

Climatology of the United States

No. 20

1971-2000

Station: DANVILLE, VA

COOP ID: 442245

Climate Division: VA 3

NWS Call Sign:

Elevation: 410 Feet Lat: 36°35N Lon: 79°23W

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	47.4	25.8	36.6	79	1967	25	45.4	1974	-5	1985	21	26.1	1977	881	0	.0	.0	12.6	2.3	22.5	.2
Feb	51.7	27.7	39.7	85	1977	27	46.7	1990	3	1958	18	31.4	1978	709	0	.0	.0	15.6	1.2	19.6	.0
Mar	60.9	34.8	47.9	91	1990	13	52.8	1990	8	1960	6	42.9	1996	532	0	.0	.1	25.4	.1	11.6	.0
Apr	71.2	43.3	57.3	95+	1990	28	61.8	1985	25+	1985	10	53.4	1983	242	9	.0	1.0	29.1	.0	2.5	.0
May	78.9	53.3	66.1	98	1965	27	70.9	1991	29	1976	9	61.5	1992	68	102	.0	2.6	31.0	.0	@	.0
Jun	86.2	62.6	74.4	103	1959	30	78.9	1981	40	1977	11	70.2	1974	5	287	.3	11.4	30.0	.0	.0	.0
Jul	90.0	67.6	78.8	105+	1990	10	82.1	1986	50+	1974	22	75.8	1984	0	428	.8	17.7	31.0	.0	.0	.0
Aug	88.3	65.9	77.1	105	1983	23	80.9	1988	47+	1986	31	73.1	1992	0	375	.4	14.4	31.0	.0	.0	.0
Sep	81.9	58.8	70.4	104	1954	6	75.0	1998	34	1951	30	67.0	1974	21	182	.1	5.6	30.0	.0	.0	.0
Oct	71.2	45.2	58.2	98+	1954	5	66.1	1984	22	1962	27	52.6	1976	245	34	.0	.2	30.8	.0	1.7	.0
Nov	61.1	36.0	48.6	87	1950	1	57.0	1985	15+	1970	25	42.3	1976	494	1	.0	.0	25.2	.0	12.0	.0
Dec	51.2	29.0	40.1	81+	1998	9	47.6	1971	2+	1983	26	31.3	1989	773	0	.0	.0	16.7	.9	20.6	.0
Ann	70.0	45.8	57.9	105+	Jul 1990	10	82.1	Jul 1986	-5	Jan 1985	21	26.1	Jan 1977	3970	1418	1.6	53.0	308.4	4.5	90.5	.2

+ 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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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: DANVILLE, VA

COOP ID: 442245

Climate Division: VA 3

NWS Call Sign:

Elevation: 410 Feet Lat: 36°35N

Lon: 79°23W

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	4.03	4.00	3.17	1992	4	8.73	1978	.72	1981	11.4	7.3	2.9	.8	1.28	1.66	2.23	2.71	3.18	3.67	4.20	4.82	5.63	6.88	8.04
Feb	3.41	3.52	2.98	1984	14	6.62	1998	.63	1978	10.0	6.7	2.3	.6	1.10	1.42	1.90	2.31	2.70	3.10	3.55	4.07	4.74	5.78	6.74
Mar	4.25	3.46	3.15	1991	30	10.44	1975	.95	1985	11.2	7.8	2.9	.9	1.23	1.63	2.24	2.77	3.28	3.82	4.41	5.11	6.02	7.44	8.75
Apr	3.83	3.31	4.26	1987	16	8.25	1987	.32	1985	10.4	6.7	2.5	.8	.73	1.08	1.64	2.15	2.68	3.24	3.89	4.66	5.68	7.33	8.90
May	3.96	3.68	3.33	1989	2	7.54	1971	1.13	1999	11.1	7.0	2.7	1.0	1.49	1.86	2.39	2.83	3.25	3.68	4.14	4.68	5.36	6.42	7.38
Jun	3.50	2.50	4.33	1995	3	14.60	1995	1.13	1985	9.9	6.4	2.3	.8	.75	1.07	1.58	2.05	2.52	3.02	3.58	4.26	5.15	6.57	7.92
Jul	4.44	4.28	3.65	1955	13	7.58	1984	1.60	1977	10.7	7.1	3.1	1.3	1.95	2.35	2.90	3.35	3.77	4.20	4.65	5.18	5.83	6.83	7.74
Aug	3.54	3.45	4.52	1964	31	9.63	1996	.86	1980	9.3	6.2	2.2	1.1	.99	1.33	1.84	2.28	2.71	3.17	3.67	4.26	5.03	6.23	7.36
Sep	4.08	3.19	4.76	1996	4	14.64	1996	.21	1985	8.6	5.6	2.3	1.1	.48	.79	1.37	1.93	2.54	3.22	4.00	4.98	6.31	8.50	10.63
Oct	3.71	3.13	4.93	1954	16	10.87	1990	.12	2000	7.8	5.2	2.4	1.1	.50	.80	1.33	1.84	2.39	2.99	3.68	4.54	5.69	7.59	9.41
Nov	3.07	2.89	3.65	1993	28	7.64	1985	.72	1981	9.2	5.5	2.1	.9	1.01	1.30	1.72	2.09	2.44	2.80	3.20	3.66	4.26	5.18	6.04
Dec	3.16	3.69	4.70	1958	29	6.42	1973	.34	1980	9.9	6.1	2.2	.9	.63	.92	1.38	1.81	2.24	2.70	3.22	3.85	4.68	6.01	7.27
Ann	44.98	45.32	4.93	Oct 1954	16	14.64	Sep 1996	.12	Oct 2000	119.5	77.6	29.9	11.3	33.47	35.73	38.62	40.79	42.71	44.56	46.47	48.56	51.09	54.74	57.88

+ 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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1971-2000

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151 Patton Avenue
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Station: DANVILLE, VA

COOP ID: 442245

Climate Division: VA 3

NWS Call Sign:

Elevation: 410 Feet

Lat: 36°35N

Lon: 79°23W

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	2.7	.0	#	0	6.5	1987	26	13.5	2000	8	1996	7	2	1988	1.1	.9	.4	.2	.0	.8	.5	.2	.0
Feb	.8	.0	#	0	6.0	1983	11	6.3	1982	13	1989	19	2	1979	.5	.5	.2	.2	.0	1.1	.5	.1	.0
Mar	.7	.0	#	0	6.0	1980	2	10.0	1980	10	1980	3	1	1980	.2	.2	.2	.1	.0	.3	.2	.1	@
Apr	.1	.0	#	0	1.0	1982	9	1.0+	1992	1	1982	9	#	1982	.1	.1	.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	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	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.1	.0	#	0	2.0	1972	17	2.0	1972	2	1972	17	#	1972	.1	.1	.0	.0	.0	@	.0	.0	.0
Dec	.9	.0	#	0	9.0	1973	17	9.0	1973	9	1973	17	#+	1998	.2	.2	.1	.1	.0	.2	@	@	.0
Ann	5.3	.0	N/A	N/A	9.0	Dec 1973	17	13.5	Jan 2000	13	Feb 1989	19	2+	Jan 1988	2.2	2.0	.9	.6	.0	2.4	1.2	.4	@

+ 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: DANVILLE, VA

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Climate Division: VA 3

NWS Call Sign:

Elevation: 410 Feet

Lat: 36°35N

Lon: 79°23W

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	5/04	4/30	4/26	4/23	4/21	4/18	4/15	4/12	4/07
32	4/24	4/19	4/15	4/11	4/08	4/05	4/02	3/29	3/23
28	4/06	4/01	3/28	3/25	3/22	3/18	3/15	3/11	3/06
24	3/23	3/18	3/14	3/11	3/08	3/05	3/02	2/26	2/21
20	3/12	3/06	3/01	2/25	2/21	2/17	2/13	2/08	2/02
16	3/04	2/23	2/16	2/10	2/05	1/30	1/24	1/16	1/05
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	10/06	10/11	10/14	10/17	10/19	10/22	10/25	10/28	11/02
32	10/14	10/19	10/22	10/25	10/27	10/30	11/02	11/05	11/09
28	10/25	10/30	11/03	11/06	11/10	11/13	11/16	11/20	11/25
24	11/13	11/19	11/23	11/26	11/30	12/03	12/06	12/10	12/16
20	11/22	11/30	12/05	12/10	12/14	12/19	12/23	12/29	1/05
16	12/05	12/14	12/21	12/27	1/02	1/08	1/14	1/21	2/02
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	201	194	189	185	181	177	173	168	161
32	222	215	210	206	201	197	193	188	181
28	255	247	242	237	232	228	223	217	209
24	289	281	275	270	266	261	256	250	242
20	325	315	308	301	296	290	284	276	266
16	>365	355	339	331	324	318	311	304	295

* 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: DANVILLE, VA

COOP ID: 442245

Climate Division: VA 3 NWS Call Sign: Elevation: 410 Feet Lat: 36°35N Lon: 79°23W

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	881	709	532	242	68	5	0	0	21	245	494	773	3970
60	726	569	383	126	19	0	0	0	4	141	350	618	2936
57	635	485	299	75	7	0	0	0	1	95	271	532	2400
55	579	431	247	50	3	0	0	0	1	70	222	473	2076
50	435	303	140	13	0	0	0	0	0	26	123	335	1375
32	83	27	2	0	0	0	0	0	0	0	1	42	155

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	226	242	493	757	1057	1273	1451	1398	1151	812	498	292	9650
55	8	2	25	117	347	583	738	685	462	169	29	10	3175
57	2	0	15	82	289	523	676	623	403	131	18	7	2769
60	0	0	6	43	208	433	583	530	316	85	8	0	2212
65	0	0	0	9	102	287	428	375	182	34	1	0	1418
70	0	0	0	1	36	158	273	226	79	9	0	0	782

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	77	120	290	534	817	1042	1212	1162	922	579	290	125	77	197	487	1021	1838	2880	4092	5254	6176	6755	7045	7170
45	34	60	176	390	662	892	1057	1007	772	427	178	61	34	94	270	660	1322	2214	3271	4278	5050	5477	5655	5716
50	11	23	93	257	508	742	902	852	622	284	95	29	11	34	127	384	892	1634	2536	3388	4010	4294	4389	4418
55	0	6	44	153	360	592	747	697	473	165	44	8	0	6	50	203	563	1155	1902	2599	3072	3237	3281	3289
60	0	0	19	79	225	443	592	542	328	79	12	1	0	0	19	98	323	766	1358	1900	2228	2307	2319	2320
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	58	93	196	343	528	697	827	792	611	373	191	83	58	151	347	690	1218	1915	2742	3534	4145	4518	4709	4792

(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.

- 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
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