



# JUNE 2003

## LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

# MILWAUKEE, WI

GENERAL MITCHELL FIELD (MKE)  
 Lat: 42°56' N Long: 87°53' W Elev (Ground): 677 Feet  
 Time Zone: CENTRAL WBAN: 14839 ISSN #:0198-5752

JUNE 2003  
MILWAUKEE, WI

DATE	TEMPERATURE °F						DEG DAYS BASE 65°		WEATHER	SNOW/ICE ON GND (IN)		PRECIPITATION (INCHES)		PRESSURE (INCHES OF HG)		WIND SPEED = MPH DIR = TENS OF DEGREES						DATE	
	MAXIMUM	MINIMUM	AVERAGE	DEP FROM NORMAL	AVERAGE DEW PT	AVERAGE WET BULB	HEATING	COOLING		DEPTH	WATER EQUIV	SNOW FALL	WATER EQUIV	AVERAGE STATION	AVERAGE SEA LEVEL	RESULTANT SPEED	RES DIR	AVERAGE SPEED	MAXIMUM				
																			5-SEC		2-MIN		
1	2	3	4	5	6	7	8	9	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
01	60	37*	49*	-13	34	43	16	0			0.0	0.00	29.33	30.09	1.2	12	5.4	23	29	13	13	01	
02	64	46	55	-8	38	47	10	0			0.0	0.00	29.27	30.01	2.5	14	4.4	18	22	15	22	02	
03	64	50	57	-6	45	50	8	0	RA BR		0.0	0.04	29.19	29.93	8.1	02	9.1	22	02	17	03	03	
04	63	49	56	-7	40	48	9	0			0.0	0.00	29.17	29.91	8.7	02	9.4	25	06	22	06	04	
05	77	52	65	1	44	53	0	0	RA		0.0	T	29.20	29.95	2.1	27	6.4	26	28	16	07	05	
06	69	52	61	-3	51	54	4	0	RA BR HZ		0.0	0.05	29.15	29.89	5.0	18	6.1	17	22	14	22	06	
07	69	49	59	-5	52	55	6	0	FG+ BR HZ		0.0	0.00	29.04	29.78	3.7	14	5.9	17	13	15	14	07	
08	64	49	57	-7	53	55	8	0	TS TSRA RA FG BR SQ		0.0	0.79	28.91	29.65	3.1	25	6.8	37*	28	25	25	08	
09	72	53	63	-2	53	55	2	0	BR HZ		0.0	0.00	29.10	29.84	2.9	20	8.6	20	32	15	14	09	
10	74	53	64	-1	58	61	1	0	RA BR HZ		0.0	T	28.97	29.70	5.8	21	9.1	33	22	26	22	10	
11	57	47	52	-13	50	51	13	0	FG BR		0.0	0.00	29.13	29.87	11.9	03	12.0	25	02	21	02	11	
12	66	48	57	-8	51	54	8	0			0.0	0.00	29.10	29.84	5.7	04	6.2	16	02	14	02	12	
13	70	51	61	-4	56	59	4	0	FG BR HZ		0.0	0.00	29.12	29.86	2.2	10	3.0	12	15	9	13	13	
14	70	54	62	-5	56	59	3	0	BR HZ		0.0	0.00	29.28	30.02	7.3	03	7.6	23	02	17	02	14	
15	66	56	61	-6	52	55	4	0			0.0	0.00	29.39	30.13	11.8	02	12.2	25	01	21	02	15	
16	67	51	59	-8	43	51	6	0			0.0	0.00	29.41	30.16	4.5	03	5.6	13	01	10	01	16	
17	75	53	64	-3	48	56	1	0			0.0	0.00	29.30	30.04	3.0	13	6.0	17	09	14	08	17	
18	85	56	71	4	56	61	0	6	TS RA HZ		0.0	0.01	29.15	29.88	3.0	34	9.5	32	01	24	02	18	
19	59	52	56	-11	42	49	9	0	RA		0.0	T	29.37	30.11	16.2	02	16.3	33	01	28*	02	19	
20	70	47	59	-8	44	51	6	0			0.0	0.00	29.42	30.17	3.3	06	4.8	14	10	10	06	20	
21	75	49	62	-5	47	54	3	0			0.0	0.00	29.32	30.06	4.9	17	6.9	20	14	17	15	21	
22	84	58	71	3	51	60	0	6			0.0	0.00	29.23	29.96	5.7	19	7.4	20	26	16	14	22	
23	88	57	73	5	57	64	0	8	HZ		0.0	0.00	29.21	29.94	7.8	19	8.5	21	22	18	21	23	
24	93	69	81	12	64	70	0	16	HZ		0.0	0.00	29.24	29.96	9.7	20	10.4	25	21	22	17	24	
25	93*	70	82*	13	68	71	0	17	TS RA BR HZ		0.0	0.01	29.18	29.90	9.5	21	11.1	31	26	25	27	25	
26	74	61	68	-1	56	61	0	3	RA BR		0.0	0.01	29.11	29.84	12.6	27	13.4	31	28	24	28	26	
27	82	57	70	1	52	59	0	5	TS TSRA RA BR		0.0	0.30	29.16	29.89	8.9	25	11.1	30	34	24	23	27	
28	67	54	61	-8	56	58	4	0	TS TSRA RA BR		0.0	0.28	29.17	29.91	3.5	04	6.1	20	06	17	06	28	
29	80	61	71	1	56	62	0	6	BR		0.0	0.00	29.29	30.02	6.0	29	8.4	24	27	17	26	29	
30	81	62	72	2	55	62	0	7			0.0	0.00	29.40	30.13	3.8	18	7.1	20	14	16	14	30	

72.6	53.4	63.0	■ ■	50.9	56.3	4.2	2.5	< MONTHLY AVERAGES	TOTALS->	0.0	1.49	29.21	29.95	1.0	29	8.2	<- MONTHLY AVERAGES
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-3.7	-2.9	-3.3	■ ■	DEPARTURE FROM NORMAL						-2.07	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3					
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<b>DEGREE DAYS</b>				GREATEST 24-HR PRECIPITATION: 0.79 DATE :08				SEA LEVEL PRESSURE DATE TIME			
MONTHLY TOTAL DEPARTURE				SEASON TO DATE TOTAL DEPARTURE				GREATEST 24-HR SNOWFALL: 0.0 DATE :			
HEATING: 125 39 7174 87				GREATEST SNOW DEPTH: 0 DATE :				MAXIMUM MINIMUM : 30.25 20 0852			
COOLING: 74 -40 75 -71				NUMBER OF DAYS WITH →		MAXIMUM TEMP ≥ 90: 2		MINIMUM TEMP ≤ 32: 0		PRECIPITATION ≥ 0.01 INCH : 8	
						MAXIMUM TEMP ≤ 32 : 0		MINIMUM TEMP ≤ 0 : 0		PRECIPITATION ≥ 0.10 INCH : 3	
						THUNDERSTORMS : 5		HEAVY FOG : 1		SNOWFALL ≥ 1.0 INCH : 0	

# HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

## MILWAUKEE, WI

JUNE 2003

MKE

WBAN # 14839

DATE	FOR HOUR (LST) ENDING AT												DATE	FOR HOUR (LST) ENDING AT												DATE	Sum if Different (See Note)	2400 LST	
	1	2	3	4	5	6	7	8	9	10	11	12		13	14	15	16	17	18	19	20	21	22	23	24			Water	Equiv.
01													01												01		0.00		
02													02												02		0.00		
03			T	T	0.01	0.01	0.01	0.01	T				03												03		0.04		
04			T	T									04												04		0.00		
05			T	T									05												05		T		
06													06	0.01	0.02	0.01		T	T		T	T	0.01	T	06		0.05		
07													07												07		0.00		
08			0.18	0.11	0.04				T	T		T	08	0.25	0.19	0.02	T								08		0.79		
09									T	T	T	T	09												09		0.00		
10						T	T	T	T				10	T	T	T									10		T		
11													11												11		0.00		
12													12												12		0.00		
13													13												13		0.00		
14													14												14		0.00		
15													15												15		0.00		
16													16												16		0.00		
17													17					T							17		0.00		
18													18						T					0.01	18		0.01		
19	T												19						T						19		T		
20													20							T					20		0.00		
21													21												21		0.00		
22													22												22		0.00		
23													23												23		0.00		
24													24												24		0.00		
25													25										0.01		25		0.01		
26	T			T				0.01	T				26												26		0.01		
27													27					0.14					0.16		27		0.30		
28								0.04	0.05	0.16	T	T	28	0.03										28		0.28			
29													29												29		0.00		
30													30												30		0.00		

### MAXIMUM SHORT DURATION PRECIPITATION (See Note)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)	.15	.21	.21	.21	.22	.38	.40	.41	.44	.44	.46	.46
Ending Date	08	08	08	08	08	08	08	08	08	08	08	08
Ending Time (Hour/Min)	1248	1252	1252	1252	1252	1327	1334	1334	1334	1334	1414	1414

Date and time are not entered for TRACE amounts.

Note : The sum of the hourly totals is given when it differs from the daily total. NWS does not edit ASOS hourly values but may edit daily and monthly totals. Hourly, daily, and monthly totals are printed as reported by the ASOS site.

## REFERENCE NOTES & SUPPLEMENTAL SUMMARIES

\* = Extreme for the month (last occurrence if more than one)

T = Trace precipitation amount

+ = also occurs on earlier date

FG+ = Heavy fog, visibility .25 miles or less

BLANK entries denote missing or unreported data

Resultant wind is the vector sum of the wind speeds and directions divided by the number of observations.

Wind direction is recorded in tens of degrees (2 digits) clockwise from true north. '00' = calm, 'VR' = variable.

Precipitation is for the 24-hour period ending at the time indicated in the column heading.

Water Equivalent of snow on the ground is reported only when the depth is 2 or more inches.

NORMALS ARE FOR THE YEARS 1971–2000

### WEATHER NOTATIONS

QUALIFIER	WEATHER PHENOMENA		
	PRECIPITATION	OBSCURATION	OTHER
BC Patches	DZ Drizzle	BR Mist	DS Duststorm
BL Blowing	GR Hail	DU Widespread Dust	FC Funnel Cloud
DR Low Drifting	GS Small Hail and/or Snow Pellets	FG Fog	+FC Tornado Waterspout
FZ Freezing	IC Ice Crystals	FU Smoke	PO Well-Developed Dust/Sand Whirls
MI Shallow	PL Ice Pellets	HZ Haze	SQ Squalls
PR Partial	RA Rain	PY Spray	SS Sandstorm
SH Shower(s)	SG Snow Grains	SA Sand	GL Glaze
TS Thunderstorm	SN Snow	VA Volcanic Ash	
VC In the Vicinity	UP Unknown Precipitation		

Intensity (as indicated on pages 4 to 6):  
'+' = Heavy    ' ' = Moderate    '-' = Light

## MILWAUKEE, WI JUNE 2003

Ceilometer (30-second) data are used to derive cloudiness at or below 12,000 feet. This cloudiness is the mean cloud cover detected during sunrise to sunset (SR–SS), or midnight to midnight (MN–MN).

Satellite data are used to derive cloudiness above 12,000 feet. Effective Cloud Amount is based on the cloud cover and the transparency of the clouds within the satellite field of view (approx. 31x31 miles).

Sky Condition is based on the sum (not to exceed 8) of the sunrise to sunset cloud cover below and above 12,000 feet. Both ceilometer and satellite data must be present to compute Sky Condition. Clear = 0–2 oktas, Partly Cloudy = 3–6 oktas, Cloudy = 7–8 oktas.

A Heating (Cooling) Degree Day is the difference between the average daily temperature and 65 degrees F. The HDD season begins July 1, the CDD season begins January 1.

Dew Point is the temperature to which the air must be cooled to achieve 100% relative humidity. Wet Bulb is the temperature the air would have if cooled to saturation at constant pressure by evaporation of water into it.

Snow Depth, Snowfall, and Sunshine data may come from nearby sites that the National Weather Service deems Climatologically representative of this site.

### ADDITIONAL NOTES:

DATE	SUNSHINE		CLOUDINESS (OKTAS)				VISIBILITY (MILES)		RESERVED
	TOTAL MINUTES	PERCENT POSSIBLE	SR–SS		MN–MN		MINIMUM	MAXIMUM	
			CEILOMETER	SATELLITE	CEILOMETER	SATELLITE			
01							10.00	10.00	
02							10.00	10.00	
03							4.00	10.00	
04							10.00	10.00	
05							9.00	10.00	
06							2.00	9.00	
07							.25	8.00	
08							.50	10.00	
09							5.00	10.00	
10							2.00	10.00	
11							.25	10.00	
12							9.00	10.00	
13							.50	10.00	
14							3.00	10.00	
15							10.00	10.00	
16							10.00	10.00	
17							10.00	10.00	
18							3.00	10.00	
19							10.00	10.00	
20							10.00	10.00	
21							10.00	10.00	
22							8.00	10.00	
23							6.00	10.00	
24							6.00	10.00	
25							5.00	10.00	
26							4.00	10.00	
27							3.00	10.00	
28							.75	10.00	
29							3.00	10.00	
30							10.00	10.00	
<b>MONTHLY AVGS</b>							6.01	9.90	
<b>SUNSHINE (MINUTES)</b>									
Total:                      Possible: Percent Possible:									
<b>NUMBER OF DAYS WITH:</b>									
<b>SKY CONDITION</b>									
CLR   PTLY CLDY   CLOUDY   MISSING 30									
<b>MINIMUM VISIBILITY (MILES)</b>									
<=0.25      <=3.0      >=7.0 2              10              13									

# OBSERVATIONS AT 3-HOURLY INTERVALS

# MILWAUKEE, WI

JUNE 2003

MKE

WBAN # 14839

HOUR (LST)	SKY COVER	CEILING 100'S OF FT	SATELLITE		WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SKY COVER	CEILING 100'S OF FT	SATELLITE		WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)	
			OBSERVATION TIME (LST)	EFF CLD AMT Okta		DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL				OBSERVATION TIME (LST)	EFF CLD AMT Okta		DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
			VISIBILITY (MILES)	VISIBILITY (MILES)		VISIBILITY (MILES)	VISIBILITY (MILES)	VISIBILITY (MILES)	VISIBILITY (MILES)	VISIBILITY (MILES)	VISIBILITY (MILES)	VISIBILITY (MILES)	VISIBILITY (MILES)				VISIBILITY (MILES)	VISIBILITY (MILES)		VISIBILITY (MILES)							
<div style="display: flex; justify-content: space-between;"> <span>SUNRISE: 0416 JUN 01</span> <span>SUNSET: 1923</span> <span>SUNRISE: 0413 JUN 07</span> <span>SUNSET: 1927</span> </div>																											
03	FEW	NC		10.00	38	33	36	83	6	32	29.33	30.10	03	SCT	NC	0.25	FG	50	50	50	100	0	00	29.05	29.79		
06	BKN	250		10.00	43	34	39	71	5	30	29.35	30.11	06	CLR	NC	1.25	BR	57	56	56	96	3	26	29.07	29.81		
09	FEW	NC		10.00	54	30	43	40	6	05	29.36	30.12	09	CLR	NC	6.00	HZ	64	55	59	74	5	23	29.06	29.80		
12	CLR	NC		10.00	57	32	46	39	5	VR	29.35	30.11	12	FEW	NC	5.00	HZ	67	57	61	71	10	12	29.03	29.77		
15	FEW	NC		10.00	60	35	48	39	8	11	29.33	30.09	15	BKN	085	6.00	HZ	68	56	61	66	14	13	29.02	29.76		
18	FEW	NC		10.00	56	35	46	46	10	14	29.31	30.06	18	SCT	NC	5.00	HZ	60	53	56	78	7	13	29.02	29.76		
21	CLR	NC		10.00	52	38	45	59	3	19	29.31	30.06	21	BKN	100	4.00	BR	53	51	52	93	6	08	29.04	29.78		
24	CLR	NC		10.00	48	34	42	58	6	22	29.30	30.05	24	OVC	110	7.00	BR	50	49	49	96	0	00	29.00	29.74		
<div style="display: flex; justify-content: space-between;"> <span>SUNRISE: 0415 JUN 02</span> <span>SUNSET: 1924</span> <span>SUNRISE: 0413 JUN 08</span> <span>SUNSET: 1928</span> </div>																											
03	CLR	NC		10.00	48	36	43	63	0	00	29.29	30.03	03	OVC	023	3.00	RA BR	50	49	49	96	0	00	28.96	29.70		
06	SCT	NC		10.00	50	38	44	63	0	00	29.31	30.06	06	OVC	003	0.50	FG	51	51	51	100	5	14	28.93	29.67		
09	OVC	200		10.00	60	39	50	46	7	16	29.31	30.06	09	BKN	060	5.00	-RA BR	61	58	59	90	7	18	28.90	29.64		
12	OVC	180		10.00	63	38	51	40	9	13	29.28	30.02	12	BKN	033	6.00	+TSRA	63	52	57	68	10	27	28.87	29.60		
15	OVC	150		10.00	55	38	47	53	9	12	29.26	30.01	15	OVC	012	8.00	-RA	58	55	56	90	6	29	28.86	29.60		
18	OVC	140		10.00	53	40	47	61	0	00	29.22	29.97	18	BKN	230	10.00		63	52	57	68	9	26	28.87	29.61		
21	OVC	120		10.00	52	39	46	61	0	00	29.22	29.96	21	BKN	090	10.00		59	54	56	83	6	27	28.94	29.67		
24	OVC	140		10.00	54	42	48	64	3	32	29.22	29.96	24	CLR	NC	10.00		57	53	55	87	7	29	28.95	29.68		
<div style="display: flex; justify-content: space-between;"> <span>SUNRISE: 0415 JUN 03</span> <span>SUNSET: 1924</span> <span>SUNRISE: 0413 JUN 09</span> <span>SUNSET: 1929</span> </div>																											
03	OVC	070		7.00	54	45	49	72	6	26	29.21	29.95	03	CLR	NC	7.00		54	52	53	93	6	28	28.98	29.72		
06	OVC	060	-RA BR	4.00	53	49	51	86	3	30	29.21	29.95	06	CLR	NC	7.00		57	53	55	87	7	28	29.06	29.80		
09	OVC	080	-RA	8.00	50	42	46	74	14	02	29.21	29.96	09	FEW	NC	10.00		66	52	58	61	14	28	29.10	29.84		
12	SCT	NC		10.00	63	48	55	58	14	03	29.17	29.91	12	BKN	042	6.00	HZ	60	54	57	80	10	11	29.13	29.87		
15	BKN	140		8.00	58	45	51	62	10	02	29.17	29.91	15	SCT	NC	6.00	HZ	63	55	58	76	10	13	29.15	29.89		
18	OVC	130		8.00	53	44	49	72	10	03	29.18	29.93	18	BKN	250	8.00		61	53	57	75	10	15	29.16	29.90		
21	OVC	110		10.00	54	41	48	62	10	02	29.19	29.93	21	FEW	NC	9.00		56	50	53	81	7	12	29.15	29.88		
24	OVC	150		10.00	54	41	48	62	8	01	29.17	29.91	24	SCT	NC	7.00		54	50	52	87	6	16	29.15	29.89		
<div style="display: flex; justify-content: space-between;"> <span>SUNRISE: 0414 JUN 04</span> <span>SUNSET: 1925</span> <span>SUNRISE: 0413 JUN 10</span> <span>SUNSET: 1929</span> </div>																											
03	OVC	140		10.00	52	43	48	72	3	06	29.16	29.91	03	OVC	085	8.00		56	51	53	84	5	15	29.09	29.83		
06	BKN	140		10.00	51	42	47	71	9	02	29.17	29.91	06	OVC	130	7.00	-RA	61	53	57	75	9	17	29.01	29.75		
09	OVC	120		10.00	54	39	47	57	15	02	29.18	29.92	09	BKN	100	10.00		67	58	62	73	13	20	28.98	29.72		
12	BKN	200		10.00	60	41	50	50	14	04	29.16	29.90	12	OVC	028	10.00		70	60	64	71	16	22	28.90	29.64		
15	OVC	100		10.00	61	39	50	44	7	33	29.15	29.89	15	OVC	027	6.00	BR	67	64	65	91	0	00	28.91	29.64		
18	OVC	110		10.00	55	39	47	55	6	03	29.17	29.91	18	SCT	NC	10.00		73	63	67	71	13	24	28.89	29.62		
21	OVC	120		10.00	50	39	45	66	9	03	29.18	29.92	21	SCT	NC	9.00		67	62	64	84	0	00	28.93	29.66		
24	BKN	120		10.00	52	41	47	66	7	30	29.20	29.94	24	OVC	004	2.00	BR	55	54	54	96	9	06	29.00	29.74		
<div style="display: flex; justify-content: space-between;"> <span>SUNRISE: 0414 JUN 05</span> <span>SUNSET: 1926</span> <span>SUNRISE: 0413 JUN 11</span> <span>SUNSET: 1930</span> </div>																											
03	OVC	080	-RA	9.00	53	47	50	80	5	11	29.21	29.95	03	OVC	013	2.00		53	51	52	93	12	04	29.07	29.81		
06	BKN	140		9.00	57	44	50	62	9	28	29.20	29.95	06	OVC	002	0.50	BR	53	52	52	96	12	03	29.11	29.84		
09	BKN	130		10.00	66	43	54	43	14	28	29.22	29.96	09	OVC	002	0.25	BR	51	50	51	96	13	02	29.15	29.89		
12	BKN	130		10.00	72	43	56	35	8	30	29.23	29.97	12	OVC	002	1.50	BR	53	50	51	89	16	02	29.16	29.91		
15	BKN	130		10.00	73	44	57	36	7	08	29.19	29.93	15	OVC	004	10.00		52	50	51	93	14	03	29.16	29.90		
18	SCT	NC		10.00	68	42	54	39	7	16	29.19	29.92	18	OVC	003	8.00		49	48	48	97	15	02	29.14	29.89		
21	FEW	NC		10.00	58	44	51	60	3	19	29.20	29.94	21	SCT	NC	9.00		49	48	48	97	9	02	29.16	29.90		
24	CLR	NC		9.00	59	43	51	56	5	20	29.22	29.95	24	OVC	230	10.00		49	47	48	93	5	02	29.11	29.85		
<div style="display: flex; justify-content: space-between;"> <span>SUNRISE: 0414 JUN 06</span> <span>SUNSET: 1927</span> <span>SUNRISE: 0412 JUN 12</span> <span>SUNSET: 1930</span> </div>																											
03	FEW	NC		8.00	54	45	49	72	0	00	29.20	29.93	03	BKN	048	10.00		51	49	50	92	5	04	29.10	29.85		
06	OVC	230		6.00	60	48	54	65	3	19	29.20	29.94	06	OVC	015	9.00		52	50	51	93	8	04	29.10	29.85		
09	OVC	150		5.00	64	53	58	68	7	21	29.18	29.92	09	OVC	015	10.00		57	52	54	83	8	03	29.12	29.86		
12	OVC	150		8.00	68	50	58	53	0	00	29.16	29.90	12	OVC	017	10.00		60	53	56	78	9	01	29.11	29.85		
15	OVC	090		4.00	60	56	58	86	7	20	29.16	29.90	15	SCT	NC	10.00		65	56	60	73	8	03	29.09	29.83		
18	OVC	085		5.00	58	52	55	81	8	13	29.11	29.85	18	BKN	230	10.00		57	50	53	78	9	06	29.08	29.82		
21	OVC	049		5.00	54	51	52	90	10	15	29.10	29.83	21	OVC	016	10.00		58	50	54	75	3	25	29.12	29.86		
24	OVC	023		3.00	53	50	51	89	5	15	29.07	29.80	24	CLR	NC	10.00		55	50	52	83	0	00	29.11	29.85		

# OBSERVATIONS AT 3-HOURLY INTERVALS

# MILWAUKEE, WI

JUNE 2003

MKE

WBAN # 14839

HOUR (LST)	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)					
	SKY COVER	CEILING 100'S OF FT			OBSERVATION TIME (LST)	EFF CLD AMT Oktas	DRY BULB		DEW POINT	WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG		STATION	SEA LEVEL			SKY COVER	CEILING 100'S OF FT	OBSERVATION TIME (LST)		EFF CLD AMT Oktas	DRY BULB	DEW POINT	WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
SUNRISE: 0412					JUN 13					SUNSET: 1931					SUNRISE: 0412					JUN 19					SUNSET: 1933				
03	SCT	NC	9.00		54	51	52	90	0	00	29.08	29.82	03	SCT	NC	10.00		53	45	49	74	13	02	29.28	30.02				
06	OVC	003	1.50	BR	57	54	55	90	0	00	29.11	29.85	06	FEW	NC	10.00		56	47	51	72	15	02	29.32	30.07				
09	BKN	200	6.00	HZ	64	58	60	81	3	VR	29.12	29.86	09	CLR	NC	10.00		58	48	53	70	20	02	29.38	30.13				
12	BKN	200	9.00		69	58	62	68	9	03	29.13	29.86	12	CLR	NC	10.00		56	46	51	70	16	03	29.41	30.16				
15	SCT	NC	10.00		69	57	62	66	7	09	29.13	29.86	15	CLR	NC	10.00		58	38	48	48	20	02	29.40	30.15				
18	BKN	250	10.00		70	55	61	59	0	00	29.11	29.84	18	CLR	NC	10.00		57	38	48	49	14	02	29.38	30.13				
21	SCT	NC	7.00		62	56	59	81	5	11	29.13	29.87	21	CLR	NC	10.00		54	32	44	43	10	01	29.39	30.14				
24	CLR	NC	7.00		60	56	58	86	0	00	29.17	29.90	24	CLR	NC	10.00		52	38	45	59	10	03	29.41	30.17				
SUNRISE: 0412					JUN 14					SUNSET: 1931					SUNRISE: 0413					JUN 20					SUNSET: 1933				
03	FEW	NC	7.00		59	55	57	87	0	00	29.19	29.92	03	CLR	NC	10.00		50	39	45	66	3	31	29.44	30.19				
06	BKN	250	3.00	BR	57	55	56	93	0	00	29.24	29.97	06	CLR	NC	10.00		53	44	49	72	3	01	29.46	30.22				
09	BKN	250	10.00		65	58	61	78	7	03	29.29	30.02	09	BKN	250	10.00		58	47	52	67	10	06	29.49	30.25				
12	BKN	240	10.00		69	60	64	73	12	05	29.31	30.05	12	FEW	NC	10.00		64	48	55	56	8	06	29.45	30.20				
15	OVC	043	9.00		66	57	61	73	9	01	29.32	30.06	15	FEW	NC	10.00		66	45	55	47	8	09	29.42	30.17				
18	BKN	230	7.00		63	57	60	81	10	02	29.30	30.04	18	BKN	240	10.00		70	37	53	30	0	00	29.36	30.11				
21	FEW	NC	10.00		61	54	57	78	9	01	29.32	30.07	21	FEW	NC	10.00		57	48	52	72	3	10	29.35	30.10				
24	FEW	NC	10.00		59	53	56	81	16	02	29.34	30.08	24	CLR	NC	10.00		53	44	49	72	5	21	29.36	30.11				
SUNRISE: 0412					JUN 15					SUNSET: 1932					SUNRISE: 0413					JUN 21					SUNSET: 1934				
03	CLR	NC	10.00		56	52	54	87	13	01	29.36	30.11	03	CLR	NC	10.00		50	43	47	77	3	29	29.35	30.10				
06	SCT	NC	10.00		58	53	55	84	12	01	29.37	30.12	06	CLR	NC	10.00		56	45	50	67	5	26	29.38	30.13				
09	FEW	NC	10.00		60	53	56	78	13	03	29.40	30.15	09	CLR	NC	10.00		69	46	57	44	7	23	29.37	30.12				
12	SCT	NC	10.00		62	54	57	75	13	03	29.40	30.15	12	CLR	NC	10.00		74	52	61	46	10	12	29.33	30.08				
15	SCT	NC	10.00		65	54	59	68	12	03	29.39	30.14	15	CLR	NC	10.00		73	48	59	41	14	15	29.30	30.03				
18	FEW	NC	10.00		58	50	54	75	13	02	29.39	30.14	18	FEW	NC	10.00		67	46	56	47	10	15	29.27	30.01				
21	CLR	NC	10.00		59	48	53	67	10	01	29.40	30.15	21	SCT	NC	10.00		62	46	54	56	3	20	29.28	30.01				
24	CLR	NC	10.00		57	46	51	67	5	VR	29.38	30.13	24	FEW	NC	10.00		61	47	54	60	6	20	29.26	30.00				
SUNRISE: 0412					JUN 16					SUNSET: 1932					SUNRISE: 0413					JUN 22					SUNSET: 1934				
03	CLR	NC	10.00		54	46	50	75	0	00	29.40	30.15	03	CLR	NC	10.00		59	48	53	67	6	22	29.27	30.01				
06	FEW	NC	10.00		57	47	52	69	7	04	29.43	30.18	06	FEW	NC	8.00		64	51	57	63	5	21	29.30	30.03				
09	FEW	NC	10.00		60	45	52	58	7	03	29.44	30.19	09	BKN	250	10.00		78	51	62	39	6	25	29.27	30.00				
12	SCT	NC	10.00		62	48	55	60	8	07	29.43	30.18	12	BKN	250	10.00		81	50	63	34	14	21	29.26	29.98				
15	FEW	NC	10.00		64	48	55	56	6	07	29.42	30.17	15	SCT	NC	10.00		81	55	65	41	10	15	29.21	29.94				
18	FEW	NC	10.00		66	28	49	24	7	02	29.38	30.13	18	FEW	NC	10.00		77	53	63	44	12	17	29.17	29.90				
21	FEW	NC	10.00		56	40	48	55	3	VR	29.39	30.14	21	FEW	NC	10.00		68	51	58	55	5	VR	29.17	29.90				
24	FEW	NC	10.00		58	39	49	50	3	32	29.37	30.12	24	CLR	NC	10.00		61	52	56	72	5	VR	29.20	29.93				
SUNRISE: 0412					JUN 17					SUNSET: 1932					SUNRISE: 0413					JUN 23					SUNSET: 1934				
03	SCT	NC	10.00		56	41	49	57	0	00	29.36	30.11	03	FEW	NC	9.00		62	52	56	70	6	22	29.21	29.94				
06	BKN	065	10.00		57	46	51	67	3	34	29.37	30.12	06	CLR	NC	8.00		68	55	60	63	6	20	29.23	29.95				
09	CLR	NC	10.00		69	52	59	55	3	VR	29.33	30.08	09	BKN	200	10.00		79	58	66	49	13	21	29.24	29.96				
12	FEW	NC	10.00		72	52	60	50	5	10	29.32	30.06	12	BKN	250	10.00		85	59	68	42	8	22	29.23	29.95				
15	FEW	NC	10.00		73	51	60	46	10	15	29.28	30.01	15	BKN	250	10.00		85	61	69	45	9	15	29.20	29.93				
18	SCT	NC	10.00		73	50	60	44	8	15	29.22	29.96	18	BKN	140	9.00		76	57	64	52	8	17	29.17	29.89				
21	FEW	NC	10.00		68	47	56	47	5	20	29.23	29.96	21	SCT	NC	10.00		75	56	64	52	7	17	29.21	29.94				
24	FEW	NC	10.00		65	49	56	56	5	21	29.20	29.93	24	CLR	NC	10.00		73	59	64	62	9	17	29.20	29.93				
SUNRISE: 0412					JUN 18					SUNSET: 1933					SUNRISE: 0414					JUN 24					SUNSET: 1934				
03	SCT	NC	9.00		64	51	57	63	9	22	29.17	29.90	03	BKN	100	9.00		72	58	63	61	7	19	29.22	29.95				
06	SCT	NC	7.00		67	54	59	63	10	23	29.16	29.88	06	BKN	250	7.00		71	61	65	71	10	20	29.26	29.98				
09	BKN	085	8.00		75	61	66	62	8	23	29.14	29.87	09	BKN	150	6.00	HZ	75	66	69	74	9	15	29.28	30.01				
12	BKN	080	9.00		85	64	71	50	12	31	29.11	29.83	12	SCT	NC	7.00		88	68	74	52	15	19	29.24	29.96				
15	OVC	070	5.00	TS HZ	69	60	64	73	8	05	29.11	29.84	15	FEW	NC	7.00		92	67	75	44	14	20	29.25	29.97				
18	OVC	100	3.00	HZ	63	57	60	81	3	01	29.13	29.86	18	FEW	NC	9.00		91	66	74	44	14	20	29.21	29.93				
21	OVC	110	10.00		62	55	58	78	15	02	29.18	29.91	21	FEW	NC	9.00		83	66	72	57	10	20	29.21	29.94				
24	OVC	060	10.00	-RA	56	47	51	72	15	03	29.24	29.97	24	CLR	NC	8.00		76	65	69	69	6	20	29.25	29.97				

# OBSERVATIONS AT 3-HOURLY INTERVALS

# MILWAUKEE, WI

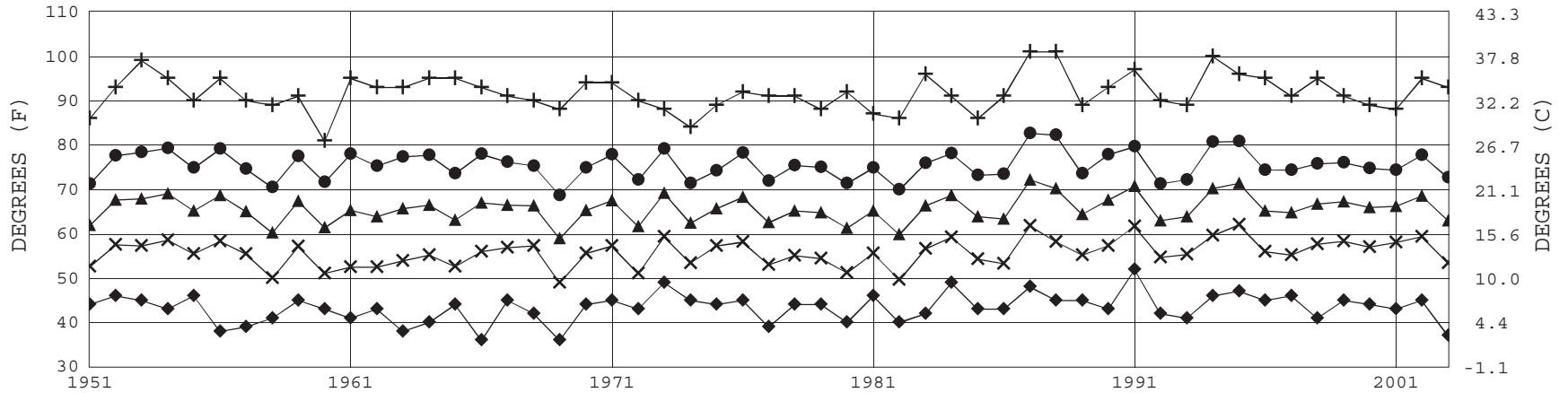
JUNE 2003

MKE

WBAN # 14839

HOUR (LST)	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)	
	SKY COVER	CEILING 100'S OF FT			OBSERVATION TIME (LST)	EFF CLD AMT Oktas	DRY BULB		DEW POINT	WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG		STATION	SEA LEVEL			SKY COVER	CEILING 100'S OF FT	OBSERVATION TIME (LST)		EFF CLD AMT Oktas	DRY BULB	DEW POINT	WET BULB
SUNRISE: 0414 JUN 25 SUNSET: 1934													SUNRISE: JUN 31 SUNSET:												
03	SCT	NC	7.00		73	64	67	74	7	19	29.25	29.97													
06	BKN	200	5.00	HZ	74	65	68	74	8	20	29.26	29.98													
09	SCT	NC	5.00	HZ	84	68	73	59	13	21	29.24	29.96													
12	BKN	250	7.00		90	71	77	54	12	18	29.20	29.92													
15	SCT	NC	8.00		92	68	75	46	16	19	29.13	29.85													
18	OVC	230	10.00		78	68	71	71	8	24	29.14	29.86													
21	OVC	230	7.00		74	69	71	85	8	20	29.09	29.81													
24	OVC	180	10.00		71	67	68	87	9	20	29.02	29.74													
SUNRISE: 0414 JUN 26 SUNSET: 1934													3-HOURLY OBSERVATION NOTES												
03	OVC	018	10.00		70	65	67	84	8	24	29.06	29.78	Sky Cover is the amount of the sky obscured. CLR or SKC = 0, FEW = 1/8-2/8, SCT = 3/8-4/8, BKN = 5/8-7/8, OVC = 8/8, VV = Vertical Visibility = 8/8. Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet. NC= No ceiling detected. & = Original observation contained additional weather elements. See page 3 for additional notes.												
06	OVC	043	10.00		71	64	67	79	15	26	29.06	29.78													
09	BKN	150	8.00		65	58	61	78	10	28	29.10	29.83													
12	SCT	NC	10.00		72	54	61	53	18	29	29.10	29.83													
15	SCT	NC	10.00		73	54	62	51	23	27	29.09	29.82													
18	BKN	065	10.00		71	46	57	41	21	31	29.12	29.85													
21	FEW	NC	10.00		65	47	55	52	7	26	29.18	29.91													
24	CLR	NC	10.00		61	49	54	65	9	25	29.18	29.91													
SUNRISE: 0415 JUN 27 SUNSET: 1934													SUMMARY BY HOUR												
03	CLR	NC	10.00		59	49	54	69	9	25	29.17	29.90	AVERAGES												
06	CLR	NC	10.00		61	50	55	67	12	25	29.19	29.92	HOUR (LST)	CEILOMETER	EFF CLD AMT	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY	PRESSURE (INCHES, HG)		VISIBILITY (MILES)	WIND SPEED (MPH)	RESULTANT WIND (MPH)	
09	CLR	NC	10.00		72	49	59	44	15	25	29.19	29.92								STATION	SEA LEVEL			SPEED	DIRECTION
12	FEW	NC	10.00		79	49	62	35	18	24	29.17	29.90	01			58	49	53	75	29.20	29.94	8.57	5	1	33
15	SCT	NC	10.00		81	49	62	33	17	25	29.13	29.86	02			57	49	53	77	29.20	29.95	8.47	5	1	32
18	BKN	110	10.00		69	61	64	76	7	11	29.12	29.85	03			56	49	53	79	29.21	29.95	8.28	5	1	28
21	FEW	NC	10.00		63	60	61	90	0	00	29.14	29.87	04			56	50	53	80	29.21	29.95	8.14	6	1	28
24	BKN	200	6.00	BR	61	58	59	90	5	04	29.16	29.89	05			56	50	53	80	29.22	29.95	7.64	6	2	32
SUNRISE: 0415 JUN 28 SUNSET: 1935													06			59	51	54	77	29.22	29.96	7.29	7	2	29
03	BKN	100	8.00		57	54	55	90	7	03	29.17	29.90	07			61	50	55	71	29.23	29.97	7.88	8	2	29
06	CLR	NC	7.00		54	52	53	93	7	03	29.15	29.89	08			63	52	57	69	29.23	29.97	8.10	8	2	30
09	OVC	070	2.00	TSRA BR	58	56	57	93	5	VR	29.19	29.92	09			65	52	58	64	29.23	29.97	8.31	9	2	30
12	OVC	006	5.00	-RA BR	59	56	57	90	0	00	29.17	29.91	10			67	52	59	61	29.23	29.96	8.57	11	1	31
15	BKN	021	10.00		66	60	62	81	8	06	29.17	29.91	11			68	52	59	58	29.22	29.96	8.74	11	1	29
18	SCT	NC	10.00		62	57	59	84	8	08	29.16	29.90	12			69	53	60	58	29.22	29.96	8.78	11	1	4
21	SCT	NC	6.00	BR	59	56	57	90	3	19	29.19	29.93	13			69	53	60	59	29.21	29.95	8.46	12	2	10
24	BKN	230	3.00	BR	61	59	60	93	5	24	29.18	29.91	14			69	52	59	58	29.21	29.94	8.83	11	1	8
SUNRISE: 0415 JUN 29 SUNSET: 1934													15			69	52	59	58	29.20	29.94	8.90	11	2	11
03	BKN	120	6.00	BR	64	61	62	90	7	23	29.17	29.90	16			68	52	59	58	29.20	29.94	9.23	10	2	11
06	BKN	130	8.00		65	61	63	87	5	33	29.21	29.95	17			67	51	58	59	29.19	29.93	9.00	11	1	4
09	BKN	220	10.00		73	58	64	59	12	31	29.26	30.00	18			66	50	57	61	29.19	29.93	9.07	9	2	10
12	SCT	NC	10.00		77	54	63	45	15	26	29.30	30.03	19			64	50	56	63	29.19	29.93	8.97	7	1	12
15	SCT	NC	10.00		79	51	63	38	14	30	29.31	30.05	20			62	50	56	67	29.19	29.93	9.13	7	1	9
18	SCT	NC	10.00		74	54	62	50	9	06	29.33	30.07	21			61	50	55	69	29.21	29.94	9.17	6	1	7
21	CLR	NC	10.00		68	53	59	59	0	00	29.37	30.11	22			60	50	54	70	29.21	29.94	9.07	6	1	34
24	CLR	NC	10.00		64	54	58	70	0	00	29.38	30.12	23			60	49	54	70	29.21	29.95	8.83	6	1	1
SUNRISE: 0416 JUN 30 SUNSET: 1934													24			59	50	54	73	29.21	29.94	8.73	5	0	0
03	CLR	NC	10.00		65	57	60	76	5	28	29.39	30.13													
06	SCT	NC	10.00		67	57	61	71	5	26	29.41	30.15													
09	FEW	NC	10.00		78	52	63	40	8	29	29.42	30.16													
12	SCT	NC	10.00		79	58	66	49	12	13	29.42	30.16													
15	SCT	NC	10.00		78	55	64	45	14	14	29.40	30.14													
18	FEW	NC	10.00		77	53	63	44	9	17	29.36	30.10													
21	FEW	NC	10.00		70	52	60	53	5	15	29.38	30.12													
24	SCT	NC	10.00		70	51	59	51	0	00	29.38	30.12													

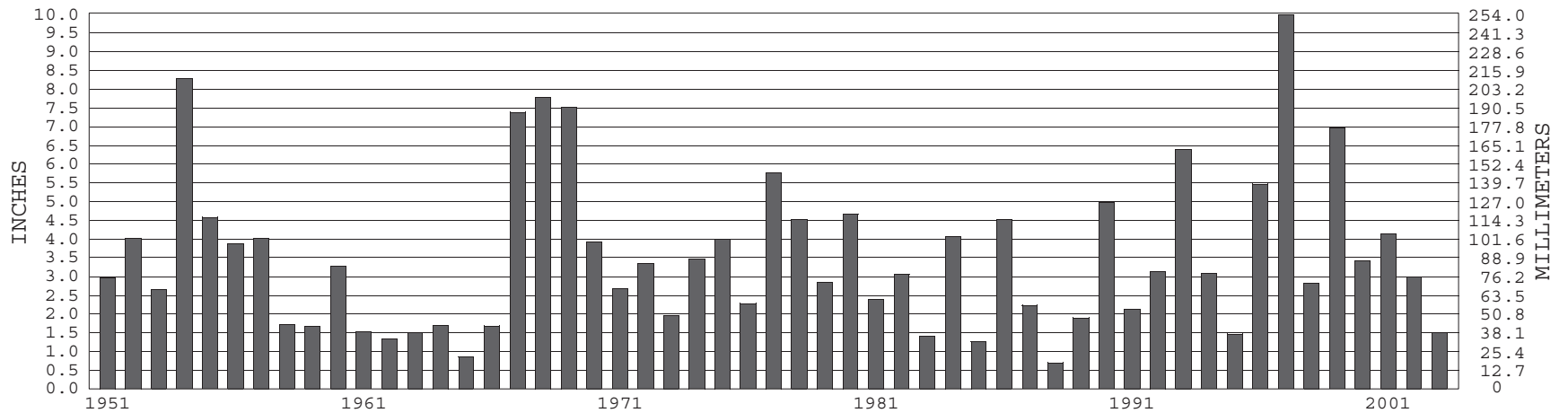
### MILWAUKEE, WI JUNE TEMPERATURES



+ Extreme Max.      ● Mean Max.      ▲ Mean      × Mean Min.      ◆ Extreme Min.

Long-Term (1951-2003) Mean: 65.6      1961-1990 Normal: 66.3

### MILWAUKEE, WI JUNE PRECIPITATION



Long-Term (1951-2003) Mean Monthly Total: 3.54

1961-1990 Normal: 3.56



JUNE 2003  
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# LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

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