Oklahoma Monthly Climate Summary

JANUARY 2014

OKLAHOMA CLIMATOLOGICAL SURVEY

Oklahoma became a weather battleground state during January. A large upper-level ridge of high pressure entrenched over the western United States battled a deep trough of low pressure to the east for supremacy over the state's weather. When the ridge gained the upper hand, temperatures at times rose into the 60s and 70s. Several locations even managed to reach 80 degrees on January 12, the highest temperature recorded during the month. A westward push by the trough would result in another arctic blast and a plunge back to winter with highs struggling out of the 20s. Nowata reached a teeth-chattering low of minus 12 degrees following one of those cold fronts on January 6, the lowest temperature recorded by the Mesonet for the month. For those needing significant moisture, however, there was very little variety as dry weather dominated both sides of the skirmish. According to data from the Oklahoma Mesonet, the month finished with a statewide average of 0.29 inches, 1.16 inches below normal to rank as the eighth driest January since records began in 1895. Of the 120 Oklahoma Mesonet stations, five reported no precipitation during the month, and another 56 ended with a tenth of an inch or less.

January 2014 Statewide Extremes

Description	Extreme	Station	Day
High Temperature	80°F	Several	12
Low Temperature	-12°F	Nowata	6
High Precipitation	1.96 in.	Mt. Herman	--
Low Precipitation	0.00 in.	Several	--

Those stations left completely dry during January were Altus, Cheyenne, Erick, Hollis and Mangum. The Mt. Herman Mesonet site led the state with 1.95 inches. Oklahoma City experienced its sixth driest January with 0.07 inches of precipitation. Tulsa was not much better with only 0.13 inches, the fourth driest January for that city. Complete monthly records for Oklahoma City date back to 1891 and 1894 for Tulsa. Combined with a dry December, the statewide average for the first two months of winter came up over 2 inches short for the 13th driest such period on record. That same stretch was also decidedly cold. The statewide average temperature for December-January was 35.5 degrees, more than 2 degrees below normal and the 21st coolest on record.

One of the impacts of the near constant northwesterly upper-level air flow over the state was a loss of moist air return from the Gulf of Mexico. Without that humidity, let alone any significant precipitation, wildfire danger often soared in the face of dry air and strong winds. Those same conditions also quickened the pace of drought intensification, something not normally seen during the cool season. A bit more than 38 percent of the state was covered by at least moderate drought at the beginning of the month according to the U.S. Drought Monitor. At month's end, however, that area had increased to nearly 47 percent. The most intense drought continued across southwestern Oklahoma and the Panhandle, a persistence of impacts that dates back more than three years. Much of the far southwest was considered in extreme-to-exceptional drought. Extreme drought had also begun to spread outward from the Texas County area in the Panhandle. The Drought Monitor's intensity scale slides from moderate-severe-extreme-exceptional, with exceptional being the worst classification.

January 2014 Statewide Statistics

Temperature

	Average	Depart.	Rank (1895-2014)
Month (January)	36.2°F	0.1°F	49th Coolest
Year-to-Date (Dec-Jan)	35.5°F	-2.1°F	21st Coolest

Precipitation

	Total	Depart.	Rank (1895-2014)
Month (January)	.29 in.	-1.16 in.	8th Driest
Year-to-Date (Dec-Jan)	1.40 in.	-2.07 in	13th Driest

Depart. = departure from 30-year normal

JANUARY 2014 DAILY SUMMARIES

JANUARY 1: A strong arctic cold front plunged into the region from the northwest, increasing clouds and wind speeds along the way. Locations ahead of and behind the front had drastically different maximum temperatures with Burneyville reaching 69 degrees and Buffalo, Beaver, and Slapout only reaching 37 degrees. Minimum temperatures were also on opposite ends of the spectrum with Clayton having a minimum temperature of 31 degrees and the northeast measuring minimum temperatures

Copyright © 2014 Board of Regents of the University of Oklahoma.

in the mid-teens. Light snow fell in the north and average wind speeds were generally between 10 and 18mph. Wind gusts as high as 49mph were reported in Medicine Park.

JANUARY 2: Cold air advection caused maximum temperatures to plummet on the 2nd. Highs ranged from 22 degrees in Miami to 53 degrees in Kenton and Boise City. Minimum temperatures were well below freezing, ranging from 5 degrees at Newkirk to 23 degrees at Broken Bow. Snowfall started in the early morning of the 2nd and accumulated 1 inch in Alva, 1 inch at Cherokee, half an inch at Newkirk and Jay, and trace amounts elsewhere. Average wind speeds were between 5 and 12mph.

JANUARY 3-4: Southerly winds allowed maximum temperatures to rebound and climb into the upper 60s in the panhandle (Jan. 3) and the south-central portion of the state (Jan. 4). The lowest maximums in the state were 39 in Westville on Friday and 42 in Slapout and Beaver on Saturday. The minimum temperature range jumped up by roughly 10 degrees as it increased from 10-29 degrees on the 3rd, to 17-40 degrees on the 4th. Winds were gusty where southerly flow met an approaching cold front on Saturday. The highest daily average wind speeds were 24mph and 21 mph on each day, respectively.

JANUARY 5: The highest maximum temperatures dropped by a little over 10 degrees on the 5th. The highest temperature in the state was 57 degrees in Idabel and Hugo and the lowest maximum temperatures were drastically lower than the previous period's with the panhandle only reaching the upper teens. The highest minimum temperature matched the highest maximum, but occurred in Broken Bow on the other side of the state. The coolest temperature reported that day was -3 in Kenton and Blackwell. Snow fell in many areas of the state, accumulating the highest amounts, however, in north-central, northeast, and central Oklahoma. 1-4.5 inches fell in the north-central and northeast region, and 1-3 inches fell in the central portion of the state. Wind speeds were from the north and tended to range between 10mph and a very breezy 27mph. A gust of 56mph was measured in Medicine Park.

JANUARY 6: Clear skies and snow covered areas from the 5th kept temperatures cool in the north. The highest temperatures ranged from 10 degrees in Miami to 35 degrees in Kenton. Minimum temperatures were well below freezing with a range of -12 degrees in Nowata to 13 degrees in Grady. Although trace amounts of snow fell throughout most northern areas on the 6th, COOP observers measured 2 inches of snow in Braman, 1.5 inches in Stillwater, and 1 inch in Spavinaw. Wind speeds were fairly mild, averaging less than 11mph.

JANUARY 7: Thanks to some southerly flow, the highest temperatures in the state jumped up to 61 degrees in Kenton and Boise City. Although some portions of the state only got as warm as 37 degrees, they were able to climb above freezing, unlike some areas on the 6th. Minimum temperatures increased by about 10 degrees as well, varying between -4 in Nowata and 25 in Woodward. Sunny skies made way for clouds in the afternoon and average wind speeds ranged between 5 and 19mph. The majority of the state, however, had wind speeds between 5 and 15mph.

JANUARY 8-9: A weak cold front entered the state from the northwest and cooled the highest maximum temperatures down from 61 degrees the previous day to 57 degrees on the 8th and 9th. Portions of east-central and southeast OK only got as warm as 33 and 34 degrees. While some areas in southern OK cooled to the low-mid 30s, the panhandle dropped into the upper teens. Varying temperatures throughout the state allowed for a mixture of precipitation types. West, southwest, central, south-central, east, and southeast Oklahoma received either light drizzle or freezing drizzle. According to our COOP records, Idabel and Broken Bow measured .4 and .32 inches of precipitation on the 9th, respectively. The Mesonet measured .19 inches in Westville on the 8th, .39 inches in Broken Bow on the 9th, and .35 inches in Mt. Herman on the 9th. Most other areas had less than one tenth of an inch. The pairing of drizzle and dense fog in southwest and western OK made for a pretty dreary Thursday.

JANUARY 10: Although a cold front moved in from the northwest, it was barely noticeable when looking at some of the maximum temperatures. The highest maximums in the state were a warm 68 degrees in Waurika, Ringling, and Newport. The coolest maximum was 51 in Kenton and Boise City. Minimum temperatures ranged from 24 degrees in the panhandle to 38 degrees in the south. The passing front helped push widespread showers and thunderstorms through southern, south-central, central, and eastern portions of Oklahoma. The highest precipitation amounts measured by the Mesonet included 1.47 inches at Mt. Herman, 1.31 inches at Broken Bow, and 1.20 inches at Idabel. Small hail was even reported in Coal County. Average wind speeds were between 5mph in the southeast and 17mph in north-central and west-central OK. Gusts made it into the 40s in the panhandle.

JANUARY 11: A high pressure system moving into the area from the northwest allowed for clear skies and mild temperatures. Maximum temperatures ranged from 52 degrees in the northeast to 66 degrees in south Oklahoma. Minimum temperatures fell between 22 degrees in Boise City and 43 degrees in Medicine Park. Although the highest daily average wind speed was 14.3mph in Cheyenne, most areas had wind speeds averaging between 5 and 10mph.

JANUARY 12: Southerly winds and mostly sunny skies on the 12th played a role in the unseasonably warm temperatures, as well as a record breaking daily high temperature of 75 degrees in Oklahoma City. 75 degrees, however, was far from the warmest temperature observed in the state on that day—Grady, Altus, Mangum, and Tipton all managed to reach 80 degrees. The coolest maximums were nearly as warm as the previous day's highest maximums, measuring 65 degrees in Hooker and Goodwell. Low temperatures were similar to minimums on the 11th with a range of 23 degrees in Wister to 48 degrees in

Copyright © 2014 Board of Regents of the University of Oklahoma.

Byars. Average wind speeds were blustery, varying between 10 and 23mph. A gust of 54mph was reported in Boise City.

JANUARY 13-15: A cold front moved through on the 13th and 14th, which gave maximum temperatures a tendency to cool during this three-day period. The highest temperature was 63 in Broken Bow and Burneyville on the 13th and 14th, respectively. On the 15th, the highest temperatures in the state were reported in Kenton, Butler, and Grady at 61 degrees. The coolest highs observed each consecutive day dropped from 54 degrees in the panhandle to 42 degrees in the northeast. The highest minimum temperature was 41 degrees on Monday, but fell below freezing to 31 degrees on Wednesday. The lowest minimum temperatures ranged from 13-20 degrees. Although western skies became cloudy on Monday and Tuesday morning, they were typically sunny and dry. Average wind speeds were generally less than 17mph and gusts were manageable, only peaking in the low 40s at times.

JANUARY 16-17: A strong cold front swept through the entire area, creating windy conditions and an environment susceptible to wild fires. Average wind speeds were generally between 10-20mph on the 16th and 8-13mph on the 17th. Wind gusts as high as 55mph were reported in Freedom. Maximum temperatures dropped from a range of 48-66 degrees on the 16th to a range of 39-58 degrees on the 17th. The lowest minimum temperatures were in the teens on both days, and the highest minimum temperatures were in the low 40s on Thursday and mid 30s on Friday.

JANUARY 18-19: Temperatures warmed by roughly 10 degrees with the Tipton Mesonet site hitting 70, and Alva and Woodward hitting 75. Although some areas only made it into the upper 50s, it was still a great deal warmer than the 17th. Minimum temperatures were between the teens and upper 30s. With the highest average wind speeds measuring 16mph, conditions were a little breezy on the 18th and 19th.

JANUARY 20-23: Temperatures were on a rapidly decreasing trend as a series of cold fronts moved through the region. In conjunction with winds becoming more northerly with passing fronts, clear skies and radiational cooling helped temperatures plummet. The warmest maximum temperatures dropped from 74 degrees in Walters, Grady, and Waurika on the 20th, to 68 in the panhandle on the 21st, 55 in the southeast on the 22nd, and 41 in Broken Bow on the 23rd. While some locations only made it to 52 degrees on the 20th, a few areas only made it into the low 20s by the 23rd. The minimum temperature range of 15 to 42 degrees on the 20th also dropped to a range of -3 to 24 degrees by the end of this period. Wind speeds were variable with the highest average wind speed measuring 17mph in Slapout on the 20th, 13mph in Minco on the 21st, 15mph in Weatherford on the 22nd, and 22mph in Medicine Park and Hobart on the 23rd.

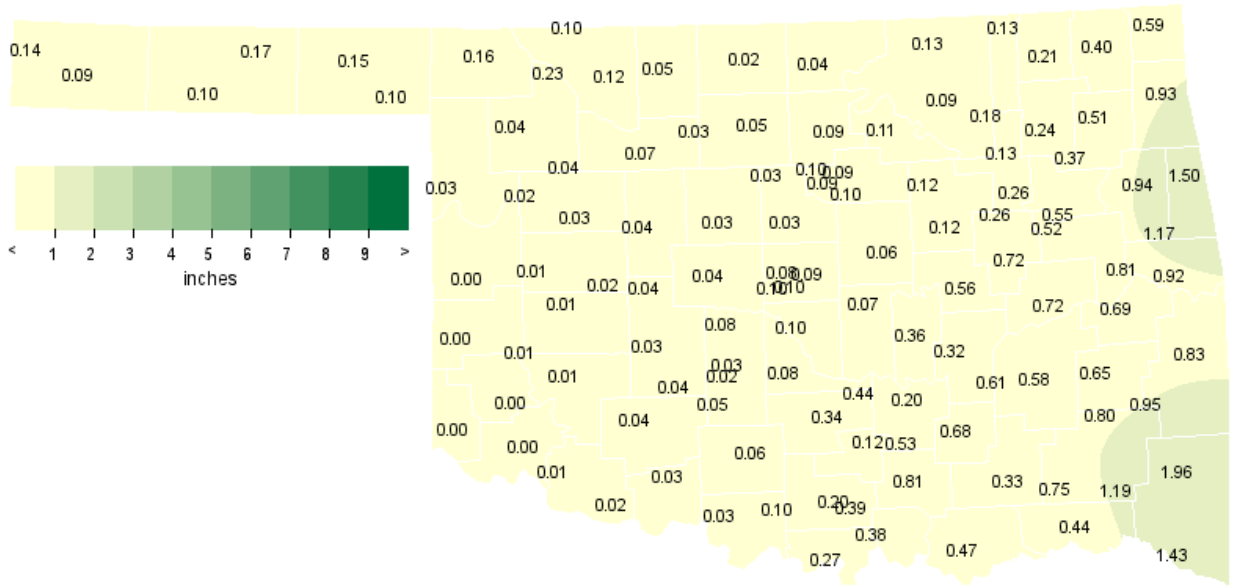
JANUARY 24-26: A drastic warm-up in temperatures provided some relief to Oklahoman's following the previous days' bitter cold. Over a 15 degree increase in the highest maximum temperature occurred on the 24th as highs of 57 degrees were reported in the panhandle. Continuing to soar, the warmest temperatures in the state reached 71 on the 25th and 72 on the 26th. Mesonet sites that recorded the lowest maximum temperatures also managed to comfortably climb from 36 on the 24th to 58 the following two days. The highest minimum temperatures did a 20 degree jump during this time, increasing from 13 degrees to 43 degrees. Locations with the coolest minimums saw a similar trend as their lows climbed from -3 to 21 degrees in three days. Average wind speeds ranged from 3-19mph on the 24th, 2-13mph on the 25th, and 3-13mph on the 26th. On the 26th, fairly high wind gusts of 57mph and 55mph were reported in Camargo and Freedom, respectively.

JANUARY 27-28: As they rarely do this time of year, highs in the 70s didn't last long. The warmest temperatures fell to 54 in Madill on the 27th and 36 in Broken Bow on the 28th. Only a strong cold front would be able to drop highs by 18 degrees so quickly statewide. This was less evident, however, in the lowest observed maximum temperatures as they came in at 26 degrees both days. Minimum temperatures were between 12 (Hooker) and 28 degrees (Idabel) on the 27th and between 0 (Buffalo) and 20 degrees (Hugo) on the 28th. Snow flurries fell in the northern half of Oklahoma on Monday. Average wind speeds were blustery on the 27th, reporting between 10 and 25mph and gusting to 58mph in Hinton, and 57mph in Weatherford and Tipton. The winds were more calm on the 28th, averaging less than 11mph.

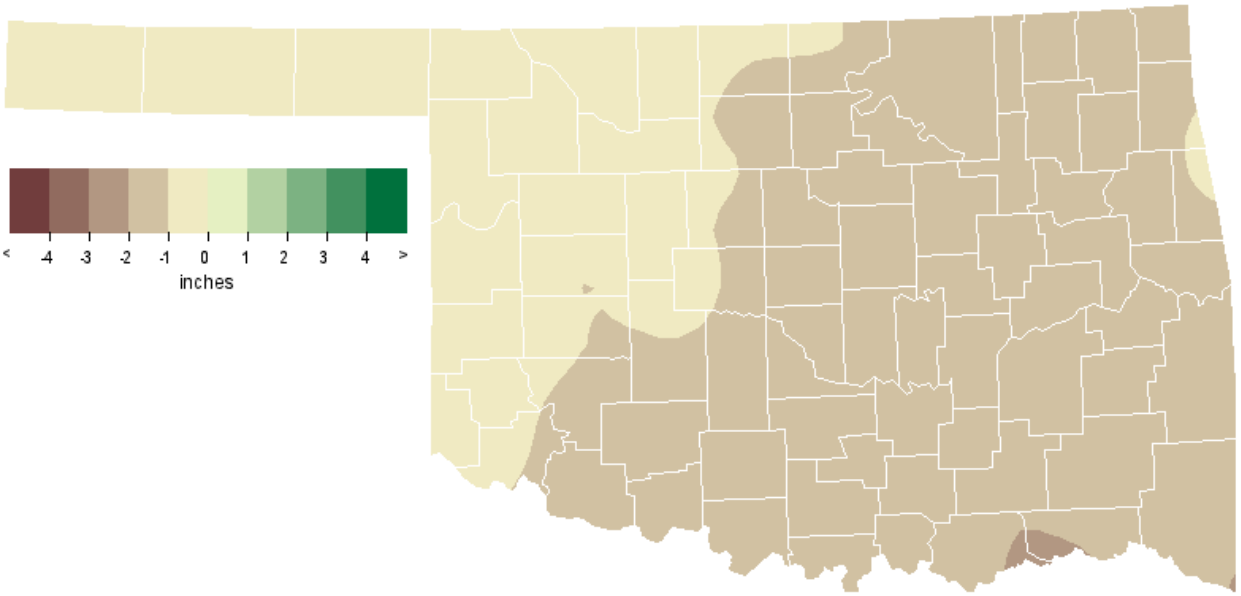
JANUARY 29-31: Ending the month on a fairly pleasant note, an increase in the highest maximum temperatures ensued. The warmest Mesonet sites were Kenton on the 29th (57 degrees), Grady on the 30th (68 degrees), and Idabel on the 31st (70 degrees). With temperatures 5 to 10 degrees warmer than normal, weak cold fronts passing through on the 30th and 31st were only noticeable from the northerly wind shift and the coolest maximum temperature trend. The latter fluctuated from 39 on the 29th, to 46 on the 30th, and 29 on the 31st. The warmest minimum temperatures increased from 20 degrees in Tulsa and Goodwell on the 29th, to 34 in Fairview and Marshall on the 30th, and 47 in Hugo on the 31st. The coldest temperatures in the state during this period increased as well, climbing from 2 degrees in Buffalo to 15 degrees in Broken Bow and Kenton. Average wind speeds were less than 20mph on the 29th, less than 19mph on the 30th, and less than 15mph on the 31st.

Copyright © 2014 Board of Regents of the University of Oklahoma.

JANUARY 2014 OBSERVED PRECIPITATION

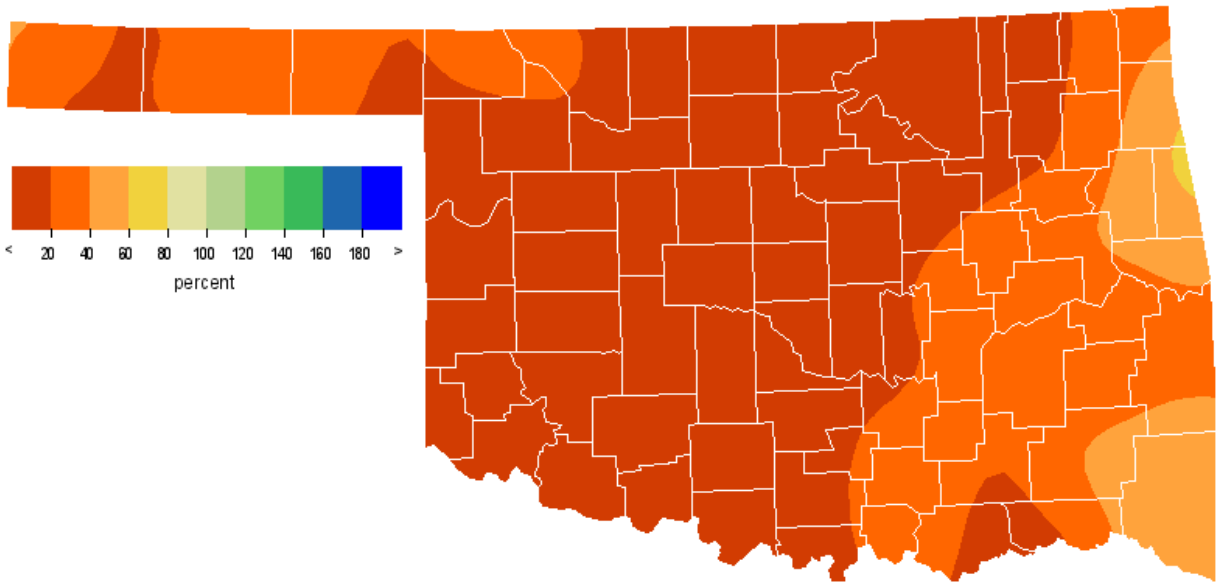


JANUARY 2014 DEPARTURE FROM NORMAL PRECIPITATION

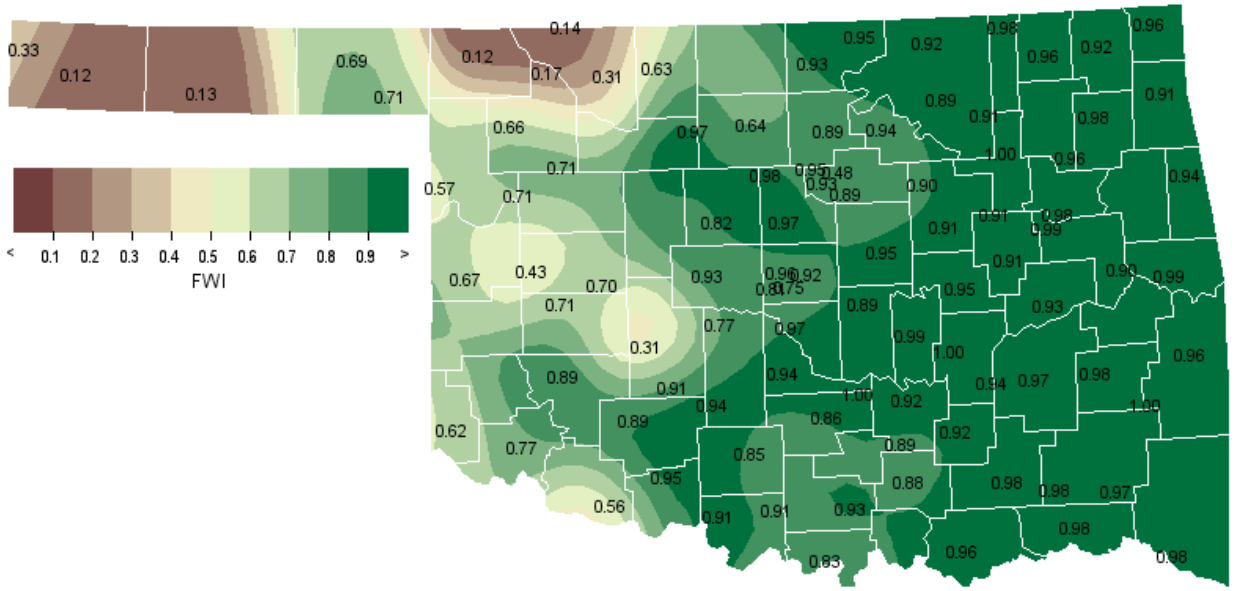


Copyright © 2014 Board of Regents of the University of Oklahoma.

JANUARY 2014 PERCENT OF NORMAL PRECIPITATION

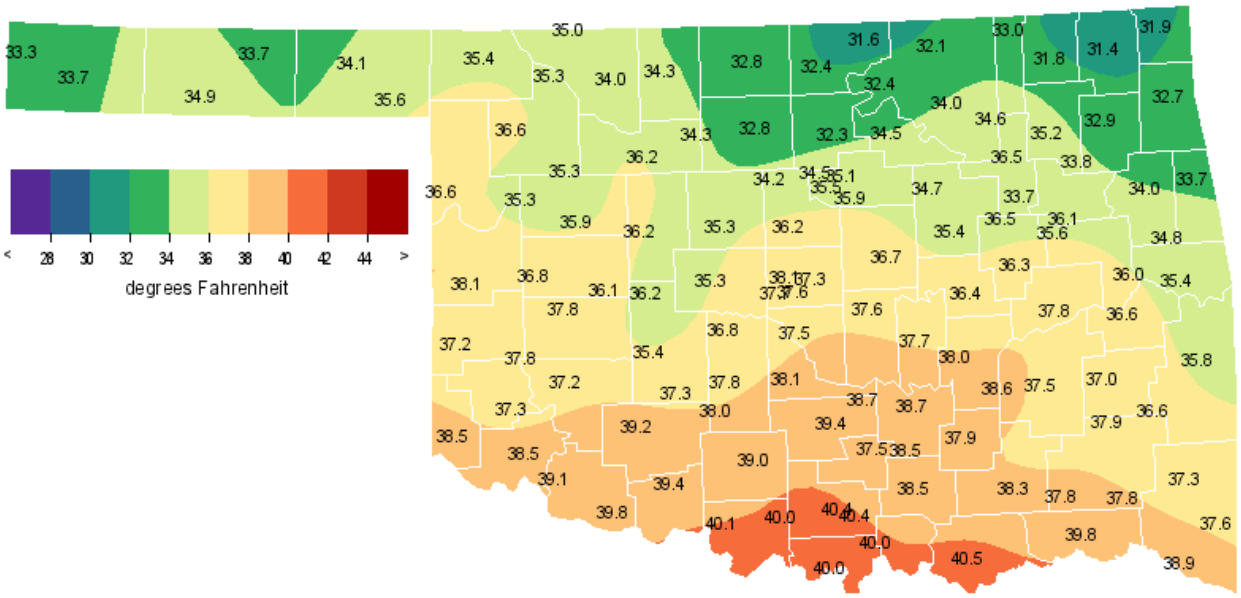


JANUARY 2014 AVERAGE SOIL MOISTURE AT 25CM

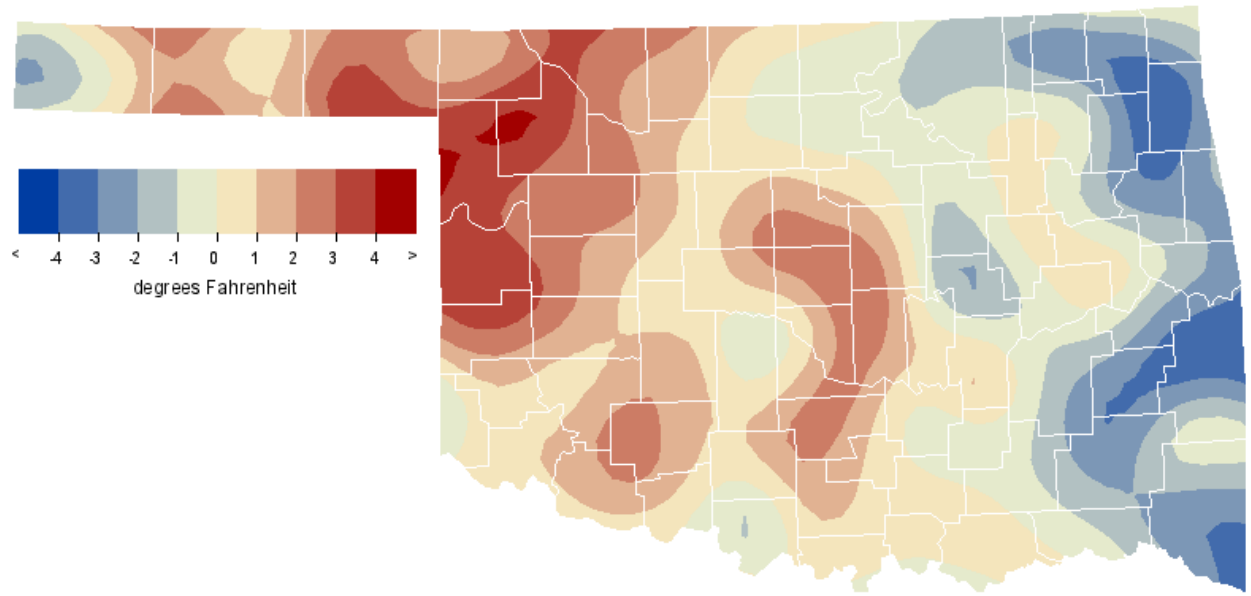


Copyright © 2014 Board of Regents of the University of Oklahoma.

JANUARY 2014 AVERAGE TEMPERATURE



JANUARY 2014 DEPARTURE FROM NORMAL TEMPERATURE



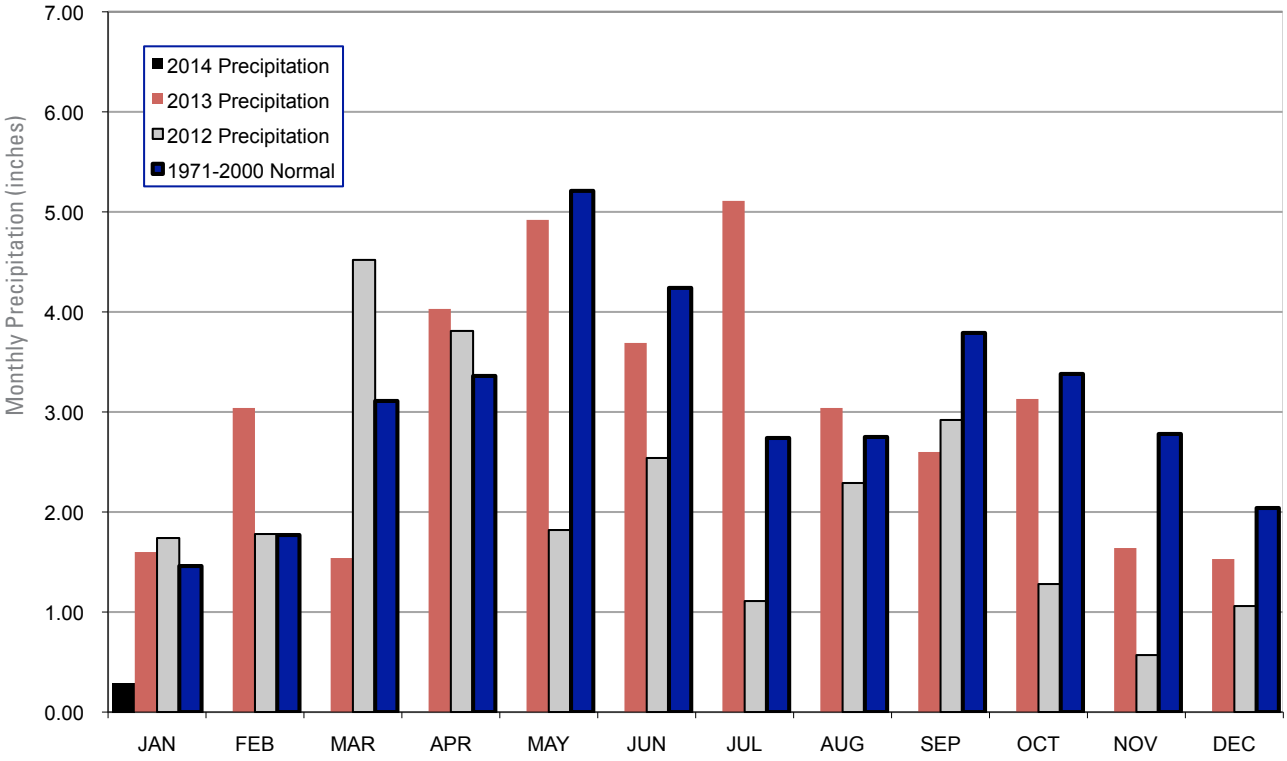
Copyright © 2014 Board of Regents of the University of Oklahoma.

MESONET MONTHLY SUMMARY FOR JANUARY 2014

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
PANHANDLE										
Arnett	36.6	75	12	-2	6	882	0	.03	.03	28
Beaver	35.3	71	19	-4	6	****	****	.15	.07	28
Boise City	33.7	68	19	-4	6	971	0	.09	.08	24
Buffalo	35.3	74	12	-7	6	921	0	.16	.08	28
Goodwell	34.8	70	19	-2	6	935	0	.10	.05	24
Hooker	33.7	71	19	-5	6	970	0	.17	.08	28
Kenton	33.3	69	19	-4	6	982	0	.14	.08	24
Slapout	35.7	73	12	-4	6	909	0	.10	.06	28
NORTH CENTRAL										
Alva	33.9	76	12	-9	6	963	0	.12	.05	28
Blackwell	32.4	70	12	-6	6	1010	0	.04	.02	8
Breckinridge	33.8	71	12	-6	6	966	0	.05	.02	8
Cherokee	34.3	73	12	-6	6	952	0	.05	.03	7
Fairview	36.2	74	12	-3	6	894	0	.07	.03	28
Freedom	35.3	74	19	-4	6	922	0	.23	.10	7
Lahoma	34.2	71	12	-3	6	955	0	.03	.01	8
May Ranch	35.0	73	19	-8	6	929	0	.10	.04	7
Medford	32.8	71	12	-5	6	997	0	.02	.01	8
Newkirk	32.6	70	12	-4	6	1003	0	.05	.02	10
Red Rock	34.3	72	12	-7	6	952	0	.09	.04	7
Seiling	35.3	75	12	0	24	921	0	.04	.02	28
Woodward	36.7	75	19	-3	6	878	0	.04	.02	28
NORTHEAST										
Bixby	34.9	70	12	3	24	****	****	.26	.20	10
Burbank	33.4	72	12	-3	24	981	0	.16	.08	7
Claremore	35.2	71	12	-2	6	925	0	.24	.10	7
Copan	32.9	70	12	-8	6	994	0	.13	.04	7
Foraker	32.1	71	12	-7	6	1021	0	.13	.06	7
Inola	33.8	71	12	-1	6	968	0	.37	.21	10
Jay	32.7	68	12	-4	6	1003	0	.93	.45	10
Miami	32.0	68	12	-7	6	1024	0	.59	.33	10
Nowata	31.8	70	12	-12	6	1030	0	.21	.08	31
Pawnee	34.4	72	12	-5	6	947	0	.11	.05	7
Porter	36.1	71	12	2	6	895	0	.55	.37	10
Pryor	32.9	69	12	-7	6	997	0	.51	.31	10
Skiatook	34.7	71	12	-4	6	939	0	.18	.07	7
Tulsa	36.4	73	12	2	6	885	0	.13	.06	7
Vinita	31.5	67	12	-10	6	1040	0	.40	.10	10
Wynona	34.0	73	12	-6	6	961	0	.09	.03	7
WEST CENTRAL										
Bessie	37.8	76	12	6	6	843	0	.01	.01	9
Butler	36.8	78	12	1	6	874	0	.01	.01	28
Camargo	35.3	77	12	-3	6	922	0	.02	.02	28
Cheyenne	38.1	76	12	3	6	834	0	.00	.00	1
Erick	37.1	78	12	4	6	864	0	.00	.00	1
Putnam	36.0	74	12	0	6	900	0	.03	.02	28
Retrop	37.8	77	12	5	24	843	0	.01	.01	10
Watonga	36.2	72	12	1	6	892	0	.04	.02	28
Weatherford	36.1	73	12	6	6	897	0	.02	.01	8
CENTRAL										
Acme	38.0	75	12	1	6	837	0	.05	.03	10
Bowlegs	37.7	72	26	4	6	847	0	.36	.28	10
Bristow	35.4	72	12	-3	24	918	0	.12	.05	9
Lake Carl Blac	34.4	73	12	-7	6	948	0	.10	.05	7
Chandler	36.6	73	12	1	24	880	0	.06	.04	9
Chickasha	*****	***	***	***	***	****	****	.03	.02	10
El Reno	35.2	74	12	2	6	923	0	.04	.02	9
Guthrie	36.1	73	12	1	6	896	0	.03	.02	9
Kingfisher	35.2	74	12	-1	24	922	0	.03	.01	8
Marena	35.5	73	12	1	6	914	0	.09	.04	9
Minco	36.8	75	12	5	24	875	0	.08	.03	9
Marshall	34.2	73	12	-4	6	955	0	.03	.02	7
Ninnekah	37.8	75	12	3	24	844	0	.02	.01	9
Norman	37.6	73	12	4	6	851	0	.10	.05	8
Oilton	34.7	73	12	-5	6	939	0	.12	.05	7
OKC East	37.6	73	12	4	24	849	0	.10	.06	9
OKC North	38.1	73	12	3	6	834	0	.08	.03	8
OKC West	37.7	73	12	6	6	848	0	.10	.05	8
Okemah	36.3	71	26	1	24	889	0	.56	.49	10
Perkins	35.9	73	12	1	24	902	0	.10	.04	7
Shawnee	37.6	72	12	2	6	848	0	.07	.03	9
Spencer	37.3	73	12	2	6	860	0	.09	.05	9
Stillwater	35.1	73	12	-1	24	927	0	.09	.04	8
Washington	38.1	74	12	4	6	835	0	.08	.03	8
EAST CENTRAL										
Cookson	34.8	69	26	0	24	936	0	1.17	.73	10
Eufaula	37.9	71	26	5	24	840	0	.72	.62	10
Haskell	35.6	71	26	1	6	912	0	.52	.36	10
Hectorville	36.4	72	12	2	6	886	0	.26	.17	10
Holdenville	38.0	70	12	3	6	838	0	.32	.23	10
McAlester	37.5	70	12	1	24	853	0	.58	.50	10
Okmulgee	36.3	71	26	1	24	890	0	.72	.61	10
Sallisaw	35.3	71	12	2	24	920	0	.92	.49	10
Stigler	36.7	71	26	3	24	878	0	.69	.45	10
Stuart	38.5	70	12	5	6	820	0	.61	.53	10
Tahlequah	33.9	68	12	-1	6	963	0	.94	.60	10
Webbers Falls	36.0	72	26	4	24	900	0	.81	.64	10
Westville	33.7	67	12	-2	6	969	0	1.50	1.09	10
SOUTHWEST										
Altus	38.5	80	12	5	24	823	0	.00	.00	1
Apache	37.2	75	12	5	6	861	0	.04	.02	10
Fort Cobb	36.6	76	12	6	6	****	****	.03	.02	8
Grandfield	39.8	80	12	7	24	782	0	.02	.01	9
Hinton	36.2	74	12	5	6	893	0	.04	.02	8
Hobart	37.1	77	12	6	24	864	0	.01	.01	10
Hollis	38.5	79	12	7	24	823	0	.00	.00	1
Mangum	37.3	80	12	4	24	858	0	.00	.00	1
Medicine Park	39.2	77	12	8	6	799	0	.04	.02	10
Tipton	39.1	80	12	7	24	803	0	.01	.01	10
Walters	39.4	78	12	9	24	793	0	.03	.01	8
SOUTH CENTRAL										
Ada	38.7	72	12	3	24	816	0	.20	.10	10
Ardmore	40.5	72	12	9	6	761	0	.39	.31	10
Burneyville	40.0	75	12	5	29	774	0	.27	.21	10
Byars	38.7	72	12	5	6	815	0	.44	.37	10
Centrahoma	37.8	71	26	6	24	842	0	.68	.56	10
Durant	40.5	70	12	10	24	759	0	.47	.34	10
Fittstown	38.5	70	12	5	6	823	0	.53	.36	10
Ketchum Ranch	38.9	75	12	6	24	808	0	.06	.03	10
Lane	38.3	70	26	9	29	829	0	.33	.30	10
Madill	40.0	73	12	7	6	776	0	.38	.30	10
Newport	40.4	74	12	8	6	763	0	.20	.10	10
Pauls Valley	39.4	74	12	6	6	795	0	.34	.20	10
Ringling	40.0	75	12	8	24	776	0	.10	.06	10
Sulphur	37.6	72	12	3	24	851	0	.12	.05	10
Tishomingo	38.5	70	26	7	6	823	0	.81	.65	10
Waurika	40.1	78	12	7	24	771	0	.03	.02	9
SOUTHEAST										
Antlers	37.8	70	12	6	29	843	0	.75	.69	10
Broken Bow	37.6	71	12	8	7	850	0	1.74	1.31	10
Clayton	37.8	70	12	5	24	842	0	.80	.67	10
Cloudy	37.9	69	12	8	7	841	0	1.19	1.04	10
Hugo	39.8	69	26	9	6	780	0	.44	.39	10
Idabel	38.8	71	20	11	7	812	0	1.43	1.20	10
Mt Herman	37.3	68	12	8	24	860	0	1.96	1.47	10
Talihina	36.7	70	12	4	24	878	0	.95	.73	10
Wilburton	36.9	70	12	3	24	870	0	.65	.54	10
Wister	35.8	71	26	3	24	906	0	.83	.57	10

Copyright © 2014 Board of Regents of the University of Oklahoma.

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

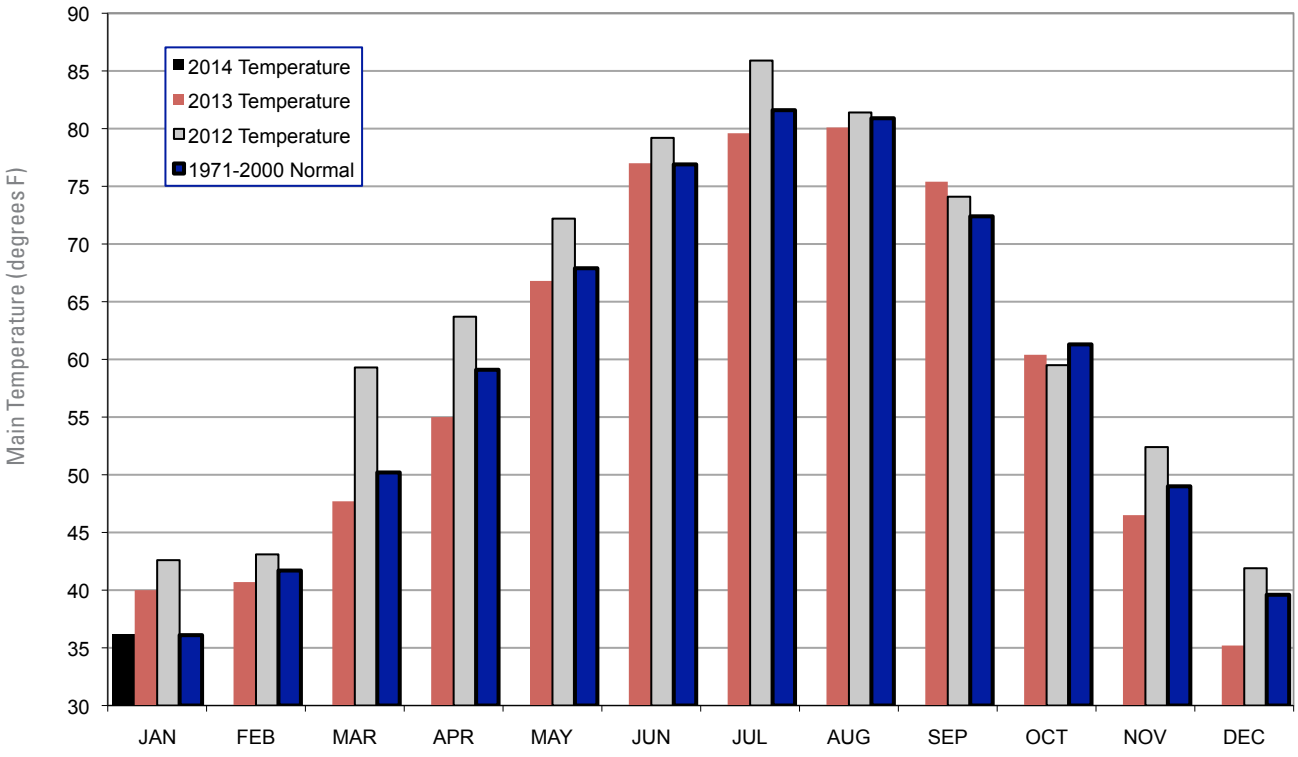


January 2014 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Jan-13
Panhandle	0.12	-0.40	18th Driest	1.92 (2005)	0.01 (1904)	0.73
North Central	0.07	-0.86	10th Driest	4.43 (1949)	0.00 (1912)	1.11
Northeast	0.32	-1.25	10th Driest	6.01 (1949)	0.01 (1986)	2.58
West Central	0.02	-0.86	4th Driest	4.08 (1949)	0.00 (1912)	1.24
Central	0.11	-1.26	7th Driest	6.18 (1949)	0.00 (1912)	1.51
East Central	0.75	-1.38	20th Driest	7.99 (1932)	0.04 (1986)	2.82
Southwest	0.02	-1.04	6th Driest	4.89 (1949)	0.00 (1902)	1.05
South Central	0.33	-1.57	14th Driest	6.85 (1932)	0.00 (1909)	1.90
Southeast	1.00	-1.81	17th Driest	11.08 (1932)	0.11 (2003)	3.57
Statewide	0.29	-1.16	8th Driest	5.23 (1949)	0.04 (1986)	1.81

Copyright © 2014 Board of Regents of the University of Oklahoma.

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



January 2014 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Jan-13 (F)
Panhandle	34.7	1.7	54th Warmest	42.7 (2006)	19.5 (1930)	36.1
North Central	34.1	0.6	50th Coolest	44.6 (2006)	19.4 (1930)	37.7
Northeast	33.5	-1.1	38th Coolest	46.0 (2006)	21.3 (1940)	39.1
West Central	36.8	1.8	56th Warmest	46.2 (2006)	20.8 (1930)	39.0
Central	36.5	0.3	51st Coolest	47.4 (2006)	22.5 (1930)	40.6
East Central	36.2	-1.1	35th Coolest	47.8 (2006)	24.8 (1940)	40.8
Southwest	38.0	0.5	56th Coolest	47.8 (1923)	24.2 (1930)	40.9
South Central	39.2	0.1	51st Coolest	49.5 (1923)	27.0 (1930)	43.0
Southeast	37.7	-1.9	23rd Coolest	49.4 (1952)	28.3 (1979)	42.1
Statewide	36.2	0.1	49th Coolest	46.4 (2006)	23.5 (1930)	39.9

Copyright © 2014 Board of Regents of the University of Oklahoma.

RECORD EVENT REPORTS

Description	Day	Location	Record	Previous Record	Year
Daily maximum temperature	12	Oklahoma City	75	73	1935

MESONET EXTREMES FOR JANUARY 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	75	12th	Arnett	-7	6th	Buffalo	0.17	Hooker	0.08	24th	Boise City
North Central	76	12th	Alva	-9	6th	Alva	0.23	Freedom	0.10	7th	Freedom
Northeast	73	12th	Tulsa	-10	6th	Vinita	0.93	Jay	0.45	10th	Jay
West Central	78	12th	Erick	-3	6th	Camargo	0.04	Watonga	0.02	28th	Camargo
Central	75	12th	Acme	-7	6th	Lake Carl Blackwell	0.56	Okemah	0.49	10th	Okemah
East Central	72	26th	Webbers Falls	-2	6th	Westville	1.50	Westville	1.09	10th	Westville
Southwest	80	12th	Grandfield	4	24th	Mangum	0.04	Medicine Park	0.02	8th	Fort Cobb
South Central	78	12th	Waurika	3	24th	Sulphur	0.81	Tishomingo	0.65	10th	Tishomingo
Southeast	71	26th	Wister	3	24th	Wilburton	1.96	Mt Herman	1.47	10th	Mt Herman
Statewide	80	12th	Several	-12	6th	Nowata	1.96	Mt Herman	1.47	10th	Mt Herman

Copyright © 2014 Board of Regents of the University of Oklahoma.

FEBRUARY OUTLOOK

February is the warmest of the Oklahoma's three winter months, a product of the combination of gradually lengthening days - often heralding an illusory approach of spring - and the very real existence of the continuing winter. Recorded temperatures in Oklahoma during the second month of the year traverse a range of 126 degrees Fahrenheit, from 99 degrees at Arapaho on February 24, 1918, to -31 degrees at the Nowata Mesonet site on February 10, 2011. The latter thermometer reading is the state's all-time lowest temperature. Oklahoma's normal monthly temperature, based on data obtained from 1971 through 2000, is 42.3 degrees. Monthly values of normal daily maximum temperatures across the state range between 60.3 degrees along the Red River at Waurika and 49.5 degrees at Newkirk near the state's northern border. Normal daily minimum temperatures vary between 34.4 degrees at Waurika and 22.0 degrees in the Panhandle at Beaver. The monthly mean temperatures for February, compiled as a statewide average since 1892, have varied between a high of 50.7 degrees in 1954 and a low of 26.6 degrees in both 1899 and 1905.

Temperature

Mean	42.3 degrees
Warmest February	1954, 51.8 degrees
Coolest February	1899, 27.9 degrees
Hottest recorded	99 degrees, Arapaho, February 24, 1918.
Coldest recorded	-31 degrees, Nowata, February 10, 2011

Of all the other months, only January has a normal precipitation lower, when averaged statewide, than February's 1.77 inches. Southeastern Oklahoma's Idabel possesses the state's greatest precipitation normal during February at 3.60 inches. Kenton, in the shadow of Black Mesa, gains distinction as the state's driest reporting station during February with a normal total of 0.33 inch. The February statewide-averaged precipitation varies substantially, being bounded by a low of 0.18 inch attained 1996 and a high of, 4.66 inches in 1938. In contrast to the many stations that have suffered through February precipitation voids, Tuskahoma was treated to an excessive 13.21 inches during February 1945. Snow is an important part of the precipitation picture in northwestern Oklahoma. Helena and Woodward both average about 4.7 inches of snow during February, compared to less than one-half inch at stations in southeastern Oklahoma.

Precipitation

Mean	1.77 inches
Wettest February	1938, 6.44 inches
Driest February	1947 and 1966, 0.20 inches
Wettest location	Idabel, 3.60 inches
Driest location	Kenton, 0.33 inches
Most recorded	13.21 inches, Tuskahoma, 1945

Tornadoes

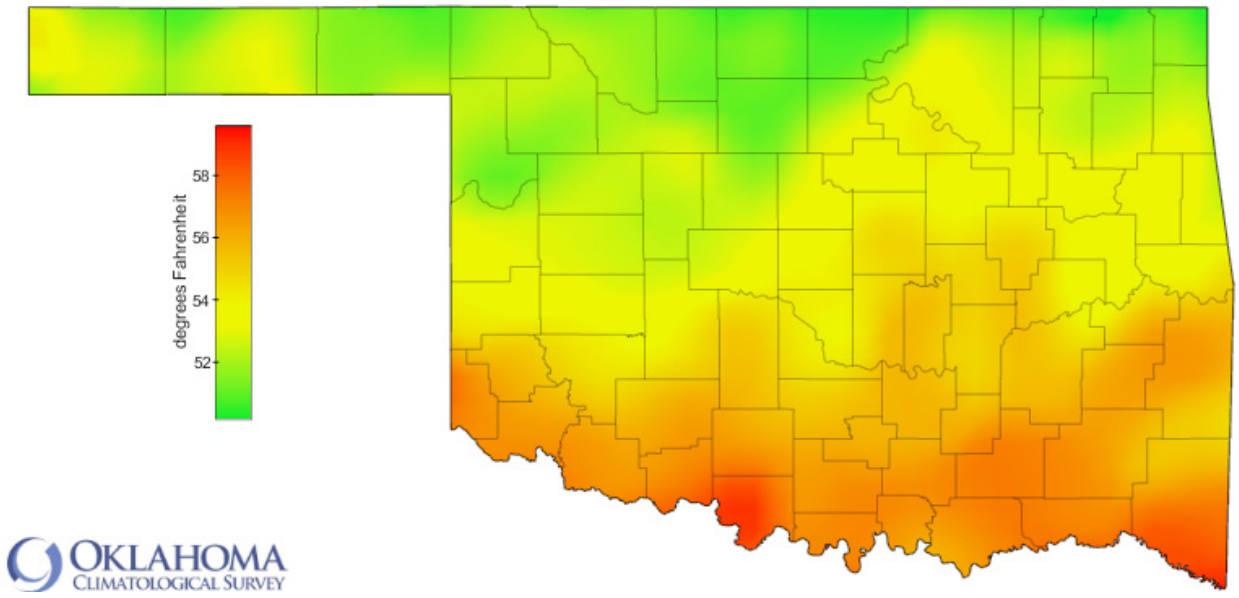
Average February Tornadoes	0.8
Most	6 (1975, 2009)

Oklahoma's extreme snowstorm of record was the blizzard of February 21-23, 1971. This blizzard buried northwestern Oklahoma under as much as three feet of snow, not accounting for drifts. Buffalo was the hardest hit, reporting 23 inches of snow on the 21st and a state-record snow depth of 36 inches by the morning of the 24th. The snow was driven by winds 30 to 50 miles per hour, producing drifts as high as 20 feet. Military cargo planes were used to airdrop hay to cattle stranded in the far-flung pastures of the region. Losses to agriculture were estimated at $2.1 million (1971 dollars). Lost livestock included approximately 11,000 cattle, 3,500 hogs, and 1,000 sheep. Buffalo reported a total of 39.5 inches of snow during the month (a state record for all months).

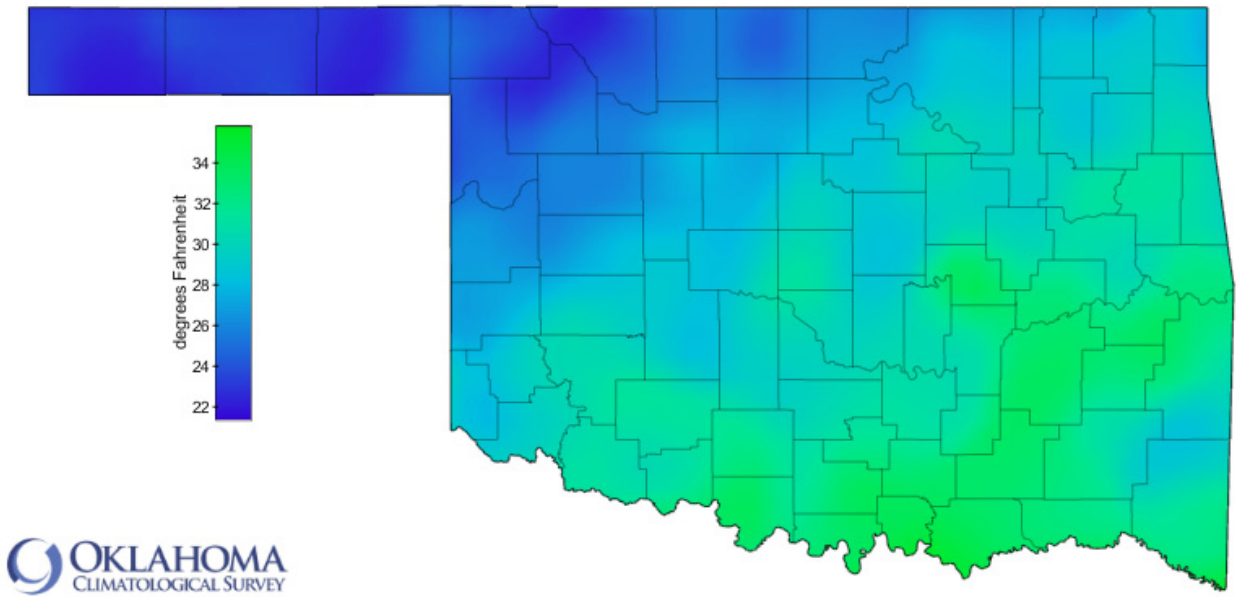
Tornadoes are not generally considered a February phenomenon, but a total of 44 February tornadoes have been recorded across the state since 1950, including six in 1975. Three people were killed on February 22, 1975, bringing the confirmed total of February tornado deaths in the state to nine, according to storm-by-storm death tolls compiled by Thomas P. Grazulis and published in the book "Significant Tornadoes: 1880-1989."

Copyright © 2014 Board of Regents of the University of Oklahoma.

FEBRUARY NORMAL DAILY MAXIMUM TEMPERATURE (1981-2010)

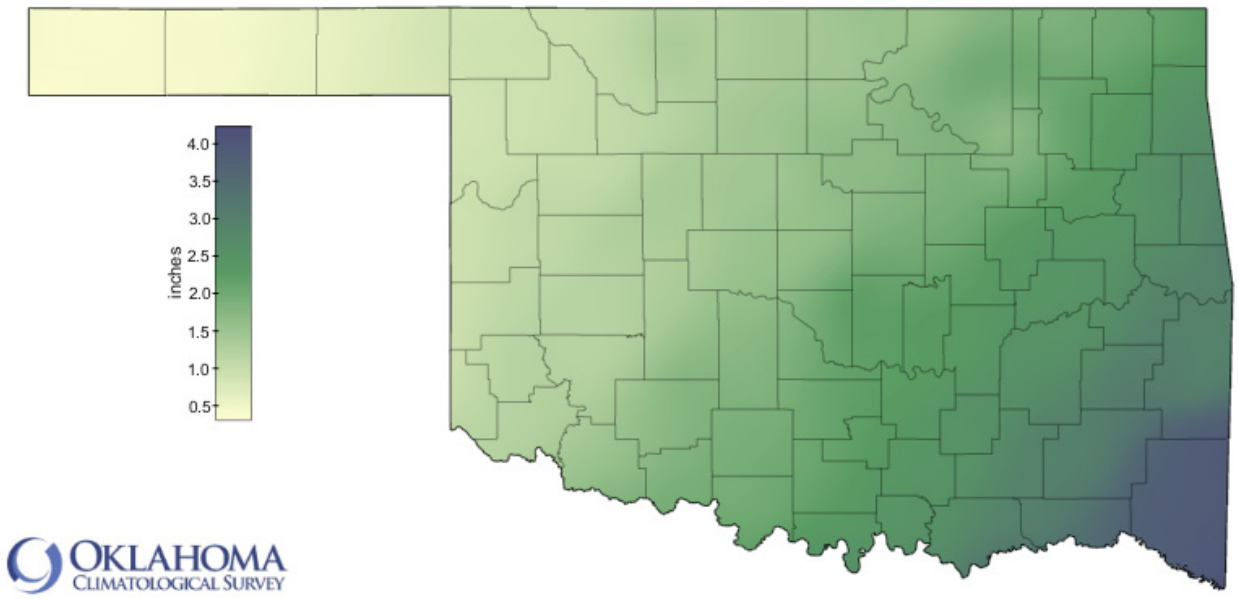


FEBRUARY NORMAL DAILY MINIMUM TEMPERATURE (1981-2010)

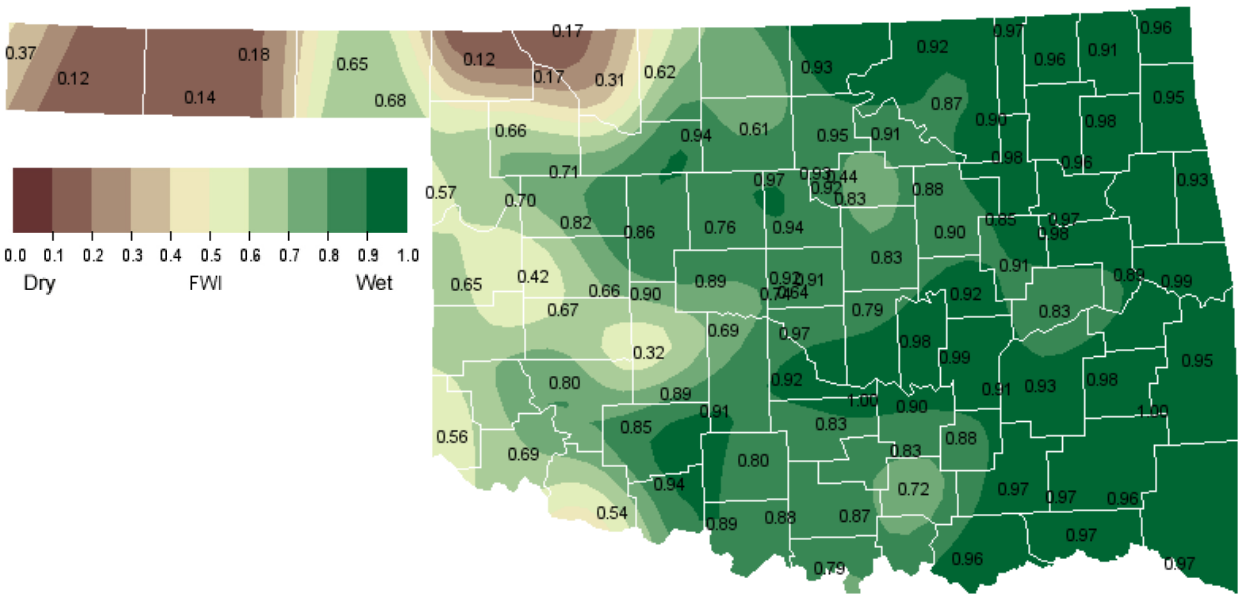


Copyright © 2014 Board of Regents of the University of Oklahoma.

FEBRUARY NORMAL PRECIPITATION (1981-2010)



FEBRUARY 1, 2014 SOIL MOISTURE CONDITIONS AT 25CM

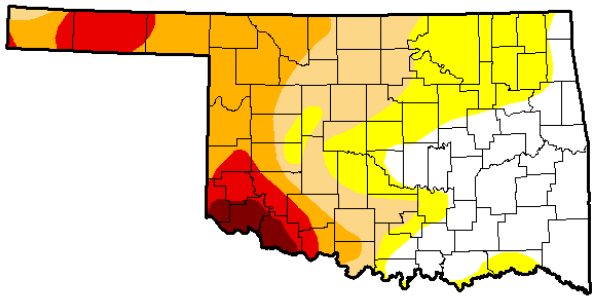


Copyright © 2014 Board of Regents of the University of Oklahoma.

FEBRUARY 2014 DROUGHT INDICES

U.S. Drought Monitor

Oklahoma



January 28, 2014

(Released Thursday, Jan. 30, 2014)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	29.84	70.16	46.74	28.80	10.12	2.40
Last Week 1/21/2014	35.17	64.83	38.04	18.99	4.84	2.40
3 Months Ago 10/29/2013	47.79	52.21	30.50	14.58	4.42	1.47
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 1/29/2013	0.00	100.00	100.00	100.00	92.14	39.58

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.

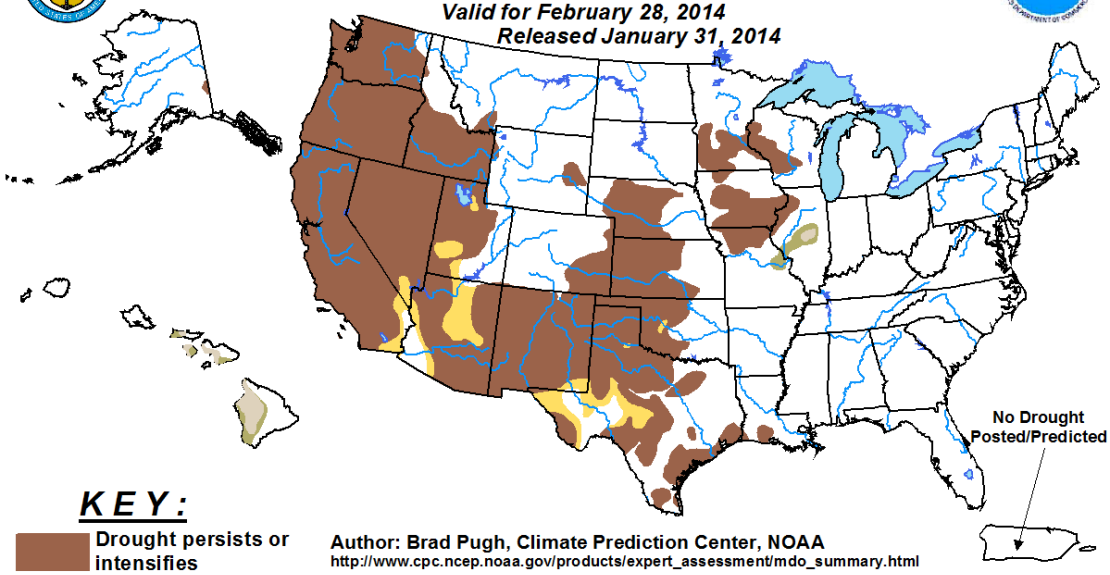
Author:
Anthony Artusa
NOAA/NWS/NCEP/CPC

http://droughtmonitor.unl.edu/

U.S. Monthly Drought Outlook

Drought Tendency During the Valid Period

Valid for February 28, 2014
Released January 31, 2014



KEY:

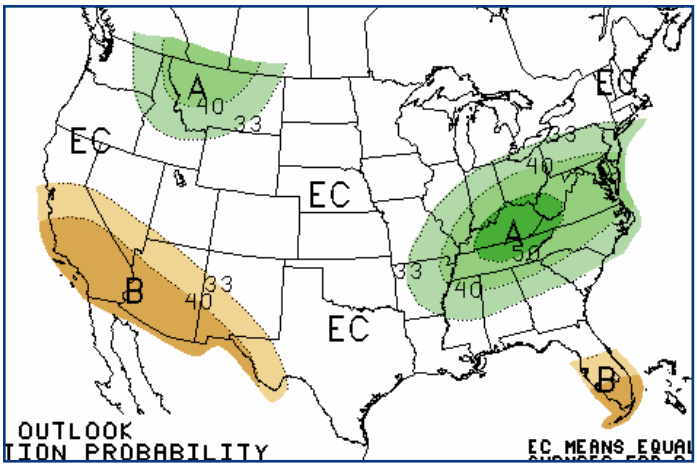
- **Drought persists or intensifies**
- **Drought remains but improves**
- **Drought removal likely**
- **Drought development likely**

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)

Copyright © 2014 Board of Regents of the University of Oklahoma.

FEBRUARY 2014 U.S. PRECIPITATION FORECAST



Percent Likelihood of Above or Below Average Precipitation*

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

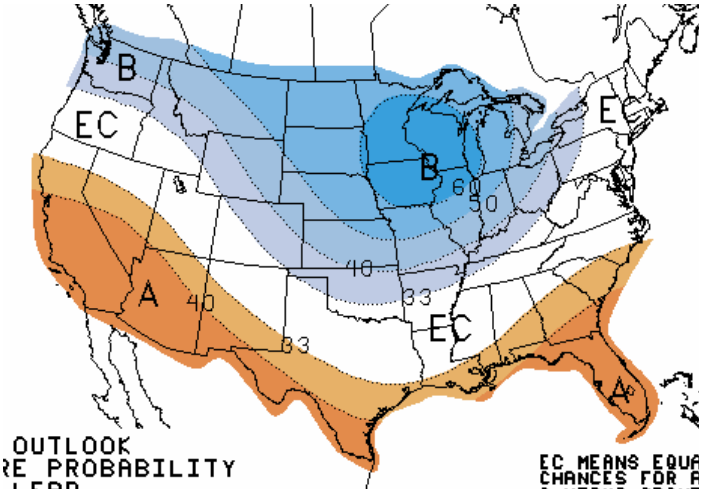
A = Above

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

B = Below

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

FEBRUARY 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

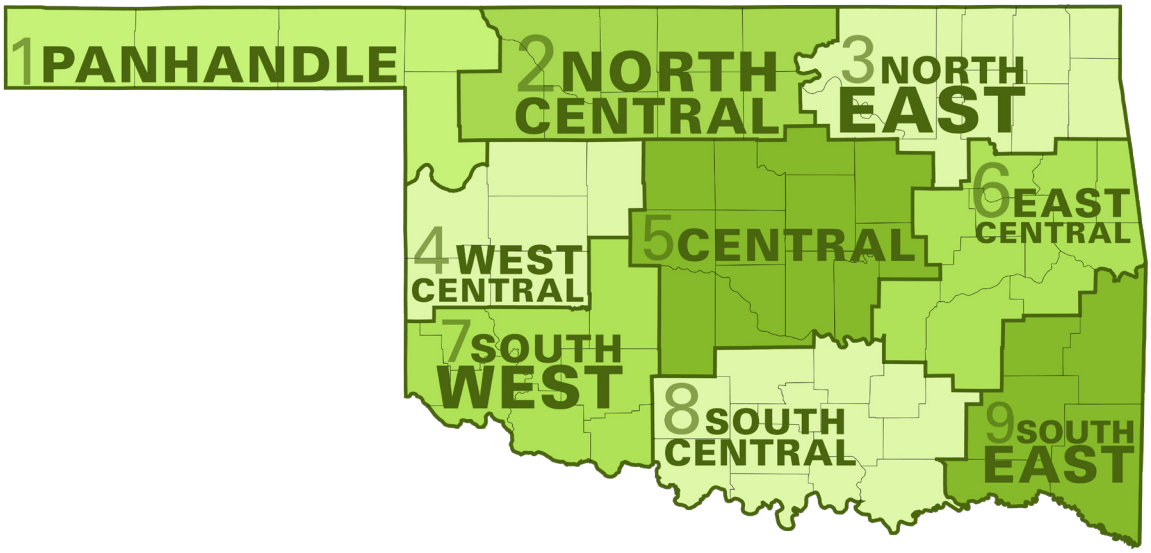
*EC indicates no forecasted anomalies due to lack of model skill.

Copyright © 2014 Board of Regents of the University of Oklahoma.

FEBRUARY CLIMATE NORMALS

Climate Division	Max. Temperature (°F)	Min. Temperature (°F)	Avg. Temperature (°F)	Precipitation (inches)
1	53.3	23.8	38.6	0.64
2	51.4	25.1	38.3	1.23
3	52.9	28.8	40.9	1.96
4	53.2	26.9	40.1	1.09
5	53.9	29.2	41.6	1.77
6	54.4	31.2	42.8	2.35
7	55.9	29.0	42.5	1.36
8	56.8	31.9	44.4	2.21
9	57.3	31.9	44.6	3.13
Statewide	54.2	28.7	41.5	1.82

Oklahoma Climate Divisions



Copyright © 2014 Board of Regents of the University of Oklahoma.

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
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

Copyright © 2014 Board of Regents of the University of Oklahoma.