Oklahoma Monthly Climate Summary

APRIL 2014

OKLAHOMA CLIMATOLOGICAL SURVEY

The proverbial April showers will not lead to May flowers this year as the month ended desperately dry across much of Oklahoma. Widespread rains never materialized, which allowed drought to once again make significant gains to the east from the hardest hit areas across western Oklahoma. Severe weather made a few brief appearances as well, although the month was still tame compared to some recent Aprils. The preliminary count from the National Weather Service of four tornadoes during April is actually well below the 1950-2013 average of 12, but one of those occurrences led to a fatality. An EF2 twister struck the small town of Quapaw on April 27, killing one person and injuring five others according to the Oklahoma Department of Emergency Management. Nearly 50 homes and businesses were damaged in the storm, including the town's fire station.

Preliminary data from the Oklahoma Mesonet indicate that the state experienced its 12th driest April since records began in 1895 with a statewide average of 1.64 inches, a deficit of 1.72 inches. The month was particularly dry across north central Oklahoma where an average of about a half-inch of moisture fell, marking this April as the second driest on record for that region. Most Mesonet sites across western and northern Oklahoma recorded less than an inch of rainfall, with several seeing less than a quarter-inch. Medford had the lowest total with a meager 0.15 inches, 3.1 inches below normal for that location. Of the 120 Mesonet stations, 36 recorded less than an inch of rainfall for the month. Dry weather has dominated headlines since the beginning of 2014. The January-April statewide average was 4.20 inches, nearly 5.5 inches below normal and the second driest such period on record. Medford has received a tally of an inch since January 1, a deficit of over 8 inches and a crippling blow to one of the state's most bountiful winter wheat producing areas. Only Goodwell and Kenton recorded less for that period with 0.9 and 0.7 inches, respectively. Wilburton led the state with 5.5 inches of rain.

The statewide average temperature finished close to normal during April at 58.8 degrees, 0.3 degrees below normal. The first four months of the year were exceedingly cool, however, at 44.3 degrees statewide, 2.5 degrees below normal and the 16th coolest January-April on record. April became the 13th month out of the last 15 to finish cooler than normal.

The state experienced a multitude of dry, windy days that saw massive dust storms in the Panhandle that often pushed east into the main body of Oklahoma. Those conditions also helped propel drought towards the northern and eastern side of the state. The latest U.S. Drought Monitor report valid for April 29 showed over 20 percent of the state to be in exceptional drought and 39 percent covered by at least extreme drought. Just over 79 percent of the state was considered to be in at least moderate drought. The Drought Monitor's intensity scale slides from moderate-severe-extreme-exceptional, with exceptional being the worst classification. A mere three months ago only two percent of the state was in exceptional drought, with 10 percent in at least extreme drought. Currently, approximately 14 percent of the state is considered abnormally dry, and seven percent completely free of any dry conditions. Most of those two categories reside across southeastern Oklahoma.

April 2014 Statewide Extremes

Description	Extreme	Station	Day
High Temperature	95°F	Altus	26
Low Temperature	21°F	Kenton, Chickasha	4, 15
High Precipitation	5.05 in.	Wilburton	
Low Precipitation	0.15 in.	Medford	

April 2014 Statewide Statistics

Temperature

	Average	Depart.	Rank (1895-2014)
Month (April)	58.8°F	-0.3°F	53rd Coolest
Season-to-Date (Mar-Apr)	52.4°F	-2.2°F	26th Coolest
Year-to-Date (Jan-Apr)	44.3°F	-2.5°F	16th Coolest

Precipitation

	Total	Depart.	Rank (1895-2014)
Month (April)	1.64 in.	-1.72 in.	12th Driest
Season-to-Date (Mar-Apr)	3.38 in.	-3.09 in.	11th Driest
Year-to-Date (Jan-Apr)	4.20 in.	-5.48 in.	2nd Driest

Depart. = departure from 30-year normal

APRIL 2014 DAILY SUMMARIES

APRIL 1-3: A warm front swooped into the region, stretching from Grandfield to Shawnee on the 1st. Accompanying the front was a shift to southerly winds, moist air, and rising temperatures. Along the frontal boundary, rain and isolated thunderstorms developed. Storms became severe by the 3rd with 2 and 2.5 inch diameter hail reports in Muskogee, one 2 inch diameter hail report in Checotah, two severe wind gust reports of 70mph in Mazie and Hulbert, and our first severe tornado of the season in Ottawa County (EF-2). Although precipitation amounts were generally less than one-tenth of an inch on the 1st, Cookson received .6 inches and Webbers Falls received .24 inches. .12 inches in Hugo was the highest amount of rain any town saw on the 2nd. Precipitation was pretty significant with the severe storms on the 3rd, however, as 1.40 inches fell in Durant, 1.03 inches in Wilburton, and between one-quarter and 1 inch of rain in most other eastern areas. With the highest temperatures climbing to the mid-80s and low 90s, conditions were muggy in the south. The lowest maximum temperatures were a bit more sporadic with Vinita only hitting 54 degrees on the 1st, Mount Herman hitting 74 degrees on the 2nd, and Hooker having a high of 49 degrees on the 3rd. Minimum temperatures ranged from the 20s to the 60s and the highest daily average wind speeds were 16mph (Tuesday), 18mph (Wednesday), and 20mph (Thursday).

APRIL 4: A cold front moved through on the 3rd which brought cooler temperatures to Oklahoma on the 4th. Temperatures were about 10 degrees below normal with highs ranging from 53 degrees in Jay to 67 degrees in Grady and Hollis. Minimum temperatures were between 21 degrees in Kenton and 45 degrees in Idabel. High pressure over the region made for some rain-free skies and wind speeds below 13mph.

APRIL 5-7: These next few days were a bit on the wet side as the high pressure system moved out of our area. A trough with rainfall and thunderstorms moved in from the southwest on the 5th and covered western and central Oklahoma, discharging as much as .32 inches in Holdenville and .3 inches in Woodward. Another band of rain moved through southern Oklahoma on the 6th and made its way northeast. On that day, most areas in Oklahoma received anywhere from one-tenth to the .96 inches reported in Ringling. By the 7th, the rainfall started to move east out of Oklahoma, but not before releasing less than a quarter inch of rain in most areas, and over half an inch in Wister, Westville, and Sallisaw. Maximum temperatures ranged from the 50s to low 70s on the 5th and 7th, but made a detour on the 6th and dropped between the 50s and 60s. Minimum temperatures ranged from the upper 20s to mid-40s. The coolest Mesonet reading during this period was 27 degrees at Nowata and the warmest readings were 71 In Buffalo, Mangum, and Hollis. Peak wind gusts of 50mph were reported in Freedom and Altus on the 7th, and average wind speeds were less than 17mph on the 5th, less than 9mph on the 6th, and less than 19mph on the 7th.

APRIL 8-10: Clear skies and a warming trend ensued on the 8th as another high pressure system moved into the region. Maximum temperatures ranged from 60 (Westville) to 78 degrees (Hollis) on the 8th, 71 (Westville) to 91 degrees (Altus, Buffalo, and Hollis) on the 8th, and 72 (Boise City and Kenton) to 94 degrees (Grady) on the 10th. Minimum temperatures climbed from a range between 27 and 47 degrees to a range between 41 and 64 degrees. It was not until late in the day on the 10th that a cold front entered the picture and stretched from Waurika to Bixby. Average wind speeds generally ranged between 5 and 15mph on all three days.

APRIL 11-12: A slight cool down from a stalled cold front was only evident when viewing the two opposite ends of the temperature spectrum on the 11th—highest maximum temperatures and lowest minimum temperatures. The lowest maximum temperatures were generally in the mid-70s and the highest maximum temperatures climbed from 85 degrees in the southwest to 97 degrees in in the northwest. The highest minimum temperatures were in the low 60s and the highest minimum temperatures increased from 30 degrees in Kenton to 45 degrees in Boise City. The highest daily average wind speeds in the state jumped from 12mph on the 11th to 23 mph on the 12th. Gusts of 55mph were reported in Kenton on Saturday and rainfall amounts were held at zero.

APRIL 13: A low pressure system in the central high plains brought in warm, moist air to Oklahoma. Rain and isolated thunderstorms developed and moved through the central, east-central, and southeast portions of the state with little rain elsewhere. Most areas that received rain accumulated over one quarter of an inch. However, 1.65 inches, 1.63 inches, and 1.33 inches fell in Broken Bow, Idabel, and Mt. Herman, respectively. Just before the full effect of a passing cold front could be felt, the highest maximum temperatures hit 94 degrees (Tipton) and the lowest maximum temperatures measured 63 degrees (Kenton). Minimum temperatures were between 24 degrees in Kenton and Boise City and 59 degrees in Idabel. Average wind speeds were between 10 and 26mph with gusts of 57mph in Medicine Park.

APRIL 14-16: Mother Nature flipped a switch following the cold front on the 13th causing maximum temperatures to drop 35 degrees on the 14th. This helped play a role in Tulsa breaking its daily maximum snowfall record with trace amounts on the 14th, and Oklahoma City breaking its daily minimum temperature record with 27 degrees on the 15th. Highs ranged from 39 to 59 degrees on the 14th, 57 to 70 degrees on the 15th, and 61 to 78 degrees on the 16th. Lows were between 21 degrees in Chickasha and 34 degrees in Medicine Park and Fairview. Rainfall was negligible and daily average wind speeds were less than 25mph, 17mph, and 22mph on each consecutive day.

APRIL 17-19: Yet another cold front, slightly weaker this time, moved into the region. The highest maximum temperatures dropped to 70 degrees on the 17th, but slowly began to rebound as temperatures hit 76 degrees on the 18th and 84 degrees on the 19th. Low maximum temperatures increased from 50 degrees in Beaver and May Ranch to 74 degrees in Mt. Herman and Westville. The coolest low temperatures ranged from 28 degrees (Medford) to 39 degrees (Nowata) during this period, and the warmest lows ranged from 48 degrees (Madill and Waurika) to 54 degrees (northwest). Although the 18th and 19th were rain-free, the unstable atmosphere produced light rain in the panhandle, central, and southeast Oklahoma on the 17th. Most rainfall amounts were less than one-tenth of an inch, however, Goodwell measured .33 inches and Hooker measured .19 inches. Average wind speeds were less than 13mph on the 17th, and less than a blustery 21mph and 20mph on the 18th and 19th.

APRIL 20-23: Maximum temperatures were on the rise with the warmest ones starting at 82degrees in Beaver on the 20th and climbing to 91 degrees in Tipton on the 23rd. Low maximum temperatures dropped ever so slightly to 65 degrees in Clayton, Talihina, and Wister from a cold front on the 21st, but had an overall increase from 69 degrees on the 20th to 79 degrees on the 23rd. Minimum temperatures generally ranged from the 40s to the low 60s. Although light rain fell in the western two-thirds of Oklahoma on the 20th, rainfall and storms eventually became strong-severe in far western and southwest OK. On that day, Eldorado, OK received 2 inch diameter hail and as much as .87 inches, .65 inches, and .64 inches of rain fell in Boise City, Hollis, and Walters, respectively. Intense rain continued on the 21st in all but north-central OK. Heavy rainfall amounts of 1.91 inches fell in Centrahoma, 1.82 inches in Ketchum Ranch, and 1.78 inches in Hectorville. Most areas had between one-quarter and one-inch of precipitation. The 22nd took a break from rain, but measurements of one-quarter to one inch of rain were taken in west-central, southwest, and central OK. Large wind gusts of 62mph were recorded in Retrop and Cherokee on the 23rd. The highest daily average wind speeds were bearable on the20th (14mph), 21st (12mph), and 22nd (17mph), but were a breezy 27mph on the 23rd.

APRIL 24: Storms moved into south-central and southeast Oklahoma on the 24th along with a strong cold front that dropped the highest maximum temperatures down from 91 degrees the previous day to 82 degrees in Broken Bow. The lowest maximum temperature was 67 degrees in Westville and Cookson, and minimum temperatures ranged between 39 degrees in Kenton and 57 degrees in Medicine Park and Hugo. Precipitation amounts measured between one-tenth of an inch and .86 inches in Talihina. Conditions were extremely windy with a report of 75mph gusts coming in from Adair. Average wind speeds were between 10 and 18mph.

APRIL 25-26: Skies remained relatively clear on the 25th and 26th with high pressure at the surface. Maximum temperatures ranged from 76 to 90 degrees on the 25th and from 80 to 95 degrees on the 26th. Minimum temperatures ranged from 35 to 53 degrees on the 25th and from 44 to 68 degrees on the 26th. The warmest Mesonet sites were Beaver on Friday and Altus on Saturday; the coolest sites were Kenton (Friday) and Broken Bow (Saturday). Daily average wind speeds were less than 20mph on the 25th and less than 25mph on the 26th.

APRIL 27-29: Showers, thunderstorms, and a cold front kicked off a cooling trend for the last four days of the month. Trace amounts to 1.02 inches of rain fell as storms passed over central Oklahoma and then into eastern Oklahoma on the 27th. Clayton received the most rain (1.02 in.), followed by Minco with .84 inches and Wilburton with .74 inches. Although a few sprinkles fell in western Oklahoma on the 28th, rainfall the following three days was negligible. The highest maximum temperature in the state was 88 degrees (Burneyville) on the 27th, and then it dropped to 80 degrees (Tipton and Altus), 72 degrees (Broken Bow), and 68 degrees (Grady) each consecutive day. The lowest maximum temperatures tumbled from 64 degrees in Kenton and Boise City to 57 degrees in Westville by the 28th. Minimum temperatures fell from a range of 41 to 71 degrees on Easter Sunday to a range of 33 to 46 degrees on Wednesday. The coldest temperature during this period was 32 degrees in Kenton on the 28th. Peak wind gusts were in the 60s on the first three days and average wind speeds were less than 30mph on the 27th, less than 23mph on the 28th, less than 30mph on the 29th, and less than 22mph on the 30th.

APRIL 2014 SEVERE WEATHER

Significant Tornadoes (EF2 or greater)

EF Rating	County	Day
EF2	Ottawa/Cherokee KS	3

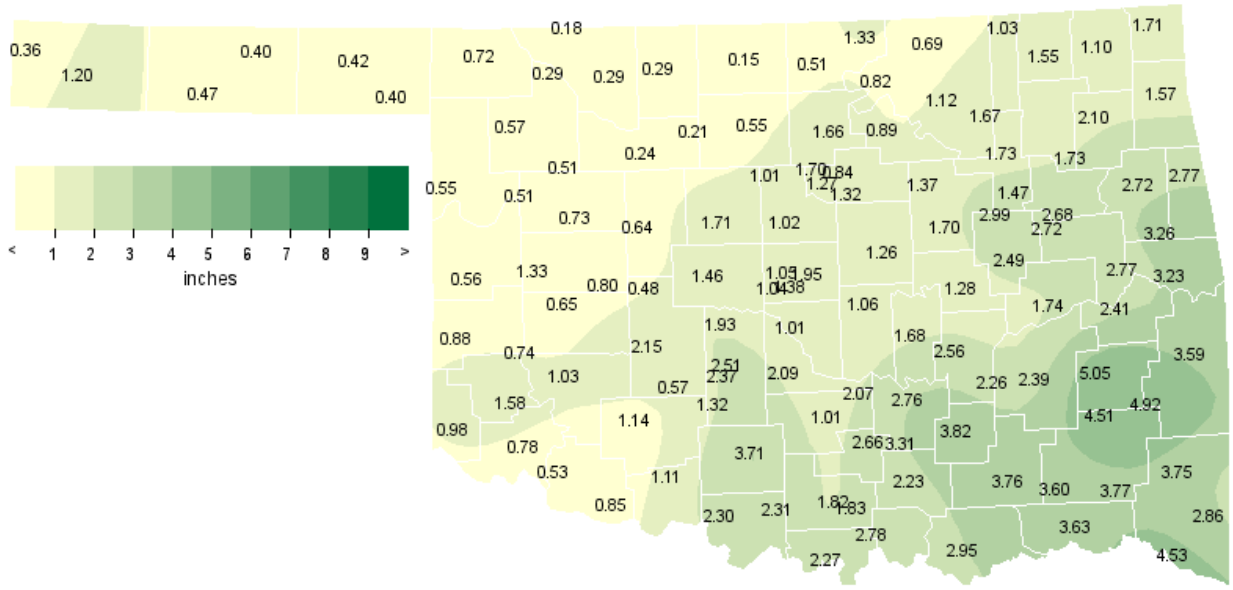
Hail (2 inches in diameter or greater)

Size (in.)	Location	County	Day
2.50	Muskogee	Muskogee	3
2.00	Muskogee	Muskogee	3
2.50	Checotah	McIntosh	3
2.00	3 NW Eldorado	Jackson	20

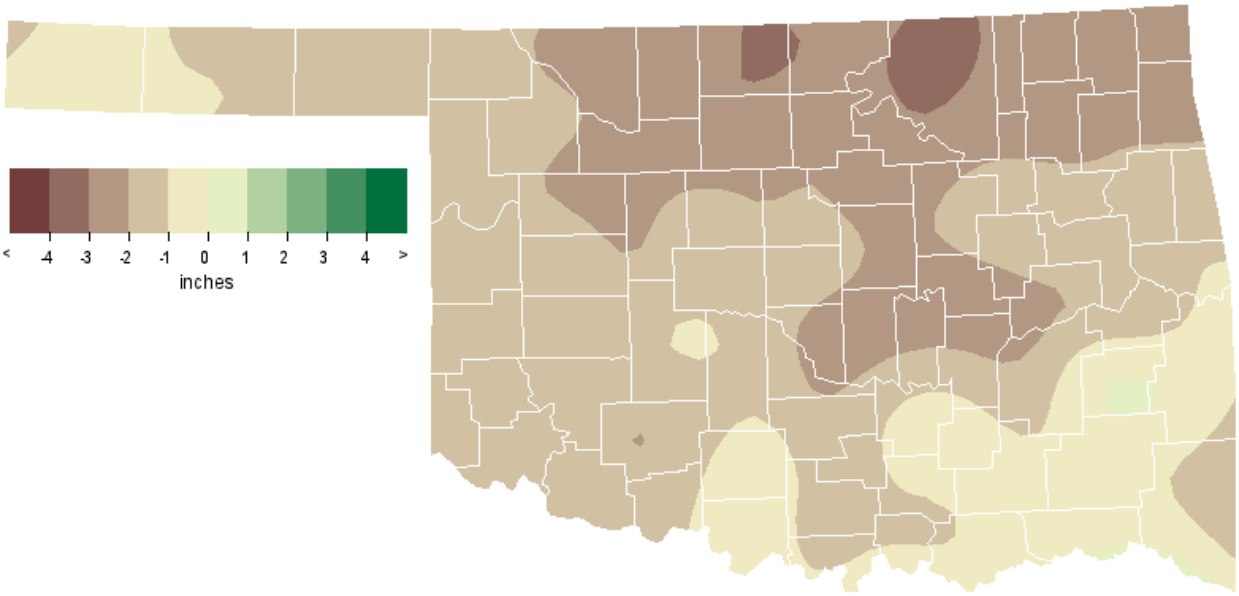
Wind Gusts (70 mph or greater)

Speed (m.p.h)	Location	County	Day
70	2 S Mazie	Mayes	3
70	Hulbert	Cherokee	3
75	Adair	Mayes	24

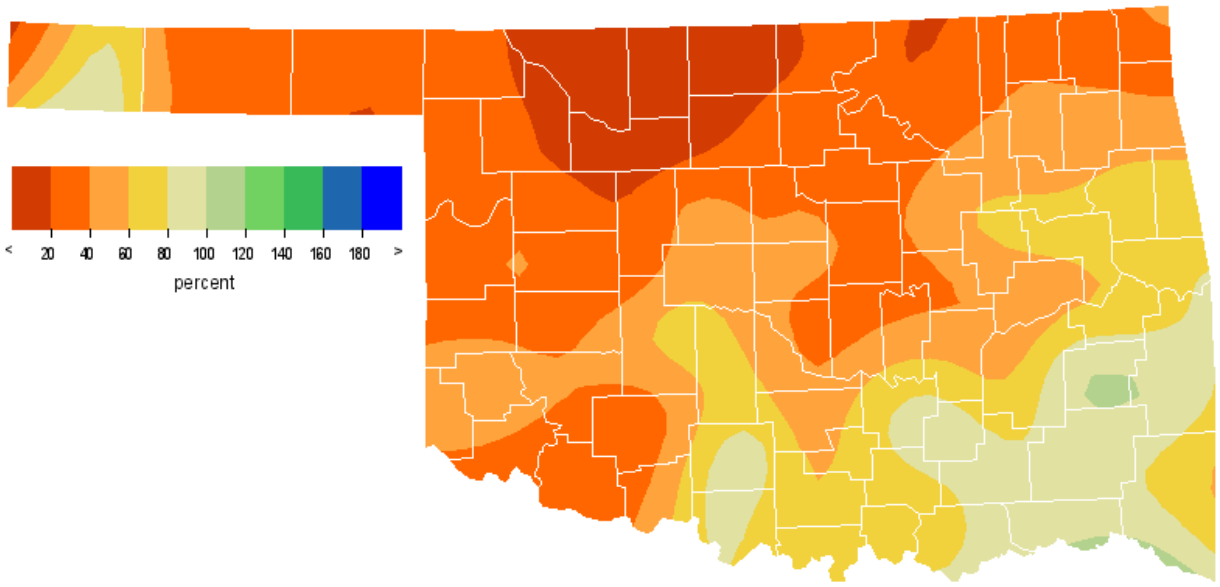
APRIL 2014 OBSERVED PRECIPITATION



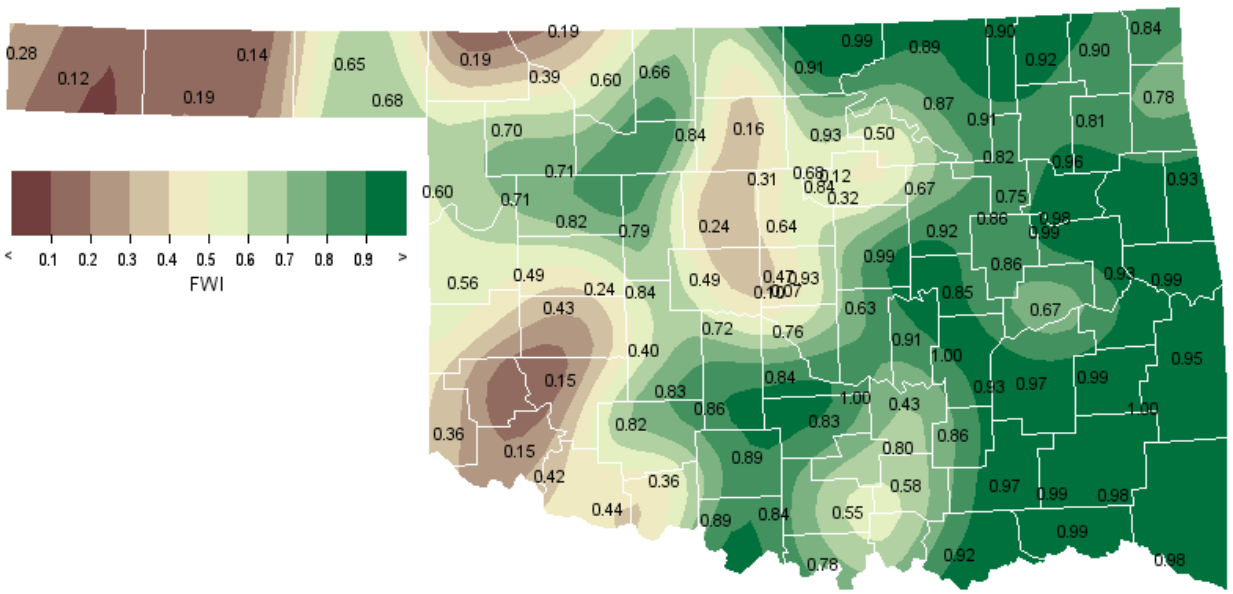
APRIL 2014 DEPARTURE FROM NORMAL PRECIPITATION



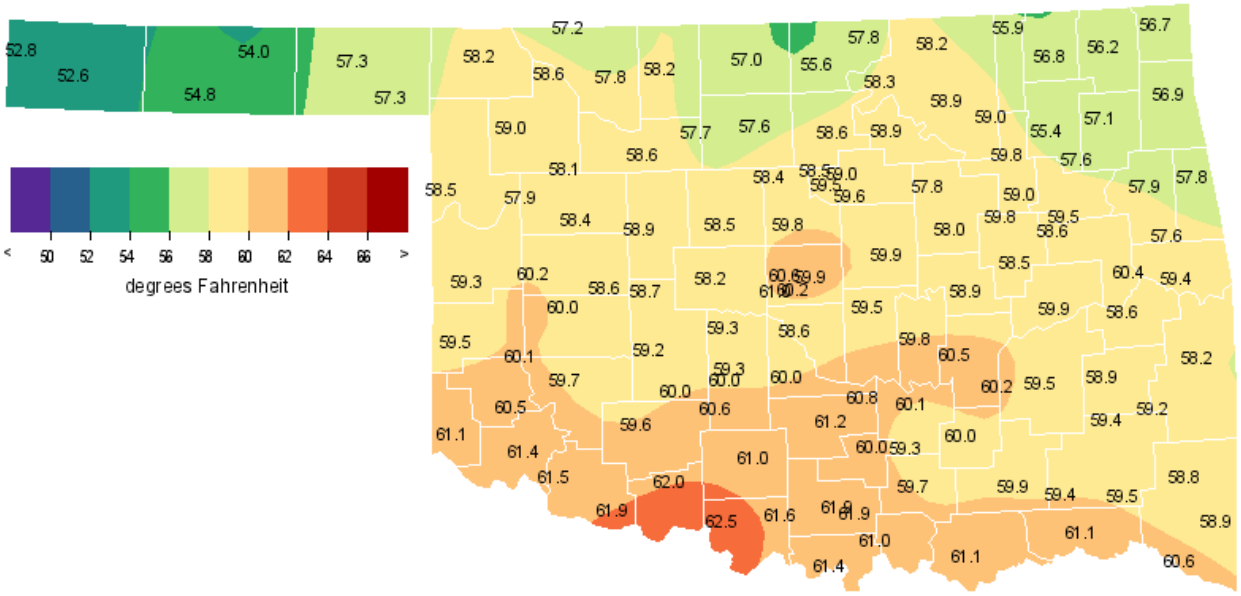
APRIL 2014 PERCENT OF NORMAL PRECIPITATION



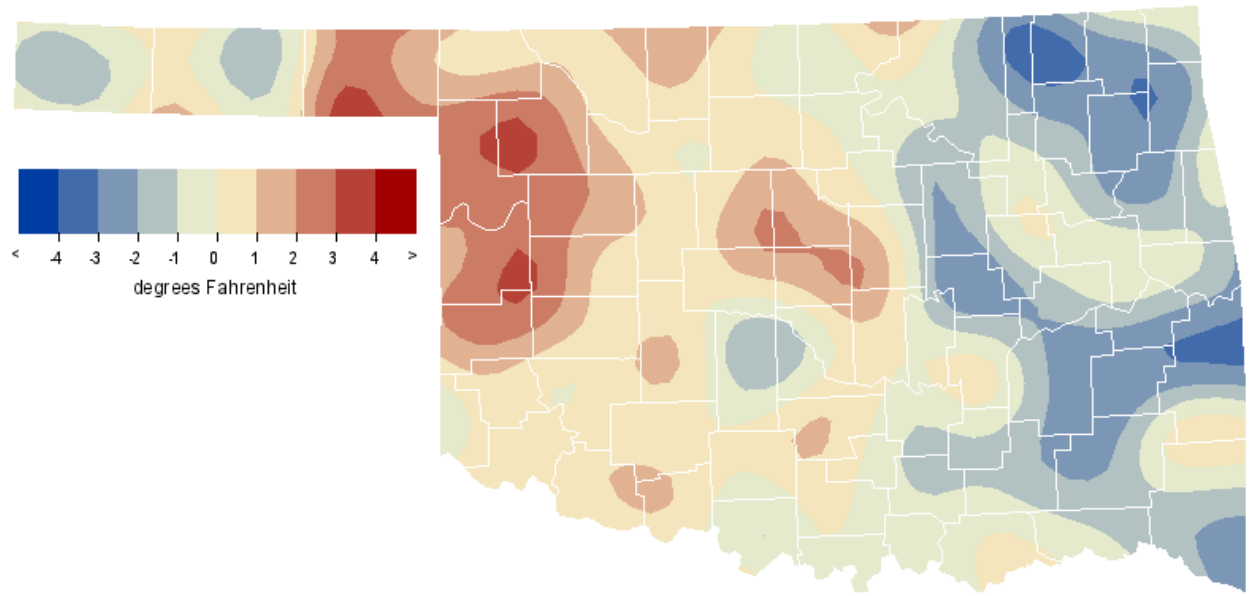
APRIL 2014 AVERAGE SOIL MOISTURE AT 25CM



APRIL 2014 AVERAGE TEMPERATURE



APRIL 2014 DEPARTURE FROM NORMAL TEMPERATURE

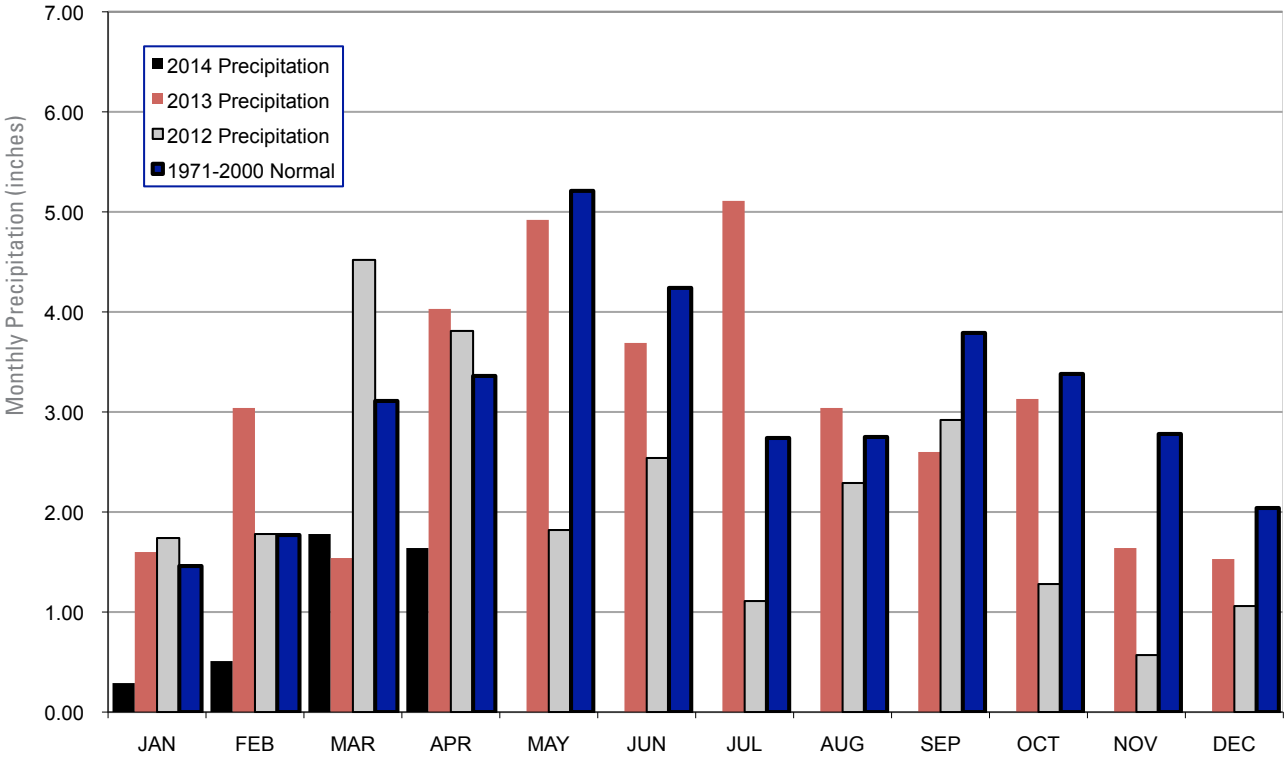


MESONET MONTHLY SUMMARY FOR APRIL 2014

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
PANHANDLE										
Arnett	58.5	94	12	23	15	229	34	.55	.31	20
Beaver	57.4	95	12	23	15	277	49	.42	.19	5
Boise City	52.7	86	12	22	14	377	6	1.20	.87	20
Buffalo	58.2	97	12	27	15	248	45	.72	.53	20
NORTH CENTRAL										
Alva	57.7	94	12	26	15	246	27	.29	.15	5
Blackwell	57.6	90	26	22	15	****	****	.51	.18	21
Breckinridge	57.7	89	26	25	14	248	27	.55	.27	23
Cherokee	58.2	92	12	26	15	238	34	.29	.21	5
Fairview	58.7	89	12	31	14	218	28	.24	.11	7
Freedom	58.6	95	12	24	15	235	43	.29	.14	5
Lahoma	57.7	88	26	28	15	241	23	.21	.14	23
NORTHEAST										
Bixby	58.9	86	10	27	15	215	33	1.47	.47	21
Burbank	58.2	88	2	25	15	241	38	.82	.24	27
Claremore	59.3	86	10	29	15	****	****	1.80	.95	21
Copan	57.8	84	2	28	5	****	****	1.03	.42	27
Foraker	58.2	88	2	28	15	237	32	.69	.18	13
Inola	57.6	85	3	26	15	246	25	1.73	.64	21
Jay	56.9	82	3	25	15	268	26	1.57	.44	21
Miami	56.6	82	3	25	15	269	18	1.71	.68	27
WEST CENTRAL										
Bessie	59.9	90	26	29	15	188	35	.65	.33	20
Butler	60.1	90	12	25	15	190	43	1.33	.95	23
Camargo	57.8	92	12	24	15	245	29	.51	.34	20
Cheyenne	59.3	92	12	30	14	210	40	.56	.34	20
Erick	59.5	93	12	22	15	205	40	.88	.49	20
CENTRAL										
Acme	60.6	88	10	25	15	185	51	1.32	.34	21
Bowlegs	59.8	86	26	29	15	197	40	1.68	.38	6
Bristow	58.1	87	10	23	15	236	28	1.70	.40	13
Lake Carl Blac	58.5	91	26	26	15	233	37	1.70	.52	21
Chandler	59.9	88	26	29	15	194	41	1.26	.28	7
Chickasha	59.3	89	13	21	15	204	33	2.51	1.04	21
El Reno	58.2	92	13	26	15	236	31	1.46	.71	27
Guthrie	59.8	90	26	23	15	201	45	1.02	.63	27
Kingfisher	58.5	90	13	22	15	227	32	1.71	.78	21
Marena	59.6	90	26	28	15	204	41	1.27	.43	13
Minco	59.3	87	26	28	15	203	34	1.93	.84	27
Marshall	58.3	89	26	22	15	235	34	1.01	.53	23
EAST CENTRAL										
Cookson	57.6	83	26	24	15	247	25	3.26	.79	3
Eufaula	59.8	84	27	30	15	195	40	1.74	.44	6
Haskell	58.6	85	27	28	15	222	29	2.72	.59	3
Hectorville	59.8	86	10	28	15	192	37	2.99	1.78	21
Holdenville	60.5	85	26	27	15	185	50	2.56	.42	24
McAlester	59.5	85	27	25	15	210	46	2.39	.51	6
Okmulgee	58.5	85	26	26	15	227	32	2.49	.67	3
SOUTHWEST										
Altus	61.4	97	12	22	15	172	65	.78	.57	20
Apache	60.0	92	13	28	15	196	47	.57	.19	6
Fort Cobb	59.2	91	13	23	15	211	37	2.15	1.27	21
Grandfield	61.8	94	10	24	15	162	66	.85	.39	20
Hinton	58.7	88	13	27	15	217	29	.48	.14	21
Hobart	59.7	91	13	22	15	201	41	1.03	.59	23
SOUTH CENTRAL										
Ada	60.0	89	3	29	15	193	44	2.76	.94	13
Ardmore	62.0	89	3	29	15	156	65	1.83	.65	6
Burneyville	61.4	89	3	25	15	175	67	2.27	.78	6
Byars	60.7	87	3	29	15	176	47	2.07	.55	13
Centrahoma	60.0	84	26	25	15	195	45	3.82	1.91	21
Durant	61.2	85	27	28	15	168	54	2.95	1.40	3
Fittstown	59.2	82	26	26	15	203	29	3.31	1.60	21
Ketchum Ranch	61.0	88	10	27	15	168	48	3.71	1.82	21
SOUTHEAST										
Antlers	59.4	85	26	26	15	199	32	3.60	.84	13
Broken Bow	58.9	85	26	28	15	209	25	2.86	1.65	13
Clayton	59.4	85	26	26	15	201	33	4.51	1.02	27
Cloudy	59.5	84	26	29	15	192	26	3.77	1.03	13
Hugo	61.0	84	26	32	15	160	42	3.63	.97	13

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
Goodwell	54.8	90	12	24	15	324	19	.47	.33	17
Hooker	55.8	92	12	25	14	****	****	.40	.19	17
Kenton	52.8	85	23	21	4	374	7	.36	.12	6
Slapout	57.3	95	12	24	15	265	34	.40	.19	20
May Ranch	57.2	94	12	30	15	257	25	.18	.09	20
Medford	57.0	87	23	22	15	262	22	.15	.07	23
Newkirk	57.8	87	2	27	15	246	29	1.33	.63	27
Red Rock	58.6	90	26	26	15	227	34	1.66	.55	27
Seiling	58.1	90	12	22	15	242	36	.51	.26	23
Woodward	59.0	93	12	28	15	229	49	.57	.30	5
Nowata	56.8	84	10	24	15	268	22	1.55	.55	21
Pawnee	58.9	89	26	26	15	221	39	.89	.50	13
Porter	59.6	85	26	29	15	199	36	2.68	.62	3
Pryor	57.1	84	3	25	15	260	24	2.10	1.01	21
Skiatook	59.0	86	10	31	15	213	33	1.67	.47	21
Tulsa	59.7	87	10	33	15	193	35	1.73	.75	21
Vinita	56.2	84	3	25	15	277	14	1.10	.37	13
Wynona	58.9	87	26	29	15	219	36	1.12	.34	27
Putnam	58.4	88	12	25	15	228	30	.73	.53	23
Retrop	60.1	90	26	30	15	186	41	.74	.40	20
Watonga	58.9	87	26	28	15	220	36	.64	.42	23
Weatherford	58.7	87	13	25	15	220	30	.80	.31	20
Ninnekah	60.1	89	13	24	15	188	39	2.37	1.19	21
Norman	60.5	88	26	29	15	****	****	1.01	.30	6
Oilton	57.7	87	10	24	15	249	31	1.37	.48	27
OKC East	60.2	88	26	32	15	190	46	1.38	.32	21
OKC North	60.6	88	26	32	15	179	48	1.05	.27	6
OKC West	61.0	88	26	32	15	173	52	1.04	.28	6
Okemah	58.9	85	26	24	15	215	33	1.28	.45	24
Perkins	59.6	89	26	29	15	199	38	1.32	.46	27
Shawnee	59.5	87	26	30	15	202	37	1.06	.22	7
Spencer	59.9	88	26	30	15	194	42	1.95	.90	21
Stillwater	59.1	90	26	28	15	220	42	.84	.39	13
Washington	60.0	86	10	30	15	189	39	2.09	.56	6
Sallisaw	59.4	85	26	28	15	198	29	3.23	.79	24
Stigler	58.6	84	26	27	15	220	28	2.41	.59	24
Stuart	60.2	84	26	31	15	186	41	2.26	.46	6
Tahlequah	57.9	82	26	24	15	241	30	2.72	.96	3
Webbers Falls	60.4	87	26	30	15	181	42	2.77	.67	24
Westville	57.8	81	10	27	15	242	25	2.77	.92	3
Hollis	61.1	96	12	23	15	179	63	.98	.65	20
Mangum	60.6	95	12	23	15	183	49	1.58	1.04	23
Medicine Park	61.7	91	13	34	15	****	****	1.14	.69	21
Tipton	61.6	94	13	23	15	166	63	.53	.25	20
Walters	62.0	92	10	28	15	151	60	1.11	.64	20
Lane	59.9	84	27	27	15	190	37	3.76	1.02	13
Madill	61.0	86	27	26	15	175	57	2.78	.81	6
Newport	61.8	90	3	29	15	160	63	1.82	.64	6
Pauls Valley	61.2	88	26	27	15	169	54	1.01	.27	6
Ringling	61.6	87	10	27	15	159	56	2.31	.96	6
Sulphur	60.1	87	3	22	15	190	43	2.66	1.16	21
Tishomingo	59.7	83	27	29	15	190	32	2.23	.74	6
Waurika	62.5	91	10	27	15	147	72	2.30	.70	6
Idabel	60.6	85	26	31	15	176	44	4.53	1.63	13
Mt Herman	58.8	82	26	29	15	206	21	3.75	1.33	13
Talihina	59.2	86	26	26	15	211	36	4.92	.89	6
Wilburton	59.0	84	26	26	15	212	31	5.05	1.03	3
Wister	58.2	85	26	27	15	225	21	3.59	.83	21

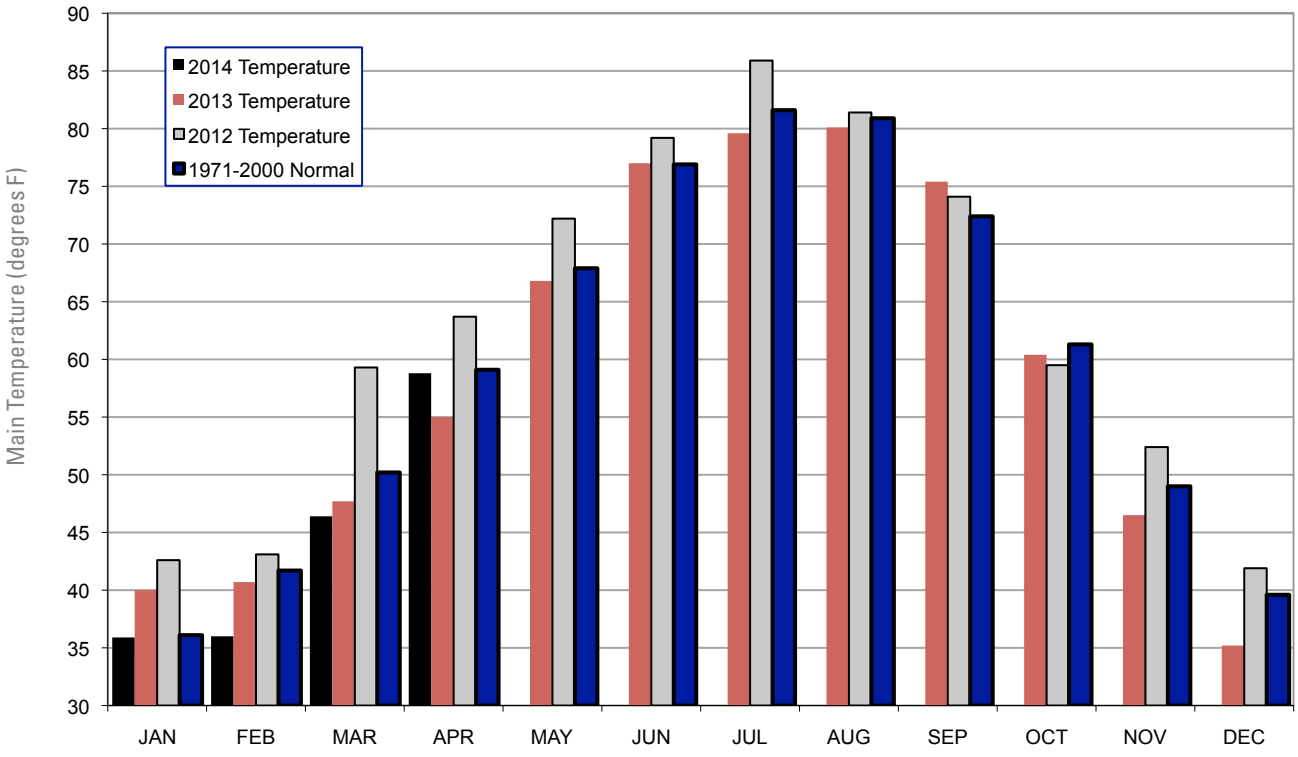
2012, 2013 AND 2014 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL



April 2014 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Apr-13
Panhandle	0.57	-1.29	14th Driest	5.31 (1900)	0.02 (1935)	0.61
North Central	0.52	-2.44	2nd Driest	7.14 (1999)	0.48 (1989)	3.03
Northeast	1.46	-2.54	5th Driest	9.06 (1942)	0.22 (1989)	4.36
West Central	0.76	-1.84	12th Driest	8.43 (1997)	0.16 (1996)	2.55
Central	1.47	-2.06	14th Driest	9.37 (1942)	0.28 (1989)	6.27
East Central	2.64	-1.69	18th Driest	11.32 (1957)	0.74 (1989)	5.31
Southwest	1.02	-1.65	16th Driest	7.53 (1997)	0.14 (1989)	3.62
South Central	2.60	-1.16	35th Driest	11.33 (1942)	0.40 (1903)	3.18
Southeast	4.02	-0.47	51st Driest	12.81 (1957)	0.80 (1987)	4.67
Statewide	1.64	-1.72	12th Driest	8.32 (1942)	0.55 (1989)	3.81

2012, 2013 AND 2014 STATEWIDE TEMPERATURE MONTHLY TOTALS VS. NORMAL



April 2014 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Apr-13 (F)
Panhandle	55.7	0.5	51st Warmest	62.1 (1946)	48.8 (1997)	50.0
North Central	57.8	0.2	54th Warmest	64.4 (1981)	50.4 (1983)	51.7
Northeast	57.9	-1.0	41st Coolest	65.7 (1954)	52.5 (1983)	54.5
West Central	59.2	1.3	45th Warmest	65.1 (2006)	52.2 (1983)	52.6
Central	59.4	-0.2	50th Coolest	66.9 (2006)	53.6 (1983)	54.7
East Central	59.1	-1.1	34th Coolest	67.8 (1896)	54.5 (1907)	57.2
Southwest	60.5	0.1	53rd Coolest	67.6 (2006)	54.9 (1997)	56.0
South Central	60.8	-0.5	42nd Coolest	68.8 (1925)	56.6 (1983)	57.4
Southeast	59.4	-1.2	34th Coolest	66.7 (2006)	55.3 (1983)	58.6
Statewide	58.8	-0.3	53rd Coolest	65.8 (2006)	53.2 (1983)	54.7

RECORD EVENT REPORTS APRIL 2014

Description	Day	Location	Record	Previous Record	Year
Daily maximum snowfall	14	Tulsa	Trace	Trace	1943
Daily minimum temperature	15	Oklahoma City	27	30	1928

MESONET EXTREMES FOR APRIL 2014

Climate Division	High Temp (F)	Day	Station	Low Temp (F)	Day	Station	High Monthly Rainfall (inches)	Station	High Daily Rainfall (inches)	Day	Station
Panhandle	97	12th	Buffalo	21	4th	Kenton	1.20	Boise City	0.87	20th	Boise City
North Central	95	12th	Freedom	22	15th	Blackwell	1.66	Red Rock	0.63	27th	Newkirk
Northeast	89	26th	Pawnee	24	15th	Nowata	2.68	Porter	1.01	21st	Pryor
West Central	93	12th	Erick	22	15th	Erick	1.33	Butler	0.95	23rd	Butler
Central	92	13th	El Reno	21	15th	Chickasha	2.51	Chickasha	1.19	21st	Ninnekah
East Central	87	26th	Webbers Falls	24	15th	Cookson	3.26	Cookson	1.78	21st	Hectorville
Southwest	97	12th	Altus	22	15th	Hobart	2.15	Fort Cobb	1.27	21st	Fort Cobb
South Central	91	10th	Waurika	22	15th	Sulphur	3.82	Centrahoma	1.91	21st	Centrahoma
Southeast	86	26th	Talihina	26	15th	Wilburton	5.05	Wilburton	1.65	13th	Broken Bow
Statewide	97	12th	Buffalo	21	4th	Kenton	5.05	Wilburton	1.91	21st	Centrahoma

MAY OUTLOOK

Oklahoma's weather reaches something of a crescendo in May as springtime comes to full flower. May is Oklahoma's wettest (statewide-averaged precipitation of 5.13 inches) and certainly its stormiest month (an average of 19.9 tornadoes, more than one-third of the annual average, occurring on 5.5 days, statewide). Its position in the spring transition season is confirmed by a monthly mean temperature, averaged statewide, of 68.4 degrees that ranks fifth highest among the months. Vestiges of winter are occasionally seen in the far northwestern portions of the state, but mostly May is a time for flowering of most plants, full leafing of deciduous trees, planting of row crops, and the maturing and ripening of the winter wheat that was sowed the previous fall.

May usually is characterized by a pleasant range of temperatures across the state, although there are times most years when it is evident that the hot Oklahoma summer is drawing near. Monthly mean temperatures since 1892

Temperature

Mean	68.4 degrees
Warmest May	1962, 74.0 degrees
Coolest May	1907, 61.9 degrees
Hottest Recorded	114 degrees, Weatherford, May 25, 2000
Coldest Recorded	19 degrees, Hooker, May 1, 1909

have ranged from 62.3 degrees in 1907 to 75.8 degrees in 1896. Normal daily maximum temperatures across the state vary from 84.6 degrees at Waurika to 76.5 degrees at Arnett. Normal daily minimum temperatures fall between 61.2 degrees at Ardmore and 46.8 degrees at Boise City. Historical extremes of temperature during the month are 114 degrees at Weatherford, reported on May 25, 2000 and 19 degrees at Hooker on May 1, 1909. Temperatures in southwestern Oklahoma, the state's hot spot, reach 100 degrees an average of slightly more than once each May. Freezing temperatures are also rare, occurring less than once per year in the panhandle, rarely elsewhere. Freezes have occurred in the state's most northerly regions as late as the end of the month.

The Oklahoma panhandle's climate differs from the rest of the state in that its primary precipitation season is shifted toward summer, being tied to the patterns of the High Plains, of which it is a part. Elsewhere in the state, May is the month of maximum precipitation and May is, in fact, the panhandle's second wettest month by a small margin. May has produced statewide-averaged monthly precipitation totals ranging from 10.68 inches in 1957 to 1.30 inches in 1988. Extremes of individual station-normal precipitation for the month are 7.06

Precipitation

Mean	5.13 inches
Wettest May	1957, 10.54 inches
Driest May	1988, 1.23 inches
Wettest location	Smithville, 7.06 inches
Driest location	Regnier, 2.02 inches
Most recorded	22.38 inches, Hennessey, 1957

Tornadoes

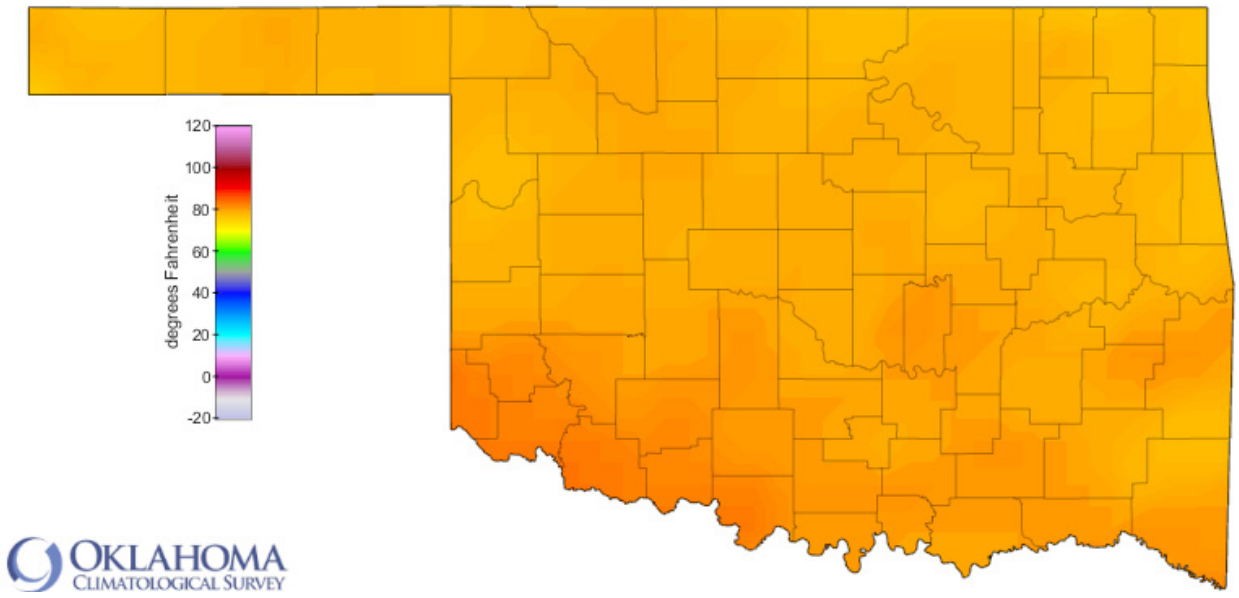
Average May Tornadoes (1950-2013)	21.7
Most	91 (2010)

inches in the southeast at Smithville and 2.29 inches in the western panhandle at Regnier. Miami recorded the greatest May monthly total precipitation, 23.95 inches, in 1943. The record-breaking 1957 statewide-averaged precipitation was amplified by the May total of 22.38 inches of rain recorded at Hennessey, most of which fell during the drought-breaking, flood-producing deluge that hammered much of the state on the 15th and 16th. Purcell apparently holds the single reporting-day precipitation record for May, measuring 13.68 inches of rain on May 11, 1950. Interestingly, the events that produced the Purcell and Hennessey precipitation records (and the widespread flooding that occurred after each) bracket the state's driest ever 7-year period.

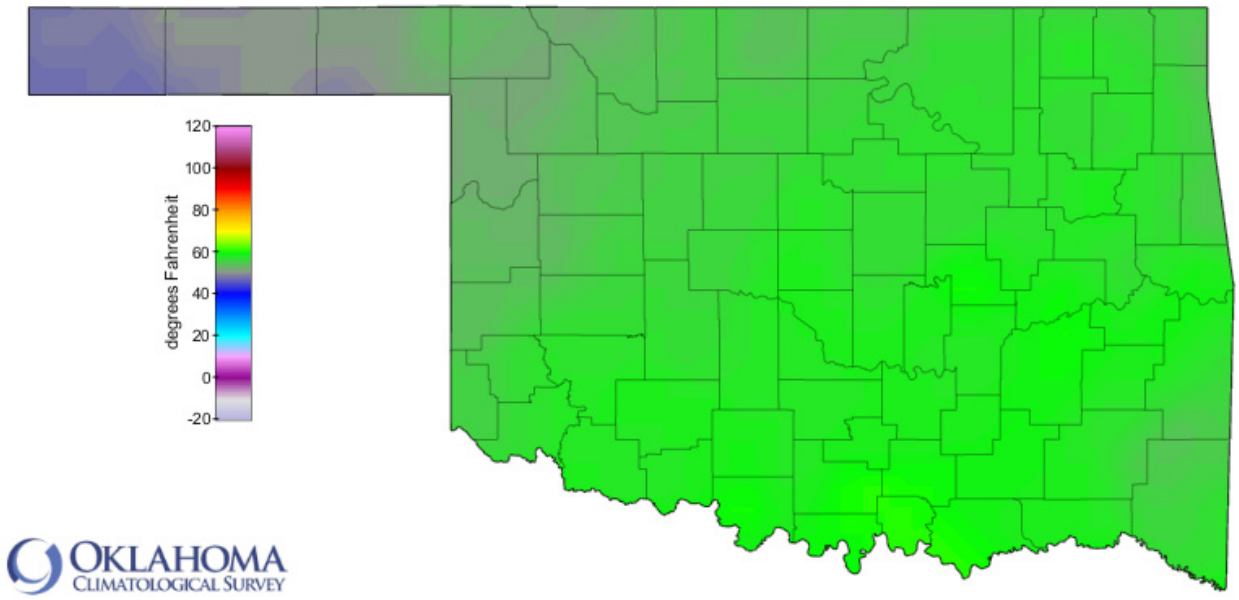
Springtime in Oklahoma is noted for severe thunderstorms and tornadoes. Over the last 52 years (the period of reasonably comprehensive statistics on the subject) Oklahoma has been struck by more tornadoes in May than in any other two months combined (April and June rank second and third, respectively, among the months). May 1999 holds the state record for most tornadoes in a single month with a nearly unbelievable confirmed total of 90. Most of those tornadoes (59) occurred

in central and western Oklahoma on the afternoon and evening of May 3. That outbreak caused extensive damage and killed 40 people along a wide path extending generally from Amber to Stroud. Some of the fiercest storms struck in the southern portion of the Oklahoma City metropolitan area. A mobile Doppler radar operated by a University of Oklahoma research team measured winds as great as 318 miles per hour in one of the funnels, the greatest wind speed yet measured on the planet.

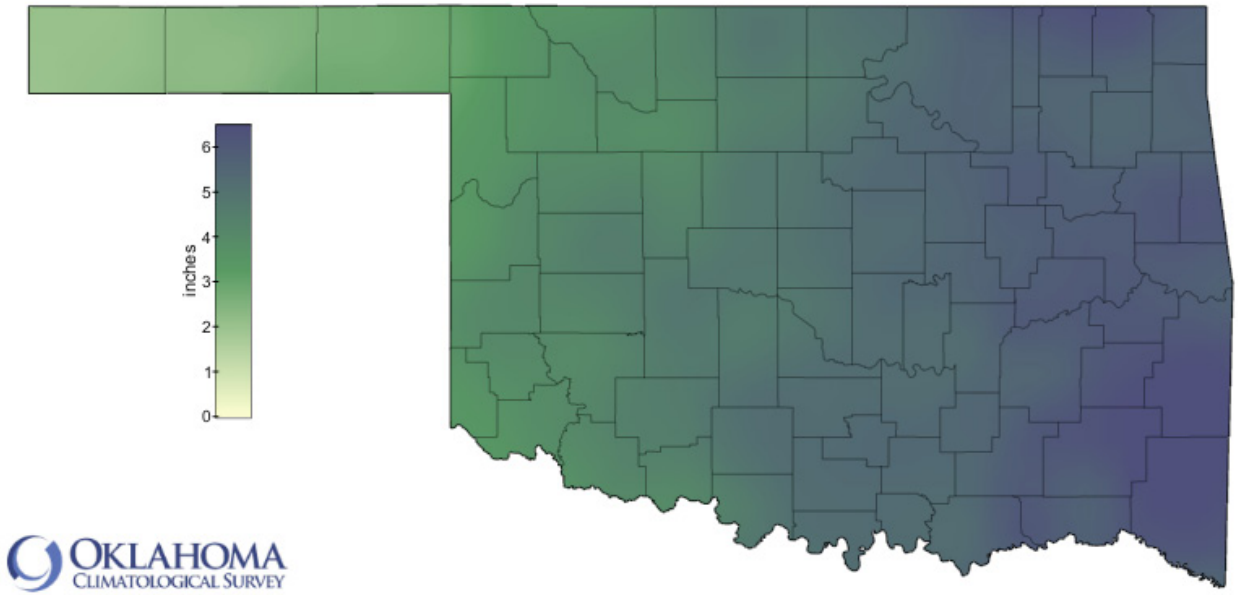
MAY NORMAL DAILY MAXIMUM TEMPERATURE (1981-2010)



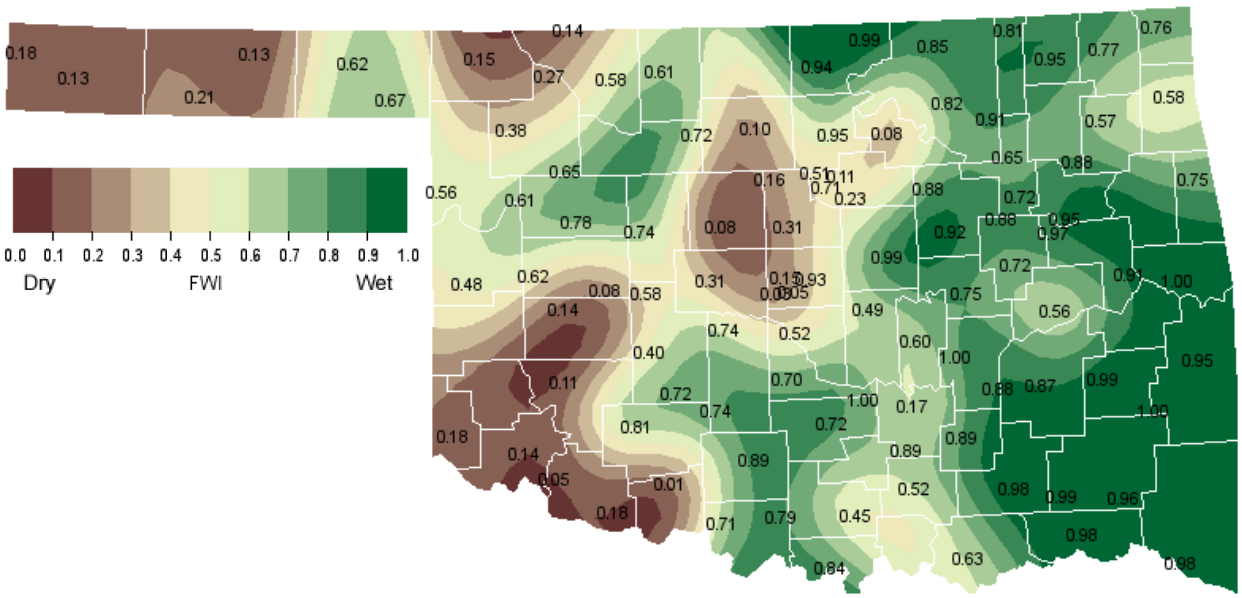
MAY NORMAL DAILY MINIMUM TEMPERATURE (1981-2010)



MAY NORMAL PRECIPITATION (1981-2010)



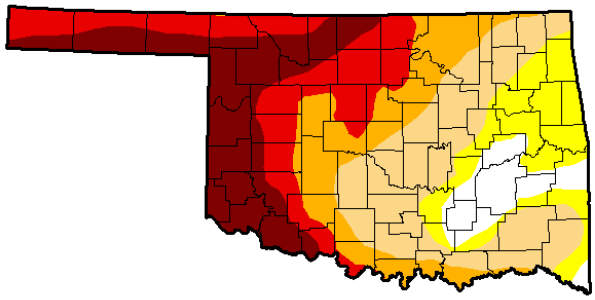
MAY 1, 2014 SOIL MOISTURE CONDITIONS AT 25CM



MAY 2014 DROUGHT INDICES

U.S. Drought Monitor

Oklahoma



April 29, 2014

(Released Thursday, May. 1, 2014)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	7.19	92.81	79.21	54.81	39.03	20.26
Last Week 4/22/2014	6.73	93.27	78.95	54.81	37.86	14.54
3 Months Ago 1/28/2014	29.84	70.16	46.74	28.80	10.12	2.40
Start of Calendar Year 12/31/2013	50.84	49.16	38.17	18.99	4.84	2.40
Start of Water Year 10/1/2013	21.74	78.26	43.00	17.62	4.42	1.45
One Year Ago 4/30/2013	16.69	83.31	67.94	52.82	30.53	6.39

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:
Richard Heim
NCDC/NOAA

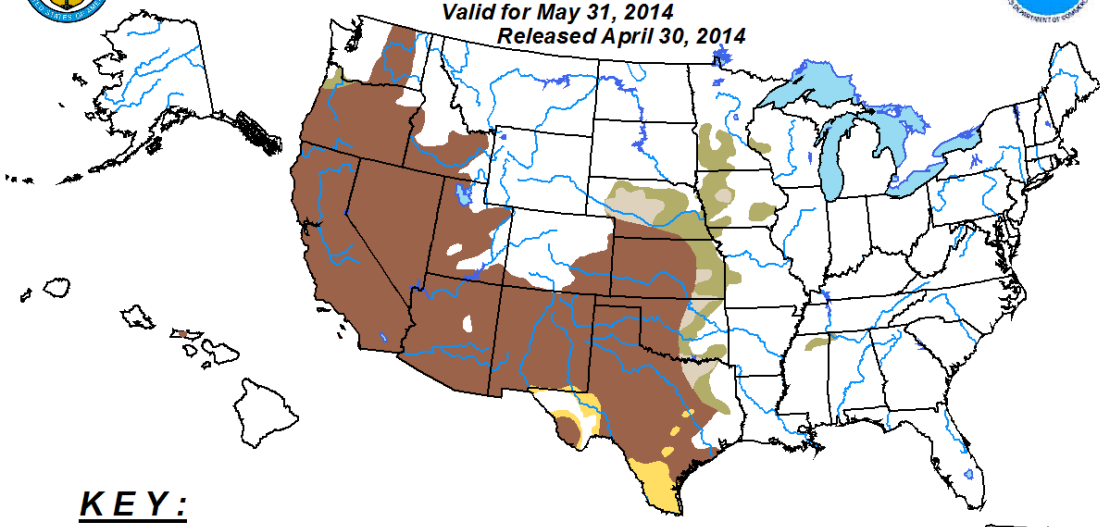
http://droughtmonitor.unl.edu/

U.S. Monthly Drought Outlook

Drought Tendency During the Valid Period

Valid for May 31, 2014

Released April 30, 2014



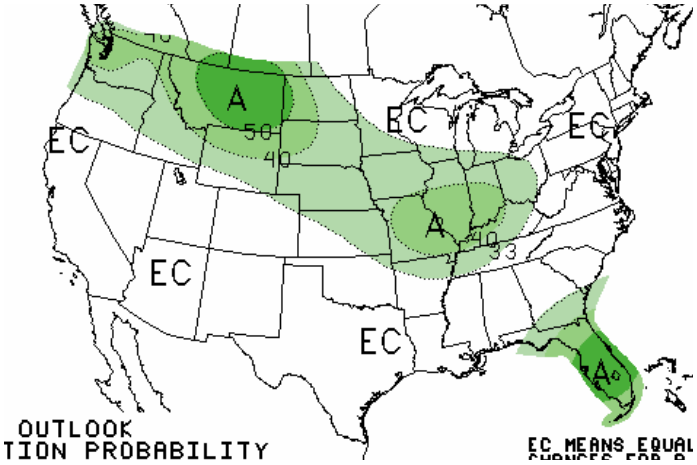
KEY:

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

Author: Brad Pugh, 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)

MAY 2014 U.S. PRECIPITATION FORECAST



Percent Likelihood of Above or Below Average Precipitation*

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

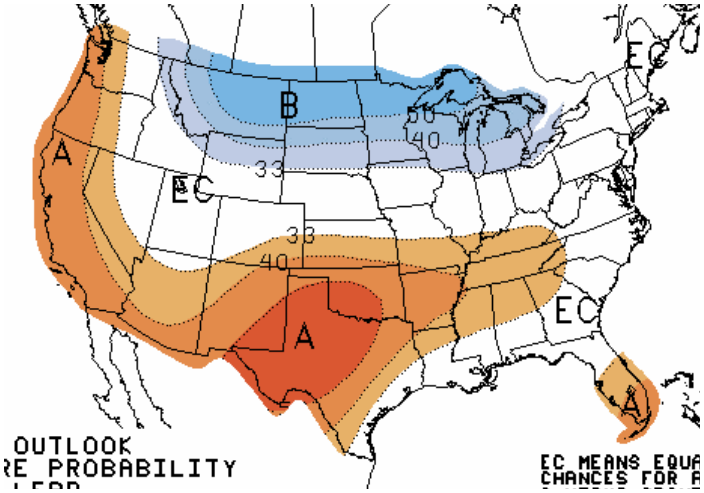
A = Above

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

B = Below

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

MAY 2014 U.S. TEMPERATURE FORECAST



Percent Likelihood of Above or Below Average Temperatures*

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

A = Above

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

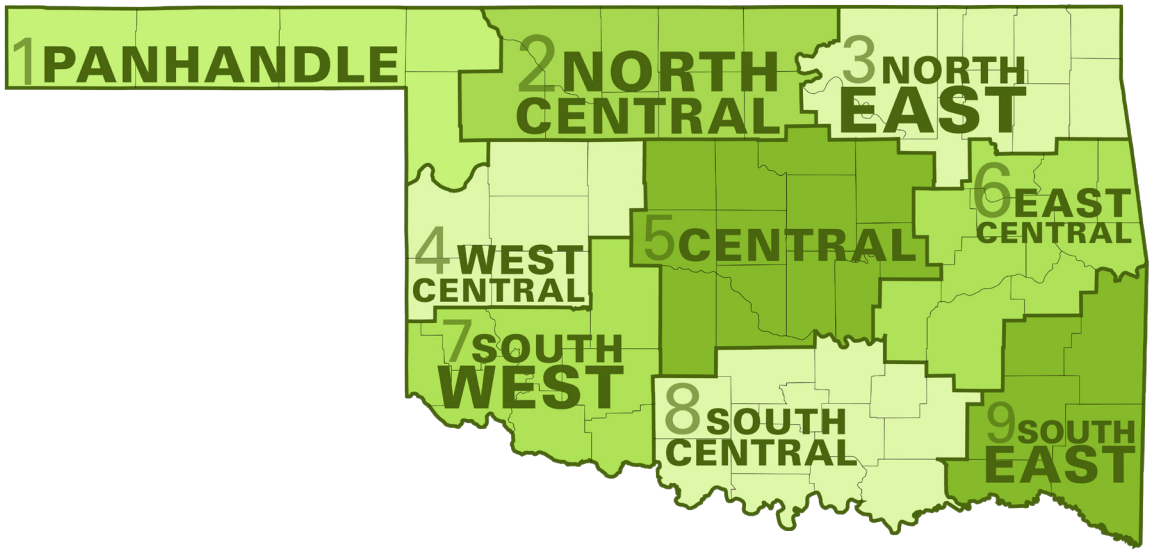
B = Below

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

MAY CLIMATE NORMALS

Climate Division	Max. Temperature (°F)	Min. Temperature (°F)	Avg. Temperature (°F)	Precipitation (inches)
1	78.8	50.8	64.8	3.30
2	79.1	54.9	67.0	4.68
3	78.9	56.6	67.8	5.40
4	79.5	55.0	67.3	4.64
5	79.6	57.5	68.6	5.45
6	79.2	57.8	68.5	5.77
7	81.8	56.8	69.3	4.80
8	80.8	58.8	69.8	5.52
9	80.5	57.5	69.0	6.31
Statewide	79.8	56.3	68.1	5.21

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

EDITOR
Gary D. McManus State Climatologist

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

DESIGN
Nicholas Richardson Graphic Designer
Ada Shih 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