

# Climatology of the United States

No. 20

1971-2000

Station: VINITA 2 N, OK

COOP ID: 349203

Climate Division: OK 3

NWS Call Sign:

Elevation: 735 Feet Lat: 36°40N Lon: 95°08W

## 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	45.3	24.1	34.7	78	1950	25	43.0	1990	-17	1984	19	22.6	1979	941	0	.0	.0	12.6	5.0	24.1	1.0
Feb	52.0	28.6	40.3	86	1996	22	50.0	1976	-19	1996	4	28.7	1978	692	0	.0	.0	16.3	3.0	18.1	.4
Mar	62.2	37.5	49.9	90	1974	31	54.2	1974	-6	1948	12	44.7	1998	470	0	.0	@	26.2	.3	10.3	.0
Apr	71.6	46.4	59.0	98	1972	12	65.9	1981	15	1957	13	52.6	1983	206	26	.0	.1	29.4	.0	1.9	.0
May	78.5	55.6	67.1	95+	1953	26	72.7	1987	31	1963	1	63.0	1976	61	124	.0	.5	31.0	.0	@	.0
Jun	86.5	64.5	75.5	105+	1952	29	79.4	1980	41	1988	10	71.7	1982	3	317	.1	7.5	30.0	.0	.0	.0
Jul	92.1	68.9	80.5	118	1954	14	86.8	1980	45	1971	31	76.0	1971	0	481	1.9	20.4	31.0	.0	.0	.0
Aug	92.2	67.0	79.6	114	1956	6	85.4	1980	46	1988	29	74.0	1992	1	454	2.9	19.7	31.0	.0	.0	.0
Sep	84.0	59.7	71.9	108	1956	16	78.2	1998	30	1984	30	63.8	1974	29	234	.6	7.7	30.0	.0	@	.0
Oct	73.2	48.3	60.8	99+	1953	1	64.7	1973	15	1993	31	54.5	1976	166	34	.0	.3	30.6	.0	1.9	.0
Nov	59.4	37.4	48.4	85	1955	12	57.6	1999	3	1976	29	40.7	1976	503	4	.0	.0	23.7	.2	10.7	.0
Dec	48.7	27.4	38.1	80	1948	14	43.7	1984	-14	1989	23	24.1	1983	835	0	.0	.0	15.3	3.4	21.7	.6
Ann	70.5	47.1	58.8	118	Jul 1954	14	86.8	Jul 1980	-19	Feb 1996	4	22.6	Jan 1979	3907	1674	5.5	56.2	307.1	11.9	88.7	2.0

+ 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/normal/usnormals.html](http://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

097-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: VINITA 2 N, OK**

**COOP ID: 349203**

**Climate Division: OK 3**

**NWS Call Sign:**

**Elevation: 735 Feet Lat: 36°40N**

**Lon: 95°08W**

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	1.88	1.67	2.74	1985	1	4.30	1973	.01	1986	6.5	4.0	1.1	.5	.16	.29	.54	.80	1.08	1.41	1.80	2.29	2.97	4.10	5.21
Feb	2.05	1.83	5.69	1985	23	7.67	1985	.22	1996	6.2	3.8	1.4	.4	.39	.57	.87	1.15	1.43	1.74	2.08	2.50	3.05	3.94	4.79
Mar	3.93	3.56	2.24	1985	30	12.06	1973	.92	1971	8.8	6.3	2.8	1.2	.91	1.27	1.85	2.36	2.88	3.42	4.03	4.76	5.72	7.24	8.68
Apr	3.92	3.51	3.96	1970	30	9.36	1999	.29	1989	9.4	6.4	2.8	1.2	.93	1.30	1.87	2.39	2.89	3.43	4.03	4.75	5.69	7.18	8.58
May	5.48	5.31	3.62	1957	21	9.11	1993	1.40	1988	10.9	7.8	4.0	1.8	2.39	2.88	3.57	4.13	4.65	5.18	5.75	6.40	7.22	8.47	9.60
Jun	4.64	4.78	5.95	1948	22	10.06	1995	.72	1988	8.6	6.7	2.9	1.2	1.09	1.52	2.20	2.81	3.41	4.05	4.77	5.62	6.75	8.53	10.20
Jul	3.28	3.37	4.74	1959	16	9.01	1976	.00	1999	6.1	4.5	2.2	1.1	.42	.84	1.40	1.86	2.33	2.82	3.38	4.04	4.91	6.30	7.62
Aug	3.24	2.80	4.68	1948	8	8.60	1977	.00	2000	6.3	4.3	2.1	1.1	.53	.97	1.52	1.97	2.41	2.86	3.37	3.97	4.76	6.00	7.16
Sep	5.42	5.07	5.85	1986	30	14.36	1986	.42	1979	7.7	5.7	2.9	1.6	.98	1.46	2.26	2.99	3.75	4.56	5.49	6.61	8.10	10.50	12.79
Oct	3.97	3.31	5.84	1980	16	9.12	1983	.86	1978	7.3	5.1	2.5	1.3	1.03	1.41	1.99	2.49	2.99	3.52	4.10	4.80	5.70	7.12	8.46
Nov	4.50	4.01	4.45	1979	21	9.78	1985	.20	1989	7.4	5.4	2.6	1.5	.72	1.11	1.76	2.39	3.03	3.72	4.52	5.50	6.80	8.92	10.95
Dec	2.88	2.33	3.64	1992	14	7.16	1992	.24	1989	6.8	4.3	2.2	.8	.35	.58	.99	1.39	1.81	2.29	2.84	3.52	4.44	5.95	7.42
Ann	45.19	43.86	5.95	Jun 1948	22	14.36	Sep 1986	.00+	Aug 2000	92.0	64.3	29.5	13.7	32.40	34.88	38.06	40.47	42.62	44.68	46.82	49.17	52.03	56.17	59.75

+ 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

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**Climate Division: OK 3**

**NWS Call Sign:**

**Elevation: 735 Feet**

**Lat: 36°40N**

**Lon: 95°08W**

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	4.8	4.5	1	#	6.2	1983	22	25.0	1979	11	1979	31	5	1979	2.5	1.5	.5	.1	.0	7.3	3.1	1.7	.1
Feb	2.8	1.7	#	#	6.3	1985	5	16.8	1978	11	1979	1	3	1979	1.8	1.0	.2	.1	.0	4.6	2.3	1.2	.1
Mar	1.4	.0	#	0	14.0	1999	14	14.0	1999	4	1975	14	#+	2000	.7	.4	.1	.1	@	.6	.1	.0	.0
Apr	#	.0	0	0	#	1994	6	#+	1994	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	0	.5	1993	30	.5	1993	0	0	0	0	0	@	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.7	.0	#	0	5.0	1971	23	5.0	1971	5	1971	23	#+	1983	.4	.3	@	@	.0	.3	.1	.1	.0
Dec	1.9	.5	#	0	9.0	2000	13	9.0	2000	8	1983	31	3	1983	1.3	.7	.2	.1	.0	2.4	1.1	.7	.0
Ann	11.6	6.7	N/A	N/A	14.0	Mar 1999	14	25.0	Jan 1979	11+	Feb 1979	1	5	Jan 1979	6.7	3.9	1.0	.4	@	15.2	6.7	3.7	.2

+ 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

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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	5/01	4/28	4/25	4/22	4/20	4/17	4/14	4/09
32	4/21	4/17	4/14	4/11	4/09	4/06	4/04	3/31	3/27
28	4/12	4/07	4/03	3/31	3/28	3/25	3/22	3/19	3/14
24	4/02	3/27	3/22	3/17	3/14	3/10	3/05	2/28	2/22
20	3/24	3/17	3/12	3/08	3/04	2/28	2/23	2/18	2/11
16	3/13	3/06	2/28	2/23	2/19	2/14	2/10	2/04	1/27
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	9/26	10/01	10/05	10/08	10/11	10/14	10/17	10/21	10/26
32	10/07	10/13	10/17	10/20	10/23	10/26	10/30	11/02	11/08
28	10/18	10/24	10/29	11/02	11/05	11/09	11/13	11/18	11/24
24	10/28	11/03	11/08	11/12	11/16	11/20	11/24	11/29	12/06
20	11/06	11/14	11/19	11/23	11/27	12/01	12/06	12/11	12/18
16	11/15	11/22	11/27	12/02	12/06	12/10	12/14	12/20	12/27
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	192	185	180	175	171	167	163	158	150
32	215	209	204	200	197	193	189	184	178
28	248	239	232	227	221	216	211	204	195
24	275	265	258	253	247	241	235	229	219
20	296	286	279	273	268	262	256	249	240
16	322	310	302	296	289	283	276	268	257

\* 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:  
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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	941	692	470	206	61	3	0	1	29	166	503	835	3907
60	786	562	325	107	18	0	0	0	8	73	365	684	2928
57	696	484	245	64	7	0	0	0	3	39	290	597	2425
55	640	434	198	42	3	0	0	0	0	24	245	540	2126
50	496	319	106	11	0	0	0	0	0	5	152	404	1493
32	126	61	3	0	0	0	0	0	0	0	9	82	281

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	208	293	556	811	1087	1305	1504	1476	1195	892	500	271	10098
55	9	22	39	162	377	615	791	763	505	203	46	16	3548
57	3	16	23	124	319	555	729	701	447	156	31	11	3115
60	1	10	10	77	237	465	636	608	363	97	16	4	2524
65	0	0	0	26	124	317	481	454	234	34	4	0	1674
70	0	0	0	6	49	184	327	306	134	7	0	0	1013

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	69	150	337	573	840	1060	1252	1227	956	650	290	99	69	219	556	1129	1969	3029	4281	5508	6464	7114	7404	7503
45	31	86	221	428	685	910	1097	1072	806	496	186	52	31	117	338	766	1451	2361	3458	4530	5336	5832	6018	6070
50	9	42	127	292	530	760	942	917	657	352	105	23	9	51	178	470	1000	1760	2702	3619	4276	4628	4733	4756
55	1	16	66	174	378	610	787	762	508	224	52	5	1	17	83	257	635	1245	2032	2794	3302	3526	3578	3583
60	0	4	28	86	235	460	632	607	366	117	24	0	0	4	32	118	353	813	1445	2052	2418	2535	2559	2559
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	50	112	220	361	547	730	850	821	635	415	179	72	50	162	382	743	1290	2020	2870	3691	4326	4741	4920	4992

(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](http://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](http://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"><li>a. Temperature/ Precipitation Tables<ol style="list-style-type: none"><li>1. 1971-2000 Monthly Normals</li><li>2. Cooperative Summary of the Day</li><li>3. National Weather Service station records</li><li>4. 1971-2000 serially complete daily data</li></ol></li><li>b. Degree Day Table<ol style="list-style-type: none"><li>1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals</li><li>2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data</li></ol></li></ol> | <ol style="list-style-type: none"><li>c. Snow Tables<ol style="list-style-type: none"><li>1. Snow Climatology</li><li>2. Cooperative Summary of the Day</li></ol></li><li>d. Freeze Data Table<br/>1971-2000 serially complete daily data</li></ol> |
|---|---|

## References

U.S. Climate Normals 1971-2000, [www.ncdc.noaa.gov/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)