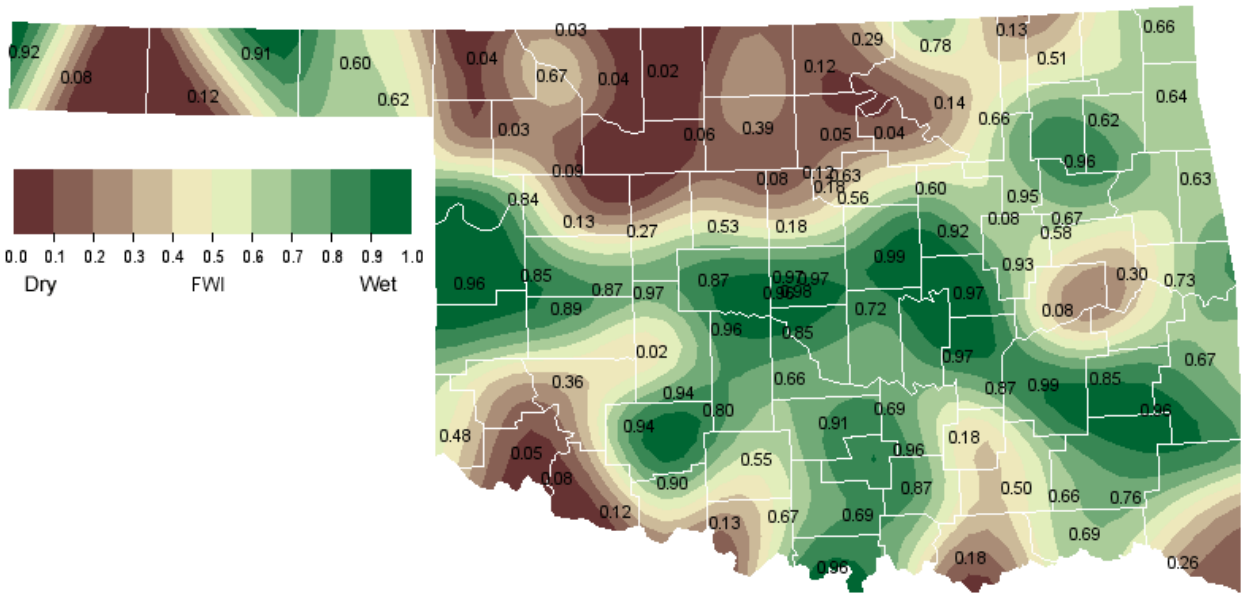
OCTOBER NORMAL DAILY MINIMUM TEMPERATURE (1981-2010)



OCTOBER NORMAL PRECIPITATION (1981-2010)



OCTOBER 1, 2012 SOIL MOISTURE CONDITIONS AT 25CM



OCTOBER 2012 DROUGHT INDICES

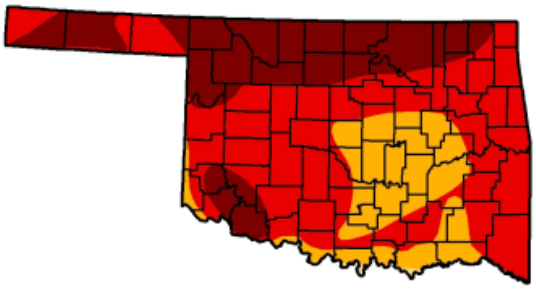
U.S. Drought Monitor

October 2, 2012
Valid 7 a.m. EST

Oklahoma

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	99.71	80.12	28.21
Last Week (09/25/2012 map)	0.00	100.00	100.00	99.98	95.33	42.09
3 Months Ago (07/03/2012 map)	0.35	99.65	61.12	18.25	7.58	0.00
Start of Calendar Year (12/27/2011 map)	14.83	85.17	78.76	50.55	27.48	3.33
Start of Water Year (09/25/2012 map)	0.00	100.00	100.00	99.98	95.33	42.09
One Year Ago (09/27/2011 map)	0.00	100.00	100.00	100.00	78.97	66.42



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.

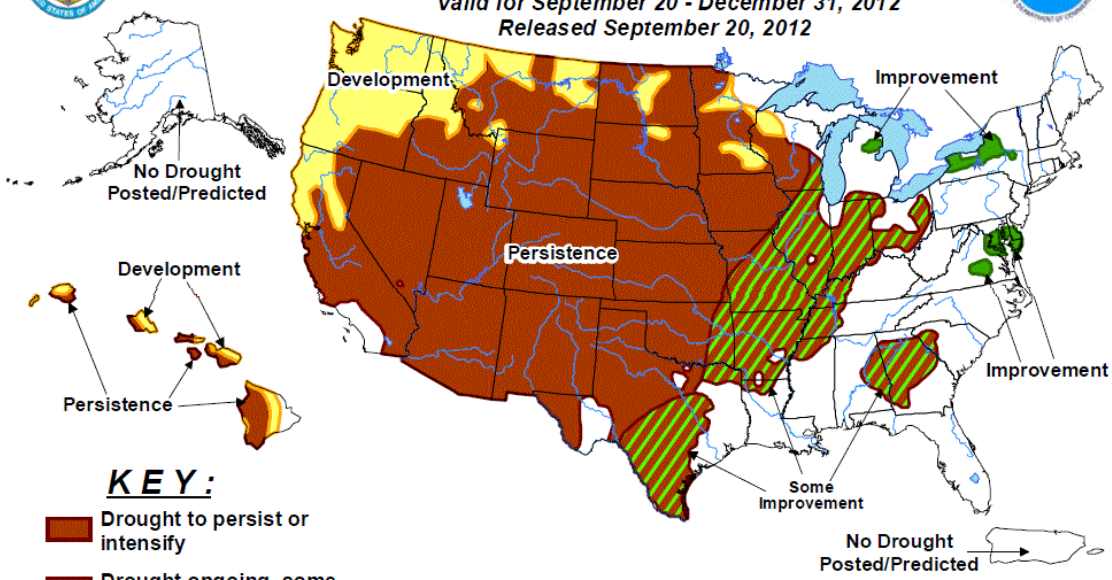
http://droughtmonitor.unl.edu

Released Thursday, October 4, 2012
Anthony Artusa, NOAA/NWS/NCEP/CPC

U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for September 20 - December 31, 2012
Released September 20, 2012

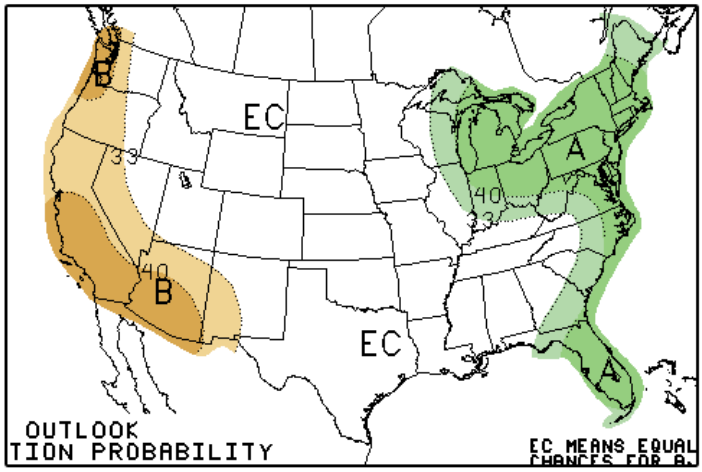


KEY:

- 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 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.

OCTOBER 2012 U.S. PRECIPITATION FORECAST



Percent Likelihood of Above or Below Average Precipitation*

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

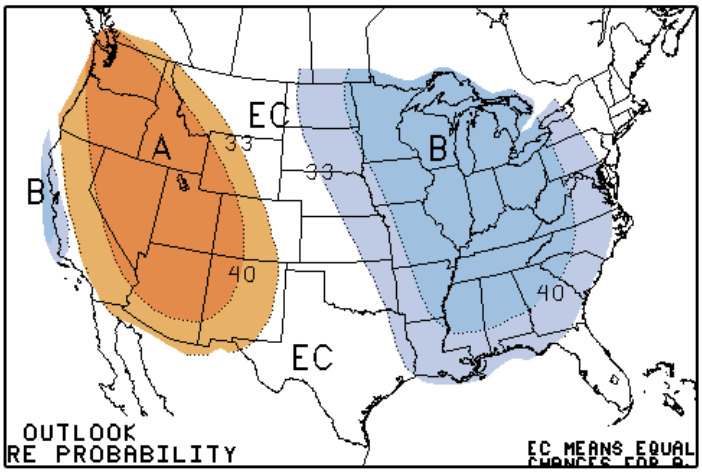
A = Above

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

B = Below

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

OCTOBER 2012 U.S. TEMPERATURE FORECAST



Percent Likelihood of Above or Below Average Temperatures*

- 10% - 20%
- 5% - 10%
- 0% - 5%

A = Above

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

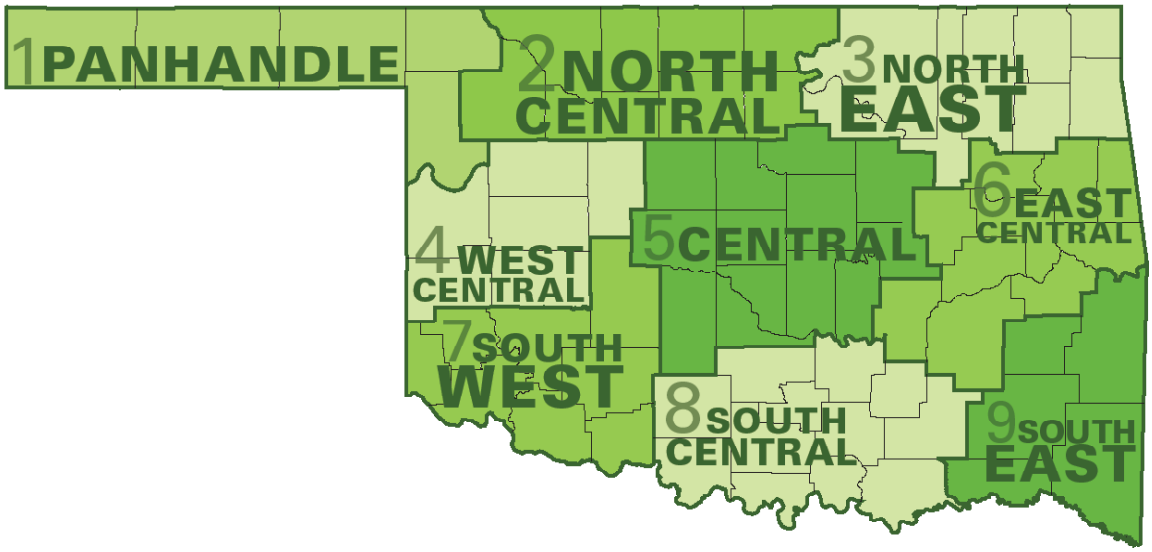
B = Below

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

OCTOBER CLIMATE NORMALS

Climate Division	Max. Temperature (°F)	Min. Temperature (°F)	Avg. Temperature (°F)	Precipitation (inches)
1	73.70	42.90	58.30	1.49
2	73.50	46.50	60.00	2.66
3	73.80	48.70	61.30	3.62
4	73.70	47.20	60.50	2.47
5	74.40	49.30	61.80	3.64
6	74.50	50.00	62.30	4.19
7	75.80	48.90	62.30	2.99
8	76.10	50.80	63.50	4.17
9	76.10	49.50	62.80	4.98
Statewide	74.60	48.30	61.50	3.48

Oklahoma Climate Divisions



INTERPRETATION INFORMATION

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

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

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

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

ADDITIONAL RESOURCES

SUNRISE / SUNSET TABLES
U.S. Naval Observatory: http://aa.usno.navy.mil/data

SEVERE STORM REPORTS
Storm Prediction Center: http://spc.noaa.gov/climo/

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

SEASONAL OUTLOOKS
Climate Prediction Center:
http://www.cpc.ncep.noaa.gov/products/OUTLOOKS_index.html

CLIMATE CALENDARS AND OTHER LOCAL WEATHER AND CLIMATE INFORMATION
Oklahoma Climatological Survey:
http://climate.mesonet.org or http://climate.ok.gov/

OKLAHOMA CLIMATOLOGICAL SURVEY

Oklahoma Climatological Survey is the State Climate Office for Oklahoma

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