U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: DORA, MO **COOP ID: 232302**

Climate Division: MO 4 **NWS Call Sign:** **Elevation: 990 Feet** **Lat: 36˚47N** **Lon: 92˚14W**

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	43.5	21.9	32.7	76	1986	21	40.6	1990	-19	1977	11	17.6	1977	1000	0	.0	.0	10.8	6.3	27.1	1.9
Feb	50.5	26.3	38.4	82	1982	23	47.8	1976	-9	1985	3	25.3	1978	744	0	.0	.0	14.6	3.2	21.5	1.1
Mar	59.7	34.5	47.1	89	1967	13	52.3	1973	2	1980	2	41.3+	1996	555	0	.0	.0	23.7	.6	15.3	.0
Apr	69.9	43.5	56.7	94	1987	30	62.8	1981	6	1967	7	52.1	1982	261	12	.0	.4	28.7	.0	5.2	.0
May	76.4	53.0	64.7	95	1977	31	71.6	1987	26	1989	2	59.5	1976	108	99	.0	.4	31.0	.0	.4	.0
Jun	83.8	61.6	72.7	102	1988	26	77.4	1977	38	1972	1	68.4	1974	9	241	.2	5.2	30.0	.0	.0	.0
Jul	89.6	66.0	77.8	109	1966	6	83.1	1980	46+	1972	6	73.6	1989	0	398	1.3	16.8	31.0	.0	.0	.0
Aug	89.2	64.2	76.7	107+	1984	29	83.5	1980	41	1989	8	70.1	1992	5	368	1.8	15.2	31.0	.0	.0	.0
Sep	81.2	56.8	69.0	103	1980	10	76.2	1980	26	1989	24	62.5	1974	59	179	.5	5.1	30.0	.0	.2	.0
Oct	71.5	44.8	58.2	95	1963	11	64.7	1971	16	1989	20	52.6	1988	237	24	.0	.4	30.5	.0	4.8	.0
Nov	58.1	35.6	46.9	88	1980	8	53.9	1990	5	1989	29	39.7	1996	545	0	.0	.0	21.9	.3	14.6	.0
Dec	47.3	26.3	36.8	78	1982	1	45.0	1971	-21	1989	23	23.3	1983	876	0	.0	.0	13.4	3.5	24.7	.9
Ann	68.4	44.5	56.5	109	Jul 1966	6	83.5	Aug 1980	-21	Dec 1989	23	17.6	Jan 1977	4399	1321	3.8	43.5	296.6	13.9	113.8	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/normals/usnormals.html

(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

Issue Date: February 2004

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Precipitation (inches)

Precipitation Totals

Month	Means/ Medians(1) Mean	Means/ Medians(1) Median	Extremes Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year
Jan	2.34	1.94	4.15	1975	10	6.79	1975	.00	1986
Feb	2.63	2.42	4.89	1985	23	5.92	1985	.75	1988
Mar	3.99	3.62	3.74	1985	30	8.37	1973	.63	1982
Apr	4.43	4.17	3.13	1970	19	8.41	1972	.53	1989
May	4.86	4.53	4.09	1989	22	11.90	1990	1.09	1994
Jun	4.07	3.70	2.93	2001	29	7.84	1985	1.50	1984
Jul	3.16	3.03	2.30	1988	1	7.58	1978	.85	1982
Aug	2.98	3.21	3.38	1982	27	6.12	1977	.26	1980
Sep	4.25	3.47	5.33	1993	25	13.58	1993	.12	1981
Oct	3.58	3.05	4.15	1998	6	10.59	1984	.69	1992
Nov	4.95	4.73	6.40	1985	19	11.62	1985	.47	1976
Dec	3.64	2.72	4.25	1984	21	13.90	1982	.63	1989
Ann	44.88	47.26	6.40	Nov 1985	19	13.90	Dec 1982	.00	Jan 1986

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	5.6	4.1	1.7	.6
Feb	5.6	4.1	1.9	.7
Mar	7.2	6.1	2.9	.9
Apr	7.6	6.2	3.0	1.1
May	8.9	7.3	3.3	1.5
Jun	7.9	6.1	2.9	1.4
Jul	5.3	4.3	2.2	1.0
Aug	5.7	4.3	2.0	.8
Sep	6.7	5.3	2.8	1.3
Oct	6.1	4.7	2.7	1.2
Nov	6.8	5.6	2.9	1.5
Dec	5.9	4.3	2.3	1.1
Ann	79.3	62.4	30.6	13.1

Precipitation Probabilities (1)

Probability that the monthly/annual precipitation will be equal to or less than the indicated amount

Monthly/Annual Precipitation vs Probability Levels
These values were determined from the incomplete gamma distribution

Month	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.23	.50	.89	1.23	1.58	1.95	2.38	2.90	3.58	4.69	5.75
Feb	.67	.92	1.31	1.64	1.98	2.33	2.72	3.18	3.78	4.74	5.63
Mar	.93	1.30	1.89	2.41	2.93	3.48	4.10	4.83	5.80	7.33	8.77
Apr	1.33	1.75	2.38	2.92	3.45	4.00	4.60	5.31	6.22	7.65	8.98
May	1.85	2.30	2.95	3.49	4.00	4.52	5.09	5.74	6.57	7.85	9.02
Jun	1.72	2.09	2.61	3.04	3.43	3.83	4.27	4.77	5.39	6.35	7.22
Jul	.92	1.22	1.67	2.06	2.44	2.84	3.28	3.79	4.46	5.50	6.47
Aug	.56	.83	1.26	1.67	2.08	2.52	3.02	3.63	4.43	5.73	6.96
Sep	.47	.80	1.39	1.98	2.61	3.32	4.16	5.19	6.60	8.92	11.19
Oct	.88	1.22	1.74	2.20	2.66	3.15	3.69	4.33	5.17	6.50	7.75
Nov	.98	1.42	2.15	2.82	3.49	4.22	5.04	6.03	7.34	9.44	11.43
Dec	.62	.93	1.46	1.96	2.48	3.03	3.67	4.44	5.48	7.15	8.74
Ann	29.70	32.55	36.26	39.10	41.64	44.12	46.69	49.55	53.05	58.15	62.60

\+ 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:
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Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	2.4	1.0	1	#
Feb	2.4	.2	1	#
Mar	1.1	.0	#	0
Apr	.3	.0	#	0
May	.0	.0	0	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	.0	.0	0	0
Nov	.9	.0	#	0
Dec	.9	.0	#	0
Ann	8.0	1.2	N/A	N/A

Extremes (2)

Month	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year
Jan	8.0	1978	17	12.0	1978	13	1977	11	6	1977
Feb	11.0	1993	16	11.0	1993	18	1980	10	5	1980
Mar	6.5	1975	10	13.0	1975	13	1994	9	1	1999
Apr	4.6	1980	14	4.6	1980	4	1980	14	#	1980
May	.0	0	0	.0	0	0	0	0	0	0
Jun	.0	0	0	.0	0	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	.0	0	0	.0	0	0	0	0	0	0
Oct	1.0	1993	30	1.0	1993	0	0	0	0	0
Nov	6.5	1975	26	6.5	1975	6	1980	27	1	1980
Dec	8.0	1984	5	8.0	1984	7	2000	15	3	2000
Ann	11.0	Feb 1993	16	13.0	Mar 1975	18	Feb 1980	10	6	Jan 1977

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	1.3	1.1	.5	.3	.0
Feb	1.0	.9	.4	.1	@
Mar	.5	.5	.1	.1	.0
Apr	.1	.1	@	.0	.0
May	.0	.0	.0	.0	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0
Oct	@	@	.0	.0	.0
Nov	.3	.3	.1	.1	.0
Dec	.6	.6	.2	.1	.0
Ann	3.8	3.5	1.3	.7	@

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	2.7	1.7	.5	.0
Feb	1.8	.8	.2	.0
Mar	.5	.1	.1	.0
Apr	.1	@	.0	.0
May	.0	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.0	.0	.0	.0
Nov	.2	.1	@	.0
Dec	.5	.2	.2	.0
Ann	5.8	2.9	1.0	.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

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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	5/20	5/14	5/10	5/07	5/04	4/30	4/27	4/23	4/17
32	5/05	4/29	4/25	4/22	4/19	4/16	4/13	4/09	4/03
28	4/24	4/18	4/14	4/11	4/08	4/05	4/01	3/28	3/23
24	4/13	4/07	4/03	3/31	3/28	3/24	3/21	3/17	3/11
20	4/05	3/28	3/23	3/18	3/14	3/09	3/05	2/27	2/20
16	3/23	3/14	3/08	3/03	2/26	2/21	2/15	2/09	1/31

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	9/22	9/26	9/29	10/02	10/04	10/06	10/09	10/11	10/15
32	9/27	10/03	10/07	10/10	10/13	10/16	10/20	10/24	10/29
28	10/06	10/13	10/18	10/23	10/27	10/31	11/04	11/10	11/17
24	10/22	10/29	11/03	11/07	11/10	11/14	11/18	11/23	11/29
20	10/31	11/07	11/12	11/16	11/19	11/23	11/27	12/02	12/09
16	11/06	11/14	11/19	11/24	11/28	12/03	12/08	12/13	12/21

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	171	165	160	156	152	149	145	140	134
32	200	192	186	181	177	172	167	161	153
28	233	222	214	208	201	195	188	181	170
24	252	244	237	232	227	222	217	210	202
20	278	268	261	255	250	245	239	232	223
16	311	299	290	282	275	268	260	252	239

***** 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

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Degree Days to Selected Base Temperatures (˚F)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1000	744	555	261	108	9	0	5	59	237	545	876	4399
60	845	611	409	145	45	1	0	1	21	127	405	724	3334
57	754	532	325	92	22	0	0	0	10	79	325	637	2776
55	699	481	273	64	13	0	0	0	5	55	276	580	2446
50	554	360	166	19	3	0	0	0	0	17	173	441	1733
32	162	76	8	0	0	0	0	0	0	0	10	103	359

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	185	256	476	742	1014	1222	1421	1386	1110	810	456	250	9328
55	8	16	28	115	314	532	708	673	425	152	32	14	3017
57	2	12	18	83	261	472	646	611	370	114	21	9	2619
60	0	6	9	46	190	383	553	518	291	69	11	3	2079
65	0	0	0	12	99	241	398	368	179	24	0	0	1321
70	0	0	0	2	39	122	249	231	96	5	0	0	744

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	51	115	260	494	758	976	1176	1138	862	548	235	75	51	166	426	920	1678	2654	3830	4968	5830	6378	6613	6688
45	21	58	160	355	603	826	1021	983	712	401	144	36	21	79	239	594	1197	2023	3044	4027	4739	5140	5284	5320
50	2	24	88	233	449	676	866	828	564	264	75	13	2	26	114	347	796	1472	2338	3166	3730	3994	4069	4082
55	0	8	44	137	302	526	711	673	419	155	32	0	0	8	52	189	491	1017	1728	2401	2820	2975	3007	3007
60	0	0	15	70	175	377	556	518	285	69	9	0	0	0	15	85	260	637	1193	1711	1996	2065	2074	2074
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	49	94	191	325	488	659	793	760	565	367	166	61	49	143	334	659	1147	1806	2599	3359	3924	4291	4457	4518

(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.
Compete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normals/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 are 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.

a. Temperature/ Precipitation Tables
   1. 1971-2000 Monthly Normals
   2. Cooperative Summary of the Day
   3. National Weather Service station records
   4. 1971-2000 serially complete daily data

b. Degree Day Table
   1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals
   2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data

c. Snow Tables
   1. Snow Climatology
   2. Cooperative Summary of the Day

d. Freeze Data Table
   1971-2000 serially complete daily data

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normals.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/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