

MONTHLY CLIMATE DATA

WINNIPEG, MANITOBA

Month: NOVEMBER Year: 1993

	CURRENT		NORMAL	
	VALUE	DATE	VALUE	DATE
Mean Maximum	-1.1		-0.4	
Mean Minimum	-10.0		-9.2	
Mean	-5.6		-4.7	
Extreme Maximum and Date	8.5	16	23.9	1975/1
Extreme Minimum and Date	-21.6	23	-36.7	1875/26
Rainfall (mm)	0.2		5.3	
Snowfall (cm)	22.4		19.0	
Total Precipitation (mm)	20.2		21.2	
Days With Thunder	0		0	
Days With Measurable Precipitation	13		9	
Sunshine Hours	74.4		94.9	
Wind (km/h)	19.2		18.0	
Heating Degree Days Below 18 C	706.4		683.3	
Growing Degree Days Above 5 C	0.0		4.3	
Heating Degree Days Below 0 C	174.2		168.3	
Cooling Degree Days Above 18 C	0.0		0.0	

Highlights of the Month

Although the total snowfall of 22.4 cm was above normal by 3.4 cm, the bulk of it arrived late in the month. In fact, almost half of that total (10.4 cm) fell on the 26th while another 6.4 cm accumulated on 25th and 27th. The lack of snow early in the month helped to boost maximum temperatures to several degrees above freezing between the 11th and 21st. Although temperatures were mild during the middle of the month, the cold temperatures during the last week of November lowered the mean temperature for the month to below normal by almost one degree. This now makes 7 months in a row with below normal temperatures. The depth of snow on the ground at the end of the month was 9cm, which is very near to the long term normal of 8cm. Sunshine hours were 78% of normal while windspeeds were near normal.

WIND SUMMARY
SUMMAIRE DES VENTS

WINNIPEG INT'L AIRPORT

NOVEMBER 1993
PAGE 6

DAY	HOUR ->	DIRECTION																								DIR.	PEAK WIND SPEED	WIND TIME		
		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23					
17	00	W	NW	W	SW	SW	SSW	SSW	SSW	S	S	S	S	S	S	SSW	SSW	S	S	S	S	S	S	S	S	S	S	43	13:50	
18	00	S	S	SSE	S	S	S	S	S	S	SW	C	S	C	SSE	SSW	SSW	SSW	SSW	W	WNW	W	W	WNW	W	WNW	WNW	57	22:42	
19	00	WNW	W	W	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	78	04:02
20	00	SSE	SSE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	WSW	43	22:44
21	00	WSW	WSW	W	WSW	W	W	WNW	WNW	WNW	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	WNW	52	10:58
22	00	N	N	N	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	37	14:20
23	00	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	35	04:55
24	00	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	9	4
25	00	N	NNE	NE	ENE	N	NNE	NNE	NNE	NNE	NE	NNE	NE	NNE	NE	ENE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	N	9	11
26	00	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	N	32	18:28
27	00	N	NNE	N	N	NNE	N	WNW	N	NNE	C	C	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	S	41	23:35
28	00	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	N	41	15:22
29	00	WNW	W	W	WNW	WNW	WNW	WNW	WNW	C	C	WSW	C	C	S	S	S	S	S	S	S	S	S	S	S	S	S	S	57	23:44
30	00	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	69	06:28
EQUAL TO OR OVER		----->																												
NUMBER OF HOURS		----->																												
NUMBER OF DAYS		----->																												
MAX CONSECUTIVE HOURS		----->																												
		10	15	20	25	30	35	40	45	50	55	60	65	70		WINDSPEED IS														
		557	472	362	217	110	58	30	11	1	0	0	0	0		IN KM/HR														
		30	30	28	25	19	9	7	2	1	0	0	0	0																
		91	60	32	29	13	10	7	3	0	0	0	0	0																

DEU POINT SUMMARY
 SUMMAIRE DES TEMPERATURES DE ROSEE

WINNIPEG INT'L AIRPORT

NOVEMBER 1993
 PAGE 4

HOUR->	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
D	-64	-66	-66	-67	-68	-67	-67	-68	-65	-60	-52	-44	-24	-8	-2	10	12	12	5	0	-3	-21	-15	-33	
A	-2	-6	-3	-4	-8	-24	-23	-25	-24	-23	-25	-22	-18	-29	-24	-19	-18	-16	-15	-15	-14	-20	-19	-18	
T	-13	-31	-25	-21	-20	-24	-25	-28	-29	-39	-39	-36	-35	-34	-36	-37	-34	-42	-39	-45	-56	-64	-65	-62	
E	-62	-61	-56	-49	-38	-27	-38	-51	-55	-62	-68	-75	-77	-74	-74	-80	-87	-84	-90	-97	-105	-102	-100	-92	
	-97	-103	-108	-116	-126	-130	-127	-132	-126	-131	-109	-97	-118	-133	-111	-108	-106	-108	-99	-104	-95	-91	-96	-79	
	-83	-91	-112	-129	-135	-130	-134	-140	-146	-126	-102	-89	-84	-89	-87	-76	-72	-68	-65	-66	-69	-73	-71	-72	
	-77	-74	-79	-77	-64	-59	-84	-100	-96	-97	-107	-114	-118	-121	-115	-106	-109	-110	-122	-117	-119	-122	-119	-121	
	-120	-112	-110	-107	-103	-101	-103	-104	-91	-77	-68	-59	-61	-63	-59	-58	-58	-56	-69	-99	-80	-83	-107	-121	
	-126	-146	-145	-138	-152	-136	-110	-101	-100	-89	-71	-59	-61	-70	-59	-81	-84	-92	-90	-101	-96	-105	-119	-135	
	-142	-152	-151	-147	-141	-144	-138	-120	-105	-92	-77	-71	-63	-55	-50	-44	-38	-36	-32	-34	-28	-21	-21	-25	
	-28	-31	-36	-39	-39	-36	-38	-39	-42	-53	-55	-48	-49	-52	-51	-48	-50	-45	-45	-44	-43	-46	-49	-52	
	-50	-51	-53	-58	-60	-60	-62	-62	-63	-59	-51	-39	-33	-33	-36	-40	-36	-35	-38	-40	-43	-47	-50	-54	
	-59	-74	-93	-98	-81	-97	-60	-45	-40	-28	-18	-11	-13	-31	-33	-51	-53	-52	-53	-49	-48	-46	-44	-46	
	-53	-55	-56	-58	-80	-66	-66	-64	-53	-42	-34	-25	-18	-11	-17	-25	-23	-24	-28	-28	-36	-47	-59	-64	
	-79	-87	-90	-88	-80	-75	-74	-72	-63	-56	-45	-39	-30	-37	-33	-31	-27	-27	-25	-25	-26	-27	-27	-26	
	-27	-29	-32	-34	-35	-33	-35	-41	-41	-38	-32	-21	-9	-13	-14	-17	-9	-19	-31	-57	-65	-59	-56	-50	
	-47	-49	-49	-60	-80	-83	-91	-98	-96	-83	-59	-45	-40	-31	-29	-27	-21	-21	-20	-21	-22	-24	-27	-30	
	-32	-33	-32	-31	-29	-31	-32	-28	-29	-29	-24	-18	-15	-11	-8	-10	-18	-11	-19	-16	-16	-16	-16	-16	
	-64	-72	-78	-76	-111	-110	-125	-135	-134	-141	-139	-141	-144	-147	-150	-148	-151	-143	-134	-139	-130	-135	-137	-133	
	-125	-122	-122	-116	-109	-110	-107	-109	-109	-104	-99	-86	-73	-60	-46	-36	-26	-19	-20	-21	-18	-16	-16	-16	
	-16	-18	-18	-16	-16	-15	-18	-19	-28	-56	-88	-141	-150	-161	-177	-190	-202	-200	-212	-207	-200	-188	-178	-176	
	-185	-186	-192	-190	-191	-185	-197	-203	-199	-200	-193	-194	-194	-194	-193	-219	-209	-209	-225	-222	-222	-223	-217	-221	
	-221	-220	-221	-221	-223	-220	-216	-225	-232	-242	-258	-254	-234	-223	-222	-219	-235	-218	-218	-236	-238	-245	-251	-261	
	-259	-248	-243	-249	-244	-236	-240	-233	-226	-215	-199	-186	-183	-180	-194	-215	-207	-201	-197	-192	-172	-164	-163	-156	
	-154	-151	-169	-180	-173	-163	-161	-160	-160	-153	-163	-167	-161	-171	-158	-154	-113	-122	-120	-114	-82	-76	-69	-68	
	-67	-66	-67	-67	-67	-67	-70	-70	-71	-70	-65	-63	-60	-59	-56	-54	-48	-51	-51	-50	-50	-52	-54	-58	
	-59	-60	-60	-59	-58	-85	-75	-69	-82	-70	-51	-66	-61	-62	-59	-67	-104	-115	-119	-119	-122	-122	-120	-116	
	-118	-113	-114	-116	-117	-120	-125	-128	-130	-139	-126	-120	-109	-74	-73	-72	-86	-107	-113	-115	-132	-155	-156	-162	
	-182	-178	-195	-193	-206	-202	-217	-220	-218	-236	-203	-158	-160	-154	-157	-151	-149	-150	-140	-144	-145	-143	-142	-139	
	-140	-138	-126	-109	-105	-95	-90	-86	-80	-75	-70	-67	-65	-60	-57	-55	-54	-48	-42	-36	-31	-32	-35	-43	
MEAN	-92	-94	-97	-97	-99	-98	-98	-99	-98	-96	-90	-85	-82	-81	-80	-81	-81	-81	-82	-85	-84	-85	-88	-89	

MOYENNE

*TEMPERATURES IN TENTHS OF DEGREES CELSIUS
 *TEMPERATURES EN DIXIEME DEGRES CELSIUS

COMPARATIVE RECORDS AT RELEVÉS COMPARATIFS A		WINNIPEG INT'L AIRPORT				MONTH MOIS			NOVEMBER			19 93		
Temperature/Temperature Précipitation/Precipitation Rainfall/hauteur de pluie Snowfall/hauteur de neige Wind speed/Vitesse du vent Station pressure/Pression à la station		- Celsius - Millimètres/millimètres (mm) - Millimètres/millimètres (mm) - Centimètres/centimètres (cm) - Kilomètres/h / Kilomètres h (km/h) - Kilopascals (kPa)		THIS MONTH CE MOIS-CI		PREVIOUS YEAR ANNÉE PRÉCÉDENTE		NORMAL NORMALE	RECORD FOR THE MONTH RECORD POUR LE MOIS			YEARS D'ANNÉES		
		VALUE RELEVÉ	DAY JOUR	VALUE RELEVÉ	DAY JOUR	VALUE RELEVÉ	DAY JOUR		YEAR ANNÉE	VALUE RELEVÉ	DAY JOUR		YEAR ANNÉE	
HIGHEST TEMPERATURE (MAXIMUM) TEMPÉRATURE MAXIMALE		8.5	16	5.1	1			23.9	1	1975		121		
LOWEST TEMPERATURE (MINIMUM) TEMPÉRATURE MINIMALE		-21.6	23	-18.6	15						-36.7	26	1875	121
MEAN MONTHLY TEMPERATURE TEMPÉRATURE MENSUELLE MOYENNE		-5.6		-4.7		-4.7	1.3			1923	-13.9		1896	121
TOTAL MONTHLY RAINFALL HAUTEUR TOTALE MENSUELLE DE PLUIE		0.2		0.6		5.3	62.2			1918	0.0		1933	121
TOTAL MONTHLY SNOWFALL HAUTEUR TOTALE MENSUELLE DE NEIGE		22.4		39.8		19.0	80.3			1955	TR		1928	121
TOTAL MONTHLY PRECIPITATION PRÉCIPITATION TOTALE MENSUELLE		20.2		39.4		21.2	90.2			1955	0.8		1976	121
NO OF DAYS WITH MEASURABLE PRECIPITATION NOMBRE DE JOURS AVEC PRÉCIPITATION MESURABLE		10		12		9	20			1955	1		1976	121
GREATEST RAINFALL IN ONE DAY HAUTEUR DE PLUIE MAXIMALE EN UNE JOURNÉE		0.2	4	0.2	11			44.5	17	1918				121
GREATEST SNOWFALL IN ONE DAY HAUTEUR DE NEIGE MAXIMALE EN UNE JOURNÉE		10.4	26	14.6	10			31.0	10	1919				121
GREATEST PRECIPITATION IN ONE DAY PRÉCIPITATION MAXIMALE EN UNE JOURNÉE		9.4	26	14.6	10			44.5	17	1918				121
MAXIMUM RAINFALL RECORDED IN HAUTEUR DE PLUIE MAXIMALE ENREGISTRÉE EN														
5 MINUTES		0.2	4	0.0	0			1.3	14	1971				40
10 MINUTES		0.2	4	0.0	0			1.8	14	1971				40
15 MINUTES		0.2	4	0.0	0			2.0	14	1971				40
30 MINUTES		0.2	4	0.0	0			2.8	14	1971				40
60 MINUTES		0.2	4	0.2	99			3.8	14	1971				40
24 CONSECUTIVE HOURS HEURES CONSECUTIVES		0.2	4	0.2	99			44.5	17	1918				121
MEAN WIND SPEED (km/h) VITESSE MOYENNE DU VENT (km/h)		19.4		16.6		18.0	25.4			1953	13.7		1972	72
MAXIMUM SPEED (2 min mean) (km/h) VITESSE MAXIMALE (moyenne sur 2 min) (km/h)		S 50	30	S 43	7		NW 80	5	1952					54
MAXIMUM GUST SPEED (km/h) POINTE DU VENT MAXIMALE (km/h)		NW 78	19	N 58	3		NNW124	21	1960					46
TOTAL HOURS OF SUNSHINE TOTAL DES HEURES INSOLATION		74.4		46.5		94.9	139.7			1976	25.1		1944	111
MEAN STATION PRESSURE (kPa) PRESSION MOYENNE À LA STATION (kPa)		98.69		98.91		98.66	99.19			1943	98.20		1949	54
GREATEST STATION PRESSURE (kPa) PRESSION MAXIMALE À LA STATION (kPa)		100.80	17	100.11	19		101.52	20	1978					54
LEAST STATION PRESSURE (kPa) PRESSION MINIMALE À LA STATION (kPa)		96.61	21	96.44	30						94.56	20	1962	54
CLIMATOLOGICAL DATA THIS MONTH FOR THE PAST DONNÉES CLIMATOLOGIQUES CE MOIS-CI POUR LES											YEARS DERNIÈRE ANNÉES			
YEAR ANNÉE	MAXIMUM TEMP MAXIMALE	MINIMUM TEMP MINIMALE	MEAN TEMP MOYENNE	RAINFALL HAUTEUR DE PLUIE	SNOWFALL HAUTEUR DE NEIGE	TOTAL PRECIP TOTALE	MEAN WIND SPEED VITESSE MOYENNE DES VENTS	MAXIMUM WIND SPEED VITESSE MAXIMALE DES VENTS	SUNSHINE HEURES INSOLATION	HEATING DEGRES-JOURS DE CHAUFFE	GROWING DEGRES-JOURS DE CROISSANCE	COOLING DEGRES-JOURS DE REFRIGERATION	SNOWFAL SEPT. 1	
1984	7.9	-20.5	-4.9	17.6	10.2	26.6	16.1	NW 61	110.5	686.2	0.0	0.0	29.8	
1985	9.4	-34.0	-11.9	6.0	44.5	43.8	14.6	NNE 54	113.3	897.3	0.6	0.0	58.7	
1986	6.4	-26.3	-9.6	4.4	47.4	48.4	17.4	NNE 70	107.1	828.8	0.0	0.0	47.4	
1987	14.8	-14.7	-0.8	11.0	1.0	11.2	15.3	S 44	121.6	564.0	6.8	0.0	11.4	
1988	6.7	-21.1	-4.4	1.2	26.4	21.3	15.8	C 48	60.7	671.9	0.0	0.0	39.0	
1989	8.0	-24.5	-7.7	2.0	16.4	17.4	15.9	NW 46	98.1	772.3	0.0	0.0	17.8	
1990	14.2	-21.4	-4.3	13.7	7.8	19.6	17.0	S 44	103.3	668.6	2.0	0.0	9.0	
1991	5.5	-24.0	-8.5	6.8	23.8	29.4	25.3	N 98	103.0	794.7	0.0	0.0	40.6	
1992	5.1	-18.6	-4.7	0.6	39.8	39.4	16.6	S 43	46.5	681.7	0.0	0.0	41.6	
1993	8.5	-21.6	-5.6	0.2	22.4	20.2	19.4	S 50	74.4	706.4	0.0	0.0	26.8	

Note/Aviz 1. Climatological Day/Jourée climatologique 0001 C.S.T. - 2300 C.S.T.
 2. Normal/Normale 1961-1990
 3. Extremes for period of record/Extrêmes pour la période de registre
 4. Maximum rainfall recorded in: may overlap calendar days/hauteur de pluie maximale enregistrée en: peut-être pour plus d'une journée du calendrier
 5. ** indicates most recent occurrence/Indique le plus récent
 6. * indicates first of more than one occurrence/Indique le premier de plusieurs