U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: DIVIDE, MT **COOP ID: 242421**

Climate Division: MT 2 **NWS Call Sign:** **Elevation: 5,350 Feet** **Lat: 45˚45N** **Lon: 112˚45W**

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	30.9	5.6	18.3	55+	1989	30	27.6	1994	-34	1979	5	.9	1979	1450	0	.0	.0	.7	14.4	30.5	7.1
Feb	36.0	9.1	22.6	61	1950	26	31.2	1991	-35	1989	3	8.9	1989	1189	0	.0	.0	2.6	8.1	27.8	4.4
Mar	42.8	17.3	30.1	70	1994	15	37.8	1992	-19	1960	2	24.3	1976	1085	0	.0	.0	8.5	3.3	29.5	1.1
Apr	51.7	25.2	38.5	80	1992	29	44.7	1987	0	1982	8	29.8	1975	798	0	.0	.0	17.3	.6	23.8	@
May	61.0	33.5	47.3	101	1954	20	52.2	1992	15	1967	2	43.0	1974	552	0	.0	.0	26.8	.0	10.6	.0
Jun	69.9	39.7	54.8	93	1988	25	60.5	1988	26+	1998	5	49.9	1998	313	7	.0	.3	29.3	.0	2.0	.0
Jul	78.5	43.7	61.1	98	1975	27	66.3	1985	24	1999	22	52.5	1993	164	44	.0	1.4	31.0	.0	.3	.0
Aug	77.6	42.0	59.8	96+	2000	1	64.5	1971	26	1992	25	54.3	1993	195	33	.0	.8	31.0	.0	.5	.0
Sep	67.5	33.3	50.4	91+	1950	3	58.0	1998	8	1996	23	44.2	1986	443	5	.0	.1	28.1	.0	7.7	.0
Oct	56.1	23.8	40.0	84	1964	13	46.1	1988	-5	1991	30	34.9	1984	777	0	.0	.0	22.5	.5	22.5	.1
Nov	39.6	13.6	26.6	71	1999	13	37.5	1999	-31	1959	16	14.9	1985	1152	0	.0	.0	5.7	6.8	28.2	1.9
Dec	30.7	6.5	18.6	59	1980	27	29.0	1980	-35+	1990	29	5.9	1983	1439	0	.0	.0	1.1	15.9	30.6	5.6
Ann	53.5	24.4	39.0	101	May 1954	20	66.3	Jul 1985	-35+	Dec 1990	29	.9	Jan 1979	9557	89	.0	2.6	204.6	49.6	214.0	20.2

\+ 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

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1915-2001

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

Issue Date: February 2004

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Climate Division: MT 2 **NWS Call Sign:** **Elevation: 5,350 Feet** **Lat: 45˚45N** **Lon: 112˚45W**

Precipitation (inches)

Precipitation Totals

Month	Means/ Medians(1) Mean	Means/ Medians(1) Median	Extremes Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year
Jan	.46	.43	.76	1962	7	1.22	1975	.00	1999
Feb	.42	.38	.70	1997	13	1.38	1986	.00+	1999
Mar	.77	.76	.58	1979	17	1.96	1991	.00+	2000
Apr	.99	.96	.96	1980	30	2.48	1979	.00	1999
May	1.91	1.83	1.60	1981	22	4.50	1980	.34	1979
Jun	2.09	1.94	1.65	1953	2	4.06	1999	.30	1974
Jul	1.31	1.02	1.08	1993	26	3.86	1975	.00	1999
Aug	1.39	1.28	1.58	1964	28	3.96	1983	.00	2000
Sep	1.14	1.01	1.70	1968	20	3.53	1980	.00	1999
Oct	.70	.52	1.05	1957	3	3.21	1975	.00+	1999
Nov	.57	.51	.59	1968	9	1.41	1981	.00	1998
Dec	.53	.44	.90	1998	4	1.41	1998	.00+	2000
Ann	12.28	11.96	1.70	Sep 1968	20	4.50	May 1980	.00+	Dec 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	6.8	1.5	@	.0
Feb	5.8	1.5	@	.0
Mar	9.2	2.6	@	.0
Apr	8.4	3.5	.3	.0
May	11.6	5.6	.9	.1
Jun	11.1	5.9	.9	.1
Jul	8.2	3.6	.8	@
Aug	8.4	4.5	.6	@
Sep	6.8	3.4	.5	.1
Oct	4.9	2.2	.3	.0
Nov	7.0	2.1	@	.0
Dec	6.4	1.8	@	.0
Ann	94.6	38.2	4.3	.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
These values were determined from the incomplete gamma distribution

Month	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.03	.08	.15	.22	.29	.37	.46	.57	.72	.97	1.20
Feb	.00	.00	.14	.21	.28	.35	.43	.53	.65	.85	1.03
Mar	.00	.21	.37	.49	.59	.70	.82	.95	1.13	1.40	1.66
Apr	.15	.29	.45	.59	.73	.87	1.03	1.21	1.46	1.84	2.21
May	.62	.80	1.06	1.29	1.51	1.74	1.99	2.28	2.65	3.24	3.78
Jun	.59	.79	1.09	1.35	1.61	1.87	2.17	2.52	2.97	3.68	4.34
Jul	.11	.26	.47	.66	.86	1.07	1.32	1.61	2.01	2.66	3.27
Aug	.19	.37	.61	.80	1.00	1.21	1.44	1.71	2.08	2.65	3.20
Sep	.05	.14	.31	.47	.65	.86	1.10	1.40	1.81	2.50	3.18
Oct	.00	.00	.15	.27	.39	.53	.69	.89	1.15	1.59	2.03
Nov	.06	.13	.23	.31	.39	.48	.58	.70	.86	1.11	1.35
Dec	.00	.11	.22	.30	.38	.47	.56	.66	.80	1.02	1.23
Ann	7.20	8.11	9.31	10.25	11.11	11.95	12.83	13.81	15.03	16.84	18.43

+ 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: 1915-2001
(3) Derived from 1971-2000 serially complete daily data

Complete documentation available from:
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Climate Division: MT 2 **NWS Call Sign:** **Elevation: 5,350 Feet** **Lat: 45°45N** **Lon: 112°45W**

Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	5.5	4.0	3	2
Feb	4.8	3.7	2	#
Mar	6.4	5.1	1	#
Apr	4.7	3.2	#	#
May	.3	.0	#	0
Jun	#	.0	0	0
Jul	.0	.0	0	0
Aug	.1	.0	0	0
Sep	.6	.0	#	0
Oct	1.7	.0	#	#
Nov	4.8	4.9	1	#
Dec	5.6	5.2	2	1
Ann	34.5	26.1	N/A	N/A

Extremes (2)

Month	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year
Jan	6.0	1975	25	17.8	1975	14	1982	26	11	1979
Feb	6.0	1989	19	15.9	1986	13	1982	9	10	1982
Mar	6.3	1980	27	18.1	1991	10	1989	3	3	1989
Apr	9.0	1979	18	26.2	1979	6	1979	19	1	1979
May	3.5	1975	4	4.5	1975	2	1975	4	#+	2000
Jun	#	1975	9	#+	1975	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	3.0	1992	23	3.0	1992	0	0	0	0	0
Sep	7.0	1972	25	10.0	1972	3	1972	25	#+	1988
Oct	5.0	1973	31	11.0	1975	5	1980	16	1	1980
Nov	7.0	1994	26	10.5	1986	8	1986	11	3	1986
Dec	10.0	1998	4	21.1	1971	12	1971	26	7	1978
Ann	10.0	Dec 1998	4	26.2	Apr 1979	14	Jan 1982	26	11	Jan 1979

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	5.6	2.1	.6	.1	.0
Feb	4.4	1.9	.4	.1	.0
Mar	4.8	2.3	.5	.1	.0
Apr	2.5	1.4	.5	.2	.0
May	.3	.2	@	.0	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	@	@	@	.0	.0
Sep	.2	.2	.1	@	.0
Oct	1.0	.4	.3	.1	.0
Nov	3.7	1.7	.4	.1	.0
Dec	5.2	1.9	.6	.1	@
Ann	27.7	12.1	3.4	.8	@

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	16.6	8.3	4.6	.8
Feb	9.3	4.2	2.5	.5
Mar	3.9	1.4	.4	.0
Apr	1.6	.6	.3	.0
May	.1	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.1	.1	.0	.0
Oct	.7	.3	.1	.0
Nov	5.8	2.8	.9	.0
Dec	15.7	8.1	3.7	.2
Ann	53.8	25.8	12.5	1.5

+ 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

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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	7/21	7/15	7/10	7/07	7/03	6/30	6/26	6/22	6/16
32	7/06	6/29	6/23	6/18	6/14	6/09	6/04	5/30	5/22
28	6/13	6/06	5/31	5/27	5/23	5/18	5/14	5/08	5/01
24	6/03	5/25	5/19	5/14	5/09	5/04	4/29	4/23	4/14
20	5/07	5/02	4/28	4/24	4/21	4/18	4/14	4/10	4/04
16	4/21	4/16	4/12	4/09	4/06	4/03	3/30	3/27	3/21

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	8/12	8/17	8/21	8/24	8/27	8/30	9/02	9/06	9/11
32	8/21	8/27	8/31	9/04	9/07	9/11	9/15	9/19	9/25
28	9/05	9/10	9/14	9/17	9/20	9/23	9/26	9/29	10/05
24	9/14	9/20	9/24	9/28	10/01	10/04	10/08	10/12	10/18
20	9/25	10/01	10/05	10/08	10/11	10/14	10/18	10/22	10/27
16	10/02	10/08	10/12	10/16	10/20	10/24	10/27	11/01	11/07

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	81	72	65	59	54	49	43	36	27
32	116	105	97	91	85	79	72	65	54
28	148	138	131	125	119	114	108	101	91
24	179	167	159	151	144	137	130	121	109
20	199	190	183	178	173	167	162	155	146
16	221	213	207	201	196	191	186	180	171

***** 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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Degree Days to Selected Base Temperatures (˚F)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1450	1189	1085	798	552	313	164	195	443	777	1152	1439	9557
60	1295	1049	930	648	398	186	79	100	307	622	1002	1284	7900
57	1202	965	837	558	309	125	42	59	234	529	912	1191	6963
55	1140	909	775	498	254	92	25	39	191	468	852	1129	6372
50	985	769	620	357	136	32	7	11	103	318	702	974	5014
32	456	306	154	35	1	0	0	0	0	17	239	449	1657

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	28	41	92	227	472	685	903	861	552	262	76	33	4232
55	0	0	0	1	13	87	215	187	53	1	0	0	557
57	0	0	0	0	6	60	169	145	37	0	0	0	417
60	0	0	0	0	1	31	113	94	19	0	0	0	258
65	0	0	0	0	0	7	44	33	5	0	0	0	89
70	0	0	0	0	0	1	12	9	0	0	0	0	22

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	1	19	98	277	488	710	684	387	149	18	0	0	1	20	118	395	883	1593	2277	2664	2813	2831	2831
45	0	0	1	38	153	342	556	529	256	67	0	0	0	0	1	39	192	534	1090	1619	1875	1942	1942	1942
50	0	0	0	12	69	210	401	377	141	21	0	0	0	0	0	12	81	291	692	1069	1210	1231	1231	1231
55	0	0	0	0	24	110	253	230	59	2	0	0	0	0	0	0	24	134	387	617	676	678	678	678
60	0	0	0	0	3	44	125	106	14	0	0	0	0	0	0	0	3	47	172	278	292	292	292	292
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	0	2	26	89	196	317	460	444	280	138	17	0	0	2	28	117	313	630	1090	1534	1814	1952	1969	1969

(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:
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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

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

c. Snow Tables
   1. Snow Climatology
   2. Cooperative Summary of the Day

d. Freeze Data Table
   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