

Month: DECEMBER Year: 1993

	CURRENT		NORMAL	
	VALUE	DATE	VALUE	DATE
Mean Maximum	-8.6		-9.9	
Mean Minimum	-16.7		-19.4	
Mean	-12.7		-14.6	
Extreme Maximum and Date	0.2	15	11.7	6th/1939
Extreme Minimum and Date	-32.6	26	-47.8	24th/1879
Rainfall (mm)	0.0		1.6	
Snowfall (cm)	15.2		20.1	
Total Precipitation (mm)	13.0		18.6	
Days With Thunder	0		*	
Days With Measurable Precipitation	9		11	
Sunshine Hours	66.7		98.6	
Wind (km/h)	17.9		17	
Heating Degree Days Below 18 C	952.0		1013.7	
Growing Degree Days Above 5 C	0.0		0.0	
Heating Degree Days Below 0 C	112.1		456.1	
Cooling Degree Days Above 18 C	0.0		0.0	

Highlights of the Month

The month of December can be divided into two distinct parts. The first part of the month was mild and dry while the latter part was cold and snowy. The numbers speak for themselves.

	Temperature			Precipitation	
	Maximum	Minimum	Mean	Snow(cm)	Total(mm)
December 1 to 19	-4.7	-11.7	-8.2	5.8	5.8
December 20 to 31	-14.9	-24.7	-19.8	9.4	7.2

Parents with school aged children are well aware that temperatures plunged as soon as the Christmas holidays began. Speaking of Christmas, a search of temperatures on previous Christmases revealed that the mean temperature of -28.2 recorded this year was one of the coldest on record. In fact only two Christmas in the last 50 years (1990 & 1984) were colder. Christmas of 1993 ranks as the 12th coldest since temperature records began in 1872. The bitter cold during the end of the month could not overshadow the mild temperatures during the first 19 days. In the finally tally the mean temperature was above normal by almost 2 degrees. Skies were cloudy during December which was a contributing factor in keeping the minimum temperature well above normal; the mean minimum temperature was closer to 3 degrees above normal. However, sunshine totals were well below normal. The sunshine total of 66.7 hour is only 68% of normal. Snowfall and total precipitation were also below normal.

For those of you that are keeping score, December is the first month since April with a mean temperature that is above normal! On a global scale, November of 1993 was the first month with a mean temperature above normal since Mount Pinatubo erupted in June of 1991.

Happy New Year!

WIND SUMMARY
SUMMAIRE DES VENTS

WINNIPEG INT'L AIRPORT

DECEMBER 1993
PAGE 6

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	DIR.	PEAK WIND SPEED	WIND TIME	
D	N	NNE	NNE	ENE	NNE	N	N	NNE	NNE	NNE	NNE	NNE	NNE	NNE	N	N	N	N	N	N	N	N	N	N				
A	6	7	9	6	9	9	15	19	17	15	17	19	17	19	24	15	17	15	15	20	15	9	11					
Y	N	NW	NW	NW	NW	NW	NW	SSW	W	SSW	WSW	SW	WSW	WSW	SW	SSW	S	S	S	S	S	S	S	S				
O	17	11	13	11	9	6	4	4	7	9	9	13	13	20	20	13	11	17	15	15	22	19	17					
F	SSW	S	W	WSW	SW	WSW	WSW	WSW	WSW	WSW	WSW	W	NW	NW	N	NW	NW	NW	NW	NW	NW	NW	NW					
M	17	17	15	13	15	11	15	11	11	13	13	9	11	17	22	19	17	32	35	33	26	32	33	26			46	
O	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	C	SSW	S	S	S	SSE	SSE	S	S	S	S	S	S			16:58	
N	26	22	19	20	19	17	11	15	11	13	6	0	11	17	15	15	17	24	30	33	32	30	33	35	S	48	23:08	
T	S	S	SSE	SSE	SSE	SE	SE	NE	NE	N	N	N	N	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	N				
H	33	33	33	30	28	24	17	9	13	9	17	19	24	24	33	37	41	41	41	37	30	32	28	26			50	
	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW			17:18	
	26	19	22	15	15	22	15	7	20	11	7	4	4	4	4	4	0	0	0	2	0	4	0	0				
	SSW	W	WSW	W	NW	NW	NW	NW	NW	NW	NW	NW	W	W	W	WSW	SW	WSW	SW	WSW	SW	SSW	SW	S				
	4	4	6	7	11	11	11	11	19	19	19	15	13	15	19	19	11	9	11	19	17	15	11	4	6			
	S	S	S	SSE	SSE	SSE	SE	SE	NE	NE	N	N	N	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	N			69	
	9	13	15	15	13	13	11	13	13	13	15	20	15	17	9	9	13	13	19	44	56	41	32	32	35	N	69	18:50
	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW			00:06	
	28	20	15	11	13	7	15	13	15	7	6	2	6	7	6	4	0	0	0	2	0	4	4	2				
	NW	N	NW	N	N	NNE	NNE	NNE	NNE	N	C	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW				
	6	6	6	6	6	9	9	9	7	4	0	6	6	6	7	11	6	13	13	13	13	13	13	13				
	W	W	W	W	W	W	W	W	WSW	WSW	SW	SW	WSW	W	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	S				
	20	15	15	13	15	15	17	15	20	13	15	15	13	11	13	17	19	17	20	20	20	17	15	20				
	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S				
	22	24	24	24	30	37	41	41	44	46	52	48	41	33	24	13	9	26	54	43	41	43	46	43			57	
	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	W	W	W	WSW	SSW	SSW	S	S	S	S	S	SSW			21:00	
	44	41	37	26	30	28	28	24	22	13	20	17	7	7	7	13	11	13	19	19	19	22	32	32			46	
	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	W	W	W	WSW	SSW	SSW	S	S	S	S	S	SSW			00:31	
	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S				
	32	35	26	28	19	11	9	17	24	17	13	13	17	15	15	15	15	13	11	9	9	9	6	6			33	
	WSW	W	WSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW			00:25	
	4	11	4	0	24	26	28	24	28	28	28	30	30	32	32	32	26	32	28	24	17	13	17	19			41	
	WSW	W	NW	C	NNE	NE	NNE	NE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	N	NNE	N	N	NNE	NNE	N	N			13:02	

EQUAL TO OR OVER	10	15	20	25	30	35	40	45	50	55	60	65	70	WINDSPEED IS
NUMBER OF HOURS	566	452	286	159	110	49	32	10	4	1	0	0	0	
NUMBER OF DAYS	30	30	27	19	14	10	6	3	3	1	0	0	0	
MAX CONSECUTIVE HOURS	82	57	29	18	17	12	8	3	0	0	0	0	0	

WINDSPEED IS
IN KM/HR

DEU POINT SUMMARY
 SUMMAIRE DES TEMPERATURES DE ROSEE

WINNIPEG INT'L AIRPORT

DECEMBER 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 1	-38	-34	-27	-27	-24	-23	-25	-25	-24	-24	-20	-17	-17	-20	-21	-24	-22	-19	-17	-34	-33	-35	-54	-61	-28
A 2	-65	-71	-72	-70	-72	-73	-76	-81	-84	-86	-88	-90	-92	-88	-86	-83	-78	-77	-79	-85	-86	-87	-92	-97	-82
T 3	-100	-105	-112	-130	-146	-149	-147	-141	-134	-137	-127	-124	-107	-100	-92	-88	-85	-74	-73	-69	-62	-61	-60	-62	-104
E 4	-64	-71	-83	-76	-67	-74	-81	-86	-85	-82	-78	-77	-73	-60	-50	-39	-32	-32	-32	-36	-37	-34	-33	-36	-59
5	-42	-39	-34	-32	-33	-39	-37	-35	-33	-35	-41	-43	-38	-30	-27	-30	-57	-78	-90	-109	-114	-119	-137	-138	-59
6	-149	-148	-134	-125	-134	-143	-143	-152	-156	-162	-150	-142	-134	-132	-127	-129	-137	-140	-146	-151	-159	-156	-170	-167	-145
7	-171	-164	-138	-127	-122	-119	-123	-131	-142	-141	-136	-135	-126	-117	-118	-116	-120	-122	-127	-139	-146	-148	-145	-149	-134
8	-159	-162	-163	-165	-167	-166	-166	-161	-157	-156	-144	-138	-122	-111	-96	-86	-87	-89	-94	-110	-124	-128	-119	-125	-133
9	-126	-144	-157	-158	-159	-170	-184	-183	-184	-179	-174	-161	-143	-136	-134	-135	-140	-135	-136	-137	-147	-158	-172	-183	-156
10	-188	-199	-200	-212	-220	-264	-265	-274	-278	-273	-256	-244	-241	-236	-228	-225	-227	-241	-245	-239	-243	-242	-239	-244	-238
11	-237	-235	-237	-231	-224	-215	-209	-208	-199	-194	-184	-169	-162	-149	-131	-134	-132	-130	-124	-118	-112	-106	-102	-98	-168
12	-92	-85	-78	-73	-79	-82	-86	-85	-86	-88	-83	-80	-78	-76	-72	-71	-68	-69	-68	-64	-67	-68	-70	-74	-77
13	-75	-82	-92	-99	-95	-96	-101	-97	-97	-97	-88	-77	-71	-66	-66	-67	-64	-56	-53	-58	-61	-64	-72	-76	-78
14	-83	-107	-126	-139	-125	-118	-112	-140	-135	-127	-124	-114	-112	-92	-86	-77	-72	-68	-68	-70	-73	-74	-74	-69	-99
15	-67	-61	-60	-56	-52	-50	-50	-50	-48	-45	-40	-37	-32	-29	-25	-20	-21	-19	-28	-30	-33	-41	-44	-44	-41
16	-52	-84	-73	-71	-78	-84	-77	-54	-71	-77	-59	-49	-53	-52	-48	-45	-45	-45	-45	-44	-47	-47	-47	-49	-58
17	-42	-39	-36	-33	-41	-41	-45	-44	-41	-37	-31	-29	-27	-27	-24	-24	-23	-23	-24	-27	-42	-43	-44	-40	-34
18	-65	-60	-58	-58	-76	-61	-62	-65	-62	-63	-61	-51	-51	-50	-49	-47	-43	-42	-42	-39	-38	-44	-42	-44	-53
19	-44	-46	-59	-63	-66	-65	-66	-68	-68	-66	-62	-58	-55	-45	-44	-53	-55	-61	-109	-127	-137	-148	-159	-176	-79
20	-187	-194	-204	-209	-241	-239	-250	-251	-253	-252	-248	-233	-228	-219	-211	-208	-199	-194	-188	-188	-182	-174	-160	-152	-211
21	-148	-139	-136	-131	-129	-125	-123	-121	-122	-121	-121	-118	-115	-129	-138	-146	-154	-159	-170	-175	-179	-180	-180	-180	-141
22	-183	-189	-233	-226	-233	-235	-234	-236	-252	-288	-290	-282	-268	-258	-248	-244	-238	-238	-225	-219	-236	-233	-214	-215	-238
23	-218	-218	-218	-214	-219	-235	-248	-254	-269	-280	-280	-268	-264	-252	-247	-242	-238	-239	-238	-233	-249	-251	-254	-245	-245
24	-256	-265	-270	-261	-256	-248	-238	-230	-224	-211	-203	-190	-187	-178	-169	-173	-173	-178	-166	-229	-257	-276	-289	-305	-226
25	-314	-326	-336	-344	-338	-352	-357	-358	-346	-352	-344	-340	-328	-322	-313	-309	-311	-313	-315	-320	-316	-317	-329	-337	-331
26	-340	-350	-352	-365	-359	-364	-364	-360	-361	-364	-354	-345	-337	-323	-325	-323	-319	-308	-306	-313	-316	-317	-326	-329	-338
27	-326	-331	-327	-332	-332	-329	-334	-334	-339	-345	-342	-332	-320	-306	-305	-305	-305	-301	-301	-290	-286	-288	-292	-296	-317
28	-292	-301	-299	-291	-291	-284	-277	-271	-264	-252	-246	-243	-235	-216	-198	-183	-165	-145	-143	-157	-171	-184	-193	-220	-230
29	-244	-240	-244	-247	-249	-251	-252	-264	-272	-276	-271	-270	-266	-255	-250	-243	-246	-254	-258	-255	-257	-239	-223	-220	-252
30	-208	-202	-196	-182	-171	-149	-128	-109	-107	-109	-106	-100	-97	-87	-82	-72	-74	-82	-89	-95	-99	-104	-95	-91	-118
31	-94	-71	-66	-71	-84	-96	-108	-110	-120	-132	-153	-167	-174	-179	-178	-179	-190	-189	-232	-247	-260	-277	-285	-295	-165

MEAN -151 -154 -155 -155 -157 -159 -160 -161 -162 -163 -158 -152 -147 -140 -135 -133 -133 -133 -133 -136 -142 -147 -150 -152 -156 -150
 MOYENNE

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

COMPARATIVE RECORDS AT RELEVÉS COMPARATIFS A		WINNIPEG INT'L AIRPORT				MONTH MOIS DECEMBER 93							
Temperature/Température Precipitation/Précipitation Rainfall/Hauteur de pluie Snowfall/Hauteur de neige Wind speed/Vitesse du vent Station pressure/Pression à la station		THIS MONTH CE MOIS-CI		PREVIOUS YEAR ANNÉE PRÉCÉDENTE		NORMAL NORMALE	RECORD FOR THE MONTH RECORD POUR LE MOIS					RECORD FOR THE MONTH RECORD POUR LE MOIS	
- ° Celsius - Millimètres/millimètres (mm) - Centimètres/millimètres (cm) - Kilomètres/h / Kilomètres/h (km/h) - Kilo Pascals (kPa)		VALUE RELEVÉ	DAY JOUR	VALUE RELEVÉ	DAY JOUR		HIGHEST EVER MAXIMUM ABSOLU			LOWEST EVER MINIMUM ABSOLU			
						VALUE RELEVÉ	DAY JOUR	YEAR ANNÉE	VALUE RELEVÉ	DAY JOUR	YEAR ANNÉE		
HIGHEST TEMPERATURE (MAXIMUM) TEMPÉRATURE MAXIMALE		0.2	15	0.5	1	11.7	6	1939				121	
LOWEST TEMPERATURE (MINIMUM) TEMPÉRATURE MINIMALE		-32.6	26	-33.9	26				-47.8	24	1879	121	
MEAN MONTHLY TEMPERATURE TEMPÉRATURE MENSUELLE MOYENNE		-12.7		-16.6		-14.6	-3.4	1877	-25.9		1879	121	
TOTAL MONTHLY RAINFALL HAUTEUR TOTALE MENSUELLE DE PLUIE		TR		TR		1.6	23.4	1877	0.0		1990	121	
TOTAL MONTHLY SNOWFALL HAUTEUR TOTALE MENSUELLE DE NEIGE		15.2		40.4		20.1	101.3	1909	0.5		1877	121	
TOTAL MONTHLY PRECIPITATION PRÉCIPITATION TOTALE MENSUELLE		13.0		29.2		18.6	101.3	1909	2.5		1892	121	
NO OF DAYS WITH MEASURABLE PRECIPITATION NOMBRE DE JOURS AVEC PRÉCIPITATION MESURABLE		9		15		11	17	1955	2		SVRL	121	
GREATEST RAINFALL IN ONE DAY HAUTEUR DE PLUIE MAXIMALE EN UNE JOURNÉE		TR	99	TR	16	21.8	2	1982				121	
GREATEST SNOWFALL IN ONE DAY HAUTEUR DE NEIGE MAXIMALE EN UNE JOURNÉE		3.4	28	14.8	13	30.5	26	1916				121	
GREATEST PRECIPITATION IN ONE DAY PRÉCIPITATION MAXIMALE EN UNE JOURNÉE		2.8	3	12.2	13	30.5	26	1916				121	
MAXIMUM RAINFALL RECORDED IN HAUTEUR DE PLUIE MAXIMALE ENREGISTRÉE EN													
5 MINUTES		TR	SVRL	TR	16	2.0	2	1982				40	
10 MINUTES		TR	SVRL	TR	16	3.8	2	1982				40	
15 MINUTES		TR	SVRL	TR	16	4.0	2	1982				40	
30 MINUTES		TR	SVRL	TR	16	4.3	2	1982				40	
60 MINUTES		TR	SVRL	TR	16	7.8	2	1982				40	
24 CONSECUTIVE HOURS HEURES CONSECUTIVES		TR	SVRL	TR	16	15.2	22	1877				121	
MEAN WIND SPEED (km/h) VITESSE MOYENNE DU VENT (km/h)		17.9		19.2		17.0	24.6	1943	12.5		1978	72	
MAXIMUM SPEED (2 min mean) (km/h) VITESSE MAXIMALE (moyenne sur 2 min.) (km/h)		N 56	24	WNW 63	25	NW 74	0	SVRL				54	
MAXIMUM GUST SPEED (km/h) POINTE DU VENT MAXIMALE (km/h)		N 69	24	WNW 82	24	NW100	11	1946				46	
TOTAL HOURS OF SUNSHINE TOTAL DES HEURES INSOLATION		66.7		81.6		98.6	141.8	1989	31.7		1920	111	
MEAN STATION PRESSURE (kPa) PRESSION MOYENNE À LA STATION (kPa)		98.61		98.86		98.79	99.26	1983	98.29		1953	54	
GREATEST STATION PRESSURE (kPa) PRESSION MAXIMALE À LA STATION (kPa)		100.35	27	101.41	28	101.77	8	1982				54	
LEAST STATION PRESSURE (kPa) PRESSION MINIMALE À LA STATION (kPa)		96.34	12	96.26	1				94.71	17	1967	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 TEMP MOYENNE	RAINFALL HAUTEUR DE PLUIE	SNOWFALL HAUTEUR DE NEIGE	TOTAL PRECP TOTALE	MEAN WIND SPEED VITESSE MOYENNE DES VENTS	MAXIMUM WIND SPEED VITESSE MAXIMALE DES VENTS	SUNSHINE HEURES INSOLATION	HEATING DEGREES-DAYS DEGREES-JOURS DE CHAUFFE	CROWING DEGREES-DAYS DEGREES-JOURS DE CHOISSANCE	COOLING DEGREES-DAYS DEGREES-JOURS DE REFRIGERATION	SNOWFAL SEPT. 1
1984	3.4	-34.5	-17.6	0.0	25.6	22.3	17.0	NNW 50	93.2	1102.8	0.0	0.0	55.4
1985	2.6	-31.9	-14.0	TR	15.9	14.0	15.2	NNW 54	108.4	1107.0	0.0	0.0	74.6
1986	1.5	-25.7	-10.1	0.2	7.0	6.4	18.4	NW 46	113.6	869.8	0.0	0.0	54.4
1987	3.6	-25.8	-8.2	5.8	10.2	14.6	14.2	N 43	62.9	811.5	0.0	0.0	21.6
1988	6.5	-30.4	-12.8	TR	26.7	22.5	17.2	S 37	100.3	955.3	0.0	0.0	65.7
1989	4.3	-37.0	-19.8	0.2	19.8	17.0	14.6	NNW 48	141.8	1172.2	0.0	0.0	37.6
1990	5.4	-35.3	-16.4	0.0	27.1	24.1	18.1	S 52	119.3	1064.0	0.0	0.0	36.1
1991	3.0	-30.8	-10.9	0.8	31.2	32.0	25.6	WNW 67	84.5	896.2	0.0	0.0	71.8
1992	0.5	-33.9	-16.6	TR	40.4	29.2	19.2	WNW 63	81.6	1070.7	0.0	0.0	82.0
1993	0.2	-32.6	-12.7	TR	15.2	13.0	17.9	N 56	66.7	952.0	0.0	0.0	42.0

Notes/Avts
 1. Climatological Day/Journee climatologique 0001 C.S.T. - 2300 C.S.T.
 2. Normal/Normale 1981-1980
 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