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: BLUE HILL OBS MILTON, MA **COOP ID: 190736**

Climate Division: MA 2 **NWS Call Sign: MQE** **Elevation: 630 Feet** **Lat: 42˚13N** **Lon: 71˚07W**

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	33.8	18.1	26.0	68	1950	26	34.2	1990	-10+	1976	23	17.6	1981	1207	0	.0	.0	3.0	14.6	28.1	2.1
Feb	36.3	20.3	28.3	68	1985	24	35.1	1984	-21	1934	9	18.4	1979	1034	0	.0	.0	3.2	10.6	24.7	1.0
Mar	44.8	27.8	36.3	89+	1938	23	41.9	1977	-5	1950	4	30.0	1984	894	1	.0	.0	9.2	3.2	21.8	.0
Apr	55.5	37.1	46.3	94	1976	19	51.4	1976	12	1954	4	41.8	1972	562	3	.0	.1	21.0	.2	7.3	.0
May	67.0	47.0	57.0	93+	1929	30	62.1	1991	29+	1956	8	53.4	1974	271	21	.0	.4	29.2	.0	.2	.0
Jun	75.5	55.9	65.7	96	1952	26	69.7	1999	36	1945	1	61.2	1982	74	93	.0	1.3	30.0	.0	.0	.0
Jul	81.2	62.0	71.6	100	1977	21	75.3	1994	44	1988	1	67.9+	2000	9	215	@	3.2	31.0	.0	.0	.0
Aug	78.9	60.9	69.9	101+	1949	10	73.3	1988	39	1965	30	66.3	1982	22	173	@	1.4	31.0	.0	.0	.0
Sep	71.0	53.2	62.1	99	1953	2	66.2	1999	31+	1950	25	59.2	1978	138	49	.0	.3	30.0	.0	@	.0
Oct	60.3	42.9	51.6	88	1963	7	57.2	1971	21+	1928	30	47.5	1974	422	3	.0	.0	27.7	.0	3.0	.0
Nov	49.3	34.2	41.8	81	1950	2	48.0	1975	5	1932	27	37.3	1976	698	0	.0	.0	13.8	1.0	13.5	.0
Dec	38.6	23.8	31.2	74	1998	7	36.9	1998	-19	1933	29	17.9	1989	1040	0	.0	.0	4.8	8.7	25.3	.5
Ann	57.7	40.3	49.0	101+	Aug 1949	10	75.3	Jul 1994	-21	Feb 1934	9	17.6	Jan 1981	6371	558	.0	6.7	233.9	38.3	123.9	3.6

\+ 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

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: BLUE HILL OBS MILTON, MA **COOP ID: 190736**

Climate Division: MA 2 **NWS Call Sign: MQE** **Elevation: 630 Feet** **Lat: 42˚13N** **Lon: 71˚07W**

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	4.78	4.23	3.00	1956	9	11.61	1979	.97	1980
Feb	4.06	3.63	3.10	1969	24	7.93	1981	.71	1987
Mar	4.79	4.36	5.61	1968	18	10.02	1983	.63	1981
Apr	4.32	4.20	3.18	1991	21	10.37	1987	1.17	1999
May	3.79	3.44	5.02	1984	31	9.14	1984	1.23	1993
Jun	3.93	3.02	6.07	1998	13	17.32	1998	.14	1999
Jul	3.74	3.48	4.01	1979	27	10.66	1988	1.11	1983
Aug	4.06	3.84	8.07	1955	19	8.92	1976	.53	1981
Sep	4.13	3.52	5.60	1999	10	12.37	1999	.69	1980
Oct	4.42	4.03	7.10	1996	20	11.76	1996	.39	1994
Nov	4.64	4.69	4.26	1955	5	9.78	1983	.55	1976
Dec	4.53	3.74	3.94	1992	12	9.80	1992	1.14	1989
Ann	51.19	51.91	8.07	Aug 1955	19	17.32	Jun 1998	.14	Jun 1999

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	12.1	7.8	3.3	1.5
Feb	10.6	6.3	2.9	1.2
Mar	12.0	8.3	3.3	1.2
Apr	11.6	7.1	3.1	1.2
May	12.1	8.0	2.3	.7
Jun	11.2	6.7	2.2	.9
Jul	9.7	6.1	2.4	1.2
Aug	10.1	6.4	2.8	1.1
Sep	9.5	6.4	2.5	1.3
Oct	9.7	6.6	3.0	1.2
Nov	10.8	7.0	2.9	1.4
Dec	12.7	7.8	2.7	1.4
Ann	132.1	84.5	33.4	14.3

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
These values were determined from the incomplete gamma distribution

Month	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	1.18	1.63	2.32	2.94	3.56	4.20	4.93	5.79	6.91	8.69	10.36
Feb	1.41	1.80	2.36	2.83	3.27	3.74	4.24	4.83	5.58	6.74	7.81
Mar	1.61	2.06	2.72	3.29	3.83	4.38	4.99	5.71	6.62	8.04	9.35
Apr	1.48	1.88	2.48	2.98	3.47	3.96	4.51	5.14	5.95	7.21	8.36
May	1.25	1.61	2.13	2.58	3.02	3.46	3.95	4.52	5.25	6.39	7.45
Jun	.35	.62	1.14	1.69	2.28	2.96	3.77	4.79	6.18	8.52	10.81
Jul	1.11	1.47	2.00	2.46	2.91	3.37	3.89	4.49	5.27	6.49	7.62
Aug	.90	1.27	1.87	2.40	2.94	3.51	4.15	4.92	5.94	7.55	9.07
Sep	.77	1.14	1.74	2.30	2.87	3.49	4.19	5.03	6.15	7.96	9.68
Oct	1.29	1.71	2.34	2.89	3.42	3.98	4.59	5.31	6.25	7.72	9.08
Nov	1.22	1.66	2.33	2.92	3.51	4.12	4.79	5.60	6.65	8.30	9.84
Dec	1.08	1.50	2.17	2.77	3.36	3.99	4.69	5.53	6.63	8.37	10.01
Ann	36.74	39.55	43.15	45.88	48.30	50.64	53.05	55.71	58.94	63.62	67.66

\+ 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

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

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Services

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: BLUE HILL OBS MILTON, MA **COOP ID: 190736**

Climate Division: MA 2 **NWS Call Sign: MQE** **Elevation: 630 Feet** **Lat: 42°13N** **Lon: 71°07W**

Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	15.9	13.4	4	3
Feb	13.0	10.9	4	2
Mar	11.4	8.5	2	2
Apr	3.1	.1	#	1
May	.3	.0	#	1
Jun	.0	.0	#	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	.3	.0	#	0
Nov	3.1	1.6	#	0
Dec	10.9	8.8	1	1
Ann	58.0	43.3	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	19.0	1978	20	47.6	1996	33	1996	11	15	1996
Feb	17.1	1978	7	33.9	1994	33	1978	8	20	1978
Mar	17.2	1984	14	43.9	1984	30	1978	4	13	1978
Apr	15.0	1997	1	24.2	1996	27	1997	2	4	1997
May	5.0	1977	9	7.8	1977	8	1977	10	1	1977
Jun	.0	0	0	.0	0	0	0	0	#	1977
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	6.8	1979	10	6.8	1979	5	1979	11	#	1979
Nov	11.0	1986	19	13.5	1986	12	1971	22	1+	1997
Dec	15.0	1992	12	29.8	1981	20+	1975	26	7	1981
Ann	19.0	Jan 1978	20	47.6	Jan 1996	33+	Jan 1996	11	20	Feb 1978

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	7.6	4.0	1.8	1.0	.1
Feb	6.2	3.0	1.5	.8	.3
Mar	5.1	3.0	1.2	.7	.2
Apr	1.1	.7	.4	.2	.1
May	.1	.1	@	@	.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	.1	@	@	.0
Nov	1.7	.9	.4	.2	@
Dec	5.8	2.7	1.2	.6	.1
Ann	27.7	14.5	6.5	3.5	.8

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	16.9	12.7	9.5	4.3
Feb	17.0	11.9	8.3	4.0
Mar	9.2	5.4	3.6	1.6
Apr	1.5	.9	.6	.3
May	.1	.1	@	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.1	@	@	.0
Nov	2.1	.8	.3	.1
Dec	9.3	5.2	2.9	1.1
Ann	56.2	37.0	25.2	11.4

+ 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

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

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: BLUE HILL OBS MILTON, MA **COOP ID: 190736**

Climate Division: MA 2 **NWS Call Sign: MQE** **Elevation: 630 Feet** **Lat: 42˚13N** **Lon: 71˚07W**

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	5/11	5/08	5/05	5/03	4/30	4/28	4/26	4/23	4/19
32	5/01	4/28	4/26	4/24	4/22	4/20	4/18	4/16	4/13
28	4/23	4/18	4/14	4/11	4/08	4/05	4/02	3/30	3/25
24	4/08	4/04	4/01	3/30	3/27	3/25	3/23	3/20	3/16
20	4/06	4/02	3/29	3/26	3/24	3/21	3/18	3/15	3/10
16	3/30	3/25	3/21	3/17	3/14	3/11	3/07	3/04	2/26

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

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	173	168	164	161	158	155	152	148	143
32	201	193	188	184	180	175	171	166	159
28	231	222	216	211	207	202	197	191	183
24	258	250	245	240	235	231	226	220	212
20	271	263	258	253	249	244	240	234	227
16	290	282	277	272	267	263	258	252	244

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

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: BLUE HILL OBS MILTON, MA **COOP ID: 190736**

Climate Division: MA 2 **NWS Call Sign: MQE** **Elevation: 630 Feet** **Lat: 42˚13N** **Lon: 71˚07W**

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	1207	1034	894	562	271	74	9	22	138	422	698	1040	6371
60	1056	887	734	411	132	13	0	0	37	273	548	892	4983
57	963	803	641	323	77	4	0	0	15	196	459	799	4280
55	901	747	579	267	50	1	0	0	7	152	400	737	3841
50	746	607	426	144	11	0	0	0	1	69	263	586	2853
32	251	173	48	1	0	0	0	0	0	0	13	156	642

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	61	71	190	432	773	1009	1225	1173	898	605	308	108	6853
55	0	0	5	22	127	325	512	460	224	54	11	1	1741
57	0	0	3	15	94	270	450	398	176	35	7	0	1448
60	0	0	2	8	57	195	358	308	116	16	3	0	1063
65	0	0	1	3	21	93	215	173	49	3	0	0	558
70	0	0	0	1	6	32	95	71	15	0	0	0	220

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	16	15	67	221	534	777	987	933	669	371	140	36	16	31	98	319	853	1630	2617	3550	4219	4590	4730	4766
45	4	7	32	120	382	627	832	778	519	233	67	12	4	11	43	163	545	1172	2004	2782	3301	3534	3601	3613
50	0	0	11	60	246	477	677	623	371	127	32	2	0	0	11	71	317	794	1471	2094	2465	2592	2624	2626
55	0	0	4	23	136	334	522	468	231	57	9	0	0	0	4	27	163	497	1019	1487	1718	1775	1784	1784
60	0	0	3	10	61	200	369	317	123	15	2	0	0	0	3	13	74	274	643	960	1083	1098	1100	1100
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	7	9	45	118	295	481	662	619	388	184	61	13	7	16	61	179	474	955	1617	2236	2624	2808	2869	2882

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

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