

Climatology of the United States

No. 20

1971-2000

Station: ORONO, ME

COOP ID: 176430

Climate Division: ME 2

NWS Call Sign:

Elevation: 115 Feet

Lat: 44° 54N

Lon: 68° 40W

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	27.7	8.1	17.9	58	1974	28	25.6	1983	-22	1957	18	10.2	1977	1459	0	.0	.0	.6	20.4	30.3	9.0
Feb	30.9	11.5	21.2	63	1954	19	31.9	1981	-26+	1971	4	14.1	1993	1226	0	.0	.0	.8	15.6	27.1	4.5
Mar	40.2	21.7	31.0	78	1998	31	39.0	1977	-14	1982	1	25.8	1992	1056	0	.0	.0	4.9	5.0	27.0	1.1
Apr	52.0	32.0	42.0	86	1976	19	46.9	1983	3	1954	5	37.6	1989	689	0	.0	.0	18.3	.3	17.1	.0
May	65.8	41.9	53.9	99	1977	23	58.7	1999	22	1985	15	48.6+	1990	353	7	.0	.3	29.8	.0	2.5	.0
Jun	74.8	50.6	62.7	100	1988	15	68.5	1999	34	1967	1	57.8	1985	119	51	@	1.7	30.0	.0	.0	.0
Jul	80.4	56.4	68.4	102	1982	19	72.6	1982	35	1969	8	61.4	1992	37	142	@	3.7	31.0	.0	.0	.0
Aug	77.7	54.5	66.1	98	1987	17	69.0	1988	32	1965	31	62.4	1989	47	81	.0	1.8	31.0	.0	.0	.0
Sep	67.1	45.7	56.4	96	1999	3	65.3	1999	22	1980	30	52.7	1991	270	12	.0	.2	29.8	.0	1.3	.0
Oct	54.7	35.9	45.3	82+	1968	2	51.0	1995	18	1956	25	41.1	1992	611	0	.0	.0	23.5	.0	11.0	.0
Nov	42.8	28.1	35.5	73	1953	20	41.5	1999	-2	1989	24	31.3	1989	887	0	.0	.0	7.3	3.0	21.1	@
Dec	32.0	15.3	23.7	64	1982	4	33.4	1996	-22+	1989	30	8.1	1989	1282	0	.0	.0	1.3	15.5	29.4	3.3
Ann	53.8	33.5	43.7	102	Jul 1982	19	72.6	Jul 1982	-26+	Feb 1971	4	8.1	Dec 1989	8036	293	.0	7.7	208.3	59.8	166.8	17.9

+ 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

Issue Date: February 2004

(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

025-A

**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: ORONO, ME

COOP ID: 176430

Climate Division: ME 2

NWS Call Sign:

Elevation: 115 Feet Lat: 44°54N

Lon: 68°40W

Precipitation (inches)																								
	Precipitation Totals									Mean Number of Days (3)				Precipitation Probabilities (1) Probability that the monthly/annual precipitation will be equal to or less than the indicated amount										
	Means/ Medians(1)		Extremes							Daily Precipitation				Monthly/Annual Precipitation vs Probability Levels 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	3.52	3.33	2.86	1999	18	8.56	1979	.76	1985	9.8	7.1	1.8	.6	1.18	1.51	2.00	2.41	2.81	3.22	3.67	4.19	4.86	5.90	6.86
Feb	2.37	2.36	2.31	1970	4	4.92	1984	.46	1994	7.1	5.6	1.4	.4	.78	1.01	1.34	1.62	1.89	2.17	2.47	2.83	3.29	4.00	4.66
Mar	3.26	2.80	2.31	1984	19	6.21	1983	.79	1981	10.0	7.4	1.8	.6	1.28	1.58	2.01	2.37	2.70	3.05	3.42	3.84	4.39	5.22	5.98
Apr	3.21	3.19	2.33	1983	25	6.77	1983	.55	1985	9.4	6.8	1.8	.6	.92	1.22	1.69	2.09	2.48	2.88	3.33	3.86	4.55	5.63	6.64
May	3.34	3.13	2.02	1951	28	7.13	1989	.08	1992	10.2	7.1	2.4	.6	.82	1.14	1.62	2.06	2.48	2.94	3.44	4.04	4.82	6.07	7.23
Jun	3.56	3.50	2.99	1972	1	8.40	1977	1.08	1979	10.6	7.0	2.5	.6	1.30	1.63	2.11	2.52	2.90	3.29	3.72	4.22	4.85	5.83	6.72
Jul	3.37	3.02	2.48	1976	24	7.71	1976	.93	1978	9.0	6.3	2.2	.9	1.08	1.40	1.87	2.27	2.67	3.07	3.51	4.03	4.70	5.75	6.71
Aug	3.24	2.79	3.32	1965	19	7.79	1991	.49	1978	8.7	5.7	2.0	.8	.77	1.07	1.54	1.97	2.39	2.83	3.33	3.92	4.70	5.94	7.10
Sep	3.84	3.69	4.01	1954	12	9.37	1999	.68	1992	9.1	6.6	2.7	1.0	1.16	1.52	2.07	2.54	2.99	3.47	3.99	4.60	5.40	6.63	7.78
Oct	3.40	3.20	2.40	1990	24	6.46	1981	1.02	1982	8.9	6.3	2.4	.7	1.31	1.63	2.08	2.45	2.80	3.16	3.55	4.01	4.58	5.46	6.27
Nov	3.53	2.98	4.12	1983	25	11.18	1983	1.44	1978	10.0	7.4	2.1	.5	1.30	1.63	2.11	2.50	2.88	3.27	3.70	4.19	4.81	5.78	6.66
Dec	3.63	2.74	4.20	1962	30	8.77	1996	1.33	1974	10.0	7.8	2.0	.7	.95	1.29	1.82	2.28	2.74	3.21	3.75	4.38	5.20	6.50	7.72
Ann	40.27	38.84	4.20	Dec 1962	30	11.18	Nov 1983	.08	May 1992	112.8	81.1	25.1	8.0	28.58	30.84	33.74	35.94	37.90	39.79	41.74	43.90	46.52	50.32	53.60

+ 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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Station: ORONO, ME

COOP ID: 176430

Climate Division: ME 2

NWS Call Sign:

Elevation: 115 Feet

Lat: 44° 54N

Lon: 68° 40W

Snow (inches)																							
Snow Totals															Mean Number of Days (1)								
Means/Medians (1)					Extremes (2)										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	20.4	19.8	2	1	15.0	1982	2	50.0	1987	12	1990	30	4	1992	6.8	6.0	2.7	1.4	.2	-9.9	-9.9	-9.9	-9.9
Feb	15.4	16.0	1	1	14.0	1978	7	32.5	1972	8	1980	17	4	1992	4.8	4.4	2.1	1.0	.1	-9.9	-9.9	-9.9	-9.9
Mar	13.0	13.0	1	#	21.0	1984	14	34.0	1996	8+	1986	7	4	1977	4.5	4.0	1.6	.8	.2	-9.9	-9.9	-9.9	-9.9
Apr	4.4	2.3	#	#	8.5	1975	4	22.0	1973	8	1982	7	1	1982	1.9	1.6	.6	.4	.0	1.3	.3	.2	.0
May	#	.0	#	0	#	1997	7	#+	1997	#+	1997	7	#+	1997	.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	.1	.0	#	0	1.5	1988	9	1.5+	1988	2	1988	9	#+	1996	.2	.1	.0	.0	.0	.2	.0	.0	.0
Nov	4.7	3.3	#	#	12.0	1987	26	14.5	1980	12	1987	26	1+	1997	1.8	1.6	.5	.4	@	1.5	.2	.2	.1
Dec	15.4	14.3	1	#	16.0	1987	16	42.0	1972	16	1987	16	3+	1997	5.1	4.5	1.7	1.1	.1	-9.9	-9.9	-9.9	-9.9
Ann	73.4	68.7	N/A	N/A	21.0	Mar 1984	14	50.0	Jan 1987	16	Dec 1987	16	4+	Feb 1992	25.1	22.2	9.2	5.1	.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

Complete documentation available from:

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Climate Division: ME 2

NWS Call Sign:

Elevation: 115 Feet

Lat: 44° 54N

Lon: 68° 40W

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	6/05	6/01	5/28	5/25	5/23	5/20	5/17	5/14	5/09
32	5/21	5/16	5/13	5/10	5/08	5/05	5/03	4/30	4/25
28	5/06	5/02	4/28	4/26	4/24	4/21	4/19	4/15	4/11
24	4/24	4/19	4/15	4/12	4/09	4/06	4/02	3/29	3/24
20	4/14	4/09	4/05	4/02	3/31	3/28	3/25	3/21	3/17
16	4/06	4/01	3/29	3/26	3/23	3/21	3/18	3/15	3/10
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	9/05	9/09	9/12	9/15	9/18	9/20	9/23	9/26	9/30
32	9/17	9/22	9/25	9/27	9/30	10/02	10/05	10/08	10/12
28	9/30	10/05	10/08	10/10	10/13	10/15	10/18	10/21	10/26
24	10/09	10/16	10/20	10/24	10/28	11/01	11/05	11/09	11/16
20	11/02	11/06	11/09	11/11	11/13	11/15	11/18	11/21	11/25
16	11/13	11/17	11/21	11/24	11/26	11/29	12/02	12/05	12/10
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	136	130	125	121	117	113	109	104	98
32	163	157	152	148	144	140	136	132	125
28	192	185	180	176	172	168	164	159	152
24	228	219	212	207	202	196	191	185	176
20	245	239	234	230	227	223	219	215	208
16	269	261	256	251	247	243	238	233	226

* 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:

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Climate Division: ME 2

NWS Call Sign:

Elevation: 115 Feet Lat: 44° 54N Lon: 68° 40W

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	1459	1226	1056	689	353	119	37	47	270	611	887	1282	8036
60	1304	1086	901	539	220	46	8	9	155	457	737	1127	6589
57	1211	1002	808	449	154	21	2	2	101	366	647	1034	5797
55	1149	946	746	390	116	11	0	1	73	308	587	972	5299
50	994	806	591	248	47	1	0	0	26	176	437	817	4143
32	451	324	134	5	0	0	0	0	0	0	53	332	1299

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	14	22	101	306	676	922	1128	1056	732	412	156	73	5598
55	0	0	0	1	79	243	415	344	115	7	0	0	1204
57	0	0	0	0	55	193	355	284	83	3	0	0	973
60	0	0	0	0	28	128	268	197	47	1	0	0	669
65	0	0	0	0	7	51	142	81	12	0	0	0	293
70	0	0	0	0	1	13	58	18	2	0	0	0	92

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	0	0	16	125	449	696	894	825	507	203	49	4	0	0	16	141	590	1286	2180	3005	3512	3715	3764	3768
45	0	0	3	54	297	546	739	670	359	100	15	1	0	0	3	57	354	900	1639	2309	2668	2768	2783	2784
50	0	0	2	16	169	398	584	515	220	39	2	0	0	0	2	18	187	585	1169	1684	1904	1943	1945	1945
55	0	0	0	5	76	258	429	361	112	7	0	0	0	0	0	5	81	339	768	1129	1241	1248	1248	1248
60	0	0	0	0	26	139	279	219	45	0	0	0	0	0	0	0	26	165	444	663	708	708	708	708
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	0	11	80	262	426	576	521	290	104	17	0	0	0	11	91	353	779	1355	1876	2166	2270	2287	2287

(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.
Complete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normal/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 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.

- | | |
|---|---|
| <ol style="list-style-type: none">a. Temperature/ Precipitation Tables<ol style="list-style-type: none">1. 1971-2000 Monthly Normals2. Cooperative Summary of the Day3. National Weather Service station records4. 1971-2000 serially complete daily datab. Degree Day Table<ol style="list-style-type: none">1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data | <ol style="list-style-type: none">c. Snow Tables<ol style="list-style-type: none">1. Snow Climatology2. Cooperative Summary of the Dayd. Freeze Data Table
1971-2000 serially complete daily data |
|---|---|

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normal.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normal/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