



OCTOBER 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	72	50	61	6	49	55	4	0	RA				0.01	29.02	29.91	7.5	36	8.6	30	03	18	34	01		
02	50	43	47	-8	40	43	18	0	RA				0.04	29.27	30.18	10.9	02	11.2	30	03	20	02	02		
03	54	41	48	-7	47	48	17	0	RA BR				T	29.08	29.99	8.4	13	9.2	20	15	16	14	03		
04	55	41	48	-6	46	48	17	0	RA DZ BR				1.93	28.71	29.60	9.5	34	12.9	39	35	32	34	04		
05	54	39	47	-7	39	44	18	0	RA BR				0.65	29.14	30.05	1.9	13	6.3	17	11	14	03	05		
06	48	36	42	-11	41	43	23	0	RA BR				0.34	29.03	29.94	6.9	32	10.2	36	01	25	33	06		
07	45	32	39	-14	35	38	26	0	RA SN				0.18	29.19	30.11	6.8	15	8.1	20	15	17	15	07		
08	64	40	52	0	44	47	13	0	RA BCFG				0.01	29.09	30.00	4.6	30	6.6	25	32	21	32	08		
09	55	35	45	-7	37	42	20	0	RA BCFG BR				0.39	29.25	30.16	1.8	15	4.1	14	18	10	13	09		
10	66	46	56	4	51	53	9	0	RA BR				0.21	29.13	30.04	7.4	14	8.1	18	17	16	12	10		
11	75*	53	64*	13	50	57	1	0					0.00	29.00	29.89	13.4	18	13.8	39	18	32	18	11		
12	66	35	51	0	39	44	14	0	RA BR				0.24	29.24	30.15	13.3	31	14.0	33	28	26	29	12		
13	53	31	42	-8	26	35	23	0					0.00	29.42	30.34	7.9	27	9.1	31	26	24	28	13		
14	63	37	50	0	33	43	15	0					0.00	29.04	29.95	7.5	21	14.1	46*	20	32*	22	14		
15	47	29	38	-11	25	34	27	0					0.00	29.18	30.09	10.7	33	10.8	29	34	22	34	15		
16	39	26	33	-16	25	30	32	0	SN BR				T	29.19	30.12	1.0	22	2.8	14	24	12	24	16		
17	40	33	37	-12	32	35	28	0	RA DZ SN				T	29.00	29.92	3.7	19	5.0	15	19	12	18	17		
18	48	37	43	-5	35	39	22	0	RA DZ				0.13	28.81	29.72	6.2	29	13.2	29	30	23	32	18		
19	40	32	36	-12	26	33	29	0					0.00	29.15	30.07	10.1	29	11.0	25	33	20	33	19		
20	36	33	35	-12	30	33	30	0	RA SN PL BR				0.03	29.20	30.12	4.9	09	6.9	18	09	14	09	20		
21	36	32	34	-13	30	33	31	0	SN PL BR				0.02	29.22	30.14	10.5	02	11.1	30	02	16	02	21		
22	39	28	34	-12	20	29	31	0					0.00	29.53	30.47	10.5	01	10.6	31	01	17	35	22		
23	36	25	31	-14	16	26	34	0					0.00	29.63	30.58	5.9	01	6.6	25	03	13	03	23		
24	41	30	36	-9	27	32	29	0	SN BR				T	29.44	30.37	3.7	10	6.3	15	06	12	12	24		
25	42	37	40	-4	37	38	25	0	RA DZ SN BR				T	29.15	30.07	0.9	19	5.9	14	30	12	30	25		
26	42	31	37	-7	31	35	28	0					0.00	29.21	30.13	6.0	27	6.7	23	29	18	29	26		
27	41	26	34	-9	29	32	31	0	RA DZ BR HZ				T	29.34	30.27	2.1	17	2.9	15	19	12	20	27		
28	42	35	39	-4	34	36	26	0	RA DZ SN BR				T	29.23	30.15	9.1	14	9.2	18	13	14	14	28		
29	45	39	42	0	35	39	23	0	RA				T	29.22	30.14	5.4	07	7.0	18	03	13	03	29		
30	40	28	34	-8	30	34	31	0	DZ SN				T	29.35	30.27	10.4	36	11.1	26	03	17	02	30		
31	34	24*	29*	-12	16	25	36	0					0.00	29.38	30.32	11.0	30	11.7	21	29	17	30	31		
48.6		35.0	41.8	■ ■	34.0	38.8	22.9	0.0	< MONTHLY AVERAGES		TOTALS->		4.18	29.19	30.10	1.7	33	8.9	<- MONTHLY AVERAGES						
-9.8		-3.9	-6.9	■ ■	<-----DEPARTURE FROM NORMAL----->								2.07	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3											
DEGREE DAYS									GREATEST 24-HR PRECIPITATION: 1.93				DATE :04				SEA LEVEL PRESSURE				DATE		TIME		
MONTHLY									GREATEST 24-HR SNOWFALL:				MAXIMUM				:		30.63		23		0753		
TOTAL DEPARTURE									GREATEST SNOW DEPTH:				MINIMUM				:		29.30		04		0953		
HEATING: 711 195 834 113									NUMBER OF		MAXIMUM TEMP ≥ 90: 0		MINIMUM TEMP ≤ 32: 13		PRECIPITATION ≥ 0.01 INCH :		13								
COOLING: 0 -3 987 288									DAYS WITH		MAXIMUM TEMP ≤ 32 : 0		MINIMUM TEMP ≤ 0 : 0		PRECIPITATION ≥ 0.10 INCH :		8								
											THUNDERSTORMS : 0		HEAVY FOG : 0		SNOWFALL ≥ 1.0 INCH :										

OCTOBER 2002
MINNEAPOLIS-ST.PAUL, MN

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

MINNEAPOLIS—ST.PAUL, MN

OCTOBER 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			0.01
02	0.03	0.01	T										02			T	T		T		T		T	0.01	T	01			0.04
03													03										T	T		02			T
04	0.02	0.14	0.33	0.37	0.60	0.14	0.01		T	0.10	0.09	T	04	0.02	0.10	0.01										03			T
05													05								T	0.07	0.23	0.10	0.25	04			1.93
06													06													05			0.65
07	0.01	0.04	0.09	0.02				T	T	0.02	0.01	0.08	07	0.05	T	0.01	0.01									06			0.34
08	0.01												08	T	0.01	T			T	0.03	0.09	0.03			07			0.18	
09													09											T	0.02	08			0.01
10	0.12	0.09	T										10										T	0.05	0.34	09			0.39
11													11													10			0.21
12	T	T	0.02	0.05	0.11	0.06	T						12													11			0.00
13													13													12			0.24
14													14													13			0.00
15													15													14			0.00
16													16													15			0.00
17													17		T	T	T	T	T	T	T	T	T			16			T
18	T	0.09	0.04	T							T	T	18	T	T	T		T							T	17			T
19													19													18			0.13
20						T	T	0.01	0.01	T	0.01	T	20	T	T				T	T	T	T	T	T	T	19			0.00
21													21													20			0.03
22	T	T	T	T		0.01	T	0.01	T				22													21			0.02
23													23													22			0.00
24													24													23			0.00
25	T	T	T	T	T	T					T	T	25	T	T									T	T	24			T
26													26													25			T
27													27										T		T	26			0.00
28	T	T	T	T	T								28												T	27			T
29	T												29								T	T			T	28			T
30											T	T	30	T	T	T	T	T								29			T
31													31													30			T
																										31			0.00

MAXIMUM SHORT DURATION PRECIPITATION (See Note)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)	.10	.18	.23	.28	.37	.50	.63	.73	.86	.98	1.17	1.31
Ending Date	04	04	04	04	04	04	04	04	04	04	04	04
Ending Time (Hour/Min)	0416	0419	0419	0422	0421	0444	0449	0459	0449	0451	0459	0500

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
OCTOBER 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.

DATE	SUNSHINE		CLOUDINESS (OKTAS)				VISIBILITY (MILES)		RESERVED
	TOTAL MINUTES	PERCENT POSSIBLE	SR-SS		MN-MN		MINIMUM	MAXIMUM	
			CEILOMETER	SATELLITE	CEILOMETER	SATELLITE			
01							9.00	10.00	
02							10.00	10.00	
03							6.00	10.00	
04							1.75	10.00	
05							3.00	10.00	
06							2.00	10.00	
07							8.00	10.00	
08							7.00	10.00	
09							5.00	10.00	
10							4.00	10.00	
11							10.00	10.00	
12							5.00	10.00	
13							10.00	10.00	
14							10.00	10.00	
15							10.00	10.00	
16							2.50	10.00	
17							7.00	10.00	
18							8.00	10.00	
19							10.00	10.00	
20							2.00	10.00	
21							5.00	10.00	
22							10.00	10.00	
23							10.00	10.00	
24							6.00	10.00	
25							3.00	10.00	
26							7.00	10.00	
27							2.50	10.00	
28							5.00	10.00	
29							10.00	10.00	
30							9.00	10.00	
31							10.00	10.00	
MONTHLY AVGS							6.89	10.00	
<p align="center">SUNSHINE (MINUTES)</p> <p>Total: Possible:</p> <p align="center">Percent Possible:</p>									
<p align="center">NUMBER OF DAYS WITH:</p> <p align="center">SKY CONDITION</p> <p align="center">CLR PTLY CLDY CLOUDY MISSING</p> <p align="center">31</p> <p align="center">MINIMUM VISIBILITY (MILES)</p> <p align="center"><=0.25 <=3.0 >=7.0</p> <p align="center">0 4 18</p>									

OBSERVATIONS AT 3-HOURLY INTERVALS

MINNEAPOLIS-ST. PAUL, MN

OCTOBER 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 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: 0611	OCT 01			SUNSET: 1754										SUNRISE: 0618	OCT 07									
03	CLR	NC			10.00		61	50	55	67	3	23	28.85	29.72	03	CLR	NC			10.00		34	31	33	89	3	23	29.29	30.21
06	FEW	NC			10.00		59	55	57	87	0	00	28.94	29.82	06	BKN	100			10.00		32	30	31	92	5	22	29.29	30.21
09	CLR	NC			10.00		64	54	58	70	10	03	29.00	29.88	09	OVC	049			10.00		37	31	35	79	7	22	29.29	30.22
12	FEW	NC			10.00		70	52	60	53	10	02	29.01	29.91	12	OVC	080			10.00		43	33	39	68	10	13	29.20	30.12
15	SCT	NC			10.00		71	39	54	31	12	36	29.03	29.93	15	OVC	085			10.00		44	36	40	73	15	13	29.13	30.05
18	BKN	150			9.00		64	43	53	46	17	02	29.07	29.97	18	OVC	080		-RA	10.00		44	37	41	76	10	13	29.09	30.01
21	OVC	070			10.00		60	42	51	52	12	35	29.15	30.05	21	OVC	065			10.00		42	40	41	92	12	13	29.07	29.99
24	BKN	070			10.00		50	45	47	83	12	36	29.22	30.12	24	OVC	050		-RA	10.00		44	42	43	93	6	13	29.04	29.96
					SUNRISE: 0612	OCT 02				SUNSET: 1752									SUNRISE: 0620	OCT 08									
03	BKN	085			10.00		47	42	45	83	16	02	29.22	30.12	03	BKN	100			10.00		44	43	44	96	7	34	29.01	29.92
06	BKN	150			10.00		46	38	42	73	9	02	29.28	30.18	06	BKN	150			8.00		43	43	43	100	0	00	29.03	29.94
09	OVC	150			10.00		45	35	41	68	16	03	29.29	30.20	09	FEW	NC			10.00		49	47	48	93	0	00	29.07	29.98
12	OVC	150			10.00		48	39	44	71	12	36	29.28	30.19	12	FEW	NC			10.00		60	46	53	60	8	23	29.06	29.97
15	OVC	150			10.00	-RA	48	40	44	74	14	02	29.27	30.18	15	OVC	055			10.00		63	50	56	63	13	27	29.06	29.96
18	OVC	150			10.00		47	39	43	74	9	04	29.26	30.17	18	BKN	250			10.00		52	45	48	77	14	31	29.14	30.05
21	OVC	110			10.00		47	40	44	77	9	03	29.26	30.18	21	SCT	NC			10.00		45	42	44	90	9	30	29.19	30.10
24	SCT	NC			10.00		44	40	42	85	6	06	29.26	30.17	24	CLR	NC			10.00		41	36	39	82	7	32	29.23	30.14
					SUNRISE: 0613	OCT 03				SUNSET: 1750									SUNRISE: 0621	OCT 09									
03	OVC	015			10.00		44	41	43	89	3	04	29.23	30.15	03	CLR	NC			10.00		38	35	37	89	0	00	29.26	30.17
06	OVC	011			10.00		45	42	44	90	10	12	29.21	30.13	06	SCT	NC		BCFG	10.00		36	34	35	93	0	00	29.29	30.21
09	OVC	008			10.00		49	46	47	90	9	13	29.18	30.09	09	CLR	NC			10.00		44	37	41	76	0	00	29.31	30.23
12	OVC	010			8.00		51	48	50	89	10	12	29.12	30.03	12	CLR	NC			10.00		50	36	44	59	7	VR	29.28	30.20
15	OVC	012			10.00		53	49	51	86	12	14	29.05	29.96	15	FEW	NC			10.00		53	36	45	52	6	16	29.22	30.13
18	OVC	010			10.00		52	49	50	89	12	14	28.99	29.88	18	FEW	NC			10.00		52	36	45	55	6	13	29.20	30.11
21	OVC	008			10.00		52	50	51	93	8	15	28.92	29.82	21	BKN	200			10.00		49	40	45	71	8	13	29.19	30.10
24	OVC	006			9.00		53	52	52	96	9	14	28.79	29.69	24	OVC	043		RA BR	5.00		46	45	46	96	5	13	29.20	30.12
					SUNRISE: 0615	OCT 04				SUNSET: 1748									SUNRISE: 0622	OCT 10									
03	OVC	004			2.50	+RA BR	53	53	53	100	7	02	28.65	29.54	03	OVC	041			10.00		47	46	46	97	9	14	29.15	30.06
06	OVC	004			9.00	-RA	52	52	52	100	15	04	28.46	29.34	06	BKN	065			6.00	BR	46	45	46	96	5	13	29.17	30.08
09	OVC	006			10.00	-DZ	55	52	53	90	6	05	28.43	29.31	09	OVC	005			4.00	BR	49	47	48	93	8	11	29.17	30.08
12	OVC	014			10.00	-RA	52	49	50	89	26	34	28.50	29.38	12	FEW	NC			5.00	BR	55	51	53	87	7	09	29.16	30.07
15	OVC	028			10.00		50	45	47	83	18	32	28.72	29.62	15	CLR	NC			10.00		64	55	59	73	7	11	29.11	30.01
18	BKN	045			10.00		49	40	45	71	13	31	28.89	29.79	18	FEW	NC			10.00		64	57	60	78	12	10	29.08	29.99
21	FEW	NC			10.00		45	37	41	74	12	28	29.00	29.91	21	SCT	NC			10.00		59	56	57	90	8	14	29.08	29.99
24	CLR	NC			10.00		41	36	39	82	6	28	29.07	29.98	24	FEW	NC			10.00		58	51	54	75	12	18	29.07	29.98
					SUNRISE: 0616	OCT 05				SUNSET: 1746									SUNRISE: 0623	OCT 11									
03	BKN	150			10.00		40	37	39	89	6	28	29.12	30.03	03	FEW	NC			10.00		57	49	53	74	10	16	29.06	29.96
06	OVC	070			10.00		42	37	40	82	9	25	29.18	30.09	06	SCT	NC			10.00		54	49	51	82	8	16	29.05	29.95
09	BKN	060			10.00		44	38	41	79	3	24	29.24	30.16	09	FEW	NC			10.00		61	50	55	67	17	17	29.03	29.93
12	BKN	250			10.00		52	34	44	50	7	19	29.21	30.12	12	BKN	250			10.00		69	48	57	47	22	17	29.00	29.88
15	BKN	060			10.00		53	37	46	55	6	13	29.15	30.06	15	SCT	NC			10.00		75	50	61	42	23	18	28.93	29.81
18	OVC	050			10.00		52	40	46	64	10	08	29.09	30.01	18	BKN	250			10.00		70	50	59	49	10	17	28.93	29.81
21	OVC	055			7.00	-RA	48	47	47	96	7	09	29.06	29.98	21	BKN	250			10.00		66	54	59	65	12	16	28.96	29.85
24	OVC	006			6.00	RA BR	47	47	47	100	12	04	29.00	29.90	24	OVC	055			10.00		66	55	60	68	10	23	28.98	29.86
					SUNRISE: 0617	OCT 06				SUNSET: 1744									SUNRISE: 0625	OCT 12									
03	OVC	008			10.00	-RA	47	46	46	97	10	05	28.90	29.80	03	OVC	075			9.00	RA	53	50	51	89	8	01	29.05	29.94
06	OVC	010			10.00		46	45	46	96	5	29	28.88	29.78	06	OVC	041		-RA	10.00		50	48	49	93	12	32	29.10	30.00
09	OVC	010			2.50	-RA BR	47	45	46	93	7	23	28.86	29.77	09	BKN													

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 OFF	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 OFF	Observation Time (LST)	EFF CLD AMT Oktas	Visibility (Miles)	Dry Bulb		Dew Point	Wet Bulb	Speed (MPH)	Direction Tens of Deg		Station	Sea Level		
<div>SUNRISE: 0626 OCT 13 SUNSET: 1732</div>																															
03	CLR	NC			10.00		33	27	31	78	7	26	29.44	30.37	03	OVC	024			10.00		38	31	35	76	14	31	29.06	29.98		
06	CLR	NC			10.00		31	23	28	72	9	25	29.45	30.39	06	SCT	NC			10.00		35	29	33	78	12	31	29.12	30.00		
09	FEW	NC			10.00		38	22	32	53	13	25	29.46	30.39	09	BKN	039			10.00		36	27	33	70	13	31	29.17	30.09		
12	SCT	NC			10.00		49	23	39	36	18	30	29.43	30.36	12	BKN	038			10.00		40	24	34	53	13	31	29.18	30.10		
15	FEW	NC			10.00		52	25	41	35	14	31	29.40	30.33	15	OVC	037			10.00		38	25	33	60	13	29	29.16	30.08		
18	FEW	NC			10.00		48	27	39	44	3	27	29.40	30.32	18	OVC	033			10.00		36	24	32	62	14	26	29.17	30.10		
21	CLR	NC			10.00		43	29	37	58	0	00	29.38	30.30	21	OVC	037			10.00		35	23	31	61	6	26	29.17	30.10		
24	CLR	NC			10.00		40	30	36	68	0	00	29.34	30.26	24	OVC	040			10.00		33	25	30	72	6	24	29.17	30.09		
<div>SUNRISE: 0627 OCT 14 SUNSET: 1730</div>																															
03	CLR	NC			10.00		38	28	34	68	10	14	29.26	30.17	03	OVC	042			10.00		33	26	30	75	3	18	29.17	30.09		
06	FEW	NC			10.00		39	31	36	73	9	15	29.16	30.07	06	OVC	036			8.00	-SN	34	28	32	79	0	00	29.20	30.12		
09	BKN	150			10.00		49	34	42	57	16	17	29.05	29.97	09	OVC	044			2.00	-SN BR	33	31	32	92	5	07	29.22	30.15		
12	FEW	NC			10.00		59	30	46	33	22	20	28.97	29.86	12	OVC	043			6.00	-SN	35	30	33	82	7	09	29.22	30.14		
15	FEW	NC			10.00		62	33	48	34	17	23	28.91	29.80	15	OVC	050			9.00		36	31	34	82	12	08	29.18	30.10		
18	BKN	075			10.00		59	38	49	46	5	27	28.91	29.81	18	OVC	040			7.00	-RASN	35	31	33	85	9	08	29.20	30.13		
21	SCT	NC			10.00		52	37	45	57	12	33	28.98	29.88	21	OVC	009			8.00		35	33	34	93	10	08	29.19	30.12		
24	FEW	NC			10.00		47	36	42	66	14	33	29.04	29.94	24	OVC	005			9.00	-PL	34	32	33	92	9	06	29.18	30.10		
<div>SUNRISE: 0628 OCT 15 SUNSET: 1728</div>																															
03	SCT	NC			10.00		42	33	38	71	10	31	29.08	29.98	03	OVC	007			8.00	-SN	34	33	34	97	9	04	29.13	30.06		
06	BKN	050			10.00		42	32	38	68	9	33	29.13	30.04	06	OVC	009			5.00	-SN BR	33	32	33	96	8	02	29.13	30.06		
09	SCT	NC			10.00		41	28	36	60	14	34	29.19	30.10	09	OVC	007			10.00		34	32	33	92	10	02	29.15	30.08		
12	SCT	NC			10.00		43	21	35	42	20	31	29.20	30.11	12	OVC	009			10.00		35	31	33	85	13	01	29.19	30.12		
15	FEW	NC			10.00		44	18	34	35	15	34	29.20	30.11	15	OVC	017			10.00		36	30	34	79	14	02	29.22	30.15		
18	FEW	NC			10.00		39	16	31	39	8	33	29.21	30.13	18	OVC	028			10.00		35	29	33	78	13	02	29.28	30.21		
21	CLR	NC			10.00		33	19	28	56	6	33	29.23	30.16	21	SCT	NC			10.00		33	27	31	78	8	02	29.33	30.25		
24	FEW	NC			10.00		30	21	27	69	5	33	29.23	30.15	24	OVC	025			10.00		33	27	31	78	9	02	29.37	30.30		
<div>SUNRISE: 0630 OCT 16 SUNSET: 1727</div>																															
03	CLR	NC			10.00		27	22	25	81	0	00	29.23	30.16	03	OVC	027			10.00		33	25	30	72	12	02	29.41	30.35		
06	SCT	NC			10.00		27	21	25	78	5	02	29.24	30.17	06	BKN	120			10.00		31	24	28	76	8	36	29.46	30.40		
09	OVC	180			10.00		34	22	30	61	5	14	29.24	30.17	09	OVC	060			10.00		33	24	30	70	10	01	29.52	30.46		
12	OVC	055			10.00		39	15	31	38	5	VR	29.21	30.14	12	BKN	200			10.00		38	19	31	47	10	36	29.53	30.47		
15	OVC	033			5.00	-SN	35	30	33	82	10	23	29.17	30.10	15	BKN	044			10.00		35	20	30	54	12	01	29.55	30.49		
18	OVC	055			8.00	-SN	34	30	32	85	0	00	29.15	30.08	18	OVC	045			10.00		32	18	27	56	10	02	29.60	30.55		
21	OVC	050			10.00	-SN	34	31	33	89	0	00	29.12	30.05	21	OVC	047			10.00		30	14	25	51	12	01	29.63	30.58		
24	OVC	021			9.00		34	31	33	89	5	23	29.10	30.02	24	BKN	045			10.00		28	14	24	56	7	01	29.65	30.59		
<div>SUNRISE: 0631 OCT 17 SUNSET: 1725</div>																															
03	OVC	029			7.00		34	31	33	89	3	21	29.06	29.98	03	OVC	047			10.00		27	15	23	61	6	36	29.67	30.61		
06	OVC	029			7.00		34	31	33	89	3	25	29.05	29.98	06	BKN	045			10.00		27	17	24	66	6	01	29.68	30.63		
09	SCT	NC			10.00		36	29	33	76	9	21	29.03	29.96	09	OVC	045			10.00		30	15	25	54	12	01	29.69	30.63		
12	OVC	032			10.00		39	28	35	65	10	17	29.00	29.92	12	OVC	045			10.00		34	16	28	48	9	36	29.66	30.60		
15	OVC	028			10.00	-RA	39	32	36	76	6	19	28.97	29.88	15	BKN	045			10.00		34	16	28	48	3	VR	29.61	30.55		
18	OVC	032			10.00		40	35	38	83	0	00	28.97	29.88	18	BKN	044			10.00		31	16	26	54	7	02	29.59	30.54		
21	FEW	NC			10.00		38	35	37	89	6	VR	28.96	29.88	21	BKN	044			10.00		30	17	26	59	6	36	29.58	30.52		
24	OVC	050			10.00	-DZ	39	35	37	86	7	16	28.91	29.82	24	OVC	038			10.00		30	19	26	64	3	01	29.56	30.50		
<div>SUNRISE: 0632 OCT 18 SUNSET: 1723</div>																															
03	OVC	031			10.00	-DZ	37	35	36	93	14	11	28.79	29.70	03	OVC	041			10.00		30	20	27	66	5	01	29.54	30.49		
06	BKN	008			10.00		39	37	38	93	15	12	28.68	29.58	06	OVC	040			10.00		30	22	27	72	5	03	29.52	30.47		
09	BKN	200			10.00		43	39	41	86	0	00	28.68	29.58	09	BKN	180			10.00		34	23	30	64	7	VR	29.50	30.45		
12	OVC	024			10.00		46	37	42	71	15	29	28.74	29.64	12	OVC	037			10.00		38	27	34	65	6	13	29.45	30.39		
15	OVC	024			10.00		44	36	40	73	13	28	28.78	29.69	15	OVC	026			10.00		40	29	36	65	6	12	29.39	30.32		
18	OVC	022			10.00		41	33	38	74	13	31	28.88	29.79	18	OVC	022			10.00		39	30	35	70	9	12	29.37	30.30		
21	OVC	024			10.00		40	32	37	73	20	32	28.97	29.88	21	OVC	016			10.00		38	32	36	79	10	12	29.32	30.25		
24	OVC	022			10.00		38	31	35	76	15	31	29.02	29.93	24	OVC	008			6.00	-SN BR	38	35	37	89	6	14	29.29	30.21		

OBSERVATIONS AT 3-HOURLY INTERVALS

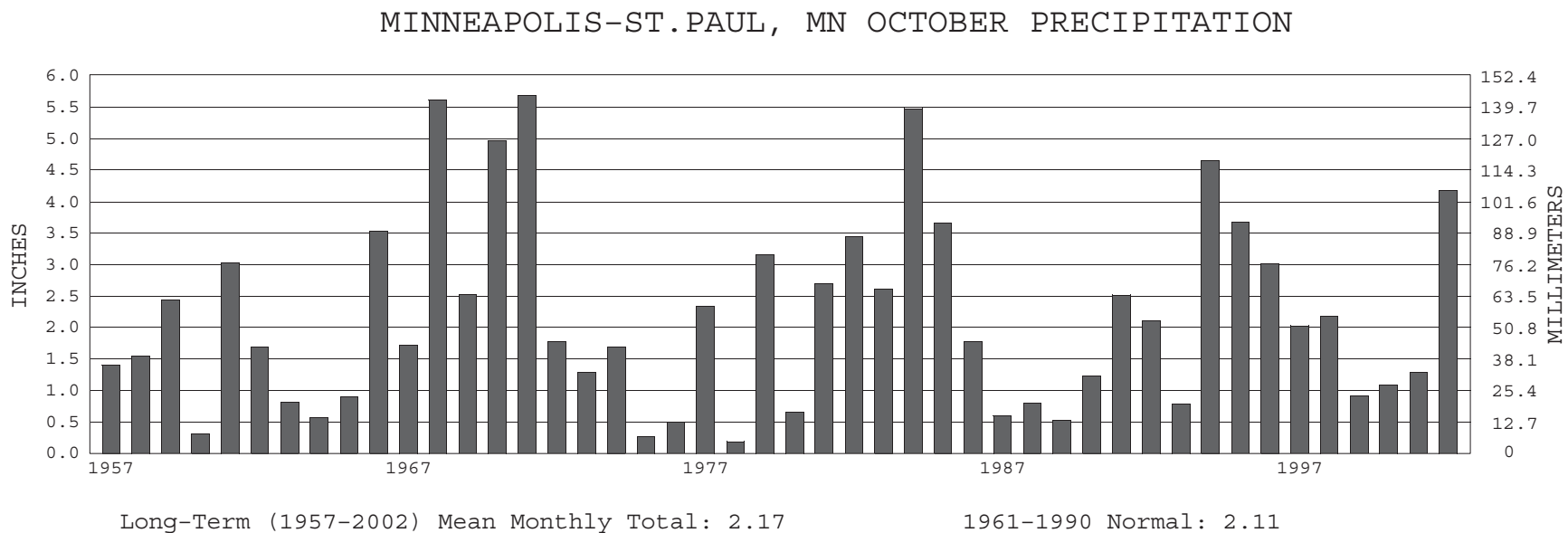
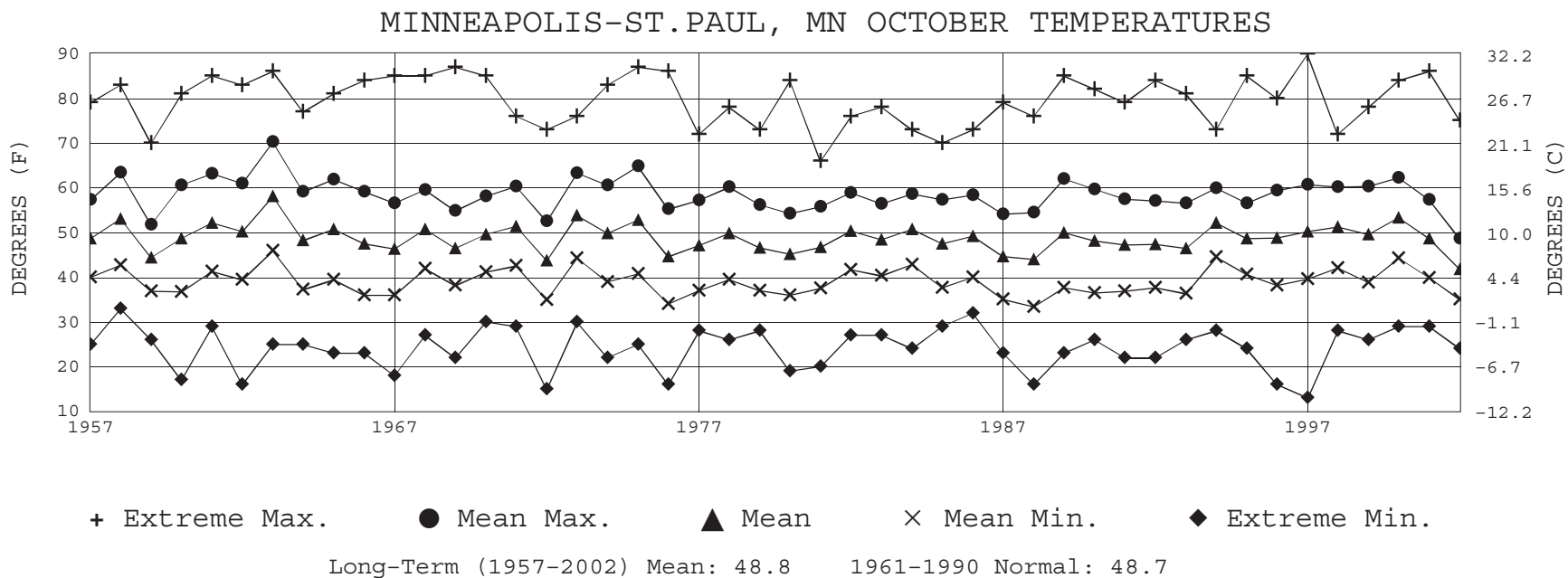
MINNEAPOLIS-ST. PAUL, MN

OCTOBER 2002

MSP

WBAN # 14922

HOUR (LST)	SKY COVER		CEILING 100'S OFF	SATELLITE		OBSERVATION TIME (LST)	EFF CLD AMT <small>Okta</small>	VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES,HG)		HOUR (LST)	SKY COVER		CEILING 100'S OFF	SATELLITE		OBSERVATION TIME (LST)	EFF CLD AMT <small>Okta</small>	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	DRY BULB	DEW POINT					WET BULB	SPEED (MPH)					DIRECTION TENS OF DEG	STATION	SEA LEVEL						
SUNRISE: 0642 OCT 25 SUNSET: 1712										SUNRISE: 0650 OCT 31 SUNSET: 1703																										
03	OVC	004						3.00	-DZSN BR	38	37	38	97	6	13	29.25	30.17	03	OVC	027							10.00		26	16	23	66	13	33	29.41	30.35
06	OVC	006						6.00	BR	39	37	38	93	9	12	29.19	30.11	06	OVC	027							10.00		25	15	22	66	9	34	29.40	30.34
09	OVC	008						6.00	BR	39	37	38	93	7	13	29.15	30.07	09	SCT	NC							10.00		27	15	23	61	8	30	29.42	30.36
12	OVC	012						10.00		41	37	39	86	5	13	29.12	30.04	12	SCT	NC							10.00		33	17	28	52	13	27	29.39	30.32
15	OVC	016						10.00		42	37	40	82	5	VR	29.09	30.01	15	FEW	NC							10.00		34	17	28	50	15	29	29.33	30.27
18	OVC	015						10.00		42	37	40	82	8	31	29.09	30.01	18	CLR	NC							10.00		29	16	25	58	12	29	29.33	30.26
21	OVC	055						10.00		40	36	38	86	9	30	29.10	30.02	21	CLR	NC							10.00		27	17	24	66	13	29	29.36	30.30
24	OVC	048						8.00		39	35	37	86	3	26	29.13	30.05	24	CLR	NC							10.00		25	17	23	72	10	30	29.36	30.29
SUNRISE: 0643 OCT 26 SUNSET: 1710										3-HOURLY OBSERVATION NOTES																										
03	OVC	046						7.00		39	34	37	82	3	26	29.13	30.05	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.																		
06	OVC	042						9.00		38	34	36	86	7	26	29.14	30.06	Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet.																		
09	OVC	016						9.00		39	33	37	79	10	28	29.19	30.11	NC= No ceiling detected.																		
12	OVC	047						10.00		40	30	36	68	9	26	29.20	30.12	& = Original observation contained additional weather elements.																		
15	OVC	037						10.00		40	30	36	68	8	29	29.20	30.12	See page 3 for additional notes.																		
18	OVC	049						10.00		38	29	34	70	7	30	29.24	30.16																			
21	SCT	NC						9.00		35	30	33	82	3	27	29.29	30.22																			
24	CLR	NC						8.00		31	28	30	89	0	00	29.33	30.25																			
SUNRISE: 0644 OCT 27 SUNSET: 1709										SUMMARY BY HOUR																										
03	CLR	NC						5.00	BR	29	26	28	89	0	00	29.35	30.28	HOUR (LST)	AVERAGES										RESULTANT WIND (MPH)							
06	CLR	NC						4.00	BR	28	26	27	92	0	00	29.37	30.29		CEILOMETER	EFF CLD AMT	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY	PRESSURE (INCHES,HG)		VISIBILITY (MILES)	WIND SPEED (MPH)	SPEED	DIRECTION						
09	OVC	043						4.00	BR	32	30	31	92	0	00	29.40	30.32	01			40	35	38	82	29.19	30.10	9.03	7	2	1						
12	OVC	045						9.00		39	30	35	70	3	VR	29.40	30.32	02			39	35	38	84	29.18	30.10	8.84	7	1	2						
15	OVC	200						10.00		41	27	35	57	6	17	29.33	30.26	03			39	34	37	83	29.18	30.09	8.92	7	2	3						
18	OVC	095						10.00		39	28	35	65	6	13	29.31	30.24	04			39	34	37	85	29.18	30.09	8.97	7	2	3						
21	OVC	030						10.00		39	30	35	70	8	20	29.32	30.24	05			39	34	37	84	29.18	30.10	8.95	7	1	2						
24	OVC	060						6.00	-DZ BR	36	34	35	93	0	00	29.30	30.23	06			39	34	37	84	29.18	30.10	9.10	7	1	2						
SUNRISE: 0646 OCT 28 SUNSET: 1707																																				
03	OVC	012						5.00	-SN BR	35	32	34	89	9	14	29.27	30.19	07			39	34	37	84	29.18	30.10	9.00	7	1	1						
06	OVC	010						10.00		35	33	34	93	10	14	29.25	30.17	08			40	34	38	81	29.19	30.11	8.94	7	1	2						
09	OVC	010						10.00		36	33	35	89	10	14	29.25	30.17	09			41	34	38	77	29.19	30.11	8.95	8	1	1						
12	OVC	012						10.00		38	34	36	86	10	16	29.23	30.16	10			43	34	39	72	29.19	30.11	9.02	10	2	30						
15	OVC	018						10.00		41	34	38	76	10	16	29.18	30.10	11			44	34	40	69	29.19	30.10	9.10	10	2	31						
18	OVC	020						10.00		41	34	38	76	9	13	29.20	30.12	12			46	33	41	65	29.18	30.10	9.32	11	3	31						
21	OVC	041						10.00		41	34	38	76	10	13	29.21	30.13	13			46	34	41	64	29.17	30.09	9.74	10	3	31						
24	OVC	041						9.00	-RA	40	36	38	86	5	15	29.21	30.13	14			46	34	41	64	29.17	30.08	9.84	11	3	29						
SUNRISE: 0647 OCT 29 SUNSET: 1706																																				
03	OVC	070						10.00		40	36	38	86	6	09	29.17	30.09	15			47	34	41	64	29.17	30.08	9.77	11	2	31						
06	OVC	036						10.00		41	34	38	76	6	07	29.20	30.12	16			46	34	41	64	29.17	30.09	9.68	11	3	30						
09	OVC	044						10.00		41	34	38	76	7	06	29.22	30.14	17			45	34	40	66	29.18	30.09	9.84	11	3	34						
12	OVC	034						10.00		44	35	40	71	6	VR	29.21	30.13	18			44	33	39	67	29.19	30.10	9.81	9	3	35						
15	OVC	042						10.00		44	36	40	73	8	08	29.20	30.11	19			43	33	39	70	29.20	30.11	9.84	9	2	34						
18	OVC	100						10.00		45	36	41	71	6	VR	29.22	30.14	20			42	33	39	72	29.20	30.12	9.84	9	2	34						
21	OVC	033						10.00		43	36	40	76	10	04	29.26	30.18	21			42	34	38	74	29.20	30.12	9.81	9	2	34						
24	OVC	110						10.00		40	35	38	83	10	03	29.27	30.19	22			41	34	38	76	29.21	30.13	9.48	8	2	33						
SUNRISE: 0648 OCT 30 SUNSET: 1704																																				
03	OVC	110						10.00		39	36	38	89	9	02	29.29	30.21	23			40	34	37	79	29.21	30.13	9.35	8	2	33						
06	OVC	008						10.00		38	35	37	89	9	01	29.31	30.23	24			39	34	37	81	29.21	30.12	9.19	7	2	33						
09	OVC	010						10.00		37	33	35	86	13	01	29.36	30.28																			
12	OVC	012						9.00	-SN	37	32	35	82	14	02	29.37	30.29																			
15	OVC	021						9.00	-SNDZ	36	32	34	86	12	36	29.35	30.27																			
18	OVC	021						10.00		34	27	31	76	9	33	29.37	30.29																			
21	BKN	029						10.00		32	22	28	66	15	33	29.40	30.32																			
24	BKN	031						10.00		28	20	25	72	12	32	29.40	30.34																			





OCTOBER 2002

MINNEAPOLIS—ST. PAUL, MN

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

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