

# Climatology of the United States No. 20

Station: STOCKTON DAM, MO

1971-2000

COOP ID: 238082

Climate Division: MO 3

NWS Call Sign:

Elevation: 924 Feet

Lat: 37°42N

Lon: 93°46W

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	39.3	20.3	29.8	70	1997	3	40.3	1990	-16	1985	21	16.3	1979	1090	0	.0	.0	7.6	8.3	27.0	1.9
Feb	45.4	25.1	35.3	80	1996	27	44.3	1999	-15	1979	1	21.7	1978	833	0	.0	.0	11.3	5.3	21.1	1.1
Mar	56.0	34.3	45.2	87	1995	23	49.4	1985	-1	1978	4	37.6	1996	616	0	.0	.0	21.6	.8	13.2	@
Apr	66.6	44.3	55.5	91	1972	13	61.6	1981	19	1975	3	48.4	1983	297	10	.0	@	28.2	.0	2.6	.0
May	75.8	55.3	65.6	93	1991	29	72.5	1987	30	1976	3	60.8+	1997	105	121	.0	.5	30.9	.0	@	.0
Jun	84.0	64.5	74.3	104	1988	25	79.1	1988	42	1982	1	69.6	1974	9	287	.2	6.7	30.0	.0	.0	.0
Jul	90.0	69.7	79.9	108+	1986	31	87.4	1980	47	1970	20	76.0	1996	0	459	1.7	18.0	31.0	.0	.0	.0
Aug	89.3	67.4	78.4	107	1980	1	84.1	1980	47	1986	28	71.7	1992	2	416	1.7	16.5	31.0	.0	.0	.0
Sep	80.8	58.6	69.7	106+	2000	2	76.1	1998	29	1984	30	62.5	1974	47	188	.3	5.8	30.0	.0	.1	.0
Oct	70.0	46.7	58.4	92	1980	9	63.4	1971	19	1993	31	51.7	1976	233	26	.0	.2	30.0	.0	2.3	.0
Nov	55.1	35.6	45.4	83	1999	14	55.6	1999	5+	1991	9	37.2	1976	590	0	.0	.0	20.1	.9	12.0	.0
Dec	43.9	25.5	34.7	75	1991	9	41.6	1984	-18+	1989	23	18.8	1983	940	0	.0	.0	10.5	5.0	22.8	.9
Ann	66.4	45.6	56.0	108+	Jul 1986	31	87.4	Jul 1980	-18+	Dec 1989	23	16.3	Jan 1979	4762	1507	3.9	47.7	282.2	20.3	101.1	3.9

+ 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: 1970-2001

(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: STOCKTON DAM, MO

COOP ID: 238082

Climate Division: MO 3

NWS Call Sign:

Elevation: 924 Feet Lat: 37°42N

Lon: 93°46W

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	1.74	1.34	2.50+	1996	18	4.27	1975	.00	1986	7.1	4.4	1.0	.2	.17	.38	.67	.92	1.18	1.46	1.77	2.15	2.66	3.47	4.25
Feb	2.33	2.09	3.78	1985	23	6.43	1985	.15	1996	6.0	4.0	1.5	.5	.50	.71	1.05	1.37	1.68	2.01	2.39	2.84	3.43	4.38	5.27
Mar	3.48	2.88	3.73	1974	10	8.87	1973	.95	1972	8.5	6.2	2.4	.9	.95	1.27	1.78	2.22	2.65	3.10	3.60	4.19	4.97	6.18	7.31
Apr	3.93	3.36	4.33	1994	11	10.49	1994	.16	1989	10.2	6.8	2.5	1.1	.67	1.01	1.59	2.12	2.68	3.28	3.96	4.79	5.90	7.69	9.41
May	5.16	4.94	4.90	1989	22	11.67	1995	1.64	1988	11.3	8.1	3.5	1.5	1.85	2.34	3.04	3.63	4.19	4.76	5.39	6.12	7.05	8.48	9.80
Jun	4.78	4.29	3.70	1975	17	13.85	1981	.98	1972	10.4	7.5	3.3	1.3	1.42	1.88	2.56	3.14	3.71	4.31	4.96	5.73	6.73	8.29	9.73
Jul	3.76	3.42	4.30	1992	11	15.46	1992	.43	1980	7.5	5.2	2.3	1.2	.53	.84	1.38	1.91	2.45	3.05	3.75	4.60	5.75	7.62	9.42
Aug	3.92	3.66	4.70	1992	6	7.97	1997	.02	1971	6.9	5.2	2.6	1.3	.31	.56	1.07	1.62	2.21	2.90	3.73	4.77	6.21	8.62	11.01
Sep	4.40	4.38	3.87	1993	25	15.45	1993	1.11	1995	8.2	5.7	3.0	1.4	.96	1.37	2.01	2.60	3.18	3.80	4.50	5.34	6.45	8.21	9.88
Oct	4.20	3.81	5.98	1998	5	11.41	1998	.34	1999	8.2	5.6	2.5	1.3	.87	1.25	1.87	2.43	3.00	3.60	4.28	5.10	6.19	7.92	9.56
Nov	3.72	3.13	4.25	1979	21	10.59	1992	.07	1989	7.5	5.0	2.3	1.4	.50	.80	1.33	1.85	2.39	2.99	3.69	4.54	5.70	7.59	9.41
Dec	2.70	2.33	2.55	1973	4	6.51	1973	.53	1976	6.1	3.9	2.1	.7	.55	.80	1.19	1.56	1.92	2.31	2.75	3.29	3.99	5.11	6.18
Ann	44.12	45.58	5.98	Oct 1998	5	15.46	Jul 1992	.00	Jan 1986	97.9	67.6	29.0	12.8	30.45	33.06	36.43	39.00	41.28	43.50	45.80	48.34	51.44	55.94	59.85

+ 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: 1970-2001

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

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Federal Building  
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**Station: STOCKTON DAM, MO**

**COOP ID: 238082**

**Climate Division: MO 3**

**NWS Call Sign:**

**Elevation: 924 Feet**

**Lat: 37°42N**

**Lon: 93°46W**

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	4.4	.5	1	#	9.0	1987	20	15.0	1977	9+	1987	20	3	1978	1.4	.9	.4	.2	.0	2.1	1.8	1.0	.0
Feb	3.4	1.3	1	0	14.0	1980	8	15.5	1980	14	1980	9	6	1979	1.2	.9	.3	.1	.1	1.9	.7	.2	.1
Mar	1.3	.0	#	0	9.0	1975	10	11.8	1975	14	1989	6	2	1989	.5	.4	.1	@	.0	.6	.1	.1	.1
Apr	.0	.0	#	0	.5	1973	9	.5	1973	1	1973	9	#	1973	@	.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	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	1.2	.0	#	0	5.0	1972	19	9.0	1972	4	1988	21	#+	1988	.4	.4	.2	.1	.0	@	@	.0	.0
Dec	1.4	.1	#	0	5.5	1981	23	6.0	1987	6	1981	23	2+	2000	1.0	.6	.2	.1	.0	.1	.0	.0	.0
Ann	11.7	1.9	N/A	N/A	14.0	Feb 1980	8	15.5	Feb 1980	14+	Mar 1989	6	6	Feb 1979	4.5	3.2	1.2	.5	.1	4.7	2.6	1.3	.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

Complete documentation available from:

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**Station: STOCKTON DAM, MO**

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**NWS Call Sign:**

**Elevation: 924 Feet**

**Lat: 37° 42N**

**Lon: 93° 46W**

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	5/07	5/02	4/28	4/25	4/22	4/20	4/17	4/13	4/08
32	4/23	4/19	4/15	4/13	4/10	4/08	4/05	4/02	3/28
28	4/10	4/06	4/03	3/31	3/28	3/26	3/23	3/20	3/16
24	4/04	3/29	3/25	3/21	3/17	3/14	3/10	3/06	2/28
20	3/26	3/19	3/14	3/10	3/07	3/03	2/27	2/22	2/15
16	3/18	3/11	3/05	2/28	2/24	2/19	2/14	2/09	2/01
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	9/25	10/01	10/05	10/08	10/11	10/14	10/17	10/21	10/27
32	10/01	10/08	10/13	10/17	10/21	10/25	10/29	11/03	11/10
28	10/19	10/25	10/30	11/02	11/06	11/10	11/13	11/18	11/24
24	10/30	11/06	11/10	11/14	11/18	11/22	11/26	11/30	12/07
20	11/05	11/12	11/17	11/21	11/25	11/28	12/02	12/07	12/14
16	11/16	11/23	11/29	12/03	12/07	12/11	12/15	12/21	12/28
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	193	185	180	175	171	167	162	156	149
32	216	208	203	198	193	189	184	178	170
28	245	237	231	227	222	217	212	207	199
24	271	262	256	250	245	240	234	228	219
20	293	283	275	268	262	256	249	242	231
16	318	307	299	292	286	279	272	264	253

\* 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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**NWS Call Sign:**

**Elevation: 924 Feet Lat: 37°42N Lon: 93°46W**

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	1090	833	616	297	105	9	0	2	47	233	590	940	4762
60	935	698	467	175	45	1	0	0	15	125	449	786	3696
57	843	620	380	116	24	0	0	0	6	78	367	699	3133
55	784	567	325	84	15	0	0	0	3	55	316	642	2791
50	641	442	207	30	3	0	0	0	0	18	207	501	2049
32	222	124	15	0	0	0	0	0	0	0	17	137	515

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	155	215	421	703	1039	1268	1482	1437	1130	816	417	220	9303
55	4	14	19	97	341	578	769	724	443	157	26	12	3184
57	1	10	12	69	288	518	707	662	387	119	17	7	2797
60	0	5	6	38	216	430	614	569	305	73	9	1	2266
65	0	0	0	10	121	287	459	416	188	26	0	0	1507
70	0	0	0	2	55	164	310	272	100	6	0	0	909

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	37	95	243	481	793	1033	1239	1199	901	580	241	74	37	132	375	856	1649	2682	3921	5120	6021	6601	6842	6916
45	12	45	149	347	639	883	1084	1044	751	435	150	35	12	57	206	553	1192	2075	3159	4203	4954	5389	5539	5574
50	1	18	80	229	486	733	929	889	601	298	83	11	1	19	99	328	814	1547	2476	3365	3966	4264	4347	4358
55	0	3	38	131	338	583	774	734	457	184	37	2	0	3	41	172	510	1093	1867	2601	3058	3242	3279	3281
60	0	0	6	60	206	434	619	579	325	97	11	0	0	0	6	66	272	706	1325	1904	2229	2326	2337	2337
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	28	67	150	291	502	701	846	812	594	363	140	45	28	95	245	536	1038	1739	2585	3397	3991	4354	4494	4539

(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)