

Climatology of the United States

No. 20

1971-2000

Station: BARNSDALL, OK

COOP ID: 340535

Climate Division: OK 3

NWS Call Sign:

Elevation: 770 Feet

Lat: 36° 34N

Lon: 96° 10W

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	46.6	22.5	34.6	78+	1965	7	42.6	1990	-17	1984	19	21.6	1979	943	0	.0	.0	13.9	4.7	24.6	.7
Feb	53.2	27.4	40.3	90	1996	22	49.6	1976	-17	1996	4	27.9	1978	694	0	.0	@	17.3	2.5	18.8	.5
Mar	63.1	36.8	50.0	95	1974	31	55.2	1986	0	1967	8	44.6	1996	467	1	.0	.1	26.7	.3	10.4	.0
Apr	73.0	46.5	59.8	101	1972	12	67.8	1981	16	1957	13	52.9	1983	192	34	@	.4	29.7	.0	1.7	.0
May	79.8	55.8	67.8	95+	1956	18	72.4	1987	31+	1960	1	63.2	1976	51	137	.0	1.8	31.0	.0	.0	.0
Jun	87.7	64.4	76.1	105	1980	26	79.7	1990	45+	1954	4	72.2	1982	2	333	.3	11.5	30.0	.0	.0	.0
Jul	93.7	69.1	81.4	115	1954	15	87.5	1980	49	1971	31	78.0	1989	0	508	5.8	23.8	31.0	.0	.0	.0
Aug	93.5	67.2	80.4	111+	1956	16	85.6+	1983	46+	1967	28	74.1	1992	1	477	6.2	23.1	31.0	.0	.0	.0
Sep	84.7	59.5	72.1	109	1985	1	79.3	1998	30	1984	30	64.5	1974	32	245	1.3	10.2	30.0	.0	.1	.0
Oct	74.2	47.7	61.0	99+	1953	2	64.1	1979	14	1993	31	54.5	1976	164	38	.0	1.1	30.7	.0	1.8	.0
Nov	60.0	36.2	48.1	88	1980	7	56.1	1999	6	1976	29	42.9	1972	507	2	.0	.0	24.0	.2	10.9	.0
Dec	49.5	26.1	37.8	81	1955	24	42.7	1971	-13+	1983	30	24.2	1983	844	0	.0	.0	16.1	2.7	22.0	.6
Ann	71.6	46.6	59.1	115	Jul 1954	15	87.5	Jul 1980	-17+	Feb 1996	4	21.6	Jan 1979	3897	1775	13.6	72.0	311.4	10.4	90.3	1.8

+ 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/normal/usnormals.html

Issue Date: February 2004

(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

009-A

**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: BARNSDALL, OK

COOP ID: 340535

Climate Division: OK 3

NWS Call Sign:

Elevation: 770 Feet Lat: 36°34N

Lon: 96°10W

Precipitation (inches)																								
	Precipitation Totals									Mean Number of Days (3)				Precipitation Probabilities (1) Probability that the monthly/annual precipitation will be equal to or less than the indicated amount										
	Means/ Medians(1)		Extremes							Daily Precipitation				Monthly/Annual Precipitation vs Probability Levels These values were determined from the incomplete gamma distribution										
Month	Mean	Med-ian	Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year	>= 0.01	>= 0.10	>= 0.50	>= 1.00	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	1.50	1.03	1.93	1985	1	3.95	1973	.00	1976	5.9	3.2	.8	.3	.04	.13	.33	.54	.78	1.06	1.40	1.83	2.43	3.45	4.46
Feb	1.97	1.42	4.35	1985	23	6.83	1985	.19	1996	5.7	3.8	1.2	.6	.19	.34	.60	.88	1.17	1.51	1.91	2.40	3.08	4.20	5.30
Mar	3.62	3.45	4.16	1974	10	10.29	1973	.30	1971	8.3	5.5	2.5	1.1	.48	.77	1.29	1.79	2.32	2.91	3.59	4.42	5.55	7.39	9.18
Apr	3.99	3.86	3.65	1999	25	8.84	1985	.32	1989	8.3	5.9	2.9	1.5	.86	1.22	1.81	2.34	2.87	3.44	4.08	4.84	5.85	7.46	8.98
May	5.67	5.08	4.94	1993	9	12.71	1993	1.20	1988	10.1	7.6	4.3	1.7	1.58	2.12	2.93	3.64	4.34	5.07	5.87	6.82	8.06	10.00	11.81
Jun	5.05	3.88	6.60	1985	10	14.33	1995	1.47	1972	8.4	6.7	3.2	1.5	1.08	1.55	2.29	2.96	3.63	4.35	5.16	6.13	7.41	9.46	11.39
Jul	3.37	2.76	4.25	1961	15	15.44	1994	.01	1980	5.9	3.9	2.0	.9	.16	.33	.72	1.17	1.69	2.31	3.07	4.05	5.44	7.83	10.22
Aug	3.24	2.65	5.40	1961	14	11.89	1974	.00	2000	6.8	4.5	2.0	1.0	.19	.50	1.00	1.48	1.98	2.54	3.19	3.99	5.08	6.87	8.61
Sep	5.09	4.01	10.42	1986	29	18.04	1986	.38	2000	7.8	5.8	2.6	1.5	.66	1.07	1.79	2.50	3.24	4.07	5.03	6.21	7.82	10.44	12.98
Oct	3.53	2.55	4.45	1972	22	9.04	1998	.50	1978	7.0	4.6	2.2	1.1	.56	.87	1.38	1.86	2.37	2.92	3.54	4.31	5.34	7.00	8.60
Nov	3.48	3.28	4.00	1974	3	7.17	1996	.05	1989	6.5	4.2	2.3	1.3	.30	.53	.99	1.48	2.01	2.61	3.33	4.23	5.48	7.56	9.61
Dec	2.17	1.71	2.98	1971	15	5.85	1984	.17	1976	5.7	3.9	1.5	.5	.21	.36	.66	.96	1.29	1.66	2.10	2.65	3.41	4.67	5.90
Ann	42.68	41.70	10.42	Sep 1986	29	18.04	Sep 1986	.00+	Aug 2000	86.4	59.6	27.5	13.0	28.56	31.23	34.68	37.32	39.68	41.98	44.36	47.01	50.24	54.96	59.07

+ 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

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: BARNSDALL, OK

COOP ID: 340535

Climate Division: OK 3

NWS Call Sign:

Elevation: 770 Feet

Lat: 36°34N

Lon: 96°10W

Snow (inches)																							
Snow Totals															Mean Number of Days (1)								
Means/Medians (1)					Extremes (2)										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	3.2	1.5	#	#	5.8	1987	17	17.0	1979	10	1988	9	2	1988	1.9	1.4	.4	.1	.0	2.5	1.3	.6	.2
Feb	3.0	2.0	#	0	8.0	1980	8	10.0	1978	8	1980	8	1+	1996	1.2	1.1	.3	.1	.0	1.4	.6	.3	.0
Mar	1.0	.0	#	0	7.5	1994	9	7.5	1994	8	1994	9	1	1989	.3	.3	.1	.1	.0	.6	.2	.1	.0
Apr	#	.0	0	0	#	1979	4	#+	1979	0	0	0	0	0	.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	#	1993	30	#+	1993	#+	1993	30	#+	1993	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.4	.0	#	0	2.4	1972	19	3.0	1992	4	1971	23	#+	1995	.3	.2	.0	.0	.0	.1	.0	.0	.0
Dec	.6	.0	#	#	7.7	1987	15	7.7+	1987	11	2000	13	3	1983	.6	.4	.1	@	.0	.9	.2	.2	.1
Ann	8.2	3.5	N/A	N/A	8.0	Feb 1980	8	17.0	Jan 1979	11	Dec 2000	13	3	Dec 1983	4.3	3.4	.9	.3	.0	5.5	2.3	1.2	.3

+ 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/normal/usnormals.html

Climatography of the United States

No. 20 1971-2000

Station: BARNSDALL, OK

COOP ID: 340535

Climate Division: OK 3

NWS Call Sign:

Elevation: 770 Feet

Lat: 36°34N

Lon: 96°10W

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	5/05	4/30	4/27	4/24	4/21	4/19	4/16	4/13	4/08
32	4/18	4/14	4/11	4/09	4/06	4/04	4/02	3/30	3/26
28	4/10	4/05	4/01	3/30	3/27	3/24	3/21	3/18	3/13
24	4/05	3/29	3/25	3/21	3/18	3/14	3/10	3/06	2/27
20	3/25	3/18	3/13	3/09	3/04	2/28	2/24	2/19	2/12
16	3/11	3/03	2/26	2/21	2/17	2/12	2/07	2/02	1/25
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	9/27	10/01	10/05	10/07	10/10	10/13	10/15	10/19	10/23
32	10/07	10/13	10/17	10/20	10/24	10/27	10/30	11/04	11/09
28	10/20	10/25	10/29	11/01	11/04	11/07	11/10	11/13	11/18
24	10/29	11/05	11/09	11/13	11/17	11/21	11/25	11/29	12/06
20	11/03	11/10	11/16	11/21	11/25	11/29	12/04	12/09	12/17
16	11/14	11/21	11/26	12/01	12/05	12/09	12/14	12/19	12/26
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	189	183	178	174	171	167	163	159	153
32	220	213	208	204	200	196	191	187	180
28	241	234	229	225	221	217	213	208	202
24	267	259	253	248	244	239	234	228	220
20	297	286	278	271	265	258	251	244	232
16	322	311	304	297	291	285	278	270	260

* 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/normal/usnormals.html

**Climatology
of the United States**
No. 20
1971-2000

Station: BARNSDALL, OK

COOP ID: 340535

Climate Division: OK 3

NWS Call Sign:

Elevation: 770 Feet Lat: 36°34N Lon: 96°10W

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	943	694	467	192	51	2	0	1	32	164	507	844	3897
60	789	564	324	98	14	0	0	0	9	72	368	690	2928
57	699	487	245	58	5	0	0	0	4	38	291	602	2429
55	641	438	199	38	2	0	0	0	1	23	245	545	2132
50	498	325	109	10	0	0	0	0	0	5	148	406	1501
32	126	66	3	0	0	0	0	0	0	0	7	77	279

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	206	298	560	832	1109	1321	1531	1499	1204	897	492	256	10205
55	8	26	44	180	399	631	818	786	514	207	39	12	3664
57	3	19	27	140	340	571	756	724	457	160	25	7	3229
60	1	12	13	90	255	481	663	631	373	101	13	2	2635
65	0	0	1	34	137	333	508	477	245	38	2	0	1775
70	0	0	0	9	56	197	354	329	145	9	0	0	1099

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	72	164	367	621	888	1106	1311	1280	991	670	298	97	72	236	603	1224	2112	3218	4529	5809	6800	7470	7768	7865
45	31	92	243	473	733	956	1156	1125	841	516	187	50	31	123	366	839	1572	2528	3684	4809	5650	6166	6353	6403
50	9	45	147	332	578	806	1001	970	691	374	106	26	9	54	201	533	1111	1917	2918	3888	4579	4953	5059	5085
55	2	20	76	212	423	656	846	815	544	240	55	5	2	22	98	310	733	1389	2235	3050	3594	3834	3889	3894
60	0	7	33	115	277	506	691	660	399	137	19	1	0	7	40	155	432	938	1629	2289	2688	2825	2844	2845
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	64	129	243	397	587	758	873	841	655	435	189	77	64	193	436	833	1420	2178	3051	3892	4547	4982	5171	5248

(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.
Complete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normal/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 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.

- | | |
|---|---|
| <ol style="list-style-type: none">a. Temperature/ Precipitation Tables<ol style="list-style-type: none">1. 1971-2000 Monthly Normals2. Cooperative Summary of the Day3. National Weather Service station records4. 1971-2000 serially complete daily datab. Degree Day Table<ol style="list-style-type: none">1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data | <ol style="list-style-type: none">c. Snow Tables<ol style="list-style-type: none">1. Snow Climatology2. Cooperative Summary of the Dayd. Freeze Data Table
1971-2000 serially complete daily data |
|---|---|

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normal.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normal/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