### 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

COOP ID: 460582

Lon: 81°07W

**Station: BECKLEY AP, WV** 

Climate Division: WV 4 NWS Call Sign: BKW

Temperature (°F) Degree Days (1) Mean (1) Mean Number of Days (3) **Extremes** Base Temp 65 Max Max Max Max Min Min Highest Lowest Daily Daily Highest Lowest Month(1) Month(1) Cooling >= >= >= <= <= <= Month Mean Year Day Year Year Day Year Heating Max Min Daily(2) Daily(2) Mean Mean 100 90 50 32 32 0 38.8 22.1 30.4 69 1985 41.4 1974 -22 1985 21 16.5 1977 1068 0 .0 .0 6.8 9.7 24.8 2.0 Jan 42.8 24.9 33.9 74 1977 26 42.2 1976 -16 1996 5 21.6 1978 882 0 .0 .0 9.2 6.7 20.9 .8 Feb Mar 51.9 32.4 42.1 81 +1989 28 48.6 1973 -5 1980 3 36.1 1971 714 .0 .0 17.8 2.2 16.3 .1 1997 8 Apr 62.5 40.6 51.5 86 1976 18 56.4 1994 11 1985 10 46.9 414 .0 .0 25.5 .2 6.9 0. May 70.6 49.2 59.9 89+ 1996 19 66.4 1991 23 1966 10 54.2 1997 199 29 .0 .0 30.6 .0 .8 .0 57.0 23 70.2 32 .0 77.0 67.0 90 1964 1984 1972 11 61.8 1972 48 99 .0 .0 30.0 .0 @ Jun Jul 80.2 70.7 94+ 8 74.1 1993 41+ 1963 10 67.5 2000 10 .0 31.0 0. 61.1 1988 183 .6 .0 .0 78.9 59.8 69.3 96 1988 17 73.7 1988 36+ 1965 29 66.3 1976 16 149 .0 .4 31.0 .0 .0 .0 Aug 30 Sep 72.6 53.5 63.1 92 1998 14 67.0 1998 1983 24 59.6 1974 115 56 .0 @ 29.9 .0 .1 .0 46.4 Oct 63.1 42.4 52.8 81 +1969 2 61.4 1984 18 +1965 29 1988 388 4 .0 .0 27.9 (a) 4.8 .0 52.4 34.4 43.4 78 1993 14 52.4 1985 4 1970 25 34.5 1976 647 0 .0 18.1 1.7 14.2 0. Nov .0 Dec 43.1 26.5 34.8 73 +1971 10 45.2 1984 -18 1989 23 22.4 1989 926 0 .0 .0 10.1 6.1 21.9 .7 Aug Jul Jan Jan 42.0 51.6 96 1988 17 74.1 1993 -22 1985 21 16.5 1977 5427 529 .0 1.0 267.9 110.7 61.2 26.6 3.6 Ann

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

Issue Date: February 2004 005-A

(1) From the 1971-2000 Monthly Normals

Elevation: 2,504 Feet Lat: 37°48N

- (2) Derived from station's available digital record: 1963-2001
- (3) Derived from 1971-2000 serially complete daily data

<sup>+</sup> Also occurred on an earlier date(s)

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

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Station: BECKLEY AP, WV

Climate Division: WV 4 NWS Call Sign: BKW Elevation: 2,504 Feet Lat: 37°48N Lon: 81°07W

										Pı	recipi	tation	(incl	hes)											
		Precipitation Totals  Means/ Medians(1)  Extremes									Mean Number of Days (3)  Daily Precipitation				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	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	3.23	3.03	2.10	1995	6	6.36	1974	.53	1983	16.5	8.0	1.9	.3	.89	1.20	1.66	2.07	2.47	2.89	3.35	3.90	4.61	5.72	6.76	
Feb	2.96	2.73	2.11	1994	9	6.01	1972	.98	1978	14.5	7.6	1.6	.4	1.28	1.55	1.92	2.22	2.51	2.80	3.11	3.46	3.91	4.59	5.20	
Mar	3.63	3.12	1.97	1967	6	9.18	1975	1.79	1981	15.5	8.9	2.3	.4	1.29	1.63	2.12	2.54	2.94	3.34	3.79	4.31	4.97	5.99	6.93	
Apr	3.43	3.34	3.59	1977	4	7.63	1987	.28	1976	14.4	7.8	2.0	.4	1.09	1.42	1.90	2.31	2.71	3.12	3.57	4.09	4.77	5.83	6.81	
May	4.39	4.40	2.06	1993	11	7.58	1998	1.03	1977	14.4	9.5	3.1	.9	1.82	2.22	2.78	3.25	3.68	4.13	4.60	5.15	5.85	6.91	7.87	
Jun	3.92	3.84	2.47	1983	20	7.00+	1998	1.26	1999	13.0	8.3	2.8	.6	1.60	1.96	2.47	2.89	3.28	3.68	4.11	4.61	5.24	6.20	7.07	
Jul	4.78	4.31	3.48	2001	26	9.61	1982	1.65	1993	13.0	8.6	3.4	1.3	1.98	2.42	3.03	3.54	4.01	4.49	5.01	5.61	6.36	7.52	8.56	
Aug	3.45	3.50	2.55	1980	18	5.93	1977	1.52	1998	11.0	7.0	2.3	.7	1.77	2.06	2.44	2.75	3.04	3.32	3.62	3.96	4.39	5.02	5.59	
Sep	3.23	2.91	4.35	1964	29	6.65	1996	.54	1985	11.1	6.4	2.0	.7	.95	1.25	1.72	2.11	2.50	2.91	3.35	3.88	4.56	5.63	6.62	
Oct	2.64	2.62	3.13	1989	17	5.91	1990	.49	2000	10.2	6.1	1.6	.4	.73	.98	1.36	1.69	2.02	2.36	2.73	3.18	3.75	4.66	5.50	
Nov	2.88	2.57	2.50	1985	4	6.33	1985	1.25	1981	12.6	7.1	1.7	.4	1.20	1.46	1.83	2.13	2.42	2.71	3.02	3.38	3.84	4.53	5.16	
Dec	3.09	2.73	1.78	1969	30	6.43	1991	1.06	1980	15.2	7.7	1.8	.3	1.20	1.49	1.90	2.24	2.56	2.88	3.23	3.64	4.16	4.96	5.68	
Ann	41.63	40.79	4.35	Sep 1964	29	9.61	Jul 1982	.28	Apr 1976	161.4	93.0	26.5	6.8	32.53	34.36	36.67	38.39	39.91	41.36	42.85	44.48	46.44	49.26	51.66	

<sup>+</sup> Also occurred on an earlier date(s)

Complete documentation available from:

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

<sup>#</sup> Denotes amounts of a trace

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>\*\*</sup> Statistics not computed because less than six years out of thirty had measurable precipitation

<sup>(1)</sup> From the 1971-2000 Monthly Normals

<sup>(2)</sup> Derived from station's available digital record: 1963-2001

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**Station: BECKLEY AP, WV** 

Climate Division: WV 4 NWS Call Sign: BKW Elevation: 2,504 Feet Lat: 37°48N Lon: 81°07W

										Snov	v (incl	hes)													
						Sno	ow To	tals							Mean Number of Days (1)										
	Mean	s/Medi	ans (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	13.9	11.9	2	1	14.0	1998	27	37.3	1996	24	1998	28	11	1977	9.5	4.1	1.4	.3	.1	13.2	7.7	4.7	1.9		
Feb	15.2	13.0	2	2	10.0	1996	2	28.4	1998	19	1998	7	6+	1998	9.8	4.3	1.5	.6	.0	11.8	7.2	4.6	.9		
Mar	8.5	5.2	1	1	27.7	1993	13	35.5	1993	30	1993	14	5	1993	5.8	2.4	.6	.2	@	4.7	2.0	1.1	.4		
Apr	2.7	1.0	#	0	13.1	1987	3	18.6	1987	15+	1987	6	2	1987	2.4	.7	.3	.1	@	.9	.4	.2	.1		
May	.1	.0	#	0	1.3	1989	7	1.3	1989	#	1989	7	#	1998	.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	.6	.0	#	0	6.5	1993	31	6.5	1993	2+	1993	31	#	1993	.4	.2	@	@	.0	.2	.0	.0	.0		
Nov	3.6	2.5	#	0	6.0	1974	30	13.1	1974	5+	1995	16	1+	1995	3.7	1.1	.3	@	.0	2.3	.5	.1	.0		
Dec	10.2	8.9	1	0	6.9	1973	21	26.5	1993	14	1974	3	4	1989	8.0	3.4	1.0	.2	.0	8.1	3.8	1.5	.2		
Ann	54.8	42.5	N/A	N/A	27.7	Mar 1993	13	37.3	Jan 1996	30	Mar 1993	14	11	Jan 1977	39.6	16.2	5.1	1.4	.1	41.2	21.6	12.2	3.5		

<sup>+</sup> Also occurred on an earlier date(s) #Denotes trace amounts

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<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>-9/-9.9</sup> represents missing values Annual statistics for Mean/Median snow depths are not appropriate

<sup>(1)</sup> Derived from Snow Climatology and 1971-2000 daily data

<sup>(2)</sup> Derived from 1971-2000 daily data

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S Call Sign: BKW Elevation: 2,504 Feet Lat: 37°48N Lon: 81°07W

				Freez	e Data										
			Spri	ng Freeze D	ates (Month/	/Day)									
Temp (F)		P	robability of	later date i	n spring (thr	ru Jul 31) tha	n indicated	(*)							
icinp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90						
36	5/31	5/25	5/21	5/17	5/14	5/10	5/06	5/02	4/26						
32	5/21	5/14	5/10	5/06	5/03	4/29	4/25	4/21	4/14						
28	4/28	4/23	4/20	4/17	4/14	4/12	4/09	4/05	4/01						
24	4/18	4/13	4/10	4/07	4/04	4/01	3/29	3/26	3/21						
20	4/08	4/02	3/29	3/25	3/21	3/18	3/14	3/10	3/04						
16	3/31	3/25	3/20	3/15	3/11	3/07	3/03	2/26	2/19						
			Fa	ll Freeze Da	tes (Month/D	Day)			•						
Temp (F)	Probability of earlier date in fall (beginning Aug 1) than indicated(*)														
remb (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90						
36	9/18	9/22	9/25	9/28	10/01	10/04	10/06	10/10	10/14						
32	9/28	10/02	10/05	10/07	10/10	10/12	10/14	10/17	10/21						
28	10/07	10/13	10/17	10/21	10/24	10/28	10/31	11/05	11/11						
24	10/20	10/26	10/30	11/03	11/06	11/10	11/14	11/18	11/24						
20	10/29	11/04	11/08	11/12	11/15	11/18	11/22	11/26	12/02						
16	11/09	11/16	11/21	11/25	11/29	12/03	12/08	12/13	12/20						
				Freeze F	ree Period										
Temp (F)			Probability	of longer th	an indicated	freeze free p	eriod (Days)	)							
remp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90						
36	162	155	149	144	140	135	130	125	117						
32	181	174	168	164	159	155	150	145	137						
28	216	208	202	197	192	187	182	177	168						
24	238	230	225	220	215	211	206	201	193						
20	265	256	249	243	238	233	227	220	211						
16	290	280	273	268	262	257	251	244	234						

<sup>\*</sup> 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:

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	Degree Days to Selected Base Temperatures (°F)														
Base						Heatin	g Degree l	Days (1)							
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
65	1068	882	714	414	199	48	10	16	115	388	647	926	5427		
60	916	732	555	264	103	9	0	1	34	253	501	781	4149		
57	823	648	468	189	62	3	0	0	14	186	418	693	3504		
55	764	592	411	145	41	1	0	0	7	148	364	636	3109		
50	621	461	279	64	12	0	0	0	1	74	242	493	2247		
32	204	103	26	0	0	0	0	0	0	0	19	128	480		

Base	Cooling Degree Days (1)													
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann	
32	125	165	350	585	856	1042	1193	1155	929	641	361	192	7594	
55	1	3	22	77	188	356	480	442	255	73	20	4	1921	
57	0	1	14	56	146	299	418	381	206	49	11	2	1583	
60	0	0	7	31	92	218	326	289	139	24	4	1	1131	
65	0	0	1	8	29	99	183	149	56	4	0	0	529	
70	0	0	0	1	3	22	65	43	10	0	0	0	144	

	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											Jun	Jul	Aug	Sep	Oct	Nov	Dec							
40	44	76	181	369	618	814	952	918	702	409	194	79	44	120	301	670	1288	2102	3054	3972	4674	5083	5277	5356
45	20	34	108	245	466	664	797	763	552	272	115	40	20	54	162	407	873	1537	2334	3097	3649	3921	4036	4076
50	2	14	60	151	321	514	642	608	404	159	57	17	2	16	76	227	548	1062	1704	2312	2716	2875	2932	2949
55	0	1	26	83	192	367	487	453	264	77	20	0	0	1	27	110	302	669	1156	1609	1873	1950	1970	1970
60	0	0	6	35	95	225	334	300	149	30	3	0	0	0	6	41	136	361	695	995	1144	1174	1177	1177
Base		•		Gro	wing De	gree Unit	s for Co	rn (Mont	thly)	•	•				Gr	owing D	egree Ur	its for C	orn (Acc	umulate	d Month	ly)	•	
50/86	25	43	108	222	370	521	642	605	428	231	106	37	25	68	176	398	768	1289	1931	2536	2964	3195	3301	3338

(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