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: PHILPOTT DAM 2, VA 1971-2000 COOP ID: 446692

Climate Division: VA 3 NWS Call Sign: Elevation: 1,123 Feet Lat: 36°47N Lon: 80°02W

									,	Гетре	eratur	re (°F)									
	Mea	n (1)						Extr	emes					Degree Base To	-		Mean	Numb	er of I	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	46.0	26.0	36.0	76	1975	29	44.4	1974	-10+	1985	21	27.0	1977	899	0	.0	.0	12.2	3.7	25.0	.5
Feb	50.1	26.8	38.5	80	1977	27	45.0	1976	-1	1996	5	29.3	1978	743	0	.0	.0	14.2	2.1	21.3	.1
Mar	58.6	34.1	46.4	87	1990	13	51.0	1990	6	1993	15	41.9	1996	579	0	.0	.0	23.6	.3	14.8	.0
Apr	68.4	41.7	55.1	92+	1976	20	59.9	1994	21	1985	10	51.2	1997	302	4	.0	.4	28.5	.0	4.3	.0
May	76.0	51.8	63.9	94+	1996	20	69.2	1991	29	1966	11	59.2	1997	106	72	.0	.6	31.0	.0	.2	.0
Jun	83.0	61.1	72.1	98+	1959	30	75.4	1981	35	1972	12	67.8	1972	8	219	.0	4.8	30.0	.0	.0	.0
Jul	86.8	65.9	76.4	100+	1983	22	79.7	1993	48	1988	1	72.9	2000	0	352	.1	10.7	31.0	.0	.0	.0
Aug	85.6	64.3	75.0	102	1983	22	78.3	1995	44+	1986	30	71.6	1992	0	307	.1	7.6	31.0	.0	.0	.0
Sep	79.3	57.3	68.3	99+	1954	8	72.3	1998	34	1967	30	65.1	1981	32	133	.0	2.4	30.0	.0	.0	.0
Oct	70.1	44.4	57.3	94	1954	6	64.8	1984	22+	1972	21	51.5	1988	265	25	.0	.1	30.6	.0	2.8	.0
Nov	59.9	36.4	48.2	85+	1974	3	56.1	1985	12	1970	25	43.4	1996	507	0	.0	.0	24.5	@	11.8	.0
Dec	49.7	28.6	39.2	79	2001	6	46.8	1984	-2+	1983	26	30.4	1989	802	0	.0	.0	15.4	1.8	21.3	.1
Ann	67.8	44.9	56.4	102	Aug 1983	22	79.7	Jul 1993	-10+	Jan 1985	21	27.0	Jan 1977	4243	1112	.2	26.6	302.0	7.9	101.5	.7

⁺ Also occurred on an earlier date(s)

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

Issue Date: February 2004 044-A

[@] Denotes mean number of days greater than 0 but less than .05

⁽¹⁾ From the 1971-2000 Monthly Normals

⁽²⁾ Derived from station's available digital record: 1953-2001

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

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COOP ID: 446692

Station: PHILPOTT DAM 2, VA

Climate Division: VA 3

Elevation: 1,123 Feet Lat: 36°47N Lon: 80°02W

										Pı	ecipit	tation	(incl	nes)										
			P	recipi	itatio	on Total	S			M	ean N	lumbo	_	Proba	bility th	nat the n		annual ₁			ies (1)	ıal to or	less tha	ın the
	Medi					Extremes	3			D	aily Pred				Th		•		-		bility Leve te gamma		ion	
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	3.91	3.65	4.02	1998	28	12.44	1998	.34	1981	9.7	6.7	2.7	1.1	.86	1.22	1.79	2.31	2.83	3.38	4.00	4.74	5.72	7.28	8.75
Feb	3.50	3.32	2.86	1998	17	11.02	1998	.33	1978	9.0	6.1	2.4	.9	.63	.94	1.46	1.93	2.42	2.94	3.54	4.26	5.23	6.78	8.26
Mar	4.55	3.82	3.07	1987	1	10.71	1975	1.15	1985	10.1	7.0	3.2	1.2	1.38	1.81	2.45	3.01	3.55	4.11	4.72	5.45	6.39	7.85	9.21
Apr	3.82	3.61	3.82	1987	16	10.78	1987	.66	1986	9.9	6.7	2.2	1.0	.88	1.23	1.79	2.29	2.79	3.32	3.92	4.63	5.56	7.04	8.44
May	4.99	4.41	3.05	1972	4	10.54	1998	1.04	1997	12.2	8.2	3.3	1.5	1.51	1.98	2.69	3.30	3.89	4.51	5.18	5.98	7.01	8.62	10.11
Jun	4.46	4.20	5.47	1972	21	10.72	1972	.35	1986	11.0	7.0	3.0	1.0	.85	1.25	1.91	2.51	3.13	3.78	4.53	5.43	6.63	8.55	10.38
Jul	5.09	5.49	4.04	1964	13	11.86	1989	1.23	2000	11.5	7.5	3.2	1.5	1.50	1.99	2.71	3.34	3.95	4.59	5.29	6.11	7.18	8.85	10.40
Aug	4.65	3.98	6.91	1985	18	11.61	1996	1.35	1983	10.4	6.5	2.8	1.2	1.21	1.65	2.32	2.92	3.50	4.12	4.80	5.61	6.67	8.34	9.89
Sep	4.69	3.16	8.28	1987	8	17.81	1996	.14	1985	9.5	5.9	2.8	1.2	.34	.64	1.25	1.89	2.61	3.44	4.44	5.70	7.45	10.40	13.32
Oct	3.99	3.28	4.75	1990	11	14.16	1990	.00	2000	8.1	5.4	2.5	1.2	.39	.85	1.52	2.10	2.69	3.33	4.06	4.93	6.10	7.99	9.79
Nov	3.36	2.90	4.45	1962	10	9.28	1985	.77	1981	8.3	5.4	2.4	1.0	.98	1.30	1.78	2.19	2.60	3.02	3.49	4.04	4.76	5.87	6.91
Dec	3.32	3.29	3.38	1958	29	10.98	1996	.20	1980	8.7	5.9	2.3	1.0	.43	.70	1.17	1.63	2.12	2.66	3.28	4.05	5.09	6.80	8.45
Ann	50.33	49.64	8.28	Sep 1987	8	17.81	Sep 1996	.00	Oct 2000	118.4	78.3	32.8	13.8	31.23	34.73	39.33	42.88	46.09	49.23	52.51	56.18	60.68	67.31	73.12

⁺ Also occurred on an earlier date(s)

NWS Call Sign:

Complete documentation available from:

www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

[#] 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: 1953-2001

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COOP ID: 446692

Station: PHILPOTT DAM 2, VA

Climate Division: VA 3 NWS Call Sign: Elevation: 1,123 Feet Lat: 36°47N Lon: 80°02W

										Snov	w (incl	hes)											
						Sn	ow To	tals									Mea	n Nu	mber	of Day	VS (1)		
	Mean	s/Medi	ians (1))					Extre	mes (2)							ow Fa					Depth esholo	
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	1.7	.2	#	#	6.5	1988	8	6.5	1988	22	1987	26	5	1987	.6	.3	.1	.1	.0	1.3	.7	.2	.0
Feb	.9	.0	1	0	12.0	1983	11	12.0	1983	12	1983	12	3	1987	.9	.6	.4	.3	.1	1.0	.7	.4	.1
Mar	1.3	.0	#	0	22.5	1993	14	22.5	1993	20	1993	14	2	1993	.4	.2	.2	.1	.1	.4	.3	.2	.1
Apr	.1	.0	#	0	.9	1993	6	.9	1993	3	1983	19	1	1987	.1	.0	.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	.0	.0	0	0	.5	1987	11	.5	1987	0	0	0	0	0	.1	.0	.0	.0	.0	.0	.0	.0	.0
Dec	.7	.0	#	0	4.2	1976	8	4.2	1976	7	1997	30	2	1989	.2	.2	.1	.0	.0	.2	@	.0	.0
Ann	4.7	.2	N/A	N/A	22.5	Mar 1993	14	22.5	Mar 1993	22	Jan 1987	26	5	Jan 1987	2.3	1.3	.8	.5	.2	2.9	1.7	.8	.2

⁺ Also occurred on an earlier date(s) #Denotes trace amounts

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

[@] 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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COOP ID: 446692

Lon: 80°02W

Lat: 36°47N

Station: PHILPOTT DAM 2, VA

Climate Division: VA 3

NWS Call Sign:

				Freez	e Data							
			Spri	ng Freeze D	ates (Month/	Day)						
Freeze Data Spring Freeze Dates (Month/Day)												
Temp (I')	.10	.20	.30	.40	.50	.60	.70	.80	.90			
36	5/18	5/12	5/08	5/05	5/02	4/29	4/25	4/21	4/16			
32	5/02	4/27	4/23	4/20	4/17	4/14	4/11	4/07	4/02			
28	4/16	4/11	4/08	4/05	4/02	3/30	3/28	3/24	3/19			
24	4/03	3/29	3/25	3/21	3/18	3/15	3/11	3/07	3/02			
20	3/24	3/18	3/13	3/09	3/05	3/01	2/25	2/20	2/13			
16	3/11	3/02	2/25	2/20	2/15	2/10	2/05	1/30	1/22			
<u>.</u>			Fal	l Freeze Da	tes (Month/D	ay)						
Former (E)		Pro	bability of ea	arlier date i	n fall (beginn	ing Aug 1) t	han indicate	d(*)				
remp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90			
36	9/30	10/04	10/07	10/09	10/12	10/14	10/17	10/20	10/24			
32	10/10	10/14	10/18	10/21	10/24	10/27	10/30	11/02	11/07			
28	10/18	10/24	10/28	11/01	11/04	11/07	11/11	11/15	11/21			
24	11/07	11/13	11/17	11/21	11/24	11/28	12/02	12/06	12/12			
20	11/16	11/23	11/28	12/02	12/06	12/10	12/14	12/19	12/26			
16	11/29	12/07	12/12	12/16	12/21	12/25	12/30	1/04	1/11			
•				Freeze F	ree Period				1			
Tomp (F)			Probability	of longer th	an indicated	freeze free p	eriod (Days)	1				
remp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90			
36	184	177	171	167	162	158	153	148	140			
32	209	202	197	193	189	185	181	177	170			
28	236	229	224	219	215	211	207	202	194			
24	278	269	262	256	251	245	240	233	223			
20	303	294	287	281	276	270	265	258	249			
16	341	328	320	313	307	301	294	286	276			

^{*} 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.

Complete documentation available from:

Elevation: 1,123 Feet

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				Deg	ree Days t	o Selected	Base Tem	peratures	(°F)				
Base						Heatin	g Degree l	Days (1)					
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	899	743	579	302	106	8	0	0	32	265	507	802	4243
60	744	603	427	173	40	1	0	0	7	156	362	647	3160
57	651	519	341	112	18	0	0	0	2	105	281	557	2586
55	595	464	286	79	9	0	0	0	1	78	231	500	2243
50	451	333	169	25	1	0	0	0	0	30	129	360	1498
32	88	33	4	0	0	0	0	0	0	0	2	49	176

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	212	214	448	692	989	1201	1375	1330	1090	783	485	270	9089
55	5	0	17	81	285	511	662	617	401	148	25	9	2761
57	0	0	10	54	232	451	600	555	343	113	15	3	2376
60	0	0	3	25	161	362	507	462	257	70	6	0	1853
65	0	0	0	4	72	219	352	307	133	25	0	0	1112
70	0	0	0	0	22	102	201	163	46	6	0	0	540

										Gro	wing]	Degre	e Uni	ts (2)										
Base					Growing	g Degree	Units (N	(Ionthly)					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	99	241	465	731	954	1116	1078	848	538	269	107	63	162	403	868	1599	2553	3669	4747	5595	6133	6402	6509
45	26 48 141 325 576 804 961 923 698 388 162											50	26	74	215	540	1116	1920	2881	3804	4502	4890	5052	5102
50	6 16 68 204 423 654 806 768 548 252 81											22	6	22	90	294	717	1371	2177	2945	3493	3745	3826	3848
55	0	1	30	113	282	504	651	613	399	137	38	2	0	1	31	144	426	930	1581	2194	2593	2730	2768	2770
60	0	0	5	51	157	355	496	458	262	60	8	0	0	0	5	56	213	568	1064	1522	1784	1844	1852	1852
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0/86 52 80 167 296 466 641 767 734 553 340 176											75	52	132	299	595	1061	1702	2469	3203	3756	4096	4272	4347

(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

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.

Compete documentation for the 1971-2000 Normals is available on the internet from:

www.ncdc.noaa.gov/oa/climate/normals/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 are 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

- c. Snow Tables
 - 1. Snow Climatology
 - 2. Cooperative Summary of the Day
- d. Freeze Data Table

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

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normals.html

U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/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