

Climatology of the United States

No. 20

1971-2000

Station: TERRY 21 NNW, MT

COOP ID: 248169

Climate Division: MT 7

NWS Call Sign:

Elevation: 3,255 Feet Lat: 47°04N

Lon: 105°30W

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	24.9	3.7	14.3	65	1992	31	28.7	1992	-36	1982	10	-.1	1982	1572	0	.0	.0	.9	18.5	30.7	11.9
Feb	31.3	10.2	20.8	67+	1995	24	31.8	1991	-33+	1996	1	5.2	1989	1240	0	.0	.0	3.2	11.9	27.6	7.5
Mar	41.5	18.8	30.2	74+	1999	26	39.3	1986	-34	1996	8	19.4	1996	1080	0	.0	.0	10.0	6.5	28.5	2.6
Apr	54.6	28.5	41.6	87	1980	20	48.8	1987	-5	1986	15	34.2	1975	704	0	.0	.0	20.9	1.1	19.6	.2
May	65.6	38.9	52.3	96	1980	22	59.6	1988	11	1967	3	46.3	1974	403	9	.0	.3	29.0	.1	6.1	.0
Jun	75.0	48.0	61.5	103+	1988	26	75.0	1988	26	1998	3	55.4	1998	173	69	.2	1.8	30.0	.0	.3	.0
Jul	82.4	53.0	67.7	103+	1975	28	72.1	2000	34	1972	4	59.0	1993	71	155	.2	6.1	31.0	.0	.0	.0
Aug	81.9	51.9	66.9	102	1995	7	73.8	1983	28+	1994	31	60.3	1993	100	157	.1	6.7	31.0	.0	.1	.0
Sep	69.6	40.7	55.2	99+	1998	4	64.0	1998	14	1995	21	49.4+	1985	324	29	.0	1.4	28.4	.0	4.3	.0
Oct	56.3	29.6	43.0	89	1997	2	46.6	1979	-14	1991	30	38.8	1972	683	0	.0	.0	23.3	.8	16.6	.1
Nov	38.3	16.4	27.4	75	1999	12	38.5	1999	-26	1993	24	11.0	1985	1130	0	.0	.0	7.4	8.6	27.6	2.7
Dec	28.0	6.6	17.3	66	1979	4	27.9	1999	-37+	1989	22	-1.5	1983	1479	0	.0	.0	1.7	16.1	30.2	9.1
Ann	54.1	28.9	41.5	103+	Jun 1988	26	75.0	Jun 1988	-37+	Dec 1989	22	-1.5	Dec 1983	8959	419	.5	16.3	216.8	63.6	191.6	34.1

+ 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: 1949-2001

(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: TERRY 21 NNW, MT

COOP ID: 248169

Climate Division: MT 7

NWS Call Sign:

Elevation: 3,255 Feet Lat: 47°04N

Lon: 105°30W

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	.44	.35	.56	1980	6	1.24	1971	.03	1973	4.5	1.6	@	.0	.05	.09	.15	.21	.28	.35	.43	.54	.68	.91	1.14
Feb	.28	.20	.54	1965	12	.81	1998	.06+	1992	3.5	1.1	@	.0	.04	.07	.11	.14	.18	.23	.28	.34	.42	.55	.68
Mar	.54	.51	.81	1995	12	2.03	1995	.03	1999	4.9	2.1	@	.0	.11	.16	.24	.31	.38	.46	.55	.66	.80	1.04	1.25
Apr	1.20	.77	3.86	1992	18	6.11	1992	.05	1983	5.7	3.0	.6	.1	.10	.17	.33	.50	.68	.89	1.14	1.45	1.89	2.62	3.35
May	2.18	1.90	1.98	1975	6	7.28	1978	.26	1980	8.6	5.3	1.2	.3	.34	.53	.84	1.14	1.46	1.80	2.19	2.67	3.31	4.35	5.34
Jun	2.62	2.52	3.67	1973	18	6.69	1973	.33	1979	8.7	5.7	1.7	.5	.62	.86	1.24	1.59	1.93	2.29	2.69	3.17	3.81	4.81	5.75
Jul	1.86	1.66	4.68	1997	1	6.51	1993	.06	1988	6.5	4.0	.9	.3	.17	.30	.55	.81	1.09	1.41	1.79	2.27	2.93	4.02	5.10
Aug	1.22	.87	2.20	1968	23	3.22	1980	.13	2000	4.9	3.0	.9	.1	.21	.32	.49	.66	.83	1.02	1.23	1.49	1.83	2.39	2.92
Sep	1.36	.89	3.02	1986	25	5.99	1986	.03	1979	5.2	3.2	.7	.3	.07	.15	.31	.49	.70	.95	1.25	1.64	2.19	3.13	4.06
Oct	1.04	.83	1.46	1980	22	3.23	1998	.05	1983	4.5	2.9	.5	.1	.10	.17	.32	.46	.62	.80	1.01	1.27	1.63	2.24	2.83
Nov	.48	.37	.72	2000	2	1.44	1978	.00+	1987	4.1	1.6	@	.0	.00	.00	.08	.16	.25	.34	.45	.60	.79	1.11	1.43
Dec	.45	.45	.53	1989	9	1.28	1989	.02	1997	3.8	1.7	@	.0	.09	.13	.20	.26	.32	.38	.46	.55	.67	.86	1.04
Ann	13.67	13.51	4.68	Jul 1997	1	7.28	May 1978	.00+	Nov 1987	64.9	35.2	6.5	1.7	8.08	9.09	10.42	11.45	12.40	13.32	14.29	15.38	16.72	18.71	20.46

+ 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

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Station: TERRY 21 NNW, MT

COOP ID: 248169

Climate Division: MT 7

NWS Call Sign:

Elevation: 3,255 Feet

Lat: 47°04N

Lon: 105°30W

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	2.0	-99.9	8	5	2.0	1983	99	2.0	1983	40	1978	31	35	1978	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9
Feb	1.5	-99.9	8	0	3.0	1973	12	3.0	1973	65	1978	20	56	1978	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9
Mar	.5	-99.9	6	0	2.0	1973	27	2.0	1973	61	1978	5	61	1978	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9
Apr	#	#	#	0	#	1992	12	#+	1992	12	1989	3	1	1989	.0	.0	.0	.0	.0	.0	.0	.0	.0
May	.2	.0	0	0	2.0	1972	1	2.0	1972	12	1983	12	1	1983	.1	.1	.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	.7	.0	0	0	6.0	1972	25	6.0	1972	0	0	0	0	0	.1	.1	.1	.1	.0	.0	.0	.0	.0
Oct	.3	.0	#	0	3.0	1992	6	3.0	1992	5	1991	31	1	1991	.1	.1	.1	.0	.0	.0	.0	.0	.0
Nov	.5	-99.9	1	0	2.0	1980	12	2.0	1980	18	1978	30	8	1978	.3	.3	.0	.0	.0	-9.9	-9.9	-9.9	-9.9
Dec	6.0	-99.9	6	2	6.0	1980	23	6.0	1980	33	1978	31	27	1978	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9
Ann	11.7	-9.9	N/A	N/A	6.0+	Dec 1980	23	6.0+	Dec 1980	65	Feb 1978	20	61	Mar 1978	-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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No. 20 1971-2000

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COOP ID: 248169

Climate Division: MT 7

NWS Call Sign:

Elevation: 3,255 Feet

Lat: 47° 04N

Lon: 105° 30W

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	6/25	6/18	6/13	6/09	6/05	6/01	5/27	5/22	5/16
32	6/11	6/04	5/30	5/26	5/22	5/18	5/14	5/09	5/02
28	5/24	5/19	5/15	5/12	5/08	5/05	5/02	4/28	4/22
24	5/10	5/06	5/04	5/01	4/29	4/27	4/24	4/21	4/17
20	5/04	4/29	4/25	4/21	4/18	4/15	4/11	4/07	4/02
16	4/20	4/15	4/11	4/08	4/05	4/02	3/30	3/26	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	8/22	8/27	8/31	9/03	9/06	9/09	9/12	9/16	9/21
32	9/04	9/08	9/11	9/13	9/15	9/17	9/20	9/22	9/26
28	9/07	9/12	9/15	9/18	9/21	9/24	9/27	10/01	10/06
24	9/16	9/22	9/26	9/30	10/04	10/07	10/11	10/15	10/21
20	9/26	10/02	10/06	10/09	10/13	10/16	10/20	10/24	10/30
16	10/05	10/11	10/15	10/19	10/22	10/25	10/29	11/02	11/08
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	103	98	93	88	82	76	67
32	139	131	125	120	115	111	106	100	91
28	156	149	144	139	135	131	127	122	114
24	179	171	166	161	157	153	148	143	135
20	197	190	185	181	177	173	169	164	158
16	225	216	209	204	199	194	189	182	173

* 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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COOP ID: 248169

Climate Division: MT 7 NWS Call Sign: Elevation: 3,255 Feet Lat: 47°04N Lon: 105°30W

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	1572	1240	1080	704	403	173	71	100	324	683	1130	1479	8959
60	1417	1100	925	554	270	94	25	45	211	528	980	1324	7473
57	1324	1016	832	467	201	58	12	26	154	436	890	1231	6647
55	1262	966	770	411	161	40	8	17	121	375	830	1169	6130
50	1113	836	624	279	82	14	0	5	57	232	689	1015	4946
32	611	413	190	21	0	0	0	0	0	9	255	514	2013

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	62	97	133	307	629	885	1107	1081	695	349	116	57	5518
55	0	6	0	7	77	235	402	385	126	2	0	0	1240
57	0	0	0	4	55	193	345	332	99	1	0	0	1029
60	0	0	0	1	30	139	264	258	66	0	0	0	758
65	0	0	0	0	9	69	155	157	29	0	0	0	419
70	0	0	0	0	2	26	77	83	11	0	0	0	199

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	5	36	153	418	666	877	858	497	200	25	2	0	5	41	194	612	1278	2155	3013	3510	3710	3735	3737
45	0	0	8	78	275	516	722	703	358	104	9	0	0	0	8	86	361	877	1599	2302	2660	2764	2773	2773
50	0	0	0	28	159	369	568	549	230	46	0	0	0	0	0	28	187	556	1124	1673	1903	1949	1949	1949
55	0	0	0	8	75	231	414	399	130	11	0	0	0	0	0	8	83	314	728	1127	1257	1268	1268	1268
60	0	0	0	1	27	122	273	257	61	0	0	0	0	0	0	1	28	150	423	680	741	741	741	741
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	6	36	128	264	412	559	545	321	151	28	1	0	6	42	170	434	846	1405	1950	2271	2422	2450	2451

(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