Oklahoma Monthly Climate Summary

MAY 2014

OKLAHOMA CLIMATOLOGICAL SURVEY

Drought made significant advances across Oklahoma through the first three weeks of May, aided by a string of hot, windy days coupled with a persistent absence of spring rains. The prolonged drought preempted the normal spring green-up of vegetation and extended the wildfire season well into May. Fire danger rose to extreme levels prompting a state of emergency declaration by the Governor as well as a burn ban for 36 counties across central and western Oklahoma. More than 30,000 acres were burned in wildfires in just a few days during the month's second week, including a fire in Noble County that killed one person and destroyed or damaged 60 properties. Relief finally arrived in the form of a slow-moving upper-level low pressure system camped over the Desert Southwest. The spinning storm system allowed for ample moisture return into the Southern Plains from the Gulf of Mexico, an ingredient sorely lacking with other systems since the beginning of the year. The event's first impacts were felt on the 21st with a few showers in the Panhandle and continued through the end of the month as the storm moved slowly east and meandered about the Ark-La-Tex region. Rain fell somewhere in Oklahoma on each of May's final 11 days.

May 2014 Statewide Extremes

Description	Extreme	Station	Day
High Temperature	105°F	Altus, Cherokee	5, 6
Low Temperature	26°F	Kenton	2
High Precipitation	7.65 in.	Mt. Herman	
Low Precipitation	0.51 in.	Freedom	

The highest monthly rain totals occurred in far southeastern Oklahoma with Mt. Herman leading all Oklahoma Mesonet sites at 7.65 inches. Southwestern Oklahoma, an area plagued by drought for well over three years, also saw widespread 4-5 inch amounts. Even the central Oklahoma Panhandle received more than three inches, which is about an inch above normal for that area. Unfortunately, outside of those and a few other isolated regions, Oklahoma's wettest month still came up short. According to preliminary data from the Mesonet, the statewide average rainfall total for May was 3.06 inches, 2.15 inches below normal and the 28th driest since records began in 1895. Central and south central Oklahoma were particularly dry at more than 3 inches below normal, the 19th driest and 13th driest May on record for those areas, respectively. The lowest May total, 0.51 inches, was recorded at the Freedom Mesonet site. Oklahoma's climatological spring (March-May) ended as the 10th driest on record with a statewide average of 6.50 inches, 5.18 inches below normal. The January-May ranking was worse with an average of 7.32 inches, 7.57 inches below normal and the third driest such period on record. The first five months of the year were the sixth driest for Tulsa with a total of 8.45 inches, approximately 8 inches below normal. Oklahoma City shared a similar fate with 7.13 inches, a deficit of about 6.5 inches to rank as the ninth driest such period on record.

May 2014 Statewide Statistics

Temperature

	Average	Depart.	Rank (1895-2014)
Month (May)	69.1°F	1.2°F	39th Warmest
Season-to-Date (Mar-May)	58.2°F	-0.9°F	38th Coolest
Year-to-Date (Jan-May)	49.5°F	-1.6°F	23rd Coolest

Precipitation

	Total	Depart.	Rank (1895-2014)
Month (May)	3.06 in.	-2.15 in.	28th Driest
Season-to-Date (Mar-May)	6.50 in.	-5.18 in.	10th Driest
Year-to-Date (Jan-May)	7.32 in.	-7.57 in.	3rd Driest

Depart. = departure from 30-year normal

Owing to the extreme drought-fueled heat of the first half of the month, May finished 1.2 degrees above normal with a statewide average of 69.1 degrees. That ranked the month as the 39th warmest May on record, and also the first month to end warmer than normal since September 2013. The highest May temperature recorded by the Mesonet was 105 degrees at Altus and Cherokee on May 5 and 6, respectively. The lowest temperature of 26 degrees was recorded at Kenton on May 2, although it did freeze in the western Panhandle as late as May 14. Climatological spring was quite cool with a statewide average temperature of 58.2 degrees, 0.9 degrees below normal to rank as the 38th coolest on record. The January-May statewide average of 49.5 degrees was 1.6 degrees below normal and the 23rd coolest such period on record.

May ended with 80 percent of the state in drought according to the U.S. Drought Monitor. Extreme-to-exceptional drought reached as high as 61 percent before the rains began late in the month and finished at 55 percent. Over 26 percent of the state remained in exceptional drought by the month's end. The Drought Monitor's intensity scale slides from moderate-severe-extreme-exceptional, with exceptional being the worst classification.

Severe weather was nearly non-existent during May, normally Oklahoma's most violent weather month. Preliminary totals from the National Weather Service (NWS) indicate three confirmed tornadoes during May, which would tie 2012 for the third lowest total since accurate records began in 1950. That total could rise if NWS investigators find evidence of more tornadoes. The average tornado count for May is 22. May 2005 holds the record for the lowest total at zero and 2010 had the highest count at 91. The preliminary January-May tally of seven tornadoes ties 1988 for the lowest total through the first five months of the year. The 1988 annual total of 17 is the lowest on record. By the end of May last year, Oklahoma had already experienced 79 tornadoes for the first five months of the year, including 63 in May. Hail to the size of baseballs fell on May 7 across southwestern Oklahoma in addition to wind gusts of over 70 mph. Various other reports of flash flooding, large hail and severe winds were reported later in the month in addition to the tornadoes.

MAY 2014 DAILY SUMMARIES

MAY 1: Low pressure over the region aided in keeping Oklahoma relatively cool. High temperatures ranged from 61 in Miami, Kenton, and Boise City to 75 degrees in Grady. Some locations experienced patchy frost as minimum temperatures dropped below freezing, ranging from 28 in Hooker to 44 degrees at the Oklahoma City West Mesonet site. Winds were out of the northwest between 5 and 14mph.

MAY 2-6: As a surface high pressure settled over the area, skies cleared and temperatures began to warm. Temperatures climbed and eventually surpassed the seasonal normals. While the highest maximum temperatures during this period only hit 79 degrees in Hooker and Grady on the 2nd, they rapidly increased to 105 degrees in Altus and Cherokee on the 5th and 6th, respectively. The coolest temperatures occurred in the panhandle and increased from the upper 20s on the 2nd to the mid-40s on the 6th. The highest daily average wind speeds started off at a calm 9mph on Friday and then jumped to roughly 20mph the remaining four days. Rain-free skies, high winds, and hot temperatures created ideal fire conditions by the 4th. This five-day period housed the entire month's worth of daily record events. A low temperature record was made in McAlester on the 2nd at 35 degrees, and maximum temperature records were set in Oklahoma City (97 degrees) and McAlester (92 degrees) on the 4th, Oklahoma City (97 degrees) and Tulsa (92 degrees) on the 5th, and Oklahoma City again on the 6th (92 degrees).

MAY 7-9: A high pressure system vacated the area and a cooling trend with stormy weather ensued. Rain showers and thunderstorms started in eastern Oklahoma on the 7th and eventually formed in western and central Oklahoma by the afternoon. On that day, 2.5 inch hail fell in Chattanooga, 2.25 inch hail fell in Indiahoma and Taylor, and 2.75 inch hail fell in Addington. Fort Cobb Reservoir also experienced a severe wind gust of 71mph. Severe weather was reported on the 8th as well with a wind gust of 82mph in Walters and flooding at the Will Rogers Airport. The largest 24-hour rainfall amounts were 2.54 inches in Oklahoma City West (7th), 3.88 inches in Antlers (8th), and .60 inches in Mt. Herman (9th). The highest maximum temperatures in the state started at 100 degrees in Altus on the 7th and dropped by five degrees on the 8th and 9th. The lowest maximum temperatures were 80 degrees in Mt. Herman, 71 degrees in Cloudy, and 75 degrees in Newkirk on each consecutive day. The highest minimum temperatures were in the 60s and the lowest minimum temperatures decreased from 45 degrees in Hooker to 35 degrees in Kenton during the three-day period. Average wind speeds were between 10 and 20mph on the 7th, 5 and 16mph on the 8th, and less than 12mph on the 9th.

MAY 10-11: A cold front lifted back, turned into a warm front and caused a slight increase in temperatures. Temperatures ranged from 39 degrees in Kenton to 98 degrees in Hollis and Altus on the 10th and 41 degrees in Kenton to 99 degrees in Hollis on the 11th. Some brief thunderstorms produced .18 inches of rain in Idabel during the early hours of the 10th and by the 11th, showers and thunderstorms moved into far western OK, producing .23 inches of rain in Cheyenne. South-central and southeast OK saw some patchy fog on the 10th. Maximum daily average wind speeds were 20mph on the 10th and a gusty 29mph on the 11th as a cold front started to push ever so slightly into far northwest Oklahoma. With the high wind speed averages and gusts reaching 61mph in May Ranch on the 11th, a wind advisory was put in effect for the northeast and other areas north of I-40.

MAY 12-13: The previous day's cold front pushed further into the state and moved southeast. Rain and thunderstorms developed ahead of the front in northwest, west-central, and central Oklahoma during the 12th. By evening, thunderstorms had moved into eastern Oklahoma and continued the following day in central and eastern parts of the state. The heaviest amounts of precipitation occurred in the east with as much as 2.88 inches at the Jay Mesonet, 2.53 inches at the Clayton Mesonet, and 2.41 inches at the Talihina Mesonet on the 12th where flooding was also reported. The 13th only saw as much as .23 inches in Cheyenne. The highest maximum temperatures drastically plummeted from the already cooler 87 degrees in Webbers Falls on the 12th to 69 degrees in Ringling, Burneyville, and Grady on the 13th. The lowest

maximum temperatures actually increased from 49 degrees to 54 degrees in Kenton. Minimum temperatures ranged from 37 degrees (Kenton) to 65 degrees (Broken Bow) on the 12th and 33 degrees (Boise City) to 53 degrees (southeast OK) on the 13th. Average wind speeds were 10mph to 27mph on Monday and less than 18mph on Tuesday. Gusts in the 40s were reported on both days.

MAY 14-16: Temperatures gradually started to warm with the highest maximums climbing from 75 degrees in Grady on the 14th to 82 degrees in Hollis, Tipton, and Grady on the 15th, and finally to 91 degrees in Grady on the 16th. The lowest maximum temperatures increased from 54 degrees in Westville to 62 degrees in Miami and Jay. Minimum temperatures ranged from the low-mid 30s to the low 50s. Light showers passed through northwest, central, and eastern Oklahoma with totals ranging from trace amounts to .61 inches in Clayton on the 14th, .47 inches in Sallisaw on the 15th, and .37 inches in Miami on the 16th. Average wind speeds were mild, measuring less than 13mph on the 14th, less than 10mph on the 15th, and less than 15mph on the 16th. Gusts at 51mph were reported in Woodward that Friday.

MAY 17-20: Due to an upper-level disturbance, scattered rain fell in northern and east-central Oklahoma. Maximum precipitation amounts were .75 inches in Sallisaw, .61 inches n Webbers Falls, and .49 inches in Cookson. Most areas received around one-tenth of an inch or less. The following days were rain-free and temperatures began to rise once again. Maximum temperatures ranged from 61 to 80 degrees, 70 to 91 degrees, 79 to 101 degrees, and 81 to 103 degrees each consecutive day. The warmest temperatures were all in the northwest and southwest. Minimum temperatures ranged from the 40s to 50s at the beginning of this period, and from the 40s to the 70s by the end. On the 18th, a warm front stalled along the Red River and winds were from the south-southeast. This made for some breezy conditions and instigated a wind advisory on the 19th. The highest daily average wind speeds were clocked at 16mph on the 17th, 18mph on the 18th, 27mph on the 19th, and 23mph on the 20th. Wind gusts peaked in the 40s from the 17ththrough the 19th and in the 50s on the 20th.

MAY 21: An upper low moving across the western US and a stalled cold front in northwest Oklahoma created a slight drop in maximum temperatures. The only Mesonet site to experience any relief from dryness that day was Slapout who received .5 inches of precipitation. Maximum temperatures were between 81 degrees in Jay and Westville and 99 degrees in Freedom. Minimum temperatures were between 49 degrees in Hooker and Goodwell and 74 degrees in Fairview. Average wind speeds were between 5 and 19mph.

MAY 22-27: This period experienced some heavy rain from an east-moving low pressure system as well as some severe wind reports of 70mph in Guymon on the 22nd. The warmest temperatures in the state dropped from 95 degrees in Freedom on Thursday and huddled in the upper 80s the following four days. Some areas only warmed into the 80s on the 22nd, 60s on the 23rd, 70s on the 24th, 25th, and 26th, and upper 60s on the 27th. The highest minimum temperatures remained in the upper 60s for this six-day stretch of time while the lowest minimum temperatures measured in the upper 40s and low 50s. Kenton came in with the coolest temperature every day except on the 24th when it came in second to Boise City. Small hail and thunderstorms spread throughout Oklahoma as a front stalled over the region on the 22nd. The slow, east moving storms produced by the upper level low dropped over one inch of rain on the 22nd and 24th, nearly 3 inches on the 23rd, and just over 2 inches on the 25th, 26th, and 27th. Although Hobart received the most rain at 3.01 inches on the 23rd, flooding was reported in Fort Gibson and Warner on the 26th. The most heavily soaked areas were initially north of the I-44 corridor, but eventually moved east and spread throughout the state. Non-severe wind gusts measured in the 40s, 50s, and 60s, and the highest gusts observed were 67mph in Goodwell (22nd), 64mph in Kenton (22nd), and 60mph in Grady (26th). Average wind speeds were not nearly as bad, however, as they generally measured less than 13mph on all six days.

MAY 28-31: The last four days of May ended with maximum temperatures ranging from the upper 70s and low 80s to the low 90s. Hooker was the warmest Mesonet site from the 28th through the 30th until Grady came in on top on the 31st. Minimum temperatures were primarily in the 50s and 60s. Fog formed in central Oklahoma on the 28th and southeast Oklahoma on the 30th, dropping some visibilities to less than one-quarter mile. The stalled and spinning upper low over southeast Oklahoma aided in the development of showers and thunderstorms in central, north-central, and eastern OK through the end of the month. Although maximum daily rainfall measurements were .32 inches in Hugo (28th), .81 inches in Broken Bow (29th), .72 inches in Kenton (30th), and 1.13 inches in Boise City (31st), most areas received less than .1 inches on the 28th and 29th, and less than a quarter inch on the 30th and 31st. Winds were calm and generally less than 10mph each day.

MAY 2014 SEVERE WEATHER

Hail (2 inches in diameter or greater)

Size (in.)	Location	County	Day
2.50	5 SSW Chattanooga	Tillman	7
2.50	2 SW Chattanooga	Tillman	7
2.25	1 N Indiahoma	Comanche	7
2.25	1 W Taylor	Cotton	7
2.75	1 SW Addington	Jefferson	7

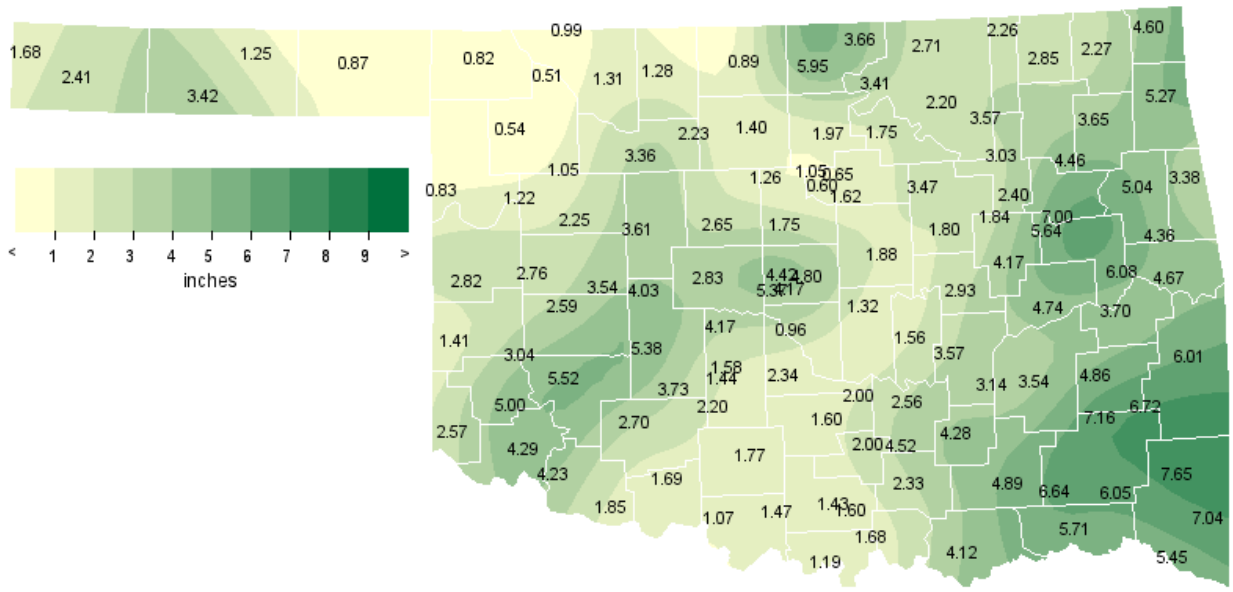
Wind Gusts (70 mph or greater)

Speed (m.p.h)	Location	County	Day
71	Fort Cobb Reservoir	Caddo	7
82	4 NW Walters	Cotton	8
70	2 W Guymon	Texas	22

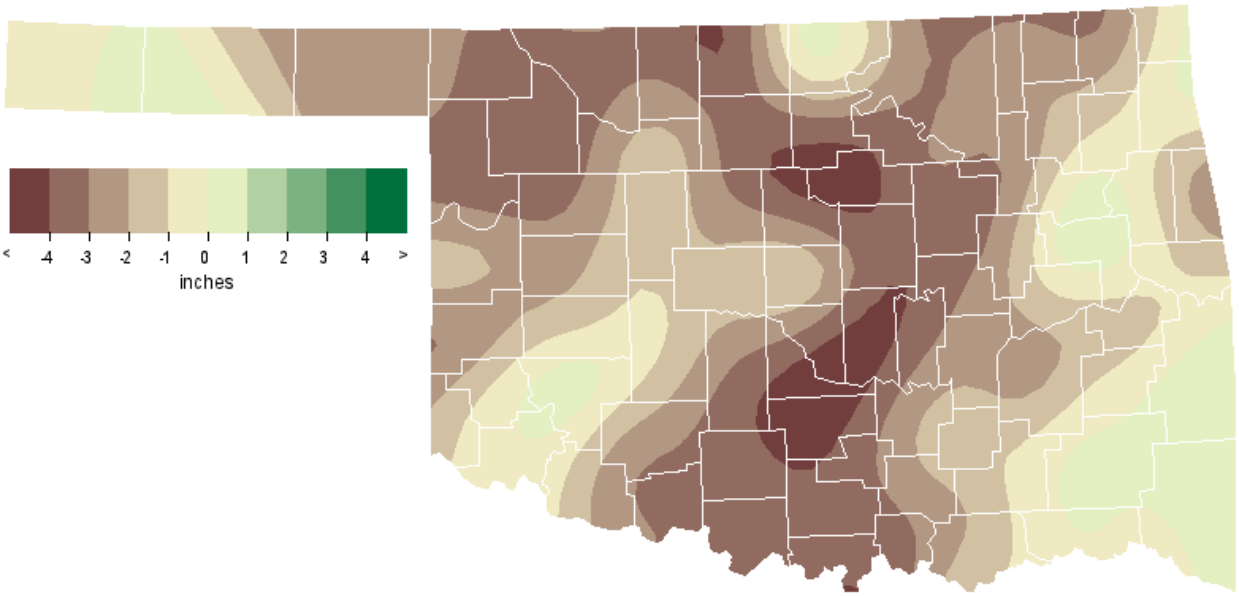
Flooding

Location	County	Day
4 E Will Rogers Airport	Oklahoma	8
Talihina	Le Flore	12
Fort Gibson	Muskogee	26
Warner	Muskogee	26

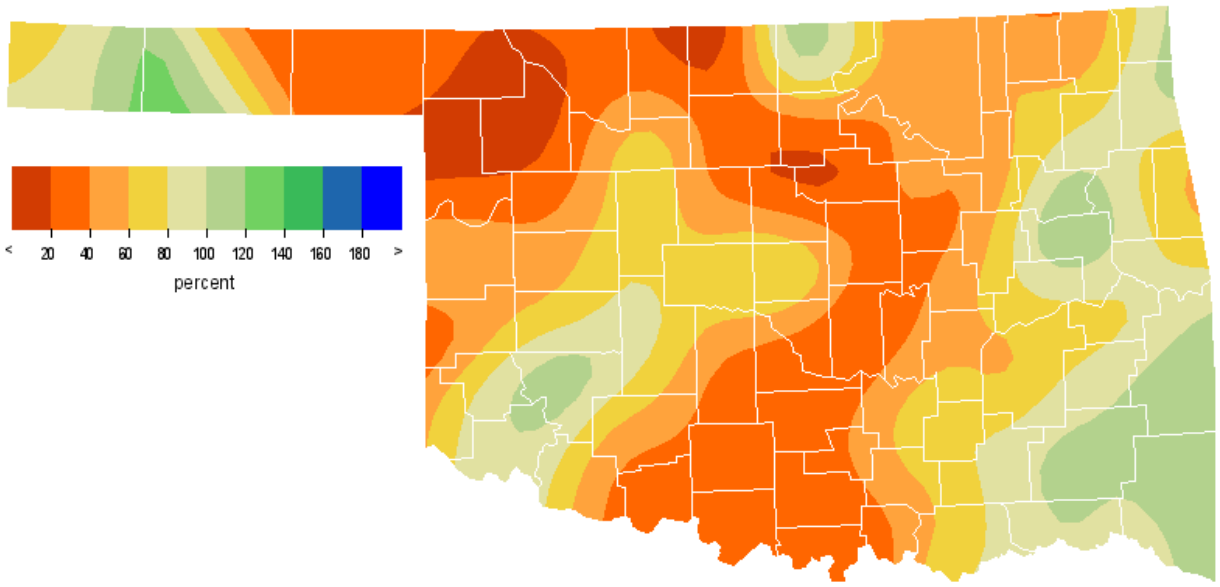
MAY 2014 OBSERVED PRECIPITATION



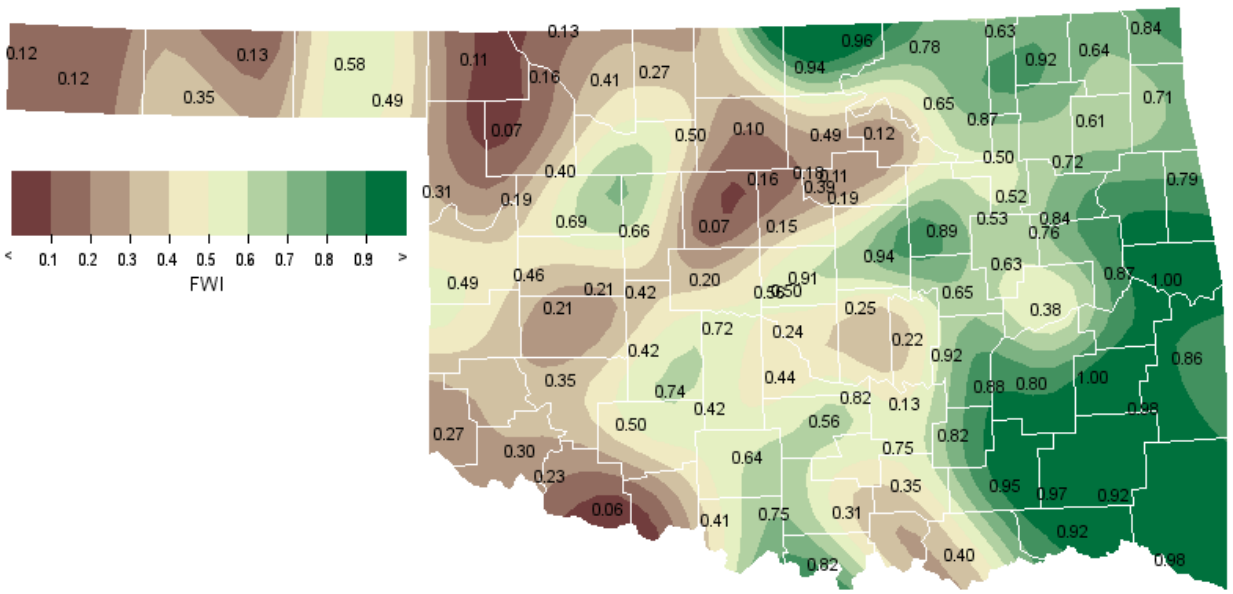
MAY 2014 DEPARTURE FROM NORMAL PRECIPITATION



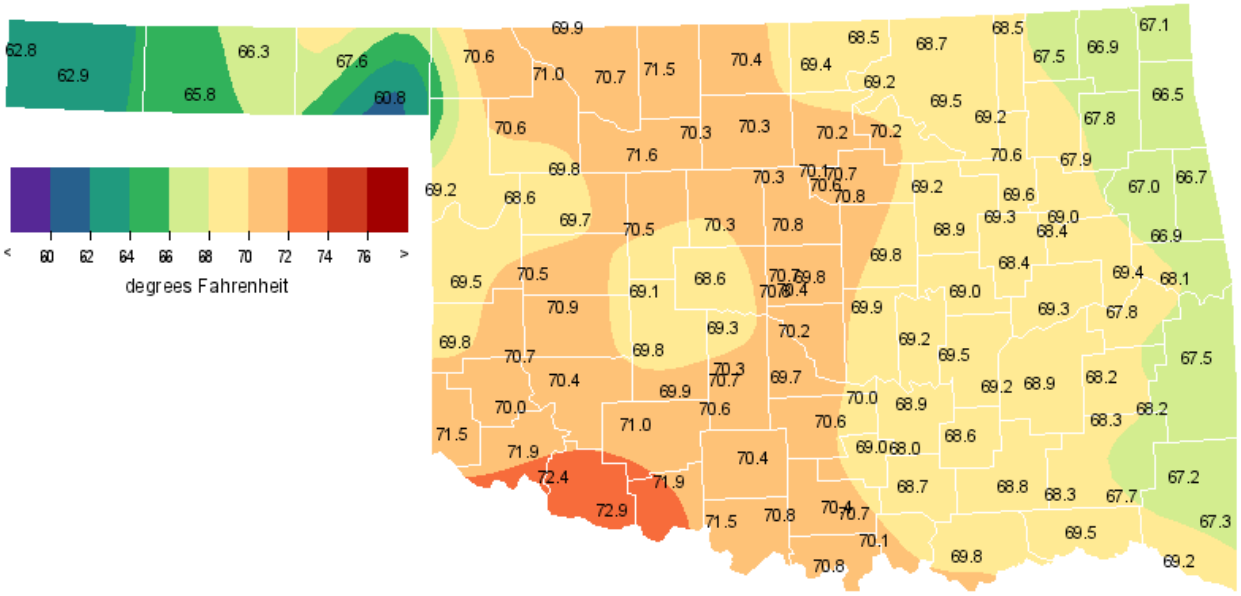
MAY 2014 PERCENT OF NORMAL PRECIPITATION



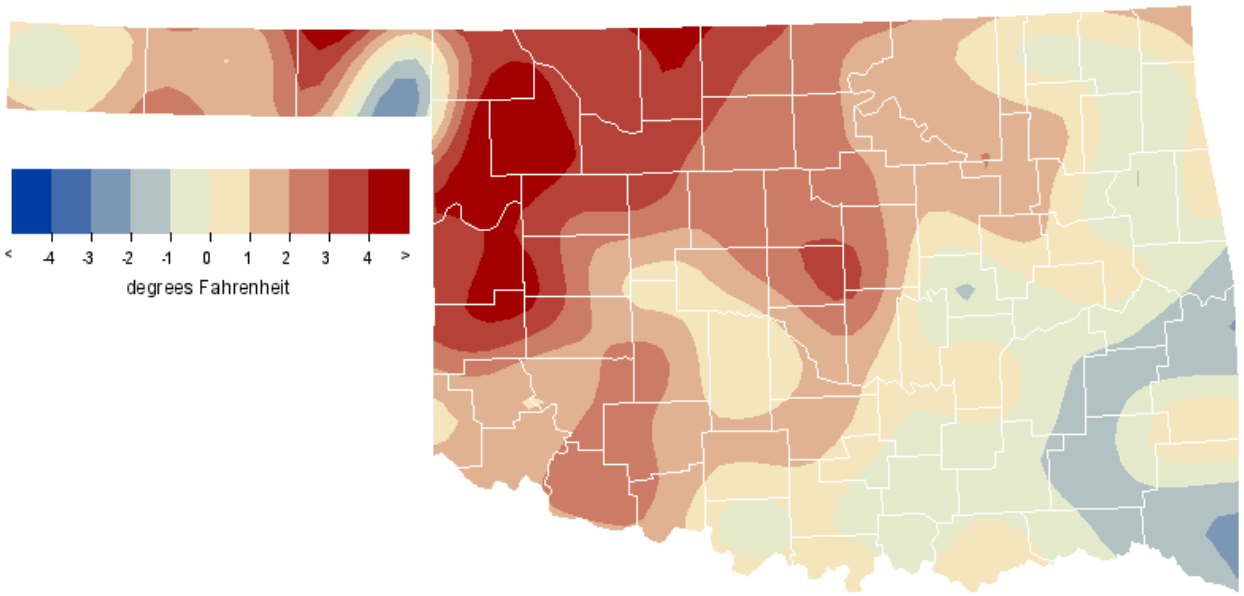
MAY 2014 AVERAGE SOIL MOISTURE AT 25CM



MAY 2014 AVERAGE TEMPERATURE



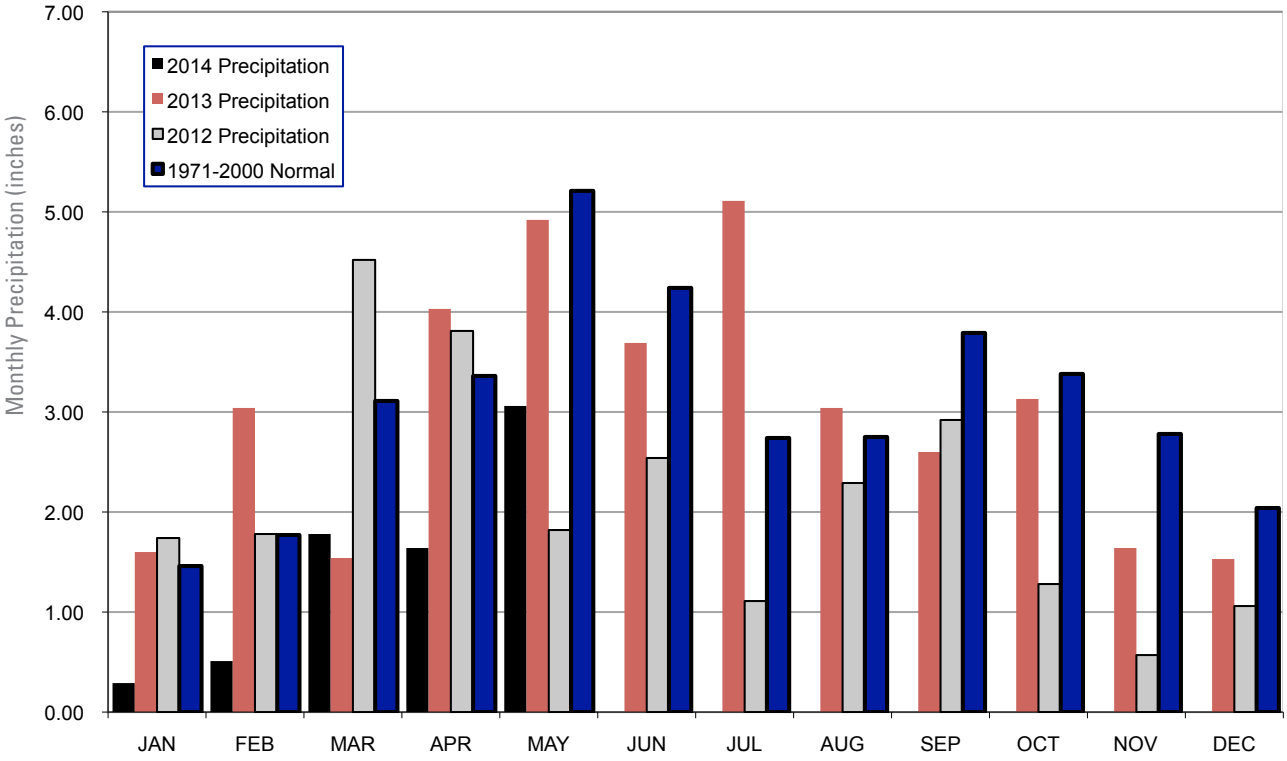
MAY 2014 DEPARTURE FROM NORMAL TEMPERATURE



MESONET MONTHLY SUMMARY FOR MAY 2014

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
PANHANDLE										
Arnett	69.2	100	20	37	1	67	198	.83	.40	23
Beaver	67.5	101	19	27	2	95	173	.87	.35	22
Boise City	62.8	93	19	29	2	133	66	2.41	1.13	31
Buffalo	70.6	103	4	36	1	74	247	.82	.38	25
NORTH CENTRAL										
Alva	70.7	104	6	32	2	76	255	1.31	.35	25
Blackwell	69.4	100	4	32	2	75	212	5.95	2.37	25
Breckinridge	70.3	100	4	33	2	64	229	1.40	.46	23
Cherokee	71.4	105	6	31	2	65	265	1.28	.36	12
Fairview	71.6	103	6	37	2	51	257	3.36	.79	26
Freedom	71.0	103	4	32	1	76	260	.51	.26	23
Lahoma	70.3	102	6	36	2	62	226	2.23	1.05	27
NORTHEAST										
Bixby	69.6	95	4	34	1	69	212	2.40	1.37	26
Burbank	69.1	98	4	36	1	76	204	3.41	2.33	25
Claremore	*****	***	***	***	***	****	****	*****	*****	***
Copan	68.5	96	4	35	16	86	195	2.26	1.01	25
Foraker	68.7	98	4	35	1	82	195	2.71	1.34	25
Inola	67.8	90	4	35	2	81	167	4.46	1.46	8
Jay	66.5	91	4	35	2	105	153	5.27	2.88	12
Miami	67.1	90	4	34	2	102	167	4.60	1.07	26
WEST CENTRAL										
Bessie	70.9	102	6	38	1	45	229	2.59	1.36	23
Butler	70.4	102	6	34	2	61	228	2.76	.89	22
Camargo	68.6	101	6	32	2	79	192	1.22	.29	12
Cheyenne	69.6	100	5	40	2	64	206	2.82	.74	12
Erick	69.8	101	5	33	1	60	210	1.41	.67	23
CENTRAL										
Acme	70.6	98	5	33	1	50	224	2.20	1.00	23
Bowlegs	69.1	93	4	35	1	60	188	1.56	.70	12
Bristow	68.9	95	4	32	2	76	196	1.80	1.13	27
Lake Carl Blac	70.1	97	4	32	2	69	228	1.05	.37	24
Chandler	69.8	95	4	36	1	57	206	1.88	1.09	27
Chickasha	70.3	97	5	36	1	53	217	1.58	.53	27
El Reno	68.6	96	4	32	1	67	178	2.83	1.02	23
Guthrie	70.8	97	4	36	2	55	236	1.75	.60	26
Kingfisher	70.3	99	4	31	1	66	231	2.65	1.15	23
Marena	70.6	97	4	37	1	56	231	.60	.11	25
Minco	69.3	95	5	36	1	53	188	4.17	2.29	23
Marshall	70.4	98	4	31	2	71	237	1.26	.57	25
EAST CENTRAL										
Cookson	66.9	89	4	34	1	97	155	4.36	1.20	12
Eufaula	69.3	91	4	39	2	56	188	4.74	1.95	12
Haskell	68.3	91	4	36	1	72	175	5.64	2.19	26
Hectorville	69.2	91	4	36	1	65	196	1.84	.49	26
Holdenville	69.5	92	4	39	1	49	187	3.57	1.86	12
McAlester	68.9	91	4	33	1	67	187	3.54	1.66	12
Okmulgee	68.3	91	4	35	2	73	177	4.17	.95	26
SOUTHWEST										
Altus	71.9	105	5	33	1	42	255	4.29	2.46	23
Apache	69.9	98	5	34	1	52	203	3.73	2.23	23
Fort Cobb	69.8	97	6	34	1	56	204	5.38	2.07	23
Grandfield	72.9	102	5	34	1	36	282	1.85	.53	7
Hinton	69.0	98	6	34	1	67	192	4.03	1.32	26
Hobart	70.4	102	5	33	1	56	222	5.52	3.01	23
SOUTH CENTRAL										
Ada	68.9	93	4	34	1	52	174	2.56	.93	12
Ardmore	70.7	95	4	38	1	40	216	1.60	.64	12
Burneyville	70.8	95	4	32	1	43	223	1.19	.57	8
Byars	70.0	94	4	37	1	46	201	2.00	1.03	12
Centrahoma	68.6	90	4	33	1	58	170	4.28	2.08	12
Durant	69.7	91	4	38	1	39	184	4.12	1.28	12
Fittstown	68.0	91	4	37	1	57	150	4.52	2.75	27
Ketchum Ranch	70.4	95	4	35	1	43	211	1.77	.51	23
SOUTHEAST										
Antlers	68.3	90	4	36	1	58	161	6.64	3.88	8
Broken Bow	67.3	88	4	32	1	62	133	7.04	2.08	12
Clayton	68.4	90	4	35	1	68	172	7.16	2.53	12
Cloudy	67.7	88	4	38	1	61	144	6.05	3.34	8
Hugo	69.5	89	4	41	1	43	182	5.71	3.75	8
Goodwell	65.8	97	19	31	1	94	118	3.42	1.36	22
Hooker	66.3	100	19	28	1	90	131	1.25	.53	22
Kenton	62.8	93	19	26	2	140	71	1.68	.72	30
Slapout	67.3	101	4	35	1	****	****	1.34	.50	21
May Ranch	69.9	102	4	38	13	78	232	.99	.33	22
Medford	70.3	101	4	31	2	72	238	.89	.38	12
Newkirk	68.4	97	4	37	1	85	191	3.66	.98	25
Red Rock	70.2	97	4	35	1	67	229	1.97	1.39	25
Seiling	69.9	102	20	31	2	76	227	1.05	.50	23
Woodward	70.6	101	4	35	2	73	245	.54	.27	23
Nowata	67.5	92	4	33	2	93	172	2.85	1.01	25
Pawnee	70.2	98	4	34	2	66	226	1.75	.84	25
Porter	69.0	92	4	38	1	66	189	7.00	2.71	26
Pryor	67.8	89	4	34	2	91	179	3.65	1.23	26
Skiatook	69.2	93	4	39	1	69	200	3.57	2.46	25
Tulsa	70.6	94	4	40	2	57	230	3.03	1.36	25
Vinita	66.9	89	4	33	2	97	155	2.27	1.00	12
Wynona	69.5	97	4	38	2	70	208	2.20	1.04	26
Putnam	69.8	101	6	33	1	69	218	2.25	.98	23
Retrop	70.6	101	5	36	1	50	223	3.04	1.29	23
Watonga	70.5	101	6	39	1	53	222	3.61	1.09	27
Weatherford	*****	***	***	***	***	****	****	3.54	1.21	26
Ninnekah	70.7	98	5	34	1	49	226	1.44	.46	23
Norman	70.3	95	4	36	1	51	214	.96	.29	27
Oilton	69.1	95	4	31	2	71	198	3.47	1.92	25
OKC East	70.3	96	4	38	2	47	213	4.17	2.39	7
OKC North	70.6	96	4	43	1	44	218	4.42	1.64	7
OKC West	70.8	96	4	41	2	43	222	5.37	2.54	7
Okemah	69.1	92	4	35	1	66	192	2.93	1.39	27
Perkins	70.8	98	4	36	2	55	235	1.62	.50	8
Shawnee	69.9	94	4	40	2	54	205	1.32	.54	27
Spencer	69.8	94	4	38	1	54	204	4.80	1.50	27
Stillwater	70.7	99	4	33	2	62	240	.65	.14	8
Washington	69.7	95	4	37	1	49	194	2.34	1.21	23
Sallisaw	68.1	90	4	35	1	85	181	4.67	1.10	12
Stigler	67.9	88	4	36	2	82	171	3.70	1.09	31
Stuart	69.2	90	4	40	2	51	180	3.14	1.70	12
Tahlequah	67.0	89	4	34	2	97	160	5.04	1.56	12
Webbers Falls	69.4	94	4	39	1	66	203	6.08	1.21	12
Westville	66.7	88	4	35	1	103	155	3.38	1.33	8
Hollis	71.6	103	5	36	1	40	244	2.57	1.22	23
Mangum	70.1	103	5	36	1	50	209	5.00	2.85	23
Medicine Park	71.0	98	5	42	1	35	220	2.70	.85	26
Tipton	72.4	104	5	32	1	41	269	4.23	1.75	23
Walters	71.9	101	5	37	1	34	249	1.69	.53	8
Lane	68.8	90	4	35	1	54	172	4.89	1.41	12
Madill	70.2	92	4	32	1	47	207	1.68	.57	8
Newport	70.4	94	4	37	1	42	210	1.43	.69	12
Pauls Valley	70.6	95	4	37	1	43	217	1.60	.54	8
Ringling	70.8	95	4	35	1	40	219	1.47	.64	8
Sulphur	69.0	92	4	32	1	57	181	2.00	1.04	12
Tishomingo	68.7	92	4	35	1	56	171	2.33	1.03	12
Waurika	71.5	98	5	35	1	34	235	1.07	.46	8
Idabel	69.1	88	4	36	1	53	181	5.45	2.03	8
Mt Herman	67.2	86	4	33	1	70	138	7.65	3.48	8
Talihina	68.2	90	4	32	1	76	175	6.72	2.75	8
Wilburton	68.3	89	4	35	1	72	174	4.86	1.50	12
Wister	67.5	89	4	33	1	80	158	6.01	2.17	8

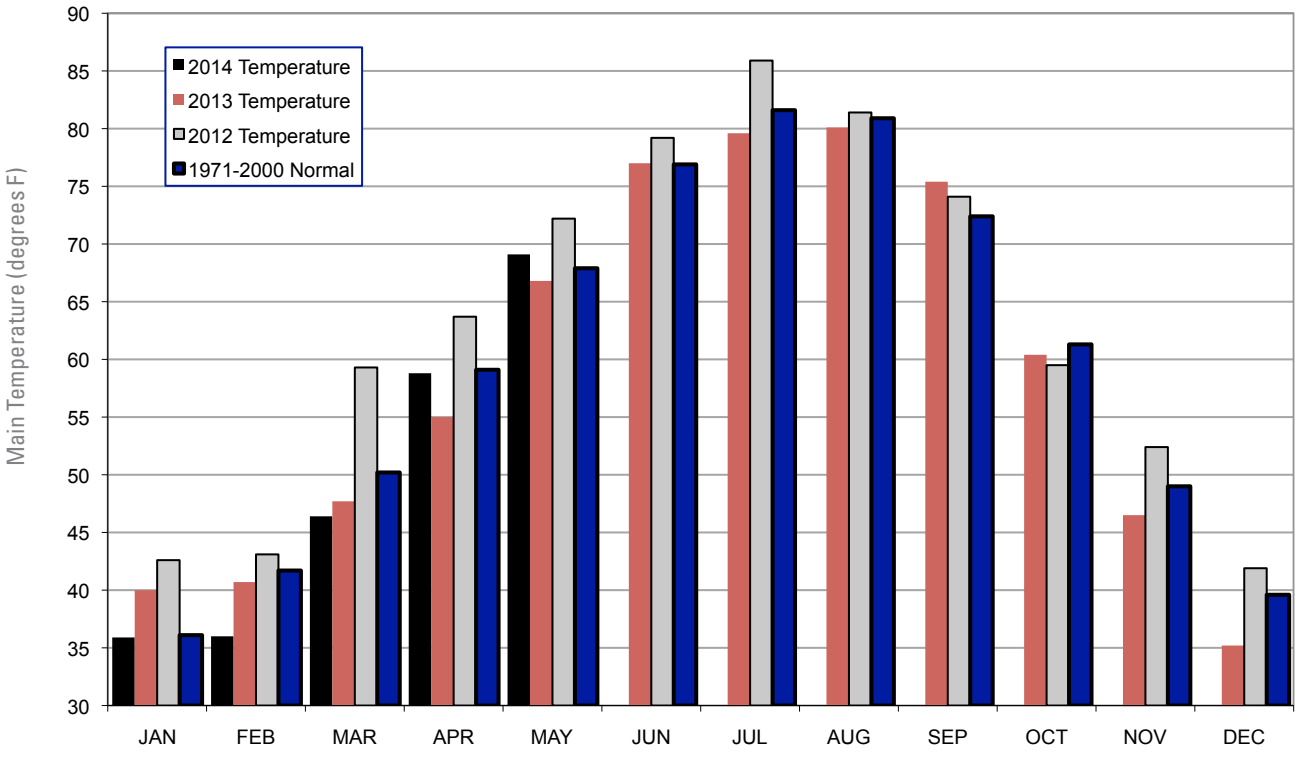
2012, 2013 AND 2014 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL



May 2014 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	May-13
Panhandle	1.61	-1.76	32nd Driest	6.92 (1902)	0.19 (2004)	0.49
North Central	1.93	-2.79	21st Driest	11.11 (1957)	0.63 (1970)	3.39
Northeast	3.43	-2.05	29th Driest	17.98 (1943)	1.45 (1911)	6.94
West Central	2.58	-2.32	35th Driest	12.10 (1982)	0.42 (1966)	1.89
Central	2.37	-3.26	19th Driest	12.07 (1982)	0.92 (1988)	5.32
East Central	4.14	-1.75	40th Driest	14.80 (1943)	1.56 (1921)	7.00
Southwest	3.73	-1.24	56th Driest	10.68 (1982)	0.44 (1966)	2.52
South Central	2.41	-3.19	13th Driest	12.82 (1982)	0.58 (1988)	7.12
Southeast	6.33	-0.03	51st Wettest	13.78 (1990)	1.21 (1988)	7.20
Statewide	3.06	-2.15	28th Driest	10.54 (1957)	1.23 (1988)	4.72

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



May 2014 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	May-13 (F)
Panhandle	65.8	1.3	46th Warmest	71.1 (1896)	58.0 (1907)	66.0
North Central	70.3	3.2	13th Warmest	74.5 (1962)	60.6 (1907)	65.9
Northeast	68.5	1.3	50th Warmest	74.4 (1962)	61.7 (1917)	65.9
West Central	70.0	2.8	22nd Warmest	75.0 (1896)	60.9 (1907)	67.5
Central	70.0	1.5	39th Warmest	74.6 (1962)	62.0 (1907)	66.6
East Central	68.4	0.1	52nd Coolest	74.3 (1962)	63.2 (1917)	67.0
Southwest	71.0	1.4	35th Warmest	76.4 (1996)	63.5 (1907)	69.8
South Central	69.8	0.1	54th Coolest	75.1 (1996)	63.5 (1907)	68.4
Southeast	68.1	-0.7	47th Coolest	73.1 (1899)	62.8 (1917)	67.1
Statewide	69.1	1.2	39th Warmest	74.0 (1962)	61.9 (1907)	67.1

RECORD EVENT REPORTS MAY 2014

Description	Day	Location	Record	Previous Record	Year
Daily Low Temperature	2	McAlester	35	35	2005
Daily Maximum Temperature	4	Oklahoma City	97	93	1955
Daily High Temperature	4	McAlester	92	92	1955
Daily Maximum Temperature	5	Oklahoma City	97	94	1940
Daily High Temperature	5	Tulsa	92	92	1952
Daily Maximum Temperature	6	Oklahoma City	92	92	1918

MESONET EXTREMES FOR MAY 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	103	4th	Buffalo	26	2nd	Kenton	3.42	Goodwell	1.36	22nd	Goodwell
North Central	105	6th	Cherokee	31	2nd	Medford	5.95	Blackwell	2.37	25th	Blackwell
Northeast	98	4th	Foraker	33	2nd	Nowata	7.00	Porter	2.88	12th	Jay
West Central	102	6th	Bessie	32	2nd	Camargo	3.61	Watonga	1.36	23rd	Bessie
Central	99	4th	Kingfisher	31	2nd	Marshall	5.37	Oklahoma City West	2.54	7th	Oklahoma City West
East Central	94	4th	Webbers Falls	33	1st	McAlester	6.08	Webbers Falls	2.19	26th	Haskell
Southwest	105	5th	Altus	32	1st	Tipton	5.52	Hobart	3.01	23rd	Hobart
South Central	98	5th	Waurika	32	1st	Burneyville	4.89	Lane	2.75	27th	Fittstown
Southeast	90	4th	Antlers	32	1st	Talihina	7.65	Mt Herman	3.88	8th	Antlers
Statewide	105	5th	Altus	26	2nd	Kenton	7.65	Mt Herman	3.88	8th	Antlers

JUNE OUTLOOK

June marks a transition from spring into summer, and is considered the first of the "climatological summer" months. About the middle of the month, weather patterns change from mild and wet to dry and hot. The transition is especially apparent across Western Oklahoma, where the wheat harvest replaces vegetation with exposed soil. Sunlight heats the bare ground more quickly, pushing temperatures higher. Buffalo and Mangum each average more than five days with temperatures at or above 100 degrees.

Rainfall across the state generally decreases from its springtime peak, but the Panhandle has its wettest months ahead of it. While most of the state follows the patterns of the Great Plains, weather patterns in far western Oklahoma are more controlled by the Rocky Mountains to the west, which typically develop late afternoon thunderstorms. Even with its peak rainfall occurring in June, most Panhandle locations are still drier than the rest of the state. Rainfall totals over an inch are rare, even in their rainy season. The Panhandle is also notable for dust storms during the dry years, especially during the 1930s and 1950s. In 1937, Goodwell reported 11 days with visibility less than one mile due to dust storms, and a dust storm near Hooker in 1957 led to a 12-car pile-up. A "black blizzard" was reported at Kenton in 1939, when rain washed thick dust from the air.

Temperature

Mean	76.9 degrees
Warmest June	1953, 84.6 degrees
Coldest June	1903, 69.8 degrees
Hottest location	Waurika, 80.3 degrees
Coolest location	Boise City, 72.6 degrees
Hottest recorded	117 degrees, Hollis, June 24, 1953; Mangum, June 24, 1980; June 27-28, 1980
Coldest recorded	34 degrees, Kenton, June 13, 1919

Flooding is a major hazard during June. Flooding can occur from localized heavy rainfall, or from persistent rains in a river basin. As much as twenty inches may have fallen near Hydro within a 14-hour period one June 22, 1948, although official reports showed 11.25 inches. Resulting flash floods killed 11 people who found themselves trapped along Route 66. Basin flooding in 1923 was described as "unusually disastrous" on the North Canadian, Arkansas, Cimarron, and Neosho rivers from June 7-11. The Washita River flooded Pauls Valley in 1941, contributing to an extensive development effort to control the river through a series of small dams upstream. In 1957, waters first topped the spillway at Lake Texoma, and the Red River remained in flood stage downstream of the dam for the entire month. Waurika, Guthrie, and areas north and east of the Arkansas River have frequently dealt with flooding in past Junes.

Precipitation

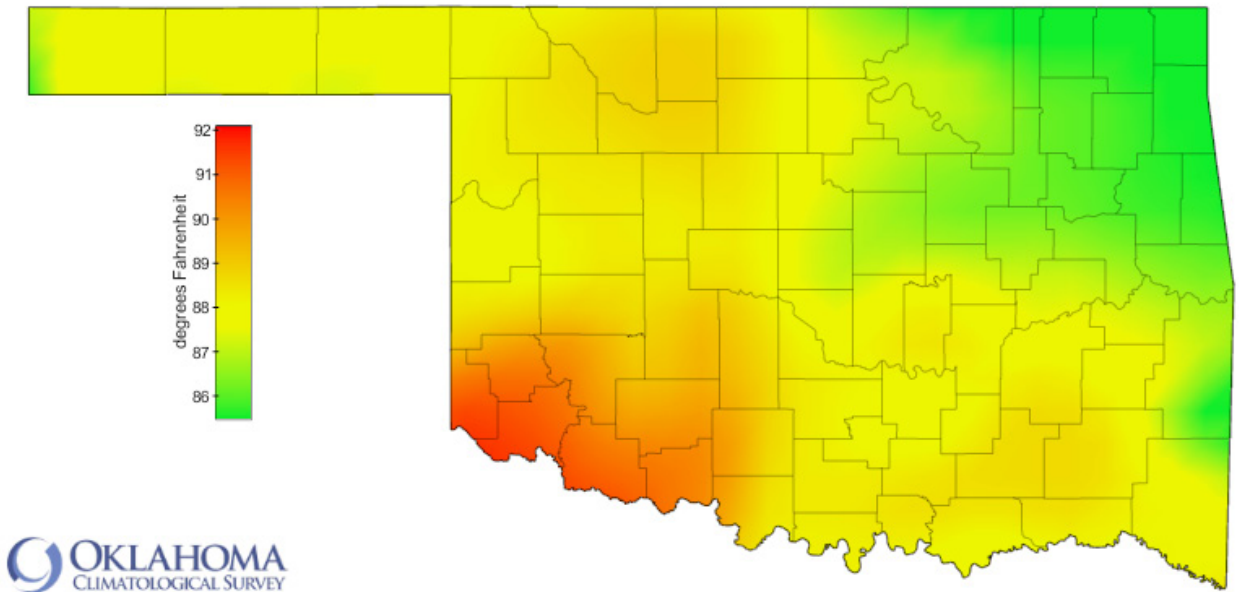
Mean	4.24 inches
Wettest June	2007, 9.10 inches
Driest June	1933, 0.46 inches
Wettest location	Durant, 5.49 inches
Driest location	Kenton, 2.18 inches
Most recorded	18.87 inches, Meeker, 1932

Tornadoes

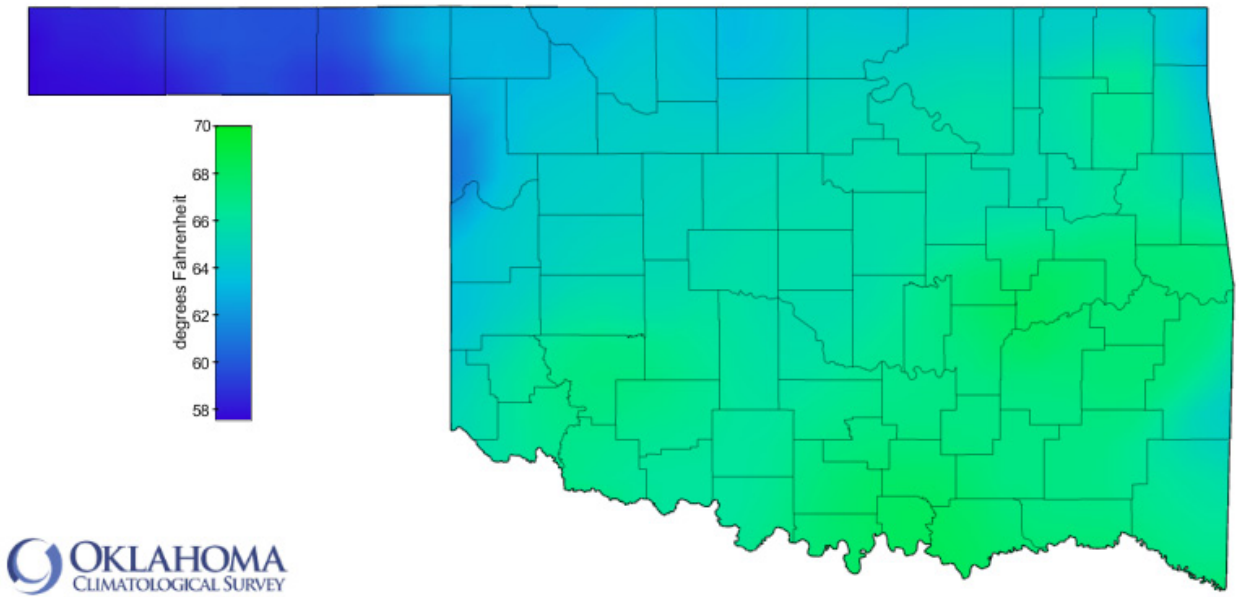
Average June Tornadoes (1950-2013)	7.8
Most	28 (1995)

Springtime severe weather patterns are common in early June. The state averages nine tornadoes per year, with as many as 28 occurring in 1995 and as few as none in 1987. Especially violent tornadoes include one on June 1, 1917 that killed 14 people in Coalgate, one that left 35 dead in southwest Oklahoma City on June 12, 1942, and a June 8, 1974 tornado that killed 14 in Drumright. Hail also plagues the state. Farmers have lost wheat crops to hailstorms just before the fields were ready for harvest. One hailstorm cut a 25-mile by 10-mile swath west of Gage on June 14, 1938. In 1993, hailstorms from Tyrone to Grove caused more than $70 million in damage to the wheat crop alone. Hail up to six inches in diameter was reported in Enid from the storm, and extensive property damage occurred in Blackwell. A nearly-stationary storm dropped hailstones on Woodward for one hour in 1957, causing extensive damage to property. Straight-line winds from thunderstorms have been recorded as high as 110 miles per hour, leaving many customers without power.

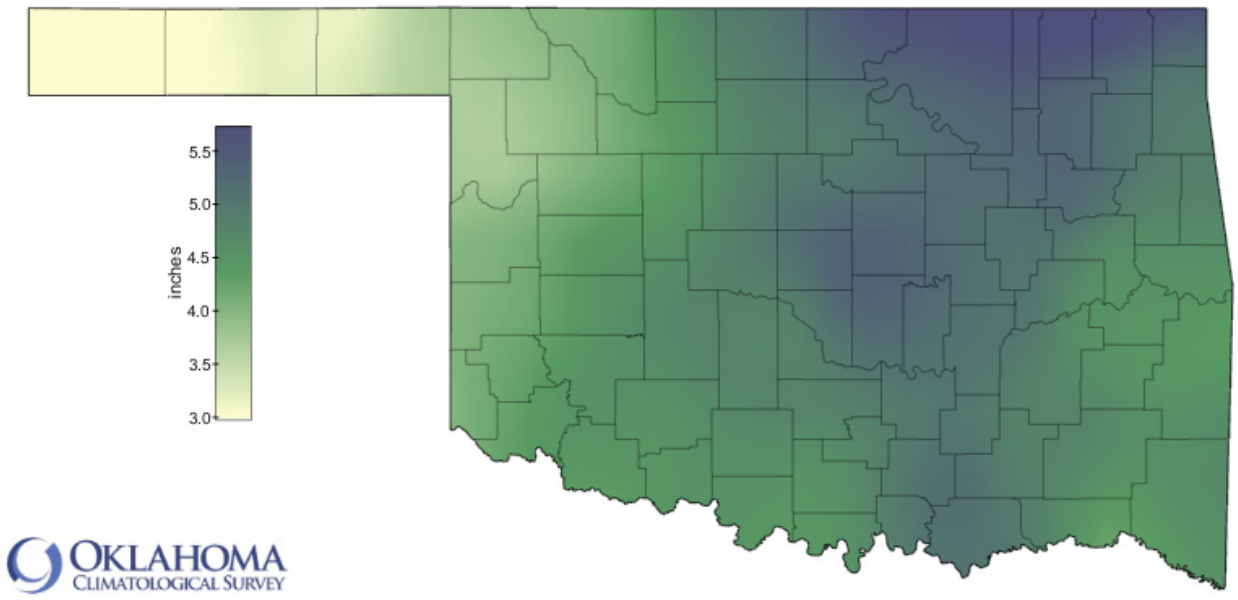
JUNE NORMAL DAILY MAXIMUM TEMPERATURE (1981-2010)



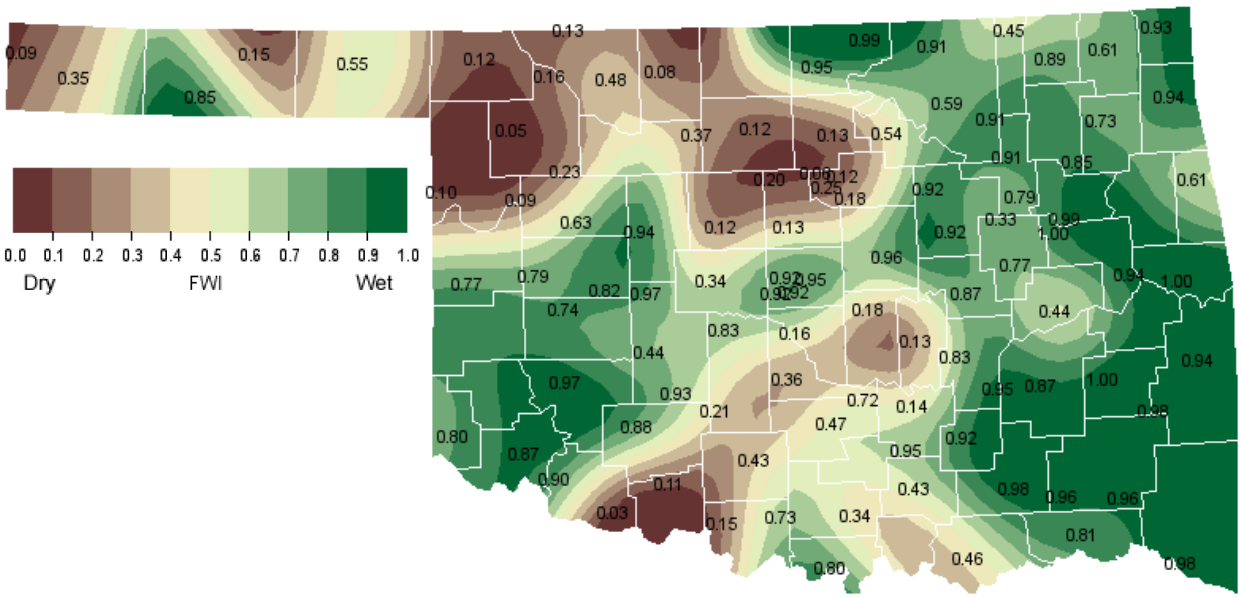
JUNE NORMAL DAILY MINIMUM TEMPERATURE (1981-2010)



JUNE NORMAL PRECIPITATION (1981-2010)

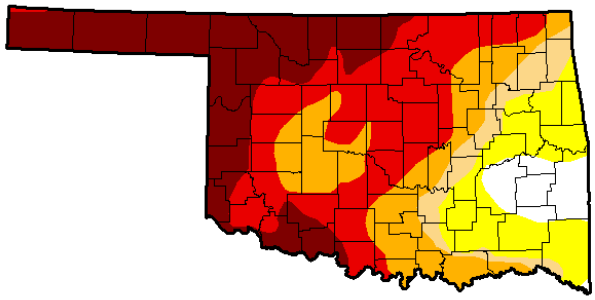


JUNE 1, 2014 SOIL MOISTURE CONDITIONS AT 25CM



JUNE 2014 DROUGHT INDICES

U.S. Drought Monitor
Oklahoma



May 27, 2014
(Released Thursday, May. 29, 2014)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	5.78	94.22	79.94	73.26	55.04	26.47
Last Week 5/20/2014	5.78	94.22	81.06	73.26	61.24	34.25
3 Months Ago 2/25/2014	0.09	99.91	62.41	28.86	13.07	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 5/28/2013	31.88	68.12	58.80	48.33	26.51	11.34

Intensity:

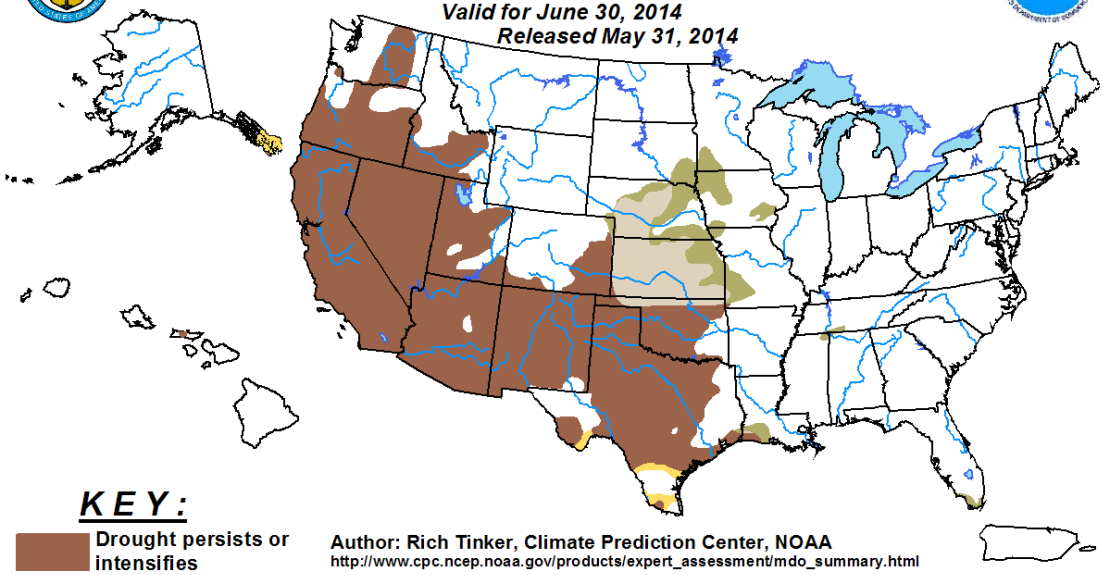
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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

Author:
Michael Brewer
NCDC/NOAA

http://droughtmonitor.unl.edu/

U.S. Monthly Drought Outlook
Drought Tendency During the Valid Period
Valid for June 30, 2014
Released May 31, 2014



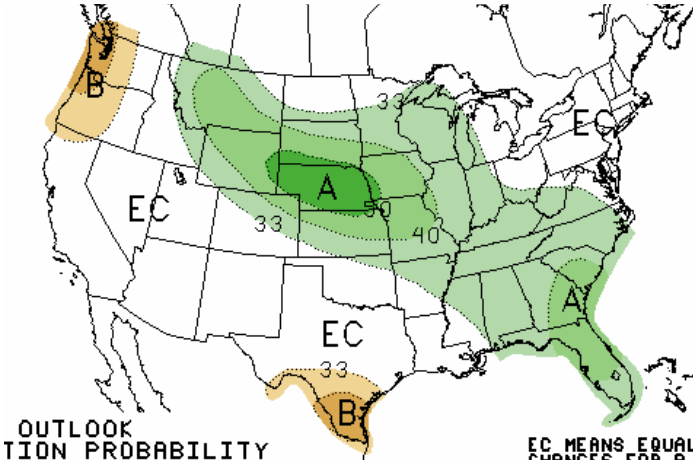
KEY:

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

Author: Rich Tinker, 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)

JUNE 2014 U.S. PRECIPITATION FORECAST



Percent Likelihood of Above or Below Average Precipitation*

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

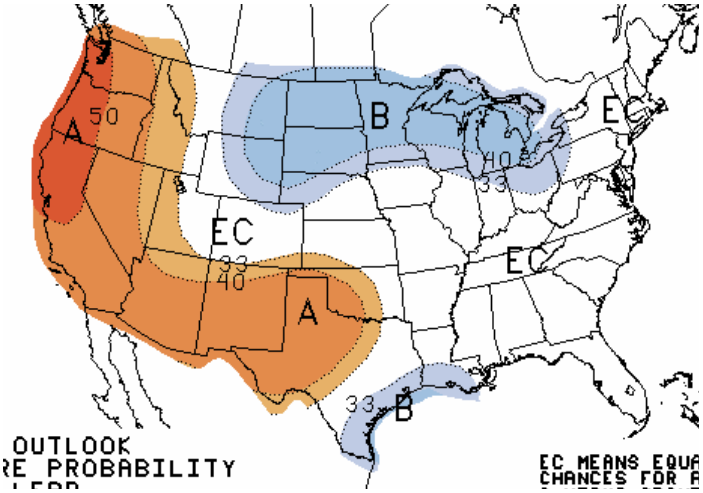
A = Above

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

B = Below

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

JUNE 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%

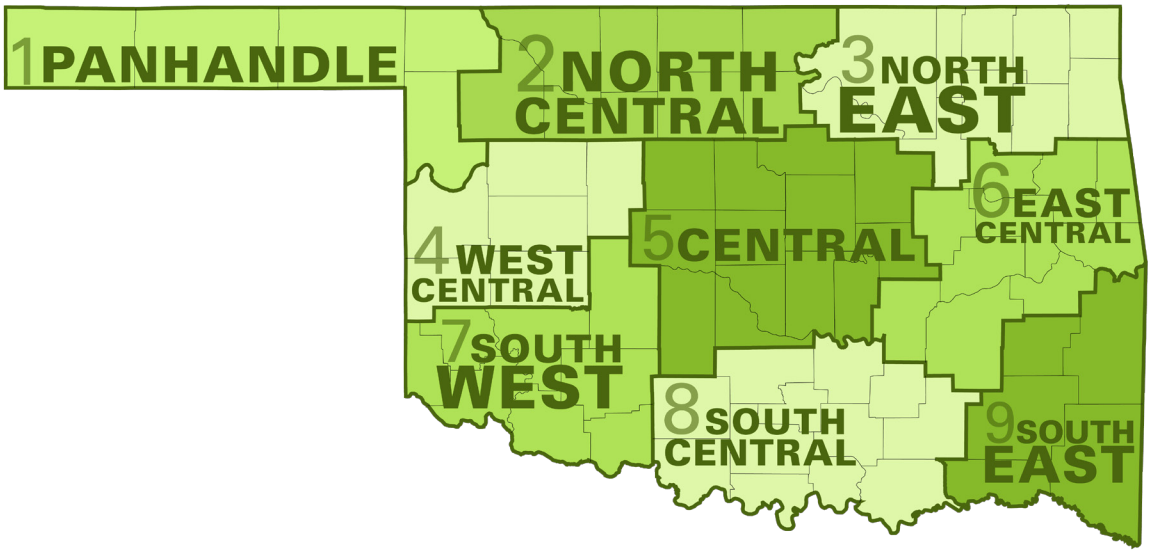
B = Below

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

JUNE CLIMATE NORMALS

Climate Division	Max. Temperature (°F)	Min. Temperature (°F)	Avg. Temperature (°F)	Precipitation (inches)
1	88.9	60.6	74.8	2.90
2	88.9	64.5	76.7	3.92
3	86.8	65.3	76.1	4.59
4	88.6	64.7	76.6	3.78
5	87.7	66.0	76.8	4.45
6	86.8	65.9	76.3	4.70
7	90.5	65.9	78.3	4.01
8	88.5	66.9	77.7	4.56
9	87.9	65.2	76.6	4.63
Statewide	88.2	65.1	76.7	4.26

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

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