



NOAA TECHNICAL MEMORANDUM NWS WR-262

CLIMATE OF MILES CITY, MONTANA

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**U.S. DEPARTMENT
OF COMMERCE**

National Oceanic and
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National Weather
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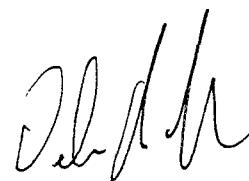
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CLIMATE OF MILES CITY, MONTANA

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I. INTRODUCTION

Miles City is located on the western edge of the northern Great Plains in a shallow part of the Yellowstone River Valley. The Tongue River runs south of the city. To the north, the river bluffs are from 200 to 300 feet above the valley floor. There are no nearby mountain ranges to influence climatic conditions. Temperatures range from very cold in the winter to hot in the summer, which is characteristic of continental climates. The climate of Miles City is classified as semi-arid with less than 10 inches of liquid precipitation about one year in seven.

Cold waves accompanied by temperatures of zero or lower, occur frequently during the winter, are usually accompanied by northerly winds and snow, and last from two to four days. Periods of several days with minimums of zero degrees or lower can be expected during the winter months. Spring and fall are cool with maximum temperatures of 90°F or above rarely occurring as early as April or as late as October. Maximum temperatures of 90°F or more occur frequently in July and August, but as to be expected in a semi-arid region, humidity is low and the heat is not as oppressive as would be expected from such hot temperatures.

About 70% of the precipitation falls during the growing season, April through September, with greatest monthly amounts usually falling during May and June. Precipitation during the spring and summer often falls during periods of shower or thunderstorm activity; however, general rains also are frequent in late spring and early summer. Measurable snowfall can be expected as late as May and as early as September.

Killing freezes generally do not occur after the last week in April or earlier than the first week of October. The growing season averages about 158 days. Sunny growing seasons, with May and June rainfall being the heaviest of the year, encourage rapid crop development. Crops grown in this area seldom have difficulty in reaching maturity, although hail sometimes causes local damage during summer.

II. STATION HISTORY

Weather records actually began being taken three miles southwest of Miles City at Fort Keogh on October 1, 1877. Records at Fort Keogh continued until December 31, 1899. The observations were actually taken at five different locations on Fort Keogh during that period. Weather records were taken at five different locations inside the city

between October 1, 1891 and January 15, 1943. Observations at Wiley Field began on January 1, 1933, first at the terminal, then at the Radio Range Station beginning March 1, 1936. Observations have been taken at the present location, The Radio Watch House on the southeast corner of the airport, since November 7, 1936 when full airway observations began. Most of the records mentioned in this publication only include observations taken from November 7, 1936 through December 31, 1999.

Monthly Normals

Miles City, Montana

Period of Record: 1961-1990

Month	MAX	MIN	AVG	HDD	CDD	PCPN	SNOW
Jan.	25.7	6.3	16.0	1519	0	0.55	6.0
Feb.	33.4	13.0	23.3	1168	0	0.45	4.7
Mar.	44.3	22.2	33.3	983	0	0.62	4.9
Apr.	58.1	33.8	46.0	570	0	1.36	3.9
May	69.1	44.6	56.9	266	15	2.27	0.8
Jun.	79.9	54.1	67.0	84	144	2.77	0.0
Jul.	88.8	60.7	74.7	55	306	1.55	0.0
Aug.	86.5	58.5	72.5	39	271	1.15	0.0
Sep.	73.0	46.5	59.8	228	72	1.27	0.4
Oct.	60.4	35.5	48.0	527	0	0.90	0.7
Nov.	42.4	21.7	32.1	987	0	0.54	4.0
Dec.	29.0	9.4	19.2	1420	0	0.64	6.2
Annual	57.6	33.9	45.7	7796	808	14.07	31.6

All Temperatures are in Degrees Fahrenheit
Heating and Cooling Degree Days are Based on a 65 Degree Standard
Precipitation and Snowfall are in Inches

Monthly Extremes

Miles City, Montana

Period of Record: 1936-1999

Month	High Max	Last Occ'd	Low Max	Last Occ'd	Low Min	Last Occ'd	High Min	Last Occ'd
Jan.	72	1992	-18	1954	-37	1996	39	1974
Feb.	73	1992	-22	1989	-37	1939	40	1991
Mar.	83	1943	-6	1951	-28	1996	46	1961
Apr.	92	1980	20	1954	5	1986	60	1952
May	100	1988	28	1953	15	1954	70	1980
Jun.	106	1988	40	1951	32	1951	78	1988
Jul.	109	1980	57	1972	41	1971	77	1988
Aug.	110	1995	52	1992	35	1966	77	1983
Sep.	106	1983	34	1984	19	1995	74	1960
Oct.	94	1997	15	1991	-8	1991	57	1957
Nov.	80	1999	-7	1985	-25	1985	45	1990
Dec.	69	1939	-25	1983	-40	1989	41	1980

Monthly Extremes

Miles City, Montana

All Time

Month	High Max	Last Occ'd	Low Min	Last Occ'd
Jan.	72	1992	-65	1888
Feb.	73	1992	-49	1887
Mar.	88	1910	-45	1891
Apr.	94	1908	-7	1899
May	101	1934	6	1908
Jun.	108	1910	32	1951
Jul.	112	1886	40	1915
Aug.	112	1886	34	1910
Sep.	106	1983	17	1926
Oct.	94	1997	-8	1991
Nov.	80	1999	-31	1880
Dec.	69	1939	-52	1880

January

MLS Daily Normals/Temperature Extremes/Degree Days - 1937 to 1999

Date	Normal Hi/Lo (Deg. F)	High/Year (deg. F)	Low Max./Year (deg. F)	Low/Year (deg. F)	High Min./Year (deg. F)	Heating Deg. Day	Cooling Deg. Day	Date
1	25/06	57/1964	-5/1942	-29/1942	32/1998	49	0	1
2	25/06	50/1962	-8/1968	-23/1991	37/1939	49	0	2
3	25/06	55/1962	-10/1950	-23/1977	39/1962	49	0	3
4	25/06	49/1954	-8/1979	-27/1979	29/1984	49	0	4
5	25/06	50/1958	-6/1982	-27/1988	33/1954	49	0	5
6	25/05	53/1954	-6/1991	-24/1996	32/1963	50	0	6
7	25/05	55/1963	-9/1976	-23/1970	34/1948	50	0	7
8	25/05	54/1958	-11/1970	-26/1977	35/1990	50	0	8
9	25/05	60/1953	-5/1965	-21/1973	31/1990	50	0	9
10	25/05	54/1995	-15/1982	-29/1982	30/1995	50	0	10
11	25/05	55/1987	-12/1997	-27/1974	31/1987	50	0	11
12	25/05	62/1953	-8/1997	-35/1998	36/1983	50	0	12
13	25/06	56/1944	-10/1950	-25/1972	31/1991	49	0	13
14	25/06	55/1944	-12/1950	-28/1979	33/1973	49	0	14
15	25/06	50/1974	-7/1950	-29/1950	38/1974	49	0	15
16	25/06	56/1961	-9/1954	-27/1937	39/1974	49	0	16
17	25/06	56/1946	-14/1943	-28/1943	31/1986	49	0	17
18	25/06	51/1981	-8/1963	-32/1943	35/1944	49	0	18
19	25/06	60/1944	-10/1943	-30/1954	37/1986	49	0	19
20	26/06	56/1992	-18/1954	-36/1954	30/1967	49	0	20
21	26/06	53/1981	-10/1949	-30/1949	32/1968	49	0	21
22	26/07	59/1981	-9/1982	-30/1982	34/1990	48	0	22
23	26/07	58/1981	-10/1949	-32/1982	35/1947	48	0	23
24	26/07	56/1981	-17/1969	-32/1969	35/1968	48	0	24
25	27/07	52/1992	-14/1972	-37/1969	34/1984	48	0	25
26	27/07	51/1992	-17/1972	-33/1957	29/1984	48	0	26
27	27/08	55/1992	-15/1972	-27/1972	32/1984	47	0	27
28	27/08	57/1992	-12/1969	-25/1969	34/1984	47	0	28
29	28/08	58/1992	-13/1996	-27/1996	35/1992	47	0	29
30	28/08	57/1992	-11/1996	-37/1996	36/1989	47	0	30
31	28/09	72/1992	-1/1985	-26/1956	38/1995	46	0	31

Numbers in bold indicate monthly extremes

February

MLS Daily Normals/Temperature Extremes/Degree Days - 1937 to 1999								
Date	Normal Hi/Lo (Deg. F)	High/Year (deg. F)	Low Max./Year (deg. F)	Low/Year (deg. F)	High Min./Year (deg. F)	Heating Deg. Day	Cooling Deg. Day	Date
1	29/09	61/1995	-12/1989	-30/1996	34/1995	46	0	1
2	29/09	61/1962	-22/1989	-35/1996	36/1962	46	0	2
3	29/10	65/1962	-18/1989	-36/1982	39/1962	45	0	3
4	30/10	57/1992	-12/1989	-31/1989	35/1963	45	0	4
5	30/10	56/1963	-3/1982	-24/1982	35/1965	45	0	5
6	30/11	61/1987	3/1971	-26/1971	32/1963	44	0	6
7	31/11	59/1954	-6/1994	-31/1971	34/1963	44	0	7
8	31/11	65/1954	-18/1939	-33/1939	37/1945	44	0	8
9	32/11	53/1984	-17/1939	-30/1937	33/1976	43	0	9
10	32/12	66/1961	-7/1939	-37/1939	34/1961	43	0	10
11	32/12	59/1987	6/1944	-24/1944	36/1990	43	0	11
12	33/12	57/1991	-7/1949	-18/1958	33/1991	42	0	12
13	33/13	57/1999	0/1949	-25/1949	34/1971	42	0	13
14	33/13	57/1981	-2/1938	-17/1938	32/1996	42	0	14
15	34/13	55/1992	-8/1979	-25/1958	36/1981	41	0	15
16	34/13	60/1981	-2/1993	-25/1956	35/1991	41	0	16
17	34/14	62/1995	0/1942	-28/1938	37/1977	41	0	17
18	35/14	63/1948	0/1966	-19/1959	37/1983	40	0	18
19	35/14	69/1995	-3/1959	-26/1959	36/1996	40	0	19
20	35/15	66/1995	6/1957	-29/1959	40/1991	40	0	20
21	36/15	70/1995	-1/1957	-17/1949	37/1995	39	0	21
22	36/15	62/1992	0/1957	-18/1993	32/1998	39	0	22
23	36/16	64/1954	-1/1955	-18/1993	35/1976	39	0	23
24	37/16	72/1995	3/1993	-23/1993	33/1986	38	0	24
25	37/16	67/1995	7/1962	-16/1993	39/1986	38	0	25
26	37/16	62/1988	2/1962	-20/1962	35/1999	38	0	26
27	38/17	73/1992	2/1962	-24/1960	35/1992	37	0	27
28	38/17	69/1992	-2/1962	-27/1962	42/1999	37	0	28
29	38/17	72/1992	11/1972	-13/1960	29/1992	37	0	29

Numbers in bold indicate monthly extremes

March

MLS Daily Normals/Temperature Extremes/Degree Days - 1937 to 1999								
Date	Normal Hi/Lo (Deg. F)	High/Year (deg. F)	Low Max/Year (deg. F)	Low/Year (deg. F)	High Min/Year (deg. F)	Heating Deg. Day	Cooling Deg. Day	Date
1	38/17	70/1992	2/1989	-19/1960	34/1994	37	0	1
2	39/18	66/1946	2/1962	-17/1960	36/1994	36	0	2
3	39/18	68/1992	2/1978	-25/1960	35/1994	36	0	3
4	39/18	68/1987	1/1989	-24/1989	38/1991	36	0	4
5	40/18	73/1987	0/1995	-24/1947	40/1992	36	0	5
6	40/19	70/1987	-2/1951	-27/1947	37/1992	35	0	6
7	40/19	65/1977	-6/1951	-22/1951	36/1992	35	0	7
8	41/19	64/1941	-2/1951	-28/1996	37/1986	35	0	8
9	41/20	65/1954	6/1948	-9/1949	34/1986	34	0	9
10	42/20	69/1954	7/1998	-15/1949	37/1995	34	0	10
11	42/20	72/1990	9/1950	-22/1951	35/1995	34	0	11
12	42/21	66/1945	12/1950	-17/1951	38/1983	33	0	12
13	43/21	70/1994	10/1944	-7/1962	40/1972	33	0	13
14	43/21	72/1999	8/1949	-18/1947	36/1972	33	0	14
15	44/22	72/1992	4/1943	-13/1947	38/1999	32	0	15
16	44/22	78/1994	7/1943	-5/1943	41/1992	32	0	16
17	44/22	70/1974	4/1965	-7/1965	41/1972	32	0	17
18	45/23	70/1972	13/1965	-12/1965	37/1972	31	0	18
19	45/23	76/1997	8/1965	-8/1965	39/1975	31	0	19
20	46/23	77/1997	11/1965	-11/1965	39/1997	30	0	20
21	46/24	72/1939	23/1952	-5/1965	41/1973	30	0	21
22	47/24	75/1963	14/1965	-2/1952	39/1986	29	0	22
23	47/25	78/1993	7/1965	-7/1965	43/1945	29	0	23
24	48/25	78/1993	9/1955	-13/1964	46/1961	28	0	24
25	48/25	76/1999	13/1955	-10/1937	43/1993	28	0	25
26	49/26	80/1999	21/1975	-6/1937	45/1997	27	0	26
27	49/26	82/1946	14/1975	-3/1937	43/1960	27	0	27
28	50/27	80/1986	14/1954	0/1954	44/1946	26	0	28
29	50/27	83/1943	25/1996	-5/1954	42/1986	26	0	29
30	51/27	79/1986	20/1938	2/1989	42/1986	26	0	30
31	51/28	75/1964	26/1975	6/1954	40/1946	25	0	31

Numbers in bold indicate monthly extremes

April

MLS Daily Normals/Temperature Extremes/Degree Days - 1937 to 1999								
Date	Normal Hi/Lo (Deg. F)	High/Year (deg. F)	Low Max./Year (deg. F)	Low/Year (deg. F)	High Min./Year (deg. F)	Heating Deg. Day	Cooling Deg. Day	Date
1	52/28	76/1991	23/1975	10/1967	40/1959	25	0	1
2	52/29	80/1943	20/1954	7/1954	40/1985	24	0	2
3	53/29	81/1992	21/1982	9/1982	45/1991	24	0	3
4	53/29	78/1991	24/1982	10/1982	47/1992	24	0	4
5	54/30	84/1991	25/1979	6/1982	51/1991	23	0	5
6	54/30	84/1969	25/1997	14/1997	46/1972	23	0	6
7	55/31	77/1977	27/1997	9/1997	47/1988	22	0	7
8	55/31	80/1977	28/1997	6/1997	50/1943	22	0	8
9	55/31	84/1996	27/1997	16/1973	48/1943	22	0	9
10	56/32	78/1985	27/1997	12/1997	47/1970	21	0	10
11	56/32	84/1949	26/1940	8/1940	42/1968	21	0	11
12	57/33	79/1976	31/1979	13/1957	46/1976	20	0	12
13	57/33	78/1969	30/1986	15/1986	53/1976	20	0	13
14	58/33	84/1942	24/1986	10/1986	50/1942	19	0	14
15	58/34	81/1981	37/1970	5/1986	49/1963	19	0	15
16	59/34	82/1994	35/1970	14/1951	46/1946	18	0	16
17	59/34	88/1994	36/1989	19/1953	53/1979	18	0	17
18	59/35	83/1980	28/1941	15/1953	50/1994	18	0	18
19	60/35	86/1962	26/1951	12/1951	51/1990	17	0	19
20	60/36	90/1980	32/1951	19/1966	54/1946	17	0	20
21	60/36	92/1980	27/1967	15/1967	55/1989	17	0	21
22	61/36	87/1994	34/1967	8/1967	54/1994	16	0	22
23	61/37	86/1943	40/1958	19/1967	53/1990	16	0	23
24	62/37	89/1962	38/1960	24/1958	51/1969	15	0	24
25	62/37	89/1974	36/1988	25/1959	52/1962	15	0	25
26	62/38	88/1952	32/1994	20/1995	52/1946	15	0	26
27	63/38	85/1992	32/1956	20/1956	53/1978	14	0	27
28	63/38	91/1952	32/1950	21/1984	60/1952	14	0	28
29	63/39	88/1939	34/1970	19/1966	59/1980	14	0	29
30	64/39	88/1968	32/1967	20/1966	57/1980	13	0	30

Numbers in bold indicate monthly extremes

May

MLS Daily Normals/Temperature Extremes/Degree Days - 1937 to 1999								
Date	Normal Hi/Lo (Deg. F)	High/Year (deg. F)	Low Max/Year (deg. F)	Low/Year (deg. F)	High Min./Year (deg. F)	Heating Deg. Day	Cooling Deg. Day	Date
1	64/39	89/1981	39/1954	24/1954	58/1987	13	0	1
2	64/40	90/1985	35/1967	18/1954	53/1981	13	0	2
3	65/40	89/1986	37/1950	15/1954	60/1985	12	0	3
4	65/41	88/1966	39/1950	24/1967	56/1939	12	0	4
5	65/41	89/1966	51/1950	27/1967	52/1993	12	0	5
6	66/41	90/1992	46/1965	28/1946	56/1970	11	0	6
7	66/42	90/1992	40/1950	25/1984	53/1992	11	0	7
8	66/42	90/1987	38/1950	18/1945	56/1977	11	0	8
9	67/42	89/1987	33/1996	27/1996	57/1977	10	0	9
10	67/43	89/1961	40/1996	23/1979	59/1977	10	0	10
11	67/43	92/1958	28/1953	23/1953	60/1958	10	0	11
12	68/43	96/1960	33/1983	24/1953	59/1977	9	0	12
13	68/44	90/1977	44/1995	28/1967	62/1977	9	0	13
14	68/44	88/1987	37/1945	30/1945	60/1969	9	0	14
15	69/44	94/1984	48/1942	32/1945	64/1984	8	0	15
16	69/45	89/1979	44/1942	31/1986	57/1949	8	0	16
17	69/45	92/1972	46/1974	32/1943	60/1972	8	0	17
18	70/45	98/1948	46/1977	34/1971	62/1948	7	0	18
19	70/46	94/1992	48/1959	28/1968	65/1948	7	0	19
20	70/46	99/1964	47/1969	31/1968	63/1964	7	0	20
21	71/46	96/1980	47/1974	29/1963	63/1980	6	0	21
22	71/47	99/1980	51/1971	36/1969	68/1980	6	0	22
23	72/47	96/1980	50/1949	30/1947	70/1980	5	0	23
24	72/47	95/1985	48/1996	33/1947	64/1977	5	0	24
25	72/48	90/1969	52/1989	33/1995	59/1952	5	0	25
26	73/48	98/1969	48/1965	34/1965	59/1942	4	0	26
27	73/48	96/1969	48/1959	30/1965	60/1979	4	0	27
28	73/49	95/1937	50/1947	24/1947	62/1949	4	0	28
29	74/49	100/1988	50/1982	31/1947	68/1988	3	0	29
30	74/49	98/1984	50/1978	36/1982	64/1988	3	0	30
31	74/49	92/1986	42/1951	32/1982	62/1944	3	0	31

Numbers in bold indicate monthly extremes

June

MLS Daily Normals/Temperature Extremes/Degree Days - 1937 to 1999								
Date	Normal Hi/Lo (Deg. F)	High/Year (deg. F)	Low Max./Year (deg. F)	Low/Year (deg. F)	High Min./Year (deg. F)	Heating Deg. Day	Cooling Deg. Day	Date
1	75/50	96/1948	40/1951	32/1951	61/1997	2	0	1
2	75/50	96/1986	49/1951	32/1951	62/1991	2	0	2
3	75/50	95/1988	46/1943	32/1943	64/1991	2	0	3
4	76/51	101/1988	44/1944	38/1944	68/1988	1	0	4
5	76/51	105/1988	47/1945	38/1944	75/1988	1	0	5
6	76/51	102/1988	53/1945	37/1944	68/1988	1	0	6
7	77/52	104/1988	51/1950	39/1982	64/1988	0	0	7
8	77/52	99/1988	42/1950	32/1950	66/1997	0	0	8
9	78/52	100/1956	49/1995	35/1950	65/1977	0	0	9
10	78/53	104/1988	59/1947	39/1969	75/1988	0	1	10
11	78/53	99/1992	62/1967	36/1969	70/1956	0	1	11
12	79/53	97/1992	48/1969	35/1969	67/1953	0	1	12
13	79/53	103/1979	61/1967	34/1969	66/1979	0	1	13
14	79/54	99/1959	57/1990	39/1945	66/1995	0	2	14
15	80/54	97/1987	61/1968	38/1945	66/1987	0	2	15
16	80/54	94/1995	59/1998	41/1945	63/1996	0	2	16
17	80/55	102/1988	55/1949	43/1954	65/1996	0	3	17
18	81/55	98/1986	53/1973	38/1973	69/1996	0	3	18
19	81/55	101/1974	62/1972	43/1946	65/1988	0	3	19
20	82/55	105/1988	62/1948	43/1978	78/1988	0	4	20
21	82/56	101/1988	55/1947	40/1942	75/1988	0	4	21
22	82/56	103/1954	59/1944	42/1942	67/1938	0	4	22
23	83/56	104/1988	57/1967	43/1942	68/1988	0	5	23
24	83/56	102/1986	64/1989	46/1953	72/1983	0	5	24
25	83/57	100/1974	59/1969	37/1958	69/1990	0	5	25
26	84/57	106/1988	55/1969	40/1950	76/1988	0	6	26
27	84/57	102/1970	56/1999	42/1985	72/1988	0	6	27
28	84/58	102/1966	55/1945	43/1951	70/1988	0	6	28
29	85/58	104/1961	59/1968	43/1959	71/1961	0	7	29
30	85/58	101/1990	59/1968	41/1995	74/1937	0	7	30

Numbers in bold indicate monthly extremes

July

MLS Daily Normals/Temperature Extremes/Degree Days - 1937 to 1999								
Date	Normal Hi/Lo (Deg. F)	High/Year (deg. F)	Low Max./Year (deg. F)	Low/Year (deg. F)	High Min./Year (deg. F)	Heating Deg. Day	Cooling Deg. Day	Date
1	86/58	102/1990	61/1992	41/1945	73/1981	0	7	1
2	86/59	104/1990	62/1951	46/1973	70/1990	0	8	2
3	86/59	102/1961	65/1972	44/1972	72/1949	0	8	3
4	87/59	104/1937	63/1993	44/1972	72/1996	0	8	4
5	87/59	109/1937	70/1993	48/1960	73/1937	0	8	5
6	87/60	106/1937	68/1958	44/1958	77/1981	0	9	6
7	87/60	102/1983	66/1944	42/1952	70/1989	0	9	7
8	88/60	107/1983	70/1944	46/1996	76/1983	0	9	8
9	88/60	104/1970	62/1951	49/1959	74/1963	0	9	9
10	88/60	105/1939	61/1951	45/1951	77/1974	0	9	10
11	88/60	103/1939	59/1987	42/1951	73/1973	0	9	11
12	89/61	104/1954	63/1993	44/1987	72/1954	0	10	12
13	89/61	102/1940	67/1993	46/1943	73/1957	0	10	13
14	89/61	108/1983	63/1962	48/1977	70/1982	0	10	14
15	89/61	102/1947	63/1983	49/1976	72/1960	0	10	15
16	89/61	108/1966	65/1993	44/1999	74/1960	0	10	16
17	90/61	104/1977	72/1987	48/1993	72/1977	0	11	17
18	90/61	105/1955	64/1987	48/1968	72/1955	0	11	18
19	90/61	108/1960	61/1972	44/1948	73/1960	0	11	19
20	90/61	109/1960	57/1972	47/1972	77/1960	0	11	20
21	90/61	105/1964	65/1992	50/1950	75/1960	0	11	21
22	90/61	105/1985	74/1992	52/1978	76/1982	0	11	22
23	90/62	109/1980	72/1946	49/1950	74/1960	0	11	23
24	90/62	108/1976	73/1993	52/1996	74/1966	0	11	24
25	90/62	102/1983	69/1982	51/1985	74/1959	0	11	25
26	90/62	104/1959	64/1993	41/1971	71/1988	0	11	26
27	90/62	104/1998	70/1993	51/1969	77/1988	0	11	27
28	90/62	108/1999	72/1971	52/1971	75/1951	0	11	28
29	90/62	106/1995	70/1985	48/1971	73/1984	0	11	29
30	90/62	104/1988	59/1985	50/1992	76/1946	0	11	30
31	90/62	104/1989	67/1950	47/1995	75/1994	0	11	31

Numbers in bold indicate monthly extremes

August

MLS Daily Normals/Temperature Extremes/Degree Days - 1937 to 1999								
Date	Normal Hi/Lo (Deg. F)	High/Year (deg. F)	Low Max./Year (deg. F)	Low/Year (deg. F)	High Min./Year (deg. F)	Heating Deg. Day	Cooling Deg. Day	Date
1	90/62	101/1994	73/1974	47/1950	76/1989	0	11	1
2	90/61	103/1947	65/1978	49/1937	71/1959	0	11	2
3	90/61	106/1947	66/1972	44/1978	74/1958	0	11	3
4	90/61	105/1964	73/1977	47/1952	77/1966	0	11	4
5	90/61	104/1971	72/1976	47/1977	74/1983	0	11	5
6	89/61	107/1949	70/1996	48/1959	75/1988	0	10	6
7	89/61	110/1995	70/1966	47/1939	77/1983	0	10	7
8	89/61	105/1958	67/1939	42/1939	74/1971	0	10	8
9	89/61	104/1940	60/1939	46/1985	70/1941	0	10	9
10	89/60	104/1969	67/1952	46/1939	73/1940	0	10	10
11	89/60	104/1984	70/1985	42/1952	73/1983	0	10	11
12	88/60	103/1965	68/1985	47/1964	73/1940	0	9	12
13	88/60	107/1937	60/1977	47/1992	74/1970	0	9	13
14	88/59	104/1971	61/1944	45/1985	71/1984	0	9	14
15	87/59	102/1994	67/1968	45/1974	71/1971	0	8	15
16	87/59	101/1973	63/1997	48/1968	73/1961	0	8	16
17	87/59	104/1958	70/1985	45/1985	73/1958	0	8	17
18	86/59	103/1964	62/1956	48/1987	69/1958	0	8	18
19	86/58	100/1992	67/1956	40/1950	69/1984	0	7	19
20	86/58	100/1969	60/1966	37/1950	71/1973	0	7	20
21	85/58	102/1995	56/1966	41/1966	70/1957	0	7	21
22	85/57	103/1971	65/1966	35/1966	73/1995	0	6	22
23	84/57	100/1969	52/1992	40/1966	71/1995	0	6	23
24	84/56	103/1953	58/1992	43/1992	70/1991	0	5	24
25	84/56	103/1952	61/1987	36/1992	75/1969	0	5	25
26	83/56	102/1939	61/1987	43/1967	74/1955	0	5	26
27	83/55	103/1996	64/1977	44/1988	70/1939	0	4	27
28	82/55	100/1971	66/1974	43/1960	72/1971	0	4	28
29	82/54	101/1995	59/1964	41/1965	69/1939	0	3	29
30	81/54	105/1948	58/1956	40/1992	71/1961	0	3	30
31	81/53	101/1983	64/1974	42/1994	75/1991	0	2	31

Numbers in bold indicate monthly extremes

September

MLS Daily Normals/Temperature Extremes/Degree Days - 1937 to 1999

Date	Normal Hi/Lo (Deg. F)	High/Year (deg. F)	Low Max./Year (deg. F)	Low/Year (deg. F)	High Min./Year (deg. F)	Heating Deg. Day	Cooling Deg. Day	Date
1	80/53	106/1983	59/1986	38/1974	72/1991	0	2	1
2	79/52	100/1940	53/1973	32/1974	67/1991	0	1	2
3	79/52	101/1978	53/1999	37/1962	72/1940	0	1	3
4	78/51	105/1950	53/1965	30/1962	74/1960	0	0	4
5	78/51	100/1978	55/1986	37/1965	68/1978	0	0	5
6	77/50	97/1980	57/1965	35/1943	63/1998	1	0	6
7	77/50	101/1947	53/1946	37/1986	70/1991	1	0	7
8	76/49	99/1958	39/1962	31/1962	67/1983	2	0	8
9	76/49	100/1998	57/1962	36/1962	64/1998	2	0	9
10	75/49	94/1958	51/1989	34/1955	65/1998	3	0	10
11	75/48	98/1971	49/1974	28/1989	68/1966	3	0	11
12	74/48	95/1990	44/1970	29/1970	68/1958	4	0	12
13	74/47	97/1959	38/1970	28/1989	62/1940	4	0	13
14	73/47	99/1948	45/1982	30/1993	61/1996	5	0	14
15	73/46	101/1948	48/1973	32/1970	64/1946	5	0	15
16	72/46	96/1998	42/1965	28/1965	62/1998	6	0	16
17	72/46	94/1998	45/1965	25/1965	65/1976	6	0	17
18	72/45	95/1984	48/1957	28/1991	61/1998	6	0	18
19	71/45	99/1937	35/1983	29/1965	58/1969	7	0	19
20	71/45	95/1937	49/1995	28/1983	57/1966	7	0	20
21	70/44	94/1938	46/1995	19/1995	61/1937	8	0	21
22	70/44	97/1938	44/1946	27/1995	55/1967	8	0	22
23	70/43	98/1992	39/1984	26/1965	56/1990	8	0	23
24	69/43	94/1938	34/1984	27/1984	61/1938	9	0	24
25	69/43	91/1990	37/1972	24/1942	55/1967	9	0	25
26	69/42	93/1956	44/1946	20/1942	56/1990	9	0	26
27	68/42	91/1963	35/1941	22/1951	56/1979	10	0	27
28	68/42	90/1980	35/1985	26/1984	60/1962	10	0	28
29	68/42	94/1989	40/1985	26/1939	52/1991	10	0	29
30	67/41	93/1989	38/1950	21/1985	56/1967	11	0	30

Numbers in bold indicate monthly extremes

October

MLS Daily Normals/Temperature Extremes/Degree Days - 1937 to 1999								
Date	Normal Hi/Lo (Deg. F)	High/Year (deg. F)	Low Max./Year (deg. F)	Low/Year (deg. F)	High Min./Year (deg. F)	Heating Deg. Day	Cooling Deg. Day	Date
1	67/41	93/1953	36/1950	27/1950	55/1963	11	0	1
2	67/41	94/1997	39/1950	29/1999	57/1957	11	0	2
3	66/40	90/1992	44/1994	24/1999	56/1992	12	0	3
4	66/40	93/1963	43/1991	27/1954	54/1948	12	0	4
5	66/40	87/1993	35/1941	15/1952	53/1962	12	0	5
6	65/39	88/1960	40/1946	14/1952	51/1980	13	0	6
7	65/39	88/1980	31/1946	23/1946	52/1963	13	0	7
8	64/39	86/1980	30/1985	19/1985	52/1980	13	0	8
9	64/38	90/1955	37/1987	20/1985	49/1942	14	0	9
10	64/38	90/1942	32/1959	19/1959	52/1963	14	0	10
11	63/38	89/1995	33/1969	18/1959	53/1942	14	0	11
12	63/37	84/1958	33/1969	22/1986	53/1963	15	0	12
13	62/37	84/1964	35/1969	24/1969	53/1950	15	0	13
14	62/36	84/1958	40/1975	22/1969	51/1973	16	0	14
15	61/36	83/1958	34/1992	20/1976	54/1953	16	0	15
16	61/36	90/1991	36/1951	19/1976	49/1991	16	0	16
17	60/35	81/1997	39/1976	18/1969	46/1941	17	0	17
18	60/35	82/1955	33/1969	21/1976	44/1994	17	0	18
19	59/35	86/1947	29/1949	15/1976	48/1958	18	0	19
20	59/34	80/1947	29/1949	13/1987	49/1974	18	0	20
21	58/34	80/1992	37/1951	19/1949	45/1962	19	0	21
22	58/33	78/1954	38/1975	18/1981	47/1989	19	0	22
23	57/33	77/1973	31/1991	17/1981	45/1989	20	0	23
24	57/32	81/1948	29/1957	10/1942	44/1973	20	0	24
25	56/32	78/1955	33/1969	9/1942	49/1979	21	0	25
26	55/31	82/1960	29/1969	19/1970	45/1940	22	0	26
27	55/31	79/1983	33/1975	16/1991	44/1994	22	0	27
28	54/31	82/1937	16/1991	10/1991	47/1998	22	0	28
29	53/30	76/1968	15/1991	-2/1991	46/1938	23	0	29
30	53/30	78/1950	18/1991	-8/1991	43/1974	23	0	30
31	52/29	82/1999	25/1951	0/1984	48/1987	24	0	31

Numbers in bold indicate monthly extremes

November

MLS Daily Normals/Temperature Extremes/Degree Days - 1937 to 1999								
Date	Normal Hi/Lo (Deg. F)	High/Year (deg. F)	Low Max/Year (deg. F)	Low/Year (deg. F)	High Min./Year (deg. F)	Heating Deg. Day	Cooling Deg. Day	Date
1	51/29	75/1965	14/1991	-2/1984	43/1987	25	0	1
2	51/28	71/1959	13/1991	-4/1995	45/1988	25	0	2
3	50/28	70/1981	22/1991	-7/1991	44/1989	26	0	3
4	49/27	75/1945	20/1951	-8/1961	45/1983	27	0	4
5	49/27	72/1969	20/1959	5/1959	42/1954	27	0	5
6	48/26	73/1999	17/1991	5/1959	43/1980	28	0	6
7	47/26	75/1999	16/1973	2/1966	41/1980	28	0	7
8	47/25	78/1999	16/1966	-3/1966	42/1980	29	0	8
9	46/25	65/1953	6/1986	-8/1986	42/1937	29	0	9
10	45/24	71/1989	5/1940	-13/1986	45/1990	30	0	10
11	45/24	65/1987	3/1940	-10/1966	42/1967	30	0	11
12	44/23	80/1999	8/1986	-16/1955	40/1999	31	0	12
13	44/23	66/1942	1/1959	-23/1955	40/1991	31	0	13
14	43/22	70/1999	5/1955	-11/1959	40/1987	32	0	14
15	42/22	72/1953	1/1955	-17/1959	40/1963	33	0	15
16	42/21	66/1999	2/1959	-18/1959	39/1954	33	0	16
17	41/21	65/1976	10/1955	-20/1955	37/1981	34	0	17
18	41/20	67/1995	16/1937	-5/1955	35/1992	34	0	18
19	40/20	70/1989	1/1978	-9/1985	44/1989	35	0	19
20	40/20	63/1968	-1/1985	-18/1985	33/1999	35	0	20
21	39/19	58/1974	-2/1978	-19/1978	37/1974	36	0	21
22	38/19	68/1954	0/1985	-12/1985	38/1968	36	0	22
23	38/18	62/1957	1/1985	-19/1985	34/1988	37	0	23
24	37/18	63/1986	0/1993	-18/1993	39/1986	37	0	24
25	37/17	70/1960	5/1985	-18/1977	39/1960	38	0	25
26	36/17	67/1963	-6/1985	-16/1985	38/1963	38	0	26
27	36/16	72/1949	-7/1985	-16/1955	36/1963	39	0	27
28	36/16	57/1997	-3/1985	-25/1985	35/1949	39	0	28
29	35/15	60/1951	-2/1985	-21/1985	35/1956	40	0	29
30	35/15	61/1995	-3/1985	-12/1985	32/1999	40	0	30

Numbers in bold indicate monthly extremes

December

MLS Daily Normals/Temperature Extremes/Degree Days - 1936 to 1999								
Date	Normal Hi/Lo (Deg. F)	High/Year (deg. F)	Low Max/Year (deg. F)	Low/Year (deg. F)	High Min./Year (deg. F)	Heating Deg. Day	Cooling Deg. Day	Date
1	34/14	64/1998	-6/1985	-22/1985	35/1994	41	0	1
2	34/14	63/1949	-1/1978	-33/1985	38/1956	41	0	2
3	33/14	60/1943	0/1972	-12/1972	33/1998	41	0	3
4	33/13	67/1979	-5/1972	-21/1972	34/1975	42	0	4
5	32/13	69/1939	-4/1972	-25/1972	32/1939	42	0	5
6	32/12	68/1939	-8/1972	-27/1972	34/1991	43	0	6
7	31/12	56/1939	-9/1972	-23/1972	34/1987	43	0	7
8	31/12	59/1957	-11/1972	-28/1977	31/1938	43	0	8
9	31/11	66/1957	-5/1977	-35/1977	37/1939	44	0	9
10	30/11	61/1956	1/1961	-15/1966	37/1987	44	0	10
11	30/11	58/1980	3/1949	-15/1961	34/1939	44	0	11
12	30/10	55/1953	1/1961	-22/1985	32/1988	45	0	12
13	29/10	54/1997	-2/1963	-25/1985	31/1988	45	0	13
14	29/10	56/1979	-3/1963	-24/1963	33/1977	45	0	14
15	29/09	66/1980	-2/1951	-26/1945	41/1980	46	0	15
16	29/09	61/1980	-20/1964	-27/1964	40/1939	46	0	16
17	28/09	64/1998	-9/1983	-29/1964	36/1982	47	0	17
18	28/08	62/1979	-11/1983	-25/1983	34/1966	47	0	18
19	28/08	54/1954	-11/1990	-19/1990	33/1966	47	0	19
20	27/08	57/1954	-16/1990	-31/1951	34/1965	47	0	20
21	27/08	55/1954	-15/1990	-30/1990	32/1950	47	0	21
22	27/07	60/1954	-13/1990	-40/1989	32/1985	48	0	22
23	27/07	51/1963	-19/1983	-33/1983	33/1950	48	0	23
24	27/07	54/1963	-25/1983	-38/1983	35/1993	48	0	24
25	26/07	53/1963	-14/1983	-32/1983	30/1943	48	0	25
26	26/07	54/1976	-2/1965	-26/1996	31/1976	48	0	26
27	26/06	55/1956	3/1965	-17/1965	41/1980	49	0	27
28	26/06	58/1999	-4/1988	-20/1990	35/1956	49	0	28
29	26/06	60/1956	-18/1968	-28/1990	36/1945	49	0	29
30	25/06	53/1980	-15/1978	-28/1968	35/1956	49	0	30
31	25/06	57/1963	-6/1951	-30/1978	32/1963	49	0	31

Numbers in bold indicate monthly extremes

January

MLS Daily Normals/Temperature Extremes/Degree Days - All Time						
Date	Normal Hi/Lo (Deg. F)	High/Year (deg. F)	Low/Year (deg. F)	Heating Deg. Day	Cooling Deg. Day	Date
1	25/06	57/1964	-33/1928	49	0	1
2	25/06	50/1962	-28/1879	49	0	2
3	25/06	55/1962	-33/1879	49	0	3
4	25/06	50/1906	-27/1979	49	0	4
5	25/06	52/1921	-36/1887	49	0	5
6	25/05	53/1954	-42/1888	50	0	6
7	25/05	55/1963	-50/1888	50	0	7
8	25/05	54/1958	-46/1887	50	0	8
9	25/05	60/1953	-32/1881	50	0	9
10	25/05	54/1995	-29/1982	50	0	10
11	25/05	55/1987	-30/1909	50	0	11
12	25/05	62/1953	-35/1998	50	0	12
13	25/06	56/1944	-65/1888	49	0	13
14	25/06	55/1944	-41/1988	49	0	14
15	25/06	50/1974	-50/1885	49	0	15
16	25/06	56/1961	-31/1930	49	0	16
17	25/06	58/1919	-42/1886	49	0	17
18	25/06	60/1919	-45/1892	49	0	18
19	25/06	60/1944	-41/1892	49	0	19
20	26/06	56/1992	-42/1888	49	0	20
21	26/06	56/1900	-45/1886	49	0	21
22	26/07	59/1981	-44/1886	48	0	22
23	26/07	64/1919	-32/1982	48	0	23
24	26/07	56/1981	-32/1969	48	0	24
25	27/07	52/1992	-37/1969	48	0	25
26	27/07	52/1934	-33/1957	48	0	26
27	27/08	55/1992	-30/1915	47	0	27
28	27/08	60/1931	-30/1929	47	0	28
29	28/08	66/1931	-32/1929	47	0	29
30	28/08	58/1931	-37/1996	47	0	30
31	28/09	72/1992	-36/1887	46	0	31

February

MLS Daily Normals/Temperature Extremes/Degree Days - All Time						
Date	Normal Hi/Lo (Deg. F)	High/Year (deg. F)	Low/Year (deg. F)	Heating Deg. Day	Cooling Deg. Day	Date
1	29/09	64/1934	-45/1893	46	0	1
2	29/09	61/1962	-42/1893	46	0	2
3	29/10	65/1962	-38/1883	45	0	3
4	30/10	57/1992	-38/1899	45	0	4
5	30/10	56/1963	-30/1914	45	0	5
6	30/11	61/1987	-30/1884	44	0	6
7	31/11	59/1954	-38/1884	44	0	7
8	31/11	65/2000	-37/1939	44	0	8
9	32/11	59/2000	-30/1937	43	0	9
10	32/12	66/1961	-49/1887	43	0	10
11	32/12	59/1987	-45/1887	43	0	11
12	33/12	65/1921	-40/1899	42	0	12
13	33/13	62/1934	-32/1936	42	0	13
14	33/13	66/1921	-37/1936	42	0	14
15	34/13	62/1921	-45/1936	41	0	15
16	34/13	60/1981	-42/1936	41	0	16
17	34/14	62/1995	-32/1936	41	0	17
18	35/14	65/1930	-31/1936	40	0	18
19	35/14	69/1995	-30/1890	40	0	19
20	35/15	66/1995	-36/1918	40	0	20
21	36/15	70/1995	-26/1918	39	0	21
22	36/15	62/1992	-29/1910	39	0	22
23	36/16	64/1954	-25/1917	39	0	23
24	37/16	72/1995	-30/1922	38	0	24
25	37/16	68/1896	-47/1890	38	0	25
26	37/16	68/1932	-47/1890	38	0	26
27	38/17	73/1992	-32/1922	37	0	27
28	38/17	69/1992	-34/1922	37	0	28
29	38/17	72/1992	-13/1960	37	0	29

March

MLS Daily Normals/Temperature Extremes/Degree Days - All Time						
Date	Normal Hi/Lo (Deg. F)	High/Year (deg. F)	Low/Year (deg. F)	Heating Deg. Day	Cooling Deg. Day	Date
1	38/17	70/1992	-38/1888	37	0	1
2	39/18	74/1905	-17/1960	36	0	2
3	39/18	72/1905	-45/1891	36	0	3
4	39/18	68/1987	-25/1891	36	0	4
5	40/18	73/1987	-35/1895	36	0	5
6	40/19	70/1987	-37/1891	35	0	6
7	40/19	66/1890	-29/1891	35	0	7
8	41/19	64/1941	-27/1891	35	0	8
9	41/20	65/1954	-25/1888	34	0	9
10	42/20	69/1954	-15/1949	34	0	10
11	42/20	74/1900	-22/1951	34	0	11
12	42/21	70/1916	-17/1951	33	0	12
13	43/21	70/1994	-35/1890	33	0	13
14	43/21	75/1935	-25/1880	33	0	14
15	44/22	72/1992	-19/1897	32	0	15
16	44/22	78/1994	-12/1906	32	0	16
17	44/22	74/1910	-12/1892	32	0	17
18	45/23	70/1972	-14/1893	31	0	18
19	45/23	76/1997	-8/1965	31	0	19
20	46/23	82/1910	-11/1965	30	0	20
21	46/24	78/1910	-21/1913	30	0	21
22	47/24	88/1910	-13/1898	29	0	22
23	47/25	78/1993	-7/1965	29	0	23
24	48/25	78/1993	-13/1964	28	0	24
25	48/25	76/1999	-10/1937	28	0	25
26	49/26	80/1999	-8/1904	27	0	26
27	49/26	82/1946	-3/1937	27	0	27
28	50/27	80/1986	-2/1894	26	0	28
29	50/27	83/1943	-5/1954	26	0	29
30	51/27	79/1986	2/1989	26	0	30
31	51/28	76/1882	-5/1899	25	0	31

April

MLS Daily Normals/Temperature Extremes/Degree Days - All Time						
Date	Normal Hi/Lo (Deg. F)	High/Year (deg. F)	Low/Year (deg. F)	Heating Deg. Day	Cooling Deg. Day	Date
1	52/28	76/1991	-7/1899	25	0	1
2	52/29	84/1882	2/1936	24	0	2
3	53/29	82/1921	2/1899	24	0	3
4	53/29	79/1927	5/1936	24	0	4
5	54/30	84/1991	0/1936	23	0	5
6	54/30	84/1969	14/1997	23	0	6
7	55/31	85/1877	9/1997	22	0	7
8	55/31	81/1930	6/1997	22	0	8
9	55/31	85/1910	11/1893	22	0	9
10	56/32	82/1912	12/1997	21	0	10
11	56/32	84/1949	8/1940	21	0	11
12	57/33	82/1886	13/1957	20	0	12
13	57/33	89/1915	15/1986	20	0	13
14	58/33	85/1913	10/1986	19	0	14
15	58/34	85/1915	5/1986	19	0	15
16	59/34	84/1926	14/1951	18	0	16
17	59/34	88/1994	19/1953	18	0	17
18	59/35	83/1980	12/1884	18	0	18
19	60/35	86/1962	12/1951	17	0	19
20	60/36	91/1908	15/1880	17	0	20
21	60/36	92/1980	15/1967	17	0	21
22	61/36	94/1908	8/1967	16	0	22
23	61/37	90/1906	16/1931	16	0	23
24	62/37	89/1962	21/1890	15	0	24
25	62/37	89/1974	25/1959	15	0	25
26	62/38	88/1952	20/1995	15	0	26
27	63/38	85/1992	20/1956	14	0	27
28	63/38	91/1952	21/1984	14	0	28
29	63/39	88/1939	18/1907	14	0	29
30	64/39	88/1968	20/1966	13	0	30

May

MLS Daily Normals/Temperature Extremes/Degree Days - All Time						
Date	Normal Hi/Lo (Deg. F)	High/Year (deg. F)	Low/Year (deg. F)	Heating Deg. Day	Cooling Deg. Day	Date
1	64/39	89/1981	20/1909	13	0	1
2	64/40	90/1985	18/1954	13	0	2
3	65/40	89/1986	15/1954	12	0	3
4	65/41	88/1966	24/1967	12	0	4
5	65/41	93/1934	23/1905	12	0	5
6	66/41	90/1992	21/1885	11	0	6
7	66/42	97/1891	17/1885	11	0	7
8	66/42	97/1891	18/1945	11	0	8
9	67/42	91/1887	27/1996	10	0	9
10	67/43	89/1961	23/1979	10	0	10
11	67/43	92/1958	23/1953	10	0	11
12	68/43	96/1960	24/1953	9	0	12
13	68/44	90/1977	28/1967	9	0	13
14	68/44	96/1903	19/1890	9	0	14
15	69/44	94/1984	32/1945	8	0	15
16	69/45	98/1907	30/1925	8	0	16
17	69/45	100/1901	32/1943	8	0	17
18	70/45	98/1948	27/1890	7	0	18
19	70/46	94/1992	28/1968	7	0	19
20	70/46	99/1964	29/1908	7	0	20
21	71/46	96/1980	29/1963	6	0	21
22	71/47	99/1980	6/1908	6	0	22
23	72/47	96/1980	30/1947	5	0	23
24	72/47	101/1886	33/1947	5	0	24
25	72/48	95/1931	33/1995	5	0	25
26	73/48	100/1934	34/1965	4	0	26
27	73/48	98/1934	30/1965	4	0	27
28	73/49	95/1937	24/1947	4	0	28
29	74/49	101/1934	31/1947	3	0	29
30	74/49	98/1984	32/1917	3	0	30
31	74/49	92/1986	32/1982	3	0	31

June

MLS Daily Normals/Temperature Extremes/Degree Days - All Time						
Date	Normal Hi/Lo (Deg. F)	High/Year (deg. F)	Low/Year (deg. F)	Heating Deg. Day	Cooling Deg. Day	Date
1	75/50	96/1948	32/1951	2	0	1
2	75/50	96/1986	32/1951	2	0	2
3	75/50	95/1988	32/1943	2	0	3
4	76/51	101/1988	37/1910	1	0	4
5	76/51	105/1988	33/1888	1	0	5
6	76/51	102/1988	36/1888	1	0	6
7	77/52	104/1988	35/1885	0	0	7
8	77/52	99/1988	32/1950	0	0	8
9	78/52	100/1956	35/1950	0	0	9
10	78/53	104/1988	39/1969	0	1	10
11	78/53	99/1992	36/1969	0	1	11
12	79/53	98/1918	35/1969	0	1	12
13	79/53	103/1979	34/1969	0	1	13
14	79/54	99/1959	39/1945	0	2	14
15	80/54	100/1919	36/1885	0	2	15
16	80/54	107/1931	40/1880	0	2	16
17	80/55	104/1933	33/1912	0	3	17
18	81/55	98/1986	38/1973	0	3	18
19	81/55	102/1898	43/1946	0	3	19
20	82/55	108/1910	36/1902	0	4	20
21	82/56	106/1900	36/1902	0	4	21
22	82/56	104/1910	42/1942	0	4	22
23	83/56	106/1900	40/1893	0	5	23
24	83/56	104/1936	42/1906	0	5	24
25	83/57	107/1887	37/1958	0	5	25
26	84/57	106/1988	40/1950	0	6	26
27	84/57	106/1936	42/1985	0	6	27
28	84/58	107/1919	43/1951	0	6	28
29	85/58	104/1961	43/1959	0	7	29
30	85/58	104/1881	39/1878	0	7	30

July

MLS Daily Normals/Temperature Extremes/Degree Days - All Time

Date	Normal Hi/Lo (Deg. F)	High/Year (deg. F)	Low/Year (deg. F)	Heating Deg. Day	Cooling Deg. Day	Date
1	86/58	105/1907	41/1945	0	7	1
2	86/59	104/1990	42/1915	0	8	2
3	86/59	105/1936	40/1915	0	8	3
4	87/59	104/1937	45/1890	0	8	4
5	87/59	109/1937	48/1960	0	8	5
6	87/60	107/1936	42/1934	0	9	6
7	87/60	106/1886	42/1952	0	9	7
8	88/60	107/1983	42/1895	0	9	8
9	88/60	108/1886	40/1893	0	9	9
10	88/60	110/1886	41/1890	0	9	10
11	88/60	107/1886	42/1951	0	9	11
12	89/61	112/1886	44/1987	0	10	12
13	89/61	110/1886	41/1883	0	10	13
14	89/61	108/1983	46/1893	0	10	14
15	89/61	103/1930	44/1912	0	10	15
16	89/61	108/1966	41/1883	0	10	16
17	90/61	104/1977	48/1993	0	11	17
18	90/61	106/1936	45/1912	0	11	18
19	90/61	108/1960	44/1948	0	11	19
20	90/61	110/1892	43/1898	0	11	20
21	90/61	109/1893	50/1950	0	11	21
22	90/61	110/1893	50/1891	0	11	22
23	90/62	109/1980	45/1896	0	11	23
24	90/62	108/1976	44/1911	0	11	24
25	90/62	102/1983	46/1918	0	11	25
26	90/62	106/1933	40/1887	0	11	26
27	90/62	106/1917	48/1883	0	11	27
28	90/62	108/1999	41/1890	0	11	28
29	90/62	106/1995	43/1880	0	11	29
30	90/62	104/1988	41/1890	0	11	30
31	90/62	111/1901	44/1890	0	11	31

August

MLS Daily Normals/Temperature Extremes/Degree Days - All Time						
Date	Normal Hi/Lo (Deg. F)	High/Year (deg. F)	Low/Year (deg. F)	Heating Deg. Day	Cooling Deg. Day	Date
1	90/62	108/1905	45/1890	0	11	1
2	90/61	104/1900	39/1884	0	11	2
3	90/61	106/1947	44/1978	0	11	3
4	90/61	105/1964	47/1952	0	11	4
5	90/61	104/1971	45/1917	0	11	5
6	89/61	108/1882	48/1959	0	10	6
7	89/61	110/1995	46/1921	0	10	7
8	89/61	105/1958	42/1939	0	10	8
9	89/61	104/1940	43/1893	0	10	9
10	89/60	107/1935	42/1895	0	10	10
11	89/60	104/1984	42/1952	0	10	11
12	88/60	103/1965	42/1893	0	9	12
13	88/60	107/1937	44/1908	0	9	13
14	88/59	107/1892	43/1893	0	9	14
15	87/59	103/1909	41/1890	0	8	15
16	87/59	103/1883	45/1893	0	8	16
17	87/59	104/1958	45/1985	0	8	17
18	86/59	103/1964	34/1890	0	8	18
19	86/58	103/1891	40/1950	0	7	19
20	86/58	106/1916	37/1950	0	7	20
21	85/58	102/1995	36/1883	0	7	21
22	85/57	107/1886	35/1966	0	6	22
23	84/57	112/1886	40/1966	0	6	23
24	84/56	103/1953	40/1879	0	5	24
25	84/56	103/1952	34/1910	0	5	25
26	83/56	109/1882	38/1910	0	5	26
27	83/55	103/1996	40/1893	0	4	27
28	82/55	103/1924	37/1893	0	4	28
29	82/54	101/1995	36/1886	0	3	29
30	81/54	105/1948	37/1886	0	3	30
31	81/53	101/1983	42/1994	0	2	31

September

MLS Daily Normals/Temperature Extremes/Degree Days - All Time						
Date	Normal Hi/Lo (Deg. F)	High/Year (deg. F)	Low/Year (deg. F)	Heating Deg. Day	Cooling Deg. Day	Date
1	80/53	106/1983	30/1936	0	2	1
2	79/52	102/1916	32/1974	0	1	2
3	79/52	101/1978	28/1879	0	1	3
4	78/51	105/1950	30/1962	0	0	4
5	78/51	100/1978	25/1879	0	0	5
6	77/50	99/1927	35/1943	1	0	6
7	77/50	106/1908	33/1929	1	0	7
8	76/49	102/1893	31/1962	2	0	8
9	76/49	100/1998	36/1962	2	0	9
10	75/49	94/1958	34/1955	3	0	10
11	75/48	98/1971	28/1989	3	0	11
12	74/48	95/1990	25/1890	4	0	12
13	74/47	97/1959	25/1879	4	0	13
14	73/47	99/1948	30/1993	5	0	14
15	73/46	101/1948	30/1879	5	0	15
16	72/46	96/1998	28/1965	6	0	16
17	72/46	96/1926	25/1965	6	0	17
18	72/45	95/1984	22/1879	6	0	18
19	71/45	99/1937	26/1879	7	0	19
20	71/45	95/1937	24/1927	7	0	20
21	70/44	96/1922	19/1995	8	0	21
22	70/44	97/1938	24/1895	8	0	22
23	70/43	98/1992	18/1879	8	0	23
24	69/43	99/1885	19/1926	9	0	24
25	69/43	91/1990	17/1926	9	0	25
26	69/42	93/1956	20/1942	9	0	26
27	68/42	91/1963	20/1893	10	0	27
28	68/42	98/1890	26/1984	10	0	28
29	68/42	96/1892	22/1895	10	0	29
30	67/41	94/1890	18/1879	11	0	30

October

MLS Daily Normals/Temperature Extremes/Degree Days - All Time						
Date	Normal Hi/Lo (Deg. F)	High/Year (deg. F)	Low/Year (deg. F)	Heating Deg. Day	Cooling Deg. Day	Date
1	67/41	93/1953	22/1892	11	0	1
2	67/41	94/1997	18/1883	11	0	2
3	66/40	91/1902	24/1999	12	0	3
4	66/40	93/1963	21/1878	12	0	4
5	66/40	91/1920	15/1952	12	0	5
6	65/39	90/1892	14/1952	13	0	6
7	65/39	90/1890	23/1946	13	0	7
8	64/39	87/1889	19/1985	13	0	8
9	64/38	90/1955	20/1985	14	0	9
10	64/38	90/1942	10/1910	14	0	10
11	63/38	89/1995	18/1959	14	0	11
12	63/37	84/1958	13/1881	15	0	12
13	62/37	84/1964	15/1883	15	0	13
14	62/36	84/1958	19/1890	16	0	14
15	61/36	83/1958	19/1890	16	0	15
16	61/36	90/1991	19/1976	16	0	16
17	60/35	86/1927	16/1930	17	0	17
18	60/35	87/1884	17/1885	17	0	18
19	59/35	86/1947	7/1905	18	0	19
20	59/34	83/1921	9/1905	18	0	20
21	58/34	85/1927	15/1885	19	0	21
22	58/33	78/1954	11/1887	19	0	22
23	57/33	77/1973	-5/1887	20	0	23
24	57/32	81/1948	0/1887	20	0	24
25	56/32	78/1955	-1/1919	21	0	25
26	55/31	82/1960	-4/1919	22	0	26
27	55/31	80/1891	-2/1925	22	0	27
28	54/31	87/1891	-8/1925	22	0	28
29	53/30	87/1891	-4/1925	23	0	29
30	53/30	78/1950	-8/1991	23	0	30
31	52/29	82/1999	0/1984	24	0	31

November

MLS Daily Normals/Temperature Extremes/Degree Days - All Time						
Date	Normal Hi/Lo (Deg. F)	High/Year (deg. F)	Low/Year (deg. F)	Heating Deg. Day	Cooling Deg. Day	Date
1	51/29	75/1965	-2/1984	25	0	1
2	51/28	76/1931	-10/1893	25	0	2
3	50/28	76/1909	-7/1991	26	0	3
4	49/27	75/1945	1/1935	27	0	4
5	49/27	73/1891	-1/1933	27	0	5
6	48/26	73/1999	4/1936	28	0	6
7	47/26	75/1999	-7/1895	28	0	7
8	47/25	78/1999	-3/1966	29	0	8
9	46/25	67/1885	-8/1986	29	0	9
10	45/24	71/1989	-13/1986	30	0	10
11	45/24	72/1894	-14/1911	30	0	11
12	44/23	80/1999	-20/1911	31	0	12
13	44/23	70/1931	-23/1955	31	0	13
14	43/22	71/1894	-11/1959	32	0	14
15	42/22	72/1953	-17/1959	33	0	15
16	42/21	67/1905	-18/1959	33	0	16
17	41/21	68/1908	-20/1955	34	0	17
18	41/20	70/1908	-12/1888	34	0	18
19	40/20	76/1897	-15/1921	35	0	19
20	40/20	66/1917	-23/1880	35	0	20
21	39/19	68/1878	-20/1896	36	0	21
22	38/19	68/1954	-24/1884	36	0	22
23	38/18	62/1957	-31/1880	37	0	23
24	37/18	63/1986	-23/1880	37	0	24
25	37/17	70/1960	-21/1883	38	0	25
26	36/17	67/1963	-24/1887	38	0	26
27	36/16	72/1949	-22/1882	39	0	27
28	36/16	65/1914	-26/1897	39	0	28
29	35/15	60/1951	-21/1985	40	0	29
30	35/15	61/1995	-25/1896	40	0	30

December

MLS Daily Normals/Temperature Extremes/Degree Days - All Time						
Date	Normal Hi/Lo (Deg. F)	High/Year (deg. F)	Low/Year (deg. F)	Heating Deg. Day	Cooling Deg. Day	Date
1	34/14	64/1998	-22/1985	41	0	1
2	34/14	69/1885	-33/1985	41	0	2
3	33/14	60/1943	-31/1897	41	0	3
4	33/13	67/1979	-33/1880	42	0	4
5	32/13	69/1939	-37/1880	42	0	5
6	32/12	68/1939	-27/1972	43	0	6
7	31/12	58/1900	-23/1972	43	0	7
8	31/12	59/1957	-28/1977	43	0	8
9	31/11	66/1957	-35/1977	44	0	9
10	30/11	61/1956	-15/1966	44	0	10
11	30/11	58/1980	-30/1879	44	0	11
12	30/10	64/1924	-26/1922	45	0	12
13	29/10	60/1877	-25/1985	45	0	13
14	29/10	56/1979	-24/1963	45	0	14
15	29/09	66/1980	-26/1945	46	0	15
16	29/09	61/1980	-27/1964	46	0	16
17	28/09	64/1998	-33/1879	47	0	17
18	28/08	62/1979	-40/1924	47	0	18
19	28/08	54/1954	-43/1924	47	0	19
20	27/08	57/1954	-31/1951	47	0	20
21	27/08	55/1954	-42/1884	47	0	21
22	27/07	60/1954	-40/1989	48	0	22
23	27/07	53/1885	-48/1884	48	0	23
24	27/07	54/1963	-52/1879	48	0	24
25	26/07	53/1963	-43/1879	48	0	25
26	26/07	54/1976	-26/1996	48	0	26
27	26/06	55/1956	-38/1880	49	0	27
28	26/06	58/1999	-48/1880	49	0	28
29	26/06	60/1956	-52/1880	49	0	29
30	25/06	53/1980	-43/1880	49	0	30
31	25/06	57/1963	-42/1884	49	0	31

The 20 Highest Daily Maximum Temperatures in Miles City, MT (1936-1999)

1. 110°F Aug. 7, 1995
2. 110°F Aug. 7, 1949
3. 109°F Jul. 23, 1980
4. 109°F Jul. 20, 1960
5. 109°F Jul. 5, 1937
6. 108°F Jul. 28, 1999
7. 108°F Jul. 14, 1983
8. 108°F Jul. 24, 1976
9. 108°F Jul. 16, 1966
10. 108°F Jul. 19, 1960
11. 108°F Jul. 28, 1947
12. 108°F Jul. 28, 1947
13. 107°F Jul. 8, 1983
14. 107°F Aug. 6, 1949
15. 107°F Aug. 13, 1937
16. 106°F Jul. 24, 1999
17. 106°F Jul. 29, 1995
18. 106°F Jun. 26, 1988
19. 106°F Sep 1, 1983
20. 106°F Jul. 28, 1975

The 20 Lowest Daily Maximum Temperatures in Miles City, MT (1936-1999)

1. -25°F Dec. 24, 1983
2. -22°F Feb. 2, 1989
3. -20°F Dec. 16, 1964
4. -19°F Dec. 23, 1983
5. -18°F Feb. 3, 1989
6. -18°F Dec. 29, 1968
7. -18°F Jan. 20, 1954
8. -18°F Feb. 8, 1939
9. -17°F Dec. 29, 1990
10. -17°F Jan. 26, 1972
11. -17°F Jan. 24, 1969
12. -17°F Feb. 9, 1939
13. -16°F Dec. 20, 1990
14. -15°F Dec. 21, 1990
15. -15°F Jan. 10, 1982
16. -15°F Dec. 30, 1978
17. -15°F Jan. 27, 1972
18. -14°F Dec. 25, 1983
19. -14°F Feb. 3, 1982
20. -14°F Jan. 25, 1972

The 20 Lowest Daily Minimum Temperatures in Miles City, MT (1936-1999)

1. -40°F Dec. 22, 1989
2. -38°F Dec. 24, 1983
3. -37°F Jan. 30, 1996
4. -37°F Jan. 25, 1969
5. -37°F Jan. 25, 1957
6. -37°F Feb. 10, 1939
7. -36°F Feb. 3, 1982
8. -36°F Jan. 20, 1954
9. -35°F Jan. 12, 1998
10. -35°F Feb. 2, 1996
11. -35°F Dec. 9, 1977
12. -34°F Feb. 3, 1996
13. -34°F Dec. 22, 1990
14. -33°F Feb. 3, 1989
15. -33°F Dec. 2, 1985
16. -33°F Dec. 23, 1983
17. -33°F Jan. 26, 1957
18. -33°F Jan. 25, 1949
19. -33°F Feb. 8, 1939
20. -32°F Dec. 25, 1983

The 20 Highest Daily Minimum Temperatures in Miles City, MT (1936-1999)

1. 78°F Jun. 20, 1988
2. 77°F Jul. 27, 1988
3. 77°F Aug. 7, 1983
4. 77°F Jul. 6, 1981
5. 77°F Jul. 10, 1974
6. 77°F Aug. 4, 1966
7. 77°F Jul. 20, 1960
8. 77°F Aug. 7, 1949
9. 76°F Aug. 1, 1989
10. 76°F Jun. 26, 1988
11. 76°F Jul. 8, 1983
12. 76°F Jul. 22, 1982
13. 76°F Jul. 30, 1946
14. 75°F Jul. 31, 1994
15. 75°F Aug. 31, 1991
16. 75°F Aug. 6, 1988
17. 75°F Jun. 21, 1988
18. 75°F Jun. 10, 1988
19. 75°F Jun. 5, 1988
20. 75°F Aug. 25, 1969

The 20 Highest Annual Mean Temperatures in Miles City, MT (1936-1999)

1. 49.5°F 1987
2. 49.3°F 1999
3. 49.2°F 1981
4. 48.8°F 1988
5. 48.8°F 1992
6. 48.4°F 1990
7. 48.3°F 1939
8. 48.0°F 1991
9. 47.9°F 1963
10. 47.7°F 1961
11. 47.6°F 1998
12. 47.5°F 1980
13. 47.5°F 1976
14. 47.5°F 1986
15. 47.3°F 1974
16. 47.2°F 1994
17. 47.0°F 1941
18. 47.0°F 1946
19. 46.9°F 1983
20. 46.9°F 1973

The 20 Lowest Annual Mean Temperatures in Miles City, MT (1936-1999)

1. 41.2°F 1950
2. 41.5°F 1951
3. 42.1°F 1978
4. 42.7°F 1982
5. 42.8°F 1996
6. 43.2°F 1965
7. 43.5°F 1985
8. 43.4°F 1972
9. 43.5°F 1993
10. 43.7°F 1979
11. 43.9°F 1949
12. 44.2°F 1966
13. 44.2°F 1975
14. 44.3°F 1969
15. 44.6°F 1945
16. 44.6°F 1955
17. 44.6°F 1959
18. 44.7°F 1971
19. 44.8°F 1970
20. 44.8°F 1968

Miles City, MT Monthly Precipitation														
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann	
1936	M	M	M	M	M	M	M	M	M	M	0.37	0.35	0.72*	
1937	0.38	0.23	0.66	0.79	0.81	2.00	1.76	1.33	0.77	1.00	0.27	0.42	10.42	
1938	0.33	0.21	1.04	0.27	2.06	2.50	0.97	1.17	0.49	1.25	0.35	0.20	10.84	
1939	0.19	0.12	0.08	0.82	1.67	4.04	0.92	0.46	0.56	0.08	0.04	0.18	9.16	
1940	0.42	0.26	0.71	1.86	1.62	2.82	1.97	1.04	0.42	2.70	0.24	0.34	14.40	
1941	0.09	0.19	0.25	1.60	2.47	2.39	1.78	2.15	4.67	1.24	0.51	0.73	18.07	
1942	0.22	0.30	0.36	1.06	3.27	5.13	1.41	1.58	1.22	0.78	0.26	0.07	15.66	
1943	0.55	0.26	0.27	0.29	1.38	6.12	1.04	2.57	0.31	1.65	0.55	0.02	15.01	
1944	0.65	0.31	0.96	1.53	1.49	9.78	0.68	2.09	0.87	T	0.35	0.24	18.95	
1945	0.43	0.08	0.89	0.59	2.95	2.01	1.53	1.23	1.91	0.46	0.19	0.33	12.60	
1946	0.15	0.08	0.50	0.63	3.32	2.17	1.22	1.00	4.60	3.20	0.41	0.52	17.80	
1947	0.34	0.19	1.10	1.84	0.66	3.87	0.75	1.83	0.31	0.40	0.31	0.28	11.88	
1948	0.42	0.74	0.61	1.09	1.79	4.91	4.58	0.69	0.45	T	0.49	0.31	16.08	
1949	0.76	0.91	0.51	0.29	1.32	0.92	0.95	0.11	0.37	2.43	0.02	0.20	8.79	
1950	0.29	0.62	1.83	1.10	0.94	3.99	1.05	0.48	2.09	0.40	0.52	0.35	13.66	
1951	0.08	0.28	0.15	0.67	1.54	3.05	1.56	4.00	1.42	0.70	0.32	1.14	14.91	
1952	0.42	0.92	0.59	0.10	1.68	2.06	1.48	0.95	0.93	0.01	0.61	0.11	9.86	
1953	0.71	0.53	0.53	2.54	4.06	2.43	2.40	1.37	0.23	1.57	0.02	0.22	16.61	
1954	0.47	0.08	0.90	0.80	0.82	2.52	0.82	2.40	1.03	0.35	0.14	0.05	10.38	
1955	0.17	0.63	0.38	1.47	5.33	1.96	0.73	0.17	0.31	0.63	0.75	0.53	13.06	
1956	0.52	0.13	0.08	0.43	2.43	0.98	1.83	1.52	0.26	0.54	0.61	0.22	9.55	
1957	0.58	0.35	0.90	1.92	1.89	3.01	0.38	1.24	0.58	0.50	1.25	0.02	12.62	
1958	0.32	0.47	0.64	1.61	0.24	2.85	3.58	0.45	0.14	1.16	1.26	0.50	13.22	
1959	0.81	1.30	0.07	1.02	1.34	1.59	0.22	0.40	1.26	0.53	0.91	0.03	9.48	
1960	0.51	0.37	0.68	0.72	1.32	1.25	0.33	0.78	T	0.22	0.12	0.69	6.99	
1961	0.08	0.77	0.38	0.97	2.34	0.84	0.47	0.36	2.83	0.09	0.56	0.28	9.97	
1962	0.35	0.41	0.65	0.57	4.97	4.59	4.51	0.37	1.07	0.61	0.43	0.47	19.00	
1963	0.80	0.66	0.28	2.69	1.68	4.78	1.19	1.11	1.92	T	0.18	0.66	15.95	
1964	0.72	0.57	0.93	1.25	1.42	4.72	0.54	2.33	0.23	0.25	1.33	0.62	14.91	

1965	0.96	0.53	0.75	2.12	1.41	3.46	3.59	0.22	1.77	T	0.39	0.40	15.60
1966	0.67	0.53	0.77	0.85	1.07	3.26	1.61	0.62	0.52	0.34	0.80	0.54	11.58
1967	0.33	0.87	1.78	2.11	1.79	5.23	0.86	T	2.35	0.47	0.38	1.33	15.18
1968	0.84	0.77	0.29	0.48	1.64	5.18	0.93	3.88	0.48	0.63	0.72	1.78	17.62
1969	0.70	0.24	0.73	2.82	1.99	2.63	3.40	0.17	0.05	1.09	0.03	1.33	15.18
1970	0.69	1.06	0.83	2.59	3.18	2.01	1.06	0.03	1.43	0.99	0.88	0.43	15.18
1971	1.78	0.76	0.56	1.26	1.55	2.12	0.10	1.61	1.01	6.31	0.42	1.24	18.72
1972	1.48	0.73	0.60	0.45	2.83	3.62	1.97	3.34	0.68	0.66	0.15	1.03	17.54
1973	0.14	0.33	0.16	4.22	1.92	3.30	0.27	1.72	4.02	0.57	0.17	0.82	17.64
1974	0.22	0.19	0.72	1.17	4.13	1.29	1.35	1.44	0.32	2.24	0.23	0.34	13.64
1975	0.81	0.33	1.23	2.70	4.77	3.68	1.66	0.67	0.44	2.31	0.91	0.56	20.07
1976	0.23	0.18	0.36	1.43	1.00	3.41	1.11	0.78	1.06	0.75	0.19	0.27	10.77
1977	0.68	0.10	0.97	0.24	2.45	1.38	1.91	2.26	1.91	1.16	1.50	1.23	15.79
1978	0.51	1.19	0.12	0.47	6.81	1.39	2.51	0.81	3.40	0.27	2.17	0.63	20.28
1979	0.33	1.14	0.26	0.76	1.36	0.77	2.79	0.67	0.03	0.32	0.20	0.05	8.86
1980	0.33	0.33	0.28	0.66	0.28	3.04	0.53	2.04	0.73	1.61	0.29	0.33	10.45
1981	0.05	0.06	0.28	0.20	2.87	2.57	0.36	1.12	0.72	1.39	0.78	0.23	10.63
1982	0.96	0.20	0.73	0.53	2.61	5.10	0.69	0.61	2.23	1.61	0.10	1.01	16.38
1983	0.26	0.09	0.95	0.02	1.36	1.56	1.89	0.33	1.36	0.26	0.43	0.28	8.79
1984	0.13	0.13	0.27	1.34	0.90	3.55	0.18	0.89	0.58	0.11	0.20	0.53	8.81
1985	0.23	0.02	0.97	0.86	1.16	1.12	3.13	1.86	1.45	0.64	0.72	0.54	12.70
1986	0.49	0.72	0.21	1.18	3.31	2.14	1.64	2.05	3.38	0.19	0.54	0.14	15.99
1987	0.05	0.09	0.86	0.16	4.28	1.04	3.99	1.83	0.82	0.01	0.12	0.08	13.33
1988	0.25	0.14	0.27	0.11	0.56	0.70	T	0.33	1.10	0.82	0.39	0.60	5.27
1989	0.93	0.35	1.16	3.81	1.43	2.79	1.29	0.65	0.07	0.62	0.66	M	13.76*
1990	0.37	0.02	0.15	2.84	1.05	1.76	0.91	0.44	0.23	0.71	0.46	0.22	9.16
1991	0.59	0.39	0.13	3.96	2.70	6.44	0.29	0.73	3.77	0.47	0.39	0.08	19.94
1992	0.07	0.01	0.47	2.46	1.16	2.47	2.93	1.67	1.28	1.18	0.58	0.39	14.67
1993	0.62	0.31	0.68	2.22	1.04	4.71	6.32	1.04	0.13	1.13	0.34	0.09	18.63
1994	0.93	0.31	0.47	1.36	1.23	1.00	0.62	0.52	1.24	1.79	0.25	0.05	9.77
1995	0.09	0.26	1.33	1.13	2.97	2.95	1.59	0.53	0.27	0.93	0.58	0.27	12.90
1996	1.19	0.32	1.06	0.93	4.83	0.84	0.61	0.05	0.92	1.04	0.84	0.48	13.11

1997	0.23	0.07	0.43	1.54	1.31	1.50	2.65	0.62	0.27	1.07	0.13	0.02	9.84
1998	0.34	0.29	1.21	0.62	0.81	2.86	2.27	1.93	0.39	2.38	0.55	0.56	14.21
1999	0.57	0.13	0.13	2.58	1.69	2.11	0.56	2.16	0.87	0.23	0.26	0.22	11.28
Mean	0.49	0.40	0.62	1.31	2.10	2.89	1.56	1.18	1.16	0.95	0.49	0.46	13.59
Normal	0.55	0.45	0.62	1.36	2.27	2.77	1.55	1.15	1.27	0.90	0.54	0.64	14.07

Miles City, MT Monthly Precipitation Extremes								
	Mean	High	Low	1 Day Max	Number of Days			
					>=0.01"	>=0.10"	>=0.50"	>=1.00"
January	0.49"	1.78" 1971	0.05" 1981	0.76" 3 rd - 1996	8	2	0	0
February	0.40"	1.30" 1959	0.01" 1992	0.77" 18 th - 1952	6	1	0	0
March	0.62"	1.83" 1950	0.07" 1959	0.83" 12 nd - 1995	8	2	0	0
April	1.31"	4.22" 1973	0.02" 1983	2.06" 27 th - 1989	8	4	1	0
May	2.10"	6.81" 1978	0.24" 1958	2.30" 17 st - 1978	11	6	1	0
June	2.89"	9.78" 1944	0.70" 1988	2.71" 18 th - 1964	11	7	2	0
July	1.56"	6.32" 1993	0.00" 1988	2.22" 29 th - 1985	8	4	1	0
August	1.18"	4.00" 1951	0.00" 1967	1.66" 23 rd - 1968	6	3	1	0
September	1.16"	4.67" 1941	0.00" 1960	2.67" 7 th - 1941	6	3	1	0
October	0.95"	6.31" 1971	0.00" 1944	2.11" 1 st - 1971	6	2	0	0
November	0.49"	2.17" 1978	0.02" 1949	1.17" 1 ST - 1957	6	2	0	0
December	0.46"	1.78" 1968	0.02" 1943	0.48" 6 th - 1971	7	2	0	0
Annual	13.59"	20.28" 1978	5.27" 1988	2.71" 06/18/64	90	36	6	1
Winter	1.64"	3.45" 1972	0.16" 1992	0.77" 02/18/22	21	4	0	0
Spring	4.25"	8.70" 1975	0.94" 1988	2.30" 5/17/78	26	11	2	0
Summer	5.47"	12.28" 1944	1.03" 1988	2.71" 06/18/64	25	13	3	1
Fall	2.71"	8.21" 1946	0.34" 1960	2.67" 09/07/41	18	7	1	0

Seasons are climatological not calendar seasons

Winter = Dec., Jan., and Feb. Spring = Mar., Apr., and May

Summer = Jun., Jul., and Aug. Fall = Sep., Oct., and Nov.

Miles City, MT Highest Monthly and Annual Precipitation

Rank	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann.
1	1.78" 1971	1.30" 1959	1.83" 1950	4.22" 1973	6.81" 1978	9.78" 1944	6.32" 1993	4.00" 1951	4.67" 1941	6.31" 1971	2.17" 1978	1.78" 1968	20.28" 1978
2	1.48" 1972	1.19" 1978	1.78" 1967	3.96" 1991	5.33" 1955	6.44" 1991	4.58" 1948	3.88" 1968	4.60" 1946	3.20" 1946	1.50" 1977	1.33" 1969	20.07" 1975
3	1.19" 1996	1.14" 1979	1.33" 1995	3.81" 1989	4.97" 1962	6.12" 1943	4.51" 1962	3.34" 1972	4.02" 1973	2.70" 1940	1.33" 1964	1.33" 1967	19.94" 1991
4	0.96" 1982	1.06" 1970	1.23" 1975	2.84" 1990	4.83" 1996	5.23" 1967	3.99" 1987	2.57" 1943	3.77" 1991	2.43" 1949	1.26" 1958	1.24" 1971	19.00" 1962
5	0.96" 1965	0.92" 1952	1.21" 1998	2.82" 1969	4.77" 1975	5.18" 1968	3.59" 1965	2.40" 1954	3.40" 1978	2.38" 1998	1.25" 1957	1.23" 1977	18.72" 1971
6	0.93" 1994	0.91" 1949	1.16" 1989	2.70" 1975	4.28" 1987	5.13" 1942	3.58" 1958	2.33" 1964	3.38" 1986	2.31" 1975	0.91" 1975	1.14" 1951	18.63" 1993
7	0.93" 1989	0.87" 1967	1.10" 1947	2.69" 1963	4.13" 1974	5.10" 1982	3.40" 1969	2.26" 1977	2.83" 1961	2.24" 1974	0.91" 1959	1.03" 1972	18.11" 1941
8	0.84" 1968	0.77" 1968	1.06" 1996	2.59" 1970	4.06" 1953	4.91" 1948	3.13" 1985	2.16" 1999	2.35" 1967	1.79" 1994	0.88" 1970	1.01" 1982	18.07" 1946
9	0.81" 1975	0.77" 1961	1.04" 1938	2.58" 1999	3.32" 1946	4.78" 1963	2.93" 1992	2.15" 1941	2.23" 1982	1.61" 1982	0.84" 1996	0.82" 1973	17.91" 1942
10	0.81" 1959	0.76" 1971	0.97" 1977	2.54" 1953	3.31" 1986	4.72" 1964	2.79" 1979	2.09" 1944	2.09" 1950	1.61" 1980	0.80" 1966	0.73" 1941	17.64" 1973

The 20 Wettest Years in Miles City, MT

1. 20.28" 1978
2. 20.07" 1975
3. 19.94" 1991
4. 19.00" 1962
5. 18.72" 1971
6. 18.63" 1993
7. 18.11" 1941
8. 18.07" 1946
9. 17.91" 1942
10. 17.64" 1973
11. 17.62" 1968
12. 17.54" 1972
13. 17.50" 1967
14. 16.61" 1953
15. 16.38" 1982
16. 16.17" 1948
17. 15.99" 1986
18. 15.95" 1963
19. 15.79" 1977
20. 15.60" 1965

The 20 Wettest Months in Miles City, MT

1. 9.78" Jun. 1944
2. 6.81" May 1978
3. 6.44" Jun. 1991
4. 6.32" Jun. 1993
5. 6.31" Oct. 1971
6. 6.12" Jun. 1943
7. 5.33" May 1955
8. 5.23" May 1967
9. 5.18" Jun. 1968
10. 5.13" Jun. 1942
11. 5.10" Jun. 1982
12. 4.97" May 1962
13. 4.91" Jun. 1948
14. 4.83" May 1996
15. 4.78" Jun. 1963
16. 4.77" May 1975
17. 4.72" Jun. 1964
18. 4.71" Jun. 1993
19. 4.67" Sep. 1941
20. 4.60" Sep. 1946

The 20 Greatest Precipitation Events in Miles City, MT

1. 2.71" Jun. 18, 1964
2. 2.67" Sep. 7, 1941
3. 2.45" Jun. 7, 1993
4. 2.30" May 17, 1978
5. 2.23" Jun. 1, 1962
6. 2.22" Jul. 29, 1985
7. 2.17" May 3, 1955
8. 2.12" Jul. 25, 1979
9. 2.11" Oct. 1, 1971
10. 2.06" Apr. 27, 1989
11. 2.04" Sep. 15, 1991
12. 1.94" Jun. 3, 1944
13. 1.92" Jun. 17, 1944
14. 1.88" Oct. 18, 1971
15. 1.82" Jun. 22, 1944
16. 1.77" Apr. 19, 1973
17. 1.77" Jun. 2, 1943
18. 1.75" Jun. 29, 1982
19. 1.75" Oct. 2, 1971
20. 1.75" Jun. 13, 1967

The 20 Driest Years in Miles City, MT

1. 5.27" 1988
2. 6.99" 1960
3. 8.79" 1983
4. 8.79" 1949
5. 8.81" 1984
6. 8.86" 1979
7. 9.16" 1990
8. 9.16" 1939
9. 9.48" 1959
10. 9.55" 1956
11. 9.77" 1994
12. 9.84" 1997
13. 9.86" 1952
14. 9.97" 1961
15. 10.42" 1937
16. 10.45" 1980
17. 10.63" 1981
18. 10.77" 1976
19. 10.84" 1938
20. 11.28" 1999

Miles City, MT Monthly Snowfall In Inches

Years	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Ann
1936-37	M	M	M	M	M	M	2.0	2.0	5.0	2.3	0.0	0.0	9.3*
1937-38	0.0	0.0	0.0	T	14.6	6.9	14.5	1.6	23.2	0.1	T	0.0	60.9
1938-39	0.0	0.0	0.0	0.3	10.2	13.8	2.8	4.6	2.2	0.4	0.0	0.0	34.3
1939-40	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	2.3	0.0	0.0	0.0	2.7
1940-41	0.0	0.0	0.0	0.0	1.2	4.6	4.9	3.7	0.6	2.7	0.0	0.0	17.7
1941-42	0.0	0.0	3.0	5.5	8.4	33.9	1.9	11.3	7.3	T	0.0	0.0	71.3
1942-43	0.0	0.0	T	2.0	9.0	1.4	4.3	7.3	7.9	0.0	0.9	T	32.8
1943-44	0.0	0.0	0.0	1.2	2.0	T	7.1	6.4	3.4	T	T	0.0	20.1
1944-45	0.0	0.0	T	T	1.4	3.0	4.9	1.2	1.3	1.9	1.2	0.0	14.9
1945-46	0.0	0.0	0.0	T	4.0	12.2	2.3	2.0	2.3	0.0	0.0	0.0	22.8
1946-47	0.0	0.0	0.0	8.2	2.7	19.5	5.7	3.0	11.0	12.2	0.0	0.0	62.3
1947-48	0.0	0.0	0.0	T	2.8	4.9	18.9	3.9	6.4	0.7	0.2	0.0	37.8
1948-49	0.0	0.0	0.0	T	1.5	7.7	14.7	19.0	5.6	T	T	0.0	48.5
1949-50	0.0	0.0	T	12.6	0.0	4.1	3.3	6.5	16.0	5.2	1.4	T	49.1
1950-51	T	0.0	0.7	0.6	5.9	4.3	3.1	4.1	1.9	3.7	0.0	T	24.3
1951-52	0.0	T	0.0	4.2	5.0	15.0	4.4	7.5	6.1	0.8	0.0	0.0	43.0
1952-53	0.0	0.0	0.0	0.0	1.4	1.0	7.8	7.1	5.3	8.2	2.0	T	32.8
1953-54	T	0.0	0.0	T	T	1.6	7.4	0.3	10.4	1.3	T	T	21.0
1954-55	0.0	0.0	T	1.7	1.2	0.6	2.7	8.4	3.8	1.0	0.0	0.0	19.4
1955-56	T	0.0	T	0.6	14.6	6.5	5.3	1.1	0.5	4.1	T	0.0	32.7
1956-57	0.0	0.0	0.0	T	4.0	1.5	5.6	3.8	8.6	2.0	0.0	0.0	25.5
1957-58	0.0	0.0	0.0	3.0	1.9	0.1	2.8	4.4	1.7	T	0.0	0.0	13.9
1958-59	0.0	0.0	0.0	T	8.9	10.8	10.3	11.8	0.6	3.5	0.0	0.0	45.9
1959-60	0.0	0.0	T	T	7.0	T	6.0	4.3	3.1	1.0	0.0	0.0	21.4
1960-61	0.0	0.0	0.0	T	2.0	6.0	1.4	6.0	3.0	T	0.0	0.0	18.4
1961-62	0.0	0.0	T	T	4.0	3.0	5.9	4.5	2.5	T	0.0	0.0	19.9
1962-63	0.0	0.0	T	T	1.4	3.1	9.6	6.0	0.4	9.0	0.0	0.0	29.5
1963-64	0.0	0.0	0.0	0.0	0.2	6.1	11.2	5.5	11.1	4.8	0.0	0.0	38.9
1964-65	0.0	0.0	0.0	0.0	14.4	7.3	13.4	3.5	6.9	4.0	T	0.0	49.5

1965-66	0.0	0.0	T	0.0	3.0	4.2	8.3	5.9	4.0	0.9	T	0.0	26.3
1966-67	0.0	0.0	0.0	T	7.9	3.7	2.4	5.8	17.8	16.6	8.6	0.0	62.8
1967-68	0.0	0.0	0.0	T	2.5	12.6	7.5	7.3	0.6	3.9	T	0.0	34.4
1968-69	0.0	0.0	0.0	T	2.2	18.0	6.9	2.4	6.0	1.9	0.0	0.1	37.5
1969-70	0.0	0.0	0.0	2.6	T	10.5	6.3	10.7	5.2	12.6	T	0.0	47.9
1970-71	0.0	0.0	0.6	0.3	3.3	3.4	17.2	6.6	5.1	T	0.1	0.0	36.6
1971-72	0.0	0.0	0.0	2.5	4.6	12.6	14.8	6.0	2.9	T	0.1	0.0	43.5
1972-73	0.0	0.0	7.1	3.3	T	10.0	1.7	3.3	0.4	5.1	0.0	T	30.9
1973-74	0.0	0.0	T	T	1.7	8.6	2.1	1.9	5.8	2.9	2.8	0.0	25.8
1974-75	0.0	0.0	T	0.1	0.7	3.4	5.6	3.3	12.3	10.6	T	0.0	36.0
1975-76	0.0	0.0	0.0	2.8	6.8	4.8	1.4	0.9	3.5	1.6	0.0	0.0	21.8
1976-77	0.0	0.0	0.0	4.4	1.7	2.6	6.4	0.8	5.4	T	0.0	0.0	21.3
1977-78	0.0	0.0	0.0	T	19.4	14.8	5.3	11.9	0.2	T	0.0	0.0	51.6
1978-79	0.0	0.0	T	0.0	16.8	6.7	3.3	11.8	2.2	3.5	T	0.0	44.3
1979-80	0.0	0.0	0.0	T	2.2	0.8	3.7	2.7	2.2	T	0.0	0.0	11.6
1980-81	0.0	0.0	0.0	3.0	0.9	2.0	T	1.0	T	T	0.0	0.0	6.9
1981-82	0.0	0.0	0.0	T	2.0	2.0	7.2	1.9	5.8	2.6	0.0	0.0	21.5
1982-83	0.0	0.0	T	T	1.0	10.4	1.5	0.4	4.3	T	12.0	0.0	29.6
1983-84	0.0	0.0	1.0	0.0	2.1	2.7	1.1	1.6	3.2	12.1	0.0	0.0	23.8
1984-85	0.0	0.0	3.3	0.6	0.8	8.8	4.4	2.0	12.1	1.1	0.0	0.0	33.1
1985-86	0.0	0.0	T	2.5	13.7	3.7	1.5	16.7	1.5	6.7	1.0	0.0	47.3
1986-87	0.0	0.0	0.0	T	7.1	1.6	1.2	0.2	8.6	T	0.0	0.0	18.7
1987-88	0.0	0.0	0.0	T	T	0.1	3.5	3.0	T	T	0.0	0.0	6.6
1988-89	0.0	0.0	0.0	T	4.2	5.8	16.6	5.2	10.6	15.6	T	0.0	58.0
1989-90	0.0	0.0	0.0	T	2.0	M	4.2	T	2.0	0.6	T	0.0	8.8*
1990-91	0.0	0.0	0.0	T	T	6.3	14.0	1.3	1.0	10.0	1.0	T	33.6
1991-92	0.0	0.0	0.0	7.7	4.6	1.1	1.0	0.1	0.9	1.0	0.0	0.0	16.4
1992-93	1.0	0.0	0.0	1.8	2.2	6.3	9.5	6.8	2.2	2.9	0.0	T	32.7
1993-94	0.0	T	0.0	1.2	4.1	0.5	9.9	3.7	4.0	5.5	0.0	T	28.9
1994-95	0.0	0.0	0.0	0.0	1.4	0.4	0.7	1.8	2.8	5.5	3.5	T	16.1
1995-96	T	T	0.3	2.1	4.7	5.6	19.2	7.9	16.9	0.7	7.1	T	64.5
1996-97	0.0	0.0	0.0	4.6	9.4	13.4	4.2	0.9	4.0	10.9	0.0	0.0	47.4

1997-98	T	0.0	0.0	0.6	0.8	0.5	4.4	2.2	5.5	0.0	T	0.0	14.0
1998-99	T	0.0	0.0	0.0	3.0	5.3	8.6	0.9	0.4	4.1	2.7	0.0	25.0
Mean	0.0	0.0	0.3	1.3	3.9	5.1	5.9	4.5	4.8	3.3	0.7	0.0	29.8
Normal	0.0	0.0	0.4	0.7	4.0	6.2	6.0	4.7	4.9	3.9	0.9	0.0	31.6

Miles City, MT Highest Monthly and Annual Snowfall

Rank	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Ann
1	7.1" 1972	12.6" 1949	19.4" 1977	33.9" 1941	19.2" 1996	19.0" 1949	23.2" 1938	16.6" 1967	12.0" 1983	71.3" 1941-42
2	3.3" 1984	8.2" 1946	16.8" 1978	19.5" 1946	18.9" 1948	16.7" 1986	17.8" 1967	15.6" 1989	8.6" 1967	64.5" 1995-96
3	3.0" 1941	7.7" 1991	14.6" 1955	18.0" 1968	17.2" 1971	11.9" 1978	16.9" 1996	12.6" 1970	7.1" 1996	62.8" 1966-67
4	1.0" 1983	5.5" 1941	14.6" 1937	15.0" 1951	16.6" 1989	11.8" 1979	16.0" 1950	12.2" 1974	3.5" 1995	62.3" 1946-47
5	0.7" 1950	4.6" 1996	14.4" 1964	14.8" 1977	14.8" 1972	11.8" 1959	12.3" 1975	12.1" 1984	2.8" 1974	58.0" 1988-89
6	0.6" 1970	4.4" 1976	13.7" 1985	13.8" 1938	14.7" 1949	11.3" 1942	12.1" 1985	10.9" 1997	2.7" 1999	51.6" 1977-78
7	0.3" 1995	4.2" 1951	10.2" 1938	13.4" 1996	14.5" 1938	10.7" 1970	11.1" 1964	10.6" 1975	2.0" 1953	49.5" 1964-65
8	T 1985	3.3" 1972	9.0" 1942	12.6" 1971	14.0" 1991	8.4" 1955	11.0" 1947	10.0" 1991	1.4" 1950	49.1" 1949-50
9	T 1982	3.0" 1980	8.9" 1958	12.6" 1968	13.4" 1965	7.9" 1996	10.6" 1989	9.0" 1963	1.2" 1945	48.5" 1948-49
10	T 1978	3.0" 1957	8.4" 1941	12.2" 1945	11.2" 1964	7.5" 1952	10.4" 1954	8.2" 1953	1.0" 1991	47.9" 1969-70

The 20 Highest Annual Snowfalls in Miles City, MT

1. 71.3" 1941-1942
2. 64.5" 1995-1996
3. 62.8" 1966-1967
4. 62.3" 1946-1947
5. 60.9" 1937-1938
6. 58.0" 1988-1989
7. 51.6" 1977-1978
8. 49.5" 1964-1965
9. 49.1" 1949-1950
10. 48.5" 1948-1949
11. 47.9" 1969-1970
12. 47.4" 1996-1997
13. 47.3" 1978-1979
14. 45.9" 1971-1972
15. 44.3" 1978-1979
16. 43.5" 1971-1972
17. 43.0" 1951-1952
18. 38.9" 1963-1964
19. 37.8" 1947-1948
20. 37.5" 1968-1969

The 20 Highest Monthly Snowfalls in Miles City, MT

1. 33.9" Dec. 1941
2. 23.2" Mar. 1938
3. 19.5" Dec. 1946
4. 19.4" Nov. 1977
5. 19.2" Jan. 1996
6. 19.0" Feb. 1949
7. 18.9" Jan. 1948
8. 18.0" Dec. 1968
9. 17.8" Mar. 1967
10. 17.2" Jan. 1971
11. 16.9" Mar. 1996
12. 16.8" Nov. 1978
13. 16.7" Feb. 1986
14. 16.6" Jan. 1989
15. 16.6" Apr. 1967
16. 16.0" Mar. 1950
17. 15.6" Apr. 1989
18. 15.0" Dec. 1951
19. 14.8" Dec. 1977
20. 14.8" Jan. 1972

The 20 Highest Daily Snowfalls in Miles City, MT

1. 19.0" Dec. 31, 1941
2. 15.0" Apr. 27, 1989
3. 14.0" Dec. 26, 1941
4. 14.0" Jan. 29, 1938
5. 10.4" Oct. 20, 1949
6. 10.0" Jan. 12, 1948
7. 10.0" Dec. 13 1946
8. 10.0" Nov. 28, 1937
9. 9.6" Feb. 18, 1949
10. 9.0" Dec. 13, 1945
11. 9.0" Dec. 30, 1938
12. 9.0" Mar. 30, 1998
13. 8.4" Jan. 1, 1991
14. 8.0" Nov. 19, 1977
15. 8.0" May 10, 1967
16. 8.0" Nov 14, 1964
17. 7.9" Apr. 4, 1947
18. 7.7" Apr. 5, 1997
19. 7.5" Jan. 23, 1964
20. 7.1" Sep. 25, 1972

The 20 Lowest Annual Snowfalls in Miles City, MT

1. 2.7" 1939-1940
2. 6.6" 1987-1988
3. 6.9" 1980-1981
4. 11.6" 1979-1980
5. 13.9" 1957-1958
6. 14.0" 1997-1998
7. 14.9" 1944-1945
8. 16.1" 1994-1995
9. 16.4" 1991-1992
10. 17.7" 1940-1941
11. 18.4" 1960-1961
12. 18.7" 1986-1987
13. 19.4" 1954-1955
14. 19.9" 1961-1962
15. 20.1" 1943-1944
16. 21.0" 1953-1954
17. 21.3" 1976-1977
18. 21.4" 1959-1960
19. 21.5" 1981-1982
20. 21.8" 1975-1976

Miles City, MT Mean Wind Speed and Direction

Month	Speed (mph)	Direction
Jan.	9.6	NW
Feb.	9.7	NW
Mar.	10.8	NW
Apr.	11.8	NW
May	11.2	SE
Jun.	10.3	SE
Jul.	9.7	SE
Aug.	9.8	SE
Sep.	10.0	NW
Oct.	9.8	S
Nov.	9.7	S
Dec.	9.8	S
Annual	10.2	NW

Miles City MT Airport. Wind Rose. 1984-1989. All hours Elev 2628 ft.

HOURS USED FOR WIND ROSE ("1" - USED, "0" - NOT USED)

0 6 12 18 23 (L.S.T.)

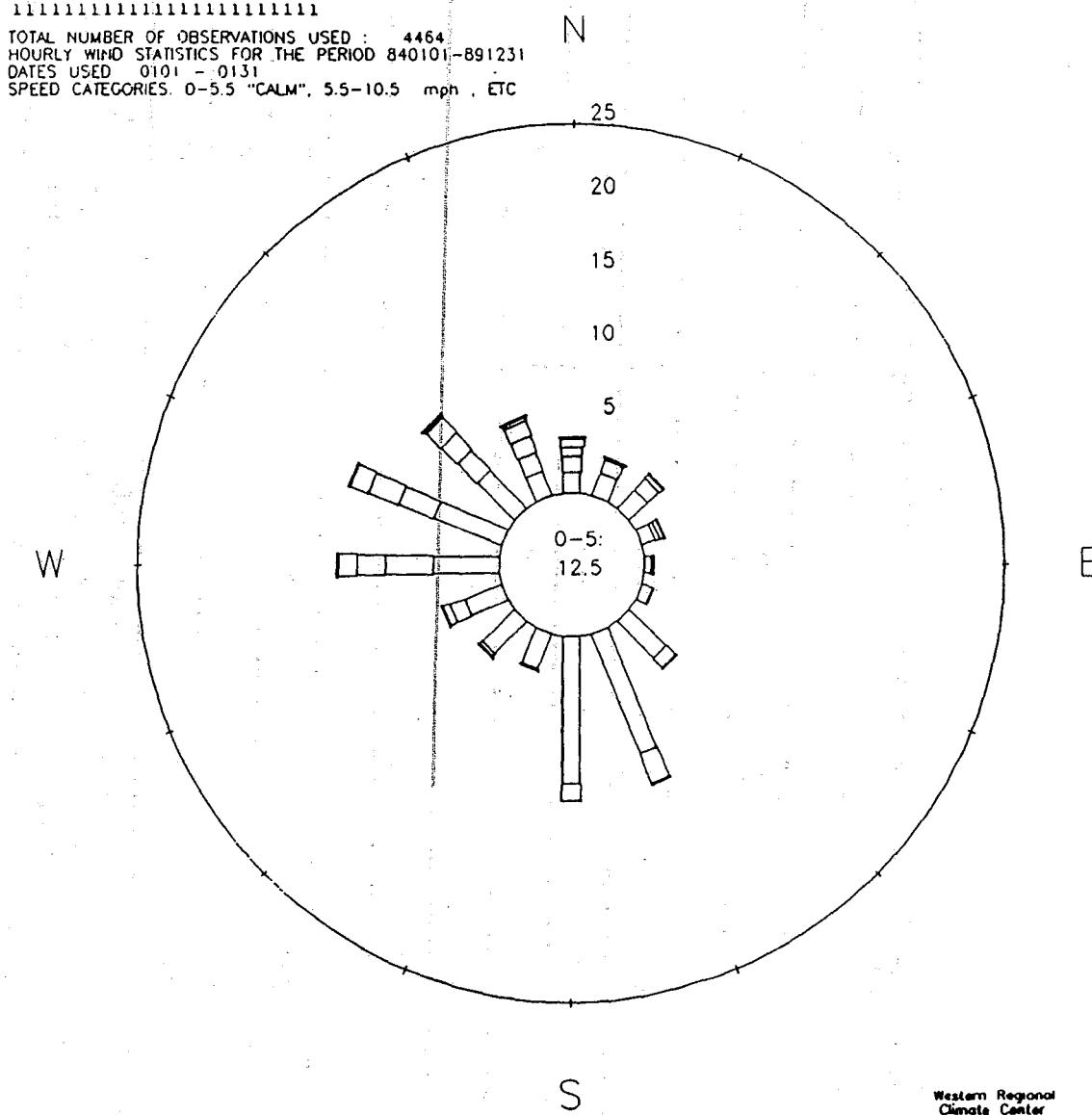
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TOTAL NUMBER OF OBSERVATIONS USED : 4464

HOURLY WIND STATISTICS FOR THE PERIOD 840101-891231

DATES USED 0101 - 0131

SPEED CATEGORIES. 0-5.5 "CALM", 5.5-10.5 mph, ETC



Western Regional
Climate Center

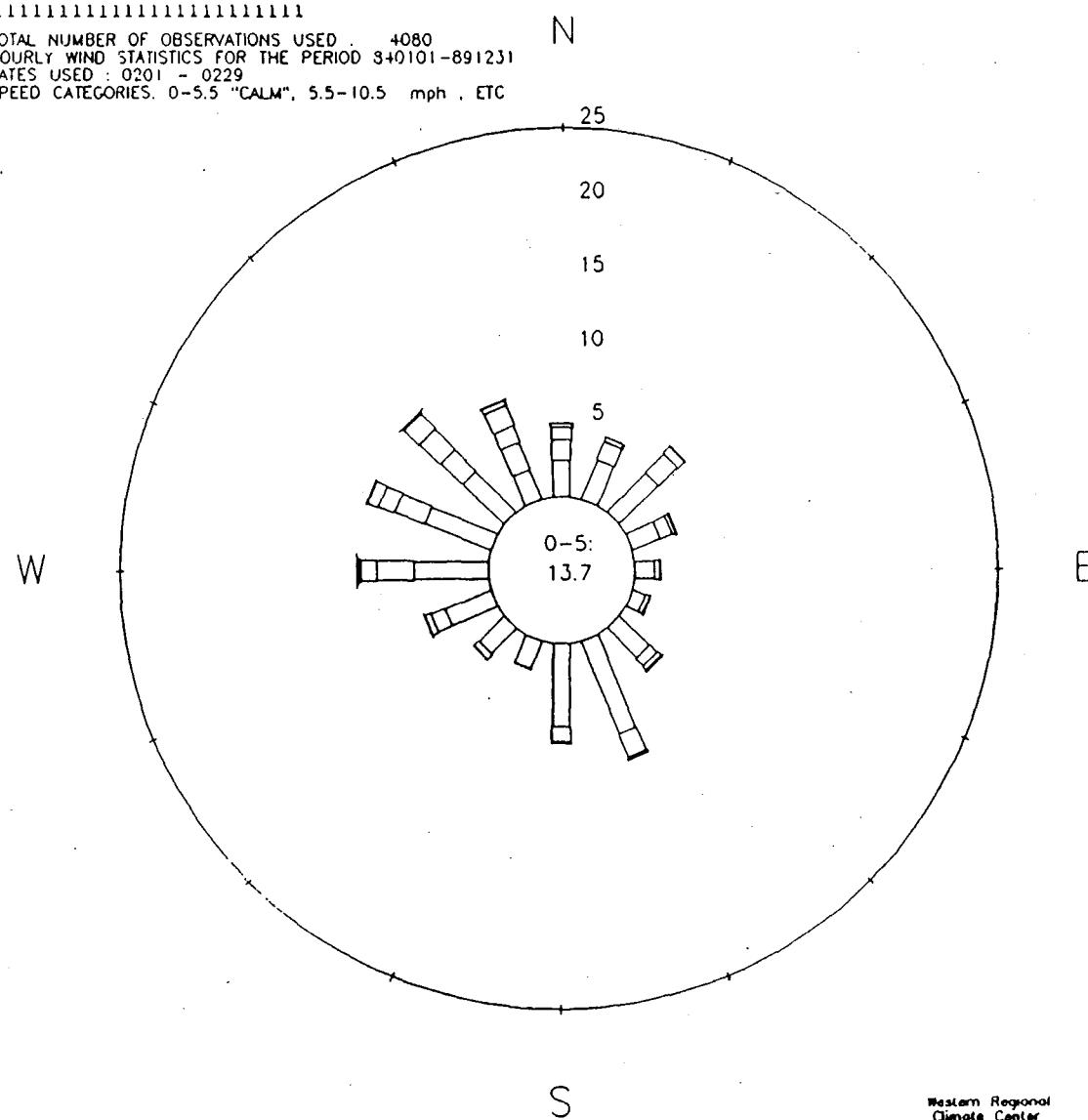
Miles City MT Airport. Wind Rose. 1984-1989. All hours Elev 2628 ft.

HOURS USED FOR WIND ROSE ("1" - USED, "0" - NOT USED)

0 6 12 18 23 (L.S.T.)

1 1

TOTAL NUMBER OF OBSERVATIONS USED . 4080
HOURLY WIND STATISTICS FOR THE PERIOD 3-0101-891231
DATES USED : 0201 - 0229
SPEED CATEGORIES. 0-5.5 "CALM", 5.5-10.5 mph , ETC

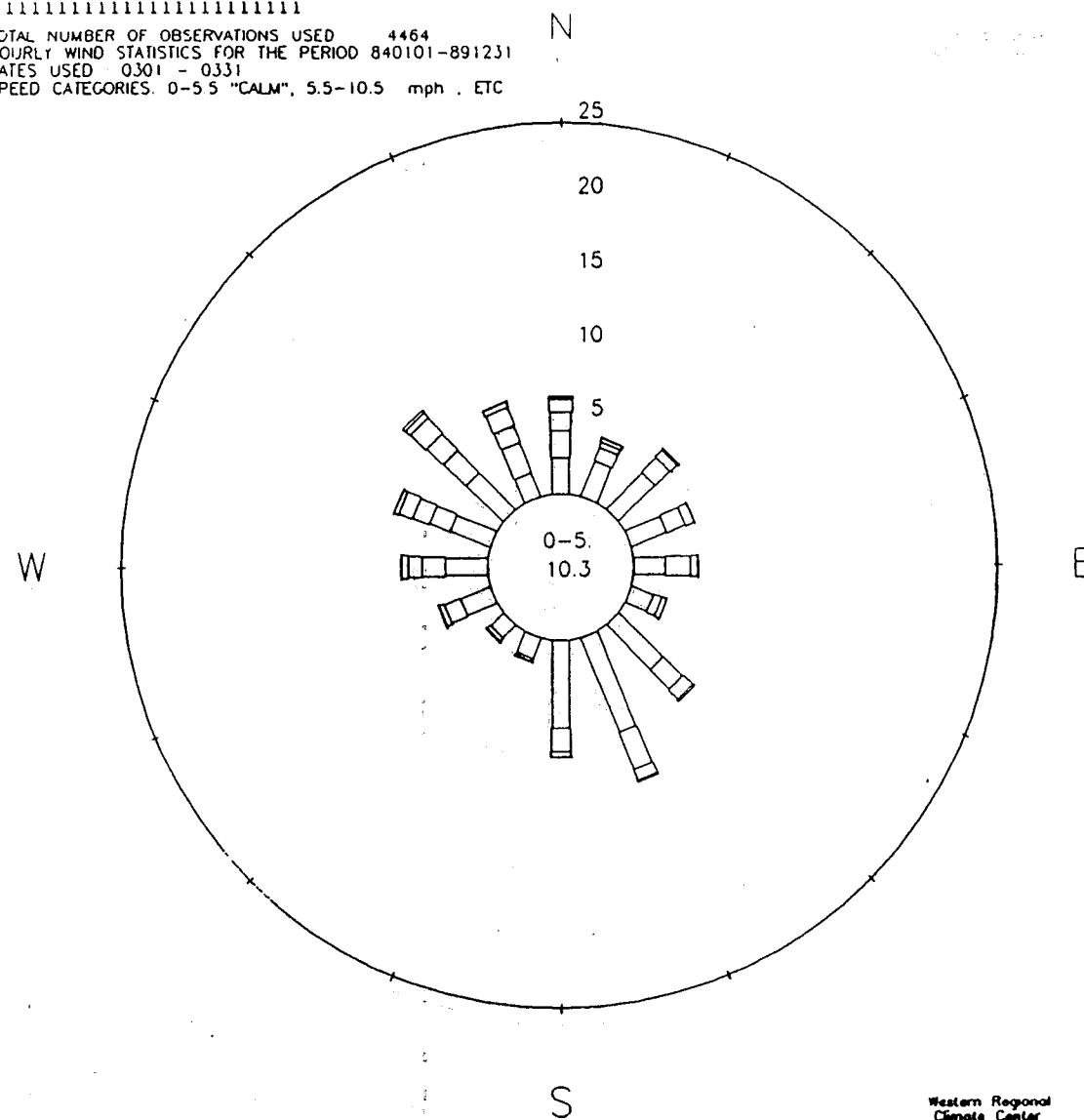


Western Regional Climate Center

Miles City MT Airport. Wind Rose. 1984-1989. All hours Elev 2628 ft

HOURS USED FOR WIND ROSE ("1" - USED, "0" - NOT USED),
0 6 12 18 23 (L.S.T.)

TOTAL NUMBER OF OBSERVATIONS USED 4464
HOURLY WIND STATISTICS FOR THE PERIOD 840101-891231
DATES USED 0301 - 0331
SPEED CATEGORIES 0-5.5 "CALM", 5.5-10.5 mph . ETC



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Miles City MT Airport. Wind Rose. 1984-1989. All hours Elev 2628 ft.

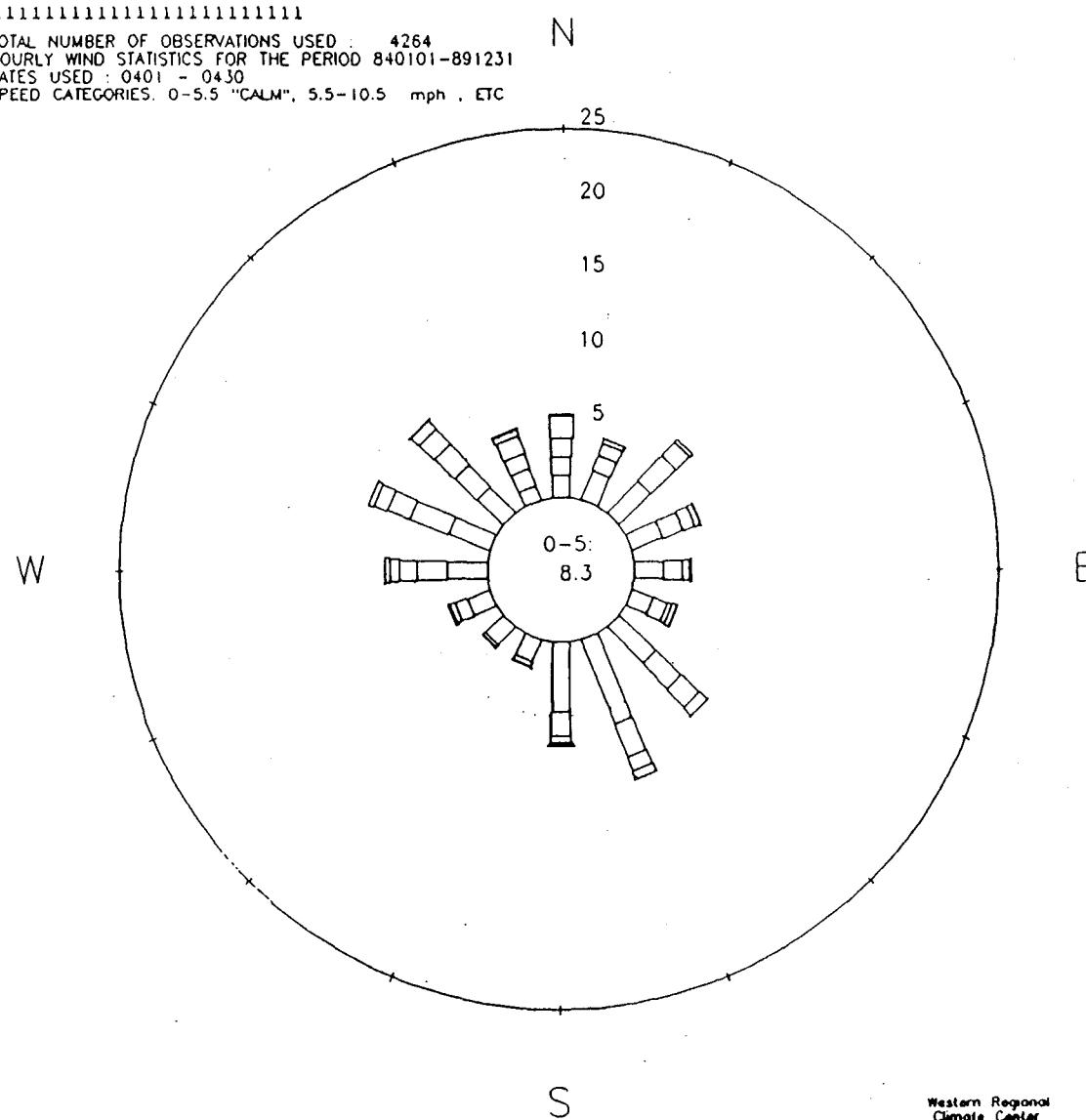
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0 6 12 18 23 (L.S.T.)

TOTAL NUMBER OF OBSERVATIONS USED : 4264

TOTAL NUMBER OF OBSERVATIONS HOURLY WIND STATISTICS FOR

DATES USED : 0401 - 0430



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Climate Center

Miles City MT Airport. Wind Rose. 1984-1989. All hours Elev 2628 ft.

HOURS USED FOR WIND ROSE ("1" - USED, "0" - NOT USED):

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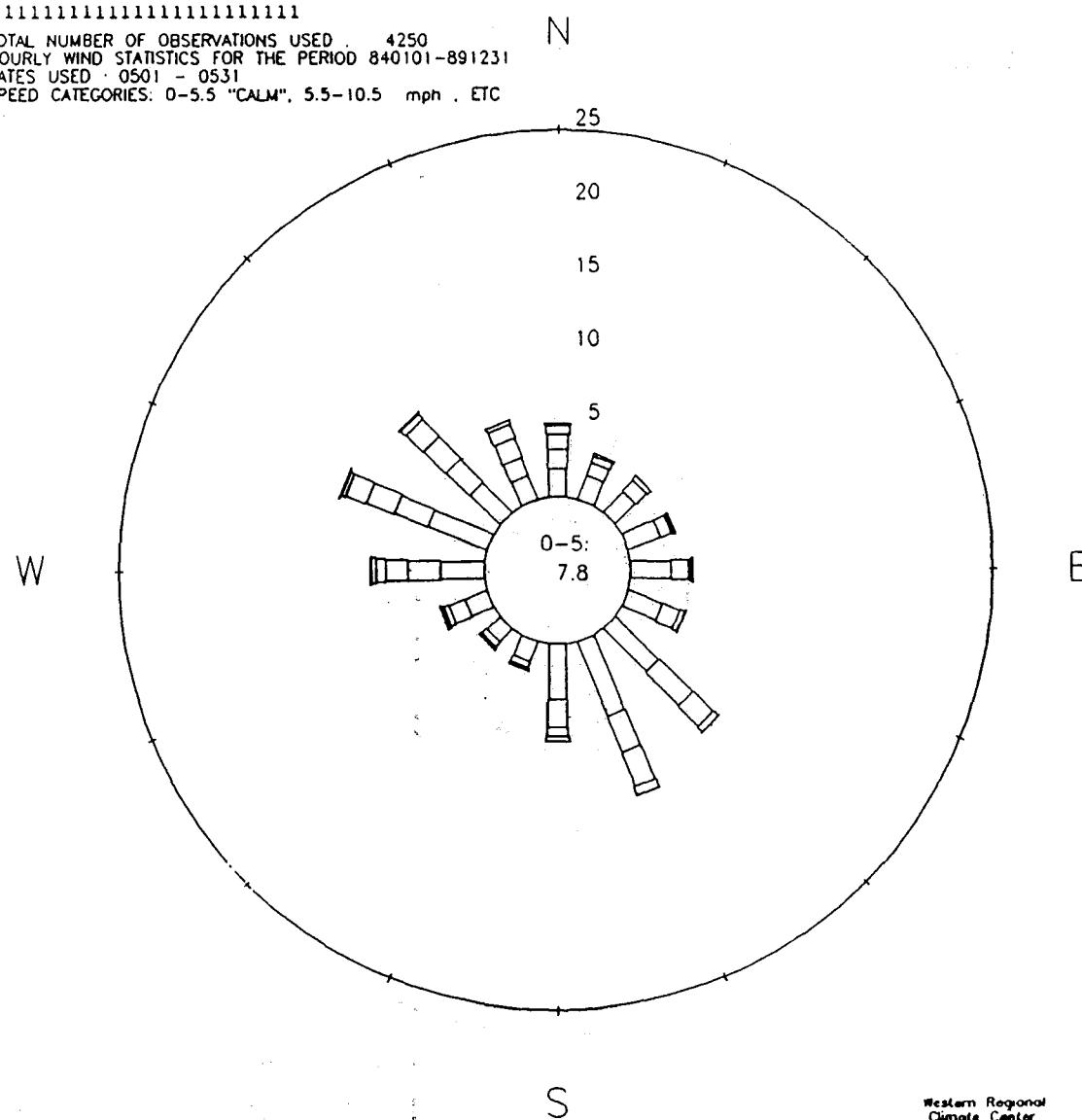
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TOTAL NUMBER OF OBSERVATIONS USED 4250

HOURLY WIND STATISTICS FOR THE PERIOD 840101-891231

DATES USED 0501 - 0531

SPEED CATEGORIES: 0-5.5 "CALM", 5.5-10.5 mph, ETC



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Miles City MT Airport. Wind Rose. 1984-1989. All hours Elev 2628 ft.

HOURS USED FOR WIND ROSE ("1" - USED, "0" - NOT USED)

0 6 12 18 23 (L.S.T.)

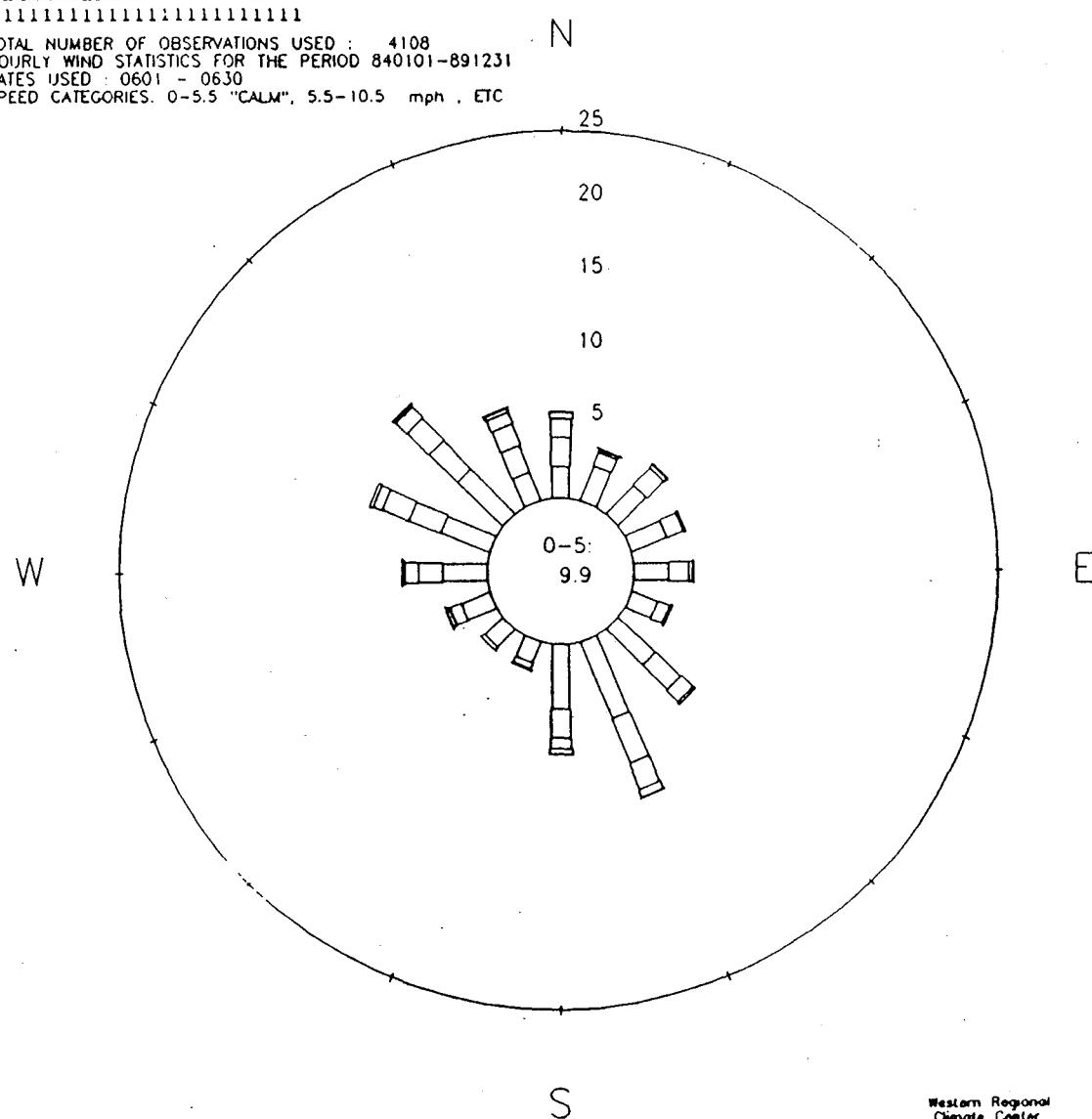
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TOTAL NUMBER OF OBSERVATIONS USED : 4108

HOURLY WIND STATISTICS FOR THE PERIOD 840101-891231

DATES USED : 0601 - 0630

SPEED CATEGORIES. 0-5.5 "CALM", 5.5-10.5 mph, ETC



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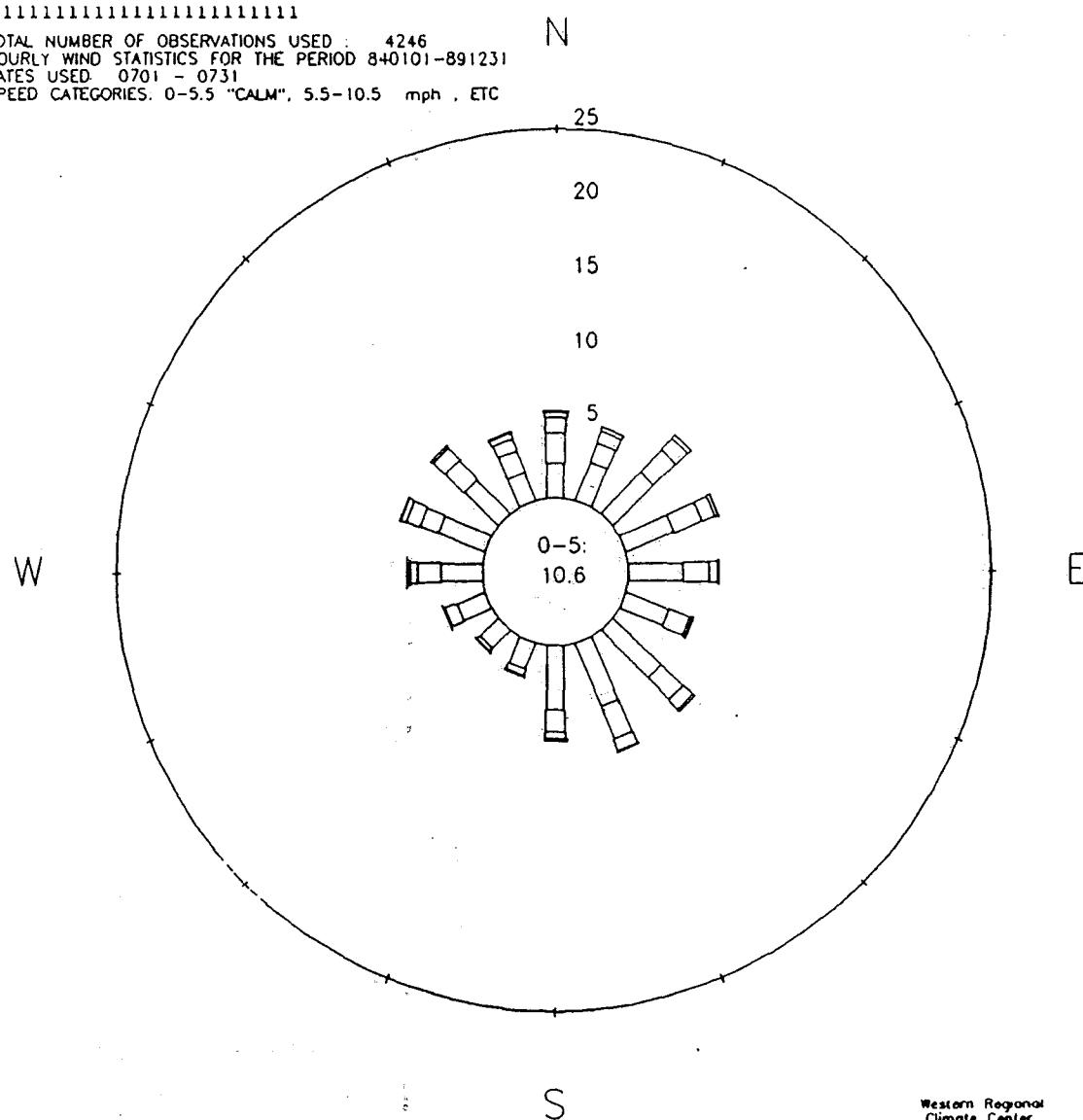
Miles City MT Airport. Wind Rose. 1984-1989. All hours Elev 2628 ft

HOURS USED FOR WIND ROSE ("1" - USED, "0" - NOT USED)

0 6 12 18 23 (L.S.T.)

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TOTAL NUMBER OF OBSERVATIONS USED : 4246
HOURLY WIND STATISTICS FOR THE PERIOD 840101-891231
DATES USED: 0701 - 0731
SPEED CATEGORIES: 0-5.5 "CALM", 5.5-10.5 mph, ETC



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Miles City MT Airport. Wind Rose. 1984-1989. All hours. Elev 2628 ft.

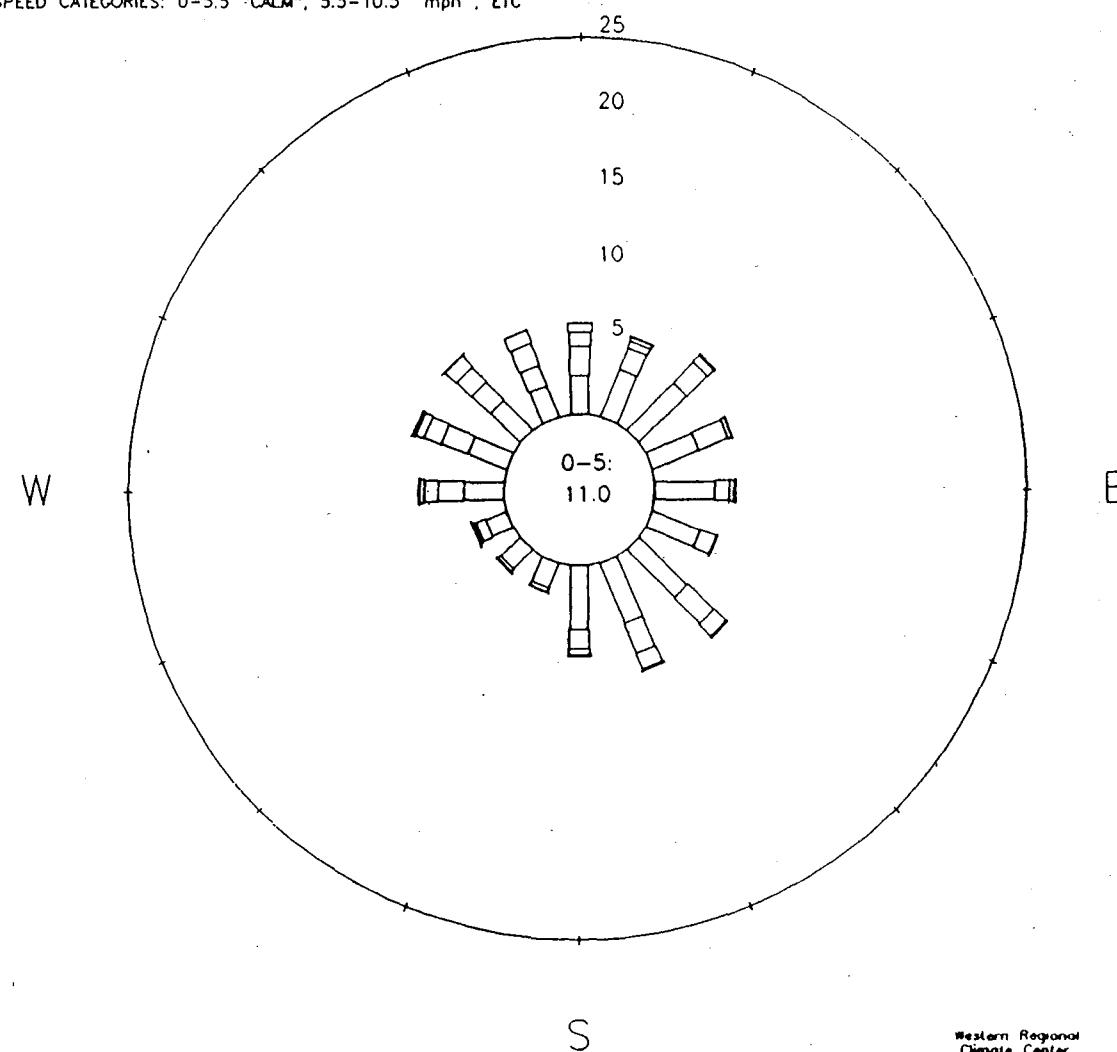
HOURS USED FOR WIND ROSE ("1" - USED, "0" - NOT USED).

0 6 12 18 23 (L.S.T.)

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TOTAL NUMBER OF OBSERVATIONS USED : 4245
HOURLY WIND STATISTICS FOR THE PERIOD 840101-891231
DATES USED : 0801 - 0831
SPEED CATEGORIES: 0-5.5 "CALM", 5.5-10.5 mph , ETC



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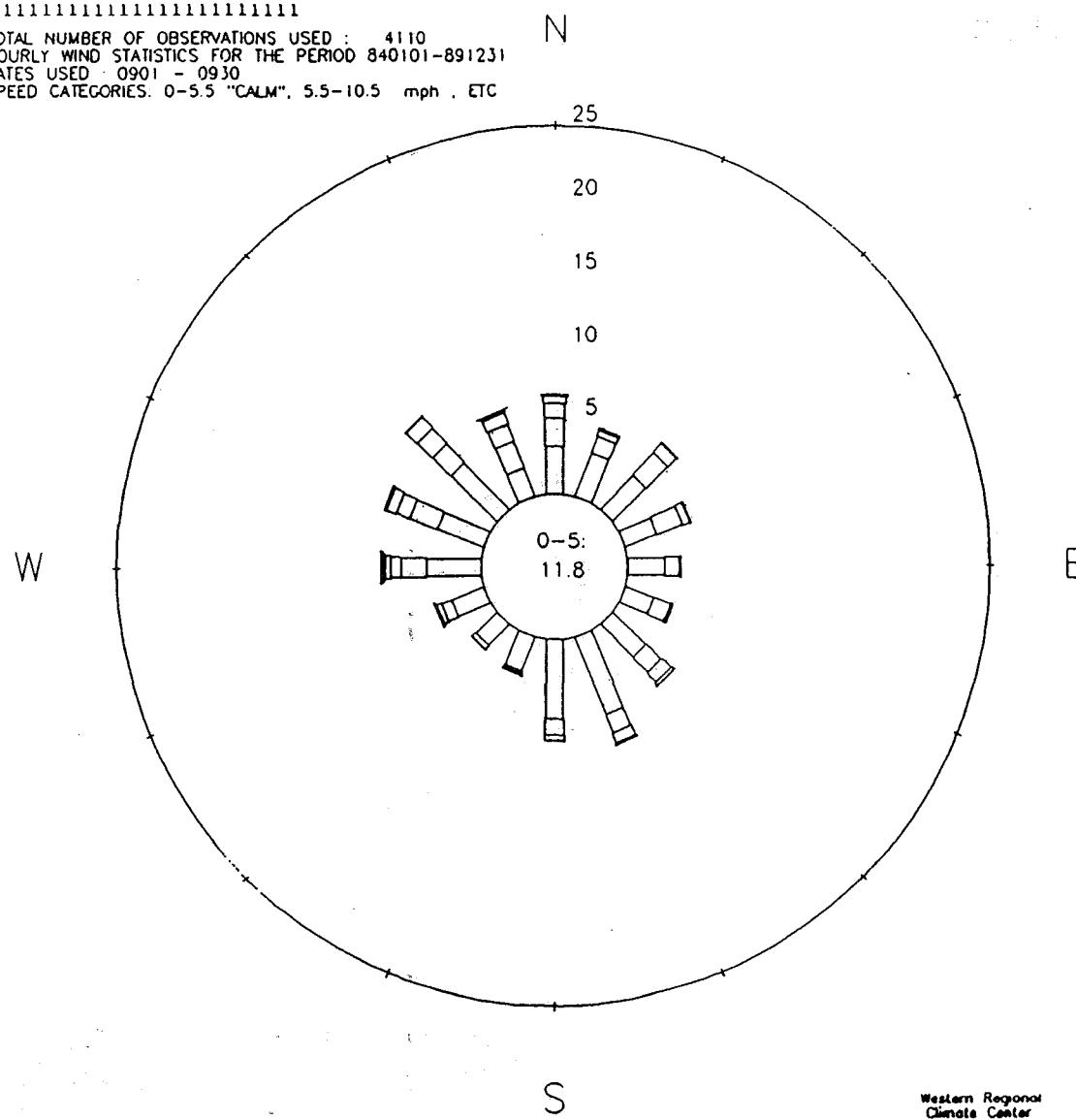
Miles City MT Airport. Wind Rose. 1984-1989 All hours Elev 2628 ft.

HOURS USED FOR WIND ROSE ("1" - USED, "0" - NOT USED)

0 6 12 18 23 (L.S.T.)

1 1

TOTAL NUMBER OF OBSERVATIONS USED : 4110
HOURLY WIND STATISTICS FOR THE PERIOD 840101-891231
DATES USED : 0901 - 0930
SPEED CATEGORIES: 0-5.5 "CALM", 5.5-10.5 mph , ETC



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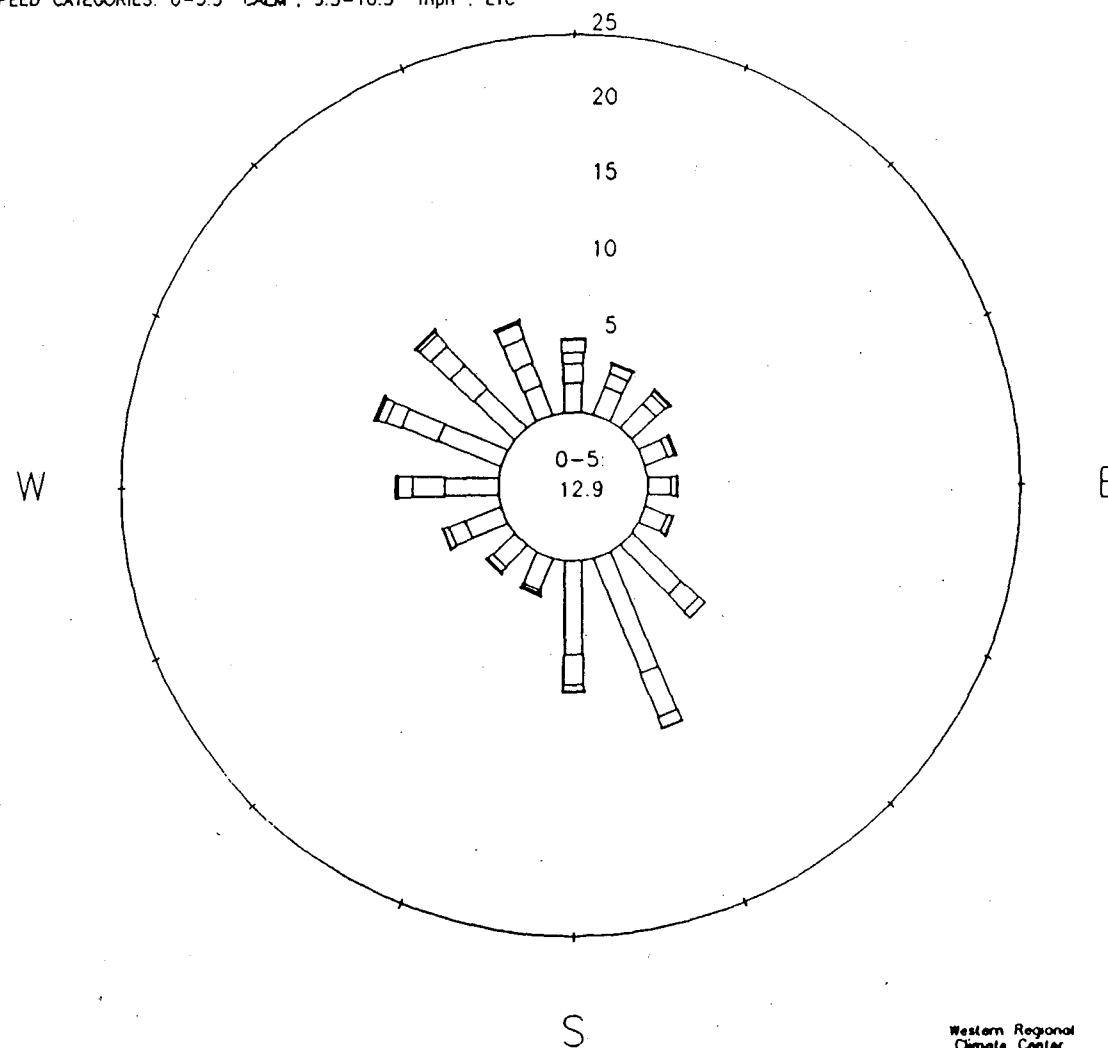
Miles	City	MT	Airport.	Wind	Rose.	1984-1989.	All hours	Elev	2628 ft
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HOURS USED FOR WIND ROSE ("1" - USED, "0" - NOT USED)

0 6 12 18 23 (L.S.T.)

N

TOTAL NUMBER OF OBSERVATIONS USED : 4462
HOURLY WIND STATISTICS FOR THE PERIOD 840101-891231
DATES USED : 1001 - 1031
SPEED CATEGORIES : 0-5.5 "CALM", 5.5-10.5 mph , ETC



Miles City MT Airport. Wind Rose. 1984-1989. All hours Elev 2628 ft.

HOURS USED FOR WIND ROSE ("1" - USED, "0" - NOT USED) .

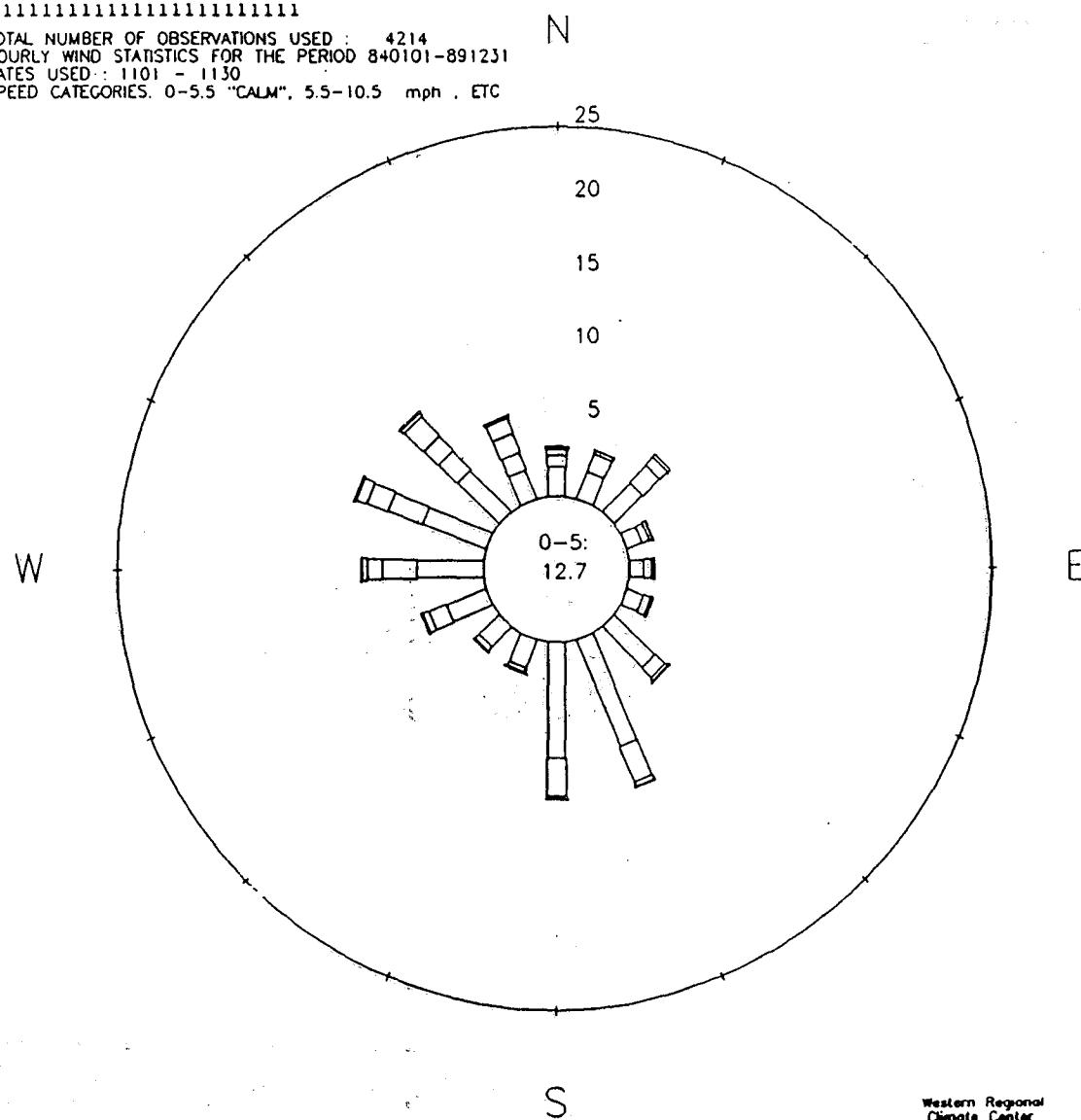
0 6 12 18 23 (L.S.T.)

1 1

TOTAL NUMBER OF OBSERVATIONS USED : 4214
HOURLY WIND STATISTICS FOR THE PERIOD 840101-891231

HOCKEY WIND STATISTICS FOR THE PERIOD 840101-851231
DATES USED : 1101 - 1130
SPEED CATEGORIES. 0-5.5 "CALM", 5.5-10.5 mph , ETC

SPEED CATEGORIES. 0-5.5 "CALM", 5.5-10.5 mph, ETC



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Miles City MT Airport. Wind Rose. 1984-1989 All hours Elev 2628 ft.

HOURS USED FOR WIND ROSE ("1" - USED, "0" - NOT USED) :

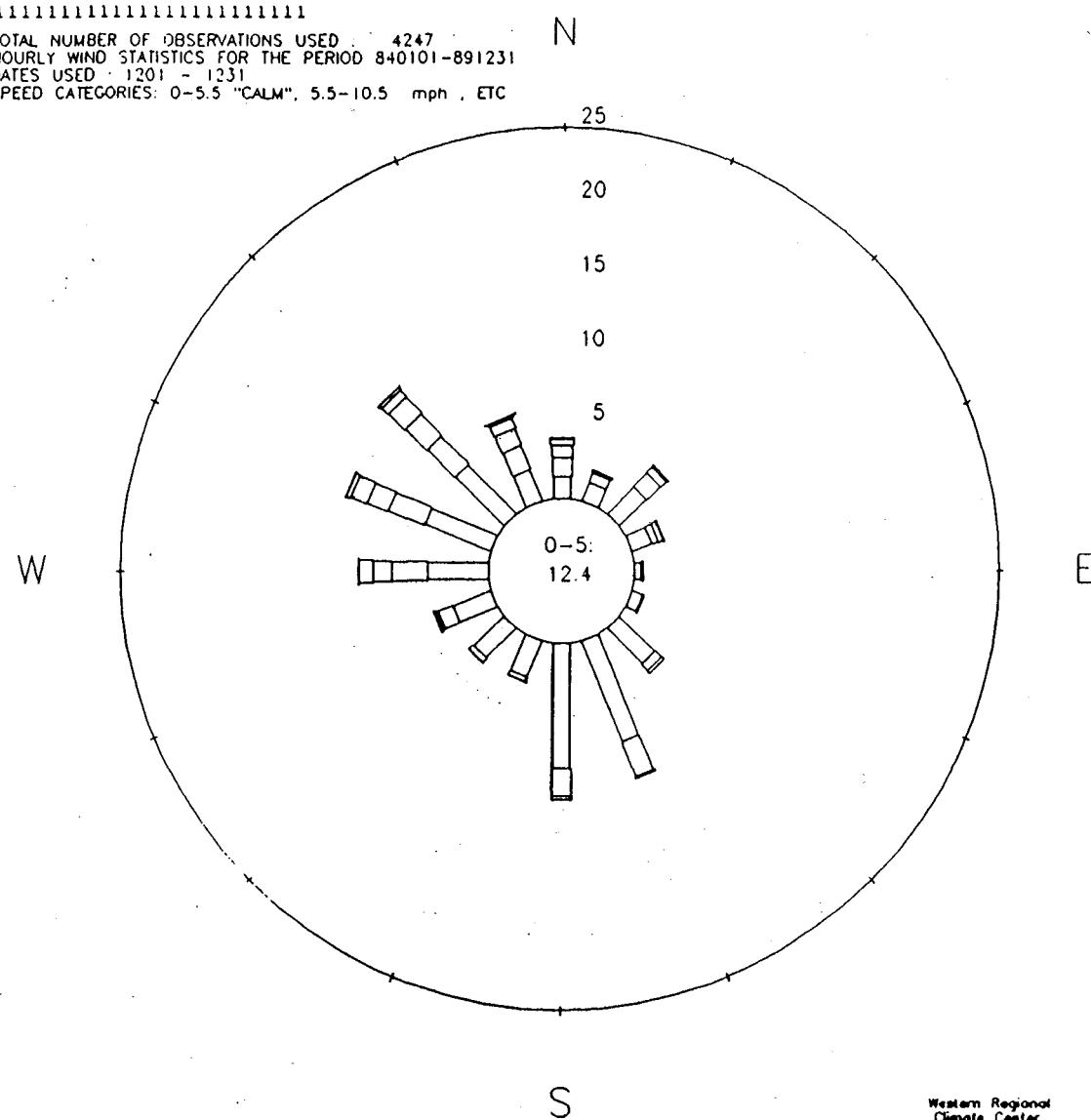
0 6 12 18 23 (L.S.T.)

1 1

TOTAL NUMBER OF OBSERVATIONS USED : 4247

HOURLY WIND STATISTICS FOR THE PERIOD 840101-891231

DATES USED - 1201 - 1231
SPEED CATEGORIES: 0-5.5 "CALM" 5.5-10.5 mph 10.5+



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Miles City MT Airport. Wind Rose. 1984-1989. All hours Elev 2628 ft.

HOURS USED FOR WIND ROSE ("1" - USED, "0" - NOT USED):

0 6 12 18 23 (L.S.T.)

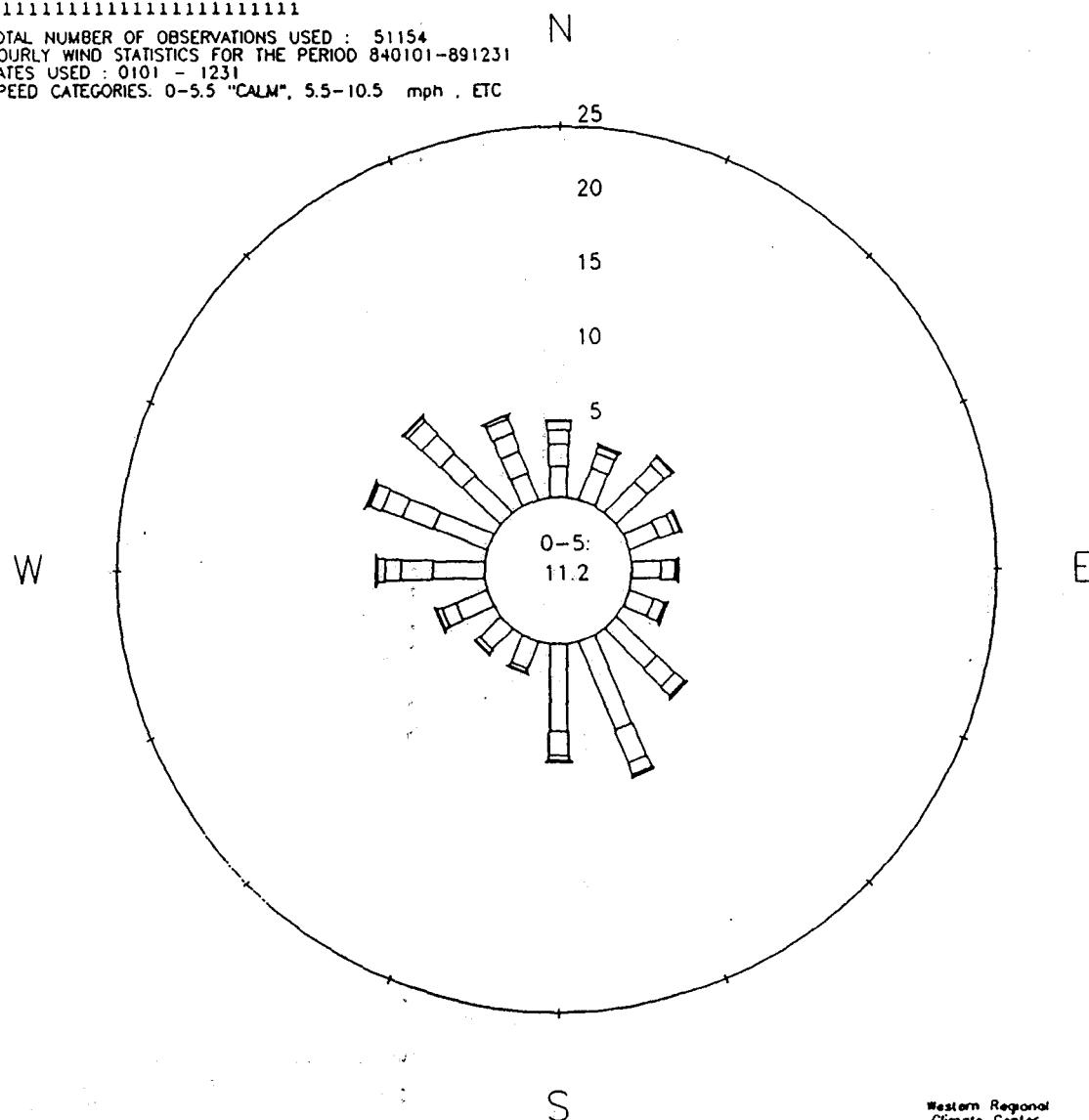
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TOTAL NUMBER OF OBSERVATIONS USED : 51154

HOURLY WIND STATISTICS FOR THE PERIOD 840101-891231

DATES USED : 0101 - 1231

SPEED CATEGORIES: 0-5.5 "CALM", 5.5-10.5 mph, ETC



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ACKNOWLEDGMENTS

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REFERENCES

- Evans, T. and Halvorson, D., 1998: Climate of San Diego, California, NOAA Technical Memorandum NWS WR-256, National Weather Service Office, San Diego, CA.
- Felton, D., 1998: Climate of Seattle, Washington, NOAA Technical Memorandum NWS WR-257, National Weather Service Forecast Office, Seattle, WA.
- Rockey, C., 1997: Climate of Eugene, Oregon, NOAA Technical Memorandum NWS WR-248, National Weather Service Forecast Office, Portland, OR.
- Skrbac, P., 1999: Climate of Las Vegas, Nevada, NOAA Technical Memorandum NWS WR-260, National Weather Service Forecast Office, Las Vegas, NV.

- 151 NMC Model Performance in the Northeast Pacific. James E. Overland, PMEL-ERL, April 1980. (PB80 156033)
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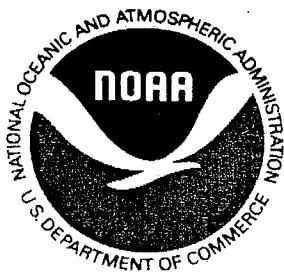
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