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

COOP ID: 305334

Lon: 73°37W

Station: MILLBROOK, NY

Climate Division: NY 5 NWS Call Sign:

Temperature (°F) Degree Days (1) Mean (1) Mean Number of Days (3) **Extremes** Base Temp 65 Max Max Max Max Min Min Highest Lowest Daily Daily Highest Lowest Month(1) Month(1) Cooling >= >= >= <= <= <= Month Mean Year Day Year Year Day Year Heating Max Min Daily(2) Daily(2) Mean Mean 100 90 50 32 32 0 33.7 12.1 22.9 66 1950 26 33.1 1990 -29 1994 21 13.4 1994 1306 0 .0 .0 2.0 13.1 29.8 4.5 Jan 36.7 13.6 25.2 78 1985 24 32.9 1998 -20 1987 14 14.2 1979 1116 0 .0 .0 3.2 8.1 26.4 3.4 Feb Mar 45.9 23.4 34.7 83 1998 31 40.2 1973 -11+1996 10 27.7 1984 942 0 .0 .0 11.3 2.5 25.7 .4 33.4 7 1972 Apr 57.6 45.5 91 1976 18 49.8 1986 1985 9 41.1 585 0 .0 .1 24.4 .1 13.3 .0 May 68.9 43.2 56.1 96 1949 14 60.5 1998 22 1978 1 51.9 1995 286 8 .0 .3 30.8 .0 2.2 .0 51.5 15 32+ .0 76.7 64.1 95+ 1988 67.4 1999 1980 11 59.6 1985 85 58 .0 1.1 30.0 .0 @ Jun Jul 81.4 56.0 68.7 98+ 20 72.3 1999 37 3 65.2 1978 20 135 2.8 31.0 0. .0 1991 2001 .0 .0 1982 37 79.3 54.6 67.0 99+ 2001 10 69.9 1988 33 1982 29 63.2 98 .0 1.4 31.0 .0 .0 .0 Aug Sep 71.4 46.1 58.8 99 1953 2 63.8 1999 25+1963 24 54.8 1975 200 13 .0 .3 30.0 .0 1.2 0. 34.4 53.7 42.9 1972 Oct 61.3 47.9 86 1949 10 1990 15 2001 31 533 0 .0 .0 28.7 .0 10.9 .0 49.0 26.4 37.7 79 1950 43.2 1999 0 1989 24 30.9 1976 819 0 .0 .0 14.9 20.3 @ Nov 1 .6 Dec 38.3 17.9 28.1 71 1998 8 35.7 1998 -20 1980 26 15.3 1989 1145 0 .0 .0 4.0 7.7 28.2 1.7 Aug Jul Jan Jan 58.4 34.4 46.4 99+ 2001 10 72.3 1999 -29 1994 21 13.4 1994 7074 312 .0 6.0 241.3 32.1 158.0 10.0 Ann

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

Issue Date: February 2004 055-A

(1) From the 1971-2000 Monthly Normals

Elevation: 820 Feet Lat: 41°51N

- (2) Derived from station's available digital record: 1948-2001
- (3) Derived from 1971-2000 serially complete daily data

⁺ Also occurred on an earlier date(s)

[@] Denotes mean number of days greater than 0 but less than .05

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

COOP ID: 305334

Station: MILLBROOK, NY

Climate Division: NY 5 NWS Call Sign: Elevation: 820 Feet Lat: 41°51N Lon: 73°37W

										Pı	recipi	tation	(incl	nes)										
	Me	ans/	P	recip	itatio	on Total	s			M	lean N of D	Numbo Pays (3		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										
		ans(1)				Extreme	5			Daily Precipitation				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	3.05	2.77	2.24	1978	9	6.24	1979	1.02	1985	10.4	6.7	2.4	.5	.99	1.28	1.71	2.07	2.42	2.78	3.18	3.64	4.24	5.16	6.02
Feb	2.62	2.32	3.00	1981	2	10.69	1981	.34	1987	8.5	5.6	1.2	.4	.72	.97	1.35	1.68	2.00	2.34	2.71	3.15	3.72	4.62	5.46
Mar	3.07	3.12	2.60	1980	22	6.69	1977	.25	1981	9.6	6.4	2.3	.6	1.01	1.30	1.73	2.10	2.45	2.81	3.20	3.66	4.26	5.18	6.03
Apr	3.40	3.78	2.45	1987	5	6.27	1996	.58	1978	10.2	6.6	2.3	.4	1.07	1.39	1.87	2.28	2.68	3.09	3.54	4.07	4.75	5.81	6.79
May	4.34	4.38	3.23	1984	29	10.04	1984	.83	1980	11.5	8.0	2.6	1.0	1.38	1.80	2.41	2.93	3.43	3.95	4.52	5.19	6.05	7.39	8.63
Jun	3.96	3.31	5.68	1973	30	9.79	1972	.25	1995	10.6	7.5	2.6	.9	.65	.99	1.57	2.11	2.67	3.28	3.98	4.83	5.97	7.82	9.59
Jul	4.37	3.70	3.25	1959	21	10.94	1975	.61	1993	9.9	6.9	2.6	1.4	1.37	1.78	2.40	2.93	3.44	3.96	4.55	5.23	6.11	7.47	8.74
Aug	4.24	3.73	5.60	1955	19	11.82	1990	.72	1981	10.0	7.0	2.8	1.3	1.41	1.81	2.40	2.90	3.38	3.88	4.42	5.05	5.86	7.12	8.29
Sep	3.82	3.36	4.90	1999	17	10.16	1999	.99	1990	10.8	6.8	2.6	1.0	1.10	1.46	2.00	2.48	2.94	3.42	3.96	4.59	5.40	6.68	7.87
Oct	3.61	3.02	3.25	1972	8	8.01	1995	1.64	1992	9.7	6.4	2.4	1.0	1.41	1.75	2.23	2.62	2.99	3.37	3.78	4.26	4.86	5.79	6.64
Nov	3.12	3.15	2.18	1995	12	5.95	1985	.57	1987	9.5	6.5	2.4	.9	.97	1.26	1.70	2.08	2.45	2.83	3.24	3.73	4.36	5.35	6.26
Dec	2.99	2.90	2.52	1948	31	8.86	1973	.49	1998	10.5	6.9	2.2	.4	.70	.98	1.42	1.81	2.20	2.61	3.07	3.62	4.35	5.49	6.57
Ann	42.59	42.15	5.68	Jun 1973	30	11.82	Aug 1990	.25+	Jun 1995	121.2	81.3	28.4	9.8	32.29	34.33	36.92	38.86	40.58	42.23	43.92	45.78	48.03	51.26	54.03

⁺ Also occurred on an earlier date(s)

Complete documentation available from:

www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

[#] 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: 1948-2001

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

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

COOP ID: 305334

Station: MILLBROOK, NY

Climate Division: NY 5 NWS Call Sign:

Elevation: 820 Feet Lat: 41°51N Lon: 73°37W

										Snov	w (incl	hes)												
						Sno	ow To	tals							Mean Number of Days (1)									
	Mean	s/Medi	ans (1))	Extremes (2)												Snow Fall >= Thresholds						ls	
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	12.9	12.5	3	2	19.0	1987	23	33.6	1994	20	1994	18	10	1994	4.8	3.7	1.5	.5	.1	16.0	11.2	7.1	1.8	
Feb	9.1	10.0	3	2	9.0	1978	7	20.0	1972	17+	2000	4	10	1978	3.5	2.7	1.3	.3	.0	13.7	10.0	6.3	2.2	
Mar	6.7	7.5	1	#	10.0	1977	23	19.4	1977	13	1977	23	7	1978	2.7	2.0	.7	.2	.1	6.3	3.5	2.3	.8	
Apr	2.0	.0	#	0	13.0	1982	6	13.0	1982	8	1971	8	1	1971	.6	.5	.2	.2	.1	.8	.4	.2	.0	
May	.2	.0	#	0	6.0	1977	9	6.0	1977	6	1977	9	#	1977	@	@	@	@	.0	.1	.1	.1	.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	1.0	1972	19	1.0	1972	1	1972	19	#	1972	@	@	.0	.0	.0	.1	.0	.0	.0	
Nov	2.0	.0	#	#	9.0	1971	25	12.0	1971	12	1971	27	2	1971	1.0	.6	.2	.1	.0	1.2	.4	.3	.1	
Dec	7.2	7.0	1	1	10.0	1981	16	16.7	1992	14	1995	22	7	1995	3.2	2.6	.9	.3	@	9.2	4.6	1.8	.0	
Ann	40.1	37.0	N/A	N/A	19.0	Jan 1987	23	33.6	Jan 1994	20	Jan 1994	18	10+	Jan 1994	15.8	12.1	4.8	1.6	.3	47.4	30.2	18.1	4.9	

⁺ Also occurred on an earlier date(s) #Denotes trace amounts

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

[@] 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

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

COOP ID: 305334

Station: MILLBROOK, NY

Climate Division: NY 5 NWS Call Sign:

NWS Call Sign: Elevation: 820 Feet Lat: 41°51N Lon: 73°37W

				Freez	ze Data						
			Spri	ng Freeze D	ates (Month	/Day)					
Temp (F)		P	robability of	later date i	n spring (thr	ru Jul 31) tha	n indicated((*)			
remp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90		
36	6/09	6/04	5/30	5/27	5/23	5/20	5/16	5/12	5/06		
32	5/29	5/22	5/17	5/13	5/09	5/05	5/01	4/26	4/20		
28	5/14	5/08	5/04	4/30	4/27	4/23	4/20	4/15	4/09		
24	4/25	4/21	4/19	4/16	4/14	4/12	4/10	4/07	4/03		
20	4/16	4/12	4/08	4/05	4/02	3/30	3/27	3/24	3/19		
16	4/04	3/31	3/28	3/25	3/23	3/20	3/18	3/15	3/11		
•			Fal	ll Freeze Da	tes (Month/I	Day)	•	1	•		
Probability of earlier date in fall (beginning Aug 1) than indicated(*)											
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90		
36	9/03	9/08	9/11	9/14	9/17	9/19	9/22	9/25	9/30		
32	9/13	9/19	9/23	9/26	9/30	10/03	10/06	10/10	10/16		
28	9/28	10/04	10/07	10/11	10/14	10/17	10/20	10/24	10/30		
24	10/06	10/12	10/15	10/19	10/22	10/24	10/28	10/31	11/06		
20	10/20	10/26	10/31	11/04	11/08	11/12	11/16	11/21	11/27		
16	11/07	11/12	11/16	11/20	11/23	11/26	11/29	12/03	12/09		
				Freeze I	ree Period						
Tomp (F)			Probability	of longer th	an indicated	freeze free p	eriod (Days))			
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90		
36	135	128	123	119	116	112	108	103	96		
32	167	158	152	147	142	138	133	127	118		
28	195	186	180	174	169	164	159	152	144		
24	207	201	197	193	189	186	182	178	172		
20	243	235	229	224	219	214	209	203	195		
16	261	256	251	248	244	241	237	233	227		

^{*} 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:

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: MILLBROOK, NY

COOP ID: 305334

Climate Division: NY 5 NWS Call Sign: Elevation: 820 Feet Lat: 41°51N Lon: 73°37W

	Degree Days to Selected Base Temperatures (°F)														
Base						Heatin	g Degree	Days (1)							
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
65	1306	1116	942	585	286	85	20	37	200	533	819	1145	7074		
60	1151	976	787	435	159	25	1	5	93	384	669	990	5675		
57	1058	892	694	347	100	9	0	1	52	300	579	897	4929		
55	996	836	632	290	69	4	0	0	33	248	519	835	4462		
50	841	696	479	165	20	0	0	0	8	140	371	680	3400		
32	336	248	83	1	0	0	0	0	0	2	33	224	927		

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	53	56	164	406	745	963	1138	1083	803	492	205	102	6210
55	0	0	0	5	101	277	425	370	146	26	0	0	1350
57	0	0	0	2	70	222	363	309	105	16	0	0	1087
60	0	0	0	0	36	148	272	220	57	6	0	0	739
65	0	0	0	0	8	58	135	98	13	0	0	0	312
70	0	0	0	0	1	13	46	26	1	0	0	0	87

	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											Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
40	4	8	61	223	547	756	931	881	611	303	95	17	4	12	73	296	843	1599	2530	3411	4022	4325	4420	4437
45	1	2	25	122	393	606	776	726	461	175	46	3	1	3	28	150	543	1149	1925	2651	3112	3287	3333	3336
50	0	0	10	60	252	456	621	571	316	88	15	0	0	0	10	70	322	778	1399	1970	2286	2374	2389	2389
55	0	0	4	23	134	312	466	416	192	37	2	0	0	0	4	27	161	473	939	1355	1547	1584	1586	1586
60	0	0	0	7	60	175	311	266	95	9	0	0	0	0	0	7	67	242	553	819	914	923	923	923
Base				Gro	wing De	gree Unit	s for Co	rn (Mont	thly)						Gr	owing D	egree Ur	its for C	orn (Acc	umulate	d Month	ly)		
50/86	1	8	49	151	339	484	615	576	378	201	62	7	1	9	58	209	548	1032	1647	2223	2601	2802	2864	2871

(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

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

- c. Snow Tables
 - 1. Snow Climatology
 - 2. Cooperative Summary of the Day
- d. Freeze Data Table

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

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