

WIND CHILL FOR DECEMBER 1983

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	1339	1342	0	1345	1442	1618	1504	1538	1507	0	0	0	0	1473	1465	1467	1399	1427	1480	1518	1437	1433	
2	1357	1365	0	1483	1486	1481	1387	1484	1435	1501	1513	1569	1585	1570	0	0	0	1426	1394	0	0	1446	1611	
3	1578	1661	1624	1720	1732	1676	1777	1712	1731	1724	1844	1761	1698	1851	1809	1776	1667	1665	1595	1570	1495	1471	1457	
4	1373	1344	1351	1463	1432	1414	1408	1396	1440	0	1226	0	0	1291	1267	1306	1318	0	0	0	0	0	0	
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1387	1372	0	0	1424	1342	0	0	
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1252	1325	1235	1291	
7	1367	1383	1315	1330	1296	0	0	0	0	0	0	1299	0	0	0	0	0	0	0	0	0	0	0	
8	0	0	0	0	0	1402	1695	1635	1758	1738	1879	1856	1758	0	0	0	0	0	0	0	0	0	0	
9	0	1649	1786	1714	0	1827	1684	1750	1690	0	1707	1725	1742	0	0	1768	0	0	0	1668	1627	0	1617	
10	0	0	0	0	0	0	0	0	1719	1711	1780	1858	1773	1815	0	1815	1783	1715	1639	1710	1744	1643	1734	
11	1827	1767	1735	1742	1738	1696	1615	1529	1545	1497	1322	0	0	0	1313	1322	1433	1516	1588	1605	1635	1614	1679	
12	1603	1711	1627	1702	1606	1666	1726	1646	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14	0	0	0	0	0	0	0	0	0	1496	1574	0	0	1545	1564	0	1643	1575	1689	1662	1610	1668	1657	
15	1675	1797	1804	1760	1806	1816	1853	1886	1927	1988	2015	2013	2084	2079	2098	2113	2098	2099	2106	2051	2036	2020	1920	
16	1934	1967	2015	2042	2017	2062	1995	1900	1803	0	1815	1880	1859	1759	1869	0	1728	1719	0	1678	0	1655	0	
17	0	0	0	0	0	0	1759	1765	1800	1950	1871	1871	1829	1829	1846	1925	1898	1880	1862	1844	1835	1762	0	
18	0	0	0	0	1817	1832	1832	1901	0	1873	1931	1878	1987	1952	1878	2002	1978	1953	1865	1765	1822	1745	1829	
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
20	1762	1768	1882	1780	1803	0	1862	1892	1841	1855	1861	1870	0	1940	1835	0	1816	1777	1756	1675	1666	1866	1903	
21	1856	1792	1732	1824	1805	1746	1786	1675	0	1672	0	0	0	0	0	0	0	1597	1663	1629	1672	0	1720	
22	1714	1824	1894	1920	1984	1923	2004	2081	2114	2038	2143	2127	2062	2134	2101	2125	2135	2118	2080	2106	2099	2156	2116	
23	1856	1919	1815	1874	1826	1928	1931	2107	2044	2066	2091	1958	2060	2060	2105	2060	2102	2160	2053	2175	2094	2185	2192	
24	2170	2139	2171	2217	2257	2267	2261	2193	2132	2246	2261	2210	2082	2037	2011	2024	2040	2077	2086	2113	2136	2091	2058	
25	2009	2018	1969	1783	1910	1796	1718	1721	1758	1799	1786	1633	1573	1637	1588	1640	1682	1724	1630	1580	1447	1405	1408	
26	1281	1451	1354	1430	1374	1383	1438	1503	1455	1445	1378	1449	1427	1354	1527	1454	1451	1428	1453	1309	1396	1422	1366	
27	1433	0	0	0	0	0	0	0	0	0	0	0	0	1464	0	1510	1513	1526	1517	1458	1478	1345	1354	
28	1445	1452	1447	1567	1557	1661	0	1774	1698	1650	1704	1696	1783	1754	1657	1617	1669	1761	0	1568	1741	0	1628	
29	1811	1748	1687	1929	1874	1822	1803	1764	1821	1812	1871	1805	1864	1789	1770	1780	1748	1850	1714	1683	1585	1582	1526	
30	1529	1497	1417	1445	1440	1436	1399	1439	1473	0	1499	1490	1575	1586	1634	1653	1688	1635	1492	1357	1345	0	0	
31	1397	1653	1585	1546	1531	0	1594	1724	1603	1668	1654	0	0	0	1702	0	0	0	0	0	1498	0	0	

SUMMARY

	RANGE	RANGE	RANGE	RANGE
	1200-1599 W/SQ.M	1600-1999 W/SQ.M	2000-2299 W/SQ.M	> 2299 W/SQ.M.
NUMBER OF HOURS=	154	250	76	0
NUMBER OF DAYS=	18	23	7	0
LONGEST CONSECUTIVE HOURS			38	0

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.	-15.7	-15.6	-16.7	-17.2	-18.1	-18.7	-18.9	-19.1	-17.8	-15.8	-14.4	-13.6	-13.1	-12.5	-12.7	-12.2	-13.3	-13.8	-14.1	-14.2	-15.3	-14.9	-15.0	
2.	-13.6	-13.2	-13.7	-14.8	-15.5	-17.4	-17.7	-18.2	-19.3	-19.3	-17.6	-16.2	-15.1	-14.8	-15.9	-16.9	-17.7	-18.0	-17.6	-18.1	-18.4	-17.8	-17.3	
3.	-17.5	-17.1	-16.7	-15.8	-16.3	-16.2	-16.0	-16.3	-16.4	-16.2	-15.3	-14.0	-12.8	-11.4	-10.7	-10.4	-9.7	-9.3	-9.2	-9.3	-9.5	-10.2	-11.0	-11.5
4.	-12.5	-13.5	-12.3	-10.7	-9.3	-9.0	-8.8	-8.3	-8.7	-9.2	-10.5	-10.9	-11.4	-10.7	-10.6	-10.4	-12.3	-11.7	-12.0	-11.6	-11.3	-11.0	-10.8	-10.8
5.	-10.6	-10.4	-10.4	-10.8	-10.6	-11.4	-12.9	-12.3	-13.0	-14.2	-13.2	-12.7	-13.2	-12.8	-13.0	-13.3	-15.5	-18.0	-19.2	-18.9	-19.0	-19.6	-18.9	-20.1
6.	-21.5	-20.9	-21.1	-21.9	-23.7	-23.5	-20.9	-18.5	-15.5	-13.8	-12.7	-11.0	-10.2	-10.2	-10.2	-9.8	-9.6	-10.0	-10.0	-10.5	-10.8	-11.3	-11.7	-11.8
7.	-12.2	-12.2	-12.5	-12.0	-12.2	-11.6	-12.3	-11.8	-11.9	-11.8	-11.5	-11.6	-11.6	-11.3	-11.3	-10.7	-12.0	-13.6	-13.5	-14.1	-13.9	-15.1	-13.7	-13.7
8.	-13.1	-13.1	-13.9	-16.0	-18.1	-20.9	-22.3	-24.1	-25.1	-24.5	-23.2	-22.6	-21.8	-21.7	-20.9	-21.2	-21.9	-22.8	-23.0	-23.5	-24.1	-24.6	-24.5	-24.5
9.	-25.1	-25.3	-25.3	-26.1	-25.9	-26.5	-27.1	-27.5	-27.6	-27.6	-25.9	-25.4	-24.1	-22.0	-22.8	-22.7	-22.9	-24.5	-25.0	-24.8	-24.9	-27.1	-27.0	-26.6
10.	-27.0	-26.3	-26.3	-24.0	-23.0	-24.1	-24.3	-24.1	-24.8	-24.1	-23.1	-22.4	-21.6	-20.8	-19.5	-18.7	-18.2	-17.1	-16.7	-16.8	-16.6	-16.1	-16.0	-15.5
11.	-14.7	-14.0	-13.5	-13.0	-12.6	-12.3	-12.0	-11.8	-11.8	-12.3	-12.6	-13.3	-13.6	-13.9	-14.4	-15.3	-16.6	-18.6	-20.4	-24.0	-21.2	-22.0	-22.4	-22.5
12.	-24.5	-23.8	-25.0	-25.0	-25.3	-24.6	-24.4	-24.7	-26.0	-23.3	-21.0	-20.1	-18.9	-19.3	-18.4	-18.2	-18.1	-17.0	-17.0	-17.5	-16.8	-16.5	-15.8	-15.8
13.	-13.2	-15.0	-14.5	-15.4	-15.5	-15.2	-15.4	-15.5	-15.1	-14.4	-13.5	-12.3	-14.0	-14.5	-14.8	-16.0	-15.1	-13.6	-13.4	-13.1	-13.8	-17.1	-17.8	-18.8
14.	-19.5	-20.1	-21.3	-18.6	-21.3	-20.8	-21.4	-20.3	-19.1	-18.3	-17.5	-15.4	-14.0	-12.2	-11.8	-11.5	-11.2	-11.0	-11.7	-13.2	-14.0	-14.4	-15.2	-15.9
15.	-16.9	-17.8	-18.9	-19.6	-20.3	-20.7	-21.3	-22.0	-22.5	-22.9	-23.5	-23.0	-23.2	-22.8	-23.0	-23.2	-23.7	-24.4	-25.2	-26.2	-26.5	-27.3	-27.7	-27.9
16.	-28.3	-28.4	-29.2	-29.5	-29.6	-29.6	-28.9	-27.7	-27.4	-26.8	-26.6	-26.3	-25.7	-24.9	-24.2	-24.1	-24.8	-25.8	-26.1	-26.3	-26.9	-27.1	-27.7	-27.9
17.	-27.7	-27.9	-29.1	-30.0	-29.3	-29.3	-30.1	-30.1	-30.7	-31.1	-30.2	-29.6	-29.0	-28.4	-28.1	-27.8	-28.0	-28.5	-28.5	-28.5	-29.0	-29.7	-30.2	-30.2
18.	-30.2	-30.3	-30.6	-31.6	-31.3	-31.8	-31.2	-32.0	-31.8	-31.7	-30.9	-30.1	-29.1	-27.9	-27.7	-27.2	-27.9	-28.7	-29.2	-29.5	-29.7	-30.0	-30.3	-30.3
19.	-30.6	-31.0	-30.5	-30.6	-31.6	-31.4	-32.0	-32.0	-32.1	-31.2	-28.5	-27.3	-26.5	-26.1	-26.1	-26.1	-26.7	-27.4	-27.7	-27.8	-28.0	-27.8	-28.4	-29.2
20.	-29.0	-29.0	-30.0	-30.5	-31.0	-31.2	-31.5	-31.5	-31.6	-30.3	-29.3	-27.5	-26.2	-25.5	-24.8	-25.7	-25.7	-25.5	-25.4	-24.9	-24.7	-24.4	-23.8	-23.4
21.	-23.2	-22.8	-22.8	-22.8	-22.7	-22.8	-22.6	-22.2	-22.2	-22.2	-22.1	-22.2	-22.1	-22.4	-23.2	-22.7	-23.8	-24.3	-24.1	-24.4	-24.0	-24.8	-25.6	-26.1
22.	-26.2	-26.5	-26.6	-27.2	-27.2	-27.4	-27.8	-27.9	-28.0	-28.7	-29.0	-28.5	-27.4	-27.2	-27.0	-27.0	-27.5	-28.2	-28.8	-29.0	-29.6	-29.4	-30.0	-31.2
23.	-31.3	-30.4	-31.3	-32.0	-32.8	-32.2	-31.8	-31.8	-31.7	-31.8	-31.6	-30.8	-30.1	-28.3	-27.8	-27.8	-28.0	-27.7	-27.4	-27.3	-26.7	-26.7	-26.7	-26.5
24.	-26.8	-27.3	-27.1	-28.1	-28.5	-28.5	-28.5	-28.3	-28.8	-29.2	-28.4	-27.3	-27.0	-25.8	-25.1	-24.5	-23.6	-23.5	-22.9	-22.5	-21.8	-21.8	-21.6	-22.2
25.	-22.5	-22.6	-23.8	-23.6	-23.2	-21.4	-19.4	-18.5	-18.3	-18.6	-18.7	-18.9	-18.3	-16.7	-15.2	-13.8	-12.8	-11.3	-11.2	-11.6	-12.1	-13.2	-14.4	-14.7
26.	-14.9	-14.3	-14.0	-13.7	-12.9	-12.6	-11.9	-12.1	-12.1	-11.7	-11.6	-10.9	-9.9	-9.3	-9.0	-9.8	-12.5	-13.3	-13.3	-15.9	-16.8	-15.9	-15.0	-14.9
27.	-14.8	-14.4	-14.4	-13.9	-14.5	-14.4	-14.2	-14.3	-15.7	-17.3	-17.4	-16.3	-16.0	-14.1	-13.5	-13.4	-13.7	-13.7	-13.9	-15.2	-16.3	-16.0	-17.0	-17.0
28.	-17.6	-18.5	-19.2	-20.3	-20.6	-21.8	-21.8	-22.2	-22.2	-22.8	-22.6	-22.4	-20.8	-21.1	-20.5	-20.4	-19.6	-20.1	-21.5	-22.0	-23.2	-23.0	-21.4	-23.0
29.	-22.4	-24.0	-24.3	-24.0	-24.5	-23.8	-24.3	-24.8	-24.2	-23.0	-22.0	-19.9	-18.6	-16.7	-15.7	-14.6	-13.9	-12.2	-11.4	-11.2	-11.6	-11.4	-12.3	-13.4
30.	-13.6	-13.5	-14.6	-15.8	-18.7	-18.4	-17.9	-16.9	-18.4	-19.0	-17.8	-16.2	-15.2	-13.8	-13.4	-13.0	-13.8	-15.0	-15.2	-19.0	-19.8	-18.5	-18.0	-19.6
31.	-20.1	-20.0	-20.4	-20.9	-22.1	-22.2	-22.4	-24.1	-23.2	-23.7	-21.3	-17.8	-16.4	-15.4	-15.4	-15.7	-16.5	-17.2	-14.0	-13.2	-13.3	-13.7	-13.4	-13.6

MEAN -20.5 -20.5 -20.9 -21.0 -21.5 -21.6 -21.7 -21.6 -21.7 -21.5 -20.7 -19.9 -19.2 -18.5 -18.1 -18.1 -18.4 -18.8 -18.9 -19.3 -19.4 -19.8 -19.9 -20.3

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	-15.4	-16.6	-13.2	-10.7	-14.2	-15.1	-12.4	-21.2	-25.3	-21.0	-15.7	-20.7	-14.9	-16.1	-22.8	-27.0

MEAN DAILY TEMPERATURES BASED ON HOURLY READINGS

DATE	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
MEAN	-29.0	-29.9	-28.9	-27.5	-23.2	-28.0	-29.5	-25.7	-17.2	-12.7	-14.8	-21.1	-18.4	-16.4	-18.1

COMPARATIVE RECORDS RELEVÉS COMPARATIFS		MONTH MOIS		DECEMBER / DECEMBRE		1983									
Temperature/Température Precipitation/Précipitation Rainfall/Hauteur de pluie Snowfall/Hauteur de neige Wind speed/Vitesse du vent Station pressure/Pression à la station	°Celsius - Millimetres (mm) - Millimetres (mm) - Centimetres (cm) - Kilometres/par heure (km/h) - Kilopascals	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		VALUE RELEVÉ	DAY JOUR	YEAR ANNÉE	VALUE RELEVÉ	DAY JOUR	YEAR ANNÉE			
HIGHEST TEMPERATURE TEMPÉRATURE LA PLUS ÉLEVÉE		-8.3	4	9.7	2	2.6	11.7	6	1939	-8.3	4	1983	112		
LOWEST TEMPERATURE TEMPÉRATURE LA PLUS BASSE		-33.0	19	-25.6	30	32.6	-18.3	10	1877	-47.8	24	1879	112		
MEAN MONTHLY TEMPERATURE TEMPÉRATURE MENSUELLE MOYENNE		-20.3		9.9		14.0	-3.4		1877	-25.9		1879	112		
TOTAL MONTHLY RAINFALL HAUTEUR TOTALE MENSUELLE DE PLUIE		0.0		22.2		0.9	23.4		1877	Nil (several)			112		
TOTAL MONTHLY SNOWFALL HAUTEUR TOTALE MENSUELLE DE NEIGE		8.8		12.2		20.7	101.3		1909	0.5		1877	112		
TOTAL MONTHLY PRECIPITATION PRÉCIPITATION TOTALE MENSUELLE		5.7		31.7		19.2	101.3		1909	2.5		1892	112		
NO OF DAYS WITH MEASURABLE PRECIPITATION NOMBRE DE JOURS AVEC PRÉCIPITATION MESURABLE		10		12		11	17		1955	2 (several)			100		
GREATEST RAINFALL IN ONE DAY HAUTEUR DE PLUIE MAXIMALE EN UNE JOURNÉE		0.0		21.8*	2		21.8	2	1982				112		
GREATEST SNOWFALL IN ONE DAY HAUTEUR DE NEIGE MAXIMALE EN UNE JOURNÉE		2.0*	11, 21	6.0*	23		30.5	26	1916				112		
GREATEST PRECIPITATION IN ONE DAY PRÉCIPITATION MAXIMALE EN UNE JOURNÉE		1.5*	21	21.8*	2		30.5	26	1916				112		
MAXIMUM RAINFALL RECORDED IN: HAUTEUR DE PLUIE MAXIMALE ENREGISTRÉE EN:															
5 MINUTES				2.0	2		2.0	2	1982				15		
10 MINUTES				3.8	2		3.8	2	1982				15		
15 MINUTES				4.0	2		4.0	2	1982				15		
30 MINUTES				4.3	2		4.3	2	1982				15		
60 MINUTES				7.8	2		7.8	2	1982				15		
24 CONSECUTIVE HOURS HEURES CONSECUTIVES				22.0	1-2		15.2	22	1877				112		
MEAN WIND SPEED (km/h) VITESSE MOYENNE DU VENT (km/h)		13.9		16.7		18.6	24.6		1943	12.5		1978	63		
MAXIMUM SPEED (1 min.) (km/h) VITESSE MAXIMALE (1 min.) (km/h)		N46	14	SSE44	16	54	NW74	(several)					45		
MAXIMUM GUST SPEED (km/h) POINTE DU VENT MAXIMALE (km/h)		W61	24	S70	9	75	NW100	11	1946				37		
TOTAL HOURS OF SUNSHINE TOTAL DES HEURES INSOLATION		138.6		70.5		92.6	139.5		1978	31.7		1920	84		
MEAN STATION PRESSURE (kPa) PRESSION MOYENNE À LA STATION (kPa)		99.26		98.61		98.77	99.26		1983	98.29		1953	45		
GREATEST STATION PRESSURE (kPa) PRESSION MAXIMALE À LA STATION (kPa)		101.16	19	101.77	8	1007.3	101.77	8	1982				45		
LEAST STATION PRESSURE (kPa) PRESSION MINIMALE À LA STATION (kPa)		97.06	3	96.30	2	96.39				94.71	17	1967	45		
CLIMATOLOGICAL DATA FOR THE PAST DONNÉES CLIMATOLOGIQUES POUR LES										TEN (10) DIX			YEARS DERNIÈRE ANNÉES		
YEAR ANNÉE	MAXIMUM TEMP. MAXIMALE	MINIMUM TEMP. MINIMALE	MEAN TEMP. MOYENNE	RAINFALL HAUTEUR DE PLUIE	SNOWFALL HAUTEUR DE NEIGE	TOTAL PRECI. TOTALE	MEAN WINDSPEED VITESSE MOYENNE DES VENTS	MAXIMUM WINDSPEED VITESSE MAXIMALE DES VENTS	HOURS SUNSHINE HEURES INSOLATION	HEATING DEGREES-DAYS DE CHAUFFE	GROWING DEGREES-DAYS DE CROISSANCE				
1974	4.4	-21.1	-8.6	Tr.	18.5	13.0	16.1	N 45	94.6	822.8					
1975	5.9	-33.7	-14.1	Tr.	18.9	17.1	17.9	ESE 47	96.0	995.4					
1976	3.0	-34.7	-18.5	Nil	20.6	18.2	19.1	S52	106.4	1131.3					
1977	1.8	-33.8	-17.4	1.6	18.3	18.8	16.9	NNW41	84.8	1098.7					
1978	0.3	-34.7	-17.8	Tr.	20.4	20.9	12.5	S57	139.5	1109.1					
1979	2.0	-28.4	-9.8	1.0	10.5	11.3	18.4	S56	104.3	862.8					
1980	6.4	-30.3	-15.5	2.8	8.8	11.0	17.9	NNW56	99.9	1037.3					
1981	0.4	-31.3	-12.9	0.5	12.2	7.3	14.2	S48	111.6	959.3					
1982	9.7	-25.6	-9.9	22.2	12.2	31.7	16.7	SSE 44	70.5	862.7	0.4				
1983	-8.3	-33.0	-20.3	0.0	8.8	5.7	13.9	N46	138.6	1187.8					
CORRECTION DEC.82 NORMAL STATION PRESSURE 98.77							NOT 99.77								
*DEC.1-2 - 24 Hr. rainfall and precipitation 22.0 mm															
*DEC.22-23 - 24 Hr. snowfall 8.2 cm															

1983 3.4 cm snow on Dec.10-11
2.6 mm Precp. on Dec.10-11