

Climatography of the United States

No. 20

1971-2000

Station: SPENCER, WV

COOP ID: 468384

Climate Division: WV 3

NWS Call Sign:

Elevation: 943 Feet

Lat: 38°48N

Lon: 81°22W

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	40.7	19.5	30.1	80	1939	5	39.8	1974	-31+	1994	19	16.8	1977	1081	0	.0	.0	8.4	7.8	26.3	3.0
Feb	45.4	20.4	32.9	81	2000	27	41.7	2000	-22	1996	6	21.7	1978	899	0	.0	.0	10.7	4.5	23.1	1.6
Mar	55.7	27.9	41.8	90	1929	26	50.5	1973	-13	1943	4	34.2	1996	718	0	.0	.0	20.8	.9	20.2	.3
Apr	66.4	36.1	51.3	92+	1986	28	56.5+	1985	15+	1982	7	45.2	1997	416	2	.0	.3	27.3	.1	10.1	.0
May	75.1	46.8	61.0	98	1934	1	69.0	1991	21	1947	10	54.7	1997	185	60	.0	.9	31.0	.0	2.3	.0
Jun	82.3	56.2	69.3	101	1944	19	73.3	1984	31	1972	11	64.5	1972	27	154	.0	3.7	30.0	.0	@	.0
Jul	85.9	61.1	73.5	105	1934	26	77.4	1999	38	1988	1	70.1+	2000	4	268	.2	8.3	31.0	.0	.0	.0
Aug	84.4	58.9	71.7	104	1930	5	76.9	1995	35	1986	29	67.9	1992	13	219	@	5.4	31.0	.0	.0	.0
Sep	78.3	51.3	64.8	103	1932	2	68.6	1973	29+	1942	29	61.7	1997	71	65	.0	1.6	30.0	.0	.5	.0
Oct	67.6	38.9	53.3	92	1927	2	61.0	1971	15+	1952	21	46.1	1988	379	15	.0	.0	30.1	.0	8.7	.0
Nov	55.7	30.8	43.3	85	1933	2	53.1	1985	-1	1958	30	35.4	1976	653	0	.0	.0	20.2	.4	16.8	.0
Dec	45.1	24.2	34.7	81	1982	4	44.6	1971	-22	1989	22	20.1	1989	940	0	.0	.0	11.3	4.3	23.4	.8
Ann	65.2	39.3	52.3	105	Jul 1934	26	77.4	Jul 1999	-31+	Jan 1994	19	16.8	Jan 1977	5386	783	.2	20.2	281.8	18.0	131.4	5.7

+ 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: 1926-2001

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

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No. 20
1971-2000**

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

Station: SPENCER, WV

COOP ID: 468384

Climate Division: WV 3

NWS Call Sign:

Elevation: 943 Feet Lat: 38°48N

Lon: 81°22W

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	3.50	3.21	2.03	1994	4	7.73	1978	1.22	2000	15.4	8.2	2.0	.5	1.19	1.52	2.00	2.41	2.80	3.21	3.65	4.17	4.83	5.86	6.80
Feb	3.21	2.95	2.10	2000	18	7.16	1989	.93	1977	12.9	7.2	2.1	.4	1.27	1.57	1.99	2.34	2.67	3.00	3.36	3.78	4.31	5.12	5.86
Mar	3.88	3.75	3.39	1997	2	10.48	1997	1.09	1971	13.7	8.5	2.8	.5	1.39	1.75	2.28	2.73	3.15	3.59	4.06	4.61	5.31	6.40	7.40
Apr	3.33	3.19	2.52	1939	16	5.85	1972	1.05	1971	14.0	8.1	2.0	.2	1.42	1.72	2.15	2.49	2.82	3.14	3.50	3.90	4.41	5.19	5.90
May	4.30	3.82	2.22	1967	7	9.00	1996	1.55	1977	13.4	9.2	3.3	.7	1.69	2.09	2.65	3.12	3.56	4.01	4.50	5.06	5.78	6.88	7.88
Jun	3.93	3.45	2.90	1953	17	10.36	1998	1.02	1988	11.7	8.3	2.9	.8	1.33	1.70	2.25	2.71	3.15	3.61	4.11	4.69	5.43	6.59	7.65
Jul	4.94	4.73	3.98	1996	31	9.50	1980	1.90	1974	12.0	8.5	3.7	1.1	1.96	2.42	3.06	3.60	4.11	4.62	5.18	5.82	6.64	7.89	9.02
Aug	4.08	3.96	3.50	1969	10	7.57	1980	1.73	1988	10.8	7.1	2.8	1.1	1.74	2.11	2.62	3.05	3.44	3.84	4.27	4.77	5.39	6.35	7.21
Sep	3.90	3.21	2.74	1996	7	10.92	1971	.70	1983	9.9	6.8	2.5	1.0	1.05	1.42	1.98	2.48	2.96	3.47	4.03	4.70	5.57	6.93	8.20
Oct	3.11	3.04	3.31	1985	21	6.61	1983	.53	1994	10.2	6.2	2.1	.6	.70	.99	1.44	1.85	2.26	2.70	3.19	3.77	4.54	5.76	6.92
Nov	3.69	3.54	2.60	1985	5	8.38	1985	1.24	1976	12.3	7.9	2.5	.7	1.44	1.78	2.27	2.67	3.06	3.44	3.86	4.35	4.97	5.92	6.78
Dec	3.48	2.95	2.64	1978	9	10.16	1978	1.48	1971	13.9	8.2	1.9	.6	1.32	1.65	2.11	2.50	2.86	3.24	3.64	4.11	4.71	5.63	6.47
Ann	45.35	44.29	3.98	Jul 1996	31	10.92	Sep 1971	.53	Oct 1994	150.2	94.2	30.6	8.2	34.05	36.29	39.13	41.26	43.15	44.96	46.83	48.88	51.35	54.92	57.99

+ 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: 1926-2001

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

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NWS Call Sign:

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Lat: 38°48N

Lon: 81°22W

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	10.3	6.1	2	1	12.0	1978	20	48.5	1978	24	1978	21	9	1978	6.0	3.7	1.1	.5	.1	9.6	5.9	3.2	1.2
Feb	7.8	5.0	1	#	10.0	1986	11	22.5	1979	14	1983	12	5	1985	4.4	2.4	1.0	.4	@	6.8	2.8	1.6	.2
Mar	4.5	3.4	#	#	11.0	1993	14	15.0	1993	15	1993	15	2	1993	2.0	1.5	.5	.1	@	3.0	1.0	.4	.1
Apr	.6	.0	#	0	7.0	1987	5	13.5	1987	14	1987	5	1	1987	.3	.1	.1	.1	.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	#	2000	9	#+	2000	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.6	.0	#	0	3.0	1971	25	3.5	1996	2	1996	22	#+	2000	.5	.3	@	.0	.0	.5	.0	.0	.0
Dec	3.4	2.3	#	#	3.7	1985	25	12.0	1989	6	1989	26	2	1989	2.4	1.6	.1	.0	.0	3.9	1.2	.1	.0
Ann	27.2	16.8	N/A	N/A	12.0	Jan 1978	20	48.5	Jan 1978	24	Jan 1978	21	9	Jan 1978	15.6	9.6	2.8	1.1	.1	23.8	10.9	5.3	1.5

+ 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

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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	6/05	5/30	5/25	5/21	5/17	5/14	5/10	5/05	4/29
32	5/24	5/18	5/14	5/11	5/08	5/04	5/01	4/27	4/21
28	5/11	5/06	5/02	4/29	4/26	4/23	4/20	4/16	4/11
24	4/23	4/18	4/14	4/11	4/08	4/05	4/02	3/29	3/24
20	4/14	4/09	4/05	4/02	3/30	3/27	3/24	3/20	3/15
16	4/09	4/01	3/26	3/21	3/16	3/12	3/07	3/01	2/21
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	9/15	9/20	9/23	9/26	9/29	10/02	10/05	10/09	10/13
32	9/24	9/29	10/02	10/05	10/08	10/11	10/14	10/17	10/22
28	10/02	10/08	10/12	10/15	10/18	10/22	10/25	10/29	11/03
24	10/15	10/21	10/26	10/30	11/02	11/06	11/10	11/14	11/20
20	10/21	10/27	10/31	11/04	11/08	11/11	11/15	11/20	11/26
16	11/05	11/13	11/18	11/23	11/27	12/01	12/05	12/11	12/18
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	157	149	144	139	134	130	125	119	111
32	172	166	161	157	153	149	145	140	133
28	195	188	183	179	175	171	167	162	155
24	233	224	218	213	208	203	197	191	182
20	244	236	231	226	222	218	213	208	201
16	284	274	267	260	255	249	242	235	225

* 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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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	1081	899	718	416	185	27	4	13	71	379	653	940	5386
60	926	759	567	277	99	5	0	0	21	252	506	785	4197
57	833	675	480	203	61	2	0	0	9	190	423	697	3573
55	771	619	424	160	42	1	0	0	4	153	368	640	3182
50	627	488	293	77	13	0	0	0	1	82	246	497	2324
32	202	122	34	0	0	0	0	0	0	1	19	130	508

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	144	147	338	576	898	1118	1287	1230	984	660	356	213	7951
55	1	0	15	46	227	428	574	517	299	100	16	10	2233
57	0	0	10	29	184	369	512	455	243	74	10	5	1891
60	0	0	4	14	129	283	419	362	166	43	3	0	1423
65	0	0	0	2	60	154	268	219	65	15	0	0	783
70	0	0	0	0	21	61	133	107	15	3	0	0	340

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	45	72	188	385	668	890	1052	997	764	442	195	81	45	117	305	690	1358	2248	3300	4297	5061	5503	5698	5779
45	22	34	106	259	514	740	897	842	614	301	118	38	22	56	162	421	935	1675	2572	3414	4028	4329	4447	4485
50	10	15	59	162	372	590	742	687	466	182	60	18	10	25	84	246	618	1208	1950	2637	3103	3285	3345	3363
55	0	2	27	90	237	445	587	532	325	98	26	5	0	2	29	119	356	801	1388	1920	2245	2343	2369	2374
60	0	1	10	40	130	301	432	378	199	47	7	0	0	1	11	51	181	482	914	1292	1491	1538	1545	1545
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	35	59	149	274	442	593	711	669	502	301	136	53	35	94	243	517	959	1552	2263	2932	3434	3735	3871	3924

(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