



# JUNE 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	68	43	56	-6	47	52	9	0	RA	0		0.0	0.01	28.83	29.74	6.7	20	7.6	24	27	18	20	01								
02	65	50	58	-4	50	54	7	0		0		0.0	0.00	28.75	29.67	6.2	29	8.5	31	31	24	31	02								
03	59	47	53	-10	39	46	12	0		0		0.0	0.00	29.00	29.93	5.4	32	6.9	20	32	13	32	03								
04	65	41*	53	-10	39	47	12	0	RA	0		0.0	T	29.00	29.93	2.9	35	4.6	16	01	13	01	04								
05	58	43	51*	-12	42	47	14	0	RA	0		0.0	T	29.08	30.02	4.6	02	5.8	17	04	14	04	05								
06	62	43	53	-11	41	47	12	0	RA	0		0.0	T	29.18	30.11	2.7	28	4.3	18	24	13	30	06								
07	66	43	55	-9	41	48	10	0		0		0.0	0.00	29.23	30.16	3.3	31	4.6	16	29	13	29	07								
08	69	42	56	-9	44	50	9	0	RA BR	0		0.0	T	29.21	30.14	7.0	14	7.6	20	16	17	16	08								
09	60	53	57	-8	56	56	8	0	RA DZ FG BR	0		0.0	0.11	29.01	29.94	9.2	10	10.0	26	10	21	10	09								
10	71	56	64	-1	58	59	1	0	FG+ BR	0		0.0	0.00	29.01	29.93	1.6	05	3.2	11	14	10	13	10								
11	73	57	65	0	64	65	0	0	TSRA RA BR	0		0.0	1.09	28.71	29.62	8.7	17	12.4	32	14	24	15	11								
12	78	60	69	4	60	63	0	4	TSRA RA BR	0		0.0	0.05	28.71	29.61	6.1	24	7.5	22	33	17	32	12								
13	76	55	66	0	59	62	0	1	BR	0		0.0	0.00	28.87	29.78	2.9	31	4.5	15	34	11	36	13								
14	73	55	64	-2	57	60	1	0	RA BR HZ	0		0.0	T	28.69	29.60	7.0	09	8.3	22	09	18	09	14								
15	79	54	67	1	59	62	0	2		0		0.0	0.00	28.61	29.52	4.6	02	5.4	16	01	13	02	15								
16	81	58	70	3	61	64	0	5	RA BCFG	0		0.0	T	28.77	29.67	4.1	35	5.4	17	36	15	05	16								
17	81	55	68	1	62	65	0	3	BCFG BR	0		0.0	0.00	29.04	29.95	3.3	16	4.9	15	18	13	17	17								
18	83	62	73	6	65	66	0	8	TS TSRA RA FG+ BR	0		0.0	2.67	28.93	29.84	7.1	14	10.8	36	23	29	23	18								
19	78	62	70	3	61	64	0	5	BR	0		0.0	0.00	28.84	29.75	7.9	22	8.6	24	22	16	23	19								
20	89	63	76	8	67	70	0	11	TSRA	0		0.0	0.02	28.89	29.80	6.5	18	7.9	29	30	22	29	20								
21	82	66	74	6	62	66	0	9	RA	0		0.0	0.11	28.99	29.89	4.2	24	6.9	21	19	17	19	21								
22	83	61	72	4	61	65	0	7		0		0.0	0.00	29.09	30.01	1.6	24	2.6	14	23	10	22	22								
23	85	61	73	5	62	67	0	8	MIFG	0		0.0	0.00	29.09	30.00	3.6	14	4.8	20	11	15	12	23								
24	89	66	78	10	69	72	0	13	TS TSRA BR	0		0.0	0.46	28.96	29.87	9.3	18	11.1	31	31	20	17	24								
25	89*	70	80*	11	71	74	0	15	TS TSRA RA	0		0.0	0.01	28.90	29.80	8.5	20	9.2	26	18	22	18	25								
26	87	64	76	7	68	71	0	11		0		0.0	0.00	28.92	29.83	3.3	10	5.5	16	14	14	14	26								
27	88	66	77	8	71	73	0	12	TS TSRA BR	0		0.0	1.92	28.89	29.79	3.8	12	8.6	49*	01	41*	36	27								
28	85	66	76	7	66	69	0	11	TSRA RA BR	0		0.0	0.93	28.96	29.87	1.8	22	8.1	41	09	36	09	28								
29	84	63	74	5	64	67	0	9	TSRA RA	0		0.0	0.08	28.87	29.78	3.9	23	5.6	21	29	14	30	29								
30	79	63	71	2	61	65	0	6	RA	0		0.0	T	28.86	29.76	6.6	32	7.3	21	32	15	34	30								
< MONTHLY AVERAGES										TOTALS-->		0.0		7.46	28.93	29.84	1.5	18	7.0	<-- MONTHLY AVERAGES											
-2.0										2.1		0.1		<----- DEPARTURE FROM NORMAL ----->										3.80		SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3					
DEGREE DAYS									GREATEST 24-HR PRECIPITATION: 2.84			DATE : 27-28			SEA LEVEL PRESSURE				DATE		TIME										
MONTHLY									GREATEST 24-HR SNOWFALL: 0.0			DATE :			MAXIMUM				: 30.21		08										
TOTAL DEPARTURE									GREATEST SNOW DEPTH: 0			DATE :			MINIMUM				: 29.34		11										
HEATING: 95 27									6621			-1052			NUMBER OF DAYS WITH →				MAXIMUM TEMP ≥ 90: 0				MINIMUM TEMP ≤ 32: 0				PRECIPITATION ≥ 0.01 INCH : 12				
COOLING: 140 36									197			63			THUNDERSTORMS : 9				MINIMUM TEMP ≤ 0: 0				PRECIPITATION ≥ 0.10 INCH : 7								
															HEAVY FOG : 2				SNOWFALL ≥ 1.0 INCH : 0												

JUNE 1998  
MADISON, WI

# HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

MADISON, WI

JUNE 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						T	0.01	T	T	T			01		0.01	
02													02													02		0.00	
03													03													03		0.00	
04													04													04		T	
05			T	T	T								05											T		05		T	
06													06			T										06		T	
07													07													07		0.00	
08													08													08		T	
09	T	0.01	0.02	T	0.01	T	0.01	T	T	0.01	T	T	09	T	T	0.04	T			T	T	0.01	T	T		09		0.11	
10													10													10		0.00	
11													11	0.14	0.14	0.36	0.03	0.03	T	T						11	1.08	1.09	
12			0.15	0.12	0.08	0.03							12											0.01	T	12		0.05	
13													13													13		0.00	
14													14		T											14		T	
15													15													15		0.00	
16													16								T	T				16		T	
17													17		T											17		0.00	
18													18	0.97	0.09	0.10	T		0.56	0.46	0.19	0.01			18	2.55	2.67		
19													19													19		0.00	
20													20								0.01	0.01				20		0.02	
21													21													21		0.11	
22		T	0.01	0.10	T	T							22													22		0.00	
23													23													23		0.00	
24				0.17	0.24								24													24		0.46	
25							T	T					25					T	0.05	T						25		0.01	
26													26													26		0.00	
27				0.64									27										T	1.19	0.07	27	1.91	1.92	
28	0.13	0.58	0.01	T									28													28	0.94	0.93	
29			0.23										29		T	0.04	T									29	0.07	0.08	
30	T												30													30		T	

## 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**  
**JUNE 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							7.00	10.00	
02							8.00	10.00	
03							10.00	10.00	
04							10.00	10.00	
05							10.00	10.00	
06							10.00	10.00	
07							10.00	10.00	
08							6.00	10.00	
09							.50	7.00	
10							<.25	10.00	
11							1.50	10.00	
12							5.00	10.00	
13							7.00	10.00	
14							5.00	10.00	
15							7.00	10.00	
16							7.00	10.00	
17							6.00	10.00	
18							.25	10.00	
19							6.00	10.00	
20							10.00	10.00	
21							10.00	10.00	
22							10.00	10.00	
23							10.00	10.00	
24							2.00	10.00	
25							8.00	10.00	
26							8.00	10.00	
27							4.00	10.00	
28							3.00	10.00	
29							8.00	10.00	
30							10.00	10.00	
<b>MONTHLY AVGS</b>							6.64	9.90	
<p align="center"><b>SUNSHINE (MINUTES)</b></p> <p>Total:                  Possible:</p> <p align="center">Percent Possible:</p>									
<p align="center"><b>NUMBER OF DAYS WITH:</b></p> <p align="center"><b>SKY CONDITION</b></p> <p align="center">CLR   PTLY CLDY   CLOUDY   MISSING</p> <p align="center">30</p> <p align="center"><b>MINIMUM VISIBILITY (MILES)</b></p> <p align="center">&lt;=0.25      &lt;=3.0      &gt;=7.0</p> <p align="center">2                6                18</p>									

## OBSERVATIONS AT 3-HOURLY INTERVALS

MADISON, WI

JUNE 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: 0421	JUN 01			SUNSET: 1929										SUNRISE: 0418	JUN 07									
03	CLR	NC			8.00	47	46	46	97	0	00	28.96	29.88	03	CLR	NC			10.00	45	42	44	90	5	28	29.19	30.13		
06	CLR	NC			9.00	51	47	49	86	6	15	28.96	29.88	06	CLR	NC			10.00	47	44	46	90	3	VR	29.24	30.17		
09	CLR	NC			10.00	59	45	52	60	13	19	28.91	29.82	09	CLR	NC			10.00	59	42	50	54	7	33	29.25	30.19		
12	CLR	NC			10.00	66	45	55	47	14	21	28.84	29.75	12	SCT	NC			10.00	63	40	51	43	10	33	29.23	30.17		
15	CLR	NC			10.00	67	44	55	44	10	23	28.76	29.68	15	BKN	080			10.00	65	38	51	37	7	VR	29.22	30.16		
18	OVC	090			10.00	59	50	54	72	8	24	28.75	29.67	18	SCT	NC			10.00	64	36	50	35	5	30	29.21	30.14		
21	OVC	075			10.00	58	52	55	81	6	21	28.69	29.61	21	CLR	NC			10.00	49	44	47	83	0	00	29.22	30.16		
24	CLR	NC			10.00	56	51	53	84	7	17	28.64	29.55	24	CLR	NC			10.00	45	43	44	93	0	00	29.25	30.18		
					SUNRISE: 0420	JUN 02			SUNSET: 1930										SUNRISE: 0418	JUN 08									
03	CLR	NC			9.00	57	50	53	78	7	20	28.56	29.47	03	CLR	NC			10.00	43	42	43	97	0	00	29.24	30.17		
06	CLR	NC			9.00	61	55	58	81	9	24	28.57	29.47	06	FEW	NC			10.00	48	44	46	86	0	00	29.26	30.19		
09	BKN	027			10.00	65	56	60	73	14	28	28.63	29.54	09	BKN	100			10.00	62	44	53	52	6	18	29.25	30.18		
12	SCT	NC			10.00	60	48	54	65	15	33	28.79	29.71	12	BKN	060			10.00	64	41	52	43	14	16	29.25	30.19		
15	FEW	NC			10.00	64	47	55	54	10	31	28.83	29.75	15	BKN	070			10.00	66	43	54	43	12	13	29.20	30.13		
18	BKN	046			10.00	62	46	54	56	9	32	28.88	29.80	18	OVC	060			10.00	64	47	55	54	10	15	29.15	30.08		
21	SCT	NC			10.00	57	47	52	69	0	00	28.94	29.85	21	OVC	055			10.00	60	39	50	46	14	13	29.17	30.09		
24	OVC	060			10.00	53	49	51	86	0	00	28.94	29.86	24	OVC	034			6.00	55	52	53	90	8	10	29.13	30.06		
					SUNRISE: 0420	JUN 03			SUNSET: 1931										SUNRISE: 0418	JUN 09									
03	OVC	034			10.00	53	45	49	74	7	34	28.95	29.87	03	OVC	050			4.00	53	52	52	96	12	10	29.07	29.99		
06	BKN	049			10.00	50	42	46	74	10	36	28.98	29.91	06	OVC	010			2.00	55	54	54	96	15	09	29.02	29.95		
09	SCT	NC			10.00	50	39	45	66	9	32	29.05	29.98	09	OVC	008			2.00	57	56	56	96	14	11	29.00	29.93		
12	CLR	NC			10.00	54	35	45	49	9	31	29.00	29.93	12	OVC	008			1.50	58	57	57	97	14	09	28.96	29.88		
15	CLR	NC			10.00	57	36	47	45	9	27	28.99	29.91	15	OVC	008			5.00	59	58	58	96	8	08	28.97	29.89		
18	CLR	NC			10.00	57	35	47	44	7	29	28.99	29.92	18	OVC	008			7.00	59	58	58	96	6	07	28.98	29.91		
21	CLR	NC			10.00	50	39	45	66	3	29	29.01	29.94	21	OVC	006			2.00	58	58	58	100	3	36	28.99	29.92		
24	CLR	NC			10.00	47	39	43	74	5	31	29.00	29.93	24	VV	001			0.50	57	57	57	100	3	09	28.99	29.92		
					SUNRISE: 0419	JUN 04			SUNSET: 1932										SUNRISE: 0418	JUN 10									
03	CLR	NC			10.00	42	40	41	92	0	00	28.99	29.93	03	VV	001			0.25	56	56	56	100	0	00	29.01	29.94		
06	CLR	NC			10.00	48	42	45	80	0	00	29.01	29.95	06	OVC	001			0.25	57	57	57	100	8	01	29.01	29.94		
09	CLR	NC			10.00	57	38	48	49	5	26	29.03	29.97	09	OVC	012			7.00	62	58	60	86	8	03	29.04	29.97		
12	BKN	060			10.00	61	33	48	35	7	VR	28.99	29.92	12	OVC	035			10.00	64	57	60	78	5	28	29.04	29.96		
15	OVC	070			10.00	63	39	51	41	8	31	28.98	29.91	15	BKN	041			10.00	69	58	62	68	0	00	28.99	29.92		
18	FEW	NC			10.00	60	39	50	46	7	35	28.98	29.90	18	OVC	035			10.00	69	60	64	73	0	00	28.98	29.90		
21	CLR	NC			10.00	53	40	47	61	7	36	28.99	29.92	21	CLR	NC			7.00	61	59	60	93	3	07	28.98	29.90		
24	SCT	NC			10.00	52	43	48	72	6	05	28.98	29.90	24	SCT	NC			2.00	58	56	57	93	6	11	28.97	29.89		
					SUNRISE: 0419	JUN 05			SUNSET: 1932										SUNRISE: 0418	JUN 11									
03	OVC	060			10.00	50	44	47	80	7	04	29.01	29.94	03	OVC	028			2.00	58	57	57	97	12	15	28.91	29.82		
06	OVC	045			10.00	48	44	46	86	8	04	29.06	29.99	06	SCT	NC			3.00	62	62	62	100	9	12	28.89	29.80		
09	OVC	043			10.00	50	42	46	74	8	07	29.09	30.03	09	BKN	006			3.00	67	64	65	91	16	14	28.80	29.71		
12	BKN	060			10.00	56	41	49	57	10	02	29.07	30.01	12	OVC	023			10.00	71	65	67	81	21	15	28.73	29.64		
15	SCT	NC			10.00	54	39	47	57	9	01	29.09	30.02	15	OVC	015			8.00	68	67	67	96	7	11	28.61	29.53		
18	BKN	085			10.00	55	39	47	55	3	34	29.11	30.04	18	OVC	014			10.00	71	69	70	94	15	17	28.47	29.37		
21	FEW	NC			10.00	46	43	45	89	0	00	29.13	30.07	21	OVC	016			10.00	67	62	64	84	17	26	28.54	29.44		
24	SCT	NC			10.00	45	43	44	93	5	28	29.13	30.07	24	OVC	022			10.00	65	60	62	84	10	26	28.64	29.54		
					SUNRISE: 0419	JUN 06			SUNSET: 1933										SUNRISE: 0417	JUN 12									
03	OVC	075			10.00	45	44	45	97	0	00	29.14	30.08	03	CLR	NC			10.00	61	59	60	93	5	23	28.65	29.56		
06	BKN	095			10.00	49	45	47	86	0	00	29.17	30.11	06	SCT	NC			5.00	63	61	62	93	13	22	28.69	29.60		
09	FEW	NC			10.00	54	38	46	55	5	33	29.19	30.13	09	SCT	NC			10.00	72	63	66	73	8	26	28.71	29.61		
12	BKN	100			10.00	56	40	48	55	5	VR	29.19	30.13	12	SCT	NC			10.00	77	61	67	58	12	27	28.72	29.62		
15	BKN	080			10.00	57	38	48	49	9	27	29.17	30.11	15	SCT	NC			10.00	76	59	65	56	6	VR	28.71	29.62		
18	BKN	110			10.00	56	41	49	57	9	26	29.16	30.10	18	FEW	NC			10.00	67	62	64	84	6	26	28.69	29.60		
21	CLR	NC			10.00	50	42	46	74	3	VR	29.19	30.13	21	FEW	NC			10.										

## OBSERVATIONS AT 3-HOURLY INTERVALS

MADISON, WI

JUNE 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: 0417		JUN 13	SUNSET: 1937										SUNRISE: 0418		JUN 19	SUNSET: 1940										
03	CLR	NC			10.00	58	56	57	93	6	28	28.79	29.70	03	OVC	007		6.00	BR		64	62	63	93	10	18	28.79	29.70	
06	OVC	013			10.00	60	57	58	90	6	31	28.86	29.77	06	CLR	NC		10.00			64	60	62	87	9	22	28.81	29.72	
09	BKN	028			9.00	66	60	62	81	9	35	28.91	29.82	09	CLR	NC		10.00			69	59	63	70	12	23	28.81	29.72	
12	BKN	025			10.00	69	59	63	70	8	31	28.93	29.84	12	BKN	034		10.00			73	61	66	66	14	24	28.84	29.75	
15	FEW	NC			10.00	73	60	65	64	3	27	28.90	29.81	15	BKN	070		10.00			74	59	65	60	9	23	28.86	29.77	
18	FEW	NC			10.00	74	60	65	62	0	00	28.88	29.78	18	CLR	NC		10.00			77	59	66	54	9	23	28.86	29.76	
21	CLR	NC			10.00	62	60	61	93	0	00	28.86	29.78	21	CLR	NC		10.00			68	62	64	81	0	00	28.88	29.79	
24	CLR	NC			10.00	61	60	60	97	3	20	28.84	29.75	24	CLR	NC		10.00			70	62	65	76	6	20	28.88	29.79	
			SUNRISE: 0417		JUN 14	SUNSET: 1938										SUNRISE: 0418		JUN 20	SUNSET: 1940										
03	CLR	NC			7.00	57	57	57	100	0	00	28.79	29.70	03	CLR	NC		10.00			66	61	63	84	0	00	28.89	29.80	
06	CLR	NC			7.00	61	60	60	97	3	03	28.76	29.67	06	CLR	NC		10.00			69	64	66	84	5	19	28.91	29.81	
09	CLR	NC			9.00	69	62	65	78	12	13	28.73	29.64	09	CLR	NC		10.00			79	69	72	72	8	19	28.90	29.80	
12	CLR	NC			10.00	70	60	64	71	10	10	28.68	29.59	12	FEW	NC		10.00			86	70	75	59	15	19	28.88	29.78	
15	SCT	NC			10.00	72	56	62	57	16	09	28.65	29.56	15	CLR	NC		10.00			88	69	75	54	20	16	28.84	29.75	
18	CLR	NC			10.00	68	54	60	61	12	06	28.60	29.51	18	SCT	NC		10.00			84	72	76	67	9	19	28.89	29.79	
21	CLR	NC			10.00	62	55	58	78	7	04	28.61	29.52	21	CLR	NC		10.00			69	65	66	87	3	VR	28.91	29.81	
24	CLR	NC			10.00	58	53	55	84	6	04	28.60	29.50	24	CLR	NC		10.00			69	62	65	78	0	00	28.90	29.80	
			SUNRISE: 0417		JUN 15	SUNSET: 1938										SUNRISE: 0418		JUN 21	SUNSET: 1940										
03	CLR	NC			10.00	56	53	54	90	3	34	28.60	29.49	03	OVC	070		10.00	-RA		69	63	65	81	13	19	28.90	29.80	
06	SCT	NC			8.00	61	56	58	84	5	VR	28.60	29.50	06	BKN	090		10.00			68	64	66	87	5	18	28.93	29.83	
09	CLR	NC			10.00	73	61	65	66	12	04	28.60	29.51	09	SCT	NC		10.00			76	66	69	72	9	31	28.97	29.87	
12	CLR	NC			10.00	77	61	67	58	9	04	28.61	29.52	12	BKN	075		10.00			79	65	70	62	9	28	29.00	29.91	
15	SCT	NC			10.00	79	60	67	52	7	VR	28.61	29.52	15	FEW	NC		10.00			81	61	68	51	10	24	28.99	29.91	
18	FEW	NC			10.00	75	60	66	60	6	04	28.60	29.51	18	CLR	NC		10.00			77	57	65	50	6	VR	29.00	29.91	
21	CLR	NC			10.00	64	61	62	90	0	00	28.64	29.55	21	CLR	NC		10.00			73	59	64	62	6	23	29.06	29.98	
24	FEW	NC			8.00	61	60	60	97	0	00	28.63	29.54	24	CLR	NC		10.00			69	61	64	76	3	VR	29.10	30.01	
			SUNRISE: 0417		JUN 16	SUNSET: 1939										SUNRISE: 0418		JUN 22	SUNSET: 1940										
03	CLR	NC			8.00	59	58	58	96	3	32	28.65	29.55	03	CLR	NC		10.00			63	58	60	84	0	00	29.09	30.00	
06	CLR	NC			7.00	62	59	60	90	5	36	28.68	29.59	06	SCT	NC		10.00			67	61	63	81	0	00	29.11	30.02	
09	CLR	NC			10.00	74	62	66	67	7	03	28.71	29.62	09	CLR	NC		10.00			76	64	68	67	7	22	29.13	30.04	
12	SCT	NC			10.00	81	63	69	54	8	33	28.74	29.65	12	CLR	NC		10.00			80	62	69	54	6	VR	29.12	30.03	
15	FEW	NC			10.00	75	62	67	64	9	31	28.77	29.68	15	CLR	NC		10.00			81	61	68	51	0	00	29.06	29.98	
18	SCT	NC			10.00	70	61	64	73	6	VR	28.85	29.76	18	FEW	NC		10.00			80	58	66	47	3	26	29.05	29.96	
21	CLR	NC			10.00	65	62	63	90	0	00	28.89	29.79	21	CLR	NC		10.00			68	62	64	81	0	00	29.08	29.99	
24	CLR	NC			10.00	62	60	61	93	0	00	28.95	29.85	24	CLR	NC		10.00			65	63	64	93	0	00	29.08	30.00	
			SUNRISE: 0417		JUN 17	SUNSET: 1939										SUNRISE: 0418		JUN 23	SUNSET: 1940										
03	CLR	NC			6.00	56	56	56	100	0	00	28.98	29.90	03	CLR	NC		10.00			63	61	62	93	3	34	29.08	30.00	
06	CLR	NC			8.00	62	60	61	93	0	00	29.03	29.95	06	CLR	NC		10.00			67	64	65	91	0	00	29.11	30.03	
09	CLR	NC			10.00	74	64	68	71	5	VR	29.08	29.99	09	CLR	NC		10.00			77	64	69	64	0	00	29.16	30.07	
12	CLR	NC			10.00	80	63	69	56	5	VR	29.08	30.00	12	FEW	NC		10.00			83	59	68	44	3	VR	29.11	30.02	
15	CLR	NC			10.00	80	61	68	52	15	16	29.03	29.95	15	FEW	NC		10.00			83	61	69	48	8	18	29.08	29.99	
18	FEW	NC			10.00	78	65	70	64	10	17	29.03	29.94	18	FEW	NC		10.00			80	62	69	54	8	12	29.05	29.96	
21	FEW	NC			10.00	73	65	68	76	5	16	29.05	29.96	21	CLR	NC		10.00			74	63	67	69	10	14	29.06	29.97	
24	SCT	NC			7.00	68	65	66	90	6	08	29.05	29.97	24	BKN	085		10.00			72	62	66	71	5	12	29.06	29.97	
			SUNRISE: 0417		JUN 18	SUNSET: 1939										SUNRISE: 0419		JUN 24	SUNSET: 1941										
03	BKN	100			7.00	67	62	64	84	9	12	28.99	29.91	03	BKN	045		10.00			72	64	67	76	10	15	29.01	29.93	
06	FEW	NC			8.00	69	63	65	81	8	12	29.01	29.93	06	FEW	NC		10.00			66	65	65	96	9	12	28.99	29.89	
09	CLR	NC			10.00	78	69	72	74	14	16	28.97	29.87	09	CLR	NC		10.00			78	70	73	76	14	18	28.99	29.90	
12	OVC	029			1.50	75	72	73	89	22	24	29.01	29.92	12	SCT	NC		10.00			86	71	76	61	10	20	28.96	29.86	
15	BKN	040			10.00	67	65	66	93	3	36	28.91	29.82	15	SCT	NC		10.00			88	71	76	57	16	18	28.92	29.82	
18	OVC	009			0.25	63	62	62	97	7	VR	28.95	29.87	18	BKN	055		10.00	-TSRA		77	74	75	90	6	19	28.94	29.85	
21	CLR	NC			10.00	62	61	61	96	9	14	28.82	29.72	21	CLR	NC		10.00			81	71	74	72	10	18	28.94	29.83	
24	SCT	NC			10.00	62	61	61	96	12	18	28.79	29.70	24	FEW	NC		10.00			80	71	74	74	14	18	28.92	29.81	

## OBSERVATIONS AT 3-HOURLY INTERVALS

MADISON, WI

JUNE 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)		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 Ok/as			DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL				OBSERVATION TIME (LST)	EFF CLD AMT Ok/as			DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
					SUNRISE: 0419	JUN 25				SUNSET: 1941																			
03	FEW	NC			8.00		77	72	74	85	12	17	28.90	29.80															
06	FEW	NC			8.00		78	71	73	79	10	19	28.91	29.81															
09	CLR	NC			10.00		82	72	75	72	13	22	28.94	29.84															
12	FEW	NC			10.00		88	71	76	57	12	21	28.91	29.80															
15	CLR	NC			10.00		89	71	76	55	15	20	28.85	29.75															
18	BKN	120			10.00	-RA	83	73	76	72	9	23	28.87	29.77															
21	SCT	NC			10.00		75	68	70	79	5	VR	28.89	29.79															
24	BKN	055			8.00		71	70	70	96	0	00	28.92	29.82															
					SUNRISE: 0419	JUN 26				SUNSET: 1941																			
03	FEW	NC			10.00		67	65	66	93	3	34	28.96	29.86															
06	CLR	NC			10.00		71	66	68	84	0	00	28.98	29.88															
09	CLR	NC			10.00		78	67	71	69	7	02	28.97	29.87															
12	CLR	NC			10.00		83	68	73	61	0	00	28.94	29.85															
15	CLR	NC			10.00		86	69	74	57	3	VR	28.91	29.81															
18	FEW	NC			10.00		84	71	75	65	8	10	28.88	29.78															
21	FEW	NC			10.00		80	74	76	82	12	12	28.87	29.77															
24	SCT	NC			8.00		76	70	72	82	12	15	28.85	29.74															
					SUNRISE: 0420	JUN 27				SUNSET: 1941																			
03	OVC	030			9.00	-TSRA	69	66	67	90	22	02	28.88	29.78															
06	BKN	025			10.00		68	67	67	96	9	15	28.86	29.77															
09	FEW	NC			10.00		76	71	73	85	10	18	28.88	29.78															
12	BKN	030			10.00		86	76	79	72	3	VR	28.89	29.79															
15	FEW	NC			10.00		88	73	77	61	0	00	28.90	29.80															
18	FEW	NC			10.00		85	73	77	68	8	07	28.88	29.78															
21	SCT	NC			10.00		76	71	73	85	7	14	28.91	29.82															
24	OVC	060			7.00	-TSRA	69	67	68	93	14	10	28.94	29.84															
					SUNRISE: 0420	JUN 28				SUNSET: 1941																			
03	OVC	036			4.00	RA BR	68	67	67	96	31	10	28.90	29.80															
06	CLR	NC			10.00		69	65	66	87	10	17	28.92	29.82															
09	SCT	NC			10.00		76	68	71	77	9	29	28.94	29.84															
12	FEW	NC			10.00		80	68	72	67	7	23	28.98	29.88															
15	FEW	NC			10.00		84	68	73	59	8	26	28.98	29.88															
18	CLR	NC			10.00		83	62	69	49	3	VR	28.99	29.89															
21	CLR	NC			10.00		72	65	67	79	5	24	28.99	29.90															
24	CLR	NC			10.00		66	65	65	96	0	00	28.99	29.90															
					SUNRISE: 0421	JUN 29				SUNSET: 1941																			
03	CLR	NC			10.00		64	64	64	100	0	00	28.99	29.90															
06	CLR	NC			10.00		70	65	67	84	0	00	28.99	29.88															
09	CLR	NC			10.00		81	63	69	54	10	20	28.92	29.82															
12	FEW	NC			10.00		83	67	72	59	8	27	28.89	29.79															
15	BKN	110			10.00	-TSRA	76	71	73	85	8	21	28.87	29.78															
18	CLR	NC			10.00		75	58	65	55	9	22	28.76	29.66															
21	CLR	NC			10.00		69	62	65	78	9	24	28.76	29.66															
24	OVC	095			10.00		65	62	63	90	10	30	28.75	29.66															
					SUNRISE: 0421	JUN 30				SUNSET: 1941																			
03	BKN	120			10.00		65	62	63	90	6	29	28.73	29.64															
06	CLR	NC			10.00		66	61	63	84	6	30	28.77	29.67															
09	SCT	NC			10.00		70	61	64	73	12	31	28.81	29.71															
12	FEW	NC			10.00		75	61	66	62	10	32	28.87	29.78															
15	SCT	NC			10.00		78	60	67	54	10	35	28.89	29.80															
18	SCT	NC			10.00		74	62	66	67	6	35	28.91	29.82															
21	FEW	NC			10.00		67	64	65	91	3	28	28.96	29.87															
24	SCT	NC			10.00		66	61	63	84	3	34	28.98	29.89															

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 Visibilty = 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.

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)		
							STATION	SEA LEVEL		SPEED	DIRECTION	
01			60	57	58	88	28.92	29.84	8.43	4	2	16
02			60	57	58	90	28.92	29.84	8.28	4	1	16
03			59	56	57	91	28.92	29.83	8.28	6	2	12
04			58	56	57	92	28.93	29.84	8.60	5	2	18
05			59	56	57	92	28.93	29.85	8.14	5	1	17
06			61	58	59	88	28.94	29.85	8.47	5	1	15
07			64	58	60	81	28.94	29.86	8.91	7	1	21
08			67	58	62	76	28.95	29.86	9.00	7	2	18
09			69	59	63	71	28.95	29.86	9.33	9	2	21
10			70	58	63	67	28.95	29.86	9.55	8	2	22
11			72	58	64	64	28.94	29.86	9.61	7	2	18
12			73	58	64	61	28.94	29.86	9.43	9	3	25
13			73	57	63	59	28.94	29.85	9.20	8	2	21
14			74	57	64	58	28.93	29.84	9.55	7	1	19
15			74	57	64	59	28.92	29.83	9.77	8	2	21
16			73	57	64	58	28.91	29.83	9.62	8	1	18
17			73	57	64	60	28.91	29.82	9.53	8	2	20
18			71	58	63	64	28.91	29.82	9.57	6	1	20
19			69	58	63	69	28.91	29.82	9.57	6	1	16
20			66	58	61	77	28.91	29.83	9.60	5	1	13
21			64	58	61	80	28.93	29.84	9.63	5	2	18
22			63	58	60	83	28.93	29.84	9.48	5	1	17
23			63	58	60	85	28.93	29.85	9.19	5	2	18
24			62	58	59	87	28.93	29.84	8.88	5	1	16

# SUPPLEMENTARY HOURLY PRECIPITATION

## UNIVERSAL RAIN GAUGE (WATER EQUIVALENT IN INCHES)

JUNE 1998  
MADISON, WI

LATITUDE 43° 8'N  
LONGITUDE -89° 20'W

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	T	T	0.02	0.05	0.20	0.10	0.05						01												01	0.02	
02													02												0.00		
03													03												0.00		
04													04												0.00		
05													05												0.00		
06													06												T	06	0.00
07													07													0.00	
08													08													T	
09													09													0.02	
10													10												0.00		
11		0.05	0.20	0.10	0.05							11	0.18	0.45	0.05	0.05								11	1.08		
12												12					0.05								12	0.05	
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	0.75	0.45	0.10		0.20	0.80	0.25					18	2.55	
19													19												19	0.00	
20													20												20	0.00	
21				0.10									21												21	0.10	
22													22												22	0.00	
23													23												23	0.00	
24					0.38	0.05							24			0.05									24	0.48	
25													25												25	0.00	
26													26												26	0.00	
27				0.67									27									1.15	0.10	27	1.92		
28	0.10	0.60	0.30	0.15									28												28	1.15	
29													29												29	0.00	
30													30												30	0.00	
PUBLISHED BY: NCDC, ASHEVILLE, NC.																							MONTHLY TOTAL			7.37	

### SUPPLEMENTARY MAXIMUM SHORT DURATION PRECIPITATION (MSDP)

TIME PERIOD (MINUTES)	5	10	15	20	30	45	60	80	100	120	150	180
PRECIPITATION (INCHES)			1.00	1.00	1.00	1.15	1.15	1.20	1.25	1.25	1.30	1.35
ENDED: DATE			27	27	27	27	27	27	28	28	28	28
ENDED: TIME			2300	2300	2300	2300	2300	2359	0050	0050	0050	0100

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.



**JUNE 1998  
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  
704–271–4800 (voice), 704–271–4876 (fax),  
704–271–4010(TDD)  
or [orders@ncdc.noaa.gov](mailto:orders@ncdc.noaa.gov)  
Local Climatological Data is available at [www.ncdc.noaa.gov](http://www.ncdc.noaa.gov)

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