

Climatography of the United States

No. 20

1971-2000

Station: ROCKY MOUNT, VA

COOP ID: 447338

Climate Division: VA 3

NWS Call Sign:

Elevation: 1,315 Feet Lat: 36° 59N Lon: 79° 54W

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	44.6	25.5	35.1	80	1952	2	44.8	1990	-11	1985	21	23.5	1977	928	0	.0	.0	10.2	4.0	23.9	.5
Feb	48.8	27.3	38.1	79	1985	25	45.6	1990	-2+	1996	6	28.7	1978	755	0	.0	.0	13.1	2.7	20.7	.1
Mar	57.1	34.2	45.7	87	1968	22	50.7	1990	0	1960	8	41.1	1971	601	0	.0	.0	22.7	.4	14.9	.0
Apr	67.5	41.9	54.7	91+	1985	23	60.2	1994	20+	1985	11	51.1	1975	312	3	.0	.2	28.4	.0	4.6	.0
May	75.2	50.6	62.9	95	1962	20	68.6	1991	28+	1986	4	58.8	1997	119	54	.0	.5	30.9	.0	.4	.0
Jun	82.4	59.7	71.1	100+	1952	26	75.4	1994	36+	1966	2	66.6	1974	15	196	.0	4.1	30.0	.0	.0	.0
Jul	86.5	64.4	75.5	102+	1988	10	79.8	1993	46	1961	10	72.5	1984	0	324	.2	9.6	31.0	.0	.0	.0
Aug	85.1	62.7	73.9	101+	1983	22	77.2	1995	40	1986	30	71.3	1971	1	277	.1	7.5	31.0	.0	.0	.0
Sep	78.2	56.1	67.2	98+	1983	12	71.7	1998	31+	1983	26	64.0	1984	45	109	.0	2.2	30.0	.0	.1	.0
Oct	68.4	43.7	56.1	93	1951	7	63.0	1984	22+	1969	25	50.3	1987	298	20	.0	.0	30.3	.0	3.9	.0
Nov	58.2	35.5	46.9	83+	1974	2	55.4	1985	7	1956	25	40.8	1996	545	1	.0	.0	23.4	@	12.9	.0
Dec	48.4	28.4	38.4	78+	1998	7	45.9	1984	-4+	1983	26	29.1	1989	825	0	.0	.0	13.9	2.0	21.2	.1
Ann	66.7	44.2	55.5	102+	Jul 1988	10	79.8	Jul 1993	-11	Jan 1985	21	23.5	Jan 1977	4444	984	.3	24.1	294.9	9.1	102.6	.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

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

049-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: ROCKY MOUNT, VA

COOP ID: 447338

Climate Division: VA 3

NWS Call Sign:

Elevation: 1,315 Feet Lat: 36°59N

Lon: 79°54W

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	3.73	3.72	3.37+	1992	4	7.57	1978	.46	1981	9.7	7.1	2.5	1.0	1.00	1.35	1.89	2.36	2.83	3.32	3.86	4.50	5.34	6.65	7.88
Feb	3.20	3.27	2.70	1984	14	7.53	1998	.47	1978	8.8	6.2	2.2	.7	.77	1.07	1.54	1.96	2.37	2.80	3.29	3.87	4.63	5.84	6.97
Mar	4.21	3.97	2.53	1987	1	9.42	1993	1.13	1985	10.1	7.5	2.9	1.1	1.26	1.66	2.26	2.78	3.28	3.80	4.38	5.05	5.93	7.29	8.56
Apr	4.13	3.32	4.17	1987	16	11.70	1987	1.41	1975	9.9	7.2	2.1	1.0	1.29	1.68	2.26	2.76	3.25	3.75	4.30	4.95	5.79	7.09	8.29
May	4.32	4.00	3.15	1989	6	8.64	1971	.64	1997	11.4	7.8	3.0	1.1	1.33	1.74	2.35	2.88	3.39	3.91	4.49	5.17	6.05	7.42	8.69
Jun	4.11	4.01	3.61	1996	10	8.80	1995	.65	1986	10.3	7.1	2.5	1.1	1.00	1.38	1.98	2.52	3.05	3.61	4.23	4.98	5.95	7.50	8.95
Jul	4.87	4.35	4.56	1990	14	11.76	1994	.96	1976	11.1	7.3	3.1	1.3	1.26	1.72	2.42	3.05	3.66	4.31	5.03	5.88	6.99	8.75	10.39
Aug	3.79	3.72	5.60	1964	31	8.56	1986	.66	1997	9.5	6.4	2.4	.9	1.08	1.44	1.98	2.45	2.92	3.40	3.93	4.55	5.37	6.64	7.83
Sep	4.33	3.42	7.45	1987	8	12.89	1987	.27	1984	9.2	6.3	2.5	1.2	.43	.74	1.33	1.93	2.59	3.33	4.20	5.28	6.78	9.25	11.68
Oct	3.51	2.90	4.25	1968	19	12.73	1976	.04	2000	7.2	5.0	2.5	1.0	.33	.58	1.06	1.55	2.08	2.68	3.39	4.28	5.50	7.53	9.52
Nov	3.26	2.92	3.81	1962	10	8.78	1985	.43	1981	8.6	5.9	2.4	.8	.95	1.26	1.73	2.13	2.52	2.93	3.38	3.91	4.60	5.67	6.67
Dec	3.16	3.10	6.09	1958	29	6.82	1973	.45	1980	8.5	5.8	2.1	.9	.81	1.11	1.57	1.97	2.37	2.79	3.26	3.81	4.54	5.68	6.75
Ann	46.62	47.26	7.45	Sep 1987	8	12.89	Sep 1987	.04	Oct 2000	114.3	79.6	30.2	12.1	34.18	36.61	39.72	42.07	44.14	46.15	48.21	50.49	53.24	57.21	60.64

+ 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

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Station: ROCKY MOUNT, VA

COOP ID: 447338

Climate Division: VA 3

NWS Call Sign:

Elevation: 1,315 Feet

Lat: 36°59N

Lon: 79°54W

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	5.3	2.0	1	#	11.0	1987	26	31.0	1987	24	1996	8	6	1996	1.8	1.5	.7	.4	.1	5.0	2.6	1.5	.3
Feb	6.6	4.3	1	#	12.0	1983	11	24.0	1983	18	1983	12	4	1983	1.7	1.5	.8	.4	.1	3.8	1.8	1.1	.3
Mar	2.6	.5	#	0	11.5	1993	13	19.5	1993	12	1993	13	1	1993	1.0	.7	.3	.2	.1	1.0	.5	.3	.1
Apr	.3	.0	#	0	3.0	1982	9	3.0	1982	2	1987	4	#+	1996	.1	.1	@	.0	.0	.1	.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	#	1993	31	#	1993	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.5	.0	#	0	7.0	1971	25	8.0	1971	5	1971	25	#+	1996	.2	.2	@	@	.0	.3	.1	@	.0
Dec	2.5	1.0	#	#	8.8	1989	13	15.3	1989	8	1982	12	2	1989	.9	.8	.3	.2	.0	1.4	.5	.3	.0
Ann	17.8	7.8	N/A	N/A	12.0	Feb 1983	11	31.0	Jan 1987	24	Jan 1996	8	6	Jan 1996	5.7	4.8	2.1	1.2	.3	11.6	5.5	3.2	.7

+ 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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Station: ROCKY MOUNT, VA

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Climate Division: VA 3

NWS Call Sign:

Elevation: 1,315 Feet

Lat: 36° 59N

Lon: 79° 54W

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	5/17	5/11	5/07	5/04	4/30	4/27	4/23	4/19	4/14
32	5/06	5/01	4/27	4/23	4/20	4/17	4/13	4/09	4/03
28	4/19	4/14	4/09	4/06	4/02	3/30	3/26	3/22	3/16
24	4/06	3/31	3/26	3/23	3/19	3/15	3/12	3/07	3/01
20	3/30	3/22	3/16	3/11	3/07	3/02	2/25	2/19	2/11
16	3/16	3/08	3/03	2/26	2/22	2/18	2/13	2/08	1/31
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	10/05	10/08	10/10	10/12	10/15	10/18	10/22
32	10/05	10/10	10/14	10/17	10/20	10/23	10/26	10/30	11/04
28	10/15	10/22	10/27	10/31	11/04	11/07	11/12	11/16	11/23
24	10/26	11/02	11/07	11/11	11/16	11/20	11/24	11/29	12/07
20	11/12	11/19	11/23	11/27	11/30	12/04	12/07	12/12	12/18
16	11/23	12/01	12/07	12/11	12/16	12/20	12/25	12/30	1/07
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	185	177	171	167	162	158	153	147	139
32	209	200	193	187	182	177	171	165	156
28	240	231	225	220	215	210	204	198	189
24	273	262	254	247	241	235	228	220	209
20	298	288	280	274	268	262	255	248	237
16	328	317	309	302	296	289	282	274	263

* 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 3 NWS Call Sign: Elevation: 1,315 Feet Lat: 36° 59N Lon: 79° 54W

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	928	755	601	312	119	15	0	1	45	298	545	825	4444
60	773	615	448	181	45	2	0	0	12	182	401	670	3329
57	680	531	362	117	20	0	0	0	4	128	320	579	2741
55	626	477	306	83	10	0	0	0	2	98	270	523	2395
50	482	348	185	27	1	0	0	0	0	43	163	382	1631
32	115	46	6	0	0	0	0	0	0	0	4	59	230

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	210	215	428	681	958	1171	1347	1299	1054	745	450	257	8815
55	8	2	15	74	255	481	634	586	366	130	25	8	2584
57	0	0	9	48	203	421	572	524	308	98	16	2	2201
60	0	0	2	21	135	333	479	431	226	59	7	0	1693
65	0	0	0	3	54	196	324	277	109	20	1	0	984
70	0	0	0	0	14	91	181	140	35	5	0	0	466

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	62	102	227	454	719	942	1106	1062	828	505	251	98	62	164	391	845	1564	2506	3612	4674	5502	6007	6258	6356
45	27	53	132	315	564	792	951	907	678	356	148	48	27	80	212	527	1091	1883	2834	3741	4419	4775	4923	4971
50	4	20	64	194	410	642	796	752	528	224	74	19	4	24	88	282	692	1334	2130	2882	3410	3634	3708	3727
55	0	3	30	108	269	492	641	597	379	121	36	5	0	3	33	141	410	902	1543	2140	2519	2640	2676	2681
60	0	0	6	52	147	344	486	442	244	48	8	0	0	0	6	58	205	549	1035	1477	1721	1769	1777	1777
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	41	70	154	287	450	632	758	724	533	319	159	63	41	111	265	552	1002	1634	2392	3116	3649	3968	4127	4190

(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