

**City of Winnipeg**  
**Water and Waste Department**  
**South End Water Pollution Control Centre Monitoring Data**  
**September 2009**

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-Sep-09	63.0	10	24	7	18	1,122	3.58	4.2	3.3	24	19	18	6.56	49	13
2-Sep-09	60.5	10	28	7	18	1,083	3.90	4.6	3.4	22	19	19	6.62	70	70
3-Sep-09	61.6	14	39	7	18	1,114	4.08	4.4	3.4	21	19	19	6.61	130	130
4-Sep-09	58.6	9	38	9	18	1,055	3.74	4.1	3.5	22	19	18	6.56	21	21
5-Sep-09	54.1	9	nr	nr	17	908	3.23	3.6	3.5	21	19	19	6.70	9	9
6-Sep-09	51.6	8	34	5	16	805	3.22	3.6	3.5	21	19	18	6.73	33	33
7-Sep-09	55.5	8	36	5	16	905	3.51	4.0	3.5	28	19	19	6.65	4	2
8-Sep-09	67.7	13	40	8	17	1,116	3.61	4.0	3.4	20	19	19	6.49	130	33
9-Sep-09	67.6	6	32	4	14	926	2.63	3.0	3.4	19	19	19	6.51	170	79
10-Sep-09	58.0	12	60	4	17	998	3.42	3.8	3.4	22	19	19	6.53	140	14
11-Sep-09	90.2	13	47	6	16	1,416	3.31	3.8	3.4	20	19	19	6.56	230	49
12-Sep-09	86.2	10	32	4	10	855	1.76	2.3	3.3	16	19	18	6.87	170	22
13-Sep-09	71.0	12	35	4	13	937	2.63	3.1	3.3	17	19	19	6.81	79	22
14-Sep-09	66.2	6	39	4	14	913	2.96	3.5	3.3	18	19	19	6.20	14	14
15-Sep-09	63.8	8	32	4	18	1,135	4.49	4.6	3.4	20	19	20	6.56	110	17
16-Sep-09	65.8	9	32	6	18	1,165	3.68	4.1	3.5	24	19	21	6.60	(35,000)	(7,000)
17-Sep-09	61.2	9	37	4	19	1,132	3.86	4.1	3.5	23	20	18	6.51	31	13
18-Sep-09	60.2	8	32	4	19	1,163	3.40	3.6	3.5	22	20	nr	6.58	23	23
19-Sep-09	58.7	6	25	5	18	1,051	3.01	3.3	3.5	22	20	19	6.76	8	4
20-Sep-09	57.5	4	30	3	19	1,063	3.23	3.5	3.6	23	20	18	6.77	11	4
21-Sep-09	58.0	7	26	3	19	1,097	3.90	3.9	3.6	25	21	19	6.56	<2	<2
22-Sep-09	56.5	7	24	4	21	1,187	4.17	4.6	3.7	27	21	19	6.50	17	nr
23-Sep-09	58.1	10	22	5	22	1,283	4.13	4.5	3.7	27	21	19	6.63	170	46
24-Sep-09	55.4	13	40	7	22	1,214	4.52	4.9	3.8	27	22	19	6.66	33	13
25-Sep-09	55.8	10	22	5	23	1,260	3.39	3.8	3.8	28	22	19	6.60	14	7
26-Sep-09	54.6	13	21	6	22	1,184	2.53	2.9	3.8	27	22	19	6.80	7	2
27-Sep-09	55.9	11	nr	nr	22	1,251	3.09	3.4	3.8	27	23	19	6.72	7	4
28-Sep-09	54.8	5	24	5	23	1,277	3.39	4.1	3.8	27	23	18	6.58	170	70
29-Sep-09	53.8	15	40	9	27	1,453	4.01	4.5	3.8	nr	23	18	6.56	540	140
30-Sep-09	53.5	15	28	9	26	1,413	4.45	5.3	3.9	30	23	18	6.61	70	13
<b>Max:</b>	90.2														
<b>Min:</b>	51.6														
<b>Average:</b>	<b>61.2</b>	<b>10</b>	<b>33</b>	<b>5</b>	<b>19</b>	<b>1,116</b>	<b>3.49</b>	<b>3.9</b>		<b>23</b>		<b>19</b>	<b>6.61</b>		
<b>Geo.Mean:</b>														<b>37</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 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.