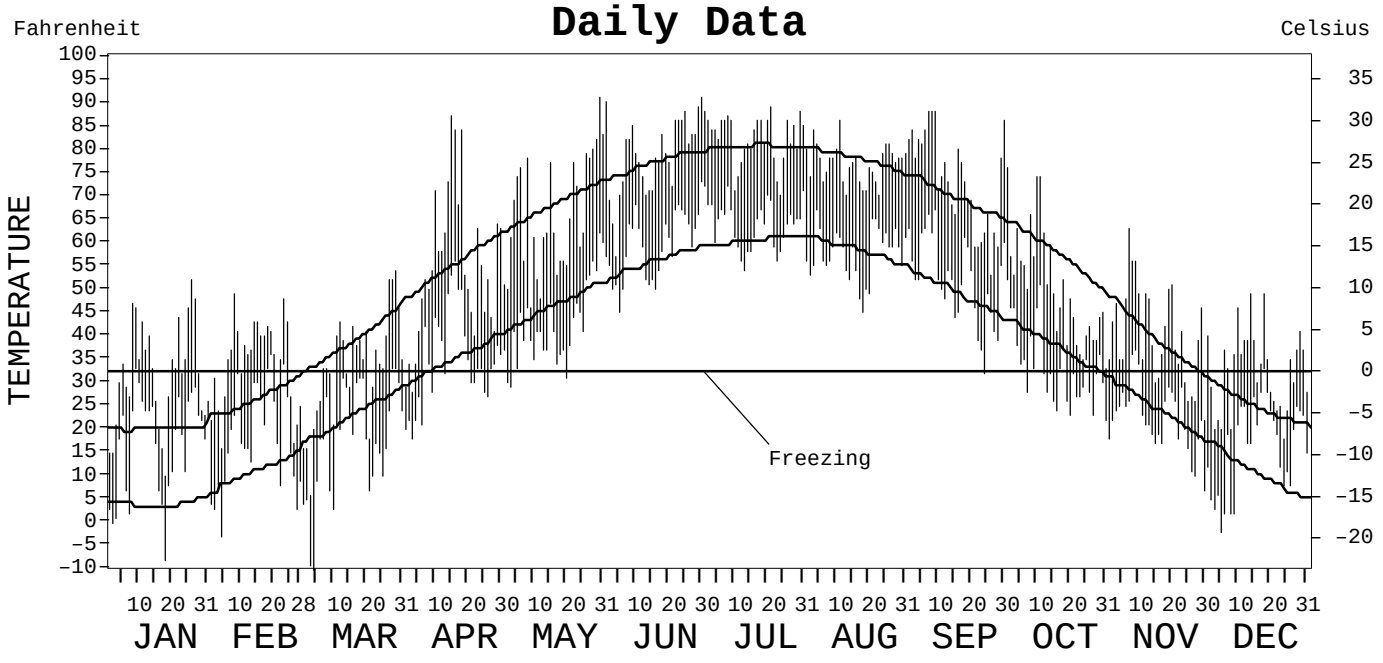
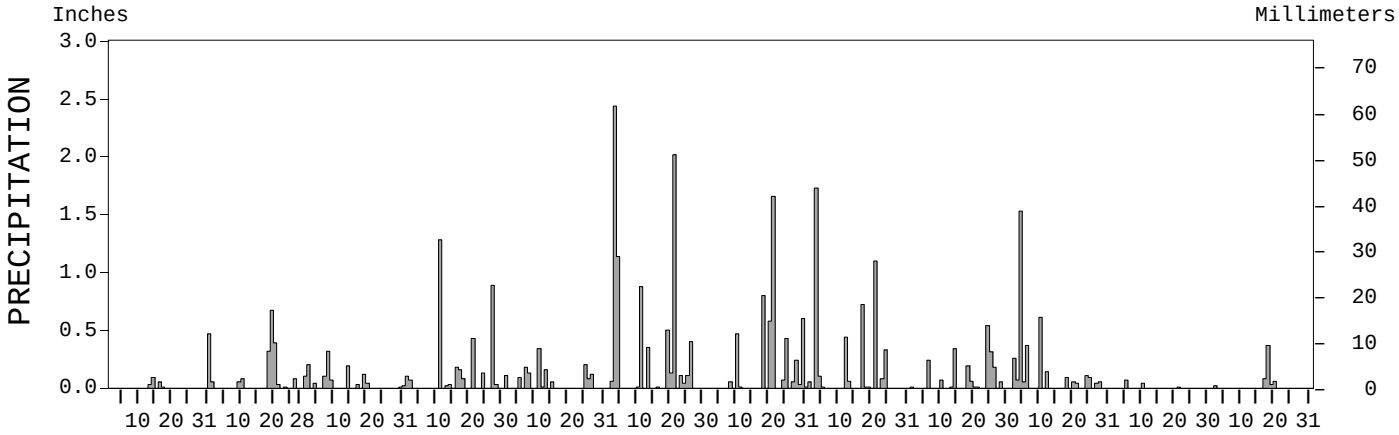
2002 LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA

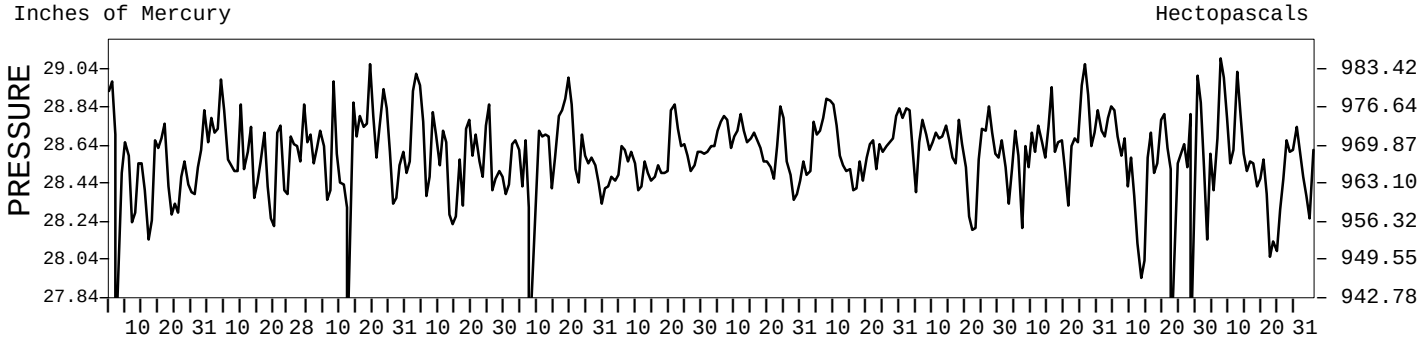
ISSN 0198-2753

ROCHESTER,
MINNESOTA (RST)

Daily Data







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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE
NATIONAL CLIMATIC DATA CENTER
ASHEVILLE, NORTH CAROLINA

METEOROLOGICAL DATA FOR 2002

ROCHESTER, MN (RST)

LATITUDE: 43° 54′ 15″ N | LONGITUDE: 92° 29′ 30″ W | ELEVATION (FT): GRND: 1323 BARO: 1326 | TIME ZONE: CENTRAL (UTC + 6) | WBAN: 14925

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	MEAN DAILY MAXIMUM	31.6	34.1	33.4	54.3	65.5	78.4	82.2	76.8	73.2	50.4	40.2	32.5	54.4
	HIGHEST DAILY MAXIMUM	52	49	54	87	91	91	89	86	88	76	63	49	91
	DATE OF OCCURRENCE	26	08	29	15	30	30	21	11	09+	01	07	18+	JUN 30
	MEAN DAILY MINIMUM	16.9	17.8	17.5	34.9	42.2	59.1	63.7	57.5	51.9	33.3	22.4	16.2	36.1
	LOWEST DAILY MINIMUM	-8	-3	-10	18	29	45	54	45	32	22	7	-2	-10
	DATE OF OCCURRENCE	18	04	04	03	03	05	13	18	24	31	30	05	MAR 04
	AVERAGE DRY BULB	24.3	26.0	25.5	44.6	53.9	68.8	73.0	67.2	62.6	41.9	31.3	24.4	45.3
	MEAN WET BULB	23.0	24.8	23.2	40.3		63.4		63.8	57.6		28.4	22.9	
	MEAN DEW POINT	19.7	21.0	17.8	35.0		60.0		61.5	54.4		23.7	19.0	
	NUMBER OF DAYS WITH:													
	MAXIMUM ≥ 90°	0	0	0	0	1	2	0	0	0	0	0	0	3
	MAXIMUM ≤ 32°	16	11	12	2	0	0	0	0	0	0	7	14	62
	MINIMUM ≤ 32°	30	25	29	12	3	0	0	0	1	17	27	30	174
	MINIMUM ≤ 0°	2	1	2	0	0	0	0	0	0	0	0	1	6
H/C	HEATING DEGREE DAYS	1254	1087	1217	618	363	44	1	22	145	710	1003	1255	7719
	COOLING DEGREE DAYS	0	0	0	12	27	165	257	97	78	0	0	0	636
RH	MEAN (PERCENT)	82	80	74	71	65	75	80	83	78	77	76	79	77
	HOUR 00 LST	84	83	80	76	73	81	87	92	87	83	81	81	82
	HOUR 06 LST	85	85	81	83	79	88	90	95	92	86	86	85	86
	HOUR 12 LST	76	73	67	66	54	66	67	70	65	64	64	73	67
	HOUR 18 LST	81	77	69	61	56	64	71	75	71	74	71	76	70
S	PERCENT POSSIBLE SUNSHINE													
W/O	NUMBER OF DAYS WITH:													
	HEAVY FOG(VISBY ≤ 1/4 MI)	0	1	3	5	2	2	3	4	2	2	1	5	30
	THUNDERSTORMS	0	0	1	3	4	11	6	6	4	2	1	1	39
CLOUDINESS	SUNRISE-SUNSET: (OKTAS)													
	CEILOMETER (≤ 12,000 FT.)													
	SATELLITE (> 12,000 FT.)													
	MIDNIGHT-MIDNIGHT: (OKTAS)													
	CEILOMETER (≤ 12,000 FT.)													
	SATELLITE (> 12,000 FT.)													
	NUMBER OF DAYS WITH:													
	CLEAR													
	PARTLY CLOUDY													
	CLOUDY													
PR	MEAN STATION PRESS. (IN.)		28.59		28.59		28.55	28.62	28.66	28.59	28.67		28.54	
	MEAN SEA-LEVEL PRESS. (IN.)		30.04		30.02		29.94		30.05	29.99	30.11		30.00	
WINDS	RESULTANT SPEED (MPH)	5.6	5.5		2.6		3.8	3.5	2.9	2.2	1.7	5.8	4.7	
	RES. DIR. (TENS OF DEGS.)	27	28		22		18	20	18	18	28	28	24	
	MEAN SPEED (MPH)	12.8	15.3	13.4	14.2	13.1	12.1	9.2	8.2	9.3	9.6	10.9	12.8	11.7
	PREVAIL.DIR.(TENS OF DEGS.)	31	32	36	18	16	18	19	15	18	30	28	28	19
	MAXIMUM 2-MINUTE WIND:													
	SPEED (MPH)	29	44	44	40	46	35	43	26	30	35	39	31	46
	DIR. (TENS OF DEGS.)	19	32	29	30	19	18	27	28	19	18	31	28	19
	DATE OF OCCURRENCE	22+	12	09	25+	05	19	21	17+	30+	14	29	22+	MAY 05
	MAXIMUM 5-SECOND WIND:													
	SPEED (MPH)	35	52	51	49	53	47	58	37	39	45	48	37	58
	DIR. (TENS OF DEGS.)	31	31	29	30	21	01	26	28	22	19	29	10	26
	DATE OF OCCURRENCE	12	12	09	24	05	16	21	17	30+	14	29	17	JUL 21
PRECIPITATION	WATER EQUIVALENT:													
	TOTAL (IN.)	0.65	1.68	1.24	3.40	1.47	8.20	5.00	4.64	2.02	3.50	0.12	0.56	32.48
	GREATEST 24-HOUR (IN.)	0.47	0.76	0.32	1.28	0.35	2.63	1.66	1.83	0.85	1.59	0.07	0.45	2.63
	DATE OF OCCURRENCE	31	19-20	08	11	11-12	03-04	21	03-04	24-25	03-04	05	17-18	JUN 03-04
	NUMBER OF DAYS WITH:													
	PRECIPITATION ≥ 0.01	5	9	12	12	11	14	13	12	13	14	3	5	123
	PRECIPITATION ≥ 0.10	1	3	6	7	7	10	7	6	6	6	0	1	60
	PRECIPITATION ≥ 1.00	0	0	0	1	0	3	1	2	0	1	0	0	8
SNOWFALL	SNOW,ICE PELLETS,HAIL:													
	TOTAL (IN.)	10.0	5.5	7.1	6.9	T	0.0	T	0.0	0.0	1.4	1.0	1.6	33.5
	GREATEST 24-HOUR (IN.)	7.0	2.5	3.0	4.0	T	0.0	T	0.0	0.0	0.9	0.9	0.8	7.0
	DATE OF OCCURRENCE	31	20	02	21	08		30			24	05	20	JAN 31
	MAXIMUM SNOW DEPTH (IN.)	3	8	5	1	0	0	0	0	0	1	1	1	8
	DATE OF OCCURRENCE	19+	01	05	04+						24	05	23+	FEB 01
	NUMBER OF DAYS WITH:													
	SNOWFALL ≥ 1.0	3	2	3	3	0	0	0	0	0	0	0	0	11

NORMALS, MEANS, AND EXTREMES

ROCHESTER, MN (RST)

LATITUDE: 43° 54′ 15″ N | LONGITUDE: 92° 29′ 30″ W | ELEVATION (FT): GRND: 1323 BARO: 1326 | TIME ZONE: CENTRAL (UTC + 6) | WBAN: 14925

	ELEMENT	POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	19.9	26.2	38.7	54.8	67.7	76.6	80.1	77.5	69.2	56.9	38.7	24.5	52.6
	MEAN DAILY MAXIMUM	55	21.2	26.9	37.7	55.1	68.2	77.5	81.4	79.1	70.5	58.7	40.6	26.5	53.6
	HIGHEST DAILY MAXIMUM	43	55	63	79	91	92	101	102	99	95	93	75	62	102
	YEAR OF OCCURRENCE		1981	1981	1986	1980	1980	1985	1988	1988	1978	1997	1999	1998	JUL 1988
	MEAN OF EXTREME MAXS.	55	39.9	44.0	60.3	77.8	85.9	91.0	92.3	90.5	86.2	78.5	61.8	45.4	71.1
	NORMAL DAILY MINIMUM	30	3.7	10.6	22.6	34.6	46.1	55.6	60.1	58.0	48.7	37.1	23.7	10.1	34.2
	MEAN DAILY MINIMUM	55	3.6	9.4	20.6	34.4	46.0	55.7	60.0	57.9	48.5	37.8	24.2	10.8	34.1
	LOWEST DAILY MINIMUM	43	-32	-35	-31	5	21	35	42	37	23	11	-20	-33	-35
	YEAR OF OCCURRENCE		1970	1996	1962	1982	1967	1990	1967	1964	1967	1988	1977	1983	FEB 1996
	MEAN OF EXTREME MINS.	55	-20.3	-14.7	-2.1	18.5	30.9	41.7	48.4	45.3	32.5	21.6	4.1	-13.3	16.1
	NORMAL DRY BULB	30	11.5	17.1	29.8	44.9	56.8	66.5	70.9	68.2	59.2	47.9	32.6	17.2	43.6
	MEAN DRY BULB	55	12.5	18.1	29.1	44.7	56.8	66.6	70.7	68.4	59.5	48.2	32.4	18.5	43.8
	MEAN WET BULB	18	14.5	18.9	28.3	40.0	51.5	60.5	64.1	63.0	54.8	42.8	29.0	17.6	40.4
	MEAN DEW POINT	18	11.0	15.1	23.5	34.0	45.5	56.0	60.5	60.4	50.9	37.8	25.2	14.2	36.2
	NORMAL NO. DAYS WITH:														
	MAXIMUM ≥ 90°	30	0.0	0.0	0.0	0.1	0.3	1.7	3.5	1.8	0.4	0.0	0.0	0.0	7.8
	MAXIMUM ≤ 32°	30	24.2	18.0	9.6	0.6	0.0	0.0	0.0	0.0	0.0	0.1	7.1	22.7	82.3
	MINIMUM ≤ 32°	30	30.8	27.3	26.1	12.9	2.0	0.0	0.0	0.0	0.8	10.1	23.3	30.3	163.6
	MINIMUM ≤ 0°	30	14.1	9.3	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	9.0	35.6
H/C	NORMAL HEATING DEG. DAYS	30	1650	1305	1066	609	281	65	23	50	208	558	1014	1479	8308
	NORMAL COOLING DEG. DAYS	30	0	0	0	1	30	99	181	135	26	1	0	0	473
RH	NORMAL (PERCENT)	30	77	76	75	68	67	69	72	75	75	72	77	80	74
	HOUR 00 LST	30	78	79	79	75	75	79	83	85	84	78	81	82	80
	HOUR 06 LST	30	79	80	82	80	80	82	85	88	88	83	84	83	83
	HOUR 12 LST	30	74	72	69	59	57	57	60	61	63	60	70	76	65
	HOUR 18 LST	30	76	74	70	59	56	57	60	64	68	67	76	80	67
S	PERCENT POSSIBLE SUNSHINE														
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG(VISBY≤1/4 MI)	42	3.5	3.2	4.3	2.2	2.0	1.1	1.7	2.5	2.8	1.9	3.1	4.1	32.4
	THUNDERSTORMS	42	0.1	0.2	1.3	3.3	5.7	7.4	7.7	6.4	4.8	2.0	0.6	0.1	39.6
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	36	5.3	5.3	5.5	5.4	5.2	5.0	4.4	4.4	4.7	4.8	5.8	5.6	5.1
	MIDNIGHT-MIDNIGHT (OKTAS)	32	5.0	4.9	5.3	5.2	5.0	4.5	4.0	4.1	4.3	4.6	5.4	5.3	4.8
	MEAN NO. DAYS WITH:														
	CLEAR	36	7.4	7.3	6.3	6.1	6.8	6.7	8.4	8.7	9.1	8.5	5.0	6.0	86.3
	PARTLY CLOUDY	36	7.1	6.2	7.1	7.4	8.8	10.7	11.9	11.1	7.3	7.8	5.6	6.3	97.3
	CLOUDY	36	16.5	14.8	17.6	16.4	15.4	12.7	10.7	11.2	13.6	14.7	19.4	18.7	181.7
PR	MEAN STATION PRESSURE(IN)	29	28.62	28.62	28.56	28.54	28.54	28.54	28.59	28.62	28.62	28.61	28.59	28.63	28.59
	MEAN SEA-LEVEL PRES. (IN)	17	30.09	30.11	30.05	29.95	29.94	29.93	29.97	30.02	30.03	30.04	30.04	30.10	30.02
WINDS	MEAN SPEED (MPH)	44	13.0	12.6	13.2	13.7	12.4	11.4	10.1	9.8	10.9	12.0	13.1	12.8	12.1
	PREVAIL.DIR(TENS OF DEGS)	29	31	31	31	31	18	18	19	18	18	18	31	31	18
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	6	37	44	47	51	47	48	43	31	36	45	47	38	51
	DIR. (TENS OF DEGS)		31	32	29	23	31	31	27	19	31	29	29	32	23
	YEAR OF OCCURRENCE		1999	2002	1999	2001	1997	1999	2002	1999	1997	2001	1998	1999	APR 2001
	MAXIMUM 5-SECOND:														
	SPEED (MPH)	6	41	52	57	62	64	59	58	38	49	55	56	45	64
	DIR. (TENS OF DEGS)		29	31	28	22	21	31	26	18	31	28	18	28	21
	YEAR OF OCCURRENCE		1997	2002	1999	2001	1998	1999	2002	1999	1997	2001	1998	2001	MAY 1998
PRECIPITATION	NORMAL (IN)	30	0.94	0.75	1.88	3.01	3.53	4.00	4.61	4.33	3.12	2.20	2.01	1.02	31.40
	MAXIMUM MONTHLY (IN)	43	2.53	2.21	3.58	7.30	8.41	12.51	12.33	9.52	10.50	6.08	5.90	2.83	12.51
	YEAR OF OCCURRENCE		1967	1971	1990	2001	1982	2000	1978	1979	1986	1970	1991	1982	JUN 2000
	MINIMUM MONTHLY (IN)	43	0.07	0.04	0.32	0.94	1.17	0.94	1.02	1.17	0.38	0.27	0.06	0.22	0.04
	YEAR OF OCCURRENCE		1961	1964	1994	2000	1963	1985	1975	1970	1975	1965	1967	1967	FEB 1964
	MAXIMUM IN 24 HOURS (IN)	43	1.42	1.05	2.04	3.97	5.23	4.80	7.47	3.89	6.01	2.81	2.64	1.35	7.47
	YEAR OF OCCURRENCE		1967	1984	1966	1990	2000	2000	1981	1991	1978	1966	1991	1982	JUL 1981
	NORMAL NO. DAYS WITH:														
	PRECIPITATION ≥ 0.01	30	8.4	7.6	10.2	11.5	11.4	11.2	9.9	9.9	10.8	8.5	8.7	9.4	117.5
	PRECIPITATION ≥ 1.00	30	0.1	0.0	0.1	0.4	0.7	0.9	1.3	0.9	0.9	0.5	0.2	0.0	6.0
SNOWFALL	NORMAL (IN)	30	11.9	7.8	9.0	4.3	0.*	0.0	0.0	0.0	0.*	1.0	7.1	11.6	52.7
	MAXIMUM MONTHLY (IN)	39	30.2	19.1	25.2	16.4	0.3	T	T	T	0.8	5.4	22.5	35.3	35.3
	YEAR OF OCCURRENCE		1996	1962	1985	1983	1967	1993	1994	1989	1961	1979	1985	2000	DEC 2000
	MAXIMUM IN 24 HOURS (IN)	39	15.4	9.3	11.3	13.7	0.3	T	T	T	0.8	5.4	9.2	9.0	15.4
	YEAR OF OCCURRENCE		1982	1983	1966	1988	1967	1993	1994	1989	1961	1979	1991	1985	JAN 1982
	MAXIMUM SNOW DEPTH (IN)	50	29	21	20	11	1	0	0	0	0	4	11	20	29
	YEAR OF OCCURRENCE		1982	1979	1951	1988	1954					1979	1983	1969	JAN 1982
	NORMAL NO. DAYS WITH:														
	SNOWFALL ≥ 1.0	30	3.1	2.5	3.0	1.1	0.0	0.0	0.0	0.0	0.0	0.2	2.4	3.3	15.6

PRECIPITATION (inches) 2002 ROCHESTER, MN (RST)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1973	1.05	0.88	2.85	4.26	5.26	3.24	4.85	5.71	5.84	2.60	3.37	0.99	40.90
1974	0.36	0.73	2.42	2.59	4.53	7.04	1.26	2.37	1.01	2.54	0.86	0.56	26.27
1975	1.91	0.76	1.78	3.66	2.34	3.86	1.02	5.97	0.38	0.68	4.61	1.21	28.18
1976	0.38	0.49	2.91	2.77	2.09	1.20	1.96	1.68	0.76	0.62	0.11	0.47	15.44
1977	0.37	0.97	2.94	2.91	3.74	4.65	2.34	2.63	3.65	1.97	1.51	1.57	29.25
1978	0.58	0.33	0.43	2.36	3.84	5.62	12.33	1.92	8.08	0.95	1.99	0.83	39.26
1979	1.28	0.34	2.49	2.10	3.83	2.40	2.74	9.52	0.63	4.95	2.28	0.48	33.04
1980	1.52	0.52	0.82	1.17	3.72	1.75	2.56	7.86	2.97	1.88	0.13	0.42	25.32
1981	0.23	2.00	0.54	2.47	2.69	3.46	10.46	6.44	1.01	2.13	0.85	0.72	33.00
1982	1.70	0.11	1.31	3.13	8.41	1.36	3.97	4.94	4.05	2.64	2.38	2.83	36.83
1983	0.82	1.27	2.01	2.52	3.92	4.55	3.12	4.63	4.72	2.88	3.90	1.00	35.34
1984	0.11	1.96	1.08	3.91	2.89	3.74	3.34	1.93	2.40	3.78	1.68	1.79	28.61
1985	0.63	0.57	2.31	1.58	1.74	0.94	2.57	5.40	6.41	1.53	2.43	1.14	27.25
1986	0.59	0.61	2.15	3.80	3.40	5.04	6.00	3.17	10.50	3.57	0.84	0.32	39.99
1987	0.58	0.23	1.29	1.02	2.12	3.69	7.24	3.85	2.05	1.61	1.94	1.75	27.37
1988	1.16	0.22	1.56	2.43	2.35	1.52	1.12	2.88	3.77	0.40	2.87	1.11	21.39
1989	0.41	0.42	1.65	3.49	1.74	2.39	3.31	5.73	0.61	1.67	1.62	0.38	23.42
1990	0.55	0.71	3.58	6.47	4.52	9.27	8.29	5.30	1.30	1.86	0.44	1.65	43.94
1991	0.67	0.45	2.82	5.25	3.84	2.25	5.32	4.66	2.31	1.99	5.90	1.47	36.93
1992	1.03	0.55	2.53	3.24	1.60	1.59	3.51	1.50	4.93	1.30	4.02	1.30	27.10
1993	1.15	0.83	2.92	4.56	4.32	7.44	5.00	6.88	2.75	0.85	1.00	0.74	38.44
1994	1.21	0.72	0.32	4.95	3.22	2.89	4.79	5.64	3.62	1.59	1.77	0.54	31.26
1995	0.45	0.15	2.98	2.91	3.18	3.30	3.56	3.23	2.34	3.07	0.68	0.62	26.47
1996	2.00	0.18	2.64	1.53	2.13	6.43	1.93	2.94	2.08	2.86	3.94	1.37	30.03
1997	1.63	0.92	1.63	2.32	3.05	2.59	9.00	3.23	1.85	2.71	0.26	0.38	29.57
1998	1.47	1.44	3.27	2.20	3.38	5.51	3.30	4.46	1.04	4.71	1.15	0.28	32.21
1999	2.07	1.13	0.81	6.47	5.32	3.76	8.74	6.20	0.56	0.52	1.00	0.49	37.07
2000	0.41	0.45	0.64	0.94	7.38	12.51	5.57	5.26	1.03	1.65	3.06	1.64	40.54
2001	0.91	1.06	1.39	7.30	7.18	5.05	2.46	4.77	3.82	1.71	2.06	1.39	39.10
2002	0.65	1.68	1.24	3.40	1.47	8.20	5.00	4.64	2.02	3.50	0.12	0.56	32.48
POR= 91 YRS	0.94	0.79	1.68	2.71	3.69	4.37	3.83	3.77	3.10	2.05	1.61	0.91	29.45

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AVERAGE TEMPERATURE (˚F) 2002 ROCHESTER, MN (RST)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1973	15.8	20.1	39.3	42.4	53.4	68.3	71.0	70.6	59.4	53.9	34.6	14.9	45.3
1974	12.8	15.8	29.4	46.8	53.8	64.3	74.6	66.2	54.7	49.3	33.4	22.3	43.6
1975	14.6	15.4	21.0	39.6	60.7	67.5	73.2	70.8	56.2	52.9	37.5	22.5	44.3
1976	12.8	28.2	31.8	49.5	55.8	68.2	73.8	69.8	58.5	42.0	24.9	9.6	43.7
1977	-1.8	21.7	38.7	53.0	64.5	66.7	73.0	65.1	60.9	47.3	32.0	14.3	44.6
1978	3.5	8.3	28.3	44.7	57.8	66.4	69.2	68.8	63.7	46.1	29.1	12.6	41.5
1979	-1.5	5.7	26.7	42.1	55.1	67.8	72.7	68.7	62.5	47.4	32.4	26.0	42.1
1980	15.5	15.1	26.6	47.1	60.4	67.1	73.2	69.7	60.1	43.6	35.4	19.2	44.4
1981	18.8	22.4	35.6	48.1	55.0	65.9	69.9	67.6	57.3	44.7	35.9	16.4	44.8
1982	3.0	16.2	28.6	40.9	60.3	61.5	72.9	68.7	60.6	49.8	32.7	26.1	43.4
1983	17.8	23.9	32.1	39.3	51.8	65.9	73.9	73.6	60.5	47.1	33.5	2.9	43.5
1984	12.4	25.4	23.4	44.8	52.5	65.9	67.7	70.6	56.2	49.6	33.1	19.1	43.4
1985	10.3	14.8	35.9	50.4	60.4	62.6	70.5	65.3	58.7	46.0	23.0	6.3	42.0
1986	15.9	15.3	32.7	48.4	57.5	65.9	71.4	64.0	59.5	47.5	26.3	22.5	43.9
1987	19.2	29.3	36.2	50.8	61.0	70.0	73.7	66.8	60.0	42.3	36.8	23.3	47.5
1988	8.3	12.3	31.9	44.0	61.7	70.4	73.7	72.6	61.0	42.0	32.5	19.2	44.1
1989	21.7	9.4	26.3	44.1	55.8	64.4	72.3	68.5	58.2	48.7	27.1	10.0	42.2
1990	25.8	22.1	35.3	45.5	53.8	67.6	69.4	69.4	62.4	46.5	37.7	15.4	45.9
1991	10.1	23.5	34.1	48.3	61.0	72.2	70.1	69.0	57.4	45.5	24.0	21.6	44.7
1992	21.4	26.7	31.3	42.1	58.2	64.6	64.2	63.2	57.7	46.0	30.8	19.8	43.8
1993	12.6	14.6	25.7	41.7	55.7	63.6	69.0	68.3	53.6	45.5	30.3	21.5	41.8
1994	3.4	11.0	33.1	44.5	58.3	68.6	67.3	64.9	63.2	50.4	36.4	24.0	43.8
1995	16.3	18.9	33.4	40.3	55.1	69.2	70.9	73.3	57.8	46.7	25.7	18.1	43.8
1996	9.6	17.0	25.1	40.8	53.4	66.4	66.8	66.5	58.7	47.8	24.6	13.8	40.9
1997	10.5	18.9	28.3	41.7	51.3	67.7	68.9	65.5	60.4	49.7	27.6	25.0	43.0
1998	19.7	29.5	30.0	49.1	63.2	63.9	69.6	69.1	64.4	49.6	36.3	25.1	47.5
1999	11.2	26.6	32.8	46.7	58.1	65.7	73.2	66.7	58.1	47.0	40.1	23.6	45.8
2000	14.4	26.3	39.3	45.6	58.9	64.5	69.4	69.0	59.9	51.7	30.0	6.1	44.6
2001	17.4	11.2	24.0	47.7	57.6	66.4	72.5	68.9	58.0	46.6	45.4	26.4	45.2
2002	24.3	26.0	25.5	44.6	53.9	68.8	73.0	67.2	62.6	41.9	31.3	24.4	45.3
POR= 88 YRS	12.4	17.2	29.4	44.8	56.9	66.3	71.2	68.8	59.9	48.3	32.6	18.9	43.9

HEATING DEGREE DAYS (base 65˚F) 2002 ROCHESTER, MN (RST)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1973–74	3	15	197	349	903	1546	1611	1372	1098	547	350	78	8069
1974–75	0	50	309	478	941	1317	1556	1385	1359	755	196	60	8406
1975–76	19	7	273	380	821	1311	1615	1059	1021	468	283	22	7279
1976–77	1	26	225	710	1195	1715	2071	1208	808	371	90	37	8457
1977–78	1	60	143	543	986	1570	1903	1581	1131	601	254	66	8839
1978–79	11	20	142	577	1069	1624	2064	1658	1183	680	319	31	9378
1979–80	0	47	123	540	974	1201	1533	1442	1185	543	206	53	7847
1980–81	0	11	181	659	882	1416	1424	1185	905	496	305	42	7506
1981–82	21	27	235	621	868	1503	1922	1363	1121	718	164	129	8692
1982–83	0	48	178	464	964	1197	1456	1145	1010	765	403	86	7716
1983–84	8	0	209	555	938	1925	1625	1142	1281	600	381	40	8704
1984–85	23	18	281	470	950	1414	1692	1404	895	456	166	129	7898
1985–86	6	55	268	580	1255	1817	1516	1388	994	492	248	60	8679
1986–87	5	81	187	535	1153	1312	1412	993	888	425	173	31	7195
1987–88	8	64	168	697	837	1290	1755	1527	1020	620	144	22	8152
1988–89	3	27	154	706	970	1414	1335	1555	1190	620	290	99	8363
1989–90	0	16	224	500	1132	1700	1205	1196	912	596	341	55	7877
1990–91	9	14	167	567	815	1534	1701	1154	950	507	222	12	7652
1991–92	15	24	274	597	1225	1342	1343	1104	1036	678	239	80	7957
1992–93	73	104	226	587	1019	1394	1618	1407	1211	693	294	87	8713
1993–94	7	32	341	605	1033	1344	1910	1509	985	613	234	34	8647
1994–95	26	73	116	445	848	1264	1503	1284	974	732	300	56	7621
1995–96	14	0	242	569	1175	1447	1715	1386	1232	721	377	71	8949
1996–97	22	18	215	528	1206	1579	1682	1286	1132	689	416	21	8794
1997–98	38	51	151	498	1117	1236	1398	990	1075	470	116	111	7251
1998–99	3	1	99	473	854	1232	1662	1069	990	543	222	81	7229
1999–00	5	20	239	551	738	1276	1558	1114	793	574	224	84	7176
2000–01	26	11	193	407	1040	1820	1470	1499	1262	517	248	94	8587
2001–02	13	31	222	563	582	1190	1254	1087	1217	618	363	44	7184
2002–	1	22	145	710	1003	1255							

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COOLING DEGREE DAYS (base 65˚F) 2002 ROCHESTER, MN (RST)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1973	0	0	0	0	1	123	196	192	37	11	0	0	560
1974	0	0	0	4	12	65	302	97	7	0	0	0	487
1975	0	0	0	0	68	141	279	194	18	12	0	0	712
1976	0	0	0	9	5	126	278	183	36	4	0	0	641
1977	0	0	0	18	83	98	255	68	26	0	0	0	548
1978	0	0	0	0	39	112	147	146	111	0	0	0	555
1979	0	0	0	0	21	119	246	167	57	1	0	0	611
1980	0	0	0	14	69	121	262	164	41	0	0	0	671
1981	0	0	0	0	4	75	179	113	13	0	0	0	384
1982	0	0	0	0	26	30	254	167	53	0	0	0	530
1983	0	0	0	0	0	121	289	272	79	7	0	0	768
1984	0	0	0	0	1	74	115	201	23	0	0	0	414
1985	0	0	0	26	28	64	182	74	86	0	0	0	460
1986	0	0	0	2	21	94	211	59	29	0	0	0	416
1987	0	0	0	6	57	189	283	124	26	0	0	0	685
1988	0	0	0	0	48	191	280	272	38	0	0	0	829
1989	0	0	0	0	10	90	235	133	26	2	0	0	496
1990	0	0	0	18	3	140	153	158	97	0	0	0	569
1991	0	0	0	11	101	233	181	153	52	0	0	0	731
1992	0	0	0	0	34	75	54	52	16	2	0	0	233
1993	0	0	0	0	10	52	136	137	6	4	0	0	345
1994	0	0	0	6	33	150	104	77	69	0	0	0	439
1995	0	0	0	0	0	188	205	263	36	7	0	0	699
1996	0	0	0	0	22	120	87	73	37	0	0	0	339
1997	0	0	0	0	0	110	165	73	20	31	0	0	399
1998	0	0	0	0	67	86	152	133	89	0	0	0	527
1999	0	0	0	0	15	109	264	79	37	0	0	0	504
2000	0	0	0	0	40	77	167	142	47	4	0	0	477
2001	0	0	0	3	26	139	250	160	17	0	0	0	595
2002	0	0	0	12	27	165	257	97	78	0	0	0	636

SNOWFALL (inches) 2002 ROCHESTER, MN (RST)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1973–74	0.0	0.0	0.0	T	0.3	16.3	2.1	12.3	11.2	0.3	0.0	0.0	42.5
1974–75	0.0	0.0	0.0	0.0	2.9	8.3	14.1	10.2	15.0	2.5	0.0	0.0	53.0
1975–76	0.0	0.0	0.0	T	7.8	1.9	6.6	1.6	10.3	T	0.2	0.0	28.4
1976–77	0.0	0.0	0.0	2.9	1.9	7.7	9.2	1.8	7.5	3.5	0.0	0.0	34.5
1977–78	0.0	0.0	0.0	T	10.0	18.8	7.4	5.9	5.4	1.2	0.0	0.0	48.7
1978–79	0.0	0.0	0.0	0.0	11.2	14.2	24.4	5.0	11.1	7.4	T	0.0	73.3
1979–80	0.0	0.0	0.0	5.4	5.5	0.7	13.6	6.3	12.8	10.9	0.0	0.0	55.2
1980–81	0.0	0.0	0.0	T	0.7	5.1	3.5	16.1	T	0.2	0.0	0.0	25.6
1981–82	0.0	0.0	0.0	2.2	8.2	11.1	27.3	2.2	4.0	7.7	0.0	0.0	62.7
1982–83	0.0	0.0	0.0	0.5	2.4	8.3	7.9	15.9	11.2	16.4	0.0	0.0	62.6
1983–84	0.0	0.0	0.0	T	14.0	16.2	2.7	12.0	16.1	5.0	0.0	0.0	66.0
1984–85	0.0	0.0	0.0	T	3.7	14.4	12.2	9.3	25.2	3.8	0.0	0.0	68.6
1985–86	0.0	0.0	T	0.0	22.5	16.0	11.5	8.7	1.2	0.8	0.0	0.0	60.7
1986–87	0.0	0.0	0.0	T	8.4	3.5	8.1	2.3	4.7	T	0.0	0.0	27.0
1987–88	0.0	0.0	0.0	0.9	1.7	16.0	18.2	5.8	3.1	15.6	0.0	0.0	61.3
1988–89	0.0	0.0	0.0	T	10.8	4.8	4.7	9.3	21.2	0.1	0.2	0.0	51.1
1989–90	0.0	T	0.0	2.6	10.5	6.6	5.9	9.3	0.5	0.2	0.0	T	35.6
1990–91	0.0	0.0	0.0	0.8	1.6	20.8	9.9	6.1	5.9	0.8	0.0	0.0	45.9
1991–92	0.0	0.0	0.0	4.5	20.3	7.3	9.0	6.5	15.0	T	T	0.0	62.6
1992–93	0.0	0.0	0.0	0.8	4.3	11.7	15.7	10.8	9.8	9.3	0.0	T	62.4
1993–94	T	0.0	0.0	T	7.7	6.0	21.8	15.3	2.9	3.2	T	0.0	56.9
1994–95	T	0.0	0.0	0.0	4.8	7.2	4.5	1.4	10.1	5.1	T	0.0	33.1
1995–96	0.0	0.0	T	2.3	4.0	11.8	30.2	1.9	9.3	2.1	0.0		
1996–97					17.3								
1997–98													
1998–99					0.7								
1999–00													
2000–01					5.4	35.3	7.3	7.4	10.2	T	0.0	T	
2001–02	0.0	0.0	0.0	T	0.4	2.2	10.0	5.5	7.1	6.9	T	0.0	32.1
2002–	T	0.0	0.0	1.4	1.0	1.6							
POR= 37 YRS	T	T	0.0	0.8	5.4	10.2	10.4	7.5	9.0	3.8	0.5	T	47.6

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REFERENCE NOTES:

PAGE 1:
THE TEMPERATURE GRAPH SHOWS NORMAL MAXIMUM AND NORMAL MINIMUM DAILY TEMPERATURES (SOLID CURVES) AND THE ACTUAL DAILY HIGH AND LOW TEMPERATURES (VERTICAL BARS).

PAGE 2 AND 3:
H/C INDICATES HEATING AND COOLING DEGREE DAYS.
RH INDICATES RELATIVE HUMIDITY
W/O INDICATES WEATHER AND OBSTRUCTIONS
S INDICATES SUNSHINE.
PR INDICATES PRESSURE.
CLOUDINESS ON PAGE 3 IS THE SUM OF THE CEILOMETER AND SATELLITE DATA NOT TO EXCEED EIGHT EIGHTHS(OKTAS).

GENERAL:
T INDICATES TRACE PRECIPITATION, AN AMOUNT GREATER THAN ZERO BUT LESS THAN THE LOWEST REPORTABLE VALUE.
+ INDICATES THE VALUE ALSO OCCURS ON EARLIER DATES.
BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA.
NORMALS ARE 30-YEAR AVERAGES (1961 – 1990).
ASOS INDICATES AUTOMATED SURFACE OBSERVING SYSTEM.
PM INDICATES THE LAST DAY OF THE PREVIOUS MONTH.
POR (PERIOD OF RECORD) BEGINS WITH THE JANUARY DATA MONTH AND IS THE NUMBER OF YEARS USED TO COMPUTE THE MEAN. INDIVIDUAL MONTHS WITHIN THE POR MAY BE MISSING.
WHEN THE POR FOR A NORMAL IS LESS THAN 30 YEARS, THE NORMAL IS PROVISIONAL AND IS BASED ON THE NUMBER OF YEARS INDICATED.
0.* OR * INDICATES THE VALUE OR MEAN-DAYS-WITH IS BETWEEN 0.00 AND 0.05.
CLOUDINESS FOR ASOS STATIONS DIFFERS FROM THE NON-ASOS OBSERVATION TAKEN BY A HUMAN OBSERVER. ASOS STATION CLOUDINESS IS BASED ON TIME-AVERAGED CEILOMETER DATA FOR CLOUDS AT OR BELOW 12,000 FEET AND ON SATELLITE DATA FOR CLOUDS ABOVE 12,000 FEET.
THE NUMBER OF DAYS WITH CLEAR, PARTLY CLOUDY, AND CLOUDY CONDITIONS FOR ASOS STATIONS IS THE SUM OF THE CEILOMETER AND SATELLITE DATA FOR THE SUNRISE TO SUNSET PERIOD.

GENERAL CONTINUED:
CLEAR INDICATES 0 – 2 OKTAS, PARTLY CLOUDY INDICATES 3 – 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS. WHEN AT LEAST ONE OF THE ELEMENTS (CEILOMETER OR SATELLITE) IS MISSING, THE DAILY CLOUDINESS IS NOT COMPUTED.
WIND DIRECTION IS RECORDED IN TENS OF DEGREES (2 DIGITS) CLOCKWISE FROM TRUE NORTH. ”00” INDICATES CALM. ”36” INDICATES TRUE NORTH.
RESULTANT WIND IS THE VECTOR AVERAGE OF THE SPEED AND DIRECTION.
AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY MAXIMUM AND MINIMUM TEMPERATURE DIVIDED BY 2.
SNOWFALL DATA COMPRISE ALL FORMS OF FROZEN PRECIPITATION, INCLUDING HAIL.
A HEATING (COOLING) DEGREE DAY IS THE DIFFERENCE BETWEEN THE AVERAGE DAILY TEMPERATURE AND 65° F.
DRY BULB IS THE TEMPERATURE OF THE AMBIENT AIR.
DEW POINT IS THE TEMPERATURE TO WHICH THE AIR MUST BE COOLED TO ACHIEVE 100 PERCENT RELATIVE HUMIDITY.
WET BULB IS THE TEMPERATURE THE AIR WOULD HAVE IF THE MOISTURE CONTENT WAS INCREASED TO 100 PERCENT RELATIVE HUMIDITY.

ON JULY 1, 1996, THE NATIONAL WEATHER SERVICE BEGAN USING THE ”METAR” OBSERVATION CODE THAT WAS ALREADY EMPLOYED BY MOST OTHER NATIONS OF THE WORLD. THE MOST NOTICEABLE DIFFERENCE IN THIS ANNUAL PUBLICATION WILL BE THE CHANGE IN UNITS FROM TENTHS TO EIGHTS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.

2002
ROCHESTER, MINNESOTA (RST)

Rochester, Minnesota, is in the Zumbro River Valley. The south branch of the Zumbro flows through Rochester. Within the city of Rochester three creeks flow into the south branch. Terrain around Rochester is rolling, and the elevation ranges from 1,000 to 1,300 feet above sea level.

The National Weather Service station is located 8 miles south of Rochester on a ridge 300 feet above the city elevation. Temperatures from radiation cooling on clear, calm nights can sometimes be much lower in the city.

The succession of high and low pressure systems over Rochester brings a variety of weather that is changeable and stimulating. The weather pattern is continental with four definite seasons. Winters are cold, but summers are pleasant.

The season–to–season temperature variation is quite large. The average temperature for a warm winter is 20 degrees and for a cold winter it is 12 degrees. The average temperature for a warm summer is 70 degrees and a cold summer is 67 degrees, which indicates that summer temperatures are not as variable as those during the winter. The average growing season is about 140 days.

Rochester lies near the northern edge of the influx of moisture from the Gulf of Mexico. Severe storms such as blizzards, freezing rain (glaze), tornadoes, wind, and hail storms do occur. During the five month growing season, May through September, the major crops of corn, soybeans, small grains, and hay are produced. During this period, the normal rainfall is over 18 inches, approximately 65 percent of the annual precipitation.

Snowfall averages above 45 inches per season. The snow season usually begins in November. About one year in ten the first 1 inch or more of snow will occur the latter part of October.

Rolling terrain and the thunderstorm probability make the south branch of the Zumbro River and its tributaries susceptible to flash flooding. Some flooding can occur with the spring snowmelt. In some instances the snowmelt is complicated with moderate spring rainfall.

STATION LOCATION

ROCHESTER, MINNESOTA

LOCATION	Occupied From	Occupied To	Airline Distances and Directions from previous Location	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE SEA LEVEL GROUND TEMPERATURE SITE	ELEVATION ABOVE GROUND WIND INSTRUMENT	EXTREME THERMOMETERS	PSYCHROMETER	SUN-SHINE SWITCH	TIPPING BUCKET RAIN GAUGE	WEIGHING RAIN GAGE	8 INCH RAIN GAGE	HYGROTHERMOMETER	AUTOMATIC OBSERVING EQUIPMENT *	REMARKS
*NOTE:																
AIRPORT																
Municipal Airport	3/01/32	12/13/40	1.2 mi. SSE	44°00′	92°27′	1017		4					3			Operated by Airport Personnel.
Municipal Airport	12/14/40	11/27/43		44°00′	92°27′	1017	57	5	5			4	3			Operated by CAA Personnel.
Municipal Airport	11/28/43	10/22/56		44°00′	92°27′	1017	63	28	28			26	26			First Order WB Station. Instruments moved to roof as follows: thermometer 4/28/52, 8″ rain gage 5/27/53, and weighing gage 6/13/53.
Lobb Field	10/22/56	9/25/60	0.1 mi. NW	44°00′	92°27′	1017	63	a5				a4	a4			a. 450 feet NW of office.
Municipal Airport	9/25/60	06/01/96	6.0 mi. SSW	43°55′	92°30′	1297	30	4	20 g4		f4	4	b3 c25 e4	d5 h5		b. Added 10/1/62. c. Effective 4/15/73. d. Telepsychrometer (4′) 10/22/56–9/25/60. Hygro. comm. 9/25/60. e. Moved to ground 7/1/77. f. Installed 6/1/81. g. New type 5/25/82. h. Type change 9/10/85.
Municipal Airport	06/01/96	Present		43°54′	92°30′	i1323									S	ASOS Commissioned 06/01/96 i. Ground elevation.

* TYPE

M = AMOS
T = AUTOB
S = ASOS
W = AWOS

*** NOTES: For earlier station history see previous edition.**