

Manitoba Ambient Air Quality Data - 2010 Annual Pollutant Summary – Continuous Monitoring

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	0.16	2.2	0.77 ^Δ	0	0 ^Δ	0	0 ^Δ	--	0 ^Δ
	9119 WINNIPEG, 65 ELLEN STREET	0.25	2.4	0.77 ^Δ	0	0 ^Δ	0	0 ^Δ	--	0 ^Δ
NITROGEN DIOXIDE (NO ₂) pphm	5131 BRANDON, ASSIN. COMM.COLLEGE	0.46	4.9	3.13 [◊]	--	--	0	0 [◊]	0	--
	9118 WINNIPEG, SCOTIA & JEFFERSON	0.69	5.7	4.41 [◊]	--	--	0	0 [◊]	0	--
	9119 WINNIPEG, 65 ELLEN STREET	0.89	7.7	3.39 [◊]	--	--	0	0 [◊]	0	--
NITRIC OXIDE (NO) pphm	5131 BRANDON, ASSIN. COMM.COLLEGE	0.23	14.6	3.58 [◊]	--	--	--	--	--	--
	9118 WINNIPEG, SCOTIA & JEFFERSON	0.31	15.0	5.38 [◊]	--	--	--	--	--	--
	9119 WINNIPEG, 65 ELLEN STREET	0.46	19.1	5.02 [◊]	--	--	--	--	--	--
NITROGEN OXIDES (NO _x) pphm	5131 BRANDON, ASSIN. COMM.COLLEGE	0.74	19.5	6.69 [◊]	--	--	--	--	--	--
	9118 WINNIPEG, SCOTIA & JEFFERSON	1.06	20.5	9.17 [◊]	--	--	--	--	--	--
	9119 WINNIPEG, 65 ELLEN STREET	1.47	21.7	8.38 [◊]	--	--	--	--	--	--
SULPHUR DIOXIDE (SO ₂) ppm ¹⁰	7251 FLIN FLON, 143 MAIN STREET	0.00	0.61	0.14 [◊]	12	29 [◊]	3	12 [◊]	--	0 [◊]
	7271 [†] FLIN FLON, AQUA CENTRE	0.00	0.74	0.08 [◊]	5	20 [◊]	2	0 [◊]	--	0 [◊]
	7281 [†] FLIN FLON, HBM&S STAFFHOUSE	0.01	0.33	0.08 [◊]	10	16 [◊]	0	0 [◊]	--	0 [◊]
	7291 [†] CREIGHTON, SASK. CITY HALL	0.00	0.40	0.04 [◊]	10	0 [◊]	1	0 [◊]	--	0 [◊]
	7301 [†] FLIN FLON, HAPNOT COLLEGIATE	0.00	0.44	0.05 [◊]	2	0 [◊]	1	0 [◊]	--	0 [◊]
	7351 [†] THOMPSON, WATER TREAT. PLANT	0.00	0.75	0.06 [◊]	16	0 [◊]	3	0 [◊]	--	0 [◊]
	7361 [†] THOMPSON, EASTWOOD SCHOOL	0.00	0.64	0.07 [◊]	29	9 [◊]	4	0 [◊]	--	0 [◊]
	7371 [†] THOMPSON, RIVERSIDE SCHOOL	0.00	1.11	0.09 [◊]	38	13 [◊]	4	0 [◊]	--	0 [◊]
	7381 [†] THOMPSON, WESTWOOD	0.00	0.55	0.07 [◊]	17	19 [◊]	5	0 [◊]	--	0 [◊]
ppb	9119 [◊] WINNIPEG, 65 ELLEN STREET	0.41 [◊]	13.90 [◊]	4.22 [◊]	0	0 [◊]	0	0 [◊]	--	0 [◊]
OXIDANTS OZONE (O ₃) pphm ¹¹	5131 BRANDON, ASSIN. COMM.COLLEGE	2.56	6.60	5.12 [◊]	46	~	0	~	0	--
	9118 WINNIPEG, SCOTIA & JEFFERSON	2.54	7.20	5.21 [◊]	85	~	0	~	0	--
	9119 WINNIPEG, 65 ELLEN STREET	2.33	7.20	5.39 [◊]	90	~	0	~	0	--
AMMONIA (NH ₃) ppm ¹²	5131 BRANDON, ASSIN. COMM.COLLEGE	0.1	2.40	0.69 [◊]	--	--	1	--	--	--

- Notes: ^Δ Averaged over 8 hours
[†] Company supplied data
[◊] Using 24-hour moving average
[◊] 9119, 65 Ellen Street data measured in parts per billion (ppb)
 ~ numerous exceedences of the 24 hour MDL and MAL which are currently under review
 -- no guideline or objective
¹⁰ - SO₂ guidelines (ppm): MDL: 1hr-0.170, 24hr-0.060; MAL: 1hr-0.340, 24hr-0.110; MTL: 24hr-0.310
¹¹ - O₃ guidelines (pphm): MDL: 1hr-5.0, 24hr-1.50; MAL: 1hr-8.20, 24hr-2.50; MTL: 1hr-20.0
¹² - NH₃ guidelines (ppm): MAL: 1hr-2.0

Manitoba Ambient Air Quality Data - 2010 Annual Pollutant Summary – Particulate Matter Monitoring (PM₁₀)

POLLUTANT	STATION NUMBER & LOCATION	ANNUAL ARITH/GEO MEAN	MAXIMUM DATA VALUES 24/1-HR	# OF ABOVE		# OF SAMPLES ABOVE M.A.L.		# OF SAMPLES ABOVE M.T.L.	
				1-HR	24-HR	1-HR	24-HR	1-HR	24-HR
INHALABLE PARTICULATE (PM ₁₀)	7251 ⁵ FLIN FLON, 143 MAIN STREET	17.29/10.93	213.75/793.7	--	--	--	10	--	--
	7251 ³ FLIN FLON, 143 MAIN STREET	14.74/1.00	57.36/-	--	--	--	3	--	--
	7283 ^{4†} CREIGHTON SK, HIGH SCHOOL	24.36/17.10	334.17/-	--	--	--	29	--	--
	7284 ^{1†} FLIN FLON, RUTH BETTS	12.93/9.77	52.17/-	--	--	--	2	--	--
	7381 ⁵ THOMPSON, WESTWOOD	10.50/6.67	57.62/428.4	--	--	--	3	--	--
	9119 ⁵ WINNIPEG, 65 ELLEN STREET	7.74/6.39	41.30/64.30	--	--	--	0	--	--
	9119 ² WINNIPEG, 65 ELLEN STREET	/	/-	--	--	--	0	--	--
	5131 ⁵ BRANDON, ASSIN.COMM.COLLEGE	21.28/11.83	129.43/692.40	--	--	--	26	--	--
LEAD (Pb)	7283 ^{4,9†} CREIGHTON SK, HIGH SCHOOL	0.17/0.17	0.25/-	--	--	--	0	--	--
	7284 ^{1†} FLIN FLON, RUTH BETTS	0.02/0.01	0.15/-	--	--	--	0	--	--
SULPHATES (SO ₄ ⁼)	7284 ^{1†} FLIN FLON, RUTH BETTS	1.07/0.90	2.76/-	--	--	--	--	--	--
ARSENIC (As)	7283 ^{4,9†} CREIGHTON SK, HIGH SCHOOL	0.01/0.00	0.18/-	--	--	--	0	--	--
	7284 ^{1†} FLIN FLON, RUTH BETTS	0.00/0.00	0.10/-	--	--	--	0	--	--
CADMIUM (Cd)	7283 ^{4,9†} CREIGHTON SK, HIGH SCHOOL	0.01/0.01	0.02/-	--	--	--	0	--	--
	7284 ^{1†} FLIN FLON, RUTH BETTS	0.00/0.00	0.06/-	--	--	--	0	--	--
COPPER (Cu)	7283 ^{4,9†} CREIGHTON SK, HIGH SCHOOL	0.04/0.03	0.55/-	--	--	--	0	--	--
	7284 ^{1†} FLIN FLON, RUTH BETTS	0.07/0.03	0.62/-	--	--	--	0	--	--
ZINC (Zn)	7283 ^{4,9†} CREIGHTON SK, HIGH SCHOOL	0.06/0.04	1.36/-	--	--	--	0	--	--
	7284 ^{1†} FLIN FLON, RUTH BETTS	0.42/0.01	3.78/-	--	--	--	0	--	--

Notes:

All Concentration units for the above Table are in ug/m³.

-- No guideline or objective

- No data available

¹ - 24 Hour sample collected every three days, synchronized with the NAPS schedule (with numerous exceptions)

² - 24 Hour sample collected every six days according to NAPS schedule (Dichotomous)

³ - 24 Hour sample collected every three days according to NAPS schedule (Dichotomous)

⁴ - 24 Hour sample collected daily (Dichotomous)

⁵ - Real-time continuous monitoring (TEOM)

⁹ - Majority of data at or below detection limit

† Company supplied data

Manitoba Ambient Air Quality Data - 2010 Annual Pollutant Summary – Particulate Matter Monitoring (PM_{2.5})

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	6.55/3.70	35.76/78.90	--	--	--	1 ⁷	--	--
	9119 ¹	WINNIPEG, 65 ELLEN STREET	6.29/5.30	23.75/-	--	--	--	0 ⁷	--	--
	9119 ⁵	WINNIPEG, 65 ELLEN STREET	4.82/3.02	39.44/58.00	--	--	--	1 ⁷	--	--
	5131 ⁵	BRANDON, ASSIN. COMM.COLLEGE	4.72/2.81	36.35/69.50	--	--	--	1 ⁷	--	--
	7251 ⁵	FLIN FLON, 143 MAIN STREET	5.82/2.68	203.60/976.5	--	--	--	7 ⁷	--	--
	7251 ¹	FLIN FLON, 143 MAIN STREET	6.06/1.00	36.72/-	--	--	--	7	--	--
	7283 ^{4†}	CREIGHTON SK, HIGH SCHOOL	12.10/7.63	285.65/-	--	--	--	16 ⁷	--	--
	7381 ⁵	THOMPSON, WESTWOOD	3.73/1.95	48.56/109.30	--	--	--	3 ⁷	--	--

Notes:

All Concentration units for the above Table are in ug/m³.

-- No guideline or objective

- No data available

¹ - 24 Hour sample collected every three days, synchronized with the NAPS schedule (Dichotomous)

⁴ - 24 Hour sample collected daily (Dichotomous)

⁵ - Real-time continuous monitoring (TEOM)

⁷ - Based on Canada Wide Standard "level" for PM_{2.5} (not the actual metric of the 98th percentile annual value averaged over 3 years)

† Company supplied data

Manitoba Ambient Air Quality Data - 2010 Annual Pollutant Summary – Particulate Matter Monitoring (TSP)

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 ¹	FLIN FLON, 143 MAIN STREET	39.38/29.67	154.00	--	--	--	6	--	0
	7283 ³⁺	CREIGHTON SK, HIGH SCHOOL	41.82/25.24	597.77	--	--	--	10	--	1
	7284 ²⁺	FLIN FLON, RUTH BETTS	24.69/17.88	128.89	--	--	--	1	--	0
LEAD (Pb)	7251 ¹	FLIN FLON, 143 MAIN STREET	0.07/0.04	0.61	--	--	--	0	--	--
	7283 ³⁺	CREIGHTON SK, HIGH SCHOOL	0.02/0.01	0.31	--	--	--	0	--	--
	7284 ²⁺	FLIN FLON, RUTH BETTS	0.02/0.01	0.22	--	--	--	0	--	--
SULPHATES (SO ₄ =)	7251 ¹	FLIN FLON, 143 MAIN STREET	1.93/1.51	9.78	--	--	--	--	--	--
	7283 ³⁺	CREIGHTON SK, HIGH SCHOOL	1.39/1.03	7.80	--	--	--	--	--	--
	7284 ²⁺	FLIN FLON, RUTH BETTS	1.38/1.18	4.25	--	--	--	--	--	--
NITRATES (NO ₃ -)	7251 ¹	FLIN FLON, 143 MAIN STREET	0.17/0.11	1.29	--	--	--	--	--	--
ARSENIC (As) ¹³	7251 ¹	FLIN FLON, 143 MAIN STREET	0.02/0.01	0.27	--	--	--	0	--	--
	7283 ³⁺	CREIGHTON SK, HIGH SCHOOL	0.00/0.00	0.15	--	--	--	0	--	--
	7284 ²⁺	FLIN FLON, RUTH BETTS	0.01/0.00	0.29	--	--	--	0	--	--
CADMIUM (Cd)	7251 ¹	FLIN FLON, 143 MAIN STREET	0.01/0.00	0.22	--	--	--	0	--	--
	7283 ³⁺	CREIGHTON SK, HIGH SCHOOL	0.00/0.00	0.06	--	--	--	0	--	--
	7284 ²⁺	FLIN FLON, RUTH BETTS	0.00/0.00	0.18	--	--	--	0	--	--
COPPER (Cu)	7251 ¹	FLIN FLON, 143 MAIN STREET	0.91/0.53	8.62	--	--	--	0	--	--
	7283 ³⁺	CREIGHTON SK, HIGH SCHOOL	0.09/0.04	1.02	--	--	--	0	--	--
	7284 ²⁺	FLIN FLON, RUTH BETTS	0.18/0.07	1.55	--	--	--	0	--	--
ZINC (Zn)	7251 ¹	FLIN FLON, 143 MAIN STREET	5.27/3.99	16.72	--	--	--	0	--	--
	7283 ³⁺	CREIGHTON SK, HIGH SCHOOL	0.44/0.01	5.07	--	--	--	0	--	--
	7284 ²⁺	FLIN FLON, RUTH BETTS	0.61/0.02	5.31	--	--	--	0	--	--

Notes:

All Concentration units for the above Table are in ug/m³.

-- No guideline or objective

+ Company supplied data

¹ - 24 Hour sample collected every two out of three days, synchronized with the NAPS schedule (with numerous exceptions)

² - 24 Hour sample collected every three days, synchronized with the NAPS schedule (with numerous exceptions)

³ - 24 Hour sample collected every second day

¹³ - As guidelines (ug/m³): MAL: 24hr-0.300