

Manitoba Ambient Air Quality Data - 2006 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	0.22	2.0	1.34 <sup>Δ</sup>	0	0 <sup>Δ</sup>	0	0 <sup>Δ</sup>	--	0 <sup>Δ</sup>
	9119 WINNIPEG, 65 ELLEN STREET	0.37	2.8	1.43 <sup>Δ</sup>	0	0 <sup>Δ</sup>	0	0 <sup>Δ</sup>	--	0 <sup>Δ</sup>
NITROGEN DIOXIDE (NO2) pphm	5131 BRANDON, ASSIN. COMM.COLLEGE	0.50	4.3	2.33 <sup>○</sup>	--	--	0	0 <sup>○</sup>	0	--
	9118 WINNIPEG, SCOTIA & JEFFERSON	0.74	5.4	3.21 <sup>○</sup>	--	--	0	0 <sup>○</sup>	0	--
	9119 WINNIPEG, 65 ELLEN STREET	1.27	9.1	3.62 <sup>○</sup>	--	--	0	0 <sup>○</sup>	0	--
NITRIC OXIDE (NO) pphm	5131 BRANDON, ASSIN. COMM.COLLEGE	0.25	14.4	3.27 <sup>○</sup>	--	--	--	--	--	--
	9118 WINNIPEG, SCOTIA & JEFFERSON	0.32	12.0	4.66 <sup>○</sup>	--	--	--	--	--	--
	9119 WINNIPEG, 65 ELLEN STREET	0.73	24.0	6.72 <sup>○</sup>	--	--	--	--	--	--
NITROGEN OXIDES (NOx) pphm	5131 BRANDON, ASSIN. COMM.COLLEGE	0.74	18.1	5.57 <sup>○</sup>	--	--	--	--	--	--
	9118 WINNIPEG, SCOTIA & JEFFERSON	1.07	16.2	7.86 <sup>○</sup>	--	--	--	--	--	--
	9119 WINNIPEG, 65 ELLEN STREET	2.00	29.4	10.25 <sup>○</sup>	--	--	--	--	--	--
SULPHUR DIOXIDE (SO2) ppm <sup>10</sup>	7251 FLIN FLON, 143 MAIN STREET	0.01	0.50	0.12 <sup>○</sup>	77	104 <sup>○</sup>	12	3 <sup>○</sup>	--	0 <sup>○</sup>
	7271 <sup>†</sup> FLIN FLON, AQUA CENTRE	0.00	0.67	0.09 <sup>○</sup>	31	40 <sup>○</sup>	6	0 <sup>○</sup>	--	0 <sup>○</sup>
	7281 <sup>†</sup> FLIN FLON, HBM&S STAFFHOUSE	0.01	0.48	0.09 <sup>○</sup>	49	49 <sup>○</sup>	4	0 <sup>○</sup>	--	0 <sup>○</sup>
	7291 <sup>†</sup> CREIGHTON, SASK. CITY HALL	0.00	0.58	0.07 <sup>○</sup>	16	41 <sup>○</sup>	7	0 <sup>○</sup>	--	0 <sup>○</sup>
	7301 <sup>†</sup> FLIN FLON, HAPNOT COLLEGIATE	0.00	0.38	0.05 <sup>○</sup>	12	0 <sup>○</sup>	3	0 <sup>○</sup>	--	0 <sup>○</sup>
	7351 <sup>†</sup> THOMPSON, WATER TREAT. PLANT	0.00	0.87	0.09 <sup>○</sup>	27	46 <sup>○</sup>	7	0 <sup>○</sup>	--	0 <sup>○</sup>
	7361 <sup>†</sup> THOMPSON, EASTWOOD SCHOOL	0.00	0.54	0.06 <sup>○</sup>	33	0 <sup>○</sup>	2	0 <sup>○</sup>	--	0 <sup>○</sup>
	7371 <sup>†</sup> THOMPSON, RIVERSIDE SCHOOL	0.00	0.54	0.08 <sup>○</sup>	23	23 <sup>○</sup>	5	0 <sup>○</sup>	--	0 <sup>○</sup>
7381 THOMPSON, WESTWOOD	0.00	0.54	0.05 <sup>○</sup>	22	0 <sup>○</sup>	5	0 <sup>○</sup>	--	0 <sup>○</sup>	
OXIDANTS OZONE (O3) pphm <sup>11</sup>	5131 BRANDON, ASSIN. COMM.COLLEGE	2.7	6.2	4.7 <sup>○</sup>	80	~	0	~	0	--
	9118 WINNIPEG, SCOTIA & JEFFERSON	2.3	6.3	4.8 <sup>○</sup>	64	~	0	~	0	--
	9119 WINNIPEG, 65 ELLEN STREET	2.2	6.3	4.4 <sup>○</sup>	74	~	0	~	0	--
AMMONIA (NH3) ppm <sup>12</sup>	5131 BRANDON, ASSIN. COMM.COLLEGE	0.02	2.3	0.5 <sup>○</sup>	--	--	1	--	--	--

- Notes: <sup>Δ</sup> averaged over 8 hours  
<sup>†</sup> denotes company supplied data  
<sup>○</sup> using 24-hour moving average  
~ numerous exceedences of the 24 hour MDL and MAL which are currently under review  
-- no guideline or objective  
<sup>10</sup> - SO2 guidelines (ppm): MDL: 1hr-0.170, 24hr-0.060; MAL: 1hr-0.340, 24hr-0.110; MTL: 24hr-0.310  
<sup>11</sup> - O3 guidelines (pphm): MDL: 1hr-5.0, 24hr-1.50; MAL: 1hr-8.20, 24hr-2.50; MTL: 1hr-20.0  
<sup>12</sup> - NH3 guidelines (ppm): MAL: 1hr-2.0

Manitoba Ambient Air Quality Data - 2006 Annual Pollutant Summary –  
Particulate Matter Monitoring (PM<sub>10</sub>)

POLLUTANT	STATION NUMBER & LOCATION	ANNUAL ARITH/GEO MEAN	MAXIMUM DATA VALUES 24/1-HR	# 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
INHALABLE PARTICULATE (PM <sub>10</sub> )	7251 <sup>5</sup> FLIN FLON, 143 MAIN STREET	16.3/10.2	72.8/301.8	--	--	--	13 <sup>6</sup>	--	0
	7283 <sup>4</sup> FLIN FLON, CREIGHTON	20.81/16.20	152.08/-	--	--	--	21 <sup>6</sup>	--	0
	7284 <sup>1</sup> FLIN FLON, RUTH BETTS	12.01/9.22	56.62/-	--	--	--	0 <sup>6</sup>	--	0
	7381 <sup>5</sup> THOMPSON, WESTWOOD	10.6/6.9	74.2/372.6	--	--	--	3 <sup>6</sup>	--	0
	9119 <sup>5</sup> WINNIPEG, 65 ELLEN STREET	18.2/12.8	72.0/273.9	--	--	--	4 <sup>6</sup>	--	0
	9119 <sup>1</sup> WINNIPEG, 65 ELLEN STREET	17.24/14.76	47.81/-	--	--	--	0 <sup>6</sup>	--	0
	5131 <sup>5</sup> BRANDON, ASSIN.COMM.COLLEGE	22.26/12.01	317.1/3975.2	--	--	--	34 <sup>6</sup>	--	0
LEAD (Pb)	7283 <sup>4,9</sup> FLIN FLON, CREIGHTON SCHOOL	0.17/0.17	0.33/-	--	--	--	0	--	--
	7284 <sup>1</sup> FLIN FLON, RUTH BETTS	0.06/0.02	0.66/-	--	--	--	0	--	--
SULPHATES (SO <sub>4</sub> <sup>=</sup> )	7284 <sup>1</sup> FLIN FLON, RUTH BETTS	1.89/1.65	3.94/-	--	--	--	--	--	--
ARSENIC (As)	7283 <sup>4,9</sup> FLIN FLON, CREIGHTON SCHOOL	0.01/0.00	0.17/-	--	--	--	0 <sup>6</sup>	--	--
	7284 <sup>1</sup> FLIN FLON, RUTH BETTS	0.02/0.00	0.21/-	--	--	--	0 <sup>6</sup>	--	--
CADMIUM (Cd)	7283 <sup>4,9</sup> FLIN FLON, CREIGHTON SCHOOL	0.01/0.01	0.12/-	--	--	--	0 <sup>6</sup>	--	--
	7284 <sup>1</sup> FLIN FLON, RUTH BETTS	0.02/0.00	0.21/-	--	--	--	0 <sup>6</sup>	--	--
COPPER (Cu)	7283 <sup>4,9</sup> FLIN FLON, CREIGHTON SCHOOL	0.05/0.03	0.85/-	--	--	--	0 <sup>6</sup>	--	--
	7284 <sup>1</sup> FLIN FLON, RUTH BETTS	0.13/0.05	0.73/-	--	--	--	0 <sup>6</sup>	--	--
ZINC (Zn)	7283 <sup>4,9</sup> FLIN FLON, CREIGHTON SCHOOL	0.09/0.04	1.44/-	--	--	--	0 <sup>6</sup>	--	--
	7284 <sup>1</sup> FLIN FLON, RUTH BETTS	0.13/0.01	1.28/-	--	--	--	0 <sup>6</sup>	--	--

Notes:

- All Concentration units for the above Table 4a are in ug/m<sup>3</sup>.
- No guideline or objective
- No data available
- <sup>1</sup> - 24 Hour sample collected every six days according to NAPS schedule (Dichotomous)
- <sup>4</sup> - 24 Hour sample collected daily (Dichotomous)
- <sup>5</sup> - Real-time continuous monitoring (TEOM)
- <sup>6</sup> - Ontario 24-hour guideline
- <sup>9</sup> - Majority of data at or below detection limit

Manitoba Ambient Air Quality Data - 2006 Annual Pollutant Summary –  
Particulate Matter Monitoring (PM<sub>2.5</sub>)

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 <sub>2.5</sub> )	9118 <sup>5</sup>	WINNIPEG, SCOTIA & JEFFERSON	4.97/3.26	17.7/58.5	--	--	--	0 <sup>7</sup>	--	--
	9119 <sup>1</sup>	WINNIPEG, 65 ELLEN STREET	7.24/6.25	22.73/-	--	--	--	0 <sup>7</sup>	--	--
	9119 <sup>5</sup>	WINNIPEG, 65 ELLEN STREET	4.66/3.00	22.0/55.1	--	--	--	0 <sup>7</sup>	--	--
	5131 <sup>5</sup>	BRANDON, ASSIN. COMM.COLLEGE	5.52/3.13	34.7/307.4	--	--	--	2 <sup>7</sup>	--	--
	7251 <sup>5</sup>	FLIN FLON, 143 MAIN STREET	5.01/2.39	44.2/113.3	--	--	--	5 <sup>7</sup>	--	--
	7381 <sup>5</sup>	THOMPSON, WESTWOOD	3.50/1.76	32.9/139.9	--	--	--	1 <sup>7</sup>	--	--

Notes:

All Concentration units for the above Table 4b are in ug/m<sup>3</sup>.

-- No guideline or objective

- No data available

<sup>1</sup> - 24 Hour sample collected every six days according to NAPS schedule (Dichotomous)

<sup>5</sup> - Real-time continuous monitoring (TEOM)

<sup>7</sup> - Based on Canada Wide Standard "level" for PM<sub>2.5</sub> (not the actual metric of the 98<sup>th</sup> percentile annual value averaged over 3 years)

Manitoba Ambient Air Quality Data - 2006 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	7251 <sup>2</sup>	FLIN FLON, 143 MAIN STREET	45.89/34.15	202.00	--	--	--	10	--	0
SUSPENDED	7283 <sup>3+</sup>	CREIGHTON, SCHOOL	27.31/21.19	162.98	--	--	--	1	--	0
PARTICULATE (TSP)	7284 <sup>2+</sup>	FLIN FLON, RUTH BETTS	23.27/17.68	93.17	--	--	--	0	--	0
LEAD (Pb)	7251 <sup>2</sup>	FLIN FLON, 143 MAIN STREET	0.14/0.06	1.87	--	--	--	0	--	--
	7283 <sup>3+</sup>	CREIGHTON, SCHOOL	0.02/0.02	0.28	--	--	--	0	--	--
	7284 <sup>2+</sup>	FLIN FLON, RUTH BETTS	0.06/0.03	0.51	--	--	--	0	--	--
SULPHATES (SO4=)	7251 <sup>2</sup>	FLIN FLON, 143 MAIN STREET	2.22/1.77	10.36	--	--	--	--	--	--
	7283 <sup>3+</sup>	CREIGHTON, SCHOOL	1.14/0.86	5.79	--	--	--	--	--	--
	7284 <sup>2+</sup>	FLIN FLON, RUTH BETTS	1.92/1.58	4.23	--	--	--	--	--	--
NITRATES (NO3-)	7251 <sup>2</sup>	FLIN FLON, 143 MAIN STREET	0.05/0.04	0.36	--	--	--	--	--	--
ARSENIC (As) 13	7251 <sup>2</sup>	FLIN FLON, 143 MAIN STREET	0.05/0.02	0.55	--	--	--	5 <sup>6</sup>	--	--
	7283 <sup>3+</sup>	CREIGHTON, SCHOOL	0.01/0.00	0.12	--	--	--	0 <sup>6</sup>	--	--
	7284 <sup>2+</sup>	FLIN FLON, RUTH BETTS	0.02/0.01	0.17	--	--	--	0 <sup>6</sup>	--	--
CADMIUM (Cd)	7251 <sup>2</sup>	FLIN FLON, 143 MAIN STREET	0.04/0.01	0.52	--	--	--	0 <sup>6</sup>	--	--
	7283 <sup>3,9+</sup>	CREIGHTON, SCHOOL	0.00/0.00	0.09	--	--	--	0 <sup>6</sup>	--	--
	7284 <sup>2+</sup>	FLIN FLON, RUTH BETTS	0.02/0.00	0.18	--	--	--	0 <sup>6</sup>	--	--
COPPER (Cu)	7251 <sup>2</sup>	FLIN FLON, 143 MAIN STREET	0.94/0.52	7.53	--	--	--	0 <sup>6</sup>	--	--
	7283 <sup>3+</sup>	CREIGHTON, SCHOOL	0.45/0.38	2.19	--	--	--	0 <sup>6</sup>	--	--
	7284 <sup>2+</sup>	FLIN FLON, RUTH BETTS	0.74/0.56	2.60	--	--	--	0 <sup>6</sup>	--	--
ZINC (Zn)	7251 <sup>2</sup>	FLIN FLON, 143 MAIN STREET	2.24/1.47	10.54	--	--	--	0 <sup>6</sup>	--	--
	7283 <sup>3+</sup>	CREIGHTON, SCHOOL	0.14/0.01	2.28	--	--	--	0 <sup>6</sup>	--	--
	7284 <sup>2+</sup>	FLIN FLON, RUTH BETTS	0.29/0.02	1.52	--	--	--	0 <sup>6</sup>	--	--

Notes:

All Concentration units for the above Table 4c are in ug/m<sup>3</sup>.

-- No guideline or objective

+ Company supplied data

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

<sup>3</sup> - 24 Hour sample collected every second day

<sup>6</sup> - Ontario 24-hour guideline

<sup>9</sup> - Majority of data at or below detection limit

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