

# WIND CHILL FOR NOVEMBER 1982

## YWG - WINNIPEG MANITOBA

EXPRESSED IN WATTS/SQ.M.

DAY	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	0	0	0	0	0	0	0	1000	1052	0	991	0	0	0	983	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	1074	1099	1102	1170	1219	1176	1185	1208	1188	1230	1133	1280	1229	1273	1293	1301	1349	1288	1259	1220	1229	1243	1258	1256
4	1294	1281	1322	1263	1316	1298	1267	1396	1305	1440	1432	1385	1365	1369	1316	1366	1360	1338	1273	1294	1242	1252	1290	1252
5	1130	0	1087	0	0	1081	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	1067	0	1111	1154	1128	0	1220	1253	1263	1276	1243	1141	1276	1159	1302	1280	1212	1146	1116	0	0	0	0
7	0	0	986	1000	0	0	0	0	0	0	0	0	1120	1135	1208	1212	1231	1200	0	0	0	0	0	0
8	1155	0	986	0	1021	1021	1015	1052	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1103	0	0	0	0	0	0	0	0
10	0	0	1084	1035	1078	1087	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	977	0	0	0	0	0	1040	1071	1093	1112	1128	1112	0	0	0	1103	0	0	1224	1353	1425
12	1482	1501	1553	1524	1555	1567	1614	1662	1707	1745	1793	1735	1771	1749	1670	1731	1680	1698	1550	1512	1508	1379	1482	1330
13	1426	0	0	0	1333	0	1399	1473	1426	1377	0	1362	0	0	1380	1345	1330	1217	0	1136	0	0	0	1240
14	1331	1367	1373	1406	1306	1331	1357	0	1267	0	1357	1313	1297	1437	1467	1376	1329	1364	1334	1293	1401	1405	1383	
15	1364	1360	1319	1302	1324	1275	1237	1229	1255	1275	1255	1262	1279	1259	1329	1280	1184	1077	0	0	0	0	0	0
16	1156	1044	1120	1102	1090	1164	1084	0	1151	1183	1188	1167	1139	1111	0	1049	1052	0	0	0	0	0	0	0
17	0	0	0	0	0	1110	0	0	0	0	1067	0	1038	1017	1033	1003	0	0	0	0	0	0	0	0
18	0	1065	1116	1136	1112	1160	1185	1173	1193	1196	1147	1205	1224	1146	1251	1192	0	0	0	0	0	0	0	0
19	0	0	0	1000	0	1060	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1285	1357	1392	1452	1571	1555	1574	1561	1600
21	1476	1476	1500	1530	1544	1577	1556	1483	1610	1578	1626	1636	1592	1653	1595	1639	1660	1584	1541	1464	1451	1441	1393	1384
22	1442	1414	1383	1357	1414	0	0	1345	0	0	0	0	0	1495	1492	0	1498	1486	1483	1374	1448	1365	0	0
23	0	0	0	0	1420	1477	0	0	0	1507	1449	1461	1426	1501	1642	1696	1696	1679	1595	1578	1588	1548	0	0
24	0	0	0	0	0	1555	1597	1666	1729	1712	1705	1764	1840	1743	1565	1494	1356	1500	1530	1589	1479	1481	1522	1574
25	1494	1581	1526	1525	1534	1481	0	0	0	0	0	0	0	0	0	0	0	0	1411	0	0	1387	0	0
26	1459	0	0	0	0	0	0	1525	0	0	0	0	0	0	0	0	0	0	0	1374	0	1387	0	0
27	0	0	0	1471	1441	1523	1567	1580	1486	1526	1574	1560	1546	1504	1527	1505	1578	1511	1520	1444	1426	1426	1376	1380
28	1387	1364	1297	1276	1263	1195	1182	1180	1189	1215	0	0	0	0	0	0	1244	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1067	0	0	0	0	0	0
30	1068	1069	1057	0	1123	1176	1123	1192	1162	1162	0	1165	1207	1230	1276	1202	1158	1161	1154	1110	0	0	0	0

### SUMMARY

RANGE	1200-1599 W/SQ.M	1600-1999 W/SQ.M	2000-2299 W/SQ.M	> 2299 W/SQ.M.
NUMBER OF HOURS=	227	30	0	0
NUMBER OF DAYS=	20	5	0	0
LONGEST CONSECUTIVE HOURS				

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INTERNATIONAL AIRPORT FOR THE MONTH OF NOVEMBER

ABSTRACT OF THE WIND AT WINNIPEG  
ALL TIMES ARE C.S.T. VELOCITY IN KILOMETERS PER HOUR

TIME  
(CST)

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

PEAK  
GUSTS

1	S	15	13	15	9	11	9	6	0	11	9	9	9	11	17	15	9	7	7	4	7	13	4	0	0			
2	NW	6	19	28	22	19	20	22	13	22	13	22	22	28	26	28	26	30	30	24	17	15	13	20	24	17	NW	41
3	NW	17	17	15	17	15	26	20	22	22	22	26	37	28	28	30	30	30	28	30	28	30	28	22	28	26	NNW	52
4	N	24	35	24	39	37	31	31	30	24	30	31	31	26	30	26	28	30	26	15	9	11	9	7	11	N	48	0253
5	N	6	9	6	6	4	4	0	0	6	0	7	4	0	0	6	4	7	6	11	9	13	15	11	S			
6	S	9	17	19	20	22	20	13	20	13	24	26	22	20	20	22	15	11	9	7	11	13	15	15	SSE	35	1014	
7	S	15	11	7	9	7	6	15	13	17	22	26	26	33	30	28	26	30	26	9	11	9	13	13	13	NNW	43	1647
8	NNW	13	15	9	9	7	9	9	9	9	4	2	4	9	6	9	9	6	2	0	6	6	6	4	6	SSE	35	1056
9	ESE	7	6	7	6	9	9	7	6	9	9	17	24	22	20	17	13	11	6	7	7	13	11	13	13	SSE	35	
10	SSE	7	9	9	6	7	7	6	6	0	0	9	6	4	4	4	6	9	13	6	9	9	11	15	11	SSE	35	
11	SSW	13	13	11	13	15	17	17	17	17	17	17	17	20	26	24	33	41	41	43	43	48	41	41	37	NNW	76	2129
12	NW	39	43	41	41	43	33	35	31	24	33	31	31	24	24	24	17	20	11	13	7	6	9	11	9	NW	65	0052
13	S	13	15	13	11	9	11	9	11	13	11	13	11	7	11	9	9	9	13	15	17	17	19	13	15	S		
14	SSW	17	9	13	9	9	19	17	13	17	19	17	17	22	22	20	30	30	30	26	24	20	19	19	15	S	41	1438
15	S	13	11	13	15	17	19	19	19	24	22	19	17	17	11	15	17	13	17	20	11	13	13	11	15	S	33	0812
16	SW	11	4	11	13	15	15	15	13	9	11	15	11	9	11	13	9	11	6	7	4	0	0	0	11	NNE		

ALL TEMPERATURES IN DEGREES CELSIUS

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.	.8	-3	-1.0	-1.8	-1.2	-2.6	-2.0	-2.0	-9	1.5	4.0	7.3	10.0	11.6	12.0	11.7	11.2	9.8	7.5	4.7	6.1	4.6	4.2	2.5
2.	1.6	2.9	3.2	3.0	3.2	2.8	2.8	1.0	1.8	2.0	2.0	2.5	3.0	3.1	3.1	3.1	2.0	.2	-8	-2.5	-3.7	-2.2	-2.4	-4.0
3.	-4.3	-5.0	-5.4	-5.7	-3.6	-4.0	-4.0	-4.6	-5.2	-4.2	-3.0	-3.3	-2.5	-1.4	-1.2	-1.6	-2.0	-2.4	-3.0	-3.1	-4.8	-4.3	-4.1	-4.1
4.	-3.8	-4.6	-4.9	-5.1	-5.2	-5.1	-5.1	-5.1	-5.2	-5.0	-4.4	-3.8	-3.4	-3.0	-2.5	-2.3	-2.9	-2.8	-3.5	-4.5	-4.5	-4.7	-4.3	-4.3
5.	-4.3	-4.5	-4.9	-4.9	-4.8	-4.6	-4.6	-4.5	-4.4	-4.1	-3.4	-3.6	-3.1	-3.3	-3.0	-3.3	-3.4	-3.5	-3.7	-3.8	-3.8	-4.0	-4.3	-5.9
6.	-6.0	-5.4	-5.5	-5.0	-4.7	-4.4	-5.0	-5.4	-5.6	-4.8	-3.6	-2.8	-1.5	-6	0.0	1.7	1.6	.6	-5	-1.7	-1.0	-.3	.7	1.5
7.	1.2	.6	-.7	-.8	-2.0	-2.5	-3.2	-4.8	-5.0	-2.8	-2.2	-1.3	.5	.3	1.0	.2	0.0	0.0	-3	-1.2	-1.0	-1.0	-1.0	-1.0
8.	-.8	-1.0	-1.2	-1.2	-1.4	-1.3	-1.4	-1.7	-1.7	-1.0	0.0	.7	1.0	1.3	2.3	1.7	1.3	.6	-1.6	-1.3	-1.1	-1.6	-4.2	-4.2
9.	-4.6	-4.3	-4.7	-5.1	-5.8	-5.9	-6.3	-6.9	-6.5	-4.0	-1.7	0.0	0.0	.8	1.3	1.3	1.2	-1.0	-.7	-1.8	-3.1	-2.7	-2.9	-3.2
10.	-4.3	-4.7	-4.6	-5.1	-5.8	-5.7	-6.3	-5.7	-5.6	-4.8	-3.4	-.9	1.2	2.8	4.4	4.6	3.2	.4	-1.8	-3.0	-.5	-.7	.2	.1
11.	.2	.7	1.2	.3	-.6	-.7	-1.4	-2.0	-2.5	-2.0	.3	0.0	-.2	0.0	.3	-.3	-2.5	-4.4	-5.6	-6.1	-6.7	-7.0	-7.8	-8.8
12.	-9.7	-10.3	-11.8	-12.8	-13.7	-14.2	-14.7	-15.1	-15.5	-14.1	-13.2	-13.7	-12.0	-10.9	-10.8	-10.4	-11.6	-12.9	-14.5	-14.2	-13.5	-13.3	-13.0	-13.1
13.	-13.6	-14.6	-14.5	-14.5	-14.2	-14.0	-14.7	-14.7	-14.6	-13.4	-11.3	-9.0	-7.4	-6.2	-6.3	-7.5	-6.6	-8.3	-10.0	-10.0	-10.2	-10.2	-10.5	-10.0
14.	-9.7	-9.4	-9.2	-9.7	-10.4	-8.7	-8.3	-10.2	-12.2	-12.1	-10.3	-8.8	-7.3	-6.4	-5.9	-6.0	-6.1	-5.5	-6.0	-6.5	-6.7	-7.0	-7.7	-8.2
15.	-8.2	-9.4	-8.8	-8.2	-6.5	-6.7	-6.3	-5.7	-5.6	-4.8	-3.4	-.9	1.2	2.8	4.4	4.6	3.2	.4	-1.8	-3.0	-4.3	-3.7	-4.6	-4.6
16.	-4.4	-7.7	-6.7	-6.4	-5.4	-4.7	-3.8	-4.0	-4.3	-3.2	-1.0	.9	2.8	4.3	5.0	4.8	2.5	0.0	-3.5	-2.3	-4.0	-4.1	-4.2	-5.3
17.	-3.7	-3.9	-3.9	-4.5	-3.9	-3.8	-3.0	-2.8	-2.1	-1.4	-.4	.9	3.1	4.3	5.0	5.0	3.8	1.7	0.0	-.5	-.6	-1.2	-2.0	-1.9
18.	-2.0	-2.3	-2.9	-3.0	-3.1	-2.0	-2.0	-1.5	-1.4	-.6	.8	2.4	3.7	5.0	5.7	5.5	3.3	1.7	1.0	.3	0.0	-1.5	-3.0	-2.3
19.	-2.1	.2	1.1	1.5	2.1	2.4	2.6	3.5	3.8	4.4	4.0	4.8	5.0	5.7	5.9	6.0	6.1	6.0	5.6	5.4	5.7	6.0	6.0	6.0
20.	6.4	6.5	6.2	6.2	5.2	4.5	1.9	1.2	.4	-1.6	-2.9	-4.5	-5.4	-7.4	-7.8	-8.3	-8.3	-8.4	-7.6	-7.6	-7.8	-8.2	-9.0	-9.9
21.	-10.3	-10.8	-11.8	-13.6	-14.2	-14.5	-14.9	-15.0	-15.0	-14.6	-13.8	-13.0	-12.5	-12.0	-11.6	-11.3	-12.0	-13.1	-13.6	-14.1	-14.7	-13.8	-12.7	-13.5
22.	-13.3	-13.2	-13.4	-14.8	-15.3	-14.3	-15.4	-17.4	-16.8	-16.7	-15.8	-15.4	-15.0	-14.9	-14.4	-13.8	-14.1	-15.4	-15.7	-16.1	-16.5	-15.8	-16.0	-16.2
23.	-17.0	-17.8	-17.7	-17.2	-17.2	-17.0	-17.4	-16.2	-15.5	-15.5	-14.8	-14.5	-15.0	-15.0	-14.5	-14.8	-15.7	-17.7	-19.0	-19.2	-20.0	-17.4	-18.6	-18.8
24.	-18.6	-18.2	-17.2	-16.7	-16.5	-16.1	-16.1	-15.5	-14.1	-14.0	-10.8	-7.8	-8.2	-8.7	-8.7	-10.0	-11.2	-12.7	-14.0	-15.6	-16.3	-17.8	-18.1	-18.1
25.	-19.1	-19.9	-20.1	-20.1	-21.0	-21.0	-20.9	-20.5	-19.8	-18.6	-16.5	-15.6	-14.7	-14.0	-13.4	-12.5	-13.2	-14.5	-15.6	-17.0	-17.9	-16.8	-16.7	-16.9
26.	-16.3	-19.6	-20.9	-20.0	-21.9	-21.9	-21.8	-23.7	-21.3	-19.7	-17.8	-16.4	-15.0	-14.4	-13.3	-13.2	-13.4	-14.6	-16.2	-15.7	-15.4	-16.0	-16.7	-16.2
27.	-16.3	-16.7	-15.0	-13.9	-13.5	-12.3	-11.2	-10.0	-9.0	-8.4	-8.1	-7.7	-7.2	-5.9	-5.4	-5.8	-5.8	-5.9	-5.6	-6.0	-5.3	-4.7	-5.0	-4.6
28.	-5.2	-6.3	-6.6	-8.9	-9.0	-10.1	-10.7	-11.7	-10.5	-8.7	-7.2	-5.8	-4.6	-3.3	-1.4	-2.3	-3.1	-5.2	-6.3	-6.1	-6.5	-9.2	-8.8	-10.3
29.	-10.4	-11.3	-11.3	-11.2	-11.2	-10.3	-10.6	-9.3	-7.6	-6.7	-5.9	-3.8	-3.2	-3.1	-2.7	-2.1	-2.3	-2.4	-1.5	-2.6	-2.2	-3.4	-3.3	-4.0
30.	-4.4	-5.5	-5.7	-5.7	-6.3	-5.8	-6.0	-5.7	-4.7	-2.5	-1.2	-.7	-.5	-.4	.2	.1	0.0	.3	.4	.5	.5	.7	.8	1.0
MEAN	-6.6	-7.1	-7.2	-7.4	-7.5	-7.4	-7.5	-7.7	-7.4	-6.5	-5.3	-4.3	-3.5	-2.9	-2.4	-2.5	-3.1	-4.2	-5.1	-5.6	-5.9	-5.9	-6.2	-6.5

MEAN DAILY TEMPERATURES BASED ON HOURLY READINGS

DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MEAN	4.1	1.1	-3.5	-4.1	-4.0	-2.3	-1.0	-.6	-2.7	-1.4	-2.2	-12.8	-11.0	-8.2	-3.2	-2.2

MEAN DAILY TEMPERATURES BASED ON HOURLY READINGS

DATE	17	18	19	20	21	22	23	24	25	26	27	28	29	30
MEAN	-.6	.1	4.1	-2.7	-13.1	-15.1	-16.8	-14.1	-17.2	-17.5	-8.6	-6.9	-5.8	-2.0

COMPARATIVE RECORDS  
RELEVÉS COMPARATIFS

MONTH  
MOIS NOVEMBER / NOVEMBRE

19 82

Temperature/Température Précipitation/Précipitation Rainfall/Hauteur de pluie Snowfall/Hauteur de neige Wind speed/Vitesse du vent Station pressure/Pression à la station	°Celsius - Millimetres (mm) - Millimètres (mm) - Centimetres (cm) - Kilometres/Par hour (km/h) - Kilopascals (kPa)	THIS MONTH CE MOIS-CI		PREVIOUS YEAR ANNÉE PRÉCÉDENTE		NORMAL NORMALE	RECORD FOR THE MONTH RECORD POUR LE MOIS						YEARS OF RECORD ANNÉES D'OBSERVATIONS
		VALUE RELEVÉ	DATE	VALUE RELEVÉ	DATE		HIGHEST MAXIMUM ABSOLU			LOWEST MINIMUM ABSOLU			
							VALUE RELEVÉ	DAY JOUR	YEAR ANNÉE	VALUE RELEVÉ	DAY JOUR	YEAR ANNÉE	
HIGHEST TEMPERATURE TEMPÉRATURE LA PLUS ÉLEVÉE		12.3	1	18.2	4	10.8	23.9	5	1975	2.2	5	1972	111
LOWEST TEMPERATURE TEMPÉRATURE LA PLUS BASSE		-23.8	26	-10.7	20	-23.3	-7.8	12	1899	-36.7	28	1875	111
MEAN MONTHLY TEMPERATURE TEMPÉRATURE MENSUELLE MOYENNE		-5.8		1.0		-4.5	1.3		1923 1899	-13.9		1896	111
TOTAL MONTHLY RAINFALL HAUTEUR TOTALE MENSUELLE DE PLUIE		3.8		3.6		5.5	62.2		1918	Nil (Several)			111
TOTAL MONTHLY SNOWFALL HAUTEUR TOTALE MENSUELLE DE NEIGE		3.2		2.5		21.9	80.3		1955	Tr.		1928	111
TOTAL MONTHLY PRECIPITATION PRÉCIPITATION TOTALE MENSUELLE		5.7		5.9		25.2	90.2		1955	0.8		1976	111
NO OF DAYS WITH MEASURABLE PRECIPITATION NOMBRE DE JOURS AVEC PRÉCIPITATION MESURABLE		5		4		9	20		1955	1		1901	99
GREATEST RAINFALL IN ONE DAY HAUTEUR DE PLUIE MAXIMALE EN UNE JOURNÉE		*2.1	19	3.4	15		44.5	17	1918				111
GREATEST SNOWFALL IN ONE DAY HAUTEUR DE NEIGE MAXIMALE EN UNE JOURNÉE		*1.2	4	1.9	26		31.0	10	1919				111
GREATEST PRECIPITATION IN ONE DAY PRÉCIPITATION MAXIMALE EN UNE JOURNÉE		*2.7	2.0	3.4	15		44.5	17	1918				111
MAXIMUM RAINFALL RECORDED IN: HAUTEUR DE PLUIE MAXIMALE ENREGISTRÉE EN:													
5 MINUTES				0.2	15		1.3	8 14	1980 1971				14
10 MINUTES	Rain gauge out of order data missing			0.5	15		1.8	14	1971				14
15 MINUTES				0.8	15		2.0	14	1971				14
30 MINUTES				1.0	15		2.8	14	1971				14
60 MINUTES				1.5	15		3.8	14	1971				14
24 CONSECUTIVE HOURS HEURES CONSECUTIVES		3.6	19-20	3.4	15		44.5	17	1918				111
MEAN WIND SPEED (km/h) VITESSE MOYENNE DU VENT (km/h)		15.7		17.7		19.4	25.4		1953	13.7		1972	62
MAXIMUM SPEED (1 min.) (km/h) VITESSE MAXIMALE (1 min.) (km/h)		NNW48	11	NW54	7	57	NW80	11 5	1940 1952				44
MAXIMUM GUST SPEED (km/h) POINTE DU VENT MAXIMALE (km/h)		NNW76	11	NW80	7	81	NNW124	21	1960				37
TOTAL HOURS OF SUNSHINE TOTAL DES HEURES INSOLATION		115.9		112.4		90.7	139.7		1976	25.1		1944	83
MEAN STATION PRESSURE (kPa) PRESSION MOYENNE À LA STATION (kPa)		98.74		98.63		98.63	99.19		1943	98.20		1949	44
GREATEST STATION PRESSURE (kPa) PRESSION MAXIMALE À LA STATION (kPa)		100.50	26	100.24	8,9	100.52	101.52	20	1978				44
LEAST STATION PRESSURE (kPa) PRESSION MINIMALE À LA STATION (kPa)		96.60	20	97.31	7	96.38				94.56	20	1962	44

CLIMATOLOGICAL DATA FOR THE PAST TEN (10) YEARS  
DONNÉES CLIMATOLOGIQUES POUR LES DERNIÈRES ANNÉES

YEAR ANNÉE	MAXIMUM TEMP. MAXIMALE	MINIMUM TEMP. MINIMALE	MEAN TEMP. MOYENNE	RAINFALL HAUTEUR DE PLUIE	SNOWFALL HAUTEUR DE NEIGE	TOTAL PRECIP. TOTALE	MEAN WINDSPEED VITESSE MOYENNE DES VENTS	MAXIMUM WINDSPEED VITESSE MAXIMALE DES VENTS	HOURS SUNSHINE HEURES INSOLATION	HEATING DEGREES DAYS DEGRES JOURS DE CHAUFFE	CROWING DEGREES DAYS DEGRES JOURS DE CROISSANCE
1973	3.3	-21.7	-7.5	6.9	37.1	40.1	16.6	W 42	77.6	760.6	0.0
1974	11.7	-18.3	-3.3	0.8	10.4	5.6	18.5	NW 45	87.8	635.6	2.2
1975	23.9	-25.4	-2.0	2.3	15.5	13.0	16.4	S 40	122.9	598.4	28.9
1976	13.3	-26.7	-5.9	Tr.	1.7	0.8	20.3	NNE40	139.7	714.7	3.4
1977	17.8	-25.3	-4.8	0.6	28.4	28.4	19.9	WNW56	102.1	682.6	14.6
1978	17.3	-30.7	-8.4	8.2	36.4	42.6	16.1	W 59	99.6	791.2	11.0
1979	7.5	-18.1	-5.0	0.6	16.2	14.6	15.2	NW 57	100.7	688.6	0.0
1980	16.0	-21.5	-2.0	4.3	20.7	25.0	17.1	NW 46	125.0	601.1	2.2
1981	18.2	-10.7	1.0	3.6	2.5	5.9	17.7	NW 54	112.4	510.5	22.3
1982	12.3	-23.8	-5.8	3.8	3.2	5.7	15.7	NNW 48	115.9	713.8	0.0

NOV. 19-20 - 24 HOUR PRECIP. - 4.2 mm, NOV. 4-5 - 24 HOUR SNOW - 1.8 cm, NOV. 19-20 - 24 HOUR RAIN - 3.6 mm