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: JORDAN, MT **COOP ID: 244522**

Climate Division: MT 6 **NWS Call Sign:** **Elevation: 2,640 Feet** **Lat: 47˚19N** **Lon: 106˚55W**

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	27.4	.7	14.1	68	1992	31	26.9	1986	-51	1918	31	-2.3	1979	1580	0	.0	.0	1.8	15.0	30.4	12.5
Feb	36.1	8.4	22.3	74	1995	24	34.1	1991	-58	1936	14	6.1	1989	1197	0	.0	.0	6.4	9.6	27.0	7.0
Mar	47.8	18.7	33.3	81	1910	22	42.3	1986	-35	1960	3	22.4	1996	986	0	.0	.0	15.8	3.8	27.7	1.8
Apr	59.9	29.8	44.9	94	1939	29	53.2	1980	-13	1936	2	37.7	1975	604	0	.0	.1	24.8	.4	17.9	.1
May	70.3	40.0	55.2	102+	1988	29	61.8	1988	10	1954	3	49.6	1974	319	15	@	1.5	30.1	.0	4.9	.0
Jun	80.9	49.9	65.4	111	1936	27	78.3	1988	29	1910	3	60.3	1998	105	116	.9	6.0	30.0	.0	.1	.0
Jul	88.4	54.3	71.4	112	1936	10	75.4	1984	31	1945	1	62.7	1993	28	226	2.6	15.7	31.0	.0	.0	.0
Aug	88.3	52.5	70.4	110	1949	7	77.0	1983	29	1992	25	64.5	1977	55	221	2.7	15.3	31.0	.0	.1	.0
Sep	75.6	39.6	57.6	107	1950	4	64.7	1998	13	1985	30	52.0	1985	259	36	.2	3.9	29.3	.0	4.1	.0
Oct	62.6	29.3	46.0	95	1992	1	48.9	1979	-14	1919	25	42.1	1991	591	0	.0	.2	26.4	.4	17.7	.1
Nov	42.7	15.1	28.9	78+	1999	15	39.8	1999	-32	1985	23	12.7	1985	1084	0	.0	.0	10.0	6.1	27.4	3.2
Dec	31.4	5.3	18.4	71	1939	5	29.7	1999	-46	1989	21	-1.1	1983	1446	0	.0	.0	3.2	12.8	30.3	8.6
Ann	59.3	28.6	44.0	112	Jul 1936	10	78.3	Jun 1988	-58	Feb 1936	14	-2.3	Jan 1979	8254	614	6.4	42.7	239.8	48.1	187.6	33.3

\+ 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: 1905-2001

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

Issue Date: February 2004

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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	.51	.43	1.40	1917	30	1.69	1971	.00	1973
Feb	.36	.29	.96	1979	14	1.77	1979	.01+	1990
Mar	.61	.54	.70	1910	17	1.42	1996	.12	1999
Apr	.98	.81	1.53	1955	4	3.26	1991	.14+	1983
May	2.19	2.13	2.16	1975	6	4.90	1978	.15	1980
Jun	2.27	1.81	4.34	1972	9	5.66	1976	.47	1985
Jul	1.73	1.06	2.52	1989	14	7.40	1993	.00	1984
Aug	1.19	.87	2.09	1951	29	3.21	1999	.13	2000
Sep	1.23	.71	1.91	1996	17	5.19	1978	.04	1990
Oct	.88	.75	1.45	1993	31	2.90	1993	.03	1987
Nov	.44	.36	.64	1998	3	1.21	1998	.00	1972
Dec	.51	.51	1.98	1917	28	1.69	1989	.02	1997
Ann	12.90	12.97	4.34	Jun 1972	9	7.40	Jul 1993	.00+	Jul 1984

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	6.1	2.2	@	.0
Feb	4.9	1.3	@	.0
Mar	6.7	2.2	.0	.0
Apr	7.1	3.3	.3	@
May	9.5	5.5	1.2	.3
Jun	9.0	5.1	1.2	.4
Jul	7.1	4.0	1.0	.5
Aug	5.6	2.6	.8	.1
Sep	5.6	2.9	.7	.2
Oct	4.6	2.3	.5	.1
Nov	4.9	1.7	@	.0
Dec	5.9	1.8	.0	.0
Ann	77.0	34.9	5.7	1.6

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	.07	.15	.23	.31	.40	.50	.63	.81	1.10	1.38
Feb	.01	.03	.06	.11	.16	.23	.31	.42	.58	.85	1.13
Mar	.20	.26	.34	.42	.49	.56	.64	.73	.85	1.03	1.21
Apr	.15	.23	.37	.51	.65	.80	.98	1.20	1.49	1.97	2.43
May	.49	.70	1.02	1.31	1.60	1.90	2.25	2.66	3.21	4.07	4.88
Jun	.54	.75	1.08	1.38	1.67	1.99	2.34	2.75	3.30	4.17	4.99
Jul	.13	.32	.60	.85	1.11	1.40	1.73	2.13	2.67	3.55	4.40
Aug	.16	.26	.43	.59	.77	.96	1.18	1.45	1.82	2.42	3.00
Sep	.08	.16	.32	.48	.67	.89	1.15	1.49	1.96	2.74	3.53
Oct	.07	.13	.25	.37	.51	.66	.84	1.07	1.39	1.92	2.45
Nov	.03	.07	.14	.20	.27	.34	.43	.54	.68	.92	1.15
Dec	.06	.10	.17	.24	.32	.40	.50	.62	.79	1.07	1.33
Ann	7.13	8.14	9.49	10.56	11.53	12.49	13.50	14.65	16.07	18.18	20.05

\+ 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: 1905-2001
(3) Derived from 1971-2000 serially complete daily data

Complete documentation available from:
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Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	12.0	-99.9	2	#
Feb	2.7	-99.9	#	0
Mar	.3	-99.9	1	0
Apr	.4	.0	#	0
May	.1	.0	#	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	#	.0	0	0
Oct	#	.0	#	0
Nov	2.3	-99.9	1	0
Dec	2.3	-99.9	1	#
Ann	20.1	-9.9	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	9.0	1988	11	12.0	1977	13	1989	10	12	1989
Feb	8.0	2000	15	8.0	2000	10	2000	16	3	2000
Mar	.8	2000	13	.8	2000	7	1982	20	4	1985
Apr	4.0	2000	14	4.0	2000	4	2000	14	#+	2000
May	1.0	1995	1	1.0+	1999	1	1999	11	#	1999
Jun	.0	0	0	.0	0	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	#	1985	23	#	1985	0	0	0	0	0
Oct	#	1999	4	#+	1999	#	1999	4	#	1999
Nov	4.5	1993	23	4.5	1993	13	1985	16	11	1985
Dec	4.5	1983	8	4.5	1983	5	1980	24	4	1988
Ann	9.0	Jan 1988	11	12.0	Jan 1977	13+	Jan 1989	10	12	Jan 1989

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	-9.9	-9.9	-9.9	-9.9	-9.9
Feb	-9.9	-9.9	-9.9	-9.9	-9.9
Mar	-9.9	-9.9	-9.9	-9.9	-9.9
Apr	.2	.1	.1	.0	.0
May	.1	.1	.0	.0	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0
Nov	.3	.3	.2	.0	.0
Dec	-9.9	-9.9	-9.9	-9.9	-9.9
Ann	-9.9	-9.9	-9.9	-9.9	-9.9

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	-9.9	-9.9	-9.9	-9.9
Feb	-9.9	-9.9	-9.9	-9.9
Mar	-9.9	-9.9	-9.9	-9.9
Apr	.1	.1	.0	.0
May	.1	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.0	.0	.0	.0
Nov	-9.9	-9.9	-9.9	-9.9
Dec	-9.9	-9.9	-9.9	-9.9
Ann	-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

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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	6/21	6/14	6/10	6/06	6/03	5/30	5/26	5/22	5/15
32	5/29	5/25	5/22	5/19	5/16	5/14	5/11	5/08	5/03
28	5/19	5/14	5/11	5/09	5/06	5/04	5/01	4/28	4/24
24	5/07	5/03	4/30	4/27	4/24	4/21	4/19	4/15	4/11
20	4/29	4/24	4/20	4/17	4/14	4/11	4/08	4/04	3/30
16	4/16	4/11	4/07	4/03	3/31	3/28	3/25	3/21	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	8/24	8/28	9/01	9/04	9/07	9/10	9/13	9/16	9/21
32	9/03	9/07	9/10	9/12	9/15	9/17	9/20	9/23	9/27
28	9/09	9/13	9/16	9/19	9/22	9/25	9/27	10/01	10/05
24	9/19	9/25	9/29	10/02	10/05	10/08	10/12	10/16	10/21
20	9/23	9/29	10/04	10/08	10/11	10/15	10/19	10/23	10/30
16	10/04	10/10	10/15	10/19	10/22	10/26	10/30	11/03	11/09

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	118	110	105	100	96	91	87	81	73
32	140	133	129	125	121	117	113	108	102
28	156	150	146	142	138	134	131	126	120
24	186	179	173	168	163	159	154	148	140
20	204	196	190	184	180	175	169	163	155
16	227	219	213	209	204	200	195	190	182

***** 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)

Base	Heating Degree Days (1)												
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1580	1197	986	604	319	105	28	55	259	591	1084	1446	8254
60	1425	1062	831	459	196	46	8	21	153	437	934	1291	6863
57	1333	985	738	375	136	24	1	11	102	345	844	1198	6092
55	1273	932	677	323	103	16	0	6	75	285	784	1136	5610
50	1126	802	532	206	43	4	0	1	27	154	646	987	4528
32	632	402	136	10	0	0	0	0	0	4	230	497	1911

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	75	129	174	396	719	1001	1221	1190	768	435	135	73	6316
55	3	16	2	18	109	326	508	483	152	4	0	0	1621
57	1	12	1	11	80	275	448	425	120	1	0	0	1374
60	0	5	0	5	47	206	361	343	81	0	0	0	1048
65	0	0	0	0	15	116	226	221	36	0	0	0	614
70	0	0	0	0	3	53	124	128	14	0	0	0	322

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	15	61	222	516	783	991	964	579	259	38	1	0	15	76	298	814	1597	2588	3552	4131	4390	4428	4429
45	0	1	19	123	370	633	836	809	438	147	11	0	0	1	20	143	513	1146	1982	2791	3229	3376	3387	3387
50	0	0	1	62	236	483	681	655	303	68	1	0	0	0	1	63	299	782	1463	2118	2421	2489	2490	2490
55	0	0	0	22	130	335	526	501	182	26	0	0	0	0	0	22	152	487	1013	1514	1696	1722	1722	1722
60	0	0	0	5	59	204	372	355	95	4	0	0	0	0	0	5	64	268	640	995	1090	1094	1094	1094
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	1	20	77	192	349	493	618	600	397	222	44	4	1	21	98	290	639	1132	1750	2350	2747	2969	3013	3017

(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.
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