

Climatology of the United States No. 20

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

Station: MILLERSBURG, OH

1971-2000

COOP ID: 335297

Climate Division: OH 6

NWS Call Sign:

Elevation: 819 Feet

Lat: 40°33N

Lon: 81°55W

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	33.7	16.2	25.0	69	1946	6	36.2	1990	-35	1994	20	10.4	1977	1241	0	.0	.0	3.3	12.9	28.0	3.4
Feb	37.6	18.1	27.9	75	2000	27	37.3	1998	-17	1948	9	15.4	1978	1040	0	.0	.0	5.3	9.4	24.3	2.3
Mar	48.8	26.3	37.6	85	1945	25	46.3	1973	-10	1948	12	28.4	1984	851	0	.0	.0	14.9	2.5	21.6	.3
Apr	60.2	35.3	47.8	90	1948	26	53.0	1985	13	1964	1	43.0	1975	518	0	.0	.0	24.9	.1	10.9	.0
May	70.8	46.3	58.6	94+	1939	26	66.3	1991	20	1994	2	52.2	1997	241	41	.0	@	30.8	.0	1.6	.0
Jun	79.2	55.4	67.3	98	1944	18	70.8	1971	30	1972	11	63.0	1972	41	111	@	1.8	30.0	.0	@	.0
Jul	83.1	59.5	71.3	101+	1936	14	74.5	1988	40	1963	10	67.5	2000	5	200	.1	4.7	31.0	.0	.0	.0
Aug	81.4	57.4	69.4	99	1988	17	74.7	1995	35	1982	29	65.4	1992	23	159	.0	2.2	31.0	.0	.0	.0
Sep	75.1	50.3	62.7	99+	1939	15	67.0	1971	25	1942	29	58.4	1975	120	50	.0	.6	30.0	.0	.4	.0
Oct	63.4	38.4	50.9	90+	1946	5	58.7	1971	16+	1988	31	43.1	1988	442	5	.0	.0	28.5	.0	7.2	.0
Nov	50.4	30.6	40.5	81	1961	3	46.0	1975	0+	1976	30	33.1	1976	735	0	.0	.0	16.3	.8	17.7	@
Dec	38.7	21.9	30.3	76	1982	3	38.6	1982	-24	1989	22	17.3	1989	1077	0	.0	.0	5.9	7.9	25.5	1.2
Ann	60.2	38.0	49.1	101+	Jul 1936	14	74.7	Aug 1995	-35	Jan 1994	20	10.4	Jan 1977	6334	566	.1	9.3	251.9	33.6	137.2	7.2

+ 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: 1936-2001

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

054-A

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Station: MILLERSBURG, OH

COOP ID: 335297

Climate Division: OH 6

NWS Call Sign:

Elevation: 819 Feet Lat: 40°33N

Lon: 81°55W

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	2.48	1.98	2.95	2000	3	5.70	2000	.76	1971	11.2	5.7	1.3	.3	.72	.96	1.31	1.62	1.92	2.23	2.57	2.98	3.50	4.32	5.08
Feb	1.96	1.72	1.85	1948	13	5.05	1990	.42	1978	9.8	5.4	1.1	.2	.59	.78	1.06	1.30	1.53	1.77	2.04	2.35	2.75	3.38	3.96
Mar	2.81	2.89	2.79	1964	10	4.81	1982	.59	1990	11.6	6.9	1.6	.3	1.08	1.34	1.71	2.02	2.32	2.62	2.94	3.32	3.80	4.53	5.20
Apr	3.38	3.31	2.97	1948	11	6.53	2000	.91	1971	12.1	7.4	2.0	.6	1.27	1.59	2.04	2.42	2.78	3.14	3.54	4.00	4.59	5.50	6.32
May	3.90	4.07	2.82	1971	6	7.92	1990	1.22	1977	12.4	8.4	2.5	.8	1.58	1.94	2.45	2.86	3.26	3.66	4.09	4.59	5.22	6.19	7.06
Jun	4.58	4.65	3.37	1981	9	8.21	1981	.84	1988	10.5	7.4	3.2	1.3	1.60	2.03	2.66	3.19	3.69	4.22	4.78	5.44	6.29	7.60	8.81
Jul	3.99	3.62	6.75	1969	5	10.47	1992	1.08	1991	10.3	7.5	2.6	.9	1.23	1.61	2.17	2.66	3.13	3.62	4.15	4.79	5.60	6.87	8.05
Aug	3.68	3.24	3.76	1983	1	9.27	1980	.72	1993	9.2	6.7	2.2	.7	1.01	1.36	1.89	2.35	2.81	3.28	3.81	4.43	5.24	6.52	7.71
Sep	3.27	3.12	5.21	1979	14	7.75	1979	.56	1998	8.7	5.9	1.8	.8	.96	1.28	1.74	2.15	2.54	2.95	3.40	3.93	4.62	5.69	6.69
Oct	2.64	2.48	2.70	1959	1	5.69	1990	.80	1982	9.1	5.9	1.4	.5	.81	1.06	1.44	1.76	2.07	2.39	2.75	3.17	3.71	4.55	5.33
Nov	3.17	2.88	1.98	1966	3	10.13	1985	.44	1976	11.0	6.6	2.0	.6	.81	1.11	1.57	1.97	2.38	2.80	3.27	3.82	4.55	5.70	6.78
Dec	2.72	2.53	2.38	2000	16	6.30	1990	1.00	1976	11.3	6.4	1.6	.5	1.10	1.35	1.70	2.00	2.27	2.55	2.85	3.20	3.64	4.32	4.94
Ann	38.58	39.00	6.75	Jul 1969	5	10.47	Jul 1992	.42	Feb 1978	127.2	80.2	23.3	7.5	28.69	30.64	33.12	34.99	36.65	38.24	39.88	41.68	43.86	47.00	49.70

+ 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: 1936-2001

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

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Station: MILLERSBURG, OH

COOP ID: 335297

Climate Division: OH 6

NWS Call Sign:

Elevation: 819 Feet

Lat: 40°33N

Lon: 81°55W

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	7.0	4.5	2	1	6.5	1976	8	21.5	1977	20	1978	31	10	1978	4.5	3.0	1.0	.4	.0	11.1	6.4	4.7	.6
Feb	6.9	6.5	2	1	8.5	1971	9	17.0	1971	18	1978	1	8	1978	3.0	2.0	.8	.1	.0	10.7	5.8	3.4	1.0
Mar	3.3	3.0	#	#	6.0	1974	24	9.5	1971	8	1993	1	2	1978	1.8	1.1	.3	.2	.0	2.9	1.1	.4	.0
Apr	.5	.0	#	0	6.0	1982	9	6.0	1982	6	1982	9	#+	1997	.2	.2	@	@	.0	.2	@	@	.0
May	#	.0	0	0	#	1996	2	#+	1996	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	1.0	1989	18	1.0	1989	1	1989	18	#+	1989	@	@	.0	.0	.0	@	.0	.0	.0
Nov	1.0	.0	#	#	4.0	1980	18	7.5	1980	4	1991	13	#+	2000	.9	.5	.1	.0	.0	1.0	.2	.0	.0
Dec	5.1	4.7	1	#	18.0	1974	2	21.5	1974	18	1974	2	4	1974	2.6	1.8	.5	.1	@	5.5	2.0	1.2	.3
Ann	23.8	18.7	N/A	N/A	18.0	Dec 1974	2	21.5+	Jan 1977	20	Jan 1978	31	10	Jan 1978	13.0	8.6	2.7	.8	@	31.4	15.5	9.7	1.9

+ 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

Complete documentation available from:

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Climate Division: OH 6

NWS Call Sign:

Elevation: 819 Feet

Lat: 40°33N

Lon: 81°55W

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	5/31	5/25	5/22	5/18	5/15	5/12	5/09	5/05	4/30
32	5/23	5/17	5/13	5/09	5/06	5/02	4/28	4/24	4/18
28	5/05	5/01	4/28	4/25	4/23	4/20	4/18	4/15	4/10
24	4/24	4/19	4/16	4/13	4/10	4/07	4/04	4/01	3/27
20	4/18	4/11	4/07	4/03	3/30	3/27	3/23	3/19	3/12
16	4/03	3/28	3/24	3/20	3/16	3/13	3/09	3/05	2/27
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	9/15	9/18	9/21	9/23	9/26	9/28	9/30	10/03	10/06
32	9/23	9/28	10/01	10/04	10/06	10/09	10/12	10/15	10/20
28	10/05	10/10	10/14	10/17	10/20	10/23	10/26	10/30	11/04
24	10/18	10/23	10/27	10/30	11/02	11/05	11/08	11/12	11/17
20	11/03	11/08	11/11	11/14	11/17	11/19	11/22	11/25	11/30
16	11/13	11/20	11/25	11/29	12/03	12/06	12/10	12/15	12/22
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	148	143	139	136	133	129	126	122	117
32	172	166	161	157	153	149	145	140	134
28	200	193	188	184	180	176	172	167	160
24	224	217	213	209	205	201	197	193	186
20	251	244	239	235	230	226	222	217	210
16	287	278	272	266	261	255	250	243	234

* 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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Climate Division: OH 6

NWS Call Sign:

Elevation: 819 Feet Lat: 40°33N Lon: 81°55W

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	1241	1040	851	518	241	41	5	23	120	442	735	1077	6334
60	1086	900	696	371	141	10	0	3	48	302	585	922	5064
57	993	816	603	287	95	4	0	0	24	229	496	829	4376
55	931	760	546	236	70	2	0	0	13	186	437	767	3948
50	780	622	404	126	27	0	0	0	3	99	300	625	2986
32	310	208	70	1	0	0	0	0	0	0	24	204	817

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	92	92	242	473	823	1060	1218	1159	920	587	279	150	7095
55	0	0	5	18	179	372	505	446	244	59	2	0	1830
57	0	0	0	9	142	314	443	384	194	41	1	0	1528
60	0	0	0	3	96	230	350	294	128	21	0	0	1122
65	0	0	0	0	41	111	200	159	50	5	0	0	566
70	0	0	0	0	13	34	80	65	12	0	0	0	204

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	17	28	128	299	606	842	987	935	703	385	142	39	17	45	173	472	1078	1920	2907	3842	4545	4930	5072	5111
45	5	14	71	189	453	692	832	780	553	252	79	19	5	19	90	279	732	1424	2256	3036	3589	3841	3920	3939
50	0	1	36	108	311	542	677	625	407	142	33	3	0	1	37	145	456	998	1675	2300	2707	2849	2882	2885
55	0	0	13	56	187	393	522	470	269	69	11	0	0	0	13	69	256	649	1171	1641	1910	1979	1990	1990
60	0	0	3	21	97	252	368	320	155	27	1	0	0	0	3	24	121	373	741	1061	1216	1243	1244	1244
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	7	22	91	199	378	553	667	625	450	238	87	24	7	29	120	319	697	1250	1917	2542	2992	3230	3317	3341

(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