

**City of Winnipeg**  
**Water and Waste Department**  
**South End Water Pollution Control Centre Monitoring Data**  
**May 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-May-10	87.5	11	11	8	19	1,680	2.24	2.7	4.0	25	28	13	6.84	17	11
2-May-10	76.2	14	19	14	22	1,653	2.47	3.1	4.0	25	28	13	6.79	49	11
3-May-10	73.1	9	11	6	21	1,564	2.59	3.3	4.0	23	28	14	6.77	79	33
4-May-10	74.1	34	30	20	22	1,594	3.00	3.7	4.1	23	28	ns	ns	ns	ns
5-May-10	<b>143.7</b>	23	24	13	12	1,768	1.38	2.1	4.0	13	28	12	7.11	(1,100)	(700)
6-May-10	97.1	16	16	12	15	1,495	2.28	3.1	4.0	18	27	11	7.25	(700)	(700)
7-May-10	81.2	21	15	10	21	1,721	3.22	3.8	4.0	25	27	nr	7.07	(110)	(49)
8-May-10	74.5	21	14	8	22	1,653	2.54	3.2	4.0	24	27	13	6.94	11	11
9-May-10	71.2	23	16	9	23	1,623	2.60	3.4	4.0	24	27	14	6.96	2	<2
10-May-10	71.1	24	19	11	24	1,691	2.79	3.5	3.9	26	27	14	6.87	4,300	4,300
11-May-10	74.6	21	14	8	22	1,604	2.76	3.5	3.9	27	26	14	6.99	49	49
12-May-10	69.1	14	18	10	23	1,610	2.95	3.8	3.9	28	26	14	6.92	46	9
13-May-10	65.4	30	27	17	24	1,563	3.04	4.3	3.9	26	26	ns	ns	ns	ns
14-May-10	64.9	42	33	14	26	1,654	3.18	4.6	3.9	26	26	14	6.91	4	2
15-May-10	61.9	58	nr	nr	25	1,553	2.85	5.4	4.0	27	26	14	6.86	13	13
16-May-10	61.9	156	89	>30	25	1,560	2.71	6.8	4.1	36	26	15	6.87	4	4
17-May-10	61.7	112	65	>34	24	1,506	2.86	5.5	4.1	29	27	15	6.78	49	17
18-May-10	60.2	122	65	34	25	1,530	2.72	5.7	4.2	30	27	15	6.84	22	22
19-May-10	62.5	130	76	59	26	1,619	3.50	6.5	4.3	34	27	ns	ns	ns	ns
20-May-10	59.3	126	77	37	25	1,476	2.13	5.2	4.3	33	27	15	6.85	93	43
21-May-10	59.0	122	43	>33	23	1,374	2.47	5.2	4.3	34	27	ns	ns	ns	ns
22-May-10	52.0	94	62	27	22	1,164	1.68	4.5	4.3	33	27	15	6.85	4	4
23-May-10	57.7	116	75	22	20	1,143	1.33	4.8	4.3	30	27	15	6.85	150	15
24-May-10	56.8	208	123	>37	20	1,125	1.62	6.6	4.4	38	28	14	6.89	9	4
25-May-10	<b>104.8</b>	52	31	16	14	1,446	1.05	2.5	4.4	22	27	15	7.03	(930)	(430)
26-May-10	67.1	114	56	23	19	1,295	2.04	5.0	4.4	23	27	15	6.82	<3	<3
27-May-10	65.3	100	58	45	22	1,431	3.93	7.1	4.4	32	27	15	6.88	150	150
28-May-10	<b>134.9</b>	110	47	18	11	1,497	0.85	2.6	4.4	16	27	15	7.05	(2,300)	(2,300)
29-May-10	<b>201.0</b>	60	34	18	5	1,005	0.47	1.4	4.2	14	26	14	7.22	(93)	(43)
30-May-10	<b>275.5</b>	43	25	18	5	1,342	0.72	1.4	4.1	15	26	17	7.41	(46,000)	(15,000)
31-May-10	<b>161.7</b>	24	18	13	7	1,197	1.10	2.3	4.1	9	25	13	7.45	(110,000)	(46,000)
<b>Max:</b>	275.5														
<b>Min:</b>	52.0														
<b>Average:</b>	<b>88.0</b>	<b>66</b>	<b>40</b>	<b>21</b>	<b>20</b>	<b>1,488</b>	<b>2.29</b>	<b>4.1</b>		<b>25</b>		<b>14</b>	<b>6.97</b>	<b>25</b>	<b>14</b>
<b>Geo.Mean:</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.