

Climatography of the United States

No. 20

1971-2000

Station: COLONIAL BEACH, VA

COOP ID: 441913

Climate Division: VA 1

NWS Call Sign:

Elevation: 10 Feet

Lat: 38°15N

Lon: 76°58W

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	47.1	26.8	37.0	75+	1975	30	43.8	1998	-3	1994	20	28.2	1977	870	0	.0	.0	11.7	2.5	23.2	.2
Feb	50.7	28.9	39.8	80	2000	26	47.5	1976	-6	1996	5	29.3	1979	707	0	.0	.0	13.7	1.3	19.0	.1
Mar	59.7	36.1	47.9	92	1998	30	53.6	2000	9	1978	5	42.8	1978	529	0	.0	.1	25.7	.1	10.5	.0
Apr	70.0	45.1	57.6	93+	1995	19	63.6	1994	20	1972	8	52.9	1975	238	14	.0	.6	29.8	.0	2.0	.0
May	78.5	55.0	66.8	99+	2000	14	71.4	1991	27	1966	11	63.6	1992	45	100	.0	2.4	31.0	.0	@	.0
Jun	86.4	63.7	75.1	102	1999	9	79.2	1981	40+	1992	23	68.5	1992	4	305	.2	10.3	30.0	.0	.0	.0
Jul	90.6	68.4	79.5	105	1999	5	83.5	1987	49+	1996	27	75.7	2000	0	450	1.3	18.1	31.0	.0	.0	.0
Aug	88.7	67.1	77.9	109	1983	21	81.7	1980	46	1967	31	71.7	1992	0	400	.5	13.3	31.0	.0	.0	.0
Sep	82.8	61.1	72.0	101+	1998	27	78.0	1980	38	1991	28	67.0	1975	14	221	.1	4.7	30.0	.0	.0	.0
Oct	71.7	48.7	60.2	91+	1986	5	66.5	1984	21	1979	30	55.9	1988	185	37	.0	.1	30.9	.0	1.1	.0
Nov	61.4	39.7	50.6	85	1971	2	57.0	1985	15+	1991	27	45.9	1995	433	0	.0	.0	26.5	.0	7.5	.0
Dec	51.2	31.4	41.3	85	1998	7	48.4	1971	5	1983	25	28.6	1989	736	0	.0	.0	16.4	.9	18.3	.0
Ann	69.9	47.7	58.8	109	Aug 1983	21	83.5	Jul 1987	-6	Feb 1996	5	28.2	Jan 1977	3761	1527	2.1	49.6	307.7	4.8	81.6	.3

+ 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: 1963-2001

(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: COLONIAL BEACH, VA

COOP ID: 441913

Climate Division: VA 1

NWS Call Sign:

Elevation: 10 Feet

Lat: 38°15N

Lon: 76°58W

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	3.41	3.31	2.00	1976	27	8.00	1978	.41	1981	11.1	6.4	2.9	.7	.99	1.31	1.80	2.22	2.64	3.07	3.54	4.10	4.82	5.96	7.01
Feb	3.05	2.63	2.50	1994	11	7.15	1998	.80	1976	9.6	5.7	2.0	.7	.86	1.15	1.59	1.97	2.34	2.73	3.16	3.67	4.33	5.37	6.34
Mar	4.05	3.56	2.25	1974	30	8.11	1994	1.35	1986	11.6	7.1	2.6	.9	1.37	1.75	2.31	2.78	3.24	3.71	4.22	4.82	5.59	6.78	7.87
Apr	3.03	2.76	1.83	1982	27	5.35	1996	.21	1976	10.7	6.4	2.1	.5	.81	1.09	1.53	1.92	2.30	2.69	3.14	3.66	4.34	5.41	6.42
May	4.42	4.22	2.88	1990	29	9.12	1989	.66	1999	12.0	7.9	3.0	1.0	1.58	2.00	2.60	3.10	3.59	4.08	4.62	5.24	6.04	7.28	8.41
Jun	3.46	3.18	6.66	1972	22	11.91	1972	.41	1980	10.6	6.3	2.4	.6	.90	1.22	1.72	2.17	2.61	3.06	3.58	4.18	4.97	6.22	7.39
Jul	4.60	4.65	3.90	1975	13	9.19	1984	1.12	1993	10.6	7.5	3.2	1.3	1.55	1.98	2.62	3.16	3.68	4.22	4.80	5.49	6.36	7.72	8.98
Aug	3.73	3.88	4.53	1993	6	7.16	1986	.44	1980	8.8	5.8	2.5	1.2	.86	1.20	1.75	2.24	2.73	3.24	3.83	4.52	5.43	6.88	8.25
Sep	3.60	3.18	2.34	1975	26	10.82	1975	.47	1998	9.4	6.2	2.4	1.1	.64	.96	1.49	1.98	2.48	3.02	3.64	4.38	5.38	6.98	8.51
Oct	3.20	2.92	3.74	1995	21	8.44	1995	.04	2000	8.3	5.0	2.5	1.2	.56	.84	1.30	1.74	2.19	2.68	3.23	3.90	4.80	6.25	7.64
Nov	2.88	2.78	2.87	1993	28	7.93	1972	.52	1981	10.2	5.8	1.8	.6	.68	.95	1.37	1.75	2.12	2.52	2.96	3.49	4.19	5.29	6.32
Dec	3.26	3.28	2.50	2000	17	7.27	1973	.48	1980	10.0	6.2	2.2	.7	.79	1.09	1.57	1.99	2.41	2.86	3.35	3.94	4.71	5.94	7.09
Ann	42.69	41.03	6.66	Jun 1972	22	11.91	Jun 1972	.04	Oct 2000	122.9	76.3	29.6	10.5	29.22	31.79	35.10	37.63	39.88	42.07	44.34	46.85	49.91	54.37	58.24

+ 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: 1963-2001

(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: COLONIAL BEACH, VA

COOP ID: 441913

Climate Division: VA 1

NWS Call Sign:

Elevation: 10 Feet

Lat: 38°15N

Lon: 76°58W

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	.7	-99.9	#	0	1.8	1973	9	3.6	1973	2	1973	9	#	1973	-9.9	-9.9	-9.9	-9.9	-9.9	.1	.0	.0	.0
Feb	1.3	-99.9	#	0	4.0	1978	6	4.0	1978	4	1978	6	#+	2000	-9.9	-9.9	-9.9	-9.9	-9.9	.1	.1	.0	.0
Mar	-99.9	-99.9	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Apr	-99.9	-99.9	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
May	-99.9	-99.9	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Jun	-99.9	-99.9	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Jul	-99.9	-99.9	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Aug	-99.9	-99.9	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Sep	-99.9	-99.9	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Oct	-99.9	-99.9	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Nov	-99.9	-99.9	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Dec	2.8	.0	0	0	7.0	1973	17	14.0	1973	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Ann	-9.9	-9.9	N/A	N/A	7.0	Dec 1973	17	14.0	Dec 1973	4	Feb 1978	6	#+	Feb 2000	-9.9	-9.9	-9.9	-9.9	-9.9	.2	.1	.0	.0

+ 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: COLONIAL BEACH, VA

COOP ID: 441913

Climate Division: VA 1

NWS Call Sign:

Elevation: 10 Feet

Lat: 38° 15N

Lon: 76° 58W

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	4/28	4/24	4/21	4/18	4/15	4/13	4/10	4/07	4/02
32	4/22	4/16	4/12	4/09	4/06	4/02	3/30	3/26	3/21
28	4/10	4/05	4/01	3/28	3/25	3/22	3/18	3/14	3/09
24	3/31	3/25	3/20	3/15	3/11	3/07	3/03	2/26	2/19
20	3/18	3/10	3/04	2/27	2/23	2/18	2/14	2/08	1/31
16	3/10	3/01	2/23	2/17	2/12	2/07	2/01	1/26	1/17
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	10/05	10/11	10/15	10/18	10/21	10/24	10/28	11/01	11/06
32	10/17	10/23	10/27	10/31	11/03	11/07	11/10	11/14	11/20
28	10/29	11/04	11/09	11/13	11/17	11/21	11/25	11/29	12/06
24	11/09	11/16	11/22	11/27	12/01	12/06	12/11	12/17	12/24
20	11/24	12/02	12/07	12/12	12/16	12/21	12/25	12/31	1/07
16	12/05	12/14	12/20	12/25	12/30	1/03	1/09	1/15	1/23
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	210	202	197	192	188	184	179	174	166
32	235	226	221	216	211	206	201	195	187
28	262	253	247	241	236	231	225	219	210
24	296	285	277	271	264	258	251	244	233
20	330	318	310	303	296	289	281	273	261
16	>365	346	332	324	316	309	302	294	283

* 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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1971-2000

Station: COLONIAL BEACH, VA

COOP ID: 441913

Climate Division: VA 1 NWS Call Sign: Elevation: 10 Feet Lat: 38°15N Lon: 76°58W

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	870	707	529	238	45	4	0	0	14	185	433	736	3761
60	715	567	378	127	9	0	0	0	2	90	292	587	2767
57	622	487	295	78	2	0	0	0	0	52	215	501	2252
55	564	435	242	53	1	0	0	0	0	33	170	445	1943
50	421	309	134	15	0	0	0	0	0	8	84	316	1287
32	70	37	2	0	0	0	0	0	0	0	1	43	153

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	223	254	496	766	1078	1291	1473	1423	1198	875	558	331	9966
55	4	8	23	129	366	601	760	710	508	196	38	19	3362
57	1	4	13	94	305	541	698	648	448	152	22	13	2939
60	0	0	4	53	219	451	605	555	360	98	9	6	2360
65	0	0	0	14	100	305	450	400	221	37	0	0	1527
70	0	0	0	2	30	174	295	252	110	9	0	0	872

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	73	110	272	534	834	1054	1226	1176	955	625	336	132	73	183	455	989	1823	2877	4103	5279	6234	6859	7195	7327
45	34	60	157	389	679	904	1071	1021	805	470	214	68	34	94	251	640	1319	2223	3294	4315	5120	5590	5804	5872
50	13	28	81	255	525	754	916	866	655	323	122	33	13	41	122	377	902	1656	2572	3438	4093	4416	4538	4571
55	2	8	37	141	372	604	761	711	505	191	60	12	2	10	47	188	560	1164	1925	2636	3141	3332	3392	3404
60	0	0	13	69	228	454	606	556	358	94	20	3	0	0	13	82	310	764	1370	1926	2284	2378	2398	2401
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	48	80	168	326	537	714	839	811	643	389	198	79	48	128	296	622	1159	1873	2712	3523	4166	4555	4753	4832

(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