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: BEAVER, OK **COOP ID: 340593**

Climate Division: OK 1 **NWS Call Sign: Q44** **Elevation: 2,465 Feet** **Lat: 36˚49N** **Lon: 100˚32W**

Temperature (˚F)

Month	Mean (1)			Extremes										Degree Days (1) Base Temp 65		Mean Number of Days (3)					
	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	46.0	17.5	31.8	82	1951	26	41.0	1986	-23	1959	4	19.0	1979	1031	0	.0	.0	14.2	6.2	30.1	1.9
Feb	52.3	22.0	37.2	89+	1962	12	45.3	1976	-19	1951	1	24.4	1978	780	0	.0	.0	16.9	4.1	25.0	1.0
Mar	60.7	30.3	45.5	94+	1956	25	51.6	1986	-10+	1948	11	38.9	1996	605	0	.0	.1	23.8	1.0	18.1	.0
Apr	70.8	39.7	55.3	102+	1950	23	62.6	1981	15	1952	10	49.0	1983	311	19	@	1.2	28.1	.1	5.7	.0
May	78.9	50.7	64.8	108	1953	26	70.2	1996	26	1982	26	58.8	1995	104	98	.6	4.3	30.7	.0	.2	.0
Jun	89.1	60.8	75.0	113	1981	10	80.5	1994	42+	1951	4	68.6	1982	16	315	3.6	14.9	30.0	.0	.0	.0
Jul	95.1	66.2	80.7	110+	1953	5	87.7	1980	46+	1952	8	77.1	1989	0	485	8.3	24.7	31.0	.0	.0	.0
Aug	93.2	64.7	79.0	110+	1952	16	85.0	1983	45+	1976	29	72.9	1992	2	434	6.0	22.3	31.0	.0	.0	.0
Sep	84.8	55.4	70.1	108	2000	5	75.0	1998	27	1984	30	62.7	1974	35	188	1.7	11.6	29.8	.0	.3	.0
Oct	73.8	41.8	57.8	99	1954	3	61.2	1979	13+	1993	30	51.7	1976	237	13	.0	2.3	30.0	.1	4.4	.0
Nov	58.7	28.4	43.6	89+	1952	1	50.2	1999	-6	1991	3	35.0	1972	645	0	.0	.0	21.9	.8	20.9	.1
Dec	48.3	19.7	34.0	87	1955	24	39.3	1994	-13+	1983	28	22.6	1983	961	0	.0	.0	15.1	4.3	29.1	1.4
Ann	71.0	41.4	56.2	113	Jun 1981	10	87.7	Jul 1980	-23	Jan 1959	4	19.0	Jan 1979	4727	1552	20.2	81.4	302.5	16.6	133.8	4.4

\+ 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

Issue Date: February 2004

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: BEAVER, OK **COOP ID: 340593**

Climate Division: OK 1 **NWS Call Sign: Q44** **Elevation: 2,465 Feet** **Lat: 36°49N** **Lon: 100°32W**

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	.53	.41	1.15	2001	28	1.60	1999	.00+	1986
Feb	.73	.34	1.40	1948	27	3.11	1971	.00+	1999
Mar	1.75	1.22	2.00	1961	17	7.60	1973	.00	1971
Apr	1.82	1.51	2.82	1985	29	5.26	1976	.00	1996
May	3.04	3.25	4.50	1989	17	8.57	1989	.58	1971
Jun	3.24	2.49	5.07	1983	10	9.61	1989	.36	1998
Jul	2.75	2.29	4.44	1988	1	9.27	1988	.68	1983
Aug	2.39	2.19	4.20	1967	9	5.70	1989	.00	1990
Sep	1.78	1.92	2.18	1960	23	4.46	1973	.02	1980
Oct	1.32	.83	2.42	1998	31	6.21	1998	.00+	1978
Nov	1.11	.75	3.85	1971	17	5.14	1971	.00+	1999
Dec	.78	.55	1.60	1996	1	3.01	1997	.00	1988
Ann	21.24	20.05	5.07	Jun 1983	10	9.61	Jun 1989	.00+	Nov 1999

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	3.0	1.5	.3	.0
Feb	3.1	1.7	.4	.1
Mar	5.3	3.5	1.2	.4
Apr	5.5	3.5	1.3	.4
May	7.5	5.4	2.0	.6
Jun	7.6	5.2	2.0	1.0
Jul	6.5	4.3	1.6	.7
Aug	5.9	4.0	1.7	.5
Sep	5.2	3.4	1.4	.5
Oct	3.7	2.4	1.0	.3
Nov	3.4	2.1	.5	.2
Dec	3.0	2.1	.3	.1
Ann	59.7	39.1	13.7	4.8

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	.00	.00	.10	.19	.28	.38	.51	.66	.87	1.23	1.58
Feb	.00	.00	.03	.12	.23	.38	.58	.84	1.23	1.92	2.64
Mar	.03	.14	.35	.60	.88	1.20	1.61	2.12	2.85	4.08	5.32
Apr	.05	.17	.42	.68	.97	1.30	1.70	2.21	2.93	4.13	5.32
May	.69	.98	1.42	1.82	2.22	2.65	3.12	3.69	4.44	5.63	6.75
Jun	.33	.57	1.01	1.46	1.95	2.50	3.14	3.95	5.05	6.88	8.67
Jul	.51	.76	1.16	1.54	1.92	2.33	2.79	3.36	4.10	5.31	6.45
Aug	.13	.35	.72	1.07	1.44	1.86	2.34	2.94	3.75	5.10	6.41
Sep	.08	.17	.38	.61	.88	1.21	1.62	2.14	2.88	4.15	5.43
Oct	.00	.05	.22	.41	.62	.88	1.20	1.60	2.17	3.15	4.13
Nov	.00	.00	.11	.25	.43	.66	.94	1.32	1.86	2.79	3.75
Dec	.03	.10	.22	.33	.45	.59	.76	.96	1.24	1.70	2.16
Ann	14.03	15.38	17.14	18.49	19.69	20.87	22.09	23.45	25.10	27.53	29.64

\+ 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: BEAVER, OK **COOP ID: 340593**

Climate Division: OK 1 **NWS Call Sign: Q44** **Elevation: 2,465 Feet** **Lat: 36°49N** **Lon: 100°32W**

Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	2.6	.4	#	0
Feb	2.6	.4	#	0
Mar	2.0	.0	#	0
Apr	.2	.0	#	0
May	.0	.0	0	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	.1	.0	#	0
Nov	1.8	.0	#	0
Dec	3.3	.0	#	0
Ann	12.6	.8	N/A	N/A

Extremes (2)

Month	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year
Jan	9.0	1988	7	13.0	1988	6	1974	4	4	1974
Feb	8.0	1971	21	10.0	1975	28	1971	23	4	1982
Mar	7.0	1998	18	11.0	1998	11	1988	3	#+	1999
Apr	4.5	1973	8	4.5	1973	1	1982	10	#	1982
May	.0	0	0	.0	0	0	0	0	0	0
Jun	.0	0	0	.0	0	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	.0	0	0	.0	0	0	0	0	0	0
Oct	2.0	1991	31	2.0	1991	2	1993	29	#	1993
Nov	8.5	1972	19	20.5	1972	9	1972	19	2	1972
Dec	10.8	1997	24	12.0	1997	18	1997	25	2	1997
Ann	10.8	Dec 1997	24	20.5	Nov 1972	28	Feb 1971	23	4+	Feb 1982

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	.9	.4	.2	.1	.0
Feb	.9	.8	.3	.2	.0
Mar	.2	.2	.2	.1	.0
Apr	.0	.0	.0	.0	.0
May	.0	.0	.0	.0	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0
Oct	.1	.1	.0	.0	.0
Nov	.5	.4	.2	.1	.0
Dec	.6	.5	.2	.1	.1
Ann	3.2	2.4	1.1	.6	.1

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	1.2	.1	.0	.0
Feb	.7	.4	.1	.0
Mar	.1	.1	.1	.0
Apr	.0	.0	.0	.0
May	.0	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.0	.0	.0	.0
Nov	.6	.3	.2	.0
Dec	.5	.1	.0	.0
Ann	3.1	1.0	.4	.0

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

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

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

(2) Derived from 1971-2000 daily data

-9/-9.9 represents missing values

Annual statistics for Mean/Median snow depths are not appropriate

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: BEAVER, OK **COOP ID: 340593**

Climate Division: OK 1 **NWS Call Sign: Q44** **Elevation: 2,465 Feet** **Lat: 36˚49N** **Lon: 100˚32W**

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	5/14	5/09	5/05	5/01	4/28	4/25	4/21	4/17	4/11
32	5/05	4/29	4/25	4/21	4/18	4/14	4/11	4/07	4/01
28	4/27	4/21	4/17	4/13	4/10	4/07	4/03	3/30	3/24
24	4/12	4/07	4/03	3/31	3/28	3/25	3/22	3/19	3/14
20	4/07	4/01	3/27	3/23	3/19	3/16	3/12	3/07	3/01
16	3/30	3/23	3/17	3/12	3/08	3/04	2/27	2/21	2/13

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	9/21	9/26	9/30	10/03	10/05	10/08	10/11	10/15	10/20
32	9/29	10/04	10/08	10/11	10/14	10/17	10/20	10/24	10/29
28	10/12	10/17	10/21	10/24	10/27	10/30	11/02	11/06	11/11
24	10/24	10/30	11/02	11/06	11/09	11/12	11/15	11/19	11/24
20	10/28	11/03	11/08	11/12	11/15	11/19	11/23	11/27	12/04
16	11/04	11/11	11/15	11/19	11/23	11/27	11/30	12/05	12/11

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	181	174	168	164	160	155	151	146	138
32	202	194	188	183	179	174	169	163	156
28	225	216	210	204	199	194	189	182	173
24	246	239	233	229	225	221	216	211	204
20	266	257	251	245	240	235	230	223	214
16	286	277	270	265	259	254	248	241	232

***** 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: BEAVER, OK **COOP ID: 340593**

Climate Division: OK 1 **NWS Call Sign: Q44** **Elevation: 2,465 Feet** **Lat: 36˚49N** **Lon: 100˚32W**

Degree Days to Selected Base Temperatures (˚F)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1031	780	605	311	104	16	0	2	35	237	645	961	4727
60	876	642	453	196	42	4	0	0	9	121	497	806	3646
57	783	565	367	141	21	1	0	0	3	71	413	713	3078
55	722	512	311	109	12	0	0	0	0	48	359	651	2724
50	574	387	190	49	2	0	0	0	0	14	237	501	1954
32	154	85	7	0	0	0	0	0	0	0	18	100	364

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	146	229	425	698	1017	1289	1508	1455	1143	800	364	162	9236
55	1	12	16	117	316	599	795	742	453	135	14	0	3200
57	0	8	10	88	263	539	733	680	396	96	8	0	2821
60	0	2	2	54	191	453	640	587	311	52	3	0	2295
65	0	0	0	19	98	315	485	434	188	13	0	0	1552
70	0	0	0	5	39	196	333	288	97	2	0	0	960

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	40	101	242	470	778	1055	1266	1216	911	566	189	50	40	141	383	853	1631	2686	3952	5168	6079	6645	6834	6884
45	5	51	147	334	623	905	1111	1061	762	418	106	17	5	56	203	537	1160	2065	3176	4237	4999	5417	5523	5540
50	0	19	78	216	473	755	956	906	617	285	51	4	0	19	97	313	786	1541	2497	3403	4020	4305	4356	4360
55	0	6	33	122	329	605	801	751	472	169	17	0	0	6	39	161	490	1095	1896	2647	3119	3288	3305	3305
60	0	0	9	60	204	456	646	596	338	87	4	0	0	0	9	69	273	729	1375	1971	2309	2396	2400	2400
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	69	123	202	325	487	677	808	781	576	383	173	80	69	192	394	719	1206	1883	2691	3472	4048	4431	4604	4684

(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