

The Climate of Okfuskee County

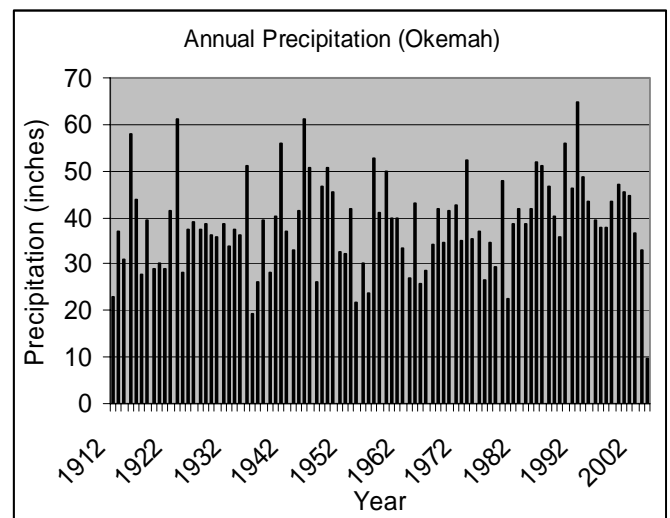
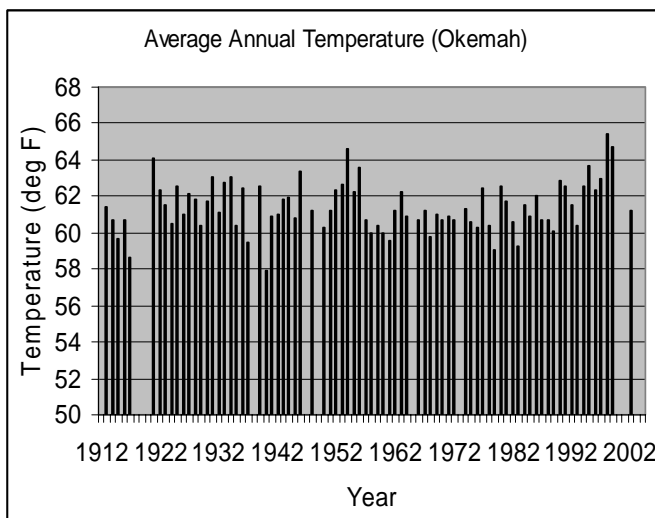


Okfuskee County is located primarily in the cross-timbers region of Oklahoma. Blackjack and Post Oak trees in the western part of the county give way to more hardwood forests in the eastern parts. Average annual precipitation generally increases from the northwest to the southeast, and can vary by more than three inches across the county. On average, the county receives more than 42 inches of precipitation each year. Most precipitation comes during spring and fall, but all months typically receive abundant precipitation. Four out of five years have at least one inch of snow during the winter, with one in four years having ten or more inches.

Temperatures are relatively uniform, with a mean between 61 and 62 degrees. Temperatures range from an average daytime high of 94 degrees in July and August to an average low of 29 degrees in January. Okfuskee County averages a growing season of 224 days, but plants that can withstand short periods of colder temperatures may have an additional five weeks.

Winds across Okfuskee County are predominantly from the south to southeast, averaging about eight miles-per-hour. Relative humidity, on average, ranges from 47% to 91% during the day. Relative humidity is relatively constant throughout the year, with a slight increase in late spring. Winter months tend to be cloudier than summer months. The percentage of possible sunshine ranges from an average of 50% in winter to nearly 80% in summer.

Thunderstorms occur on about 51 days each year, predominantly in the spring and summer. During the period 1950 - 2003, Okfuskee County recorded 32 tornadoes. The most recent significant tornado (F2 intensity or greater) was part of a state record tornado outbreak on October 4, 1998, leaving a damage path up to three miles wide in places. Typically, there are 2-3 events each year of hail exceeding one inch in diameter. As information collection improves, both the number of reported tornadoes and the number of severe hail events have increased.



Temperature (deg Fahrenheit)												
	AVERAGES (1971-2000)			EXTREMES (1912-2003)				AVG # DAYS PER MONTH (1971-2000)				
	Daily Max	Daily Min	Daily Avg	Record High		Record Low		Max>100	Max>90	Max<32	Min<32	Min<0
Jan	48.8	28.5	38.7	82	(24th, 1943)	-10	(18th, 1930)			4	20	*
Feb	55.1	33.4	44.2	93	(22nd, 1996)	-6	(8th, 1933)		*	2	12	*
Mar	64.3	41.6	52.9	94	(21st, 1916)	-2	(12th, 1948)		*	*	6	
Apr	73.4	50.1	61.7	99	(12th, 1972)	21	(2nd, 1936)		*		1	
May	80.3	59.0	69.6	97	(31st, 1934)	35	(3rd, 1954)		2			
Jun	87.8	66.8	77.3	108	(21st, 1936)	45	(1st, 1983)	*	13			
Jul	93.8	70.8	82.3	114	(19th, 1936)	53	(31st, 1971)	5	24			
Aug	93.8	69.6	81.7	115	(10th, 1936)	49	(31st, 1915)	6	24			
Sep	85.4	62.8	74.1	111	(3rd, 1939)	34	(27th, 1942)	1	10			
Oct	74.9	52.1	63.5	98	(1st, 1913)	17	(30th, 1917)		1		*	
Nov	61.1	40.8	51.0	88	(6th, 1945)	11	(13th, 1940)			*	6	
Dec	51.2	31.7	41.5	83	(13th, 1948)	-9	(23rd, 1989)			2	16	*
Annual	72.6	50.7	61.6	115	(Aug 10, 1936)	-10	(Jan 18, 1930)	12	75	8	62	*

Precipitation (inches)											
	AVERAGE	EXTREMES (1912-2003)				AVG # DAYS PER MONTH (1971-2000)					
	1971-2000	Monthly Max	Daily Max		any	meas	0.10"+	0.25"+	0.50"+	1.00"+	
Jan	1.67"	8.87" (1916)	5.34"	(31st, 1923)	6	5	3	2	1	*	
Feb	2.12"	7.00" (1938)	4.21"	(1st, 1983)	6	6	4	2	1	1	
Mar	3.50"	8.75" (1990)	2.95"	(27th, 1977)	8	7	6	4	3	1	
Apr	3.98"	17.78" (1945)	10.05"	(14th, 1945)	8	7	6	4	3	1	
May	5.71"	14.91" (1943)	5.50"	(18th, 1949)	9	9	7	5	4	2	
Jun	4.84"	15.67" (1948)	6.76"	(23rd, 1948)	8	8	6	5	3	2	
Jul	2.98"	11.49" (1950)	6.14"	(28th, 1988)	6	5	4	3	2	1	
Aug	2.42"	10.12" (1915)	4.87"	(21st, 1958)	6	5	4	3	2	1	
Sep	4.98"	13.65" (1993)	6.68"	(14th, 1993)	7	7	6	4	3	1	
Oct	4.02"	20.87" (1941)	6.60"	(30th, 1941)	7	6	5	3	2	1	
Nov	3.59"	9.53" (1931)	4.30"	(21st, 1979)	6	6	5	3	2	1	
Dec	2.47"	7.45" (1932)	5.90"	(23rd, 1932)	7	6	4	3	2	1	
Annual	42.28"	20.87" (Oct 1941)	10.05"	(Apr 14, 1945)	85	77	60	43	28	13	

Snow and Sleet (inches)											
	AVERAGE	EXTREMES (1912-2003)				AVG # DAYS PER MONTH (1971-2000)					
	1971-2000	Monthly Max	Daily Max		Greatest Depth		any	meas	0.50"+	1.00"+	Pot. Glazing
Jan	2.1"	25.0" (1937)	15.0"	(21st, 1937)	12.0"	(7th, 1988)	2	1	1	1	2
Feb	0.9"	11.0" (1927)	7.0"	(27th, 1945)	10.0"	(19th, 1921)	1	1	*	*	1
Mar	0.8"	12.5" (1968)	10.5"	(6th, 1989)	10.0"	(12th, 1968)	*	*	*	*	*
Apr		0.0" (1951)	0.0"	(8th, 1916)	0.1"	(8th, 1938)					
May											
Jun		0.0" (1951)	0.0"	(3rd, 1949)							
Jul											
Aug											
Sep											
Oct	0.0"	3.0" (1913)	3.0"	(27th, 1913)			*	*	*		*
Nov	0.4"	4.0" (1980)	4.0"	(17th, 1980)	2.0"	(29th, 1974)	1	*	*	*	*
Dec	0.6"	6.5" (1935)	6.0"	(21st, 1913)	6.0"	(31st, 1958)	1	1	*	*	1
Annual	4.7"	25.0" (Jan 1937)	15.0"	(Jan 21, 1937)	12.0"	(Jan 7, 1988)	4	3	2	2	4

TEMPERATURE AND PRECIPITATION

From Okemah Cooperative Observer Station (346638); April 1912 – June 2003

Latitude: 3526N Longitude: 09618W Elevation: 934 ft

Exceedence values (2 in 10 years)				
Month:	Maximum Temperature Higher Than:	Minimum Temperature Lower Than:	Precipitation Less Than:	Precipitation More Than:
January	75	1	0.57	2.55
February	79	8	0.72	2.88
March	86	17	1.50	4.56
April	89	30	2.21	5.96
May	94	41	2.85	8.14
June	100	52	2.38	6.65
July	107	59	0.78	5.04
August	107	57	1.02	4.06
September	102	42	1.43	6.92
October	93	31	1.05	6.31
November	82	18	0.88	4.30
December	75	6	0.70	3.15
Annual	108	-1	32.11	47.61

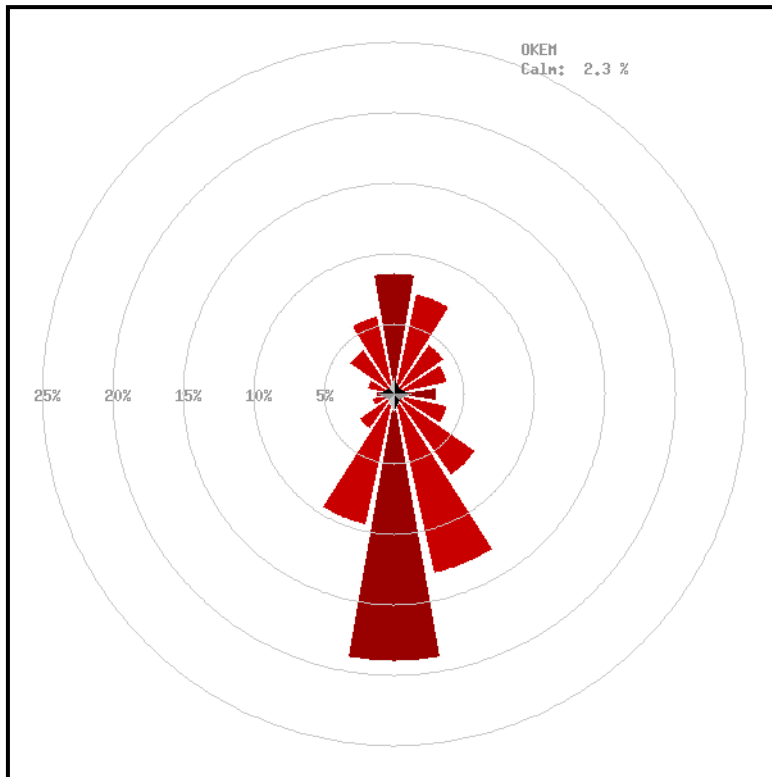
First Freezing Temperature in Fall			
Probability	24 F or Lower	28 F or Lower	32 F or Lower
1 Year in 10 Earlier Than –	November 3	November 1	October 20
2 Years in 10 Earlier Than –	November 11	November 4	October 28
5 Years in 10 Earlier Than –	November 27	November 13	November 6
Last Freezing Temperature in Spring			
Probability	24 F or Lower	28 F or Lower	32 F or Lower
1 Year in 10 Later Than –	March 20	April 4	April 14
2 Years in 10 Later Than –	March 24	March 30	April 9
5 Years in 10 Later Than –	March 10	March 20	March 29

Number of Days in Growing Season			
Probability	Higher than 24 F	Higher than 28 F	Higher than 32 F
9 Years in 10	233	221	202
8 Years in 10	239	226	207
5 Years in 10	261	243	224
2 Years in 10	283	262	236
1 Year in 10	306	272	243

WINDS

From Okemah Mesonet Site (OKEM); Jan 1994 – Dec 2001

Latitude: 3526N Longitude: 09616W Elevation: 863 ft



Wind Roses show the prevailing direction from which the wind is blowing. North is up in the image. The circles show the percentage of time from which the wind is blowing in that direction. For example, Okemah records a southerly wind nearly 20 percent of the time, with northerly winds 9 percent of the time.

The table below shows the percentage of time the wind is blowing from each of the 16-point compass headings, and the percent of time the prevailing wind is recorded in each speed bin.

Maximum Gust: 63.4 mph
Maximum Sustained: 41.1 mph
Overall Average Speed: 8.5 mph

OKEM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Totals
Calm																	2.3%
1- 5 mph	1.6	1.6	1.4	1.6	1.6	1.9	2.1	2.5	2.5	1.5	0.9	0.5	0.4	0.5	0.8	1.0	22.4%
6-10 mph	3.3	3.0	2.0	1.7	1.3	1.7	3.8	6.7	6.0	2.9	1.2	0.6	0.5	0.8	1.4	1.9	38.7%
11-15 mph	2.5	2.0	0.8	0.5	0.3	0.3	1.0	3.0	5.4	2.7	0.7	0.3	0.2	0.4	1.0	1.6	22.8%
16-20 mph	1.1	0.7	0.1	0.1	0.0	0.0	0.1	0.8	3.7	1.7	0.3	0.1	0.1	0.2	0.6	0.9	10.4%
21-25 mph	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	1.2	0.6	0.1	0.0	0.0	0.1	0.2	0.3	2.9%
26-30 mph	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5%
31-35 mph	0.0	0.0					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
35+ mph	0.0								0.0	0.0				0.0		0.0	0.0%
Totals	8.7	7.4	4.3	3.9	3.1	3.9	7.1	13.1	19.0	9.5	3.1	1.6	1.3	2.0	3.9	5.8	100.0%
OKEM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
Max Gust	57	53	40	38	36	36	46	49	63	58	51	47	53	58	49	53	
Max 5 Min	39	33	29	28	26	25	32	32	39	39	32	33	34	41	34	36	
Avg Speed	9.2	8.5	6.8	6.0	5.2	5.1	6.4	7.9	10.9	10.7	8.0	7.8	7.6	8.3	9.6	10.0	

Due to rounding, column and row totals may not sum to exactly 100.0%.

HUMIDITY

From Okemah Mesonet Site (OKEM); Jan 1994 – Dec 2003

Latitude: 3526N Longitude: 09616W Elevation: 863 ft

Mean Monthly Humidity and Moisture					
	Daily Maximum Relative Humidity	Daily Minimum Relative Humidity	Daily Average Relative Humidity	Daily Average Dewpoint (°F)	Daily Average Vapor Deficit
January	90	48	70	28	2.9
February	87	44	66	32	4.4
March	88	43	66	37	5.4
April	90	44	67	48	7.0
May	93	54	75	60	7.1
June	94	53	75	67	9.0
July	91	45	70	70	13.9
August	91	42	68	68	14.4
September	93	47	72	61	10.0
October	91	48	72	51	6.5
November	90	49	71	40	4.4
December	89	49	71	31	3.1
Annual	91	47	70	50	7.3

Vapor pressure is given in millibars.

SOIL TEMPERATURES

From Okemah Mesonet Site (OKEM); Jan 1994 – Dec 2003

Latitude: 3526N Longitude: 09616W Elevation: 863 ft

Soil Temperatures at 10 cm (4-inch) depth				
	Average Temperature beneath sod	Average Temperature beneath bare soil	Average Daily Max Temperature	Average Daily Min Temperature
January	41	39	42	36
February	45	43	48	39
March	50	49	55	44
April	60	60	67	54
May	70	71	78	65
June	77	80	87	73
July	82	86	94	79
August	82	85	93	79
September	75	75	82	70
October	65	63	69	58
November	54	51	56	47
December	45	42	45	39
Annual	62	62	68	57

Average daily maximum and minimum temperatures based on bare soil.

TORNADOES

Significant Tornadoes (F2 intensity or greater) affecting Okfuskee County, 1880 – 2003. Source: *Significant Tornadoes, 1880-1989: Volume I* and National Climatic Data Center.

Date	Path	Deaths	Injuries	Rating	Counties Affected
May 29, 1909	15 miles	0	8	F3	Hughes, Okfuskee
May 28, 1924	25 miles	7	30	F4	Hughes, Okfuskee
May 7, 1926	30 miles	2	23	F4	Okfuskee, Okmulgee
May 4, 1941	3 miles	0	2	F2	Okfuskee
May 2, 1942	55 miles	16	80	F4	Pottawatomie, Lincoln, Okfuskee, Creek
May 5, 1943	unknown	unknown	unknown	F2	Okfuskee
April 15, 1945	15 miles	0	10	F2	Okfuskee, Okmulgee
April 23, 1953	1.5 miles	1	4	F3	Okfuskee
May 1, 1954	50 miles	0	6	F3	Pontotoc, Seminole, Hughes, Okfuskee
May 1, 1954	7 miles	0	0	F2	Seminole, Okfuskee
May 5, 1060	70 miles	5	81	F5	Pottawatomie, Seminole, Lincoln, Okfuskee, Creek
Feb 17, 1961	80 miles	0	11	F3	Garvin, Pontotoc, Pottawatomie, Seminole, Hughes, Okfuskee, Okmulgee
October 5, 1970	25 miles	4	84	F4	Pottawatomie, Lincoln, Okfuskee
June 8, 1974	20 miles	0	0	F3	Seminole, Okfuskee
May 17, 1981	35 miles	0	2	F4	Seminole, Okfuskee, Okmulgee
May 17, 1981	15 miles	0	0	F3	Seminole, Okfuskee
October 4, 1998	27 miles	0	4	F2	Okfuskee, Okmulgee

About the Data:

The temperature and precipitation data from Okemah are from the National Weather Service Cooperative Observer station, which records daily maximum and minimum temperatures, precipitation, and snowfall. The station has been in operation since 1912, yielding a 91-year series of data. Extremes, frost and freeze data, and growing season lengths were determined using the entire 91 year series. The means for temperature, precipitation, and snowfall were determined using a subset of the series, from 1971-2000, corresponding with official national standards set by the National Climatic Data Center.

Wind and humidity data are compiled from the Oklahoma Mesonet station at Okemah, which has been operational since 1994. The Oklahoma Mesonet is a cooperative project between Oklahoma State University and The University of Oklahoma. Data are collected and archived at the Oklahoma Climatological Survey. The Mesonet records a variety of weather information at 5-minute intervals throughout the day, with at least one reporting station in every county in Oklahoma. For more information on the Mesonet, see <http://www.mesonet.org/>.

Solar radiation (sunshine) data were obtained from the *Climatic Atlas of the United States*, U.S. Department of Commerce, 1968. Severe storm information is available from the National Climatic Data Center, <http://www.ncdc.noaa.gov/>, under Weather/Climate Events: Climatology & Extreme Events, U.S. Storm Events Database. The best site for online county tornado information for Oklahoma is through the National Weather Service, Norman Office, <http://www.srh.noaa.gov/oun/tornadodata/>.

The tables and summary were prepared by the Oklahoma Climatological Survey. For more information, please contact OCS at 405-325-2541. Many climate summary products are available on the worldwide web at <http://www.ocs.ou.edu/>.

Need Additional Information?

If you cannot find what you need here, or want some help interpreting what this means for your particular needs, please contact:

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Norman, OK 73019-1012
Phone: 405-325-2541
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In addition to maintaining records of all weather and climate information for Oklahoma, OCS has a staff of climatologists who specialize in tailoring information for particular needs. Whether you want to know how dry it has been or are planning a construction project, OCS can help.