

Climatography of the United States No. 20

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

Station: WICHITA MTN WL REF, OK

1971-2000

COOP ID: 349629

Climate Division: OK 7

NWS Call Sign:

Elevation: 1,665 Feet Lat: 34°44N

Lon: 98°43W

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	48.5	23.1	35.8	83	1950	24	43.1	1990	-8	1966	23	25.0	1979	906	0	.0	.0	16.7	3.6	25.3	.2
Feb	54.3	28.6	41.5	88	1996	23	50.1	1976	-11	1951	2	29.5	1978	659	0	.0	.0	19.0	2.2	17.5	.1
Mar	63.0	36.8	49.9	97	1971	27	54.5	2000	-6	1948	12	44.5	1996	469	1	.0	.2	27.1	.2	8.9	.0
Apr	72.1	45.6	58.9	99	1972	12	64.5	1972	19+	1975	3	51.2	1983	218	33	.0	.9	29.4	.0	1.8	.0
May	79.9	55.5	67.7	107	2000	24	74.8	1996	30	1960	1	63.6	1995	66	150	.3	4.6	31.0	.0	.0	.0
Jun	88.3	64.2	76.3	111+	1980	29	81.4	1998	42+	1983	1	71.2	1983	5	343	1.2	14.9	30.0	.0	.0	.0
Jul	94.2	68.9	81.6	111	1954	25	88.2	1980	46+	1952	9	76.7	1975	0	512	6.9	25.5	31.0	.0	.0	.0
Aug	93.0	67.2	80.1	111	1964	6	86.6	2000	47	1962	26	73.8	1992	1	470	6.0	24.0	31.0	.0	.0	.0
Sep	84.8	58.8	71.8	111	2000	5	80.0	1998	34	1984	30	64.8	1974	29	233	1.3	11.4	29.9	.0	.0	.0
Oct	74.6	47.0	60.8	101	1977	1	64.9	1979	17	1993	31	54.4	1976	163	33	.1	1.6	30.7	.0	1.6	.0
Nov	60.4	34.7	47.6	90	1980	8	56.0	1999	6	1951	18	41.3	1972	524	0	.0	@	24.8	.1	11.1	.0
Dec	50.6	25.8	38.2	85	1955	24	43.8	1999	-12	1989	23	24.4	1983	831	0	.0	.0	19.1	2.6	22.4	.2
Ann	72.0	46.4	59.2	111+	Sep 2000	5	88.2	Jul 1980	-12	Dec 1989	23	24.4	Dec 1983	3871	1775	15.8	83.1	319.7	8.7	88.6	.5

+ 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

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: WICHITA MTN WL REF, OK

COOP ID: 349629

Climate Division: OK 7

NWS Call Sign:

Elevation: 1,665 Feet Lat: 34°44N

Lon: 98°43W

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	1.38	.74	4.02	1982	29	4.49	1998	.00+	1996	3.3	2.1	.9	.4	.00	.00	.06	.26	.51	.81	1.19	1.68	2.37	3.55	4.78
Feb	1.61	1.08	2.90	1997	21	5.65	1997	.00	1996	3.9	3.0	1.0	.4	.05	.16	.37	.60	.86	1.16	1.52	1.97	2.60	3.66	4.71
Mar	2.84	2.39	3.46	1973	30	7.54	1985	.13	1997	4.7	3.9	1.9	.9	.27	.47	.85	1.24	1.67	2.16	2.74	3.46	4.45	6.10	7.72
Apr	2.89	2.96	4.70	1972	26	7.55	1972	.00	1987	4.7	3.8	1.9	1.0	.25	.57	1.04	1.46	1.90	2.37	2.91	3.56	4.44	5.87	7.24
May	5.13	4.56	5.45	1951	17	14.28	1987	.00	1984	6.7	5.9	3.5	1.8	.38	.93	1.75	2.50	3.28	4.14	5.12	6.33	7.95	10.59	13.14
Jun	4.07	3.94	4.70	1975	22	10.36	1989	1.00	1986	6.0	5.3	2.8	1.3	1.00	1.38	1.98	2.50	3.03	3.58	4.19	4.93	5.89	7.40	8.83
Jul	2.42	1.96	2.75	1952	15	8.08	1990	.00+	1983	4.3	3.7	1.7	.8	.00	.26	.69	1.08	1.47	1.91	2.41	3.02	3.85	5.21	6.53
Aug	2.47	2.44	4.47	1950	16	9.74	1996	.00	2000	5.2	4.1	1.6	.7	.08	.26	.60	.96	1.35	1.80	2.34	3.02	3.96	5.53	7.09
Sep	4.12	3.39	8.60	1988	18	11.30	1988	.00+	1984	5.2	4.3	2.6	1.3	.00	.52	1.29	1.95	2.62	3.34	4.17	5.14	6.48	8.65	10.73
Oct	3.39	2.29	6.03	1983	20	12.80	1983	.00+	1982	5.0	4.1	1.8	.8	.00	.21	.73	1.25	1.81	2.45	3.22	4.17	5.50	7.73	9.93
Nov	2.27	1.67	4.95	1994	20	9.15	1992	.00	1989	3.8	2.8	1.3	.6	.10	.29	.63	.96	1.32	1.72	2.20	2.79	3.60	4.95	6.27
Dec	1.60	1.22	2.63	1984	31	6.51	1984	.03	1989	3.3	2.6	1.2	.6	.05	.12	.28	.49	.73	1.03	1.40	1.90	2.61	3.84	5.10
Ann	34.19	32.94	8.60	Sep 1988	18	14.28	May 1987	.00+	Aug 2000	56.1	45.6	22.2	10.6	23.18	25.27	27.97	30.03	31.87	33.66	35.51	37.57	40.08	43.73	46.91

+ 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: WICHITA MTN WL REF, OK

COOP ID: 349629

Climate Division: OK 7

NWS Call Sign:

Elevation: 1,665 Feet

Lat: 34° 44N

Lon: 98° 43W

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	1.7	.0	#	0	6.0	1977	9	7.0	1992	6	1977	9	1	1979	.5	.3	.2	.1	.0	.8	.4	.4	.0
Feb	1.4	.0	#	0	4.0	1978	17	15.0	1978	6	1978	10	2	1978	.7	.5	.2	.0	.0	.6	.4	.2	.0
Mar	.2	.0	#	0	3.0	1971	2	3.0	1971	3	1971	2	#+	2000	.2	.1	.1	.0	.0	@	@	.0	.0
Apr	.0	.0	0	0	.0	0	0	.0	0	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	0	#	1993	31	#	1993	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.1	.0	#	0	1.0	1976	28	1.0	1976	#+	1991	30	#+	1991	.1	.1	.0	.0	.0	.0	.0	.0	.0
Dec	.8	.0	#	0	5.5	1971	2	5.5	1971	3	1975	24	#	1975	.3	.2	.1	.1	.0	.1	@	.0	.0
Ann	4.2	.0	N/A	N/A	6.0	Jan 1977	9	15.0	Feb 1978	6+	Feb 1978	10	2	Feb 1978	1.8	1.2	.6	.2	.0	1.5	.8	.6	.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/normal/usnormals.html

Climatography of the United States

No. 20 1971-2000

Station: WICHITA MTN WL REF, OK

COOP ID: 349629

Climate Division: OK 7

NWS Call Sign:

Elevation: 1,665 Feet

Lat: 34° 44N

Lon: 98° 43W

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	5/03	4/27	4/23	4/20	4/17	4/14	4/10	4/06	4/01
32	4/19	4/15	4/12	4/09	4/06	4/04	4/01	3/29	3/24
28	4/17	4/10	4/06	4/02	3/29	3/26	3/22	3/17	3/11
24	4/07	3/30	3/25	3/20	3/15	3/11	3/06	3/01	2/21
20	3/30	3/20	3/13	3/07	3/02	2/24	2/18	2/11	2/01
16	3/11	3/02	2/24	2/19	2/14	2/09	2/04	1/28	1/20
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	10/03	10/07	10/10	10/13	10/17	10/20	10/24	10/29
32	10/14	10/18	10/21	10/24	10/27	10/29	11/01	11/04	11/09
28	10/23	10/29	11/03	11/06	11/10	11/13	11/17	11/22	11/28
24	10/30	11/06	11/10	11/14	11/18	11/22	11/26	12/01	12/07
20	11/10	11/17	11/21	11/25	11/29	12/03	12/07	12/11	12/18
16	11/17	11/25	11/30	12/05	12/09	12/14	12/18	12/24	1/01
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	202	194	188	183	179	175	170	164	157
32	216	212	208	205	203	200	197	194	189
28	247	240	234	229	225	220	216	210	202
24	271	263	257	252	247	242	237	231	223
20	306	295	286	278	272	265	257	249	237
16	330	317	309	302	296	290	283	276	265

* 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

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

Station: WICHITA MTN WL REF, OK

COOP ID: 349629

Climate Division: OK 7

NWS Call Sign:

Elevation: 1,665 Feet Lat: 34°44N Lon: 98°43W

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	906	659	469	218	66	5	0	1	29	163	524	831	3871
60	751	526	324	120	23	0	0	0	8	70	382	676	2880
57	659	449	244	76	10	0	0	0	2	36	303	586	2365
55	599	399	197	53	6	0	0	0	0	22	254	528	2058
50	455	284	105	17	1	0	0	0	0	4	153	387	1406
32	84	40	2	0	0	0	0	0	0	0	6	58	190

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	201	305	556	805	1107	1328	1535	1491	1194	893	473	249	10137
55	3	20	39	168	400	638	822	778	504	201	30	7	3610
57	1	14	24	131	342	578	760	716	446	154	19	3	3188
60	0	8	11	85	262	488	667	623	362	94	9	0	2609
65	0	0	1	33	150	343	512	470	233	33	0	0	1775
70	0	0	0	10	70	210	359	322	133	7	0	0	1111

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	88	184	378	599	893	1113	1317	1276	984	687	296	118	88	272	650	1249	2142	3255	4572	5848	6832	7519	7815	7933
45	38	107	252	454	738	963	1162	1121	835	535	191	56	38	145	397	851	1589	2552	3714	4835	5670	6205	6396	6452
50	8	54	149	319	583	813	1007	966	686	390	104	21	8	62	211	530	1113	1926	2933	3899	4585	4975	5079	5100
55	1	15	76	194	431	663	852	811	540	254	45	1	1	16	92	286	717	1380	2232	3043	3583	3837	3882	3883
60	0	2	32	102	285	513	697	657	401	147	15	0	0	2	34	136	421	934	1631	2288	2689	2836	2851	2851
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	88	143	253	381	577	743	864	834	645	440	200	99	88	231	484	865	1442	2185	3049	3883	4528	4968	5168	5267

(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