

Manitoba Ambient Air Quality Data - 2013 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	3.3	0.66 ^Δ	0	0 ^Δ	0	0 ^Δ	--	0 ^Δ
	9119 WINNIPEG, 65 ELLEN STREET	0.24	1.6	0.59 ^Δ	0	0 ^Δ	0	0 ^Δ	--	0 ^Δ
NITROGEN DIOXIDE (NO ₂) ppb	5131 BRANDON, ASSIN. COMM.COLLEGE	4.69	57.7	30.29 [○]	--	--	0	0 [○]	0	--
	9118 WINNIPEG, SCOTIA & JEFFERSON	7.32	52.0	33.98 [○]	--	--	0	0 [○]	0	--
	9119 WINNIPEG, 65 ELLEN STREET	7.79	62.7	34.17 [○]	--	--	0	0 [○]	0	--
NITRIC OXIDE (NO) ppb	5131 BRANDON, ASSIN. COMM.COLLEGE	2.95	124.0	29.21 [○]	--	--	--	--	--	--
	9118 WINNIPEG, SCOTIA & JEFFERSON	3.53	133.0	34.05 [○]	--	--	--	--	--	--
	9119 WINNIPEG, 65 ELLEN STREET	4.75	183.2	36.30 [○]	--	--	--	--	--	--
NITROGEN OXIDES (NO _x) ppb	5131 BRANDON, ASSIN. COMM.COLLEGE	7.61	181.7	58.75 [○]	--	--	--	--	--	--
	9118 WINNIPEG, SCOTIA & JEFFERSON	10.85	175.4	55.60 [○]	--	--	--	--	--	--
	9119 WINNIPEG, 65 ELLEN STREET	12.47	241.6	65.15 [○]	--	--	--	--	--	--
SULPHUR DIOXIDE (SO ₂) ppb ¹⁰	7251 FLIN FLON, 143 MAIN STREET	1	12	3 [○]	0	0 [○]	0	0 [○]	--	0 [○]
	7351 [†] THOMPSON, WATER TREAT. PLANT	1	312	38 [○]	3	0 [○]	0	0 [○]	--	0 [○]
	7361 [†] THOMPSON, EASTWOOD SCHOOL	3	458	70 [○]	26	9 [○]	2	0 [○]	--	0 [○]
	7371 [†] THOMPSON, RIVERSIDE SCHOOL	3	446	119 [○]	30	25 [○]	2	7 [○]	--	0 [○]
	7381 [†] THOMPSON, WESTWOOD	3	441	54 [○]	19	0 [○]	3	0 [○]	--	0 [○]
9119 WINNIPEG, 65 ELLEN STREET	0	10	2 [○]	0	0 [○]	0	0 [○]	--	0 [○]	
OXIDANTS OZONE (O ₃) ppb ¹¹	5131 BRANDON, ASSIN. COMM.COLLEGE	27.9	66.3	54.33 [○]	139	--	0	--	0	--
	9118 WINNIPEG, SCOTIA & JEFFERSON	28.9	64.5	57.04 [○]	375	--	0	--	0	--
	9119 WINNIPEG, 65 ELLEN STREET	23.7	61.0	47.93 [○]	80	--	0	--	0	--
	7251 FLIN FLON, 143 MAIN STREET	26.5	58.6	51.35 [○]	31	--	0	--	0	--
	7381 THOMPSON, WESTWOOD	28.0	54.1	52.23 [○]	56	--	0	--	0	--
AMMONIA (NH ₃) ppb ¹²	5131 BRANDON, ASSIN. COMM.COLLEGE	27.31	1131.0	302.8 [○]	--	--	0	--	--	--

Notes: ^Δ Averaged over 8 hours
[†] Company supplied data
[○] Using 24-hour moving average
 -- No guideline or objective
 Maximum Desirable Level (MDL), Maximum Acceptable Level (MAL), Maximum Tolerable Level (MTL)
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 - 2013 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	12.5/6.1	70.1/513.8	--	--	--	8	--	--
	7251 ³ FLIN FLON, 143 MAIN STREET	11.83/7.97	59.71/-	--	--	--	1	--	--
	7283 ^{4†} CREIGHTON SK, HIGH SCHOOL	16.71/13.83	53.36/-	--	--	--	1	--	--
	7284 ^{1†} FLIN FLON, RUTH BETTS	10.64/8.89	34.50/-	--	--	--	0	--	--
	7381 ⁵ THOMPSON, WESTWOOD	11.8/7.2	70.4/783.7	--	--	--	4	--	--
	9119 ⁵ WINNIPEG, 65 ELLEN STREET	4.5/3.9	13.2/33.0	--	--	--	0	--	--
	9119 ² WINNIPEG, 65 ELLEN STREET	6.24/4.57	22.47/-	--	--	--	0	--	--
	5131 ⁵ BRANDON, ASSIN.COMM.COLLEGE	13.7/7.1	206.3/1358.0	--	--	--	7	--	--
LEAD (Pb)	7283 ^{4,9†} CREIGHTON SK, HIGH SCHOOL	0.17/0.17	0.17/-	--	--	--	0	--	--
	7284 ^{1†} FLIN FLON, RUTH BETTS	0.01/0.01	0.05/-	--	--	--	0	--	--
SULPHATES (SO ₄ ²⁻)	7284 ^{1†} FLIN FLON, RUTH BETTS	0.71/0.65	1.21/-	--	--	--	--	--	--
ARSENIC (As)	7283 ^{4,9†} CREIGHTON SK, HIGH SCHOOL	0.00/0.00	0.01/-	--	--	--	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	0.01/-	--	--	--	0	--	--
	7284 ^{1†} FLIN FLON, RUTH BETTS	0.00/0.00	0.01/-	--	--	--	0	--	--
COPPER (Cu)	7283 ^{4,9†} CREIGHTON SK, HIGH SCHOOL	0.02/0.02	0.22/-	--	--	--	0	--	--
	7284 ^{1†} FLIN FLON, RUTH BETTS	0.03/0.02	0.29/-	--	--	--	0	--	--
ZINC (Zn)	7283 ^{4,9†} CREIGHTON SK, HIGH SCHOOL	0.05/0.03	0.48/-	--	--	--	0	--	--
	7284 ^{1†} FLIN FLON, RUTH BETTS	0.64/0.06	4.20/-	--	--	--	0	--	--

Notes:

All Concentration units for the above Table 4a are in micrograms per cubic metre (ug/m³)

-- No guideline or objective

- No data available

¹ - 24 Hour sample collected every six days (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 - 2013 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 ³	WINNIPEG, SCOTIA & JEFFERSON	5.6/3.5	35.1/124.8	--	--	--	2 ⁶	--	--
	9119 ²	WINNIPEG, 65 ELLEN STREET	6.14/4.74	22.18/-	--	--	--	0 ⁶	--	--
	9119 ³	WINNIPEG, 65 ELLEN STREET	6.6/5.2	34.7/52.4	--	--	--	2 ⁶	--	--
	5131 ³	BRANDON, ASSIN. COMM. COLLEGE	6.4/5.2	22.5/194.2	--	--	--	0 ⁶	--	--
	7251 ³	FLIN FLON, 143 MAIN STREET	5.3/4.0	43.7/98.4	--	--	--	1 ⁶	--	--
	7251 ¹	FLIN FLON, 143 MAIN STREET	5.41/3.41	43.15/-	--	--	--	1 ⁶	--	--
	7283 ^{4†}	CREIGHTON SK, HIGH SCHOOL	10.00/7.94	41.20/-	--	--	--	10 ⁶	--	--
	7381 ⁵	THOMPSON, WESTWOOD	4.3/2.1	63.0/186.2	--	--	--	5 ⁶	--	--

Notes:

All Concentration units for the above Table 4b 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 (SHARP)

⁴ - 24 Hour sample collected daily (Dichotomous)

⁵ - Real-time continuous monitoring (TEOM)

⁶ - 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 - 2013 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	33.05/25.97	159	--	--	--	2	--	0
	7283 ³⁺	CREIGHTON SK, HIGH SCHOOL	21.45/17.07	100	--	--	--	0	--	0
	7284 ²⁺	FLIN FLON, RUTH BETTS	22.67/21.45	137	--	--	--	1	--	0
LEAD (Pb)	7251 ¹	FLIN FLON, 143 MAIN STREET	0.04/0.03	0.33	--	--	--	0	--	--
	7283 ³⁺	CREIGHTON SK, HIGH SCHOOL	0.01/0.01	0.05	--	--	--	0	--	--
	7284 ²⁺	FLIN FLON, RUTH BETTS	0.01/0.01	0.10	--	--	--	0	--	--
SULPHATES (SO ₄ =)	7251 ¹	FLIN FLON, 143 MAIN STREET	1.28/1.08	4.99	--	--	--	--	--	--
	7283 ³⁺	CREIGHTON SK, HIGH SCHOOL	0.87/0.72	3.97	--	--	--	--	--	--
	7284 ²⁺	FLIN FLON, RUTH BETTS	0.92/0.83	2.10	--	--	--	--	--	--
NITRATES (NO ₃ -)	7251 ¹	FLIN FLON, 143 MAIN STREET	0.48/0.16	24.00	--	--	--	--	--	--
ARSENIC (As) ¹³	7251 ¹	FLIN FLON, 143 MAIN STREET	0.01/0.01	0.05	--	--	--	0	--	--
	7283 ³⁺	CREIGHTON SK, HIGH SCHOOL	0.00/0.00	0.01	--	--	--	0	--	--
	7284 ²⁺	FLIN FLON, RUTH BETTS	0.00/0.00	0.02	--	--	--	0	--	--
CADMIUM (Cd)	7251 ¹	FLIN FLON, 143 MAIN STREET	0.00/0.00	0.06	--	--	--	0	--	--
	7283 ³⁺	CREIGHTON SK, HIGH SCHOOL	0.00/0.00	0.00	--	--	--	0	--	--
	7284 ²⁺	FLIN FLON, RUTH BETTS	0.00/0.00	0.01	--	--	--	0	--	--
COPPER (Cu)	7251 ¹	FLIN FLON, 143 MAIN STREET	0.26/0.20	1.85	--	--	--	0	--	--
	7283 ³⁺	CREIGHTON SK, HIGH SCHOOL	0.02/0.01	0.13	--	--	--	0	--	--
	7284 ²⁺	FLIN FLON, RUTH BETTS	0.07/0.04	0.64	--	--	--	0	--	--
ZINC (Zn)	7251 ¹	FLIN FLON, 143 MAIN STREET	5.90/4.48	21.44	--	--	--	0	--	--
	7283 ³⁺	CREIGHTON SK, HIGH SCHOOL	0.43/0.02	4.05	--	--	--	0	--	--
	7284 ²⁺	FLIN FLON, RUTH BETTS	0.62/0.06	4.78	--	--	--	0	--	--

Notes:

All Concentration units for the above Table 4c 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