

Climatography of the United States

No. 20

1971-2000

Station: STONY CREEK 1 E, VA

COOP ID: 448129

Climate Division: VA 1

NWS Call Sign:

Elevation: 70 Feet

Lat: 36° 57N

Lon: 77° 24W

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	47.4	26.7	37.1	77	1970	29	46.2	1974	-8	1985	21	26.8	1977	866	0	.0	.0	13.6	2.8	22.4	.1
Feb	51.4	28.9	40.2	85	1985	24	47.5	1990	-6+	1979	11	28.9	1979	695	0	.0	.0	15.5	1.9	19.1	.1
Mar	60.9	35.8	48.4	92	1989	30	53.3	2000	12+	1996	10	42.8	1996	516	0	.0	.1	25.1	.2	12.0	.0
Apr	71.6	43.6	57.6	100	1985	23	65.3	1985	20	1966	2	52.0	1975	238	17	@	1.2	29.3	.0	3.4	.0
May	79.7	53.2	66.5	98+	1991	31	73.2	1991	27	1966	11	62.2+	1997	70	114	.0	3.2	31.0	.0	.1	.0
Jun	87.5	62.2	74.9	103+	1988	24	78.3	1981	38	1967	2	70.4	1979	4	299	.4	10.7	30.0	.0	.0	.0
Jul	91.1	66.4	78.8	105	1983	22	83.0	1986	47	1988	2	75.5	1979	0	427	2.3	17.2	31.0	.0	.0	.0
Aug	88.3	64.1	76.2	106+	1983	23	79.9	1983	42+	1976	31	72.9	1992	0	347	.5	12.6	31.0	.0	.0	.0
Sep	82.3	57.6	70.0	105	1983	12	75.0	1998	32	1969	30	66.4	1974	24	172	.2	4.5	30.0	.0	.0	.0
Oct	70.9	44.4	57.7	94	1986	5	64.5	1984	18	1962	27	51.6	1988	260	31	.0	.4	30.7	.0	3.3	.0
Nov	61.5	36.2	48.9	85+	1974	3	56.8	1985	11	1970	25	42.4	1976	487	2	.0	.0	25.5	.1	11.7	.0
Dec	51.5	29.1	40.3	82	1998	7	47.5	1971	2	1983	26	29.9	1989	766	0	.0	.0	17.5	1.3	20.9	.0
Ann	70.3	45.7	58.1	106+	Aug 1983	23	83.0	Jul 1986	-8	Jan 1985	21	26.8	Jan 1977	3926	1409	3.4	49.9	310.2	6.3	92.9	.2

+ 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: 1948-2001

(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: STONY CREEK 1 E, VA

COOP ID: 448129

Climate Division: VA 1

NWS Call Sign:

Elevation: 70 Feet

Lat: 36°57N

Lon: 77°24W

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	4.26	4.14	2.65	1976	27	8.15	1987	.49	1981	9.3	7.2	2.7	1.2	1.37	1.77	2.37	2.88	3.37	3.88	4.44	5.10	5.94	7.25	8.46
Feb	3.34	2.98	2.61	1988	12	6.43	1982	.77	1976	8.1	6.2	2.1	1.0	1.03	1.35	1.82	2.23	2.62	3.03	3.48	4.00	4.69	5.75	6.73
Mar	4.70	4.71	3.85	1998	9	8.23	1975	1.63	1985	9.2	7.0	3.3	1.2	1.97	2.39	2.99	3.49	3.95	4.42	4.92	5.50	6.24	7.36	8.38
Apr	3.46	3.38	3.25	2000	18	7.97	1989	.00	1985	7.0	5.7	2.3	.9	.69	1.18	1.76	2.23	2.67	3.13	3.64	4.23	5.00	6.19	7.30
May	4.33	3.97	4.00	1984	30	7.37	1981	.82+	1991	7.8	6.3	3.1	1.1	1.53	1.94	2.53	3.03	3.50	3.99	4.52	5.14	5.93	7.15	8.28
Jun	4.04	3.83	7.50	1981	7	8.76	1981	.71	1994	7.9	6.0	2.5	1.0	.89	1.26	1.85	2.39	2.92	3.49	4.13	4.90	5.91	7.52	9.05
Jul	4.54	4.35	4.82	1986	24	11.05	1982	1.66	1991	8.6	6.5	2.6	1.3	1.58	2.01	2.63	3.15	3.66	4.17	4.74	5.39	6.23	7.53	8.72
Aug	4.43	4.02	4.17	1965	24	11.64	1992	1.00	1997	7.7	6.0	3.0	1.4	1.25	1.67	2.31	2.86	3.40	3.97	4.60	5.34	6.30	7.81	9.21
Sep	4.42	3.42	6.16	1985	27	14.17	1999	.85	1978	6.8	5.2	2.6	1.3	.84	1.23	1.88	2.48	3.09	3.74	4.48	5.38	6.57	8.48	10.29
Oct	3.50	3.26	4.25	1971	23	8.72	1977	.00	2000	6.3	4.9	2.4	1.2	.51	.97	1.57	2.06	2.55	3.06	3.63	4.31	5.20	6.61	7.94
Nov	3.12	2.88	2.89	1993	28	8.05	1985	.87	1998	6.8	5.0	2.4	.9	.93	1.22	1.67	2.05	2.42	2.81	3.24	3.74	4.39	5.40	6.35
Dec	2.92	2.84	2.36	1986	24	6.20	1973	.93	1988	7.8	5.6	1.6	.7	.81	1.09	1.51	1.88	2.24	2.61	3.03	3.52	4.16	5.16	6.10
Ann	47.06	46.62	7.50	Jun 1981	7	14.17	Sep 1999	.00+	Oct 2000	93.3	71.6	30.6	13.2	34.93	37.31	40.35	42.64	44.67	46.62	48.62	50.83	53.50	57.35	60.66

+ 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: 1948-2001

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

Complete documentation available from:
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Station: STONY CREEK 1 E, VA

COOP ID: 448129

Climate Division: VA 1

NWS Call Sign:

Elevation: 70 Feet

Lat: 36°57N

Lon: 77°24W

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	2.8	.5	#	#	9.5	1982	15	14.0	1996	13	1996	9	5	1996	1.3	1.1	.4	.2	.0	2.4	1.6	1.0	.2
Feb	3.3	.5	#	#	11.0	1979	19	25.0	1989	19	1989	19	2	1996	1.1	1.0	.6	.2	.1	2.1	1.4	.4	.1
Mar	1.1	.0	#	#	6.0	1971	26	10.0	1971	18	1980	3	1	1980	.4	.4	.2	@	.0	.3	.1	.1	.0
Apr	.2	.0	#	0	4.0	1983	19	4.0	1983	4	1983	19	#+	1996	.1	.1	@	.0	.0	.1	.1	.0	.0
May	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Jun	.0	.0	#	0	.0	0	0	.0	0	#	1987	2	#	1987	.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	#	.0	0	0	#	1988	31	#	1988	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.1	.0	#	0	2.0	1987	12	2.0	1987	2	1987	12	#+	1996	@	@	.0	.0	.0	.1	.0	.0	.0
Dec	1.6	.0	#	0	4.0	1973	17	7.0	1989	6	1989	13	2	1989	.8	.7	.1	.0	.0	1.4	.5	.2	.0
Ann	9.1	1.0	N/A	N/A	11.0	Feb 1979	19	25.0	Feb 1989	19	Feb 1989	19	5	Jan 1996	3.7	3.3	1.3	.4	.1	6.4	3.7	1.7	.3

+ 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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No. 20 1971-2000

Station: STONY CREEK 1 E, VA

COOP ID: 448129

Climate Division: VA 1

NWS Call Sign:

Elevation: 70 Feet

Lat: 36° 57N

Lon: 77° 24W

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	5/12	5/06	5/02	4/29	4/25	4/22	4/19	4/15	4/09
32	5/01	4/25	4/21	4/18	4/14	4/11	4/07	4/03	3/28
28	4/16	4/10	4/07	4/03	3/31	3/28	3/25	3/21	3/16
24	3/28	3/23	3/20	3/16	3/13	3/10	3/07	3/03	2/26
20	3/22	3/14	3/09	3/04	2/27	2/23	2/18	2/12	2/04
16	3/06	2/25	2/19	2/13	2/08	2/02	1/27	1/19	1/05
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	9/27	10/02	10/06	10/09	10/12	10/15	10/18	10/22	10/27
32	10/04	10/10	10/14	10/17	10/21	10/24	10/27	10/31	11/06
28	10/14	10/19	10/24	10/27	10/31	11/03	11/07	11/11	11/17
24	10/29	11/04	11/08	11/12	11/15	11/18	11/22	11/26	12/02
20	11/12	11/20	11/25	11/30	12/05	12/09	12/14	12/20	12/27
16	12/01	12/09	12/14	12/19	12/23	12/28	1/02	1/08	1/20
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	193	185	179	174	169	164	159	153	145
32	212	204	198	193	189	184	179	173	165
28	236	228	222	217	213	208	203	197	189
24	270	262	256	251	246	241	236	230	222
20	310	299	292	286	280	274	268	260	250
16	>365	347	334	325	317	310	303	295	284

* 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: VA 1 NWS Call Sign: Elevation: 70 Feet Lat: 36°57N Lon: 77°24W

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	866	695	516	238	70	4	0	0	24	260	487	766	3926
60	711	555	367	129	22	0	0	0	5	154	347	611	2901
57	626	476	284	80	9	0	0	0	2	105	268	526	2376
55	567	423	233	54	4	0	0	0	1	79	221	468	2050
50	425	298	129	16	0	0	0	0	0	32	125	333	1358
32	84	33	2	0	0	0	0	0	0	0	2	43	164

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	241	262	509	768	1067	1285	1450	1370	1138	795	506	301	9692
55	10	8	27	133	359	595	737	657	449	160	35	12	3182
57	7	4	16	98	301	535	675	595	390	125	22	8	2776
60	0	0	6	57	221	445	582	502	303	80	11	1	2208
65	0	0	0	17	114	299	427	347	172	31	2	0	1409
70	0	0	0	3	44	168	276	200	72	9	0	0	772

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	92	140	300	540	819	1036	1201	1112	911	552	302	132	92	232	532	1072	1891	2927	4128	5240	6151	6703	7005	7137
45	43	77	190	394	665	886	1046	957	761	401	193	68	43	120	310	704	1369	2255	3301	4258	5019	5420	5613	5681
50	21	35	105	265	510	736	891	802	611	262	110	31	21	56	161	426	936	1672	2563	3365	3976	4238	4348	4379
55	1	15	49	155	358	586	736	647	462	154	54	7	1	16	65	220	578	1164	1900	2547	3009	3163	3217	3224
60	0	2	24	81	224	440	581	492	321	72	21	1	0	2	26	107	331	771	1352	1844	2165	2237	2258	2259
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	66	98	198	345	526	697	812	748	600	356	203	91	66	164	362	707	1233	1930	2742	3490	4090	4446	4649	4740

(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