

MONTHLY METEOROLOGICAL SUMMARY SOMMAIRE MÉTÉOROLOGIQUE MENSUEL

MONTH/MOIS

DECEMBER / DÉCEMBRE

19 91

AT/A WINNIPEG INT'L AIRPORT / AÉROPORT INTERN. DE WINNIPEG

LAT: 49° 54' N		LONG: 97° 14' W		ELEVATION ALTITUDE: 239.6		METRES (ASL) MÉTRES (NMM)		STANDARD TIME USED: CENTRAL									
DATE	TEMPERATURE TEMPERATURE			DEGREE-DAYS DEGRÉS-JOURS			REL. HUMIDITY HUMIDITÉ REL.		PRECIPITATION PRÉCIPITATIONS			WIND VENT		BRIGHT SUNSHINE INSOLATION EFFECTIVE			
	MAXIMUM MAXIMALE	MINIMUM MINIMALE	MEAN MOYENNE	HEATING DE CHAUFFE	GROWING DE CROISSANCE	COOLING DE RÉFRIGÉRATION	MAXIMUM MAXIMALE	MINIMUM MINIMALE	THUNDERSTORM ORAGE	RAINFALL PLUIE (HAUTEUR)	SNOWFALL NEIGE (HAUTEUR)	TOTAL PRECIP. TOTALE	SNOW ON GROUND NEIGE AU SOL		AVERAGE SPEED VITESSE MOYENNE	PREVAILING DIRECTION DIRECTION DOMINANTE	MAX 2 MIN MEAN SPEED & DIRECTION VITESSE MOYENNE MAX. SUR 2 MIN & DIRECTION
	°C	°C	°C	BASE 18.0°C	BASE 5.0°C	BASE 18.0°C	%	%		mm	cm	mm	cm		km/h		km/h
1	-7.9	-25.5	-16.7	34.7			87	38			0.6	0.6	9	26.8	NW	WNW65	6.1
2	-16.2	-23.8	-20.0	38.0			72	46			2.0	2.0	9	30.8	E	E 43	0.0
3	-20.6	-28.2	-24.4	42.4			69	50			0.8	0.8	10	28.1	NNW	NNW41	6.6
4	-23.5	-29.7	-26.6	44.6			70	53					10	8.5	W	W 15*	0.0
5	-18.5	-24.1	-21.3	39.3			74	60			1.8	1.8	11	8.6	E	E 20	4.2
6	-11.9	-23.3	-17.6	35.6			84	67			12.4	12.4	11	19.3	SE	ESE41	0.0
7	-9.6	-20.6	-15.1	33.1			87	71		TR.	0.4	0.4	21	20.6	S	WNW33	0.3
8	-9.1	-12.7	-10.9	28.9			90	80			1.0	1.0	19	15.3	NW	NNE30*	0.0
9	-5.9	-14.4	-10.2	28.2			96	85		0.2	TR.	0.2	18	24.7	S	S 56	1.2
10	0.3	-6.0	-2.9	20.9			87	68					17	32.5	WSW	S 41*	7.1
11	0.8	-6.5	-2.9	20.9			77	62					16	33.1	SSW	SSW46	2.3
12	0.5	-14.1	-6.8	24.8			88	70					15	24.7	W	SSW41	4.8
13	-8.0	-17.2	-12.6	30.6			92	83			9.2	9.2	15	27.3	NNE	NNE56*	0.0
14	-17.2	-26.7	-22.0	40.0			75	48			0.4	0.4	24	24.0	W	NW 50	6.9
15	-12.7	-30.8	-21.8	39.8			81	62			TR.	TR.	24	21.4	S	S 37	0.0
16	-1.3	-12.8	-7.1	25.1			90	78			0.4	0.4	24	23.3	W	WNW67	0.9
17	-7.0	-26.0	-16.5	34.5			87	62			0.4	0.4	24	20.5	NW	NNW41	7.1
18	-13.7	-26.7	-20.2	38.2			76	49			TR.	TR.	24	38.4	S	S 59*	3.1
19	-1.8	-14.3	-8.1	26.1			98	70		0.6	1.2	1.8	24	54.3	S	S 65	1.9
20	-1.0	-8.0	-4.5	22.5			95	63			TR.	TR.	24	27.6	WSW	S 44	6.8
21	3.0	-10.8	-3.9	21.9			85	64					19	30.3	S	S 50	1.4
22	2.1	-7.3	-2.6	20.6			80	62					19	29.7	W	SW 39	1.8
23	-4.5	-13.4	-9.0	27.0			89	71					17	15.5	W	W 28	5.3
24	-3.1	-8.7	-5.9	23.9			87	64					12	19.0	W	S 30	4.6
25	-2.1	-9.3	-5.7	23.7			92	73					12	22.9	S	S 41	7.4
26	-4.4	-11.6	-8.0	26.0			97	80		TR.	TR.	TR.	11	16.5	S	N 35	4.7
27	-4.3	-8.1	-6.2	24.2			96	91		TR.		TR.	11	42.2	S	S 54	0.0
28	-3.5	-5.3	-4.4	22.4			95	89			0.4	0.4	11	45.7	S	S 57	0.0
29	-0.1	-3.8	-2.0	20.0			98	86		TR.	0.2	0.2	11	15.3	SE	S 31	0.0
30	-0.2	-1.4	-0.8	18.8			98	87		TR.	TR.	TR.	11	23.8	SSE	SSE28*	0.0
31	0.6	-3.5	-1.5	19.5			100	87		TR.	TR.	TR.	10	24.3	S	S 31*	0.0
MEAN MOYENNE	-6.5	-15.3	-10.9	TOTAL 896.2	TOTAL	TOTAL	87	68	TOT 0	TOTAL 0.8	TOTAL 31.2	TOTAL 32.0		25.6	PREVAILING DIRECTION DOMINANTE S	MAXIMALE WNW67	TOTAL 84.5
NORMAL NORMALE	-9.4	-18.6	-14.0	991.8	0.0	0.0			0	0.9	20.7	19.2		18.6	S		92.6

DEGREE-DAY SUMMARY/SOMMAIRE DE DEGRÉS JOURS

DAYS WITH TOTAL PRECIPITATION / JOURS AVEC PRÉCIPITATIONS TOTALES

DAYS WITH SNOWFALL / JOURS AVEC CHÛTE DE NEIGE TOTALES

mm cm

02 OR MORE / 10 OR MORE / 20 OR MORE / 100 OR MORE / 500 OR MORE

02 OR MORE / 10 OR MORE / 20 OR MORE / 100 OR MORE / 500 OR MORE

OU PLUS / OU PLUS / OU PLUS / OU PLUS / OU PLUS

15 7 4 1 0 14 6 3 1 0

15 7 4 1 0 14 6 3 1 0

UDC 551.506.1 ()

Note/Avis 1. Climatological Day/Journée climatologique 00 01 C S.T. — 00 00 C S.T.

2. Normal/Normale 1951-1980

3. TR = Trace

4. M = Missing/Manquant

5. No entry/Pas de valeur = No occurrence/Pas d'événement

6. * Indicates first of more than one prevailing direction and/or maximum 2 minute mean speed (see page 4)/Indique la première de plusieurs des directions dominantes et/ou la vitesse moyenne maximale sur 2 minutes (voir page 4).

7. C = Calm/Calm

8. Price: single issue \$3.00 ; annual (Jan to Dec.) \$29.50 /Prix: numéro individuel \$3.00 ; annuel (janv à dec.) \$29.50



COMPARATIVE RECORDS AT: RELEVÉS COMPARATIFS À:		WINNIPEG INTERNATIONAL AIRPORT AÉROPORT INTERN. DE WINNIPEG				MONTH MOIS	DECEMBER DÉCEMBRE			19	91					
Temperature/Température — ° Celsius Precipitation/Précipitation — Millimètres/millimètres (mm) Rainfall/Hauteur de pluie — Millimètres/millimètres (mm) Snowfall/Hauteur de neige — Centimètres/centimètres (cm) Wind speed/Vitesse du vent — Kilomètres/h / kilomètres/h (km/h) Station pressure/Pression à la station — Kilopascals (kPa)	THIS MONTH CE MOIS-CI		PREVIOUS YEAR ANNÉE PRÉCÉDENTE		NORMAL NORMALE	RECORD FOR THE MONTH RECORD POUR LE MOIS										
	VALUE RELEVÉ	DAY JOUR	VALUE RELEVÉ	DAY JOUR		VALUE RELEVÉ	DAY JOUR	YEAR ANNÉE	VALUE RELEVÉ	DAY JOUR	YEAR ANNÉE	NO. OF YEARS # D'ANNÉES				
HIGHEST TEMPERATURE (MAXIMUM) TEMPÉRATURE MAXIMALE	3.0	21	5.4	8		11.7	6	1939				120				
LOWEST TEMPERATURE (MINIMUM) TEMPÉRATURE MINIMALE	-30.8	15	-35.3	30					-47.8	24	1879	120				
MEAN MONTHLY TEMPERATURE TEMPÉRATURE MENSUELLE MOYENNE	-10.9		-16.4		-14.0	-3.4		1877	-25.9		1879	120				
TOTAL MONTHLY RAINFALL HAUTEUR TOTALE MENSUELLE DE PLUIE	0.8		0.0		0.9	23.4		1877	0.0		1990*	120				
TOTAL MONTHLY SNOWFALL HAUTEUR TOTALE MENSUELLE DE NEIGE	31.2		27.1		20.7	101.3		1909	0.5		1877	120				
TOTAL MONTHLY PRECIPITATION PRÉCIPITATION TOTALE MENSUELLE	32.0		24.1		19.2	101.3		1909	2.5		1892	120				
NO OF DAYS WITH MEASURABLE PRECIPITATION NOMBRE DE JOURS AVEC PRÉCIPITATION MESURABLE	15		13		11	17		1955*	2		SEV	120				
GREATEST RAINFALL IN ONE DAY HAUTEUR DE PLUIE MAXIMALE EN UNE JOURNÉE	0.6	19	0.0			21.8	2	1982				120				
GREATEST SNOWFALL IN ONE DAY HAUTEUR DE NEIGE MAXIMALE EN UNE JOURNÉE	12.4	6	9.6	11		30.5	26	1916				120				
GREATEST PRECIPITATION IN ONE DAY PRÉCIPITATION MAXIMALE EN UNE JOURNÉE	12.4	6	9.6	11		30.5	26	1916				120				
MAXIMUM RAINFALL RECORDED IN: HAUTEUR DE PLUIE MAXIMALE ENREGISTRÉE EN:																
5 MINUTES						2.0	2	1982				39				
10 MINUTES						3.8	2	1982				39				
15 MINUTES						4.0	2	1982				39				
30 MINUTES						4.3	2	1982				39				
60 MINUTES						7.8	2	1982				39				
24 CONSECUTIVE HOURS HEURES CONSÉCUTIVES	0.6	19	0.0			15.2	22	1877				120				
MEAN WIND SPEED (km/h) VITESSE MOYENNE DU VENT (km/h)	25.6		18.1		18.6	25.6		1991	12.5		1978	71				
MAXIMUM SPEED (2 min. mean) (km/h) VITESSE MAXIMALE (moyenne sur 2 min.) (km/h)	WNW67	16	S 52	4*		NW74		SEV				53				
MAXIMUM GUST SPEED (km/h) POINTE DU VENT MAXIMALE (km/h)	WNW98	1	S 80	27		NW100	11	1946				45				
TOTAL HOURS OF SUNSHINE TOTAL DES HEURES D'INSOLATION	84.5		119.3		92.6	141.8		1989	31.7		1920	110				
MEAN STATION PRESSURE (kPa) PRESSION MOYENNE À LA STATION (kPa)	98.71		98.87		98.77	99.26		1983	98.29		1953	53				
GREATEST STATION PRESSURE (kPa) PRESSION MAXIMALE À LA STATION (kPa)	100.61	18	100.55	21		101.77	8	1982				53				
LEAST STATION PRESSURE (kPa) PRESSION MINIMALE À LA STATION (kPa)	96.71	6	96.79	5					94.71	17	1967	53				
CLIMATOLOGICAL DATA THIS MONTH FOR THE PAST DONNÉES CLIMATOLOGIQUES CE MOIS-CI POUR LES												TEN / DIX		YEARS DERNIÈRE ANNÉES		(10)
YEAR ANNÉE	MAXIMUM TEMP MAXIMALE	MINIMUM TEMP MINIMALE	MEAN TEMP. MOYENNE	RAINFALL HAUTEUR DE PLUIE	SNOWFALL HAUTEUR DE NEIGE	TOTAL PRECIP. PRÉCIP. TOTALE	MEAN WIND SPEED VITESSE MOYENNE DES VENTS	MAXIMUM WIND SPEED VITESSE MAXIMALE DES VENTS	SUNSHINE HEURES INSOLATION	HEATING DEGREES-DAYS DEGRÉS-JOURS DE CHAUFFE	GROWING DEGREE-DAYS DEGRÉS-JOURS DE CROISSANCE	COOLING DEGREE-DAYS DEGRÉS-JOURS DE RÉFRIGÉRATION				
1982	9.7	-25.6	-9.9	22.2	12.2	31.7	16.7	S 44	70.5	862.7	0.4					
1983	-8.3	-33.0	-20.2	0.0	8.8	5.7	13.9	N 46	138.6	1187.8						
1984	3.4	-34.5	-17.6	0.0	25.6	22.3	17.0	NNW 50	93.2	1102.8						
1985	2.6	-31.9	-14.0	Tr.	15.9	14.0	15.2	NNW 54	108.4	1107.0						
1986	1.5	-25.7	-10.1	0.2	7.0	6.4	18.4	NW 46	113.6	869.8						
1987	3.6	-25.8	-8.2	5.8	10.2	14.6	14.2	N 43	62.9	811.5						
1988	6.5	-30.4	-12.8	Tr.	26.7	22.5	17.2	S 37	100.3	955.3						
1989	4.3	-37.0	-19.8	0.2	19.8	17.0	14.6	NNW 48	141.8	1172.2						
1990	5.4	-35.3	-16.4	0.0	27.1	24.1	18.1	S 52	119.3	1064.0						
1991	3.0	-30.8	-10.9	0.8	31.2	32.0	25.6	WNW 67	84.5	896.2						

Note/Aviz 1. Climatological Day/Journée climatologique 00 01 C S.T. - 00 00 C S.T.
 2. Normal/Normale 1951-1980
 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

DRY-BULB TEMPERATURES AT:
 TEMPERATURES DU THERMOMETRE SEC A:

WINNIPEG INTERNATIONAL AIRPORT
 AEROPORT INTERN. DE WINNIPEG

MONTH: DECEMBER
 MOIS: DECEMBRE 1991

Date	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-92	-139	-170	-184	-197	-206	-212	-224	-231	-232	-234	-238	-236	-236	-236	-238	-245	-249	-251	-250	-252	-252	-250	-243
2	-238	-232	-227	-226	-228	-223	-218	-212	-206	-202	-196	-187	-178	-168	-164	-163	-165	-169	-174	-176	-181	-193	-193	-198
3	-206	-209	-210	-211	-213	-215	-213	-219	-222	-225	-233	-239	-238	-235	-235	-242	-247	-255	-257	-265	-273	-269	-278	-277
4	-275	-282	-280	-277	-277	-281	-286	-288	-290	-283	-275	-264	-256	-255	-247	-249	-254	-264	-259	-268	-242	-243	-237	-235
5	-236	-229	-228	-225	-224	-221	-217	-215	-221	-219	-207	-200	-189	-196	-198	-202	-204	-205	-204	-215	-219	-225	-230	-233
6	-230	-218	-212	-210	-206	-195	-189	-185	-177	-174	-166	-157	-150	-140	-134	-127	-123	-123	-121	-120	-122	-125	-128	-131
7	-136	-141	-150	-163	-177	-177	-183	-196	-198	-192	-170	-146	-142	-141	-138	-133	-127	-125	-119	-119	-116	-113	-107	-99
8	-97	-94	-91	-107	-110	-113	-121	-120	-123	-123	-120	-116	-113	-108	-104	-103	-101	-104	-104	-102	-101	-101	-98	-97
9	-94	-91	-97	-95	-98	-99	-99	-101	-118	-135	-137	-121	-112	-113	-107	-99	-90	-82	-72	-72	-72	-71	-68	-62
10	-59	-46	-9	-3	0	-18	-25	-25	-32	-38	-28	-18	-5	-3	0	-2	-8	-12	-11	-24	-25	-28	-33	-24
11	-37	-36	-46	-61	-54	-63	-51	-47	-43	-36	-33	-30	-26	-48	-14	-10	-10	-14	-9	4	5	0	-4	-2
12	2	3	-11	-16	-21	-23	-28	-29	-34	-41	-42	-32	-27	-26	-36	-48	-63	-73	-89	-98	-92	-101	-112	-134
13	-134	-136	-130	-123	-116	-106	-106	-106	-104	-101	-96	-86	-86	-98	-119	-126	-137	-137	-143	-152	-157	-162	-163	-168
14	-172	-181	-187	-192	-203	-205	-212	-221	-230	-239	-235	-226	-219	-210	-206	-210	-216	-226	-232	-238	-236	-231	-253	-256
15	-265	-262	-261	-271	-270	-286	-299	-295	-296	-305	-285	-257	-239	-228	-210	-203	-198	-194	-188	-188	-168	-157	-145	-137
16	-127	-121	-117	-116	-115	-113	-111	-109	-106	-103	-96	-87	-84	-77	-66	-55	-51	-45	-39	-23	-17	-17	-17	-40
17	-65	-85	-105	-111	-103	-125	-140	-154	-167	-192	-180	-185	-179	-176	-177	-183	-195	-208	-230	-245	-244	-249	-243	-246
18	-238	-249	-249	-255	-248	-240	-238	-237	-237	-231	-215	-208	-198	-183	-177	-166	-155	-151	-152	-152	-141	-138	-141	-139
19	-141	-136	-134	-127	-120	-116	-109	-103	-97	-95	-90	-83	-72	-61	-46	-33	-25	-21	-25	-23	-23	-22	-20	-19
20	-19	-14	-14	-25	-43	-53	-49	-59	-51	-55	-53	-38	-28	-20	-18	-26	-27	-33	-43	-47	-51	-60	-67	-70
21	-80	-76	-94	-104	-94	-81	-83	-89	-90	-80	-65	-50	-21	-20	-2	5	12	25	22	24	16	17	10	11
22	9	9	2	4	1	5	2	3	7	8	3	6	0	-3	-4	2	-7	-17	-32	-51	-55	-62	-64	-64
23	-67	-107	-109	-112	-98	-105	-127	-127	-121	-122	-113	-93	-66	-80	-81	-75	-79	-86	-82	-86	-61	-54	-49	-49
24	-60	-58	-58	-52	-57	-59	-60	-75	-79	-76	-68	-66	-66	-55	-36	-35	-61	-65	-68	-66	-75	-76	-76	-76
25	-75	-74	-65	-65	-71	-65	-68	-68	-64	-67	-55	-50	-41	-33	-23	-23	-25	-41	-62	-84	-77	-66	-73	-72
26	-63	-63	-54	-45	-68	-87	-108	-107	-106	-103	-102	-97	-85	-80	-78	-91	-97	-94	-94	-89	-88	-87	-88	-84
27	-78	-79	-72	-67	-64	-69	-68	-68	-67	-67	-63	-61	-56	-53	-51	-47	-47	-49	-51	-50	-48	-46	-46	-45
28	-44	-43	-41	-37	-36	-36	-35	-37	-40	-43	-45	-46	-45	-50	-52	-49	-50	-50	-49	-49	-45	-41	-39	-36
29	-35	-36	-38	-33	-33	-31	-30	-25	-21	-18	-14	-13	-13	-10	-8	-6	-4	-4	-3	-3	-3	-6	-8	-10
30	-10	-11	-11	-10	-11	-10	-10	-10	-12	-13	-13	-13	-13	-11	-9	-7	-6	-5	-5	-3	-3	-3	-3	-3
31	-2	1	3	3	4	3	2	1	1	1	1	2	4	5	2	4	2	-4	-7	-14	-18	-23	-26	-33

Note/avis: 1. Climatological Day/Journee climatologique 0001 C.S.T. - 0000 C.S.T.
 2. Hours are C.S.T./Les heures sont a l'heure normale de la localite
 3. Unit/Unite = 0.1°C

WINDS (km/h) AT:
DES VENTS (km/h) A:

WINNIPEG INTERNATIONAL AIRPORT
AEROPORT INTERN. DE WINNIPEG

MONTH: DECEMBER 1991
MOIS: DECEMBRE 1991

Date	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Peak Gust Rafale Max	Hour/Date Heure/Date	
1	SW	WNW	NW	WNW	NW	NW	WNW	NW	WNW	NW	WNW	NW	NW	NW	WNW	WNW	W	C	C	S	SE	SE	ESE	ESE	WNW	0043	
2	E	E	ESE	E	E	E	E	E	E	E	E	E	E	E	E	ENE	ENE	NE	NNE	NNE	NNE	N	N	N	NNW	E	0659
3	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NW	NNW	NW	NW	NW	WNW	WNW	WNW	NW	NW	WNW	WNW	W	NNW	0040	
4	W	W	W	W	W	WSW	W	W	W	W	WNW	NW	WNW	NW	N	C	W	S	NE	NNE	E	E	E	E	E	0040	
5	E	E	ENE	NE	ENE	E	E	ENE	NNE	ENE	E	C	C	NW	WNW	NW	C	W	W	W	C	SW	SW	C	SW	0040	
6	S	S	SSE	SE	SE	SE	SE	SE	SE	ESE	ESE	E	ESE	SE	ESE	SE	ESE	E	ESE	ENE	N	NNW	NW	WNW	ESE	1145	
7	WNW	WNW	WNW	NW	WNW	WNW	WNW	WSW	W	SW	S	S	S	S	SSE	SSE	SE	SSE	S	SSE	SSE	SSE	SSE	SSE	NW	0210	
8	SE	ESE	NNE	NNE	N	NNW	NW	NW	NW	NW	NW	WNW	NW	WNW	WNW	W	C	S	S	SSE	SSE	SSE	SE	ESE	N	0304	
9	SE	C	NNE	NNE	NNW	NNW	NW	NW	NNW	WNW	NNE	WSW	S	S	S	S	SSE	S	S	S	S	S	S	S	S	1825	
10	S	S	SW	W	WNW	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	W	W	W	WSW	WSW	WSW	WSW	WSW	W	1357	
11	WSW	WSW	WSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	S	S	S	S	S	S	S	S	S	S	S	S	SSW	1152	
12	S	SSW	S	S	SSW	SW	SW	W	W	W	W	W	W	W	W	W	W	W	WSW	WSW	WSW	W	SW	SSE	S	0105	
13	SSE	S	S	C	C	NNE	E	NE	NE	ENE	ENE	NE	NNE	NNE	NNE	NNE	NNE	N	N	N	N	N	N	NNW	NNE	1710	
14	NNW	NNW	NW	NW	NW	WNW	WNW	WNW	W	W	WNW	WNW	W	WNW	W	W	W	W	W	W	W	WNW	WNW	W	W	NNW	0012
15	W	W	W	W	WSW	S	SW	SSW	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	SSE	1522
16	SSE	SSE	SSE	SSE	SE	SE	SE	SE	SSE	SSE	SSE	S	S	S	SSW	WSW	W	W	W	W	W	W	W	WNW	W	WNW	2155
17	N	N	W	WNW	WNW	NNW	NW	NNW	NNW	NW	WNW	NW	NNW	NW	NW	NW	NW	NW	NNW	NNW	WNW	C	E	SSW	NNW	0652	
18	S	SSE	S	S	S	S	S	S	S	S	S	S	S	S	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	S	S	S	S	2142
19	S	S	S	S	S	S	SSE	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	0828
20	S	SSW	SW	W	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	W	W	W	W	W	W	WSW	WSW	WSW	WSW	WSW	W	0012	
21	W	SW	SSW	SSE	S	S	SSE	S	S	S	S	S	S	S	SSW	SSW	SW	WSW	WSW	WSW	WSW	WSW	SW	WSW	S	1230	
22	SW	SW	SW	WSW	W	W	WSW	W	W	W	W	W	W	W	W	W	W	WNW	WNW	WNW	W	W	W	W	WSW	W	0340
23	W	NW	W	W	W	W	NW	WNW	WSW	WSW	WSW	C	S	S	SSW	S	S	SSW	SW	W	W	W	W	W	W	W	2002
24	W	W	W	W	W	W	W	W	W	W	W	W	W	WSW	S	S	S	S	S	S	S	S	S	S	S	S	0407
25	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	0453
26	WNW	WNW	WNW	NNE	NNE	N	N	NW	NW	NW	WNW	WNW	C	C	C	SSW	S	SSE	S	S	SSE	S	S	S	N	0450	
27	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	2012
28	S	S	S	S	S	S	S	S	S	S	S	S	S	E	S	S	S	S	S	S	S	S	S	S	S	S	0657
29	S	S	S	SSW	S	SE	ENE	SE	SE	SE	ESE	ESE	ESE	ESE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	S	0005	
30	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SE	0426	
31	SSE	S	SSE	S	S	S	S	SSE	SSE	SSE	S	S	S	S	S	S	S	S	SW	SSW	SSW	SSW	SSW	SSW	S	SSE	0217

Note/Avis: 1. Climatological Day/Journée climatologique 0001 C.S.T. - 0000 C.S.T.
2. Hours are C.S.T./Les heures sont a l'heure normale de la localite
3. Unit/Unite = 1.0 km/h
4. C = Calm/Calme
5. M = Missing/Manquant
6. * Indicates first of more than one occurrence of the same speed/
Indique le premier de plusieurs de la meme vitesse

**HOURLY DEW POINT TEMPERATURE AT:
WINNIPEG INTERNATIONAL AIRPORT**
**TEMPERATURE DE ROSÉE HORLAIRE A:
AÉROPORT INTERN. DE WINNIPEG**

MONTH: DECEMBER 1991
MOIS: DÉCEMBRE 1991

Date	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-107	-156	-191	-217	-276	-284	-301	-316	-320	-291	-284	-316	-324	-329	-324	-323	-326	-327	-319	-310	-303	-308	-314	-315
2	-313	-307	-304	-287	-290	-284	-282	-274	-273	-263	-249	-241	-243	-235	-232	-219	-238	-208	-211	-213	-222	-235	-235	-251
3	-248	-256	-256	-258	-263	-262	-259	-268	-273	-277	-282	-294	-294	-298	-301	-311	-315	-319	-323	-327	-332	-329	-330	-332
4	-331	-330	-328	-326	-319	-327	-328	-332	-338	-328	-323	-316	-311	-313	-312	-318	-314	-320	-304	-318	-294	-294	-293	-291
5	-294	-282	-278	-270	-271	-264	-262	-258	-264	-263	-252	-248	-243	-249	-255	-255	-255	-253	-252	-261	-263	-263	-269	-272
6	-268	-257	-251	-251	-247	-237	-228	-223	-215	-210	-199	-191	-181	-170	-162	-156	-149	-150	-148	-145	-144	-147	-151	-164
7	-167	-174	-186	-204	-218	-215	-223	-233	-230	-224	-205	-190	-194	-184	-177	-170	-164	-157	-145	-134	-134	-126	-119	-119
8	-117	-113	-106	-120	-125	-129	-138	-141	-144	-144	-142	-137	-134	-132	-129	-131	-128	-128	-126	-124	-124	-122	-119	-114
9	-110	-106	-103	-102	-106	-108	-109	-112	-130	-153	-151	-135	-129	-132	-126	-116	-109	-100	-93	-88	-87	-84	-81	-75
10	-73	-64	-41	-30	-25	-46	-61	-67	-75	-80	-73	-65	-57	-49	-48	-50	-52	-56	-59	-67	-68	-73	-77	-75
11	-81	-83	-87	-95	-95	-102	-96	-96	-95	-89	-87	-89	-85	-80	-79	-72	-69	-55	-48	-34	-33	-39	-42	-41
12	-43	-39	-44	-52	-59	-70	-77	-69	-66	-72	-74	-63	-60	-65	-72	-81	-96	-107	-119	-119	-130	-136	-139	-149
13	-152	-152	-149	-143	-137	-124	-128	-130	-125	-118	-110	-100	-97	-111	-133	-140	-140	-153	-158	-167	-173	-178	-179	-185
14	-188	-217	-226	-275	-249	-252	-258	-262	-272	-280	-277	-269	-264	-257	-253	-256	-259	-272	-269	-280	-277	-270	-294	-299
15	-305	-302	-302	-314	-313	-328	-348	-341	-344	-350	-329	-298	-278	-269	-250	-243	-237	-233	-224	-203	-188	-174	-165	-156
16	-152	-145	-137	-135	-132	-132	-131	-129	-127	-123	-119	-110	-103	-98	-85	-77	-76	-70	-65	-56	-53	-50	-50	-54
17	-84	-104	-127	-127	-129	-151	-169	-197	-214	-236	-222	-231	-229	-230	-233	-239	-252	-260	-278	-294	-287	-287	-285	-287
18	-279	-286	-280	-298	-288	-279	-278	-280	-281	-273	-256	-251	-244	-235	-231	-233	-235	-237	-233	-231	-218	-195	-194	-188
19	-185	-176	-171	-165	-157	-154	-145	-133	-130	-131	-129	-120	-106	-94	-72	-49	-35	-30	-34	-32	-29	-27	-26	-27
20	-28	-23	-25	-51	-65	-81	-84	-97	-97	-96	-95	-87	-82	-79	-79	-81	-83	-90	-95	-99	-104	-109	-115	-119
21	-120	-121	-120	-127	-122	-110	-114	-122	-124	-116	-103	-87	-64	-56	-42	-39	-38	-37	-37	-33	-33	-32	-33	-35
22	-35	-38	-41	-42	-39	-44	-45	-51	-55	-57	-56	-56	-51	-54	-53	-52	-55	-62	-70	-80	-84	-88	-98	-99
23	-102	-128	-128	-128	-122	-127	-140	-144	-140	-141	-134	-120	-108	-116	-115	-110	-111	-115	-112	-113	-97	-90	-87	-86
24	-91	-93	-94	-93	-97	-100	-100	-109	-111	-110	-105	-104	-105	-98	-92	-93	-100	-99	-96	-99	-98	-94	-97	-98
25	-101	-97	-88	-86	-89	-82	-85	-90	-91	-94	-89	-83	-77	-70	-63	-64	-67	-73	-77	-96	-88	-78	-97	-97
26	-88	-86	-78	-64	-86	-117	-131	-121	-122	-116	-114	-109	-107	-108	-109	-118	-114	-101	-100	-96	-94	-93	-93	-89
27	-82	-86	-86	-75	-72	-78	-77	-77	-75	-75	-72	-70	-65	-62	-60	-57	-56	-60	-62	-60	-58	-56	-57	-55
28	-55	-53	-50	-47	-45	-43	-42	-47	-50	-53	-56	-58	-57	-63	-67	-63	-63	-62	-62	-60	-56	-51	-47	-43
29	-42	-42	-44	-42	-38	-36	-34	-30	-28	-24	-22	-21	-23	-24	-21	-18	-16	-16	-17	-21	-23	-22	-22	-21
30	-22	-23	-22	-22	-26	-26	-25	-26	-27	-25	-27	-28	-27	-26	-25	-23	-21	-21	-21	-19	-17	-13	-9	-7
31	-4	-1	-1	-3	-2	-2	-1	0	-1	0	1	2	3	-4	-16	-10	-12	-18	-23	-28	-32	-35	-39	-45

- Note/avis:**
1. Climatological Day/Journée climatologique 0001 C.S.T. - 0000 C.S.T.
 2. Hours are C.S.T./Les heures sont à 1'heure normale de la localité
 3. Unit/Unité = 0.1°C

Date	HOURLY RELATIVE HUMIDITY AT: HUMIDITE HORAIRE A:										WINNIPEG INTERNATIONAL AIRPORT AEROPORT INTERN. DE WINNIPEG										MONTH: DECEMBER MOIS: DECEMBRE		1991		PAGE 6.
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	89	87	85	74	47	49	41	42	46	60	66	50	45	38	45	50	48	47	55	55	63	63	55	56	
2	50	46	48	54	60	61	56	58	58	56	62	60	56	59	56	64	52	72	71	71	70	72	72	66	
3	71	64	64	64	63	63	69	65	62	63	66	58	60	55	50	51	51	51	59	57	58	66	57		
4	57	66	66	67	67	66	65	70	64	66	64	62	59	59	55	53	58	59	65	68	65	64	59		
5	59	60	66	67	67	68	63	69	68	68	65	66	63	62	61	61	65	65	69	68	74	73	73		
6	73	74	70	70	71	67	73	74	71	75	77	74	75	77	81	79	82	82	80	82	84	84	83		
7	78	76	74	71	71	73	71	72	77	73	76	69	62	70	73	74	72	72	73	81	87	86	86		
8	86	86	89	90	90	89	86	83	85	85	83	83	86	84	82	82	80	82	85	82	82	85	86		
9	88	89	94	94	96	88	94	92	91	87	90	90	88	86	86	88	86	87	85	86	89	91	90		
10	90	87	79	82	83	83	77	73	72	73	71	71	68	71	70	70	72	72	70	73	73	71	72		
11	72	70	73	77	73	74	71	69	69	67	67	64	64	63	62	64	64	75	76	75	76	76	75		
12	71	77	79	77	76	70	70	74	79	78	78	78	77	75	75	78	78	78	81	85	87	74	78		
13	88	88	85	85	82	87	85	82	85	88	90	90	92	91	90	90	90	88	89	86	86	86	89		
14	85	75	69	48	65	65	64	68	66	72	66	67	68	64	65	64	69	67	73	72	66	73	70		
15	68	69	69	68	68	65	63	63	63	62	76	70	72	73	70	65	72	72	73	76	74	79	77		
16	79	83	83	86	86	86	84	84	85	87	83	82	87	83	85	84	82	83	82	78	77	79	78		
17	87	87	84	88	82	81	80	70	64	68	70	69	65	62	64	62	64	64	66	65	64	71	69		
18	69	72	76	68	70	71	70	66	66	66	69	70	66	64	62	56	51	49	49	50	52	62	67		
19	70	70	74	72	73	73	75	79	77	75	74	75	77	78	82	89	93	94	95	98	94	96	94		
20	94	95	93	82	85	82	77	72	70	73	73	69	67	64	63	66	65	67	67	65	68	67	67		
21	73	70	81	85	80	79	79	77	77	76	75	76	73	77	75	73	70	64	66	68	70	70	72		
22	71	70	73	72	74	70	71	67	64	62	65	64	69	69	70	66	68	74	80	80	79	77	74		
23	75	85	87	87	82	85	89	85	86	83	86	83	71	75	75	76	77	79	82	76	77	76	76		
24	79	76	76	72	73	74	74	76	77	76	77	71	73	72	65	64	74	78	82	83	86	87	83		
25	81	83	85	85	86	87	89	86	82	80	77	78	76	77	75	73	73	78	88	92	91	89	82		
26	85	85	84	87	89	79	84	87	87	90	91	91	84	80	80	81	86	94	97	95	96	96	97		
27	97	95	90	91	94	94	96	96	92	92	94	92	93	95	93	91	91	93	91	93	93	92	93		
28	92	93	94	93	94	95	95	94	92	94	91	91	91	91	89	91	91	91	91	91	91	92	94		
29	95	95	96	95	98	95	97	97	95	96	95	95	93	91	91	92	92	92	91	87	86	89	92		
30	92	92	92	92	88	88	90	88	88	93	91	91	91	88	90	87	89	89	89	89	91	93	96		
31	98	98	96	96	95	96	98	99	98	99	100	100	99	93	88	89	90	91	91	91	92	91	92		

Note/avis: 1. Climatological Day/Journée climatologique 0001 C.S.T. - 0000 C.S.T.
 2. Hours are C.S.T./Les heures sont à l'heure normale de la localité
 3. Unit/Unité = percent/pour cent

CLIMATOLOGICAL SUMMARY FOR DECEMBER 1991

AT WINNIPEG, MANITOBA

Like last year, the month of December can be divided into two halves, with very different weather conditions. Unlike December of 1990, however, the first half of December, 1991 was cold and snowy while the second half was mild with very little precipitation. The table below illustrates the dichotomy.

	<u>TEMPERATURE</u>			<u>PRECIPITATION</u>		
	High	Low	Mean	Rain	Snow	Total
1-15th	-10.6	-20.2	-15.4	0.2	28.6	28.8
16-31st	-2.6	-10.7	-6.7	0.6	2.6	3.2

The mean temperature for the month ended up 3.1 degrees above normal, mostly on the strength of the last 10 days in the month. That 10 day "festive" period, from the 22nd to the 31st was the fourth mildest on record. The mean temperature from the 22nd to the 31st was -4.6 degrees. Other years with milder temperatures on those days were 1940 (-4.0), 1931 (-2.1) and 1877 (-1.9). Christmas day was the 12th warmest on record while New Year's Eve was the third warmest since record keeping began in 1872. The mean temperature of -1.5 on the 31st is the warmest since 1929.

This is the fourth consecutive month with above normal precipitation.

What about those winds! December of 1991 is the windiest December in Winnipeg since wind measurement began in 1921. In fact, the mean wind of 25.6 km/h has been exceeded in only 3 months during the last 71 years.

The city was enveloped by dense fog and a blanket of low clouds at the end of the month which helped to keep total sunshine hour below normal by about 9 hours.

1. Blowing snow overnight, mainly sunny through the day, with ice crystals mid afternoon. Maximum temperature near normal with the minimum temperature well below normal. Winds strong gusting to gale force, decreasing to light in the afternoon.
2. Overcast with snow. Temperatures well below normal. Winds moderate, occasionally gusting strong.
3. Overcast with snow and blowing snow overnight, clearing by noon. Temperatures well below normal. Winds moderate becoming light by evening.
4. Variable cloud. Temperatures well below normal. Winds light.
5. Variable cloudiness, with light snow on and off during the day. Temperatures well below normal. Winds light.
6. Overcast with snow and visibility reduced at times to one half kilometre in blowing snow. Temperatures below normal. Wind light overnight increasing to moderate mid-afternoon.
7. Sunny, becoming overcast with light snow and freezing drizzle in the early evening. Maximum temperature near normal, minimum temperature slightly below normal. Winds light to moderate.
8. Overcast with light snow throughout the day. Maximum temperature near normal, minimum temperature above normal. Winds moderate overnight, decreasing to light, early morning.
9. Overcast with light snow and freezing drizzle overnight, snow continuing through the day. Temperatures slightly above normal. Winds light increasing strong by late afternoon.
10. & 11. Sunny. Temperatures well above normal. Winds moderate gusting strong.
12. Cloudy becoming sunny in early afternoon. Maximum temperature well above normal, minimum temperature above normal. Winds moderate decreasing to light mid evening.
13. Overcast with snow starting in early morning. Snow becoming moderate in early afternoon with blowing snow starting in mid-afternoon. Visibility reduced to 0.8 kms or less for most of the afternoon. Temperatures near normal. Winds light increasing to strong, gusting gale, late afternoon.
14. Snow and blowing snow ending overnight, sunny through the day. Temperatures well below normal. Winds strong overnight decreasing to light by early afternoon.
15. Sunny, becoming cloudy by noon, snow starting just after noon. Maximum temperature slightly below normal, minimum temperature well below normal. Winds light, increasing moderate by noon.
16. Cloudy to overcast, with light snow on and off during day. Maximum temperature well above normal, minimum above normal. Winds light increasing to moderate mid morning, with occasional strong gusts in the evening.
17. Sunny. Maximum temperature near normal, minimum well below normal. Winds moderate, decreasing to light early afternoon.
18. Sunny, with ice crystals, drifting snow beginning late morning. Maximum temperature below normal, minimum well below normal. Winds light, increasing to strong gusting to gale force, late morning.
19. Clear becoming overcast with ice pellets and freezing rain by early afternoon, snow and blowing snow beginning early evening. Maximum temperature well above normal, minimum above normal. Winds strong gusting to gale force.
20. Sunny. Temperatures well above normal. Winds moderate, occasionally gusting strong.
21. Cloudy. Temperatures well above normal. Winds moderate, except for a period of strong around noon.
22. Cloudy, clearing mid-afternoon. Temperatures well above normal. Winds moderate gusting strong, decreasing, to light late evening.
23. Mainly sunny. Temperatures above normal. Winds light, increasing to moderate early evening.
24. Clear becoming cloudy late morning. Temperatures well above normal. Winds moderate, decreasing to light early morning, increasing again to moderate late evening.
25. Sunny. Temperatures well above normal. Winds moderate occasionally gusting strong, decreasing to light mid-afternoon.
26. Sunny break in the afternoon, otherwise overcast. Snow and ice crystals in the morning, with fog beginning late afternoon and freezing drizzle late evening. Maximum temperature above normal, minimum well above normal. Winds moderate overnight, decreasing to light early morning, increasing to moderate late evening.
27. Overcast with ice fog over night and fog in evening. Temperatures well above normal. Winds moderate becoming strong late morning gusting to gale.
28. Overcast with fog in late morning and light snow beginning late afternoon. Temperatures well above normal. Winds strong gusting gale diminishing to moderate in late afternoon.
29. Overcast with light snow and freezing drizzle throughout the day. Temperatures well above normal. Winds light.
30. Overcast with freezing drizzle, snow, snow grains, and fog, beginning late morning. Temperatures well above normal. Winds increasing to moderate overnight, continuing moderate through the day.
31. Overcast with drizzle, fog, snow grains, snow grains ending overnight, drizzle and fog ending early afternoon. Temperatures well above normal. Winds moderate decreasing to light early evening.