



JULY 1998

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	80	60	70	0	58	63	0	5	TS TSRA RA BR BR RA BCFG	0		0.0	0.00	29.07	29.98	2.7	33	5.4	20	02	14	03	01		
02	83	62	73	3	62	67	0	8		0		0.0	0.00	29.12	30.04	3.2	24	4.5	16	29	11	28	02		
03	81	67	74	4	67	68	0	9		0		0.0	0.62	29.05	29.97	3.7	22	5.8	22	30	16	29	03		
04	76	55	66	-4	59	62	0	1		0		0.0	0.00	29.16	30.08	9.1	03	9.6	21	06	17	04	04		
05	78	54	66	-4	58	62	0	1		0		0.0	T	29.18	30.11	7.0	14	8.1	20	14	16	16	05		
06	82	67	75	5	68	70	0	10	RA BR HZ	0		0.0	0.02	29.04	29.95	1.6	16	4.9	16	16	14	16	06		
07	76	63	70	0	66	67	0	5	RA BR	0		0.0	0.70	29.02	29.93	4.2	06	4.8	16	03	14	04	07		
08	82	67	75	5	68	70	0	10	RA BR HZ	0		0.0	T	29.05	29.96	2.0	07	4.9	15	04	14	04	08		
09	84	66	75	5	67	69	0	10	BR HZ	0		0.0	0.00	29.09	30.01	0.6	35	1.8	9	34	7	36	09		
10	80	60	70	0	63	66	0	5	BR	0		0.0	0.00	29.18	30.10	6.2	08	6.9	16	09	14	08	10		
11	80	53*	67	-4	56	60	0	2	BR	0		0.0	0.00	29.18	30.10	1.2	07	2.7	10	06	8	03	11		
12	81	57	69	-2	60	64	0	4		0		0.0	0.00	29.07	29.99	3.5	20	5.0	21	19	14	17	12		
13	85	61	73	2	66	69	0	8		0		0.0	0.00	29.02	29.93	5.1	22	5.7	14	22	10	22	13		
14	87	67	77	6	69	72	0	12	MIFG HZ	0		0.0	0.00	29.06	29.97	5.5	20	6.7	17	17	14	19	14		
15	86	70	78*	7	68	71	0	13	BR HZ	0		0.0	0.00	29.05	29.96	5.8	24	7.9	25	16	23*	16	15		
16	85	63	74	3	62	66	0	9	MIFG	0		0.0	0.00	29.11	30.02	2.8	32	3.3	13	30	9	31	16		
17	82	62	72	0	62	66	0	7		0		0.0	0.00	29.07	29.98	2.2	32	3.6	11	32	9	34	17		
18	84	60	72	0	62	66	0	7		0		0.0	0.00	29.00	29.91	1.0	25	2.8	11	18	9	18	18		
19	86	67	77	5	68	71	0	12	TSRA RA BR	0		0.0	0.35	28.92	29.83	4.1	27	6.5	20	23	15	20	19		
20	88*	62	75	3	67	70	0	10	TSRA BR	0		0.0	0.76	28.98	29.89	5.9	17	7.7	31*	33	22	17	20		
21	84	68	76	4	68	72	0	11	BR	0		0.0	0.00	28.94	29.85	3.9	25	6.4	25	31	18	29	21		
22	80	65	73	1	65	68	0	8	RA	0		0.0	0.02	29.04	29.95	2.5	25	4.6	16	23	13	22	22		
23	74	59	67	-5	56	60	0	2		0		0.0	0.00	29.07	29.99	6.4	30	7.1	23	26	16	29	23		
24	77	55	66*	-6	55	60	0	1	BCFG	0		0.0	0.00	29.18	30.10	4.0	31	4.3	18	31	13	31	24		
25	78	56	67	-5	58	62	0	2	BR	0		0.0	0.00	29.25	30.17	0.8	02	3.7	17	05	15	05	25		
26	79	54	67	-5	57	62	0	2	BCFG BR	0		0.0	0.00	29.18	30.10	3.4	21	5.0	14	22	11	17	26		
27	83	62	73	1	62	66	0	8	RA BR HZ	0		0.0	0.02	29.02	29.93	5.0	27	6.6	18	29	14	28	27		
28	85	60	73	2	62	66	0	8		0		0.0	0.00	28.95	29.86	4.2	26	5.9	23	25	16	26	28		
29	80	55	68	-3	57	62	0	3	RA	0		0.0	T	29.08	29.99	2.7	31	3.5	15	30	11	32	29		
30	80	58	69	-2	58	62	0	4	RA	0		0.0	0.01	29.14	30.06	4.2	01	5.0	25	03	16	36	30		
31	79	54	67	-4	54	59	0	2	BR	0		0.0	0.00	29.35	30.27	4.8	05	5.2	16	04	13	04	31		
81.5 60.9 71.2 ■■											< MONTHLY AVERAGES		TOTALS-->		0.0	2.50	29.09	30.00	0.7	25	5.4	<-- MONTHLY AVERAGES			
- .9 1.4 0.2 ■■											<----- DEPARTURE FROM NORMAL ----->												- .89		
DEGREE DAYS									GREATEST 24-HR PRECIPITATION: 0.76 DATE: 20					SEA LEVEL PRESSURE DATE TIME											
MONTHLY									GREATEST 24-HR SNOWFALL: 0.0 DATE: 1					MAXIMUM : 30.32 31 2241											
TOTAL DEPARTURE									GREATEST SNOW DEPTH: 0 DATE: 1					MINIMUM : 29.73 19 0450											
HEATING: 0 -12 0 -12									NUMBER OF DAYS WITH →					PRECIPITATION ≥ 0.01 INCH : 8											
COOLING: 199 1 396 64									MAXIMUM TEMP ≥ 90: 0					PRECIPITATION ≥ 0.10 INCH : 4											
									MAXIMUM TEMP ≤ 32 : 0					SNOWFALL ≥ 1.0 INCH : 0											
									THUNDERSTORMS : 3																
									MINIMUM TEMP ≤ 32 : 0																
									HEAVY FOG : 0																

JULY 1998
MADISON, WI

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

MADISON, WI

JULY 1998

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												01	0.60		0.00	
02													02												02			0.00	
03			T				T	0.04	0.22	T			03		0.04	0.12	0.03	0.02	0.04	0.09	T				03			0.62	
04													04												04			0.00	
05													05									T	T		05			T	
06													06												06	0.69		0.02	
07					0.01	T	0.05	0.59	0.05	0.02			07												07			0.70	
08										T			08												08			T	
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	0.69		0.00	
17													17												17			0.00	
18													18												18			0.00	
19		T	0.19	0.16	T	T							19												19			0.35	
20													20				0.32	0.24	0.06	0.05	0.02				20			0.76	
21													21												21			0.00	
22													22												22			0.02	
23													23												23			0.00	
24													24												24			0.00	
25													25												25			0.00	
26													26												26			0.00	
27													27												27			0.02	
28										0.02			28												28			0.00	
29													29									T	T	T	29			T	
30	T	T	T			T	T	0.01					30												30			0.01	
31													31												31		0.00		

MAXIMUM SHORT DURATION PRECIPITATION (See Note 1)

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 1: NCDC derives these data from one-minute ASOS values. The table is not printed when inconsistent with ASOS hourly totals.

Note 2: 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
JULY 1998

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							9.00	10.00	
02							10.00	10.00	
03							3.00	10.00	
04							2.00	10.00	
05							7.00	10.00	
06							3.00	10.00	
07							2.00	10.00	
08							2.00	10.00	
09							1.00	10.00	
10							3.00	10.00	
11							5.00	10.00	
12							7.00	10.00	
13							7.00	10.00	
14							6.00	10.00	
15							2.00	10.00	
16							10.00	10.00	
17							10.00	10.00	
18							7.00	10.00	
19							3.00	10.00	
20							7.00	10.00	
21							5.00	10.00	
22							9.00	10.00	
23							9.00	10.00	
24							8.00	10.00	
25							6.00	10.00	
26							1.75	10.00	
27							6.00	10.00	
28							8.00	10.00	
29							9.00	10.00	
30							8.00	10.00	
31							5.00	10.00	
MONTHLY AVGS							5.83	10.00	
<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 10 15</p>									

OBSERVATIONS AT 3-HOURLY INTERVALS

MADISON, WI

JULY 1998

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)			
			OBSERVATION TIME (LST)	EFF CLD AMT Okta		VISIBILITY (MILES)	DRY BULB	DEW POINT		WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG	STATION				SEA LEVEL	OBSERVATION TIME (LST)		EFF CLD AMT Okta	VISIBILITY (MILES)	DRY BULB		DEW POINT	WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
	SKY COVER	CEILING 100'S OF FT													SKY COVER	CEILING 100'S OF FT													
			SUNRISE: 0422		JUL 01	SUNSET: 1941										SUNRISE: 0425		JUL 07	SUNSET: 1939										
03	CLR	NC			10.00		63	59	61	87	5	33	28.99	29.91	03	BKN	013			6.00	BR	65	63	64	93	9	05	29.02	29.93
06	FEW	NC			9.00		62	58	60	86	7	36	29.05	29.96	06	OVC	013			7.00	-RA	64	62	63	93	3	09	29.04	29.96
09	CLR	NC			10.00		72	56	62	57	6	33	29.08	30.00	09	OVC	007			9.00		66	64	65	93	6	07	29.03	29.95
12	CLR	NC			10.00		76	57	64	52	9	35	29.08	30.00	12	OVC	011			8.00		73	67	69	81	7	09	29.02	29.93
15	FEW	NC			10.00		79	56	65	45	6	36	29.08	30.00	15	OVC	017			9.00		74	68	70	82	5	03	29.00	29.92
18	FEW	NC			10.00		78	58	66	50	0	00	29.07	29.99	18	OVC	021			8.00		74	69	71	85	5	08	28.99	29.91
21	FEW	NC			10.00		68	62	64	81	3	22	29.08	29.99	21	OVC	020			7.00		70	69	69	97	0	00	28.99	29.91
24	CLR	NC			10.00		70	59	63	68	5	22	29.09	30.00	24	OVC	029			6.00	BR	71	68	69	90	0	00	28.99	29.91
			SUNRISE: 0422		JUL 02	SUNSET: 1941										SUNRISE: 0426		JUL 08	SUNSET: 1939										
03	CLR	NC			10.00		62	59	60	90	0	00	29.10	30.02	03	OVC	006			5.00	BR	67	66	66	97	3	12	29.00	29.92
06	CLR	NC			10.00		68	61	64	78	6	23	29.14	30.06	06	OVC	007			2.50	BR	69	67	68	93	5	20	29.02	29.94
09	CLR	NC			10.00		76	64	68	67	5	27	29.15	30.07	09	BKN	012			3.00	BR	73	69	70	87	6	22	29.05	29.96
12	CLR	NC			10.00		81	61	68	51	0	00	29.14	30.05	12	BKN	030			6.00	HZ	77	69	72	77	10	03	29.06	29.98
15	FEW	NC			10.00		82	60	68	47	8	24	29.12	30.04	15	BKN	035			10.00		80	69	73	69	6	VR	29.05	29.96
18	SCT	NC			10.00		80	63	69	56	5	26	29.10	30.01	18	SCT	NC			10.00		79	68	72	69	5	06	29.04	29.95
21	SCT	NC			10.00		77	64	69	64	5	23	29.12	30.03	21	FEW	NC			9.00		70	69	69	97	0	00	29.06	29.98
24	OVC	110			10.00		75	60	66	60	6	22	29.11	30.03	24	FEW	NC			5.00	BR	68	66	67	93	0	00	29.08	29.99
			SUNRISE: 0423		JUL 03	SUNSET: 1940										SUNRISE: 0427		JUL 09	SUNSET: 1938										
03	OVC	100			10.00		71	62	65	73	6	17	29.08	29.99	03	OVC	006			2.50	BR	68	67	67	96	0	00	29.08	29.99
06	BKN	095			9.00		71	63	66	76	6	18	29.07	29.99	06	OVC	006			1.00	BR	70	69	69	97	0	00	29.09	30.01
09	BKN	037			5.00	-RA BR	67	66	66	97	9	19	29.06	29.98	09	BKN	010			2.50	HZ	74	68	70	82	5	VR	29.11	30.03
12	CLR	NC			10.00		78	68	71	71	13	18	29.05	29.96	12	SCT	NC			10.00		80	65	70	60	0	00	29.11	30.02
15	OVC	026			4.00	-TSRA BR	74	71	72	91	16	29	29.03	29.94	15	SCT	NC			10.00		83	66	72	57	3	VR	29.07	29.98
18	BKN	110			10.00		71	68	69	90	3	01	29.00	29.92	18	SCT	NC			10.00		81	67	72	62	5	34	29.05	29.97
21	FEW	NC			10.00		69	68	68	96	0	00	29.00	29.92	21	CLR	NC			10.00		69	68	68	96	0	00	29.10	30.01
24	OVC	015			9.00		69	68	68	96	0	00	29.02	29.94	24	CLR	NC			8.00		66	65	65	96	0	00	29.11	30.03
			SUNRISE: 0423		JUL 04	SUNSET: 1940										SUNRISE: 0427		JUL 10	SUNSET: 1938										
03	BKN	015			8.00		66	64	65	93	9	03	29.04	29.96	03	CLR	NC			9.00		64	63	63	96	3	33	29.14	30.05
06	OVC	013			4.00	BR	65	62	63	90	12	03	29.11	30.03	06	CLR	NC			6.00	BR	66	63	64	90	7	06	29.17	30.09
09	OVC	007			4.00	BR	64	62	63	93	10	01	29.18	30.10	09	SCT	NC			10.00		72	64	67	76	8	08	29.20	30.12
12	BKN	021			10.00		71	61	65	71	14	03	29.18	30.10	12	BKN	034			10.00		77	66	70	69	9	06	29.21	30.13
15	SCT	NC			10.00		75	59	65	58	10	02	29.19	30.10	15	SCT	NC			10.00		79	66	70	65	10	10	29.17	30.09
18	CLR	NC			10.00		71	51	60	49	12	07	29.19	30.11	18	FEW	NC			10.00		75	64	68	69	10	08	29.17	30.09
21	CLR	NC			9.00		58	56	57	93	0	00	29.22	30.14	21	CLR	NC			10.00		67	61	63	81	6	11	29.20	30.12
24	CLR	NC			9.00		56	53	54	90	0	00	29.23	30.15	24	CLR	NC			10.00		60	59	59	96	0	00	29.23	30.15
			SUNRISE: 0424		JUL 05	SUNSET: 1940										SUNRISE: 0428		JUL 11	SUNSET: 1938										
03	FEW	NC			10.00		55	51	53	87	5	36	29.22	30.15	03	CLR	NC			6.00	BR	56	56	56	100	0	00	29.22	30.14
06	BKN	031			10.00		59	56	57	90	5	04	29.24	30.16	06	CLR	NC			8.00		57	54	55	90	0	00	29.23	30.15
09	FEW	NC			10.00		71	57	63	61	12	13	29.24	30.16	09	CLR	NC			10.00		70	56	62	61	5	VR	29.22	30.14
12	FEW	NC			10.00		75	58	65	55	9	14	29.21	30.14	12	CLR	NC			10.00		76	54	63	47	3	VR	29.21	30.13
15	BKN	049			10.00		76	60	66	58	10	16	29.17	30.09	15	CLR	NC			10.00		79	51	63	38	6	VR	29.16	30.08
18	SCT	NC			10.00		74	62	66	67	10	16	29.13	30.05	18	CLR	NC			10.00		78	55	64	45	5	10	29.13	30.05
21	OVC	031			10.00		70	60	64	71	8	14	29.12	30.03	21	CLR	NC			10.00		63	59	61	87	0	00	29.12	30.04
24	BKN	046			10.00		67	59	62	76	9	16	29.10	30.02	24	CLR	NC			10.00		59	58	58	96	0	00	29.13	30.05
			SUNRISE: 0425		JUL 06	SUNSET: 1940										SUNRISE: 0429		JUL 12	SUNSET: 1937										
03	OVC	050			8.00		67	62	64	84	7	17	29.06	29.97	03	CLR	NC			7.00		58	57	57	97	0	00	29.12	30.04
06	OVC	039			7.00		70	64	66	82	7	VR	29.04	29.96	06	CLR	NC			9.00		64	59	61	84	3	17	29.10	30.01
09	OVC	016			6.00	BR	72	68	69	87	7	21	29.04	29.96	09	CLR	NC			10.00		75	61	66	62	7	VR	29.11	30.03
12	OVC	017			7.00		76	71	73	85	0	00	29.04	29.95	12	SCT	NC			10.00		79	60	67	52	9	23	29.08	30.00
15	OVC	036			9.00		80	72	74	76	3	33	29.02	29.94	15	SCT													

OBSERVATIONS AT 3-HOURLY INTERVALS

MADISON, WI

JULY 1998

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: 0430	JUL 13			SUNSET: 1936										SUNRISE: 0435	JUL 19										
03	CLR	NC				10.00		63	58	60	84	0	00	29.02	29.94	03	OVC	032		3.00	+TSRA	BR	70	67	68	90	13	29	28.99	29.90	
06	CLR	NC				10.00		69	58	62	68	3	20	29.04	29.96	06	SCT	NC		10.00			69	67	68	93	0	00	28.89	29.80	
09	FEW	NC				10.00		75	61	66	62	9	23	29.05	29.96	09	CLR	NC		10.00			76	67	70	74	9	26	28.92	29.82	
12	CLR	NC				10.00		82	70	74	67	6	VR	29.02	29.94	12	FEW	NC		10.00			83	69	73	63	13	24	28.90	29.80	
15	FEW	NC				10.00		84	70	74	63	9	24	29.00	29.92	15	FEW	NC		10.00			84	70	74	63	10	30	28.91	29.81	
18	CLR	NC				10.00		83	71	75	67	7	22	28.99	29.90	18	FEW	NC		10.00			84	70	74	63	10	30	28.92	29.83	
21	CLR	NC				8.00		79	71	74	77	6	22	29.01	29.93	21	CLR	NC		10.00			72	69	70	91	0	00	28.97	29.87	
24	CLR	NC				7.00		75	69	71	82	9	22	29.03	29.95	24	CLR	NC		10.00			68	66	67	93	0	00	28.99	29.90	
						SUNRISE: 0431	JUL 14				SUNSET: 1936									SUNRISE: 0436	JUL 20										
03	CLR	NC				8.00		72	67	69	84	3	VR	29.04	29.95	03	CLR	NC		9.00			65	64	64	97	0	00	29.00	29.91	
06	CLR	NC				7.00	MIFG	73	68	70	84	0	00	29.07	29.98	06	CLR	NC		9.00			69	67	68	93	0	00	29.03	29.93	
09	CLR	NC				10.00		80	69	73	69	6	VR	29.09	30.00	09	SCT	NC		10.00			83	66	72	57	7	18	29.03	29.94	
12	FEW	NC				10.00		85	71	75	63	9	19	29.08	29.98	12	CLR	NC		10.00			87	67	73	51	15	18	29.00	29.91	
15	FEW	NC				10.00		86	71	76	61	10	17	29.06	29.97	15	SCT	NC		10.00			86	66	73	51	18	17	28.95	29.86	
18	FEW	NC				9.00		84	69	74	61	10	20	29.04	29.95	18	OVC	040		8.00	-TSRA		70	69	69	97	5	VR	29.01	29.92	
21	CLR	NC				6.00	HZ	79	70	73	74	8	18	29.04	29.95	21	FEW	NC		10.00			71	69	70	94	10	17	28.93	29.83	
24	CLR	NC				7.00		76	70	72	82	9	21	29.04	29.95	24	BKN	100		10.00			70	67	68	90	9	06	28.92	29.82	
						SUNRISE: 0431	JUL 15				SUNSET: 1935									SUNRISE: 0437	JUL 21										
03	CLR	NC				5.00	BR	73	70	71	90	8	22	29.06	29.97	03	SCT	NC		5.00	BR		73	72	72	96	3	VR	28.88	29.78	
06	CLR	NC				2.50	BR	72	69	70	91	9	22	29.06	29.97	06	CLR	NC		8.00			79	74	75	85	8	22	28.86	29.77	
09	FEW	NC				6.00	HZ	77	68	71	74	14	23	29.02	29.93	09	OVC	026		10.00			81	74	76	79	7	VR	28.90	29.80	
12	SCT	NC				10.00		84	69	74	61	10	23	29.04	29.94	12	OVC	085		10.00			79	70	73	74	5	32	28.91	29.82	
15	FEW	NC				10.00		84	65	71	53	9	31	29.04	29.95	15	CLR	NC		10.00			83	62	69	49	7	25	28.97	29.87	
18	FEW	NC				10.00		83	67	72	59	7	32	29.05	29.96	18	CLR	NC		10.00			81	65	70	58	7	VR	28.99	29.90	
21	CLR	NC				10.00		74	67	69	79	5	29	29.06	29.98	21	CLR	NC		10.00			75	64	68	69	6	28	29.02	29.93	
24	CLR	NC				10.00		71	64	67	79	6	28	29.07	29.98	24	CLR	NC		10.00			69	65	66	87	0	00	29.01	29.92	
						SUNRISE: 0432	JUL 16				SUNSET: 1935									SUNRISE: 0438	JUL 22										
03	CLR	NC				10.00		64	63	63	96	0	00	29.10	30.01	03	CLR	NC		9.00			67	65	66	93	0	00	29.05	29.96	
06	SCT	NC				10.00		65	62	63	90	0	00	29.14	30.05	06	SCT	NC		10.00			67	66	66	97	0	00	29.06	29.98	
09	CLR	NC				10.00		78	61	67	56	3	VR	29.14	30.06	09	BKN	100		10.00	-RA		72	67	69	84	0	00	29.08	29.99	
12	FEW	NC				10.00		82	58	67	44	7	30	29.13	30.04	12	SCT	NC		10.00			75	65	69	71	3	VR	29.05	29.97	
15	SCT	NC				10.00		84	59	68	43	7	30	29.10	30.01	15	FEW	NC		10.00			79	64	69	60	7	VR	29.00	29.92	
18	FEW	NC				10.00		81	61	68	51	6	34	29.08	30.00	18	BKN	095		10.00			74	64	68	71	8	29	28.99	29.91	
21	SCT	NC				10.00		68	65	66	90	3	34	29.09	30.01	21	SCT	NC		10.00			71	66	68	84	5	VR	29.02	29.93	
24	FEW	NC				10.00		65	61	63	87	0	00	29.10	30.01	24	CLR	NC		10.00			66	61	63	84	5	29	29.03	29.95	
						SUNRISE: 0433	JUL 17				SUNSET: 1934									SUNRISE: 0439	JUL 23										
03	FEW	NC				10.00		64	61	62	90	0	00	29.09	30.01	03	CLR	NC		9.00			62	58	60	86	3	VR	29.00	29.92	
06	SCT	NC				10.00		66	61	63	84	3	VR	29.08	30.00	06	CLR	NC		10.00			62	58	60	86	7	29	29.04	29.96	
09	CLR	NC				10.00		76	63	68	64	7	35	29.09	30.01	09	FEW	NC		10.00			70	55	61	59	9	31	29.08	29.99	
12	FEW	NC				10.00		79	59	66	50	5	VR	29.07	29.99	12	SCT	NC		10.00			72	54	61	53	9	29	29.09	30.01	
15	FEW	NC				10.00		81	60	68	49	7	35	29.04	29.96	15	SCT	NC		10.00			74	54	62	50	13	29	29.07	29.99	
18	SCT	NC				10.00		78	61	67	56	3	31	29.03	29.95	18	FEW	NC		10.00			72	54	61	53	8	30	29.07	29.99	
21	CLR	NC				10.00		68	64	66	87	3	28	29.04	29.96	21	CLR	NC		10.00			61	57	59	87	0	00	29.10	30.02	
24	CLR	NC				10.00		64	63	63	96	3	35	29.03	29.94	24	CLR	NC		10.00			62	54	57	75	5	26	29.14	30.06	
						SUNRISE: 0434	JUL 18				SUNSET: 1933									SUNRISE: 0440	JUL 24										
03	SCT	NC				8.00		61	61	61	100	0	00	29.02	29.94	03	CLR	NC		10.00			58	54	56	87	3	30	29.15	30.07	
06	SCT	NC				7.00		64	61	62	90	5	35	29.04	29.95	06	CLR	NC		8.00			58	55	56	90	0	00	29.18	30.10	
09	CLR	NC				10.00		77	57	65	50	0	00	29.03	29.95	09															

OBSERVATIONS AT 3-HOURLY INTERVALS

MADISON, WI

JULY 1998

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)	
			OBSERVATION TIME (LST)	EFF CLD AMT Okta			DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
SUNRISE: 0441 JUL 25 SUNSET: 1927														
03	BKN	090			8.00		59	57	58	93	0	00	29.23	30.15
06	BKN	090			9.00		62	59	60	90	0	00	29.24	30.16
09	CLR	NC			10.00		72	58	63	61	8	29	29.25	30.17
12	BKN	090			10.00		73	58	64	59	5	VR	29.25	30.17
15	BKN	110			10.00		73	61	66	66	9	06	29.25	30.17
18	SCT	NC			10.00		71	60	64	68	6	14	29.24	30.16
21	SCT	NC			10.00		64	59	61	84	0	00	29.28	30.20
24	CLR	NC			6.00	BR	58	58	58	100	0	00	29.28	30.21
SUNRISE: 0442 JUL 26 SUNSET: 1926														
03	CLR	NC			5.00	BR	56	56	56	100	0	00	29.28	30.20
06	CLR	NC			4.00	BR	58	57	57	97	0	00	29.25	30.17
09	CLR	NC			10.00		71	57	63	61	8	18	29.26	30.18
12	SCT	NC			10.00		76	57	64	52	3	VR	29.21	30.13
15	BKN	070			10.00		77	60	66	56	6	23	29.14	30.06
18	FEW	NC			10.00		76	56	64	50	6	26	29.09	30.01
21	CLR	NC			10.00		72	59	64	64	6	23	29.08	30.00
24	CLR	NC			9.00		70	58	63	66	8	22	29.06	29.97
SUNRISE: 0443 JUL 27 SUNSET: 1925														
03	FEW	NC			9.00		69	59	63	70	8	24	29.04	29.95
06	BKN	065			7.00		67	61	63	81	6	VR	29.02	29.94
09	BKN	040			7.00		72	66	68	82	9	29	29.03	29.95
12	SCT	NC			10.00		79	64	69	60	6	VR	29.02	29.93
15	SCT	NC			10.00		82	58	67	44	13	28	28.99	29.91
18	FEW	NC			10.00		79	61	68	54	5	32	28.99	29.90
21	CLR	NC			10.00		65	63	64	93	3	28	29.00	29.92
24	CLR	NC			9.00		63	60	61	90	0	00	28.99	29.90
SUNRISE: 0444 JUL 28 SUNSET: 1924														
03	CLR	NC			8.00		60	59	59	96	0	00	28.99	29.90
06	CLR	NC			10.00		67	60	63	79	3	VR	28.99	29.90
09	CLR	NC			10.00		76	61	67	60	7	VR	28.98	29.88
12	CLR	NC			10.00		82	61	69	49	12	24	28.94	29.85
15	FEW	NC			10.00		84	64	71	51	12	23	28.91	29.82
18	FEW	NC			10.00		82	66	71	58	6	26	28.89	29.79
21	FEW	NC			10.00		74	64	68	71	5	33	28.95	29.86
24	CLR	NC			10.00		66	54	59	65	5	33	29.00	29.91
SUNRISE: 0445 JUL 29 SUNSET: 1923														
03	CLR	NC			10.00		60	53	56	78	3	33	29.05	29.96
06	CLR	NC			10.00		58	56	57	93	0	00	29.07	29.98
09	CLR	NC			10.00		73	56	63	55	5	29	29.09	30.01
12	FEW	NC			10.00		78	54	64	43	6	33	29.09	30.01
15	CLR	NC			10.00		77	56	64	48	5	30	29.07	29.99
18	CLR	NC			10.00		73	58	64	59	3	33	29.06	29.98
21	BKN	070			10.00		66	63	64	90	3	26	29.09	30.01
24	OVC	100			10.00	-RA	66	58	61	75	0	00	29.10	30.01
SUNRISE: 0446 JUL 30 SUNSET: 1922														
03	OVC	110			10.00		64	59	61	84	5	33	29.07	29.99
06	OVC	085			9.00	-RA	64	60	62	87	0	00	29.10	30.02
09	BKN	110			10.00		67	63	64	87	5	VR	29.13	30.05
12	FEW	NC			10.00		77	57	65	50	8	01	29.13	30.04
15	SCT	NC			10.00		79	56	65	45	8	36	29.13	30.04
18	FEW	NC			10.00		75	55	63	50	8	06	29.15	30.07
21	CLR	NC			10.00		61	59	60	93	0	00	29.20	30.13
24	CLR	NC			10.00		58	56	57	93	5	03	29.25	30.17

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
SUNRISE: 0447 JUL 31 SUNSET: 1921														
03	CLR	NC			7.00		56	55	55	97	0	00	29.28	30.20
06	FEW	NC			7.00		59	56	57	90	6	36	29.33	30.25
09	SCT	NC			10.00		70	56	62	61	9	05	29.37	30.29
12	FEW	NC			10.00		77	54	63	45	9	06	29.37	30.29
15	FEW	NC			10.00		78	50	62	37	8	03	29.36	30.28
18	FEW	NC			10.00		74	51	61	45	12	06	29.35	30.27
21	CLR	NC			10.00		61	55	58	81	0	00	29.38	30.31
24	CLR	NC			10.00		54	54	54	100	0	00	29.38	30.31

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 WIND (MPH)	
	CEILOMETER	EFF CLD AMT	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY	PRESSURE (INCHES,HG)		VISIBILITY (MILES)	WIND SPEED (MPH)	SPEED	DIRECTION
							STATION	SEA LEVEL				
01			65	62	63	88	29.07	29.99	8.48	3	1	27
02			65	61	62	88	29.07	29.99	8.39	3	1	29
03			64	61	62	90	29.08	29.99	7.89	3	1	31
04			63	61	62	92	29.08	29.99	7.87	3	1	25
05			63	61	62	91	29.08	30.00	7.49	3	0	0
06			66	62	63	88	29.09	30.01	7.74	3	0	0
07			68	62	65	81	29.10	30.01	8.15	4	1	21
08			71	63	66	76	29.10	30.02	8.31	7	1	25
09			73	62	66	70	29.10	30.02	8.79	5	1	26
10			75	62	67	66	29.11	30.02	8.97	5	1	24
11			77	62	68	62	29.10	30.02	9.35	7	1	30
12			78	62	68	59	29.09	30.01	9.71	6	1	26
13			79	62	68	56	29.09	30.00	9.71	7	1	28
14			80	62	68	55	29.08	29.99	9.90	7	2	28
15			80	62	68	55	29.07	29.99	9.74	8	2	28
16			80	62	68	56	29.06	29.98	9.77	7	1	30
17			78	62	68	60	29.06	29.98	9.71	6	1	31
18			77	62	68	61	29.06	29.98	9.81	6	1	34
19			75	63	67	68	29.07	29.98	9.52	4	0	0
20			71	64	66	79	29.07	29.98	9.52	3	1	24
21			69	64	66	84	29.08	30.00	9.52	3	1	22
22			68	63	65	84	29.08	30.00	9.19	4	1	22
23			67	62	64	85	29.09	30.00	9.10	3	1	22
24			66	61	63	85	29.09	30.00	8.94	3	1	23

SUPPLEMENTARY HOURLY PRECIPITATION

UNIVERSAL RAIN GAUGE (WATER EQUIVALENT IN INCHES)

JULY 1998
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								0.20	0.05	T			03			0.15	T	0.04	T	0.05	0.01	T			03	0.50		
04													04												04	0.00		
05													05												05	0.00		
06													06												06	0.02		
07						0.04	0.61	0.05	T	0.02			07												07	0.70		
08											T		08												08	T		
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												17	0.00		
18													18												18	0.00		
19	0.01	0.27	0.03	0.01	0.01								19												19	0.33		
20													20			T	0.32	0.23	0.06	0.07	0.04				20	0.72		
21													21												21	0.00		
22								T	T	0.01	T		22												22	0.01		
23													23												23	0.00		
24													24												24	0.00		
25													25												25	0.00		
26													26												26	0.00		
27								0.02					27												27	0.02		
28													28												28	0.00		
29													29												29	0.00		
30					T	T	T						30												30	T		
31													31												31	0.00		
PUBLISHED BY: NCDC, ASHEVILLE, NC.														MONTHLY TOTAL														2.30

SUPPLEMENTARY MAXIMUM SHORT DURATION PRECIPITATION (MSDP)

TIME PERIOD (MINUTES)	5	10	15	20	30	45	60	80	100	120	150	180
PRECIPITATION (INCHES)					0.50	0.55	0.61	0.62	0.63	0.66	0.69	0.70
ENDED: DATE					07	07	07	07	07	07	07	07
ENDED: TIME					0630	0645	0700	0715	0750	0800	0800	0800

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.



**JULY 1998
MADISON, WI**

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

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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
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