

**City of Winnipeg**  
**Water and Waste Department**  
**South End Water Pollution Control Centre Monitoring Data**  
**July 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-Jul-10	60.1	8	29	3	22	1,310	1.81	2.2	2.6	28	22	18	6.78	4	4
2-Jul-10	61.4	6	28	2	21	1,271	2.35	2.7	2.6	26	23	19	6.78	23	23
3-Jul-10	73.1	8	30	6	17	1,272	2.18	2.6	2.6	23	23	18	6.68	93	43
4-Jul-10	78.7	9	23	5	15	1,188	2.13	2.3	2.6	20	23	19	6.79	4	<3
5-Jul-10	71.3	10	25	5	19	1,362	2.47	2.8	2.6	25	23	18	6.76	75	43
6-Jul-10	69.7	7	25	3	19	1,289	2.13	2.5	2.7	24	23	18	6.64	43	43
7-Jul-10	62.9	5	28	3	20	1,277	2.57	2.9	2.7	27	23	18	6.76	15	<3
8-Jul-10	63.9	13	45	5	22	1,400	3.18	3.6	2.7	28	23	18	6.78	9	4
9-Jul-10	61.3	18	35	6	22	1,367	3.13	3.7	2.7	29	24	19	6.77	(75)	(75)
10-Jul-10	56.4	6	31	4	22	1,219	2.03	2.3	2.7	28	24	18	6.72	7	4
11-Jul-10	55.5	6	46	<2	22	1,237	2.95	3.2	2.8	29	24	18	6.77	9	9
12-Jul-10	57.7	6	37	3	23	1,327	3.08	3.4	2.8	29	25	18	6.74	75	11
13-Jul-10	69.3	61	66	22	19	1,344	2.59	3.5	2.8	27	25	18	6.52	4	<3
14-Jul-10	<b>198.0</b>	33	31	9	7	1,330	0.77	1.3	2.8	14	24	18	7.28	(4,300)	(4,300)
15-Jul-10	<b>105.7</b>	15	25	4	11	1,205	1.46	2.0	2.8	17	24	17	7.09	(15)	(15)
16-Jul-10	81.9	8	22	<2	15	1,195	1.95	2.3	2.7	20	24	18	6.97	23	23
17-Jul-10	73.2	4	nr	nr	15	1,076	2.09	2.3	2.7	20	24	18	6.89	43	23
18-Jul-10	68.4	7	29	3	15	1,033	2.25	2.5	2.7	21	24	18	6.82	9	9
19-Jul-10	67.5	6	25	2	17	1,114	2.60	3.0	2.8	22	24	18	6.75	93	23
20-Jul-10	64.2	5	26	3	17	1,060	2.86	3.2	2.8	23	24	18	6.71	43	43
21-Jul-10	62.2	5	25	2	17	1,076	3.08	3.4	2.8	23	24	18	6.74	15	9
22-Jul-10	69.4	9	26	6	17	1,173	2.98	3.3	2.8	23	24	18	6.72	43	43
23-Jul-10	75.0	<4	20	<2	13	998	2.29	2.5	2.8	21	24	19	6.70	23	23
24-Jul-10	64.3	4	18	3	14	887	2.37	2.6	2.8	22	24	19	6.77	43	7
25-Jul-10	60.0	5	16	3	15	876	2.58	2.8	2.8	20	24	19	6.65	7	4
26-Jul-10	62.6	6	27	4	15	957	3.09	3.4	2.8	21	24	19	6.57	23	9
27-Jul-10	77.9	5	26	6	12	942	2.31	2.6	2.8	17	24	19	6.74	93	23
28-Jul-10	64.2	6	27	4	14	918	2.56	2.9	2.8	21	23	19	6.65	23	9
29-Jul-10	61.9	7	22	4	15	953	3.16	3.5	2.8	21	23	19	6.66	23	23
30-Jul-10	60.6	5	20	5	16	939	3.05	3.5	2.8	22	23	19	6.58	38	38
31-Jul-10	55.5	7	18	5	14	794	2.91	3.0	2.9	21	23	19	6.56	15	15
<b>Max:</b>	198.0														
<b>Min:</b>	55.5														
<b>Average:</b>	<b>71.4</b>	<b>10</b>	<b>28</b>	<b>4</b>	<b>17</b>	<b>1,142</b>	<b>2.48</b>	<b>2.8</b>		<b>23</b>		<b>18</b>	<b>6.75</b>		
<b>Geo.Mean:</b>														<b>22</b>	<b>12</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.