

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

**September 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-Sep-10	331.9	68	41	14	7	2,174	0.95	2.0	2.7	13	17	19	7.12	2,300	230
2-Sep-10	<b>689.3</b>	54	39	12	2	1,475	0.58	1.3	2.7	10	17	18	7.13	(>110,000)	(>110,000)
3-Sep-10	<b>411.3</b>	10	<10	4	4	1,563	0.80	1.2	2.7	11	17	18	7.21	(24,000)	(9,300)
4-Sep-10	300.7	4	<10	3	5	1,383	1.31	1.6	2.6	13	17	19	7.11	2,300	930
5-Sep-10	246.7	8	<20	2	4	1,029	1.70	1.9	2.6	15	16	18	7.05	2,900	230
6-Sep-10	225.3	6	<20	3	4	969	1.98	2.2	2.6	16	16	19	6.93	430	38
7-Sep-10	222.4	7	<10	3	5	1,190	2.22	2.6	2.5	17	16	19	6.95	430	150
8-Sep-10	213.9	5	13	3	6	1,354	2.35	2.6	2.5	18	16	19	6.80	230	43
9-Sep-10	203.5	34	39	15	7	1,427	2.45	3.0	2.5	18	16	19	6.79	150	150
10-Sep-10	<b>589.9</b>	39	36	13	2	1,050	0.89	1.5	2.4	9	16	17	6.81	(110,000)	(110,000)
11-Sep-10	349.2	9	<10	3	2	842	1.08	1.4	2.4	11	15	18	7.07	2,300	430
12-Sep-10	285.9	8	11	3	3	720	1.37	1.7	2.3	13	15	18	7.05	380	43
13-Sep-10	266.7	7	12	2	3	813	1.87	2.3	2.4	15	15	18	7.04	430	150
14-Sep-10	250.9	6	11	3	4	1,064	2.12	2.5	2.4	16	15	19	6.93	75	<3
15-Sep-10	231.6	8	13	4	6	1,292	2.39	2.8	2.5	17	16	19	6.85	230	230
16-Sep-10	265.9	22	31	8	7	1,731	2.57	2.8	2.5	16	16	19	6.81	750	750
17-Sep-10	252.2	6	12	4	4	951	1.92	2.2	2.5	14	16	18	6.83	2,100	120
18-Sep-10	201.0	<4	<10	3	3	527	2.60	3.0	2.5	17	16	18	6.95	150	93
19-Sep-10	194.6	8	12	2	5	903	2.81	3.2	2.5	19	16	19	6.72	75	75
20-Sep-10	217.4	8	16	3	4	952	2.25	3.1	2.6	16	16	18	6.71	150	93
21-Sep-10	216.4	6	13	3	4	972	2.51	3.6	2.6	17	16	18	6.62	430	430
22-Sep-10	299.4	35	39	12	6	1,901	2.31	2.9	2.6	18	16	18	6.61	430	23
23-Sep-10	267.1	45	45	15	4	1,173	1.46	2.1	2.5	14	16	17	6.78	930	930
24-Sep-10	<b>523.1</b>	27	22	5	2	1,297	0.95	1.4	2.5	10	15	14	6.82	(110,000)	(21,000)
25-Sep-10	299.5	6	<10	2	3	752	1.13	1.4	2.4	12	15	17	7.00	9,300	4,300
26-Sep-10	257.7	8	<10	2	3	685	1.86	2.2	2.3	14	15	18	6.96	230	93
27-Sep-10	239.9	6	<10	3	3	703	2.05	2.4	2.3	15	15	18	6.87	93	43
28-Sep-10	235.4	8	13	2	5	1,252	2.46	2.9	2.3	17	15	19	6.96	43	23
29-Sep-10	219.1	8	16	3	7	1,610	2.86	3.4	2.3	19	15	19	6.78	43	23
30-Sep-10	214.2	8	20	3	8	1,750	2.98	3.4	2.4	22	15	19	6.86	43	43
<b>Max:</b>	689														
<b>Min:</b>	195														
<b>Average:</b>	<b>291</b>	<b>16</b>	<b>17</b>	<b>5</b>	<b>4</b>	<b>1,183</b>	<b>1.89</b>	<b>2.4</b>		<b>15</b>		<b>18</b>	<b>6.90</b>		
<b>Geo.Mean:</b>														<b>366</b>	<b>115</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 380 ML/D per clause 26 of Licence 2684RRR.
- (6) Bracketed Coliform results not used in the Geometric Mean calculation.
- (7) Raw wastewater flows in excess of 400 ML/D will by-pass the secondary process and flows in excess of 675 ML/D will cause raw sewage to by-pass the plant.
- (8) Total Nitrogen results are calculated from TKN and nitrate values.