



NOVEMBER 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	52	45	49	7	42	46	16	0		0		0.0	0.00	29.31	30.25	11.2	04	11.3	20	05	17	04	01			
02	47	35	41	-1	34	38	24	0		0		0.0	0.00	29.27	30.21	16.6	05	16.8	32	05	28	05	02			
03	44	28	36	-5	28	33	29	0		0		0.0	0.00	29.25	30.21	13.6	04	14.2	29	08	23	05	03			
04	42	25	34	-7	22	28	31	0		0		0.0	0.00	29.31	30.27	7.2	36	7.8	21	36	17	02	04			
05	35	21*	28*	-12	22	27	37	0		0		0.0	0.00	29.27	30.23	3.4	34	4.5	15	01	13	02	05			
06	36	26	31	-9	23	29	34	0		0		0.0	0.00	29.33	30.29	3.0	31	4.1	14	33	10	34	06			
07	42	22	32	-8	25	30	33	0	SN	0		T	T	29.41	30.38	1.3	25	2.9	13	25	10	24	07			
08	37	31	34	-5	31	33	31	0	SN BR HZ	0		0.4	0.04	29.31	30.27	1.2	33	1.5	10	22	8	23	08			
09	45	35	40	1	35	37	25	0	TSRA RA BR HZ	0		0.0	0.58	29.10	30.05	10.1	12	10.6	28	12	23	11	09			
10	60	34	47	9	38	41	18	0	TSRA RA SN BR	0		T	1.20	28.27	29.19	17.4	20	22.4	52*	21	38*	18	10			
11	43	33	38	0	25	33	27	0	SN	0		T	T	29.06	30.01	12.3	26	12.8	43	26	26	27	11			
12	41	22	32	-5	22	30	33	0		0		0.0	0.00	29.36	30.32	2.7	29	4.5	14	32	11	23	12			
13	51	22	37	0	26	33	28	0	HZ	0		0.0	0.00	29.13	30.08	6.1	19	7.5	22	20	16	18	13			
14	55	40	48	12	37	41	17	0	BR HZ	0		0.0	0.00	28.83	29.76	6.4	28	10.1	26	33	20	32	14			
15	41	30	36	0	27	33	29	0		0		0.0	0.00	29.00	29.94	4.4	22	7.4	17	17	15	16	15			
16	45	36	41	6	35	38	24	0	RA BR HZ	0		0.0	0.01	28.83	29.77	2.9	33	8.1	18	31	15	34	16			
17	43	28	36	1	32	34	29	0	BR	0		0.0	0.00	29.18	30.13	0.5	26	3.1	14	21	10	21	17			
18	57	33	45	11	38	42	20	0	RA BR	0		0.0	0.03	28.98	29.92	11.3	16	13.0	36	15	28	15	18			
19	48	31	40	6	28	32	25	0		0		0.0	0.00	28.95	29.90	12.3	26	12.7	30	28	23	25	19			
20	32	26	29	-4	22	27	36	0	SN BR	0		T	T	29.13	30.09	7.8	30	8.6	22	32	16	32	20			
21	41	27	34	1	24	30	31	0	HZ	0		0.0	0.00	29.20	30.16	9.5	18	10.4	28	18	22	18	21			
22	55	41	48	16	34	41	17	0		0		0.0	0.00	28.93	29.86	13.5	20	13.7	28	19	21	19	22			
23	56	38	47	15	29	40	18	0		0		0.0	0.00	29.01	29.94	7.5	26	9.9	33	29	25	29	23			
24	55	26	41	10	29	37	24	0		0		0.0	0.00	29.17	30.12	6.6	17	7.5	24	18	20	19	24			
25	57	44	51	20	33	41	14	0		0		0.0	0.00	28.85	29.79	6.4	24	8.1	22	18	18	18	25			
26	59	31	45	15	28	38	20	0		0		0.0	0.00	29.02	29.96	4.4	26	5.3	21	27	17	27	26			
27	65*	28	47	17	32	39	18	0		0		0.0	0.00	29.09	30.03	3.8	19	4.0	14	22	11	19	27			
28	62	37	50	21	46	49	15	0	DZ BR HZ	0		0.0	T	28.99	29.92	5.2	19	5.6	15	19	13	19	28			
29	64	53	59*	30	56	58	6	0	DZ BR HZ	0		0.0	T	28.77	29.69	11.6	18	11.6	24	19	18	19	29			
30	63	36	50	22	44	47	15	0	RA BR HZ	0		0.0	0.09	28.88	29.81	7.0	26	10.1	28	29	20	29	30			
< MONTHLY AVERAGES										TOTALS-->			0.4	1.95	29.07	30.02	2.2	22	9.0	<-- MONTHLY AVERAGES						
49.1				32.1	40.6	■ ■	31.6	36.8	24.1	0.0	<----- DEPARTURE FROM NORMAL ----->		- .14		SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3											
5.1				5.4	5.2	■ ■																				
DEGREE DAYS									GREATEST 24-HR PRECIPITATION: 1.67 DATE :9-10				SEA LEVEL PRESSURE DATE TIME													
MONTHLY TOTAL DEPARTURE 724 -164									GREATEST 24-HR SNOWFALL: 0.4 DATE :08				MAXIMUM : 30.44 07 0953													
SEASON TO DATE TOTAL DEPARTURE 1212 -393									GREATEST SNOW DEPTH: 0 DATE :				MINIMUM : 28.97 10 0847													
HEATING: 724 -164									NUMBER OF DAYS WITH ➡		MAXIMUM TEMP ≥ 90: 0		MINIMUM TEMP ≤ 32: 16		PRECIPITATION ≥ 0.01 INCH : 6											
COOLING: 0 0											MAXIMUM TEMP ≤ 32 : 1		MINIMUM TEMP ≤ 0 : 0		PRECIPITATION ≥ 0.10 INCH : 2											
654 169											THUNDERSTORMS : 2		HEAVY FOG : 0		SNOWFALL ≥ 1.0 INCH : 0											

NOVEMBER 1998
MADISON, WI

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

MADISON, WI

NOVEMBER 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			0.00	
02													02												02			0.00	
03													03												03			0.00	
04													04												04			0.00	
05													05												05			0.00	
06													06												06			0.00	
07													07											T	07		T	0.00	
08	0.01	0.01	0.01	T	T	0.01	T	T	T	T			08			T	0.02	0.06	0.03	0.05	0.01	0.03	0.05	0.12	0.19	08		0.04	0.56
09													09			T	T	T	T	0.01	T	T	T	T	09	0.56		0.58	1.14
10	0.25	0.17	0.12	0.07	0.25	0.19	0.04	0.01	0.02	0.01		T	10	T											10			1.20	
11	T	T											11												11		T		
12													12												12			0.00	
13													13												13			0.00	
14													14												14			0.00	
15													15												15			0.00	
16													16												16			0.01	
17						T	0.01	T					17												17			0.00	
18													18			T	T	0.03	T						18			0.03	
19													19												19			0.00	
20													20												20			T	
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													28								T	T	T	T	28		T		
29													29												29		T		
30			T		T	T	0.08	0.01				T	30												30			0.09	

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

Intensity (as indicated on pages 4 to 6):
'+' = Heavy ' ' = Moderate '-' = Light

Ceilometer (30-second) data are used to derive cloudiness at or below 12,000 feet. This cloudiness is the mean cloud cover detected during sunrise to sunset (SR-SS), or midnight to midnight (MN-MN).

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.

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.

ADDITIONAL NOTES:

SUNSHINE (MINUTES)

Total: Possible:
Percent Possible:

NUMBER OF DAYS WITH:

CLR PTLY CLDY CLOUDY MISSING
30

MINIMUM VISIBILITY (MILES)		
<=0.25	<=3.0	>=7.0
0	10	16

OBSERVATIONS AT 3-HOURLY INTERVALS

MADISON, WI

NOVEMBER 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: 0632			NOV 01	SUNSET: 1649									SUNRISE: 0640			NOV 07	SUNSET: 1642									
03	OVC	031			10.00		49	45	47	86	10	04	29.30	30.24	03	BKN	040			10.00	27	22	25	81	6	28	29.41	30.39	
06	OVC	030			10.00		47	44	46	90	10	04	29.32	30.26	06	CLR	NC			10.00	23	20	22	88	0	00	29.43	30.40	
09	BKN	038			10.00		48	42	45	80	12	04	29.35	30.29	09	CLR	NC			10.00	31	24	28	76	3	VR	29.47	30.44	
12	OVC	028			10.00		51	41	46	69	13	02	29.32	30.26	12	CLR	NC			10.00	39	27	34	62	3	15	29.43	30.40	
15	OVC	035			10.00		50	43	47	77	12	03	29.30	30.24	15	FEW	NC			10.00	42	27	36	55	0	00	29.38	30.34	
18	OVC	025			10.00		48	42	45	80	9	03	29.30	30.24	18	CLR	NC			10.00	32	25	29	75	0	00	29.38	30.35	
21	OVC	032			10.00		47	39	43	74	12	05	29.31	30.25	21	OVC	100			10.00	34	28	32	79	3	26	29.38	30.34	
24	OVC	034			10.00		45	39	42	80	16	05	29.29	30.23	24	OVC	026			6.00	-SN	35	29	33	78	7	23	29.38	30.34
			SUNRISE: 0633			NOV 02	SUNSET: 1648									SUNRISE: 0641			NOV 08	SUNSET: 1641									
03	OVC	022			10.00		43	37	40	80	12	04	29.29	30.24	03	OVC	016			2.50	-SN BR	32	30	31	92	0	00	29.36	30.31
06	OVC	032			10.00		43	37	40	80	18	04	29.28	30.22	06	OVC	035			2.50	-SN BR	32	31	32	96	0	00	29.33	30.29
09	OVC	032			10.00		41	36	39	82	22	04	29.30	30.24	09	OVC	005			1.50	-SN BR	33	31	32	92	0	00	29.34	30.29
12	OVC	030			10.00		43	37	40	80	21	06	29.26	30.20	12	OVC	035			2.50	HZ	36	31	34	82	7	32	29.30	30.26
15	SCT	NC			10.00		44	31	39	60	24	05	29.22	30.17	15	OVC	019			2.50	HZ	37	31	35	79	6	30	29.28	30.23
18	FEW	NC			10.00		37	28	34	70	15	05	29.26	30.21	18	OVC	021			8.00		36	31	34	82	0	00	29.27	30.23
21	CLR	NC			10.00		35	28	32	76	14	04	29.26	30.22	21	OVC	021			6.00	HZ	36	31	34	82	0	00	29.28	30.24
24	BKN	032			10.00		37	30	34	76	18	04	29.24	30.19	24	OVC	019			6.00	BR	36	32	34	86	0	00	29.27	30.23
			SUNRISE: 0635			NOV 03	SUNSET: 1647									SUNRISE: 0642			NOV 09	SUNSET: 1640									
03	OVC	030			10.00		37	31	35	79	17	05	29.23	30.18	03	OVC	021			8.00		37	30	34	76	5	18	29.26	30.22
06	OVC	030			10.00		37	31	35	79	10	05	29.26	30.21	06	OVC	043			7.00		36	30	34	79	6	13	29.25	30.21
09	BKN	030			10.00		38	27	34	65	17	06	29.27	30.23	09	OVC	020			3.00	HZ	37	32	35	82	8	13	29.24	30.20
12	OVC	028			10.00		41	31	37	67	20	05	29.23	30.19	12	OVC	018			3.00	HZ	39	31	36	73	13	12	29.17	30.12
15	OVC	030			10.00		41	30	37	65	17	03	29.23	30.18	15	OVC	021			3.00	-RA HZ	39	31	36	73	13	10	29.05	30.00
18	OVC	034			10.00		37	26	33	65	15	03	29.26	30.22	18	OVC	027			2.50	-RA BR	40	40	40	100	14	11	29.00	29.95
21	CLR	NC			10.00		30	24	28	79	9	36	29.27	30.23	21	OVC	009			3.00	-RA BR	43	42	43	97	17	11	28.87	29.80
24	OVC	034			10.00		32	24	29	73	12	03	29.30	30.25	24	OVC	009			4.00	-RA BR	45	44	45	97	20	11	28.69	29.62
			SUNRISE: 0636			NOV 04	SUNSET: 1646									SUNRISE: 0644			NOV 10	SUNSET: 1639									
03	BKN	030			10.00		27	19	24	72	7	36	29.32	30.27	03	OVC	007			4.00	-RA BR	47	46	46	97	18	12	28.47	29.39
06	FEW	NC			10.00		27	19	24	72	7	32	29.33	30.29	06	OVC	007			7.00	-RA	53	51	52	93	18	13	28.22	29.13
09	FEW	NC			10.00		34	21	29	59	14	36	29.34	30.30	09	OVC	041			5.00	-RA	55	50	52	83	24	20	28.08	28.98
12	FEW	NC			10.00		40	23	34	51	10	01	29.32	30.28	12	OVC	031			10.00		42	33	38	71	24	20	28.13	29.04
15	BKN	045			10.00		39	23	33	53	7	VR	29.29	30.25	15	OVC	034			10.00		40	27	35	60	30	22	28.15	29.06
18	SCT	NC			10.00		32	21	28	64	3	35	29.31	30.27	18	OVC	022			4.00	-SN	35	32	34	89	24	22	28.21	29.13
21	CLR	NC			10.00		29	22	27	75	3	34	29.31	30.27	21	OVC	024			10.00	-SN	37	31	35	79	22	24	28.33	29.25
24	CLR	NC			10.00		25	22	24	88	3	34	29.29	30.25	24	OVC	027			10.00	-SN	36	29	33	76	23	26	28.52	29.44
			SUNRISE: 0637			NOV 05	SUNSET: 1644									SUNRISE: 0645			NOV 11	SUNSET: 1638									
03	CLR	NC			10.00		23	21	22	92	0	00	29.28	30.24	03	OVC	023			10.00		35	27	32	72	16	27	28.71	29.65
06	BKN	035			10.00		24	22	23	91	5	34	29.28	30.24	06	SCT	NC			10.00		34	25	31	70	15	26	28.89	29.83
09	BKN	031			10.00		32	26	30	79	8	35	29.28	30.24	09	FEW	NC			10.00		34	23	30	64	14	27	29.04	30.00
12	OVC	027			10.00		33	22	29	64	6	VR	29.27	30.23	12	CLR	NC			10.00		41	23	34	49	17	26	29.11	30.06
15	OVC	031			10.00		34	22	30	61	7	VR	29.23	30.19	15	CLR	NC			10.00		43	22	35	43	12	26	29.16	30.11
18	OVC	031			10.00		32	21	28	64	3	32	29.26	30.22	18	CLR	NC			10.00		38	24	33	57	9	24	29.25	30.21
21	OVC	035			10.00		32	23	29	69	5	33	29.26	30.22	21	CLR	NC			10.00		37	28	34	70	7	21	29.29	30.24
24	OVC	035			10.00		32	22	28	66	3	33	29.26	30.22	24	CLR	NC			10.00		36	27	33	70	10	22	29.29	30.24
			SUNRISE: 0638			NOV 06	SUNSET: 1643									SUNRISE: 0646			NOV 12	SUNSET: 1637									
03	OVC	035			10.00		32	25	29	75	3	34	29.26	30.22	03	BKN	085			10.00		37	25	32	62	8	24	29.31	30.26
06	OVC	039			10.00		32	23	29	69	5	30	29.28	30.24	06	BKN	095			10.00		36	27	33	70	5	31	29.33	30.29
09	OVC	039			10.00		35	22	30	59	7	31	29.32	30.28	09	SCT	NC			10.00		35	25	31	67	10	36	29.40	30.37
12	OVC	035			10.00		35	21	30	57	7	32	29.33	30.29	12	CLR	NC			10.00		38	19	31	47	8	29	29.38	30.34
15	OVC	033			10.00		35	23	31	61	5	31	29.34	30.29	15	CLR	NC			10.00		40	21	33	47	7	28	29.36	30.31
18	OVC	039			10.00		33	23	29	67	7	30	29.36	30.32	18	CLR	NC			10.00		31	20	27	64	0	00	29.38	30.34
21	FEW	NC			10.00		28	23	26	81	0	00	29.38	30.35	21	CLR	NC			10.00		26	21	24	81	0	00	29.38	30.34
24	BKN	042			10.00		27	22	25	81	5	VR	29.41	30.38	24	CLR	NC			10.00		23	20	22	88	0	00	29.36	30.32

OBSERVATIONS AT 3-HOURLY INTERVALS

MADISON, WI

NOVEMBER 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	
			SUNRISE: 0647			NOV 13	SUNSET: 1636									SUNRISE: 0655			NOV 19	SUNSET: 1630										
03	CLR	NC			10.00		25	16	22	69	6	15	29.30	30.26	03	OVC	015				10.00		41	36	39	82	10	24	28.82	29.75
06	FEW	NC			10.00		24	16	22	71	5	15	29.27	30.23	06	OVC	018				10.00		37	30	34	76	9	25	28.86	29.80
09	CLR	NC			10.00		34	24	30	67	10	17	29.22	30.18	09	OVC	016				10.00		34	28	32	79	16	24	28.94	29.87
12	CLR	NC			10.00		45	31	39	58	9	20	29.15	30.10	12	OVC	023				10.00		34	25	31	70	16	24	28.96	29.90
15	CLR	NC			10.00		51	31	42	46	9	20	29.04	29.99	15	OVC	025				10.00		34	24	30	67	13	26	28.99	29.93
18	CLR	NC			10.00		43	31	38	63	8	17	29.00	29.96	18	OVC	023				10.00		31	23	28	72	12	27	29.03	29.98
21	CLR	NC			8.00		43	31	38	63	7	VR	28.97	29.91	21	BKN	023				10.00		31	24	28	76	12	26	29.04	30.00
24	BKN	037			6.00	HZ	42	32	38	68	7	22	28.91	29.84	24	OVC	019				10.00		31	27	29	85	9	30	29.05	30.01
			SUNRISE: 0649			NOV 14	SUNSET: 1635									SUNRISE: 0656			NOV 20	SUNSET: 1630										
03	BKN	007			4.00	BR	41	39	40	93	5	VR	28.84	29.77	03	BKN	018				10.00		28	22	26	78	6	VR	29.06	30.02
06	BKN	110			3.00	BR	41	40	41	96	7	19	28.76	29.69	06	OVC	015				10.00		27	22	25	81	8	29	29.06	30.02
09	CLR	NC			2.00	BR	44	40	42	85	12	22	28.72	29.65	09	OVC	013			-SN BR	1.25		26	23	25	88	8	30	29.10	30.06
12	CLR	NC			10.00		53	39	46	59	10	26	28.70	29.63	12	BKN	028				10.00		31	20	27	64	13	31	29.11	30.07
15	BKN	044			10.00		54	38	46	55	16	28	28.75	29.68	15	OVC	026				10.00		31	21	27	67	9	31	29.12	30.09
18	OVC	037			10.00		46	33	40	61	9	31	28.89	29.83	18	OVC	022				10.00		31	23	28	72	8	29	29.18	30.14
21	OVC	031			10.00		42	30	37	62	10	33	28.99	29.92	21	OVC	020				10.00		30	23	28	75	9	30	29.21	30.17
24	OVC	029			10.00		41	31	37	67	12	30	29.00	29.94	24	OVC	018				10.00		29	23	27	78	6	29	29.25	30.21
			SUNRISE: 0650			NOV 15	SUNSET: 1634									SUNRISE: 0657			NOV 21	SUNSET: 1629										
03	BKN	031			10.00		37	26	33	65	5	31	29.03	29.97	03	OVC	016				10.00		29	22	27	75	0	00	29.25	30.22
06	SCT	NC			10.00		32	24	29	73	9	31	29.07	30.02	06	OVC	016				10.00		28	22	26	78	0	00	29.27	30.23
09	OVC	023			10.00		33	25	30	72	6	VR	29.10	30.05	09	BKN	014			HZ	4.00		29	23	27	78	9	18	29.28	30.24
12	FEW	NC			10.00		37	26	33	65	8	22	29.05	30.00	12	BKN	120				10.00		36	21	31	55	13	17	29.26	30.22
15	CLR	NC			10.00		39	27	34	62	8	24	28.99	29.94	15	FEW	NC				10.00		40	23	34	51	17	16	29.19	30.14
18	CLR	NC			10.00		37	28	34	70	7	19	28.93	29.88	18	CLR	NC				10.00		38	24	33	57	17	17	29.13	30.09
21	SCT	NC			10.00		37	30	34	76	9	18	28.89	29.83	21	CLR	NC				10.00		39	24	33	55	17	18	29.09	30.04
24	SCT	NC			10.00		38	31	35	76	8	17	28.83	29.77	24	CLR	NC				10.00		41	30	36	65	15	18	29.06	30.01
			SUNRISE: 0651			NOV 16	SUNSET: 1633									SUNRISE: 0659			NOV 22	SUNSET: 1628										
03	OVC	055			9.00		39	34	37	82	8	16	28.76	29.70	03	CLR	NC				10.00		42	31	37	65	16	19	29.02	29.96
06	OVC	100			8.00	-RA	40	35	38	83	7	16	28.70	29.64	06	CLR	NC				10.00		42	32	38	68	15	20	28.97	29.91
09	BKN	060			5.00	HZ	43	38	41	82	5	VR	28.71	29.65	09	CLR	NC				10.00		45	32	39	61	16	19	28.96	29.90
12	OVC	015			8.00		44	38	41	79	10	33	28.73	29.67	12	CLR	NC				10.00		51	34	43	52	14	21	28.92	29.85
15	OVC	009			7.00		39	36	38	89	12	34	28.81	29.75	15	CLR	NC				10.00		54	36	46	51	10	21	28.87	29.80
18	OVC	011			10.00		38	34	36	86	7	33	28.95	29.89	18	CLR	NC				10.00		51	37	45	59	12	19	28.89	29.82
21	OVC	013			10.00		37	34	36	89	8	34	29.01	29.96	21	CLR	NC				10.00		50	37	44	61	13	20	28.88	29.81
24	OVC	021			10.00		37	34	36	89	6	32	29.06	30.01	24	CLR	NC				10.00		46	34	41	63	14	19	28.83	29.76
			SUNRISE: 0653			NOV 17	SUNSET: 1632									SUNRISE: 0660			NOV 23	SUNSET: 1627										
03	BKN	031			10.00		33	31	32	92	3	32	29.10	30.05	03	CLR	NC				10.00		46	31	40	56	12	20	28.77	29.70
06	SCT	NC			8.00		28	27	28	96	3	29	29.14	30.10	06	CLR	NC				10.00		48	31	41	52	8	21	28.78	29.70
09	FEW	NC			10.00		37	31	35	79	0	00	29.20	30.16	09	CLR	NC				10.00		50	31	42	48	9	26	28.92	29.85
12	BKN	020			10.00		42	33	38	71	5	VR	29.19	30.14	12	FEW	NC				10.00		56	30	44	37	15	28	28.99	29.93
15	OVC	022			10.00		42	33	38	71	9	21	29.18	30.13	15	CLR	NC				10.00		54	25	42	33	16	29	29.06	30.00
18	OVC	022			10.00		40	34	37	79	3	04	29.19	30.15	18	CLR	NC				10.00		46	27	38	47	8	27	29.17	30.11
21	FEW	NC			9.00		36	33	35	89	3	05	29.21	30.16	21	CLR	NC				10.00		42	29	37	60	0	00	29.23	30.17
24	CLR	NC			7.00		35	32	34	89	3	11	29.22	30.17	24	CLR	NC				10.00		40	31	36	70	7	26	29.25	30.19
			SUNRISE: 0654			NOV 18	SUNSET: 1631									SUNRISE: 0701			NOV 24	SUNSET: 1627										
03	CLR	NC			6.00	BR	37	34	36	89	5	13	29.20	30.15	03	CLR	NC				10.00		34	29	32	82	0	00	29.28	30.23
06	CLR	NC			5.00	BR	34	32	33	92	5	11	29.19	30.14	06	CLR	NC				10.00		30	27	29	88	0	00	29.28	30.23
09	CLR	NC			4.00	BR	41	37	39	86	12	13	29.12	30.07	09	CLR	NC				10.00		40	32	37	73	5	24	29.30	30.25
12	CLR	NC			10.00		52	38	45	59	21	15	29.01	29.95	12	CLR	NC				10.00		50	32	42	50	8	15	29.23	30.17
15	SCT	NC			10.00		56	37	47	49	21	15	28.85	29.78	15	CLR	NC				10.00		54	21	41	28	15	17	29.13	30.08
18	OVC	046			10.00	-RA	51	43	47	74	15	17	28.82	29.75	18	CLR	NC				10.00		47	27	39	46	13	16	29.08	30.03
21	BKN	085			10.00		53	42	48	66	16	18	28.75	29.68	21	CLR	NC				10.00		46	29	39	51	10	17	29.02	29.96
24	OVC	017			10.00		48	44	46	86	14	25	28.77	29.70	24	BKN	045				10.00		46	29	39	51	12	19	28.99	29.92

OBSERVATIONS AT 3-HOURLY INTERVALS

MADISON, WI

NOVEMBER 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		DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL				OBSERVATION TIME (LST)	EFF CLD AMT Okta									
					SUNRISE: 0702	NOV 25		SUNSET: 1626																			
03	OVC	060				46	30	39	54	12	19	28.88	29.80														
06	OVC	029				47	33	41	59	7	20	28.84	29.78														
09	OVC	025				47	36	42	66	6	22	28.83	29.77														
12	FEW	NC				50	38	44	63	8	29	28.81	29.74														
15	CLR	NC				56	33	45	42	9	29	28.81	29.74														
18	CLR	NC				51	27	41	39	8	28	28.85	29.78														
21	CLR	NC				47	30	40	52	8	27	28.89	29.82														
24	CLR	NC				45	33	40	63	12	26	28.93	29.86														
					SUNRISE: 0703	NOV 26		SUNSET: 1626																			
03	CLR	NC				41	31	37	67	3	26	28.98	29.91														
06	CLR	NC				39	29	35	67	6	25	28.99	29.93														
09	CLR	NC				43	29	37	58	8	24	29.03	29.97														
12	CLR	NC				55	29	44	37	9	23	29.00	29.93														
15	CLR	NC				58	26	44	30	9	27	28.99	29.92														
18	CLR	NC				48	27	39	44	0	00	29.03	29.98														
21	CLR	NC				35	27	32	72	0	00	29.07	30.02														
24	CLR	NC				32	27	30	82	0	00	29.08	30.03														
					SUNRISE: 0705	NOV 27		SUNSET: 1625																			
03	CLR	NC				30	27	29	88	0	00	29.12	30.06														
06	CLR	NC				29	26	28	89	0	00	29.12	30.08														
09	CLR	NC				41	35	38	79	3	16	29.14	30.09														
12	CLR	NC				61	33	48	35	8	21	29.10	30.04														
15	CLR	NC				63	31	48	30	10	20	29.05	30.00														
18	CLR	NC				53	34	44	49	8	18	29.05	30.00														
21	CLR	NC				46	36	42	68	3	16	29.05	29.99														
24	CLR	NC				43	36	40	76	3	19	29.05	29.98														
					SUNRISE: 0706	NOV 28		SUNSET: 1625																			
03	CLR	NC				40	36	38	86	3	20	29.03	29.96														
06	CLR	NC				39	37	38	93	5	17	29.03	29.97														
09	CLR	NC				47	43	45	86	7	17	29.03	29.97														
12	CLR	NC				58	47	52	67	6	19	28.99	29.93														
15	OVC	023			5.00 HZ	61	52	56	72	10	19	28.95	29.87														
18	OVC	015			5.00 BR	58	54	56	87	7	21	28.96	29.89														
21	OVC	008			2.00 DZ BR	56	55	55	97	6	18	28.94	29.87														
24	OVC	002			1.00 BR	56	56	56	100	7	19	28.93	29.85														
					SUNRISE: 0707	NOV 29		SUNSET: 1624																			
03	OVC	006			3.00 BR	56	55	55	97	6	17	28.89	29.80														
06	FEW	NC			3.00 BR	54	53	53	97	10	17	28.85	29.77														
09	OVC	011			3.00 BR	56	54	55	93	12	18	28.81	29.73														
12	OVC	005			1.25 DZ BR	59	58	58	96	14	19	28.75	29.67														
15	OVC	025			3.00 BR	62	58	60	86	12	18	28.69	29.61														
18	OVC	044			6.00 BR	63	58	60	84	14	19	28.71	29.62														
21	OVC	037			7.00	64	58	60	81	13	19	28.71	29.62														
24	OVC	045			8.00	63	55	58	76	13	18	28.70	29.61														
					SUNRISE: 0708	NOV 30		SUNSET: 1624																			
03	OVC	024			6.00 HZ	61	56	58	84	12	19	28.71	29.62														
06	OVC	090			4.00 BR	60	57	58	90	7	20	28.70	29.61														
09	OVC	048			7.00	57	53	55	87	9	27	28.73	29.65														
12	OVC	015			2.50 HZ	52	47	49	83	13	30	28.77	29.69														
15	SCT	NC			10.00	47	36	42	66	17	30	28.91	29.83														
18	SCT	NC			10.00	39	32	36	76	8	29	29.07	30.01														
21	CLR	NC			10.00	37	32	35	82	6	VR	29.15	30.09														
24	CLR	NC			10.00	36	32	34	86	7	28	29.22	30.17														

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			39	32	36	79	29.08	30.02	8.73	8	2	21
02			38	32	36	79	29.08	30.02	8.73	7	2	20
03			38	31	35	79	29.07	30.02	8.75	7	2	19
04			37	32	35	81	29.07	30.01	8.60	7	2	20
05			37	31	35	81	29.07	30.01	8.58	6	2	20
06			37	31	35	81	29.07	30.02	8.55	7	1	21
07			37	31	34	82	29.07	30.02	8.12	8	2	19
08			38	32	35	80	29.08	30.02	7.83	8	2	20
09			40	32	37	75	29.09	30.03	7.79	9	2	22
10			42	32	38	69	29.09	30.03	8.68	9	2	23
11			43	32	39	65	29.08	30.03	8.95	10	3	22
12			45	32	39	62	29.07	30.01	8.91	11	3	23
13			45	31	39	60	29.05	30.00	8.81	11	3	24
14			46	31	40	58	29.05	29.99	9.00	12	4	23
15			46	31	40	58	29.05	29.99	9.02	12	4	24
16			45	31	39	60	29.06	30.00	8.93	11	3	25
17			43	31	38	64	29.06	30.01	9.05	9	2	24
18			41	31	37	68	29.07	30.02	9.18	9	3	21
19			41	31	37	71	29.08	30.02	9.12	9	2	21
20			40	31	36	72	29.08	30.03	9.22	9	3	21
21			40	31	36	74	29.08	30.03	9.17	8	2	21
22			39	31	36	75	29.08	30.03	9.02	7	2	23
23			39	31	36	76	29.08	30.02	9.03	8	2	22
24			39	32	36	78	29.08	30.02	8.93	9	3	23

SUPPLEMENTARY HOURLY PRECIPITATION

UNIVERSAL RAIN GAUGE (WATER EQUIVALENT IN INCHES)

NOVEMBER 1998
MADISON, WI

LATITUDE 43° 8'N
LONGITUDE 89° 20'

A.M. HOUR (L.S.T.) ENDING AT													P.M. HOUR (L.S.T.) ENDING AT													DATE	DAILY TOTAL			
DATE	1	2	3	4	5	6	7	8	9	10	11	12	DATE	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													05												05	0.00				
06													06												06	0.00				
07													07											T	07	T				
08	T	0.01	T	0.01	T	T	T						08												08	0.02				
09													09				0.05	0.05	0.01	0.05	0.04	0.01	0.02	0.14	0.18	09	0.55			
10	0.25	0.15	0.10	0.10	0.20	0.20	0.02	0.01	0.01	T			10												10	1.04				
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				T	T	0.02	T					18	0.02				
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													28												28	0.00				
29													29												29	0.00				
30						T	0.08	T					30												30	0.08				
PUBLISHED BY: NCDC, ASHEVILLE, NC.																									MONTHLY TOTAL					1.71

SUPPLEMENTARY MAXIMUM SHORT DURATION PRECIPITATION (MSDP)

TIME PERIOD (MINUTES)	5	10	15	20	30	45	60	80	100	120	150	180
PRECIPITATION (INCHES)					0.15	0.20	0.20	0.25	0.35	0.40	0.45	0.50
ENDED: DATE					10	10	10	10	10	10	10	10
ENDED: TIME					0415	0500	0600	0600	0600	0600	0600	0600

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.



**NOVEMBER 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
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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