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: HEMLOCK, NY **COOP ID: 303773**

Climate Division: NY10 **NWS Call Sign:** **Elevation: 902 Feet** **Lat: 42˚47N** **Lon: 77˚37W**

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	31.3	14.3	22.8	70	1950	25	32.7	1990	-28	1957	15	12.1	1977	1308	0	.0	.0	1.8	16.2	29.3	4.5
Feb	33.6	14.6	24.1	68	1997	21	32.1+	1998	-27+	1979	18	11.5	1979	1146	0	.0	.0	3.0	13.4	26.0	4.4
Mar	42.9	22.9	32.9	79+	1998	31	40.4	1973	-14	1960	11	24.7	1984	994	0	.0	.0	8.2	6.3	24.9	.9
Apr	55.2	33.7	44.5	89	1990	28	49.3	1985	4	1982	7	37.0	1975	616	0	.0	.0	20.5	.4	14.0	.0
May	68.0	44.5	56.3	92	1977	21	62.3	1998	16	1978	4	50.6	1997	291	20	.0	@	30.2	.0	2.5	.0
Jun	76.4	53.7	65.1	95+	1953	21	68.3	1991	30	1977	3	60.4	1985	71	72	.0	.5	30.0	.0	@	.0
Jul	80.5	58.7	69.6	100	1931	2	73.7	1999	40	1977	27	66.2	2000	14	156	.0	1.9	31.0	.0	.0	.0
Aug	78.6	57.4	68.0	97	2001	9	71.7	1973	32	1982	29	63.8	1982	32	124	.0	.7	31.0	.0	@	.0
Sep	70.7	50.4	60.6	97	1953	3	65.1	1971	25	1947	28	56.2	1975	155	22	.0	.1	30.0	.0	.6	.0
Oct	59.3	40.1	49.7	88	1927	2	57.3	1971	17	1976	27	44.3	1976	479	3	.0	.0	25.9	.0	5.9	.0
Nov	47.2	31.4	39.3	79	1950	1	45.8	1975	2+	1938	26	31.6	1976	770	0	.0	.0	12.0	2.1	17.2	.0
Dec	36.6	21.6	29.1	69+	2001	5	35.6	1998	-22	1942	20	16.2	1989	1113	0	.0	.0	3.5	10.3	26.6	1.1
Ann	56.7	36.9	46.8	100	Jul 1931	2	73.7	Jul 1999	-28	Jan 1957	15	11.5	Feb 1979	6989	397	.0	3.2	227.1	48.7	147.0	10.9

\+ 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: 1926-2001

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

Issue Date: February 2004

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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	1.77	1.39	1.91	1998	8	4.84	1998	.18	1980
Feb	1.54	1.48	2.11	1961	26	3.61	1990	.40	1987
Mar	2.37	2.30	1.77	1999	4	4.32	1984	.98	1978
Apr	2.98	2.81	1.85	1962	30	5.38	1983	.73	1982
May	3.27	2.93	2.23	1933	12	6.95	1989	.85	1977
Jun	3.77	3.65	2.85	1972	23	9.55	1972	1.01	1988
Jul	3.47	2.77	4.11	1944	11	11.07	1992	.81	1983
Aug	3.38	2.84	2.87	1953	9	9.04	1977	1.03	1973
Sep	3.77	3.64	2.73	1945	18	9.75	1977	1.59	1995
Oct	3.06	2.65	2.64	1959	1	6.86	1995	.79	1994
Nov	2.96	2.79	3.01	1995	20	6.72	1985	.87	1978
Dec	2.20	2.05	1.52	1978	25	4.43	1990	.82+	1989
Ann	34.54	33.79	4.11	Jul 1944	11	11.07	Jul 1992	.18	Jan 1980

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	12.5	4.8	.7	.2
Feb	10.4	4.3	.6	@
Mar	11.5	6.5	1.3	.1
Apr	12.4	7.2	1.6	.4
May	12.4	8.0	2.0	.4
Jun	12.2	8.1	2.4	.7
Jul	11.4	7.4	2.2	.6
Aug	11.9	7.3	2.1	.7
Sep	13.4	8.2	2.2	.7
Oct	13.2	7.5	1.8	.4
Nov	13.4	7.7	1.6	.3
Dec	13.2	6.2	1.1	.2
Ann	147.9	83.2	19.6	4.7

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	.32	.47	.73	.97	1.22	1.49	1.79	2.16	2.64	3.43	4.18
Feb	.53	.67	.88	1.06	1.24	1.41	1.61	1.83	2.12	2.57	2.98
Mar	.97	1.19	1.50	1.75	1.99	2.23	2.49	2.78	3.16	3.74	4.27
Apr	1.06	1.34	1.75	2.09	2.41	2.75	3.11	3.53	4.07	4.91	5.67
May	1.04	1.35	1.81	2.20	2.58	2.98	3.41	3.92	4.57	5.59	6.53
Jun	1.24	1.60	2.12	2.57	3.00	3.44	3.93	4.50	5.23	6.36	7.40
Jul	1.04	1.37	1.87	2.29	2.70	3.13	3.61	4.16	4.88	6.00	7.04
Aug	1.17	1.49	1.95	2.35	2.72	3.11	3.53	4.02	4.65	5.63	6.52
Sep	1.73	2.06	2.52	2.89	3.24	3.59	3.96	4.38	4.92	5.73	6.46
Oct	1.05	1.34	1.76	2.12	2.46	2.81	3.20	3.64	4.22	5.10	5.92
Nov	1.08	1.35	1.75	2.09	2.41	2.74	3.09	3.51	4.04	4.85	5.60
Dec	.83	1.04	1.33	1.57	1.80	2.04	2.30	2.59	2.97	3.55	4.08
Ann	26.83	28.38	30.33	31.79	33.07	34.30	35.56	36.94	38.61	41.00	43.04

\+ 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)

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	13.5	-99.9	1	0	13.5	1995	99	13.5	1995	5	1971	3	3	1971	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9
Feb	-99.9	-99.9	1	0	.0	0	0	.0	0	12	1971	17	6	1971	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9
Mar	.5	-99.9	1	0	.5	1995	1	.5	1995	11	1971	5	6	1971	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9
Apr	-99.9	-99.9	#	0	#	1977	5	#	1977	#	1971	26	#	1971	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
May	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Jun	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Jul	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Aug	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Sep	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Oct	#	.0	0	0	#	1972	19	#	1972	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Nov	-99.9	-99.9	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9
Dec	-99.9	-99.9	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9
Ann	-9.9	-9.9	N/A	N/A	13.5	Jan 1995	99	13.5	Jan 1995	12	Feb 1971	17	6+	Mar 1971	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9

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

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	9/01	9/08	9/13	9/17	9/21	9/25	9/30	10/05	10/12
32	9/15	9/22	9/27	10/01	10/04	10/08	10/12	10/17	10/23
28	10/06	10/12	10/15	10/18	10/21	10/24	10/27	10/31	11/05
24	10/13	10/19	10/24	10/28	10/31	11/04	11/08	11/13	11/19
20	10/24	10/31	11/05	11/09	11/12	11/16	11/20	11/25	12/02
16	11/13	11/18	11/22	11/25	11/28	12/01	12/05	12/08	12/14

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	147	137	130	124	118	113	107	99	90
32	168	160	154	150	145	140	135	129	121
28	197	190	185	180	176	172	168	163	156
24	223	214	207	201	195	190	184	177	168
20	249	240	233	228	223	218	212	206	197
16	268	260	254	249	244	239	234	227	219

***** 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	1308	1146	994	616	291	71	14	32	155	479	770	1113	6989
60	1153	1006	839	468	176	21	0	5	64	335	620	958	5645
57	1060	922	746	382	121	8	0	0	33	258	531	865	4926
55	998	866	684	327	91	4	0	0	19	212	472	803	4476
50	843	726	532	205	38	0	0	0	4	117	331	653	3449
32	343	283	119	6	0	0	0	0	0	2	28	207	988

Base — Cooling Degree Days (1)

Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	57	61	148	380	752	991	1166	1115	857	549	248	117	6441
55	0	0	0	11	130	305	453	402	186	46	1	0	1534
57	0	0	0	6	98	249	391	341	139	30	0	0	1254
60	0	0	0	2	60	172	298	252	81	14	0	0	879
65	0	0	0	0	20	72	156	124	22	3	0	0	397
70	0	0	0	0	5	18	57	42	2	0	0	0	124

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	8	12	56	194	513	758	928	880	631	324	106	24	8	20	76	270	783	1541	2469	3349	3980	4304	4410	4434
45	0	1	24	108	363	608	773	725	481	200	53	6	0	1	25	133	496	1104	1877	2602	3083	3283	3336	3342
50	0	0	6	53	234	459	618	570	339	107	22	1	0	0	6	59	293	752	1370	1940	2279	2386	2408	2409
55	0	0	2	24	131	317	463	416	209	48	3	0	0	0	2	26	157	474	937	1353	1562	1610	1613	1613
60	0	0	0	8	59	184	310	266	111	14	0	0	0	0	0	8	67	251	561	827	938	952	952	952
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	0	7	43	126	312	483	613	574	380	175	53	7	0	7	50	176	488	971	1584	2158	2538	2713	2766	2773

(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