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: 236791

Lon: 90°24W

Station: POPLAR BLUFF, MO

Climate Division: MO 6 NWS Call Sign:

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 42.1 23.0 32.6 78 1943 24 40.9 1990 -23 1930 18 20.0 1977 1006 0 .0 .0 8.1 6.3 25.2 .8 Jan .2 48.6 27.7 38.2 83 1962 13 45.5 1992 -18 1951 2 26.1 1978 751 0 .0 .0 13.4 3.8 18.7 Feb Mar 59.2 36.5 47.9 92 1929 24 52.4 1973 0 1943 3 41.4 1975 533 .0 .0 24.4 .4 11.1 0. 94 27 20 1983 23 Apr 69.9 46.0 58.0 1927 64.4 1981 1921 5 51.7 234 .0. .2 29.1 .0 2.0 0. May 79.0 55.9 67.5 100 1934 30 74.1 1987 31 1944 7 62.1 1976 70 147 .0 2.0 31.0 .0 .0 .0 42 71.2 Jun 87.3 64.7 76.0 110 1936 20 79.4 1987 1930 1974 2 333 .2 11.4 30.0 .0 .0 .0 Jul 91.9 69.4 80.7 109+ 14 86.1 48 1947 23 77.6 1972 0 484 1.4 20.2 31.0 0. 1980 1980 .0 .0 44 1992 90.0 66.9 78.5 112 1930 9 84.3 1980 1967 28 73.0 416 .7 15.6 31.0 .0 .0 .0 Aug 7 31 26 Sep 82.7 58.9 70.8 108 1925 76.5 1998 1924 30 64.1 1974 200 .1 6.0 30.0 .0 .0 .0 72.2 53.4 215 34 Oct 46.1 59.2 96+ 1963 11 66.1 1971 17 1952 29 1976 .0 .3 30.7 .0 1.6 .0 58.0 37.0 47.5 85 1924 4 54.2 1999 4 1950 25 38.9 1976 527 .0 .0 22.3 .2 10.4 .0 Nov 1 Dec 46.5 27.7 37.1 79 1939 7 44.5 1971 -10 1989 22 25.4 1983 865 0 .0 .0 12.0 3.1 20.9 .3 Aug Jul Jan Jan

46.7

69.0

Ann

57.8

112

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

9

86.1

1980

-23

1930

18

20.0

1977

4230

1639

Issue Date: February 2004 079-A

1930

(1) From the 1971-2000 Monthly Normals

55.7

2.4

Elevation: 370 Feet Lat: 36°46N

(2) Derived from station's available digital record: 1918-2001

293.0

13.8

89.9

1.3

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

⁺ Also occurred on an earlier date(s)

[@] Denotes mean number of days greater than 0 but less than .05

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Station: POPLAR BLUFF, MO COOP ID: 236791

Climate Division: MO 6 NWS Call Sign: Elevation: 370 Feet Lat: 36°46N Lon: 90°24W

										Pı	recipi	tation	(incl	nes)										
	Mea	ans/	P	recip	itatio	on Total						ays (3)	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										
	Medi	ans(1)				Extremes	;			Daily Precipitation				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	2.96	2.86	5.72	1969	30	5.69	1999	.19	1986	7.4	5.4	2.1	.8	.52	.78	1.21	1.62	2.03	2.48	2.99	3.61	4.44	5.77	7.05
Feb	3.48	2.63	3.90	1979	23	13.39	1989	.19	1999	7.3	5.4	2.4	1.0	.63	.94	1.45	1.92	2.41	2.93	3.53	4.25	5.21	6.75	8.22
Mar	4.71	3.78	6.60	1977	28	12.15	1977	1.51	1971	9.6	6.9	3.2	1.1	1.56	2.00	2.66	3.22	3.75	4.31	4.91	5.62	6.53	7.95	9.25
Apr	4.77	3.88	3.80	1944	11	11.36	1991	1.18	2000	9.8	7.0	3.1	1.4	1.46	1.91	2.59	3.17	3.73	4.31	4.96	5.71	6.69	8.21	9.62
May	4.37	4.35	4.79	1918	12	8.51	1973	.75	1994	9.7	6.8	3.0	1.3	1.28	1.70	2.32	2.86	3.38	3.93	4.53	5.24	6.16	7.60	8.93
Jun	3.96	3.85	4.00	1928	4	11.40	1998	.25	1991	8.0	5.8	2.7	1.1	.79	1.15	1.73	2.26	2.80	3.38	4.03	4.82	5.86	7.53	9.11
Jul	3.83	3.32	5.52	1937	4	11.97	1988	.57	1983	7.2	5.5	2.6	1.0	.72	1.06	1.62	2.14	2.67	3.24	3.88	4.66	5.69	7.36	8.94
Aug	3.38	2.88	5.67	1942	23	9.56	1977	.39	2000	6.6	4.9	2.2	1.0	.54	.82	1.32	1.78	2.26	2.79	3.39	4.13	5.12	6.72	8.25
Sep	3.37	2.55	6.17	1936	2	11.61	1993	.44	1999	6.5	4.7	2.1	1.2	.43	.70	1.18	1.65	2.15	2.69	3.33	4.12	5.18	6.93	8.62
Oct	3.35	3.13	4.91	1998	6	8.65	1984	.61	1971	6.8	5.0	2.3	1.0	.84	1.15	1.64	2.07	2.50	2.95	3.45	4.05	4.83	6.06	7.22
Nov	4.90	4.33	3.34	1931	20	10.71	1973	.73	1976	9.1	6.3	3.3	1.7	1.39	1.85	2.56	3.17	3.77	4.39	5.08	5.90	6.96	8.61	10.16
Dec	4.32	3.67	3.62	1918	12	11.15	1982	1.17	1989	8.5	6.3	3.2	1.1	1.12	1.53	2.16	2.71	3.25	3.83	4.46	5.22	6.21	7.76	9.22
Ann	47.40	47.58	6.60	Mar 1977	28	13.39	Feb 1989	.19+	Feb 1999	96.5	70.0	32.2	13.7	32.61	35.44	39.08	41.86	44.33	46.73	49.22	51.97	55.33	60.21	64.44

⁺ Also occurred on an earlier date(s)

Complete documentation available from:

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

[#] 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: 1918-2001

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

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COOP ID: 236791

Station: POPLAR BLUFF, MO

Climate Division: MO 6 NWS Call Sign: Elevation: 370 Feet Lat: 36°46N Lon: 90°24W

										Snov	w (inc	hes)													
						Sn	ow To	tals							Mean Number of Days (1)										
	Mean	s/Medi	ians (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	2.9	.0	#	0	20.0	1978	17	23.0	1978	4	1988	8	#	2000	.9	.7	.4	.2	@	.2	@	.0	.0		
Feb	1.7	.0	#	0	9.5	1980	8	13.5	1980	4	1976	3	#	1976	.5	.4	.2	.1	.0	.1	@	.0	.0		
Mar	1.7	.0	#	0	13.6	1994	9	18.0	1994	6	1975	10	#	1975	.4	.4	.3	.1	.1	.1	.1	@	.0		
Apr	#	.0	0	0	#	1971	7	#	1971	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
May	.0	.0	#	0	.0	0	0	.0	0	0	0	0	#	1995	.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	.3	.0	#	0	6.0	1975	27	6.0	1975	7	1980	27	#	1980	.1	.1	@	@	.0	.1	.1	.1	.0		
Dec	.6	.0	#	0	2.5	1972	15	2.6	1985	7	1984	6	#	1984	.4	.2	.0	.0	.0	.1	.1	@	.0		
Ann	7.2	.0	N/A	N/A	20.0	Jan 1978	17	23.0	Jan 1978	7+	Dec 1984	6	#+	Jan 2000	2.3	1.8	.9	.4	.1	.6	.3	.1	.0		

⁺ Also occurred on an earlier date(s) #Denotes trace amounts

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

[@] 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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NWS Call Sign: Elevation: 370 Feet Lat: 36°46N Lon: 90°24W

				Freez	e Data								
			Spri	ng Freeze D	ates (Month/	(Day)							
Tomn (F)		P	robability of	later date i	n spring (thr	u Jul 31) tha	n indicated((*)					
Temp (F) 36 32 28 24 20 16 Temp (F) 36 32 28 24 20 16 Temp (F) 36 32 28 24 20 16	.10	.20	.30	.40	.50	.60	.70	.80	.90				
36	4/27	4/22	4/19	4/16	4/13	4/10	4/07	4/04	3/30				
32	4/17	4/12	4/09	4/07	4/04	4/01	3/30	3/26	3/22				
28	4/08	4/03	3/30	3/27	3/24	3/21	3/18	3/14	3/09				
24	3/31	3/23	3/18	3/13	3/09	3/04	2/28	2/22	2/15				
20	3/18	3/11	3/05	3/01	2/24	2/20	2/15	2/10	2/03				
16	3/12	3/04	2/26	2/20	2/15	2/11	2/05	1/30	1/22				
1		•	Fal	l Freeze Da	tes (Month/D	ay)	•	•					
To (E)	Probability of earlier date in fall (beginning Aug 1) than indicated(*)												
_	.10	.20	.30	.40	.50	.60	.70	.80	.90				
36	10/04	10/09	10/12	10/15	10/17	10/20	10/22	10/26	10/30				
32	10/14	10/19	10/22	10/25	10/28	10/31	11/03	11/07	11/12				
28	10/28	11/02	11/06	11/09	11/12	11/14	11/17	11/21	11/26				
24	11/02	11/09	11/14	11/19	11/23	11/27	12/01	12/07	12/14				
20	11/13	11/20	11/25	11/30	12/04	12/08	12/13	12/18	12/25				
16	11/22	12/01	12/07	12/13	12/18	12/23	12/29	1/04	1/13				
·		•		Freeze F	ree Period								
Town (F)			Probability	of longer th	an indicated	freeze free p	eriod (Days))					
remp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90				
36	204	198	194	190	186	183	179	174	168				
32	228	221	215	211	207	202	198	192	185				
28	254	246	241	236	232	227	223	217	210				
24	287	277	270	264	259	253	247	240	230				
20	310	300	293	287	282	276	270	263	254				
16	338	325	316	309	302	296	289	281	270				

^{*} 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	1006	751	533	234	70	2	0	1	26	215	527	865	4230		
60	851	614	388	129	25	0	0	0	5	115	386	711	3224		
57	758	536	307	81	12	0	0	0	2	72	307	623	2698		
55	699	484	257	57	7	0	0	0	0	50	258	566	2378		
50	556	360	155	18	1	0	0	0	0	16	157	426	1689		
32	157	71	7	0	0	0	0	0	0	0	7	89	331		

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	175	243	498	779	1099	1321	1507	1439	1164	842	471	246	9784
55	3	13	35	145	393	631	794	726	474	179	32	11	3436
57	0	9	23	110	336	571	732	664	416	139	21	6	3027
60	0	3	11	68	257	481	639	571	329	89	10	1	2459
65	0	0	1	23	147	333	484	416	200	34	1	0	1639
70	0	0	0	5	68	194	329	270	100	8	0	0	974

	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											Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec					
40	45	117	291	548	854	1085	1261	1188	927	598	261	84	45	162	453	1001	1855	2940	4201	5389	6316	6914	7175	7259
45	21	58	182	408	699	935	1106	1033	777	444	160	39	21	79	261	669	1368	2303	3409	4442	5219	5663	5823	5862
50	2	23	99	276	545	785	951	878	627	303	88	13	2	25	124	400	945	1730	2681	3559	4186	4489	4577	4590
55	0	4	46	162	391	635	796	723	477	185	41	2	0	4	50	212	603	1238	2034	2757	3234	3419	3460	3462
60	0	0	16	85	248	485	641	568	337	95	13	0	0	0	16	101	349	834	1475	2043	2380	2475	2488	2488
Base		•	•	Gro	wing De	gree Unit	s for Co	rn (Mont	thly)	•	•				Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)	•	
50/86	33	77	175	337	551	739	859	814	617	379	153	46	33	110	285	622	1173	1912	2771	3585	4202	4581	4734	4780

(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