

The Climate of McIntosh County

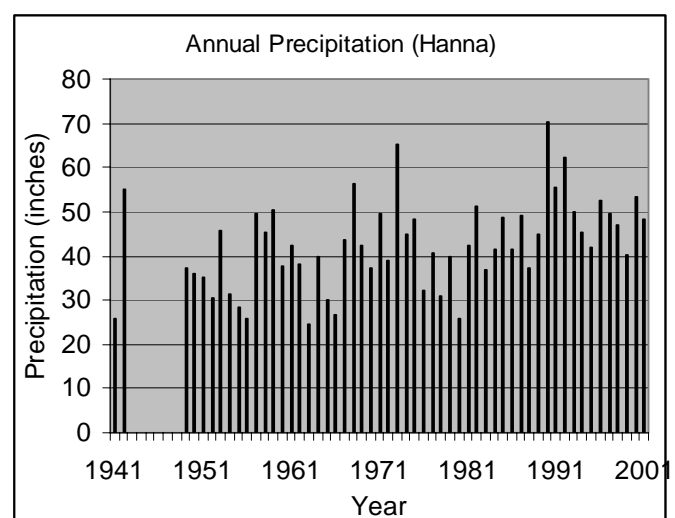
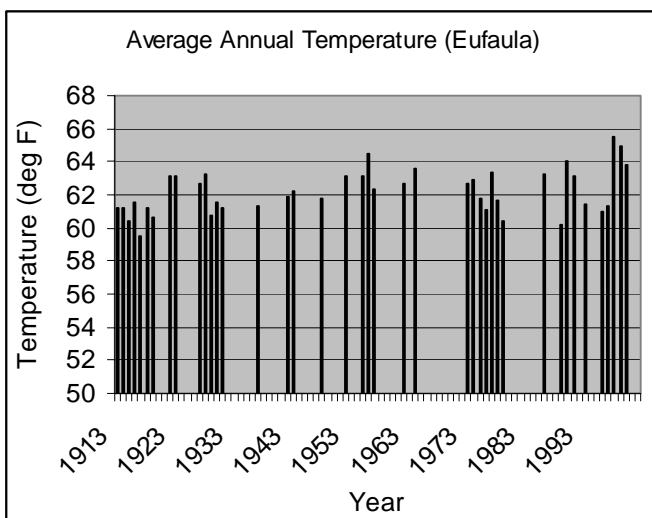


McIntosh County is part of the Hardwood Forest and the Caves and Prairies in the extreme northeast. The Hardwood Forest is a region of heavily forested ridges and valleys while the Caves and Prairies region is less forested and irregular and features more grassland. Average annual precipitation ranges from about 45 inches to 48 inches throughout the county. May and October are the wettest months, on average, but much of the spring through fall receives sufficient rainfall. Nearly every winter has at least one inch of snow, with one year in nine having ten or more inches.

Temperatures average near 63 degrees, with a slight increase from north to south. Temperatures range from an average daytime high of 94 degrees in July and August to an average low of 30 degrees in January. McIntosh County averages a growing season of 223 days, but plants that can withstand short periods of colder temperatures may have an additional three to seven weeks.

Winds from the south to southwest are quite dominant, averaging just over seven miles-per-hour. Relative humidity, on average, ranges from 44% to 94% during the day. During the year, humidity is highest in September and lowest in February and March. Winter months tend to be cloudier than summer months. The percentage of possible sunshine ranges from an average of about 55% in winter to nearly 80% in summer.

Thunderstorms occur on about 52 days each year, predominantly in the spring and summer. During the period 1950 - 2003, McIntosh County recorded 34 tornadoes. The most recent significant tornado (F2 intensity or greater) occurred on May 20, 2001. This tornado cut an 11 mile long path through Hughes and McIntosh without injuries and little damage. Typically, there are about 4 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 (1912-2002)				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	48.9	29.5	39.2	82	(24th, 1943)	-18	(22nd, 1930)			3	19	*
Feb	55.1	34.0	44.6	90	(22nd, 1996)	-4	(8th, 1933)		*	2	12	*
Mar	64.7	42.6	53.7	95	(31st, 1974)	-2	(12th, 1948)		*	*	5	
Apr	73.5	51.3	62.4	95	(11th, 1930)	18	(5th, 1920)		*		*	
May	80.5	60.6	70.5	99	(29th, 1927)	34	(1st, 1918)		1			
Jun	88.1	68.7	78.4	107	(21st, 1936)	40	(21st, 1916)	*	12			
Jul	94.1	73.0	83.5	110	(29th, 1930)	50	(5th, 1915)	5	24			
Aug	94.0	71.7	82.9	116	(10th, 1936)	46	(31st, 1915)	6	24			
Sep	85.0	64.4	74.7	114	(1st, 2000)	30	(29th, 1916)	1	9			
Oct	74.9	53.7	64.3	100	(9th, 1963)	15	(30th, 1917)		1		*	
Nov	61.5	42.4	51.9	87	(14th, 1924)	11	(15th, 1940)			*	5	
Dec	52.3	33.1	42.7	82	(13th, 1948)	-7	(22nd, 1916)			2	15	*
Annual	72.8	52.2	62.5	116	(Aug 10, 1936)	-18	(Jan 22, 1930)	13	73	7	56	*

Precipitation (inches)											
	AVERAGE	EXTREMES (1896-2002)				AVG # DAYS PER MONTH (1971-2000)					
	1971-2000	Monthly Max	Daily Max		any	meas	0.10"+	0.25"+	0.50"+	1.00"+	
Jan	2.29"	11.21" (1916)	3.40"	(4th, 1998)	8	6	4	3	1	1	
Feb	2.43"	11.68" (1938)	5.28"	(15th, 1938)	7	6	4	3	1	1	
Mar	4.26"	10.27" (1990)	4.20"	(27th, 1977)	9	8	6	4	3	1	
Apr	4.17"	13.03" (1957)	5.60"	(25th, 1897)	9	8	6	5	3	1	
May	5.80"	15.83" (1943)	11.77"	(11th, 1943)	10	9	7	6	4	2	
Jun	4.73"	11.99" (2000)	3.60"	(28th, 2001)	9	8	6	5	3	2	
Jul	2.85"	13.83" (1950)	4.70"	(29th, 1950)	6	5	4	3	2	1	
Aug	2.74"	12.35" (1915)	4.50"	(20th, 1919)	6	5	4	3	2	1	
Sep	5.42"	13.18" (1926)	7.15"	(14th, 1998)	9	8	6	5	4	2	
Oct	4.48"	25.72" (1941)	12.86"	(31st, 1941)	7	6	5	4	3	1	
Nov	4.43"	13.15" (1996)	4.85"	(7th, 1996)	8	7	5	4	3	2	
Dec	3.18"	9.53" (1987)	4.99"	(23rd, 1932)	7	6	4	3	2	1	
Annual	46.78"	25.72" (Oct 1941)	12.86"	(Oct 31, 1941)	95	82	62	46	31	15	

Snow and Sleet (inches)											
	AVERAGE	EXTREMES (1897-2002)				AVG # DAYS PER MONTH (1971-2000)					
	1971-2000	Monthly Max	Daily Max		Greatest Depth		any	meas	0.50"+	1.00"+	Pot. Glazing
Jan	2.2"	18.5" (1937)	9.0"	(22nd, 1937)	10.0"	(8th, 1944)	1	1	1	1	2
Feb	1.3"	16.0" (1929)	10.0"	(9th, 1929)	6.0"	(15th, 1951)	1	1	1	1	1
Mar	0.1"	21.0" (1924)	6.5"	(31st, 1926)	6.0"	(10th, 1948)	*	*	*	*	*
Apr		0.0" (1951)	0.0"	(4th, 1920)							
May											
Jun		0.0" (1949)	0.0"	(8th, 1949)							
Jul											
Aug											
Sep					2.0"	(13th, 1915)					
Oct		0.0" (1913)	0.0"	(26th, 1913)							
Nov	0.2"	3.0" (1952)	3.0"	(29th, 1952)	3.0"	(29th, 1952)	*	*	*	*	*
Dec	0.6"	10.0" (2000)	6.0"	(14th, 1916)	6.0"	(13th, 1958)	*	*	*	*	1
Annual	4.5"	21.0" (Mar 1924)	10.0"	(Feb 9, 1929)	10.0"	(Jan 8, 1944)	3	2	2	1	4

TEMPERATURE AND PRECIPITATION

From Eufaula Cooperative Observer Station (342993); January 1896 – January 2002

Latitude: 3512N Longitude: 09535W Elevation: 619 ft

Exceedence values (2 in 10 years)				
Month:	Maximum Temperature Higher Than:	Minimum Temperature Lower Than:	Precipitation Less Than:	Precipitation More Than:
January	74	2	0.90	3.70
February	80	9	1.06	3.60
March	86	16	1.78	5.37
April	89	30	2.77	6.15
May	93	42	3.30	8.15
June	99	52	1.93	6.15
July	106	57	0.66	5.17
August	108	55	1.04	5.42
September	102	42	1.37	7.48
October	95	29	0.89	5.83
November	83	18	0.96	4.69
December	76	9	1.07	4.20
Annual	109	0	32.2	53.97

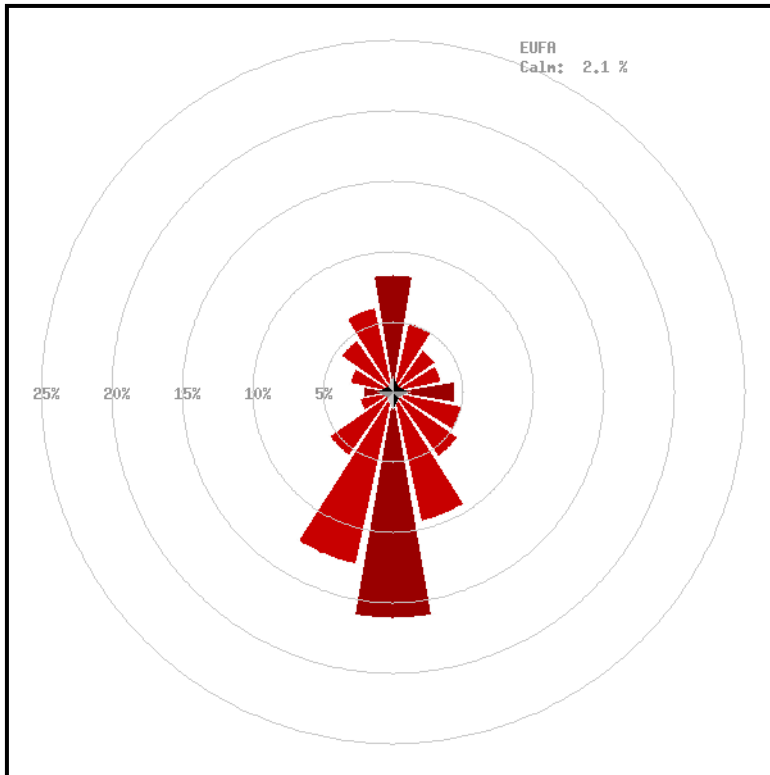
First Freezing Temperature in Fall			
Probability	24 F or Lower	28 F or Lower	32 F or Lower
1 Year in 10 Earlier Than –	November 4	October 26	October 23
2 Years in 10 Earlier Than –	November 13	November 2	October 26
5 Years in 10 Earlier Than –	November 29	November 14	November 4
Last Freezing Temperature in Spring			
Probability	24 F or Lower	28 F or Lower	32 F or Lower
1 Year in 10 Later Than –	March 27	April 9	April 17
2 Years in 10 Later Than –	March 22	March 31	April 13
5 Years in 10 Later Than –	March 7	March 21	March 28

Number of Days in Growing Season			
Probability	Higher than 24 F	Higher than 28 F	Higher than 32 F
9 Years in 10	237	221	194
8 Years in 10	241	230	201
5 Years in 10	272	245	223
2 Years in 10	304	271	245
1 Year in 10	314	288	254

WINDS

From Eufaula Mesonet Site (EUFA); Jan 1994 – Dec 2001

Latitude: 3530N Longitude: 09566W Elevation: 666 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, Eufaula records a south-southwesterly wind about 13 percent of the time, with northerly winds just over 8 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: 63.0 mph

Maximum Sustained: 37.0 mph

Overall Average Speed: 7.3 mph

EUFA	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Totals
Calm																	2.1%
1- 5 mph	2.5	1.9	1.7	1.6	1.8	2.5	2.6	2.5	2.1	2.0	1.6	1.1	1.0	1.3	1.9	2.4	30.5%
6-10 mph	4.0	2.5	1.8	1.8	2.1	2.1	2.5	4.3	5.8	4.5	2.5	0.9	0.7	1.2	1.7	2.6	41.0%
11-15 mph	1.6	0.6	0.2	0.2	0.5	0.4	0.5	2.0	4.9	3.3	1.0	0.3	0.3	0.5	0.8	1.0	17.8%
16-20 mph	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.6	2.5	1.9	0.4	0.1	0.1	0.2	0.2	0.1	6.6%
21-25 mph	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7	0.7	0.1	0.0	0.0	0.0	0.0	1.8%
26-30 mph			0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0		0.2%
31-35 mph								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			0.0%
Totals	8.3	5.1	3.8	3.6	4.5	5.0	5.7	9.5	16.1	12.6	5.5	2.4	2.1	3.2	4.5	6.1	100.0%
EUFA	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
Max Gust	45	35	41	41	56	38	48	51	50	57	48	62	63	51	52	40	
Max 5 Min	24	20	28	26	37	27	33	34	36	32	36	35	37	36	34	24	
Avg Speed	6.9	5.8	5.0	5.2	5.8	5.1	5.3	7.6	10.2	10.2	7.5	6.1	6.1	6.6	6.3	6.2	

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

HUMIDITY

From Eufaula Mesonet Site (EUFA); Jan 1994 – Dec 2003

Latitude: 3530N Longitude: 09566W Elevation: 666 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	88	50	70	30	3.0
February	86	46	66	33	4.3
March	87	45	66	39	5.3
April	89	46	68	49	6.9
May	93	56	76	61	6.9
June	94	56	77	68	8.6
July	91	48	71	71	12.9
August	90	44	69	69	13.9
September	92	48	72	62	9.7
October	90	46	70	52	7.0
November	89	50	70	42	4.6
December	88	50	70	33	3.3
Annual	90	49	70	51	7.2

Vapor pressure is given in millibars.

SOIL TEMPERATURES

From Eufaula Mesonet Site (EUFA); Jan 1994 – Dec 2003

Latitude: 3530N Longitude: 09566W Elevation: 666 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	42	40	44	38
February	45	44	49	40
March	50	50	56	46
April	59	61	67	55
May	68	71	78	65
June	76	79	87	73
July	81	86	94	79
August	81	85	93	79
September	75	76	83	71
October	65	64	70	59
November	55	52	57	48
December	46	43	47	40
Annual	62	63	69	58

Average daily maximum and minimum temperatures based on bare soil.

TORNADOES

Significant Tornadoes (F2 intensity or greater) affecting McIntosh County, 1880 – 2003. Source: *Significant Tornadoes, 1880-1989: Volume I* and National Weather Service, Norman office.

Date	Path	Deaths	Injuries	Rating	Counties Affected
June 4, 1906	10 miles	0	unknown	F2	Pittsburg, McIntosh
April 12, 1911	10 miles	2	25	F3	McIntosh
September 29, 1927	1 mile	0	8	F2	McIntosh
April 30, 1929	8 miles	0	12	F2	McIntosh, Okmulgee
May 8, 1936	1 mile	1	30	F3	McIntosh
May 10, 1946	10 miles	1	5	F3	McIntosh, Pittsburg
March 25, 1948	45 miles	10	25	F4	Hughes, McIntosh
March 25, 1948	85 miles	4	15	F4	McIntosh, Haskell, Sequoyah, Crawford (AR)
May 1, 1954	26 miles	0	6	F2	Pittsburg, McIntosh
May 5, 1960	15 miles	2	6	F3	McIntosh
May 5, 1960	1 mile	0	0	F2	McIntosh
March 26, 1961	20 miles	0	1	F3	McIntosh
March 29, 1976	0.3 miles	0	0	F2	McIntosh
March 8, 1999	1.2 miles	0	4	F2	McIntosh
March 8, 1999	9 miles	0	0	F2	McIntosh
June 1, 1999	4.5 miles	0	0	F3	McIntosh
June 1, 1999	2 miles	0	0	F2	McIntosh
May 20, 2001	11 miles	0	0	F2	Hughes, McIntosh

About the Data:

The temperature and precipitation data from Eufaula 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 1896, yielding a 108-year series of data. Extremes, frost and freeze data, and growing season lengths were determined using the entire 108-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 Eufaula (4 miles west-northwest of town), which has been operational since 1994. The Eufaula Mesonet site was chosen because it is the only Mesonet site in McIntosh County. 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:

The Oklahoma Climatological Survey
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Norman, OK 73019-1012
Phone: 405-325-2541
E-mail: ocs@ou.edu

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.