

**City of Winnipeg**  
**Water and Waste Department**  
**South End Water Pollution Control Centre Monitoring Data**  
**October 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-Oct-09	57.4	18	23	6	25	1,446	3.33	4.1	3.9	27	23	19	6.53	240	130
2-Oct-09	60.8	<4	25	7	26	1,570	4.49	5.0	3.9	31	24	18	6.56	13	4
3-Oct-09	52.1	8	21	9	25	1,319	3.52	3.9	3.9	30	24	18	6.72	23	8
4-Oct-09	55.4	6	8	6	25	1,386	3.87	4.2	3.9	27	24	18	6.80	2	<2
5-Oct-09	52.0	ns	ns	ns	ns	ns	ns	ns	3.9	ns	24	18	6.50	940	940
6-Oct-09	53.4	ns	ns	ns	ns	ns	ns	ns	3.9	ns	24	18	6.44	22	4
7-Oct-09	55.9	ns	ns	ns	ns	ns	ns	ns	3.9	ns	24	18	6.60	23	23
8-Oct-09	53.5	ns	ns	ns	ns	ns	ns	ns	3.9	ns	24	18	6.53	26	26
9-Oct-09	54.3	8	25	5	ns	ns	ns	ns	3.9	ns	24	18	6.61	9	9
10-Oct-09	57.6	6	20	6	25	1,464	4.01	4.1	3.9	nr	25	18	ns	ns	ns
11-Oct-09	52.1	10	21	5	24	1,267	3.88	4.2	4.0	29	25	18	nr	4	<3
12-Oct-09	53.4	14	29	7	25	1,346	4.07	4.1	4.0	28	25	na	6.68	<3	<3
13-Oct-09	54.5	9	19	4	26	1,423	3.83	4.3	4.1	28	26	18	6.54	49	17
14-Oct-09	52.7	6	14	5	27	1,427	4.44	4.8	4.1	30	26	19	6.31	<2	<2
15-Oct-09	57.9	10	22	7	30	1,736	4.09	4.3	4.1	nr	27	19	6.53	4	4
16-Oct-09	54.1	12	14	5	27	1,455	4.03	4.3	4.1	28	27	17	6.63	14	7
17-Oct-09	64.4	9	16	7	27	1,714	3.88	4.1	4.1	27	27	18	6.72	2	<2
18-Oct-09	54.9	8	17	6	26	1,410	3.98	4.3	4.2	29	27	18	6.72	4	2
19-Oct-09	54.2	7	12	4	26	1,393	4.16	4.9	4.2	28	28	18	6.58	7	<2
20-Oct-09	51.9	9	15	4	27	1,391	4.42	4.8	4.3	30	28	17	6.36	11	8
21-Oct-09	55.7	6	12	4	27	1,488	4.09	4.7	4.3	32	28	19	6.54	nr	7
22-Oct-09	53.7	11	27	9	29	1,558	5.39	5.7	4.3	31	28	18	6.51	22	17
23-Oct-09	51.6	13	14	5	29	1,487	3.65	3.8	4.3	33	29	17	6.63	21	13
24-Oct-09	55.0	8	22	8	28	1,533	4.11	4.3	4.3	28	29	18	6.66	7	4
25-Oct-09	54.4	7	16	6	27	1,451	3.89	4.0	4.3	28	29	18	6.68	170	70
26-Oct-09	52.4	13	16	4	26	1,341	3.98	4.5	4.4	29	29	17	6.51	33	33
27-Oct-09	51.7	<4	12	3	26	1,324	4.99	5.0	4.4	32	29	17	6.40	110	22
28-Oct-09	53.3	8	14	5	29	1,568	5.62	5.9	4.5	32	29	18	6.52	nr	nr
29-Oct-09	60.5	21	34	10	29	1,724	5.07	5.6	4.6	34	30	17	6.52	8	8
30-Oct-09	62.5	8	21	5	22	1,343	3.24	nr	4.5	27	29	16	6.69	130	7
31-Oct-09	55.8	9	17	4	25	1,412	3.71	4.2	4.5	28	29	17	6.78	23	4
<b>Max:</b>	64.4														
<b>Min:</b>	51.6														
<b>Average:</b>	<b>55.1</b>	<b>9</b>	<b>19</b>	<b>6</b>	<b>26</b>	<b>1,461</b>	<b>4.14</b>	<b>4.5</b>		<b>29</b>		<b>18</b>	<b>6.58</b>		
<b>Geo.Mean:</b>														<b>16</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.