Oklahoma Monthly Climate Summary

OCTOBER 2013

OKLAHOMA CLIMATOLOGICAL SURVEY

Eastern Oklahoma saw plenty of rain during October, putting the halt to a blossoming flash drought in that part of the state. Unfortunately for drought-plagued western Oklahoma, Mother Nature was not quite so generous. Rainfall totals recorded by the Oklahoma Mesonet during October ranged from 7.15 inches at Wister in LeFlore County to a paltry 0.14 inches at Erick in Beckham County. That sort of disparity, while a bit exaggerated, spelled out the month's precipitation fortunes for the two sides of the state. The surplus in the east and the deficit in the west did manage to even things out with an average total across the state of 3.13 inches. That ranks October as the 47th wettest since records began in 1895, but still amounts to a deficit of about a third of an inch. To punctuate the disparity between the east and west, southeastern Oklahoma experienced its 20th wettest October on record and west central Oklahoma suffered through its 35th driest. The January-October period was the 31st wettest across the state with a statewide average of 33.65 inches, 1.82 inches above normal. Central Oklahoma stands out during that time frame with an average of 41.86 inches, 8.69 inches above normal to rank as the eighth wettest on record. Oklahoma City's January-October total of 50.55 inches is its second highest on record, dating back to 1891, after recording 3.42 inches during October. Oklahoma City's record total of 52.99 inches for January-October occurred in 2007.

October 2013 Statewide Extremes

Description	Extreme	Station	Day
High Temperature	96°F	Hollis	4
Low Temperature	25°F	Kenton, Boise City	18, 19
High Precipitation	7.15 in.	Wister	--
Low Precipitation	0.14 in.	Erick	--

Temperatures began the month on the hot side, but a series of cool fronts brought the statewide average back below normal by the end of the month. The month finished as the 38th coolest October on record with an average temperature of 60.5 degrees, nearly a degree below normal. The state's first freeze struck in the Panhandle on October 6. Kenton dropped to 27 degrees on that date, and Boise City and Goodwell also reached the freezing mark. By the end of the month, most of the northwestern half of the state had seen a freeze. The Mesonet's lowest recorded temperature for October was 25 degrees at Kenton on the 18th and then again at Boise City on the 19th. The highest temperature of 96 degrees was reported at Hollis on the fourth. The year was still on track to finish slightly below normal. The statewide average temperature for the January-October period was 62.5 degrees, 0.3 degrees below normal and the 50th coolest on record.

The percentage of the state impacted by drought dropped from 43 percent to 31 percent during October according to the U.S. Drought Monitor. Most of that reduction occurred across southeastern Oklahoma, as expected from their generous rainfall totals. Nearly 15 percent of the state remained in at least severe drought, with most of that showing up in the Panhandle and southwestern Oklahoma. Exceptional drought, the Drought Monitor's worst category, still covered most of Jackson and Tillman counties in far southwestern Oklahoma. At the end of October last year, virtually the entire state was mired in at least severe drought. At that point, Oklahoma was in the midst of its driest May-December on record.

October 2013 Statewide Statistics

Temperature

	Average	Depart.	Rank (1895-2013)
Month (October)	60.4°F	-0.9°F	37th Coolest
Season-to-Date (Sep-Oct)	67.9°F	1.2°F	39th Warmest
Year-to-Date (Jan-Oct)	62.5°F	-0.3°F	50th Coolest Warmest

Precipitation

	Average	Depart.	Rank (1895-2013)
Month (October)	3.13 in.	-0.25 in.	47th Wettest
Season-to-Date (Sep-Oct)	5.55 in.	-1.64 in.	50th Driest
Year-to-Date (Jan-Oct)	33.67 in.	1.82 in.	31st Wettest

OCTOBER 2013 DAILY SUMMARIES

OCTOBER 1-3: Maximum temperatures were above average throughout much of Oklahoma with highs in the low-mid 90s. The lowest maximum temperatures were in the upper 70s and low 80s in the far northwest and panhandle. Minimum

temperatures ranged from 69 in the southeast to 44 in the panhandle. Rainfall was negligible and winds were brisk. The highest daily average wind speeds were around 16mph on the 1st, 20mph on the 2nd, and 23mph on the 3rd.

OCTOBER 4-5: A strong cold front moved in from the northwest on the 4th and continued to push southeastward on the 5th. Ahead of the front, maximum temperatures were still reaching 96 in Hollis, 93 in Freedom, and the low 90s elsewhere. Behind the cold front, maximums were chilly in the low 70s on the 4th and low 60s on the 5th. The front not only brought cooler temperatures, but strong-severe thunderstorms as well. On the 4th, rainfall amounts of 1.92 inches and 1.77 inches occurred in Mangum and Retrop, respectively. The 5th saw even more precipitation with 2.25 inches in Cookson, 1.76 inches in Jay, and over half an inch in many other areas. Average wind speeds were brisk yet again, measuring 10-22mph on Friday and 5-20mph on Saturday. The highest gust observed was 58mph in Mangum.

OCTOBER 6-9: Recovering from a cold and wet visit from Mother Nature, temperatures started to gradually climb and the weather remained dry. The warmest maximum temperature increased from 81 in Hollis on the 6th to 87 in Grady on the 9th. The lowest maximum temperatures shifted from 63 to 75 in Westville. With clearer skies, minimums were still fairly cool, ranging from 27 in Kenton to 57 in Oklahoma City. Daily average wind speeds were less than 15mph on the 6th, less than 12mph on the 7th, and less than 20mph on the 8th and 9th.

OCTOBER 10-11: The highest temperatures in the state were 87 in Grady and 90 in Altus. The lowest maximums were 77 in Westville on the 10th and 71 in Kenton on the 11th. Minimum temperatures were between 50 in Boise City and 67 in Burneyville. Isolated precipitation visited the panhandle on Thursday, dropping .68 inches of rain in Beaver, .42 inches in Hooker, and .39 inches in Goodwell. Rainfall the following day was unsubstantial, with the highest amount measuring only .2 inches in Okmulgee. All other areas received less than one-tenth of an inch. A severe wind gust of 71mph was reported in Goodwell on the 10th around 8pm. On that same day, average wind speeds were fairly high with most of the northwest, panhandle, and west-central portions of the state measuring slightly less than 20mph. Most other regions had between 5 and 15mph wind speed averages.

OCTOBER 12-16: Another cold front moved through the state, decreasing temperatures and leaving behind significant amounts of precipitation. Durant and Burneyville managed to stay in the 90s before the front passed through on the 12th. Other parts of the state witnessed a drastic drop in maximums from 81 degrees on the 13th in Talihina to 66 degrees in Sallisaw by the 16th. Low maximums were in the low 60s on the 12th – 14th, and dropped to the low 50s and upper 40s on the 15th and 16th in the panhandle. The highest minimums were in the 60s and 50s, and the lowest minimums were in the 30s and low 40s. Kenton was the only Mesonet site to fall below freezing during this period, measuring 31 degrees on the 16th. About one-quarter of an inch to 1.93 inches (Talihina) fell in the eastern part of the state on Saturday and areas of isolated precipitation between one tenth of an inch and 1.97 inches (Talihina) fell in the southeast on Sunday. Showers became heavier and more wide-spread on Monday with most areas receiving over half an inch. Ardmore and Newport reported 2.83 and 2.56 inches on that day, respectively. Tuesday was similar with most areas receiving between one-quarter of an inch and 3 inches (Westville). Rains lightened just a tad by Wednesday, ranging from less than one-tenth of an inch to .41 inches at Mt. Herman. Average wind speeds were less than 18mph on the 12th and 14th, less than 12mph on the 13th and 16th, and less than 19mph on the 15th. The highest peak wind gusts during this period were 52mph in Ardmore (12th) and 50mph in Red Rock (15th).

OCTOBER 17: High maximum temperatures increased from 66 the day before to 74 in the southeast portion of the state. Low maximum temperatures were up as well at 63 degrees in Westville compared to the previous day's 48 degrees. Minimum temperatures ranged from 27 in Kenton to 45 in Idabel. A frost advisory was issued for the colder regions. Average wind speeds were light and less than 8mph.

OCTOBER 18-19: A cold front moved through the state, bringing showers and isolated storms to northwest, west, and the central one-third of Oklahoma. Lighter drizzle fell in the east. While most areas received less than one-third of an inch of rain, Waurika reported .67 inches. Remnants of rain occurred in the southeast on the 19th, but didn't accumulate much. The highest temperature in the state was 71 on both days, first in Newport and then in Alva. The lowest highs went from 46 in the panhandle and northwest on the 18th to 58 in the northeast and east-central part of OK on the 19th. Minimum temperatures ranged from the mid-20s to the 40s. Daily average wind speeds were 5-15mph on the 18th and 5-13mph on the 19th.

OCTOBER 20-21: A southeast moving cold front pushed through Oklahoma on the 20th. This produced almost a 10 degree difference in the warmest maximum temperatures with a decrease from 79 in Hollis on the 20th to 68 in Grady on the 21st. The lowest highs fell from 66 to 54 degrees. The range of low temperatures was between 29 (Kenton) and 50 (Fairview) as the front started to initially move through from the northwest, and between 34 (Kenton) and 48 (Mt. Herman) the following day. Rainfall throughout the state increased by the 21st with areas receiving less than one-tenth of an inch on Sunday and one-tenth of an inch to just over three quarters of an inch on Monday in the central and eastern portions of Oklahoma. Minco measured the highest amount of precipitation on both days at .28 inches and .81 inches. Daily average wind speeds were less than 15mph.

OCTOBER 22-25: Although the entire state remained dry throughout this period, maximum temperatures fluctuated quite a bit. With high temperatures pleasantly in the low-mid 80s on the 22nd and 23rd, a cold front migrated through on the 24th and dropped the warmest maximums into the low-mid 70s as it moved southeast. Following a similar trend, the lowest maximum temperatures in the state fell from the low-mid 60s on the 22nd and 23rd to the mid-50s on the 24th and 25th. Minimum temperatures averaged in the 30s and 40s with areas in the panhandle and northeast quadrant of the state slipping just below the freezing point. Average wind speeds were less than 12mph on the 22nd and 23rd, but picked up to a brisk 16mph in the panhandle on the 24th and 25th.

OCTOBER 26-27: A low pressure system moving into Oklahoma brought with it scattered showers and thunderstorms. Rainfall amounts ranged from one-tenth of an inch to 2.93 inches in Idabel and 2.94 inches in Antlers. Rains died down the following day with less than one-tenth of an inch still falling in the southeast. The highest temperature was 78 on both days, but the location of those highs shifted from the southwest and south-central areas of Oklahoma to the panhandle. The lowest maximum temperatures were 54 in Broken Bow and Antlers on the 26th and 61 in Hugo, Lane, and Cloudy on the 27th. Although the highest minimum temperatures were in the 50s on both days in the south, they dropped from the mid-30s in the panhandle on Saturday to the mid-20s in northwest and north-central OK on Sunday. Daily average wind speeds were generally less than 10mph; however, there were a few Mesonet stations in the northwest that had averages between 10mph and 14mph.

OCTOBER 28-29: Fog blanketed portions of southeast OK on the 28th, reducing visibility to less than half a mile in many areas. Low pressure and cloudy skies produced isolated showers in the panhandle and the northeast, capping high maximum temperatures at 79 where showers fell. Despite flooding and a hefty 2.34 inches of rain in Beaver, most areas received less than half an inch on the 28th. Before a cold front pushed through on the 29th, high temperatures managed to reach into the mid-80s. Low maximum temperatures, however, dropped from 64 in Lahoma to 60 in Goodwell, Beaver, and Hooker. Minimum temperatures were slightly warmer than the previous period, ranging from the mid-upper 30s to the mid-upper 60s. By the 29th, rainfall amounts died down a bit with many areas in the northeast still receiving two-tenths of an inch to .84 inches in Miami. Daily average wind speeds were a gusty 5-18mph. A severe gust of 70mph was measured in Beaver on Tuesday.

OCTOBER 30-31: Showers and thunderstorms passed over central and southern Oklahoma and then into eastern Oklahoma on the 30th. Severe flooding was reported by the National Weather Service in Peggs, OK with the town receiving over 4 inches of rain. According to the Mesonet, Porter measured 3.95 inches that same day. For the most part, rainfall amounts were generally between one-third of an inch and two inches. Halloween was also fairly wet with many areas accumulating anywhere between one-quarter of an inch to .81 inches (Foraker) of precipitation. The warmest temperature on the 30th was 82 degrees in Altus and 77 degrees in Broken Bow, Wister, and Idabel on the 31st. The coolest maximum temperature was 66 in Beaver (30th) and 61 in Boise City

OCTOBER 2013 SEVERE WEATHER

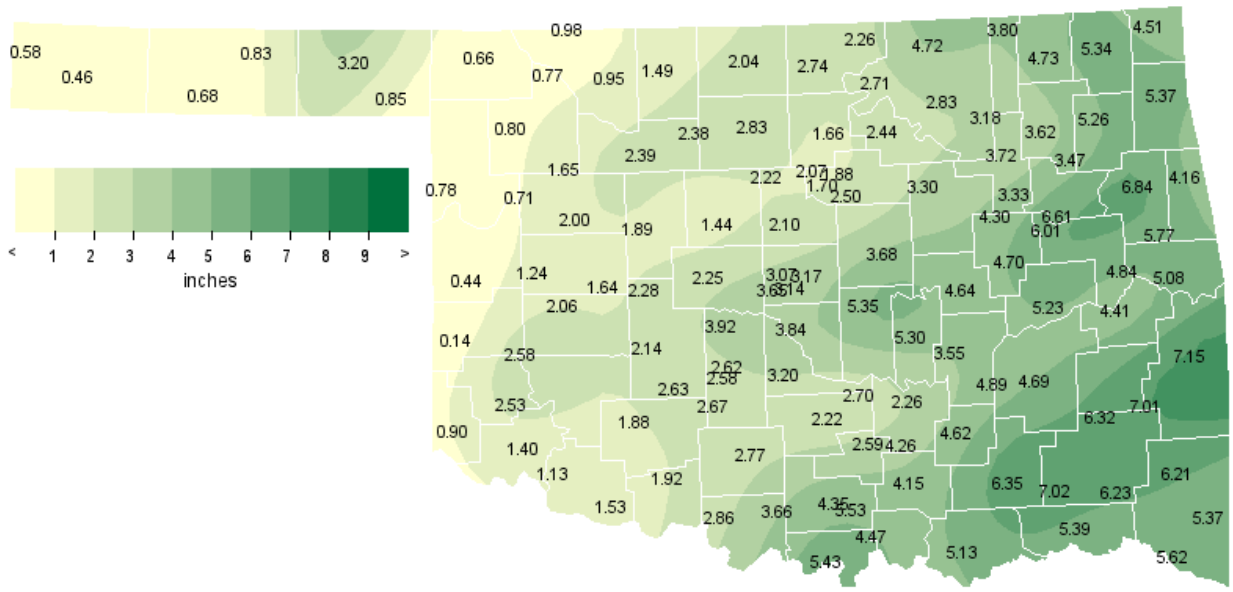
Wind Gusts (70 mph or greater)

Speed (m.p.h)	Location	County	Day
71	2 E Goodwell	Texas	10
70	9 W Knowles	Beaver	29

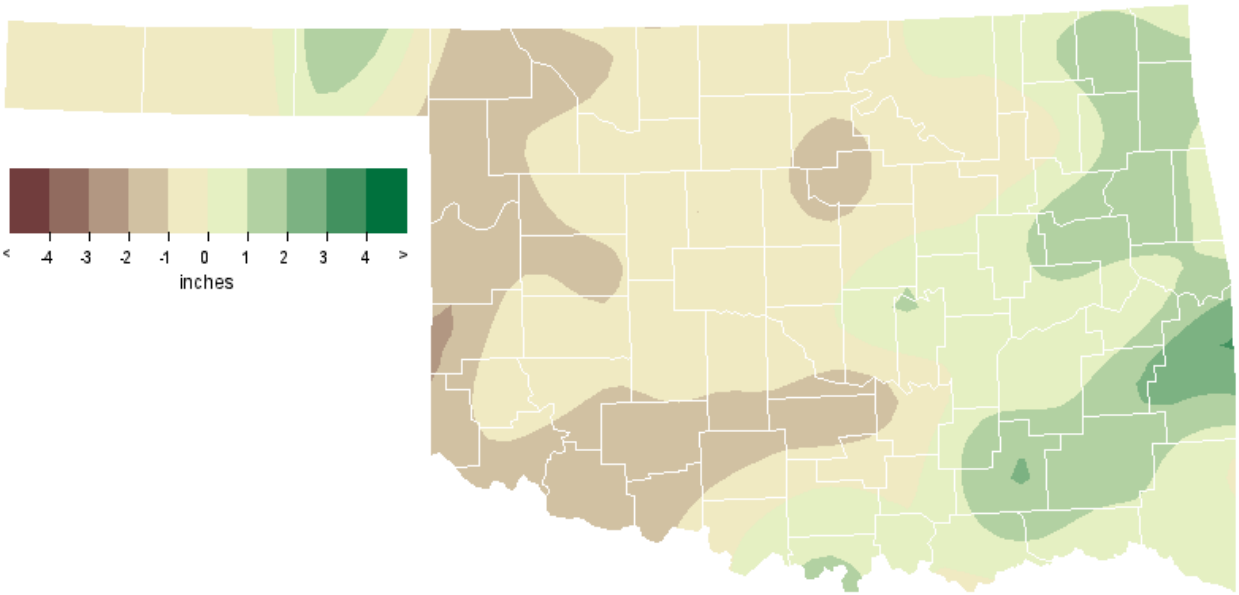
Flooding

Location	County	Day
Beaver	Beaver	28
2 S Peggs	Cherokee	30

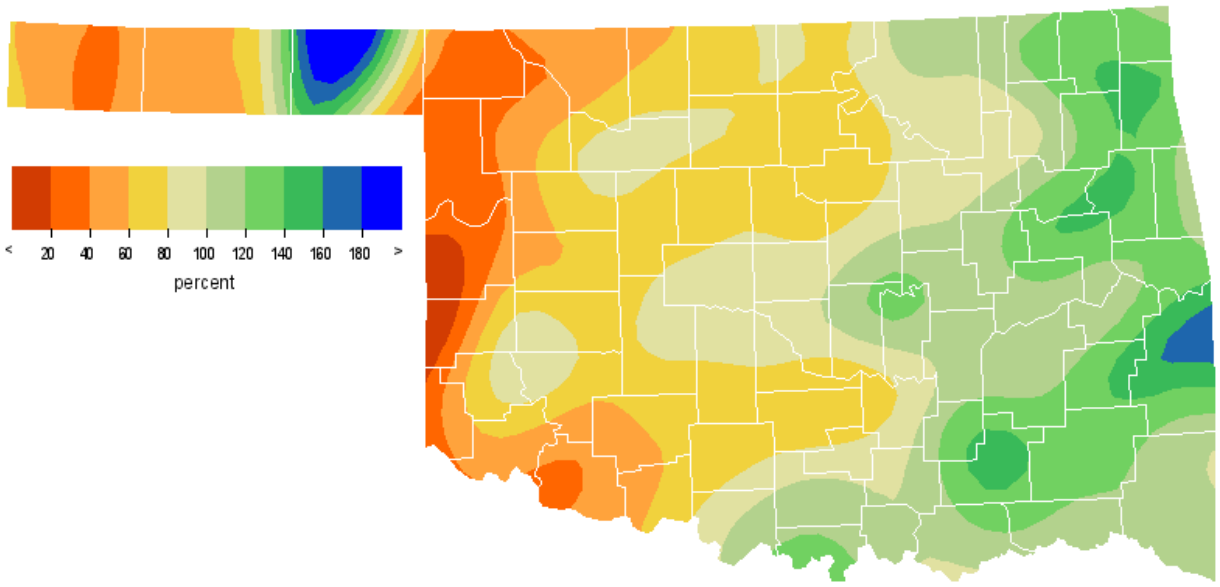
OCTOBER 2013 OBSERVED PRECIPITATION



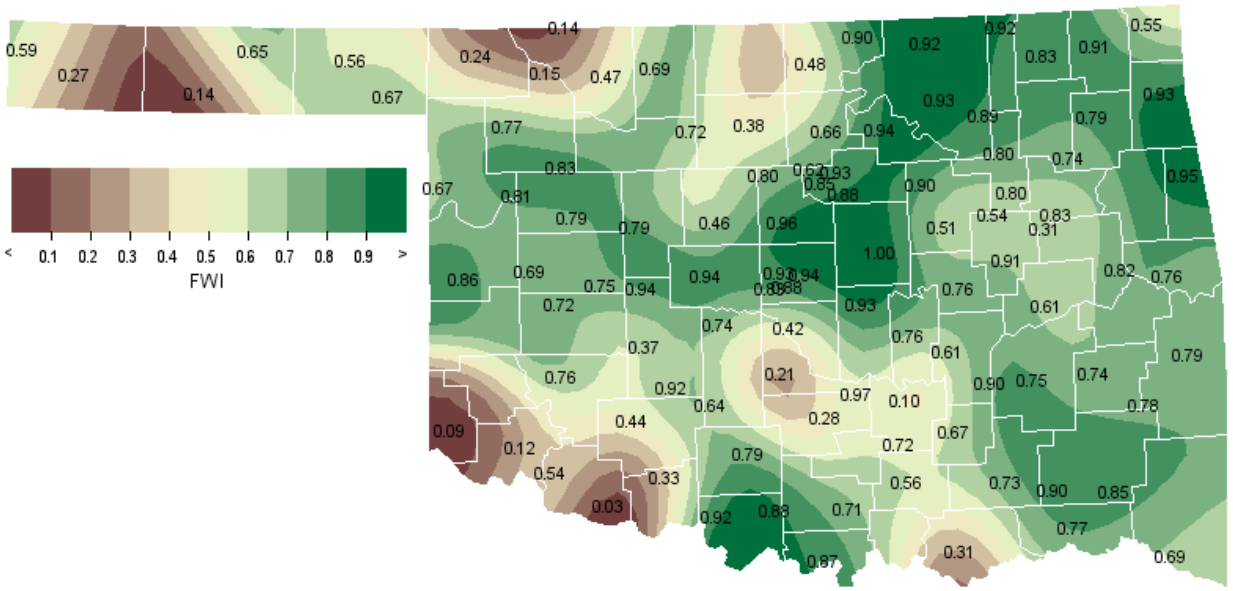
OCTOBER 2013 DEPARTURE FROM NORMAL PRECIPITATION



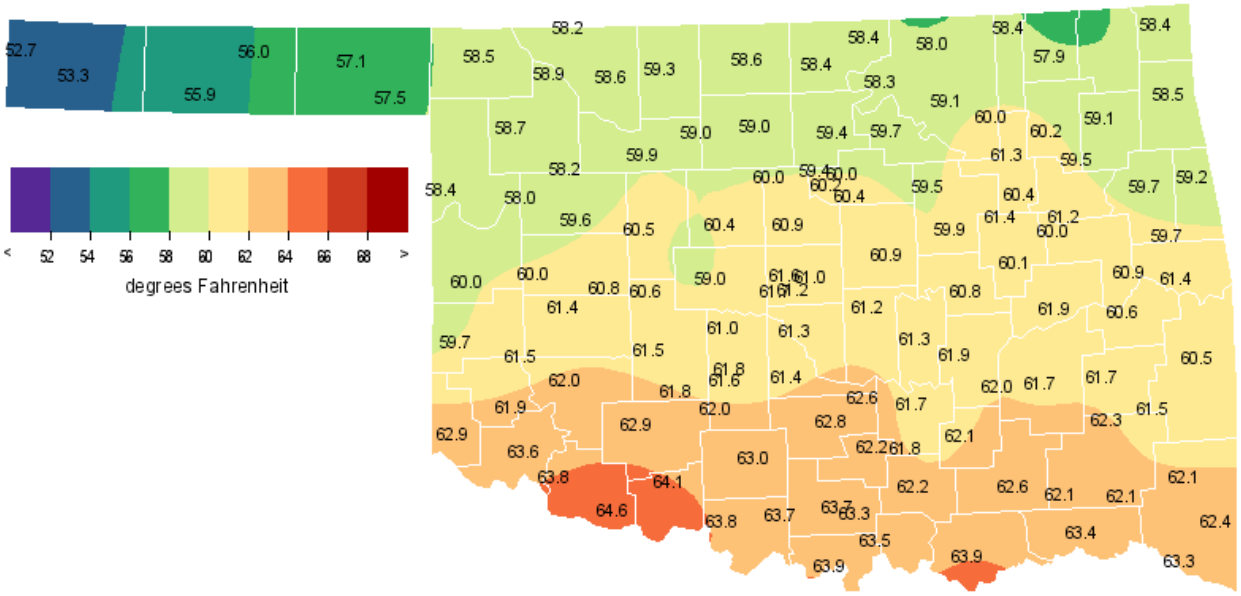
OCTOBER 2013 PERCENT OF NORMAL PRECIPITATION



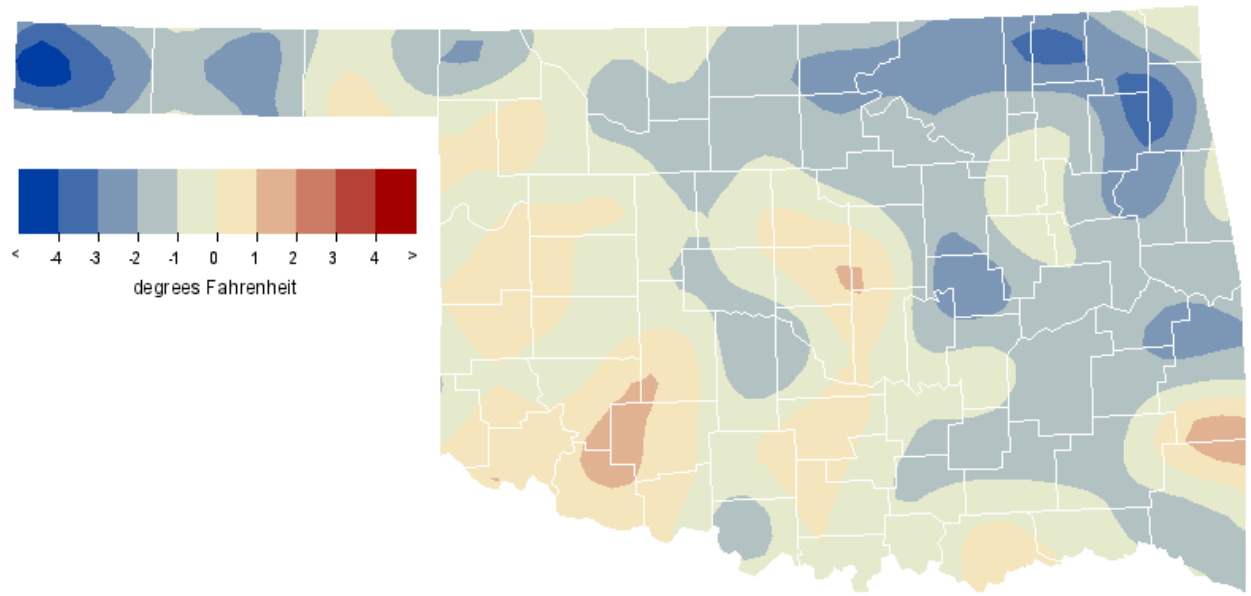
OCTOBER 2013 AVERAGE SOIL MOISTURE AT 25CM



OCTOBER 2013 AVERAGE TEMPERATURE



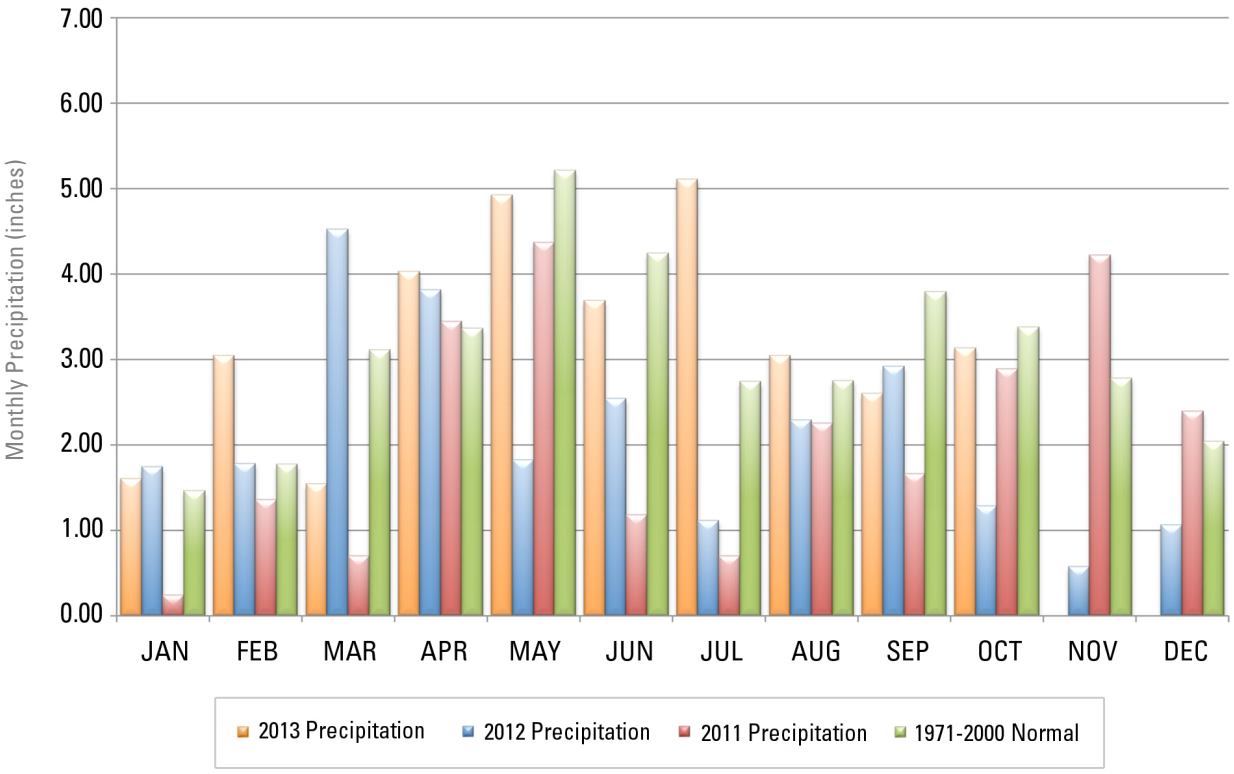
OCTOBER 2013 DEPARTURE FROM NORMAL TEMPERATURE



MESONET MONTHLY SUMMARY FOR OCTOBER 2013

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
PANHANDLE										
Arnett	58.3	89	4	27	27	243	36	.78	.35	18
Beaver	57.1	92	3	27	27	283	37	3.20	2.34	28
Boise City	53.3	86	2	25	19	365	2	.46	.32	31
Buffalo	58.5	91	3	28	27	253	51	.66	.50	18
Goodwell	55.9	91	2	29	19	300	18	.68	.39	10
Hooker	56.0	91	3	30	19	301	21	.83	.42	10
Kenton	52.7	84	2	25	18	383	2	.58	.29	31
Slapout	57.5	90	3	30	27	260	29	.85	.45	18
NORTH CENTRAL										
Alva	58.6	91	4	29	27	248	50	.95	.21	4
Blackwell	58.4	89	3	29	27	261	55	2.74	.78	31
Breckinridge	59.0	90	3	29	19	243	58	2.83	.83	30
Cherokee	59.3	90	4	30	27	228	53	1.49	.52	4
Fairview	59.9	90	4	32	19	210	51	2.39	.82	30
Freedom	58.9	93	4	27	27	238	48	.77	.33	14
Lahoma	59.1	90	3	32	19	236	52	2.38	.99	4
May Ranch	58.2	89	4	33	18	246	34	.98	.57	18
Medford	58.6	89	3	29	27	246	47	2.04	.97	4
Newkirk	58.4	88	3	31	19	252	47	2.26	.64	14
Red Rock	59.4	89	3	30	19	237	62	1.66	.69	4
Seiling	58.2	89	4	26	27	253	41	1.65	.67	4
Woodward	58.7	89	4	31	18	236	42	.80	.35	30
NORTHEAST										
Bixby	60.4	88	4	33	19	209	65	3.33	1.45	30
Burbank	58.3	88	3	30	19	260	52	2.71	.73	4
Claremore	60.2	86	4	32	19	212	63	3.62	1.00	14
Copan	58.4	87	4	31	19	257	53	3.80	1.00	14
Foraker	57.9	88	3	31	19	267	47	4.72	1.08	30
Inola	59.5	88	4	31	25	231	59	3.47	1.04	30
Jay	58.5	85	4	33	24	250	48	5.37	1.76	5
Miami	58.3	86	4	30	25	255	49	4.51	.92	12
Nowata	57.9	87	4	28	25	270	50	4.73	1.03	12
Pawnee	59.7	90	3	31	19	226	63	2.44	.67	4
Porter	61.1	88	4	33	19	192	72	6.61	3.95	30
Pryor	59.0	87	4	30	25	240	55	5.26	1.54	5
Skiatook	60.0	86	3	32	19	212	58	3.18	1.04	14
Vinita	*****	***	***	***	***	****	****	5.34	1.51	12
Wynona	59.1	88	3	31	19	241	58	2.83	.80	14
WEST CENTRAL										
Bessie	61.4	89	3	33	19	177	66	2.06	.75	14
Butler	60.1	90	4	30	27	213	60	1.24	.61	4
Camargo	58.1	88	4	28	17	252	37	.71	.30	30
Cheyenne	60.0	88	4	32	18	206	50	.44	.21	18
Erick	59.7	92	4	30	18	217	54	.14	.07	14
Putnam	59.6	89	4	31	18	222	54	2.00	1.02	4
Retrop	61.6	90	3	33	18	175	70	2.58	1.77	4
Watonga	60.5	88	4	32	19	206	67	1.89	1.00	4
Weatherford	60.8	89	3	31	19	197	66	1.64	.39	4
CENTRAL										
Acme	62.0	90	3	31	19	177	83	2.67	.88	14
Bowlegs	61.3	89	3	32	19	193	79	5.30	1.49	14
Bristow	60.0	89	3	30	25	223	67	*****	*****	***
Lake Carl Blac	59.4	90	3	30	25	240	66	2.07	1.05	4
Chandler	60.9	89	3	31	19	197	69	3.68	1.45	30
Chickasha	61.8	92	3	33	19	182	82	2.62	1.00	14
El Reno	59.0	88	3	30	25	242	57	2.25	.99	14
Guthrie	60.8	89	3	32	19	205	74	2.10	.94	4
Kingfisher	60.4	90	3	31	19	216	75	1.44	.71	4
Marena	60.2	90	3	32	19	216	67	1.70	.77	4
Minco	61.0	89	3	32	19	188	65	3.92	1.03	14
Marshall	60.0	89	3	31	19	226	70	2.22	1.18	4
Ninnekah	61.6	91	3	31	19	185	80	2.58	.79	14
Norman	61.4	89	3	33	19	188	76	3.84	.81	15
Oilton	59.4	89	3	29	25	235	62	3.30	1.28	5
OKC East	61.2	89	3	33	19	194	76	3.14	1.51	14
OKC North	61.6	89	3	34	19	182	76	3.07	1.71	14
OKC West	61.7	89	3	35	19	180	76	3.65	1.82	14
Okemah	60.8	89	3	32	19	205	74	4.64	1.17	14
Perkins	60.4	90	3	32	19	212	69	2.50	.72	14
Shawnee	61.2	89	3	33	19	194	76	5.35	2.44	30
Spencer	61.0	88	3	32	19	194	71	3.17	1.06	14
Stillwater	59.9	90	3	30	19	225	68	1.88	.73	4
Washington	61.5	90	3	32	19	183	73	3.20	.85	14
EAST CENTRAL										
Cookson	59.8	86	1	32	25	222	59	5.77	2.25	5
Eufaula	61.9	87	1	36	19	173	78	5.23	1.15	14
Haskell	60.1	88	4	32	19	213	63	6.01	2.91	30
Hectorville	61.3	88	3	33	19	187	73	4.30	2.54	30
Holdenville	61.9	89	3	32	19	180	83	3.55	1.19	15
McAlester	61.7	88	3	34	22	188	84	4.69	1.53	14
Okmulgee	60.1	88	4	33	19	214	63	4.70	1.42	30
Sallisaw	61.4	88	1	35	25	189	77	5.08	1.40	15
Stigler	60.6	87	1	34	22	203	66	4.41	1.42	15
Stuart	62.1	88	4	35	19	173	83	4.89	1.43	5
Tahlequah	59.6	86	1	35	22	221	56	6.84	1.97	13
Webbers Falls	60.9	86	1	36	22	197	71	4.84	1.61	5
Westville	59.1	84	1	35	22	232	51	4.16	1.07	5
SOUTHWEST										
Altus	63.6	93	3	32	19	140	98	1.40	.91	30
Apache	61.8	90	3	33	19	173	74	2.63	1.02	5
Fort Cobb	61.6	90	3	32	19	179	73	2.14	.88	4
Grandfield	64.7	94	3	35	19	122	113	1.53	.39	15
Hinton	60.6	90	3	33	19	203	66	2.28	1.10	14
Hobart	62.0	90	3	33	19	173	80	*****	*****	***
Hollis	62.9	96	4	31	19	152	87	.90	.68	13
Mangum	62.0	92	3	30	19	173	79	2.53	1.92	4
Medicine Park	62.9	89	3	37	19	142	77	1.88	.63	30
Tipton	63.7	92	3	33	19	134	96	1.13	.55	30
Walters	*****	***	***	***	***	****	****	*****	*****	***
SOUTH CENTRAL										
Ada	61.7	90	3	32	19	185	83	2.26	.90	14
Ardmore	63.4	90	3	36	19	142	91	5.53	2.83	14
Burneyville	63.9	91	3	34	19	142	109	5.43	2.22	14
Byars	62.5	89	3	32	19	163	87	2.70	1.16	14
Centrahoma	62.2	89	4	33	19	180	92	4.62	1.25	14
Durant	63.8	91	12	37	22	137	101	5.13	2.37	26
Fittstown	61.8	88	3	33	19	175	76	4.26	1.81	14
Ketchum Ranch	63.0	91	3	33	19	153	90	2.77	1.73	14
Lane	62.6	89	4	37	22	166	91	6.35	1.99	26
Madill	63.5	90	3	33	19	149	104	4.47	1.68	14
Newport	63.7	91	3	34	19	137	95	4.35	2.56	14
Pauls Valley	62.8	90	3	34	19	162	93	2.22	.93	14
Ringling	63.7	90	3	34	19	140	100	3.66	1.63	14
Sulphur	62.3	89	3	33	19	175	90	2.59	.95	14
Tishomingo	62.2	89	3	33	19	170	84	4.15	1.15	14
Vanoss	*****	***	***	***	***	****	****	*****	*****	***
Waurika	63.8	92	3	34	19	137	100	2.86	1.05	14
SOUTHEAST										
Antlers	62.1	87	3	36	20	174	85	7.02	2.94	26
Antlers	*****	***	***	***	***	****	****	*****	*****	***
Broken Bow	62.3	88	4	34	20	158	75	5.37	1.93	26
Clayton	62.3	87	2	36	25	173	89	6.32	1.52	15
Cloudy	62.0	86	4	35	20	169	77	6.23	2.60	26
Hugo	63.4	87	3	39	20	135	86	5.39	1.82	26
Idabel	63.3	87	4	36	20	138	85	5.62	2.93	26
Mt Herman	62.1	85	4	37	22	164	75	6.21	2.27	15
Talihina	61.5	86	4	34	20	190	81	7.01	1.93	12
Wilburton	61.7	87	4	34	22	185	82	5.27	1.19	5
Wister	60.6	88	4	34	22	202	65	7.15	3.00	15

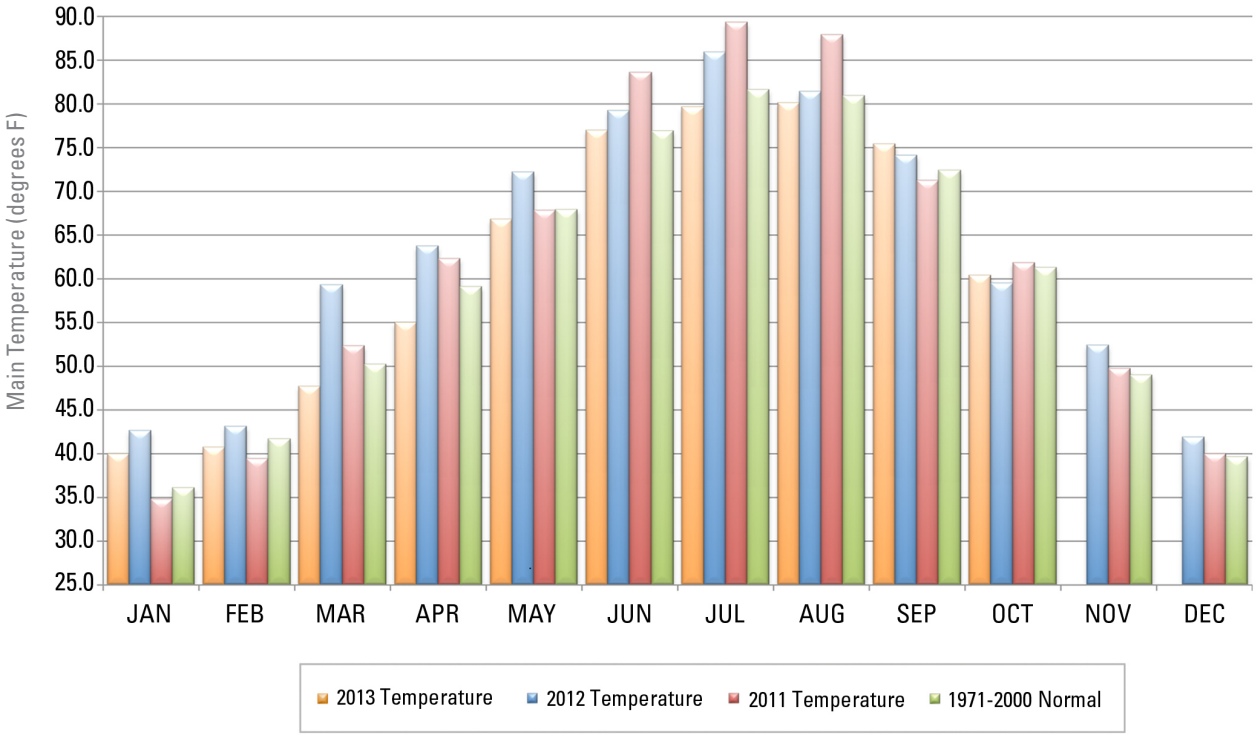
2011, 2012 AND 2013 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL



October 2013 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Oct-12
Panhandle	1.00	-0.51	52nd Driest	6.41 (2000)	0.03 (1952)	0.57
North Central	1.76	-0.90	48th Driest	9.65 (1998)	0.00 (1952)	0.39
Northeast	4.13	0.50	42nd Wettest	17.33 (1941)	0.05 (1917)	2.53
West Central	1.41	-1.15	35th Driest	9.41 (1986)	0.00 (1910)	0.18
Central	3.02	-0.64	49th Wettest	13.51 (1941)	0.00 (1917)	1.05
East Central	4.96	0.69	34th Wettest	14.75 (1941)	0.19 (1904)	1.07
Southwest	1.83	-1.15	42nd Driest	11.44 (1983)	0.00 (1952)	0.37
South Central	3.96	-0.29	47th Wettest	14.61 (1981)	0.00 (1917)	1.31
Southeast	6.26	1.30	20th Wettest	13.21 (2009)	0.10 (1921)	2.00
Statewide	3.13	-0.25	47th Wettest	11.32 (1941)	0.14 (1952)	1.08

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



October 2013 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Oct-12 (F)
Panhandle	56.2	-1.6	27th Coolest	66.4 (1963)	50.9 (1925)	57.1
North Central	58.8	-1.6	28th Coolest	69.6 (1963)	52.1 (1925)	58.9
Northeast	59.2	-1.5	30th Coolest	70.0 (1963)	52.9 (1925)	59.1
West Central	60.2	-0.3	46th Coolest	69.0 (1963)	53.2 (2009)	59.3
Central	60.8	-1.1	37th Coolest	70.3 (1963)	54.5 (1925)	60.1
East Central	60.8	-1.3	33rd Coolest	71.2 (1963)	55.3 (2009)	60.3
Southwest	62.7	0.2	59th Coolest	70.5 (1963)	55.4 (1925)	61.3
South Central	62.9	-0.6	46th Coolest	71.5 (1963)	56.4 (1976)	61.5
Southeast	62.1	-0.3	47th Coolest	70.6 (1963)	55.7 (1976)	60.7
Statewide	60.4	-0.9	37th Coolest	69.9 (1963)	54.4 (1925)	59.8

MESONET EXTREMES FOR OCTOBER 2013

Climate Division	High Temp (F)	Day	Station	Low Temp (F)	Day	Station	High Monthly Rainfall (inches)	Station	High Daily Rainfall (inches)	Day	Station
Panhandle	92	3rd	Beaver	25	18th	Kenton	3.20	Beaver	2.34	28th	Beaver
North Central	93	4th	Freedom	26	27th	Seiling	2.83	Breckinridge	0.99	4th	Lahoma
Northeast	90	3rd	Pawnee	28	25th	Nowata	6.61	Porter	3.95	30th	Porter
West Central	92	4th	Erick	28	17th	Camargo	2.58	Retrop	1.77	4th	Retrop
Central	92	3rd	Chickasha	29	25th	Oilton	5.35	Shawnee	2.44	30th	Shawnee
East Central	89	3rd	Holdenville	32	25th	Cookson	6.84	Tahlequah	2.91	30th	Haskell
Southwest	96	4th	Hollis	30	19th	Mangum	2.63	Apache	1.92	4th	Mangum
South Central	92	3rd	Waurika	32	19th	Ada	6.35	Lane	2.83	14th	Ardmore
Southeast	88	4th	Wister	34	20th	Talihina	7.15	Wister	3.00	15th	Wister
Statewide	96	4th	Hollis	25	18th	Kenton	7.15	Wister	3.95	30th	Porter

NOVEMBER OUTLOOK

Oklahoma's weather descends rather rapidly during November from the pleasantry of autumn into the chill of early winter. The state's normal temperature (averaged statewide) during the month, 49.0 degrees Fahrenheit, is the 4th lowest of any of the year's 12 months. Based on monthly averages across the state, November is 13 degrees cooler than October, easily Oklahoma's largest temperature difference between consecutive months. The increasingly frequent intrusions of cooler (and sometimes frigid) air, frequently accompanied by some dreary, dismal weather, are usually separated by interludes of gorgeous autumn days. The pleasant interludes provide farmers with an opportunity to complete the harvest of peanuts, cotton, and sorghum, or to finish drilling the new wheat crop. The statewide-averaged November normal precipitation is 2.78 inches, making November the 6th wettest of the months in Oklahoma. Snow, sleet, and ice are frequent late-November visitors to the state, too often creating travel hazards during the long Thanksgiving weekend.

Temperature

Mean	49.0 degrees
Warmest November	1989, 56.2 degrees
Coolest November	1929, 42.6 degrees
Warmest location	Waurika, 53.4 degrees
Coolest location	Turpin, 42.8 degrees
Hottest recorded	95 degrees, Waukomis, November 1, 1914. Coalgate, November 1, 1937
Coldest recorded	-15 degrees, Kenton, November 28, 1976

Statewide-averaged monthly temperature extremes for the Novembers since 1892 have varied between 56.0 degrees in 1999 and 41.3 degrees in 1929. The range of normal daily average temperatures across the state, as published by the National Climatic Data Center, is from 53.4 degrees at Waurika to 42.8 degrees at Turpin. Normal daily maximum temperatures fall between Waurika's 65.3 degrees and Newkirk's 56.6 degrees. Normal daily minimum temperatures range from 42.9 degrees at Okemah to 28.4 degrees at three panhandle reporting stations (Turpin, Boise City, and Beaver). Hot weather is rare, but not absent, during the month. Coalgate set a state record for November's highest temperature when the thermometer registered 95 degrees on November 1, 1937. November's coldest day, according to the Oklahoma record book, occurred on November 28, 1976 when a temperature of 15 degrees below zero (-15) was reported at Kenton.

Precipitation

Mean	2.78 inches
Wettest November	1909, 5.72 inches
Driest November	1910, 0.12 inches
Wettest location	Carnasaw Fire Tower, 5.64 inches
Driest location	Goodwell and Regnier, 0.61 inches
Most recorded	17.01 inches, Idabel, 2000

Tornadoes

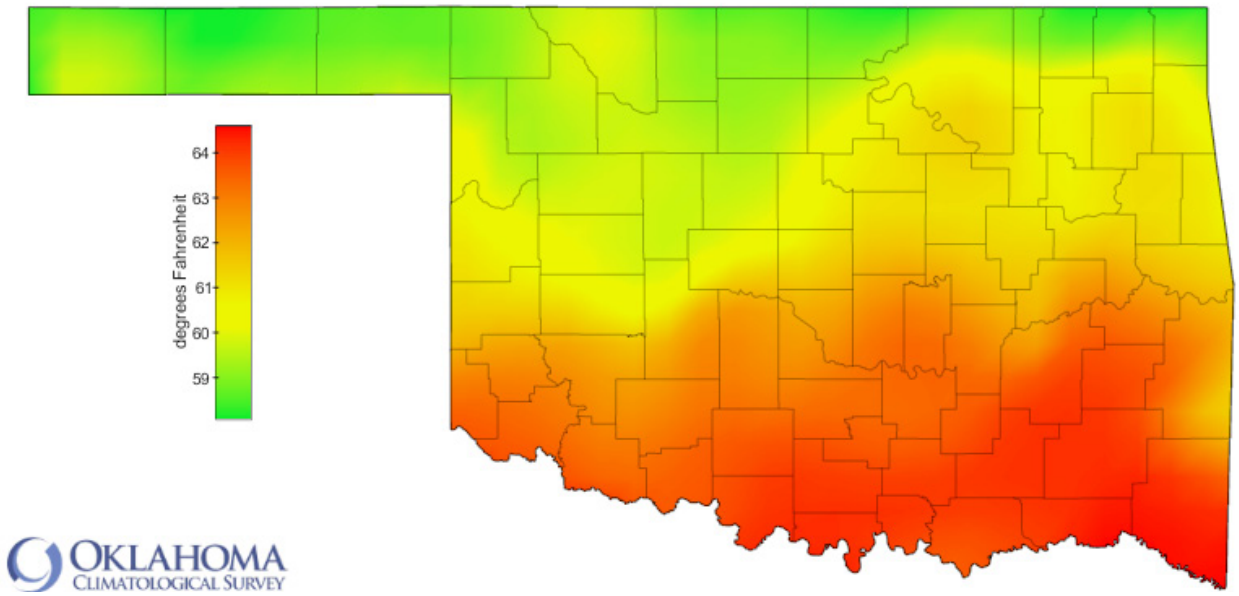
Average September Tornadoes	1.5
Most	12 (1958)

November precipitation is highly variable from year-to-year. The state's driest recorded November, a statewide averaged precipitation of 0.12 inches was attained three times in 1910, 1949, and 1989. The record high precipitation for November is 5.72 inches in 1909. During much of the state's history, November was thought of as a much drier month than it is today. During the period from 1931 through 1960, the statewide-averaged precipitation during November across Oklahoma was only 1.87 inches, nearly a full inch less than the currently established monthly normal (compiled from 1971 through 2000). Annual precipitation across Oklahoma compiled from the earlier was a full 3.25 inches less than the value currently in use. Increased precipitation during November has contributed more to the recent increases in annual precipitation than any other month. At individual locations within Oklahoma, November normal precipitation ranges 5.64 inches at the Carnasaw Fire Tower in McCurtain County to 0.61 inch at the panhandle's Goodwell and Regnier. Stilwell averages 9.6 days with measurable precipitation (at least 0.01 inch), whereas Leedey averages a mere 2.4 such

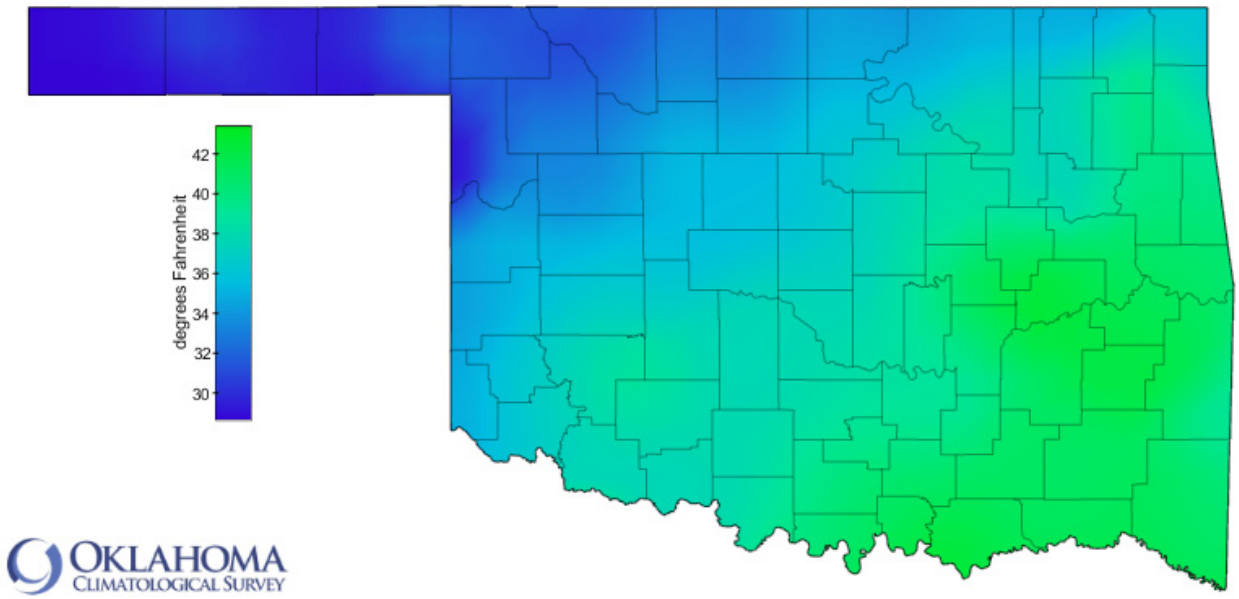
days. Ponca City holds the record for most precipitation in one day at a recognized reporting site during November: 11.11 inches on November 20, 1979. Idabel recorded 17.01 inches of precipitation during November 2000 to establish the record for total precipitation during the month at a regular reporting station.

Severe and dangerous weather takes on a myriad of forms during November. There were 76 November tornadoes reported in the state from 1950 through 2003. Twelve of those were recorded on November 17, 1958 to establish the state record for most November tornadoes, both during a month and on a day. A tornado that struck Camel Creek School and the town of Bethany on November 19, 1930 killed 23 people. On November 4, 1922, a tornado between Shamrock and Drumright resulted in 11 deaths. The most recent November tornado fatalities occurred on November 19, 1973 when five people were killed in Blanchard. There were no tornadoes reported within the state during 32 of those 54 Novembers.

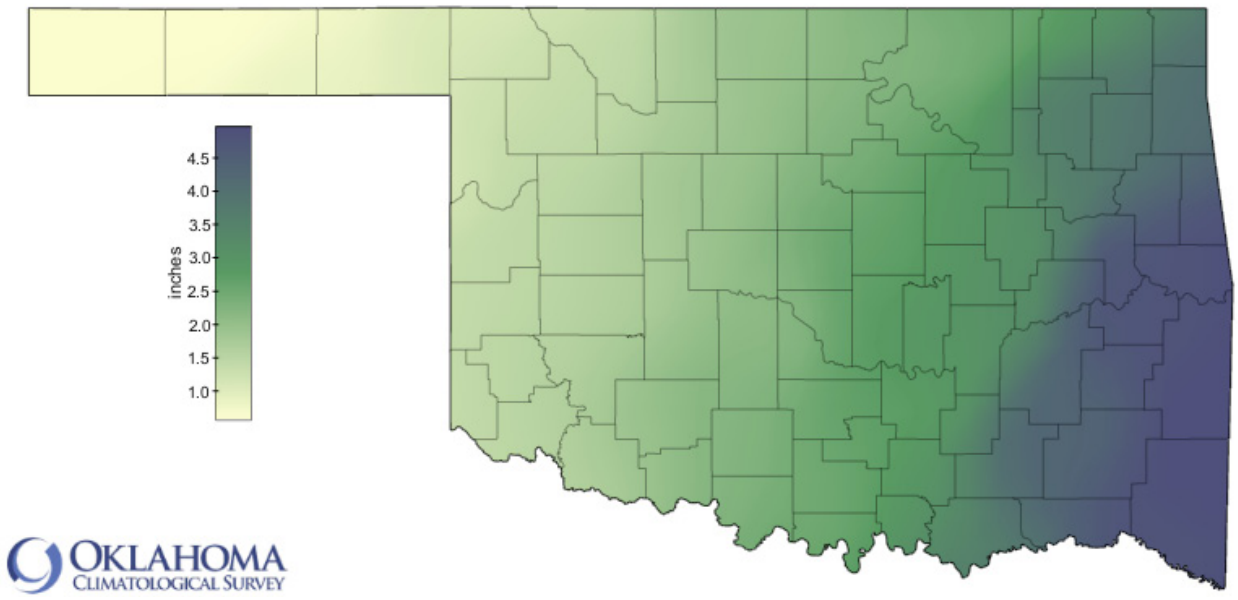
NOVEMBER NORMAL DAILY MAXIMUM TEMPERATURE (1981-2010)



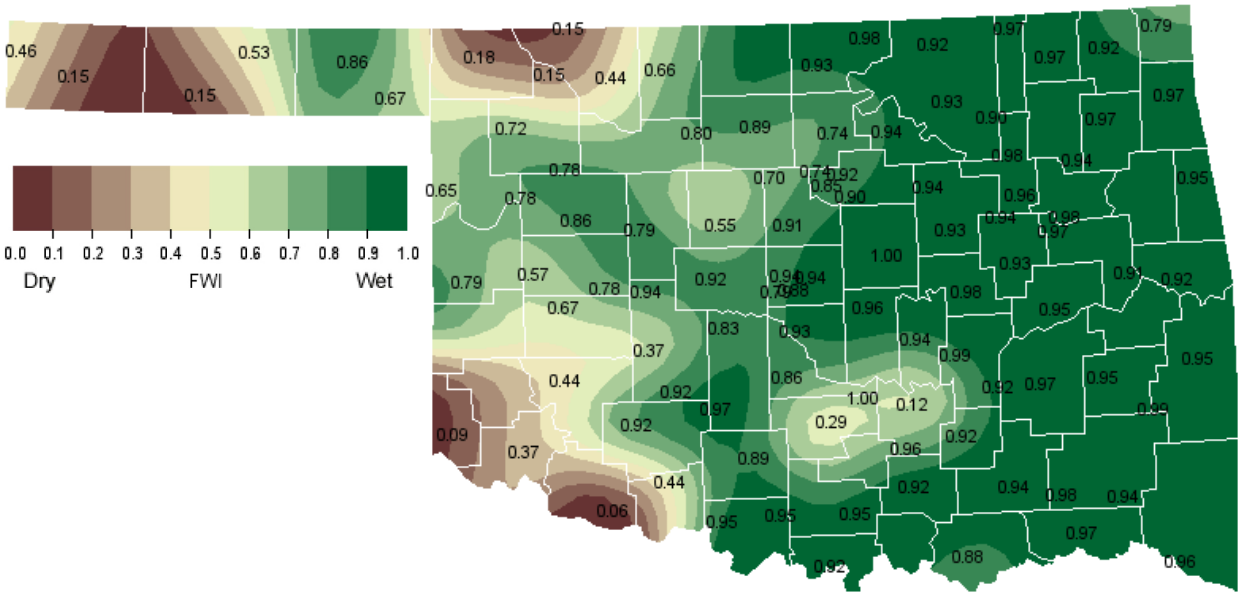
NOVEMBER NORMAL DAILY MINIMUM TEMPERATURE (1981-2010)



NOVEMBER NORMAL PRECIPITATION (1981-2010)

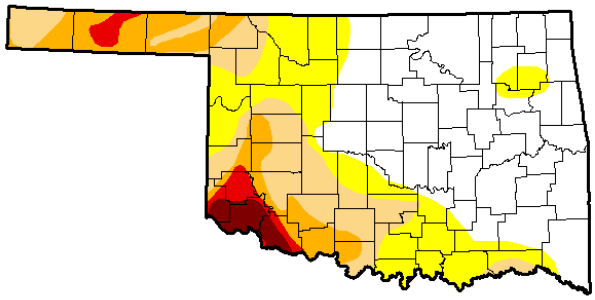


NOVEMBER 1, 2013 SOIL MOISTURE CONDITIONS AT 25CM



NOVEMBER 2013 DROUGHT INDICES

U.S. Drought Monitor
Oklahoma



November 5, 2013
(Released Thursday, Nov. 7, 2013)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	47.85	52.15	30.50	14.58	4.48	2.08
Last Week 10/29/2013	47.79	52.21	30.50	14.58	4.42	1.47
3 Months Ago 8/6/2013	45.72	54.28	37.94	32.04	21.91	4.47
Start of Calendar Year 1/1/2013	0.00	100.00	100.00	100.00	94.89	37.06
Start of Water Year 10/1/2013	21.74	78.26	43.00	17.62	4.42	1.45
One Year Ago 11/6/2012	0.00	100.00	100.00	99.96	75.74	31.90

Intensity:

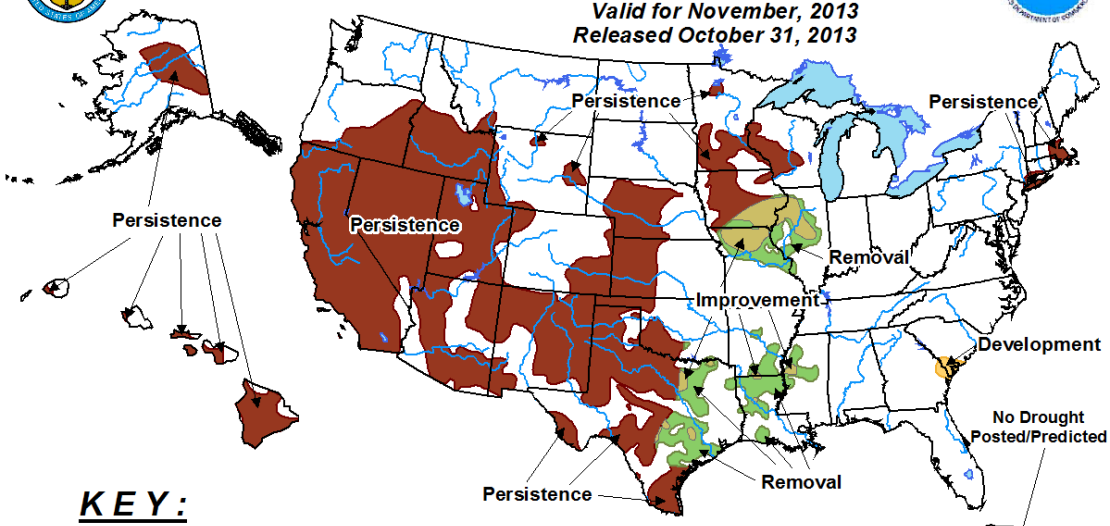
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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

Author:
David Simeral
Western Regional Climate Center

http://droughtmonitor.unl.edu/

U.S. Monthly Drought Outlook
Drought Tendency During the Valid Period
Valid for November, 2013
Released October 31, 2013



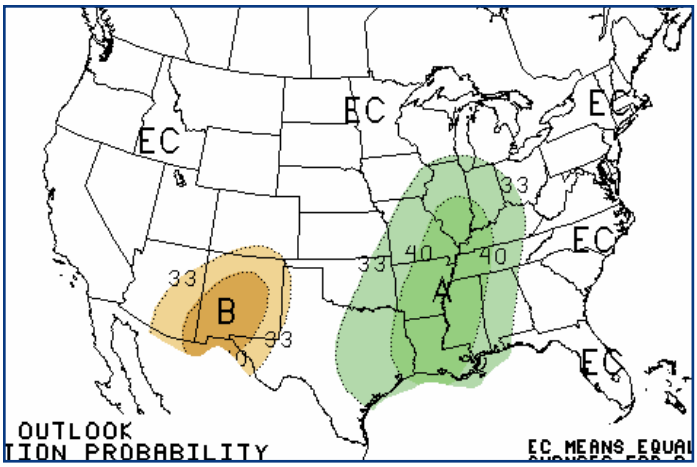
KEY:

- **Drought persists or intensifies**
- **Drought remains but improves**
- **Drought removal likely**
- **Drought development likely**

Author: Adam Allgood, Climate Prediction Center, NOAA
http://www.cpc.ncep.noaa.gov/products/expert_assessment/mdo_summary.html

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 tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period although drought will remain. The green areas imply drought removal by the end of the period (D0 or none)

NOVEMBER 2013 U.S. PRECIPITATION FORECAST



Percent Likelihood of Above or Below Average Precipitation*

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

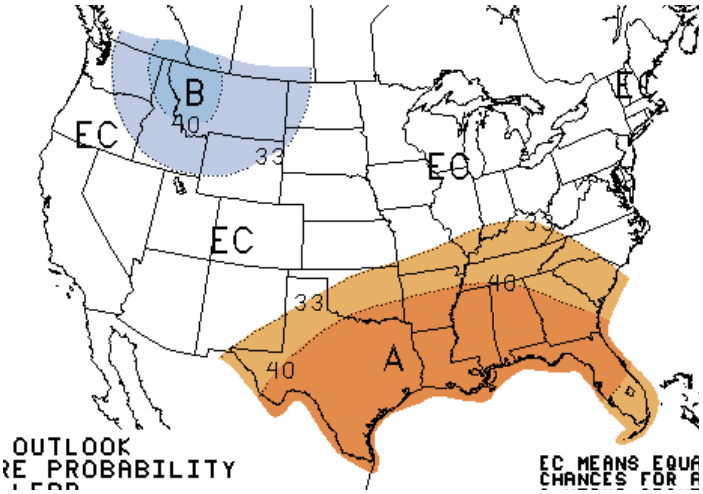
A = Above

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

B = Below

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

NOVEMBER 2013 U.S. TEMPERATURE FORECAST



Percent Likelihood of Above or Below Average Temperatures*

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

A = Above

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

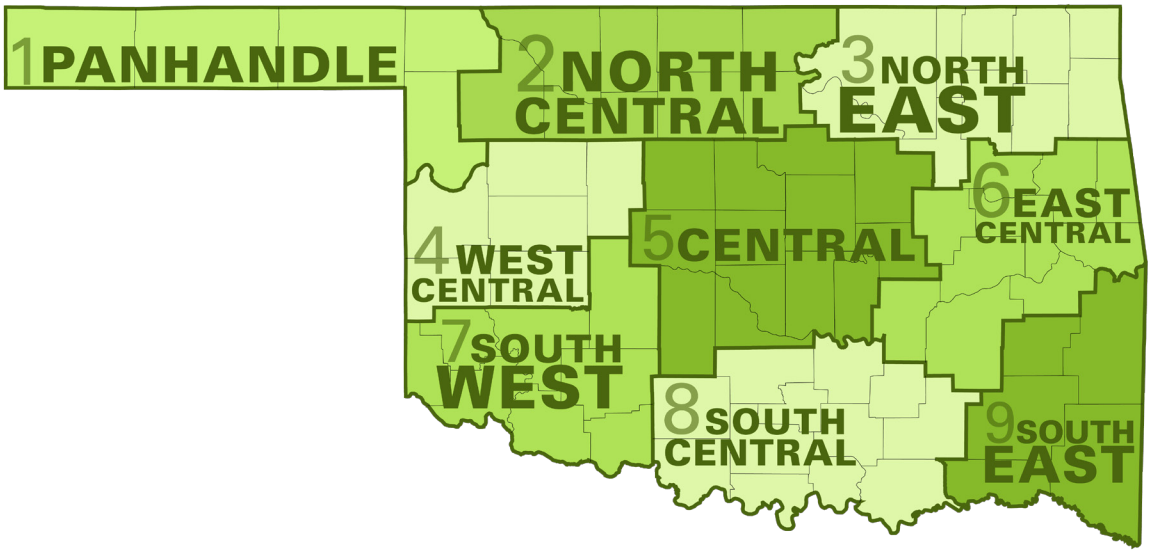
B = Below

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

NOVEMBER CLIMATE NORMALS

Climate Division	Max. Temperature (°F)	Min. Temperature (°F)	Avg. Temperature (°F)	Precipitation (inches)
1.0	58.8	30.2	44.6	1.0
2.0	58.1	33.4	45.8	2.1
3.0	60.0	37.5	48.8	3.6
4.0	59.0	34.3	46.7	1.7
5.0	60.3	37.2	48.8	2.7
6.0	60.9	39.0	50.0	4.2
7.0	61.7	36.3	49.0	1.7
8.0	62.7	39.2	51.0	3.1
9.0	63.0	39.0	51.0	5.0
Statewide	60.5	36.4	48.5	2.9

Oklahoma Climate Divisions



INTERPRETATION INFORMATION

MEAN DAILY TEMPERATURE: Calculated from an average of the daily maximum and minimum temperatures. Daily averages are summed for each day, and then divided by the number of valid data points – typically the number of days in the month. Although this June 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 June result in an artificially high or low value.

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

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

ADDITIONAL RESOURCES

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

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

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

Dr. Kevin Kloesel Director
Dr. Renee McPherson State Climatologist

EDITOR
Gary D. McManus Associate State Climatologist

CONTRIBUTORS
Gary D. McManus Associate State Climatologist
Dr. Mark A. Shafer Director of Climate Services
Howard Johnson Associate State Climatologist (Ret.)
Monica Deming Service Climatologist

DESIGN
Ada Shih Graphic Designer
Nicholas Richardson Graphic Designer

For more information, contact:
Oklahoma Climatological Survey
The University of Oklahoma
120 David L. Boren Blvd., Suite 2900
Norman, OK 73072-7305

TEL: 405-325-2541
FAX: 405-325-2550
E-MAIL: ocs@ou.edu
WEBSITE: http://climate.ok.gov