

As a transition period between summer and fall, Mother Nature often provides Oklahoma with a wildly varying tale to tell during September. This year was no exception. At first glance, a description of Oklahoma’s weather during September seems fairly straightforward - a toasty month with an abundance of moisture in the west and too little in the east. The state’s weather story is never quite that simple, of course. Far northwestern Oklahoma was actually the driest region of the state, and parts of eastern Oklahoma enjoyed a surplus. That disparate rainfall pattern put a halt to budding dry conditions across parts of western Oklahoma, but intensified drought across eastern sections of the state.

September 2016 Statewide Extremes

Description	Extreme	Station	Day
High Temperature	101°F	Buffalo	19
Low Temperature	37°F	Eva, Kenton	26
High Precipitation	7.25 in.	Watonga	--
Low Precipitation	0.06 in.	Goodwell	--

According to preliminary data from the Oklahoma Mesonet, the statewide average rainfall total was 3.14 inches, 0.39 inches below normal. Regionally, the Panhandle suffered its 18th driest September at more than an inch below normal, west central Oklahoma saw bountiful moisture for their 16th wettest, and east central Oklahoma plunged more than 2 inches below normal to rank as their 35th driest. Walters led all Mesonet sites with 7.01 inches of rain for the month while Goodwell barely wet the gauge at 0.06 inches. The rainfall for the first nine months of the year was just as discordant as September with a surplus of more than 5 inches in the southwest and a deficit greater than 5 inches in both the northeast and east central sections. The statewide average for that January-September period was 26.97 inches, about 1.5 inches below normal. September ended as the 55th wettest on record statewide while January-September ranked as the 57th wettest. Those records date back to 1895.

Unlike rainfall, the temperature statistics were demonstratively more uniform. Despite a few glimpses of fall, September was unusually warm across the entire state. According to preliminary data from the Oklahoma Mesonet, the statewide average temperature was 74.7 degrees, 2.4 degrees above normal and the 34th warmest September on record. The Mesonet recorded triple-digit high temperatures

seven times during September with Buffalo leading the way at 101 degrees on the 19th. Winter made a brief appearance at the end of the month with five readings in the 30s, bottoming out at 37 degrees at two Panhandle stations – Eva and Kenton – on the 26th. September’s heat added to what has become a decidedly warm year thus far with the January-September statewide average jumping 1.8 degrees above normal, the 14th warmest such period on record.

September 2016 Statewide Statistics

Temperature

	Average	Depart.	Rank (1895-2016)
Month (Sept)	74.7°F	2.4°F	34th Warmest
Year-to-Date (Jan-Sept)	65.1°F	1.8°F	14th Warmest

Precipitation

	Total	Depart.	Rank (1895-2016)
Month (Sept)	3.14 in.	-0.39 in.	55th Wettest
Year-to-Date (Jan-Sept)	26.97 in.	-1.42 in.	57th Wettest

Depart. = departure from 30-year normal

While the dry conditions across western Oklahoma were eliminated by month’s end, drought remained and even intensified across the eastern one-third of the state. Nearly 34 percent of the state was considered abnormally dry by the U.S. Drought Monitor at the beginning of September, and that category had been reduced to 23 percent on the month’s final map. Actual drought, from moderate to severe, had jumped from 14 percent to 19 percent. The worst hit area remained from Pontotoc County down through Atoka County in the southeast as well as from Wagoner County through Cherokee County in the northeast. Those areas were labeled “severe” by the Drought Monitor. Surrounding those two areas, moderate drought extended from the Red River to near the Kansas border. The Drought Monitor’s intensity scale slides from moderate-severe-extreme-exceptional, with exceptional being the worst classification.

SEPTEMBER 2016 DAILY SUMMARIES

SEPTEMBER 1-2: The state welcomed September with widely scattered showers and thunderstorms. At times, the rain became heavy and produced over an inch in portions of northwest, central, and eastern Oklahoma on the 1st. The highest rainfall amount was 2.57 inches in Fairview where flooding was also reported. Rainfall intensity declined by the 2nd with the maximum amount of precipitation only measuring .39 inches in Grandfield. Maximum temperatures ranged from 77 degrees in Clayton to 90 degrees in Idabel. Minimum temperatures were between the mid-upper 50s and the low 70s. Daily average wind speeds were less than 10 mph on the 1st and less than 14 mph on the 2nd. The highest wind gusts were in the 30s and occurred in Valliant on the 1st and in Kenton and Boise City the following day.

SEPTEMBER 3-4: The warmest temperatures in the state were 91 degrees in Kenton and Hollis on the 3rd and 94 degrees in Kenton and Chickasha on the 4th. The coolest daily maximum temperature slightly increased from 82 degrees in Miami and Cookson to 86 degrees in the southeast. Minimum temperatures ranged from 52 degrees in Bristow to 69 degrees in Tipton on the 3rd and from 54 degrees in Wister to 72 degrees in Buffalo on the 4th. Rainfall was negligible for this brief period of time. Average wind speeds were less than 20 mph and the highest wind gust during this time was 46 mph in Boise City on the 4th.

SEPTEMBER 5-8: Temperatures increased and rain and thunderstorms returned to the area. The highest maximum temperatures climbed slightly from 98 degrees to 100 degrees in Hectorville over these five days. The lowest maximum temperatures were in the 80s. The highest minimum temperature increased from 74 degrees in parts of central, south-central, and northwest Oklahoma to 80 degrees in Tulsa, Stillwater, and Guthrie. Tulsa's minimum temperature of 80 degrees on the 8th also broke its daily high minimum temperature record which was previously 78 degrees in 1983. The coolest minimum temperatures were in the low 60s in the panhandle. The highest rainfall amounts each day were .95 inches in Boise City on the 5th, .24 inches in Beaver on the 6th, .14 inches in Buffalo on the 7th, and .81 inches in Vinita on the 8th. The highest daily average wind speeds gradually decreased from 20 mph in Slapout on the 5th to 16 mph in Kingfisher by the 8th. The highest wind gust was 69 mph in May Ranch on the 8th.

SEPTEMBER 9-10: A cold front moved into the state and brought heavy rain and severe thunderstorms along with it. The northwestern half of the state received the most precipitation with many areas receiving over half an inch of rain and a quarter inch of rain on the 9th and 10th, respectively. The maximum daily rainfall observed each day was 2.34 inches in Inola on the 9th and 1.39 inches in Jay on the 10th. In addition to the rainfall, the storms brought severe winds, measuring 75 mph in Enid and Vance Air Force Base on the 9th. Temperatures

decreased as the front moved through. The highest maximum temperature fell from 100 degrees in Tipton on the 9th to 85 degrees in Lane and Idabel the following day. The daily lowest maximum temperatures decreased from 86 degrees in Boise City to 75 degrees in Jay and Hinton. The highest minimum temperatures were in the low 60s and the lowest reported daily minimum temperature decreased from 53 degrees in Kenton to 43 degrees in Eva. Daily average wind speeds were less than 17 mph on the 9th and less than 13 mph on the 10th.

SEPTEMBER 11-12: Oklahoma took a break from the rainy weather and temperatures increased. The highest temperature in the state was 95 degrees in Eva both days and the lowest maximum temperatures were a pleasant 80 degrees in Miami on the 11th and 85 degrees in Mt. Herman on the 12th. From the 11th to the 12th, the highest minimum temperature increased from 61 degrees in Medicine Park to 71 degrees in Buffalo. The lowest minimum temperatures occurred in the east and increased from 46 degrees to 50 degrees. Winds were breezy, averaging less than 17 mph on the 11th and less than 25 mph on the 12th. The highest wind gust was 43 mph in Cheyenne, followed by 42 mph in May Ranch on the 12th.

SEPTEMBER 13-18: This period was marked by a weak cold front and numerous storms. Although the highest maximum temperatures remained in the mid-90s through this entire period, the lowest maximum temperatures fluctuated quite a bit between 67 degrees in Goodwell and Beaver and 83 degrees in Weatherford. The highest minimum temperatures were primarily in the low 70s before decreasing to 69 degrees on the 17th and 18th. The coolest temperatures occurred in the panhandle and decreased from 55 degrees on the 13th to 44 degrees on the 18th. Showers and storms were widespread, but the heaviest hit areas were southwest up through north-central Oklahoma where the front stalled on the 13th; the eastern two-thirds of Oklahoma on the 14th; the southeast half of Oklahoma on the 15th and 16th as another cold front entered the area; the southern half of the state on the 17th; and central, south-central, and southwest Oklahoma on the 18th. The highest amount of rainfall each consecutive day was 1.42 inches in Erick, 1.22 inches in Washington, 1.72 inches in Antlers, 1.47 inches in Sallisaw, 1.90 inches in Mt. Herman, and 1.50 inches in Ninnekah. As some storms strengthened, they produced flooding in Pontotoc and Caddo County on the 15th, a 71 mph wind gust in Sallisaw on the 16th, and a 70 mph wind gust in Moore on the 17th. Average wind speeds were less than 13 mph on the 13th, 14th, 16th, and 18th, less than 16 mph on the 15th, and less than 10 mph on the 17th. The highest non-severe wind gusts were in the 60s on the 17th and 18th in Erick, Boise City, Watonga, and Grandfield.

SEPTEMBER 19-23: Fall tried to enter the picture with decreasing temperatures. The warmest maximum temperatures decreased from a hot 101 degrees in Buffalo on the 19th to 94 degrees in Hectorville, Red Rock, Porter, and Lane. The coolest maximum temperatures decreased from 90 degrees to the mid-80s. The warmest minimum temperatures were in the

70s and the coolest minimum temperatures increased from the mid-40s in Eva on the 19th to 61 degrees in Boise City on the 21st before decreasing again to 55 degrees in Boise City on the 23rd. Skies were rain-free despite a trace amount of precipitation in Kenton on the 23rd. The highest daily average wind speeds were 12mph on the 19th (Cheyenne), 15 mph on the 20th (Beaver and Boise City), 16 mph on the 21st (panhandle), 17 mph on the 22nd (panhandle), and 20 mph on the 23rd (Beaver and Boise City).

SEPTEMBER 24-26: Oklahoma experienced yet another cold front and some of the heaviest rain of the month. Maximum temperatures decreased from a range between 75 and 94 degrees on the 24th to a range between 69 and 80 degrees on the 26th. Minimum temperatures decreased from a range between 40 and 75 degrees on the 24th to a range between 37 and 65 degrees on the 26th. The warmest Mesonet site during this period was Hectorville and the coolest Mesonet sites were Eva and Kenton. Rainfall was intense, leaving as much as 3.49 inches in Walters on the 24th and 4.95 inches in Tishomingo on the 25th. Flooding was also reported in Elk City and Lawton on the 24th. The highest amount of rain on the 26th was a much more subdued .25 inches in Stigler. Average wind speeds were 4-15 mph on the 24th, 3-16 mph on the 25th, and 3-14 mph on the 26th. The highest wind gust during this three-day stretch was 50 mph in Beaver, Ft. Cobb, and El Reno on the 24th.

SEPTEMBER 27-28: Although September experienced one last cold front on the 28th, skies remained clear. The highest maximum temperatures were in the low to mid-90s and the lowest maximum temperature was 78 degrees in the east. The highest minimum temperature increased from 55 degrees in Minco to 62 degrees in Medicine Park. The lowest minimum temperatures were in the low 40s in the north. Average wind speeds were less than 12 mph with the highest wind gusts only peaking in the upper 20s.

SEPTEMBER 29-30: Oklahoma felt the effects from the cold front the previous day, but it made for some pleasant weather. Skies were clear and the warmest temperatures in the state increased from 79 degrees in Kenton and Hooker on the 29th to 83 degrees in Eva on the 30th. Weatherford had the lowest maximum temperature both days, heating to only 69 degrees on the 29th and 74 degrees the following day. The highest minimum temperature was 54 degrees both days in the southeast and the lowest minimum temperature was 39 degrees in Eva on Thursday and 40 degrees in Bristow on Friday. The highest daily average wind speed increased from 10 mph to 13 mph and the highest wind gust was 30 mph in Talihina on the 29th and in Goodwell on the 30th.

SEPTEMBER 2016 SEVERE WEATHER

Flooding

Location	County	Day
2 E Fairview	Major	1
Stonewall	Pontotoc	15
1 S Eakly	Caddo	15
Elk City	Beckham	24
Lawton	Comanche	24

Wind Gusts (70 mph or Greater)

Speed (mph)	Location	County	Day
75.00	4 SE Enid	Garfield	9
75.00	4 ENE Vance Air Force Base	Garfield	9
70.00	3 SW Moore	Cleveland	17

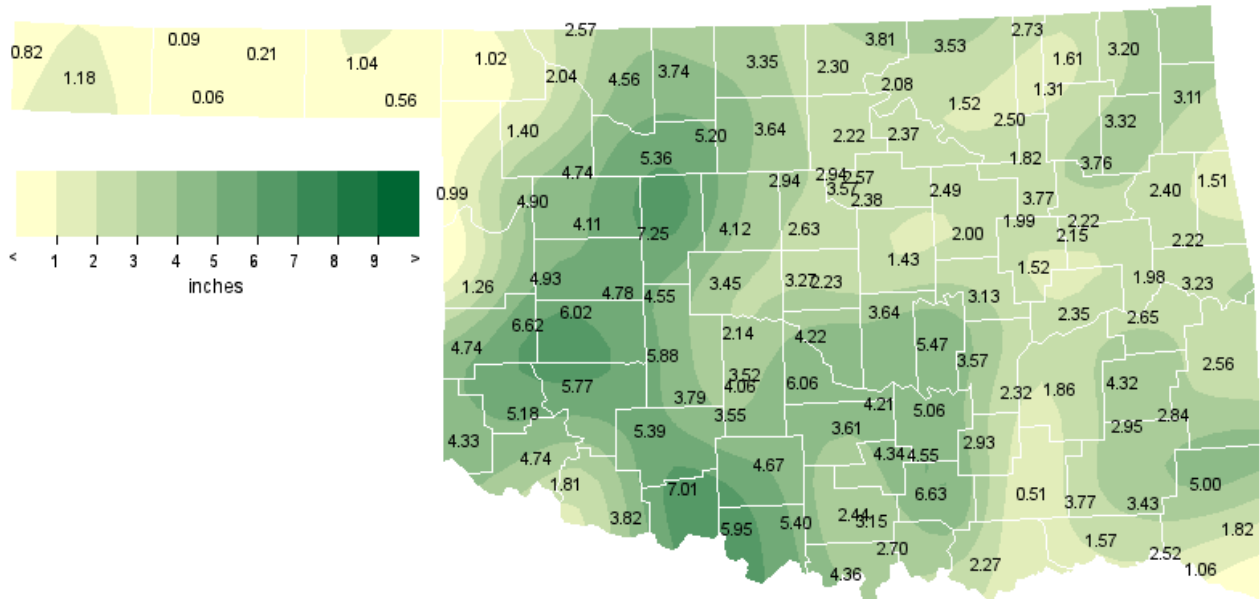
Hail (2 Inches in Diameter or Greater)

Size (in)	Location	County	Day
None			

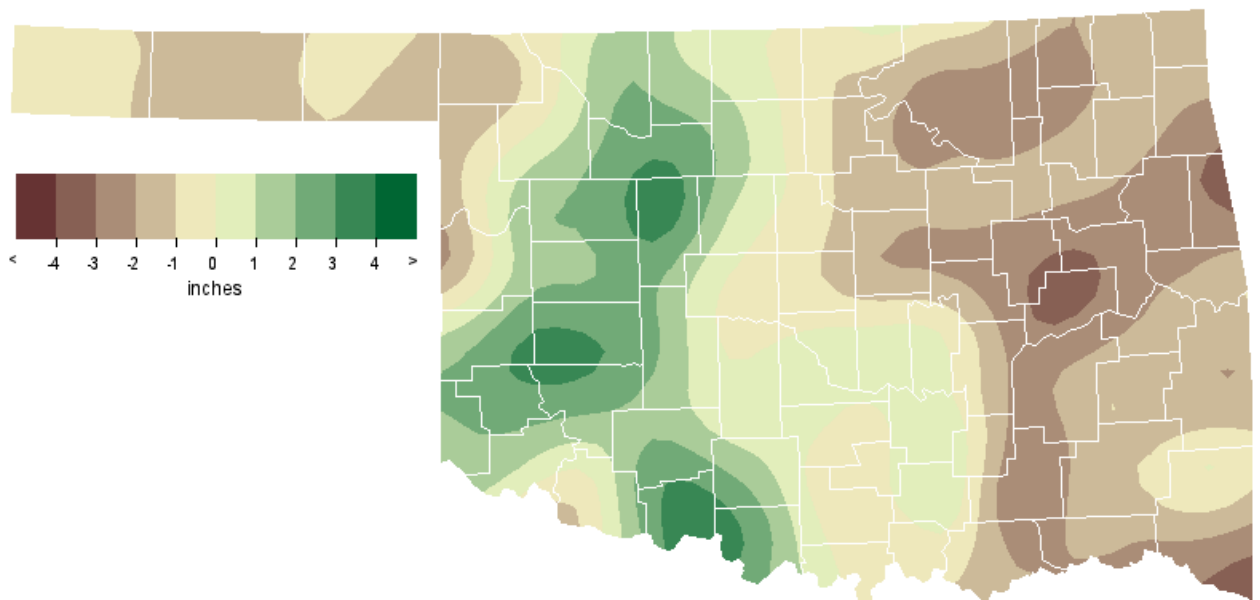
Significant Tornadoes (EF2 or Greater)

EF-Rating	County (Start/End)	Day
None		

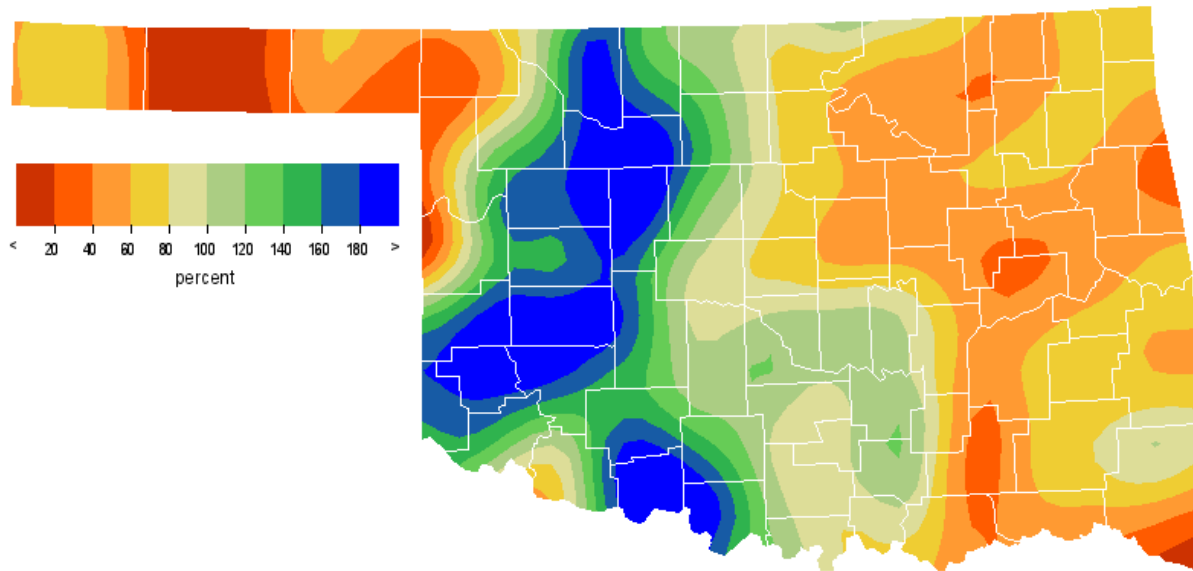
SEPTEMBER 2016 OBSERVED PRECIPITATION



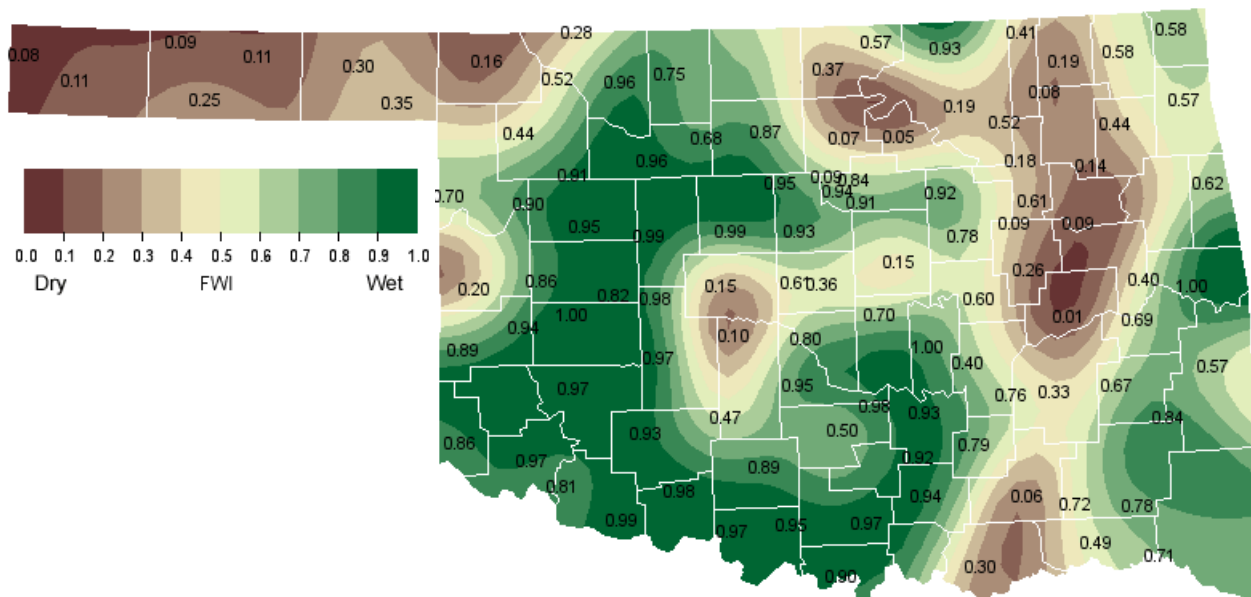
SEPTEMBER 2016 DEPARTURE FROM NORMAL PRECIPITATION



SEPTEMBER 2016 PERCENT OF NORMAL PRECIPITATION



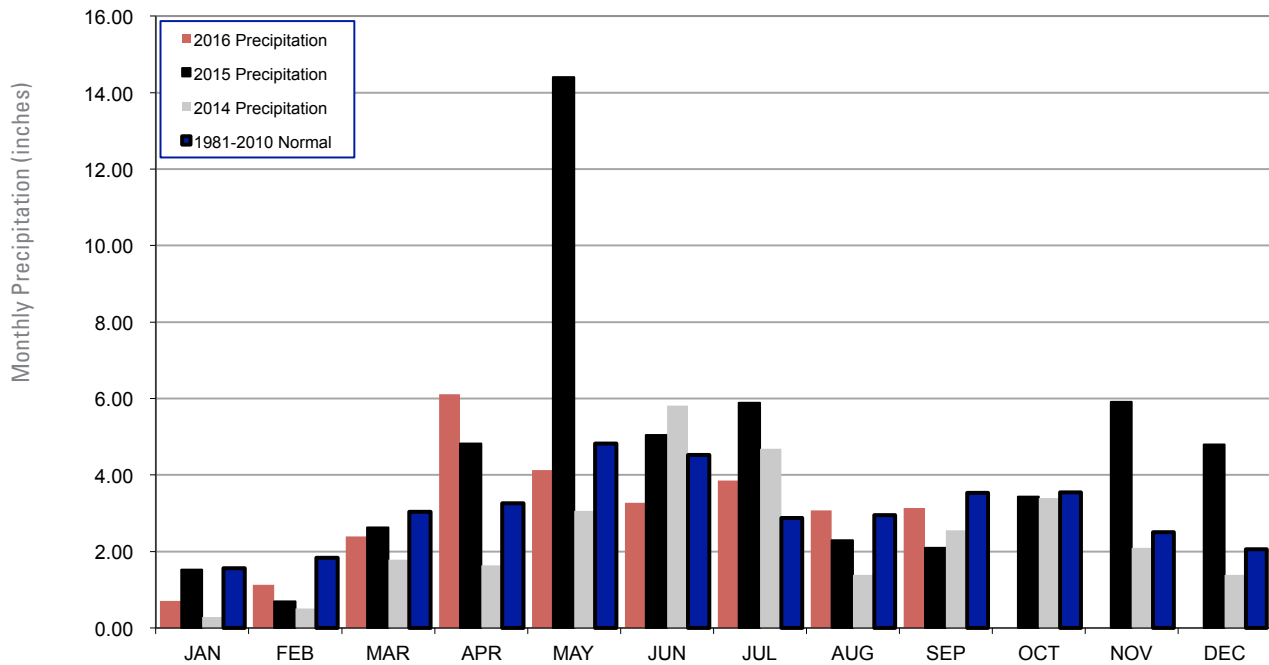
SEPTEMBER 2016 AVERAGE SOIL MOISTURE AT 25CM



MESONET MONTHLY SUMMARY FOR SEPTEMBER 2016

PANHANDLE										NORTH CENTRAL										NORTHEAST										WEST CENTRAL										CENTRAL										EAST CENTRAL										SOUTHWEST										SOUTH CENTRAL										SOUTHEAST																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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PANHANDLE										NORTH CENTRAL										NORTHEAST										WEST CENTRAL										CENTRAL										EAST CENTRAL										SOUTHWEST										SOUTH CENTRAL										SOUTHEAST																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Arnett	73.1	96	19	46	27	14	256	.99	.54	24	Goodwell	71.8	97	19	39	26	23	229	.06	.03	15	Bixby	75.6	99	8	47	30	6	324	3.77	1.16	25	Porter	75.9	97	20	47	27	3	329	2.22	1.44	1	Burbank	74.1	97	19	45	29	12	286	2.08	1.00	9	Pryor	74.2	97	8	43	27	14	289	3.32	1.21	9	Copan	74.0	95	6	47	29	11	281	2.73	.66	9	Skiatook	75.2	96	8	50	29	6	313	2.50	1.18	14	Foraker	73.5	95	20	47	29	11	265	3.53	1.75	9	Talala	74.6	96	19	47	27	6	294	1.31	.45	9	Inola	74.3	98	8	44	27	12	291	3.76	2.34	9	Jay	72.8	93	20	43	29	22	256	3.11	1.39	10	Miami	72.6	94	7	43	30	19	247	*****	*****	***	Vinita	72.7	95	6	43	27	17	247	3.20	1.12	9	Nowata	73.3	97	20	41	30	17	266	1.61	.71	9	Wynona	75.0	98	20	47	27	7	308	1.52	.69	9	Bessie	74.6	96	9	48	29	14	301	6.02	1.37	25	Erick	73.5	94	9	46	30	15	271	4.74	1.42	13	Butler	74.1	95	9	45	30	15	289	4.93	2.07	9	Putnam	73.8	95	9	47	30	17	280	4.11	1.36	9	Camargo	73.3	96	9	44	27	16	266	4.90	2.52	24	Watonga	74.2	95	9	48	29	****	*****	6.96	1.93	9	Cheyenne	73.3	94	19	48	29	15	265	1.26	.57	24	Weatherford	74.2	95	9	49	30	15	291	4.78	1.45	24	Elk City	74.1	95	9	49	29	11	284	6.62	2.09	24	WEST CENTRAL										EAST CENTRAL										SOUTHWEST										SOUTH CENTRAL										SOUTHEAST										Bowlegs	75.5	97	8	47	30	9	326	5.47	3.00	25	Cookson	73.7	93	8	43	29	15	275	2.22	1.17	14	Bristow	73.4	98	8	40	30	17	268	2.00	.82	9	Eufaula	76.5	98	8	48	30	5	351	2.35	.99	15	Lake Carl Blac	75.0	97	19	44	30	11	312	2.94	1.00	24	Haskell	74.9	96	8	46	27	7	304	2.15	1.19	1	Chandler	75.3	97	8	45	30	8	318	1.43	.51	25	Hectorville	77.0	100	8	50	30	4	365	1.99	1.11	25	Chickasha	76.1	99	9	46	30	7	342	3.52	1.07	18	Holdenville	76.0	98	8	48	29	7	338	3.57	1.49	25	El Reno	74.1	95	19	44	30	15	289	3.45	1.25	24	McAlester	75.8	98	8	45	30	8	331	1.86	.69	18	Guthrie	75.3	96	19	48	30	8	316	2.63	1.09	24	Okmulgee	74.7	99	8	44	30	11	302	1.52	.41	18	Kingfisher	75.4	96	20	47	30	10	323	4.12	1.08	14	Altus	74.8	94	19	48	30	7	300	4.74	1.38	10	Marena	74.3	96	19	48	29	****	*****	3.57	1.17	17	Apache	74.8	96	9	47	30	10	305	3.79	1.20	24	Minco	75.0	95	20	48	29	9	308	2.14	.50	24	Fort Cobb	*****	***	***	***	***	****	*****	5.88	1.43	24	Marshall	75.2	97	19	45	30	11	317	2.94	.85	24	Grandfield	77.1	99	9	50	30	4	365	3.82	1.00	10	Hobart	75.3	97	9	48	30	8	316	5.77	2.21	24	Hinton	73.9	94	9	47	30	14	283	4.55	1.43	24	Stigler	75.5	95	8	47	30	6	322	3.23	1.47	16	Stuart	76.6	98	8	49	27	8	312	2.65	.83	14	Washington	*****	***	***	***	***	****	*****	6.06	1.38	18	Westville	73.8	94	8	44	27	13	277	1.51	.62	14	Ada	76.3	98	8	46	30	8	348	5.06	2.14	25	Lane	77.0	96	17	46	28	3	361	.51	.31	18	Ardmore	76.9	96	19	51	27	****	*****	3.15	.93	18	Madill	77.1	96	19	48	30	4	368	2.70	1.07	18	Burneyville	76.3	96	19	47	30	4	344	4.36	1.60	25	Newport	77.6	98	8	50	30	2	379	2.44	1.02	18	Byars	75.5	95	8	49	30	7	322	4.21	1.16	15	Pauls Valley	76.4	98	8	49	30	5	348	3.61	1.21	18	Centrahoma	76.1	96	8	43	30	7	339	2.93	1.39	18	Ringling	77.0	98	8	49	30	4	363	5.40	1.49	25	Durant	77.4	96	19	52	30	0	373	2.27	.84	18	Sulphur	76.1	97	8	45	30	11	344	4.34	1.12	18	Fittstown	75.9	97	8	49	30	7	335	4.55	1.64	25	Tishomingo	76.2	96	8	49	27	3	340	6.63	4.95	25	Ketchum Ranch	76.0	96	8	50	30	6	336	4.67	1.26	18	Waurika	76.6	99	8	48	30	4	352	5.95	1.87	24	Antlers	75.3	94	19	45	30	7	317	3.77	1.72	15	Mt Herman	75.0	90	5	47	30	8	307	5.00	1.90	17	Broken Bow	75.4	93	17	48	28	3	314	1.82	.96	18	Talihina	74.7	94	19	43	30	8	297	2.84	1.14	16	Clayton	75.3	95	19	47	30	6	314	2.95	1.06	18	Valliant	76.3	93	19	47	30	2	342	2.52	1.24	18	Cloudy	75.2	93	19	50	28	1	307	3.43	1.16	18	Wilburton	75.1	94	19	44	30	9	313	4.32	2.18	1	Hugo	77.0	95	19	50	30	1	360	1.57	.65	18	Wister	73.9	96	8	42	30	10	278	2.56	1.19	16	Idabel	76.7	95	5	47	30	3	355	1.06	.83	18
Bessie	74.6	96	9	48	29	14	301	6.02	1.37	25	Erick	73.5	94	9	46	30	15	271	4.74	1.42	13	Butler	74.1	95	9	45	30	15	289	4.93	2.07	9	Putnam	73.8	95	9	47	30	17	280	4.11	1.36	9	Camargo	73.3	96	9	44	27	16	266	4.90	2.52	24	Watonga	74.2	95	9	48	29	****	*****	6.96	1.93	9	Cheyenne	73.3	94	19	48	29	15	265	1.26	.57	24	Weatherford	74.2	95	9	49	30	15	291	4.78	1.45	24	Elk City	74.1	95	9	49	29	11	284	6.62	2.09	24	WEST CENTRAL										EAST CENTRAL										SOUTHWEST										SOUTH CENTRAL										SOUTHEAST										Bowlegs	75.5	97	8	47	30	9	326	5.47	3.00	25	Cookson	73.7	93	8	43	29	15	275	2.22	1.17	14	Bristow	73.4	98	8	40	30	17	268	2.00	.82	9	Eufaula	76.5	98	8	48	30	5	351	2.35	.99	15	Lake Carl Blac	75.0	97	19	44	30	11	312	2.94	1.00	24	Haskell	74.9	96	8	46	27	7	304	2.15	1.19	1	Chandler	75.3	97	8	45	30	8	318	1.43	.51	25	Hectorville	77.0	100	8	50	30	4	365	1.99	1.11	25	Chickasha	76.1	99	9	46	30	7	342	3.52	1.07	18	Holdenville	76.0	98	8	48	29	7	338	3.57	1.49	25	El Reno	74.1	95	19	44	30	15	289	3.45	1.25	24	McAlester	75.8	98	8	45	30	8	331	1.86	.69	18	Guthrie	75.3	96	19	48	30	8	316	2.63	1.09	24	Okmulgee	74.7	99	8	44	30	11	302	1.52	.41	18	Kingfisher	75.4	96	20	47	30	10	323	4.12	1.08	14	Altus	74.8	94	19	48	30	7	300	4.74	1.38	10	Marena	74.3	96	19	48	29	****	*****	3.57	1.17	17	Apache	74.8	96	9	47	30	10	305	3.79	1.20	24	Minco	75.0	95	20	48	29	9	308	2.14	.50	24	Fort Cobb	*****	***	***	***	***	****	*****	5.88	1.43	24	Marshall	75.2	97	19	45	30	11	317	2.94	.85	24	Grandfield	77.1	99	9	50	30	4	365	3.82	1.00	10	Hobart	75.3	97	9	48	30	8	316	5.77	2.21	24	Hinton	73.9	94	9	47	30	14	283	4.55	1.43	24	Stigler	75.5	95	8	47	30	6	322	3.23	1.47	16	Stuart	76.6	98	8	49	27	8	312	2.65	.83	14	Washington	*****	***	***	***	***	****	*****	6.06	1.38	18	Westville	73.8	94	8	44	27	13	277	1.51	.62	14	Ada	76.3	98	8	46	30	8	348	5.06	2.14	25	Lane	77.0	96	17	46	28	3	361	.51	.31	18	Ardmore	76.9	96	19	51	27	****	*****	3.15	.93	18	Madill	77.1	96	19	48	30	4	368	2.70	1.07	18	Burneyville	76.3	96	19	47	30	4	344	4.36	1.60	25	Newport	77.6	98	8	50	30	2	379	2.44	1.02	18	Byars	75.5	95	8	49	30	7	322	4.21	1.16	15	Pauls Valley	76.4	98	8	49	30	5	348	3.61	1.21	18	Centrahoma	76.1	96	8	43	30	7	339	2.93	1.39	18	Ringling	77.0	98	8	49	30	4	363	5.40	1.49	25	Durant	77.4	96	19	52	30	0	373	2.27	.84	18	Sulphur	76.1	97	8	45	30	11	344	4.34	1.12	18	Fittstown	75.9	97	8	49	30	7	335	4.55	1.64	25	Tishomingo	76.2	96	8	49	27	3	340	6.63	4.95	25	Ketchum Ranch	76.0	96	8	50	30	6	336	4.67	1.26	18	Waurika	76.6	99	8	48	30	4	352	5.95	1.87	24	Antlers	75.3	94	19	45	30	7	317	3.77	1.72	15	Mt Herman	75.0	90	5	47	30	8	307	5.00	1.90	17	Broken Bow	75.4	93	17	48	28	3	314	1.82	.96	18	Talihina	74.7	94	19	43	30	8	297	2.84	1.14	16	Clayton	75.3	95	19	47	30	6	314	2.95	1.06	18	Valliant	76.3	93	19	47	30	2	342	2.52	1.24	18	Cloudy	75.2	93	19	50	28	1	307	3.43	1.16	18	Wilburton	75.1	94	19	44	30	9	313	4.32	2.18	1	Hugo	77.0	95	19	50	30	1	360	1.57	.65	18	Wister	73.9	96	8	42	30	10	278	2.56	1.19	16	Idabel	76.7	95	5	47	30	3	355	1.06	.83	18																																																																																																																																																																																
WEST CENTRAL										EAST CENTRAL										SOUTHWEST										SOUTH CENTRAL										SOUTHEAST																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
Bowlegs	75.5	97	8	47	30	9	326	5.47	3.00	25	Cookson	73.7	93	8	43	29	15	275	2.22	1.17	14	Bristow	73.4	98	8	40	30	17	268	2.00	.82	9	Eufaula	76.5	98	8	48	30	5	351	2.35	.99	15	Lake Carl Blac	75.0	97	19	44	30	11	312	2.94	1.00	24	Haskell	74.9	96	8	46	27	7	304	2.15	1.19	1	Chandler	75.3	97	8	45	30	8	318	1.43	.51	25	Hectorville	77.0	100	8	50	30	4	365	1.99	1.11	25	Chickasha	76.1	99	9	46	30	7	342	3.52	1.07	18	Holdenville	76.0	98	8	48	29	7	338	3.57	1.49	25	El Reno	74.1	95	19	44	30	15	289	3.45	1.25	24	McAlester	75.8	98	8	45	30	8	331	1.86	.69	18	Guthrie	75.3	96	19	48	30	8	316	2.63	1.09	24	Okmulgee	74.7	99	8	44	30	11	302	1.52	.41	18	Kingfisher	75.4	96	20	47	30	10	323	4.12	1.08	14	Altus	74.8	94	19	48	30	7	300	4.74	1.38	10	Marena	74.3	96	19	48	29	****	*****	3.57	1.17	17	Apache	74.8	96	9	47	30	10	305	3.79	1.20	24	Minco	75.0	95	20	48	29	9	308	2.14	.50	24	Fort Cobb	*****	***	***	***	***	****	*****	5.88	1.43	24	Marshall	75.2	97	19	45	30	11	317	2.94	.85	24	Grandfield	77.1	99	9	50	30	4	365	3.82	1.00	10	Hobart	75.3	97	9	48	30	8	316	5.77	2.21	24	Hinton	73.9	94	9	47	30	14	283	4.55	1.43	24	Stigler	75.5	95	8	47	30	6	322	3.23	1.47	16	Stuart	76.6	98	8	49	27	8	312	2.65	.83	14	Washington	*****	***	***	***	***	****	*****	6.06	1.38	18	Westville	73.8	94	8	44	27	13	277	1.51	.62	14	Ada	76.3	98	8	46	30	8	348	5.06	2.14	25	Lane	77.0	96	17	46	28	3	361	.51	.31	18	Ardmore	76.9	96	19	51	27	****	*****	3.15	.93	18	Madill	77.1	96	19	48	30	4	368	2.70	1.07	18	Burneyville	76.3	96	19	47	30	4	344	4.36	1.60	25	Newport	77.6	98	8	50	30	2	379	2.44	1.02	18	Byars	75.5	95	8	49	30	7	322	4.21	1.16	15	Pauls Valley	76.4	98	8	49	30	5	348	3.61	1.21	18	Centrahoma	76.1	96	8	43	30	7	339	2.93	1.39	18	Ringling	77.0	98	8	49	30	4	363	5.40	1.49	25	Durant	77.4	96	19	52	30	0	373	2.27	.84	18	Sulphur	76.1	97	8	45	30	11	344	4.34	1.12	18	Fittstown	75.9	97	8	49	30	7	335	4.55	1.64	25	Tishomingo	76.2	96	8	49	27	3	340	6.63	4.95	25	Ketchum Ranch	76.0	96	8	50	30	6	336	4.67	1.26	18	Waurika	76.6	99	8	48	30	4	352	5.95	1.87	24	Antlers	75.3	94	19	45	30	7	317	3.77	1.72	15	Mt Herman	75.0	90	5	47	30	8	307	5.00	1.90	17	Broken Bow	75.4	93	17	48	28	3	314	1.82	.96	18	Talihina	74.7	94	19	43	30	8	297	2.84	1.14	16	Clayton	75.3	95	19	47	30	6	314	2.95	1.06	18	Valliant	76.3	93	19	47	30	2	342	2.52	1.24	18	Cloudy	75.2	93	19	50	28	1	307	3.43	1.16	18	Wilburton	75.1	94	19	44	30	9	313	4.32	2.18	1	Hugo	77.0	95	19	50	30	1	360	1.57	.65	18	Wister	73.9	96	8	42	30	10	278	2.56	1.19	16	Idabel	76.7	95	5	47	30	3	355	1.06	.83	18																																																																																																																																																																																																																																																																																																																																					
Ada	76.3	98	8	46	30	8	348	5.06	2.14	25	Lane	77.0	96	17	46	28	3	361	.51	.31	18	Ardmore	76.9	96	19	51	27	****	*****	3.15	.93	18	Madill	77.1	96	19	48	30	4	368	2.70	1.07	18	Burneyville	76.3	96	19	47	30	4	344	4.36	1.60	25	Newport	77.6	98	8	50	30	2	379	2.44	1.02	18	Byars	75.5	95	8	49	30	7	322	4.21	1.16	15	Pauls Valley	76.4	98	8	49	30	5	348	3.61	1.21	18	Centrahoma	76.1	96	8	43	30	7	339	2.93	1.39	18	Ringling	77.0	98	8	49	30	4	363	5.40	1.49	25	Durant	77.4	96	19	52	30	0	373	2.27	.84	18	Sulphur	76.1	97	8	45	30	11	344	4.34	1.12	18	Fittstown	75.9	97	8	49	30	7	335	4.55	1.64	25	Tishomingo	76.2	96	8	49	27	3	340	6.63	4.95	25	Ketchum Ranch	76.0	96	8	50	30	6	336	4.67	1.26	18	Waurika	76.6	99	8	48	30	4	352	5.95	1.87	24	Antlers	75.3	94	19	45	30	7	317	3.77	1.72	15	Mt Herman	75.0	90	5	47	30	8	307	5.00	1.90	17	Broken Bow	75.4	93	17	48	28	3	314	1.82	.96	18	Talihina	74.7	94	19	43	30	8	297	2.84	1.14	16	Clayton	75.3	95	19	47	30	6	314	2.95	1.06	18	Valliant	76.3	93	19	47	30	2	342	2.52	1.24	18	Cloudy	75.2	93	19	50	28	1	307	3.43	1.16	18	Wilburton	75.1	94	19	44	30	9	313	4.32	2.18	1	Hugo	77.0	95	19	50	30	1	360	1.57	.65	18	Wister	73.9	96	8	42	30	10	278	2.56	1.19	16	Idabel	76.7	95	5	47	30	3	355	1.06	.83	18																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
Antlers	75.3	94	19	45	30	7	317	3.77	1.72	15	Mt Herman	75.0	90	5	47	30	8	307	5.00	1.90	17	Broken Bow	75.4	93	17	48	28	3	314	1.82	.96	18	Talihina	74.7	94	19	43	30	8	297	2.84	1.14	16	Clayton	75.3	95	19	47	30	6	314	2.95	1.06	18	Valliant	76.3	93	19	47	30	2	342	2.52	1.24	18	Cloudy	75.2	93	19	50	28	1	307	3.43	1.16	18	Wilburton	75.1	94	19	44	30	9	313	4.32	2.18	1	Hugo	77.0	95	19	50	30	1	360	1.57	.65	18	Wister	73.9	96	8	42	30	10	278	2.56	1.19	16	Idabel	76.7	95	5	47	30	3	355	1.06	.83	18																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									

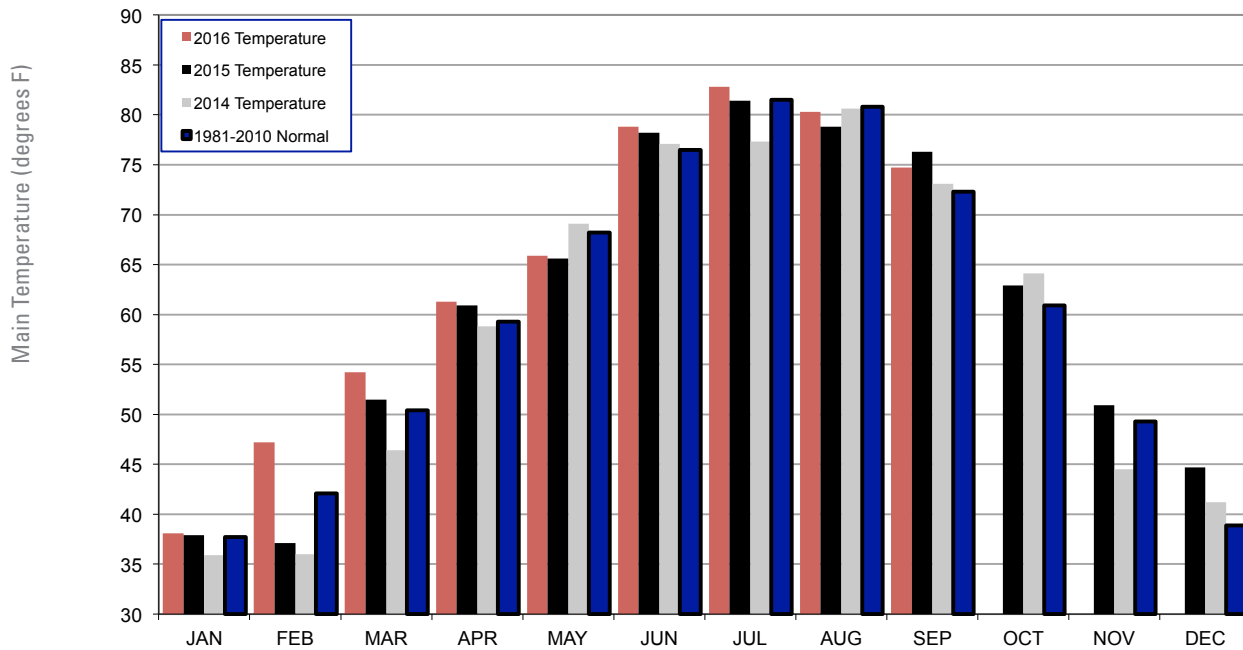
2014, 2015 AND 2016 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL



September 2016 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Sep-15 (inches)
Panhandle	0.66	-1.16	18th Driest	5.03 (1925)	0.04 (1956)	1.07
North Central	3.46	0.62	40th Wettest	7.43 (1923)	0.07 (2000)	1.91
Northeast	2.59	-1.91	43rd Driest	12.12 (1986)	0.29 (1948)	2.37
West Central	4.96	2.21	16th Wettest	8.68 (1923)	0.06 (1956)	1.65
Central	3.26	-0.60	52nd Wettest	9.81 (1945)	0.21 (1956)	2.67
East Central	2.29	-2.38	35th Driest	10.16 (1993)	0.24 (1948)	2.59
Southwest	4.75	1.77	24th Wettest	8.48 (1936)	0.04 (1939)	1.23
South Central	3.92	-0.01	46th Wettest	9.69 (1936)	0.13 (1956)	2.11
Southeast	2.89	-1.38	45th Driest	11.97 (1974)	0.57 (1931)	2.78
Statewide	3.14	-0.39	55th Wettest	7.77 (1945)	0.25 (1956)	2.06

2014, 2015 AND 2016 STATEWIDE TEMPERATURE MONTHLY TOTALS VS. NORMAL



September 2016 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Sep-15 (F)
Panhandle	72.0	2.6	28th Warmest	76.9 (1931)	62.3 (1974)	75.1
North Central	74.5	2.6	26th Warmest	80.7 (1931)	63.6 (1974)	76.7
Northeast	74.3	2.7	33rd Warmest	79.8 (1939)	63.9 (1974)	75.0
West Central	73.6	1.6	41st Warmest	80.2 (1931)	64.5 (1974)	77.3
Central	75.1	2.3	35th Warmest	81.7 (1931)	64.9 (1974)	77.0
East Central	75.4	2.8	34th Warmest	81.8 (1939)	65.1 (1974)	75.8
Southwest	75.2	1.3	52nd Warmest	81.6 (1931)	66.2 (1974)	79.1
South Central	76.5	2.4	34th Warmest	81.8 (1939)	66.6 (1974)	77.9
Southeast	75.5	2.8	30th Warmest	81.1 (1939)	65.8 (1974)	76.0
Statewide	74.7	2.4	34th Warmest	80.2 (1931)	64.7 (1974)	76.6

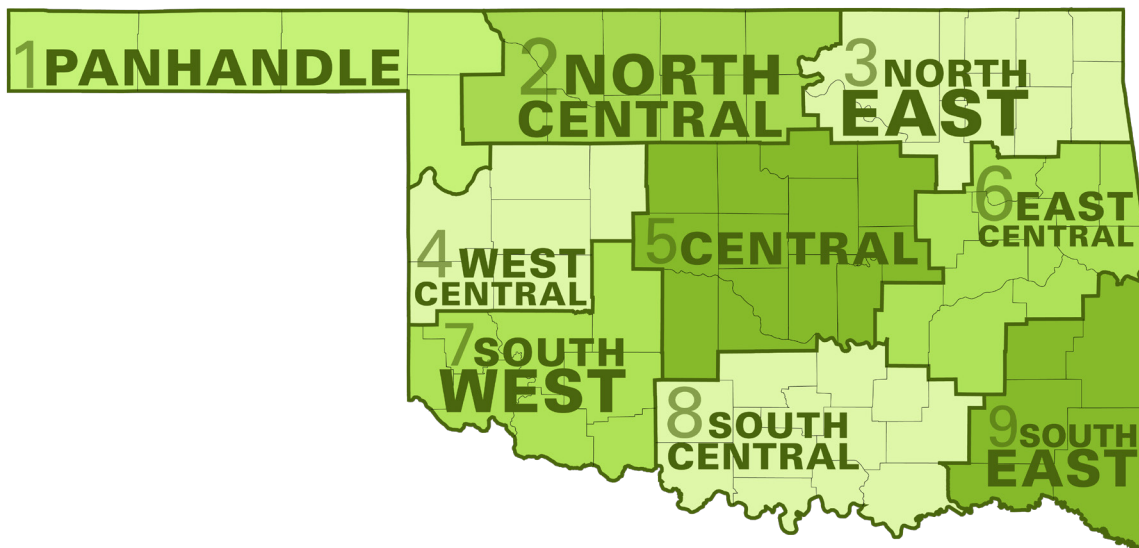
RECORD EVENT REPORTS SEPTEMBER 2016

Description	Day	Location	Record	Previous Record	Year
Daily High Minimum Temperature	8	Tulsa	80	78	1983

MESONET EXTREMES FOR SEPTEMBER 2016

Climate Division	High Temp (F)			Low Temp (F)			High Monthly Rainfall (inches)		High Daily Rainfall (inches)		
	Day	Station	Day	Day	Station	Station	Day	Station			
Panhandle	101	19th	Buffalo	37	26th	Kenton	1.18	Boise City	0.95	5th	Boise City
North Central	100	19th	Freedom	41	26th	Freedom	5.36	Fairview	2.57	1st	Fairview
Northeast	99	8th	Tulsa	41	30th	Nowata	3.77	Bixby	2.34	9th	Inola
West Central	96	9th	Bessie	44	27th	Camargo	7.25	Watonga	2.52	24th	Camargo
Central	99	8th	Okemah	40	30th	Birstow	6.06	Washington	3.00	25th	Bowlegs
East Central	100	8th	Hectorville	43	29th	Cookson	3.57	Holdenville	1.49	25th	Holdenville
Southwest	100	9th	Tipton	46	30th	Mangum	7.01	Walters	3.49	24th	Walters
South Central	99	8th	Waurika	43	30th	Centrahoma	6.63	Tishomingo	4.95	25th	Tishomingo
Southeast	96	8th	Wister	42	30th	Wister	5.00	Mt Herman	2.18	1st	Wilburton
Statewide	101	19th	Buffalo	37	26th	Kenton	7.25	Watonga	4.95	25th	Tishomingo

Oklahoma Climate Divisions



U.S. Drought Monitor Oklahoma

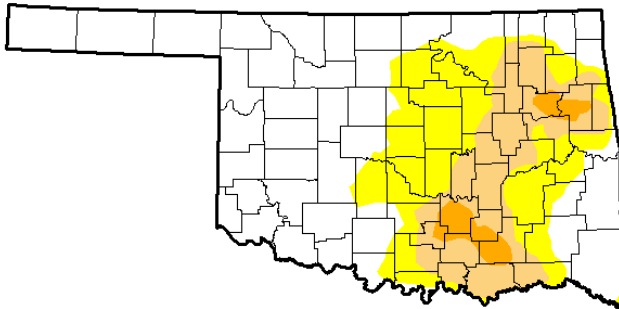
September 27, 2016

(Released Thursday, Sep. 29, 2016)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	57.82	42.18	19.04	3.05	0.00	0.00
Last Week 9/20/2016	55.17	44.83	13.24	2.39	0.00	0.00
3 Months Ago 9/28/2016	77.65	22.35	5.86	0.00	0.00	0.00
Start of Calendar Year 1/22/2015	100.00	0.00	0.00	0.00	0.00	0.00
Start of Water Year 9/29/2015	52.60	47.40	16.79	6.37	0.97	0.00
One Year Ago 9/29/2015	52.60	47.40	16.79	6.37	0.97	0.00



Intensity

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

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

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<http://droughtmonitor.unl.edu/>

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 November differs from the “true” daily average, it is consistent with historical methods of observation and comparable to the normals and extremes for stations and regions of the state.

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

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

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

ADDITIONAL RESOURCES

SUNRISE / SUNSET TABLES

U.S. Naval Observatory: <http://aa.usno.navy.mil/data>

SEVERE STORM REPORTS

Storm Prediction Center: <http://spc.noaa.gov/climo/>

National Climatic Data Center (more than about 4-5 months old):

<http://www4.ncdc.noaa.gov/cgi-win/wwwcgi.dll?wwEvent~Storms>

SEASONAL OUTLOOKS

Climate Prediction Center:

http://www.cpc.ncep.noaa.gov/products/OUTLOOKS_index.html

CLIMATE CALENDARS AND OTHER LOCAL WEATHER AND CLIMATE INFORMATION

Oklahoma Climatological Survey:

<http://climate.mesonet.org> or <http://climate.ok.gov/>



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