



JULY 2002

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

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		0600 LST	1200 LST	2400 LST	2400 LST	AVERAGE STATION	AVERAGE SEA LEVEL	RESULTANT SPEED	RES DIR	AVERAGE SPEED	MAXIMUM					
																			5-SEC		2-MIN			
																			SPEED	DIR	SPEED	DIR		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
01	93	76	85	15	71	75	0	20	TSRA RA BR HZ VCTS FG BR RA BR	0		0.0	0.00	29.30	30.03	12.0	24	12.2	25	23	22	23	01	
02	93	76	85	15	67	73	0	20		0		0.0	0.00	29.31	30.04	11.3	26	11.7	28	27	22	27	02	
03	93	75	84	13	70	74	0	19		0		0.0	0.00	29.26	29.98	10.6	25	10.8	28	24	22	23	03	
04	86	61	74	3	64	68	0	9		0		0.0	0.00	29.35	30.08	9.0	01	10.4	28	02	23	02	04	
05	73	61	67	-4	59	62	0	2		0		0.0	0.00	29.49	30.23	8.5	06	9.2	18	07	15	07	05	
06	79	64	72	1	64	66	0	7		0		0.0	0.00	29.48	30.22	5.0	13	7.2	16	10	15	09	06	
07	84	67	76	5	68	71	0	11		0		0.0	0.00	29.44	30.17	4.6	15	6.4	17	14	15	13	07	
08	95	72	84	13	72	75	0	19		0		0.0	0.92	29.28	30.01	10.4	23	11.5	29	23	23	24	08	
09	74	66	70	-1	68	68	0	5		0		0.0	0.00	29.29	30.03	12.3	02	13.3	31	02	23	02	09	
10	72	65	69	-2	63	65	0	4		0		0.0	T	29.44	30.18	10.4	06	11.2	23	02	17	03	10	
11	72	63	68	-3	58	62	0	3		0		0.0	0.00	29.47	30.21	9.3	07	10.5	20	11	16	09	11	
12	76	57	67*	-5	58	62	0	2		0		0.0	0.00	29.34	30.08	3.8	06	4.8	13	06	10	06	12	
13	80	56	68	-4	54	60	0	3		0		0.0	0.00	29.26	30.00	1.8	10	4.5	20	12	13	11	13	
14	82	55*	69	-3	54	62	0	4		0		0.0	0.00	29.28	30.01	3.1	15	4.2	14	15	13	13	14	
15	88	68	78	6	64	69	0	13		0		0.0	0.00	29.32	30.05	1.2	23	5.9	16	12	15	12	15	
16	89	72	81	9	67	72	0	16	HZ BR HZ	0		0.0	0.00	29.33	30.06	5.1	24	7.9	20	22	16	22	16	
17	90	71	81	9	65	71	0	16		0		0.0	0.00	29.27	30.00	7.5	26	7.9	22	25	18	23	17	
18	85	70	78	6	70	72	0	13		0		0.0	0.00	29.21	29.93	5.6	03	8.6	20	06	15	07	18	
19	74	63	69	-3	64	67	0	4	TSRA RA BR HZ	0		0.0	0.00	29.22	29.95	8.9	03	9.3	21	05	17	06	19	
20	82	59	71	-2	66	69	0	6		0		0.0	0.12	29.25	29.98	4.8	16	7.6	20	18	17	16	20	
21	98*	78	88*	15	75	78	0	23	BR	0		0.0	0.00	29.15	29.87	12.9	23	13.2	31	22	25	23	21	
22	85	73	79	6	67	71	0	14	RA	0		0.0	T	29.18	29.90	5.6	30	8.1	29	31	23	28	22	
23	73	63	68	-5	57	61	0	3		0		0.0	0.00	29.46	30.20	16.0	02	16.2	31*	02	25	02	23	
24	72	65	69	-4	57	62	0	4		0		0.0	0.00	29.48	30.22	7.3	10	8.4	17	14	15	14	24	
25	77	66	72	-1	64	67	0	7	RA DZ BR HZ	0		0.0	T	29.26	29.99	9.6	17	10.1	24	15	21	16	25	
26	85	66	76	3	69	71	0	11	TSRA RA BR HZ	0		0.0	1.20	29.13	29.86	2.9	17	6.6	24	27	20	28	26	
27	81	71	76	3	71	73	0	11	RA BR	0		0.0	T	29.05	29.77	6.3	20	9.2	20	22	16	22	27	
28	91	76	84	11	73	76	0	19	RA VCTS	0		0.0	T	29.03	29.75	8.1	24	8.7	30	22	25*	23	28	
29	83	72	78	5	69	71	0	13	TS TSRA RA	0		0.0	0.09	29.06	29.79	9.0	26	10.1	23	27	20	27	29	
30	92	70	81	8	66	71	0	16		0		0.0	0.00	29.22	29.95	7.8	25	9.0	26	28	20	25	30	
31	94	74	84	11	66	72	0	19		0		0.0	0.00	29.21	29.94	9.2	22	9.5	22	23	18	22	31	
83.6		67.5	75.6	■ ■	65.2	68.9	0.0	10.8	< MONTHLY AVERAGES	TOTALS->			0.0	2.33	29.28	30.01	2.5	21	9.2	<- MONTHLY AVERAGES				
2.5		4.6	3.6	■ ■	<-----DEPARTURE FROM NORMAL----->							-1.25		SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3										
DEGREE DAYS									GREATEST 24-HR PRECIPITATION: 1.20 DATE: 26				SEA LEVEL PRESSURE				DATE		TIME					
MONTHLY									GREATEST 24-HR SNOWFALL: 0.0 DATE: :				MAXIMUM				:		30.27		24		0952	
TOTAL DEPARTURE									GREATEST SNOW DEPTH: 0 DATE: :				MINIMUM				:		29.65		28		0052	
HEATING: 0 -13									NUMBER OF DAYS WITH →				MAXIMUM TEMP ≥ 90: 9				MINIMUM TEMP ≤ 32: 0				PRECIPITATION ≥ 0.01 INCH: 4			
COOLING: 336 114													MAXIMUM TEMP ≤ 32: 0				MINIMUM TEMP ≤ 0: 0				PRECIPITATION ≥ 0.10 INCH: 3			
													THUNDERSTORMS: 4				HEAVY FOG: 0				SNOWFALL ≥ 1.0 INCH: 0			

JULY 2002
MILWAUKEE, WI

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

MILWAUKEE, WI

JULY 2002

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													03												03			0.00	
04													04												04			0.00	
05													05												05			0.00	
06													06												06			0.00	
07													07												07			0.00	
08													08								0.04	0.42	0.45	0.01	08			0.92	
09													09						T	T					09			0.00	
10													10												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												17			0.00	
18													18												18			0.00	
19													19												19			0.00	
20													20									0.12			20			0.12	
21													21												21			0.00	
22										T	T		22		T										22			T	
23													23												23			0.00	
24													24												24			0.00	
25								T	T				25						T	T					25			T	
26	0.26	0.33	0.61	T									26												26			1.20	
27									T	T		T	27												27			T	
28	T												28												28			T	
29		0.08	T						T	0.01	T		29												29			0.09	
30													30												30			0.00	
31													31												31			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)												
Ending Date												
Ending Time (Hour/Min)												

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.

* = 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

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

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

WEATHER NOTATIONS

**MILWAUKEE, WI
JULY 2002**

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.

DATE	SUNSHINE		CLOUDINESS (OKTAS)				VISIBILITY (MILES)		RESERVED
	TOTAL MINUTES	PERCENT POSSIBLE	SR-SS		MN-MN		MINIMUM	MAXIMUM	
			CEILOMETER	SATELLITE	CEILOMETER	SATELLITE			
01							9.00	10.00	
02							10.00	10.00	
03							9.00	10.00	
04							10.00	10.00	
05							10.00	10.00	
06							10.00	10.00	
07							8.00	10.00	
08							.25	10.00	
09							.25	10.00	
10							6.00	10.00	
11							10.00	10.00	
12							10.00	10.00	
13							9.00	10.00	
14							10.00	10.00	
15							7.00	10.00	
16							7.00	10.00	
17							6.00	10.00	
18							4.00	10.00	
19							8.00	10.00	
20							4.00	10.00	
21							6.00	10.00	
22							10.00	10.00	
23							10.00	10.00	
24							10.00	10.00	
25							6.00	10.00	
26							.75	10.00	
27							1.75	10.00	
28							9.00	10.00	
29							8.00	10.00	
30							10.00	10.00	
31							10.00	10.00	
MONTHLY AVGS							7.56	10.00	
<p align="center">SUNSHINE (MINUTES)</p> <p>Total: Possible:</p> <p> Percent Possible:</p>									
<p align="center">NUMBER OF DAYS WITH:</p> <p align="center">SKY CONDITION</p> <p align="center">CLR PTLY CLDY CLOUDY MISSING</p> <p align="center">31</p> <p align="center">MINIMUM VISIBILITY (MILES)</p> <p align="center"><=0.25 <=3.0 >=7.0</p> <p align="center">1 3 21</p>									

OBSERVATIONS AT 3-HOURLY INTERVALS

MILWAUKEE, WI

JULY 2002

MKE

WBAN # 14839

HOUR (LST)			SATELLITE		WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES,HG)		HOUR (LST)			SATELLITE		WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES,HG)			
	SKY COVER	CEILING 100'S OF FT	OBSERVATION TIME (LST)	EFF CLD AMT Oktas		VISIBILITY (MILES)	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	VISIBILITY (MILES)	DRY BULB		DEW POINT	WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
					SUNRISE: 0417	JUL 01			SUNSET: 1934										SUNRISE: 0420	JUL 07			SUNSET: 1933						
03	CLR	NC			10.00		76	72	73	88	8	24	29.31	30.03	03	SCT	NC			9.00		69	62	65	78	5	17	29.45	30.19
06	CLR	NC			10.00		77	73	74	88	9	24	29.33	30.06	06	FEW	NC			8.00		72	65	67	79	0	00	29.48	30.22
09	CLR	NC			10.00		86	73	77	65	9	27	29.32	30.05	09	FEW	NC			10.00		82	72	75	72	0	00	29.46	30.20
12	SCT	NC			10.00		91	71	77	52	14	24	29.31	30.03	12	BKN	220			8.00		82	73	76	74	10	10	29.46	30.19
15	SCT	NC			10.00		91	71	77	52	18	23	29.29	30.01	15	BKN	250			9.00		83	73	76	72	13	14	29.42	30.15
18	CLR	NC			10.00		89	70	76	53	14	25	29.28	30.00	18	SCT	NC			9.00		81	70	74	69	9	12	29.40	30.13
21	CLR	NC			10.00		84	71	75	65	10	24	29.30	30.02	21	FEW	NC			10.00		76	67	70	74	6	18	29.40	30.13
24	CLR	NC			10.00		80	68	72	67	10	24	29.29	30.01	24	CLR	NC			10.00		75	66	69	74	8	22	29.39	30.12
					SUNRISE: 0417	JUL 02			SUNSET: 1934										SUNRISE: 0421	JUL 08			SUNSET: 1933						
03	CLR	NC			10.00		78	68	71	71	12	25	29.30	30.02	03	CLR	NC			5.00	HZ	73	67	69	81	7	23	29.38	30.11
06	CLR	NC			10.00		76	66	69	72	10	25	29.34	30.07	06	BKN	250			5.00	HZ	75	68	70	79	9	22	29.36	30.10
09	CLR	NC			10.00		83	67	72	59	14	27	29.33	30.07	09	SCT	NC			10.00		86	72	76	63	15	25	29.34	30.08
12	FEW	NC			10.00		89	68	75	50	10	27	29.32	30.04	12	BKN	250			7.00		90	74	78	59	15	23	29.30	30.02
15	FEW	NC			10.00		92	64	73	40	15	26	29.31	30.04	15	OVC	150			7.00		94	75	80	54	16	21	29.22	29.94
18	CLR	NC			10.00		89	66	73	47	13	25	29.29	30.01	18	BKN	200			6.00	HZ	91	75	79	59	17	24	29.17	29.89
21	CLR	NC			10.00		83	70	74	65	7	24	29.29	30.02	21	BKN	049			8.00	VCTS -RA	73	72	72	96	10	10	29.18	29.90
24	CLR	NC			10.00		77	68	71	74	7	23	29.30	30.02	24	OVC	180			10.00		74	73	73	97	8	19	29.20	29.92
					SUNRISE: 0418	JUL 03			SUNSET: 1934										SUNRISE: 0422	JUL 09			SUNSET: 1932						
03	CLR	NC			10.00		77	69	72	77	8	25	29.29	30.01	03	OVC	033			9.00		73	73	73	100	5	VR	29.22	29.94
06	CLR	NC			10.00		77	70	72	79	9	24	29.30	30.02	06	OVC	001			0.25	FG	69	69	69	100	6	02	29.24	29.97
09	FEW	NC			10.00		86	68	74	55	15	26	29.29	30.01	09	OVC	001			0.25	BR	66	66	66	100	10	01	29.29	30.02
12	FEW	NC			10.00		91	69	76	49	17	23	29.27	29.99	12	OVC	004			2.00	BR	70	68	69	93	20	01	29.31	30.03
15	SCT	NC			9.00		92	69	76	47	18	24	29.23	29.95	15	OVC	004			10.00		70	68	69	93	20	03	29.31	30.05
18	SCT	NC			10.00		90	70	76	52	13	27	29.21	29.93	18	BKN	005			10.00		67	66	66	97	20	02	29.31	30.04
21	FEW	NC			10.00		84	71	75	65	7	25	29.23	29.94	21	SCT	NC			10.00		68	66	67	93	15	02	29.36	30.11
24	FEW	NC			10.00		80	71	74	74	7	24	29.25	29.97	24	FEW	NC			10.00		68	61	64	78	15	03	29.38	30.12
					SUNRISE: 0418	JUL 04			SUNSET: 1934										SUNRISE: 0422	JUL 10			SUNSET: 1932						
03	CLR	NC			10.00		78	72	74	82	5	31	29.25	29.97	03	FEW	NC			10.00		66	62	64	87	12	03	29.39	30.13
06	BKN	055			10.00		78	71	73	79	6	33	29.30	30.02	06	SCT	NC			10.00		68	66	67	93	8	04	29.43	30.17
09	FEW	NC			10.00		85	61	69	45	7	34	29.32	30.05	09	BKN	050			10.00		71	63	66	76	12	09	29.46	30.20
12	FEW	NC			10.00		79	66	70	65	12	05	29.34	30.08	12	OVC	120			10.00		71	63	66	76	13	07	29.47	30.21
15	SCT	NC			10.00		72	63	66	73	21	02	29.36	30.10	15	OVC	120			10.00		70	64	66	82	12	06	29.42	30.16
18	SCT	NC			10.00		69	60	64	73	15	02	29.38	30.12	18	BKN	140			10.00	-RA	67	62	64	84	12	05	29.42	30.16
21	FEW	NC			10.00		65	58	61	78	10	01	29.43	30.16	21	BKN	100			10.00		67	62	64	84	10	06	29.46	30.20
24	CLR	NC			10.00		61	58	59	90	12	01	29.43	30.18	24	BKN	120			10.00		68	56	61	66	12	09	29.48	30.23
					SUNRISE: 0419	JUL 05			SUNSET: 1933										SUNRISE: 0423	JUL 11			SUNSET: 1931						
03	FEW	NC			10.00		63	57	60	81	10	06	29.44	30.18	03	BKN	140			10.00		67	55	60	66	12	10	29.47	30.21
06	BKN	200			10.00		64	57	60	78	14	07	29.48	30.22	06	BKN	130			10.00		66	58	61	75	13	10	29.49	30.23
09	SCT	NC			10.00		69	60	64	73	10	10	29.51	30.25	09	BKN	150			10.00		70	58	63	66	15	08	29.51	30.25
12	BKN	220			10.00		71	59	64	66	13	10	29.51	30.26	12	BKN	180			10.00		70	55	61	59	12	09	29.51	30.25
15	BKN	220			10.00		71	60	64	68	9	07	29.50	30.25	15	BKN	220			10.00		71	59	64	66	9	06	29.47	30.21
18	BKN	230			10.00		68	61	64	78	9	03	29.49	30.23	18	BKN	220			10.00		68	56	61	66	13	03	29.42	30.16
21	CLR	NC			10.00		65	61	63	87	5	04	29.50	30.24	21	BKN	220			10.00		64	60	62	87	6	01	29.42	30.17
24	FEW	NC			10.00		65	60	62	84	5	03	29.48	30.22	24	SCT	NC			10.00		64	60	62	87	6	02	29.40	30.14
					SUNRISE: 0420	JUL 06			SUNSET: 1933										SUNRISE: 0424	JUL 12			SUNSET: 1931						
03	BKN	120			10.00		65	63	64	93	5	VR	29.49	30.23	03	SCT	NC			10.00		60	58	59	93	3	30	29.38	30.12
06	OVC	045			10.00		68	62	64	81	8	14	29.51	30.26	06	SCT	NC			10.00		65	60	62	84	0	00	29.38	30.13
09	OVC	060			10.00		71	63	66	76	7	14	29.52	30.26	09	SCT													

OBSERVATIONS AT 3-HOURLY INTERVALS

MILWAUKEE, WI

JULY 2002

MKE

WBAN # 14839

HOUR (LST)				SATELLITE		WEATHER	TEMPERATURE °F				RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES,HG)		HOUR (LST)				SATELLITE		WEATHER	TEMPERATURE °F				RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES,HG)	
	SKY COVER	CEILING	100'S OF FT	OBSERVATION TIME (LST)	EFF CLD AMT <small>Okta</small>		VISIBILITY (MILES)	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 <small>Okta</small>		VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
					SUNRISE: 0425	JUL 13			SUNSET: 1930										SUNRISE: 0430	JUL 19											
03	CLR	NC			10.00		58	53	55	84	0	00	29.27	30.01	03	BKN	090			10.00	71	67	68	87	8	03	29.17	29.90			
06	CLR	NC			9.00		62	53	57	73	7	31	29.29	30.02	06	BKN	032			8.00	70	66	67	87	9	03	29.20	29.93			
09	CLR	NC			10.00		77	51	62	40	6	35	29.28	30.01	09	OVC	034			10.00	72	67	69	84	12	02	29.23	29.96			
12	CLR	NC			10.00		78	55	64	45	9	12	29.27	30.01	12	CLR	NC			10.00	74	65	68	74	15	05	29.24	29.96			
15	SCT	NC			10.00		79	54	64	42	7	10	29.26	29.99	15	SCT	NC			10.00	73	63	67	71	10	03	29.23	29.96			
18	FEW	NC			10.00		75	55	63	50	6	11	29.24	29.97	18	FEW	NC			10.00	72	59	64	64	8	05	29.21	29.93			
21	FEW	NC			10.00		65	54	59	68	0	00	29.24	29.97	21	CLR	NC			10.00	69	59	63	70	3	03	29.25	29.98			
24	CLR	NC			10.00		61	54	57	78	0	00	29.26	29.99	24	CLR	NC			10.00	65	58	61	78	3	31	29.26	29.99			
					SUNRISE: 0425	JUL 14			SUNSET: 1930										SUNRISE: 0431	JUL 20											
03	CLR	NC			10.00		60	53	56	78	0	00	29.25	29.98	03	CLR	NC			10.00	64	58	60	81	5	30	29.25	29.98			
06	FEW	NC			10.00		63	56	59	78	0	00	29.28	30.01	06	FEW	NC			10.00	65	60	62	84	5	VR	29.27	30.00			
09	FEW	NC			10.00		78	52	63	40	5	10	29.31	30.03	09	FEW	NC			10.00	76	63	68	64	6	17	29.29	30.01			
12	FEW	NC			10.00		82	50	63	33	7	11	29.30	30.02	12	SCT	NC			10.00	81	69	73	67	12	13	29.28	30.01			
15	FEW	NC			10.00		81	54	65	39	8	14	29.28	30.01	15	BKN	200			10.00	80	65	70	60	10	14	29.27	30.00			
18	SCT	NC			10.00		78	52	63	40	9	16	29.27	30.00	18	BKN	150			7.00	81	67	72	62	13	18	29.17	29.90			
21	SCT	NC			10.00		73	59	64	62	5	20	29.29	30.01	21	BKN	100			7.00	81	70	73	69	7	25	29.25	29.97			
24	FEW	NC			10.00		72	56	62	57	3	25	29.30	30.02	24	BKN	230			5.00	79	74	75	85	12	20	29.20	29.92			
					SUNRISE: 0426	JUL 15			SUNSET: 1929										SUNRISE: 0432	JUL 21											
03	FEW	NC			10.00		71	56	62	59	5	29	29.30	30.02	03	FEW	NC			7.00	78	75	76	90	9	21	29.16	29.88			
06	CLR	NC			10.00		71	62	65	73	7	31	29.33	30.07	06	BKN	140			9.00	80	76	77	87	10	23	29.19	29.91			
09	CLR	NC			10.00		82	66	71	58	9	30	29.35	30.09	09	OVC	230			10.00	87	76	79	70	12	24	29.18	29.91			
12	SCT	NC			10.00		85	66	72	53	6	VR	29.33	30.07	12	OVC	220			10.00	94	75	80	54	15	24	29.17	29.89			
15	SCT	NC			10.00		84	68	73	59	13	12	29.31	30.05	15	OVC	250			10.00	98	72	79	43	17	23	29.10	29.82			
18	SCT	NC			9.00		81	67	72	62	7	12	29.31	30.03	18	FEW	NC			10.00	93	73	79	52	22	22	29.06	29.78			
21	FEW	NC			10.00		77	64	69	64	5	21	29.31	30.04	21	SCT	NC			10.00	86	74	77	67	10	23	29.14	29.86			
24	CLR	NC			7.00		75	65	69	71	0	00	29.32	30.05	24	BKN	230			10.00	83	75	77	77	13	23	29.14	29.86			
					SUNRISE: 0427	JUL 16			SUNSET: 1928										SUNRISE: 0433	JUL 22											
03	CLR	NC			10.00		75	67	70	76	3	31	29.32	30.05	03	OVC	230			10.00	77	68	71	74	6	20	29.10	29.82			
06	CLR	NC			10.00		74	67	69	79	8	30	29.35	30.09	06	BKN	080			10.00	78	69	72	74	8	26	29.14	29.85			
09	CLR	NC			10.00		83	67	72	59	7	VR	29.36	30.09	09	OVC	085			10.00	76	70	72	82	0	00	29.14	29.86			
12	FEW	NC			10.00		87	67	73	51	12	20	29.34	30.07	12	BKN	033			10.00	83	70	74	65	9	25	29.17	29.89			
15	FEW	NC			10.00		88	66	73	48	10	23	29.31	30.04	15	BKN	080			10.00	83	69	74	63	10	29	29.17	29.89			
18	SCT	NC			10.00		82	69	73	65	10	17	29.30	30.03	18	BKN	130			10.00	82	65	71	56	8	32	29.19	29.91			
21	CLR	NC			9.00		79	67	71	67	6	24	29.31	30.04	21	BKN	250			10.00	78	61	67	56	10	34	29.26	29.98			
24	CLR	NC			10.00		76	65	69	69	7	26	29.31	30.04	24	SCT	NC			10.00	73	60	65	64	12	36	29.30	30.03			
					SUNRISE: 0428	JUL 17			SUNSET: 1928										SUNRISE: 0433	JUL 23											
03	FEW	NC			9.00		72	64	67	76	7	25	29.31	30.03	03	OVC	016			10.00	65	60	62	84	22	02	29.37	30.11			
06	SCT	NC			7.00		72	65	67	79	7	26	29.31	30.05	06	OVC	019			10.00	63	56	59	78	18	02	29.41	30.15			
09	BKN	250			10.00		81	67	72	62	10	25	29.32	30.05	09	SCT	NC			10.00	66	56	60	70	17	02	29.48	30.22			
12	SCT	NC			8.00		87	66	73	50	7	24	29.28	30.00	12	FEW	NC			10.00	68	55	60	63	18	01	29.51	30.25			
15	SCT	NC			10.00		90	64	73	42	13	25	29.24	29.96	15	FEW	NC			10.00	69	54	60	59	20	01	29.48	30.22			
18	FEW	NC			10.00		88	63	71	43	7	28	29.22	29.94	18	FEW	NC			10.00	67	57	61	71	15	02	29.46	30.21			
21	FEW	NC			10.00		81	65	70	58	3	VR	29.23	29.96	21	FEW	NC			10.00	67	56	61	68	14	04	29.49	30.23			
24	SCT	NC			8.00		77	68	71	74	6	25	29.21	29.93	24	CLR	NC			10.00	67	59	62	76	9	06	29.50	30.24			
					SUNRISE: 0429	JUL 18			SUNSET: 1927										SUNRISE: 0434	JUL 24											
03	SCT	NC			7.00		77	67	70	71	7	28	29.20	29.92	03	CLR	NC			10.00	68	58	62	70	13	13	29.48	30.22			
06	SCT	NC			5.00	HZ	76	68	71	77	0	00	29.23	29.95	06	BKN	180			10.00	66	54	59	65	8	12	29.50	30.25			
09	BKN	300			6.00	HZ	84	72	76	67	5	VR	29.22	29.94	09	SCT	NC			10.00	70	57	62	64	10	13	29.53	30.27			
12	BKN	230			5.00	BR	77	73	74	88	10	08	29.22	29.94	12	SCT	NC			10.00	72	58	63	61	12	07	29.52	30.27			
15	SCT	NC			10.00		73	71	72	94</																					

OBSERVATIONS AT 3-HOURLY INTERVALS

MILWAUKEE, WI

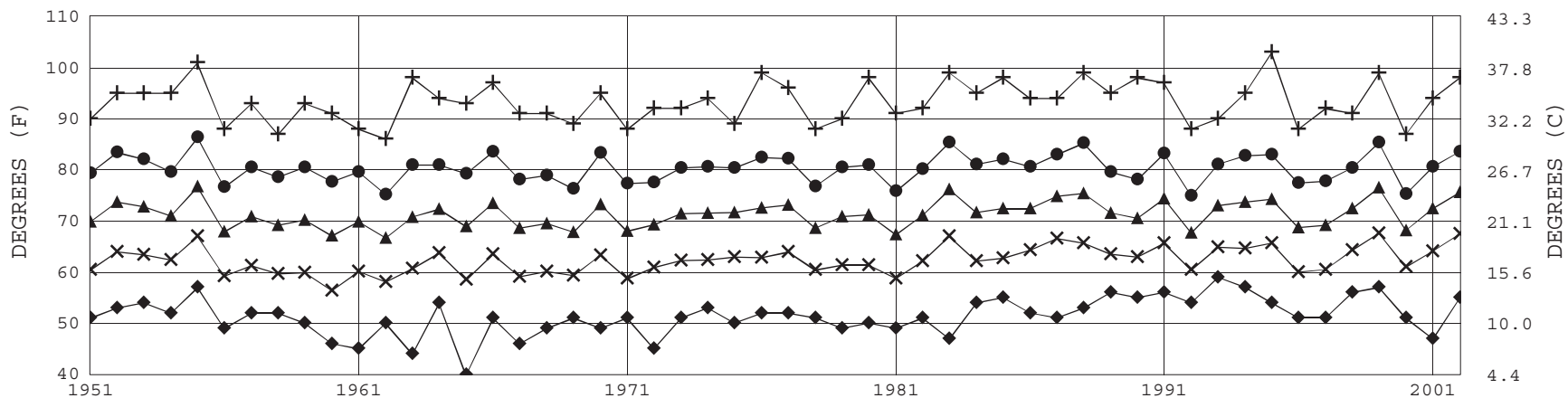
JULY 2002

MKE

WBAN # 14839

HOUR (LST)			SATELLITE		WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES,HG)		HOUR (LST)			SATELLITE		WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES,HG)	
	SKY COVER	CEILING 100'S OFFT	OBSERVATION TIME (LST)	EFF CLD AMT <i>Oktas</i>		DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL		SKY COVER	CEILING 100'S OFFT	OBSERVATION TIME (LST)	EFF CLD AMT <i>Oktas</i>		DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
			SUNRISE: 0435			JUL 25		SUNSET: 1921							SUNRISE: 0441		JUL 31		SUNSET: 1915								
03	BKN	130		10.00		66	62	64	87	6	17	29.35	30.09	03	CLR	NC		10.00		75	69	71	82	3	24	29.23	29.95
06	OVC	120		10.00		68	62	64	81	9	17	29.33	30.08	06	BKN	240		10.00		76	69	71	79	5	23	29.26	29.98
09	BKN	150		10.00		72	61	65	69	10	18	29.32	30.06	09	SCT	NC		10.00		84	70	74	63	14	23	29.26	29.98
12	OVC	045		10.00		73	64	67	74	13	14	29.29	30.02	12	SCT	NC		10.00		91	63	72	39	15	22	29.23	29.95
15	BKN	130		10.00		76	61	67	60	17	17	29.21	29.94	15	SCT	NC		10.00		93	59	71	32	16	21	29.19	29.91
18	OVC	110		10.00	-DZ	73	66	69	79	9	17	29.18	29.91	18	FEW	NC		10.00		89	62	71	41	13	21	29.17	29.89
21	BKN	100		8.00		72	68	69	87	7	17	29.17	29.89	21	FEW	NC		10.00		81	64	70	57	7	20	29.19	29.91
24	FEW	NC		6.00	BR	73	69	70	87	8	21	29.13	29.86	24	CLR	NC		10.00		78	68	71	71	12	21	29.17	29.88
			SUNRISE: 0436			JUL 26		SUNSET: 1920						3-HOURLY OBSERVATION NOTES													
03	OVC	060		3.00	-TSRA	67	67	67	100	3	23	29.13	29.86	Sky Cover is the amount of the sky obscured. CLR or SKC = 0, FEW = 1/8-2/8,													
06	SCT	NC		7.00		69	67	68	93	0	00	29.14	29.87	SCT = 3/8-4/8, BKN = 5/8-7/8, OVC = 8/8, VV = Vertical Visibilty = 8/8.													
09	BKN	200		10.00		79	70	73	74	5	26	29.15	29.87	Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet.													
12	BKN	200		8.00		84	69	74	61	7	21	29.15	29.87	NC= No ceiling detected.													
15	SCT	NC		10.00		82	71	74	69	12	14	29.11	29.84	& = Original observation contained additional weather elements.													
18	BKN	250		5.00	HZ	79	71	74	77	7	16	29.12	29.84	See page 3 for additional notes.													
21	CLR	NC		3.00	HZ	75	70	72	84	6	18	29.13	29.85														
24	SCT	NC		2.00	BR	72	70	71	94	5	22	29.11	29.83														
			SUNRISE: 0437			JUL 27		SUNSET: 1919						SUMMARY BY HOUR													
03	BKN	230		2.00	BR	72	70	71	94	6	22	29.11	29.83	HOUR (LST)	AVERAGES								RESULTANT WIND (MPH)				
06	OVC	150		3.00	BR	74	71	72	91	13	23	29.11	29.83		CEILOMETER	EFF CLD AMT	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY	PRESSURE (INCHES,HG)		VISIBILITY (MILES)	WIND SPEED (MPH)	SPEED	DIRECTION	
09	BKN	110		10.00		76	69	71	79	13	24	29.08	29.80	01			72	65	67	80	29.28	30.01	8.98	8	2	28	
12	BKN	120		10.00		79	70	73	74	5	15	29.06	29.78	02			71	65	67	81	29.28	30.01	9.28	7	2	30	
15	BKN	044		8.00		75	71	72	88	17	14	29.01	29.74	03			70	65	67	82	29.28	30.00	9.06	7	2	27	
18	BKN	200		10.00		78	73	75	85	5	13	28.98	29.70	04			70	64	66	83	29.28	30.01	9.19	7	2	28	
21	SCT	NC		6.00	BR	75	73	74	94	0	00	28.99	29.71	05			70	64	67	84	29.29	30.02	8.76	7	2	26	
24	OVC	130		9.00		81	75	77	82	15	22	28.96	29.67	06			71	65	67	81	29.30	30.03	8.75	7	2	26	
			SUNRISE: 0438			JUL 28		SUNSET: 1918						07			74	66	69	77	29.31	30.04	8.98	8	2	27	
03	FEW	NC		10.00		77	70	72	79	8	25	28.96	29.68	08			76	66	69	72	29.31	30.04	9.33	9	2	28	
06	BKN	250		10.00		78	72	74	82	8	25	29.02	29.74	09			78	65	70	68	29.31	30.04	9.52	9	2	26	
09	BKN	250		9.00		83	73	76	72	6	26	29.04	29.76	10			79	65	70	64	29.31	30.04	9.48	10	1	24	
12	BKN	200		10.00		89	75	79	63	8	29	29.05	29.77	11			80	66	71	63	29.31	30.04	9.39	10	1	18	
15	BKN	180		10.00		91	70	76	50	8	25	29.03	29.75	12			81	66	71	61	29.30	30.03	9.29	11	1	15	
18	SCT	NC		10.00		88	75	79	66	12	20	29.03	29.75	13			81	66	71	63	29.29	30.02	9.55	11	2	14	
21	SCT	NC		10.00		82	75	77	79	12	23	29.07	29.79	14			81	65	71	61	29.28	30.01	9.74	13	2	15	
24	OVC	250		10.00		78	73	75	85	8	23	29.03	29.75	15			81	65	70	59	29.27	30.00	9.77	13	2	17	
			SUNRISE: 0439			JUL 29		SUNSET: 1917						16			81	64	70	60	29.26	29.99	9.71	13	1	22	
03	OVC	100		10.00		74	71	72	91	8	29	29.00	29.72	17			80	65	70	61	29.26	29.99	9.52	12	1	19	
06	BKN	120		10.00		73	70	71	90	10	20	29.02	29.74	18			79	65	70	64	29.25	29.98	9.45	11	1	20	
09	OVC	075		10.00	-RA	73	70	71	90	9	24	29.02	29.74	19			77	65	69	68	29.26	29.99	9.39	9	1	23	
12	BKN	250		10.00		79	67	71	67	14	29	29.06	29.78	20			76	65	69	71	29.27	30.00	9.42	8	1	24	
15	BKN	047		10.00		82	66	71	58	15	25	29.04	29.76	21			74	65	68	74	29.28	30.01	9.35	7	1	26	
18	BKN	036		10.00		79	69	72	72	10	28	29.08	29.81	22			74	65	68	75	29.28	30.01	9.48	7	1	26	
21	CLR	NC		10.00		76	68	71	77	6	27	29.12	29.85	23			73	64	67	76	29.28	30.01	9.24	7	2	26	
24	FEW	NC		10.00		74	67	69	79	6	28	29.16	29.89	24			72	65	67	78	29.27	30.00	9.23	7	2	24	
			SUNRISE: 0440			JUL 30		SUNSET: 1916																			
03	CLR	NC		10.00		71	67	68	87	7	28	29.20	29.92														
06	CLR	NC		10.00		72	66	68	82	7	30	29.25	29.98														
09	CLR	NC		10.00		80	66	71	62	0	00	29.26	29.98														
12	CLR	NC		10.00		86	68	74	55	13	22	29.25	29.97														
15	CLR	NC		10.00		91	66	74	44	16	23	29.21	29.93														
18	CLR	NC		10.00		90	65	73	44	13	23	29.17	29.89														
21	OVC	140		10.00		84	67	73	57	13	26	29.26	29.98														
24	BKN	230		10.00		78	66	70	67	8	19	29.21	29.93														

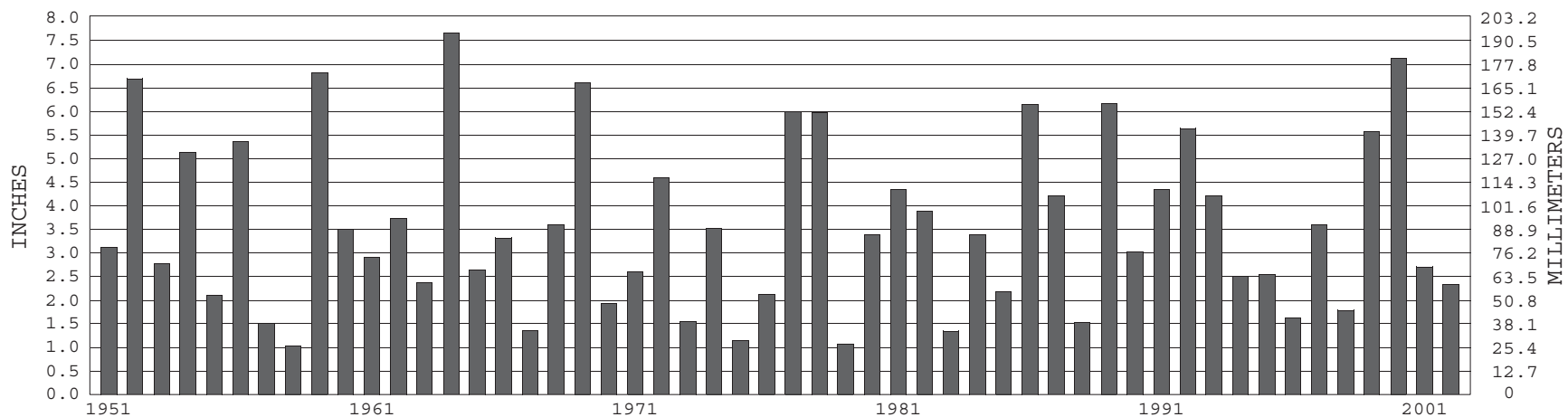
MILWAUKEE, WI JULY TEMPERATURES



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

Long-Term (1951-2002) Mean: 71.3 1961-1990 Normal: 72.0

MILWAUKEE, WI JULY PRECIPITATION



Long-Term (1951-2002) Mean Monthly Total: 3.58

1961-1990 Normal: 3.58



JULY 2002

MILWAUKEE, WI

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

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