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: DAYTON MCD, OH **COOP ID: 332067**

Climate Division: OH 8 **NWS Call Sign:** **Elevation: 745 Feet** **Lat: 39˚46N** **Lon: 84˚11W**

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	35.2	20.6	27.9	72	1950	25	38.1	1990	-21+	1985	21	12.0	1977	1150	0	.0	.0	4.2	12.6	26.4	2.3
Feb	40.0	23.5	31.8	77	2000	26	39.2	1998	-9	1936	18	18.1	1978	931	0	.0	.0	6.7	8.4	21.7	1.1
Mar	50.8	32.2	41.5	84+	1998	31	49.6	1973	1	1943	3	32.0	1984	728	0	.0	.0	15.6	2.4	17.0	.0
Apr	62.9	42.1	52.5	90+	1986	27	58.2	1985	18	1972	8	47.0	1975	380	5	.0	@	25.1	.1	4.0	.0
May	74.1	53.1	63.6	95+	1998	16	71.1	1991	30+	1966	10	58.0	1997	156	112	.0	1.7	30.8	.0	.0	.0
Jun	83.2	62.6	72.9	103	1994	19	76.9	1991	42+	1990	6	67.2	1972	16	253	.1	7.3	30.0	.0	.0	.0
Jul	87.2	66.8	77.0	105+	1934	22	81.4	1999	49	1940	13	73.6	1984	0	372	.4	11.3	31.0	.0	.0	.0
Aug	85.4	64.6	75.0	103	1999	1	80.9	1995	44	1946	30	70.7	1992	5	315	.1	8.0	31.0	.0	.0	.0
Sep	78.6	57.1	67.9	100	1954	6	73.7	1998	33	1942	29	62.8	1974	50	136	.0	3.0	30.0	.0	.0	.0
Oct	65.9	45.3	55.6	89	1997	5	63.4	1971	23	1952	21	49.4	1988	313	21	.0	.0	29.2	.0	1.7	.0
Nov	52.2	36.1	44.2	81	1999	2	49.2	1999	4+	1958	30	37.3	1976	626	0	.0	.0	16.5	1.0	11.6	.0
Dec	40.2	26.0	33.1	75	1998	7	41.1	1982	-16+	1989	23	21.0	1989	988	0	.0	.0	6.6	7.9	22.4	.7
Ann	63.0	44.2	53.6	105+	Jul 1934	22	81.4	Jul 1999	-21+	Jan 1985	21	12.0	Jan 1977	5343	1214	.6	31.3	256.7	32.4	104.8	4.1

\+ 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: 1934-2001

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

Issue Date: February 2004

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: DAYTON MCD, OH **COOP ID: 332067**

Climate Division: OH 8 **NWS Call Sign:** **Elevation: 745 Feet** **Lat: 39˚46N** **Lon: 84˚11W**

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	2.65	2.41	2.93	1959	22	5.96	1982	.29	1981
Feb	2.37	2.13	2.28	1988	2	4.85	1971	.27	1978
Mar	3.08	2.78	2.74	1964	10	5.36	1973	1.36	1979
Apr	4.04	4.12	2.86	1970	2	9.58	1996	1.30	1997
May	4.38	3.88	3.90	1991	18	9.00	1990	1.04	1988
Jun	4.17	3.86	4.10	1980	29	8.77	1980	.54	1991
Jul	3.93	3.97	2.75	1967	29	8.94	1992	.92	1974
Aug	3.28	2.74	3.16	1961	11	7.62	1979	.92	1996
Sep	2.61	2.48	4.65	1979	14	6.91	1979	.30	1998
Oct	2.69	2.53	2.98	1995	6	6.03	1983	.81	1994
Nov	3.27	2.77	3.12	1948	6	9.58	1985	.83	1976
Dec	2.94	2.74	2.41	1941	23	8.64	1990	.40	1976
Ann	39.41	39.12	4.65	Sep 1979	14	9.58+	Apr 1996	.27	Feb 1978

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	11.5	6.5	1.6	.4
Feb	10.2	5.5	1.3	.3
Mar	11.4	7.3	2.3	.3
Apr	13.1	7.9	2.4	.8
May	11.7	8.2	3.0	.9
Jun	10.1	7.1	2.6	1.1
Jul	9.4	6.5	2.9	1.0
Aug	8.6	5.9	2.5	.8
Sep	7.7	4.6	1.8	.7
Oct	8.7	5.4	1.7	.7
Nov	11.1	6.4	2.4	.6
Dec	11.0	6.5	2.1	.6
Ann	124.5	77.8	26.6	8.2

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	.74	.99	1.37	1.70	2.03	2.37	2.75	3.20	3.78	4.69	5.54
Feb	.54	.76	1.11	1.42	1.73	2.06	2.43	2.87	3.46	4.38	5.25
Mar	1.44	1.71	2.08	2.37	2.65	2.93	3.23	3.57	3.99	4.64	5.22
Apr	1.46	1.84	2.39	2.84	3.28	3.73	4.22	4.79	5.52	6.64	7.66
May	1.30	1.72	2.35	2.88	3.41	3.95	4.55	5.26	6.17	7.60	8.93
Jun	1.30	1.70	2.29	2.79	3.28	3.79	4.34	4.99	5.83	7.14	8.35
Jul	1.30	1.68	2.22	2.69	3.13	3.60	4.10	4.69	5.45	6.63	7.71
Aug	.92	1.23	1.71	2.12	2.52	2.94	3.40	3.95	4.66	5.78	6.82
Sep	.41	.63	1.01	1.37	1.74	2.15	2.61	3.18	3.94	5.18	6.37
Oct	.86	1.11	1.49	1.81	2.13	2.45	2.81	3.22	3.76	4.59	5.36
Nov	.96	1.28	1.74	2.14	2.54	2.95	3.40	3.93	4.61	5.69	6.68
Dec	.90	1.18	1.59	1.95	2.30	2.66	3.06	3.53	4.13	5.07	5.95
Ann	28.78	30.86	33.52	35.52	37.30	39.02	40.78	42.73	45.09	48.50	51.43

\+ 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: 1934-2001
(3) Derived from 1971-2000 serially complete daily data

Complete documentation available from:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

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

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: DAYTON MCD, OH **COOP ID: 332067**

Climate Division: OH 8 **NWS Call Sign:** **Elevation: 745 Feet** **Lat: 39°46N** **Lon: 84°11W**

Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	7.1	3.1	2	1
Feb	3.8	2.3	1	#
Mar	2.1	1.0	#	#
Apr	.2	.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
Nov	.4	.0	#	0
Dec	3.0	2.5	#	#
Ann	16.6	8.9	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	7.0	1994	17	27.1	1978	21	1978	31	11	1978
Feb	6.0	1979	26	18.5	1979	17	1978	1	12	1978
Mar	6.0	1987	31	7.5	1975	14	1978	9	5	1978
Apr	2.0	1982	9	2.1	1982	3	1987	1	#+	2000
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	1989	19	1.0	1989	1	1989	19	#+	1993
Nov	6.0	1980	18	6.0	1980	6	1980	18	#+	2000
Dec	7.0	1995	20	11.5	1981	7	1995	27	3	1995
Ann	7.0+	Dec 1995	20	27.1	Jan 1978	21	Jan 1978	31	12	Feb 1978

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	4.9	2.8	.7	.1	.0
Feb	2.8	1.4	.4	@	.0
Mar	1.4	.8	.1	.1	.0
Apr	.3	.1	.0	.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	.1	@	@	.0
Dec	2.5	1.2	.4	.1	.0
Ann	12.2	6.4	1.6	.3	.0

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	9.6	5.8	3.5	1.3
Feb	6.6	3.7	2.2	.4
Mar	1.7	.5	.2	.0
Apr	.2	@	.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
Nov	.3	.1	@	.0
Dec	4.2	2.1	.7	.0
Ann	22.6	12.2	6.6	1.7

+ 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:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

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: DAYTON MCD, OH **COOP ID: 332067**

Climate Division: OH 8 **NWS Call Sign:** **Elevation: 745 Feet** **Lat: 39˚46N** **Lon: 84˚11W**

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	5/06	5/02	4/28	4/26	4/23	4/21	4/18	4/15	4/10
32	4/22	4/18	4/16	4/13	4/11	4/09	4/07	4/04	3/31
28	4/17	4/12	4/09	4/06	4/03	4/01	3/29	3/25	3/21
24	4/03	3/30	3/26	3/23	3/21	3/18	3/15	3/12	3/07
20	3/29	3/23	3/18	3/14	3/11	3/07	3/03	2/26	2/20
16	3/15	3/09	3/04	2/28	2/25	2/21	2/17	2/13	2/06

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	10/01	10/07	10/11	10/14	10/18	10/21	10/25	10/29	11/04
32	10/17	10/21	10/25	10/28	10/30	11/02	11/05	11/08	11/13
28	10/28	11/01	11/04	11/07	11/09	11/12	11/14	11/17	11/21
24	11/06	11/12	11/16	11/20	11/24	11/27	12/01	12/05	12/11
20	11/16	11/22	11/27	12/01	12/05	12/09	12/13	12/17	12/24
16	11/24	11/30	12/05	12/10	12/13	12/17	12/22	12/26	1/02

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	201	193	187	182	177	172	167	161	153
32	219	213	209	205	201	198	194	189	183
28	238	231	227	223	219	216	212	207	201
24	269	262	256	252	247	243	238	233	225
20	291	283	278	273	269	264	259	254	246
16	314	306	300	295	291	286	281	276	268

***** 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:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

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: DAYTON MCD, OH **COOP ID: 332067**

Climate Division: OH 8 **NWS Call Sign:** **Elevation: 745 Feet** **Lat: 39˚46N** **Lon: 84˚11W**

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	1150	931	728	380	156	16	0	5	50	313	626	988	5343
60	995	791	577	247	83	4	0	0	15	196	478	833	4219
57	902	707	491	178	52	1	0	0	6	139	394	745	3615
55	840	654	434	139	36	1	0	0	3	107	340	688	3242
50	697	524	304	63	13	0	0	0	0	49	218	545	2413
32	255	158	41	0	0	0	0	0	0	0	13	164	631

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	128	151	336	615	979	1227	1395	1333	1076	731	376	199	8546
55	0	3	16	64	302	537	682	620	389	126	13	10	2762
57	0	0	11	43	256	478	620	558	332	95	8	5	2406
60	0	0	4	22	194	391	527	465	251	59	2	0	1915
65	0	0	0	5	112	253	372	315	136	21	0	0	1214
70	0	0	0	1	54	137	222	180	57	6	0	0	657

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	34	54	171	396	741	995	1154	1096	842	496	200	57	34	88	259	655	1396	2391	3545	4641	5483	5979	6179	6236
45	9	24	102	271	586	845	999	941	692	352	117	29	9	33	135	406	992	1837	2836	3777	4469	4821	4938	4967
50	2	7	58	168	435	695	844	786	543	223	63	8	2	9	67	235	670	1365	2209	2995	3538	3761	3824	3832
55	0	2	32	95	297	545	689	631	397	128	27	2	0	2	34	129	426	971	1660	2291	2688	2816	2843	2845
60	0	0	8	46	181	396	534	476	265	60	6	0	0	0	8	54	235	631	1165	1641	1906	1966	1972	1972
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	16	34	100	231	455	667	798	751	547	287	105	31	16	50	150	381	836	1503	2301	3052	3599	3886	3991	4022

(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