

Climatology of the United States

No. 20

1971-2000

Station: MOUNT MANSFIELD, VT

COOP ID: 435416

Climate Division: VT 1

NWS Call Sign:

Elevation: 3,950 Feet Lat: 44° 32N

Lon: 72° 49W

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	17.9	1.1	9.5	50	1959	22	17.8	1990	-39+	1957	15	.6	1994	1720	0	.0	.0	.0	27.9	30.8	14.9
Feb	19.7	3.7	11.7	51	1999	12	23.1	1984	-36	1967	12	2.8	1979	1492	0	.0	.0	@	24.6	27.8	11.5
Mar	28.1	12.7	20.4	64	1998	31	29.1	1973	-29	1998	13	13.6	1984	1384	0	.0	.0	1.0	21.3	29.4	5.7
Apr	39.1	24.2	31.7	74+	1990	28	39.7	1986	-13	1982	7	25.0	1975	1001	0	.0	.0	5.6	9.6	24.3	.3
May	54.1	37.7	45.9	79	1961	14	53.3	1998	5	1957	3	36.8	1997	593	2	.0	.0	20.1	.9	10.0	.0
Jun	61.9	46.5	54.2	84	1999	7	59.3	1999	20	1980	9	49.3	1993	325	2	.0	.0	27.8	.0	1.4	.0
Jul	65.7	51.5	58.6	82	1988	8	62.2	1988	24	1986	3	53.2	1992	209	10	.0	.0	30.7	.0	.1	.0
Aug	63.7	50.0	56.9	79+	1955	4	60.7	1973	25	1965	29	53.6	1994	256	3	.0	.0	30.5	.0	.3	.0
Sep	55.7	41.9	48.8	78+	1960	8	54.4	1999	16	1963	23	45.9	1994	486	0	.0	.0	23.3	.3	4.5	.0
Oct	44.6	30.7	37.7	71	1956	16	46.9	1971	-5	1962	28	31.9	1974	849	0	.0	.0	10.8	5.2	17.8	.0
Nov	32.5	19.5	26.0	63	1958	18	31.5	1979	-15	1956	26	19.9	1995	1170	0	.0	.0	2.3	17.1	26.5	.8
Dec	22.5	7.2	14.9	60	1966	10	21.2	1982	-40	1962	31	-.2	1989	1556	0	.0	.0	.1	25.8	30.5	9.4
Ann	42.1	27.2	34.7	84	Jun 1999	7	62.2	Jul 1988	-40	Dec 1962	31	-.2	Dec 1989	11041	17	.0	.0	152.2	132.7	203.4	42.6

+ 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/normal/usnormals.html

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1954-2001

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

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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: MOUNT MANSFIELD, VT

COOP ID: 435416

Climate Division: VT 1

NWS Call Sign:

Elevation: 3,950 Feet Lat: 44°32N

Lon: 72°49W

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	5.94	5.96	2.82	1973	20	10.96	1979	2.46	1984	21.6	16.4	3.3	.8	2.67	3.19	3.93	4.52	5.07	5.63	6.22	6.91	7.77	9.07	10.25
Feb	4.49	4.31	2.25	1982	1	9.06	2000	1.91	1978	16.2	12.0	2.6	.5	2.07	2.47	3.01	3.45	3.86	4.27	4.71	5.22	5.85	6.81	7.67
Mar	5.85	5.66	2.20	1985	13	8.04	1972	3.45	1987	17.0	13.5	4.2	1.1	3.73	4.12	4.64	5.03	5.39	5.73	6.10	6.50	6.99	7.72	8.36
Apr	6.28	5.80	3.22	1968	25	18.26	1996	1.49	1999	15.2	11.9	4.7	1.3	2.59	3.16	3.97	4.64	5.26	5.90	6.58	7.37	8.37	9.89	11.27
May	6.16	5.48	3.60	2000	9	11.89	2000	.81	1977	14.9	11.0	4.3	1.5	1.72	2.30	3.19	3.96	4.71	5.50	6.38	7.41	8.75	10.86	12.82
Jun	6.88	6.21	3.25	1989	11	15.28	1998	1.67	1995	16.2	11.4	5.1	1.9	2.76	3.40	4.29	5.03	5.73	6.44	7.21	8.09	9.21	10.93	12.49
Jul	7.47	7.24	4.93	1962	13	13.26	1998	2.99	1982	15.9	11.6	5.2	2.3	3.79	4.42	5.26	5.94	6.56	7.17	7.83	8.58	9.50	10.90	12.14
Aug	8.02	8.24	6.05	1995	4	13.17	1995	4.08	1974	16.4	11.2	5.3	2.2	4.19	4.84	5.73	6.44	7.08	7.73	8.41	9.18	10.14	11.58	12.87
Sep	7.55	7.34	5.29	2001	1	18.71	1999	3.64	1972	16.2	11.7	4.5	2.3	3.62	4.27	5.16	5.88	6.55	7.21	7.92	8.73	9.75	11.28	12.66
Oct	6.39	5.86	4.00	1999	23	12.71	1995	2.78	1974	14.3	10.8	4.4	1.6	2.93	3.50	4.27	4.90	5.49	6.08	6.71	7.42	8.33	9.70	10.93
Nov	7.40	7.57	3.24	1996	9	12.21	1983	3.26	1978	18.7	14.4	4.9	1.7	4.38	4.92	5.64	6.21	6.71	7.22	7.74	8.33	9.05	10.13	11.07
Dec	6.37	5.96	3.68	1984	29	9.92	2000	2.75	1989	21.3	15.6	3.9	1.1	3.27	3.80	4.51	5.08	5.60	6.12	6.67	7.30	8.08	9.25	10.29
Ann	78.80	77.33	6.05	Aug 1995	4	18.71	Sep 1999	.81	May 1977	203.9	151.5	52.4	18.3	61.82	65.23	69.54	72.76	75.59	78.30	81.08	84.12	87.77	93.01	97.48

+ 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: 1954-2001

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

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

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Station: MOUNT MANSFIELD, VT

COOP ID: 435416

Climate Division: VT 1

NWS Call Sign:

Elevation: 3,950 Feet

Lat: 44° 32N

Lon: 72° 49W

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	45.8	47.7	43	44	20.0	1983	16	77.7	1979	84	1982	30	74	1982	18.3	14.7	5.7	2.3	.4	-9.9	-9.9	-9.9	-9.9
Feb	37.3	33.4	62	62	17.0	1981	25	69.3	2000	102	1982	28	95	1982	13.6	10.6	4.5	2.2	.3	-9.9	-9.9	-9.9	-9.9
Mar	39.6	37.5	73	72	17.5	1993	14	73.5	1971	116	1971	9	105	1982	12.6	10.8	4.8	2.5	.6	-9.9	-9.9	-9.9	-9.9
Apr	24.7	23.0	69	68	18.0	1996	17	50.0	1975	135	1996	18	107	1982	7.3	6.3	3.2	1.9	.5	-9.9	-9.9	-9.9	-9.9
May	3.6	.8	30	30	12.0	1983	10	24.0	1997	112	1971	5	74	1971	1.5	1.0	.5	.2	@	-9.9	-9.9	-9.9	-9.9
Jun	.1	.0	1	0	1.5	1972	10	1.5	1972	47	1997	1	12	1997	.1	@	.0	.0	.0	.3	.2	.2	.2
Jul	#	.0	0	0	#	1979	5	#	1979	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Aug	.0	.0	0	0	.2	1986	28	.2	1986	0	0	0	0	0	@	.0	.0	.0	.0	.0	.0	.0	.0
Sep	.4	.0	#	0	4.0	1986	16	4.0	1986	4	1986	16	#+	1996	.3	.2	@	.0	.0	.1	@	.0	.0
Oct	8.6	5.9	1	#	13.3	1978	27	26.6	1997	16	1997	28	4+	1999	4.2	3.0	1.2	.4	.1	5.3	2.6	1.5	.5
Nov	37.6	35.0	8	8	15.0	1990	11	68.8	1976	45	1990	14	23	1976	11.1	9.0	4.5	2.6	.5	18.0	12.8	9.9	3.9
Dec	45.3	44.3	25	22	15.0	1981	6	66.5	1995	65	1981	29	53	1981	16.9	13.0	5.2	2.4	.5	-9.9	-9.9	-9.9	-9.9
Ann	243.0	227.6	N/A	N/A	20.0	Jan 1983	16	77.7	Jan 1979	135	Apr 1996	18	107	Apr 1982	85.9	68.6	29.6	14.5	2.9	-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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No. 20 1971-2000

Station: MOUNT MANSFIELD, VT

COOP ID: 435416

Climate Division: VT 1

NWS Call Sign:

Elevation: 3,950 Feet

Lat: 44°32N

Lon: 72°49W

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	7/14	7/06	7/01	6/27	6/23	6/19	6/14	6/09	6/02
32	6/28	6/22	6/17	6/13	6/09	6/05	6/01	5/27	5/20
28	6/11	6/05	5/31	5/27	5/24	5/20	5/16	5/12	5/06
24	6/03	5/28	5/23	5/19	5/15	5/11	5/07	5/02	4/25
20	5/17	5/11	5/07	5/04	4/30	4/27	4/23	4/19	4/13
16	5/06	5/02	4/28	4/25	4/23	4/20	4/17	4/14	4/09
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	8/19	8/24	8/28	9/01	9/04	9/07	9/10	9/14	9/20
32	8/29	9/03	9/06	9/09	9/12	9/15	9/18	9/22	9/27
28	9/13	9/18	9/21	9/24	9/27	9/30	10/03	10/06	10/11
24	9/19	9/24	9/28	10/01	10/04	10/07	10/10	10/14	10/19
20	9/26	10/02	10/06	10/10	10/13	10/16	10/19	10/23	10/29
16	10/11	10/16	10/20	10/24	10/27	10/30	11/03	11/07	11/13
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	100	90	84	78	72	67	61	54	44
32	121	112	105	100	95	90	84	78	69
28	153	144	137	131	125	120	114	107	97
24	167	158	152	147	142	137	131	125	116
20	189	181	175	170	165	160	155	148	140
16	210	202	196	191	187	182	177	171	163

* 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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No. 20
1971-2000**

Station: MOUNT MANSFIELD, VT

COOP ID: 435416

Climate Division: VT 1 NWS Call Sign: Elevation: 3,950 Feet Lat: 44° 32N Lon: 72° 49W

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	1720	1492	1384	1001	593	325	209	256	486	849	1170	1556	11041
60	1565	1352	1229	851	447	191	95	122	337	694	1020	1401	9304
57	1472	1268	1136	761	364	126	49	65	253	601	930	1308	8333
55	1410	1212	1074	701	313	92	27	37	201	541	870	1246	7724
50	1255	1072	919	554	202	32	5	5	97	395	720	1091	6347
32	697	575	382	126	13	0	0	0	1	51	215	546	2606

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	0	7	21	116	444	667	825	770	505	225	35	13	3628
55	0	0	0	0	31	68	138	94	15	2	0	0	348
57	0	0	0	0	21	43	99	60	7	0	0	0	230
60	0	0	0	0	10	18	52	24	1	0	0	0	105
65	0	0	0	0	2	2	10	3	0	0	0	0	17
70	0	0	0	0	0	0	0	0	0	0	0	0	0

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	6	44	227	432	578	526	285	103	13	0	0	0	6	50	277	709	1287	1813	2098	2201	2214	2214
45	0	0	1	16	135	291	423	372	165	47	3	0	0	0	1	17	152	443	866	1238	1403	1450	1453	1453
50	0	0	0	7	63	172	273	229	82	14	0	0	0	0	0	7	70	242	515	744	826	840	840	840
55	0	0	0	1	23	80	141	111	31	0	0	0	0	0	0	1	24	104	245	356	387	387	387	387
60	0	0	0	0	8	28	50	32	6	0	0	0	0	0	0	0	8	36	86	118	124	124	124	124
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	0	2	18	109	208	297	256	121	38	2	0	0	0	2	20	129	337	634	890	1011	1049	1051	1051

(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