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: HUDSON CORRECTIONL FAC, NY **COOP ID: 304025**

Climate Division: NY 5 **NWS Call Sign:** **Elevation: 60 Feet** **Lat: 42˚15N** **Lon: 73˚48W**

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	33.6	15.6	24.6	66	1974	28	34.3	1990	-26	1994	21	15.2	1994	1253	0	.0	.0	1.8	13.5	29.2	4.6
Feb	37.2	18.2	27.7	72	1985	24	34.0+	1998	-18+	1971	1	17.1	1979	1045	0	.0	.0	2.9	8.6	25.4	2.8
Mar	47.8	27.5	37.7	91	1998	31	44.1	1973	-8	1989	7	31.1	1984	848	0	.0	@	12.3	2.1	23.0	.3
Apr	61.1	37.5	49.3	94	1990	28	53.7	1991	12+	1982	7	43.9	1972	472	1	.0	.2	25.4	.1	11.2	.0
May	72.6	48.4	60.5	95+	2000	10	66.0	1991	24	1978	1	55.8	1984	177	36	.0	1.0	30.8	.0	1.2	.0
Jun	80.1	57.3	68.7	100	1999	27	73.1	1999	34+	1980	9	64.5	1982	27	138	@	2.4	30.0	.0	.0	.0
Jul	84.5	62.0	73.3	103	1966	3	76.4	1988	40+	1974	12	68.9	2000	1	256	@	5.9	31.0	.0	.0	.0
Aug	81.8	60.6	71.2	100	1999	1	74.4	1988	37	1982	29	68.3+	1986	5	196	@	3.0	31.0	.0	.0	.0
Sep	73.3	53.0	63.2	96	1980	2	66.6	1971	27	1963	24	59.8	1975	95	40	.0	.6	30.0	.0	.2	.0
Oct	62.2	41.3	51.8	90	1963	7	57.3	1971	18	1972	21	47.7	1974	412	2	.0	.0	29.0	.0	5.9	.0
Nov	49.8	32.6	41.2	82	1982	2	46.0	1975	5	1989	24	36.5	1996	714	0	.0	.0	14.7	.6	17.3	.0
Dec	38.2	22.4	30.3	71	1984	29	36.2	1984	-15+	1989	24	15.6	1989	1076	0	.0	.0	3.5	7.6	27.2	1.2
Ann	60.2	39.7	50.0	103	Jul 1966	3	76.4	Jul 1988	-26	Jan 1994	21	15.2	Jan 1994	6125	669	@	13.1	242.4	32.5	140.6	8.9

\+ 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: 1957-2001

(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	3.08	3.30	2.58	1978	9	7.87	1979	.31	1981
Feb	2.48	2.43	1.90	1960	11	5.39	1981	.06	1987
Mar	3.31	3.00	4.43	1984	13	8.27	1984	.18	1981
Apr	3.58	3.31	2.60	1968	25	8.50	1983	1.02	1985
May	4.38	4.07	3.02	1972	31	11.23	1984	.63	1980
Jun	3.77	3.05	3.20	1982	5	8.45	2000	.73	1971
Jul	3.87	2.67	3.70	1984	7	9.98	1975	1.29	1983
Aug	3.84	3.64	5.25	1971	28	11.53	1990	.67	1993
Sep	3.85	3.66	4.00	1960	12	9.60	1977	.92	1986
Oct	3.48	2.84	3.46	1987	4	7.92	1990	.87	1982
Nov	3.35	3.26	2.80	1977	8	7.02	1972	.73	1976
Dec	3.02	2.60	3.40	1973	21	8.76	1973	.66	1980
Ann	42.01	41.59	5.25	Aug 1971	28	11.53	Aug 1990	.06	Feb 1987

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	8.3	6.0	2.4	.5
Feb	7.0	5.1	1.8	.5
Mar	9.1	6.0	2.3	1.0
Apr	10.3	7.1	2.4	.9
May	11.3	8.2	2.8	1.1
Jun	10.4	6.9	2.5	.8
Jul	9.5	6.2	2.4	.9
Aug	9.4	6.5	2.3	1.0
Sep	9.3	7.0	2.6	1.1
Oct	8.3	5.7	2.1	.8
Nov	9.8	6.1	2.4	.8
Dec	9.3	6.0	2.1	.6
Ann	112.0	76.8	28.1	10.0

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	.55	.82	1.27	1.69	2.12	2.59	3.12	3.76	4.61	5.98	7.30
Feb	.62	.85	1.21	1.53	1.85	2.18	2.55	3.00	3.57	4.49	5.34
Mar	.80	1.11	1.59	2.02	2.45	2.90	3.41	4.01	4.79	6.04	7.21
Apr	1.26	1.59	2.08	2.50	2.89	3.30	3.74	4.26	4.92	5.93	6.87
May	1.18	1.60	2.23	2.78	3.33	3.90	4.53	5.28	6.25	7.78	9.21
Jun	.88	1.23	1.78	2.28	2.77	3.29	3.88	4.57	5.49	6.94	8.31
Jul	1.12	1.49	2.04	2.52	2.99	3.48	4.02	4.65	5.48	6.77	7.96
Aug	1.23	1.60	2.14	2.60	3.04	3.50	4.00	4.59	5.35	6.53	7.62
Sep	.91	1.27	1.84	2.34	2.84	3.37	3.96	4.66	5.59	7.05	8.43
Oct	.99	1.33	1.82	2.26	2.68	3.12	3.61	4.19	4.93	6.10	7.19
Nov	1.11	1.43	1.90	2.29	2.67	3.06	3.49	3.99	4.64	5.63	6.55
Dec	.59	.87	1.31	1.72	2.13	2.57	3.07	3.68	4.48	5.76	6.98
Ann	29.64	32.02	35.09	37.41	39.48	41.49	43.55	45.84	48.62	52.65	56.14

\+ 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: 1957-2001
(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	12.7	12.0	4	3	16.0	1994	18	25.0	2000	20+	1987	31	17	1994	3.7	3.0	1.6	.9	.2	15.0	10.6	6.6	2.6
Feb	10.9	8.0	4	3	12.0	1983	7	25.8	1983	24	1983	12	14	1978	2.6	2.4	1.3	.5	.1	-9.9	-9.9	-9.9	-9.9
Mar	3.3	2.5	2	#	15.0	1993	14	15.0	1993	27	1993	15	10	1994	1.4	1.4	.4	.2	.1	3.7	2.5	1.4	.5
Apr	2.0	.0	#	0	14.3	1982	6	14.3	1982	14	1982	8	2	1982	.3	.3	.2	.1	.1	.5	.3	.3	.2
May	.0	.0	#	0	.0	0	0	.0	0	5	1977	9	#	1977	.0	.0	.0	.0	.0	.0	.0	.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	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.2	.0	#	0	3.5	1987	4	3.5	1987	4	1987	4	#	1987	@	@	@	.0	.0	@	@	.0	.0
Nov	1.6	.0	#	#	10.0	1980	18	13.0	1980	17	1971	26	2	1971	.6	.4	.1	.1	.1	.6	.3	.2	.1
Dec	9.8	8.0	2	1	8.5	1995	14	16.0	1977	13	1995	15	6	1995	2.2	1.8	1.0	.2	.0	6.8	4.2	2.8	.4
Ann	40.5	30.5	N/A	N/A	16.0	Jan 1994	18	25.8	Feb 1983	27	Mar 1993	15	17	Jan 1994	10.8	9.3	4.6	2.0	.6	-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	5/28	5/23	5/19	5/16	5/13	5/10	5/07	5/03	4/28
32	5/15	5/11	5/08	5/05	5/03	4/30	4/28	4/25	4/21
28	5/05	4/30	4/27	4/24	4/22	4/19	4/16	4/13	4/08
24	4/24	4/19	4/15	4/12	4/08	4/05	4/02	3/29	3/23
20	4/08	4/04	4/01	3/30	3/27	3/25	3/22	3/19	3/15
16	4/03	3/29	3/25	3/22	3/19	3/16	3/13	3/09	3/04

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	9/17	9/21	9/24	9/26	9/28	10/01	10/03	10/06	10/10
32	9/25	9/30	10/03	10/06	10/09	10/12	10/15	10/19	10/24
28	10/05	10/11	10/16	10/20	10/23	10/27	10/31	11/04	11/11
24	10/18	10/24	10/28	11/01	11/04	11/08	11/11	11/15	11/21
20	11/03	11/09	11/14	11/17	11/21	11/24	11/28	12/03	12/09
16	11/18	11/24	11/28	12/01	12/04	12/07	12/10	12/14	12/20

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	156	150	145	141	138	134	130	125	119
32	175	169	165	162	159	155	152	148	142
28	207	199	194	189	184	179	174	169	161
24	232	224	219	214	209	204	199	194	186
20	260	253	247	242	238	233	228	223	215
16	285	276	270	265	259	254	249	243	234

***** 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	1253	1045	848	472	177	27	1	5	95	412	714	1076	6125
60	1098	905	693	328	84	5	0	0	30	270	564	921	4898
57	1005	821	600	249	47	1	0	0	12	196	474	828	4233
55	943	765	539	202	30	0	0	0	6	152	415	766	3818
50	788	625	395	105	7	0	0	0	1	71	277	616	2885
32	300	198	55	1	0	0	0	0	0	0	15	179	748

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	69	77	231	519	882	1101	1278	1214	935	613	291	126	7336
55	0	0	2	30	199	411	565	501	251	53	1	0	2013
57	0	0	0	18	154	352	503	439	197	34	0	0	1697
60	0	0	0	7	98	265	410	346	125	15	0	0	1266
65	0	0	0	1	36	138	256	196	40	2	0	0	669
70	0	0	0	0	8	51	117	78	5	0	0	0	259

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	5	13	79	280	620	853	1013	958	686	367	122	19	5	18	97	377	997	1850	2863	3821	4507	4874	4996	5015
45	0	4	38	167	465	703	858	803	537	231	62	4	0	4	42	209	674	1377	2235	3038	3575	3806	3868	3872
50	0	0	16	85	318	553	703	648	388	126	26	1	0	0	16	101	419	972	1675	2323	2711	2837	2863	2864
55	0	0	5	39	187	403	548	493	251	56	9	0	0	0	5	44	231	634	1182	1675	1926	1982	1991	1991
60	0	0	3	16	93	258	393	340	139	17	1	0	0	0	3	19	112	370	763	1103	1242	1259	1260	1260
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	0	8	58	185	386	554	684	640	427	213	63	6	0	8	66	251	637	1191	1875	2515	2942	3155	3218	3224

(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