



MARCH 1999

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

MADISON, WI

DANE COUNTY REGIONAL AIRPORT (MSN)

Lat: 43°08' N Long: 89°20' W Elev (Ground): 858 Feet

Time Zone: CENTRAL WBAN: 14837 ISSN #:0198-5736

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	41	29	35	9	24	31	30	0	SN	0		T	T	28.88	29.82	2.7	32	6.4	22	33	16	33	01	
02	40	30	35	9	27	32	30	0	SN HZ	0		T	T	28.80	29.74	5.7	31	9.5	26	32	20	32	02	
03	35	21	28	1	14	23	37	0		0		0.0	0.00	29.03	29.99	11.6	33	11.8	26	35	20	34	03	
04	33	16	25	-2	13	22	40	0		0		0.0	0.00	29.15	30.12	5.0	09	6.9	21	09	17	10	04	
05	31	21	26	-1	23	26	39	0	SN BR BLSN	2		1.7	0.09	29.17	30.13	16.0	04	17.2	33	01	28	01	05	
06	24	8	16	-12	9	16	49	0	SN BLSN	2		0.3	0.03	29.46	30.45	14.4	01	14.7	33	01	28	02	06	
07	29	3*	16*	-12	9	15	49	0		2		0.0	0.00	29.69	30.69	4.5	13	5.0	18	15	15	15	07	
08	30	20	25	-4	16	23	40	0	SN BR BLSN	1		2.9	0.13	29.36	30.34	16.3	11	16.9	34	10	30*	11	08	
09	30	23	27	-2	24	27	38	0	SN BLSN	5		2.9	0.17	29.09	30.05	13.3	06	14.6	29	10	24	10	09	
10	32	12	22	-8	15	20	43	0		4		0.0	0.00	29.34	30.31	6.5	02	7.2	20	01	16	01	10	
11	33	14	24	-6	15	22	41	0		4		0.0	0.00	29.42	30.40	4.3	01	4.9	15	02	14	01	11	
12	38	11	25	-6	17	23	40	0		2		0.0	0.00	29.46	30.43	3.8	05	4.6	15	05	11	07	12	
13	41	15	28	-3	17	25	37	0		1		0.0	0.00	29.38	30.35	2.0	07	3.0	11	06	10	04	13	
14	42	19	31	0	20	27	34	0	BR	T		0.0	0.00	29.22	30.18	5.0	03	5.6	20	03	15	05	14	
15	45	21	33	1	21	30	32	0		T		0.0	0.00	29.09	30.05	6.7	20	7.0	21	19	16	19	15	
16	56	34	45	13	28	37	20	0		0		0.0	0.00	28.83	29.77	6.1	20	7.4	16	18	13	18	16	
17	58	36	47	14	32	41	18	0		0		0.0	0.00	28.73	29.66	13.3	25	15.2	40*	28	28	28	17	
18	43	25	34	1	21	30	31	0		0		0.0	0.00	29.28	30.23	10.2	32	10.6	31	30	24	30	18	
19	46	22	34	0	22	30	31	0		0		0.0	0.00	29.47	30.43	0.9	36	3.9	14	07	10	16	19	
20	55	26	41	7	25	34	24	0		0		0.0	0.00	29.17	30.12	5.5	24	9.5	25	31	18	33	20	
21	45	28	37	3	18	30	28	0		0		0.0	0.00	29.11	30.06	11.5	32	11.9	31	31	22	33	21	
22	46	24	35	0	14	27	30	0		0		0.0	0.00	29.18	30.14	5.8	33	6.6	22	01	16	36	22	
23	54	21	38	3	20	32	27	0		0		0.0	0.00	29.05	30.00	3.9	24	6.1	25	24	18	02	23	
24	45	24	35	-1	15	28	30	0		0		0.0	0.00	29.22	30.17	7.4	34	7.9	24	33	16	32	24	
25	37	21	29	-7	18	26	36	0		0		0.0	0.00	29.41	30.38	5.7	02	7.1	21	02	17	01	25	
26	49	18	34	-3	20	29	31	0		0		0.0	0.00	29.37	30.34	2.0	17	3.6	11	17	10	17	26	
27	57	23	40	3	23	35	25	0		0		0.0	0.00	29.25	30.20	8.6	17	8.8	23	16	20	16	27	
28	54	34	44	6	30	37	21	0	RA BR HZ	0		0.0	0.05	29.09	30.04	8.5	20	11.0	30	28	22	26	28	
29	60	31	46	8	19	36	19	0		0		0.0	0.00	29.26	30.21	6.2	27	7.5	26	27	21	29	29	
30	72	41	57	19	28	44	8	0		0		0.0	0.00	29.15	30.09	10.7	20	11.0	31	18	23	19	30	
31	72*	50	61*	22	39	50	4	0		0		0.0	0.00	28.87	29.79	15.8	19	15.9	36	18	29	19	31	
44.3		23.3	33.8	■ ■	20.5	29.3	31.0	0.0	< MONTHLY AVERAGES	TOTALS-->		7.8	0.47	29.19	30.15	0.9	34	9.0	<-- MONTHLY AVERAGES					
2.8		0.3	1.5	■ ■	<----- DEPARTURE FROM NORMAL ----->								-1.70	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3										
DEGREE DAYS									GREATEST 24-HR PRECIPITATION: 0.17 DATE :09					SEA LEVEL PRESSURE DATE TIME										
MONTHLY									GREATEST 24-HR SNOWFALL: 2.9 DATE :09+					MAXIMUM : 30.77 07 0853										
TOTAL DEPARTURE									GREATEST SNOW DEPTH: 5 DATE :09					MINIMUM : 29.53 17 0904										
HEATING: 962 -52									NUMBER OF DAYS WITH → MAXIMUM TEMP ≥ 90: 0					PRECIPITATION ≥ 0.01 INCH : 5										
COOLING: 0 0									MAXIMUM TEMP ≤ 32 : 6					PRECIPITATION ≥ 0.10 INCH : 2										
									THUNDERSTORMS : 0					HEAVY FOG : 0					SNOWFALL ≥ 1.0 INCH : 3					

MARCH 1999
MADISON, WI

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

MADISON, WI

MARCH 1999

MSN

WBAN # 14837

DATE	FOR HOUR (LST) ENDING AT												DATE	FOR HOUR (LST) ENDING AT												DATE	Sum if Different (See Note 2)	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		T										01			T
02													02					T	T						02			T
03													03												03			0.00
04													04												04			0.00
05	T	T	T	T	T	T	0.01	T	T	T	T	0.01	05	0.01	T	0.01	0.01	0.01	0.01	T	T			T	05			0.09
06	T	T		T	0.01	0.02	T	T		T			06												06			0.03
07													07												07			0.00
08													08				T	T	0.01	0.01	0.05	0.01	0.03	0.02	08			0.13
09	0.02	0.02	0.05	0.02	0.02	0.01	0.01	T	T	T	T	T	09	T	T	T	T	T	T	0.01	0.01	0.01	T	T	09			0.17
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												17			0.00
18													18												18			0.00
19													19												19			0.00
20													20												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												25			0.00
26													26												26			0.00
27													27												27			0.00
28									T	0.03	0.01		28												28	0.04		0.05
29													29												29			0.00
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

**MADISON, WI
MARCH 1999**

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).

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 at constant pressure by evaporation of moisture into it, to 100% relative humidity.

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							3.00	10.00	
03							10.00	10.00	
04							10.00	10.00	
05							.75	8.00	
06							2.00	10.00	
07							8.00	10.00	
08							.75	10.00	
09							.75	10.00	
10							8.00	10.00	
11							10.00	10.00	
12							9.00	10.00	
13							7.00	10.00	
14							5.00	10.00	
15							9.00	10.00	
16							10.00	10.00	
17							10.00	10.00	
18							10.00	10.00	
19							10.00	10.00	
20							10.00	10.00	
21							10.00	10.00	
22							10.00	10.00	
23							10.00	10.00	
24							10.00	10.00	
25							10.00	10.00	
26							8.00	10.00	
27							9.00	10.00	
28							2.50	10.00	
29							10.00	10.00	
30							10.00	10.00	
31							7.00	10.00	
MONTHLY AVGS							7.73	9.94	
<p align="center">SUNSHINE (MINUTES)</p> <p>Total: Possible:</p> <p align="center">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">0 6 24</p>									

MADISON, WI

MARCH 1999

MSN

WBAN # 14837

Hour (LST)			SATELLITE		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: 0634 MAR 01 Sunset: 1746						Sunrise: 0624 MAR 07 Sunset: 1753																						
03	OVC	027		10.00		33	22	29	64	10	34	28.86	29.80	03	CLR	NC		10.00			6	3	5	87	0	00	29.70	30.69
06	BKN	025		10.00		30	22	27	72	7	34	28.90	29.84	06	CLR	NC		10.00			4	1	3	88	0	00	29.72	30.72
09	OVC	100		10.00		32	22	28	66	9	33	28.92	29.86	09	CLR	NC		10.00			16	8	14	71	0	00	29.77	30.77
12	BKN	080		10.00		37	23	32	57	6	VR	28.91	29.85	12	CLR	NC		10.00			25	8	20	48	5	10	29.74	30.74
15	BKN	100		10.00		40	24	34	53	3	35	28.87	29.81	15	FEW	NC		10.00			27	10	22	49	5	VR	29.69	30.68
18	OVC	070		10.00		39	25	34	57	5	18	28.87	29.81	18	BKN	031		10.00			26	15	23	63	13	16	29.67	30.66
21	BKN	080		10.00		35	26	32	70	6	17	28.85	29.80	21	CLR	NC		10.00			21	15	19	78	12	12	29.63	30.62
24	OVC	055		10.00		36	27	32	70	5	17	28.83	29.77	24	CLR	NC		10.00			20	13	18	74	9	14	29.61	30.59
Sunrise: 0632 MAR 02 Sunset: 1747						Sunrise: 0622 MAR 08 Sunset: 1755																						
03	OVC	050		10.00		35	28	32	76	6	17	28.81	29.75	03	OVC	100		10.00			21	14	19	74	13	14	29.56	30.54
06	OVC	110		8.00		35	29	33	78	7	18	28.76	29.70	06	OVC	110		10.00			22	8	18	55	12	13	29.55	30.53
09	BKN	080		7.00		37	30	34	76	0	00	28.74	29.68	09	BKN	100		10.00			25	14	22	63	15	12	29.50	30.48
12	OVC	017		7.00		40	31	36	70	12	30	28.75	29.69	12	BKN	070		10.00			28	15	24	58	16	10	29.37	30.35
15	OVC	011		3.00	HZ	36	31	34	82	13	31	28.76	29.70	15	OVC	070		10.00			29	16	25	58	20	11	29.30	30.27
18	OVC	021		9.00	-SN	35	27	32	72	12	34	28.84	29.78	18	OVC	024		6.00	-SN BLSN		27	18	24	69	23	10	29.22	30.19
21	OVC	034		10.00		34	23	30	64	15	33	28.88	29.82	21	OVC	016		1.50	-SN BLSN		25	22	24	88	21	09	29.16	30.12
24	BKN	038		10.00		30	17	26	59	17	34	28.93	29.87	24	OVC	014		1.75	-SN BLSN		27	24	26	89	18	10	29.06	30.03
Sunrise: 0631 MAR 03 Sunset: 1749						Sunrise: 0620 MAR 09 Sunset: 1756																						
03	CLR	NC		10.00		26	11	22	53	15	34	28.95	29.90	03	OVC	016		2.50	-SN BLSN		28	24	27	85	18	09	29.01	29.97
06	FEW	NC		10.00		22	13	19	68	15	33	28.97	29.92	06	OVC	008		0.75	-SN		28	25	27	88	14	08	29.00	29.96
09	BKN	027		10.00		24	13	21	62	18	34	29.01	29.97	09	OVC	014		4.00	-SN		28	25	27	88	15	06	29.02	29.98
12	BKN	034		10.00		30	14	25	51	15	31	29.02	29.98	12	OVC	029		2.50	-SN BLSN		29	25	28	85	15	06	29.05	30.01
15	SCT	NC		10.00		33	14	27	45	16	33	29.02	29.98	15	OVC	038		9.00	-SN		30	23	28	75	14	07	29.07	30.03
18	CLR	NC		10.00		30	14	25	51	13	32	29.08	30.05	18	OVC	045		3.00	-SN		28	24	27	85	16	04	29.15	30.11
21	CLR	NC		10.00		24	15	21	68	5	35	29.13	30.10	21	OVC	017		3.00	-SN		27	24	26	89	13	02	29.21	30.17
24	CLR	NC		10.00		23	14	20	68	6	33	29.16	30.12	24	SCT	NC		10.00			23	21	22	92	9	36	29.23	30.20
Sunrise: 0629 MAR 04 Sunset: 1750						Sunrise: 0619 MAR 10 Sunset: 1757																						
03	CLR	NC		10.00		18	10	16	71	3	32	29.16	30.12	03	FEW	NC		9.00			20	18	19	92	3	VR	29.28	30.25
06	CLR	NC		10.00		17	11	15	77	5	36	29.18	30.14	06	FEW	NC		10.00			14	12	13	92	3	33	29.32	30.29
09	FEW	NC		10.00		22	13	19	68	0	00	29.21	30.18	09	CLR	NC		10.00			22	15	20	75	7	02	29.36	30.33
12	BKN	100		10.00		29	9	23	43	3	VR	29.18	30.14	12	FEW	NC		10.00			30	17	26	59	10	02	29.37	30.34
15	OVC	075		10.00		32	11	26	41	6	11	29.12	30.09	15	FEW	NC		10.00			31	16	26	54	13	04	29.34	30.30
18	OVC	090		10.00		31	13	25	47	12	10	29.09	30.06	18	FEW	NC		10.00			28	11	23	49	9	03	29.36	30.33
21	OVC	090		10.00		29	20	26	69	14	11	29.14	30.11	21	CLR	NC		10.00			20	11	17	68	3	35	29.37	30.35
24	OVC	050		10.00		29	18	25	64	14	10	29.15	30.11	24	CLR	NC		10.00			15	11	14	84	3	31	29.38	30.35
Sunrise: 0627 MAR 05 Sunset: 1751						Sunrise: 0617 MAR 11 Sunset: 1758																						
03	OVC	010		8.00	-SN	28	24	27	85	10	09	29.14	30.10	03	CLR	NC		10.00			20	11	17	68	5	36	29.38	30.36
06	OVC	010		2.00	-SN	28	26	27	92	12	06	29.15	30.11	06	BKN	110		10.00			20	11	17	68	3	33	29.41	30.40
09	OVC	012		4.00	-SN	29	26	28	89	16	07	29.18	30.14	09	CLR	NC		10.00			24	11	20	57	9	02	29.43	30.41
12	OVC	014		1.25	-SN	30	26	29	85	18	06	29.18	30.14	12	CLR	NC		10.00			30	15	25	54	9	04	29.43	30.41
15	OVC	015		1.25	-SN BR	28	24	27	85	22	05	29.15	30.12	15	CLR	NC		10.00			33	18	28	54	7	03	29.41	30.38
18	OVC	017		1.00	-SN BLSN	25	22	24	88	18	03	29.18	30.15	18	CLR	NC		10.00			31	19	27	61	5	04	29.41	30.39
21	OVC	026		5.00	-SN BLSN	22	18	21	85	23	01	29.20	30.17	21	CLR	NC		10.00			23	18	21	81	0	00	29.43	30.42
24	OVC	016		7.00		21	17	20	85	22	02	29.21	30.18	24	CLR	NC		10.00			20	17	19	89	0	00	29.42	30.40
Sunrise: 0626 MAR 06 Sunset: 1752						Sunrise: 0615 MAR 12 Sunset: 1760																						
03	OVC	024		4.00	BLSN	19	15	18	85	23	02	29.25	30.22	03	CLR	NC		10.00			15	12	14	88	5	36	29.43	30.41
06	OVC	060		2.00	-SN BLSN	16	12	15	84	24	36	29.31	30.28	06	CLR	NC		10.00			15	12	14	88	0	00	29.48	30.46
09	OVC	047		9.00	-SN	18	9	16	68	22	36	29.41	30.39	09	CLR	NC		10.00			25	17	23	72	3	01	29.50	30.48
12	FEW	NC		10.00		21	10	18	62	23	02	29.49	30.47	12	CLR	NC		10.00			33	21	29	61	9	03	29.46	30.44
15	CLR	NC		10.00		23	7	19	50	15	02	29.52	30.51	15	CLR	NC		10.00			37	20	31	50	8	04	29.42	30.40
18	CLR	NC		10.00		19	5	16	54	7	05	29.58	30.57	18	CLR	NC		10.00			33	20	29	59	8	07	29.43	30.42
21	CLR	NC		10.00		12	5	10	73	0	00	29.64	30.63	21	CLR	NC		10.00			26	17	23	69	6	09	29.43	30.41
24	CLR	NC		10.00		8	5	7	87	0	00	29.68	30.67	24	CLR	NC		10.00			20	16	19	85	0	00	29.45	30.43

OBSERVATIONS AT 3-HOURLY INTERVALS

MADISON, WI

MARCH 1999

MSN

WBAN # 14837

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: 0613			MAR 13	SUNSET: 1801									SUNRISE: 0603			MAR 19	SUNSET: 1807									
03	CLR	NC			10.00		18	17	18	96	3	36	29.41	30.39	03	CLR	NC			10.00	25	21	24	85	3	32	29.47	30.44	
06	CLR	NC			9.00		16	14	15	92	3	32	29.39	30.37	06	CLR	NC			10.00	24	19	22	81	5	35	29.49	30.46	
09	CLR	NC			10.00		28	22	26	78	0	00	29.43	30.40	09	CLR	NC			10.00	34	23	30	64	7	01	29.52	30.49	
12	CLR	NC			10.00		38	18	31	44	7	13	29.42	30.40	12	CLR	NC			10.00	40	22	33	49	3	VR	29.50	30.47	
15	CLR	NC			10.00		40	14	31	35	0	00	29.36	30.32	15	CLR	NC			10.00	44	23	36	43	3	VR	29.46	30.42	
18	CLR	NC			10.00		35	20	30	54	6	07	29.31	30.28	18	CLR	NC			10.00	43	24	36	47	0	00	29.43	30.40	
21	CLR	NC			10.00		29	18	25	64	6	07	29.32	30.28	21	CLR	NC			10.00	32	23	29	69	0	00	29.41	30.38	
24	CLR	NC			10.00		22	17	20	82	3	36	29.30	30.27	24	CLR	NC			10.00	32	26	30	79	8	16	29.38	30.35	
			SUNRISE: 0612			MAR 14	SUNSET: 1801									SUNRISE: 0601			MAR 20	SUNSET: 1808									
03	CLR	NC			10.00	BR	22	18	21	85	5	02	29.25	30.22	03	CLR	NC			10.00	30	21	27	69	3	19	29.35	30.30	
06	CLR	NC			5.00		20	18	19	92	5	34	29.25	30.22	06	CLR	NC			10.00	28	20	25	72	3	20	29.32	30.28	
09	CLR	NC			10.00		32	24	29	73	9	05	29.26	30.22	09	CLR	NC			10.00	39	21	32	48	10	19	29.27	30.22	
12	CLR	NC			10.00		39	24	33	55	12	03	29.23	30.19	12	CLR	NC			10.00	48	27	39	44	13	20	29.17	30.12	
15	CLR	NC			10.00		42	21	34	43	8	03	29.19	30.14	15	CLR	NC			10.00	52	28	42	40	14	23	29.02	29.97	
18	CLR	NC			10.00		39	17	31	41	3	35	29.20	30.16	18	FEW	NC			10.00	52	29	42	41	12	29	28.99	29.94	
21	CLR	NC			10.00		28	18	25	66	0	00	29.19	30.15	21	CLR	NC			10.00	42	27	36	55	16	36	29.05	30.00	
24	CLR	NC			10.00		24	20	23	84	0	00	29.16	30.12	24	CLR	NC			10.00	35	21	30	57	8	28	29.05	30.00	
			SUNRISE: 0610			MAR 15	SUNSET: 1802									SUNRISE: 0559			MAR 21	SUNSET: 1809									
03	CLR	NC			10.00		23	19	22	85	0	00	29.14	30.10	03	CLR	NC			10.00	33	22	29	64	10	29	29.05	29.99	
06	BKN	110			10.00		22	20	21	92	0	00	29.15	30.11	06	OVC	049			10.00	34	20	29	56	15	32	29.07	30.01	
09	CLR	NC			10.00		36	19	30	50	5	22	29.16	30.11	09	SCT	NC			10.00	37	20	31	50	20	32	29.09	30.04	
12	CLR	NC			10.00		43	19	34	38	13	20	29.13	30.09	12	FEW	NC			10.00	41	18	33	39	20	31	29.10	30.05	
15	CLR	NC			10.00		44	19	35	37	14	20	29.07	30.02	15	FEW	NC			10.00	44	16	34	32	18	32	29.09	30.05	
18	CLR	NC			10.00		41	20	33	43	8	19	29.03	29.98	18	FEW	NC			10.00	39	14	31	36	9	34	29.14	30.09	
21	CLR	NC			10.00		37	25	32	62	9	19	29.01	29.96	21	CLR	NC			10.00	31	16	26	54	6	35	29.18	30.14	
24	CLR	NC			10.00		36	24	32	62	10	19	28.97	29.91	24	CLR	NC			10.00	28	17	25	63	7	35	29.21	30.16	
			SUNRISE: 0608			MAR 16	SUNSET: 1803									SUNRISE: 0558			MAR 22	SUNSET: 1810									
03	CLR	NC			10.00		35	24	31	64	10	19	28.88	29.82	03	CLR	NC			10.00	26	15	23	63	7	34	29.18	30.14	
06	CLR	NC			10.00		35	24	31	64	5	21	28.87	29.81	06	CLR	NC			10.00	25	14	22	63	8	33	29.20	30.15	
09	CLR	NC			10.00		41	26	35	55	7	VR	28.87	29.81	09	CLR	NC			10.00	32	14	26	47	13	33	29.24	30.20	
12	CLR	NC			10.00		50	30	41	46	8	25	28.85	29.78	12	CLR	NC			10.00	40	16	32	38	10	35	29.21	30.16	
15	CLR	NC			10.00		54	31	44	42	6	VR	28.80	29.73	15	CLR	NC			10.00	45	12	34	26	8	31	29.16	30.11	
18	CLR	NC			10.00		50	31	42	48	8	19	28.80	29.73	18	FEW	NC			10.00	43	9	32	25	6	33	29.13	30.08	
21	CLR	NC			10.00		44	31	38	60	9	17	28.76	29.70	21	CLR	NC			10.00	31	16	26	54	0	00	29.15	30.11	
24	CLR	NC			10.00		38	30	35	73	5	18	28.72	29.65	24	CLR	NC			10.00	26	17	23	69	0	00	29.16	30.12	
			SUNRISE: 0606			MAR 17	SUNSET: 1804									SUNRISE: 0556			MAR 23	SUNSET: 1812									
03	CLR	NC			10.00		49	31	41	50	12	21	28.65	29.57	03	CLR	NC			10.00	23	17	21	78	0	00	29.13	30.09	
06	CLR	NC			10.00		48	37	43	66	12	21	28.63	29.56	06	CLR	NC			10.00	23	17	21	78	3	16	29.13	30.08	
09	CLR	NC			10.00		52	41	47	66	14	22	28.61	29.54	09	CLR	NC			10.00	41	19	33	41	6	23	29.11	30.06	
12	FEW	NC			10.00		55	40	48	57	18	26	28.66	29.59	12	CLR	NC			10.00	49	18	37	29	10	24	29.05	30.00	
15	FEW	NC			10.00		54	28	43	37	15	26	28.71	29.63	15	CLR	NC			10.00	52	21	40	30	14	23	28.98	29.92	
18	OVC	046			10.00		43	26	36	51	26	27	28.81	29.75	18	CLR	NC			10.00	50	23	39	35	6	26	28.97	29.91	
21	OVC	040			10.00		39	25	34	57	17	28	28.89	29.82	21	CLR	NC			10.00	42	24	35	49	6	27	28.99	29.93	
24	OVC	036			10.00		36	24	32	62	17	29	28.96	29.89	24	CLR	NC			10.00	31	18	27	59	7	02	29.04	29.99	
			SUNRISE: 0605			MAR 18	SUNSET: 1806									SUNRISE: 0554			MAR 24	SUNSET: 1813									
03	BKN	034			10.00		33	21	29	61	14	31	29.05	30.00	03	CLR	NC			10.00	29	20	26	69	10	36	29.11	30.06	
06	BKN	028			10.00		31	22	28	69	13	31	29.17	30.12	06	CLR	NC			10.00	25	18	23	75	3	33	29.18	30.13	
09	OVC	028			10.00		32	20	28	61	14	31	29.27	30.23	09	CLR	NC			10.00	34	18	29	52	12	02	29.22	30.18	
12	SCT	NC			10.00		39	19	32	45	14	32	29.31	30.27	12	CLR	NC			10.00	40	12	31	32	8	36	29.24	30.20	
15	FEW	NC			10.00		43	21	35	42	13	35	29.32	30.27	15	CLR	NC			10.00	44	10	33	25	9	33	29.23	30.18	
18	CLR	NC			10.00		39	20	32	46	8	35	29.37	30.33	18	CLR	NC			10.00	40	8	30	27	8	34	29.25	30.21	
21	CLR	NC			10.00		32																						

OBSERVATIONS AT 3-HOURLY INTERVALS

MADISON, WI

MARCH 1999

MSN

WBAN # 14837

HOUR (LST)	SKY COVER		CEILING 100'S OF FT	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE ° F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES,HG)		HOUR (LST)	SKY COVER		CEILING 100'S OF FT	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE ° F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES,HG)																			
				OBSERVATION TIME (LST)	EFF CLD AMT Okta			DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL					OBSERVATION TIME (LST)	EFF CLD AMT Okta			DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL																		
SUNRISE: 0552 MAR 25 SUNSET: 1814																																																	
03	CLR	NC				10.00		26	17	23	69	7	35	29.34	30.30	03	CLR	NC					10.00		53	28	42	38	14	19	28.98	29.90																	
06	FEW	NC				10.00		22	18	21	85	5	33	29.39	30.36	06	CLR	NC					10.00		50	30	41	46	15	19	28.96	29.88																	
09	FEW	NC				10.00		34	16	28	48	13	03	29.43	30.40	09	CLR	NC					10.00		58	33	46	39	15	19	28.93	29.84																	
12	OVC	036				10.00		34	17	28	50	13	01	29.45	30.42	12	CLR	NC					10.00		69	41	54	36	18	19	28.85	29.77																	
15	OVC	038				10.00		35	18	29	50	13	06	29.42	30.39	15	FEW	NC					10.00		72	46	58	40	17	20	28.78	29.69																	
18	FEW	NC				10.00		32	19	28	59	8	07	29.42	30.40	18	BKN	055					10.00		67	47	56	49	18	19	28.77	29.69																	
21	CLR	NC				10.00		25	18	23	75	0	00	29.42	30.39	21	SCT	NC					7.00		57	50	53	78	14	17	28.83	29.75																	
24	CLR	NC				10.00		21	18	20	88	0	00	29.41	30.39	24	OVC	016					7.00		55	49	52	80	14	18	28.84	29.75																	
SUNRISE: 0551 MAR 26 SUNSET: 1815																																																	
03	CLR	NC				10.00		20	18	19	92	0	00	29.39	30.37	3—HOURLY OBSERVATION NOTES 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	CLR	NC				9.00		19	17	18	92	0	00	29.43	30.41																																		
09	CLR	NC				10.00		36	23	31	59	3	25	29.45	30.42																																		
12	CLR	NC				10.00		44	20	35	38	5	VR	29.40	30.37																																		
15	CLR	NC				10.00		48	18	37	30	5	VR	29.32	30.28																																		
18	CLR	NC				10.00		46	20	36	35	8	16	29.30	30.26																																		
21	CLR	NC				10.00		33	20	29	59	3	17	29.31	30.27																																		
24	CLR	NC				10.00		33	23	29	67	7	16	29.31	30.27																																		
SUNRISE: 0549 MAR 27 SUNSET: 1816																																																	
03	CLR	NC				10.00		31	24	28	76	0	00	29.30	30.25	SUMMARY BY HOUR																																	
06	CLR	NC				10.00		24	20	23	84	0	00	29.31	30.27																																		
09	CLR	NC				10.00		42	24	35	49	8	16	29.33	30.29																																		
12	CLR	NC				10.00		51	23	40	33	9	16	29.29	30.24																																		
15	CLR	NC				10.00		57	23	43	27	15	16	29.20	30.15																																		
18	CLR	NC				10.00		53	23	41	31	12	16	29.17	30.12																																		
21	CLR	NC				10.00		45	25	37	46	10	14	29.17	30.11																																		
24	CLR	NC				9.00		40	25	34	55	10	16	29.15	30.10																																		
SUNRISE: 0547 MAR 28 SUNSET: 1817																																																	
03	CLR	NC				10.00		38	25	33	60	10	16	29.10	30.04	AVERAGES																																	
06	CLR	NC				10.00		39	24	33	55	12	18	29.10	30.04																																		
09	OVC	060				10.00	-RA	43	28	37	56	13	19	29.05	30.00																																		
12	OVC	008				2.50	HZ	42	31	37	65	15	20	29.03	29.98																																		
15	OVC	018				5.00	HZ	49	43	46	80	12	20	28.99	29.93																																		
18	CLR	NC				10.00		49	31	41	50	12	27	29.10	30.04																																		
21	CLR	NC				10.00		40	30	36	68	6	27	29.17	30.12																																		
24	CLR	NC				10.00		39	32	36	76	6	23	29.20	30.15																																		
SUNRISE: 0545 MAR 29 SUNSET: 1819																																																	
03	CLR	NC				10.00		38	33	36	83	6	VR	29.21	30.16																																		
06	CLR	NC				10.00		36	28	33	73	6	26	29.25	30.20																																		
09	CLR	NC				10.00		48	29	40	48	8	26	29.29	30.23																																		
12	CLR	NC				10.00		58	10	40	15	15	28	29.27	30.21																																		
15	CLR	NC				10.00		59	7	40	12	12	27	29.24	30.18																																		
18	CLR	NC				10.00		55	10	39	16	5	26	29.26	30.21																																		
21	CLR	NC				10.00		38	16	30	41	0	00	29.30	30.25																																		
24	SCT	NC				10.00		42	19	34	40	8	18	29.27	30.21																																		
SUNRISE: 0543 MAR 30 SUNSET: 1820																																																	
03	FEW	NC				10.00		43	18	34	37	7	19	29.25	30.19	RESULTANT WIND (MPH)																																	
06	CLR	NC				10.00		43	26	36	51	6	21	29.25	30.19																																		
09	CLR	NC				10.00		54	30	43	40	8	22	29.26	30.20																																		
12	CLR	NC				10.00		67	31	50	26	12	23	29.19	30.12																																		
15	CLR	NC				10.00		71	31	52	23	14	20	29.08	30.01																																		
18	CLR	NC				10.00		66	31	49	27	10	20	29.05	29.98																																		
21	CLR	NC				10.00		61	29	46	30	14	19	29.05	29.98																																		
24	CLR	NC				10.00		56	29	44	36	15	19	29.01	29.93																																		
																																	01			29	20	25	71	29.19	30.15	9.53	7	1	34				
																																	02			28	19	25	72	29.19	30.15	9.27	8	1	35				
																																	03			28	19	25	73	29.19	30.14	9.47	7	1	36				
																																	04			27	19	24	73	29.19	30.14	9.16	6	1	33				
																																	05			27	19	24	75	29.19	30.15	8.98	6	1	32				
																																	06			26	19	24	75	29.20	30.16	8.90	7	2	32				
																																	07			28	20	25	74	29.21	30.17	8.81	8	1	34				
																																	08			31	21	28	66	29.22	30.18	9.23	9	2	33				
																	09			34	21	29	61	29.22	30.18	9.48	9	2	35																				
																	10			37	21	31	56	29.22	30.18	9.34	10	2	33																				
																	11			39	21	32	52	29.21	30.17	9.26	10	2	32																				
																	12			40	21	33	49	29.20	30.16	9.14	11	2	33																				
																	13			42	20	34	46	29.19	30.14	9.03	11	2	34																				
																	14			43	21	34	46	29.17	30.13	9.14	12	1	31																				
																	15			43	21	35	45	29.16	30.12	9.30	11	1	34																				
																	16			43	21	35	45	29.16	30.12	9.58	12	1	31																				
																	17			42	21	34	46	29.17	30.12	9.28	11	1	31																				
																	18			40	20	33	49	29.17	30.13	9.32	10	1	2																				
																	19			37	21	31	55	29.18	30.14	9.15	8	1	8																				
																	20			35	21	30	60	29.19	30.14	9.23	8	1	6																				
																	21			33	21	29	65	29.19	30.15	9.24	8	1	6																				
																	22			32	21	28	66	29.19	30.15	9.48	8	1	10																				
																	23			30	21	27	69	29.20	30.15	9.42	8	1	8																				
																	24			30	21	27	71	29.19	30.15	9.51	8	0	0																				

3-HOURLY OBSERVATION NOTES

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.

SUMMARY BY HOUR

HOUR (LST)	AVERAGES										RESULTANT	
	CEILOMETER	EFF CLD AMT	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY	PRESSURE (INCHES, HG)		VISIBILITY (MILES)	WIND SPEED (MPH)	WIND (MPH)	
							STATION	SEA LEVEL			SPEED	DIRECTION
01			29	20	25	71	29.19	30.15	9.53	7	1	34
02			28	19	25	72	29.19	30.15	9.27	8	1	35
03			28	19	25	73	29.19	30.14	9.47	7	1	36
04			27	19	24	73	29.19	30.14	9.16	6	1	33
05			27	19	24	75	29.19	30.15	8.98	6	1	32
06			26	19	24	75	29.20	30.16	8.90	7	2	32
07			28	20	25	74	29.21	30.17	8.81	8	1	34
08			31	21	28	66	29.22	30.18	9.23	9	2	33
09			34	21	29	61	29.22	30.18	9.48	9	2	35
10			37	21	31	56	29.22	30.18	9.34	10	2	33
11			39	21	32	52	29.21	30.17	9.26	10	2	32
12			40	21	33	49	29.20	30.16	9.14	11	2	33
13			42	20	34	46	29.19	30.14	9.03	11	2	34
14			43	21	34	46	29.17	30.13	9.14	12	1	31
15			43	21	35	45	29.16	30.12	9.30	11	1	34
16			43	21	35	45	29.16	30.12	9.58	12	1	31
17			42	21	34	46	29.17	30.12	9.28	11	1	31
18			40	20	33	49	29.17	30.13	9.32	10	1	2
19			37	21	31	55	29.18	30.14	9.15	8	1	8
20			35	21	30	60	29.19	30.14	9.23	8	1	6
21			33	21	29	65	29.19	30.15	9.24	8	1	6
22			32	21	28	66	29.19	30.15	9.48	8	1	10
23			30	21	27	69	29.20	30.15	9.42	8	1	8
24			30	21	27	71	29.19	30.15	9.51	8	0	0

SUPPLEMENTARY HOURLY PRECIPITATION

UNIVERSAL RAIN GAUGE (WATER EQUIVALENT IN INCHES)

MARCH 1999
MADISON, WI

LATITUDE 43° 8'N
LONGITUDE 89° 20'

DATE	A.M. HOUR (L.S.T.) ENDING AT												DATE	P.M. HOUR (L.S.T.) ENDING AT												DATE	DAILY TOTAL
	1	2	3	4	5	6	7	8	9	10	11	12		1	2	3	4	5	6	7	8	9	10	11	12		
01													01												01	0.00	
02													02												02	0.00	
03													03												03	0.00	
04													04												04	0.00	
05							T	0.01	0.01	T	T		05	0.02	0.01	0.01	0.01	0.01	0.02	0.02	T	T			05	0.12	
06													06												06	0.00	
07													07												07	0.00	
08													08					0.01	0.01	0.03	0.01	0.01	0.02	08	0.09		
09	0.02	0.01	0.03	0.05	0.03	0.02	0.01						09						0.02					09	0.19		
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											17	0.00		
18													18											18	0.00		
19													19											19	0.00		
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24													24											24	0.00		
25													25											25	0.00		
26													26											26	0.00		
27													27											27	0.00		
28									0.03	0.01			28											28	0.04		
29													29											29	0.00		
30													30											30	0.00		
31													31											31	0.00		
PUBLISHED BY: NCDC, ASHEVILLE, NC.														MONTHLY TOTAL												0.44	

SUPPLEMENTARY MAXIMUM SHORT DURATION PRECIPITATION (MSDP)

TIME PERIOD (MINUTES)	5	10	15	20	30	45	60	80	100	120	150	180
PRECIPITATION (INCHES)					0.04	0.05	0.06	0.07	0.08	0.08	0.09	0.11
ENDED: DATE					09	09	09	09	09	09	09	09
ENDED: TIME					0430	0430	0500	0500	0500	0500	0500	0500

The time indicated is the ending time of the interval.
Date and time are not entered for trace amounts.

The National Weather Service has determined that the ASOS Heated Tipping-Bucket (HTB) rain gauge may not measure water equivalent precipitation accurately during frozen precipitation events. Precipitation data from a nearby site is provided on this page to supplement the ASOS HTB data. M = Missing Data.
* = Data distribution unknown.
First HPD value that follows is the total accumulated amount.



**MARCH 1999
MADISON, 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.

DIRECTOR

NOTICE

Effective July 1, 1996, the National Weather Service & Federal Aviation Administration began using the METAR format for Hourly Observations.

We welcome your questions or comments, please contact us at
828–271–4800 (voice), 828–271–4876 (fax),
828–271–4010(TDD)
or orders@ncdc.noaa.gov
Local Climatological Data is available at www.ncdc.noaa.gov

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