

**City of Winnipeg**  
**Water and Waste Department**  
**North End Water Pollution Control Centre Monitoring Data**  
**April 2010**

Date	Raw Sewage	Final Effluent 24 Hour Composite										Final Effluent Grab Sample			
	Daily Flow	TSS	BOD5	cBOD5	Ammonia		Ortho Phosphorus	Total Phosphorus		Total Nitrogen		Temp.	pH	Fecal Coliform	E.Coli
	ML**	(mg/L)	(mg/L)	(mg/L)	(mg/L-N)	(kg NH3-N/day)	(mg/L-P)	(mg/L-P)	(mg/L-P)*	(mg/L-N)	(mg/L-N)*	(°C)	(units)	MPN/100 mL	
1-Apr-10	201.6	10	22	7	16	3,205	2.04	2.4	2.2	21	24	12	6.80	49	49
2-Apr-10	302.0	49	30	14	13	4,047	1.68	2.5	2.2	19	23	10	6.83	130	130
3-Apr-10	317.3	30	23	10	11	3,332	1.22	1.8	2.2	15	22	9	6.98	(280)	(220)
4-Apr-10	197.6	12	14	6	15	2,905	2.03	2.6	2.3	18	22	10	6.88	230	79
5-Apr-10	191.2	14	21	7	18	3,480	2.55	3.0	2.3	23	21	13	7.67	230	230
6-Apr-10	209.5	13	16	7	19	3,960	2.53	3.3	2.4	24	21	12	6.68	33	8
7-Apr-10	175.6	17	24	9	22	3,933	2.79	3.5	2.5	26	21	13	6.75	33	11
8-Apr-10	186.8	20	26	11	23	4,371	3.02	3.7	2.5	29	21	13	6.72	(>160,000)	(92,000)
9-Apr-10	182.1	11	29	9	22	4,006	2.93	3.5	2.6	24	21	13	6.78	33	33
10-Apr-10	176.9	16	27	9	24	4,299	2.78	3.4	2.7	25	21	13	6.86	49	11
11-Apr-10	173.5	17	29	8	19	3,366	2.74	3.3	2.7	24	22	13	6.27	4	4
12-Apr-10	176.3	21	34	10	23	4,090	2.88	3.6	2.8	27	22	13	6.74	11	4
13-Apr-10	177.1	19	29	7	24	4,268	3.15	3.9	2.9	27	22	13	6.86	13	13
14-Apr-10	179.7	17	27	8	24	4,295	3.09	4.0	2.9	26	23	14	6.80	23	13
15-Apr-10	181.9	17	30	8	23	4,129	2.91	3.8	3.0	27	23	14	6.83	46	33
16-Apr-10	175.6	19	28	8	25	4,408	2.89	3.7	3.0	29	23	14	6.83	4	11
17-Apr-10	169.8	15	25	8	24	4,109	3.19	3.9	3.1	27	23	14	6.89	2	4
18-Apr-10	167.9	18	57	7	24	3,946	3.18	3.9	3.1	25	23	15	6.99	8	8
19-Apr-10	173.4	17	32	7	25	4,248	3.35	4.0	3.2	28	24	14	6.87	2	8
20-Apr-10	172.6	12	29	7	26	4,539	3.44	4.0	3.2	30	24	15	6.73	8	8
21-Apr-10	172.0	16	32	6	25	4,317	3.06	3.8	3.2	26	24	15	6.78	130	79
22-Apr-10	168.6	16	31	7	25	4,164	3.24	3.9	3.3	29	24	15	6.71	49	17
23-Apr-10	166.2	12	23	6	25	4,105	3.45	4.2	3.3	26	24	15	6.74	4	4
24-Apr-10	161.6	12	24	6	25	4,024	3.42	4.2	3.4	26	24	15	6.85	79	79
25-Apr-10	159.1	15	nr	nr	25	4,025	3.54	4.4	3.4	26	24	16	6.87	17	13
26-Apr-10	165.4	15	33	6	24	3,986	3.71	4.4	3.5	25	25	15	6.75	11	8
27-Apr-10	167.2	13	20	7	26	4,414	3.59	4.5	3.5	30	25	15	6.79	2	<2
28-Apr-10	166.7	14	18	7	26	4,401	3.45	4.4	3.6	30	25	16	6.82	9	6
29-Apr-10	281.3	76	63	29	17	4,698	2.49	3.6	3.6	22	25	16	7.05	460	310
30-Apr-10	<b>417.1</b>	64	37	17	9	3,783	1.09	1.7	3.6	12	25	13	6.82	(490)	(330)
<b>Max:</b>	417														
<b>Min:</b>	159														
<b>Average:</b>	<b>197</b>	<b>21</b>	<b>29</b>	<b>9</b>	<b>22</b>	<b>4,028</b>	<b>2.85</b>	<b>3.6</b>		<b>25</b>		<b>13</b>	<b>6.83</b>		
<b>Geo.Mean:</b>														<b>22</b>	<b>16</b>

**Notes:**

- (1) Effluent ammonia load based upon Raw Sewage flows and Final NH3-N concentrations
- (2) nr - not recorded or no result; na - not analyzed; ns - no sample
- (3) Where value is expressed as less than (<), the value is halved and used in the calculations.
- (4) \* = 30 day rolling average

- (5)\*\* Flow, highlighted in bold, in excess of 380 ML/D per clause 26 of Licence 2684RRR.
- (6) Bracketed Coliform results not used in the Geometric Mean calculation.
- (7) Raw wastewater flows in excess of 400 ML/D will by-pass the secondary process and flows in excess of 675 ML/D will cause raw sewage to by-pass the plant.
- (8) Total Nitrogen results are calculated from TKN and nitrate values.