



MARCH 2002

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

MINNEAPOLIS-ST. PAUL, MN

INTERNATIONAL AIRPORT (MSP)

Lat: 44° 52' N Long: 93° 13' W Elev (Ground): 871 Feet

Time Zone: CENTRAL WBAN: 14922 ISSN #: 0198-2745

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	16	3	10	-16	-8	7	55	0	SN SN SN BR SN RA FZDZ SN PL BR TS RA FZRA FZDZ SN PL BR TS RA FZRA FZDZ SN PL FG+				0.00	29.45	30.41	8.0	02	8.8	23	01	17	35	01										
02	21	7	14	-12	-8	10	51	0					T	29.28	30.23	14.7	36	15.0	31	02	24	35	02										
03	7	-3*	2*	-24	-17	0	63	0					0.00	29.27	30.24	12.0	33	13.9	29	35	22	34	03										
04	21	1	11	-16	3	11	54	0					T	29.05	30.01	3.5	21	7.1	20	18	16	19	04										
05	23	16	20	-7	15	19	45	0					0.09	29.18	30.12	2.5	07	5.6	17	04	13	03	05										
06	24	16	20	-8	11	18	45	0	SN				T	29.31	30.25	9.5	01	9.8	26	02	15	35	06										
07	28	15	22	-6	11	19	43	0	RA FZDZ SN PL BR				0.06	29.21	30.15	10.5	07	11.7	23	03	18	08	07										
08	32	22	27	-1	24	26	38	0	TS RA FZRA FZDZ SN PL BR				0.44	28.92	29.85	8.3	03	9.3	24	03	17	04	08										
09	31	7	19	-10	13	17	46	0	TS RA FZRA FZDZ SN PL FG+				0.23	28.96	29.90	15.2	30	15.7	37	30	29	30	09										
10	18	4	11	-18	2	10	54	0	0.00				29.52	30.48	5.5	28	9.5	24	28	20	28	10											
11	32	18	25	-5	16	22	40	0	BR HZ RA BR SN PL FG+ FZFG BR SN FZFG BR BLSN				0.00	29.13	30.07	1.4	03	6.8	17	01	14	10	11										
12	46	19	33	3	26	31	32	0					0.00	28.92	29.84	9.3	19	10.1	25	19	21	17	12										
13	40	31	36	5	24	31	29	0					0.08	28.96	29.88	7.4	34	9.1	26	33	23	33	13										
14	33	26	30	-1	23	27	35	0					0.36	28.92	29.84	14.6	05	15.1	37	04	29	04	14										
15	34	22	28	-3	20	25	37	0					0.09	29.13	30.06	9.1	35	9.9	28	34	21	34	15										
16	37	12	25	-7	17	24	40	0	BR HZ				0.00	29.40	30.34	3.5	12	4.8	18	11	14	10	16										
17	40	31	36	4	24	30	29	0	SN BR				T	29.22	30.15	7.8	11	8.8	18	10	16	11	17										
18	38	25	32	-1	29	32	33	0	SN BR HZ				T	29.33	30.26	1.8	15	3.7	16	03	9	06	18										
19	38	27	33	0	27	31	32	0	SN BR				T	29.29	30.22	6.2	01	7.1	26	04	14	35	19										
20	36	13	25	-9	14	22	40	0	SN FG+ FZFG BR				0.03	29.32	30.26	8.6	36	9.6	37	36	29	35	20										
21	15	6	11	-23	0	9	54	0	SN				T	29.64	30.60	16.2	30	17.8	37*	29	29*	29	21										
22	24	9	17	-18	5	14	48	0	0.00				29.32	30.27	13.3	27	13.9	24	31	20	30	22											
23	35	16	26	-9	12	22	39	0	0.00				29.10	30.04	6.7	29	7.8	23	35	16	33	23											
24	29	14	22	-14	5	18	43	0	0.00				29.34	30.29	13.5	04	14.0	32	05	22	05	24											
25	30	10	20	-16	5	17	45	0	0.00				29.53	30.49	10.2	06	10.6	30	04	20	06	25											
26	39	16	28	-9	14	24	37	0	RA SN SN BR				0.00	29.38	30.32	1.5	02	3.9	16	02	8	24	26										
27	53*	27	40	3	24	34	25	0					0.00	29.08	30.00	13.1	15	13.2	33	14	28	15	27										
28	52	40	46*	8	29	38	19	0					T	28.78	29.68	11.3	24	14.8	30	26	25	26	28										
29	51	34	43	5	29	37	22	0					0.00	28.85	29.75	10.2	27	11.0	29	26	23	27	29										
30	44	32	38	-1	25	33	27	0					T	29.01	29.92	13.0	27	13.3	32	27	24	27	30										
31	35	26	31	-8	19	27	34	0	T	29.12	30.04	10.8	30	11.3	26	28	23	27	31														
32.3 17.5 24.9 ■■										< MONTHLY AVERAGES		TOTALS-->				1.38	29.19	30.13	3.5	34	10.4	<-- MONTHLY AVERAGES											
-8.3 -6.0 -7.2 ■■										<-----DEPARTURE FROM NORMAL----->										- .48				SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3									
DEGREE DAYS									GREATEST 24-HR PRECIPITATION: 0.67				DATE :08-09				SEA LEVEL PRESSURE				DATE TIME												
MONTHLY TOTAL DEPARTURE 1234 180									GREATEST 24-HR SNOWFALL:				DATE :				MAXIMUM : 30.68				21 1053												
SEASON TO DATE TOTAL DEPARTURE 5879 -1259									GREATEST SNOW DEPTH:				DATE :				MINIMUM : 29.50				09 0253												
HEATING: 1234 180									NUMBER OF DAYS WITH ➔				MAXIMUM TEMP ≥ 90: 0				MINIMUM TEMP ≤ 32 : 29				PRECIPITATION ≥ 0.01 INCH : 8												
COOLING: 0 0													MAXIMUM TEMP ≤ 32 : 15				MINIMUM TEMP ≤ 0 : 1				PRECIPITATION ≥ 0.10 INCH : 3												
													THUNDERSTORMS : 2				HEAVY FOG : 3				SNOWFALL ≥ 1.0 INCH :												

MARCH 2002
MINNEAPOLIS-ST. PAUL, MN

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

MINNEAPOLIS—ST.PAUL, MN

MARCH 2002

MSP

WBAN # 14922

DATE	FOR HOUR (LST) ENDING AT												DATE	FOR HOUR (LST) ENDING AT												DATE	Sum if Different (See Note)	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	T	T	T	T		T	T						02												02			T	
03													03												03			0.00	
04													04	T	T	T	T	T	T			T	T		04			T	
05						T	T	T	T	T	T	T	05	T	T	T			T	T	T	T	T		05	T		0.09	
06	T							T					06		T	T									06			T	
07													07				T	T			T	T			07	T		0.06	
08													08					T	T		T	T		0.17	08	0.35		0.44	
09	0.03	0.03	T	T	T	T	T	T	T	T	T	T	09	T					T	T	0.08			0.10	09	0.06		0.23	
10													10												10			0.00	
11													11												11			0.00	
12													12												12			0.00	
13				0.07	0.01								13												13			0.08	
14													14	0.03	0.01	0.01	0.01	0.02	0.06	0.04	0.02	0.03	0.04	0.01	0.01	14	0.32		0.36
15	T	0.01	0.05	T	T	T	T	T	T	T		0.02	0.01	15											15	0.06		0.09	
16													16												16			0.00	
17													17												17			T	
18	T	T											18						T	T	T	T	T	T	18			T	
19													19												19			T	
20													20		T				0.01	T	T	T	T	T	20	0.01		0.03	
21													21								T	T			21			T	
22													22												22			0.00	
23													23												23			0.00	
24													24												24			0.00	
25													25												25			0.00	
26													26												26			0.00	
27													27												27			0.00	
28				T	T	T							28												28			T	
29													29												29			0.00	
30		T	T	T									30												30			T	
31													31												31			T	

MAXIMUM SHORT DURATION PRECIPITATION (See Note)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)												
Ending Date												
Ending Time (Hour/Min)												

Date and time are not entered for TRACE amounts.

Note : The sum of the hourly totals is given when it differs from the daily total. NWS does not edit ASOS hourly values but may edit daily and monthly totals. Hourly, daily, and monthly totals are printed as reported by the ASOS site.

* = Extreme for the month (last occurrence if more than one)
T = Trace precipitation amount
+ = also occurs on earlier date
FG+ = Heavy fog, visibility .25 miles or less
BLANK entries denote missing or unreported data

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

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

WEATHER NOTATIONS

MINNEAPOLIS-ST. PAUL, MN
MARCH 2002

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 to saturation at constant pressure by evaporation of water into it.

Snow Depth, Snowfall, and Sunshine data may come from nearby sites that the National Weather Service deems Climatologically representative of this site.

ERRATA for Jan & Feb 2002 LCD's: To stay consistent with the Heating Degree Day Season (July 2001 – June 2002), NCDC reinstalled the 1961 – 1990 Heating Degree Day Normals and corrected the Jan & Feb 2002 LCD's. The corrected LCD's are available on NCDC's Website. The 1971 – 2000 Heating Degree Day Normals will go into effect with the July 2002 LCD. The new Cooling Degree Day Normals went into effect with the Jan 2002 LCD.

PAGE 3

OBSERVATIONS AT 3-HOURLY INTERVALS

MINNEAPOLIS-ST. PAUL, MN

MARCH 2002

MSP

WBAN # 14922

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 <small>Okta</small>	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 <small>Okta</small>	VISIBILITY (MILES)	DRY BULB		DEW POINT	WET BULB	STATION	SEA LEVEL					
				SUNRISE: 0651				MAR 01	SUNSET: 1800								SUNRISE: 0640				MAR 07	SUNSET: 1807									
03	SCT	NC			10.00		7	-10	4	45	10	36	29.42	30.38	03	OVC	065			10.00		16	-1	12	47	8	04	29.40	30.35		
06	SCT	NC			10.00		4	-9	2	54	8	02	29.47	30.43	06	OVC	055			10.00		16	-1	12	47	8	05	29.37	30.31		
09	SCT	NC			10.00		5	-8	3	55	9	01	29.50	30.47	09	OVC	055			10.00		18	3	14	52	12	07	29.31	30.25		
12	OVC	200			10.00		11	-7	8	44	6	36	29.51	30.47	12	OVC	028			10.00		24	10	20	55	9	09	29.27	30.22		
15	OVC	200			10.00		15	-7	11	36	9	06	29.43	30.39	15	OVC	024			10.00		26	15	23	63	17	08	29.15	30.09		
18	OVC	150			10.00		14	-8	10	37	9	02	29.40	30.37	18	OVC	020			10.00		27	18	24	69	16	07	29.05	29.98		
21	OVC	060			10.00		13	-7	9	40	10	03	29.41	30.38	21	OVC	015			2.50	FZRAPLSN BR	26	24	25	92	13	05	29.02	29.96		
24	OVC	048			10.00		12	-7	9	42	9	36	29.40	30.36	24	OVC	025			2.00	-FZDZ BR	24	22	23	91	15	03	28.98	29.91		
				SUNRISE: 0649				MAR 02	SUNSET: 1800								SUNRISE: 0638				MAR 08	SUNSET: 1808									
03	OVC	049			9.00	-SN	11	-9	8	40	12	01	29.37	30.33	03	OVC	007			2.00	-FZDZ BR	24	22	23	91	8	05	28.92	29.85		
06	OVC	033			9.00	-SN	11	-2	8	56	12	02	29.32	30.28	06	OVC	007			7.00	-SN	24	22	23	91	7	35	28.97	29.89		
09	OVC	170			10.00		13	-9	9	36	14	01	29.33	30.28	09	OVC	011			7.00	-SN	23	20	22	88	12	01	28.99	29.92		
12	BKN	200			10.00		19	-9	14	28	17	36	29.27	30.22	12	OVC	011			10.00		26	22	25	84	6	02	28.98	29.91		
15	FEW	NC			10.00		20	-10	14	26	18	34	29.20	30.15	15	OVC	013			10.00		29	25	28	85	9	02	28.97	29.89		
18	FEW	NC			10.00		16	-9	11	32	13	34	29.21	30.16	18	OVC	020			6.00	-FZRA	31	25	29	79	10	08	28.93	29.85		
21	CLR	NC			10.00		13	-7	9	40	16	34	29.22	30.18	21	OVC	020			3.00	-FZRA	31	28	30	89	8	03	28.84	29.76		
24	CLR	NC			10.00		7	-9	4	47	15	36	29.25	30.20	24	OVC	008			10.00	-FZRA	31	30	31	96	8	01	28.73	29.65		
				SUNRISE: 0647				MAR 03	SUNSET: 1802								SUNRISE: 0636				MAR 09	SUNSET: 1810									
03	CLR	NC			10.00		2	-14	0	46	15	35	29.25	30.20	03	OVC	010			8.00	-SN	29	27	28	92	0	00	28.60	29.50		
06	CLR	NC			10.00		-2	-19	-4	43	18	34	29.27	30.23	06	OVC	026			4.00	-SN BR	25	21	24	85	14	33	28.67	29.59		
09	CLR	NC			10.00		0	-18	-2	42	14	36	29.32	30.28	09	OVC	005			0.25	+SN BLSN FZFG	21	18	20	88	15	31	28.74	29.66		
12	CLR	NC			10.00		5	-20	2	30	17	34	29.32	30.28	12	OVC	016			1.50	-SN BLSN BR	18	13	17	81	20	30	28.91	29.84		
15	CLR	NC			10.00		4	-20	1	31	15	33	29.29	30.26	15	OVC	024			6.00	BLSN	18	12	16	77	21	29	29.04	29.98		
18	CLR	NC			10.00		2	-18	0	38	13	29	29.29	30.26	18	SCT	NC			10.00	BLSN	13	4	11	67	23	29	29.21	30.16		
21	CLR	NC			10.00		2	-15	0	44	7	28	29.25	30.22	21	BKN	032			10.00		10	1	8	67	18	30	29.35	30.29		
24	SCT	NC			10.00		1	-12	-1	54	5	21	29.18	30.14	24	FEW	NC			10.00		7	-1	5	70	16	29	29.43	30.40		
				SUNRISE: 0645				MAR 04	SUNSET: 1803								SUNRISE: 0635				MAR 10	SUNSET: 1811									
03	CLR	NC			10.00		1	-9	0	62	5	15	29.11	30.08	03	FEW	NC			10.00		5	-2	4	72	14	28	29.52	30.48		
06	OVC	070			10.00		6	-5	4	60	8	15	29.03	30.00	06	CLR	NC			10.00		4	-4	3	69	10	29	29.59	30.56		
09	OVC	050			10.00		11	-3	8	53	9	17	28.98	29.92	09	CLR	NC			10.00		9	-2	7	61	13	32	29.63	30.60		
12	OVC	016			2.50	-SN	15	8	13	74	10	20	28.96	29.91	12	SCT	NC			10.00		15	0	12	51	8	31	29.63	30.60		
15	OVC	021			7.00	-SN	20	12	18	71	6	28	28.98	29.93	15	OVC	130			10.00		17	2	14	51	5	18	29.52	30.49		
18	SCT	NC			10.00		19	9	16	65	9	32	29.07	30.02	18	OVC	100			10.00		17	5	14	59	8	23	29.45	30.42		
21	OVC	035			10.00	-SN	19	11	17	71	0	00	29.12	30.07	21	BKN	110			10.00		17	8	15	68	6	14	29.41	30.37		
24	FEW	NC			10.00		17	11	15	77	7	28	29.15	30.10	24	OVC	110			10.00		18	11	16	74	8	08	29.31	30.26		
				SUNRISE: 0644				MAR 05	SUNSET: 1804								SUNRISE: 0633				MAR 11	SUNSET: 1812									
03	OVC	090			10.00		16	10	14	77	5	23	29.16	30.10	03	SCT	NC			10.00		19	11	17	71	12	11	29.18	30.13		
06	OVC	070			9.00	-SN	18	11	16	74	0	00	29.19	30.14	06	BKN	120			10.00		19	11	17	71	9	08	29.13	30.08		
09	OVC	019			4.00	-SN	19	14	18	81	0	00	29.20	30.15	09	BKN	200			10.00		21	13	19	71	3	06	29.11	30.06		
12	OVC	013			2.00	-SN	22	15	20	75	9	09	29.21	30.15	12	BKN	200			10.00		29	18	25	64	7	30	29.11	30.04		
15	OVC	048			10.00		23	15	21	72	8	09	29.16	30.10	15	BKN	200			10.00		31	18	27	59	7	33	29.09	30.03		
18	OVC	031			1.25	-SN	23	18	21	81	7	07	29.14	30.08	18	FEW	NC			10.00		31	18	27	59	7	32	29.10	30.04		
21	OVC	012			1.75	-SN BR	22	19	21	89	7	08	29.16	30.10	21	CLR	NC			10.00		25	18	23	75	5	29	29.13	30.06		
24	OVC	042			4.00	-SN BR	21	18	20	88	10	03	29.17	30.11	24	CLR	NC			8.00		23	18	21	81	3	25	29.13	30.06		
				SUNRISE: 0642				MAR 06	SUNSET: 1806								SUNRISE: 0631				MAR 12	SUNSET: 1814									
03	OVC	037			10.00		21	17	20	85	8	03	29.17	30.11	03	CLR	NC			6.00	BR	20	17	19	89	3	15	29.08	30.01		
06	OVC	037			10.00		20	16	19	85	8	02	29.24	30.18	06	CLR	NC			6.00	BR	20	17	19	89	6	16	29.04	29.97		
09	BKN	150			9.00		21	16	20	81	13	03	29.29	30.24	09	FEW	NC			6.00	HZ	29	22	27	75	14	17	29.00	29.93		
12	BKN	100			10.00		23	15	21	72	10	01	29.33	30.27	12	BKN	200			10.00		40	26	34	58	15	18	28.92	29.84		
15	OVC	080			9.00		22	14	20	71	10	35	29.35	30.29	15	BKN	250			10.00		45	28	38	52	16	20	28.83	29.74		
18	OVC	100			10.00																										

OBSERVATIONS AT 3-HOURLY INTERVALS

MINNEAPOLIS-ST. PAUL, MN
MARCH 2002 MSP WBAN # 14922

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 <i>Okta</i> s		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 <i>Okta</i> s	VISIBILITY (MILES)	DRY BULB		DEW POINT	WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL	
SUNRISE: 0629 MAR 13						SUNSET: 1815						SUNRISE: 0618 MAR 19						SUNSET: 1823												
03	BKN	110			9.00	38	33	36	83	3	18	28.76	29.67	03	OVC	038			4.00	-SN	BR	34	32	33	92	5	06	29.30	30.22	
06	BKN	200			10.00	37	32	35	82	12	31	28.82	29.72	06	OVC	023			4.00	-SN	BR	33	32	33	96	6	36	29.29	30.22	
09	BKN	022			10.00	33	24	30	70	15	35	28.94	29.85	09	OVC	016			3.00	-SN	BR	34	32	33	92	7	VR	29.28	30.21	
12	OVC	250			10.00	34	23	30	64	10	34	29.00	29.93	12	OVC	007			6.00	BR		33	31	32	92	12	01	29.28	30.21	
15	BKN	250			10.00	36	20	30	52	7	36	29.00	29.93	15	OVC	024			10.00			36	29	33	76	7	35	29.26	30.19	
18	BKN	250			10.00	35	19	29	52	9	02	29.04	29.96	18	BKN	250			10.00			36	22	31	57	10	02	29.27	30.20	
21	BKN	200			10.00	31	19	27	61	6	02	29.10	30.03	21	SCT	NC			10.00			30	19	26	64	8	35	29.30	30.24	
24	BKN	110			10.00	32	20	28	61	7	03	29.12	30.05	24	CLR	NC			10.00			27	16	24	63	6	35	29.30	30.24	
SUNRISE: 0627 MAR 14						SUNSET: 1816						SUNRISE: 0616 MAR 20						SUNSET: 1824												
03	OVC	090			10.00	32	18	27	56	9	05	29.08	30.01	03	CLR	NC			10.00			24	15	21	68	8	36	29.30	30.24	
06	OVC	075			10.00	32	18	27	56	14	06	29.05	29.98	06	CLR	NC			10.00			21	12	18	68	8	02	29.32	30.26	
09	OVC	026			9.00	-SN	32	20	28	61	14	07	29.02	29.94	09	FEW	NC			10.00			25	12	21	58	0	00	29.34	30.27
12	OVC	005			0.25	SN FZFG	29	27	28	92	18	06	28.97	29.88	12	BKN	150			10.00			32	16	27	52	0	00	29.30	30.24
15	OVC	013			2.50	-SNPL BR	29	26	28	89	24	05	28.80	29.71	15	OVC	085			10.00			36	16	29	44	6	VR	29.21	30.14
18	OVC	013			0.50	SN FZFG	27	25	26	92	23	05	28.78	29.70	18	OVC	049			7.00	-SN		25	21	24	85	15	01	29.28	30.22
21	OVC	006			1.00	-SN BR	26	25	26	96	18	04	28.76	29.68	21	OVC	021			9.00	-SN		20	13	18	74	14	36	29.40	30.34
24	OVC	017			2.00	-SN BR	27	24	26	89	14	02	28.78	29.70	24	OVC	027			10.00			14	4	12	64	23	34	29.52	30.47
SUNRISE: 0625 MAR 15						SUNSET: 1818						SUNRISE: 0614 MAR 21						SUNSET: 1825												
03	VV	002			0.50	SN BLSN FZFG	24	23	24	96	18	35	28.85	29.78	03	FEW	NC			10.00			9	-3	7	58	22	35	29.63	30.58
06	BKN	060			8.00	-SN BR	23	19	22	85	14	36	28.97	29.89	06	FEW	NC			10.00			6	-4	4	63	16	31	29.69	30.66
09	OVC	019			10.00		26	19	24	75	13	34	29.10	30.03	09	CLR	NC			10.00			9	-4	7	55	16	30	29.71	30.68
12	FEW	NC			10.00		29	19	26	66	7	34	29.17	30.10	12	SCT	NC			10.00			12	0	10	58	18	29	29.70	30.67
15	FEW	NC			10.00		32	20	28	61	12	35	29.21	30.14	15	BKN	043			10.00			14	-1	11	51	23	28	29.65	30.61
18	FEW	NC			10.00		31	18	27	59	6	34	29.25	30.19	18	SCT	NC			10.00			14	1	11	56	18	28	29.62	30.59
21	FEW	NC			10.00		25	18	23	75	3	31	29.30	30.24	21	FEW	NC			10.00			13	5	11	70	15	27	29.58	30.55
24	CLR	NC			9.00		22	18	21	85	3	22	29.35	30.29	24	CLR	NC			10.00			12	3	10	67	17	28	29.51	30.48
SUNRISE: 0624 MAR 16						SUNSET: 1819						SUNRISE: 0612 MAR 22						SUNSET: 1827												
03	CLR	NC			7.00		16	14	15	92	3	24	29.38	30.32	03	BKN	100			10.00			11	1	9	64	15	28	29.46	30.43
06	CLR	NC			7.00		13	11	12	92	0	00	29.41	30.36	06	SCT	NC			10.00			9	-2	7	61	14	28	29.43	30.39
09	CLR	NC			5.00	HZ	21	16	20	81	0	00	29.45	30.40	09	SCT	NC			10.00			13	0	10	56	14	28	29.40	30.37
12	CLR	NC			10.00		33	18	28	54	7	18	29.46	30.41	12	CLR	NC			10.00			20	3	16	48	14	28	29.36	30.31
15	CLR	NC			10.00		37	15	30	41	8	14	29.42	30.37	15	CLR	NC			10.00			23	7	19	50	17	26	29.28	30.23
18	FEW	NC			10.00		36	19	30	50	7	09	29.38	30.32	18	CLR	NC			10.00			22	9	18	57	15	26	29.21	30.16
21	BKN	250			10.00		33	17	28	52	7	07	29.35	30.29	21	CLR	NC			10.00			21	11	18	65	12	26	29.15	30.10
24	BKN	180			10.00		32	19	28	59	10	11	29.34	30.27	24	CLR	NC			10.00			20	8	17	60	13	24	29.09	30.03
SUNRISE: 0622 MAR 17						SUNSET: 1820						SUNRISE: 0611 MAR 23						SUNSET: 1828												
03	OVC	150			10.00	32	20	28	61	13	10	29.29	30.22	03	CLR	NC			10.00			18	9	16	68	8	26	29.05	29.99	
06	OVC	090			10.00	31	21	28	67	9	09	29.27	30.20	06	CLR	NC			10.00			16	8	14	71	6	25	29.06	30.00	
09	OVC	065			10.00	32	21	28	64	13	12	29.24	30.16	09	CLR	NC			10.00			24	11	20	57	10	31	29.09	30.03	
12	OVC	044			10.00	35	23	31	61	5	09	29.19	30.12	12	BKN	250			10.00			32	13	26	45	7	32	29.10	30.03	
15	BKN	200			10.00	39	24	33	55	7	03	29.13	30.06	15	BKN	250			10.00			34	15	28	46	14	32	29.09	30.02	
18	OVC	036			9.00	-SN	36	26	32	67	10	11	29.15	30.07	18	BKN	250			10.00			32	13	26	45	13	32	29.10	30.03
21	OVC	014			7.00	-SN	33	30	32	89	6	14	29.20	30.13	21	BKN	250			10.00			27	15	23	61	3	31	29.15	30.09
24	OVC	010			8.00	-SN	32	30	31	92	3	27	29.23	30.16	24	BKN	250			10.00			26	17	23	69	3	30	29.18	30.11
SUNRISE: 0620 MAR 18						SUNSET: 1821						SUNRISE: 0609 MAR 24						SUNSET: 1829												
03	OVC	050			5.00	BR	31	30	31	96	0	00	29.26	30.18	03	FEW	NC			10.00			23	9	19	55	10	01	29.19	30.13
06	SCT	NC			2.50	BR	27	26	27	96	0	00	29.30	30.23	06	SCT	NC			10.00			19	6	16	57	9	01	29.26	30.20
09	OVC	010			3.00	BR	32	29	31	88	0	00	29.36	30.29	09	SCT	NC			10.00			22	6	18	50	15	03	29.31	30.25
12	BKN	016			7.00		36	30	34	79	6	18	29.37	30.30	12	SCT	NC			10.00			28	12	23	51	16	04	29.34	30.28
15	SCT	NC			10.00		37	29	34	73	7	17	29.36	30.28	15	SCT	NC			10.00			28	8	22	43	16	05	29.35	30.29
18	OVC	150			7.00		37	29	34	73	9	13	29.33	30.26	18	FEW	NC			10.00			25	5	20	42	16	02	29.40	30.35
21	OVC	047			8.00		36	29	33	76	3	04	29.34	30.27	21	CLR	NC			10.00			19	2	15	47	14	04	29.48	30.44
24	OVC	026			8.00		35	30	33	82	5	02	29.34	30.27	24	CLR	NC			10.00			14	-8	10	37	14	06	29.53	30.48

OBSERVATIONS AT 3-HOURLY INTERVALS

MINNEAPOLIS-ST. PAUL, MN

MARCH 2002

MSP

WBAN # 14922

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 <i>Okta</i> s			DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
SUNRISE: 0607 MAR 25 SUNSET: 1830															
03	CLR	NC				10.00		13	-6	9	42	10	05	29.51	30.47
06	FEW	NC				10.00		10	-2	8	58	12	06	29.59	30.54
09	CLR	NC				10.00		17	4	14	56	12	08	29.60	30.56
12	CLR	NC				10.00		25	8	20	48	8	06	29.56	30.52
15	CLR	NC				10.00		29	11	24	47	12	05	29.49	30.44
18	CLR	NC				10.00		29	11	24	47	14	06	29.49	30.45
21	CLR	NC				10.00		27	12	23	53	3	03	29.50	30.45
24	SCT	NC				10.00		24	12	21	60	5	04	29.47	30.42
SUNRISE: 0605 MAR 26 SUNSET: 1832															
03	CLR	NC				10.00		20	12	18	71	6	02	29.45	30.40
06	FEW	NC				10.00		17	11	15	77	5	02	29.45	30.40
09	CLR	NC				10.00		24	15	21	68	0	00	29.43	30.38
12	CLR	NC				10.00		33	12	26	42	5	15	29.40	30.34
15	FEW	NC				10.00		38	14	30	37	5	02	29.34	30.27
18	BKN	250				10.00		37	13	29	37	7	23	29.31	30.25
21	BKN	100				10.00		33	18	28	54	3	02	29.31	30.24
24	FEW	NC				10.00		30	17	26	59	5	13	29.29	30.22
SUNRISE: 0603 MAR 27 SUNSET: 1833															
03	CLR	NC				10.00		28	18	25	66	6	12	29.26	30.19
06	FEW	NC				10.00		28	19	25	69	6	15	29.22	30.15
09	FEW	NC				10.00		37	20	31	50	12	16	29.19	30.12
12	FEW	NC				10.00		45	21	36	39	20	15	29.12	30.04
15	FEW	NC				10.00		51	27	41	39	23	15	29.01	29.93
18	SCT	NC				10.00		51	28	41	41	18	16	28.93	29.84
21	OVC	120				10.00		45	28	38	52	17	15	28.92	29.82
24	SCT	NC				10.00		43	30	38	60	16	16	28.84	29.75
SUNRISE: 0601 MAR 28 SUNSET: 1834															
03	BKN	150				10.00		42	31	37	65	14	17	28.73	29.63
06	OVC	040				10.00		41	32	37	70	10	25	28.72	29.62
09	SCT	NC				10.00		42	32	38	68	13	26	28.77	29.67
12	SCT	NC				10.00		47	31	40	54	21	26	28.78	29.69
15	SCT	NC				10.00		52	26	41	37	17	26	28.81	29.71
18	SCT	NC				10.00		49	25	39	39	17	25	28.80	29.70
21	BKN	090				10.00		44	27	37	51	9	24	28.83	29.73
24	BKN	150				10.00		40	28	35	63	10	24	28.82	29.72
SUNRISE: 0559 MAR 29 SUNSET: 1835															
03	SCT	NC				10.00		37	30	34	76	8	27	28.83	29.73
06	BKN	250				10.00		34	30	32	85	6	25	28.86	29.76
09	FEW	NC				10.00		42	30	37	62	9	26	28.85	29.75
12	FEW	NC				10.00		50	27	40	41	15	25	28.83	29.73
15	SCT	NC				10.00		49	25	39	39	21	27	28.82	29.72
18	SCT	NC				10.00		45	30	39	56	10	29	28.84	29.75
21	CLR	NC				10.00		41	29	36	62	9	27	28.88	29.78
24	OVC	065				10.00		38	30	35	73	13	26	28.88	29.79
SUNRISE: 0558 MAR 30 SUNSET: 1837															
03	OVC	013				7.00	-SN	34	32	33	92	13	28	28.92	29.83
06	SCT	NC				10.00		32	27	30	82	10	28	28.97	29.88
09	SCT	NC				10.00		37	22	32	54	15	28	29.01	29.93
12	SCT	NC				10.00		42	22	34	45	16	28	29.01	29.93
15	BKN	055				10.00		43	21	35	42	22	26	29.03	29.95
18	BKN	070				10.00		42	21	34	43	16	27	29.05	29.98
21	OVC	085				10.00		39	24	33	55	6	24	29.07	29.99
24	SCT	NC				10.00		35	27	32	72	10	26	29.06	29.98

HOUR (LST)	SKY COVER		CEILING 100'S OF FT	OBSERVATION TIME (LST)	EFF CLD AMT <i>Okta</i> s	VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)	
								DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
SUNRISE: 0556 MAR 31 SUNSET: 1838															
03	CLR	NC				10.00		32	25	29	75	9	28	29.07	29.99
06	FEW	NC				10.00		30	20	27	66	14	28	29.10	30.02
09	OVC	060				10.00		32	20	28	61	13	30	29.12	30.04
12	OVC	035				9.00		33	18	28	54	16	30	29.12	30.05
15	OVC	035				10.00		31	17	26	56	16	29	29.12	30.05
18	OVC	031				10.00		29	17	25	61	10	30	29.13	30.06
21	OVC	033				10.00		28	15	24	58	9	32	29.14	30.08
24	BKN	250				10.00		26	17	23	69	0	00	29.12	30.05

3-HOURLY OBSERVATION NOTES

Sky Cover is the amount of the sky obscured. CLR or SKC = 0, FEW = 1/8-2/8, SCT = 3/8-4/8, BKN = 5/8-7/8, OVC = 8/8, VV = Vertical Visibility = 8/8.

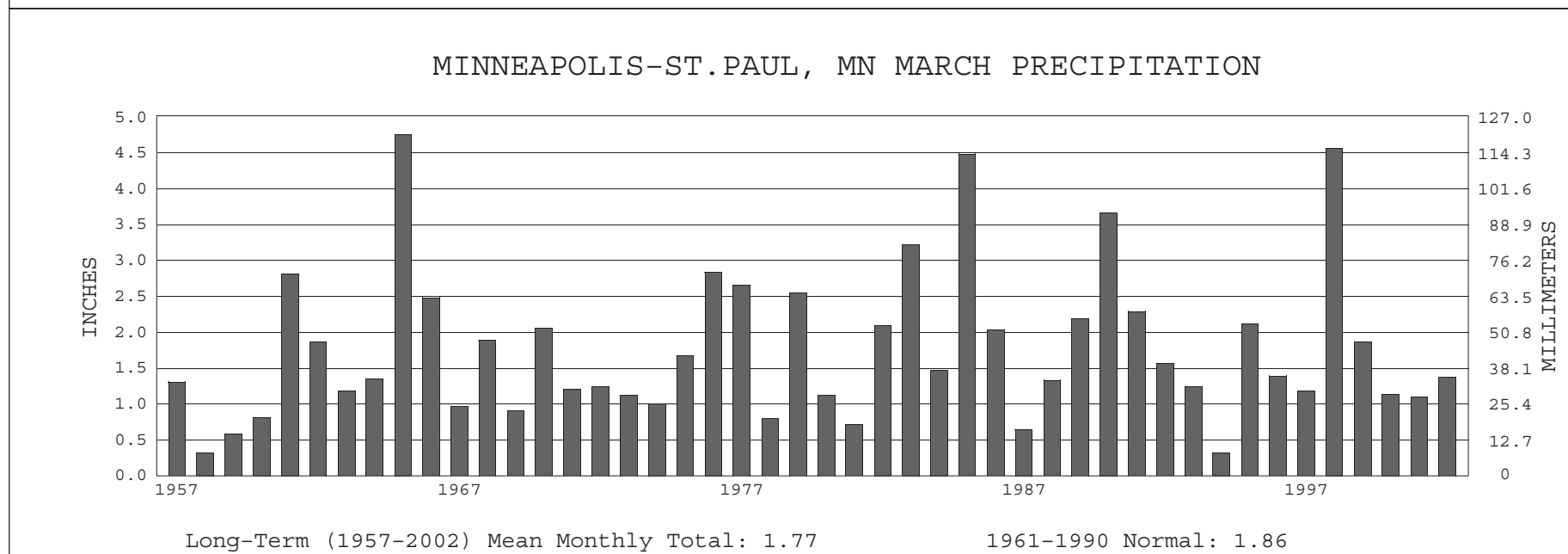
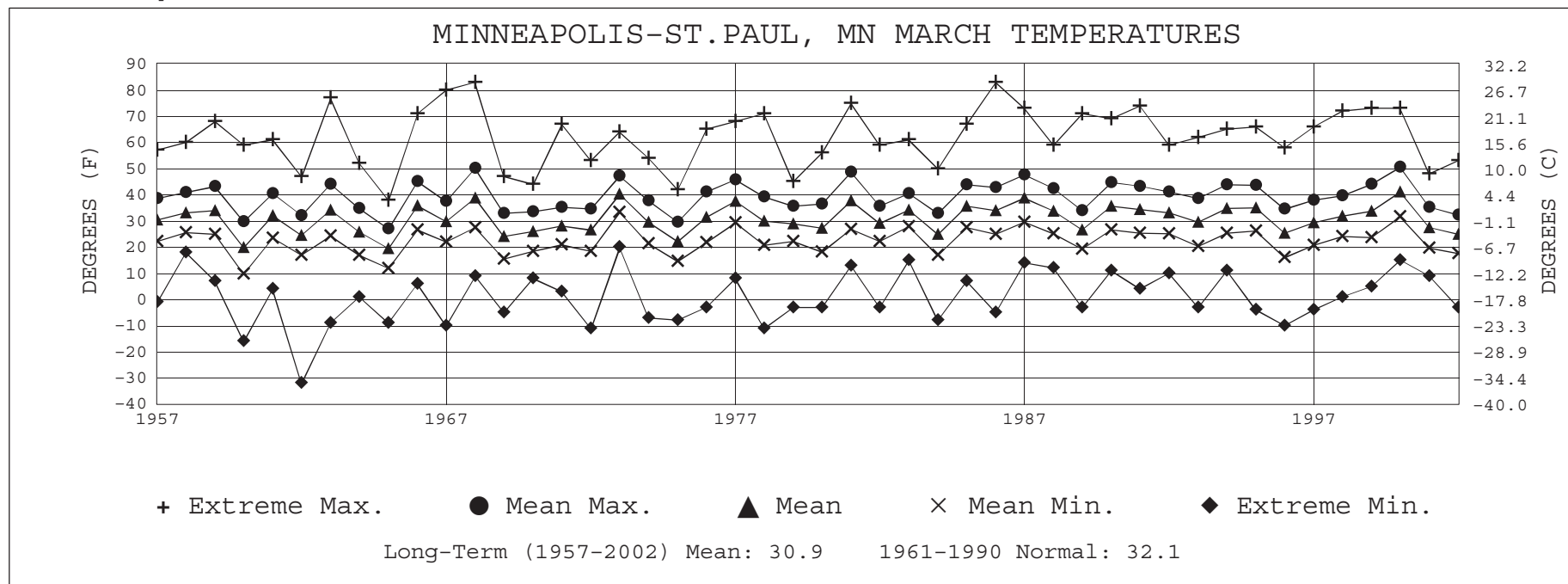
Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet.

NC = No ceiling detected.

& = Original observation contained additional weather elements.

See page 3 for additional notes.

SUMMARY BY HOUR															
HOUR (LST)	AVERAGES										RESULTANT				
	CEILOMETER	EFF CLD AMT	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY	PRESSURE (INCHES, HG)		VISIBILITY (MILES)	WIND SPEED (MPH)	WIND (MPH)				
							STATION	SEA LEVEL			SPEED	DIRECTION			
01			23	14	20	69	29.19	30.12	9.02	10	4	35			
02			22	14	20	70	29.19	30.12	8.64	10	3	35			
03			22	13	19	71	29.18	30.11	8.63	9	3	36			
04			21	13	19	71	29.18	30.11	8.44	9	4	36			
05			21	12	19	72	29.19	30.12	8.55	9	4	35			
06			20	12	18	72	29.20	30.13	8.92	9	4	35			
07			20	12	18	71	29.20	30.14	8.95	9	4	34			
08			22	13	19	69	29.21	30.15	8.66	11	4	35			
09			23	13	21	65	29.21	30.15	8.59	10	4	34			
10			25	14	22	64	29.22	30.15	8.45	10	3	33			
11			26	14	23	62	29.22	30.15	8.34	10	3	32			
12			28	14	24	58	29.21	30.15	8.65	11	4	32			
13			29	15	25	56	29.20	30.13	9.05	12	4	32			
14			30	15	25	55	29.18	30.12	9.08	13	4	33			
15			30	15	26	54	29.17	30.11	9.50	13	4	32			
16			31	15	26	54	29.17	30.11	9.40	12	4	32			
17			30	15	25	56	29.17	30.11	9.19	13	5	33			
18			29	15	24	57	29.17	30.11	9.06	12	4	34			
19			28	15	24	60	29.18	30.12	9.19	10	3	33			
20			27	15	23	62	29.19	30.12	8.87	10	3	35			
21			26	15	23	65	29.19	30.13	8.78	9	3	35			
22			25	15	22	65	29.19	30.13	8.94	9	3	33			
23			25	15	22	67	29.19	30.12	8.80	9	2	34			
24			24	15	21	69	29.18	30.12	9.06	9	3	33			





MARCH 2002

MINNEAPOLIS—ST. PAUL, MN

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

NCDC now offers an annual online subscription for the **Edited Local Climatological Data Publication**. When you purchase this subscription service, you will have **immediate online access** to all previous publications back to July 1996 and all publications thereafter until the expiration of the subscription. Your subscription is valid for one year after purchase. **The total cost is \$29 for online delivery (including back issues) compared to \$34 for offline delivery.** To order this and other subscriptions online with your credit card, go to:
www.ncdc.noaa.gov and choose subscriptions.

We welcome your questions or comments, please contact us at
Toll Free Number (866) 742-3322 (voice)
Fax Number : (304) 726-4409
TDD : 828-271-4010
or Email : ncdc.info@noaa.gov
Local Climatological Data is available at www.ncdc.noaa.gov

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

NCDC Subscription Services Center
310 State Route 956 Building 300
Rocket Center, WV 26726

OFFICIAL BUSINESS. PENALTY FOR PRIVATE USE \$300

FIRST CLASS
POSTAGE AND FEES PAID
NOAA
PERMIT G-19