

# 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: WAUSEON WATER PLANT, OH

1971-2000

COOP ID: 338822

Climate Division: OH 1

NWS Call Sign:

Elevation: 750 Feet

Lat: 41° 31N

Lon: 84° 09W

### 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	30.2	14.1	22.2	70	1950	25	34.3	1990	-24	1984	21	9.1	1977	1328	0	.0	.0	1.4	16.4	28.6	4.3
Feb	33.8	16.2	25.0	71+	2000	27	35.9	1998	-16	1982	10	8.9	1978	1119	0	.0	.0	2.7	11.6	25.7	3.3
Mar	45.6	25.5	35.6	81	1938	22	42.7	2000	-11	1948	12	26.7	1984	912	0	.0	.0	11.8	3.3	22.1	.2
Apr	58.4	35.6	47.0	88	1986	27	53.6	1985	2	1982	7	41.0	1975	541	1	.0	.0	24.3	.1	9.5	.0
May	70.6	47.3	59.0	93+	1988	31	65.8	1991	25	1966	10	51.9	1997	240	52	.0	.4	30.6	.0	.9	.0
Jun	79.9	56.9	68.4	103	1988	25	73.1	1987	37+	1977	7	64.1	1992	42	144	.1	3.2	30.0	.0	.0	.0
Jul	83.6	60.5	72.1	109	1936	14	76.9	1988	40	1988	1	68.7	1971	6	224	.1	5.7	31.0	.0	.0	.0
Aug	81.2	57.8	69.5	101+	1947	6	75.4	1995	36	1946	30	65.8	1992	30	169	.0	2.6	31.0	.0	.0	.0
Sep	74.9	50.4	62.7	100	1953	2	65.7	1987	28+	1974	23	57.0	1975	116	44	.0	.9	30.0	.0	.3	.0
Oct	62.5	39.1	50.8	92	1951	4	57.7	1971	15	1952	21	44.9	1976	444	4	.0	.0	28.2	.0	5.9	.0
Nov	48.1	30.2	39.2	79	1950	1	45.0	1987	-2	1958	30	31.3	1976	775	0	.0	.0	14.1	1.5	17.8	.0
Dec	35.4	20.6	28.0	68+	1998	7	37.2	1982	-21	1989	22	16.8	1989	1147	0	.0	.0	3.6	10.3	27.0	1.6
Ann	58.7	37.9	48.3	109	Jul 1936	14	76.9	Jul 1988	-24	Jan 1984	21	8.9	Feb 1978	6700	638	.2	12.8	238.7	43.2	137.8	9.4

+ 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: 1936-2001

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

080-A

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**Climate Division: OH 1**

**NWS Call Sign:**

**Elevation: 750 Feet Lat: 41°31N**

**Lon: 84°09W**

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	1.84	1.75	2.33	1982	31	4.66	1982	.39	1977	9.2	4.7	.9	.3	.48	.66	.93	1.16	1.39	1.63	1.90	2.22	2.64	3.29	3.91
Feb	1.64	1.33	1.77	1997	27	4.67	1990	.00	1987	7.8	4.1	.9	.3	.20	.41	.69	.92	1.15	1.40	1.68	2.02	2.46	3.17	3.83
Mar	2.50	2.37	2.34	1997	14	4.90	1985	.35	1981	9.5	5.8	1.5	.3	.84	1.08	1.42	1.72	2.00	2.29	2.61	2.98	3.46	4.20	4.89
Apr	3.29	3.32	3.45	1977	23	7.08	1977	1.25	1997	10.9	7.8	2.0	.4	1.30	1.60	2.03	2.39	2.73	3.07	3.44	3.87	4.42	5.25	6.01
May	3.47	3.32	2.72	2000	19	7.37	1997	1.06	1998	10.2	7.4	2.3	.7	1.31	1.64	2.10	2.49	2.85	3.23	3.63	4.10	4.70	5.62	6.46
Jun	3.75	3.49	3.99	1979	30	7.92	1981	.15	1988	8.9	6.5	2.9	.8	.92	1.27	1.82	2.30	2.78	3.29	3.86	4.54	5.42	6.83	8.14
Jul	3.29	3.00	4.01	1969	5	7.17	1992	.24	1974	8.9	6.4	2.3	.7	1.02	1.33	1.80	2.20	2.58	2.98	3.42	3.94	4.61	5.65	6.61
Aug	3.71	3.51	3.00	1998	24	11.28	1998	.38	1976	8.6	6.6	2.4	.9	.83	1.18	1.72	2.21	2.70	3.22	3.80	4.50	5.42	6.88	8.25
Sep	3.10	2.53	3.12	1981	4	6.56	1981	.59	1998	8.2	5.9	2.2	.5	.68	.97	1.42	1.84	2.25	2.69	3.18	3.77	4.54	5.78	6.95
Oct	2.59	2.13	3.83	1988	18	6.85	1991	.65	1994	8.7	5.9	1.6	.5	.78	1.03	1.39	1.71	2.02	2.34	2.69	3.11	3.65	4.49	5.27
Nov	2.91	2.56	3.68	1982	2	7.84	1982	.49	1976	10.6	6.5	1.9	.4	.73	1.00	1.42	1.80	2.17	2.56	3.00	3.52	4.20	5.27	6.28
Dec	2.46	2.56	2.67	1967	22	4.39	1990	.44	1989	10.1	6.1	1.5	.3	.65	.88	1.23	1.55	1.85	2.18	2.54	2.96	3.52	4.40	5.21
Ann	34.55	35.01	4.01	Jul 1969	5	11.28	Aug 1998	.00	Feb 1987	111.6	73.7	22.4	6.1	26.75	28.31	30.28	31.76	33.06	34.31	35.58	36.99	38.67	41.10	43.17

+ 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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**COOP ID: 338822**

**Climate Division: OH 1**

**NWS Call Sign:**

**Elevation: 750 Feet**

**Lat: 41°31N**

**Lon: 84°09W**

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	8.2	8.5	2	1	8.0	1978	27	25.7	1978	17	1999	12	8	1981	5.0	3.0	.8	.3	.0	12.4	5.7	2.2	.6
Feb	6.8	7.0	2	1	8.0	1982	1	13.7	1988	21	1978	5	14	1978	3.9	2.4	.7	.2	.0	9.4	4.4	1.2	.1
Mar	3.6	2.8	1	#	8.5	1993	5	10.2	1977	11	1978	5	4	1978	2.2	1.4	.5	.1	.0	3.1	1.3	.6	.0
Apr	.7	.0	#	0	8.0	1982	6	9.1	1982	8	1982	6	1	1982	.6	.2	.1	@	.0	.2	.1	.1	.0
May	.0	.0	#	0	1.0	1989	7	1.0	1989	1	1989	7	#	1989	@	@	.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	.1	.0	0	0	2.0	1989	19	2.0	1989	0	0	0	0	0	.1	@	.0	.0	.0	.0	.0	.0	.0
Nov	2.2	1.0	#	#	5.1	1974	14	7.7	1971	3	1997	16	#+	2000	1.5	.8	.3	@	.0	1.3	.2	.0	.0
Dec	6.6	5.2	1	1	8.0	1977	9	20.6	1974	12	1974	2	4	2000	4.3	2.3	.5	.2	.0	6.7	3.1	.8	@
Ann	28.2	24.5	N/A	N/A	8.5	Mar 1993	5	25.7	Jan 1978	21	Feb 1978	5	14	Feb 1978	17.6	10.1	2.9	.8	.0	33.1	14.8	4.9	.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](http://www.ncdc.noaa.gov/oa/climate/normals/usnormals.html)

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**Elevation: 750 Feet**

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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	5/21	5/17	5/14	5/11	5/09	5/07	5/04	5/01	4/27
32	5/13	5/09	5/05	5/02	4/29	4/26	4/24	4/20	4/15
28	5/02	4/27	4/24	4/21	4/19	4/16	4/14	4/11	4/06
24	4/22	4/17	4/13	4/10	4/07	4/04	4/01	3/28	3/23
20	4/11	4/06	4/02	3/30	3/27	3/24	3/21	3/17	3/12
16	4/01	3/27	3/24	3/20	3/18	3/15	3/11	3/08	3/03
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	9/18	9/23	9/26	9/28	10/01	10/03	10/06	10/09	10/13
32	9/25	9/29	10/03	10/05	10/08	10/10	10/13	10/16	10/21
28	10/05	10/11	10/15	10/18	10/21	10/25	10/28	11/01	11/07
24	10/22	10/28	10/31	11/03	11/06	11/09	11/13	11/16	11/21
20	10/30	11/06	11/10	11/15	11/18	11/22	11/26	12/01	12/08
16	11/13	11/19	11/23	11/27	11/30	12/04	12/07	12/12	12/18
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	157	153	149	147	144	141	138	135	131
32	181	174	169	165	161	157	153	148	141
28	209	201	195	190	185	180	175	169	160
24	235	227	222	217	213	209	204	199	191
20	262	253	246	241	236	230	225	218	209
16	278	271	266	261	257	253	248	243	236

\* 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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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	1328	1119	912	541	240	42	6	30	116	444	775	1147	6700
60	1173	979	757	396	144	12	0	6	43	303	625	992	5430
57	1080	895	664	315	99	5	0	1	20	229	535	899	4742
55	1018	839	604	264	74	2	0	0	10	186	476	837	4310
50	863	705	462	155	31	0	0	0	2	98	337	691	3344
32	376	283	99	3	0	0	0	0	0	1	35	245	1042

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	71	88	210	453	835	1091	1242	1162	918	584	250	121	7025
55	0	0	2	24	196	404	529	449	239	55	2	0	1900
57	0	0	0	15	159	346	467	388	188	37	1	0	1601
60	0	0	0	6	111	263	374	300	121	18	0	0	1193
65	0	0	0	1	52	144	224	169	44	4	0	0	638
70	0	0	0	0	19	60	101	77	9	0	0	0	266

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	6	13	97	285	620	880	1018	947	713	384	122	23	6	19	116	401	1021	1901	2919	3866	4579	4963	5085	5108
45	0	3	49	175	468	730	863	792	563	250	61	8	0	3	52	227	695	1425	2288	3080	3643	3893	3954	3962
50	0	0	23	98	322	580	708	637	416	144	24	3	0	0	23	121	443	1023	1731	2368	2784	2928	2952	2955
55	0	0	5	47	200	430	553	482	279	67	7	0	0	0	5	52	252	682	1235	1717	1996	2063	2070	2070
60	0	0	0	16	108	290	398	328	161	26	0	0	0	0	0	16	124	414	812	1140	1301	1327	1327	1327
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	9	65	179	382	577	684	629	454	232	65	8	0	9	74	253	635	1212	1896	2525	2979	3211	3276	3284

(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)