

# Climatology of the United States

No. 20

1971-2000

Station: APPOMATTOX, VA

COOP ID: 440243

Climate Division: VA 3

NWS Call Sign:

Elevation: 910 Feet

Lat: 37° 21N

Lon: 78° 50W

## 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	44.9	23.7	34.3	73+	1999	28	42.9	1990	-14	1994	19	23.6	1977	952	0	.0	.0	10.6	3.8	25.0	.5
Feb	48.8	25.9	37.4	80+	2000	26	44.4	1990	-7	1996	5	26.3	1979	775	0	.0	.0	13.6	2.4	21.3	.1
Mar	57.6	33.1	45.4	89	1990	14	50.6	1990	5	1993	15	40.4	1971	610	0	.0	.0	23.1	.3	14.2	.0
Apr	68.0	41.7	54.9	93	1985	24	60.1	1985	23	1982	7	50.3	1975	310	5	.0	.6	28.6	.0	3.4	.0
May	75.6	50.9	63.3	93	1996	21	69.9	1991	27	1997	5	58.1	1997	122	68	.0	.6	30.9	.0	.1	.0
Jun	83.0	60.2	71.6	98	1964	21	74.6+	1989	39+	1984	1	66.6	1972	12	209	.0	4.9	30.0	.0	.0	.0
Jul	87.0	64.7	75.9	103	1977	22	80.0	1987	45	1982	1	72.9+	2000	0	336	.4	10.5	31.0	.0	.0	.0
Aug	85.6	63.0	74.3	103	1983	21	78.6	1988	44+	1986	29	71.0	1971	2	290	.2	8.1	31.0	.0	.0	.0
Sep	79.1	56.3	67.7	98	1983	12	74.0	1998	34	1974	24	64.0	1974	43	125	.0	2.4	30.0	.0	.0	.0
Oct	68.9	43.1	56.0	90	1986	5	62.6	1984	20+	1969	25	51.0	1976	298	19	.0	@	30.6	.0	2.9	.0
Nov	58.6	34.8	46.7	83+	1974	3	54.1	1985	9	1970	25	40.6	1976	550	0	.0	.0	23.5	.0	12.4	.0
Dec	48.8	27.2	38.0	79+	1998	7	46.3	1984	-8	1983	26	28.2	1989	836	0	.0	.0	13.9	2.0	21.6	.1
Ann	67.2	43.7	55.5	103+	Aug 1983	21	80.0	Jul 1987	-14	Jan 1994	19	23.6	Jan 1977	4510	1052	.6	27.1	296.8	8.5	100.9	.7

+ 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](http://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: APPOMATTOX, VA**

**COOP ID: 440243**

**Climate Division: VA 3**

**NWS Call Sign:**

**Elevation: 910 Feet Lat: 37°21N**

**Lon: 78°50W**

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	3.58	3.44	2.20	1998	27	7.16	1978	.40	1981	8.5	7.0	2.9	.9	1.02	1.36	1.88	2.32	2.76	3.21	3.72	4.31	5.08	6.28	7.40
Feb	3.23	3.03	2.00	1972	13	7.07	1998	.22	1978	7.5	6.0	2.7	.8	.88	1.18	1.65	2.06	2.46	2.88	3.35	3.90	4.62	5.74	6.80
Mar	4.19	3.94	3.45	1990	18	10.90	1975	.81	1985	8.9	6.7	2.9	1.2	1.16	1.55	2.16	2.68	3.20	3.74	4.34	5.05	5.96	7.41	8.76
Apr	3.58	3.25	3.26	1992	22	7.23	1987	.78	1985	9.0	6.6	2.2	.9	1.16	1.50	2.00	2.42	2.83	3.26	3.73	4.27	4.97	6.06	7.07
May	4.51	3.58	3.37	1971	13	11.36	1971	.68	1994	10.5	7.6	3.1	1.4	1.14	1.56	2.22	2.80	3.37	3.98	4.65	5.45	6.49	8.15	9.70
Jun	3.55	3.05	6.85	1972	22	12.47	1972	.54	1980	8.7	6.1	2.2	1.0	.75	1.08	1.60	2.08	2.55	3.06	3.63	4.32	5.22	6.67	8.04
Jul	4.48	4.12	5.03	1975	14	9.34	1975	.88	1977	10.0	7.2	3.3	1.1	1.60	2.03	2.64	3.15	3.64	4.14	4.68	5.32	6.13	7.38	8.53
Aug	3.77	3.05	6.45	1973	18	13.75	1985	.65	1987	8.4	6.1	2.2	1.1	.80	1.14	1.70	2.20	2.71	3.25	3.86	4.59	5.55	7.10	8.55
Sep	4.45	3.33	8.35	1987	8	15.00	1996	.17	1985	7.7	5.7	2.7	1.6	.39	.69	1.29	1.90	2.58	3.35	4.27	5.42	7.01	9.66	12.27
Oct	3.86	3.48	4.24	1972	6	10.75	1995	.00	2000	7.5	5.5	2.7	1.2	.28	.68	1.30	1.86	2.45	3.10	3.85	4.76	5.99	8.00	9.94
Nov	3.61	3.05	4.20	1993	28	13.02	1985	.50	1981	7.7	5.9	2.4	1.2	.85	1.18	1.71	2.18	2.65	3.15	3.71	4.37	5.25	6.63	7.93
Dec	3.07	3.00	3.11	1958	29	6.99	1991	.42	1980	8.6	6.3	2.2	.9	.69	.97	1.42	1.83	2.23	2.66	3.14	3.72	4.48	5.69	6.83
Ann	45.88	45.97	8.35	Sep 1987	8	15.00	Sep 1996	.00	Oct 2000	103.0	76.7	31.5	13.3	32.69	35.25	38.52	41.00	43.21	45.34	47.54	49.97	52.92	57.20	60.89

+ 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: 1948-2001

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Complete documentation available from:  
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**NWS Call Sign:**

**Elevation: 910 Feet**

**Lat: 37°21N**

**Lon: 78°50W**

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	3.7	.0	1	#	18.0	1996	8	31.0	1987	30	1987	26	6	1987	1.0	.8	.5	.2	.1	3.2	2.0	.6	.4
Feb	3.7	.0	1	0	12.0	1983	11	25.8	1979	16	1982	28	10+	1987	1.2	1.1	.5	.3	.1	2.2	1.0	.8	.1
Mar	1.2	.0	#	0	6.0	1971	26	8.1	1971	12	1980	3	8	1980	.4	.3	.1	@	.0	.2	.1	.1	.0
Apr	.1	.0	#	0	3.5	1971	7	3.5	1971	4	1971	7	#	1971	.1	@	@	.0	.0	@	@	.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	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	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.3	.0	#	0	3.5	1971	25	3.5	1971	4	1971	25	#+	1996	.2	.1	@	.0	.0	.2	@	.0	.0
Dec	.5	.0	#	0	9.5	1989	13	9.5	1989	9	1973	18	1	1973	.3	.2	.1	@	.0	.3	.1	@	.0
Ann	9.5	.0	N/A	N/A	18.0	Jan 1996	8	31.0	Jan 1987	30	Jan 1987	26	10+	Feb 1987	3.2	2.5	1.2	.5	.2	6.1	3.2	1.5	.5

+ 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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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	5/13	5/08	5/05	5/02	4/29	4/26	4/23	4/20	4/15
32	5/01	4/25	4/21	4/17	4/14	4/11	4/07	4/03	3/29
28	4/18	4/13	4/09	4/05	4/02	3/30	3/26	3/22	3/16
24	4/03	3/28	3/23	3/20	3/16	3/13	3/09	3/05	2/27
20	3/26	3/20	3/15	3/12	3/08	3/05	3/01	2/25	2/19
16	3/15	3/06	2/27	2/22	2/17	2/12	2/06	1/31	1/22
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	9/28	10/02	10/06	10/08	10/11	10/14	10/16	10/20	10/24
32	10/06	10/12	10/16	10/19	10/23	10/26	10/30	11/03	11/09
28	10/15	10/21	10/25	10/29	11/02	11/05	11/09	11/13	11/19
24	10/30	11/06	11/10	11/14	11/18	11/22	11/26	11/30	12/06
20	11/10	11/17	11/22	11/26	11/30	12/03	12/07	12/12	12/19
16	11/27	12/05	12/10	12/15	12/20	12/24	12/29	1/04	1/12
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	186	178	173	168	164	160	155	150	143
32	211	204	199	195	191	187	183	178	171
28	239	230	224	218	213	208	202	196	187
24	272	263	257	251	246	241	235	229	220
20	288	280	275	270	266	261	256	251	243
16	339	328	319	312	305	298	291	283	271

\* 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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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	952	775	610	310	122	12	0	2	43	298	550	836	4510
60	797	635	457	181	50	1	0	0	11	181	404	681	3398
57	704	551	371	120	25	0	0	0	4	125	322	594	2816
55	644	500	315	86	14	0	0	0	2	95	270	536	2462
50	501	371	194	29	2	0	0	0	0	40	160	397	1694
32	120	62	8	0	0	0	0	0	0	0	4	71	265

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	191	211	422	685	969	1187	1359	1311	1072	744	444	258	8853
55	3	5	16	81	270	497	646	598	384	126	20	11	2657
57	0	1	9	55	218	437	584	536	326	95	12	6	2279
60	0	0	2	27	151	348	491	443	243	57	4	0	1766
65	0	0	0	5	68	209	336	290	125	19	0	0	1052
70	0	0	0	0	21	98	192	153	45	4	0	0	513

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	58	93	236	463	733	958	1123	1080	842	517	251	99	58	151	387	850	1583	2541	3664	4744	5586	6103	6354	6453
45	24	49	133	325	578	808	968	925	692	366	151	47	24	73	206	531	1109	1917	2885	3810	4502	4868	5019	5066
50	2	14	68	202	423	658	813	770	542	231	78	20	2	16	84	286	709	1367	2180	2950	3492	3723	3801	3821
55	0	2	27	112	281	509	658	615	396	121	31	4	0	2	29	141	422	931	1589	2204	2600	2721	2752	2756
60	0	0	9	51	161	362	503	460	256	51	9	0	0	0	9	60	221	583	1086	1546	1802	1853	1862	1862
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	42	72	154	291	459	639	768	736	544	324	155	70	42	114	268	559	1018	1657	2425	3161	3705	4029	4184	4254

(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:  
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## 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](http://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"><li>a. Temperature/ Precipitation Tables<ol style="list-style-type: none"><li>1. 1971-2000 Monthly Normals</li><li>2. Cooperative Summary of the Day</li><li>3. National Weather Service station records</li><li>4. 1971-2000 serially complete daily data</li></ol></li><li>b. Degree Day Table<ol style="list-style-type: none"><li>1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals</li><li>2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data</li></ol></li></ol> | <ol style="list-style-type: none"><li>c. Snow Tables<ol style="list-style-type: none"><li>1. Snow Climatology</li><li>2. Cooperative Summary of the Day</li></ol></li><li>d. Freeze Data Table<br/>1971-2000 serially complete daily data</li></ol> |
|---|---|

## References

U.S. Climate Normals 1971-2000, [www.ncdc.noaa.gov/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)