

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

**October 2011**

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-Oct-11	138.7	13	>78	10	28	3,925	4.76	5.4	4.2	39	32	20	7.18	230	230
2-Oct-11	144.0	12	>77	6	25	3,630	3.89	4.8	4.3	36	32	20	7.03	930	930
3-Oct-11	154.0	14	69	7	25	3,866	4.06	4.7	4.4	35	33	20	6.97	43	43
4-Oct-11	148.1	13	>72	7	27	4,029	4.51	5.6	4.5	38	34	20	6.85	93	93
5-Oct-11	150.1	13	>74	5	30	4,488	4.82	5.4	4.5	40	34	20	6.93	430	430
6-Oct-11	149.2	14	>74	6	27	4,045	4.33	5.0	4.6	36	34	20	6.93	93	93
7-Oct-11	163.8	21	69	14	26	4,258	3.84	5.1	4.6	38	34	20	6.96	230	230
8-Oct-11	137.9	23	61	13	23	3,213	3.17	4.2	4.6	33	34	20	6.99	110,000	110,000
9-Oct-11	135.1	11	64	5	24	3,269	3.36	3.9	4.6	33	34	19	7.00	4,300	4,300
10-Oct-11	189.6	8	57	6	22	4,076	2.91	3.5	4.6	30	34	20	6.95	230	230
11-Oct-11	149.0	12	57	6	21	3,190	2.75	3.4	4.5	29	34	19	6.91	430	430
12-Oct-11	205.1	35	50	19	23	4,757	2.67	3.6	4.5	32	34	19	6.87	930	44
13-Oct-11	270.0	6	nr	nr	11	2,889	1.38	1.9	4.4	17	33	17	6.68	430	430
14-Oct-11	159.1	10	37	5	22	3,501	2.37	2.4	4.3	29	33	18	6.98	430	430
15-Oct-11	143.6	10	36	6	28	3,962	2.59	3.2	4.3	38	33	18	7.01	430	430
16-Oct-11	173.3	10	43	5	22	3,744	1.99	2.6	4.2	28	33	18	7.02	1,500	1,500
17-Oct-11	154.4	10	40	5	23	3,552	2.43	3.1	4.2	31	33	17	6.93	430	430
18-Oct-11	143.2	8	34	6	26	3,723	3.18	3.9	4.1	32	32	18	6.91	290	290
19-Oct-11	147.8	12	38	6	29	4,314	3.36	4.0	4.1	36	32	19	6.83	150	150
20-Oct-11	143.8	7	48	8	25	3,652	2.92	3.6	4.1	35	33	18	6.87	230	230
21-Oct-11	142.7	9	nr	nr	27	3,780	2.85	3.2	4.1	34	33	19	6.81	150	150
22-Oct-11	176.2	19	40	11	27	4,671	2.97	3.6	4.1	34	33	19	7.06	1,500	1,500
23-Oct-11	142.5	12	27	6	19	2,722	1.78	2.2	4.1	26	33	18	6.97	46,000	46,000
24-Oct-11	142.1	10	19	6	23	3,310	1.97	2.5	4.0	30	33	18	6.85	15,000	15,000
25-Oct-11	144.7	12	30	6	26	3,805	2.65	3.3	4.0	35	33	18	6.96	110,000	110,000
26-Oct-11	154.0	13	29	7	28	4,296	2.93	3.7	3.9	37	33	18	6.84	4,300	4,300
27-Oct-11	146.0	10	40	7	28	4,118	2.93	3.3	3.9	36	33	18	6.84	930	930
28-Oct-11	146.5	12	39	8	31	4,572	3.43	3.8	3.8	40	34	18	6.75	44	44
29-Oct-11	145.2	23	38	6	37	5,344	3.77	4.3	3.8	47	34	19	7.00	380	380
30-Oct-11	138.9	14	45	7	35	4,902	3.98	4.9	3.8	45	34	19	6.99	930	930
31-Oct-11	144.7	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	18	6.89	43	43
<b>Max:</b>	270														
<b>Min:</b>	135														
<b>Average:</b>	<b>156</b>	<b>13</b>	<b>49</b>	<b>7</b>	<b>26</b>	<b>3,920</b>	<b>3.15</b>	<b>3.8</b>		<b>34</b>		<b>19</b>	<b>6.93</b>		
<b>Geo.Mean:</b>														<b>685</b>	<b>621</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.