



Environment
Canada

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Canada

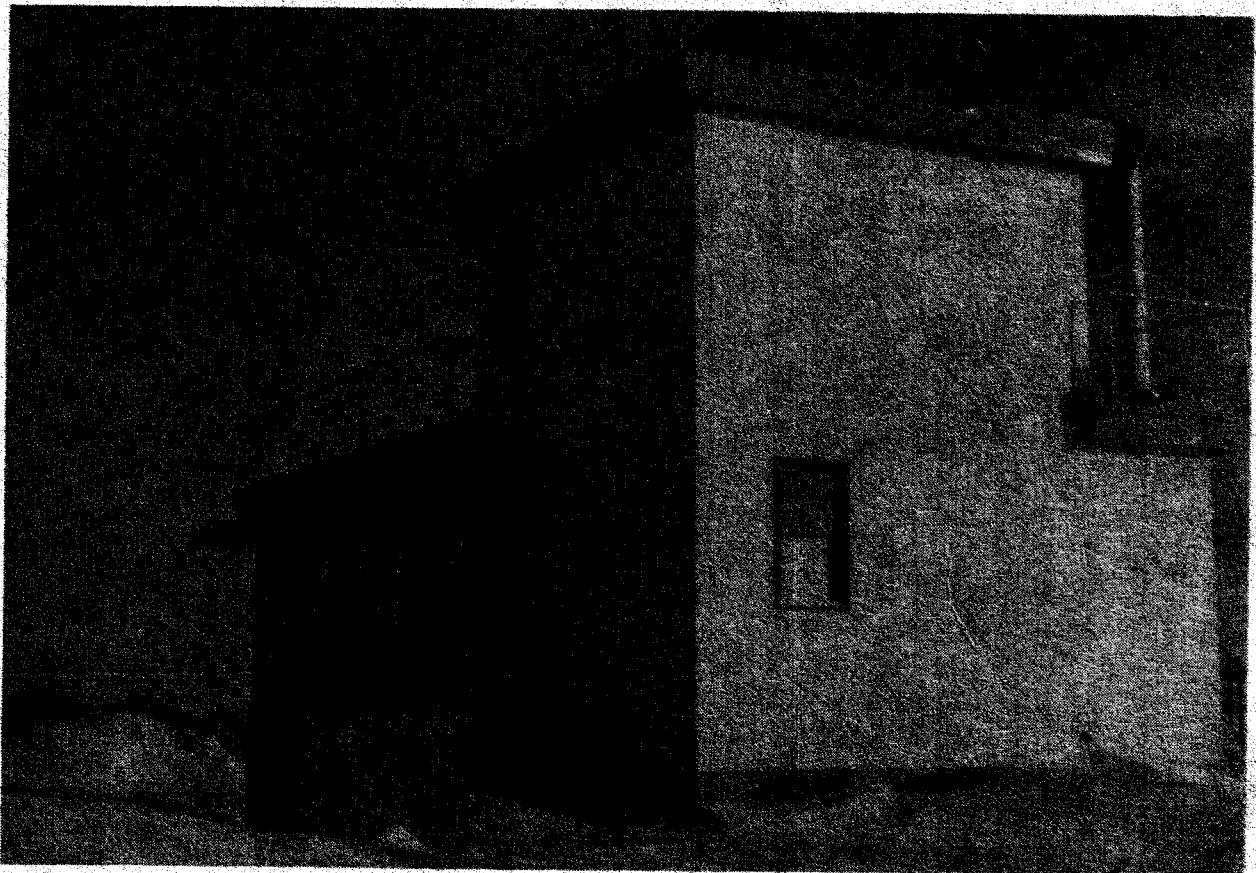
Atmospheric
Environment
Service

Service
de l'environnement
atmosphérique

WINNIPEG MANITOBA

--- LOCATED ON WEST SIDE OF
WINNIPEG'S INTERNATIONAL AIRPORT
GREAT PLACE TO BE FOR MARCH '66
BLIZZARD--- 48+ HOURS MAROONED!

ANNUAL METEOROLOGICAL SUMMARY 1981 SOMMAIRE METEOROLOGIQUE ANNUEL



ANNUAL METEOROLOGICAL SUMMARY
SOMMAIRE MÉTÉOROLOGIQUE ANNUEL

for/pour

YEAR/ANNÉE 1981

METEOROLOGICAL DATA FOR THE YEAR / DONNÉES MÉTÉOROLOGIQUE POUR L'ANNÉE														
NOTE: The following units are used throughout this summary – Temperature: Degrees and tenths Celcius (°C) Degree Day: Difference of Daily Mean Temperature from 18.0°C Rain: Millimetres and tenths (mm) Snow: Centimetres and tenths (cm) Total Precipitation: Millimetres and tenths (mm) Wind Speed: Kilometres per hour (km/h) Wind Direction: Direction (true north) from which the wind is blowing. Barometric Pressure: Kilopascals and hundredths (kPa) Sunshine: Hours and tenths of bright sunshine.						AVIS: Unités Utilisées – Température: Degrés et dixième Celsius (°C) Degré Jour: Différence entre la température moyenne du jour et 18.0°C Pluie: Millimètres et dixièmes (mm) Neige: Centimètres et dixièmes (cm) Précipitation Totale: Millimètres et dixièmes (mm) Vitesse du vent: Kilomètres par heure (km/h) Direction du vent: Direction (nord géographique) d'où le vent souffle. Pression Barométrique: Kilopascals et centièmes (kPa) Insolation: Nombre d'heures et dixièmes d'insolation effective								
MONTH MOIS	TEMPERATURE / TEMPÉRATURE										DEGREE DAYS DEGRÉS JOURS			
	MEAN / MOYENNE			NORMAL / NORMALE			EXTREME / EXTRÊME				BELOW 18.0°C AU DESSOUS DE 18.0°C	NORMAL NORMALE		
	MAXIMUM	MINIMUM	MONTHLY MENSUELLES	MAXIMUM	MINIMUM	MEAN MOYENNE	MAXIMUM MAXIMALE	DATE	MINIMUM MINIMALE	DATE				
JAN/JAN	-8.4	-19.7	-14.1	-13.4	-23.2	-18.3	2.0	22	-31.8	3	994.4	1125.6		
FEB/FÉV	-5.5	-14.7	-10.1	-10.4	-21.1	-15.7	7.5	23	-37.0	11	787.3	953.1		
MAR/MAR	4.5	-6.5	-1.0	-2.9	-13.3	-8.1	14.8	24	-16.8	6	589.7	809.8		
APR/AVR	11.8	-2.6	4.6	8.6	-1.9	3.3	27.3	16	-12.8	14	401.8	441.1		
MAY/MAI	18.8	3.0	10.9	17.1	4.1	10.6	29.9	21	-8.5	9	224.0	236.3		
JUN/JUIN	22.3	9.6	16.0	22.7	10.3	16.5	27.5	3	4.7	16	65.8	75.5		
JUL/JUIL	26.8	13.7	20.3	25.9	13.5	19.7	34.0	6	5.6	25	15.3	20.9		
AUG/AOÛT	26.6	13.6	20.1	25.0	12.2	18.7	32.3	13	7.8	15	11.6	37.5		
SEPT/SEP	18.5	6.3	12.4	18.4	6.6	12.6	29.5	10	-2.7	28	172.9	174.8		
OCT/OCT	9.7	0.9	5.3	11.9	1.1	6.6	20.3	11,16	-13.4	25	392.5	355.7		
NOV/NOV	5.5	-3.5	1.0	-0.5	-8.4	-4.4	18.2	4	-10.7	20	510.5	674.1		
DEC/DÉC	-9.0	-16.8	-12.9	-9.2	-18.2	-13.7	0.4	21	-31.3	31	959.3	983.0		
YEAR ANNÉE	10.1	-1.4	4.4	7.8	-3.2	2.3	34.0	July 6	-37.0	Feb 11	5125.1	5887.4		
MONTH MOIS	PRECIPITATION / PRÉCIPITATIONS													
	MONTHLY / MENSUELLES			NORMAL / NORMALE			EXTREME / EXTRÊME							
	RAINFALL HAUTEUR DE PLUIE	SNOWFALL HAUTEUR DE NEIGE	TOTAL	RAIN PLUIE	SNOW NEIGE	TOTAL	RAIN / PLUIE				SNOW / NEIGE			
							6 HRS	DATE	24 HRS	DATE	6 HRS	DATE	24 HRS	DATE
JAN/JAN	0.4	24.4	23.2	0.3	24.9	23.6	0.2	25*	0.2	25*	12.6	25	17.4	25*
FEB/FÉV	Tr.	5.9	3.3	0.8	19.8	19.1	Tr.	15*	Tr.	15*	1.4	7	2.5	6*
MAR/MAR	5.8	7.6	14.6	6.1	21.1	26.2	2.8	25	4.4	25	4.0	25	6.3	25
APR/AVR	12.3	1.6	12.7	25.4	11.9	37.3	4.2	21	9.2	21	1.6	18	1.6	18
MAY/MAI	47.6	Tr.	47.6	54.6	2.5	57.2	17.8	22	25.8	22	Tr.	8	Tr.	8
JUN/JUIN	90.4		90.4	80.3	Tr.	80.3	9.0	15	11.6	15*	-	-	-	-
JUL/JUIL	39.0		39.0	80.3	0.0	80.3	11.6	15	12.1	15	-	-	-	-
AUG/AOÛT	103.6		103.6	73.7	0.0	73.7	31.6	5	56.6	5*	-	-	-	-
SEPT/SEP	72.1	0.4	72.5	52.6	0.3	52.6	13.6	5	23.0	6*	0.4	28	0.4	28
OCT/OCT	57.6	3.9	59.6	29.2	5.6	34.8	19.0	12	21.8	12	2.6	24	2.9	24
NOV/NOV	3.6	2.5	5.9	7.1	21.3	27.2	3.4	15	3.4	15	1.1	26	1.9	26
DEC/DÉC	0.5	12.2	7.3	0.8	23.9	22.9	0.3	20	0.5	20	3.6	27	4.2	27
YEAR ANNÉE	432.9	58.5	479.7	411.2	131.3	535.2	31.6	Aug 5	56.6	Aug 5	12.6	25	17.4	25

3rd warmest year was 1981 - warmest
years were:-
1878 4.7
1931 5.3

* 17.9 cm snow Jan 25-26
4.4 cm snow Feb 6-7
Trace rain Feb 15,17,19,20
13.2 mm rain June 14-15
58.2 mm rain Aug 5-6
35.4 mm rain Sept. 5-6

Correction on monthly summaries
Aug. 29 mean 20.2 not 20.3
Sept. 25 max 20.0 not 10.0

* Jan. 5th 0.2 rain 6 hr and 24 hr.

ANNUAL METEOROLOGICAL SUMMARY
SOMMAIRE MÉTÉOROLOGIQUE ANNUEL

for/pour WPG INT'L AIRPORT / AEROPORT INTERN. DE WPG

YEAR/ANNÉE: 1981

METEOROLOGICAL DATA FOR THE YEAR / DONNÉES MÉTÉOROLOGIQUE POUR L'ANNÉE												
DAILY MAXIMUM TEMPERATURES - 1981 (°C)												
DATE	JAN JAN	FEB FEV	MAR MAR	APR AVR	MAY MAI	JUN JUIN	JUL JUIL	AUG AOÛT	SEPT SEP	OCT OCT	NOV NOV	DEC DEC
1	-9.1	-16.7	0.7	5.9	15.5	21.9	28.3	25.3	18.7	11.0	14.8	-1.5
2	-20.8	-17.7	-4.5	12.2	21.2	24.2	24.2	26.0	24.5	14.6	12.2	-2.0
3	-23.2	-16.5	-3.5	6.1	15.4	27.5	27.4	23.4	16.6	12.8	16.1	-1.0
4	-15.7	-7.0	-2.7	4.5	13.1	22.9	29.3	28.6	19.7	10.8	18.2	-2.9
5	-5.4	-6.4	-4.8	9.9	15.0	24.1	31.4	21.4	22.9	11.3	6.7	-3.1
6	-9.2	-6.8	-5.3	12.1	17.8	24.5	34.0	25.5	18.0	14.0	16.2	-1.5
7	-17.5	-9.0	0.7	10.5	20.9	25.5	32.8	29.2	21.5	14.0	16.8	-2.5
8	-12.8	-19.8	3.5	11.4	14.8	20.5	26.7	22.6	23.8	17.1	1.0	-5.3
9	-20.3	-20.2	2.4	16.3	8.3	20.2	30.2	23.3	27.2	14.0	7.5	-7.9
10	-17.0	-24.8	2.7	11.6	11.8	19.4	29.6	27.3	29.5	16.7	3.5	-3.7
11	-8.4	-23.5	12.5	5.0	17.2	23.3	27.1	32.2	24.6	20.3	12.0	-0.6
12	-4.7	-18.7	2.8	11.8	20.8	26.3	30.5	26.3	25.4	13.2	13.2	-4.2
13	-2.7	-8.6	4.9	6.4	22.6	19.0	29.8	32.3	21.7	10.5	12.5	-5.9
14	-6.1	1.1	11.4	4.3	24.8	17.4	24.3	24.6	18.9	9.6	12.8	-11.8
15	-14.1	5.9	2.4	23.0	13.7	15.1	22.4	21.5	13.4	11.3	9.9	-13.5
16	-6.0	6.5	12.4	27.3	18.0	25.5	22.8	23.1	12.5	20.3	5.3	-14.9
17	1.7	5.4	-0.5	16.7	21.5	22.0	26.3	28.6	19.2	12.3	1.8	-16.2
18	0.2	1.7	1.6	15.2	24.8	16.9	28.5	28.2	24.5	2.9	-1.8	-15.0
19	-6.5	2.0	2.1	4.7	27.9	21.7	29.7	28.9	18.9	11.2	-3.2	-13.0
20	-2.0	4.6	6.5	12.9	29.1	23.2	20.5	28.0	18.4	3.2	-3.0	-6.0
21	0.2	5.6	9.6	9.3	29.9	22.3	25.0	25.9	15.9	-1.7	-1.2	0.4
22	2.0	3.0	0.7	5.7	23.7	20.4	25.5	27.9	16.0	-0.1	0.7	-7.0
23	1.0	7.5	6.3	7.4	9.0	19.2	27.3	27.7	15.2	-1.6	0.7	-12.8
24	-2.9	-1.3	14.8	11.4	10.0	22.1	20.8	28.0	18.9	-0.9	-0.1	-10.8
25	-3.0	-4.8	7.7	9.0	13.8	22.0	21.6	26.3	20.0	-4.7	-0.5	-11.3
26	-6.8	4.5	4.8	19.7	21.4	25.4	24.6	27.6	15.8	10.0	-1.3	-9.4
27	-11.2	0.7	6.8	15.3	19.5	27.3	26.5	26.9	8.9	0.8	0.3	-9.3
28	-13.2	-0.2	9.7	18.8	22.8	22.8	25.7	27.3	2.9	9.0	-3.5	-22.3
29	-14.8		13.3	18.8	17.5	23.6	24.2	27.5	13.0	14.8	-1.8	-20.7
30	-6.6		11.7	10.8	18.1	22.8	29.5	30.7	7.1	12.6	-1.6	-22.0
31	-6.5		8.0		21.8		25.3	22.2		12.2		-22.3
AVG	-8.4	-5.5	4.5	11.8	18.8	22.3	26.8	26.6	18.5	9.7	5.5	-9.0

ANNUAL METEOROLOGICAL SUMMARY
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for/pour WPG INT'L AIRPORT / AÉROPORT INTERN. DE WPG

YEAR/ANNÉE: 1981

METEOROLOGICAL DATA FOR THE YEAR / DONNÉES MÉTÉOROLOGIQUE POUR L'ANNÉE												
DAILY MEAN TEMPERATURE 1981 (°C)												
DATE	JAN JAN	FEB FEV	MAR MAR	APR AVR	MAY MAI	JUN JUN	JUL JUIL	AUG AOÛT	SEPT SEP	OCT OCT	NOV NOV	DEC DEC
1	-15.6	-20.9	-6.1	2.1	6.9	15.4	23.1	17.2	11.3	6.1	7.4	-3.8
2	-25.4	-21.0	-10.4	6.8	14.0	14.5	20.5	20.6	17.4	8.7	5.1	-5.6
3	-27.5	-19.9	-8.1	2.2	8.3	16.6	20.3	18.3	10.2	9.9	10.0	-2.7
4	-22.2	-14.9	-8.8	-0.5	5.7	16.7	22.7	20.3	11.8	9.1	11.5	-7.7
5	-10.8	-7.8	-10.6	1.9	5.4	17.3	24.6	19.3	17.6	6.3	2.6	-9.1
6	-17.9	-12.7	-11.1	7.0	6.7	16.9	25.6	20.5	14.4	6.8	6.3	-3.1
7	-22.1	-15.3	-3.7	6.2	11.5	18.5	27.5	20.8	15.3	8.1	6.9	-4.6
8	-18.5	-23.9	-1.2	4.9	4.4	15.2	20.7	17.0	16.4	13.0	-4.3	-9.2
9	-24.4	-26.3	-0.9	6.7	-0.1	13.0	21.5	16.5	20.1	11.4	-0.4	-11.9
10	-21.9	-30.3	-1.2	2.2	3.8	13.0	21.8	19.2	20.2	11.6	-0.4	-7.8
11	-16.4	-30.3	5.2	-1.4	11.4	15.7	21.0	24.1	18.5	15.1	3.7	-2.8
12	-8.5	-24.3	-1.5	4.1	10.4	17.5	23.3	19.7	17.8	11.3	6.4	-8.4
13	-8.7	-14.4	-1.7	-2.4	11.3	16.5	22.9	23.4	14.9	7.4	7.7	-9.3
14	-12.7	-7.9	5.0	-4.3	14.1	15.6	19.5	18.1	12.9	7.0	5.0	-16.3
15	-18.0	1.0	-1.2	11.2	9.1	11.1	19.9	14.7	9.0	7.4	6.0	-18.4
16	-14.3	0.1	3.6	16.5	9.9	15.1	18.9	15.6	9.7	12.0	2.2	-19.3
17	-2.9	1.9	-5.8	5.8	11.6	16.5	19.2	19.6	11.4	6.9	-0.1	-19.0
18	-6.8	-0.5	-4.6	4.7	15.1	12.6	21.7	21.0	16.2	0.4	-3.2	-18.8
19	-10.8	0.8	-2.2	-0.9	18.4	14.1	22.5	22.3	11.5	5.8	-5.2	-17.1
20	-9.3	2.1	-1.3	1.8	17.6	15.9	15.0	22.4	11.3	-1.6	-6.9	-10.0
21	-5.5	2.3	1.6	7.5	20.9	14.1	16.0	22.3	12.4	-4.5	-5.5	-3.4
22	-4.1	-1.0	-2.9	3.6	15.6	15.6	18.7	21.4	11.9	-4.5	-1.9	-10.0
23	-2.7	1.0	0.3	1.7	7.7	15.0	20.4	23.4	11.2	-6.0	-1.9	-16.0
24	-6.0	-4.0	5.8	3.0	9.3	17.3	14.6	23.5	10.4	-5.1	-1.2	-12.5
25	-5.4	-7.6	3.9	5.7	11.2	16.2	13.6	22.1	12.9	-9.1	-1.4	-18.0
26	-15.3	-1.5	1.9	8.5	13.0	17.7	15.5	21.4	9.6	2.1	-3.1	-15.6
27	-17.0	-2.9	3.4	9.9	13.9	22.2	18.1	19.6	3.7	-1.9	-3.5	-18.4
28	-18.6	-5.1	5.7	8.6	16.8	18.4	19.0	20.2	0.1	4.9	-4.7	-25.9
29	-21.4		5.8	9.8	10.3	17.1	18.7	20.2	7.5	10.1	-3.0	-23.2
30	-13.9		5.5	5.3	9.1	18.0	22.9	23.5	4.3	8.5	-4.6	-26.6
31	-11.8		3.9		14.0		19.9	15.4		8.3		-26.8
AVG	-14.1	-10.1	-1.0	4.6	10.9	16.0	20.3	20.1	12.4	5.3	1.0	-12.9

ANNUAL METEOROLOGICAL SUMMARY
SOMMAIRE METEOROLOGIQUE ANNUEL

for pour WINNIPEG INT'L AIRPORT/AEROPORT INTERN. DE WPG

YEAR ANNÉE: 1981

METEOROLOGICAL DATA FOR THE YEAR / DONNÉES MÉTÉOROLOGIQUE POUR L'ANNÉE												
DAILY SNOWFALL - 1981 (cm)												
DATE	JAN JAN	FEB FEV	MAR MAR	APR AVR	MAY MAI	JUN JUIN	JUL JUIL	AUG AOÛT	SEPT SEP	OCT OCT	NOV NOV	DEC DEC
1	Tr.	Tr.	Tr.	Tr.						Tr.		0.2
2	2.8	Tr.										Tr.
3			1.1									Tr.
4	Tr.	Tr.	Tr.									0.4
5	Tr.	1.0	Tr.									
6	0.4	2.5										
7		2.4	Tr.									0.8
8	0.2	Tr.			Tr.							0.8
9		Tr.	0.2									Tr.
10	Tr.	Tr.	Tr.								Tr.	1.3
11	Tr.	Tr.										
12			Tr.									
13	0.3	Tr.										0.4
14	0.2	Tr.										Tr.
15	Tr.											Tr.
16	Tr.											Tr.
17				Tr.							Tr.	Tr.
18				1.6						Tr.	Tr.	Tr.
19			Tr.								Tr.	Tr.
20										Tr.	Tr.	Tr.
21										Tr.		Tr.
22										0.2	Tr.	2.0
23										0.8	0.2	1.0
24		Tr.								2.9	0.2	0.4
25	17.4	Tr.	6.3							Tr.	Tr.	0.2
26	0.9									Tr.	1.9	0.3
27	Tr.	Tr.									Tr.	4.2
28	Tr.	Tr.							0.4		Tr.	Tr.
29	Tr.											Tr.
30	0.3										0.2	Tr.
31	1.9		Tr.									0.2
Total	24.4	5.9	7.6	1.6	Tr.				0.4	3.9	2.5	12.2

Correction: 1980

Oct. 28 snowfall nil

Nov. 28 snowfall 3.0

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YEAR/ANNÉE: 1981

METEOROLOGICAL DATA FOR THE YEAR/DONNÉES MÉTÉOROLOGIQUE POUR L'ANNÉE													
NUMBER OF DAYS WITH: NOMBRE DE JOURS AVEC:	JAN JAN	FEB FÉV	MAR MAR	APR AVR	MAY MAI	JUN JUIL	JUL JUIL	AUG AOÛT	SEPT SEP	OCT OCT	NOV NOV	DEC DÉC	YEAR ANNÉE
MEASURABLE RAIN PLUIE, MESURABLE	2	0	4	4	6	16	11	8	10	11	2	1	75
RAIN (Trace or More) PLUIE (Trace ou davantage)	4	4	6	13	11	21	14	11	14	16	6	4	124
MEASURABLE SNOW NEIGE, MESURABLE	9	3	3	1	0	0	0	0	1	3	4	13	37
SNOW (Trace or More) NEIGE (Trace ou davantage)	19	16	11	3	1	0	0	0	1	9	13	27	100
MEASURABLE PRECIPITATION PRÉCIPITATION, MESURABLE	9	3	5	5	6	16	11	8	11	13	5	12	104
PRECIPITATION (Trace or More) PRÉCIPITATION (Trace ou davantage)	19	20	14	14	11	21	14	11	14	23	18	27	206
THUNDERSTORMS ORAGES	0	0	0	1	4	7	8	6	4	1	0	0	31
HAIL GRÊLE	0	0	0	0	0*	0*	0	0*	0	0	0	0	0
ICE PELLETS GRANULES DE GLACE	1	0	1	1	0	0	0	0	0	0	0	1	4
FREEZING PRECIPITATION PRÉCIPITATION VERGLACANTE	4	2	2	1	0	0	0	0	0	1	1	4	15
FOG* BROUILLARD*	3	4	1	0	0	1	2	2	3	1	1	0	18
MAXIMUM TEMPERATURE TEMPÉRATURE MAXIMALE 30°C OR MORE/OU PLUS	0	0	0	0	0	0	5	3	0	0	0	0	8
MAXIMUM TEMPERATURE TEMPÉRATURE MAXIMALE 0°C OR LESS/OU MOINS	26	16	6	0	0	0	0	0	0	5	10	30	93
MINIMUM TEMPERATURE TEMPÉRATURE MINIMALE 0°C OR LESS/OU MOINS	31	28	30	21	10	0	0	0	2	10	26	31	189
MINIMUM TEMPERATURE TEMPÉRATURE MINIMALE -15°C OR LESS/OU MOINS	22	13	3	0	0	0	0	0	0	0	0	16	54

*NOTE: Fog is only counted when the visibility is restricted to ½ mile or less

AVIS: On ne compte les phénomènes de brouillard que lorsque la visibilité est ½ mille ou moins

Severe Weather 1981

* Unofficial hail May 28, unofficial hail 27th June, August 17th
Unofficial funnel cloud McGregor June 27th also hail S. Manitoba.
July 1st tornado reported near Grandview, Manitoba - trees uprooted
hail, heavy rain. July 7th golf ball hail at Alexander, Minnedosa,
smaller hail at Kelwood, strong winds near Brandon. July 13th
unconfirmed reports funnel clouds near Morris and Winkler. July 15th
unconfirmed tornado near Notre Dame, Manitoba. July 19th huge forest
fire near Thompson. July 30th hail reported at Miami and Starbuck.
August 17th unofficial reports of hail at Winnipeg & S. Manitoba
especially St. Adolphe where crops destroyed. Aug. 19 cows at
Hodgson killed by lightning. Sept. 6th very heavy rain at Whiteshell
Brereton Lake reported 125-155mm rain in a few hours. Games washed
out at Pilot Mound - power outages. Sept 27th very strong winds
on Lake Winnipeg. Sept. 5th very heavy rain at Arnes, Manitoba. 00-0063-9832 (REV 76)