



NOVEMBER 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	36	21	29	-12	18	26	36	0	SN BR HZ		12		0.00	29.33	30.26	11.5	27	11.8	25	26	20	27	01	
02	45	27	36	-5	22	30	29	0					0.00	29.18	30.11	4.9	26	5.9	18	27	16	27	02	
03	46	27	37	-3	25	31	28	0					0.00	29.09	30.01	9.1	28	11.8	28	33	23	32	03	
04	37	28	33	-6	21	28	32	0					0.00	29.19	30.12	1.6	02	6.3	18	02	15	34	04	
05	36	29	33	-5	29	32	32	0					0.03	28.94	29.86	2.1	24	5.5	16	28	14	29	05	
06	45	32	39	1	29	34	26	0	BR HZ				0.00	29.08	30.00	6.8	29	8.4	21	32	17	32	06	
07	66*	33	50*	13	32	41	15	0					0.00	28.80	29.71	9.1	21	9.9	26	22	23	22	07	
08	53	35	44	8	37	42	21	0	RA BR RA FG+ MIFG BCFG BR				0.00	28.60	29.49	4.0	14	5.8	14	13	12	13	08	
09	56	39	48	12	39	43	17	0					T	28.40	29.29	3.3	16	6.4	24	36	13	36	09	
10	45	33	39	4	37	38	26	0					0.04	28.56	29.46	6.4	35	7.9	25	35	22	35	10	
11	37	27	32	-3	23	29	33	0	SN				T	29.10	30.02	5.8	32	8.1	18	35	16	36	11	
12	47	24	36	2	26	31	29	0					0.00	29.19	30.12	6.2	28	9.4	22	24	18	33	12	
13	43	22	33	-1	27	30	32	0					0.00	28.99	29.91	0.6	17	6.8	22	34	17	34	13	
14	35	24	30	-3	19	25	35	0					0.00	29.10	30.02	6.1	01	6.6	22	35	17	35	14	
15	30	21	26	-7	17	23	39	0					0.00	29.32	30.26	3.7	05	4.7	18	04	14	05	15	
16	32	24	28	-4	15	24	37	0	BR				0.00	29.34	30.27	2.2	14	4.2	14	04	9	15	16	
17	37	19	28	-3	20	26	37	0					0.00	29.12	30.06	7.9	15	8.4	20	17	16	15	17	
18	45	26	36	5	26	32	29	0					0.00	29.01	29.93	3.7	21	6.3	15	25	13	24	18	
19	50	33	42	12	27	35	23	0					0.00	29.03	29.95	6.7	27	7.5	20	28	17	29	19	
20	47	32	40	10	29	34	25	0	SN				T	29.05	29.97	3.1	35	5.9	26	01	16	35	20	
21	38	27	33	4	27	31	32	0	SN BR RA SN SN SN				0.01	29.14	30.07	8.2	34	9.9	28	01	23	35	21	
22	36	22	29	0	22	27	36	0					T	29.15	30.08	1.9	19	6.1	15	16	13	18	22	
23	44	28	36	8	23	31	29	0					T	29.03	29.95	15.0	30	15.4	36	30	28	29	23	
24	28	20	24	-4	14	22	41	0					T	29.35	30.29	11.8	33	12.0	32	33	21	33	24	
25	25	19	22	-5	13	19	43	0					T	29.46	30.41	3.2	35	6.7	18	29	15	32	25	
26	28	15*	22	-5	13	19	43	0	SN BR RA SN SN				0.00	29.56	30.51	2.8	33	4.8	14	35	10	33	26	
27	29	20	25	-1	13	21	40	0					T	29.36	30.31	7.1	21	7.4	16	24	14	23	27	
28	45	19	32	6	22	28	33	0					0.00	28.98	29.91	8.6	23	9.2	32	24	25	24	28	
29	47	24	36	10	24	33	29	0					T	28.64	29.54	19.6	30	20.8	40*	31	32*	33	29	
30	25	16	21*	-4	2	16	44	0					T	29.15	30.08	13.6	32	15.4	39	36	29	32	30	
40.4 25.5 33.0 ■■ 23.0 29.4 31.7 0.0 < MONTHLY AVERAGES TOTALS->													0.08	29.08	30.00	3.7	29	8.5	<- MONTHLY AVERAGES					
0.3 0.7 0.5 ■■ <-----DEPARTURE FROM NORMAL----->													-1.86	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3										
DEGREE DAYS									GREATEST 24-HR PRECIPITATION: 0.04 DATE :10				SEA LEVEL PRESSURE DATE TIME											
MONTHLY TOTAL DEPARTURE									GREATEST 24-HR SNOWFALL: DATE :				MAXIMUM : 30.57 26 0953											
SEASON TO DATE TOTAL DEPARTURE									GREATEST SNOW DEPTH: DATE :				MINIMUM : 29.22 09 1453											
HEATING: 951 -27 1785 86									NUMBER OF DAYS WITH ➡				MAXIMUM TEMP ≥ 90: 0				PRECIPITATION ≥ 0.01 INCH : 3							
COOLING: 0 0 987 288													MAXIMUM TEMP ≤ 32 : 7				PRECIPITATION ≥ 0.10 INCH : 0							
													MINIMUM TEMP ≤ 32 : 25				SNOWFALL ≥ 1.0 INCH :							
													MINIMUM TEMP ≤ 0 : 0											
													HEAVY FOG : 1											

NOVEMBER 2002
MINNEAPOLIS-ST.PAUL, MN

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

MINNEAPOLIS—ST.PAUL, MN

NOVEMBER 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													02												02			0.00
03													03												03			0.00
04													04												04			0.00
05							T	T	0.02	0.01	T	T	05	T											05			0.03
06													06												06			0.00
07													07												07			0.00
08													08												08			0.00
09													09												09			T
10													10		0.01	0.03	T T	T			T				10			0.04
11													11												11			T
12					T	T							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												18			0.00
19													19												19			0.00
20													20											T	20			T
21	T	T	T	0.01	T	T	T						21			T									21			0.01
22													22												22			T
23													23										T		23			T
24													24											T	24			T
25	T	T		T	T	T	T	T	T	T	T	T	25	T											25			T
26													26												26			0.00
27		T	T	T	T								27												27			T
28													28												28			0.00
29			T	T	T	T		T	T				29						T	T		T	T	T	29			T
30													30												30			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
NOVEMBER 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.

<div style="writing-mode: vertical-rl; transform: rotate(180deg);">DATE</div>	SUNSHINE		CLOUDINESS (OKTAS)				VISIBILITY (MILES)		RESERVED
	TOTAL MINUTES	PERCENT POSSIBLE	SR—SS		MN—MN		MINIMUM	MAXIMUM	
			CEILOMETER	SATELLITE	CEILOMETER	SATELLITE			
01							10.00	10.00	
02							10.00	10.00	
03							9.00	10.00	
04							10.00	10.00	
05							.75	10.00	
06							5.00	10.00	
07							10.00	10.00	
08							10.00	10.00	
09							6.00	10.00	
10							.25	10.00	
11							10.00	10.00	
12							10.00	10.00	
13							7.00	10.00	
14							10.00	10.00	
15							10.00	10.00	
16							10.00	10.00	
17							5.00	10.00	
18							10.00	10.00	
19							10.00	10.00	
20							10.00	10.00	
21							3.00	10.00	
22							10.00	10.00	
23							10.00	10.00	
24							9.00	10.00	
25							6.00	10.00	
26							10.00	10.00	
27							9.00	10.00	
28							6.00	10.00	
29							4.00	10.00	
30							9.00	10.00	
MONTHLY AVGS							8.29	10.00	

SUNSHINE (MINUTES)

Total: Possible:

Percent Possible:

NUMBER OF DAYS WITH:

SKY CONDITION

CLR PTLY CLDY CLOUDY MISSING

30

MINIMUM VISIBILITY (MILES)

<=0.25 <=3.0 >=7.0

0 2 23

OBSERVATIONS AT 3-HOURLY INTERVALS

MINNEAPOLIS-ST. PAUL, MN
NOVEMBER 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		SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
SUNRISE: 0651				NOV 01				SUNSET: 1702				SUNRISE: 0659				NOV 07				SUNSET: 1654											
03	CLR	NC			10.00	24	17	22	75	9	28	29.37	30.30	03	BKN	130			10.00	34	29	32	82	6	15	29.09	30.01				
06	CLR	NC			10.00	22	17	20	82	10	28	29.40	30.33	06	CLR	NC			10.00	35	30	33	82	8	18	28.99	29.91				
09	FEW	NC			10.00	24	17	22	75	13	27	29.40	30.35	09	FEW	NC			10.00	43	31	38	63	15	20	28.89	29.80				
12	SCT	NC			10.00	32	15	27	50	15	27	29.37	30.30	12	FEW	NC			10.00	56	32	45	40	16	22	28.77	29.67				
15	BKN	100			10.00	36	15	29	42	17	28	29.30	30.23	15	FEW	NC			10.00	65	34	50	32	15	24	28.66	29.55				
18	FEW	NC			10.00	34	19	29	54	13	26	29.27	30.21	18	CLR	NC			10.00	60	35	48	39	8	22	28.63	29.53				
21	SCT	NC			10.00	32	23	29	69	10	26	29.24	30.17	21	SCT	NC			10.00	55	35	46	47	9	23	28.61	29.51				
24	FEW	NC			10.00	31	22	28	69	9	26	29.22	30.15	24	FEW	NC			10.00	48	36	43	63	0	00	28.60	29.49				
SUNRISE: 0652				NOV 02				SUNSET: 1700				SUNRISE: 0701				NOV 08				SUNSET: 1652											
03	CLR	NC			10.00	30	22	27	72	8	26	29.20	30.13	03	SCT	NC			10.00	44	35	40	71	3	22	28.60	29.49				
06	FEW	NC			10.00	28	22	26	78	7	28	29.20	30.13	06	CLR	NC			10.00	40	34	37	79	6	23	28.62	29.52				
09	FEW	NC			10.00	32	23	29	69	8	30	29.22	30.15	09	OVC	200			10.00	42	35	39	76	0	00	28.64	29.54				
12	CLR	NC			10.00	39	23	33	53	5	VR	29.19	30.12	12	OVC	200			10.00	50	37	44	61	6	15	28.60	29.49				
15	CLR	NC			10.00	44	19	35	37	3	VR	29.15	30.07	15	OVC	200			10.00	53	38	46	57	8	08	28.59	29.48				
18	CLR	NC			10.00	39	22	33	50	5	25	29.15	30.08	18	OVC	200			10.00	49	38	44	66	7	11	28.61	29.51				
21	CLR	NC			10.00	34	23	30	64	5	22	29.15	30.07	21	BKN	200			10.00	46	39	43	77	9	13	28.56	29.45				
24	FEW	NC			10.00	31	23	28	72	5	21	29.14	30.07	24	BKN	150			10.00	46	40	43	79	5	14	28.53	29.42				
SUNRISE: 0654				NOV 03				SUNSET: 1659				SUNRISE: 0702				NOV 09				SUNSET: 1651											
03	CLR	NC			10.00	29	24	27	82	8	22	29.11	30.03	03	FEW	NC			10.00	43	40	42	89	9	13	28.46	29.35				
06	FEW	NC			9.00	27	24	26	89	7	23	29.08	30.01	06	CLR	NC			9.00	40	38	39	93	8	13	28.42	29.31				
09	FEW	NC			10.00	35	28	32	76	13	23	29.06	29.98	09	SCT	NC			10.00	42	38	40	85	7	14	28.40	29.29				
12	FEW	NC			10.00	42	28	36	58	13	26	29.02	29.94	12	BKN	180			10.00	51	37	44	59	7	22	28.40	29.28				
15	SCT	NC			10.00	45	27	38	49	16	30	29.00	29.92	15	OVC	100			10.00	54	38	46	55	5	15	28.33	29.22				
18	OVC	031			10.00	34	23	30	64	15	32	29.09	30.02	18	BKN	200			10.00	49	39	44	69	0	00	28.36	29.25				
21	OVC	023			10.00	31	20	27	64	13	33	29.14	30.07	21	OVC	025			10.00	49	42	46	77	9	33	28.41	29.30				
24	OVC	025			10.00	30	21	27	69	10	33	29.19	30.11	24	OVC	100			10.00	44	41	43	89	0	00	28.38	29.27				
SUNRISE: 0655				NOV 04				SUNSET: 1657				SUNRISE: 0703				NOV 10				SUNSET: 1650											
03	OVC	025			10.00	29	20	26	69	8	32	29.22	30.14	03	BKN	200			7.00	41	40	41	96	3	27	28.41	29.30				
06	OVC	025			10.00	28	19	25	69	7	VR	29.25	30.18	06	FEW	NC			2.50	38	37	38	97	6	26	28.46	29.35				
09	OVC	027			10.00	31	20	27	64	10	01	29.26	30.19	09	BKN	100			2.00	39	39	39	100	5	21	28.50	29.39				
12	BKN	200			10.00	34	21	29	59	6	35	29.23	30.16	12	OVC	010			6.00	43	39	41	86	7	02	28.53	29.42				
15	BKN	250			10.00	35	21	30	57	3	22	29.17	30.10	15	OVC	012			6.00	42	40	41	92	8	01	28.57	29.47				
18	BKN	250			10.00	32	21	28	64	7	13	29.15	30.09	18	OVC	018			10.00	42	37	40	82	13	36	28.64	29.55				
21	BKN	180			10.00	31	21	27	67	9	13	29.08	30.01	21	OVC	016			10.00	36	31	34	82	16	36	28.74	29.65				
24	OVC	150			10.00	31	23	28	72	5	16	29.09	30.01	24	OVC	024			10.00	34	26	31	73	10	01	28.81	29.71				
SUNRISE: 0657				NOV 05				SUNSET: 1656				SUNRISE: 0705				NOV 11				SUNSET: 1649											
03	OVC	120			9.00	30	24	28	79	6	15	29.02	29.95	03	OVC	021			10.00	33	25	30	72	12	01	28.90	29.80				
06	OVC	020			8.00	30	25	28	82	6	17	28.96	29.88	06	OVC	021			10.00	32	25	29	75	7	36	28.98	29.89				
09	OVC	005			1.50	30	29	30	96	3	16	28.94	29.85	09	OVC	021			10.00	32	22	28	66	8	35	29.06	29.99				
12	OVC	009			3.00	33	31	32	92	0	00	28.89	29.80	12	BKN	025			10.00	35	24	31	64	8	32	29.11	30.04				
15	OVC	009			3.00	35	30	33	82	0	00	28.86	29.77	15	BKN	200			10.00	36	22	31	57	7	28	29.15	30.08				
18	OVC	011			6.00	36	31	34	82	6	28	28.90	29.81	18	SCT	NC			10.00	34	22	30	61	3	25	29.22	30.15				
21	OVC	011			6.00	36	33	35	89	9	30	28.94	29.85	21	FEW	NC			10.00	30	23	28	75	6	25	29.26	30.19				
24	OVC	011			6.00	36	33	35	89	12	30	28.96	29.88	24	CLR	NC			10.00	27	22	25	81	6	23	29.26	30.19				
SUNRISE: 0658				NOV 06				SUNSET: 1655				SUNRISE: 0706				NOV 12				SUNSET: 1648											
03	OVC	020			7.00	34	28	32	79	12	29	28.97	29.88	03	FEW	NC			10.00	25	21	24	85	0	00	29.27	30.20				
06	OVC	012			7.00	34	30	32	85	8	28	29.00	29.91	06	BKN	150			10.00	28	22	26	78	7	21	29.22	30.15				
09	SCT	NC			6.00	35	30	33	82	9	23	29.02	29.95	09	SCT	NC			10.00	33	27	31	78	9	21	29.19	30.12				
12	CLR	NC			10.00	43	30	38	60	12	33	29.06	29.98	12	BKN	250			10.00	43	30	38	60	15	24	29.11	30.03				
15	SCT	NC			10.00	43	28	37	56	14	32	29.11	30.03	15	OVC	150			10.00	45	31	39	58	12	30	29.12	30.04				
18	FEW	NC			10.00	38	26	33	62	5	33	29.17	30.10	18	OVC	025			10.00	39	30	35	70	14	32	29.18	30.11				
21	CLR	NC			10.00	33	27	31	78	3	27	29.19	30.11	21	SCT	NC			10.00	32	25	29	75	9	31	29.22	30.15				
24	BKN	130			10.00	33	28	31	82	5	20	29.14	30.06	24	FEW	NC			10.00	27	19	24	72	7	33	29.21	30.14				

OBSERVATIONS AT 3-HOURLY INTERVALS

MINNEAPOLIS-ST. PAUL, MN

NOVEMBER 2002

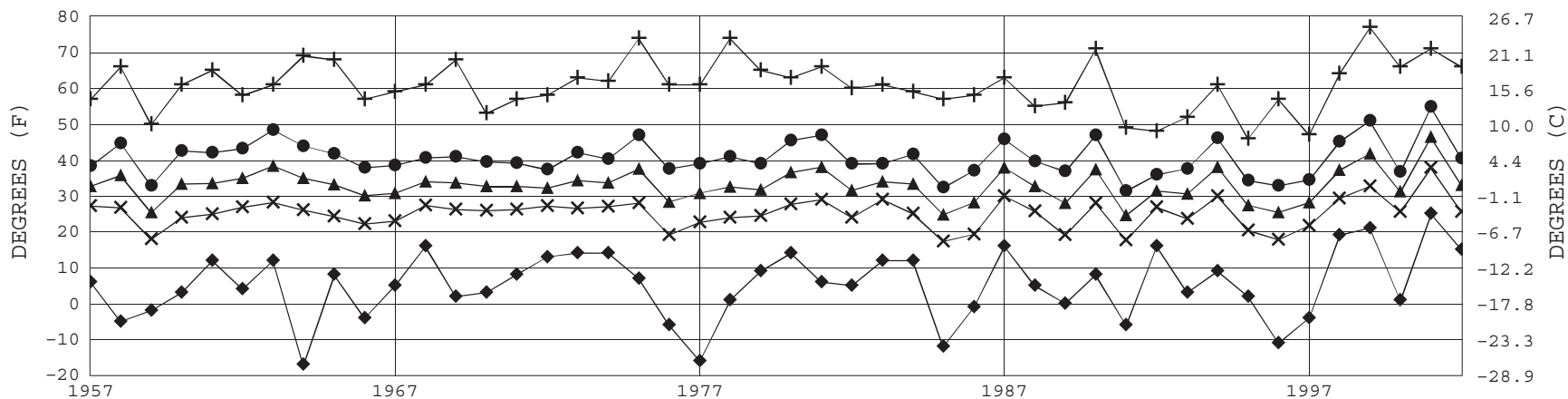
MSP

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 OFFT	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 OFFT	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: 0708						NOV 13	SUNSET: 1647						SUNRISE: 0716						NOV 19	SUNSET: 1641									
03	FEW	NC			10.00		24	19	22	81	3	29	29.20	30.13	03	FEW	NC			10.00		34	25	31	70	10	23	28.98	29.89
06	SCT	NC			10.00		23	20	22	88	0	00	29.15	30.08	06	FEW	NC			10.00		34	25	31	70	7	25	28.99	29.90
09	OVC	180			8.00		27	23	26	85	12	14	29.08	30.02	09	FEW	NC			10.00		37	27	33	67	5	25	29.02	29.94
12	OVC	150			10.00		33	27	31	78	10	14	28.96	29.88	12	FEW	NC			10.00		47	28	39	48	15	28	29.03	29.95
15	OVC	080			10.00		41	32	37	70	8	16	28.84	29.75	15	FEW	NC			10.00		49	29	40	46	10	29	29.03	29.95
18	SCT	NC			10.00		39	31	36	73	5	26	28.83	29.74	18	BKN	250			10.00		41	27	35	57	6	30	29.07	29.99
21	OVC	033			10.00		40	33	37	77	7	33	28.86	29.77	21	BKN	100			10.00		38	28	34	68	3	30	29.08	30.00
24	OVC	031			10.00		35	28	32	76	15	35	28.95	29.86	24	BKN	200			10.00		34	28	32	79	0	00	29.07	29.99
SUNRISE: 0709						NOV 14	SUNSET: 1646						SUNRISE: 0717						NOV 20	SUNSET: 1640									
03	OVC	018			10.00		31	22	28	69	12	36	29.01	29.93	03	OVC	130			10.00		32	28	31	85	0	00	29.07	29.98
06	SCT	NC			10.00		27	19	24	72	8	01	29.07	29.99	06	BKN	120			10.00		33	28	31	82	0	00	29.04	29.96
09	BKN	200			10.00		27	20	25	75	10	01	29.11	30.04	09	BKN	070			10.00		37	30	34	76	5	19	29.01	29.93
12	OVC	022			10.00		29	19	26	66	7	04	29.11	30.03	12	BKN	100			10.00		45	31	39	58	14	33	29.01	29.93
15	BKN	095			10.00		30	19	26	64	9	34	29.10	30.03	15	FEW	NC			10.00		47	32	40	56	10	36	29.03	29.95
18	FEW	NC			10.00		28	18	25	66	0	00	29.13	30.06	18	OVC	033			10.00		42	30	37	62	10	01	29.09	30.01
21	FEW	NC			10.00		25	18	23	73	0	00	29.14	30.08	21	BKN	200			10.00		33	28	31	82	6	36	29.10	30.02
24	FEW	NC			10.00		25	17	22	72	0	00	29.17	30.11	24	OVC	070			10.00		34	29	32	82	5	10	29.04	29.96
SUNRISE: 0710						NOV 15	SUNSET: 1645						SUNRISE: 0718						NOV 21	SUNSET: 1639									
03	FEW	NC			10.00		22	17	21	78	0	00	29.21	30.14	03	OVC	029			8.00	-SN	33	28	31	82	9	09	29.00	29.91
06	BKN	065			10.00		22	15	20	75	5	05	29.24	30.18	06	OVC	038			10.00		32	30	31	92	5	01	29.03	29.96
09	BKN	037			10.00		25	23	24	92	5	08	29.33	30.27	09	BKN	050			10.00		32	29	31	88	8	36	29.13	30.06
12	BKN	037			10.00		30	17	26	59	9	01	29.34	30.28	12	OVC	018			10.00		36	30	34	79	12	31	29.16	30.09
15	BKN	032			10.00		29	16	25	58	9	03	29.36	30.30	15	BKN	031			10.00		37	30	34	76	13	34	29.17	30.09
18	BKN	032			10.00		27	15	23	61	6	VR	29.39	30.33	18	OVC	032			10.00		33	22	29	64	14	34	29.23	30.16
21	BKN	038			10.00		26	15	23	63	0	00	29.40	30.34	21	FEW	NC			10.00		30	20	27	66	12	33	29.25	30.18
24	OVC	040			10.00		26	15	23	63	0	00	29.40	30.34	24	SCT	NC			10.00		27	21	25	78	8	33	29.26	30.19
SUNRISE: 0712						NOV 16	SUNSET: 1644						SUNRISE: 0719						NOV 22	SUNSET: 1639									
03	OVC	040			10.00		26	15	23	63	3	06	29.40	30.33	03	CLR	NC			10.00		23	19	22	85	6	32	29.26	30.19
06	OVC	044			10.00		26	17	23	69	0	00	29.39	30.33	06	OVC	023			10.00		24	21	23	88	5	31	29.27	30.21
09	OVC	044			10.00		27	16	24	63	3	VR	29.39	30.32	09	OVC	021			10.00		27	19	24	72	0	00	29.25	30.18
12	OVC	039			10.00		31	14	26	49	3	26	29.35	30.29	12	OVC	021			10.00		28	20	25	72	5	18	29.21	30.14
15	BKN	041			10.00		32	14	26	47	5	VR	29.31	30.24	15	BKN	180			10.00		31	21	27	67	6	13	29.12	30.05
18	FEW	NC			10.00		27	14	23	58	6	14	29.30	30.23	18	BKN	200			10.00		33	23	29	67	8	15	29.04	29.97
21	SCT	NC			10.00		25	15	22	66	6	15	29.28	30.21	21	OVC	070			10.00		35	24	31	64	8	16	29.00	29.92
24	BKN	034			10.00		25	16	22	69	5	14	29.25	30.18	24	BKN	065			10.00		35	26	32	70	3	16	28.92	29.84
SUNRISE: 0713						NOV 17	SUNSET: 1643						SUNRISE: 0721						NOV 23	SUNSET: 1638									
03	FEW	NC			10.00	BR	23	15	21	72	6	13	29.23	30.16	03	OVC	032			10.00		37	28	34	70	12	29	28.95	29.86
06	CLR	NC			9.00		20	17	19	89	6	12	29.20	30.14	06	CLR	NC			10.00		34	30	32	85	10	28	28.97	29.89
09	FEW	NC			6.00		24	21	23	88	7	15	29.18	30.12	09	CLR	NC			10.00		36	27	32	70	15	28	29.00	29.92
12	BKN	200			10.00		33	22	29	64	12	16	29.15	30.08	12	SCT	NC			10.00		42	23	35	47	22	31	29.00	29.92
15	SCT	NC			10.00		37	22	32	54	12	15	29.06	29.99	15	BKN	049			10.00		41	19	33	41	17	31	29.02	29.94
18	FEW	NC			10.00		33	21	29	61	8	16	29.05	29.98	18	BKN	049			10.00		38	20	31	48	15	31	29.08	30.01
21	BKN	150			10.00		30	21	27	69	7	15	29.02	29.96	21	BKN	120			10.00		33	17	28	52	13	31	29.14	30.06
24	SCT	NC			10.00		28	21	26	75	9	14	29.01	29.93	24	BKN	150			10.00		28	14	24	56	17	32	29.21	30.14
SUNRISE: 0714						NOV 18	SUNSET: 1642						SUNRISE: 0722						NOV 24	SUNSET: 1637									
03	BKN	130			10.00		29	21	26	72	8	14	28.99	29.90	03	FEW	NC			10.00		23	13	20	65	15	32	29.27	30.20
06	CLR	NC			10.00		26	21	24	81	7	14	28.96	29.88	06	SCT	NC			10.00		21	13	19	71	10	33	29.31	30.24
09	BKN	250			10.00		32	24	29	73	6	22	29.00	29.92	09	BKN	250			10.00		23	14	20	68	12	33	29.35	30.29
12	OVC	180			10.00		38	28	34	68	5	26	29.01	29.93	12	OVC	033			10.00		27	14	23	58	10	31	29.37	30.30
15	BKN	100			10.00		42	31	37	65	7	32	29.00	29.93	15	OVC	031			10.00		27	14	23	58	10	33	29.36	30.30
18	FEW	NC			10.00		41	30	36	65	3	20	29.03	29.96	18	OVC	031			10.00		26	14	22	60	10	32	29.40	30.34
21	FEW	NC			10.00		38	30	35	73	6	20	29.02	29.94	21	OVC	031			10.00		25	13	21	60	12	34	29.41	30.36
24	FEW	NC			10.00		37	26	33	65	9	24	29.00	29.92	24	OVC	029			9.00	-SN	24	13	21	62	9	33	29.42	30.37

[illegible]

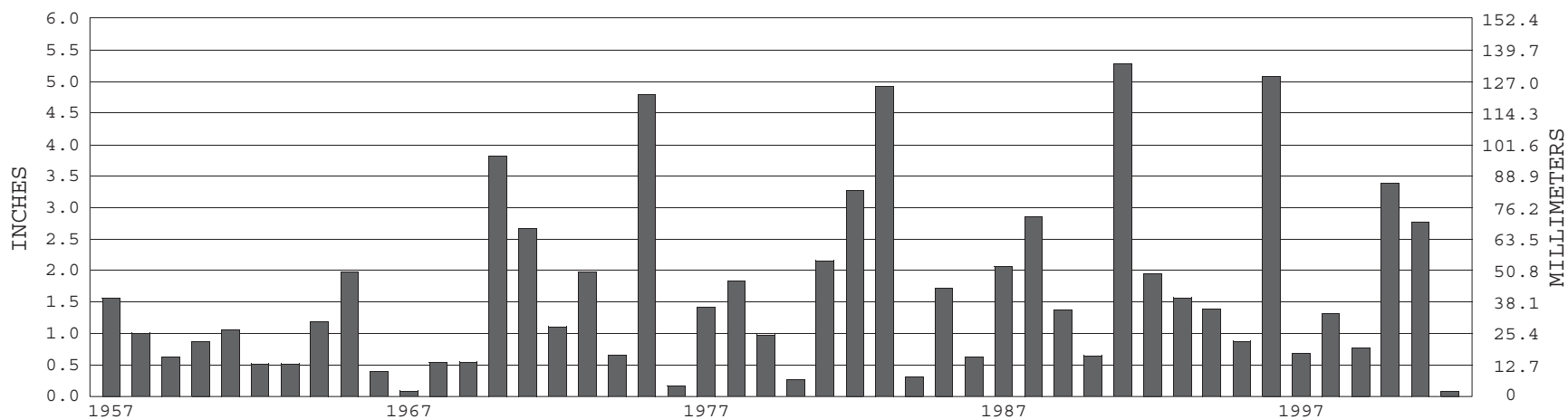
MINNEAPOLIS-ST. PAUL, MN NOVEMBER TEMPERATURES



+ Extreme Max. ● Mean Max. ▲ Mean × Mean Min. ◆ Extreme Min.

Long-Term (1957-2002) Mean: 32.9 1961-1990 Normal: 32.5

MINNEAPOLIS-ST. PAUL, MN NOVEMBER PRECIPITATION



Long-Term (1957-2002) Mean Monthly Total: 1.65

1961-1990 Normal: 1.94



NOVEMBER 2002

MINNEAPOLIS—ST. PAUL, MN

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

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