

**City of Winnipeg**  
**Water and Waste Department**  
**South 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	66.7	10	19	9	21	1,406	2.31	2.8	4.2	26	31	12	6.67	13	13
2-Apr-10	79.9	56	36	17	19	1,509	1.82	3.2	4.1	23	30	14	6.76	4	2
3-Apr-10	84.8	54	44	12	17	1,424	1.60	1.9	3.9	21	30	12	6.78	49	33
4-Apr-10	69.4	13	14	7	19	1,298	2.21	2.8	3.9	21	29	12	6.97	33	11
5-Apr-10	68.1	14	16	9	22	1,485	2.81	3.3	3.8	25	29	16	6.76	13	13
6-Apr-10	66.2	24	21	12	23	1,535	2.81	3.7	3.7	27	28	12	6.80	7	7
7-Apr-10	63.1	22	21	8	26	1,629	3.14	3.7	3.7	28	28	12	6.68	33	7
8-Apr-10	64.5	31	32	15	25	1,614	3.81	4.3	3.6	30	27	14	6.79	2	2
9-Apr-10	63.4	12	20	9	26	1,622	3.20	3.8	3.5	26	27	13	6.69	11	7
10-Apr-10	63.2	33	33	12	25	1,605	3.02	4.1	3.6	31	27	13	6.77	<2	<2
11-Apr-10	63.2	74	53	24	24	1,542	2.72	4.7	3.6	31	27	13	6.13	21	7
12-Apr-10	61.2	22	23	9	25	1,518	3.03	3.8	3.6	27	27	13	6.61	70	49
13-Apr-10	59.8	12	18	7	25	1,465	3.93	4.6	3.7	29	28	13	6.70	170	170
14-Apr-10	59.2	9	18	6	26	1,520	2.77	3.4	3.7	28	28	13	6.62	22	22
15-Apr-10	59.0	9	18	5	24	1,428	3.37	3.8	3.7	28	28	14	6.67	22	17
16-Apr-10	58.2	11	11	4	29	1,658	3.53	3.9	3.7	30	28	13	6.69	33	33
17-Apr-10	58.3	39	28	11	nr	nr	3.50	4.6	3.7	nr	28	14	6.72	8	8
18-Apr-10	58.6	27	17	10	nr	nr	3.49	4.2	3.8	nr	28	14	6.60	8	4
19-Apr-10	57.2	7	<20	5	28	1,573	3.60	3.8	3.8	28	28	14	6.69	170	170
20-Apr-10	52.6	8	<10	5	29	1,542	3.88	4.2	3.8	30	28	14	6.55	13	8
21-Apr-10	53.4	6	<10	4	nr	nr	4.01	4.4	3.8	nr	28	14	6.65	2	2
22-Apr-10	55.1	4	nr	4	nr	nr	4.56	4.7	3.9	nr	28	14	6.69	2	<2
23-Apr-10	54.5	4	<10	4	30	1,640	4.00	4.4	3.9	30	28	14	6.60	14	11
24-Apr-10	54.3	4	<10	5	30	1,619	3.72	4.1	3.9	31	28	14	6.73	<2	<2
25-Apr-10	54.5	5	nr	nr	nr	nr	3.68	4.1	3.9	nr	28	15	6.68	7	4
26-Apr-10	52.7	5	<10	<4	30	1,572	3.79	4.2	3.9	31	28	15	6.57	11	11
27-Apr-10	51.3	10	11	6	32	1,620	4.31	5.1	3.9	32	28	15	6.64	4	4
28-Apr-10	53.4	12	12	7	32	1,681	4.82	5.3	3.9	32	28	15	6.60	<2	<2
29-Apr-10	64.7	94	67	29	26	1,688	3.97	6.3	4.0	33	28	15	6.87	4	4
30-Apr-10	94.0	33	27	17	19	1,757	2.82	2.9	4.0	21	28	13	6.72	11	7
<b>Max:</b>	94.0														
<b>Min:</b>	51.3														
<b>Average:</b>	<b>62.1</b>	<b>22</b>	<b>21</b>	<b>9</b>	<b>25</b>	<b>1,558</b>	<b>3.34</b>	<b>4.0</b>		<b>28</b>		<b>14</b>	<b>6.68</b>		
<b>Geo.Mean:</b>														<b>10</b>	<b>8</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 98.6 ML/D per clause 26 of Licence 2716R.
- (6) Bracketed Coliform results not used in the Geometric Mean calculation.
- (7) Raw wastewater flows in excess of 100 ML/D will by-pass the secondary process.
- (8) Total Nitrogen results are calculated from TKN and nitrate values.