

# Climatography of the United States

No. 20

1971-2000

Station: TARKIO, MO

COOP ID: 238289

Climate Division: MO 1

NWS Call Sign:

Elevation: 1,040 Feet Lat: 40° 27N

Lon: 95° 24W

## 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	33.0	11.7	22.4	68	1981	25	35.7	1989	-28	1947	4	8.1	1979	1323	0	.0	.0	3.3	13.9	29.8	5.8
Feb	39.8	17.9	28.9	79	1930	24	38.7	1987	-24+	1978	18	14.0	1979	1012	0	.0	.0	7.1	9.0	24.7	3.2
Mar	51.6	27.6	39.6	88+	1968	30	45.1	1986	-20	1960	5	31.5	1975	788	0	.0	.0	16.8	2.2	19.5	.5
Apr	63.8	39.3	51.6	95+	1989	28	59.3	1981	6	1975	3	45.6	1997	409	5	.0	.4	26.5	.1	6.5	.0
May	74.6	50.2	62.4	103+	1934	31	68.1	1998	24	1976	3	57.1	1997	155	74	.0	1.0	31.0	.0	.2	.0
Jun	84.1	59.9	72.0	105+	1934	28	78.2	1988	37	1946	3	66.6	1982	18	229	.2	7.5	30.0	.0	.0	.0
Jul	87.1	64.3	75.7	113	1936	25	80.6	1980	42+	1972	5	71.5	1992	1	332	1.1	11.9	31.0	.0	.0	.0
Aug	85.2	61.4	73.3	112	1934	9	80.9	1983	37	1946	29	67.5	1986	19	277	.4	9.8	31.0	.0	.0	.0
Sep	78.3	52.2	65.3	105+	1939	7	71.3	1998	25	1984	29	59.8	1993	88	96	.1	3.7	29.9	.0	.6	.0
Oct	66.7	39.5	53.1	96	1938	3	58.6	1971	-2	1925	30	45.8	1976	374	5	.0	.3	29.2	.0	6.3	.0
Nov	49.3	27.6	38.5	84	1987	4	46.8	1999	-8+	1991	8	30.9	1991	796	0	.0	.0	15.8	2.8	20.9	.2
Dec	36.3	16.6	26.5	73	1964	23	32.4	1988	-24	1989	23	9.8	1983	1195	0	.0	.0	4.2	9.8	29.3	2.7
Ann	62.5	39.0	50.8	113	Jul 1936	25	80.9	Aug 1983	-28	Jan 1947	4	8.1	Jan 1979	6178	1018	1.8	34.6	255.8	37.8	137.8	12.4

+ 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/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: 1918-2001

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

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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: TARKIO, MO**

**COOP ID: 238289**

**Climate Division: MO 1**

**NWS Call Sign:**

**Elevation: 1,040 Feet Lat: 40°27N**

**Lon: 95°24W**

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	.83	.72	1.55	1960	12	3.14	1973	.00+	2000	5.0	2.3	.3	.1	.00	.00	.14	.30	.45	.62	.81	1.05	1.38	1.90	2.41
Feb	.90	.66	2.20	1919	13	3.23	1973	.00	1982	4.1	2.2	.4	.1	.07	.16	.31	.44	.58	.73	.90	1.11	1.39	1.85	2.29
Mar	2.29	2.41	3.30	1997	2	6.72	1973	.07	1994	7.1	4.1	1.0	.4	.23	.39	.70	1.02	1.37	1.76	2.22	2.79	3.58	4.89	6.16
Apr	2.66	2.02	3.23	1955	13	7.11	1999	.56	2000	8.1	6.1	2.2	1.0	.57	.82	1.21	1.56	1.91	2.29	2.72	3.23	3.90	4.97	5.99
May	4.48	4.14	3.57	1942	5	12.52	1996	1.20	1979	10.8	7.5	2.9	1.0	1.33	1.76	2.39	2.94	3.48	4.04	4.65	5.37	6.31	7.77	9.13
Jun	4.25	3.89	5.75	1942	25	10.37	1984	1.22	1988	10.3	7.6	3.0	1.3	1.39	1.79	2.38	2.89	3.37	3.88	4.43	5.07	5.90	7.18	8.37
Jul	4.84	4.78	5.46	1987	8	19.15	1993	.07	1983	9.4	6.4	2.9	1.2	.65	1.04	1.74	2.41	3.12	3.90	4.80	5.92	7.42	9.88	12.26
Aug	3.39	2.72	4.70	1945	3	9.37	1977	.50	1992	7.8	5.5	2.4	1.1	.48	.76	1.25	1.72	2.21	2.75	3.38	4.15	5.18	6.87	8.50
Sep	3.93	3.18	4.34	1941	7	11.52	1973	.85	1990	7.5	5.3	2.1	1.4	.67	1.02	1.59	2.13	2.68	3.28	3.96	4.79	5.90	7.69	9.40
Oct	2.64	2.44	3.85	1941	31	5.74	1977	.00	1999	6.4	4.2	1.5	.7	.17	.44	.85	1.24	1.65	2.10	2.62	3.26	4.12	5.54	6.91
Nov	2.20	2.17	3.26	1931	23	4.77	1972	.00	1976	6.5	4.0	1.4	.6	.26	.54	.91	1.22	1.54	1.88	2.26	2.71	3.32	4.28	5.19
Dec	1.11	.86	1.90	1973	4	3.50	1973	.00	1997	6.1	2.8	.5	.2	.04	.14	.30	.46	.63	.83	1.07	1.36	1.76	2.43	3.09
Ann	33.52	31.13	5.75	Jun 1942	25	19.15	Jul 1993	.00+	Jan 2000	89.1	58.0	20.6	9.1	19.51	22.02	25.34	27.93	30.29	32.60	35.04	37.77	41.15	46.15	50.56

+ 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: 1918-2001

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

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**Station: TARKIO, MO**

**COOP ID: 238289**

**Climate Division: MO 1**

**NWS Call Sign:**

**Elevation: 1,040 Feet**

**Lat: 40°27N**

**Lon: 95°24W**

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	6.2	5.5	1	#	12.0	1971	3	16.5	1973	12	1971	3	6	1971	2.5	1.7	.7	.3	.1	10.9	6.8	3.1	.2
Feb	6.3	6.3	1	1	9.0	1978	13	15.0	1971	12	1978	20	6	1978	2.4	1.4	.9	.3	.0	10.6	5.7	2.3	.5
Mar	2.5	1.1	#	#	8.0	1978	2	9.5	1978	14	1998	8	3+	1998	1.1	.8	.3	.1	.0	2.1	.9	.5	.2
Apr	.5	.0	#	0	3.5	1975	2	5.0	1973	3	1975	2	#+	2000	.2	.1	.1	.0	.0	.2	.1	.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	.1	.0	#	0	.7	1987	10	1.1	1987	1	1987	10	#	1987	.1	.0	.0	.0	.0	.1	.0	.0	.0
Nov	1.4	.0	#	0	6.5	1972	13	8.5	1972	6	1972	13	1	1975	.6	.4	.2	.2	.0	1.2	.5	.2	.0
Dec	3.5	1.7	#	#	7.0	1972	12	15.0	1973	6	1972	14	2	1973	2.1	1.2	.3	.1	.0	5.3	1.7	.4	.0
Ann	20.5	14.6	N/A	N/A	12.0	Jan 1971	3	16.5	Jan 1973	14	Mar 1998	8	6+	Feb 1978	9.0	5.6	2.5	1.0	.1	30.4	15.7	6.5	.9

+ 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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**Elevation: 1,040 Feet**

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**Lon: 95°24W**

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	5/13	5/08	5/05	5/02	4/30	4/27	4/25	4/21	4/17
32	5/03	4/29	4/25	4/22	4/20	4/17	4/14	4/11	4/06
28	4/23	4/18	4/15	4/12	4/09	4/07	4/04	4/01	3/27
24	4/18	4/13	4/09	4/06	4/03	3/31	3/28	3/24	3/19
20	4/08	4/02	3/29	3/25	3/22	3/19	3/15	3/11	3/06
16	3/29	3/23	3/19	3/15	3/12	3/08	3/04	2/28	2/22
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	9/13	9/18	9/21	9/24	9/26	9/29	10/02	10/05	10/09
32	9/21	9/27	10/01	10/04	10/07	10/10	10/13	10/17	10/22
28	9/29	10/04	10/09	10/12	10/15	10/19	10/22	10/27	11/01
24	10/13	10/19	10/23	10/27	10/30	11/03	11/06	11/11	11/17
20	10/19	10/26	10/31	11/05	11/09	11/13	11/17	11/22	11/29
16	10/27	11/03	11/08	11/12	11/16	11/20	11/24	11/29	12/06
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	168	161	157	153	149	145	141	136	129
32	186	180	176	173	169	166	162	158	153
28	208	202	197	192	188	184	180	175	168
24	234	226	220	215	210	205	200	194	185
20	256	247	241	236	231	226	221	214	206
16	276	267	260	254	249	244	238	231	222

\* 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	1323	1012	788	409	155	18	1	19	88	374	796	1195	6178
60	1168	872	633	275	77	4	0	4	32	240	647	1040	4992
57	1075	795	548	205	45	1	0	1	14	171	560	947	4362
55	1014	743	489	164	30	0	0	0	7	133	503	885	3968
50	869	612	353	84	8	0	0	0	1	62	369	738	3096
32	393	239	59	0	0	0	0	0	0	0	63	279	1033

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	92	150	295	586	942	1201	1355	1281	998	655	257	107	7919
55	1	10	12	61	259	511	642	568	315	74	7	0	2460
57	0	6	8	41	212	452	580	507	262	51	3	0	2122
60	0	0	1	21	151	364	487	417	189	26	0	0	1656
65	0	0	0	5	74	229	332	277	96	5	0	0	1018
70	0	0	0	0	28	120	190	161	38	0	0	0	537

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	4	43	153	387	723	986	1136	1064	777	450	114	12	4	47	200	587	1310	2296	3432	4496	5273	5723	5837	5849
45	0	14	84	261	568	836	981	909	629	315	56	4	0	14	98	359	927	1763	2744	3653	4282	4597	4653	4657
50	0	1	42	163	418	686	826	754	481	195	21	0	0	1	43	206	624	1310	2136	2890	3371	3566	3587	3587
55	0	0	13	90	277	536	671	599	343	105	4	0	0	0	13	103	380	916	1587	2186	2529	2634	2638	2638
60	0	0	4	45	154	389	517	444	223	44	1	0	0	0	4	49	203	592	1109	1553	1776	1820	1821	1821
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	6	37	111	243	446	659	772	710	505	290	79	12	6	43	154	397	843	1502	2274	2984	3489	3779	3858	3870

(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> |
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## 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)