

# Climatography of the United States

No. 20

1971-2000

Station: LIMA WWTP, OH

COOP ID: 334551

Climate Division: OH 1

NWS Call Sign:

Elevation: 850 Feet Lat: 40°43N Lon: 84°08W

## 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	32.9	18.1	25.5	71	1950	25	36.0	1990	-21+	1994	19	10.2	1977	1224	0	.0	.0	2.8	14.2	27.5	3.3
Feb	37.3	21.5	29.4	72	2000	25	38.7	1998	-16	1963	26	14.9	1978	996	0	.0	.0	4.8	10.2	23.2	1.7
Mar	48.1	30.3	39.2	82	1945	25	47.3	1973	-8	1948	12	28.1	1984	800	0	.0	.0	13.7	2.7	18.9	.1
Apr	60.3	39.3	49.8	89+	1985	21	57.6	1985	8	1982	7	43.7	1982	460	4	.0	.0	25.2	.1	6.9	.0
May	71.8	49.7	60.8	94	1962	18	68.7	1991	24	1966	10	55.1	1997	210	80	.0	.7	30.9	.0	.5	.0
Jun	80.4	58.9	69.7	101+	1952	29	74.5	1991	34	1966	1	65.3	1972	28	168	.1	3.2	30.0	.0	.0	.0
Jul	84.0	63.2	73.6	109	1936	14	77.5	1999	43+	1968	29	70.8	1984	1	267	.1	5.7	31.0	.0	.0	.0
Aug	81.5	61.7	71.6	103	1934	9	77.5	1995	36	1965	29	67.9	1976	14	219	.0	3.1	31.0	.0	.0	.0
Sep	75.6	54.8	65.2	101	1939	15	69.4	1998	27	1940	26	60.0	1975	78	84	.0	1.1	30.0	.0	.1	.0
Oct	63.6	43.6	53.6	94	1971	3	61.5	1971	18	1952	21	46.5	1988	367	13	.0	@	28.7	.0	3.2	.0
Nov	49.8	34.1	42.0	80	1950	1	47.9	1994	-3	1958	30	33.8	1976	691	0	.0	.0	15.4	1.4	14.3	.0
Dec	37.7	23.8	30.8	70+	1998	6	39.3	1982	-17+	1989	23	17.2	1989	1063	0	.0	.0	4.9	8.6	24.6	1.2
Ann	60.3	41.6	50.9	109	Jul 1936	14	77.5+	Jul 1999	-21+	Jan 1994	19	10.2	Jan 1977	5932	835	.2	13.8	248.4	37.2	119.2	6.3

+ 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](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: 1929-2001

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

045-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: LIMA WWTP, OH**

**COOP ID: 334551**

**Climate Division: OH 1**

**NWS Call Sign:**

**Elevation: 850 Feet**

**Lat: 40°43N**

**Lon: 84°08W**

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	2.22	2.09	2.48	1937	14	4.05	1999	.56	1981	11.0	5.6	1.3	.3	.65	.86	1.18	1.46	1.72	2.00	2.30	2.67	3.13	3.86	4.54
Feb	1.98	1.93	2.34	1959	10	4.45	1990	.05	1987	9.4	4.6	1.4	.3	.38	.56	.85	1.12	1.39	1.68	2.02	2.42	2.95	3.80	4.61
Mar	2.68	2.47	2.53	1939	12	6.10	1973	.67	1994	11.3	6.3	1.6	.3	.95	1.20	1.56	1.87	2.16	2.47	2.79	3.18	3.67	4.42	5.12
Apr	3.46	3.47	2.18	1972	20	7.85	1972	1.15	1971	12.3	7.7	2.1	.6	1.22	1.55	2.02	2.42	2.80	3.19	3.62	4.11	4.75	5.73	6.63
May	3.89	3.49	2.69	1971	25	8.17	1997	.87	1988	11.2	7.8	2.5	1.0	1.57	1.92	2.43	2.85	3.24	3.64	4.08	4.58	5.21	6.18	7.06
Jun	4.05	3.71	4.38	1981	14	7.83	1981	1.06	1988	10.0	7.1	2.8	1.2	1.32	1.70	2.27	2.75	3.22	3.70	4.22	4.84	5.63	6.86	8.00
Jul	4.26	3.73	3.35	1935	13	10.05	1992	.71	1974	9.9	7.0	3.0	1.3	1.41	1.81	2.41	2.91	3.40	3.90	4.45	5.09	5.91	7.19	8.37
Aug	3.38	3.31	3.33	1933	10	6.44	1990	.58	1983	9.2	6.1	2.5	1.1	1.07	1.39	1.87	2.28	2.67	3.07	3.52	4.04	4.71	5.76	6.73
Sep	3.07	2.80	3.86	1937	5	6.68	1986	.59	1994	8.5	5.7	1.9	.8	.79	1.08	1.53	1.92	2.31	2.71	3.17	3.70	4.40	5.51	6.54
Oct	2.41	2.01	3.03	1995	6	7.32	1983	.46	1982	9.0	5.6	1.4	.4	.74	.97	1.31	1.60	1.89	2.18	2.50	2.89	3.38	4.14	4.86
Nov	3.12	2.62	2.18	1938	18	6.99	1983	.40	1976	11.0	7.1	2.3	.4	.84	1.14	1.59	1.99	2.37	2.78	3.23	3.76	4.46	5.55	6.57
Dec	2.68	2.62	1.96	1967	3	6.87	1990	.72	1992	11.4	6.4	1.9	.3	.95	1.20	1.57	1.87	2.17	2.47	2.80	3.18	3.67	4.42	5.11
Ann	37.20	36.66	4.38	Jun 1981	14	10.05	Jul 1992	.05	Feb 1987	124.2	77.0	24.7	8.0	28.00	29.82	32.13	33.87	35.41	36.88	38.40	40.07	42.08	44.98	47.47

+ 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: 1929-2001

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

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Station: LIMA WWTP, OH

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Climate Division: OH 1

NWS Call Sign:

Elevation: 850 Feet

Lat: 40°43N

Lon: 84°08W

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	3.6	3.6	1	#	3.7	1972	5	7.6	1972	10	1974	13	5	1992	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9
Feb	2.2	.7	1	#	6.0	1974	7	9.5	1974	18	1978	25	17	1978	1.4	.8	.2	.1	.0	2.1	.8	.6	.0
Mar	1.5	.0	1	0	5.0	1975	15	7.0	1975	17	1978	8	9	1978	.7	.4	.1	.1	.0	.5	.3	.1	.0
Apr	.3	#	#	0	3.9	1973	12	3.9	1973	4	1973	12	#+	1973	.1	.1	.1	.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	#	1977	16	#+	1977	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.1	#	#	0	1.5	1991	7	1.5+	1991	#+	1991	4	#+	1991	.1	.1	.0	.0	.0	.0	.0	.0	.0
Dec	5.1	1.5	#	0	10.0	1973	20	19.7	1973	11	1973	22	2	1973	1.4	1.3	.4	.4	.1	1.8	1.1	.9	.3
Ann	12.8	5.8	N/A	N/A	10.0	Dec 1973	20	19.7	Dec 1973	18	Feb 1978	25	17	Feb 1978	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9

+ 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

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**Elevation: 850 Feet**

**Lat: 40° 43N**

**Lon: 84° 08W**

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	5/19	5/14	5/11	5/08	5/05	5/02	4/29	4/25	4/20
32	5/11	5/06	5/03	4/30	4/27	4/24	4/21	4/17	4/12
28	4/28	4/23	4/19	4/16	4/13	4/10	4/07	4/04	3/30
24	4/14	4/10	4/07	4/05	4/02	3/31	3/29	3/26	3/21
20	4/06	3/31	3/27	3/24	3/21	3/18	3/15	3/11	3/06
16	4/02	3/26	3/21	3/17	3/13	3/09	3/05	2/28	2/22
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	9/23	9/28	10/01	10/03	10/06	10/08	10/11	10/14	10/18
32	9/29	10/05	10/09	10/12	10/16	10/19	10/22	10/26	11/01
28	10/14	10/20	10/24	10/28	10/31	11/03	11/07	11/11	11/17
24	10/26	11/01	11/04	11/08	11/11	11/14	11/17	11/21	11/27
20	11/05	11/13	11/18	11/22	11/27	12/01	12/05	12/10	12/18
16	11/17	11/24	11/28	12/02	12/06	12/10	12/14	12/18	12/25
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	172	166	161	157	153	149	145	140	134
32	191	184	179	175	171	167	163	158	151
28	226	217	211	205	200	195	189	183	174
24	241	234	229	225	222	218	214	209	203
20	277	267	261	255	250	244	238	232	222
16	292	283	277	272	267	262	257	251	242

\* 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 1**

**NWS Call Sign:**

**Elevation: 850 Feet Lat: 40° 43N Lon: 84° 08W**

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	1224	996	800	460	210	28	1	14	78	367	691	1063	5932
60	1069	856	646	323	125	7	0	1	26	240	542	908	4743
57	976	772	560	248	86	3	0	0	11	177	455	815	4103
55	914	716	503	203	64	1	0	0	6	140	401	757	3705
50	771	586	366	111	27	0	0	0	1	71	271	613	2817
32	311	197	63	1	0	0	0	0	0	0	23	203	798

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	109	125	285	535	892	1130	1289	1228	996	669	322	163	7743
55	0	0	12	46	243	441	576	515	312	97	10	5	2257
57	0	0	8	31	203	383	514	453	257	71	4	0	1924
60	0	0	1	16	150	297	421	361	182	41	1	0	1470
65	0	0	0	4	80	168	267	219	84	13	0	0	835
70	0	0	0	1	35	72	130	107	26	3	0	0	374

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	37	132	336	676	923	1076	1011	780	448	167	36	17	54	186	522	1198	2121	3197	4208	4988	5436	5603	5639
45	6	13	77	217	522	773	921	856	630	311	92	15	6	19	96	313	835	1608	2529	3385	4015	4326	4418	4433
50	0	3	39	128	377	623	766	701	482	189	47	4	0	3	42	170	547	1170	1936	2637	3119	3308	3355	3359
55	0	0	15	63	245	473	611	546	338	103	16	1	0	0	15	78	323	796	1407	1953	2291	2394	2410	2411
60	0	0	3	28	138	328	456	392	213	47	3	0	0	0	3	31	169	497	953	1345	1558	1605	1608	1608
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	3	17	81	203	417	614	742	689	501	261	85	14	3	20	101	304	721	1335	2077	2766	3267	3528	3613	3627

(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)