

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

**September 2011**

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-11	62.5	142	>76	19	24	1,494	3.20	6.6	4.2	44	33	19	6.62	46,000	46,000
2-Sep-11	51.6	15	nr	nr	26	1,353	3.64	4.2	4.2	33	33	20	6.52	43	43
3-Sep-11	65.5	42	nr	nr	21	1,363	2.66	3.7	4.2	30	33	19	6.62	4,300	4,300
4-Sep-11	46.6	8	14	5	24	1,124	3.20	3.6	4.2	29	33	19	6.69	430	430
5-Sep-11	49.7	9	36	8	26	1,301	3.74	4.3	4.2	34	33	19	6.63	230	230
6-Sep-11	51.1	9	24	7	27	1,360	3.62	4.3	4.2	34	33	19	6.57	150	150
7-Sep-11	55.8	26	31	24	32	1,796	4.75	6.0	4.2	39	33	ns	ns	ns	ns
8-Sep-11	51.7	13	21	13	30	1,552	3.18	3.8	4.2	35	33	20	6.53	2,300	2,300
9-Sep-11	50.2	10	13	6	31	1,566	3.86	4.4	4.3	36	34	20	6.61	43	43
10-Sep-11	49.0	8	<10	5	32	1,549	4.10	4.6	4.3	37	34	21	6.61	230	230
11-Sep-11	50.4	11	14	7	32	1,613	4.23	4.6	4.3	36	34	21	6.62	15	15
12-Sep-11	51.7	9	12	6	31	1,599	3.92	4.6	4.3	36	34	20	6.57	93	93
13-Sep-11	50.3	8	<10	5	31	1,539	3.98	4.9	4.3	38	34	20	6.60	23	23
14-Sep-11	48.8	10	nr	nr	33	1,596	4.37	4.8	4.4	39	34	19	6.62	93	93
15-Sep-11	50.6	8	17	6	33	1,673	4.47	5.1	4.4	38	34	19	6.59	23	23
16-Sep-11	50.2	10	33	6	32	1,606	4.07	4.8	4.4	39	35	19	6.62	<3	<3
17-Sep-11	49.2	11	16	6	32	1,549	4.02	4.7	4.4	36	34	19	6.59	23	23
18-Sep-11	51.1	16	21	11	33	1,670	4.10	4.8	4.5	39	35	19	6.68	15	15
19-Sep-11	50.5	13	18	5	31	1,555	3.79	4.5	4.5	37	35	19	6.59	430	430
20-Sep-11	95.4	42	36	22	22	2,080	2.68	4.1	4.5	30	35	19	6.57	93	93
21-Sep-11	64.5	8	10	4	17	1,109	2.40	2.9	4.5	22	35	17	6.69	43	43
22-Sep-11	54.9	15	22	8	26	1,448	4.14	5.0	4.5	33	35	ns	ns	ns	ns
23-Sep-11	54.6	11	15	5	29	1,563	4.06	4.9	4.5	36	35	18	6.59	9	9
24-Sep-11	52.1	14	16	7	29	1,517	4.02	4.8	4.5	36	35	19	6.55	75	75
25-Sep-11	52.2	16	13	7	30	1,540	3.88	4.9	4.5	38	35	19	6.60	93	93
26-Sep-11	49.7	19	<10	14	31	1,537	4.12	4.9	4.6	39	35	19	7.07	93	93
27-Sep-11	53.3	22	17	11	35	1,867	4.70	5.6	4.6	42	36	17	6.59	15	15
28-Sep-11	51.4	26	21	15	35	1,798	4.40	5.4	4.6	41	36	19	6.57	43	43
29-Sep-11	50.3	19	22	14	37	1,837	5.04	6.1	4.7	43	36	19	6.55	93	93
30-Sep-11	49.9	27	23	16	36	1,781	5.28	6.5	4.8	45	36	19	6.60	93	93
<b>Max:</b>	95.4														
<b>Min:</b>	46.6														
<b>Average:</b>	<b>53.8</b>	<b>20</b>	<b>21</b>	<b>10</b>	<b>29</b>	<b>1,565</b>	<b>3.92</b>	<b>4.8</b>		<b>36</b>		<b>19</b>	<b>6.62</b>		
<b>Geo.Mean:</b>														<b>90</b>	<b>90</b>

**Notes:**

- (1) effluent ammonia load based upon Raw Sewage flows and Final NH3-N concentrations (5)\*\* Flow, highlighted in bold, in excess of 98.6 ML/D per clause 26 of Licence 2716R.
- (2) nr - not recorded or no result; na - not analyzed; ns - no sample (6) Bracketed Coliform results not used in the Geometric Mean calculation.
- (3) Where value is expressed as less than (<), the value is halved and used in the calculation (7) Raw wastewater flows in excess of 100 ML/D will by-pass the secondary process.
- (4) \* = 30 day rolling average (8) Total Nitrogen results are calculated from TKN and nitrate values.