

Climatography of the United States No. 20

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: WEST UNION 2, WV

1971-2000

COOP ID: 469458

Climate Division: WV 2

NWS Call Sign:

Elevation: 790 Feet

Lat: 39°17N

Lon: 80°46W

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	38.8	17.6	28.2	74+	1973	1	37.5	1990	-33+	1994	19	13.8	1977	1140	0	.0	.0	6.9	9.0	27.1	3.3
Feb	42.9	19.0	31.0	78	2000	27	38.6	1990	-17+	1996	5	17.6	1978	954	0	.0	.0	8.9	5.9	23.7	2.2
Mar	53.0	26.8	39.9	86	1989	29	48.7	1973	-7+	1980	3	33.9	1996	780	0	.0	.0	18.3	1.5	21.4	.2
Apr	63.9	35.7	49.8	90+	1976	19	54.2	1981	15	1972	9	43.9	1975	457	1	.0	.1	26.1	@	11.0	.0
May	73.2	46.0	59.6	92+	1991	27	68.2	1991	25	1996	15	53.7	1997	208	41	.0	.3	30.9	.0	1.6	.0
Jun	80.2	55.6	67.9	97+	1971	29	71.4	1971	32	1972	11	62.8	1992	43	130	.0	1.9	30.0	.0	@	.0
Jul	83.5	60.7	72.1	103	1988	17	75.9	1999	38	1988	1	68.8	2000	2	221	.1	4.9	31.0	.0	.0	.0
Aug	82.3	59.3	70.8	101+	1988	18	75.1	1988	40	1997	8	67.5	1982	12	191	.1	3.5	31.0	.0	.0	.0
Sep	76.6	51.8	64.2	96	1993	1	68.0	1971	28	1983	25	60.8	1976	86	61	.0	.8	30.0	.0	.2	.0
Oct	65.7	38.3	52.0	85+	1975	15	59.3	1984	18	1976	29	46.2	1976	410	8	.0	.0	29.4	.0	8.1	.0
Nov	54.2	29.5	41.9	81	1990	28	48.5	1985	7	1976	30	33.9	1976	694	0	.0	.0	18.9	.4	17.9	.0
Dec	43.4	22.5	33.0	78	1982	4	40.7	1984	-18	1989	23	19.6	1989	994	0	.0	.0	9.9	5.4	24.9	.8
Ann	63.1	38.6	50.9	103	Jul 1988	17	75.9	Jul 1999	-33+	Jan 1994	19	13.8	Jan 1977	5780	653	.2	11.5	271.3	22.2	135.9	6.5

+ 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: 1971-2001

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

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Lon: 80°46W

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	3.33	2.88	2.18	1974	11	7.98	1994	.96	1981	14.3	7.8	1.9	.6	1.06	1.38	1.84	2.24	2.63	3.03	3.47	3.98	4.64	5.67	6.62	
Feb	3.05	2.74	2.75	2000	19	5.27	1994	.74	1978	12.1	7.0	1.7	.2	1.08	1.37	1.79	2.14	2.47	2.81	3.19	3.62	4.17	5.03	5.82	
Mar	4.06	3.67	1.97	1997	2	7.86	1997	1.94	1987	14.3	8.6	2.9	.7	1.84	2.20	2.70	3.10	3.48	3.85	4.26	4.72	5.30	6.18	6.97	
Apr	3.52	3.11	2.27	1989	25	6.50	1972	.97	1971	13.9	8.5	2.0	.6	1.33	1.66	2.13	2.52	2.89	3.27	3.69	4.17	4.78	5.72	6.57	
May	4.79	4.68	2.83	1974	12	10.02	1996	1.56	1991	13.7	9.1	3.5	1.1	1.97	2.41	3.02	3.53	4.01	4.50	5.02	5.63	6.39	7.56	8.63	
Jun	4.24	3.60	2.90	1998	28	10.99	1998	.94	1988	12.4	8.3	3.1	.9	1.24	1.65	2.25	2.77	3.28	3.81	4.40	5.09	5.98	7.37	8.67	
Jul	5.05	4.79	3.40	2001	8	9.99	1978	2.49	1993	12.5	9.1	3.7	1.4	2.56	2.98	3.55	4.01	4.43	4.85	5.30	5.80	6.43	7.37	8.22	
Aug	4.13	3.73	3.90	1975	16	9.19	1975	1.77	1988	11.0	7.3	2.9	1.0	1.46	1.85	2.41	2.89	3.34	3.81	4.31	4.91	5.66	6.83	7.91	
Sep	3.53	3.13	4.38	1971	13	9.83	1971	.75	1985	10.2	6.4	2.3	1.0	.99	1.32	1.83	2.27	2.71	3.16	3.66	4.25	5.02	6.22	7.35	
Oct	3.08	2.79	1.78	1976	9	8.21	1976	.44	1994	10.2	6.9	2.2	.6	.81	1.10	1.55	1.94	2.33	2.73	3.19	3.72	4.42	5.53	6.56	
Nov	3.66	3.55	2.37	1999	26	10.95	1985	.70	1976	12.0	8.0	2.4	.7	1.19	1.54	2.05	2.49	2.91	3.34	3.81	4.37	5.08	6.19	7.21	
Dec	3.36	2.91	2.18+	1978	4	9.61	1990	1.58	2000	13.6	7.6	1.9	.6	1.28	1.59	2.04	2.41	2.77	3.13	3.52	3.97	4.55	5.43	6.24	
Ann	45.80	43.67	4.38	Sep 1971	13	10.99	Jun 1998	.44	Oct 1994	150.2	94.6	30.5	9.4	34.98	37.13	39.86	41.91	43.71	45.45	47.23	49.18	51.53	54.92	57.82	

+ 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: 1971-2001

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

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NWS Call Sign:

Elevation: 790 Feet

Lat: 39°17N

Lon: 80°46W

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	11.1	7.0	2	1	14.0	1994	5	51.5	1994	24	1994	5	11	1994	4.6	3.1	1.3	.5	.1	9.4	7.0	5.1	1.8
Feb	5.6	4.1	2	1	7.5	1979	19	21.5	1979	22	1979	13	14	1979	3.2	2.3	.4	.2	.0	7.5	4.0	1.6	.2
Mar	3.0	2.0	#	#	14.0	1993	14	18.5	1993	18	1993	15	3	1993	1.4	1.0	.4	.1	@	2.1	1.0	.5	.1
Apr	.3	.0	#	0	4.0	1973	12	7.0	1973	4	1973	12	#+	1997	.1	.1	.1	.0	.0	.1	.1	.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	#	1972	19	#	1972	#	1972	19	#	1972	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.5	#	#	#	3.0	1971	25	3.0	1971	3	1971	25	#+	2000	.4	.3	@	.0	.0	.5	@	.0	.0
Dec	3.1	3.5	#	#	3.0	1988	14	8.4	1989	6	1993	31	2	1989	2.3	1.3	.1	.0	.0	3.2	.7	.2	.0
Ann	23.6	16.6	N/A	N/A	14.0+	Jan 1994	5	51.5	Jan 1994	24	Jan 1994	5	14	Feb 1979	12.0	8.1	2.3	.8	.1	22.8	12.8	7.4	2.1

+ 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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NWS Call Sign:

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Lon: 80° 46W

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	6/01	5/26	5/22	5/19	5/15	5/12	5/08	5/04	4/28
32	5/20	5/15	5/11	5/07	5/04	5/01	4/27	4/23	4/17
28	5/10	5/04	4/30	4/26	4/23	4/19	4/16	4/12	4/06
24	4/21	4/17	4/13	4/11	4/08	4/05	4/03	3/30	3/26
20	4/09	4/04	3/31	3/28	3/25	3/22	3/18	3/14	3/09
16	3/31	3/24	3/18	3/14	3/09	3/05	2/28	2/23	2/15
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	9/21	9/25	9/28	9/30	10/03	10/05	10/07	10/10	10/14
32	9/24	9/30	10/05	10/09	10/12	10/16	10/20	10/24	10/31
28	10/07	10/13	10/17	10/21	10/24	10/28	10/31	11/05	11/10
24	10/19	10/24	10/27	10/31	11/02	11/05	11/08	11/12	11/17
20	10/30	11/04	11/08	11/11	11/14	11/17	11/21	11/25	11/30
16	11/11	11/18	11/23	11/28	12/02	12/06	12/10	12/15	12/22
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	159	152	148	143	140	136	132	127	120
32	187	178	172	166	161	156	150	144	134
28	208	200	194	189	184	179	174	168	159
24	230	222	217	212	208	203	199	193	186
20	258	250	244	239	234	229	224	218	210
16	295	285	278	272	267	261	255	248	238

* 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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Climate Division: WV 2 NWS Call Sign: Elevation: 790 Feet Lat: 39°17N Lon: 80°46W

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	1140	954	780	457	208	43	2	12	86	410	694	994	5780
60	985	814	625	312	112	11	0	1	29	276	545	839	4549
57	892	730	534	234	69	4	0	0	12	207	457	746	3885
55	830	674	477	186	47	2	0	0	6	167	400	684	3473
50	687	542	337	91	14	0	0	0	1	88	267	543	2570
32	246	158	42	0	0	0	0	0	0	0	17	147	610

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	128	129	285	534	856	1077	1242	1202	966	621	313	177	7530
55	0	0	7	30	190	389	529	489	282	74	5	0	1995
57	0	0	2	18	150	331	467	427	228	52	2	0	1677
60	0	0	0	7	99	248	374	335	155	28	0	0	1246
65	0	0	0	1	41	130	221	191	61	8	0	0	653
70	0	0	0	0	12	49	92	83	14	1	0	0	251

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	37	52	155	340	627	853	1012	978	748	410	168	60	37	89	244	584	1211	2064	3076	4054	4802	5212	5380	5440
45	10	19	86	223	473	703	857	823	598	272	96	28	10	29	115	338	811	1514	2371	3194	3792	4064	4160	4188
50	2	4	40	133	329	553	702	668	452	160	47	10	2	6	46	179	508	1061	1763	2431	2883	3043	3090	3100
55	0	0	14	69	204	405	547	513	308	80	15	1	0	0	14	83	287	692	1239	1752	2060	2140	2155	2156
60	0	0	4	28	106	266	392	360	183	30	3	0	0	0	4	32	138	404	796	1156	1339	1369	1372	1372
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	28	48	123	240	403	560	684	657	481	274	124	41	28	76	199	439	842	1402	2086	2743	3224	3498	3622	3663

(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