U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: ELKINS AP, WV **COOP ID: 462718**

Climate Division: WV 4 **NWS Call Sign: EKN** **Elevation: 1,948 Feet** **Lat: 38˚53N** **Lon: 79˚51W**

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	39.3	18.0	28.6	76	1950	25	39.5	1974	-24	1984	20	15.4	1977	1133	0	.0	.0	6.8	9.8	26.5	3.9
Feb	43.5	19.7	31.6	77	1932	11	39.5	1976	-22+	1977	8	17.1	1978	951	0	.0	.0	9.2	7.2	23.8	2.4
Mar	53.2	26.9	40.0	86	1929	25	48.6	1973	-15	1978	2	31.8	1999	790	0	.0	.0	17.9	2.3	21.6	.5
Apr	63.2	34.6	48.9	89	1986	28	53.9	1994	3	1985	10	44.0	1997	498	2	.0	.0	25.0	.3	13.1	.0
May	71.7	44.1	57.9	93	1996	19	65.2	1991	20+	1966	10	52.4	1997	251	16	.0	.1	30.6	.0	3.4	.0
Jun	78.5	52.7	65.6	93+	1933	9	69.4	1971	25	1977	8	61.4	1972	70	76	.0	.3	30.0	.0	.1	.0
Jul	81.7	57.6	69.6	99	1988	16	72.9	1993	32	1988	1	66.4	1996	15	153	.0	1.4	31.0	.0	@	.0
Aug	80.4	56.7	68.5	95+	1936	22	73.2	1995	34	1965	29	65.4	1982	23	126	.0	1.3	31.0	.0	.0	.0
Sep	74.1	50.1	62.1	97	1953	3	66.7	1971	26	1942	29	59.2	1984	134	41	.0	@	29.9	.0	.6	.0
Oct	64.1	37.0	50.6	87	1927	2	59.3	1984	10	1944	27	44.2	1988	456	2	.0	.0	28.2	.0	11.5	.0
Nov	52.8	29.3	41.0	80+	1946	3	50.9	1985	-8	1930	29	32.9	1976	719	0	.0	.0	18.1	1.6	19.7	.0
Dec	43.5	21.9	32.7	76	1951	7	41.6	1984	-24	1989	23	18.0	1989	996	0	.0	.0	9.9	6.1	25.0	1.7
Ann	62.2	37.4	49.8	99	Jul 1988	16	73.2	Aug 1995	-24+	Dec 1989	23	15.4	Jan 1977	6036	416	.0	3.1	267.6	27.3	145.3	8.5

\+ 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/normals/usnormals.html

(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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Precipitation (inches)

Precipitation Totals

Month	Means/ Medians(1) Mean	Means/ Medians(1) Median	Extremes Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year
Jan	3.43	3.58	1.76	1999	21	6.27	1999	1.15	1981
Feb	3.20	2.93	2.75	1932	4	6.51	1994	.79	1978
Mar	3.92	3.46	3.32	1936	17	7.42	1997	1.50	1987
Apr	3.53	3.42	2.12	1937	25	6.95	1972	1.02	1971
May	4.77	4.27	3.35	1996	16	15.76	1996	1.94	1976
Jun	4.61	4.52	3.62	1947	8	10.05	1998	1.66	1988
Jul	4.84	4.53	3.71	1935	8	12.02	1996	1.31	1987
Aug	4.26	3.85	2.85	1969	9	10.40	1980	1.09	1976
Sep	3.83	3.69	2.78	1998	7	8.88	2000	.32	1985
Oct	2.86	2.49	4.17	1929	2	6.28	1976	.43	1994
Nov	3.42	3.29	5.02	1985	4	11.08	1985	1.19	1976
Dec	3.44	3.19	1.92+	1948	15	6.73	1978	1.65	1971
Ann	46.11	45.53	5.02	Nov 1985	4	15.76	May 1996	.32	Sep 1985

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	18.0	9.5	1.5	.2
Feb	15.8	8.6	1.6	.3
Mar	16.3	9.6	2.3	.4
Apr	15.1	9.1	2.1	.3
May	14.8	10.1	2.8	.7
Jun	14.4	9.3	3.4	1.0
Jul	14.3	9.1	3.2	1.0
Aug	12.9	8.3	3.1	.7
Sep	12.0	7.8	2.3	.9
Oct	11.5	6.7	1.6	.3
Nov	14.0	8.0	2.1	.5
Dec	17.3	8.7	1.9	.4
Ann	176.4	104.8	27.9	6.7

Precipitation Probabilities (1)

Probability that the monthly/annual precipitation will be equal to or less than the indicated amount

Monthly/Annual Precipitation vs Probability Levels
These values were determined from the incomplete gamma distribution

Month	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	1.38	1.69	2.14	2.51	2.86	3.21	3.59	4.03	4.59	5.44	6.22
Feb	1.27	1.57	1.99	2.33	2.66	2.99	3.35	3.76	4.29	5.09	5.83
Mar	1.79	2.13	2.61	3.00	3.36	3.72	4.11	4.56	5.12	5.97	6.73
Apr	1.54	1.86	2.30	2.66	2.99	3.33	3.70	4.11	4.64	5.44	6.16
May	1.77	2.22	2.86	3.39	3.90	4.42	4.98	5.64	6.48	7.76	8.94
Jun	1.66	2.09	2.72	3.24	3.74	4.26	4.82	5.47	6.30	7.58	8.76
Jul	1.58	2.04	2.71	3.29	3.84	4.41	5.04	5.77	6.72	8.18	9.54
Aug	1.57	1.97	2.54	3.02	3.48	3.95	4.45	5.04	5.79	6.95	8.01
Sep	.97	1.33	1.89	2.38	2.87	3.38	3.95	4.62	5.51	6.90	8.21
Oct	.76	1.03	1.44	1.81	2.16	2.54	2.96	3.45	4.10	5.12	6.07
Nov	1.16	1.49	1.96	2.36	2.74	3.14	3.57	4.07	4.72	5.72	6.64
Dec	1.58	1.89	2.30	2.64	2.96	3.27	3.61	4.00	4.48	5.22	5.88
Ann	34.61	36.88	39.76	41.93	43.85	45.69	47.59	49.67	52.18	55.81	58.92

+ 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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Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	23.4	23.0	2	1
Feb	17.6	15.1	2	2
Mar	12.7	11.7	1	1
Apr	5.2	3.3	#	0
May	.0	.0	#	0
Jun	.0	.0	#	0
Jul	.0	.0	#	0
Aug	.0	.0	#	0
Sep	.0	.0	0	0
Oct	.6	.0	#	0
Nov	5.9	4.0	#	0
Dec	14.3	10.5	1	1
Ann	79.7	67.6	N/A	N/A

Extremes (2)

Month	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year
Jan	18.1	1996	7	45.0	1994	20+	1977	26	12	1977
Feb	12.8	1983	11	35.6	1986	17+	1977	2	9	1977
Mar	16.9	1993	13	33.5+	1993	18	1993	14	4	1978
Apr	8.8	1987	4	24.8	1987	10+	1987	5	1	1987
May	.5	1989	7	.5	1989	#	1989	7	#	1996
Jun	.0	0	0	.0	0	#	1992	14	#	1992
Jul	.0	0	0	.0	0	#	1992	20	#	1992
Aug	.0	0	0	.0	0	#	1991	8	#	1991
Sep	.0	0	0	.0	0	0	0	0	0	0
Oct	3.2	1979	10	3.9	1979	2	1979	10	#	1993
Nov	6.0	1995	14	23.7	1995	7+	1995	17	1+	1995
Dec	10.8	1973	9	36.7	1993	9+	1993	27	4	1989
Ann	18.1	Jan 1996	7	45.0	Jan 1994	20+	Jan 1977	26	12	Jan 1977

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	13.0	6.7	2.7	1.0	.1
Feb	10.6	5.9	1.9	.5	@
Mar	7.8	4.0	1.6	.5	@
Apr	3.5	1.6	.4	.3	.0
May	.0	.0	.0	.0	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0
Oct	.5	.2	.1	.0	.0
Nov	4.9	2.4	.4	.1	.0
Dec	9.8	4.8	1.3	.4	@
Ann	50.1	25.6	8.4	2.8	.1

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	14.9	9.6	6.7	2.3
Feb	12.6	8.3	5.1	1.3
Mar	5.7	2.6	1.3	.4
Apr	1.1	.3	.2	.1
May	.0	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.1	.0	.0	.0
Nov	3.0	.9	.2	.0
Dec	9.0	4.6	1.9	.0
Ann	46.4	26.3	15.4	4.1

+ 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

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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	6/17	6/10	6/06	6/02	5/29	5/25	5/21	5/16	5/10
32	6/04	5/28	5/24	5/20	5/16	5/12	5/08	5/04	4/27
28	5/17	5/13	5/09	5/06	5/04	5/01	4/28	4/25	4/20
24	5/08	5/03	4/30	4/27	4/24	4/21	4/18	4/14	4/10
20	4/24	4/19	4/16	4/13	4/11	4/08	4/05	4/02	3/29
16	4/11	4/06	4/03	3/31	3/28	3/25	3/22	3/19	3/14

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	9/12	9/17	9/20	9/22	9/25	9/27	9/30	10/03	10/07
32	9/23	9/27	9/29	10/02	10/04	10/06	10/08	10/10	10/14
28	10/04	10/08	10/10	10/13	10/15	10/17	10/20	10/22	10/26
24	10/08	10/13	10/17	10/20	10/23	10/26	10/29	11/02	11/07
20	10/17	10/22	10/26	10/29	10/31	11/03	11/06	11/10	11/14
16	10/27	11/02	11/07	11/10	11/14	11/18	11/21	11/26	12/02

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	141	133	127	123	118	114	109	104	96
32	159	153	148	144	140	136	132	127	120
28	181	175	171	167	164	160	157	153	147
24	202	195	190	185	181	177	173	168	161
20	221	215	210	206	203	199	195	191	185
16	255	247	240	235	230	225	220	214	205

***** 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

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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	1133	951	790	498	251	70	15	23	134	456	719	996	6036
60	973	795	620	335	133	13	0	3	44	313	570	846	4645
57	880	711	530	252	84	4	0	0	20	239	483	753	3956
55	818	655	473	201	59	2	0	0	11	196	429	697	3541
50	674	523	333	97	18	0	0	0	2	109	296	552	2604
32	236	140	40	0	0	0	0	0	0	2	29	160	607

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	100	124	284	498	791	997	1158	1125	897	571	295	151	6991
55	1	1	10	44	142	313	445	412	227	47	10	3	1655
57	0	1	7	29	106	258	384	351	179	30	6	1	1352
60	0	0	3	13	62	181	292	261	117	13	2	0	944
65	0	0	0	2	16	76	153	126	41	2	0	0	416
70	0	0	0	0	2	15	46	32	6	0	0	0	101

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	34	46	134	291	555	767	919	884	662	343	144	61	34	80	214	505	1060	1827	2746	3630	4292	4635	4779	4840
45	9	21	72	179	401	617	764	729	515	216	76	30	9	30	102	281	682	1299	2063	2792	3307	3523	3599	3629
50	1	2	34	100	261	469	609	574	368	114	35	11	1	3	37	137	398	867	1476	2050	2418	2532	2567	2578
55	0	0	9	46	148	324	454	421	234	51	10	0	0	0	9	55	203	527	981	1402	1636	1687	1697	1697
60	0	0	1	13	65	189	301	270	123	13	1	0	0	0	1	14	79	268	569	839	962	975	976	976
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	27	44	109	212	353	494	612	580	415	237	106	42	27	71	180	392	745	1239	1851	2431	2846	3083	3189	3231

(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:
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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

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/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