### 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

**COOP ID: 244820** 

Station: LAKEVIEW, MT

**Climate Division: MT 2** 

**NWS Call Sign:** 

Elevation: 6,710 Feet Lat: 44°36N Lon: 111°49W

									r	Tempe	eratur	re (°F)									
	Mea	<b>n</b> (1)						Extr	emes					Ü	Days (1) emp 65		Mean	Numb	er of I	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	25.1	.7	12.9	50	1971	30	19.9	1981	-49	1962	22	-1.4	1979	1615	0	.0	.0	@	24.7	30.9	14.3
Feb	30.2	4.2	17.2	52	1963	6	25.0	1991	-41	1985	4	7.1	1989	1338	0	.0	.0	.0	17.4	28.2	11.4
Mar	38.5	11.8	25.2	59+	1989	11	32.8	1986	-28	1962	12	16.4	1976	1237	0	.0	.0	1.6	8.5	30.7	5.4
Apr	48.7	21.7	35.2	75	1987	28	42.1	1987	-13+	1982	8	25.4	1975	894	0	.0	.0	11.3	1.1	27.5	.5
May	59.6	30.1	44.9	80	1986	31	51.1	1992	5	1950	1	38.8	1975	625	0	.0	.0	25.2	.0	19.6	.0
Jun	69.1	36.0	52.6	91	1988	25	59.4	1988	19	1974	1	46.3	1998	376	2	.0	@	29.0	.0	8.1	.0
Jul	77.5	40.3	58.9	93	1996	23	63.5	1985	19	1981	8	52.3	1993	205	17	.0	.3	31.0	.0	1.7	.0
Aug	77.5	39.0	58.3	94	1997	27	62.1	1994	20	1992	26	54.4	1980	219	10	.0	.3	31.0	.0	3.1	.0
Sep	67.9	31.6	49.8	89	1994	9	56.3	1990	4	1985	29	44.3	1971	458	1	.0	.0	27.9	@	16.0	.0
Oct	54.4	23.5	39.0	79	1992	1	46.2	1988	-16	1991	30	35.2	1984	808	0	.0	.0	20.1	1.0	27.5	.3
Nov	35.6	12.3	24.0	65	1969	4	33.0	1999	-34	1975	30	15.1	1985	1232	0	.0	.0	2.6	12.3	29.0	5.1
Dec	25.9	2.2	14.1	55	1964	23	20.9	1980	-45+	1990	22	4.5	1990	1579	0	.0	.0	.0	23.5	30.9	13.1
Ann	50.8	21.1	36.0	94	Aug 1997	27	63.5	Jul 1985	-49	Jan 1962	22	-1.4	Jan 1979	10586	30	.0	.6	179.7	88.5	253.2	50.1

<sup>+</sup> Also occurred on an earlier date(s)

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

Issue Date: February 2004 092-A

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>(1)</sup> From the 1971-2000 Monthly Normals

<sup>(2)</sup> Derived from station's available digital record: 1948-2001

<sup>(3)</sup> Derived from 1971-2000 serially complete daily data

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Station: LAKEVIEW, MT

Climate Division: MT 2 NWS Call Sign: Elevation: 6,710 Feet Lat: 44°36N Lon: 111°49W

										Pı	ecipi	tation	(incl	nes)										
	Mea	ans/	P	recipi	itatio	on Total					ean N of D	ays (3	)	Proba	ability th		nonthly/	annual j indic	precipita ated an	nount	ies (1)		less tha	ın the
	Medi	ans(1)				Extremes	•			"	any Fie	приано	11		Th	ese value	s were det	ermined	from the	incomplet	e gamma	distributi	on	
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	.88	.78	1.70	1967	22	2.33	1990	.22	1994	9.0	3.0	.2	.0	.18	.26	.39	.51	.63	.75	.90	1.07	1.30	1.67	2.02
Feb	.96	.89	1.40	1949	11	3.52	1999	.05	1977	7.5	2.8	.3	@	.12	.20	.33	.46	.60	.76	.94	1.17	1.47	1.97	2.46
Mar	1.76	1.56	2.75	1971	12	6.30	1974	.18	1978	9.1	5.0	.7	.2	.27	.42	.67	.91	1.17	1.44	1.76	2.15	2.68	3.53	4.34
Apr	1.54	1.42	1.13	1988	20	3.56	1986	.29	1983	7.5	4.6	.6	.1	.33	.47	.70	.90	1.11	1.33	1.58	1.88	2.27	2.90	3.49
May	2.60	2.39	1.35	1958	12	6.06	1980	.64	1979	10.5	6.8	1.1	.2	.70	.94	1.32	1.65	1.97	2.31	2.69	3.13	3.71	4.62	5.47
Jun	2.70	2.53	2.18	1971	27	4.72	1995	.69	1974	9.9	6.4	1.7	.3	.78	1.04	1.42	1.76	2.09	2.43	2.80	3.25	3.83	4.73	5.57
Jul	1.87	1.71	1.61	1958	3	6.63	1987	.00	1999	8.4	4.6	.8	.2	.30	.56	.88	1.13	1.39	1.65	1.95	2.30	2.75	3.47	4.15
Aug	1.59	1.58	1.58	1997	5	3.45	1977	.20	1994	7.8	4.2	.7	.1	.30	.44	.67	.89	1.11	1.34	1.61	1.94	2.37	3.06	3.72
Sep	1.85	1.75	1.82	2000	6	5.04	1976	.00+	1987	6.6	3.7	1.0	.3	.00	.17	.49	.78	1.09	1.43	1.82	2.30	2.95	4.04	5.09
Oct	1.44	1.20	1.45	1961	21	3.44	2000	.03	1987	6.0	3.4	.7	.1	.16	.26	.46	.66	.88	1.12	1.40	1.75	2.23	3.03	3.80
Nov	1.22	.98	1.85	1973	12	4.53	1973	.09	1976	8.7	4.1	.3	@	.18	.29	.46	.63	.81	1.00	1.22	1.49	1.85	2.45	3.01
Dec	1.08	.89	1.75	1955	23	3.70	1971	.10	1986	8.5	3.1	.2	@	.18	.28	.44	.58	.74	.90	1.09	1.32	1.63	2.12	2.60
Ann	19.49	19.74	2.75	Mar 1971	12	6.63	Jul 1987	.00+	Jul 1999	99.5	51.7	8.3	1.5	13.33	14.50	16.02	17.18	18.21	19.21	20.25	21.40	22.80	24.84	26.61

<sup>+</sup> Also occurred on an earlier date(s)

Complete documentation available from:

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

<sup>#</sup> Denotes amounts of a trace

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>\*\*</sup> Statistics not computed because less than six years out of thirty had measurable precipitation

<sup>(1)</sup> From the 1971-2000 Monthly Normals

<sup>(2)</sup> Derived from station's available digital record: 1948-2001

<sup>(3)</sup> Derived from 1971-2000 serially complete daily data

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**COOP ID: 244820** 

**Station: LAKEVIEW, MT** 

Climate Division: MT 2 NWS Call Sign: Elevation: 6,710 Feet Lat: 44°36N Lon: 111°49W

										Snov	w (incl	hes)											
						Sno	ow To	tals									Mea	n Nu	mber	of Day	<b>ys</b> (1)		
	Mean	s/Medi	ians (1)	1					Extre	mes (2)							ow Fa					Depth esholo	
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	10.3	8.5	14	11	11.0	1982	21	24.0	1971	34	1993	11	27	1972	5.5	4.0	1.0	.4	.1	-9.9	-9.9	-9.9	-9.9
Feb	7.1	7.0	17	17	9.0	1999	10	18.6	1971	39	1983	28	31	1983	4.7	3.8	1.0	.3	.0	-9.9	-9.9	-9.9	-9.9
Mar	16.8	15.0	20	21	20.0	1971	12	42.0	1982	50	1982	31	38+	1983	5.8	4.9	1.3	.5	.2	-9.9	-9.9	-9.9	-9.9
Apr	8.4	8.0	11	7	9.0	1976	27	22.0	1986	54	1982	7	40	1975	3.2	2.8	1.2	.4	.0	-9.9	-9.9	-9.9	-9.9
May	3.1	2.0	1	#	8.0	1990	8	13.0	1981	33	1975	2	12	1975	1.4	1.2	.5	.3	.0	1.0	.7	.4	.1
Jun	.6	.0	#	0	6.0	1973	17	7.0	1973	6	1973	17	#+	1998	.2	.2	.1	@	.0	.1	@	@	.0
Jul	.0	.0	#	0	.0	0	0	.0	0	#	1994	6	#	1994	.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	1.1	.0	#	0	8.0	1978	18	8.0	1978	15	1982	14	2	1982	.3	.3	.2	.1	.0	.2	.2	.1	@
Oct	3.4	2.0	#	#	8.0	1991	23	16.7	1971	12	1991	31	3	1998	1.4	1.1	.4	.2	.0	1.7	.9	.5	.0
Nov	9.1	9.0	3	3	12.0	1995	28	21.6	1973	16	1988	28	10	1991	4.7	3.7	1.0	.3	@	12.7	8.3	3.9	.6
Dec	8.8	9.5	8	8	15.0	1971	23	15.0+	1971	32	1971	26	20	1982	4.9	3.9	1.1	.3	.1	-9.9	-9.9	-9.9	-9.9
Ann	68.7	61.0	N/A	N/A	20.0	Mar 1971	12	42.0	Mar 1982	54	Apr 1982	7	40	Apr 1975	32.1	25.9	7.8	2.8	.4	-9.9	-9.9	-9.9	-9.9

<sup>+</sup> Also occurred on an earlier date(s) #Denotes trace amounts

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>-9/-9.9</sup> represents missing values Annual statistics for Mean/Median snow depths are not appropriate

<sup>(1)</sup> Derived from Snow Climatology and 1971-2000 daily data

<sup>(2)</sup> Derived from 1971-2000 daily data

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**NWS Call Sign:** 

Elevation: 6,710 Feet Lat: 44°36N Lon: 111°49W

				Freez	e Data				
			Spri	ng Freeze D	ates (Month/	Day)			
Temp (F)		P	robability of	later date i	n spring (thr	u Jul 31) tha	n indicated(	*)	
remp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	8/01	7/28	7/26	7/24	7/22	7/20	7/17	7/15	7/11
32	7/23	7/17	7/13	7/10	7/07	7/03	6/30	6/26	6/20
28	7/06	6/29	6/24	6/20	6/16	6/12	6/08	6/03	5/27
24	6/21	6/14	6/09	6/04	5/31	5/27	5/23	5/18	5/11
20	6/07	5/30	5/24	5/19	5/14	5/10	5/05	4/29	4/21
16	5/09	5/05	5/02	4/29	4/27	4/24	4/22	4/19	4/15
			Fal	l Freeze Da	tes (Month/D	ay)			
Temp (F)		Pro	bability of ea	arlier date i	n fall (beginn	ing Aug 1) t	han indicate	d(*)	
remp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	7/31	8/03	8/07	8/09	8/12	8/14	8/17	8/20	8/24
32	8/06	8/11	8/15	8/19	8/22	8/25	8/29	9/02	9/07
28	8/14	8/20	8/24	8/28	8/31	9/03	9/07	9/11	9/17
24	9/03	9/07	9/10	9/12	9/15	9/17	9/20	9/23	9/27
20	9/11	9/15	9/18	9/21	9/23	9/26	9/28	10/02	10/06
16	9/16	9/22	9/26	9/30	10/04	10/07	10/11	10/16	10/22
				Freeze F	ree Period	•			
Temp (F)			<b>Probability</b>	of longer th	an indicated	freeze free p	eriod (Days)	j.	
remp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	38	32	28	24	20	17	13	8	2
32	70	62	56	51	46	41	36	29	21
28	103	93	87	81	75	70	64	58	48
24	130	122	116	110	106	101	96	90	81
20	157	148	142	136	131	126	121	114	105
16	182	174	169	164	159	155	150	144	136

<sup>\*</sup> 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.

Complete documentation available from:

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Climate Division: MT 2 NWS Call Sign: Elevation: 6,710 Feet Lat: 44°36N Lon: 111°49W

	Degree Days to Selected Base Temperatures (°F)														
Base						Heatin	g Degree	Days (1)							
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
65	1615	1338	1237	894	625	376	205	219	458	808	1232	1579	10586		
60	1460	1198	1082	744	470	238	100	105	316	653	1082	1424	8872		
57	1367	1114	989	654	380	166	55	57	237	560	992	1331	7902		
55	1305	1058	927	594	323	125	33	35	191	498	932	1269	7290		
50	1150	918	772	452	193	50	7	6	96	346	782	1114	5886		
32	599	422	257	84	5	0	0	0	0	24	295	566	2252		

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	7	8	43	180	403	616	835	814	533	239	53	10	3741
55	0	0	0	1	8	51	155	136	33	0	0	0	384
57	0	0	0	0	3	32	114	96	20	0	0	0	265
60	0	0	0	0	0	14	66	51	8	0	0	0	139
65	0	0	0	0	0	2	17	10	1	0	0	0	30
70	0	0	0	0	0	0	2	0	0	0	0	0	2

										Gro	wing	Degre	e Uni	ts (2)										
Base					Growin	g Degree	Units (M	(Ionthly)								Growi	ng Degre	ee Units (	Accumu	lated Mo	nthly)			
	Jan   Feb   Mar   Apr   May   Jun   Jul   Aug   Sep   Oct   Nov   Dec													Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
40	0	0	0	38	179	372	581	564	296	82	2	0	0	0	0	38	217	589	1170	1734	2030	2112	2114	2114
45	0 0 0 11 84 237 426 410 175 25 0												0	0	0	11	95	332	758	1168	1343	1368	1368	1368
50	0 0 0 26 119 274 260 77 4 0												0	0	0	0	26	145	419	679	756	760	760	760
55	0	0	0	0	0	40	134	126	27	0	0	0	0	0	0	0	0	40	174	300	327	327	327	327
60	0	0	0	0	0	6	41	35	4	0	0	0	0	0	0	0	0	6	47	82	86	86	86	86
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0/86 0 0 0 47 159 276 417 416 259 107 6												0	0	0	47	206	482	899	1315	1574	1681	1687	1687

(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

#### 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

- c. Snow Tables
  - 1. Snow Climatology
  - 2. Cooperative Summary of the Day
- d. Freeze Data Table

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

### 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