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: SAINT JOHNSBURY, VT **COOP ID: 437054**

Climate Division: VT 1 **NWS Call Sign: 1V4** **Elevation: 699 Feet** **Lat: 44˚25N** **Lon: 72˚01W**

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	27.6	6.4	17.0	63+	1950	5	27.7	1990	-35	1957	14	7.9	1982	1488	0	.0	.0	.6	20.0	29.9	11.4
Feb	32.0	8.3	20.2	62	1981	21	31.0	1981	-43	1943	16	9.3	1979	1256	0	.0	.0	1.3	14.8	26.7	8.9
Mar	42.4	19.6	31.0	84	1998	31	37.8	1977	-27	1950	4	24.3	1984	1055	0	.0	.0	7.5	5.7	26.5	2.9
Apr	55.9	31.1	43.5	92	1990	28	49.2	1987	-2	1954	4	36.9	1972	645	0	.0	.1	20.8	.3	17.2	.0
May	69.9	42.7	56.3	94	1929	30	61.5	1998	20+	1950	9	50.6	1997	281	11	.0	.7	30.3	.0	4.4	.0
Jun	77.1	52.1	64.6	98+	1944	29	68.8	1999	30+	1944	4	61.3	1980	72	59	.0	1.9	30.0	.0	.1	.0
Jul	80.8	56.8	68.8	99+	1953	18	72.2	1994	36	1969	8	65.0	1992	13	129	.0	3.0	31.0	.0	.0	.0
Aug	78.2	55.4	66.8	98+	1944	11	70.3	1973	33	1965	31	64.1	1982	32	88	.0	.9	31.0	.0	.0	.0
Sep	69.3	47.4	58.4	95	1939	16	63.5	1999	22+	1941	30	54.7	1978	207	9	.0	.1	29.9	.0	1.4	.0
Oct	57.6	36.4	47.0	89	1930	12	53.2	1971	13+	1936	28	41.6	1974	559	0	.0	.0	25.4	@	11.7	.0
Nov	43.4	27.6	35.5	77	1950	2	40.6	1999	-13	1938	26	30.8	1980	884	0	.0	.0	8.7	3.2	20.4	.1
Dec	31.5	13.7	22.6	67	1998	7	30.7	1996	-42	1933	30	5.3	1989	1314	0	.0	.0	.9	15.7	29.2	5.2
Ann	55.5	33.1	44.3	99+	Jul 1953	18	72.2	Jul 1994	-43	Feb 1943	16	5.3	Dec 1989	7806	296	.0	6.7	217.4	59.7	167.5	28.5

\+ 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: SAINT JOHNSBURY, VT

COOP ID: 437054

Climate Division: VT 1 **NWS Call Sign: 1V4** **Elevation: 699 Feet** **Lat: 44˚25N** **Lon: 72˚01W**

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	2.88	2.38	1.82	1986	26	6.80	1979	.41	1981
Feb	2.04	1.97	2.12	1969	25	4.93	1981	.37	1987
Mar	2.57	2.63	1.90	1936	12	4.22	1972	1.01	1981
Apr	2.74	2.44	1.62	1945	26	6.23+	2000	.59	1999
May	3.35	3.14	2.02	1956	27	7.88	1984	.55	1982
Jun	3.88	3.78	3.44	1973	30	9.65	1973	1.24	1995
Jul	3.84	3.38	3.48	1941	12	7.24	1974	1.19	1977
Aug	4.21	3.82	4.33	1989	5	7.73	1989	1.56	1984
Sep	3.47	3.23	4.53	1999	17	8.59	1999	.95+	1972
Oct	3.24	2.66	2.55+	1926	6	6.45	1990	.84	1994
Nov	3.32	3.36	4.41	1927	4	7.04	1983	1.51	1978
Dec	3.00	2.63	2.52	1952	12	7.91	1973	1.14	1989
Ann	38.54	36.47	4.53	Sep 1999	17	9.65	Jun 1973	.37	Feb 1987

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	16.0	6.8	1.8	.3
Feb	11.8	5.3	1.2	.1
Mar	13.3	6.5	1.5	.2
Apr	12.7	7.1	1.4	.3
May	13.8	7.7	2.2	.6
Jun	14.2	8.3	2.5	.5
Jul	12.9	8.5	2.5	.6
Aug	13.2	7.8	2.7	.8
Sep	13.1	7.5	2.2	.5
Oct	13.2	6.6	2.0	.7
Nov	14.0	6.9	2.2	.4
Dec	16.2	7.3	1.4	.5
Ann	164.4	86.3	23.6	5.5

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	.85	1.13	1.54	1.89	2.24	2.60	2.99	3.46	4.06	5.00	5.88
Feb	.67	.87	1.15	1.39	1.62	1.86	2.12	2.43	2.82	3.43	4.00
Mar	1.37	1.58	1.85	2.07	2.28	2.48	2.69	2.93	3.22	3.67	4.06
Apr	1.05	1.31	1.67	1.97	2.26	2.55	2.87	3.23	3.70	4.41	5.07
May	.83	1.15	1.63	2.07	2.49	2.95	3.45	4.05	4.83	6.07	7.23
Jun	1.30	1.66	2.20	2.66	3.10	3.55	4.04	4.62	5.37	6.52	7.58
Jul	1.78	2.11	2.58	2.95	3.30	3.65	4.03	4.45	4.99	5.80	6.54
Aug	1.63	2.02	2.58	3.04	3.48	3.92	4.40	4.96	5.67	6.76	7.75
Sep	1.20	1.52	2.00	2.40	2.79	3.19	3.62	4.13	4.78	5.78	6.70
Oct	1.15	1.46	1.90	2.27	2.62	2.99	3.38	3.84	4.43	5.33	6.17
Nov	1.60	1.89	2.28	2.59	2.88	3.17	3.48	3.83	4.27	4.93	5.53
Dec	1.06	1.34	1.75	2.09	2.42	2.76	3.13	3.57	4.12	4.97	5.75
Ann	30.01	31.71	33.86	35.48	36.89	38.25	39.64	41.17	43.00	45.64	47.89

\+ 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: SAINT JOHNSBURY, VT **COOP ID: 437054**

Climate Division: VT 1 **NWS Call Sign: 1V4** **Elevation: 699 Feet** **Lat: 44°25N** **Lon: 72°01W**

Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	22.7	21.5	10	10
Feb	16.8	13.9	12	12
Mar	15.1	14.3	7	6
Apr	5.3	4.1	#	1
May	.0	.0	#	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	#	.0	0	0
Oct	.5	.0	#	0
Nov	6.6	4.3	1	0
Dec	20.8	20.0	5	4
Ann	87.8	78.1	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	11.5	1987	11	45.5	1979	30	1971	23	23	1971
Feb	12.0	1978	7	33.1	1993	36	1971	8	30	1982
Mar	20.5	1984	14	32.2	1993	41+	1971	9	30	1971
Apr	8.0	1974	9	14.6	1996	20	1971	1	4	1971
May	.5	1986	4	.5	1986	0	0	0	#	2000
Jun	.0	0	0	.0	0	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	#	1992	30	#+	1992	0	0	0	0	0
Oct	3.0	1979	9	3.5	1979	5	1976	26	#	2000
Nov	11.5	1971	25	24.0	1971	18	1971	30	3	1971
Dec	12.0	1996	8	45.2	1981	22	1995	21	14+	1972
Ann	20.5	Mar 1984	14	45.5	Jan 1979	41+	Mar 1971	9	30+	Feb 1982

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	12.0	7.1	2.5	1.3	.2
Feb	9.2	5.2	2.2	.9	.1
Mar	7.7	4.5	1.6	.7	.1
Apr	2.9	1.6	.6	.2	.0
May	.0	.0	.0	.0	.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	.6	.2	@	.0	.0
Nov	4.8	2.1	.6	.2	.1
Dec	11.4	6.6	2.2	1.0	.1
Ann	48.6	27.3	9.7	4.3	.6

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	28.9	26.5	24.1	16.2
Feb	27.5	25.8	24.0	16.9
Mar	21.8	17.9	15.0	8.5
Apr	3.3	1.5	.7	.2
May	.0	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.1	.1	@	.0
Nov	6.6	2.7	.9	.3
Dec	23.7	18.1	14.8	5.8
Ann	111.9	92.6	79.5	47.9

+ 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:
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: SAINT JOHNSBURY, VT **COOP ID: 437054**

Climate Division: VT 1 **NWS Call Sign: 1V4** **Elevation: 699 Feet** **Lat: 44˚25N** **Lon: 72˚01W**

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	6/17	6/12	6/08	6/05	6/02	5/30	5/27	5/24	5/19
32	5/30	5/26	5/23	5/21	5/19	5/17	5/14	5/11	5/08
28	5/14	5/11	5/09	5/07	5/06	5/04	5/02	4/30	4/27
24	5/02	4/28	4/25	4/22	4/20	4/18	4/15	4/12	4/08
20	4/20	4/17	4/14	4/11	4/09	4/07	4/05	4/02	3/29
16	4/14	4/10	4/07	4/04	4/02	3/30	3/28	3/25	3/21

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	9/02	9/06	9/09	9/11	9/14	9/16	9/19	9/22	9/26
32	9/17	9/20	9/23	9/25	9/27	9/29	10/02	10/04	10/08
28	9/26	9/30	10/02	10/05	10/07	10/09	10/12	10/15	10/19
24	10/06	10/11	10/14	10/17	10/20	10/23	10/25	10/29	11/02
20	10/16	10/21	10/25	10/29	11/01	11/04	11/08	11/12	11/17
16	11/03	11/07	11/11	11/14	11/17	11/19	11/22	11/26	11/30

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	123	116	111	107	103	99	94	89	82
32	143	139	136	133	131	128	126	123	119
28	167	163	159	156	154	151	148	145	140
24	198	193	189	185	182	179	175	172	166
20	226	219	214	209	205	201	196	191	184
16	250	242	237	232	228	224	219	214	206

***** 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: SAINT JOHNSBURY, VT **COOP ID: 437054**

Climate Division: VT 1 **NWS Call Sign: 1V4** **Elevation: 699 Feet** **Lat: 44˚25N** **Lon: 72˚01W**

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	1488	1256	1055	645	281	72	13	32	207	559	884	1314	7806
60	1333	1116	900	497	160	18	0	3	97	408	734	1159	6425
57	1240	1032	807	410	105	6	0	0	53	321	644	1066	5684
55	1178	976	745	354	75	2	0	0	34	268	584	1004	5220
50	1023	836	590	229	27	0	0	0	8	153	435	849	4150
32	486	361	142	10	0	0	0	0	0	2	52	354	1407

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	21	29	110	355	754	977	1139	1079	791	466	158	63	5942
55	0	0	0	9	116	289	426	366	135	19	0	0	1360
57	0	0	0	5	83	233	364	304	95	11	0	0	1095
60	0	0	0	2	46	155	272	214	48	4	0	0	741
65	0	0	0	0	11	59	129	88	9	0	0	0	296
70	0	0	0	0	1	11	37	18	0	0	0	0	67

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	1	3	34	171	528	762	928	858	577	256	60	3	1	4	38	209	737	1499	2427	3285	3862	4118	4178	4181
45	1	0	10	87	378	612	773	703	428	147	24	2	1	1	11	98	476	1088	1861	2564	2992	3139	3163	3165
50	0	0	3	41	241	463	618	549	287	69	8	0	0	0	3	44	285	748	1366	1915	2202	2271	2279	2279
55	0	0	1	17	132	316	463	394	167	29	1	0	0	0	1	18	150	466	929	1323	1490	1519	1520	1520
60	0	0	0	6	60	185	309	246	85	7	0	0	0	0	0	6	66	251	560	806	891	898	898	898
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	0	0	30	127	341	490	612	560	353	157	32	2	0	0	30	157	498	988	1600	2160	2513	2670	2702	2704

(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