

Manitoba Ambient Air Quality Data - 2005 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	0.21	2.9	1.51 <sup>Δ</sup>	0	0 <sup>Δ</sup>	0	0 <sup>Δ</sup>	--	0 <sup>Δ</sup>
	9119 WINNIPEG, 65 ELLEN STREET	0.31	3.4	1.91 <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	0.53	4.2	2.59 <sup>°</sup>	--	--	0	0 <sup>°</sup>	0	--
	9118 WINNIPEG, SCOTIA & JEFFERSON	0.80	6.4	3.64 <sup>°</sup>	--	--	0	0 <sup>°</sup>	0	--
	9119 WINNIPEG, 65 ELLEN STREET	1.25	7.9	3.97 <sup>°</sup>	--	--	0	0 <sup>°</sup>	0	--
NITRIC OXIDE (NO) pphm	5131 BRANDON, ASSIN. COMM.COLLEGE	0.36	13.3	4.14 <sup>°</sup>	--	--	--	--	--	--
	9118 WINNIPEG, SCOTIA & JEFFERSON	0.46	24.9	5.65 <sup>°</sup>	--	--	--	--	--	--
	9119 WINNIPEG, 65 ELLEN STREET	0.85	33.6	7.54 <sup>°</sup>	--	--	--	--	--	--
NITROGEN OXIDES (NOx) pphm	5131 BRANDON, ASSIN. COMM.COLLEGE	0.88	16.9	6.73 <sup>°</sup>	--	--	--	--	--	--
	9118 WINNIPEG, SCOTIA & JEFFERSON	1.24	31.3	9.20 <sup>°</sup>	--	--	--	--	--	--
	9119 WINNIPEG, 65 ELLEN STREET	2.10	40.4	11.50 <sup>°</sup>	--	--	--	--	--	--
SULPHUR DIOXIDE (SO2) ppm <sup>10</sup>	7251 FLIN FLON, 143 MAIN STREET	0.01	1.16	0.11 <sup>°</sup>	68	196 <sup>°</sup>	13	0 <sup>°</sup>	--	0 <sup>°</sup>
	7271 <sup>+</sup> FLIN FLON, AQUA CENTRE	0.00	0.80	0.07 <sup>°</sup>	34	39 <sup>°</sup>	10	0 <sup>°</sup>	--	0 <sup>°</sup>
	7281 <sup>+</sup> FLIN FLON, HBM&S STAFFHOUSE	0.01	0.84	0.17 <sup>°</sup>	51	99 <sup>°</sup>	10	16 <sup>°</sup>	--	0 <sup>°</sup>
	7291 <sup>+</sup> CREIGHTON, SASK. CITY HALL	0.00	0.66	0.15 <sup>°</sup>	15	26 <sup>°</sup>	6	20 <sup>°</sup>	--	0 <sup>°</sup>
	7301 <sup>+</sup> FLIN FLON, HAPNOT COLLEGIATE	0.00	0.45	0.04 <sup>°</sup>	12	0 <sup>°</sup>	3	0 <sup>°</sup>	--	0 <sup>°</sup>
	7351 <sup>+</sup> THOMPSON, WATER TREAT. PLANT	0.00	0.45	0.08 <sup>°</sup>	27	10 <sup>°</sup>	2	0 <sup>°</sup>	--	0 <sup>°</sup>
	7361 <sup>+</sup> THOMPSON, EASTWOOD SCHOOL	0.00	0.77	0.08 <sup>°</sup>	60	37 <sup>°</sup>	9	0 <sup>°</sup>	--	0 <sup>°</sup>
	7371 <sup>+</sup> THOMPSON, RIVERSIDE SCHOOL	0.00	0.35	0.06 <sup>°</sup>	20	0 <sup>°</sup>	1	0 <sup>°</sup>	--	0 <sup>°</sup>
7381 THOMPSON, WESTWOOD	0.00	0.60	0.08	7	13	2	0	--	0	
OXIDANTS OZONE (O3) pphm <sup>11</sup>	5131 BRANDON, ASSIN. COMM.COLLEGE	2.19	6.2	4.5 <sup>°</sup>	37	~	0	~	0	--
	9118 WINNIPEG, SCOTIA & JEFFERSON	2.03	6.0	4.8 <sup>°</sup>	67	~	0	~	0	--
	9119 WINNIPEG, 65 ELLEN STREET	1.82	5.6	4.6 <sup>°</sup>	39	~	0	~	0	--
AMMONIA (NH3) ppm <sup>12</sup>	5131 BRANDON, ASSIN. COMM.COLLEGE	0.02	5.1	1.2 <sup>°</sup>	--	--	9	--	--	--

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  
10 SO2 guidelines (ppm): MDL: 1hr-0.170, 24hr-0.06; MAL: 1hr-0.34, 24hr-0.11; MTL: 24hr-0.31  
11 O3 guidelines (pphm): MDL: 1hr-5.0, 24hr-1.50; MAL: 1hr-8.20, 24hr-2.50; MTL: 1hr-20.00  
12 NH3 guidelines (ppm): MAL: 1hr-2.0

Manitoba Ambient Air Quality Data - 2005 Annual Pollutant Summary –  
Particulate Matter Monitoring (PM<sub>10</sub>) (revised August 2007)

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	17.57/10.76	136.21/476.20	--	--	--	17 <sup>6</sup>	--	--
	7283 <sup>4</sup> FLIN FLON, CREIGHTON	17.09/13.00	97.08/ -	--	--	--	4 <sup>6</sup>	--	--
	7284 <sup>1</sup> FLIN FLON, RUTH BETTS	10.53/8.69	28.86/ -	--	--	--	0 <sup>6</sup>	--	--
	7381 <sup>5</sup> THOMPSON, WESTWOOD	9.79/6.42	45.85/373.60	--	--	--	0 <sup>6</sup>	--	--
	9119 <sup>5</sup> WINNIPEG, 65 ELLEN STREET	18.16/12.65	93.65/433.80	--	--	--	10 <sup>6</sup>	--	--
	9119 <sup>1</sup> WINNIPEG, 65 ELLEN STREET	14.15/11.42	47.19/ -	--	--	--	0 <sup>6</sup>	--	--
	5131 <sup>5</sup> BRANDON, ASSIN.COMM.COLLEGE	19.67/11.31	140.04/608.30	--	--	--	19 <sup>6</sup>	--	--
LEAD (Pb)	7283 <sup>4,9</sup> FLIN FLON, CREIGHTON SCHOOL	0.42/0.42	1.04/ -	--	--	--	0	--	--
	7284 <sup>1</sup> FLIN FLON, RUTH BETTS	0.07/0.03	0.34/ -	--	--	--	0	--	--
SULPHATES (SO <sub>4</sub> <sup>2-</sup> )	7284 <sup>1</sup> FLIN FLON, RUTH BETTS	1.57/1.22	4.35/ -	--	--	--	--	--	--
ARSENIC (As)	7283 <sup>4,9</sup> FLIN FLON, CREIGHTON SCHOOL	0.01/0.00	0.11/ -	--	--	--	0 <sup>6</sup>	--	--
	7284 <sup>1</sup> FLIN FLON, RUTH BETTS	0.02/0.01	0.07/ -	--	--	--	0 <sup>6</sup>	--	--
CADMIUM (Cd)	7283 <sup>4,9</sup> FLIN FLON, CREIGHTON SCHOOL	0.06/0.05	0.83/ -	--	--	--	0 <sup>6</sup>	--	--
	7284 <sup>1</sup> FLIN FLON, RUTH BETTS	0.01/0.00	0.06/ -	--	--	--	0 <sup>6</sup>	--	--
COPPER (Cu)	7283 <sup>4,9</sup> FLIN FLON, CREIGHTON SCHOOL	0.13/0.10	1.17/ -	--	--	--	0 <sup>6</sup>	--	--
	7284 <sup>1</sup> FLIN FLON, RUTH BETTS	0.18/0.09	1.86/ -	--	--	--	0 <sup>6</sup>	--	--
ZINC (Zn)	7283 <sup>4,9</sup> FLIN FLON, CREIGHTON SCHOOL	0.36/0.27	4.95/ -	--	--	--	0 <sup>6</sup>	--	--
	7284 <sup>1</sup> FLIN FLON, RUTH BETTS	0.37/0.14	2.48/ -	--	--	--	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

1

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

4

- 24 Hour sample collected daily (Dichotomous)

5

- Real-time continuous monitoring (TEOM)

6

- Ontario 24-hour guideline

9

- Majority of data at or below detection limit

Manitoba Ambient Air Quality Data - 2005 Annual Pollutant Summary –  
Particulate Matter Monitoring (PM<sub>2.5</sub>) (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 <sub>2.5</sub> )	9118 <sup>5</sup>	WINNIPEG, SCOTIA & JEFFERSON	4.60/3.03	22.00/52.90	--	--	--	0 <sup>7</sup>	--	--
	9119 <sup>1</sup>	WINNIPEG, 65 ELLEN STREET	6.13/5.28	22.86/ -	--	--	--	0 <sup>7</sup>	--	--
	9119 <sup>5</sup>	WINNIPEG, 65 ELLEN STREET	4.48/2.84	37.76/390.90	--	--	--	1 <sup>7</sup>	--	--
	5131 <sup>5</sup>	BRANDON, ASSIN. COMM.COLLEGE	4.70/2.82	21.60/120.20	--	--	--	0 <sup>7</sup>	--	--
	7251 <sup>5</sup>	FLIN FLON, 143 MAIN STREET	4.21/2.17	26.14/132.70	--	--	--	0 <sup>7</sup>	--	--
	7381 <sup>5</sup>	THOMPSON, WESTWOOD	3.25/1.76	18.28/53.50	--	--	--	0 <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

1

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

5

- Real-time continuous monitoring (TEOM)

7

- Based on Canada Wide Standard for PM<sub>2.5</sub>

Manitoba Ambient Air Quality Data - 2005 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	7251 <sup>2</sup>	FLIN FLON, 143 MAIN STREET	43.00/28.59	299.00	--	--	--	10	--	0
SUSPENDED	7283 <sup>3+</sup>	CREIGHTON, SCHOOL	32.52/21.36	958.67	--	--	--	5	--	1
PARTICULATE (TSP)	7284 <sup>2+</sup>	FLIN FLON, RUTH BETTS	22.46/17.36	96.47	--	--	--	0	--	0
LEAD (Pb)	7251 <sup>2</sup>	FLIN FLON, 143 MAIN STREET	0.17/0.08	2.54	--	--	--	1	--	--
	7283 <sup>3+</sup>	CREIGHTON, SCHOOL	0.04/0.02	0.55	--	--	--	0	--	--
	7284 <sup>2+</sup>	FLIN FLON, RUTH BETTS	0.09/0.05	0.38	--	--	--	0	--	--
SULPHATES (SO4=)	7251 <sup>2</sup>	FLIN FLON, 143 MAIN STREET	2.12/1.58	22.79	--	--	--	--	--	--
	7283 <sup>3+</sup>	CREIGHTON, SCHOOL	1.32/0.97	7.88	--	--	--	--	--	--
	7284 <sup>2+</sup>	FLIN FLON, RUTH BETTS	1.84/1.43	6.27	--	--	--	--	--	--
NITRATES (NO3-)	7251 <sup>2</sup>	FLIN FLON, 143 MAIN STREET	0.07/0.06	0.94	--	--	--	--	--	--
ARSENIC (As)	7251 <sup>2</sup>	FLIN FLON, 143 MAIN STREET	0.04/0.02	0.62	--	--	--	2 <sup>6</sup>	--	--
	7283 <sup>3+</sup>	CREIGHTON, SCHOOL	0.01/0.00	0.19	--	--	--	0 <sup>6</sup>	--	--
	7284 <sup>2+</sup>	FLIN FLON, RUTH BETTS	0.02/0.01	0.10	--	--	--	0 <sup>6</sup>	--	--
CADMIUM (Cd)	7251 <sup>2</sup>	FLIN FLON, 143 MAIN STREET	0.02/0.01	0.31	--	--	--	0 <sup>6</sup>	--	--
	7283 <sup>3,9+</sup>	CREIGHTON, SCHOOL	0.01/0.00	0.18	--	--	--	0 <sup>6</sup>	--	--
	7284 <sup>2+</sup>	FLIN FLON, RUTH BETTS	0.01/0.01	0.08	--	--	--	0 <sup>6</sup>	--	--
COPPER (Cu)	7251 <sup>2</sup>	FLIN FLON, 143 MAIN STREET	0.89/0.44	10.87	--	--	--	0 <sup>6</sup>	--	--
	7283 <sup>3+</sup>	CREIGHTON, SCHOOL	0.42/0.36	1.70	--	--	--	0 <sup>6</sup>	--	--
	7284 <sup>2+</sup>	FLIN FLON, RUTH BETTS	0.76/0.59	2.76	--	--	--	0 <sup>6</sup>	--	--
ZINC (Zn)	7251 <sup>2</sup>	FLIN FLON, 143 MAIN STREET	1.65/1.09	15.17	--	--	--	0 <sup>6</sup>	--	--
	7283 <sup>3+</sup>	CREIGHTON, SCHOOL	0.33/0.09	5.34	--	--	--	0 <sup>6</sup>	--	--
	7284 <sup>2+</sup>	FLIN FLON, RUTH BETTS	0.60/0.30	2.48	--	--	--	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

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