

Climatology of the United States

No. 20

1971-2000

Station: BIG MEADOWS, VA

COOP ID: 440720

Climate Division: VA 4

NWS Call Sign:

Elevation: 3,540 Feet Lat: 38° 32N

Lon: 78° 26W

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	34.8	16.8	25.8	68	1950	25	36.1	1974	-29	1994	20	15.0	1977	1216	0	.0	.0	3.4	13.1	28.2	3.1
Feb	37.7	19.4	28.6	66	1949	15	35.6	1990	-14	1958	17	18.6	1978	1021	0	.0	.0	4.8	9.9	24.1	1.6
Mar	45.4	26.2	35.8	77	1989	29	42.4	1973	-6	1993	15	29.7	1993	905	0	.0	.0	12.4	4.6	22.1	.4
Apr	55.8	35.0	45.4	86	2001	10	50.4	1999	7	1950	14	40.5	1975	589	0	.0	.0	21.5	.5	12.8	.0
May	64.4	44.5	54.5	88+	1987	19	59.3	1982	18+	1971	3	47.9	1994	334	7	.0	.0	29.4	.0	2.7	.0
Jun	71.5	52.7	62.1	87+	1991	18	65.3	1973	31	1972	11	57.9	1992	117	29	.0	@	29.9	.0	.1	.0
Jul	75.4	56.7	66.1	95	1991	24	70.1	1999	34	1988	1	62.2	1976	43	76	.0	.5	31.0	.0	.0	.0
Aug	73.4	55.4	64.4	92	1988	18	67.6	1978	31	1986	30	60.7	1976	75	56	.0	.1	31.0	.0	@	.0
Sep	67.5	49.4	58.5	90	1954	6	64.1	1998	27+	1989	27	54.5	1988	207	10	.0	.0	29.6	.0	.7	.0
Oct	57.8	38.5	48.2	84+	1974	30	55.5	1984	12	1992	20	40.5	1988	526	2	.0	.0	25.0	.1	9.2	.0
Nov	48.1	30.1	39.1	75	1950	1	47.0	1985	-1+	1976	30	32.8	1995	778	0	.0	.0	14.6	2.6	18.6	@
Dec	38.7	21.1	29.9	68	2001	8	39.5	1984	-15	1983	25	17.7	1989	1087	0	.0	.0	6.1	9.7	26.3	1.0
Ann	55.9	37.2	46.5	95	Jul 1991	24	70.1	Jul 1999	-29	Jan 1994	20	15.0	Jan 1977	6898	180	.0	.6	238.7	40.5	144.8	6.1

+ 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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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: BIG MEADOWS, VA

COOP ID: 440720

Climate Division: VA 4

NWS Call Sign:

Elevation: 3,540 Feet Lat: 38°32N

Lon: 78°26W

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	4.12	3.22	4.00	1995	15	11.13	1996	.29	1981	10.0	7.2	2.5	1.2	.70	1.06	1.66	2.22	2.80	3.43	4.15	5.02	6.19	8.07	9.87
Feb	3.38	2.58	4.75	1984	14	11.45	1984	.52	1978	8.7	5.8	2.1	.8	.58	.87	1.37	1.83	2.30	2.82	3.41	4.12	5.08	6.62	8.09
Mar	3.91	3.52	4.15	1954	1	9.55	1993	1.05	1981	10.6	7.2	2.3	1.0	1.37	1.74	2.27	2.72	3.16	3.60	4.08	4.64	5.37	6.48	7.50
Apr	4.10	3.38	5.55	1992	22	11.48	1987	1.71	1995	10.7	6.8	2.5	.9	1.31	1.70	2.28	2.77	3.24	3.73	4.27	4.90	5.71	6.97	8.13
May	5.10	4.97	3.96	1971	30	11.60	1971	1.75	1977	13.3	8.8	3.4	1.4	1.96	2.44	3.11	3.67	4.21	4.75	5.34	6.02	6.89	8.21	9.43
Jun	5.15	4.73	9.50	1972	21	18.03	1972	1.01	1980	11.6	7.6	2.7	1.3	1.20	1.67	2.43	3.10	3.78	4.49	5.29	6.24	7.50	9.48	11.36
Jul	4.90	4.66	4.41	1981	2	11.34	1981	.74	1983	13.1	8.0	3.4	1.2	1.43	1.89	2.59	3.20	3.79	4.41	5.09	5.89	6.93	8.55	10.06
Aug	4.36	4.26	6.80	1955	18	8.01	1979	1.09	1991	11.9	7.1	2.5	1.3	1.74	2.14	2.71	3.18	3.63	4.08	4.57	5.14	5.85	6.95	7.96
Sep	6.04	3.75	10.46	1996	7	19.87	1996	.69	1978	11.6	6.6	3.1	1.6	.71	1.17	2.02	2.86	3.76	4.76	5.93	7.38	9.35	12.60	15.75
Oct	5.13	3.90	10.71	1954	15	15.07	1972	.12	2000	9.4	5.8	2.6	1.6	.52	.89	1.59	2.31	3.08	3.95	4.98	6.26	8.01	10.92	13.76
Nov	4.87	4.21	7.55	1985	5	21.33	1985	.69	1998	9.1	6.1	2.8	1.4	.66	1.05	1.75	2.42	3.14	3.92	4.83	5.95	7.46	9.92	12.31
Dec	3.82	3.17	3.83	1950	4	8.41	1992	.84	1980	9.2	6.3	2.4	1.0	1.02	1.38	1.93	2.42	2.89	3.39	3.95	4.61	5.46	6.81	8.07
Ann	54.88	51.80	10.71	Oct 1954	15	21.33	Nov 1985	.12	Oct 2000	129.2	83.3	32.3	14.7	38.68	41.80	45.81	48.86	51.56	54.19	56.89	59.89	63.53	68.81	73.38

+ 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: BIG MEADOWS, VA

COOP ID: 440720

Climate Division: VA 4

NWS Call Sign:

Elevation: 3,540 Feet

Lat: 38°32N

Lon: 78°26W

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	11.3	11.0	3	2	32.0	1996	7	32.0	1978	47	1996	7	14	1996	3.8	2.8	1.5	.6	.1	8.8	5.7	3.1	1.3
Feb	12.4	10.5	4	2	18.0	1998	5	39.2	1983	29	1983	12	14	1998	3.3	2.6	1.3	.7	.2	10.4	7.1	4.7	.7
Mar	6.1	3.9	2	1	14.0	1999	15	16.0	1980	22	1994	3	7	1993	2.5	1.8	.7	.3	.1	6.0	3.6	2.4	.7
Apr	2.6	.5	#	#	12.0	1971	7	15.5	1987	12	1971	7	1	1990	.9	.4	.3	@	@	1.3	.6	.3	.1
May	#	.0	0	0	#	1971	12	#	1971	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Jun	.0	.0	#	0	.0	0	0	.0	0	#	1996	4	#	1996	.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	6.0	1977	17	6.0	1977	14	1979	10	1	1979	.2	.1	@	@	.0	.1	.1	@	.0
Nov	2.4	.5	1	#	14.0	1995	15	14.0	1995	16	1995	15	5	1995	1.0	.7	.3	.2	@	1.2	.7	.4	.1
Dec	5.3	4.6	1	1	15.0	1992	12	20.2	1973	21	1992	12	6	1992	2.9	1.5	.6	.3	.1	6.2	2.5	1.4	.2
Ann	40.5	31.0	N/A	N/A	32.0	Jan 1996	7	39.2	Feb 1983	47	Jan 1996	7	14+	Feb 1998	14.6	9.9	4.7	2.1	.5	34.0	20.3	12.3	3.1

+ 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

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Elevation: 3,540 Feet

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Lon: 78°26W

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	6/16	6/08	6/03	5/29	5/25	5/21	5/16	5/11	5/03
32	5/31	5/25	5/20	5/17	5/13	5/09	5/05	5/01	4/25
28	5/16	5/10	5/06	5/03	4/29	4/26	4/23	4/19	4/13
24	5/02	4/27	4/24	4/21	4/18	4/15	4/12	4/09	4/04
20	4/21	4/16	4/12	4/09	4/06	4/03	3/31	3/28	3/22
16	4/13	4/07	4/03	3/31	3/27	3/24	3/21	3/16	3/11
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	9/08	9/14	9/17	9/21	9/24	9/27	9/30	10/04	10/10
32	9/15	9/21	9/25	9/28	10/02	10/05	10/08	10/13	10/18
28	9/26	10/02	10/07	10/11	10/15	10/19	10/23	10/28	11/03
24	10/10	10/16	10/20	10/24	10/28	11/01	11/04	11/09	11/15
20	10/18	10/24	10/28	11/01	11/04	11/08	11/11	11/16	11/22
16	10/29	11/05	11/10	11/15	11/19	11/23	11/28	12/03	12/10
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	151	141	133	127	121	115	109	101	91
32	167	158	151	146	141	136	131	124	115
28	196	187	180	174	168	162	156	149	140
24	218	209	203	197	192	187	181	175	166
20	235	227	221	216	211	207	202	196	188
16	265	255	248	242	236	230	224	217	207

* 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

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Climate Division: VA 4 NWS Call Sign: Elevation: 3,540 Feet Lat: 38°32N Lon: 78°26W

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	1216	1021	905	589	334	117	43	75	207	526	778	1087	6898
60	1061	881	750	439	203	40	6	16	98	381	628	932	5435
57	968	797	657	352	140	16	0	4	54	301	538	839	4666
55	906	741	595	297	105	8	0	1	35	252	480	777	4197
50	751	601	449	175	41	1	0	0	8	151	343	631	3151
32	276	171	76	3	0	0	0	0	0	5	37	197	765

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	84	74	193	405	696	903	1056	1004	793	504	249	133	6094
55	0	0	0	9	88	220	343	292	138	38	3	0	1131
57	0	0	0	4	61	169	281	233	98	25	1	0	872
60	0	0	0	1	31	102	193	152	51	13	0	0	543
65	0	0	0	0	7	29	76	56	10	2	0	0	180
70	0	0	0	0	0	4	14	10	0	0	0	0	28

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	19	28	84	220	464	675	821	766	568	287	113	35	19	47	131	351	815	1490	2311	3077	3645	3932	4045	4080
45	2	10	38	130	320	526	666	611	419	169	55	17	2	12	50	180	500	1026	1692	2303	2722	2891	2946	2963
50	0	2	19	68	194	378	511	456	278	88	20	2	0	2	21	89	283	661	1172	1628	1906	1994	2014	2016
55	0	0	5	27	100	239	358	305	162	33	5	0	0	0	5	32	132	371	729	1034	1196	1229	1234	1234
60	0	0	0	7	40	121	206	163	73	6	0	0	0	0	0	7	47	168	374	537	610	616	616	616
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	1	13	50	126	259	397	513	466	320	155	61	17	1	14	64	190	449	846	1359	1825	2145	2300	2361	2378

(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