



# DECEMBER 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	34	14	24	-8	9	21	41	0		0		0.0	0.00	29.12	29.89	9.1	25	9.9	32	23	25	24	01									
02	32	20	26	-5	17	23	39	0	SN BR	T		2.5	0.14	29.28	30.05	9.9	02	12.2	28	05	22	06	02									
03	26	13	20	-11	8	16	45	0	SN BR	4		2.0	0.10	29.79	30.59	5.4	33	5.9	18	35	16	34	03									
04	26	13	20	-10	8	18	45	0		3		0.0	0.00	29.70	30.49	3.8	33	4.4	12	01	8	36	04									
05	23	11	17*	-13	11	16	48	0	SN HZ	3		T	T	29.44	30.23	8.6	27	8.9	23	29	17	28	05									
06	32	10*	21	-8	12	18	44	0	HZ	2		0.0	0.00	29.30	30.08	11.6	24	12.3	35	23	26	22	06									
07	38	28	33	4	24	30	32	0		2		0.0	0.00	29.22	29.99	9.7	26	10.2	23	27	18	29	07									
08	29	15	22	-7	6	18	43	0		1		0.0	0.00	29.66	30.45	9.5	32	10.1	31	32	24	32	08									
09	29	11	20	-8	8	18	45	0		1		0.0	0.00	29.59	30.38	10.0	23	10.2	28	25	23	25	09									
10	45	27	36	8	21	29	29	0		1		0.0	0.00	29.37	30.14	8.3	24	8.7	25	24	18	24	10									
11	45	21	33	5	20	29	32	0		0		0.0	0.00	29.29	30.05	4.9	21	5.1	16	21	14	21	11									
12	40	27	34	7	29	33	31	0	BR HZ	0		0.0	0.00	29.31	30.08	7.4	20	7.6	17	20	15	20	12									
13	41	32	37	10	33	36	28	0	BR HZ	0		0.0	0.00	29.19	29.95	4.2	01	6.8	18	32	15	32	13									
14	40	30	35	8	29	32	30	0	BR HZ	0		0.0	0.00	29.13	29.89	9.5	26	11.4	28	24	21	24	14									
15	42	28	35	9	27	33	30	0	HZ	0		0.0	0.00	29.12	29.88	7.8	36	10.2	30	02	25	02	15									
16	32	26	29	3	21	27	36	0		0		0.0	0.00	29.37	30.15	12.7	09	15.4	29	07	24	06	16									
17	38	31	35	9	27	31	30	0	RA DZ BR	0		0.0	0.02	29.29	30.06	19.4	13	19.5	35*	13	28*	13	17									
18	51	37	44	19	45	46	21	0	RA BR	0		0.0	0.48	28.92	29.67	14.9	16	15.7	33	15	26	14	18									
19	53	35	44	19	33	38	21	0	BR HZ	0		0.0	0.00	28.84	29.58	10.8	25	11.2	26	25	20	25	19									
20	35	29	32	7	23	29	33	0	SN	0		0.1	0.01	28.71	29.46	14.2	26	14.3	28	26	22	27	20									
21	34	27	31	7	19	27	34	0	SN	0		T	T	28.93	29.69	13.0	26	13.1	32	27	26	26	21									
22	31	25	28	4	18	25	37	0		0		0.0	0.00	29.06	29.82	14.6	27	14.8	32	28	25	28	22									
23	33	22	28	4	13	23	37	0		0		0.0	0.00	29.27	30.04	12.7	28	13.5	33	27	23	27	23									
24	30	20	25	2	18	23	40	0	SN HZ	0		0.1	T	29.20	29.97	7.1	36	9.1	26	07	21	06	24									
25	30	24	27	4	20	24	38	0	SN	0		T	T	29.20	29.98	11.3	31	12.3	22	27	18	32	25									
26	36	20	28	5	19	24	37	0		0		0.0	0.00	29.45	30.24	9.0	24	9.4	21	28	16	24	26									
27	39	20	30	7	22	27	35	0	BR HZ	0		0.0	0.00	29.38	30.15	10.7	24	11.0	28	25	24	25	27									
28	39	29	34	11	28	31	31	0	SN FG BR HZ	0		T	T	29.19	29.95	7.5	25	8.1	23	26	18	26	28									
29	39	23	31	9	30	33	34	0	BR HZ	0		0.0	0.00	29.24	30.01	9.0	15	9.4	26	14	21	14	29									
30	56*	36	46*	24	41	44	19	0	RA BR HZ	0		0.0	T	28.91	29.66	6.6	23	10.9	32	29	25	30	30									
31	37	26	32	10	16	27	33	0		0		0.0	0.00	29.24	30.00	9.3	30	10.1	23	31	18	31	31									
36.6 23.5 30.1 ■■											< MONTHLY AVERAGES TOTALS->				4.7 0.75		29.25 30.02		4.8 26 10.7	<- MONTHLY AVERAGES												
3.5 4.1 3.9 ■■											<-----DEPARTURE FROM NORMAL----->											-1.47 SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3										
DEGREE DAYS									GREATEST 24-HR PRECIPITATION: 0.50			DATE :17-18			SEA LEVEL PRESSURE			DATE TIME														
MONTHLY TOTAL DEPARTURE									GREATEST 24-HR SNOWFALL: 2.5			DATE :02			MAXIMUM :			30.65 03 0952														
SEASON TO DATE TOTAL DEPARTURE									GREATEST SNOW DEPTH: 4			DATE : 03			MINIMUM :			29.41 20 0352														
HEATING: 1078 -122 2469 -147									NUMBER OF DAYS WITH →			MAXIMUM TEMP ≥ 90: 0			MINIMUM TEMP ≤ 32 : 28			PRECIPITATION ≥ 0.01 INCH : 5														
COOLING: 0 0 897 281												MAXIMUM TEMP ≤ 32 : 11			MINIMUM TEMP ≤ 0 : 0			PRECIPITATION ≥ 0.10 INCH : 3														
												THUNDERSTORMS : 0			HEAVY FOG : 0			SNOWFALL ≥ 1.0 INCH : 2														

DECEMBER 2002  
MILWAUKEE, WI

# HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

MILWAUKEE, WI

DECEMBER 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	T	T			T	0.01	T	T				T	02	0.06	0.14
03	T		T	T	T	T	0.02	0.02	0.01	T	T	T	03												03	T	0.10	
04													04	T											04		0.00	
05											T	T	05												05		T	
06													06												06		0.00	
07													07												07		0.00	
08													08												08		0.00	
09													09												09		0.00	
10													10												10		0.00	
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	T		0.02	17		0.02	
18		0.04	0.04	0.11	0.10	0.02	T				0.02	0.01	18		T	0.01	0.02	0.06	0.04	0.01					18		0.48	
19							T						19												19		0.00	
20								T		T	T	T	20	T	T	T	T	T	T	T	T	T	T	T	20	T	0.01	
21	T		T										21												21		T	
22		T											22												22		0.00	
23													23												23		0.00	
24											T	T	24	T	T	T		T	T						24		T	
25	T	T											25			T			T						25		T	
26													26												26		0.00	
27													27												27		0.00	
28													28												28		T	
29													29												29		0.00	
30													30												30		T	
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)	.03	.04	.06	.08	.11	.14	.17	.19	.20	.22	.24	.25
Ending Date	18	18	18	18	18	18	18	18	18	18	18	18
Ending Time (Hour/Min)	0404	0408	0412	0404	0408	0422	0422	0422	0454	0454	0422	0454

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  
DECEMBER 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							10.00	10.00	
02							.50	10.00	
03							.50	10.00	
04							10.00	10.00	
05							4.00	10.00	
06							6.00	10.00	
07							7.00	10.00	
08							10.00	10.00	
09							10.00	10.00	
10							9.00	10.00	
11							7.00	10.00	
12							4.00	10.00	
13							2.00	6.00	
14							4.00	9.00	
15							10.00	10.00	
16							10.00	10.00	
17							3.00	10.00	
18							1.75	7.00	
19							4.00	10.00	
20							1.00	10.00	
21							9.00	10.00	
22							10.00	10.00	
23							10.00	10.00	
24							1.75	10.00	
25							9.00	10.00	
26							8.00	10.00	
27							6.00	10.00	
28							.50	6.00	
29							.75	6.00	
30							4.00	10.00	
31							10.00	10.00	
<b>MONTHLY AVGS</b>							6.22	9.48	

**SUNSHINE (MINUTES)**  
  
 Total:                  Possible:  
                               Percent Possible:

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**NUMBER OF DAYS WITH:**  
**SKY CONDITION**  
 CLR   PTLY CLDY   CLOUDY   MISSING  
     31  
**MINIMUM VISIBILITY (MILES)**  
          <=0.25                      <=3.0                      >=7.0  
                0                                      8                                      16

## OBSERVATIONS AT 3-HOURLY INTERVALS

MILWAUKEE, WI

DECEMBER 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: 0703			DEC 01	SUNSET: 1618									SUNRISE: 0709			DEC 07	SUNSET: 1617										
03	FEW	NC			10.00		14	0	11	53	8	26	29.31	30.09	03	CLR	NC				8.00		31	23	28	72	14	24	29.12	29.88
06	OVC	100			10.00		16	1	13	51	15	24	29.27	30.04	06	CLR	NC				7.00		30	24	28	79	13	24	29.16	29.93
09	OVC	090			10.00		21	2	16	43	20	24	29.21	29.99	09	CLR	NC				10.00		32	24	29	73	10	28	29.22	29.98
12	OVC	140			10.00		29	9	23	43	18	23	29.05	29.83	12	CLR	NC				10.00		37	23	32	57	13	27	29.22	29.98
15	OVC	140			10.00		32	14	26	47	15	25	28.98	29.75	15	CLR	NC				10.00		38	24	33	57	10	25	29.23	29.99
18	BKN	110			10.00		33	17	28	52	0	00	28.98	29.75	18	CLR	NC				10.00		34	24	30	67	5	25	29.28	30.04
21	SCT	NC			10.00		30	18	26	61	0	00	29.01	29.78	21	CLR	NC				10.00		31	23	28	72	5	30	29.31	30.08
24	OVC	070			10.00		32	18	27	56	3	34	29.03	29.79	24	CLR	NC				10.00		29	20	26	69	7	28	29.34	30.12
			SUNRISE: 0704			DEC 02	SUNSET: 1618									SUNRISE: 0710			DEC 08	SUNSET: 1617										
03	OVC	065			10.00		30	22	27	72	7	36	29.06	29.82	03	CLR	NC				10.00		27	15	23	61	13	31	29.42	30.19
06	OVC	021			2.00	-SN	28	25	27	88	8	35	29.09	29.85	06	CLR	NC				10.00		22	9	18	57	8	31	29.52	30.30
09	OVC	010			1.00	-SN	25	22	24	88	14	01	29.15	29.92	09	FEW	NC				10.00		20	6	16	55	14	33	29.64	30.42
12	OVC	034			8.00	-SN	24	14	21	65	16	35	29.23	30.00	12	SCT	NC				10.00		23	6	19	48	14	34	29.70	30.48
15	BKN	050			10.00		25	9	21	50	13	36	29.31	30.09	15	SCT	NC				10.00		24	3	19	40	12	35	29.75	30.53
18	BKN	050			10.00		25	15	22	66	20	06	29.40	30.19	18	FEW	NC				10.00		20	2	16	45	7	33	29.80	30.60
21	OVC	050			10.00		25	11	21	55	16	07	29.54	30.33	21	CLR	NC				10.00		18	3	14	52	5	28	29.80	30.60
24	OVC	045			7.00	-SN	21	16	20	81	10	34	29.63	30.42	24	CLR	NC				10.00		15	2	12	56	3	29	29.79	30.58
			SUNRISE: 0705			DEC 03	SUNSET: 1618									SUNRISE: 0711			DEC 09	SUNSET: 1617										
03	BKN	031			3.00	-SN	18	14	17	84	10	34	29.69	30.48	03	CLR	NC				10.00		13	2	11	61	0	00	29.76	30.55
06	OVC	050			10.00		16	2	13	54	12	34	29.76	30.55	06	CLR	NC				10.00		12	2	10	64	5	23	29.71	30.51
09	FEW	NC			10.00		16	5	13	62	9	34	29.84	30.64	09	FEW	NC				10.00		17	6	14	62	13	23	29.71	30.50
12	FEW	NC			10.00		23	4	18	44	3	01	29.81	30.61	12	SCT	NC				10.00		26	8	21	46	15	24	29.60	30.38
15	SCT	NC			10.00		24	4	19	42	0	00	29.80	30.60	15	FEW	NC				10.00		29	11	24	47	17	23	29.50	30.29
18	CLR	NC			9.00		21	11	18	65	3	29	29.81	30.61	18	CLR	NC				10.00		26	12	22	55	13	22	29.47	30.25
21	FEW	NC			10.00		18	9	16	68	5	31	29.83	30.63	21	FEW	NC				10.00		28	13	23	53	16	23	29.42	30.21
24	CLR	NC			10.00		15	9	14	77	3	30	29.81	30.62	24	FEW	NC				10.00		29	13	24	51	12	26	29.41	30.19
			SUNRISE: 0706			DEC 04	SUNSET: 1618									SUNRISE: 0712			DEC 10	SUNSET: 1617										
03	BKN	140			10.00		16	7	14	67	6	33	29.79	30.58	03	CLR	NC				10.00		29	14	24	54	13	25	29.40	30.18
06	OVC	130			10.00		19	8	16	62	0	00	29.76	30.55	06	CLR	NC				10.00		28	14	24	56	13	24	29.39	30.17
09	BKN	075			10.00		22	6	18	50	7	34	29.77	30.56	09	CLR	NC				10.00		31	17	26	56	9	26	29.41	30.19
12	BKN	085			10.00		25	6	20	44	6	03	29.72	30.50	12	CLR	NC				10.00		41	24	35	51	9	23	29.37	30.15
15	OVC	080			10.00		25	9	21	50	0	00	29.68	30.47	15	CLR	NC				10.00		44	27	37	51	8	25	29.34	30.11
18	OVC	070			10.00		25	11	21	55	0	00	29.64	30.42	18	CLR	NC				10.00		34	25	31	70	5	18	29.34	30.11
21	FEW	NC			10.00		22	11	19	63	3	32	29.60	30.39	21	CLR	NC				10.00		32	24	29	73	6	21	29.33	30.10
24	CLR	NC			10.00		18	11	16	74	5	31	29.56	30.35	24	CLR	NC				9.00		30	22	27	72	3	23	29.31	30.08
			SUNRISE: 0707			DEC 05	SUNSET: 1618									SUNRISE: 0713			DEC 11	SUNSET: 1617										
03	CLR	NC			9.00		15	11	14	84	5	30	29.54	30.33	03	CLR	NC				8.00		26	20	24	78	0	00	29.31	30.07
06	CLR	NC			7.00		15	13	15	91	5	30	29.49	30.28	06	FEW	NC				7.00		22	18	21	85	0	00	29.30	30.06
09	CLR	NC			5.00	HZ	19	12	17	74	8	28	29.48	30.27	09	SCT	NC				10.00		31	21	28	67	5	22	29.31	30.08
12	BKN	023			4.00	-SN HZ	22	14	20	71	12	28	29.42	30.21	12	FEW	NC				10.00		43	23	35	45	12	23	29.27	30.03
15	BKN	240			9.00		22	14	20	71	10	26	29.36	30.15	15	FEW	NC				10.00		45	22	36	40	7	20	29.25	30.01
18	BKN	140			10.00		19	11	17	71	12	25	29.37	30.16	18	CLR	NC				10.00		36	21	31	55	3	19	29.29	30.06
21	CLR	NC			10.00		17	8	15	68	14	28	29.39	30.17	21	CLR	NC				10.00		34	20	29	56	7	19	29.29	30.05
24	CLR	NC			10.00		15	7	13	70	7	28	29.39	30.18	24	CLR	NC				10.00		30	19	26	64	6	23	29.30	30.06
			SUNRISE: 0708			DEC 06	SUNSET: 1617									SUNRISE: 0713			DEC 12	SUNSET: 1617										
03	CLR	NC			9.00		13	6	11	74	7	27	29.41	30.19	03	BKN	022				8.00		31	24	28	76	3	18	29.31	30.07
06	CLR	NC			8.00		10	6	9	84	7	27	29.41	30.21	06	OVC	028				5.00	HZ	34	28	32	79	6	19	29.31	30.07
09	CLR	NC			6.00	HZ	13	7	12	77	7	25	29.42	30.21	09	OVC	029				4.00	HZ	35	29	33	78	8	20	29.33	30.11
12	CLR	NC			10.00		22	12	19	66	14	25	29.34	30.12	12	OVC	037				4.00	HZ	38	31	35	76	9	19	29.31	30.08
15	SCT	NC			10.00		25	15	22	66	16	22																		

## OBSERVATIONS AT 3-HOURLY INTERVALS

MILWAUKEE, WI

DECEMBER 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		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: 0714		DEC 13	SUNSET: 1618											SUNRISE: 0718		DEC 19	SUNSET: 1619							
03	OVC	040		5.00	BR	37	33	35	86	6	23	29.29	30.04	03	OVC	011		4.00	BR	48	45	47	89	16	26	28.87	29.62
06	OVC	039		4.00	HZ	37	32	35	82	5	29	29.23	29.99	06	CLR	NC		6.00	BR	40	36	38	86	13	24	28.90	29.65
09	OVC	036		3.00	BR	37	33	35	86	0	00	29.24	30.00	09	OVC	018		10.00		40	33	37	77	10	27	28.90	29.65
12	OVC	010		3.00	HZ	40	35	38	83	7	03	29.17	29.92	12	BKN	025		10.00		42	32	38	68	13	27	28.88	29.63
15	OVC	080		2.00	BR	39	36	38	89	10	03	29.12	29.88	15	OVC	029		10.00		42	32	38	68	10	24	28.81	29.55
18	OVC	009		3.00	BR	38	35	37	89	9	03	29.14	29.90	18	OVC	035		10.00		39	28	35	65	7	24	28.81	29.55
21	BKN	030		4.00	HZ	36	31	34	82	10	03	29.14	29.90	21	OVC	034		10.00		37	25	32	62	7	27	28.75	29.50
24	OVC	031		6.00	BR	32	28	31	85	9	33	29.15	29.91	24	OVC	046		10.00		35	25	31	67	9	25	28.70	29.45
			SUNRISE: 0715		DEC 14	SUNSET: 1618											SUNRISE: 0719		DEC 20	SUNSET: 1620							
03	BKN	029		6.00	BR	32	28	31	85	12	31	29.16	29.93	03	OVC	049		10.00		34	26	31	73	13	24	28.67	29.41
06	OVC	009		5.00	BR	31	28	30	89	10	31	29.16	29.93	06	OVC	046		10.00		33	26	30	75	15	25	28.67	29.42
09	OVC	005		4.00	BR	30	28	29	92	9	28	29.21	29.97	09	OVC	038		9.00	-SN	33	23	29	67	15	25	28.70	29.45
12	SCT	NC		5.00	HZ	35	29	33	78	9	24	29.19	29.95	12	OVC	060		9.00	-SN	33	23	29	67	14	26	28.67	29.42
15	BKN	220		6.00	HZ	39	30	35	70	12	21	29.09	29.85	15	OVC	055		9.00	-SN	33	23	29	67	14	25	28.70	29.45
18	FEW	NC		7.00		36	29	33	76	14	23	29.07	29.83	18	OVC	090		8.00	-SN	31	24	28	76	13	27	28.75	29.50
21	BKN	250		7.00		37	29	34	73	16	25	29.06	29.82	21	OVC	036		10.00	-SN	31	22	28	69	12	26	28.76	29.52
24	BKN	250		9.00		38	29	34	70	12	25	29.02	29.78	24	SCT	NC		9.00	-SN	30	19	26	64	14	26	28.79	29.54
			SUNRISE: 0716		DEC 15	SUNSET: 1618											SUNRISE: 0719		DEC 21	SUNSET: 1620							
03	BKN	160		10.00		37	29	34	73	7	27	29.00	29.75	03	OVC	047		9.00		30	20	27	66	18	26	28.82	29.57
06	OVC	130		10.00		37	29	34	73	6	28	29.01	29.76	06	OVC	039		10.00		30	18	26	61	18	27	28.84	29.61
09	FEW	NC		10.00		38	29	34	70	8	35	29.07	29.83	09	SCT	NC		10.00		30	17	26	59	13	28	28.93	29.69
12	BKN	025		10.00		41	31	37	67	12	03	29.07	29.83	12	BKN	034		10.00		33	18	28	54	17	26	28.96	29.72
15	OVC	029		10.00		38	32	36	79	14	03	29.12	29.88	15	BKN	200		10.00		33	19	28	56	17	26	28.97	29.73
18	OVC	028		10.00		36	28	33	73	18	03	29.19	29.95	18	BKN	200		10.00		31	20	27	64	7	26	28.98	29.74
21	OVC	024		10.00		30	18	26	61	14	01	29.28	30.04	21	SCT	NC		10.00		29	21	26	72	9	26	29.00	29.76
24	OVC	029		10.00		28	18	25	66	8	35	29.32	30.09	24	SCT	NC		10.00		27	20	25	75	9	27	28.95	29.71
			SUNRISE: 0716		DEC 16	SUNSET: 1618											SUNRISE: 0720		DEC 22	SUNSET: 1621							
03	OVC	027		10.00		27	19	24	72	12	35	29.34	30.11	03	FEW	NC		10.00		26	20	24	78	7	25	28.94	29.70
06	BKN	026		10.00		30	22	27	72	18	07	29.35	30.12	06	SCT	NC		10.00		25	21	24	85	12	27	28.96	29.72
09	BKN	150		10.00		30	18	26	61	22	08	29.39	30.16	09	OVC	022		10.00		29	20	26	69	12	28	29.01	29.78
12	BKN	020		10.00		29	21	26	72	14	11	29.39	30.17	12	OVC	026		10.00		30	19	26	64	15	28	29.05	29.82
15	OVC	017		10.00		30	22	27	72	13	09	29.38	30.16	15	BKN	034		10.00		30	16	25	56	20	26	29.08	29.85
18	BKN	022		10.00		30	22	27	72	12	12	29.37	30.15	18	OVC	055		10.00		29	14	24	54	15	26	29.15	29.92
21	BKN	095		10.00		31	24	28	76	17	11	29.40	30.17	21	SCT	NC		10.00		28	17	25	63	16	26	29.16	29.93
24	BKN	090		10.00		32	22	28	66	18	13	29.38	30.16	24	OVC	030		10.00		30	19	26	64	17	27	29.16	29.93
			SUNRISE: 0717		DEC 17	SUNSET: 1619											SUNRISE: 0720		DEC 23	SUNSET: 1621							
03	SCT	NC		10.00		31	24	28	76	15	13	29.39	30.16	03	OVC	028		10.00		29	18	25	64	14	28	29.18	29.94
06	OVC	017		10.00		32	26	30	79	18	13	29.37	30.15	06	FEW	NC		10.00		26	16	23	66	16	28	29.21	29.98
09	BKN	015		10.00		32	26	30	79	17	12	29.37	30.15	09	FEW	NC		10.00		26	14	22	60	17	29	29.26	30.03
12	BKN	200		10.00		35	26	32	70	20	13	29.31	30.08	12	FEW	NC		10.00		31	6	24	35	16	30	29.22	29.99
15	OVC	028		10.00		36	25	32	64	17	12	29.24	30.01	15	CLR	NC		10.00		32	10	25	40	17	28	29.27	30.03
18	OVC	027		10.00		37	25	32	62	23	12	29.22	29.98	18	FEW	NC		10.00		29	12	24	49	10	29	29.33	30.10
21	OVC	012		4.00	-DZ	36	32	34	86	22	13	29.20	29.96	21	FEW	NC		10.00		25	13	21	60	8	33	29.35	30.13
24	OVC	004		3.00	BR	37	35	36	93	20	13	29.12	29.88	24	CLR	NC		10.00		23	12	20	63	5	32	29.37	30.15
			SUNRISE: 0718		DEC 18	SUNSET: 1619											SUNRISE: 0721		DEC 24	SUNSET: 1622							
03	OVC	003		5.00	-RA BR	39	38	39	96	21	15	29.05	29.81	03	CLR	NC		10.00		21	13	19	71	6	30	29.33	30.11
06	OVC	004		2.00	BR	42	41	42	96	20	15	28.97	29.72	06	OVC	021		10.00		21	13	19	71	6	31	29.31	30.09
09	OVC	009		3.00	BR	48	46	47	93	16	16	28.94	29.69	09	OVC	021		10.00		23	15	21	72	6	31	29.29	30.06
12	OVC	013		4.00	BR	49	47	48	93	18	17	28.88	29.63	12	OVC	021		10.00		26	19	24	75	8	32	29.22	29.99
15	OVC	008		3.00	BR	49	46	47	90	16	16	28.83	29.57	15	OVC	015		9.00		26	22	25	84	10	34	29.14	29.91
18	OVC	060		3.00	-RA BR	49	48	48	97	13	15	28.86	29.61	18	OVC	014		10.00		27	22	25	81	10	36	29.11	29.88
21	BKN	040		4.00	BR	48	47	47	96	10	18	28.84	29.59	21	OVC	027		10.00		29	21	26	72	17	06	29.06	29.83
24	BKN	016		3.00	BR	50	48	49	93	7	18	28.83	29.57	24	OVC	019		10.00		30	23	28	75	12	04	29.03	29.80

## OBSERVATIONS AT 3-HOURLY INTERVALS

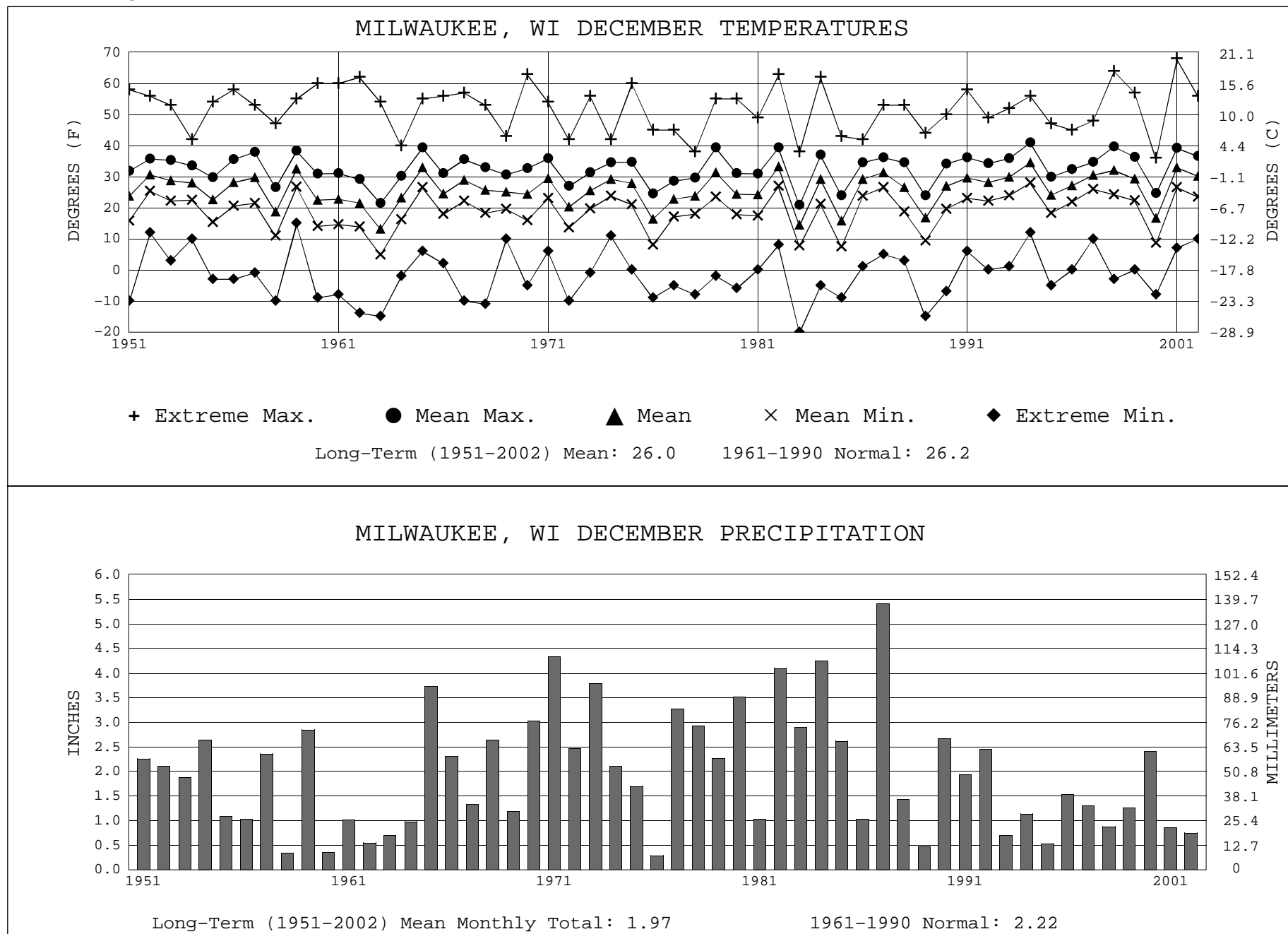
MILWAUKEE, WI

DECEMBER 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 Oktas		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 Oktas		DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL								
SUNRISE: 0721						DEC 25						SUNSET: 1623						SUNRISE: 0723						DEC 31						SUNSET: 1627					
03	OVC	017				27	21	25	78	14	34	29.05	29.82	03	BKN	180				33	20	29	59	9	28	29.17	29.93								
06	OVC	023				26	22	25	84	13	33	29.08	29.85	06	BKN	180				30	17	26	59	9	29	29.20	29.95								
09	BKN	039				28	19	25	69	13	33	29.16	29.92	09	FEW	NC				28	17	25	63	16	30	29.24	30.00								
12	BKN	021				28	19	25	69	14	31	29.19	29.96	12	FEW	NC				33	17	28	52	13	29	29.21	29.98								
15	OVC	019				27	19	24	72	12	32	29.24	30.01	15	FEW	NC				36	15	29	42	10	31	29.22	29.98								
18	OVC	017				26	20	24	78	13	27	29.30	30.07	18	CLR	NC				31	17	26	56	8	31	29.30	30.07								
21	OVC	015				25	19	23	78	8	28	29.36	30.14	21	CLR	NC				28	14	24	56	9	33	29.29	30.06								
24	OVC	013				25	20	23	81	15	28	29.37	30.15	24	CLR	NC				26	12	22	55	8	01	29.31	30.09								
SUNRISE: 0721						DEC 26						SUNSET: 1623						3-HOURLY OBSERVATION NOTES																	
03	CLR	NC				24	19	22	81	9	26	29.40	30.18	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 Visiblity = 8/8.																					
06	CLR	NC				22	16	20	78	7	24	29.44	30.22	Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet.																					
09	CLR	NC				22	17	20	82	9	24	29.48	30.27	NC= No ceiling detected.																					
12	CLR	NC				32	20	28	61	8	25	29.47	30.25	& = Original observation contained additional weather elements.																					
15	CLR	NC				35	18	29	50	12	24	29.45	30.23	See page 3 for additional notes.																					
18	CLR	NC				28	21	26	75	9	21	29.48	30.26																						
21	CLR	NC				24	19	22	81	9	22	29.47	30.26																						
24	FEW	NC				24	19	22	81	7	24	29.46	30.24																						
SUNRISE: 0722						DEC 27						SUNSET: 1624						SUMMARY BY HOUR																	
03	FEW	NC				23	17	21	78	7	22	29.47	30.25	HOUR (LST)	AVERAGES								RESULTANT WIND (MPH)		SPEED	DIRECTION									
06	FEW	NC				21	15	19	78	8	23	29.44	30.22		CEILOMETER	EFF CLD AMT	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY	PRESSURE (INCHES,HG)		VISIBILITY (MILES)	WIND SPEED (MPH)											
09	BKN	150				23	18	21	81	10	23	29.44	30.22								STATION	SEA LEVEL													
12	SCT	NC				34	24	30	67	12	22	29.37	30.15	01			28	21	26	74	29.24	30.01	8.45	10	5	26									
15	BKN	027				38	27	34	65	17	24	29.34	30.11	02			28	21	26	75	29.24	30.01	8.44	10	5	26									
18	CLR	NC				32	27	30	82	13	22	29.32	30.10	03			28	20	25	75	29.25	30.02	8.26	9	5	27									
21	CLR	NC				29	25	28	85	13	23	29.30	30.07	04			27	20	25	76	29.25	30.02	7.90	10	5	26									
24	OVC	017				33	27	31	78	14	26	29.28	30.04	05			27	20	25	76	29.26	30.03	7.97	10	5	26									
SUNRISE: 0722						DEC 28						SUNSET: 1625																							
03	OVC	120				33	28	31	82	12	25	29.23	30.00	06			27	20	25	74	29.27	30.04	7.56	10	5	26									
06	BKN	080				32	28	31	85	9	24	29.23	30.00	07			29	21	26	72	29.27	30.04	7.65	11	5	27									
09	OVC	008				32	29	31	88	9	22	29.16	29.93	08			31	21	28	70	29.28	30.05	7.94	12	6	26									
12	BKN	100				36	29	33	76	12	22	29.11	29.88	09			32	21	28	66	29.27	30.04	7.84	13	7	26									
15	FEW	NC				39	28	35	65	9	25	29.10	29.85	10			33	22	29	64	29.24	30.01	8.18	13	6	25									
18	SCT	NC				34	27	31	76	7	27	29.18	29.94	11			34	22	30	62	29.23	30.00	8.18	13	6	25									
21	BKN	220				32	27	30	82	6	26	29.24	30.00	12			34	22	30	62	29.22	29.99	8.42	13	6	26									
24	SCT	NC				30	26	29	85	5	29	29.27	30.03	13			34	22	30	63	29.22	29.99	8.66	12	6	25									
SUNRISE: 0722						DEC 29						SUNSET: 1625																							
03	BKN	120				25	23	24	92	0	00	29.29	30.06	14			34	22	30	62	29.24	30.00	8.65	11	5	25									
06	OVC	140				27	25	26	92	0	00	29.31	30.09	15			33	22	29	66	29.24	30.01	8.45	9	3	24									
09	OVC	140				33	31	32	92	6	13	29.33	30.11	16			32	22	29	69	29.24	30.01	8.87	10	3	23									
12	OVC	010				37	33	35	86	13	16	29.31	30.08	17			31	22	28	68	29.25	30.02	8.84	11	4	24									
15	BKN	010				37	33	35	86	13	13	29.25	30.01	18			31	22	28	69	29.25	30.02	8.87	11	4	26									
18	SCT	NC				36	32	34	86	18	14	29.18	29.95	19			30	21	27	70	29.25	30.02	8.65	11	3	25									
21	CLR	NC				37	33	35	86	20	14	29.11	29.87	20			30	21	27	70	29.25	30.02	8.71	10	4	25									
24	BKN	038				38	34	36	86	14	16	29.02	29.78	21			30	20	27	68	29.25	30.02	8.52	11	5	25									
SUNRISE: 0722						DEC 30						SUNSET: 1626																							
03	OVC	050				40	36	38	86	10	17	28.95	29.71	22			29	21	26	72	29.25	30.02	8.55	10	4	26									
06	OVC	013				43	40	42	89	6	17	28.88	29.63	23			29	21	26	72	29.25	30.02	8.55	10	4	26									
09	OVC	007				49	47	48	93	8	19	28.85	29.60	24			29	21	26	72	29.25	30.02	8.55	10	4	26									
12	OVC	010				54	51	52	90	15	22	28.81	29.55																						
15	OVC	045				55	52	53	90	10	23	28.81	29.55																						
18	FEW	NC				52	45	48	77	10	27	28.91	29.65																						
21	SCT	NC				40	28	35	63	18	31	29.01	29.76																						
24	BKN	230				36	24	32	62	12	29	29.10	29.85																						





DECEMBER 2002

MILWAUKEE, WI

# LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

*I certify that this is an official publication of the National Oceanic and Atmospheric Administration (NOAA). It is compiled using information from weather observing sites operated by NOAA – National Weather Service / Department Of Transportation – Federal Aviation Administration and received at the National Climatic Data Center (NCDC), Asheville, North Carolina 28801.*

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