

Manitoba Ambient Air Quality Data - 2004 Annual Pollutant Summary –
Continuous Monitoring (revised August 2007)

POLLUTANT Conc. Units	STATION NUMBER & LOCATION	ANNUAL MEAN	MAXIMUM DATA VALUES		# OF SAMPLES ABOVE M.D.L.		# OF SAMPLES ABOVE M.A.L.		# OF SAMPLES ABOVE M.T.L.	
			1-HR	24-HR	1-HR	24-HR	1-HR	24-HR	1-HR	24-HR
CARBON MONOXIDE (CO) ppm	9118 WINNIPEG, SCOTIA & JEFFERSON	0.24	2.6	1.47 ^Δ	0	0 ^Δ	0	0 ^Δ	--	0 ^Δ
	9119 WINNIPEG, 65 ELLEN STREET	0.36	3.5	1.38 ^Δ	0	0 ^Δ	0	0 ^Δ	--	0 ^Δ
NITROGEN DIOXIDE (NO ₂) pphm	5131 BRANDON, ASSIN. COMM.COLLEGE	0.54	6.6	3.05 [○]	--	--	0	0	0	--
	9118 WINNIPEG, SCOTIA & JEFFERSON	0.86	5.6	3.25 [○]	--	--	0	0	0	--
	9119 WINNIPEG, 65 ELLEN STREET	1.33	9.9	4.50 [○]	--	--	0	0	0	--
NITRIC OXIDE (NO) pphm	5131 BRANDON, ASSIN. COMM.COLLEGE	0.41	13.2	3.44 [○]	--	--	--	--	--	--
	9118 WINNIPEG, SCOTIA & JEFFERSON	0.45	24.2	7.09 [○]	--	--	--	--	--	--
	9119 WINNIPEG, 65 ELLEN STREET	0.93	28.2	9.53 [○]	--	--	--	--	--	--
NITROGEN OXIDES (NO _x) pphm	5131 BRANDON, ASSIN. COMM.COLLEGE	0.94	19.6	6.48 [○]	--	--	--	--	--	--
	9118 WINNIPEG, SCOTIA & JEFFERSON	1.28	28.0	8.98 [○]	--	--	--	--	--	--
	9119 WINNIPEG, 65 ELLEN STREET	2.26	31.7	13.35 [○]	--	--	--	--	--	--
SULPHUR DIOXIDE (SO ₂) ppm	7251 FLIN FLON, 143 MAIN STREET	0.01	0.65	0.15 [○]	63	78 [○]	8	15 [○]	--	0 [○]
	7271 [†] FLIN FLON, AQUA CENTRE	0.00	0.39	0.11 [○]	15	33 [○]	2	0 [○]	--	0 [○]
	7281 [†] FLIN FLON, HBM&S STAFFHOUSE	0.00	0.39	0.08 [○]	24	43 [○]	1	0 [○]	--	0 [○]
	7291 [†] CREIGHTON, SASK. CITY HALL	0.01	0.68	0.11 [○]	30	81 [○]	7	0 [○]	--	0 [○]
	7301 [†] FLIN FLON, HAPNOT COLLEGIATE	0.00	0.32	0.03 [○]	4	0 [○]	0	0 [○]	--	0 [○]
	7351 [†] THOMPSON, WATER TREAT. PLANT	0.00	0.34	0.08 [○]	15	19 [○]	0	0 [○]	--	0 [○]
	7361 [†] THOMPSON, EASTWOOD SCHOOL	0.00	0.61	0.09 [○]	43	54 [○]	7	0 [○]	--	0 [○]
7371 [†] THOMPSON, RIVERSIDE SCHOOL	0.00	0.59	0.15 [○]	45	103 [○]	11	9 [○]	--	0 [○]	
OXIDANTS OZONE (O ₃) pphm	5131 BRANDON, ASSIN. COMM.COLLEGE	2.22	5.3	4.5 [○]	4	~	0	~	0	--
	9118 WINNIPEG, SCOTIA & JEFFERSON	1.99	5.7	4.2 [○]	6	~	0	~	0	--
	9119 WINNIPEG, 65 ELLEN STREET	1.74	5.3	3.8 [○]	7	~	0	~	0	--
AMMONIA (NH ₃) ppm	5131 BRANDON, ASSIN. COMM.COLLEGE	0.00	2.3	0.2 [○]	--	--	1	--	--	--

Notes:

- Δ averaged over 8 hours
- † denotes company supplied data
- using 24-hour moving average
- ~ numerous exceedences of the 24 hour MDL and MAL which are currently under review
- no guideline or objective

Manitoba Ambient Air Quality Data - 2004 Annual Pollutant Summary –
Particulate Matter Monitoring (PM₁₀) (revised August 2007)

POLLUTANT	STATION NUMBER & LOCATION		ANNUAL	MAXIMUM	# OF SAMPLES		# OF SAMPLES		# OF SAMPLES	
			ARITH/GEO MEAN	DATA VALUES 24/1-HR	ABOVE M.D.L. 1-HR 24-HR	ABOVE M.A.L. 1-HR 24-HR	ABOVE M.T.L. 1-HR 24-HR			
INHALABLE PARTICULATE (PM ₁₀)	7251 ⁵	FLIN FLON, 143 MAIN STREET	16.3/-	66.7/245.1	--	--	--	10 ⁶	--	--
	7283 ^{4,8}	FLIN FLON, CREIGHTON SCHOOL	20.0/17.0	103.8/-	--	--	--	7 ⁶	--	--
	7284 ¹	FLIN FLON, RUTH BETTS	12.0/9.7	35.2/-	--	--	--	0 ⁶	--	--
	7381 ^{5,10}	THOMPSON, WESTWOOD	8.5/-	32.1/159.5	--	--	--	0 ⁶	--	--
	9119 ⁵	WINNIPEG, 65 ELLEN STREET	17.3/-	104.4/248.6	--	--	--	3 ⁶	--	--
	9119 ¹	WINNIPEG, 65 ELLEN STREET	15.9/13.4	45.7/-	--	--	--	0 ⁶	--	--
	5131 ⁵	BRANDON, ASSIN. COLLEGE	20.8/-	156.6/496.9	--	--	--	27 ⁶	--	--
LEAD (Pb)	7283 ^{4,8,9}	FLIN FLON, CREIGHTON SCHOOL	0.4/0.421	0.845/-	--	--	--	0	--	--
	7284 ¹	FLIN FLON, RUTH BETTS	0.0/0.0323	0.1517/-	--	--	--	0	--	--
SULPHATES (SO ₄ ²⁻)	7284 ¹	FLIN FLON, RUTH BETTS	1.70/1.21	3.51/-	--	--	--	--	--	--
ARSENIC (As)	7283 ^{4,8,9}	FLIN FLON, CREIGHTON SCHOOL	0.01/0.004	0.225/-	--	--	--	0 ⁶	--	--
	7284 ¹	FLIN FLON, RUTH BETTS	0.01/0.005	0.0765/-	--	--	--	0 ⁶	--	--
CADMIUM (Cd)	7283 ^{4,8,9}	FLIN FLON, CREIGHTON SCHOOL	0.044/0.044	0.119/-	--	--	--	0 ⁶	--	--
	7284 ¹	FLIN FLON, RUTH BETTS	0.0/0.0067	0.0238/-	--	--	--	0 ⁶	--	--
COPPER (Cu)	7283 ^{4,8,9}	FLIN FLON, CREIGHTON SCHOOL	0.1/0.1114	0.781/-	--	--	--	0 ⁶	--	--
	7284 ¹	FLIN FLON, RUTH BETTS	0.1/0.0647	1.147/-	--	--	--	0 ⁶	--	--
ZINC (Zn)	7283 ^{4,8,9}	FLIN FLON, CREIGHTON SCHOOL	0.23/0.208	1.859/-	--	--	--	0 ⁶	--	--
	7284 ¹	FLIN FLON, RUTH BETTS	0.76/0.1905	4.1654/-	--	--	--	0 ⁶	--	--

Notes:

- All Concentration units for the above Table 4a are in ug/m³.
- No guideline or objective
- No data available
- 1 - 24 Hour sample collected every six days according to NAPS schedule
- 4 - 24 Hour sample collected daily
- 5 - Real-time continuous monitoring
- 6 - Ontario 24-hour guideline
- 8 - Station instrument changed from hivol to dichotomous in May 2003
- 9 - Majority of data at or below detection limit
- 10 - New station established August, 2004

Manitoba Ambient Air Quality Data - 2004 Annual Pollutant Summary –
 Particulate Matter Monitoring (PM_{2.5}) (revised August 2007)

POLLUTANT	STATION NUMBER & LOCATION		ANNUAL	MAXIMUM	# OF SAMPLES		# OF SAMPLES		# OF SAMPLES	
			ARITH/GEO MEAN	DATA VALUES 24/1-HR	ABOVE M.D.L. 1-HR 24-HR	ABOVE M.A.L. 1-HR 24-HR	ABOVE M.T.L. 1-HR 24-HR			
INHALABLE PARTICULATE (PM _{2.5})	9118 ⁵	WINNIPEG, SCOTIA & JEFFERSON	4.5/-	18.1/67.8	--	--	--	--	--	--
	9119 ¹	WINNIPEG, 65 ELLEN STREET	8.0/6.5	26.5/-	--	--	--	--	--	--
	9119 ⁵	WINNIPEG, 65 ELLEN STREET	4.2/-	19.6/86.9	--	--	--	--	--	--
	5131 ⁵	BRANDON, ASSIN. COMM.COLLEGE	5.0/-	22.9/109.3	--	--	--	--	--	--
	7251 ⁵	FLIN FLON, 143 MAIN STREET	4.2/-	15.6/82.2	--	--	--	--	--	--
	7381 ^{5,10}	THOMPSON, WESTWOOD	3.7/-	15.7/63.5	--	--	--	--	--	--

Notes:

- All Concentration units for the above Table 4b are in ug/m³.
- No guideline or objective
- No data available
- 1 - 24 Hour sample collected every six days according to NAPS schedule
- 5 - Real-time continuous monitoring
- 10 - New station established August, 2004

Manitoba Ambient Air Quality Data - 2004 Annual Pollutant Summary –
Particulate Matter Monitoring (TSP) (revised August 2007)

POLLUTANT	STATION NUMBER & LOCATION		ANNUAL	MAXIMUM	# OF SAMPLES		# OF SAMPLES		# OF SAMPLES	
			ARITH/GEO MEAN	DATA VALUES 24-HR	ABOVE M.D.L. 1-HR 24-HR	ABOVE M.A.L. 1-HR 24-HR	ABOVE M.T.L. 1-HR 24-HR			
TOTAL SUSPENDED PARTICULATE (TSP)	7251 ² 7283 ³⁺ 7284 ²⁺	FLIN FLON, 143 MAIN STREET CREIGHTON, SCHOOL FLIN FLON, RUTH BETTS	41/28 32/24 23/18	423 545 97	-- -- -- -- -- --	-- -- -- -- -- --	2 2 0	-- -- --	1 1 0	
LEAD (Pb)	7251 ² 7283 ³⁺ 7284 ²⁺	FLIN FLON, 143 MAIN STREET CREIGHTON, SCHOOL FLIN FLON, RUTH BETTS	0.11/0.07 0.03/0.03 0.04/0.03	0.77 0.42 0.22	-- -- -- -- -- --	-- -- -- -- -- --	0 0 0	-- -- --	-- -- --	
SULPHATES (SO4=)	7251 ² 7283 ³⁺ 7284 ²⁺	FLIN FLON, 143 MAIN STREET CREIGHTON, SCHOOL FLIN FLON, RUTH BETTS	2.40/1.81 1.51/1.12 1.88/1.58	29.27 9.84 3.56	-- -- -- -- -- --	-- -- -- -- -- --	-- -- --	-- -- --	-- -- --	
NITRATES (NO3-)	7251 ²	FLIN FLON, 143 MAIN STREET	0.08/0.07	0.65	-- --	-- --	-- --	-- --	-- --	
ARSENIC (As)	7251 ² 7283 ³⁺ 7284 ²⁺	FLIN FLON, 143 MAIN STREET CREIGHTON, SCHOOL FLIN FLON, RUTH BETTS	0.038/0.017 0.006/0.003 0.016/0.005	0.344 0.130 0.184	-- -- -- -- -- --	-- -- -- -- -- --	1 ⁶ 0 ⁶ 0 ⁶	-- -- --	-- -- --	
CADMIUM (Cd)	7251 ² 7283 ^{3,9+} 7284 ²⁺	FLIN FLON, 143 MAIN STREET CREIGHTON, SCHOOL FLIN FLON, RUTH BETTS	0.015/0.008 0.003/0.003 0.006/0.004	0.087 0.025 0.042	-- -- -- -- -- --	-- -- -- -- -- --	0 ⁶ 0 ⁶ 0 ⁶	-- -- --	-- -- --	
COPPER (Cu)	7251 ² 7283 ³⁺ 7284 ²⁺	FLIN FLON, 143 MAIN STREET CREIGHTON, SCHOOL FLIN FLON, RUTH BETTS	0.980/0.575 0.495/0.394 0.576/0.412	5.299 1.743 3.022	-- -- -- -- -- --	-- -- -- -- -- --	0 ⁶ 0 ⁶ 0 ⁶	-- -- --	-- -- --	
ZINC (Zn)	7251 ² 7283 ³⁺ 7284 ²⁺	FLIN FLON, 143 MAIN STREET CREIGHTON, SCHOOL FLIN FLON, RUTH BETTS	2.457/1.741 0.470/0.050 0.898/0.165	8.670 3.314 4.713	-- -- -- -- -- --	-- -- -- -- -- --	0 ⁶ 0 ⁶ 0 ⁶	-- -- --	-- -- --	

Notes:

- All Concentration units for the above Table 4c are in ug/m³.
- No guideline or objective
- + Company supplied data
- 2 - 24 Hour sample collected every three days, synchronized with the NAPS schedule (with numerous exceptions)
- 3 - 24 Hour sample collected every second day
- 6 - Ontario 24-hour guideline
- 9 - Majority of data at or below detection limit