

Climatology of the United States

No. 20

1971-2000

Station: CONCEPTION, MO

COOP ID: 231822

Climate Division: MO 1

NWS Call Sign:

Elevation: 1,108 Feet Lat: 40°15N

Lon: 94°41W

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	32.3	13.6	23.0	69	1981	25	34.7	1989	-24+	1982	11	9.0	1979	1304	0	.0	.0	3.2	14.7	29.6	6.1
Feb	38.5	19.0	28.8	78	1995	26	39.1	1987	-21	1996	2	13.4	1979	1015	0	.0	.0	6.9	9.9	24.5	3.3
Mar	50.8	29.6	40.2	86	1986	30	45.7	1986	-14	1962	1	32.7	1984	770	0	.0	.0	16.6	2.7	19.1	.4
Apr	62.6	40.6	51.6	92	1989	26	58.7	1981	8	1975	3	45.1	1983	410	7	.0	.2	25.8	.1	6.4	.0
May	72.9	51.7	62.3	97	1956	21	69.5	1988	28	1976	3	56.6	1995	169	86	.0	.5	30.8	.0	.1	.0
Jun	82.8	61.1	72.0	104	1988	25	78.3	1988	40	1982	1	66.9	1982	20	229	.2	5.2	30.0	.0	.0	.0
Jul	87.4	65.4	76.4	108+	1980	31	81.5	1980	45+	1972	5	72.0	1992	0	354	1.2	12.3	31.0	.0	.0	.0
Aug	86.0	63.0	74.5	105	1983	18	83.2	1983	41+	1986	29	68.8	1985	14	309	.9	10.3	31.0	.0	.0	.0
Sep	78.1	53.7	65.9	104	1953	28	71.5	1978	15	1982	25	60.6	1993	86	112	@	3.6	29.8	.0	.4	.0
Oct	66.1	42.2	54.2	94+	1976	2	59.6	1971	16+	1972	20	49.4	1987	342	7	.0	.2	28.9	@	4.7	.0
Nov	49.4	29.8	39.6	82	1999	14	49.4	1999	-7	1964	30	31.8	1991	762	0	.0	.0	15.7	2.5	18.8	.1
Dec	36.3	18.3	27.3	70	1984	29	33.7	1987	-23+	1989	23	9.6	1983	1169	0	.0	.0	4.6	10.7	28.7	3.4
Ann	61.9	40.7	51.3	108+	Jul 1980	31	83.2	Aug 1983	-24+	Jan 1982	11	9.0	Jan 1979	6061	1104	2.3	32.3	254.3	40.6	132.3	13.3

+ 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

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No. 20 1971-2000

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

Station: CONCEPTION, MO

COOP ID: 231822

Climate Division: MO 1

NWS Call Sign:

Elevation: 1,108 Feet Lat: 40°15N

Lon: 94°41W

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	.82	.80	1.15	1996	18	2.15	1979	.00+	1986	4.5	2.9	.2	.1	.00	.10	.26	.39	.52	.66	.83	1.02	1.29	1.72	2.14
Feb	1.13	1.02	2.10	2001	9	3.13	1973	.10+	1991	4.5	3.4	.6	.1	.14	.23	.39	.55	.71	.90	1.11	1.38	1.74	2.33	2.90
Mar	2.65	2.27	1.81	1961	13	7.00	1973	.05	1994	6.7	5.7	2.2	.6	.44	.67	1.06	1.42	1.80	2.20	2.66	3.23	3.98	5.20	6.36
Apr	3.26	2.92	2.35	1976	24	7.60	1991	1.06	1985	8.1	6.6	2.2	.8	.94	1.25	1.72	2.12	2.51	2.92	3.38	3.91	4.60	5.69	6.70
May	4.75	4.20	4.10	1982	29	12.45	1982	1.02	1994	9.0	7.7	3.3	1.4	1.09	1.54	2.23	2.86	3.48	4.14	4.88	5.77	6.93	8.77	10.51
Jun	4.17	3.59	4.52	1960	5	9.01	1984	1.42	1988	7.0	6.4	2.9	1.4	1.28	1.67	2.26	2.77	3.26	3.78	4.34	5.00	5.85	7.19	8.42
Jul	5.02	4.35	5.56	1968	17	24.62	1993	.52	1974	7.6	6.5	3.3	1.5	.63	1.02	1.73	2.43	3.17	3.99	4.95	6.13	7.73	10.35	12.90
Aug	4.09	3.52	4.59	1989	29	11.67	1989	.52	1992	6.7	5.7	2.6	1.3	.80	1.17	1.77	2.32	2.88	3.48	4.16	4.98	6.07	7.81	9.47
Sep	4.23	3.34	5.10	1993	22	10.90	1993	1.21	1990	6.7	5.9	3.0	1.4	1.18	1.59	2.19	2.72	3.24	3.79	4.38	5.09	6.01	7.46	8.80
Oct	2.75	2.69	4.51	1973	11	6.99	1977	.30	1975	5.7	4.5	1.8	.6	.52	.76	1.17	1.54	1.92	2.33	2.79	3.35	4.10	5.30	6.44
Nov	2.43	2.46	2.34	1987	1	4.60	1992	.00	1989	5.6	4.8	1.8	.6	.31	.62	1.03	1.37	1.72	2.09	2.50	2.99	3.64	4.68	5.66
Dec	1.34	1.07	2.65	1980	8	4.37	1982	.04	1996	4.5	3.0	.8	.3	.13	.23	.41	.60	.80	1.03	1.30	1.64	2.10	2.87	3.62
Ann	36.64	36.09	5.56	Jul 1968	17	24.62	Jul 1993	.00+	Nov 1989	76.6	63.1	24.7	10.1	21.76	24.44	27.98	30.75	33.25	35.71	38.29	41.18	44.74	50.01	54.65

+ 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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Station: CONCEPTION, MO

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Climate Division: MO 1

NWS Call Sign:

Elevation: 1,108 Feet

Lat: 40° 15N

Lon: 94° 41W

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	7.1	6.0	2	1	12.0	1979	13	28.5	1979	22	1979	15	10	1979	3.0	2.7	.6	.2	@	11.8	6.1	3.0	.5
Feb	5.1	4.0	1	1	12.0	1978	13	17.5	1978	16	1978	14	7	1978	2.2	1.9	.7	.3	@	8.7	4.9	2.2	.3
Mar	3.1	1.5	#	#	7.0	1980	1	16.5	1980	12	1998	11	4	1978	1.5	1.3	.4	.2	.0	2.9	1.2	.6	.1
Apr	1.0	.0	#	#	12.0	1997	11	15.0	1997	15	1997	12	2	1997	.5	.4	@	@	@	.5	.1	.1	.1
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	2.0	1996	23	2.0	1996	1	1996	23	#+	1996	@	@	.0	.0	.0	@	.0	.0	.0
Nov	1.2	.5	#	#	4.0	1991	23	5.0	1975	5	1975	28	1	1992	.7	.6	.2	.0	.0	1.5	.4	.1	.0
Dec	3.6	2.0	1	#	8.0	1981	17	16.5	1981	15	1983	23	6	1983	2.4	1.9	.5	.1	.0	6.0	1.9	.7	.0
Ann	21.2	14.0	N/A	N/A	12.0+	Apr 1997	11	28.5	Jan 1979	22	Jan 1979	15	10	Jan 1979	10.3	8.8	2.4	.8	@	31.4	14.6	6.7	1.0

+ 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:

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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	5/12	5/07	5/03	4/30	4/27	4/24	4/21	4/18	4/13
32	4/29	4/25	4/22	4/20	4/17	4/15	4/12	4/09	4/05
28	4/20	4/16	4/12	4/10	4/07	4/05	4/02	3/30	3/25
24	4/13	4/09	4/05	4/02	3/30	3/28	3/25	3/21	3/17
20	4/04	3/30	3/27	3/24	3/21	3/18	3/15	3/11	3/06
16	3/29	3/21	3/15	3/10	3/06	3/01	2/24	2/18	2/10
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	9/18	9/23	9/27	9/30	10/03	10/06	10/10	10/14	10/19
32	9/26	10/01	10/05	10/08	10/11	10/14	10/18	10/21	10/27
28	10/05	10/12	10/17	10/21	10/25	10/29	11/02	11/07	11/14
24	10/19	10/25	10/30	11/03	11/06	11/10	11/14	11/18	11/25
20	10/27	11/03	11/08	11/12	11/15	11/19	11/23	11/28	12/04
16	11/05	11/12	11/16	11/21	11/24	11/28	12/02	12/07	12/14
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	179	172	167	163	159	154	150	145	138
32	198	191	185	181	176	172	167	162	155
28	221	214	209	204	200	196	191	186	178
24	245	236	230	225	220	215	210	204	196
20	264	255	249	244	239	234	228	222	214
16	297	285	277	270	263	256	249	241	229

* 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	1304	1015	770	410	169	20	0	14	86	342	762	1169	6061
60	1149	875	616	278	91	5	0	3	32	211	613	1014	4887
57	1056	799	530	209	57	2	0	0	15	146	527	921	4262
55	995	747	472	168	40	1	0	0	8	110	473	860	3874
50	851	617	337	87	14	0	0	0	1	48	341	717	3013
32	378	247	53	0	0	0	0	0	0	0	57	273	1008

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	97	156	305	588	940	1199	1376	1318	1016	687	286	127	8095
55	1	12	12	65	267	509	663	605	334	84	11	1	2564
57	0	8	8	46	222	450	601	543	281	59	6	0	2224
60	0	0	1	25	163	363	508	452	208	31	1	0	1752
65	0	0	0	7	86	229	354	309	112	7	0	0	1104
70	0	0	0	1	36	120	211	185	49	1	0	0	603

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	9	41	148	373	703	966	1138	1074	782	457	129	17	9	50	198	571	1274	2240	3378	4452	5234	5691	5820	5837
45	0	15	80	251	548	816	983	919	633	321	68	4	0	15	95	346	894	1710	2693	3612	4245	4566	4634	4638
50	0	3	42	151	397	666	828	764	487	197	27	0	0	3	45	196	593	1259	2087	2851	3338	3535	3562	3562
55	0	1	15	78	259	516	673	609	350	109	11	0	0	1	16	94	353	869	1542	2151	2501	2610	2621	2621
60	0	0	2	38	146	370	518	455	225	50	3	0	0	0	2	40	186	556	1074	1529	1754	1804	1807	1807
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	5	34	98	221	426	646	774	722	505	280	82	14	5	39	137	358	784	1430	2204	2926	3431	3711	3793	3807

(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