

**City of Winnipeg  
Water and Waste Department  
South End Water Pollution Control Centre Monitoring Data  
December 2008**

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-Dec-08	52.3	8	63	8	19	983	3.94	4.5	4.4	24	22	15	6.49	170	49
2-Dec-08	50.1	10	43	8	20	988	4.57	5.7	4.5	24	22	ns	ns	ns	ns
3-Dec-08	54.9	15	46	11	21	1,165	5.13	5.9	4.5	24	22	ns	ns	ns	ns
4-Dec-08	52.1	19	62	15	22	1,145	5.26	6.2	4.5	25	22	15	6.69	(130,000)	(79,000)
5-Dec-08	50.0	19	54	14	22	1,081	4.55	5.2	4.5	25	22	15	6.67	nr	nr
6-Dec-08	51.5	8	23	5	22	1,107	4.32	4.8	4.5	nr	22	15	6.44	330	230
7-Dec-08	51.3	6	36	5	20	1,036	5.51	6.1	4.7	25	22	14	6.59	49	11
8-Dec-08	50.1	5	36	5	20	1,011	4.09	4.6	4.7	26	22	15	6.49	170	70
9-Dec-08	50.1	5	28	4	21	1,041	4.18	4.6	4.8	25	23	14	6.57	33	17
10-Dec-08	50.5	5	34	5	21	1,039	4.47	4.7	4.8	24	23	15	6.51	79	79
11-Dec-08	48.9	7	37	5	22	1,061	4.74	4.9	4.8	26	23	15	6.45	130	79
12-Dec-08	48.7	4	31	6	22	1,072	4.55	4.8	4.8	26	23	15	6.67	130	22
13-Dec-08	52.3	<4	21	6	22	1,171	3.95	4.1	4.8	26	23	14	6.56	49	49
14-Dec-08	50.9	8	28	5	22	1,105	4.05	4.7	4.9	28	23	14	6.65	790	170
15-Dec-08	51.9	13	49	6	21	1,065	3.49	4.4	4.9	27	24	13	6.53	1,300	790
16-Dec-08	49.9	4	25	4	22	1,117	3.65	4.4	4.9	28	24	13	6.38	220	46
17-Dec-08	48.5	5	23	5	22	1,051	3.69	4.3	4.9	27	24	14	6.39	130	130
18-Dec-08	48.7	4	30	5	23	1,131	3.71	4.4	4.9	27	25	14	6.43	280	140
19-Dec-08	50.0	16	44	9	24	1,221	5.18	6.1	4.9	28	25	15	6.63	(350,000)	(110,000)
20-Dec-08	48.8	4	26	6	22	1,053	3.10	3.9	4.9	27	25	15	6.46	790	490
21-Dec-08	49.4	6	28	7	23	1,126	3.30	4.0	4.9	28	25	15	6.67	49	33
22-Dec-08	48.7	5	26	7	21	1,033	2.68	3.5	4.8	27	25	15	6.48	1,700	790
23-Dec-08	48.9	6	23	6	24	1,164	3.48	4.1	4.8	28	26	16	6.34	170	110
24-Dec-08	49.7	45	>77	13	23	1,133	3.12	4.9	4.8	30	26	14	6.72	700	170
25-Dec-08	43.4	5	27	6	25	1,066	2.62	3.1	4.8	27	26	15	6.69	212	212
26-Dec-08	43.2	9	26	9	29	1,240	2.98	3.6	4.7	32	26	15	6.55	49	49
27-Dec-08	45.1	23	59	12	28	1,263	3.33	4.4	4.7	31	27	15	6.58	220	140
28-Dec-08	46.4	27	54	12	26	1,216	3.70	4.8	4.7	30	27	15	6.63	700	31
29-Dec-08	47.5	71	>77	16	25	1,201	3.50	6.0	4.7	32	27	15	6.40	230	27
30-Dec-08	47.2	39	72	11	25	1,165	3.87	5.4	4.7	30	27	14	6.71	79	79
31-Dec-08	49.8	114	>73	26	26	1,270	3.74	7.4	4.8	36	28	14	6.59	13	8
<b>Max:</b>	54.9														
<b>Min:</b>	43.2														
<b>Average:</b>	<b>49.5</b>	<b>17</b>	<b>41</b>	<b>8</b>	<b>23</b>	<b>1,114</b>	<b>3.95</b>	<b>4.8</b>		<b>27</b>		<b>15</b>	<b>6.55</b>		
<b>Geo.Mean:</b>														<b>176</b>	<b>79</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 2716.
- (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.