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: COOPERSTOWN, NY **COOP ID: 301752**

Climate Division: NY 2 **NWS Call Sign:** **Elevation: 1,200 Feet** **Lat: 42˚43N** **Lon: 74˚56W**

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	29.1	9.4	19.3	65+	1967	25	29.4	1990	-32	1957	15	9.4	1994	1419	0	.0	.0	1.8	17.8	29.5	6.9
Feb	31.7	9.5	20.6	64+	1999	12	28.5	1984	-34	1934	9	8.7	1979	1244	0	.0	.0	2.5	13.4	26.7	5.6
Mar	41.7	19.8	30.8	87	1998	31	38.7	1973	-19+	1950	5	24.2	1984	1062	0	.0	.0	8.2	5.3	26.3	1.5
Apr	54.3	31.1	42.7	90	1990	28	47.4	1991	5	1965	1	36.4	1975	670	0	.0	@	19.8	.4	16.5	.0
May	66.6	41.8	54.2	90+	1996	20	59.3	1998	19	1966	10	49.7	1997	340	5	.0	@	30.0	.0	4.8	.0
Jun	74.8	51.5	63.2	94	1952	26	66.1	1976	28	1945	1	58.9	1985	97	41	.0	.3	30.0	.0	.2	.0
Jul	78.8	55.6	67.2	99+	1936	10	70.5	1988	36+	1963	9	64.0	1992	28	95	.0	.9	31.0	.0	.0	.0
Aug	76.6	54.6	65.6	98	1944	4	68.5	1973	29	1940	25	62.2	1982	50	68	.0	.4	31.0	.0	.0	.0
Sep	68.3	46.3	57.3	97+	1953	3	61.0	1971	21	1963	24	54.3	1984	234	3	.0	.1	29.9	.0	1.7	.0
Oct	57.8	35.4	46.6	88	1947	16	53.4	1971	12+	1972	20	41.8	1972	570	0	.0	.0	24.8	.0	10.4	.0
Nov	45.0	26.7	35.9	79+	1982	2	41.9	1999	-12	1938	26	30.5	1976	873	0	.0	.0	11.0	2.6	20.6	.0
Dec	34.0	16.8	25.4	66+	1998	6	32.0	1996	-30	1933	29	10.5	1989	1227	0	.0	.0	2.9	12.0	28.1	2.7
Ann	54.9	33.2	44.1	99+	Jul 1936	10	70.5	Jul 1988	-34	Feb 1934	9	8.7	Feb 1979	7814	212	.0	1.7	222.9	51.5	164.8	16.7

\+ 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: 1926-2001

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

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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	3.03	2.87	1.93	1959	22	6.33	1979	.75	1981
Feb	2.34	2.26	1.80	1990	16	4.41	1990	.45	1987
Mar	3.35	3.23	1.96	1977	14	6.85	1977	.79	1987
Apr	3.63	3.42	2.24	2000	4	6.93	1993	1.65	1985
May	3.75	3.26	1.92+	1989	6	8.11	2000	.78	1980
Jun	4.37	4.22	3.30	1973	29	8.78	1972	.57	1979
Jul	3.82	3.42	4.49	1935	8	7.69	1992	.93	1983
Aug	3.79	3.80	4.26	1975	30	7.44	1975	1.28	1980
Sep	3.97	3.55	3.65	1999	17	11.23	1977	1.46	1990
Oct	3.23	2.71	4.85	1932	6	7.00	1977	.67	1982
Nov	3.41	3.54	3.33	1959	28	5.98	1972	1.29	1976
Dec	3.05	2.90	1.88	1996	2	5.66	1996	1.11	1999
Ann	41.74	39.88	4.85	Oct 1932	6	11.23	Sep 1977	.45	Feb 1987

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	14.8	7.3	1.8	.3
Feb	12.0	6.1	1.2	.1
Mar	13.6	7.8	2.0	.5
Apr	12.8	7.9	2.2	.8
May	13.2	8.6	2.4	.6
Jun	12.5	8.4	2.8	.8
Jul	10.4	7.4	3.0	.7
Aug	11.3	7.4	2.5	.6
Sep	11.3	7.9	2.9	.8
Oct	12.1	7.5	1.7	.6
Nov	13.6	7.8	2.0	.5
Dec	14.7	7.6	1.9	.3
Ann	152.3	91.7	26.4	6.6

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	1.02	1.30	1.72	2.08	2.42	2.78	3.16	3.61	4.19	5.09	5.92
Feb	.89	1.10	1.42	1.68	1.92	2.17	2.45	2.76	3.17	3.79	4.35
Mar	1.32	1.63	2.07	2.44	2.78	3.13	3.51	3.95	4.50	5.35	6.13
Apr	1.67	1.99	2.43	2.79	3.12	3.45	3.81	4.21	4.72	5.50	6.19
May	1.20	1.56	2.08	2.53	2.97	3.41	3.90	4.48	5.22	6.37	7.44
Jun	1.20	1.62	2.25	2.79	3.33	3.90	4.52	5.26	6.22	7.72	9.13
Jul	1.45	1.81	2.32	2.74	3.14	3.55	3.99	4.51	5.16	6.17	7.09
Aug	1.32	1.68	2.20	2.64	3.06	3.49	3.96	4.51	5.21	6.30	7.29
Sep	1.43	1.80	2.34	2.80	3.23	3.67	4.15	4.71	5.43	6.53	7.55
Oct	.96	1.26	1.72	2.12	2.51	2.91	3.36	3.88	4.56	5.62	6.60
Nov	1.44	1.75	2.18	2.54	2.87	3.21	3.58	4.00	4.53	5.34	6.08
Dec	1.15	1.43	1.84	2.18	2.50	2.83	3.19	3.60	4.13	4.94	5.69
Ann	31.27	33.34	35.96	37.94	39.69	41.37	43.10	45.01	47.30	50.61	53.46

\+ 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: 1926-2001
(3) Derived from 1971-2000 serially complete daily data

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Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	23.5	20.2	8	7
Feb	15.1	14.1	9	7
Mar	15.6	12.2	5	2
Apr	4.9	3.4	1	#
May	.8	.0	#	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	#	.0	0	0
Oct	.2	.0	#	0
Nov	7.4	6.7	1	1
Dec	17.5	17.3	3	3
Ann	85.0	73.9	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	18.9	1983	16	58.5	1987	28+	2000	31	18	1994
Feb	18.5	1978	7	35.8	1993	29	2000	6	20	2000
Mar	27.3	1993	14	41.7	1971	38	1993	14	18+	1994
Apr	14.3	1983	20	18.1	1997	16	1983	21	3	1971
May	8.2	1977	9	13.4	1977	9	1977	10	1	1977
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	#	1992	30	#	1992	0	0	0	0	0
Oct	1.4	1993	31	1.9	1987	1	1988	14	#+	2000
Nov	10.2	1971	25	21.4	1971	14	1971	26	3	1995
Dec	13.1	1978	25	35.7	1995	20	1978	28	9	1995
Ann	27.3	Mar 1993	14	58.5	Jan 1987	38	Mar 1993	14	20	Feb 2000

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	13.1	7.0	2.0	1.0	.3
Feb	10.3	5.2	1.5	.6	.1
Mar	8.8	4.0	1.1	.6	.3
Apr	2.9	1.5	.5	.3	.1
May	.3	.1	.1	.1	.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	.4	.1	.0	.0	.0
Nov	4.9	2.7	.6	.1	@
Dec	10.9	5.7	1.9	.5	.1
Ann	51.6	26.3	7.7	3.2	.9

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	26.0	21.2	17.1	8.2
Feb	25.4	20.8	17.4	10.0
Mar	17.7	12.1	8.8	4.9
Apr	3.6	1.8	1.0	.2
May	.2	.1	.1	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.1	.0	.0	.0
Nov	6.3	3.2	1.1	.1
Dec	19.8	12.5	7.8	2.2
Ann	99.1	71.7	53.3	25.6

+ 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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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	6/19	6/14	6/11	6/08	6/05	6/03	5/31	5/28	5/23
32	6/06	5/31	5/28	5/24	5/21	5/18	5/15	5/11	5/06
28	5/19	5/15	5/12	5/10	5/07	5/05	5/03	4/30	4/26
24	5/05	5/01	4/27	4/25	4/22	4/20	4/17	4/14	4/09
20	4/24	4/19	4/16	4/13	4/10	4/08	4/05	4/01	3/28
16	4/13	4/09	4/06	4/03	4/01	3/30	3/27	3/24	3/20

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	8/30	9/03	9/07	9/09	9/12	9/15	9/18	9/21	9/25
32	9/14	9/18	9/20	9/23	9/25	9/27	9/29	10/01	10/05
28	9/22	9/26	9/29	10/02	10/05	10/07	10/10	10/13	10/17
24	10/05	10/10	10/14	10/17	10/20	10/23	10/26	10/30	11/04
20	10/17	10/22	10/27	10/30	11/03	11/06	11/10	11/14	11/20
16	10/30	11/04	11/09	11/12	11/16	11/19	11/23	11/27	12/03

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	117	110	106	102	98	94	90	86	79
32	143	137	133	129	126	122	118	114	108
28	166	160	156	153	149	146	143	139	133
24	200	193	188	184	180	176	172	167	160
20	229	221	215	210	205	201	196	190	182
16	252	244	238	233	228	223	218	212	204

***** 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

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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	1419	1244	1062	670	340	97	28	50	234	570	873	1227	7814
60	1264	1104	907	520	207	30	3	8	111	418	723	1072	6367
57	1171	1020	814	432	141	11	0	1	60	332	633	979	5594
55	1109	964	752	375	105	5	0	0	37	278	573	917	5115
50	954	824	597	243	42	0	0	0	8	163	425	762	4018
32	426	351	146	10	0	0	0	0	0	3	54	278	1268

Base — Cooling Degree Days (1)

Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	30	31	107	330	688	934	1090	1041	759	457	171	74	5712
55	0	0	0	5	80	249	377	328	107	18	0	0	1164
57	0	0	0	2	54	195	315	267	69	10	0	0	912
60	0	0	0	0	27	124	225	180	30	4	0	0	590
65	0	0	0	0	5	41	95	68	3	0	0	0	212
70	0	0	0	0	0	7	21	13	0	0	0	0	41

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	2	8	47	172	489	717	873	826	572	275	84	15	2	10	57	229	718	1435	2308	3134	3706	3981	4065	4080
45	1	0	21	97	339	567	718	671	422	159	37	3	1	1	22	119	458	1025	1743	2414	2836	2995	3032	3035
50	0	0	8	48	212	418	563	516	282	83	15	1	0	0	8	56	268	686	1249	1765	2047	2130	2145	2146
55	0	0	2	20	111	276	408	364	165	34	4	0	0	0	2	22	133	409	817	1181	1346	1380	1384	1384
60	0	0	0	6	46	154	255	214	80	8	0	0	0	0	0	6	52	206	461	675	755	763	763	763
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	1	4	41	127	306	454	571	530	344	169	51	5	1	5	46	173	479	933	1504	2034	2378	2547	2598	2603

(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:
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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