

LATITUDE 47° 04'
 LONGITUDE 109° 27'
 'LEV. (GROUND) 4130 ft.

CLIMATOGRAPHY OF THE U. S.
 STATION - LEWISTOWN, MONTANA
 STATION NO. 4983

CLIMATOLOGICAL SUMMARY

MEANS AND EXTREMES FOR PERIOD OF RECORD 1926-1955

Month	Temperature (°F)								** Mean degree days	Precipitation Totals (Inches)						Mean number of days					Month	
	Means				Extremes					Mean	Greatest daily	Year	(b) Snow, Sleet, Hail			Precip. .10 inch or more	Temperatures					
	Daily maximum	Daily minimum	Monthly	Record highest	Year	Record lowest	Year	Mean					Maximum monthly	Year	Greatest daily		Year	90° and above		32° and below		
																		0° and above	32° and below	0° and below		32° and below
(a)	28	28	28	30		30 ^x		30	30		26	30 [‡]	30 [‡]	30	30	29	28	28				
Jan.	31.8	8.2	20.0	66	1941	-46	1929	1400	.61	.80	1943	9.1	21.4	1929	5.0	1955 [†]	2	0	13	30	9	Jan.
Feb.	35.7	10.8	23.3	70	1932	-42	1936	1170	.64	.84	1937	9.7	25.6	1929	12.0	1937	2	0	9	27	7	Feb.
Mar.	41.4	17.4	29.4	75	1928	-28	1951 [†]	1100	.93	1.13	1938	11.4	26.0	1929	12.0	1938	3	0	7	29	3	Mar.
Apr.	54.9	27.5	41.2	89	1939	-17	1936	710	1.02	1.73	1927	4.6	20.9	1955	13.0	1927	3	0	2	21	*	Apr.
May	65.5	36.6	51.1	98	1931	11	1946 [†]	430	2.68	2.62	1953	.9	7.1	1951	5.1	1951	6	*	*	9	0	May
June	71.7	43.5	57.6	99	1936	27	1930 [†]	240	2.85	2.03	1948	.1	1.3	1950	1.3	1950	8	1	0	1	0	June
July	83.3	49.5	66.4	104	1931	33	1951 [†]	70	1.81	2.84	1926	T	T	1950 [†]	T	1950 [†]	4	5	0	0	0	July
Aug.	81.0	47.5	64.3	101	1949 [†]	31	1934	90	1.51	1.08	1951	T	T	1954 [†]	T	1954 [†]	4	7	0	*	0	Aug.
Sept.	69.8	39.0	54.4	96	1945 [†]	6	1926	320	1.52	1.58	1941	.8	8.5	1926	8.5	1926	4	1	*	5	0	Sept.
Oct.	59.8	31.5	45.7	90	1934	-10	1935	600	1.18	1.61	1938	4.3	18.5	1938	8.5	1938	4	*	1	16	*	Oct.
Nov.	44.8	20.3	32.6	77	1947	-23	1955	970	.78	.95	1941	8.3	31.2	1929	8.7	1941	3	0	5	26	2	Nov.
Dec.	36.5	12.8	24.7	74	1939	-40	1927	1250	.79	.96	1937	10.5	30.2	1929	10.0	1955	3	0	9	29	6	Dec.
Year	56.4	28.7	42.6	104	July 1931	-46	Jan. 1929	8350	17.32	2.84	July 1926	59.7	31.2	Nov. 1929	13.0	Apr. 1927	46	14	46	193	27	Year

- (a) Average length of record, years. ** Base 65° F. + Also on earlier dates, months or years.
- T Trace, an amount too small to measure. * Less than one half.
- x 5 months missing record 1942-1943. ‡ 5 months missing record.
- (b) Hail was included in the values from July 1948 through December 1955.

CLIMATE OF LEWISTOWN, MONTANA

Lewistown is situated among rolling foothill country in a mountainous area of Central Montana. The largest nearby mountain, Big Snowy, rises to an elevation of 8,800 feet about 15 miles due south of the city, while the Judith Mountains, with several peaks higher than 6,000 feet, start about 5 miles northeast. To the northwest about 7 miles are the South Moccasin Mountains, with highest elevations under 6,000 feet. As will be seen, this location in mountainous country has a rather marked effect on climate in the Lewistown area. Big Spring Creek flows generally northwestward around the eastern edge of the city, and joins the northward-flowing Judith River about 12 miles to the northwest. Small differences in day-to-day weather in Lewistown and around the airport are often observed, due largely to the hilly nature of the area. The airport elevation, 4132 ft., where observations have been recorded since late in 1939, is about 200 feet above most of the city.

While Lewistown is located about 150 miles east of the Continental Divide, it actually lies north and west of mountains large enough to influence local weather far more than the main chain of Northern Rockies. Prevailing winds are from the westerly quadrant, and much of the time the air borne on these winds has traveled over the Continental Divide from Pacific Ocean source regions. Instead of being downslope in the Lewistown area, however, these winds in Western Fergus County become upslope due to the mountains in the easterly quadrant. The climate of Lewistown can be described as modified continental in character, the mountains helping to separate the area from the more representative continental climate zones to the east. As a whole, Lewistown climate is representative only of the limited area at the base of the foothills of the two nearby groups of mountains.

Precipitation in the Lewistown section runs higher by several inches a year than most locations East of the Divide in Montana, and it is an unusual season when growing season rainfall is light enough to be insufficient for dryland crops such as grains. Of the 17.32-inch average for the 1926-1955 period, 8.34 inches--or nearly half--has fallen during the three main growing months May, June, and July. Winter precipitation generally is light, all months November-March averaging less than one inch of moisture, but nearly all winter moisture falls as snow, rain seldom being observed in December, January, or February. Heaviest snowfall months, on the average, are December and March. Temperature

differences in hilly country such as that around Lewistown can be as large as several degrees, particularly on clear, still winter mornings when valley bottoms can be 10° F. or more colder than surrounding hillsides. Summer weather is seldom hot, although maximum readings may reach 90° or more on 14 days in an average year. Usual summertime afternoon temperatures range in the low or mid-eighties, while morning lows, around sunrise, most of the time run between 45° and 50°. Oppressive heat is rare. Sunny weather is common during the warm season, but is subject to interruption at times from showers or thundershowers, mostly in the afternoon or early evening. In the surrounding farming sections hailstorms occur somewhere almost every year, but damage to crops therefrom is usually rather localized, and damage to property usually is light. Strong winds are observed occasionally at the airport about 2 miles west of the city center, but velocities are almost always lower in town.

Winters are generally rather cold, but here the modifying influence of the mountains makes itself felt in that midwinter cold is not generally as severe or persistent as in the true or unmodified continental climate. Winter cold spells do occur, but seldom last more than a few days without a break in the form of warmer winds from westerly directions. Minimums of zero or colder are observed on the average on 27 dates a year, but many winters are much warmer--during the 1930-31 winter only 3 days had readings as cold as zero. On the other hand, even in January, the coldest month, nearly half the days have high readings above freezing (32° F.). In midwinter, really heavy snowstorms are rare, but up to 12 or 13 inches in a day have fallen in February, March, and April. The seasonal transition from winter to spring and from fall to winter is usually fairly rapid. Snow can fall as early as September or as late as June, but summery weather also can occur as early as March or as late as November.

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 Helena, Montana

LEWISTOWN, MONTANA
Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1926	28.8	33.2	34.2	43.6	54.2	59.7	67.6	63.2	46.8	46.0	33.3	24.8	44.6
1927	21.0	23.4	33.3	38.8	44.4	57.6	64.6	61.1	54.3	48.1	26.5	11.0	40.2
1928	24.3	23.4	33.2	39.2	46.0	53.9	64.6	60.2	44.1	41.9	34.2	25.0	42.7
1929	5.6	12.5	30.6	37.9	45.8	57.0	65.8	67.2	48.6	42.5	27.6	20.8	38.9
1930	3.3	32.6	28.1	48.3	49.6	59.3	69.1	69.0	57.1	38.8	36.1	31.2	43.5
1931	31.6	33.4	33.4	44.1	53.1	63.0	67.4	66.0	49.1	40.1	30.0	28.4	46.5
1932	19.6	27.4	23.4	44.1	53.4	59.8	67.0	64.3	42.6	42.6	35.6	18.2	42.4
1933	24.5	17.7	35.6	39.5	50.0	64.6	68.7	67.2	46.5	38.0	38.0	25.8	44.0
1934	32.2	31.8	34.6	46.9	48.8	59.1	66.8	64.4	50.0	39.1	39.1	25.8	46.5
1935	21.6	33.2	27.2	35.5	47.7	57.2	67.2	63.2	44.4	44.4	30.8	32.2	43.0
1936	20.1	-0.2	30.3	41.0	58.7	63.5	72.6	66.3	45.9	35.2	35.2	24.2	42.8
1937	3.0	19.4	30.2	43.6	54.8	60.2	68.4	64.0	48.6	32.2	23.7	28.7	42.1
1938	27.8	22.0	34.1	43.2	49.7	60.5	65.8	63.6	47.1	30.0	28.3	28.3	44.5
1939	28.4	16.3	33.4	45.2	55.5	65.6	67.3	64.4	45.5	42.3	34.1	34.1	45.4
1940	13.2	21.6	33.5	38.2	52.9	60.5	68.4	66.6	48.8	23.4	30.0	30.0	43.1
1941	23.8	26.0	28.3	41.4	53.4	58.5	66.8	65.2	49.4	36.7	26.0	26.0	44.0
1942	27.8	18.8	32.4	44.8	48.2	54.8	65.8	63.6	46.6	46.6	--	--	--
1943	--	--	--	47.1	47.6	54.4	65.1	63.0	46.2	36.6	29.6	29.6	42.4
1944	29.4	21.7	23.0	42.1	52.6	54.2	62.6	61.2	47.2	32.2	23.2	23.2	42.4
1945	25.4	20.4	32.2	35.8	46.4	52.9	66.2	65.2	47.2	30.5	30.5	20.1	41.1
1946	24.6	26.6	37.7	46.2	46.7	56.7	66.2	62.6	37.4	27.2	25.6	25.6	42.5
1947	22.2	19.0	26.2	41.2	50.3	53.6	68.6	64.3	48.6	26.4	22.7	22.7	41.7
1948	23.8	16.3	24.5	41.5	50.4	57.0	62.2	64.4	46.8	46.8	30.8	18.0	40.9
1949	7.4	14.0	27.2	46.1	52.8	56.3	63.9	66.9	39.4	40.0	18.5	18.5	40.8
1950	-1.8	30.8	24.7	37.4	46.3	54.6	62.0	60.9	46.7	28.1	28.1	28.7	39.2
1951	14.7	22.3	17.6	36.9	50.6	51.0	66.3	61.4	39.6	29.6	28.8	12.8	42.7
1952	16.4	23.2	24.1	45.9	51.1	58.5	63.6	61.4	49.5	28.9	28.5	28.5	42.6
1953	32.3	27.3	33.8	35.5	45.2	58.5	65.8	66.1	37.3	40.7	40.7	28.9	45.0
1954	12.3	36.1	21.6	36.3	49.3	53.9	67.4	63.1	42.6	41.4	31.7	31.7	42.6
1955	20.7	17.6	20.6	38.5	47.8	56.2	65.2	68.0	48.3	19.3	20.5	20.5	39.7

STATION HISTORY

The earliest Lewistown weather records were made starting January 1, 1896, and, with only a few brief interruptions, the record is complete to date. However, the earlier period of record (prior to 1924) had many changes of both observer and location, some of the moves involving 1/2 mile or a little more. Not much is known about the character of earlier exposures, but actual locations (so far as they are known), observers, and periods covered are listed in the following table:

Location	Name	Period of Record
1. Uncertain	Rudolph van Tobel	1/1/96-1/25/1899
2. 5th Avenue & Watson	Halsey R. Watson	2/1/00-8/31/1907
3. 701 Spring Street	W. W. Watson	9/1/07-2/15/17
4. At City Hall	Carl O. Hissler	2/1/18-5/31/18
5. Observer's Residence	R. P. Longshore	7/1/18-5/31/19
6. 1023 Water Street	O. W. Freeman	6/1/19-8/31/21
7. 215 North High Street	Prof. J. W. Gray	9/1/21-5/31/23
8. Near High School	F. A. Ashbury	6/1/23-3/31/24
9. 801 W. Spring Street	W. W. Watson	6/1/24-9/30/31
10. 416 8th Avenue South	B. Bidmead	10/1/31-8/16/32
11. 1211 5th Avenue South	B. Bidmead	8/16/32-12/15/39
12. North side of Airport	CAA	12/16/39-7/13/43
13. South side of Airport	U. S. Air Force	7/14/43-12/18/44
14. Same site as #13	CAA	12/18/44-present

Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1926	.80	1.16	.60	.98	3.52	2.97	3.00	2.34	3.21	.46	1.94	.39	21.07
1927	.44	.39	.60	2.47	7.98	2.68	1.10	2.07	.73	1.93	1.59	.89	23.07
1928	.97	.96	.42	.95	.31	5.00	5.97	1.28	.43	1.28	.03	.66	18.26
1929	1.14	1.22	1.76	.61	3.28	3.92	1.00	.54	1.91	1.73	1.42	2.22	20.75
1930	.78	1.17	.81	.40	.79	.88	2.87	1.33	1.85	2.22	.53	.71	13.58
1931	.24	.15	.58	1.04	1.99	2.04	1.00	1.94	2.14	.10	.70	.45	12.37
1932	.80	.44	2.82	1.57	3.62	5.64	1.36	1.90	1.23	2.24	.86	1.08	22.76
1933	.62	.82	.28	2.34	2.53	1.59	.21	3.17	.70	.73	.70	1.20	15.99
1934	.60	.60	1.42	.40	1.54	3.42	2.20	1.66	1.66	.31	.13	1.38	14.09
1935	.38	.02	1.83	1.09	2.69	1.90	1.58	.23	.33	1.38	.97	.29	12.69
1936	.69	1.44	.98	1.54	2.28	1.10	.98	1.55	.52	.62	.62	.72	13.04
1937	.81	1.16	.53	.56	.43	3.48	1.77	.53	1.88	1.05	.67	1.71	14.58
1938	.83	1.10	1.87	.56	2.60	5.67	2.88	.89	.20	2.71	.73	.71	19.75
1939	.92	.78	.68	.79	1.35	4.53	1.46	1.30	1.11	1.27	.27	.59	15.05
1940	.47	.78	.65	2.44	.92	3.38	1.07	.31	.90	3.09	1.57	.16	15.74
1941	.12	.41	.37	1.06	1.32	5.78	.27	3.81	4.92	.75	1.77	.65	21.23
1942	.38	.91	1.05	1.16	5.71	5.30	1.77	.65	1.66	1.33	.58	.31	19.81
1943	1.17	.41	1.78	1.78	1.22	5.20	1.40	1.48	1.10	2.20	.23	.21	15.75
1944	.01	1.34	.34	.21	3.57	10.96	1.21	2.53	.66	1.27	.33	.57	22.42
1945	.51	.52	.58	.60	2.00	4.52	.63	.59	2.45	1.38	.87	.95	15.60
1946	.49	.18	.54	.35	2.81	2.65	4.49	.89	4.31	2.07	.62	.57	19.97
1947	.22	.57	1.35	1.35	.90	4.18	.79	1.78	2.42	.23	.88	.62	15.29
1948	1.03	.87	.99	.99	3.67	5.97	3.34	1.21	.58	.01	1.02	.68	19.70
1949	1.25	1.16	.92	.09	2.81	4.28	1.86	1.47	1.84	1.82	.16	1.78	19.46
1950	.74	.09	1.37	.58	1.08	2.86	3.47	1.62	1.38	.74	.83	1.12	15.88
1951	.12	.20	.60	.83	1.92	1.76	.84	3.30	1.44	1.68	.67	1.50	14.86
1952	.39	.86	.52	.37	3.87	1.41	1.24	2.71	.79	.37	.37	.08	13.26
1953	.45	.79	.32	1.33	7.45	5.22	1.12	1.12	.30	.33	.58	.20	20.05
1954	.61	.42	1.02	.88	1.86	4.93	1.46	2.13	.65	.65	.10	.03	16.44
1955	.31	.67	.72	2.77	4.15	2.26	1.84	.41	.65	.82	1.57	.89	17.06

STATION HISTORY - Cont'd

Because of the number of moves of the station over the years, the continuity and homogeneity of the weather record have suffered to some extent. But subsequent to 1932 moves have been less frequent and smaller in extent, and the more complete and representative portions of the record are included in this summary. No attempt has been made to summarize other than the last 30 years. The older records, of course, are on hand in the Weather Bureau if they are needed. As indicated in the above tabulation, the station has been in essentially the same location as at present since December 16, 1939.