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: AVON, NY **COOP ID: 300343**

Climate Division: NY10 **NWS Call Sign:** **Elevation: 545 Feet** **Lat: 42˚55N** **Lon: 77˚45W**

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	31.6	15.6	23.6	67	1995	16	33.4	1990	-24	1994	17	13.5	1994	1283	0	.0	.0	2.0	15.6	28.9	3.3
Feb	33.7	16.0	24.9	72	1997	22	33.2	1984	-13+	1994	11	13.3	1979	1125	0	.0	.0	3.1	13.2	26.0	2.8
Mar	42.5	23.8	33.2	84	1986	31	40.8	1973	-9+	1999	8	25.3	1984	988	0	.0	.0	8.4	6.7	25.1	.4
Apr	55.0	34.4	44.7	91	1990	29	48.7	1985	11	1982	7	38.0	1975	608	0	.0	@	19.6	.5	14.1	.0
May	67.7	45.1	56.4	92	1987	31	62.8	1991	28+	1987	5	50.8	1997	286	18	.0	.2	30.0	.0	1.2	.0
Jun	76.6	54.7	65.7	95	1999	28	68.7	1973	35	1988	10	61.4	1985	61	81	.0	1.3	30.0	.0	.0	.0
Jul	80.9	58.8	69.9	99	1988	10	73.7	1999	45	1982	5	66.2	1992	11	162	.0	3.4	31.0	.0	.0	.0
Aug	78.9	57.0	68.0	97+	2001	10	71.2	1980	37+	1982	30	64.5	1982	26	116	.0	1.9	31.0	.0	.0	.0
Sep	71.4	49.7	60.6	94	1978	6	64.8	1971	28	1991	30	57.5	1975	147	14	.0	.4	30.0	.0	.2	.0
Oct	60.1	39.5	49.8	83	1990	7	57.0	1971	21	1988	31	45.5	1976	474	1	.0	.0	26.1	.0	6.5	.0
Nov	47.6	31.7	39.7	77+	1982	3	45.7	1975	11+	2000	24	34.3	1976	761	0	.0	.0	12.1	1.7	16.7	.0
Dec	36.6	22.2	29.4	71+	1998	7	37.1	1982	-7	1988	13	15.6	1989	1105	0	.0	.0	3.4	10.0	26.4	.9
Ann	56.9	37.4	47.2	99	Jul 1988	10	73.7	Jul 1999	-24	Jan 1994	17	13.3	Feb 1979	6875	392	.0	7.2	226.7	47.7	145.1	7.4

\+ 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/normals/usnormals.html

(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

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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	1.78	1.29	3.04	1998	8	6.14	1998	.37	1980
Feb	1.53	1.50	1.48	1961	26	4.31	1990	.26	1987
Mar	2.33	2.26	1.95	1991	4	4.83	1991	.66	1981
Apr	2.82	2.76	1.58	1976	22	4.86	2000	.78	1975
May	2.85	2.59	1.71	1981	12	6.62	1984	.95	1993
Jun	3.51	3.51	2.49	1972	23	7.37	1972	.46	1991
Jul	2.78	2.39	1.92	1982	29	8.31	1992	.75	1989
Aug	3.31	2.83	5.20	1983	12	10.57	1983	1.17	1995
Sep	3.46	3.16	2.41	1979	15	7.24	1977	2.00	1971
Oct	2.58	2.54	2.60	1980	26	5.92	1995	.85	1994
Nov	2.63	2.35	2.40	1962	4	7.13	1985	.68	1978
Dec	2.23	2.05	1.37	1975	10	4.98	1977	.77	1988
Ann	31.81	31.03	5.20	Aug 1983	12	10.57	Aug 1983	.26	Feb 1987

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	12.9	4.8	.7	.2
Feb	11.3	4.2	.8	.1
Mar	12.4	5.5	1.3	.2
Apr	12.7	6.4	1.8	.5
May	11.9	6.7	1.8	.4
Jun	11.5	7.3	2.3	.8
Jul	10.5	6.5	1.7	.3
Aug	11.0	6.5	2.2	.6
Sep	12.1	7.7	2.3	.6
Oct	12.5	6.6	1.2	.3
Nov	12.7	6.6	1.6	.3
Dec	13.3	5.8	1.1	.3
Ann	144.8	74.6	18.8	4.6

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	.33	.49	.75	.99	1.24	1.51	1.81	2.17	2.66	3.44	4.18
Feb	.39	.53	.76	.95	1.15	1.35	1.58	1.85	2.20	2.76	3.29
Mar	.90	1.12	1.43	1.68	1.93	2.17	2.44	2.75	3.15	3.75	4.31
Apr	1.08	1.34	1.72	2.03	2.33	2.63	2.95	3.33	3.82	4.56	5.23
May	.98	1.24	1.64	1.97	2.29	2.62	2.98	3.40	3.93	4.76	5.53
Jun	.97	1.31	1.81	2.25	2.69	3.14	3.64	4.23	5.00	6.20	7.32
Jul	.79	1.05	1.45	1.80	2.14	2.49	2.88	3.35	3.95	4.88	5.76
Aug	1.06	1.37	1.83	2.23	2.61	3.01	3.45	3.95	4.61	5.63	6.58
Sep	1.79	2.08	2.46	2.77	3.05	3.33	3.63	3.97	4.39	5.02	5.58
Oct	.85	1.09	1.45	1.75	2.05	2.35	2.68	3.07	3.57	4.35	5.07
Nov	.83	1.08	1.45	1.76	2.07	2.39	2.73	3.14	3.67	4.48	5.24
Dec	.75	.96	1.27	1.53	1.78	2.04	2.33	2.66	3.08	3.74	4.35
Ann	25.55	26.82	28.42	29.61	30.65	31.65	32.66	33.78	35.11	37.02	38.64

\+ 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: 1948-2001
(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	13.1	12.3	3	3
Feb	12.4	11.0	4	3
Mar	10.1	8.1	2	1
Apr	3.0	1.5	#	#
May	.2	.0	#	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
Nov	4.2	3.3	#	#
Dec	11.1	12.0	2	2
Ann	54.2	48.2	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	13.0	1978	21	24.6	1994	19	1978	24	9	1978
Feb	12.0	1972	20	30.1	1993	20	1978	8	13	1978
Mar	18.0	1993	14	30.5	1993	27	1993	15	13	1993
Apr	8.0	1975	4	10.5	1975	10	1975	5	2	1975
May	4.0	1989	7	7.0	1989	4	1989	7	#+	1996
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	.0	0	0	.0	0	0	0	0	0	0
Oct	1.0	1972	19	1.0+	1988	1	1988	22	#+	1993
Nov	8.0	1996	27	13.9	1996	10	1996	27	2	1997
Dec	9.0	1977	6	21.3	1977	12	1977	8	5	1989
Ann	18.0	Mar 1993	14	30.5	Mar 1993	27	Mar 1993	15	13+	Mar 1993

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	8.8	5.2	1.3	.4	.1
Feb	7.2	4.3	1.3	.5	.1
Mar	5.3	3.1	1.3	.6	.1
Apr	1.6	1.0	.4	.2	.0
May	.1	.1	.1	.0	.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	.1	@	.0	.0	.0
Nov	2.5	1.6	.4	.2	.0
Dec	7.1	4.4	1.4	.5	.0
Ann	32.7	19.7	6.2	2.4	.3

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	20.1	12.9	7.7	.8
Feb	18.6	12.8	7.7	1.7
Mar	10.7	6.4	4.0	1.8
Apr	1.9	.8	.4	@
May	.1	@	.0	.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	3.4	1.3	.6	@
Dec	14.2	6.5	3.1	.1
Ann	69.1	40.7	23.5	4.4

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

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

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	152	146	142	138	135	131	127	123	117
32	173	168	164	161	158	155	152	148	143
28	204	198	193	189	186	182	178	174	167
24	236	228	222	217	213	208	204	198	190
20	256	249	244	240	236	232	228	223	216
16	276	269	264	259	255	251	247	242	235

***** 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	1283	1125	988	608	286	61	11	26	147	474	761	1105	6875
60	1128	985	833	460	170	16	0	2	53	327	611	950	5535
57	1035	901	740	373	115	6	0	0	24	248	521	857	4820
55	973	845	678	317	85	3	0	0	13	201	462	795	4372
50	818	705	529	193	33	0	0	0	2	105	319	644	3348
32	319	263	121	5	0	0	0	0	0	0	21	199	928

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	58	63	156	386	756	1010	1174	1114	857	551	250	118	6493
55	0	0	0	9	127	323	461	401	180	38	1	0	1540
57	0	0	0	4	95	266	399	339	131	23	0	0	1257
60	0	0	0	1	57	186	306	248	70	10	0	0	878
65	0	0	0	0	18	81	162	116	14	1	0	0	392
70	0	0	0	0	4	21	59	35	1	0	0	0	120

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	9	15	60	201	522	785	954	893	637	330	108	24	9	24	84	285	807	1592	2546	3439	4076	4406	4514	4538
45	2	2	31	113	376	635	799	738	488	202	54	8	2	4	35	148	524	1159	1958	2696	3184	3386	3440	3448
50	0	0	12	61	247	485	644	583	342	112	22	2	0	0	12	73	320	805	1449	2032	2374	2486	2508	2510
55	0	0	4	32	142	341	489	428	216	45	6	0	0	0	4	36	178	519	1008	1436	1652	1697	1703	1703
60	0	0	1	14	74	210	335	277	117	15	0	0	0	0	1	15	89	299	634	911	1028	1043	1043	1043
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	3	10	43	124	313	499	630	580	388	188	58	9	3	13	56	180	493	992	1622	2202	2590	2778	2836	2845

(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