U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

Climatography of the United States No. 20 1971-2000

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: WEBBERS FALLS 5 WSW, OK **COOP ID: 349445**

Climate Division: OK 6 **NWS Call Sign:** **Elevation: 550 Feet** **Lat: 35˚29N** **Lon: 95˚12W**

Temperature (˚F)

Mean (1)				Extremes										Degree Days (1) Base Temp 65		Mean Number of Days (3)					
Month	Daily Max	Daily Min	Mean	Highest Daily(2)	Year	Day	Highest Month(1) Mean	Year	Lowest Daily(2)	Year	Day	Lowest Month(1) Mean	Year	Heating	Cooling	Max >= 100	Max >= 90	Max >= 50	Max <= 32	Min <= 32	Min <= 0
Jan	47.4	25.0	36.2	82	1952	1	44.2	1990	-15	1977	10	24.1	1977	894	0	.0	.0	13.4	4.2	24.6	.4
Feb	53.8	29.8	41.8	92	1996	23	50.7	1976	-8	1951	2	30.0+	1979	653	0	.0	@	17.5	2.3	17.4	.4
Mar	62.8	38.4	50.6	92	1967	12	55.1	1974	2+	1948	12	43.8	1996	447	1	.0	@	26.3	.3	8.4	.0
Apr	72.4	46.9	59.7	95	1974	1	65.3	1981	23	1957	13	54.4	1983	187	26	.0	.3	29.7	.0	1.5	.0
May	79.6	56.9	68.3	96+	1951	30	73.5	1987	35+	1954	4	64.7	1981	49	148	.0	1.5	31.0	.0	.0	.0
Jun	87.9	65.5	76.7	103+	1950	27	79.8	1977	45	1982	2	73.0	1982	1	352	.2	12.1	30.0	.0	.0	.0
Jul	94.1	69.8	82.0	110+	1963	23	86.4	1980	50	1972	6	78.4	1994	0	525	4.4	24.0	31.0	.0	.0	.0
Aug	93.7	68.3	81.0	109+	1954	8	86.4	1980	50+	1956	22	74.7	1992	2	497	5.4	21.9	31.0	.0	.0	.0
Sep	85.6	60.8	73.2	112+	1998	5	81.3	1998	33	1984	30	66.4	1974	23	270	1.1	9.8	30.0	.0	.0	.0
Oct	75.4	48.8	62.1	98+	1956	7	65.7	1973	19	1993	31	55.4	1976	143	52	.0	1.2	30.7	.0	1.2	.0
Nov	61.5	37.8	49.7	88+	1950	1	57.5	1999	9+	1950	24	43.0	1976	465	4	.0	.0	24.5	.2	9.6	.0
Dec	51.3	28.7	40.0	82	1955	25	47.2	1984	-11+	1989	23	26.4	1983	775	0	.0	.0	17.1	1.9	20.1	.2
Ann	72.1	48.1	60.1	112+	Sep 1998	5	86.4+	Aug 1980	-15	Jan 1977	10	24.1	Jan 1977	3639	1875	11.1	70.8	312.2	8.9	82.8	1.0

+ Also occurred on an earlier date(s)

@ Denotes mean number of days greater than 0 but less than .05

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1948-2001

(3) Derived from 1971-2000 serially complete daily data

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

Climatography of the United States No. 20 1971-2000

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: WEBBERS FALLS 5 WSW, OK **COOP ID: 349445**

Climate Division: OK 6 **NWS Call Sign:** **Elevation: 550 Feet** **Lat: 35˚29N** **Lon: 95˚12W**

Precipitation (inches)

Precipitation Totals

Month	Means/Medians(1) Mean	Means/Medians(1) Median	Extremes Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year
Jan	2.24	2.04	3.32	1998	5	8.54	1998	.02	1986
Feb	2.53	2.09	3.30	1975	22	5.90	1989	.09	1996
Mar	4.19	3.88	3.13	1977	27	8.71	1990	.73	1971
Apr	4.26	3.64	3.42	1957	3	10.84	1990	.77	1989
May	5.64	5.65	4.89	1950	11	11.55	1990	1.81	1974
Jun	4.68	3.91	4.78	1948	24	14.77	2000	1.15	1981
Jul	2.70	2.26	5.96	1960	25	7.47	1971	.30	1974
Aug	2.91	2.35	3.94	1986	10	9.69	1974	.00	2000
Sep	5.02	4.96	5.60	1989	13	10.12	1989	.98	1979
Oct	4.53	3.64	9.46	1981	14	13.87	1981	.41	1978
Nov	4.40	3.91	3.85	1996	7	12.34	1996	.60	1989
Dec	3.17	2.83	3.25	1982	3	9.82	1987	.38	1981
Ann	46.27	48.54	9.46	Oct 1981	14	14.77	Jun 2000	.00	Aug 2000

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	7.0	4.3	1.4	.5
Feb	6.4	4.2	1.7	.6
Mar	8.6	6.4	2.8	1.3
Apr	8.3	6.4	2.7	1.2
May	10.9	7.7	3.9	1.7
Jun	7.9	6.1	3.3	1.6
Jul	5.3	3.8	2.0	.8
Aug	5.9	4.1	1.8	.9
Sep	8.2	6.3	3.2	2.0
Oct	7.3	5.1	2.4	1.3
Nov	7.8	5.6	3.0	1.7
Dec	7.1	4.6	2.2	1.1
Ann	90.7	64.6	30.4	14.7

Precipitation Probabilities (1)

Probability that the monthly/annual precipitation will be equal to or less than the indicated amount

Monthly/Annual Precipitation vs Probability Levels
These values were determined from the incomplete gamma distribution

Month	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.19	.35	.65	.96	1.30	1.69	2.15	2.73	3.53	4.86	6.18
Feb	.38	.60	.96	1.31	1.67	2.07	2.53	3.09	3.83	5.05	6.22
Mar	1.30	1.70	2.29	2.80	3.29	3.80	4.36	5.01	5.86	7.18	8.40
Apr	1.07	1.48	2.10	2.65	3.19	3.76	4.40	5.15	6.14	7.70	9.17
May	1.96	2.50	3.27	3.92	4.55	5.19	5.89	6.71	7.75	9.37	10.86
Jun	1.05	1.49	2.17	2.79	3.41	4.06	4.80	5.68	6.84	8.68	10.42
Jul	.39	.61	1.00	1.38	1.77	2.19	2.69	3.29	4.11	5.44	6.72
Aug	.23	.54	1.01	1.44	1.88	2.36	2.92	3.59	4.49	5.97	7.38
Sep	1.16	1.63	2.36	3.02	3.68	4.37	5.15	6.09	7.31	9.26	11.09
Oct	.47	.81	1.44	2.07	2.75	3.51	4.41	5.53	7.06	9.60	12.07
Nov	1.16	1.58	2.21	2.77	3.33	3.91	4.55	5.31	6.31	7.87	9.34
Dec	.48	.75	1.21	1.65	2.10	2.60	3.17	3.87	4.81	6.33	7.79
Ann	31.92	34.67	38.20	40.89	43.29	45.62	48.03	50.70	53.95	58.67	62.77

\+ Also occurred on an earlier date(s)
\# Denotes amounts of a trace
@ Denotes mean number of days greater than 0 but less than .05
****** Statistics not computed because less than six years out of thirty had measurable precipitation

(1) From the 1971-2000 Monthly Normals
(2) Derived from station's available digital record: 1948-2001
(3) Derived from 1971-2000 serially complete daily data

Complete documentation available from:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Services

Climatography of the United States No. 20 1971-2000

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: WEBBERS FALLS 5 WSW, OK **COOP ID: 349445**

Climate Division: OK 6 **NWS Call Sign:** **Elevation: 550 Feet** **Lat: 35°29N** **Lon: 95°12W**

Snow (inches)

Snow Totals

Means/Medians (1)

Extremes (2)

Mean Number of Days (1)

Snow Fall >= Thresholds

Snow Depth >= Thresholds

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year	0.1	1.0	3.0	5.0	10.0	1	3	5	10
Jan	3.0	.0	#	0	9.0	2000	28	17.5	1977	9+	2000	28	1	1988	1.3	1.0	.4	.2	.0	.5	.3	.1	.0
Feb	1.3	.0	#	0	4.0	1985	1	9.5	1985	3	1987	18	#+	1997	.6	.4	.1	.0	.0	.3	.1	.0	.0
Mar	1.3	.0	#	0	12.0	1989	6	16.5	1989	7	1995	3	#+	1999	.3	.2	.2	.1	@	.2	.2	.1	.0
Apr	.0	.0	#	0	.0	0	0	.0	0	1	1998	16	#	1998	.0	.0	.0	.0	.0	.0	.0	.0	.0
May	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Jun	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Jul	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Aug	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Sep	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.0	.0	0	0	.1	1993	30	.1	1993	0	0	0	0	0	@	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.4	.0	#	0	3.5	1995	11	3.5	1995	4	1995	11	#+	2000	.2	.1	.1	.0	.0	.2	.1	.0	.0
Dec	.4	.0	#	0	3.5	1985	13	3.5	1985	3	1988	28	#+	2000	.4	.2	.1	.0	.0	.0	.0	.0	.0
Ann	6.4	.0	N/A	N/A	12.0	Mar 1989	6	17.5	Jan 1977	9+	Jan 2000	28	1	Jan 1988	2.8	1.9	.9	.3	@	1.2	.7	.2	.0

+ Also occurred on an earlier date(s) #Denotes trace amounts

@ Denotes mean number of days greater than 0 but less than .05

-9/-9.9 represents missing values
Annual statistics for Mean/Median snow depths are not appropriate

(1) Derived from Snow Climatology and 1971-2000 daily data

(2) Derived from 1971-2000 daily data

Complete documentation available from:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

Climatography of the United States No. 20 1971-2000

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: WEBBERS FALLS 5 WSW, OK **COOP ID: 349445**

Climate Division: OK 6 **NWS Call Sign:** **Elevation: 550 Feet** **Lat: 35˚29N** **Lon: 95˚12W**

Freeze Data

Spring Freeze Dates (Month/Day)

Temp (F)	Probability of later date in spring (thru Jul 31) than indicated(*)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	4/26	4/22	4/19	4/16	4/13	4/11	4/08	4/05	4/01
32	4/17	4/12	4/08	4/05	4/02	3/30	3/27	3/24	3/18
28	4/05	3/31	3/27	3/23	3/20	3/17	3/13	3/09	3/03
24	3/26	3/18	3/12	3/08	3/03	2/27	2/22	2/17	2/09
20	3/17	3/08	3/02	2/24	2/19	2/14	2/09	2/03	1/25
16	3/09	2/26	2/17	2/10	2/04	1/28	1/20	1/11	12/29

Fall Freeze Dates (Month/Day)

Temp (F)	Probability of earlier date in fall (beginning Aug 1) than indicated(*)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	10/05	10/10	10/14	10/17	10/20	10/23	10/26	10/29	11/03
32	10/14	10/20	10/24	10/27	10/31	11/03	11/06	11/10	11/16
28	10/23	10/29	11/03	11/07	11/10	11/14	11/17	11/22	11/28
24	11/03	11/10	11/16	11/20	11/24	11/28	12/03	12/08	12/15
20	11/13	11/20	11/26	11/30	12/05	12/09	12/14	12/19	12/27
16	11/19	12/01	12/10	12/17	12/24	12/31	1/08	1/17	1/31

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	210	203	197	193	189	184	180	174	167
32	233	225	220	215	211	206	202	196	189
28	262	253	246	240	234	229	223	216	207
24	297	286	278	271	265	259	252	244	234
20	324	312	303	295	288	280	273	264	251
16	>365	358	337	326	317	308	300	290	277

***** Probability of observing a temperature as cold, or colder, later in the spring or earlier in the fall than the indicated date.

0/00 Indicates that the probability of occurrence of threshold temperature is less than the indicated probability.

Derived from 1971-2000 serially complete daily data

Complete documentation available from:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

Climatography of the United States No. 20 1971-2000

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: WEBBERS FALLS 5 WSW, OK **COOP ID: 349445**

Climate Division: OK 6 **NWS Call Sign:** **Elevation: 550 Feet** **Lat: 35˚29N** **Lon: 95˚12W**

Degree Days to Selected Base Temperatures (˚F)

Base	Heating Degree Days (1)												
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	894	653	447	187	49	1	0	2	23	143	465	775	3639
60	741	523	304	90	13	0	0	0	6	62	329	624	2692
57	652	447	226	49	5	0	0	0	1	33	256	538	2207
55	595	398	181	30	2	0	0	0	0	19	213	481	1919
50	454	289	94	6	0	0	0	0	0	4	125	348	1320
32	102	49	2	0	0	0	0	0	0	0	5	53	211

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	231	323	578	829	1123	1341	1548	1519	1237	932	534	302	10497
55	11	28	44	169	412	651	835	806	547	238	53	16	3810
57	6	20	27	128	352	591	773	744	488	190	36	11	3366
60	1	13	12	78	268	501	680	651	402	126	19	4	2755
65	0	0	1	26	148	352	525	497	270	52	4	0	1875
70	0	0	0	5	65	213	370	350	162	14	0	0	1179

Growing Degree Units (2)

Base	Growing Degree Units (Monthly)												Growing Degree Units (Accumulated Monthly)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
40	82	175	364	597	875	1098	1297	1264	995	683	323	126	82	257	621	1218	2093	3191	4488	5752	6747	7430	7753	7879
45	36	99	240	450	720	948	1142	1109	845	529	209	63	36	135	375	825	1545	2493	3635	4744	5589	6118	6327	6390
50	13	49	145	311	566	798	987	954	695	382	120	24	13	62	207	518	1084	1882	2869	3823	4518	4900	5020	5044
55	3	16	73	191	413	648	832	799	547	250	59	7	3	19	92	283	696	1344	2176	2975	3522	3772	3831	3838
60	0	2	28	94	266	498	677	644	404	137	23	0	0	2	30	124	390	888	1565	2209	2613	2750	2773	2773
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	65	130	228	376	572	753	864	838	658	435	204	89	65	195	423	799	1371	2124	2988	3826	4484	4919	5123	5212

(1) Derived from the 1971-2000 Monthly Normals
(2) Derived from 1971-2000 serially complete daily data
Note: For corn, temperatures below 50 are set to 50, and temperatures above 86 are set to 86

Complete documentation available from:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

Notes

a. The monthly means are simple arithmetic averages computed by summing the monthly values for the period 1971-2000 and dividing by thirty. Prior to averaging, the data are adjusted if necessary to compensate for data quality issues, station moves or changes in station reporting practices. Missing months are replaced by estimates based on neighboring stations.

b. The median is defined as the middle value in an ordered set of values. The median is being provided for the snow and precipitation elements because the mean can be a misleading value for precipitation normals.

c. Only observed validated values were used to select the extreme daily values.

d. Extreme monthly temperature/precipitation means were selected from the monthly normals data.
Monthly snow extremes were calculated from daily values quality controlled to be consistent with the Snow Climatology.

e. Degree Days were derived using the same techniques as the 1971-2000 normals.
Compete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

f. Mean "number of days statistics" for temperature and precipitation were calculated from a serially complete daily data set .
Documentation of the serially complete data set is available from the link below:

g. Snowfall and snow depth statistics were derived from the Snow Climatology.
Documentation for the Snow Climatology project is available from the link under references.

Data Sources for Tables

Several different data sources were used to create the Clim20 climate summaries. In some cases the daily extremes appear inconsistent with the monthly extremes and or the mean number of days statistics. For example, a high daily extreme value may not be reflected in the highest monthly value or the mean number of days threshold that is less than and equal to the extreme value. Some of these difference are caused by different periods of record. Daily extremes are derived from the station's entire period of record while the serial data and normals data were are for the 1971-2000 period. Therefore extremes observed before 1971 would not be included in the 1971-2000 normals or the 1971-2000 serial daily data set. Inconsistencies can also occur when monthly values are adjusted to reflect the current observing conditions or were replaced during the 1971-2000 Monthly Normals processing and are not reconciled with the Summary of the Day data.

a. Temperature/ Precipitation Tables
   1. 1971-2000 Monthly Normals
   2. Cooperative Summary of the Day
   3. National Weather Service station records
   4. 1971-2000 serially complete daily data

b. Degree Day Table
   1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals
   2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data

c. Snow Tables
   1. Snow Climatology
   2. Cooperative Summary of the Day

d. Freeze Data Table
   1971-2000 serially complete daily data

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normals.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/usnormalsprods.html
Snow Climatology Project Description, www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html
Eischeid, J. K., P. Pasteris, H. F. Diaz, M. Plantico, and N. Lott, 2000: Creating a serially complete, national daily time series of temperature and precipitation for the Western United States. J. Appl. Meteorol., 39, 1580-1591,
www1.ncdc.noaa.gov/pub/data/special/ serialcomplete_jam_0900.pdf