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: XENIA 6 SSE, OH **COOP ID: 339361**

Climate Division: OH 8 **NWS Call Sign:** **Elevation: 968 Feet** **Lat: 39˚37N** **Lon: 83˚54W**

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	35.7	19.5	27.6	73	1950	25	37.6	1990	-28	1984	21	13.3	1977	1161	0	.0	.0	4.2	12.0	26.6	2.9
Feb	40.4	22.8	31.6	74	1999	11	39.7	1976	-20	1985	3	15.7	1978	935	0	.0	.0	7.4	7.9	22.2	1.9
Mar	51.4	31.8	41.6	83+	1986	30	48.9	1973	-5	1980	3	33.6	1984	726	0	.0	.0	17.0	1.8	17.7	.2
Apr	62.8	40.5	51.7	89	1942	30	56.9	1985	14	1982	6	46.0	1975	402	2	.0	.0	26.9	@	6.8	.0
May	72.4	50.6	61.5	95	1941	29	68.7	1991	25	1966	10	57.5	1997	171	63	.0	@	30.9	.0	.5	.0
Jun	80.1	59.2	69.7	102	1988	25	73.4	1994	37	1972	11	65.7	1974	21	160	@	1.5	30.0	.0	.0	.0
Jul	83.5	62.6	73.1	108+	1936	14	77.4	1999	42	1988	1	69.4	1984	1	251	.1	4.0	31.0	.0	.0	.0
Aug	82.0	60.2	71.1	107	1936	19	76.4	1995	38+	1986	29	66.9	1992	11	199	.0	2.2	31.0	.0	.0	.0
Sep	76.2	53.3	64.8	103	1939	8	69.4	1998	25	1983	24	59.0	1974	85	79	.0	.6	30.0	.0	.3	.0
Oct	65.3	42.4	53.9	91	1939	8	61.3	1971	16+	1981	24	47.0	1988	359	14	.0	.0	29.1	.0	4.8	.0
Nov	52.4	33.8	43.1	80+	1987	1	48.5	1994	-8	1958	30	35.3	1976	657	0	.0	.0	16.8	.6	14.9	.0
Dec	40.7	24.6	32.7	74	1982	2	42.3	1982	-24	1989	22	18.7	1989	1002	0	.0	.0	7.4	7.0	24.2	1.1
Ann	61.9	41.8	51.9	108+	Jul 1936	14	77.4	Jul 1999	-28	Jan 1984	21	13.3	Jan 1977	5531	768	.1	8.3	261.7	29.3	118.0	6.1

\+ 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

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

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: XENIA 6 SSE, OH **COOP ID: 339361**

Climate Division: OH 8 **NWS Call Sign:** **Elevation: 968 Feet** **Lat: 39˚37N** **Lon: 83˚54W**

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	2.62	2.60	4.72	1959	21	5.80	1982	.26	1981
Feb	2.30	2.13	1.98	1975	23	4.87	1990	.49	1978
Mar	3.13	3.22	3.12	1945	6	6.55	1975	1.25	1999
Apr	3.88	3.69	3.56	1964	19	8.24	1996	1.02	1971
May	4.57	4.41	3.44	1968	24	9.39	1981	1.21	1986
Jun	4.01	3.78	3.10	1949	15	7.31	2000	.70	1988
Jul	4.13	3.83	5.30	1975	4	8.67	1980	.96	1974
Aug	3.64	3.12	3.75	1944	13	10.87	1979	1.16	1998
Sep	2.71	2.60	3.72	1979	14	6.51	1972	.28	1995
Oct	2.82	2.72	2.10	1995	5	6.26	1983	.48	1982
Nov	3.25	3.04	1.89	1938	18	10.10	1985	.40	1976
Dec	3.00	2.81	2.50	1990	18	8.77	1990	.34	1976
Ann	40.06	38.50	5.30	Jul 1975	4	10.87	Aug 1979	.26	Jan 1981

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	8.5	6.4	1.5	.4
Feb	7.5	5.8	1.3	.4
Mar	9.0	7.0	2.1	.4
Apr	10.1	8.1	2.6	.7
May	10.0	8.4	3.5	1.1
Jun	9.2	7.3	2.9	.9
Jul	9.1	7.7	3.1	1.0
Aug	7.9	6.5	2.8	1.1
Sep	6.5	5.0	2.0	.7
Oct	7.4	5.7	1.9	.6
Nov	8.6	7.0	2.5	.6
Dec	8.8	6.8	1.8	.7
Ann	102.6	81.7	28.0	8.6

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	.73	.97	1.35	1.68	2.00	2.34	2.71	3.15	3.73	4.63	5.47
Feb	.58	.79	1.13	1.42	1.72	2.02	2.37	2.78	3.31	4.16	4.95
Mar	1.29	1.58	1.98	2.31	2.62	2.94	3.28	3.68	4.17	4.94	5.63
Apr	1.16	1.53	2.09	2.56	3.02	3.50	4.03	4.66	5.46	6.72	7.88
May	1.58	2.02	2.64	3.17	3.68	4.20	4.77	5.44	6.29	7.60	8.82
Jun	1.38	1.76	2.31	2.78	3.22	3.69	4.19	4.78	5.53	6.69	7.76
Jul	1.34	1.73	2.31	2.80	3.28	3.77	4.31	4.94	5.75	7.01	8.17
Aug	1.22	1.56	2.07	2.50	2.91	3.33	3.80	4.34	5.04	6.12	7.12
Sep	.41	.64	1.03	1.41	1.80	2.22	2.71	3.31	4.12	5.43	6.68
Oct	.83	1.10	1.50	1.85	2.18	2.54	2.93	3.39	3.98	4.91	5.77
Nov	.91	1.22	1.69	2.10	2.49	2.91	3.37	3.91	4.61	5.71	6.74
Dec	1.01	1.29	1.71	2.06	2.40	2.75	3.13	3.58	4.15	5.04	5.86
Ann	29.56	31.62	34.25	36.24	37.99	39.68	41.43	43.34	45.66	49.01	51.89

\+ 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

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: XENIA 6 SSE, OH **COOP ID: 339361**

Climate Division: OH 8 **NWS Call Sign:** **Elevation: 968 Feet** **Lat: 39°37N** **Lon: 83°54W**

Snow (inches)

Snow Totals

Means/Medians (1)

Extremes (2)

Mean Number of Days (1)

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	7.7	5.0	1	0	9.0	1978	20	30.0	1978	22	1978	21	13	1978	3.4	3.3	.9	.3	.0	-9.9	-9.9	-9.9	-9.9
Feb	5.0	4.0	#	0	6.0	1972	6	17.5	1979	5	1972	9	2	1971	2.8	2.5	.7	.2	.0	-9.9	-9.9	-9.9	-9.9
Mar	2.9	2.0	#	0	7.0	1999	9	8.5	1975	4	1974	24	#+	1998	1.5	1.3	.4	.1	.0	-9.9	-9.9	-9.9	-9.9
Apr	.4	.0	#	0	3.0	1982	9	3.0+	1987	1	1972	7	#+	1997	.3	.2	.1	.0	.0	.1	.0	.0	.0
May	.0	.0	0	0	.5	1989	7	.5	1989	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	.2	.0	0	0	3.5	1993	30	3.5	1993	0	0	0	0	0	.1	.1	@	.0	.0	.0	.0	.0	.0
Nov	.9	.0	#	0	4.0	1972	28	6.3	1972	1	1971	23	#	1971	.6	.5	@	.0	.0	.2	.0	.0	.0
Dec	3.4	3.0	#	0	7.0	1974	1	11.0	1985	5	1984	6	#+	2000	1.9	1.5	.3	.2	.0	-9.9	-9.9	-9.9	-9.9
Ann	20.5	14.0	N/A	N/A	9.0	Jan 1978	20	30.0	Jan 1978	22	Jan 1978	21	13	Jan 1978	10.6	9.4	2.4	.8	.0	-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

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: XENIA 6 SSE, OH **COOP ID: 339361**

Climate Division: OH 8 **NWS Call Sign:** **Elevation: 968 Feet** **Lat: 39˚37N** **Lon: 83˚54W**

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	5/06	5/03	4/30	4/27	4/22
32	5/09	5/04	5/01	4/28	4/25	4/23	4/20	4/16	4/11
28	4/26	4/22	4/19	4/16	4/14	4/11	4/09	4/06	4/01
24	4/17	4/12	4/08	4/05	4/02	3/30	3/27	3/23	3/18
20	4/03	3/29	3/25	3/21	3/18	3/15	3/12	3/08	3/03
16	3/26	3/20	3/15	3/11	3/08	3/04	3/01	2/24	2/18

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	9/19	9/23	9/25	9/27	9/29	10/01	10/03	10/05	10/09
32	9/26	10/01	10/05	10/08	10/11	10/14	10/18	10/21	10/27
28	9/30	10/07	10/12	10/16	10/20	10/24	10/28	11/02	11/09
24	10/15	10/22	10/27	10/31	11/04	11/07	11/11	11/16	11/23
20	10/31	11/06	11/11	11/15	11/18	11/22	11/26	12/01	12/07
16	11/07	11/15	11/20	11/25	11/29	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	165	158	154	150	146	142	138	133	127
32	190	183	177	173	168	164	160	154	147
28	216	206	200	194	189	183	177	171	161
24	242	233	226	220	215	209	204	197	187
20	268	260	254	249	244	240	235	229	221
16	292	283	276	271	266	260	255	249	240

***** 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: XENIA 6 SSE, OH **COOP ID: 339361**

Climate Division: OH 8 **NWS Call Sign:** **Elevation: 968 Feet** **Lat: 39˚37N** **Lon: 83˚54W**

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	1161	935	726	402	171	21	1	11	85	359	657	1002	5531
60	1006	795	573	263	88	4	0	1	31	234	509	847	4351
57	913	711	487	189	52	1	0	0	14	171	423	759	3720
55	851	658	430	147	35	0	0	0	7	135	369	702	3334
50	708	528	299	66	10	0	0	0	1	67	242	558	2479
32	265	161	37	0	0	0	0	0	0	0	17	173	653

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	128	150	334	590	916	1129	1273	1211	983	678	350	194	7936
55	0	3	14	47	238	439	560	498	301	100	11	10	2221
57	0	0	9	29	193	380	498	436	247	74	5	5	1876
60	0	0	2	13	135	293	405	344	174	44	1	0	1411
65	0	0	0	2	63	160	251	199	79	14	0	0	768
70	0	0	0	0	22	62	115	87	23	3	0	0	312

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	56	173	377	681	899	1035	973	751	440	180	56	34	90	263	640	1321	2220	3255	4228	4979	5419	5599	5655
45	9	22	106	255	527	749	880	818	601	299	105	26	9	31	137	392	919	1668	2548	3366	3967	4266	4371	4397
50	1	7	58	153	376	599	725	663	453	184	54	6	1	8	66	219	595	1194	1919	2582	3035	3219	3273	3279
55	0	0	26	82	241	449	570	508	309	96	20	2	0	0	26	108	349	798	1368	1876	2185	2281	2301	2303
60	0	0	6	34	136	311	415	353	186	42	3	0	0	0	6	40	176	487	902	1255	1441	1483	1486	1486
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	11	33	109	233	420	599	709	654	482	265	98	32	11	44	153	386	806	1405	2114	2768	3250	3515	3613	3645

(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