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

COOP ID: 431580

Lon: 73°14W

Station: CORNWALL, VT

Climate Division: VT 2

Elevation: 400 Feet Lat: 43°58N

										Гетр	eratur	re (°F)									
	Mea	n (1)						Extr	emes					Degree Base To	Days (1) emp 65		Mean	Numb	er of I	Days (3)	l
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	27.1	8.8	18.0	64	1995	15	27.9	1990	-30	1994	27	6.4	1994	1459	0	.0	.0	.9	19.4	29.3	8.4
Feb	30.0	9.6	19.8	62	1957	26	31.6	1981	-29+	1979	12	8.9	1979	1266	0	.0	.0	1.3	14.8	26.1	6.7
Mar	40.7	21.5	31.1	82+	1946	29	39.1	1973	-19	1938	4	22.8	1984	1050	0	.0	.0	6.7	5.5	26.1	1.3
Apr	54.6	34.1	44.4	90+	1976	18	49.5	1986	2	1972	7	37.8	1972	620	0	.0	.1	20.1	.2	14.1	.0
May	68.2	46.1	57.2	95	1929	30	63.6	1975	20	1966	10	51.6	1997	261	16	.0	.2	30.4	.0	1.9	.0
Jun	76.1	54.6	65.4	99	1964	30	69.2	1999	31	1972	11	61.2	1985	64	74	.0	1.2	30.0	.0	@	.0
Jul	81.0	59.3	70.2	100	1953	18	74.7	1975	39	1978	2	64.9	1992	13	173	.0	2.1	31.0	.0	.0	.0
Aug	78.0	57.0	67.5	100+	1933	1	72.5	1973	32+	1982	29	63.4	1982	36	114	@	.8	31.0	.0	.1	.0
Sep	69.2	48.4	58.8	96	1929	4	63.2	1999	22+	2000	29	55.2	1984	196	10	.0	.2	29.9	.0	.9	.0
Oct	57.2	37.4	47.3	88	1963	7	53.7	1971	13	1974	19	42.8	1974	548	0	.0	.0	24.5	.0	9.3	.0
Nov	44.5	28.3	36.4	77	1948	6	42.9	1999	-5	1938	26	31.3	1996	859	0	.0	.0	9.3	2.8	19.3	.0
Dec	32.7	16.3	24.5	67	1941	5	30.6	1996	-32	1933	30	7.5	1989	1257	0	.0	.0	1.9	14.0	28.9	3.3
					Jul			Jul		Dec			Jan								

⁺ Also occurred on an earlier date(s)

35.1

45.1

54.9

Ann

100 +

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

18

74.7

1975

-32

1933

30

6.4

1994

7629

387

NWS Call Sign:

Issue Date: February 2004 005-A

1953

4.6

217.0

56.7

156.0

19.7

[@] Denotes mean number of days greater than 0 but less than .05

⁽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

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Climate Division: VT 2 NWS Call Sign: Elevation: 400 Feet Lat: 43°58N Lon: 73°14W

										Pı	recipi	tation	(incl	nes)										
	Me	ans/	P	recip	itatio	on Total					ean N of D	ays (3	3)	Proba	ability th		nonthly/	annual j	precipita ated an	babilit ation withount	ll be equ		less tha	an the
	Medi	ans(1)				Extremes	•			L	any Fie	стриацо	11		Th	ese value	s were de	termined	from the	incomplet	te gamma	distribut	ion	
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	2.41	2.15	2.15	1935	9	5.71	1979	.30	1981	11.0	6.0	1.7	.3	.59	.81	1.16	1.48	1.79	2.11	2.48	2.91	3.48	4.38	5.23
Feb	1.88	1.71	2.08	1981	2	5.90	1981	.31	1987	7.8	4.2	1.0	.2	.41	.58	.86	1.11	1.36	1.63	1.93	2.29	2.76	3.52	4.23
Mar	2.43	2.40	2.05	1978	27	3.46	1978	.82	1981	9.1	5.9	1.4	.3	1.26	1.46	1.73	1.94	2.14	2.34	2.54	2.78	3.07	3.51	3.90
Apr	2.65	2.40	2.06	1968	25	5.56	1983	1.07	1986	10.2	6.3	1.6	.1	1.11	1.35	1.68	1.96	2.22	2.49	2.77	3.10	3.51	4.15	4.72
May	3.35	3.07	2.40	1928	22	6.91	1984	.41	1977	12.6	8.1	2.1	.5	.95	1.27	1.75	2.17	2.57	3.00	3.47	4.02	4.74	5.87	6.93
Jun	3.14	3.01	3.61	1952	1	6.06	1998	.60	1988	12.1	7.8	1.8	.3	1.08	1.38	1.81	2.17	2.52	2.89	3.28	3.74	4.33	5.24	6.08
Jul	3.51	3.59	2.40	1990	23	6.09	1996	1.44	1983	11.6	7.7	2.3	.5	1.67	1.97	2.39	2.73	3.04	3.35	3.68	4.06	4.54	5.26	5.90
Aug	4.11	3.75	4.70	1986	18	9.25	1986	1.03	1999	11.5	7.5	2.7	.8	1.60	1.98	2.52	2.97	3.40	3.84	4.31	4.85	5.55	6.61	7.58
Sep	3.66	3.35	3.98	1999	17	8.23	1999	1.67	1984	10.6	7.1	2.5	.9	1.56	1.89	2.36	2.74	3.09	3.45	3.84	4.29	4.85	5.71	6.48
Oct	3.31	3.13	3.15	1932	6	9.18	1995	.35	1994	10.7	6.6	2.1	.7	.79	1.10	1.58	2.01	2.44	2.89	3.40	4.01	4.80	6.06	7.24
Nov	3.06	2.93	2.50	1927	2	5.18	1988	1.36	1991	11.2	6.9	2.1	.5	1.56	1.81	2.16	2.43	2.68	2.94	3.20	3.51	3.88	4.45	4.96
Dec	2.59	2.25	2.71	1973	21	7.44	1973	.84	1988	11.1	6.3	1.4	.3	.78	1.03	1.39	1.71	2.02	2.34	2.69	3.10	3.64	4.47	5.25
Ann	36.10	36.18	4.70	Aug 1986	18	9.25	Aug 1986	.30	Jan 1981	129.5	80.4	22.7	5.4	27.58	29.27	31.41	33.03	34.45	35.81	37.21	38.74	40.60	43.26	45.54

⁺ Also occurred on an earlier date(s)

Complete documentation available from:

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

[#] 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

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Climate Division: VT 2 NWS Call Sign: Elevation: 400 Feet Lat: 43°58N Lon: 73°14W

										Snov	w (incl	hes)											
						Sno	ow To	tals									Mea	ın Nu	mber	of Da	ys (1)		
	Mean	s/Medi	ians (1))					Extre	mes (2)							ow Fa					Depth esholo	
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	19.0	16.0	6	4	12.5	1978	18	45.0	1978	25	1994	18	16	1971	7.0	5.0	2.0	1.2	.1	-9.9	-9.9	-9.9	-9.9
Feb	13.3	13.5	8	6	9.5	1972	26	27.0	1972	22+	2000	20	17	1987	5.5	4.1	1.7	.9	.0	-9.9	-9.9	-9.9	-9.9
Mar	12.4	10.6	4	2	11.0	1994	3	35.5	1971	26	1971	11	20	1994	4.0	3.3	1.4	.7	@	-9.9	-9.9	-9.9	-9.9
Apr	3.8	1.0	#	#	12.0	1983	17	16.0	1983	11	1975	7	1+	2000	1.1	1.0	.3	.2	@	.8	.3	.1	.1
May	#	.0	#	0	#	1977	9	#+	1977	#	1986	4	#	1986	.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	.4	.0	#	0	5.6	2000	30	5.6	2000	5	2000	30	#+	2000	.3	.2	@	@	.0	.1	@	@	.0
Nov	5.9	4.0	#	#	14.0	1971	25	23.5	1971	14	1971	25	1	1986	1.7	1.4	.6	.3	@	.9	.4	.1	.0
Dec	14.0	14.5	3	1	14.0	1978	25	37.0	1972	15+	1984	7	11	1975	5.4	4.4	1.5	.8	@	-9.9	-9.9	-9.9	-9.9
Ann	68.8	59.6	N/A	N/A	14.0+	Dec 1978	25	45.0	Jan 1978	26	Mar 1971	11	20	Mar 1994	25.0	19.4	7.5	4.1	.1	-9.9	-9.9	-9.9	-9.9

⁺ Also occurred on an earlier date(s) #Denotes trace amounts

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

[@] 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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				Freez	e Data				
			Spri	ng Freeze D	ates (Month/	(Day)			
Temp (F)		P	robability of	later date i	n spring (thr	u Jul 31) tha	n indicated((*)	
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	6/13	6/07	6/02	5/29	5/26	5/22	5/18	5/13	5/07
32	5/26	5/20	5/16	5/12	5/09	5/05	5/02	4/27	4/22
28	5/11	5/06	5/02	4/28	4/25	4/22	4/19	4/15	4/09
24	4/29	4/24	4/21	4/18	4/15	4/12	4/09	4/06	4/01
20	4/21	4/16	4/12	4/09	4/07	4/04	4/01	3/28	3/23
16	4/10	4/05	4/01	3/29	3/26	3/23	3/20	3/16	3/11
1			Fal	l Freeze Da	tes (Month/D	ay)	•		•
To (E)		Pro	bability of ea	arlier date i	n fall (beginn	ing Aug 1) t	han indicate	d(*)	
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	9/05	9/10	9/14	9/17	9/20	9/23	9/26	9/30	10/05
32	9/14	9/19	9/24	9/27	9/30	10/04	10/07	10/11	10/17
28	9/25	9/30	10/04	10/07	10/10	10/13	10/16	10/20	10/25
24	10/02	10/09	10/14	10/18	10/22	10/26	10/31	11/05	11/12
20	10/21	10/26	10/30	11/02	11/06	11/09	11/12	11/16	11/21
16	11/01	11/06	11/11	11/14	11/18	11/21	11/24	11/29	12/04
1			1	Freeze F	ree Period		•		•
Tomp (F)			Probability	of longer th	an indicated	freeze free p	eriod (Days)		
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	141	132	126	121	117	112	107	101	92
32	169	160	154	149	144	139	134	128	119
28	190	182	176	172	167	162	157	152	144
24	215	206	200	195	190	185	179	173	164
20	237	229	222	217	212	207	202	196	187
16	261	253	246	241	236	231	225	219	210

^{*} 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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				Deg	ree Days to	o Selected	Base Tem	peratures	(°F)				
Base						Heatin	g Degree	Days (1)					
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1459	1266	1050	620	261	64	13	36	196	548	859	1257	7629
60	1304	1126	895	472	146	16	0	6	88	396	709	1102	6260
57	1211	1042	802	387	94	5	0	1	46	309	619	1009	5525
55	1149	986	740	333	67	2	0	0	28	255	559	947	5066
50	994	846	587	211	24	0	0	0	5	140	410	792	4009
32	463	372	147	9	0	0	0	0	0	1	45	301	1338

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	28	31	119	379	779	1000	1183	1101	804	476	176	67	6143
55	0	0	0	13	133	312	470	388	142	17	0	0	1475
57	0	0	0	7	98	255	408	326	100	9	0	0	1203
60	0	0	0	2	57	176	315	238	52	3	0	0	843
65	0	0	0	0	16	74	173	114	10	0	0	0	387
70	0	0	0	0	3	18	70	37	1	0	0	0	129

										Gro	wing	Degre	e Uni	ts (2)										
Base					Growing	g Degree	Units (M	Ionthly)					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	3	5	42	192	537	769	941	861	592	265	75	6	3	8	50	242	779	1548	2489	3350	3942	4207	4282	4288
45	0 0 19 105 385 619 786 706 443 159 37											2	0	0	19	124	509	1128	1914	2620	3063	3222	3259	3261
50	0 0 6 55 246 469 631 551 299 77 13											0	0	0	6	61	307	776	1407	1958	2257	2334	2347	2347
55	0	0	2	22	138	325	476	397	176	29	2	0	0	0	2	24	162	487	963	1360	1536	1565	1567	1567
60	0	0	0	10	62	193	322	252	87	6	0	0	0	0	0	10	72	265	587	839	926	932	932	932
Base	Growing Degree Units for Corn (Monthly)														Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)		
50/86	86 0 1 26 122 324 492 629 561 351 146 39											3	0	1	27	149	473	965	1594	2155	2506	2652	2691	2694

(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

- c. Snow Tables
 - 1. Snow Climatology
 - 2. Cooperative Summary of the Day
- d. Freeze Data Table

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

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