

# Climatology of the United States

No. 20

1971-2000

Station: ASHLAND, VA

COOP ID: 440327

Climate Division: VA 2

NWS Call Sign:

Elevation: 220 Feet Lat: 37°45N Lon: 77°29W

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	45.7	25.3	35.5	82	1950	26	44.2	1990	-9	1985	21	23.5	1977	915	0	.0	.0	10.6	4.0	23.6	.4
Feb	50.2	27.6	38.9	82+	1989	15	47.5	1976	-11	1996	5	26.4	1979	731	0	.0	.0	13.9	2.2	19.6	.1
Mar	59.5	34.8	47.2	90	1998	30	51.2	1990	7+	1960	13	42.2	1978	553	0	.0	@	24.9	.3	13.6	.0
Apr	70.0	43.0	56.5	94+	1990	26	61.9	1994	18	1985	10	52.0	1975	262	6	.0	.6	29.4	.0	3.8	.0
May	76.3	52.6	64.5	95+	1991	31	70.3	1991	29+	1966	11	61.1	1992	84	67	.0	.9	30.9	.0	@	.0
Jun	83.3	61.2	72.3	100+	1988	23	75.3	1989	38+	1967	2	68.4	1974	6	225	@	4.6	30.0	.0	.0	.0
Jul	87.1	66.0	76.6	103	1954	15	79.9	1987	46	1957	2	72.8	2000	0	357	.2	10.9	31.0	.0	.0	.0
Aug	85.4	64.6	75.0	104	1953	30	79.1	1988	43	1986	29	71.7	1996	1	310	.1	7.3	31.0	.0	.0	.0
Sep	79.3	58.0	68.7	105	1954	8	73.8	1998	33+	1963	25	65.5	2000	32	143	.1	2.6	30.0	.0	.0	.0
Oct	68.6	45.7	57.2	96	1954	5	64.6	1984	19	1962	27	52.5	1988	268	23	.0	.1	30.5	.0	2.2	.0
Nov	59.2	36.3	47.8	88	1950	1	55.3	1985	10	1955	29	40.7	1976	518	0	.0	.0	24.1	@	11.4	.0
Dec	49.5	28.9	39.2	80+	1998	7	47.0	1971	-1+	1989	25	28.4	1989	800	0	.0	.0	14.9	1.7	20.3	.1
Ann	67.8	45.3	56.6	105	Sep 1954	8	79.9	Jul 1987	-11	Feb 1996	5	23.5	Jan 1977	4170	1131	.4	27.0	301.2	8.2	94.5	.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](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

004-A

# 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: ASHLAND, VA**

**COOP ID: 440327**

**Climate Division: VA 2**

**NWS Call Sign:**

**Elevation: 220 Feet Lat: 37°45N**

**Lon: 77°29W**

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	3.74	3.60	2.53	1998	28	8.82	1978	.88	1981	10.2	7.5	2.7	.9	1.34	1.69	2.20	2.63	3.03	3.45	3.91	4.44	5.11	6.16	7.12
Feb	3.23	3.17	2.72	1998	4	7.32	1998	.51	1978	9.9	6.5	1.9	.8	.84	1.15	1.61	2.03	2.43	2.86	3.34	3.90	4.64	5.80	6.88
Mar	4.24	3.67	2.60	1979	24	9.43	1994	1.53	1985	10.2	7.7	3.0	1.2	1.45	1.85	2.43	2.93	3.40	3.89	4.43	5.05	5.85	7.08	8.22
Apr	3.26	3.12	2.74	1994	30	5.95	1987	.54	1985	9.3	6.4	2.4	.8	1.05	1.36	1.81	2.20	2.58	2.97	3.40	3.90	4.54	5.55	6.47
May	4.15	3.76	3.52	1980	31	8.36	1990	.99	1991	10.0	6.9	3.0	1.2	1.27	1.66	2.25	2.76	3.25	3.75	4.31	4.97	5.82	7.14	8.37
Jun	3.29	3.48	4.11	1972	22	8.67	1972	.35	1980	8.6	6.1	2.2	.7	.64	.93	1.42	1.86	2.31	2.80	3.35	4.01	4.89	6.29	7.63
Jul	4.26	4.09	5.44	1989	16	7.69	1975	.20	1983	9.5	6.6	2.7	1.0	1.02	1.42	2.04	2.60	3.15	3.73	4.38	5.16	6.18	7.80	9.32
Aug	3.84	3.28	5.24	1971	27	9.54	1985	.60	1998	8.5	5.8	2.6	1.1	.99	1.35	1.91	2.40	2.88	3.39	3.96	4.64	5.52	6.91	8.21
Sep	3.96	2.96	5.35	1977	9	14.33	1999	.59	1986	7.6	5.7	2.4	1.1	.65	1.00	1.57	2.12	2.68	3.29	3.99	4.83	5.97	7.81	9.57
Oct	3.42	2.73	4.32	1961	21	8.61	1995	.01	2000	7.3	4.9	2.3	1.2	.43	.70	1.18	1.66	2.16	2.72	3.38	4.18	5.27	7.07	8.80
Nov	3.30	3.14	2.86	1993	28	7.71	1985	.70	1981	8.5	6.3	2.1	.8	.96	1.27	1.74	2.15	2.55	2.97	3.43	3.97	4.67	5.77	6.79
Dec	3.35	3.69	2.15	1957	21	6.84	1973	.62	1980	9.2	6.3	2.3	.8	.73	1.04	1.53	1.97	2.42	2.89	3.42	4.06	4.91	6.25	7.52
Ann	44.04	44.86	5.44	Jul 1989	16	14.33	Sep 1999	.01	Oct 2000	108.8	76.7	29.6	11.6	34.09	36.08	38.59	40.48	42.14	43.73	45.36	47.15	49.31	52.40	55.05

+ 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:  
[www.ncdc.noaa.gov/oa/climate/normals/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normals/usnormals.html)

# 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](http://www.ncdc.noaa.gov)

**Station: ASHLAND, VA**

**COOP ID: 440327**

**Climate Division: VA 2**

**NWS Call Sign:**

**Elevation: 220 Feet**

**Lat: 37°45N**

**Lon: 77°29W**

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	6.8	4.7	1	1	14.0	1996	7	30.2	1996	19	1987	26	6	1996	3.2	1.8	.8	.4	.1	5.5	3.5	2.2	.7
Feb	6.0	3.1	1	#	11.5	1983	11	25.5	1979	16	1979	19	7	1979	2.6	1.6	.8	.4	.1	4.1	2.3	1.5	.3
Mar	1.7	.3	#	#	9.0	1971	26	13.5	1980	12	1980	2	1	1980	1.2	.5	.2	.2	.0	.8	.4	.1	@
Apr	.2	.0	#	0	2.0	1971	7	2.0	1971	1	2000	21	#+	2000	.2	@	.0	.0	.0	.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	1	1978	25	#	1978	.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	.2	1979	10	.2	1979	0	0	0	0	0	@	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.7	.0	#	0	6.0	1987	11	6.0	1987	6	1987	11	#+	1997	.4	.2	.1	.1	.0	.3	.1	@	.0
Dec	2.7	.1	#	#	8.5	1982	12	19.0	1973	13	1973	17	5	1989	1.2	.8	.4	.2	.0	2.0	1.2	1.0	.1
Ann	18.1	8.2	N/A	N/A	14.0	Jan 1996	7	30.2	Jan 1996	19	Jan 1987	26	7	Feb 1979	8.8	4.9	2.3	1.3	.2	12.7	7.5	4.8	1.1

+ 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](http://www.ncdc.noaa.gov/oa/climate/normals/usnormals.html)

**Climatography  
of the United States  
No. 20  
1971-2000**

**Station: ASHLAND, VA**

**COOP ID: 440327**

**Climate Division: VA 2**

**NWS Call Sign:**

**Elevation: 220 Feet**

**Lat: 37°45N**

**Lon: 77°29W**

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	5/09	5/05	5/03	4/30	4/28	4/25	4/22	4/17
32	4/28	4/24	4/21	4/18	4/15	4/13	4/10	4/07	4/02
28	4/16	4/12	4/09	4/07	4/04	4/02	3/30	3/27	3/23
24	4/06	3/31	3/27	3/24	3/20	3/17	3/14	3/10	3/04
20	4/01	3/25	3/19	3/15	3/11	3/07	3/02	2/25	2/18
16	3/14	3/07	3/03	2/27	2/23	2/20	2/16	2/11	2/05
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	9/30	10/04	10/07	10/09	10/12	10/14	10/16	10/19	10/23
32	10/07	10/12	10/16	10/19	10/22	10/25	10/28	11/01	11/07
28	10/16	10/22	10/26	10/29	11/01	11/05	11/08	11/12	11/17
24	11/05	11/10	11/14	11/17	11/19	11/22	11/25	11/29	12/04
20	11/11	11/18	11/22	11/26	11/30	12/04	12/08	12/13	12/20
16	11/23	12/01	12/06	12/11	12/15	12/20	12/24	12/30	1/06
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	184	177	172	168	164	160	156	151	144
32	209	202	197	193	189	185	181	176	169
28	233	225	220	215	211	206	201	196	188
24	265	257	252	248	243	239	235	230	222
20	290	281	274	269	264	259	253	247	238
16	323	313	306	300	294	288	282	275	266

\* 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/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormals.html)

**Climatography  
of the United States  
No. 20  
1971-2000**

**Station: ASHLAND, VA**

**COOP ID: 440327**

**Climate Division: VA 2      NWS Call Sign:      Elevation: 220 Feet    Lat: 37°45N    Lon: 77°29W**

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	915	731	553	262	84	6	0	1	32	268	518	800	4170
60	760	591	401	139	25	0	0	0	7	157	374	645	3099
57	670	514	317	84	9	0	0	0	2	106	293	560	2555
55	614	461	263	56	4	0	0	0	1	78	243	501	2221
50	471	335	151	15	0	0	0	0	0	30	139	363	1504
32	109	51	4	0	0	0	0	0	0	0	3	56	223

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	216	244	474	735	1006	1209	1380	1332	1100	778	475	279	9228
55	9	9	19	101	297	519	667	619	411	143	25	11	2830
57	2	6	11	69	240	459	605	557	353	109	16	8	2435
60	0	0	3	34	163	369	512	464	267	67	6	0	1885
65	0	0	0	6	67	225	357	310	143	23	0	0	1131
70	0	0	0	0	17	106	208	168	54	5	0	0	558

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	72	114	271	509	776	983	1149	1100	875	545	277	117	72	186	457	966	1742	2725	3874	4974	5849	6394	6671	6788
45	39	62	165	367	621	833	994	945	725	392	170	63	39	101	266	633	1254	2087	3081	4026	4751	5143	5313	5376
50	16	29	90	236	467	683	839	790	575	256	94	30	16	45	135	371	838	1521	2360	3150	3725	3981	4075	4105
55	0	11	44	137	316	533	684	635	426	144	45	9	0	11	55	192	508	1041	1725	2360	2786	2930	2975	2984
60	0	0	17	72	187	385	529	480	284	66	13	1	0	0	17	89	276	661	1190	1670	1954	2020	2033	2034
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	49	81	181	331	490	669	797	758	575	332	173	72	49	130	311	642	1132	1801	2598	3356	3931	4263	4436	4508

(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](http://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](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.

- 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/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)