

# The Climate of Greer County

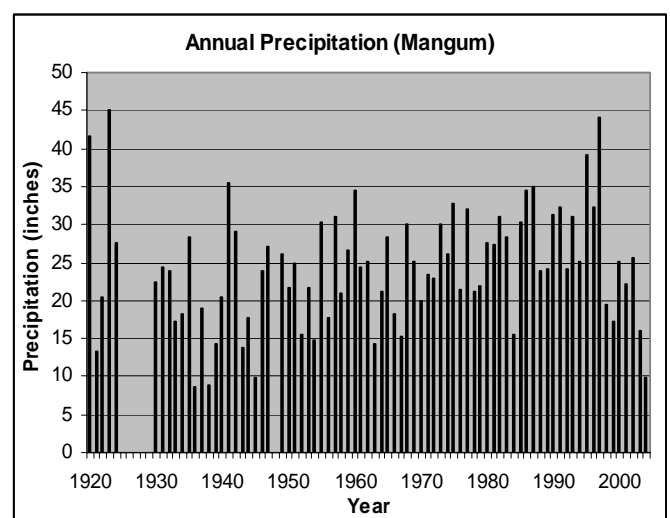
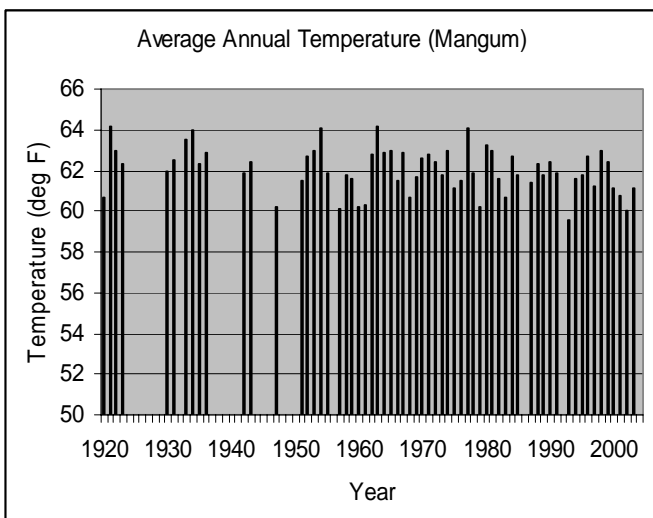


Greer County is at the western edge of the Central Great Plains, encompassing some of the best agricultural land in Oklahoma. Average annual precipitation ranges from about 25 to 38 inches across the county. Most of the precipitation comes in the springtime, with nearly one-third of the annual total falling in May and June. Autumn can also bring heavy rains, but not as consistently as the springtime. More than half of the winters have at least one inch of snow, with ten inches or more occurring about once every six years.

Temperatures average from 59 degrees in northern parts of the county to 62 degrees along its southern border. Temperatures range from an average daytime high of 98 degrees in July to an average low of 25 degrees in January. Greer County averages a growing season of 211 days, but plants that can withstand short periods of colder temperatures may have an additional five weeks.

Winds from the south to southeast are quite dominant, averaging more than nine miles-per-hour. Relative humidity, on average, ranges from 38% to 88% during the day. During the year, humidity is lowest in the summer and highest in late fall. Winter months tend to be cloudier than summer months. The percentage of possible sunshine ranges from an average of about 60% in winter to more than 80% in summer.

Thunderstorms occur on about 42 days each year, predominantly in the spring and summer. During the period 1950 - 2003, Greer County recorded 32 tornadoes, although neighboring counties had substantially more. Greer County has not reported a significant tornado (F2 intensity or greater) since May 12, 1983. However, there have been more active patterns in the past. On April 27, 1912, three significant tornadoes struck Greer County on the same day, and two others occurred on May 7 just one decade later. Typically, there are about three 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 (1920-2003)				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	51.7	25.2	38.5	85	(24th, 1950)	-9	(22nd, 1930)			3	26	*
Feb	58.5	30.0	44.3	94	(22nd, 1996)	-5	(8th, 1933)		*	1	17	*
Mar	68.3	38.0	53.1	100	(27th, 1971)	-1	(11th, 1948)	*	1	*	8	
Apr	77.4	46.2	61.8	106	(12th, 1972)	20	(2nd, 1936)	*	3		2	
May	84.8	56.9	70.8	109	(29th, 1985)	33	(3rd, 1954)	1	9			
Jun	93.0	65.4	79.2	117	(24th, 1980)	45	(4th, 1939)	5	21			
Jul	98.3	69.2	83.7	117	(3rd, 1980)	52	(5th, 1924)	14	28			
Aug	96.6	67.9	82.3	117	(12th, 1936)	51	(27th, 1962)	12	26			
Sep	88.5	60.7	74.6	109	(1st, 1951)	31	(30th, 1984)	3	16		*	
Oct	78.1	49.0	63.5	104	(4th, 2000)	14	(31st, 1993)	*	4	*	1	
Nov	63.5	36.9	50.2	90	(8th, 1980)	8	(29th, 1976)		*	*	10	
Dec	53.4	27.7	40.6	87	(24th, 1955)	-11	(23rd, 1989)			2	22	*
Annual	76.1	47.9	62.0	117	(Aug 12, 1936)	-11	(Dec 23, 1989)	36	108	6	85	*

Precipitation (inches)										
	AVERAGE	EXTREMES (1920-2003)			AVG # DAYS PER MONTH (1971-2000)					
	1971-2000	Monthly Max	Daily Max		any	meas	0.10"+	0.25"+	0.50"+	1.00"+
Jan	0.90"	4.50" (1949)	2.92"	(8th, 1939)	4	3	2	1	1	*
Feb	1.15"	4.30" (1997)	2.80"	(20th, 1997)	4	3	2	2	1	*
Mar	1.71"	4.43" (1998)	2.70"	(11th, 1923)	5	4	3	2	1	1
Apr	2.26"	9.29" (1997)	3.74"	(14th, 2002)	6	5	4	2	2	1
May	4.68"	16.99" (1980)	5.30"	(18th, 1935)	8	8	6	4	3	2
Jun	4.22"	10.94" (1982)	3.78"	(4th, 1994)	7	6	5	4	3	1
Jul	2.22"	7.06" (1975)	4.62"	(11th, 1972)	5	4	3	2	1	1
Aug	2.73"	10.33" (1920)	5.12"	(11th, 1997)	6	5	4	3	2	1
Sep	3.15"	9.99" (1965)	5.46"	(23rd, 1970)	6	5	4	3	2	1
Oct	2.69"	15.75" (1923)	6.45"	(20th, 1983)	6	5	4	2	2	1
Nov	1.22"	3.68" (1940)	2.15"	(2nd, 1961)	5	4	3	2	1	*
Dec	1.08"	5.00" (1932)	2.10"	(23rd, 1932)	5	4	2	1	1	*
Annual	28.00"	16.99" (May 1980)	6.45"	(Oct 20, 1983)	67	58	42	29	18	8

Snow and Sleet (inches)											
	AVERAGE	EXTREMES (1920-2003)				AVG # DAYS PER MONTH (1971-2000)					
	1971-2000	Monthly Max	Daily Max		Greatest Depth	any	meas	0.50"+	1.00"+	Pot. Glazing	
Jan	1.3"	15.2" (1930)	10.0"	(9th, 1930)	7.0"	(8th, 1920)	1	1	1	*	1
Feb	0.8"	13.0" (1968)	10.0"	(18th, 1921)	8.0"	(10th, 1986)	1	*	*	*	1
Mar	0.0"	18.0" (1924)	9.0"	(1st, 1942)	7.0"	(10th, 1948)	*				
Apr	0.1"	8.0" (1938)	5.0"	(7th, 1938)	1.0"	(13th, 1947)	*	*	*	*	
May		0.0" (1954)	0.0"	(18th, 1949)							
Jun		0.0" (1953)	0.0"	(5th, 1953)							
Jul		0.0" (1952)	0.0"	(13th, 1952)							
Aug											
Sep		0.0" (1955)	0.0"	(22nd, 1955)							
Oct		2.0" (1936)	2.0"	(22nd, 1936)							
Nov	0.0"	2.0" (1923)	2.0"	(28th, 1923)	2.0"	(28th, 1958)	*	*	*	*	
Dec	0.9"	19.0" (1942)	10.0"	(27th, 1942)	10.0"	(27th, 1942)	1	*	*	*	1
Annual	3.0"	19.0" (Dec 1942)	10.0"	(Feb 18, 1921)	10.0"	(Dec 27, 1942)	2	2	1	1	2

## **TEMPERATURE AND PRECIPITATION**

From Mangum Cooperative Observer Station (345590); January 1920 – June 2003

Latitude: 3453N      Longitude: 09930W      Elevation: 1594 ft

Exceedence values (2 in 10 years)				
Month:	Maximum Temperature Higher Than:	Minimum Temperature Lower Than:	Precipitation Less Than:	Precipitation More Than:
January	79	2	0.06	1.52
February	84	8	0.12	1.80
March	90	15	0.62	2.62
April	96	27	0.79	3.90
May	102	39	1.94	6.97
June	107	52	1.24	5.00
July	110	59	0.42	3.50
August	110	56	0.60	3.93
September	105	41	0.71	4.76
October	97	30	0.51	4.80
November	86	16	0.15	2.00
December	78	7	0.20	1.62
<b>Annual</b>	<b>111</b>	<b>-2</b>	<b>18.28</b>	<b>31.15</b>

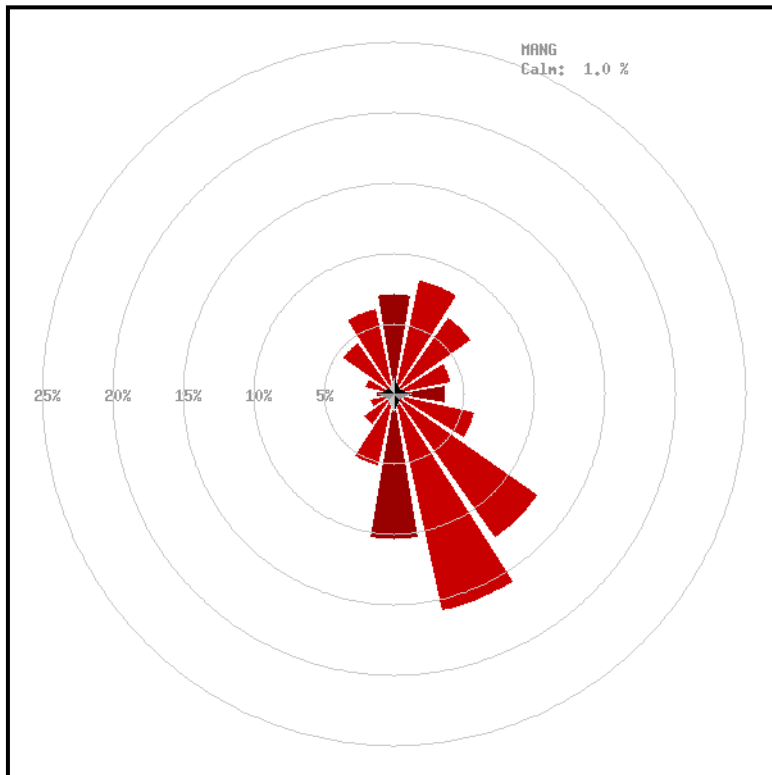
First Freezing Temperature in Fall			
Probability	24 F or Lower	28 F or Lower	32 F or Lower
1 Year in 10 Earlier Than –	November 2	October 29	October 18
2 Years in 10 Earlier Than –	November 11	November 3	October 23
5 Years in 10 Earlier Than –	November 23	November 11	November 3
Last Freezing Temperature in Spring			
Probability	24 F or Lower	28 F or Lower	32 F or Lower
1 Year in 10 Later Than –	April 4	April 11	April 16
2 Years in 10 Later Than –	March 29	April 7	April 13
5 Years in 10 Later Than –	March 14	March 25	April 5

Number of Days in Growing Season			
Probability	Higher than 24 F	Higher than 28 F	Higher than 32 F
9 Years in 10	233	211	192
8 Years in 10	237	217	194
5 Years in 10	250	231	211
2 Years in 10	271	248	226
1 Year in 10	288	260	237

## WINDS

From Mangum Mesonet Site (MANG); Jan 1994 – Dec 2001

Latitude: 3450N Longitude: 09925W Elevation: 1509 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, Mangum records a south-southeasterly wind about 16 percent of the time, with northerly winds just over 7 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: 90.5 mph*

*Maximum Sustained: 50.6 mph*

*Overall Average Speed: 9.4 mph*

MANG	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Totals
Calm																	1.0%
1- 5 mph	0.9	0.8	0.8	0.9	1.1	1.6	2.0	1.7	1.1	0.9	0.6	0.5	0.5	0.8	1.3	1.2	16.8%
6-10 mph	2.2	2.7	2.8	2.2	2.1	3.2	6.4	6.2	3.3	1.8	1.0	0.6	0.4	0.9	2.1	2.1	39.9%
11-15 mph	1.9	2.5	2.0	0.9	0.4	0.9	3.0	4.9	3.2	1.6	0.8	0.4	0.2	0.3	0.7	1.5	25.2%
16-20 mph	1.4	1.7	0.9	0.2	0.1	0.2	0.9	2.2	2.0	0.8	0.3	0.2	0.1	0.1	0.3	0.9	12.3%
21-25 mph	0.5	0.6	0.3	0.0	0.0	0.0	0.2	0.6	0.6	0.1	0.1	0.1	0.0	0.1	0.1	0.4	3.8%
26-30 mph	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.9%
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	0.0	0.0	0.0	0.2%
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	0.0	0.0	0.0%
<b>Totals</b>	<b>7.2</b>	<b>8.4</b>	<b>6.8</b>	<b>4.2</b>	<b>3.7</b>	<b>5.9</b>	<b>12.6</b>	<b>15.8</b>	<b>10.4</b>	<b>5.3</b>	<b>2.8</b>	<b>1.8</b>	<b>1.3</b>	<b>2.1</b>	<b>4.5</b>	<b>6.2</b>	<b>100.0%</b>
MANG	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
Max Gust	82	57	57	50	54	46	71	49	52	54	50	57	52	46	62	91	
Max 5 Min	40	43	36	38	35	36	38	39	36	39	34	42	39	36	43	51	
<b>Avg Speed</b>	<b>11.3</b>	<b>11.5</b>	<b>10.1</b>	<b>7.8</b>	<b>6.3</b>	<b>6.9</b>	<b>8.4</b>	<b>10.1</b>	<b>11.0</b>	<b>9.7</b>	<b>8.9</b>	<b>9.4</b>	<b>7.7</b>	<b>7.1</b>	<b>7.9</b>	<b>10.0</b>	

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

## HUMIDITY

From Mangum Mesonet Site (MANG); Jan 1994 – Dec 2003  
Latitude: 3450N Longitude: 09925W Elevation: 1509 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	87	39	65	25	3.7
February	86	39	63	29	4.8
March	88	37	63	35	5.9
April	88	35	62	44	8.7
May	91	39	65	56	11.2
June	90	40	65	63	14.2
July	87	34	59	65	19.5
August	87	35	61	64	17.9
September	89	38	64	58	12.9
October	89	39	65	47	8.3
November	90	41	68	37	4.9
December	89	41	67	28	3.5
<b>Annual</b>	<b>88</b>	<b>38</b>	<b>64</b>	<b>46</b>	<b>9.7</b>

Vapor pressure is given in millibars.

## SOIL TEMPERATURES

From Mangum Mesonet Site (MANG); Jan 1994 – Dec 2003  
Latitude: 3450N Longitude: 09925W Elevation: 1509 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	43	42	47	38
February	46	46	52	40
March	52	52	60	46
April	62	63	71	55
May	72	73	81	66
June	80	81	90	74
July	86	87	96	80
August	85	86	95	79
September	78	78	87	72
October	67	66	74	60
November	55	53	60	48
December	45	43	49	39
<b>Annual</b>	<b>64</b>	<b>64</b>	<b>72</b>	<b>58</b>

Average daily maximum and minimum temperatures based on bare soil.

## **TORNADOES**

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

<b>Date</b>	<b>Path</b>	<b>Deaths</b>	<b>Injuries</b>	<b>Rating</b>	<b>Counties Affected</b>
September 7, 1903	Unknown	0	2	F2	Greer
April 27, 1912	20 miles	7	25	F4	Greer, Kiowa
April 27, 1912	8 miles	0	0	F2	Greer
April 27, 1912	12 miles	1	5	F3	Greer, Kiowa
May 7, 1922	25 miles	1	10	F3	Harmon, Jackson, Greer
May 7, 1922	Unknown	0	0	F2	Greer
May 16, 1928	Unknown	0	1	F3	Greer
June 16, 1928	30 miles	7	52	F4	Greer, Jackson, Kiowa
January 26, 1944	Unknown	1	17	F2	Greer
May 11, 1947	7 miles	0	0	F3	Greer
June 20, 1964	Unknown	0	1	F2	Greer
April 7, 1965	Unknown	0	0	F2	Greer
May 6, 1965	25 miles	0	2	F2	Harmon, Greer (OK), Childress (TX)
May 6 1968	5 miles	0	0	F2	Harmon, Greer
May 22, 1972	10 miles	0	0	F2	Greer
May 12, 1983	0.1 mile	0	0	F2	Greer

### ***About the Data:***

The temperature and precipitation data from Mangum 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 1920, yielding a 84-year series of data. Extremes, frost and freeze data, and growing season lengths were determined using the entire 84-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 Mangum (5 miles southeast of town), 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:

The Oklahoma Climatological Survey  
100 E. Boyd Street, Suite 1210  
Norman, OK 73019-1012  
Phone: 405-325-2541  
E-mail: [ocs@ou.edu](mailto: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.