

# Climatography of the United States

No. 20

1971-2000

Station: JACKSON, MT

COOP ID: 244447

Climate Division: MT 2

NWS Call Sign:

Elevation: 6,480 Feet Lat: 45° 22N

Lon: 113° 25W

## 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	28.0	6.4	17.2	53+	1971	19	24.5	1981	-40	1963	11	2.3	1979	1482	0	.0	.0	.2	19.1	30.9	8.1
Feb	32.6	7.8	20.2	56	1995	24	28.0	1991	-41	1989	4	7.5	1989	1255	0	.0	.0	.4	12.1	28.1	7.0
Mar	39.8	14.2	27.0	62	1972	9	34.2	1986	-26	1965	18	20.8	1976	1178	0	.0	.0	3.9	5.6	30.6	2.0
Apr	48.1	21.4	34.8	75	1962	19	40.8	1987	-12	1982	8	27.0	1975	907	0	.0	.0	12.2	1.5	26.9	.3
May	57.0	29.3	43.2	86	1986	29	47.5	1986	5	1968	6	39.3	1975	678	0	.0	.0	25.1	.0	19.6	.0
Jun	66.6	35.2	50.9	88	1988	25	56.4	1988	17	1984	1	46.0	1998	424	1	.0	.8	28.9	.0	7.3	.0
Jul	74.9	39.0	57.0	92+	1966	30	61.3	1998	20	1981	8	49.0	1993	261	11	.0	.8	30.9	.0	2.2	.0
Aug	75.7	37.7	56.7	94	1986	11	61.5	1983	15+	1992	25	50.9	1993	269	11	.0	.3	30.9	.0	3.6	.0
Sep	65.2	30.4	47.8	88+	1955	6	52.8	1998	2	1965	16	42.1	1986	517	0	.0	.0	27.3	.1	16.2	.0
Oct	52.8	23.9	38.4	77+	1992	1	44.1	1988	-12	1991	30	33.0	1981	826	0	.0	.0	20.0	1.2	27.2	.2
Nov	36.5	14.2	25.4	66	1965	1	34.7	1999	-31	1959	13	15.8	2000	1189	0	.0	.0	3.8	9.8	29.0	3.0
Dec	27.6	6.6	17.1	55+	1965	6	26.3	1980	-39	1990	21	7.0	1983	1485	0	.0	.0	.3	19.6	30.7	8.9
Ann	50.4	22.2	36.3	94	Aug 1986	11	61.5	Aug 1983	-41	Feb 1989	4	2.3	Jan 1979	10471	23	.0	1.9	183.9	69.0	252.3	29.5

+ 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/normal/usnormals.html](http://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: 1949-2001

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

086-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: JACKSON, MT**

**COOP ID: 244447**

**Climate Division: MT 2**

**NWS Call Sign:**

**Elevation: 6,480 Feet Lat: 45°22N**

**Lon: 113°25W**

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	.61	.41	.80	1996	19	2.66	1996	.00	1986	6.7	1.8	.2	.0	.03	.09	.18	.27	.37	.48	.60	.76	.97	1.31	1.65
Feb	.47	.41	.63	1963	1	1.43	1996	.08+	1990	6.1	1.4	@	.0	.09	.14	.20	.27	.33	.40	.48	.57	.69	.89	1.08
Mar	.74	.79	.68	1957	12	1.71	1995	.01	1978	7.3	2.3	@	.0	.10	.16	.27	.37	.48	.60	.73	.90	1.13	1.50	1.87
Apr	1.02	.91	.90	1971	24	2.46	1971	.06	1983	7.9	3.5	.3	.0	.16	.25	.40	.54	.68	.84	1.02	1.25	1.54	2.03	2.49
May	1.68	1.59	1.15	1964	28	3.99	1981	.60	1979	9.9	4.5	.6	.1	.60	.76	.99	1.18	1.36	1.55	1.75	1.99	2.29	2.75	3.18
Jun	1.75	1.59	1.30	1964	19	3.52	1993	.45	1974	10.1	5.4	.4	.0	.48	.64	.90	1.12	1.33	1.56	1.81	2.10	2.49	3.09	3.66
Jul	1.19	1.16	1.80	1983	10	4.14	1993	.00+	1999	7.2	3.4	.4	.1	.00	.23	.47	.66	.84	1.03	1.25	1.49	1.82	2.34	2.84
Aug	1.17	1.06	1.60	1992	23	2.49	1992	.02	1998	7.2	3.4	.4	@	.15	.24	.41	.57	.74	.93	1.16	1.43	1.80	2.41	3.01
Sep	1.03	.89	2.04	1963	2	2.25	1973	.00	1994	5.2	2.9	.3	@	.05	.14	.30	.45	.61	.79	1.01	1.27	1.63	2.23	2.81
Oct	.87	.76	1.50	1992	29	3.08	1992	.02	1999	6.4	2.6	.2	.1	.08	.15	.26	.38	.52	.66	.84	1.06	1.36	1.86	2.35
Nov	.72	.54	1.19	1995	25	3.42	1995	.00	1985	6.9	2.0	.1	@	.07	.15	.27	.37	.48	.59	.72	.88	1.10	1.44	1.77
Dec	.54	.51	.75	1977	15	1.27	1996	.00+	1986	6.4	2.0	.1	.0	.00	.13	.25	.33	.41	.49	.57	.67	.80	1.01	1.20
Ann	11.79	11.21	2.04	Sep 1963	2	4.14	Jul 1993	.00+	Jul 1999	87.3	35.2	3.0	.3	8.16	8.86	9.75	10.43	11.03	11.62	12.23	12.90	13.72	14.91	15.94

+ 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: 1949-2001

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

Complete documentation available from:

[www.ncdc.noaa.gov/oa/climate/normals/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normals/usnormals.html)

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**Station: JACKSON, MT**

**COOP ID: 244447**

**Climate Division: MT 2**

**NWS Call Sign:**

**Elevation: 6,480 Feet**

**Lat: 45° 22N**

**Lon: 113° 25W**

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	3.5	-99.9	6	7	14.0	2000	11	14.0	2000	16	1979	12	13	1979	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9
Feb	3.1	-99.9	5	6	4.0	1978	25	12.3	1978	17	1979	24	14	1979	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9
Mar	4.5	.0	5	#	5.2	1982	2	15.2	1980	20	1985	7	15	1985	3.2	1.9	.4	.2	.0	-9.9	-9.9	-9.9	-9.9
Apr	3.3	1.5	2	0	7.0	1983	1	9.9	1984	18	1982	8	14	1980	1.6	.9	.4	.1	.0	1.7	1.3	1.1	.0
May	3.3	.3	#	0	6.0	1981	11	14.6	1981	6	1981	11	#+	1997	1.9	1.4	.4	.1	.0	.6	.1	.1	.0
Jun	.2	.0	#	0	3.0	1981	13	3.0	1981	#	1981	1	#	1981	.1	.1	.1	.0	.0	.0	.0	.0	.0
Jul	.1	.0	0	0	1.2	1983	10	1.2	1983	0	0	0	0	0	.1	.1	.0	.0	.0	.0	.0	.0	.0
Aug	.0	.0	#	0	.0	0	0	.0	0	#	1985	10	#	1985	.0	.0	.0	.0	.0	.0	.0	.0	.0
Sep	.8	.0	#	0	5.0	1984	24	5.5	1984	5	1984	24	#+	1984	.3	.2	.1	.1	.0	.2	.1	.1	.0
Oct	1.4	.3	#	0	2.0	1979	28	7.3	1984	20	1983	14	2	1983	1.1	.5	.0	.0	.0	.9	.3	.2	.0
Nov	2.5	-99.9	1	#	8.0	1984	9	12.6	1984	8	1984	10	3	1984	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9
Dec	2.7	-99.9	3	1	8.0	1977	30	10.8	1983	16	1983	31	12	1983	2.7	1.4	.5	.2	.0	-9.9	-9.9	-9.9	-9.9
Ann	25.4	-9.9	N/A	N/A	14.0	Jan 2000	11	15.2	Mar 1980	20+	Mar 1985	7	15	Mar 1985	-9.9	-9.9	-9.9	-9.9	-9.9	-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:

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NWS Call Sign:

Elevation: 6,480 Feet

Lat: 45° 22N

Lon: 113° 25W

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	8/03	7/30	7/26	7/24	7/21	7/19	7/16	7/13	7/09
32	7/27	7/19	7/14	7/09	7/05	7/01	6/26	6/21	6/13
28	7/16	7/06	6/30	6/24	6/19	6/13	6/08	6/01	5/23
24	6/21	6/12	6/06	6/01	5/27	5/22	5/17	5/11	5/02
20	5/30	5/23	5/17	5/12	5/08	5/04	4/29	4/23	4/16
16	5/09	5/04	4/30	4/26	4/23	4/20	4/17	4/12	4/07
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	7/29	8/01	8/05	8/07	8/10	8/13	8/15	8/18	8/23
32	8/03	8/10	8/14	8/18	8/22	8/26	8/30	9/03	9/10
28	8/14	8/20	8/24	8/28	9/01	9/04	9/08	9/13	9/19
24	8/27	9/02	9/06	9/10	9/13	9/17	9/20	9/25	10/01
20	9/09	9/15	9/19	9/23	9/26	9/30	10/04	10/08	10/14
16	9/12	9/21	9/27	10/02	10/07	10/11	10/17	10/23	10/31
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	39	32	27	23	19	15	11	6	0
32	79	68	60	54	47	41	34	26	15
28	113	99	89	81	73	66	57	47	34
24	140	129	122	115	109	102	96	88	77
20	174	162	154	147	141	134	127	119	108
16	198	187	179	172	166	159	153	145	134

\* 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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No. 20  
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**Climate Division: MT 2      NWS Call Sign:      Elevation: 6,480 Feet    Lat: 45° 22N      Lon: 113° 25W**

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	1482	1255	1178	907	678	424	261	269	517	826	1189	1485	10471
60	1327	1115	1023	757	523	282	140	148	371	671	1039	1330	8726
57	1234	1031	930	667	430	205	87	95	289	578	949	1237	7732
55	1172	975	868	607	369	160	58	65	237	516	889	1175	7091
50	1017	835	713	461	228	73	15	20	129	363	739	1020	5613
32	480	349	197	77	5	0	0	0	0	25	262	480	1875

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	21	19	42	160	350	568	773	766	473	221	64	18	3475
55	0	0	0	0	2	38	119	118	21	0	0	0	298
57	0	0	0	0	0	22	85	85	12	0	0	0	204
60	0	0	0	0	0	9	45	46	5	0	0	0	105
65	0	0	0	0	0	1	11	11	0	0	0	0	23
70	0	0	0	0	0	0	0	0	0	0	0	0	0

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	0	0	0	52	188	393	564	556	288	93	6	0	0	0	0	52	240	633	1197	1753	2041	2134	2140	2140
45	0	0	0	18	90	258	409	402	169	33	0	0	0	0	0	18	108	366	775	1177	1346	1379	1379	1379
50	0	0	0	5	38	148	263	256	79	5	0	0	0	0	0	5	43	191	454	710	789	794	794	794
55	0	0	0	0	6	70	134	125	26	0	0	0	0	0	0	0	6	76	210	335	361	361	361	361
60	0	0	0	0	0	26	45	39	1	0	0	0	0	0	0	0	0	26	71	110	111	111	111	111
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	0	4	58	156	284	400	417	257	109	9	0	0	0	4	62	218	502	902	1319	1576	1685	1694	1694

(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](http://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](http://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"><li>a. Temperature/ Precipitation Tables<ol style="list-style-type: none"><li>1. 1971-2000 Monthly Normals</li><li>2. Cooperative Summary of the Day</li><li>3. National Weather Service station records</li><li>4. 1971-2000 serially complete daily data</li></ol></li><li>b. Degree Day Table<ol style="list-style-type: none"><li>1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals</li><li>2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data</li></ol></li></ol> | <ol style="list-style-type: none"><li>c. Snow Tables<ol style="list-style-type: none"><li>1. Snow Climatology</li><li>2. Cooperative Summary of the Day</li></ol></li><li>d. Freeze Data Table<br/>1971-2000 serially complete daily data</li></ol> |
|---|---|

## References

U.S. Climate Normals 1971-2000, [www.ncdc.noaa.gov/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)