

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

**June 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-Jun-11	299.1	9	23	4	15	4,516	1.50	1.9	1.9	18	20	14	7.06	(230)	(43)
2-Jun-11	268.3	8	28	5	17	4,454	1.75	2.1	2.0	20	20	14	7.09	230	230
3-Jun-11	259.0	6	20	5	17	4,299	1.74	2.0	2.0	21	20	15	7.04	93	43
4-Jun-11	233.5	8	22	4	16	3,759	1.94	2.2	2.0	20	20	15	7.12	nr	nr
5-Jun-11	227.8	9	30	4	18	4,078	2.20	2.5	2.0	22	20	15	7.01	23	<3
6-Jun-11	232.9	8	24	3	17	4,052	2.43	2.6	2.1	20	20	15	7.07	23	9
7-Jun-11	264.2	13	21	7	16	4,333	2.13	2.5	2.1	22	21	15	6.99	43	43
8-Jun-11	<b>383.2</b>	27	28	8	10	3,832	1.07	1.6	2.1	15	20	14	6.85	(2,300)	(2,300)
9-Jun-11	237.2	8	28	4	18	4,341	2.01	2.3	2.1	23	20	15	6.93	750	230
10-Jun-11	224.4	6	24	4	19	4,196	2.19	2.5	2.1	24	20	16	7.03	43	43
11-Jun-11	206.1	5	25	4	18	3,648	2.38	2.6	2.1	23	20	17	6.93	23	9
12-Jun-11	206.3	7	39	5	18	3,672	2.72	3.0	2.2	23	21	16	6.89	23	9
13-Jun-11	270.9	23	37	10	16	4,226	2.44	3.0	2.2	21	21	16	6.93	(>1,100,000)	(1,100,000)
14-Jun-11	214.0	7	29	5	18	3,745	2.20	2.6	2.2	22	21	16	6.84	1,500	1,500
15-Jun-11	335.6	33	39	12	13	4,463	1.68	2.4	2.2	18	20	17	6.86	430	150
16-Jun-11	228.4	10	30	4	16	3,677	1.98	2.3	2.2	20	20	17	6.86	210	210
17-Jun-11	207.1	7	32	4	19	3,852	2.48	2.8	2.2	22	20	17	6.95	43	43
18-Jun-11	217.9	8	32	5	17	3,617	2.26	2.6	2.2	21	20	17	6.92	23	23
19-Jun-11	192.4	9	38	4	19	3,598	2.81	3.2	2.3	23	20	17	6.98	15	4
20-Jun-11	194.5	8	39	4	19	3,696	3.11	3.6	2.3	26	20	18	6.94	15	4
21-Jun-11	186.2	19	37	10	20	3,650	2.89	3.3	2.4	25	21	18	6.78	230	230
22-Jun-11	374.8	30	33	9	12	4,423	1.55	2.0	2.4	15	21	17	6.89	(460,000)	(460,000)
23-Jun-11	223.7	9	31	3	17	3,736	2.21	2.5	2.4	21	21	17	6.93	93	93
24-Jun-11	212.0	9	31	4	18	3,774	2.61	3.0	2.4	22	21	17	6.84	73	23
25-Jun-11	197.5	10	29	6	19	3,733	2.71	3.0	2.4	23	21	18	6.93	23	23
26-Jun-11	241.2	11	32	5	15	3,570	2.27	2.5	2.5	18	21	18	6.93	430	28
27-Jun-11	203.4	12	33	6	19	3,763	2.48	2.9	2.5	24	21	18	6.90	15	15
28-Jun-11	222.0	11	28	5	20	4,373	2.52	3.0	2.5	26	21	18	6.80	750	750
29-Jun-11	220.4	14	27	5	20	4,496	2.58	3.0	2.5	27	21	17	6.74	9	4
30-Jun-11	221.2	13	>40	5	18	3,982	2.39	2.8	2.6	24	21	18	6.70	93	4
<b>Max:</b>	383														
<b>Min:</b>	186														
<b>Average:</b>	<b>240</b>	<b>12</b>	<b>30</b>	<b>5</b>	<b>17</b>	<b>3,985</b>	<b>2.24</b>	<b>2.6</b>		<b>22</b>		<b>16</b>	<b>6.92</b>		
<b>Geo.Mean:</b>														<b>73</b>	<b>34</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.