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: CANTON 4 SE, NY **COOP ID: 301185**

Climate Division: NY 8 **NWS Call Sign:** **Elevation: 440 Feet** **Lat: 44˚34N** **Lon: 75˚06W**

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	25.9	3.6	14.8	66	1995	16	27.4	1990	-41	1925	28	1.3	1994	1558	0	.0	.0	1.2	20.6	30.0	12.8
Feb	28.4	6.1	17.3	65	1981	23	30.1	1981	-40	1979	11	4.0	1979	1337	0	.0	.0	1.4	17.7	27.0	11.1
Mar	38.8	18.5	28.7	92	1982	11	37.6	1973	-30	1938	4	19.0	1984	1128	0	.0	.0	6.2	9.7	26.8	3.4
Apr	52.3	32.1	42.2	89	1990	29	47.9	1987	-8	1972	7	34.9	1972	685	0	.0	.0	16.4	1.0	16.7	.1
May	66.1	44.7	55.4	91	1946	17	61.2	1998	21+	1974	2	50.2	1997	308	9	.0	@	29.7	.0	3.3	.0
Jun	74.3	53.4	63.9	95+	1941	27	67.8	1999	29	1986	3	59.8	1985	85	50	.0	.2	30.0	.0	.3	.0
Jul	79.2	58.1	68.7	98+	1931	2	71.4	1994	35+	1992	2	64.1	1992	15	128	.0	.9	31.0	.0	.0	.0
Aug	77.0	55.7	66.4	99	1944	15	71.3	1973	28	1924	17	62.8	1982	48	89	.0	.5	31.0	.0	@	.0
Sep	68.5	46.9	57.7	93+	1953	4	62.8	1971	22+	1991	30	53.5	1978	228	10	.0	.1	29.6	.0	2.2	.0
Oct	56.7	35.4	46.1	91	1938	3	52.7	1971	5	1927	25	40.7	1974	588	0	.0	.0	22.7	.0	12.3	.0
Nov	44.1	26.6	35.4	77	1975	8	42.6	1999	-9	1949	28	30.7	1996	890	0	.0	.0	9.2	4.2	20.9	.1
Dec	31.6	12.0	21.8	70	1941	5	31.7	1996	-37+	1993	27	1.7	1989	1339	0	.0	.0	2.2	15.4	28.8	6.4
Ann	53.6	32.8	43.2	99	Aug 1944	15	71.4	Jul 1994	-41	Jan 1925	28	1.3	Jan 1994	8209	286	.0	1.7	210.6	68.6	168.3	33.9

\+ 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: 1922-2001

(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	2.38	2.35	2.19	1978	9	5.44	1998	.56	1981
Feb	2.02	1.85	3.15	1971	14	6.59	1971	.41	1978
Mar	2.43	2.63	4.70	1943	6	4.53	1971	.74	1996
Apr	2.98	2.85	1.69	1973	2	5.62	1973	.33	1999
May	3.07	3.20	2.04	1946	16	6.47	1976	.93	1980
Jun	3.28	2.93	4.49	1940	18	6.73	1986	1.37	1995
Jul	3.60	3.25	4.10	1987	12	7.15	1987	1.36	1994
Aug	4.05	3.61	3.82	1959	10	7.41	1988	1.12	1973
Sep	4.27	4.03	3.33	1979	15	7.19	1979	1.63	1990
Oct	3.33	3.15	2.35	1995	6	6.96	1995	.43	1994
Nov	3.40	3.43	2.68	1996	9	5.91	1982	1.12	1976
Dec	2.70	2.39	2.41	1942	30	6.41	1983	.60	1989
Ann	37.51	35.96	4.70	Mar 1943	6	7.41	Aug 1988	.33	Apr 1999

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	14.3	6.5	1.2	.3
Feb	11.3	5.3	1.0	.1
Mar	11.9	6.5	1.3	.2
Apr	11.5	7.3	1.7	.4
May	13.8	8.1	1.8	.3
Jun	12.8	7.6	2.3	.5
Jul	11.9	7.1	2.3	.9
Aug	11.9	7.5	2.7	1.1
Sep	13.0	8.8	2.7	.8
Oct	12.4	7.9	1.9	.6
Nov	13.2	8.1	1.9	.5
Dec	14.2	6.8	1.4	.4
Ann	152.2	87.5	22.2	6.1

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	.78	1.00	1.34	1.62	1.89	2.17	2.48	2.84	3.31	4.03	4.69
Feb	.56	.75	1.04	1.29	1.54	1.80	2.09	2.43	2.87	3.57	4.22
Mar	1.00	1.22	1.53	1.79	2.03	2.28	2.55	2.85	3.24	3.83	4.37
Apr	.90	1.19	1.61	1.97	2.33	2.69	3.10	3.57	4.19	5.15	6.03
May	1.12	1.41	1.83	2.17	2.50	2.84	3.21	3.63	4.18	5.01	5.78
Jun	1.39	1.68	2.10	2.44	2.77	3.09	3.44	3.84	4.35	5.13	5.83
Jul	1.34	1.68	2.16	2.56	2.95	3.34	3.77	4.26	4.89	5.86	6.75
Aug	1.63	2.01	2.53	2.97	3.37	3.79	4.24	4.76	5.41	6.41	7.33
Sep	1.82	2.20	2.75	3.19	3.61	4.03	4.48	5.00	5.66	6.66	7.56
Oct	1.08	1.40	1.87	2.26	2.65	3.04	3.47	3.98	4.63	5.65	6.58
Nov	1.62	1.91	2.32	2.64	2.94	3.25	3.57	3.93	4.39	5.09	5.71
Dec	.91	1.16	1.54	1.85	2.16	2.47	2.81	3.21	3.72	4.52	5.25
Ann	30.92	32.27	33.95	35.21	36.30	37.35	38.41	39.57	40.96	42.93	44.61

\+ 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: 1922-2001
(3) Derived from 1971-2000 serially complete daily data

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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	17.5	18.4	9	8	14.0	1978	18	33.9	1979	40	1977	31	22+	1978	13.3	7.1	2.2	.9	.1	22.8	15.0	10.8	5.7
Feb	15.3	14.0	11	7	18.0	1971	14	42.3	1971	45+	1977	2	34	1971	9.8	5.1	1.8	.9	@	20.4	15.8	12.9	6.7
Mar	11.8	10.4	7	4	22.5	1977	23	29.2	1997	58	1971	5	37	1971	7.3	4.0	1.6	.6	.1	15.1	10.4	8.2	4.2
Apr	4.7	4.0	1	#	13.0	1993	23	18.8	1993	27	1971	1	7	1971	2.2	1.4	.5	.3	@	4.1	2.2	1.5	.5
May	.1	.0	#	0	3.0	1976	19	3.0	1976	3	1976	19	#+	1997	.1	.1	@	.0	.0	.1	@	.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	#	1991	30	#	1991	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.5	.0	#	0	8.0	1988	23	9.0	1988	8	1988	23	#+	2000	.4	.1	@	@	.0	.2	@	@	.0
Nov	6.7	6.7	1	1	7.0	2000	21	16.5	1995	8+	1997	16	3	1995	4.9	2.7	.7	.2	.0	7.4	2.7	1.0	.0
Dec	18.6	19.2	4	4	10.5	1977	6	38.0	1977	24+	1985	30	16	1977	11.0	5.7	2.0	.8	.1	17.7	11.7	6.9	2.8
Ann	75.2	72.7	N/A	N/A	22.5	Mar 1977	23	42.3	Feb 1971	58	Mar 1971	5	37	Mar 1971	49.0	26.2	8.8	3.7	.3	87.8	57.8	41.3	19.9

+ 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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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	6/22	6/15	6/10	6/06	6/03	5/30	5/26	5/21	5/14
32	6/05	5/30	5/27	5/23	5/20	5/17	5/14	5/10	5/04
28	5/14	5/09	5/06	5/03	5/01	4/28	4/25	4/22	4/18
24	5/02	4/29	4/26	4/24	4/22	4/20	4/18	4/15	4/11
20	4/23	4/19	4/16	4/14	4/12	4/10	4/07	4/04	3/31
16	4/15	4/11	4/08	4/05	4/02	3/31	3/28	3/25	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	8/22	8/28	9/01	9/04	9/07	9/11	9/14	9/18	9/24
32	9/08	9/13	9/16	9/19	9/22	9/25	9/28	10/01	10/06
28	9/21	9/25	9/28	10/01	10/03	10/06	10/08	10/11	10/16
24	10/01	10/06	10/09	10/11	10/14	10/16	10/19	10/22	10/26
20	10/15	10/20	10/24	10/27	10/29	11/01	11/04	11/08	11/13
16	10/27	11/01	11/05	11/07	11/10	11/13	11/16	11/19	11/24

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	121	112	106	101	96	91	86	80	72
32	145	138	133	128	124	120	116	111	103
28	173	167	162	159	155	151	147	143	136
24	193	187	182	178	174	171	166	162	155
20	220	213	208	204	200	196	192	187	180
16	242	235	230	225	221	217	213	207	200

***** 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)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1558	1337	1128	685	308	85	15	48	228	588	890	1339	8209
60	1403	1197	973	536	183	24	0	9	115	437	740	1184	6801
57	1310	1113	880	449	123	9	0	2	68	350	650	1091	6045
55	1248	1057	818	393	91	4	0	0	45	296	590	1029	5571
50	1093	917	665	266	36	0	0	0	12	178	441	880	4488
32	560	445	214	22	0	0	0	0	0	4	64	398	1707

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	26	31	110	327	724	955	1135	1065	772	440	165	82	5832
55	0	0	0	9	102	269	422	352	127	18	0	0	1299
57	0	0	0	5	72	214	360	292	90	11	0	0	1044
60	0	0	0	1	39	140	268	205	47	4	0	0	704
65	0	0	0	0	9	50	128	89	10	0	0	0	286
70	0	0	0	0	1	9	37	23	1	0	0	0	71

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	3	6	44	149	482	720	893	823	543	243	74	8	3	9	53	202	684	1404	2297	3120	3663	3906	3980	3988
45	1	0	18	88	335	570	738	668	397	147	38	3	1	1	19	107	442	1012	1750	2418	2815	2962	3000	3003
50	0	0	7	43	215	420	583	513	267	74	14	0	0	0	7	50	265	685	1268	1781	2048	2122	2136	2136
55	0	0	3	19	119	285	428	364	158	35	4	0	0	0	3	22	141	426	854	1218	1376	1411	1415	1415
60	0	0	0	6	58	162	274	227	76	7	0	0	0	0	0	6	64	226	500	727	803	810	810	810
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	0	0	29	97	286	452	585	535	329	141	40	4	0	0	29	126	412	864	1449	1984	2313	2454	2494	2498

(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

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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