

Manitoba Ambient Air Quality Data - 2011 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	0.25	1.6	1.09 ^Δ	0	0 ^Δ	0	0 ^Δ	--	0 ^Δ
	9119 WINNIPEG, 65 ELLEN STREET	0.12	1.5	0.73 ^Δ	0	0 ^Δ	0	0 ^Δ	--	0 ^Δ
NITROGEN DIOXIDE (NO ₂) ppb	5131 BRANDON, ASSIN. COMM.COLLEGE	6.25	63.9	25.4 [○]	--	--	0	0 [○]	0	--
	9118 WINNIPEG, SCOTIA & JEFFERSON	7.63	52.2	37.8 [○]	--	--	0	0 [○]	0	--
	9119 WINNIPEG, 65 ELLEN STREET	11.57	70.0	38.2 [○]	--	--	0	0 [○]	0	--
NITRIC OXIDE (NO) ppb	5131 BRANDON, ASSIN. COMM.COLLEGE	2.99	187.3	22.1 [○]	--	--	--	--	--	--
	9118 WINNIPEG, SCOTIA & JEFFERSON	2.73	122.5	29.9 [○]	--	--	--	--	--	--
	9119 WINNIPEG, 65 ELLEN STREET	5.39	175.7	40.4 [○]	--	--	--	--	--	--
NITROGEN OXIDES (NO _x) ppb	5131 BRANDON, ASSIN. COMM.COLLEGE	9.28	201.9	44.4 [○]	--	--	--	--	--	--
	9118 WINNIPEG, SCOTIA & JEFFERSON	10.40	172.0	64.0 [○]	--	--	--	--	--	--
	9119 WINNIPEG, 65 ELLEN STREET	17.01	239.4	77.4 [○]	--	--	--	--	--	--
SULPHUR DIOXIDE (SO ₂) ppb ¹⁰	7251 FLIN FLON, 143 MAIN STREET	0.55	49.0	12.0 [○]	0	0 [○]	0	0 [○]	--	0 [○]
	7271 [†] FLIN FLON, AQUA CENTRE	0.62	20.0	20.0 [○]	0	0 [○]	0	0 [○]	--	0 [○]
	7281 [†] FLIN FLON, HBM&S STAFFHOUSE	12.48	70.0	37.4 [○]	0	0 [○]	0	0 [○]	--	0 [○]
	7291 [†] CREIGHTON, SASK. CITY HALL	3.12	20.0	20.0 [○]	0	0 [○]	0	0 [○]	--	0 [○]
	7301 [†] FLIN FLON, HAPNOT COLLEGIATE	4.49	10.0	10.0 [○]	0	0 [○]	0	0 [○]	--	0 [○]
	7351 [†] THOMPSON, WATER TREAT. PLANT	1.25	532.0	65.9 [○]	9	18 [○]	3	0 [○]	--	0 [○]
	7361 [†] THOMPSON, EASTWOOD SCHOOL	2.94	717.0	104.8 [○]	32	31 [○]	4	0 [○]	--	0 [○]
	7371 [†] THOMPSON, RIVERSIDE SCHOOL	2.26	264.0	48.0 [○]	20	0 [○]	0	0 [○]	--	0 [○]
	7381 [†] THOMPSON, WESTWOOD	2.26	409.0	61.7 [○]	10	0 [○]	1	0 [○]	--	0 [○]
9119 WINNIPEG, 65 ELLEN STREET	0.07	11.0	2.09 [○]	0	0 [○]	0	0 [○]	--	0 [○]	
OXIDANTS OZONE (O ₃) ppb ¹¹	5131 BRANDON, ASSIN. COMM.COLLEGE	26.49	59.3	53.6 [○]	125	~	0	~	0	--
	9118 WINNIPEG, SCOTIA & JEFFERSON	26.35	65.5	51.5 [○]	266	~	0	~	0	--
	9119 WINNIPEG, 65 ELLEN STREET	23.65	64.3	62.0 [○]	49	~	0	~	0	--
AMMONIA (NH ₃) ppb ¹²	5131 BRANDON, ASSIN. COMM.COLLEGE	24.47	2789.0	503.2 [○]	--	--	1	--	--	--

- Notes:
- ^Δ Averaged over 8 hours
 - [†] 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
 - 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 (ppb): MDL: 1hr-50; MAL: 1hr-82, 24hr-15; MTL: 1hr-200
 - ¹² - NH₃ guidelines (ppm): MAL: 1hr-2.0

Manitoba Ambient Air Quality Data - 2011 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	14.16/7.62	71.73/271.60	--	--	--	8	--	--
	7251 ³ FLIN FLON, 143 MAIN STREET	11.81/9.56	31.95/-	--	--	--	0	--	--
	7283 ^{4†} CREIGHTON SK, HIGH SCHOOL	19.08/16.43	72.08/-	--	--	--	4	--	--
	7284 ^{1†} FLIN FLON, RUTH BETTS	10.41/8.60	37.16/-	--	--	--	0	--	--
	7381 ⁵ THOMPSON, WESTWOOD	8.35/5.77	37.86/476.10	--	--	--	0	--	--
	9119 ⁵ WINNIPEG, 65 ELLEN STREET	6.50/5.73	23.88/80.20	--	--	--	0	--	--
	9119 ² WINNIPEG, 65 ELLEN STREET	14.64/12.96	45.82/-	--	--	--	0	--	--
	5131 ⁵ BRANDON, ASSIN.COMM.COLLEGE	20.26/11.44	205.12/1775.80	--	--	--	17	--	--
LEAD (Pb)	7283 ^{4,9†} CREIGHTON SK, HIGH SCHOOL	0.17/0.17	0.38/-	--	--	--	0	--	--
	7284 ^{1†} FLIN FLON, RUTH BETTS	0.01/0.01	0.03/-	--	--	--	0	--	--
SULPHATES (SO ₄ ⁼)	7284 ^{1†} FLIN FLON, RUTH BETTS	1.04/0.86	2.43/-	--	--	--	--	--	--
ARSENIC (As)	7283 ^{4,9†} CREIGHTON SK, HIGH SCHOOL	0.00/0.00	0.04/-	--	--	--	0	--	--
	7284 ^{1†} FLIN FLON, RUTH BETTS	0.00/0.00	0.01/-	--	--	--	0	--	--
CADMIUM (Cd)	7283 ^{4,9†} CREIGHTON SK, HIGH SCHOOL	0.01/0.01	0.03/-	--	--	--	0	--	--
	7284 ^{1†} FLIN FLON, RUTH BETTS	0.00/0.00	0.00/-	--	--	--	0	--	--
COPPER (Cu)	7283 ^{4,9†} CREIGHTON SK, HIGH SCHOOL	0.03/0.02	1.23/-	--	--	--	0	--	--
	7284 ^{1†} FLIN FLON, RUTH BETTS	0.08/0.04	1.11/-	--	--	--	0	--	--
ZINC (Zn)	7283 ^{4,9†} CREIGHTON SK, HIGH SCHOOL	0.08/0.04	2.53/-	--	--	--	0	--	--
	7284 ^{1†} FLIN FLON, RUTH BETTS	0.58/0.04	4.41/-	--	--	--	0	--	--

Notes:

- All Concentration units for the above Table are in micrograms per cubic metre (ug/m³)
- No guideline or objective
- No data available
- ¹ - 24 Hour sample collected every six days, synchronized with the NAPS schedule (HI-VOL)
- 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 - 2011 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 ⁶	WINNIPEG, SCOTIA & JEFFERSON	7.15/5.78	33.10/110.90	--	--	--	1 ⁷	--	--
	9119 ²	WINNIPEG, 65 ELLEN STREET	6.02/5.40	18.37/-	--	--	--	0 ⁷	--	--
	9119 ³	WINNIPEG, 65 ELLEN STREET	4.69/3.52	30.28/84.80	--	--	--	0 ⁷	--	--
	5131 ³	BRANDON, ASSIN. COMM.COLLEGE	4.95/3.50	30.10/91.10	--	--	--	0 ⁷	--	--
	7251 ³	FLIN FLON, 143 MAIN STREET	4.16/3.02	21.15/135.40	--	--	--	0 ⁷	--	--
	7251 ¹	FLIN FLON, 143 MAIN STREET	4.61/3.00	11.81/-	--	--	--	0 ⁷	--	--
	7283 ^{4†}	CREIGHTON SK, HIGH SCHOOL	10.62/9.10	48.61/-	--	--	--	7 ⁷	--	--
	7381 ⁵	THOMPSON, WESTWOOD	3.08/1.91	29.16/220.40	--	--	--	0 ⁷	--	--

Notes:

All Concentration units for the above Table are in micrograms per cubic metre (ug/m³)

-- No guideline or objective

- No data available

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

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

³ - Real-time continuous monitoring (TEOM part of year and the rest SHARP)

⁴ - 24 Hour sample collected daily (Dichotomous)

⁵ - Real-time continuous monitoring (TEOM)

⁶ - Real-time continuous monitoring (SHARP)

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 - 2011 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	39.77/30.48	200.00	--	--	--	8	--	0
	7283 ³⁺	CREIGHTON SK, HIGH SCHOOL	22.89/18.25	133.13	--	--	--	1	--	0
	7284 ²⁺	FLIN FLON, RUTH BETTS	24.52/18.66	92.91	--	--	--	0	--	0
LEAD (Pb)	7251 ¹	FLIN FLON, 143 MAIN STREET	0.06/0.04	0.50	--	--	--	0	--	--
	7283 ³⁺	CREIGHTON SK, HIGH SCHOOL	0.01/0.01	0.08	--	--	--	0	--	--
	7284 ²⁺	FLIN FLON, RUTH BETTS	0.02/0.01	0.07	--	--	--	0	--	--
SULPHATES (SO ₄ =)	7251 ¹	FLIN FLON, 143 MAIN STREET	1.58/1.26	6.69	--	--	--	--	--	--
	7283 ³⁺	CREIGHTON SK, HIGH SCHOOL	0.99/0.80	4.66	--	--	--	--	--	--
	7284 ²⁺	FLIN FLON, RUTH BETTS	1.19/1.02	2.87	--	--	--	--	--	--
NITRATES (NO ₃ -)	7251 ¹	FLIN FLON, 143 MAIN STREET	0.18/0.11	1.83	--	--	--	--	--	--
ARSENIC (As) ¹³	7251 ¹	FLIN FLON, 143 MAIN STREET	0.01/0.01	0.06	--	--	--	0	--	--
	7283 ³⁺	CREIGHTON SK, HIGH SCHOOL	0.00/0.00	0.02	--	--	--	0	--	--
	7284 ²⁺	FLIN FLON, RUTH BETTS	0.00/0.00	0.02	--	--	--	0	--	--
CADMIUM (Cd)	7251 ¹	FLIN FLON, 143 MAIN STREET	0.00/0.00	0.04	--	--	--	0	--	--
	7283 ³⁺	CREIGHTON SK, HIGH SCHOOL	0.00/0.00	0.01	--	--	--	0	--	--
	7284 ²⁺	FLIN FLON, RUTH BETTS	0.00/0.00	0.01	--	--	--	0	--	--
COPPER (Cu)	7251 ¹	FLIN FLON, 143 MAIN STREET	0.73/0.42	14.45	--	--	--	0	--	--
	7283 ³⁺	CREIGHTON SK, HIGH SCHOOL	0.05/0.02	1.39	--	--	--	0	--	--
	7284 ²⁺	FLIN FLON, RUTH BETTS	0.19/0.08	2.78	--	--	--	0	--	--
ZINC (Zn)	7251 ¹	FLIN FLON, 143 MAIN STREET	3.88/1.74	41.52	--	--	--	0	--	--
	7283 ³⁺	CREIGHTON SK, HIGH SCHOOL	0.28/0.01	2.45	--	--	--	0	--	--
	7284 ²⁺	FLIN FLON, RUTH BETTS	0.94/0.11	7.37	--	--	--	0	--	--

Notes:

All Concentration units for the above Table are in micrograms per cubic metre (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