

Climatography of the United States

No. 20

1971-2000

Station: BIGFORK 13 S, MT

COOP ID: 240755

Climate Division: MT 1

NWS Call Sign:

Elevation: 2,910 Feet Lat: 47° 53N

Lon: 114° 02W

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	33.3	22.0	27.7	64+	1984	5	37.3	1994	-20+	1950	31	8.6	1979	1158	0	.0	.0	.9	12.5	26.3	2.0
Feb	37.7	24.0	30.9	62+	1995	24	36.4	1992	-21	1989	2	16.3	1989	956	0	.0	.0	1.6	6.8	23.6	1.2
Mar	45.6	28.7	37.2	69+	1960	25	41.9	1992	-11	1960	3	31.0	1989	864	0	.0	.0	8.1	1.7	22.8	.1
Apr	55.6	34.6	45.1	85	1939	28	49.1	1987	11	1951	19	39.0	1975	598	0	.0	.0	21.6	.0	11.7	.0
May	64.3	41.1	52.7	90	1966	26	57.3	1987	21	1954	1	47.2	1996	384	2	.0	.0	29.8	.0	2.1	.0
Jun	71.6	47.7	59.7	95+	1955	22	64.9	1986	31	1980	4	55.6	1971	186	26	.0	.2	29.9	.0	.1	.0
Jul	79.7	53.0	66.4	100+	1960	19	72.9	1985	32	1999	3	59.4	1993	77	119	@	2.9	31.0	.0	@	.0
Aug	79.5	53.0	66.3	101	1961	4	71.3	1971	35+	1978	28	60.7	1980	78	118	.0	2.4	31.0	.0	.0	.0
Sep	69.0	44.1	56.6	95	1967	1	64.5	1998	22	1965	17	51.7	1985	278	23	.0	.1	29.3	.0	1.2	.0
Oct	56.4	37.0	46.7	82	1942	6	52.0	1988	8	1971	29	42.4	1972	568	0	.0	.0	24.2	.2	8.2	.0
Nov	41.6	29.5	35.6	68	1999	12	42.2	1999	-8	1959	16	22.4	1985	883	0	.0	.0	4.5	4.1	19.3	.2
Dec	34.3	24.1	29.2	61	1957	9	36.8	1980	-27	1978	31	18.8	1983	1110	0	.0	.0	1.3	12.2	25.9	1.2
Ann	55.7	36.6	46.2	101	Aug 1961	4	72.9	Jul 1985	-27	Dec 1978	31	8.6	Jan 1979	7140	288	@	5.6	213.2	37.5	141.2	4.7

+ 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: 1938-2001

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

009-A

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: BIGFORK 13 S, MT

COOP ID: 240755

Climate Division: MT 1

NWS Call Sign:

Elevation: 2,910 Feet Lat: 47°53N

Lon: 114°02W

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	1.64	1.58	1.24	1981	24	3.39	1978	.26	1987	10.9	5.6	.5	.1	.47	.63	.87	1.07	1.27	1.47	1.70	1.97	2.32	2.86	3.37
Feb	1.18	1.28	.94	1948	26	2.28	1979	.17	1998	8.9	4.1	.3	.0	.35	.47	.63	.78	.92	1.06	1.23	1.41	1.66	2.04	2.40
Mar	1.44	1.28	1.30	1981	30	3.46	1987	.00	1994	10.0	4.3	.4	.1	.31	.51	.75	.94	1.12	1.31	1.52	1.75	2.06	2.55	2.99
Apr	1.62	1.66	1.73	1951	30	3.28	1984	.00	1977	8.3	4.3	.6	.2	.52	.75	1.00	1.19	1.36	1.54	1.72	1.94	2.21	2.62	2.99
May	2.94	2.54	5.00	1944	21	6.08	1980	1.30	1974	10.5	6.7	1.7	.4	1.17	1.44	1.83	2.14	2.44	2.75	3.08	3.45	3.94	4.67	5.34
Jun	2.76	2.48	2.50	1966	24	5.41	1980	.53	1979	10.4	6.4	1.4	.4	.83	1.10	1.49	1.83	2.15	2.49	2.87	3.31	3.88	4.77	5.60
Jul	1.72	1.49	3.55	1987	22	5.50	1987	.00	1973	7.2	3.9	.9	.2	.10	.27	.54	.79	1.06	1.36	1.70	2.13	2.70	3.65	4.58
Aug	1.61	1.41	1.80+	1965	23	5.50	1975	.12	1994	6.6	3.8	1.1	.2	.21	.34	.56	.79	1.03	1.29	1.59	1.97	2.48	3.31	4.12
Sep	1.82	1.89	2.05	1985	12	6.28	1985	.00	1990	6.7	4.5	1.0	.2	.24	.48	.79	1.05	1.30	1.58	1.88	2.25	2.73	3.49	4.21
Oct	1.47	1.24	2.52	1946	2	3.49	1975	.00	1978	7.4	4.2	.6	@	.18	.37	.62	.83	1.04	1.26	1.52	1.82	2.22	2.86	3.46
Nov	1.75	1.68	1.14	1949	13	4.14	1996	.48	1980	10.7	5.5	.5	.1	.56	.73	.97	1.18	1.38	1.59	1.82	2.09	2.43	2.97	3.46
Dec	1.92	1.73	1.12	1941	3	6.14	1977	.34	1976	12.6	6.4	.4	.0	.44	.62	.90	1.15	1.40	1.67	1.97	2.33	2.79	3.54	4.24
Ann	21.87	22.51	5.00	May 1944	21	6.28	Sep 1985	.00+	Mar 1994	110.2	59.7	9.4	1.9	15.46	16.70	18.28	19.49	20.56	21.60	22.67	23.85	25.29	27.38	29.18

+ 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: 1938-2001

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

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

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Station: BIGFORK 13 S, MT

COOP ID: 240755

Climate Division: MT 1

NWS Call Sign:

Elevation: 2,910 Feet

Lat: 47°53N

Lon: 114°02W

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	5.1	2.5	3	1	10.0	1982	23	12.5	1986	26	1982	24	12	1993	4.0	3.1	1.4	.3	.1	-9.9	-9.9	-9.9	-9.9
Feb	7.8	4.8	2	1	9.5	1986	15	18.3	1985	18	1996	4	7	1985	2.6	2.1	.7	.3	.0	-9.9	-9.9	-9.9	-9.9
Mar	1.0	.0	#	#	8.0	1990	13	8.0	1990	8	1987	19	2	1987	1.1	1.1	.3	.1	.0	1.6	.8	.2	.0
Apr	.5	.0	#	0	2.0	1982	3	4.0	1982	4	1982	5	#+	1997	.2	.2	.0	.0	.0	.2	.1	.0	.0
May	#	.0	0	0	#	1990	8	#+	1990	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	.1	.0	#	0	1.0	1991	27	1.0+	1991	2	1991	28	#+	1992	.1	.1	.0	.0	.0	.0	.0	.0	.0
Nov	6.0	2.0	1	#	12.0	1996	19	35.0	1996	18	1996	25	9	1993	1.8	1.6	.8	.4	.1	.5	.1	.1	.0
Dec	4.1	-99.9	4	2	10.0	1990	24	20.5	1989	28	1996	29	11	1985	5.2	4.4	1.7	.5	.1	-9.9	-9.9	-9.9	-9.9
Ann	24.6	-9.9	N/A	N/A	12.0	Nov 1996	19	35.0	Nov 1996	28	Dec 1996	29	12	Jan 1993	15.0	12.6	4.9	1.6	.3	-9.9	-9.9	-9.9	-9.9

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

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-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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Station: BIGFORK 13 S, MT

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Climate Division: MT 1

NWS Call Sign:

Elevation: 2,910 Feet

Lat: 47° 53N

Lon: 114° 02W

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	6/20	6/13	6/07	6/02	5/29	5/24	5/19	5/13	5/06
32	6/03	5/27	5/21	5/17	5/13	5/09	5/04	4/29	4/22
28	5/06	4/30	4/26	4/23	4/19	4/16	4/12	4/08	4/02
24	4/17	4/09	4/03	3/30	3/25	3/20	3/16	3/10	3/02
20	4/06	3/26	3/19	3/13	3/07	3/01	2/23	2/15	2/05
16	4/03	3/21	3/12	3/04	2/24	2/17	2/09	1/30	1/17
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	9/04	9/10	9/15	9/19	9/22	9/26	9/30	10/04	10/11
32	9/17	9/23	9/27	10/01	10/04	10/08	10/11	10/16	10/22
28	9/27	10/05	10/11	10/15	10/20	10/24	10/29	11/03	11/11
24	10/11	10/20	10/26	11/01	11/06	11/11	11/16	11/23	12/02
20	10/24	11/02	11/09	11/15	11/21	11/26	12/02	12/09	12/18
16	10/29	11/08	11/16	11/22	11/28	12/04	12/10	12/18	12/28
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	150	139	130	123	116	109	102	94	82
32	174	163	156	149	143	137	131	124	113
28	218	206	197	190	183	176	168	159	147
24	265	251	241	233	225	217	209	199	185
20	302	287	276	267	258	249	240	229	214
16	314	296	286	278	271	264	257	248	237

* 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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NWS Call Sign:

Elevation: 2,910 Feet Lat: 47° 53N

Lon: 114° 02W

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	1158	956	864	598	384	186	77	78	278	568	883	1110	7140
60	1003	816	709	448	242	90	25	27	167	414	733	955	5629
57	910	732	616	359	168	49	11	13	113	322	643	862	4798
55	848	676	554	301	127	30	6	6	84	264	583	800	4279
50	705	540	403	170	50	6	0	1	32	137	445	646	3135
32	261	148	41	1	0	0	0	0	0	1	88	193	733

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	126	116	201	393	641	830	1065	1062	736	456	194	105	5925
55	0	0	0	3	55	170	358	356	130	6	0	0	1078
57	0	0	0	1	34	129	301	300	99	2	0	0	866
60	0	0	0	0	15	79	222	222	62	1	0	0	601
65	0	0	0	0	2	26	119	118	23	0	0	0	288
70	0	0	0	0	0	5	48	47	7	0	0	0	107

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	6	6	37	165	397	583	810	799	492	222	37	7	6	12	49	214	611	1194	2004	2803	3295	3517	3554	3561
45	0	0	2	72	247	433	655	644	345	110	8	0	0	0	2	74	321	754	1409	2053	2398	2508	2516	2516
50	0	0	0	21	127	286	500	489	214	37	0	0	0	0	0	21	148	434	934	1423	1637	1674	1674	1674
55	0	0	0	2	54	159	347	336	105	7	0	0	0	0	0	2	56	215	562	898	1003	1010	1010	1010
60	0	0	0	0	11	66	205	192	35	0	0	0	0	0	0	0	11	77	282	474	509	509	509	509
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	0	20	100	226	339	501	499	290	116	8	0	0	0	20	120	346	685	1186	1685	1975	2091	2099	2099

(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.

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| <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 |
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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