

Climatography of the United States

No. 20

1971-2000

Station: BUCHANAN, VA

COOP ID: 441121

Climate Division: VA 5

NWS Call Sign:

Elevation: 880 Feet Lat: 37° 32N Lon: 79° 41W

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	23.9	34.4	81+	1950	26	44.7	1974	-11	1985	21	22.9	1977	950	0	.0	.0	10.5	3.3	23.9	.4
Feb	50.4	25.3	37.9	83	1932	11	45.4	1976	-13	1996	5	28.2	1978	760	0	.0	.0	14.3	1.9	20.5	@
Mar	59.9	32.4	46.2	90+	1998	29	52.0	2000	-4	1960	8	39.7	1996	585	0	.0	@	24.7	.1	14.0	.0
Apr	70.8	40.2	55.5	99	2001	12	59.9	1994	20	1950	16	51.5	1982	290	4	.0	.7	29.1	.0	5.2	.0
May	78.8	50.9	64.9	99	1941	22	71.2	1991	24	1973	5	60.2	1994	98	93	.0	1.7	31.0	.0	.4	.0
Jun	85.6	59.4	72.5	102	1934	29	75.1	1989	35	1945	6	68.9	1972	5	229	.0	6.2	30.0	.0	.0	.0
Jul	89.6	64.0	76.8	107+	1954	14	79.5	1986	43	1947	23	74.3	1984	0	367	.4	12.1	31.0	.0	.0	.0
Aug	88.3	62.3	75.3	104+	1932	31	78.0	1995	41	1976	31	72.3	1981	0	320	.3	9.6	31.0	.0	.0	.0
Sep	81.4	55.8	68.6	103	1932	2	72.9	1998	32+	1963	25	65.9	1994	28	136	.0	2.9	30.0	.0	.0	.0
Oct	71.0	43.5	57.3	99	1941	6	65.3	1984	16	1962	27	51.5	1988	262	23	.0	.0	30.6	.0	3.3	.0
Nov	59.1	33.8	46.5	87	1950	1	54.7	1985	7+	1938	28	39.8	1976	557	0	.0	.0	23.5	.1	12.9	.0
Dec	48.8	27.0	37.9	80	1998	7	46.3	1984	-5+	1989	23	27.7	1989	841	0	.0	.0	13.7	1.6	21.4	.2
Ann	69.1	43.2	56.2	107+	Jul 1954	14	79.5	Jul 1986	-13	Feb 1996	5	22.9	Jan 1977	4376	1172	.7	33.2	299.4	7.0	101.6	.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

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1930-2001

(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: BUCHANAN, VA

COOP ID: 441121

Climate Division: VA 5

NWS Call Sign:

Elevation: 880 Feet Lat: 37°32N

Lon: 79°41W

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	3.47	3.18	3.20	1998	28	8.82	1998	.19	1981	9.6	7.0	2.3	.8	.78	1.10	1.61	2.07	2.53	3.01	3.56	4.22	5.08	6.45	7.74
Feb	3.05	3.06	2.25	1973	2	8.08	1998	.43	1977	9.0	6.1	2.0	.6	.76	1.04	1.49	1.88	2.27	2.68	3.14	3.68	4.40	5.53	6.58
Mar	3.77	3.38	3.90	1936	17	8.67	1993	1.52	1972	10.1	7.5	2.7	.8	1.30	1.65	2.17	2.61	3.03	3.46	3.94	4.49	5.19	6.29	7.29
Apr	3.35	2.83	3.45	1992	22	7.12	1983	1.03	1995	10.1	6.9	2.3	.8	1.20	1.52	1.97	2.36	2.72	3.10	3.50	3.98	4.59	5.52	6.38
May	4.11	4.00	3.50	1973	28	7.79	1990	1.99	1977	11.2	7.9	2.7	.9	1.86	2.23	2.73	3.14	3.52	3.90	4.31	4.78	5.37	6.26	7.06
Jun	3.48	3.13	3.27	1995	23	10.94	1995	.75	1984	9.5	6.4	2.0	.7	.95	1.28	1.78	2.22	2.65	3.10	3.60	4.19	4.96	6.17	7.29
Jul	4.56	4.54	3.40	1954	19	8.81	1994	1.91	1982	11.3	8.1	3.0	1.1	2.07	2.48	3.03	3.48	3.90	4.33	4.78	5.30	5.95	6.93	7.82
Aug	3.46	3.18	3.95	1939	19	9.89	1984	1.17	1993	9.4	6.2	2.3	.7	1.13	1.46	1.94	2.35	2.75	3.16	3.61	4.14	4.81	5.86	6.83
Sep	3.77	2.83	5.50	1950	10	11.70	1999	.36	1984	8.7	5.9	2.2	1.0	.43	.71	1.24	1.77	2.33	2.96	3.69	4.61	5.85	7.91	9.91
Oct	3.29	2.99	4.13	1990	11	10.82	1990	.00	2000	7.4	5.3	2.2	.9	.27	.63	1.16	1.64	2.14	2.68	3.31	4.06	5.08	6.73	8.32
Nov	3.20	2.82	3.21	1996	9	7.31	1985	.62	1981	8.9	6.1	2.2	.7	.89	1.20	1.66	2.06	2.45	2.86	3.31	3.85	4.55	5.64	6.66
Dec	2.84	2.54	3.60	1958	29	6.30	1973	.56	1980	8.7	6.0	2.0	.6	.78	1.05	1.46	1.82	2.17	2.54	2.94	3.42	4.05	5.03	5.95
Ann	42.35	41.59	5.50	Sep 1950	10	11.70	Sep 1999	.00	Oct 2000	113.9	79.4	27.9	9.6	31.27	33.45	36.22	38.31	40.16	41.94	43.78	45.80	48.24	51.77	54.81

+ 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: 1930-2001

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

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

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Station: BUCHANAN, VA

COOP ID: 441121

Climate Division: VA 5

NWS Call Sign:

Elevation: 880 Feet

Lat: 37°32N

Lon: 79°41W

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	4.8	2.0	1	#	20.0	1971	1	22.5	1971	15	1996	7	5	1978	1.5	1.2	.5	.2	@	4.2	2.0	1.3	.2
Feb	5.4	2.8	1	#	14.0	1996	3	26.5	1996	14	1983	12	7	1996	1.3	1.2	.5	.3	.1	3.8	2.3	1.2	.1
Mar	2.4	1.3	#	#	8.0	1980	2	10.5	1980	10	1993	15	1	1993	1.0	.8	.3	.2	.0	1.1	.4	.3	.0
Apr	.3	.0	#	0	7.0	1971	7	7.0	1971	7	1971	7	#+	1984	.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	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	1.0	1979	10	1.0	1979	0	0	0	0	0	@	@	.0	.0	.0	.0	.0	.0	.0
Nov	.7	.0	#	0	7.0	1971	25	9.0	1971	5	1971	25	#+	1996	.3	.3	.1	@	.0	.2	@	@	.0
Dec	3.0	.6	#	#	9.0	1997	30	10.2	1997	9	1997	30	1	1997	1.1	.9	.3	.2	.0	1.9	.7	.3	.0
Ann	16.6	6.7	N/A	N/A	20.0	Jan 1971	1	26.5	Feb 1996	15	Jan 1996	7	7	Feb 1996	5.3	4.5	1.7	.9	.1	11.2	5.4	3.1	.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: BUCHANAN, VA

COOP ID: 441121

Climate Division: VA 5

NWS Call Sign:

Elevation: 880 Feet

Lat: 37°32N

Lon: 79°41W

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	5/19	5/15	5/11	5/08	5/05	5/02	4/29	4/26	4/21
32	5/10	5/04	4/30	4/26	4/23	4/20	4/16	4/12	4/07
28	4/22	4/17	4/14	4/10	4/08	4/05	4/01	3/29	3/24
24	4/12	4/06	4/02	3/29	3/25	3/22	3/18	3/13	3/07
20	3/29	3/21	3/16	3/12	3/08	3/03	2/27	2/22	2/15
16	3/17	3/10	3/04	2/28	2/24	2/20	2/16	2/10	2/03
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	9/29	10/02	10/05	10/07	10/09	10/11	10/13	10/15	10/19
32	10/07	10/12	10/15	10/18	10/21	10/24	10/27	10/30	11/04
28	10/14	10/20	10/24	10/27	10/30	11/03	11/06	11/10	11/15
24	10/26	11/01	11/05	11/08	11/11	11/14	11/18	11/22	11/27
20	11/08	11/14	11/18	11/22	11/25	11/28	12/02	12/06	12/12
16	11/21	11/28	12/02	12/06	12/10	12/13	12/17	12/22	12/28
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	173	167	163	159	156	152	149	144	138
32	202	195	189	184	180	176	171	166	158
28	225	218	213	209	205	201	197	192	185
24	256	247	241	235	230	225	219	213	204
20	286	278	272	266	262	257	252	246	238
16	314	305	299	293	288	283	277	270	261

* 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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Station: BUCHANAN, VA

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Climate Division: VA 5 NWS Call Sign: Elevation: 880 Feet Lat: 37°32N Lon: 79°41W

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	950	760	585	290	98	5	0	0	28	262	557	841	4376
60	795	620	436	162	37	0	0	0	5	151	411	686	3303
57	702	536	351	101	17	0	0	0	2	101	329	594	2733
55	647	484	297	69	10	0	0	0	1	74	277	538	2397
50	502	355	183	20	1	0	0	0	0	28	165	395	1649
32	124	52	8	0	0	0	0	0	0	0	4	62	250

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	197	217	446	704	1018	1214	1390	1343	1098	784	437	244	9092
55	7	4	22	83	315	524	677	630	408	145	20	7	2842
57	0	1	14	55	260	464	615	568	349	110	12	1	2449
60	0	0	6	26	187	375	522	475	263	67	4	0	1925
65	0	0	0	4	93	229	367	320	136	23	0	0	1172
70	0	0	0	0	34	104	215	174	47	5	0	0	579

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	63	107	260	497	766	968	1124	1089	855	535	246	96	63	170	430	927	1693	2661	3785	4874	5729	6264	6510	6606
45	26	55	155	352	611	818	969	934	705	388	143	49	26	81	236	588	1199	2017	2986	3920	4625	5013	5156	5205
50	8	22	80	229	456	668	814	779	555	248	72	19	8	30	110	339	795	1463	2277	3056	3611	3859	3931	3950
55	0	4	31	128	310	518	659	624	407	136	28	2	0	4	35	163	473	991	1650	2274	2681	2817	2845	2847
60	0	0	7	59	180	371	504	469	266	60	5	0	0	0	7	66	246	617	1121	1590	1856	1916	1921	1921
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	45	82	185	333	496	649	763	736	558	343	162	65	45	127	312	645	1141	1790	2553	3289	3847	4190	4352	4417

(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