

Climatology of the United States

No. 20

1971-2000

Station: WARSAW 2 NW, VA

COOP ID: 448894

Climate Division: VA 1

NWS Call Sign:

Elevation: 140 Feet

Lat: 37° 59N

Lon: 76° 47W

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	45.7	27.8	36.8	76	1975	29	45.1	1990	-6	1985	21	25.2	1977	876	0	.0	.0	11.3	3.2	21.3	.2
Feb	49.7	29.9	39.8	80	1989	15	48.5	1976	-4	1996	5	28.0	1979	707	0	.0	.0	14.0	1.9	18.2	.1
Mar	58.6	36.6	47.6	88+	1998	30	52.5	1977	10+	1980	3	42.7	1984	539	0	.0	.0	24.7	.2	11.4	.0
Apr	68.9	44.7	56.8	95	1960	26	62.8	1994	22	1961	3	52.4	1975	257	10	.0	.4	29.5	.0	2.8	.0
May	77.0	54.2	65.6	99	1991	31	71.6	1991	30	1966	11	61.8	1992	68	87	.0	1.6	31.0	.0	.0	.0
Jun	84.3	62.6	73.5	105	1959	30	77.3	1994	40	1988	4	69.4	1979	4	257	.0	7.0	30.0	.0	.0	.0
Jul	88.1	67.1	77.6	104+	1953	18	80.6	1993	47	1952	2	74.5	2000	0	391	.4	13.9	31.0	.0	.0	.0
Aug	86.5	65.4	76.0	103+	1983	20	79.5	1988	44	1986	30	72.6	1992	0	339	.3	9.7	31.0	.0	.0	.0
Sep	80.9	59.1	70.0	105	1954	7	75.6	1998	35	1963	25	67.4	1984	18	167	.1	3.4	30.0	.0	.0	.0
Oct	70.4	47.3	58.9	95	1954	4	65.1	1984	24	1952	30	54.1	1976	221	30	.0	.2	30.8	.0	1.8	.0
Nov	59.9	39.3	49.6	85	1974	1	56.3	1985	14	1955	29	42.4	1976	463	1	.0	.0	25.2	.0	8.8	.0
Dec	50.0	31.7	40.9	82	1998	7	47.2	1984	-1	1989	25	28.8	1989	749	0	.0	.0	16.1	1.2	17.6	@
Ann	68.3	47.1	57.8	105+	Jun 1959	30	80.6	Jul 1993	-6	Jan 1985	21	25.2	Jan 1977	3902	1282	.8	36.2	304.6	6.5	81.9	.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: 1951-2001

(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: WARSAW 2 NW, VA

COOP ID: 448894

Climate Division: VA 1

NWS Call Sign:

Elevation: 140 Feet Lat: 37°59N

Lon: 76°47W

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	3.49	3.27	3.31	1998	28	7.61	1978	.26	1981	9.9	6.5	2.5	.7	1.09	1.42	1.91	2.33	2.74	3.17	3.63	4.18	4.89	5.99	7.01
Feb	2.82	2.65	2.40	1998	4	7.13	1998	.44	1978	8.8	5.5	2.1	.5	.71	.97	1.38	1.75	2.11	2.49	2.91	3.41	4.07	5.11	6.09
Mar	3.99	3.47	2.73	1984	26	10.57	1984	.99	1986	9.5	6.5	2.6	1.2	1.08	1.46	2.03	2.54	3.03	3.55	4.13	4.81	5.70	7.09	8.39
Apr	2.91	3.12	1.89	1983	16	7.22	1983	.30	1985	9.0	5.6	2.3	.8	.88	1.16	1.57	1.93	2.27	2.63	3.03	3.49	4.09	5.03	5.91
May	4.51	3.92	3.61	1990	29	10.93	1990	.55	1999	11.3	7.6	3.0	1.2	1.29	1.72	2.36	2.92	3.47	4.04	4.68	5.42	6.39	7.91	9.32
Jun	3.40	3.35	4.53	1972	22	10.46	1972	.88	1990	9.9	6.5	2.2	.7	.96	1.28	1.77	2.20	2.61	3.05	3.53	4.09	4.83	5.98	7.06
Jul	4.65	4.47	4.71	1989	16	10.46	1995	1.61	1983	11.1	7.1	3.2	1.4	1.64	2.08	2.72	3.25	3.76	4.29	4.86	5.52	6.37	7.69	8.90
Aug	4.12	3.29	6.45	1955	12	11.42	1985	.89	1998	9.2	6.1	2.7	1.1	.98	1.36	1.96	2.50	3.04	3.60	4.23	4.99	5.98	7.55	9.02
Sep	4.35	3.82	8.45	1999	16	12.28	1979	.48	1978	8.5	5.6	2.6	1.3	.61	.97	1.59	2.20	2.83	3.52	4.33	5.31	6.64	8.81	10.90
Oct	3.51	2.96	5.80	1961	21	8.68	1971	.01	2000	7.8	4.9	2.3	1.1	.37	.64	1.12	1.61	2.14	2.73	3.42	4.29	5.47	7.42	9.33
Nov	3.07	2.85	3.59	1956	2	7.66	1997	.45	1991	8.3	5.7	2.1	.7	.86	1.15	1.59	1.98	2.35	2.75	3.18	3.70	4.37	5.42	6.40
Dec	3.03	3.10	2.50	1958	29	6.07	1986	.53	1988	8.8	6.0	2.3	.7	.65	.93	1.38	1.78	2.18	2.61	3.10	3.68	4.45	5.67	6.83
Ann	43.85	44.23	8.45	Sep 1999	16	12.28	Sep 1979	.01	Oct 2000	112.1	73.6	29.9	11.4	32.05	34.36	37.30	39.53	41.51	43.41	45.37	47.53	50.15	53.93	57.19

+ 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: 1951-2001

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

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

Climatography of the United States

No. 20 1971-2000

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151 Patton Avenue
Asheville, North Carolina 28801
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Station: WARSAW 2 NW, VA

COOP ID: 448894

Climate Division: VA 1

NWS Call Sign:

Elevation: 140 Feet

Lat: 37°59N

Lon: 76°47W

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	5.8	4.1	1	#	17.0	1987	26	27.2	1987	23	1987	26	4	1996	2.7	1.6	.5	.2	.1	4.8	2.4	1.3	.4
Feb	4.4	2.7	1	#	10.0	1979	19	19.0	1996	18	1979	19	5	1979	2.0	1.4	.7	.3	@	3.4	1.9	1.1	.1
Mar	1.7	.3	#	0	6.0	1971	26	13.0	1980	11	1980	2	1	1980	1.0	.6	.2	.1	.0	.7	.3	.1	@
Apr	.1	.0	0	0	1.0	1990	7	1.0	1990	0	0	0	0	0	.2	@	.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	.4	.0	#	0	4.0	1987	11	4.5	1987	4	1987	11	#+	1996	.2	.2	.1	.0	.0	.2	.1	.0	.0
Dec	2.4	.6	#	0	8.0	1982	12	18.5	1989	11	1989	13	4	1989	1.3	.8	.3	.1	.0	1.8	1.1	.7	@
Ann	14.8	7.7	N/A	N/A	17.0	Jan 1987	26	27.2	Jan 1987	23	Jan 1987	26	5	Feb 1979	7.4	4.6	1.8	.7	.1	10.9	5.8	3.2	.5

+ 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: WARSAW 2 NW, VA

COOP ID: 448894

Climate Division: VA 1

NWS Call Sign:

Elevation: 140 Feet

Lat: 37° 59N

Lon: 76° 47W

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	5/07	5/03	4/30	4/27	4/25	4/22	4/19	4/16	4/12
32	4/25	4/20	4/17	4/14	4/11	4/09	4/06	4/02	3/28
28	4/16	4/11	4/07	4/04	4/02	3/30	3/27	3/23	3/18
24	3/25	3/21	3/19	3/16	3/14	3/12	3/10	3/07	3/03
20	3/18	3/11	3/06	3/02	2/27	2/23	2/19	2/14	2/08
16	3/06	2/25	2/19	2/14	2/09	2/04	1/30	1/24	1/15
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	10/03	10/07	10/11	10/13	10/16	10/18	10/21	10/24	10/28
32	10/10	10/16	10/19	10/23	10/26	10/29	11/01	11/05	11/10
28	10/19	10/25	10/30	11/03	11/06	11/10	11/14	11/18	11/25
24	11/08	11/14	11/18	11/22	11/25	11/28	12/02	12/06	12/12
20	11/26	12/02	12/07	12/10	12/14	12/17	12/21	12/25	12/31
16	12/06	12/13	12/18	12/22	12/27	12/31	1/04	1/09	1/16
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	193	186	181	177	173	169	165	160	154
32	218	211	205	201	197	193	188	183	176
28	242	233	228	223	218	213	208	202	194
24	275	268	263	259	255	251	247	242	235
20	314	305	299	294	289	285	279	273	265
16	>365	342	331	324	317	311	304	296	286

* 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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**Climatography
of the United States
No. 20
1971-2000**

Station: WARSAW 2 NW, VA

COOP ID: 448894

Climate Division: VA 1 NWS Call Sign: Elevation: 140 Feet Lat: 37°59N Lon: 76°47W

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	876	707	539	257	68	4	0	0	18	221	463	749	3902
60	721	567	387	139	19	0	0	0	3	119	322	597	2874
57	636	490	303	86	7	0	0	0	1	75	245	511	2354
55	577	438	249	59	3	0	0	0	0	53	199	454	2032
50	435	314	139	17	0	0	0	0	0	17	107	321	1350
32	90	44	3	0	0	0	0	0	0	0	1	41	179

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	236	262	486	743	1041	1243	1414	1362	1139	832	529	315	9602
55	10	11	20	112	331	553	701	649	450	172	37	15	3061
57	7	7	11	80	273	493	639	587	390	132	23	10	2652
60	0	0	3	43	192	403	546	494	302	83	11	3	2080
65	0	0	0	10	87	257	391	339	167	30	1	0	1282
70	0	0	0	1	26	129	240	193	66	7	0	0	662

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	89	129	282	521	811	1022	1184	1130	912	598	322	145	89	218	500	1021	1832	2854	4038	5168	6080	6678	7000	7145
45	42	74	172	374	656	872	1029	975	762	444	207	78	42	116	288	662	1318	2190	3219	4194	4956	5400	5607	5685
50	20	33	95	242	501	722	874	820	612	301	118	39	20	53	148	390	891	1613	2487	3307	3919	4220	4338	4377
55	4	13	47	143	349	572	719	665	463	176	60	14	4	17	64	207	556	1128	1847	2512	2975	3151	3211	3225
60	0	0	19	70	214	422	564	510	320	92	24	2	0	0	19	89	303	725	1289	1799	2119	2211	2235	2237
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	54	81	175	321	519	694	819	776	609	374	188	80	54	135	310	631	1150	1844	2663	3439	4048	4422	4610	4690

(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/normal/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.

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| <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 |
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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