



# FEBRUARY 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	38	32	35	18	32	34	30	0	RA DZ SN BR	5		0.7	0.12	28.84	29.78	8.3	19	9.7	21	26	15	26	01					
02	36	28	32	15	25	29	33	0	SN	4		T	T	29.15	30.11	4.7	29	6.1	23	27	17	27	02					
03	31	24	28	11	26	27	37	0	FZDZ SN BR	4		0.3	0.03	29.34	30.31	7.0	02	7.2	16	02	15	01	03					
04	24	17	21*	3	18	20	44	0	SN BR	4		T	T	29.27	30.25	9.6	02	9.9	17	02	15	01	04					
05	27	18	23	5	20	22	42	0	BR	4		0.0	0.00	29.19	30.16	7.4	36	7.5	18	02	17	01	05					
06	37	11*	24	6	16	21	41	0		4		0.0	0.00	29.18	30.15	1.6	01	1.7	9	01	8	01	06					
07	32	16	24	6	21	23	41	0	FG+ FZFG BCFG BR	3		0.0	0.00	29.16	30.12	1.0	05	1.4	8	04	7	04	07					
08	28	17	23	4	24	25	42	0	SN FG+ FZFG BR	3		T	T	29.15	30.11	1.5	15	2.0	8	18	6	13	08					
09	29	18	24	5	24	25	41	0	SN FG+ FZFG BR	3		T	T	29.13	30.10	4.1	17	4.6	10	16	9	16	09					
10	35	26	31	12	29	30	34	0	RA FZRA FG+ FZFG BR	3		0.0	0.14	29.08	30.04	3.4	07	4.0	10	06	9	07	10					
11	36	33	35	16	33	34	30	0	RA SN FG BR	3		0.8	0.24	28.82	29.76	10.4	01	11.1	26	02	22	02	11					
12	36	27	32	12	24	29	33	0		3		0.0	0.00	29.02	29.97	3.9	31	7.3	24	33	17	34	12					
13	33	24	29	9	29	30	36	0	BR	2		0.0	0.00	29.09	30.05	2.8	11	5.5	11	05	10	06	13					
14	39	28	34	14	30	32	31	0	SN BR	1		T	T	29.24	30.20	5.4	15	8.1	18	16	16	16	14					
15	50	32	41	21	34	38	24	0	BR	T		0.0	0.00	29.15	30.10	10.0	17	10.2	22	17	18	17	15					
16	46	34	40	19	33	36	25	0	RA BR	0		0.0	0.21	29.02	29.97	12.3	07	12.7	29	08	24	08	16					
17	38	34	36	15	35	36	29	0	RA DZ BR	0		0.0	0.04	28.75	29.69	16.3	04	17.4	31	02	25	01	17					
18	37	34	36	15	33	34	29	0	DZ BR	0		0.0	T	28.78	29.72	10.7	01	11.2	26	02	21	02	18					
19	40	34	37	15	34	35	28	0	RA DZ BR	0		0.0	0.01	28.94	29.89	1.9	35	2.4	11	02	10	02	19					
20	39	32	36	14	31	33	29	0	DZ SN BR	0		T	T	28.98	29.92	2.5	32	3.1	16	36	13	33	20					
21	42	31	37	14	29	34	28	0	RA BR	0		0.0	T	29.09	30.04	2.0	21	3.0	13	22	10	21	21					
22	50	31	41	18	33	37	24	0	BR	0		0.0	0.00	29.10	30.05	4.6	14	5.6	17	17	14	18	22					
23	44	26	35	12	31	35	30	0	RA BR	0		0.0	0.03	28.99	29.93	4.6	19	5.4	16	17	13	17	23					
24	52	30	41	17	35	39	24	0	RA BR	0		0.0	0.10	29.00	29.94	5.0	30	6.2	21	31	16	32	24					
25	53	28	41	17	33	38	24	0	BR	0		0.0	0.00	29.01	29.95	13.6	12	14.0	34*	11	29*	11	25					
26	59*	43	51*	27	39	44	14	0	RA	0		0.0	0.12	28.68	29.61	16.9	12	17.2	32	12	26	11	26					
27	46	34	40	15	36	39	25	0	RA DZ BR	0		0.0	0.40	28.53	29.46	9.5	15	15.0	31	21	24	11	27					
28	46	30	38	13	30	35	27	0	BR	0		0.0	0.00	28.77	29.71	7.1	18	7.9	24	18	20	17	28					
39.4 27.6 33.5 ■■										29.2 31.9 31.2 0.0	< MONTHLY AVERAGES TOTALS-->		1.8	1.44	29.02	29.97	2.2	09	7.8	<- MONTHLY AVERAGES								
9.3 16.5 12.9 ■■										<----- DEPARTURE FROM NORMAL ----->										0.36	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3							
DEGREE DAYS									GREATEST 24-HR PRECIPITATION: 0.43 DATE: 26-27				GREATEST 24-HR SNOWFALL: 0.8 DATE: 11				GREATEST SNOW DEPTH: 5 DATE: 01				SEA LEVEL PRESSURE DATE TIME							
MONTHLY TOTAL DEPARTURE 875 -368									SEASON TO DATE TOTAL DEPARTURE 4952 -757				MAXIMUM : 30.35 03 1004				MINIMUM : 29.24 27 1002											
HEATING: 0 0									COOLING: 0 0				NUMBER OF DAYS WITH →				MAXIMUM TEMP ≥ 90: 0				MINIMUM TEMP ≤ 32: 21				PRECIPITATION ≥ 0.01 INCH : 11			
																	MAXIMUM TEMP ≤ 32 : 6				MINIMUM TEMP ≤ 0 : 0				PRECIPITATION ≥ 0.10 INCH : 7			
																	THUNDERSTORMS : 0				HEAVY FOG : 4				SNOWFALL ≥ 1.0 INCH : 0			

FEBRUARY 1998  
MADISON, WI

# HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

MADISON, WI

FEBRUARY 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	T	0.03	0.06	0.02	0.01	0.02	T	0.01	T		T	01	0.15	0.12
02		T	T	T	T								02										T		T	02		T
03	T	T	T	T	T		T	T	T	T	T	T	03	T	T						T			T		03	T	0.03
04													04	T												04		T
05													05													05		0.00
06													06													06		0.00
07													07													07		0.00
08				T	T		T	T	T	T	T	T	08													08		T
09								T	T	T	T	T	09	T	T								T	T		09		T
10													10	T	T			T	0.05	0.04	0.01	0.02	T	0.02	0.01	10	0.15	0.14
11	0.01	T	T			T		0.01	0.02	T	0.01	0.03	11	0.02	0.01	0.01	0.05	0.04	0.03	T	T					11		0.24
12													12													12		0.00
13													13													13		0.00
14									T	T			14													14		T
15													15													15		0.00
16													16				T	0.01	T	0.06	0.07	0.06	T	T	T	16	0.20	0.21
17	0.03	0.02		T	T						T	T	17					T	T	T	T	T	T	T	T	17	0.05	0.04
18	T	T	T	T	T								18	T	T	T										18		T
19	T	T	T										19							T	T	T				19		0.01
20													20			T	T				T	T		T		20		T
21													21													21		T
22													22									T				22		0.00
23													23	T	T					T	T				0.02	23	0.02	0.03
24	0.05	0.05	T										24													24		0.10
25													25													25		0.00
26				T	0.06	0.01	T	T	0.02	T			26			T	T	0.01	0.01		T	T	0.01	T		26		0.12
27	0.02	0.14	0.11	0.02	0.04	0.05	T	0.01	T	T	0.01	T	27	T												27		0.40
28													28													28		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.

## REFERENCE NOTES & SUPPLEMENTAL SUMMARIES

\* = 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

Resultant wind is the vector sum of the wind speeds and directions divided by the number of observations.

Wind direction is recorded in tens of degrees (2 digits) clockwise from true north. '00' = calm, 'VR' = variable.

Precipitation is for the 24-hour period ending at the time indicated in the column heading.

Water Equivalent of snow on the ground is reported only when the depth is 2 or more inches.

NORMALS ARE FOR THE YEARS 1961–1990

### WEATHER NOTATIONS

QUALIFIER	WEATHER PHENOMENA		
DESCRIPTOR	PRECIPITATION	OBSCURATION	OTHER
BC Patches	DZ Drizzle	BR Mist	DS Duststorm
BL Blowing	GR Hail	DU Widespread Dust	FC Funnel Cloud
DR Low Drifting	GS Small Hail and/or Snow Pellets	FG Fog	+FC Tornado Waterspout
FZ Freezing	IC Ice Crystals	FU Smoke	PO Well-Developed Dust/Sand Whirls
MI Shallow	PE Ice Pellets	HZ Haze	
PR Partial	RA Rain	PY Spray	SQ Squalls
SH Shower(s)	SG Snow Grains	SA Sand	SS Sandstorm
TS Thunderstorm	SN Snow	VA Volcanic Ash	GL Glaze
VC In the Vicinity	UP Unknown Precipitation		
Intensity (as indicated on pages 4 to 6): '+' = Heavy    ' ' = Moderate    '-' = Light			

## MADISON, WI FEBRUARY 1998

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).

Satellite data are used to derive cloudiness above 12,000 feet. Effective Cloud Amount is based on the cloud cover and the transparency of the clouds within the satellite field of view (approx. 31x31 miles).

Sky Condition is based on the sum (not to exceed 8) of the sunrise to sunset cloud cover below and above 12,000 feet. Both ceilometer and satellite data must be present to compute Sky Condition. Clear = 0–2 oktas, Partly Cloudy = 3–6 oktas, Cloudy = 7–8 oktas.

A Heating (Cooling) Degree Day is the difference between the average daily temperature and 65 degrees F. The HDD season begins July 1, the CDD season begins January 1.

Dew Point is the temperature to which the air must be cooled to achieve 100% relative humidity. Wet Bulb is the temperature the air would have if cooled 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.

### ADDITIONAL NOTES:

ERRATA -Jan 1998- Please make changes to column 14 (Water Equiv) for days indicated: 04=0.38, 05=0.25, 08=0.58, 09=0.02, 12=0.04, 14=0.23, 15=0.01, 21=0.47, 22=0.10, 23=0.06, 24=0.04, 25=0.04, 26=0.01. Monthly Total= 2.24, Departure From Normal= 1.17  
Greatest 24-HR Precipitation: 0.58 DATE: 08

DATE	SUNSHINE		CLOUDINESS (OKTAS)				VISIBILITY (MILES)		RESERVED
	TOTAL MINUTES	PERCENT POSSIBLE	SR-SS		MN-MN		MINIMUM	MAXIMUM	
			CEILOMETER	SATELLITE	CEILOMETER	SATELLITE			
01							1.00	10.00	
02							8.00	10.00	
03							1.00	10.00	
04							1.50	10.00	
05							4.00	10.00	
06							8.00	10.00	
07							.25	10.00	
08							<.25	4.00	
09							<.25	1.00	
10							<.25	2.50	
11							.50	10.00	
12							8.00	10.00	
13							1.00	7.00	
14							1.00	7.00	
15							4.00	9.00	
16							2.50	10.00	
17							.75	8.00	
18							2.00	10.00	
19							2.00	10.00	
20							1.00	10.00	
21							6.00	10.00	
22							1.00	10.00	
23							2.00	9.00	
24							2.00	10.00	
25							5.00	10.00	
26							7.00	10.00	
27							1.50	10.00	
28							6.00	10.00	
MONTHLY AVGS							2.76	8.84	
SUNSHINE (MINUTES)									
Total:                      Possible:									
Percent Possible:									
NUMBER OF DAYS WITH:									
SKY CONDITION									
CLR   PTLY CLDY   CLOUDY   MISSING									
28									
MINIMUM VISIBILITY (MILES)									
<=0.25                      <=3.0                      >=7.0									
4                                      19                                      4									

## OBSERVATIONS AT 3-HOURLY INTERVALS

MADISON, WI

FEBRUARY 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: 0718 FEB 01						SUNSET: 1714						SUNRISE: 0712 FEB 07						SUNSET: 1722											
03	OVC	070			7.00	38	33	36	83	9	19	28.91	29.85	03	OVC	250			10.00	18	16	17	92	0	00	29.14	30.11		
06	BKN	075			7.00	36	32	34	86	10	19	28.89	29.83	06	OVC	250			7.00	BCFG				0	00	29.16	30.13		
09	OVC	070			6.00	35	31	33	85	10	18	28.88	29.83	09	OVC	003			1.50	BCFG	BR			0	00	29.18	30.15		
12	OVC	090			9.00	38	28	34	68	9	17	28.84	29.78	12	OVC	003			1.00	BR				3	08	29.17	30.14		
15	OVC	019			1.00	34	32	33	92	9	16	28.78	29.72	15	BKN	200			3.00	BR				0	00	29.14	30.11		
18	OVC	006			2.00	34	33	34	97	8	17	28.77	29.71	18	OVC	200			5.00	BR				0	00	29.14	30.11		
21	OVC	006			2.00	35	34	35	96	7	21	28.77	29.71	21	OVC	200			3.00	BR				3	01	29.15	30.12		
24	OVC	010			10.00	32	28	30	85	12	28	28.85	29.79	24	OVC	003			1.50	BR				0	00	29.15	30.12		
SUNRISE: 0717 FEB 02						SUNSET: 1716						SUNRISE: 0710 FEB 08						SUNSET: 1724											
03	OVC	014			9.00	30	26	29	85	12	27	28.95	29.90	03	VV	001			0.25	FZFG				0	00	29.14	30.10		
06	OVC	016			10.00	29	24	27	82	10	28	29.04	30.00	06	VV	001			<.25	FZFG				0	00	29.15	30.12		
09	BKN	018			10.00	29	23	27	78	7	VR	29.13	30.09	09	VV	001			<.25	-SN FZFG				5	13	29.17	30.14		
12	FEW	NC			10.00	32	24	29	73	6	30	29.18	30.14	12	OVC	003			1.00	BR				3	21	29.16	30.13		
15	SCT	NC			10.00	35	24	31	64	6	34	29.20	30.16	15	OVC	005			1.50	BR				6	15	29.14	30.11		
18	BKN	095			10.00	31	26	29	82	0	00	29.26	30.23	18	OVC	008			3.00	BR				5	11	29.14	30.10		
21	OVC	044			10.00	31	27	29	85	0	00	29.30	30.26	21	BKN	250			2.50	BR				0	00	29.12	30.08		
24	OVC	026			8.00	31	27	29	85	3	07	29.30	30.26	24	OVC	002			0.25	FZFG				3	32	29.12	30.09		
SUNRISE: 0716 FEB 03						SUNSET: 1717						SUNRISE: 0709 FEB 09						SUNSET: 1725											
03	OVC	016			7.00	30	28	29	92	0	00	29.32	30.27	03	OVC	002			<.25	FZFG				0	00	29.12	30.09		
06	OVC	012			1.50	FZDZ	BR			0	00	29.32	30.28	06	OVC	002			0.25	FZFG				5	23	29.13	30.10		
09	OVC	004			1.00	28	27	28	96	6	36	29.37	30.33	09	OVC	001			0.50	-SN FZFG				5	15	29.14	30.11		
12	OVC	004			2.50	28	27	28	96	12	02	29.36	30.32	12	OVC	004			0.50	-SN BR				6	16	29.14	30.11		
15	OVC	008			10.00	28	24	27	85	13	05	29.33	30.29	15	OVC	004			1.00	BR				7	18	29.12	30.09		
18	OVC	012			10.00	27	24	26	89	10	03	29.36	30.32	18	OVC	002			0.50	FZFG				8	16	29.14	30.11		
21	OVC	011			10.00	26	22	25	84	9	03	29.37	30.34	21	OVC	001			0.25	FZFG				6	16	29.14	30.11		
24	OVC	012			10.00	24	20	23	84	12	03	29.35	30.32	24	OVC	001			<.25	FZFG				5	19	29.14	30.10		
SUNRISE: 0715 FEB 04						SUNSET: 1718						SUNRISE: 0708 FEB 10						SUNSET: 1726											
03	OVC	013			9.00	20	18	19	92	7	03	29.33	30.30	03	OVC	001			<.25	FZFG				3	11	29.12	30.08		
06	OVC	007			9.00	19	17	18	92	13	36	29.32	30.29	06	OVC	001			0.75	BR				6	11	29.11	30.07		
09	OVC	005			1.50	20	18	19	92	12	03	29.33	30.30	09	OVC	050			1.00	BR				3	10	29.13	30.09		
12	OVC	007			8.00	21	18	20	88	10	03	29.30	30.27	12	OVC	055			1.25	BR				5	03	29.10	30.06		
15	OVC	150			9.00	24	18	22	77	12	02	29.24	30.21	15	OVC	049			1.50	BR				6	04	29.04	30.01		
18	OVC	150			10.00	23	17	21	78	7	36	29.23	30.20	18	OVC	037			1.50	-RA BR				5	03	29.05	30.01		
21	OVC	150			10.00	22	16	20	78	6	36	29.21	30.18	21	OVC	035			1.50	-RA BR				5	06	29.02	29.98		
24	OVC	002			2.00	18	17	18	96	9	36	29.22	30.19	24	OVC	029			1.25	-RA BR				5	07	28.98	29.93		
SUNRISE: 0714 FEB 05						SUNSET: 1720						SUNRISE: 0707 FEB 11						SUNSET: 1728											
03	OVC	004			7.00	22	21	22	96	7	36	29.19	30.16	03	OVC	020			1.25	BR				5	05	28.92	29.86		
06	OVC	006			7.00	23	22	23	96	9	35	29.20	30.16	06	OVC	003			1.00	BR				8	03	28.88	29.82		
09	OVC	008			6.00	24	21	23	88	10	01	29.23	30.20	09	OVC	006			1.00	-RA BR				14	02	28.82	29.76		
12	OVC	008			8.00	25	21	24	85	13	36	29.20	30.17	12	OVC	030			1.00	-RA BR				16	03	28.75	29.69		
15	BKN	140			9.00	26	20	24	78	14	01	29.16	30.13	15	OVC	010			1.25	-RA BR				15	36	28.70	29.64		
18	BKN	200			10.00	25	20	23	81	0	00	29.18	30.15	18	OVC	004			1.00	-SN BR				13	36	28.76	29.70		
21	OVC	200			10.00	21	18	20	88	0	00	29.18	30.15	21	OVC	018			7.00					12	36	28.81	29.75		
24	OVC	200			10.00	20	17	19	89	5	34	29.19	30.16	24	OVC	029			10.00					8	33	28.86	29.80		
SUNRISE: 0713 FEB 06						SUNSET: 1721						SUNRISE: 0705 FEB 12						SUNSET: 1729											
03	SCT	NC			8.00	16	14	15	92	0	00	29.18	30.15	03	OVC	016			10.00	30	25	28	82	14	33	28.93	29.87		
06	FEW	NC			10.00	12	10	12	92	0	00	29.19	30.16	06	OVC	021			10.00	30	23	28	75	14	33	28.99	29.94		
09	OVC	200			8.00	20	15	19	81	0	00	29.21	30.18	09	SCT	NC			10.00	28	21	26	75	9	35	29.06	30.02		
12	OVC	200			10.00	32	18	27	56	3	07	29.19	30.16	12	FEW	NC			10.00	32	23	29	69	5	VR	29.06	30.01		
15	OVC	230			10.00	36	16	29	44	7	01	29.16	30.12	15	CLR	NC			10.00	35	24	31	64	6	VR	29.03	29.99		
18	OVC	230			10.00	31	19	27	61	0	00	29.16	30.13	18	CLR	NC			10.00	34	26	31	73	3	20	29.04	29.99		
21	OVC	230			10.00	24	18	22	77	0	00	29.16	30.13	21	BKN	200			9.00	31	27	29	85	7	21	29.02	29.98		
24	OVC	250			9.00	20	17	19	89	0	00	29.17	30.14	24	BKN	200			8.00	27	24	26	89	0	00	29.03	29.98		

## OBSERVATIONS AT 3-HOURLY INTERVALS

MADISON, WI

FEBRUARY 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: 0704						FEB 13						SUNSET: 1730						SUNRISE: 0655						FEB 19						SUNSET: 1738					
03	OVC	200			7.00	28	26	27	92	3	21	29.01	29.97	03	OVC	046				5.00	BR	34	33	34	97	0	00	28.92	29.86						
06	OVC	004			3.00	29	27	28	92	7	19	29.03	29.98	06	OVC	035				5.00	BR	34	33	34	97	3	28	28.93	29.88						
09	OVC	004			1.00	30	29	30	96	7	17	29.06	30.02	09	OVC	013				2.00	BR	36	33	35	89	3	33	28.96	29.91						
12	OVC	008			1.50	32	30	31	92	3	15	29.07	30.03	12	OVC	011				3.00	BR	38	34	36	86	0	00	28.96	29.90						
15	OVC	006			2.50	33	29	31	85	5	08	29.07	30.03	15	OVC	019				8.00		39	33	37	79	3	35	28.94	29.88						
18	OVC	006			1.50	32	31	32	96	8	06	29.13	30.09	18	OVC	018				10.00		38	34	36	86	6	05	28.95	29.90						
21	OVC	007			2.00	32	30	31	92	9	06	29.18	30.14	21	OVC	024				8.00	DZ	36	34	35	93	0	00	28.96	29.91						
24	OVC	006			1.50	31	29	30	92	5	04	29.21	30.16	24	OVC	045				8.00		34	33	34	97	0	00	28.95	29.90						
SUNRISE: 0702						FEB 14						SUNSET: 1732						SUNRISE: 0654						FEB 20						SUNSET: 1740					
03	OVC	004			3.00	29	28	29	96	6	01	29.24	30.20	03	OVC	017				5.00	BR	34	33	34	97	0	00	28.93	29.87						
06	OVC	003			2.50	28	26	27	92	3	06	29.26	30.23	06	OVC	011				4.00	BR	34	33	34	97	0	00	28.94	29.88						
09	VV	003			1.00	30	28	29	92	3	13	29.29	30.25	09	OVC	007				2.00	BR	34	32	33	92	0	00	28.96	29.90						
12	OVC	008			2.00	35	32	34	89	10	17	29.29	30.25	12	OVC	023				10.00		36	27	32	70	8	34	28.96	29.91						
15	BKN	018			7.00	39	32	36	76	15	18	29.23	30.18	15	OVC	029				10.00		34	28	32	79	7	32	28.98	29.92						
18	OVC	030			7.00	38	33	36	83	8	17	29.20	30.16	18	OVC	040				6.00	BR	33	30	32	89	3	31	29.01	29.97						
21	OVC	021			6.00	36	32	34	86	9	16	29.19	30.15	21	OVC	040				10.00		33	30	32	89	0	00	29.03	29.98						
24	OVC	150			6.00	35	32	34	89	10	17	29.19	30.14	24	OVC	044				10.00		33	27	31	78	3	27	29.03	29.98						
SUNRISE: 0701						FEB 15						SUNSET: 1733						SUNRISE: 0652						FEB 21						SUNSET: 1741					
03	OVC	150			4.00	32	30	31	92	7	16	29.16	30.11	03	OVC	050				10.00		33	28	31	82	0	00	29.04	30.00						
06	BKN	180			7.00	34	31	33	89	12	17	29.14	30.10	06	OVC	032				10.00		32	28	31	85	0	00	29.07	30.02						
09	SCT	NC			6.00	37	32	35	82	9	18	29.17	30.13	09	OVC	065				10.00		35	27	32	72	0	00	29.10	30.06						
12	SCT	NC			8.00	45	35	41	68	18	18	29.14	30.09	12	BKN	065				10.00		40	28	35	63	6	VR	29.10	30.05						
15	FEW	NC			8.00	50	39	45	66	14	18	29.12	30.06	15	OVC	070				10.00		42	29	37	60	7	25	29.08	30.03						
18	BKN	230			9.00	45	37	41	74	8	17	29.14	30.09	18	OVC	065				10.00		40	30	36	68	0	00	29.08	30.04						
21	OVC	150			8.00	40	35	38	83	7	13	29.15	30.10	21	OVC	045				9.00		37	32	35	82	3	18	29.11	30.07						
24	OVC	150			8.00	37	33	35	86	0	00	29.14	30.09	24	BKN	050				6.00	BR	33	31	32	92	0	00	29.12	30.07						
SUNRISE: 0660						FEB 16						SUNSET: 1734						SUNRISE: 0651						FEB 22						SUNSET: 1742					
03	OVC	110			8.00	36	33	35	89	3	08	29.15	30.10	03	OVC	008				5.00	BR	35	33	34	93	0	00	29.13	30.08						
06	OVC	150			7.00	35	32	34	89	7	04	29.09	30.04	06	OVC	035				3.00	BR	34	33	34	97	0	00	29.13	30.08						
09	OVC	150			6.00	39	33	37	79	9	06	29.10	30.05	09	OVC	003				1.00	BR	36	35	36	97	7	16	29.14	30.09						
12	OVC	150			10.00	45	31	39	58	17	06	29.03	29.97	12	OVC	030				10.00		45	35	41	68	13	17	29.14	30.09						
15	OVC	150			10.00	42	30	37	62	21	07	28.95	29.89	15	FEW	NC				10.00		49	34	42	57	9	17	29.05	29.99						
18	OVC	020			6.00	38	34	36	86	21	08	28.95	29.88	18	OVC	036				10.00		44	34	40	68	7	13	29.05	30.00						
21	OVC	006			5.00	37	36	37	96	18	07	28.92	29.86	21	SCT	NC				9.00		39	33	37	79	13	12	29.06	30.01						
24	OVC	006			8.00	38	37	38	97	17	09	28.92	29.85	24	FEW	NC				8.00		31	28	30	89	0	00	29.05	30.00						
SUNRISE: 0658						FEB 17						SUNSET: 1736						SUNRISE: 0649						FEB 23						SUNSET: 1743					
03	OVC	004			5.00	38	37	38	97	13	08	28.86	29.80	03	BKN	050				8.00		32	30	31	92	0	00	29.02	29.97						
06	OVC	004			5.00	38	37	38	97	14	07	28.83	29.78	06	FEW	NC				8.00		29	27	28	92	0	00	29.01	29.96						
09	VV	001			1.00	37	36	37	96	17	04	28.79	29.73	09	OVC	044				3.00	BR	35	29	33	78	5	19	29.03	29.98						
12	VV	002			1.00	37	36	37	96	16	06	28.75	29.69	12	OVC	042				9.00		43	30	38	60	10	17	29.01	29.96						
15	OVC	002			0.75	35	35	35	100	21	02	28.66	29.60	15	OVC	029				3.00	BR	42	30	37	62	9	21	28.98	29.92						
18	OVC	004			1.25	34	33	34	97	21	03	28.67	29.61	18	OVC	050				4.00	BR	42	30	37	62	7	19	28.95	29.90						
21	OVC	006			1.50	34	33	34	97	20	02	28.67	29.61	21	OVC	033				5.00	BR	42	39	41	90	9	18	28.92	29.86						
24	OVC	006			5.00	34	33	34	97	16	02	28.65	29.59	24	OVC	025				3.00	-RA BR	42	39	41	89	5	23	28.90	29.84						
SUNRISE: 0657						FEB 18						SUNSET: 1737						SUNRISE: 0648						FEB 24						SUNSET: 1745					
03	OVC	006			2.00	34	33	34	97	15	01	28.65	29.59	03	OVC	085				5.00	BR	41	41	41	100	5	22	28.87	29.81						
06	OVC	004			7.00	35	34	35	96	14	01	28.67	29.62	06	OVC	012				7.00		40	39	40	97	7	28	28.93	29.86						
09	OVC	010			10.00	35	32	34	89	14	03	28.74	29.68	09	OVC	015				4.00	BR	42	38	40	85	7	31	28.98	29.91						
12	OVC	008			7.00	36	33	35	89	13	36	28.78	29.72	12	SCT	NC				10.00		45	36	41	71	12	29	29.02	29.96						
15	OVC	013			10.00	37	32	35	82	15	01	28.80	29.75	15	SCT	NC				10.00		52	36	44	54	14	30	29.02	29.96						
18	OVC	031			10.00	36	31	34	82	3	36	28.85	29.80	18	SCT	NC				10.00		46	30	39	54	0	00	29.04	29.99						
21	OVC	045			10.00	35	32	34	89	6	36	28.90	29.84	21	SCT	NC				10.00		34	28	32	79	0	00	29.09	30.04						
24	OVC	017			8.00	35	33	34	93	3	29	28.92	29.86	24	BKN	230				10.00		32	28	31	85	0	00	29.09	30.04						

## OBSERVATIONS AT 3-HOURLY INTERVALS

MADISON, WI

FEBRUARY 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		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: 0646	FEB 25			SUNSET: 1746																		
03	BKN	230					34	29	32	82	0	00	29.13	30.08													
06	OVC	100					34	31	33	89	8	14	29.12	30.07													
09	OVC	200					39	31	36	73	12	13	29.11	30.06													
12	OVC	090					49	35	43	59	17	13	29.04	29.99													
15	OVC	200					50	35	43	57	20	12	28.94	29.88													
18	OVC	150					43	34	39	71	21	11	28.90	29.85													
21	OVC	110					45	35	41	68	22	11	28.86	29.79													
24	OVC	120					46	34	41	63	16	13	28.86	29.79													
					SUNRISE: 0644	FEB 26																					
03	OVC	120					46	33	40	61	13	13	28.80	29.73													
06	OVC	030					45	37	41	74	20	14	28.78	29.72													
09	OVC	090			-RA		44	38	41	79	13	13	28.76	29.69													
12	SCT	NC					57	42	49	58	16	13	28.68	29.61													
15	OVC	041					53	39	46	59	21	11	28.60	29.51													
18	OVC	045			-RA		49	41	45	74	20	12	28.61	29.54													
21	OVC	060			-RA		47	41	44	80	16	12	28.59	29.51													
24	OVC	055					44	41	43	89	15	11	28.54	29.45													
					SUNRISE: 0643	FEB 27																					
03	OVC	012			RA BR		42	40	41	92	18	09	28.46	29.37													
06	OVC	008					44	42	43	93	18	11	28.37	29.28													
09	OVC	008			DZ BR		45	43	44	93	21	11	28.32	29.24													
12	OVC	015					41	37	39	86	15	22	28.47	29.39													
15	OVC	026					41	32	37	70	16	21	28.58	29.50													
18	OVC	024					38	31	35	76	12	20	28.67	29.60													
21	OVC	034					37	31	35	79	9	18	28.73	29.67													
24	BKN	035					35	31	33	85	8	17	28.75	29.69													
					SUNRISE: 0641	FEB 28																					
03	SCT	NC					34	31	33	89	7	16	28.73	29.67													
06	BKN	055					33	31	32	92	5	16	28.75	29.70													
09	BKN	070					36	32	34	86	8	17	28.77	29.70													
12	BKN	220					44	32	39	63	10	19	28.75	29.69													
15	OVC	065					45	30	39	56	17	19	28.75	29.68													
18	OVC	070					39	30	35	70	8	25	28.80	29.74													
21	BKN	055					34	27	31	76	0	00	28.82	29.77													
24	OVC	030					33	27	31	78	3	VR	28.82	29.75													
					SUNRISE:	FEB 29																					
					SUNRISE:	FEB 30																					

### 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.

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			31	29	30	90	29.02	29.97	6.25	6	2	8
02			31	28	30	90	29.02	29.97	6.31	6	2	8
03			31	29	30	91	29.01	29.96	6.10	5	1	7
04			31	28	30	91	29.01	29.96	5.83	6	2	7
05			31	28	30	92	29.01	29.96	5.87	6	2	7
06			31	29	30	92	29.02	29.97	6.04	7	1	8
07			31	28	30	92	29.02	29.97	4.66	7	2	6
08			31	29	30	91	29.03	29.99	4.07	7	2	8
09			33	29	31	87	29.03	29.99	4.45	7	3	8
10			34	30	33	85	29.03	29.99	5.32	9	3	8
11			36	30	33	80	29.04	29.99	6.56	10	3	10
12			37	30	34	78	29.02	29.97	6.56	9	2	11
13			38	30	34	75	29.01	29.96	7.06	10	3	9
14			38	30	34	74	28.99	29.94	6.86	10	2	9
15			38	29	34	74	28.99	29.94	7.02	11	2	8
16			38	30	34	75	28.99	29.94	6.85	10	3	9
17			37	29	34	76	29.00	29.95	6.91	8	2	8
18			35	30	33	81	29.01	29.96	6.99	8	3	10
19			35	29	32	82	29.02	29.97	7.19	8	3	10
20			34	29	32	84	29.01	29.97	7.03	7	3	10
21			33	29	32	86	29.02	29.97	7.06	7	3	10
22			33	29	31	87	29.02	29.97	7.25	6	2	10
23			32	28	31	87	29.02	29.97	7.27	6	2	10
24			31	28	30	89	29.02	29.97	6.77	6	1	7

## 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			31	29	30	90	29.02	29.97	6.25	6	2	8
02			31	28	30	90	29.02	29.97	6.31	6	2	8
03			31	29	30	91	29.01	29.96	6.10	5	1	7
04			31	28	30	91	29.01	29.96	5.83	6	2	7
05			31	28	30	92	29.01	29.96	5.87	6	2	7
06			31	29	30	92	29.02	29.97	6.04	7	1	8
07			31	28	30	92	29.02	29.97	4.66	7	2	6
08			31	29	30	91	29.03	29.99	4.07	7	2	8
09			33	29	31	87	29.03	29.99	4.45	7	3	8
10			34	30	33	85	29.03	29.99	5.32	9	3	8
11			36	30	33	80	29.04	29.99	6.56	10	3	10
12			37	30	34	78	29.02	29.97	6.56	9	2	11
13			38	30	34	75	29.01	29.96	7.06	10	3	9
14			38	30	34	74	28.99	29.94	6.86	10	2	9
15			38	29	34	74	28.99	29.94	7.02	11	2	8
16			38	30	34	75	28.99	29.94	6.85	10	3	9
17			37	29	34	76	29.00	29.95	6.91	8	2	8
18			35	30	33	81	29.01	29.96	6.99	8	3	10
19			35	29	32	82	29.02	29.97	7.19	8	3	10
20			34	29	32	84	29.01	29.97	7.03	7	3	10
21			33	29	32	86	29.02	29.97	7.06	7	3	10
22			33	29	31	87	29.02	29.97	7.25	6	2	10
23			32	28	31	87	29.02	29.97	7.27	6	2	10
24			31	28	30	89	29.02	29.97	6.77	6	1	7

# SUPPLEMENTARY HOURLY PRECIPITATION

## UNIVERSAL RAIN GAUGE (WATER EQUIVALENT IN INCHES)

FEBRUARY 1998  
MADISON, WI

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

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			0.02	0.05	0.01	0.02	0.01	0.01	0.01				01												01	0.13		
02													02												02	0.00		
03								0.01	T	0.01	T		03												03	0.02		
04													04												04	0.00		
05													05												05	0.00		
06													06												06	0.00		
07													07												07	0.00		
08													08												08	0.00		
09													09												09	0.00		
10													10					0.05	0.02	0.02	0.02		0.03	T	10	0.14		
11	0.01	T	0.01				T	0.01	0.01	0.01	0.01	0.04	11	0.02	0.01	0.02	0.07	0.06	0.04	0.04	0.02	T	0.01		11	0.39		
12								T	T	T	T	0.01	12												12	0.01		
13													13												13	0.00		
14													14												14	0.00		
15													15												15	0.00		
16													16												16	0.15		
17	0.02	T	T	T	T	T				0.01			17						0.04	0.08	0.01	0.01	T	0.01	17	0.05		
18													18												18	0.01		
19													19									0.01			19	0.00		
20													20												20	0.00		
21													21												21	0.00		
22													22												22	0.00		
23													23											0.02	23	0.02		
24	0.05	0.02											24												24	0.07		
25													25												25	0.00		
26					0.04	T	0.01	T	0.01	T			26												26	0.06		
27		0.13	0.11	0.02	0.05	0.05	0.02						27												27	0.39		
28									T			0.01	28												28	0.00		
PUBLISHED BY: NCDC, ASHEVILLE, NC.														MONTHLY TOTAL														1.44

### 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	0.06	0.08	0.11	0.13	0.16	0.21	0.24	0.26	0.26
ENDED: DATE			27	27	27	27	27	27	27	27	27	27
ENDED: TIME			0200	0200	0200	0200	0200	0220	0240	0300	0330	0330

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.



**FEBRUARY 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.*

ACTING 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)

For address correction, please return a photocopy of this page to Subscription Services indicating changes

NATIONAL CLIMATIC DATA CENTER  
151 PATTON AVE RM 120  
ASHEVILLE, NC 28801-5001

OFFICIAL BUSINESS. PENALTY FOR PRIVATE USE \$300

FIRST CLASS  
POSTAGE AND FEES PAID  
NOAA  
PERMIT G-19