

**City of Winnipeg**  
**Water and Waste Department**  
**South End Water Pollution Control Centre Monitoring Data**  
**July 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-Jul-09	74.2	10	15	5	17	1,246	2.16	2.7	3.6	20	24	14	6.89	7	7
2-Jul-09	71.7	8	16	4	18	1,262	2.57	3.0	3.6	20	23	16	6.86	23	<2
3-Jul-09	68.9	6	17	4	18	1,247	3.40	nr	3.6	20	23	16	6.71	23	4
4-Jul-09	64.3	6	13	3	18	1,158	2.23	2.6	3.5	24	23	17	6.82	17	4
5-Jul-09	63.0	10	15	6	18	1,147	2.38	2.9	3.5	20	23	15	6.80	4	4
6-Jul-09	65.8	5	20	5	19	1,264	2.95	3.3	3.5	22	23	17	6.70	14	7
7-Jul-09	63.2	4	15	3	20	1,265	3.05	3.5	3.5	27	23	17	6.68	33	13
8-Jul-09	61.6	8	20	4	20	1,238	3.64	4.1	3.5	25	23	17	6.77	70	49
9-Jul-09	<b>120.3</b>	85	>75	23	13	1,504	2.32	3.7	3.6	19	23	17	6.78	(49)	(23)
10-Jul-09	<b>100.0</b>	25	<10	7	12	1,229	1.78	2.1	3.5	14	23	16	6.92	(170)	(130)
11-Jul-09	72.7	8	19	3	14	1,011	2.15	2.5	3.4	20	23	16	6.95	4	<2
12-Jul-09	66.4	9	19	5	16	1,063	2.40	2.7	3.4	22	23	15	6.88	33	23
13-Jul-09	66.0	6	27	5	17	1,115	2.74	3.2	3.4	nr	23	16	6.67	79	49
14-Jul-09	85.6	51	>77	21	14	1,208	2.44	4.6	3.4	22	22	17	6.65	23	23
15-Jul-09	<b>109.2</b>	9	27	6	11	1,147	1.55	2.1	3.4	13	22	16	6.92	(11)	(11)
16-Jul-09	86.3	10	37	5	14	1,174	2.36	2.8	3.3	17	22	15	6.95	790	490
17-Jul-09	74.7	5	36	4	15	1,105	2.42	2.8	3.3	17	21	16	6.84	26	11
18-Jul-09	66.4	8	40	4	14	949	2.41	2.8	3.2	18	21	16	6.83	4	4
19-Jul-09	63.6	7	21	4	15	961	2.60	3.1	3.2	19	21	16	6.71	<2	<2
20-Jul-09	86.3	15	40	7	15	1,251	2.23	2.9	3.1	17	21	17	6.82	(540)	(540)
21-Jul-09	71.5	10	23	4	16	1,144	2.85	3.4	3.1	19	21	17	6.73	11	4
22-Jul-09	64.4	7	35	3	16	1,031	2.70	3.1	3.1	19	20	17	6.66	79	33
23-Jul-09	63.1	6	39	3	17	1,078	2.88	3.3	3.1	22	20	17	6.63	4	<2
24-Jul-09	62.1	8	31	5	18	1,137	3.36	3.7	3.0	22	20	18	6.63	7	4
25-Jul-09	57.4	4	30	6	17	993	2.52	2.9	3.0	21	20	14	6.79	<2	<2
26-Jul-09	56.2	<4	30	4	17	949	2.68	3.0	2.9	21	20	14	6.71	<2	<2
27-Jul-09	60.8	20	59	11	17	1,052	2.88	3.6	3.0	25	20	15	6.81	21	14
28-Jul-09	56.9	9	29	5	19	1,069	3.09	3.5	3.1	22	20	16	6.49	20	17
29-Jul-09	62.7	41	>76	14	20	1,267	2.89	4.0	3.1	29	21	16	6.57	23	8
30-Jul-09	78.0	65	>74	nr	16	1,272	2.53	4.1	3.2	23	21	19	6.76	490	140
31-Jul-09	<b>112.3</b>	56	>75	19	10	1,067	1.09	2.3	3.2	16	21	14	6.69	(>1600000)	(>1600000)
<b>Max:</b>	120.3														
<b>Min:</b>	56.2														
<b>Average:</b>	<b>73.4</b>	<b>17</b>	<b>34</b>	<b>7</b>	<b>16</b>	<b>1,148</b>	<b>2.56</b>	<b>3.1</b>		<b>21</b>		<b>16</b>	<b>6.76</b>	<b>16</b>	<b>8</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.