

Climatography of the United States

No. 20

1971-2000

Station: TIBER DAM, MT

COOP ID: 248233

Climate Division: MT 3

NWS Call Sign:

Elevation: 2,850 Feet Lat: 48° 19N

Lon: 111° 05W

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	32.0	8.1	20.1	70	1992	31	34.3	1986	-53	1954	20	2.5	1979	1393	0	.0	.0	2.8	13.2	29.4	11.3
Feb	38.8	13.1	26.0	74	1992	27	40.1	1991	-35	1996	3	10.5	1989	1092	0	.0	.0	7.8	8.8	26.9	6.9
Mar	48.9	22.6	35.8	76	1999	25	45.1	1986	-32	1960	3	24.7	1996	906	0	.0	.0	16.3	3.8	27.6	1.8
Apr	60.8	31.3	46.1	89+	1987	28	53.0	1987	-13	1975	6	35.1	1975	569	1	.0	.0	25.4	.6	17.3	.1
May	70.5	41.1	55.8	95+	1988	16	60.7	1985	14	1954	2	49.9	1996	295	9	.0	.6	30.3	.0	3.2	.0
Jun	78.6	48.7	63.7	103	1990	30	71.1	1988	32+	1994	17	58.0	1998	115	73	.1	3.9	30.0	.0	.1	.0
Jul	85.5	52.5	69.0	105	1960	19	74.7	1985	36	1980	20	60.0	1993	44	168	.4	10.1	31.0	.0	.0	.0
Aug	85.5	51.4	68.5	107	1961	5	76.2	1971	29	1992	25	63.1	1993	64	170	.7	10.4	31.0	.0	@	.0
Sep	74.9	41.8	58.4	99	1981	9	64.8	1998	16	1995	21	51.6	1985	240	40	.0	2.3	29.1	.0	3.8	.0
Oct	63.7	32.1	47.9	94	1992	1	51.9	1989	-13	1991	30	43.4	1995	531	0	.0	.1	27.1	.4	16.0	.2
Nov	45.2	20.1	32.7	78+	1999	12	41.6	1999	-28	1985	23	13.6	1985	971	0	.0	.0	11.8	5.0	26.3	2.9
Dec	34.6	11.1	22.9	65	1987	6	35.6	1999	-45	1968	29	.3	1983	1306	0	.0	.0	4.2	11.1	29.3	7.5
Ann	59.9	31.2	45.6	107	Aug 1961	5	76.2	Aug 1971	-53	Jan 1954	20	.3	Dec 1983	7526	461	1.2	27.4	246.8	42.9	179.9	30.7

+ 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/normals/usnormals.html

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1952-2001

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

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: TIBER DAM, MT

COOP ID: 248233

Climate Division: MT 3

NWS Call Sign:

Elevation: 2,850 Feet Lat: 48°19N

Lon: 111°05W

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	.34	.25	.43	1970	24	1.11	1978	.00+	1995	3.9	1.4	.0	.0	.00	.00	.08	.14	.20	.27	.34	.43	.55	.75	.94
Feb	.23	.20	.32	1954	26	.81	1980	.00+	1998	3.2	.8	.0	.0	.00	.00	.07	.11	.15	.19	.23	.29	.37	.49	.60
Mar	.54	.35	1.51	1981	30	2.63	1981	.00	1973	4.6	1.5	.1	@	.01	.04	.11	.19	.27	.37	.50	.65	.87	1.24	1.62
Apr	.86	.67	1.12	1978	17	2.56	1989	.03	1988	5.4	2.8	.3	.1	.06	.11	.22	.34	.47	.63	.81	1.04	1.37	1.92	2.47
May	1.70	1.47	1.35	1980	25	4.45	1981	.40	1992	8.0	4.5	1.1	.2	.45	.62	.86	1.08	1.29	1.51	1.76	2.05	2.43	3.03	3.59
Jun	2.06	1.66	4.15	1999	3	5.52	1991	.34	1985	7.8	5.0	1.0	.3	.45	.64	.95	1.22	1.49	1.78	2.11	2.50	3.02	3.84	4.61
Jul	1.19	.96	1.90	2001	31	3.79	1993	.00	1984	5.5	3.1	.6	.1	.03	.11	.27	.44	.63	.85	1.12	1.46	1.93	2.72	3.51
Aug	1.30	1.25	2.31	1968	15	2.84	1989	.03	1988	5.8	3.5	.6	.1	.14	.24	.42	.60	.79	1.01	1.27	1.59	2.02	2.74	3.44
Sep	.85	.47	1.42	1988	16	3.93	1985	.00	1990	4.5	2.4	.3	.1	.03	.09	.20	.33	.46	.62	.80	1.04	1.36	1.91	2.45
Oct	.60	.55	1.04	1992	31	2.30	1975	.00+	1990	3.7	1.8	.3	@	.00	.00	.17	.28	.38	.49	.61	.77	.96	1.28	1.59
Nov	.38	.30	.52	1997	7	1.11	1989	.00+	1987	3.4	1.3	@	.0	.00	.05	.13	.19	.25	.32	.39	.48	.60	.80	.99
Dec	.32	.22	.49	1972	2	1.45	1989	.00+	1999	3.4	1.0	.0	.0	.00	.00	.02	.08	.14	.21	.30	.41	.55	.80	1.05
Ann	10.37	9.99	4.15	Jun 1999	3	5.52	Jun 1991	.00+	Dec 1999	59.2	29.1	4.3	.9	5.71	6.52	7.62	8.48	9.27	10.05	10.87	11.80	12.95	14.66	16.18

+ 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: 1952-2001

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

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Station: TIBER DAM, MT

COOP ID: 248233

Climate Division: MT 3

NWS Call Sign:

Elevation: 2,850 Feet

Lat: 48° 19N

Lon: 111° 05W

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	5.3	1.3	2	1	6.0	1971	10	20.5	1971	20	1978	31	13	1978	2.9	2.4	.7	.1	.0	-9.9	-9.9	-9.9	-9.9
Feb	1.9	2.0	3	#	4.0	1974	20	5.5	1982	24	1978	18	19	1978	1.6	1.3	.4	.0	.0	.2	.0	.0	.0
Mar	5.6	5.0	1	#	8.0	1990	13	14.2	1990	14	1989	17	8	1978	1.8	1.6	.8	.4	.0	2.4	1.1	.8	.0
Apr	3.3	.0	#	0	8.0	1975	4	23.0	1975	19	1975	9	6	1975	.6	.6	.3	.2	.0	.2	.1	.1	.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	.9	.0	#	0	5.0	1980	26	6.0	1972	3	1984	29	#+	1986	.2	.2	.1	.1	.0	.2	.1	.0	.0
Nov	3.2	3.0	1	0	6.0	1988	14	7.0	1988	11	1978	20	4	1985	.7	.7	.3	.1	.0	.5	.4	.2	.0
Dec	3.4	.5	2	#	9.0	1972	2	15.0	1972	12	1975	1	12	1975	1.5	1.2	.4	.2	.0	-9.9	-9.9	-9.9	-9.9
Ann	23.6	11.8	N/A	N/A	9.0	Dec 1972	2	23.0	Apr 1975	24	Feb 1978	18	19	Feb 1978	9.3	8.0	3.0	1.1	.0	-9.9	-9.9	-9.9	-9.9

+ 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

Complete documentation available from:

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

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No. 20 1971-2000

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Climate Division: MT 3

NWS Call Sign:

Elevation: 2,850 Feet

Lat: 48° 19N

Lon: 111° 05W

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	6/14	6/10	6/06	6/02	5/30	5/26	5/22	5/16
32	5/31	5/25	5/22	5/18	5/15	5/12	5/09	5/05	4/30
28	5/16	5/11	5/07	5/04	5/01	4/29	4/26	4/22	4/17
24	5/05	4/30	4/27	4/24	4/21	4/19	4/16	4/12	4/08
20	4/25	4/19	4/15	4/12	4/09	4/06	4/02	3/29	3/24
16	4/14	4/09	4/05	4/02	3/30	3/27	3/24	3/20	3/15
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	8/17	8/23	8/27	8/31	9/03	9/06	9/10	9/14	9/20
32	9/06	9/10	9/13	9/16	9/18	9/20	9/23	9/25	9/29
28	9/15	9/20	9/23	9/26	9/29	10/01	10/04	10/07	10/12
24	9/18	9/24	9/28	10/02	10/05	10/08	10/12	10/16	10/22
20	10/01	10/06	10/10	10/13	10/16	10/19	10/22	10/26	10/31
16	10/08	10/14	10/19	10/23	10/26	10/30	11/03	11/07	11/14
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	116	108	102	97	92	87	82	76	68
32	140	135	131	128	125	122	119	115	110
28	170	163	158	153	149	145	141	136	128
24	188	181	175	170	166	162	157	151	144
20	212	204	198	194	189	185	180	175	167
16	229	222	217	213	209	205	201	196	190

* 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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NWS Call Sign:

Elevation: 2,850 Feet Lat: 48°19N Lon: 111°05W

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	1393	1092	906	569	295	115	44	64	240	531	971	1306	7526
60	1246	963	751	427	169	46	12	23	140	378	821	1155	6131
57	1162	884	659	347	111	22	6	12	93	290	741	1072	5399
55	1103	832	600	296	80	13	1	6	68	237	684	1014	4934
50	960	704	456	189	29	1	0	1	24	125	547	870	3906
32	510	330	96	10	0	0	0	0	0	3	185	431	1565

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	140	162	213	432	738	948	1147	1129	791	495	204	148	6547
55	20	19	4	29	105	271	435	423	169	16	13	18	1522
57	17	16	1	19	74	220	377	366	134	7	10	15	1256
60	8	11	0	9	38	154	291	285	91	2	0	5	894
65	0	0	0	1	9	73	168	170	40	0	0	0	461
70	0	0	0	0	1	24	82	87	14	0	0	0	208

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	4	13	56	215	486	706	898	870	539	268	46	8	4	17	73	288	774	1480	2378	3248	3787	4055	4101	4109
45	0	1	17	115	335	556	743	715	394	152	17	0	0	1	18	133	468	1024	1767	2482	2876	3028	3045	3045
50	0	0	0	50	198	407	588	560	259	74	3	0	0	0	0	50	248	655	1243	1803	2062	2136	2139	2139
55	0	0	0	18	99	263	433	406	150	22	0	0	0	0	0	18	117	380	813	1219	1369	1391	1391	1391
60	0	0	0	2	37	143	282	264	66	5	0	0	0	0	0	2	39	182	464	728	794	799	799	799
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	4	26	68	180	322	443	563	544	366	223	47	9	4	30	98	278	600	1043	1606	2150	2516	2739	2786	2795

(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