

The Climate of Washita County

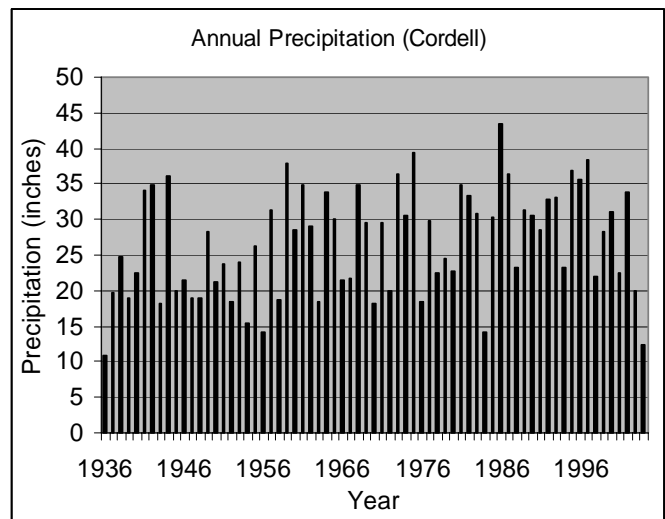
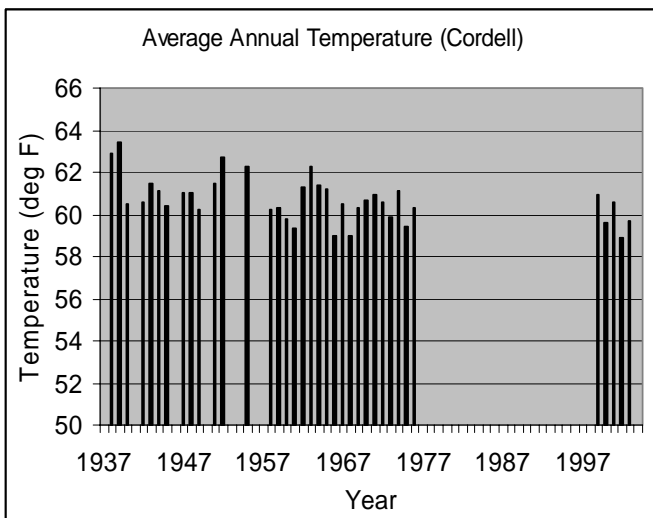


Washita County is part of the Central Great Plains, encompassing some of the best agricultural land in Oklahoma. Average annual precipitation ranges from about 27 inches in western Washita County to 33 inches in the east. May and August are the wettest months, on average, but much of the spring through fall receives sufficient rainfall. Nearly every winter has at least one inch of snow, with one year in three having ten or more inches.

Temperatures average near 61 degrees, with a slight increase from north to south. Temperatures range from an average daytime high of 97 degrees in July to an average low of 25 degrees in January. Washita County averages a growing season of 202 days, but plants that can withstand short periods of colder temperatures may have an additional three to six weeks.

Winds from the south to southwest are quite dominant, averaging just eleven miles-per-hour. Relative humidity, on average, ranges from 34% to 90% during the day. During the year, humidity is highest in May and lowest in July. 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 43 days each year, predominantly in the spring and summer. During the period 1950 - 2003, Washita County recorded 46 tornadoes. The most recent significant tornado (F2 intensity or greater) occurred on October 9, 2001. Three F3 tornadoes occurred on this day. There was a total of 10 injuries as the tornadoes moved through Elk City, Cordell, and Cowden. Beckham, Washita, Custer and Kiowa Counties were all affected. 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 (1946-1975)			EXTREMES (1893-1975)				AVG # DAYS PER MONTH (1946-1975)				
	Daily Max	Daily Min	Daily Avg	Record High		Record Low		Max>100	Max>90	Max<32	Min<32	Min<0
Jan	49.0	24.9	37.0	92	(31st, 1911)	-14	(3rd, 1911)			4	25	*
Feb	55.2	29.5	42.3	94	(25th, 1917)	-12	(13th, 1905)			2	17	*
Mar	64.7	37.9	51.3	102	(19th, 1907)	-4	(1st, 1913)		*	*	8	
Apr	73.7	46.4	60.0	104	(12th, 1972)	18	(2nd, 1936)	*	1		2	
May	81.6	56.9	69.2	107	(22nd, 1939)	26	(1st, 1909)	*	5		*	
Jun	90.6	66.1	78.3	114	(22nd, 1936)	41	(12th, 1903)	3	18			
Jul	96.8	70.5	83.6	119	(19th, 1936)	52	(10th, 1905)	11	27			
Aug	95.4	69.1	82.3	119	(11th, 1936)	45	(31st, 1915)	10	25			
Sep	86.7	61.4	74.0	109	(1st, 1947)	30	(30th, 1908)	2	12			
Oct	75.4	49.3	62.3	102	(4th, 1931)	13	(30th, 1917)	*	1		1	
Nov	60.9	36.9	48.9	89	(6th, 1945)	8	(18th, 1903)			*	10	
Dec	51.0	27.7	39.3	86	(10th, 1939)	-6	(17th, 1932)			2	23	*
Annual	73.5	48.1	60.8	119	(Jul 19, 1936)	-14	(Jan 3, 1911)	28	90	8	85	1

Precipitation (inches)										
	AVERAGE	EXTREMES (1936-2004)				AVG # DAYS PER MONTH (1971-2000)				
	1971-2000	Monthly Max	Daily Max		any	meas	0.10"+	0.25"+	0.50"+	1.00"+
Jan	1.01"	4.48" (2004)	3.40"	(17th, 2004)	7	4	2	1	1	*
Feb	1.16"	3.74" (1997)	1.97"	(4th, 1964)	6	4	3	2	1	*
Mar	2.32"	6.80" (1973)	3.08"	(3rd, 1988)	8	6	4	3	2	1
Apr	2.49"	8.92" (1997)	3.83"	(29th, 1993)	8	6	4	3	2	1
May	4.75"	14.73" (1982)	4.51"	(17th, 1982)	10	8	6	5	3	2
Jun	4.14"	10.15" (1989)	4.80"	(15th, 1937)	9	7	6	4	3	1
Jul	2.05"	9.54" (1959)	3.70"	(24th, 1975)	6	5	4	2	1	1
Aug	3.05"	12.37" (1996)	4.35"	(19th, 1961)	8	6	5	3	2	1
Sep	3.19"	11.02" (1986)	4.05"	(4th, 1973)	8	6	4	3	2	1
Oct	2.74"	9.32" (1983)	4.81"	(20th, 1983)	7	5	4	3	2	1
Nov	1.64"	9.09" (1964)	2.96"	(5th, 1964)	7	5	3	2	1	*
Dec	1.22"	4.46" (1991)	1.88"	(3rd, 1953)	7	4	3	2	1	*
Annual	29.77"	14.73" (May 1982)	4.81"	(Oct 20, 1983)	89	64	47	32	19	9

Snow and Sleet (inches)											
	AVERAGE	EXTREMES (1936-2004)				AVG # DAYS PER MONTH (1971-2000)					
	1971-2000	Monthly Max	Daily Max		Greatest Depth		any	meas	0.50"+	1.00"+	Pot. Glazing
Jan	3.1"	15.0" (1973)	8.0"	(18th, 1987)	14.0"	(7th, 1988)	4	1	1	1	3
Feb	2.7"	14.6" (1978)	6.0"	(13th, 1968)	8.0"	(14th, 1968)	3	1	1	1	2
Mar	0.8"	14.0" (1969)	8.0"	(28th, 1944)	6.0"	(9th, 1994)	1	1	1	*	*
Apr	0.1"	6.0" (1938)	6.0"	(8th, 1938)	3.0"	(8th, 1973)	*	*	*	*	
May		0.0" (1952)	0.0"	(23rd, 1952)	0.1"	(8th, 2003)					
Jun		0.0" (1951)	0.0"	(25th, 1949)							
Jul											
Aug											
Sep											
Oct	0.0"	1.0" (1991)	1.0"	(31st, 1991)	1.0"	(31st, 1991)	*	*	*	*	
Nov	0.6"	5.0" (1972)	4.0"	(20th, 1988)	4.0"	(20th, 1988)	1	*	*	*	1
Dec	2.3"	13.0" (1987)	6.0"	(6th, 1942)	7.0"	(11th, 1960)	3	1	1	1	2
Annual	9.6"	15.0" (Jan 1973)	8.0"	(Mar 28, 1944)	14.0"	(Jan 7, 1988)	13	5	4	4	8

TEMPERATURE AND PRECIPITATION

From Cordell Cooperative Observer Station (342125); July 1936 – February 2004

Latitude: 3517N Longitude: 09859W Elevation: 1539 ft

Exceedence values (2 in 10 years)				
Month:	Maximum Temperature Higher Than:	Minimum Temperature Lower Than:	Precipitation Less Than:	Precipitation More Than:
January	76	3	0.19	1.90
February	80	10	0.25	1.93
March	89	15	0.68	3.00
April	94	27	0.83	4.26
May	100	38	1.75	7.03
June	103	50	1.71	6.40
July	108	59	0.53	3.58
August	109	55	0.99	4.49
September	103	42	0.82	4.88
October	96	30	0.98	4.20
November	83	16	0.30	2.39
December	75	7	0.28	1.89
Annual	110	0	19.94	34.82

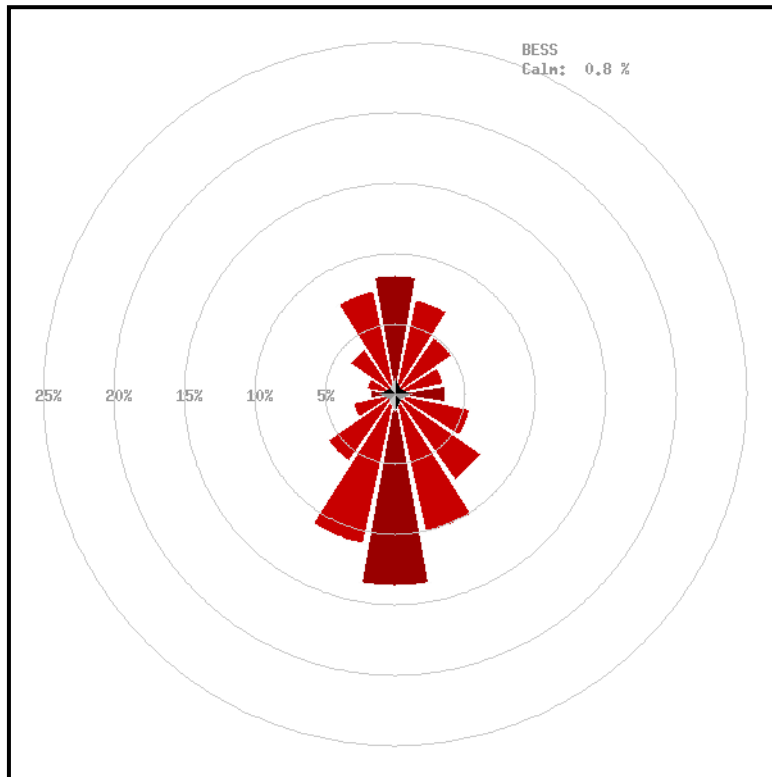
First Freezing Temperature in Fall			
Probability	24 F or Lower	28 F or Lower	32 F or Lower
1 Year in 10 Earlier Than –	November 2	October 27	October 16
2 Years in 10 Earlier Than –	November 4	November 1	October 18
5 Years in 10 Earlier Than –	November 23	November 7	November 1
Last Freezing Temperature in Spring			
Probability	24 F or Lower	28 F or Lower	32 F or Lower
1 Year in 10 Later Than –	April 5	April 11	April 21
2 Years in 10 Later Than –	March 30	April 9	April 18
5 Years in 10 Later Than –	March 18	March 30	April 6

Number of Days in Growing Season			
Probability	Higher than 24 F	Higher than 28 F	Higher than 32 F
9 Years in 10	225	212	192
8 Years in 10	228	214	196
5 Years in 10	243	226	202
2 Years in 10	268	243	222
1 Year in 10	291	247	225

WINDS

From Bessie Mesonet Site (BESS); Jan 1994 – Dec 2001

Latitude: 3540N Longitude: 09906W Elevation: 1676 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, Bessie records a south-southwesterly wind about 11 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: 79.5 mph

Maximum Sustained: 58.6 mph

Overall Average Speed: 11.0 mph

BESS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Totals
Calm																	0.8%
1- 5 mph	0.6	0.5	0.5	0.6	0.7	0.9	1.0	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.7	0.6	11.3%
6-10 mph	2.3	2.0	1.9	1.9	2.1	3.3	3.9	4.0	3.2	2.4	1.6	1.1	0.6	0.8	1.5	2.4	35.0%
11-15 mph	2.4	2.2	1.5	0.9	0.6	1.0	1.9	3.2	4.1	3.1	1.7	0.7	0.3	0.3	0.9	2.0	27.0%
16-20 mph	1.8	1.4	0.7	0.2	0.1	0.2	0.6	1.4	3.3	2.8	1.1	0.4	0.2	0.2	0.5	1.4	16.2%
21-25 mph	1.0	0.6	0.2	0.0	0.0	0.0	0.1	0.5	1.6	1.4	0.4	0.1	0.0	0.1	0.2	0.7	7.1%
26-30 mph	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.6	0.3	0.1	0.0	0.0	0.0	0.1	0.3	2.2%
31-35 mph	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5%
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	0.1%
Totals	8.5	6.9	4.9	3.6	3.6	5.5	7.5	10.1	13.6	10.9	5.8	3.1	1.8	2.1	3.9	7.5	100.0%
BESS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
Max Gust	62	80	59	56	45	57	47	55	58	62	68	55	60	57	67	62	
Max 5 Min	46	59	40	42	33	34	35	44	44	43	38	40	41	39	42	48	
Avg Speed	13.2	12.1	10.4	8.3	7.2	7.5	8.7	10.6	13.5	13.3	11.2	9.2	8.1	8.1	10.1	12.3	

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

HUMIDITY

From Bessie Mesonet Site (BESS); Jan 1994 – Dec 2003

Latitude: 3540N Longitude: 09906W Elevation: 1676 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	85	42	65	26	3.6
February	84	41	63	29	4.6
March	85	41	64	35	5.5
April	86	39	63	44	7.8
May	90	44	69	57	9.8
June	89	43	67	64	12.9
July	81	34	57	64	20.5
August	82	35	58	64	18.9
September	84	39	62	57	13.4
October	85	42	65	47	8.0
November	86	44	67	37	4.8
December	85	45	67	28	3.4
Annual	85	41	64	46	9.5

Vapor pressure is given in millibars.

SOIL TEMPERATURES

From Bessie Mesonet Site (BESS); Jan 1994 – Dec 2003

Latitude: 3540N Longitude: 09906W Elevation: 1676 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	42	45	39
February	46	46	50	42
March	51	51	56	47
April	61	61	68	56
May	71	71	78	66
June	78	79	85	73
July	86	87	94	81
August	86	86	93	80
September	78	78	84	72
October	66	66	71	61
November	54	53	58	49
December	45	44	47	41
Annual	64	64	69	59

Average daily maximum and minimum temperatures based on bare soil.

TORNADOES

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

Date	Path	Deaths	Injuries	Rating	Counties Affected
May 15, 1903	10 miles	0	10	F3	Washita, Caddo
May 23, 1903	15 miles	3	10	F4	Washita
March 17, 1905	unknown	1	unknown	F2	Washita
November 4, 1905	3 miles	8	16	F3	Kiowa, Washita
April 27, 1912	5 miles	0	2	F3	Washita
April 27, 1912	27 miles	5	15	F4	Washita, Caddo, Blaine
April 27, 1912	20 miles	6	20	F4	Washita, Custer
April 27, 1912	20 miles	4	15	F4	Kiowa, Washita
May 3, 1912	7 miles	0	0	F2	Kiowa, Washita
March 15, 1919	14 miles	1	8	F3	Washita, Custer
March 15, 1919	18 miles	2	8	F4	Washita, Caddo, Blaine
April 14, 1921	10 miles	0	0	F3	Iowa, Washita
April 11, 1927	55 miles	1	6	F3	Washita, Caddo, Grady, Canadian
June 5, 1936	1 mile	1	0	F2	Washita
April 9, 1944	14 miles	1	10	F4	Washita
June 26, 1946	2 miles	0	0	F2	Washita
October 9, 1949	16 miles	0	0	F2	Beckham, Washita, Custer
April 28, 1950	20 miles	1	1	F3	Kiowa, Washita
June 8, 1951	5 miles	0	0	F2	Washita
June 8, 1951	15 miles	0	0	F4	Washita
May 22, 1957	15 miles	0	0	F2	Washita, Caddo
May 25, 1962	7 miles	0	9	F4	Washita
April 4, 1965	3.5 miles	0	0	F2	Washita
May 22, 1972	3 miles	0	0	F2	Washita
May 2, 1975	4 miles	0	0	F2	Washita
May 2, 1975	1 mile	0	0	F2	Washita
May 22, 1981	5 miles	0	0	F2	Washita, Caddo
May 22, 1981	8 miles	0	0	F2	Washita, Custer
May 22, 1981	12 miles	0	0	F2	Washita, Caddo
May 11, 1982	7 miles	0	0	F2	Kiowa, Washita
October 9, 2001	11.5 miles	0	0	F3	Beckham, Washita, Custer
October 9, 2001	6 miles	0	9	F3	Washita
October 9, 2001	13 miles	0	1	F3	Kiowa, Washita

About the Data:

The average temperature data is from Clinton due to insufficient data at Cordell while extreme temperature data is from Cloud Chief and precipitation data from Cordell are from the National Weather Service Cooperative Observer station, which records daily maximum and minimum temperatures, precipitation, and snowfall. The Cordell station has been in operation since 1936, yielding a 67-year series of data. Extremes, frost and freeze data, and growing season lengths were determined using the entire 67-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 Bessie (4 miles west-northwest of town), which has been operational since 1994. The Bessie Mesonet site was chosen because it is the only Mesonet site in Washita 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
100 E. Boyd Street, Suite 1210
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.