

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

**July 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-Jul-11	210.3	12	44	5	17	3,638	2.41	2.9	2.6	22	22	19	6.95	43	43
2-Jul-11	186.8	13	45	6	17	3,176	2.42	2.8	2.7	23	22	18	6.96	9	<3
3-Jul-11	200.0	13	<10	4	16	3,240	2.56	3.0	2.7	23	22	19	6.99	9	4
4-Jul-11	283.2	35	43	12	13	3,795	2.08	2.7	2.7	19	22	19	6.93	23	9
5-Jul-11	258.3	15	27	6	14	3,668	1.85	2.3	2.7	19	22	20	6.89	430	430
6-Jul-11	230.4	12	25	5	18	4,124	2.18	2.7	2.7	23	22	19	6.83	93	93
7-Jul-11	246.3	15	37	5	18	4,360	2.12	2.6	2.7	21	22	20	6.87	230	93
8-Jul-11	213.5	13	31	5	19	3,992	2.22	2.7	2.8	25	22	20	6.81	230	150
9-Jul-11	246.2	10	28	5	15	3,644	1.95	2.3	2.8	19	22	20	7.01	93	9
10-Jul-11	196.7	10	32	5	21	4,091	2.27	2.7	2.8	26	22	20	6.95	120	11
11-Jul-11	203.7	12	24	4	20	4,054	2.46	2.8	2.8	24	22	20	6.95	230	230
12-Jul-11	203.3	10	28	4	19	3,761	2.52	3.0	2.8	24	22	19	6.98	43	15
13-Jul-11	198.8	14	25	5	18	3,618	2.58	3.0	2.8	24	22	19	6.99	43	23
14-Jul-11	195.1	14	37	6	20	3,961	2.85	3.3	2.8	25	22	20	6.93	43	9
15-Jul-11	195.5	58	29	14	25	4,868	0.25	1.6	2.8	33	23	20	6.83	2,300	210
16-Jul-11	176.5	24	22	13	24	4,165	0.99	1.6	2.7	30	23	20	7.03	23,000	4,300
17-Jul-11	168.1	12	19	8	23	3,799	1.39	1.7	2.7	28	23	20	7.02	4300	4300
18-Jul-11	181.4	14	21	7	23	4,227	1.49	1.9	2.7	29	24	20	7.00	43000	2800
19-Jul-11	168.2	15	29	5	24	4,054	1.45	1.9	2.6	30	24	20	6.92	4300	4300
20-Jul-11	166.7	15	23	5	25	4,184	0.83	1.3	2.6	30	24	20	6.85	430	230
21-Jul-11	166.6	9	25	5	25	4,232	1.49	2.0	2.5	30	24	20	6.94	1500	1500
22-Jul-11	148.9	12	23	5	28	4,125	2.26	2.7	2.5	32	25	20	6.93	9	4
23-Jul-11	162.7	11	23	4	28	4,507	2.56	3.1	2.6	35	25	20	7.02	230	93
24-Jul-11	145.7	8	32	7	25	3,701	2.38	3.0	2.6	32	26	20	7.00	4300	930
25-Jul-11	159.8	12	28	6	25	4,011	2.70	3.4	2.6	32	26	19	6.89	430	150
26-Jul-11	160.0	13	30	6	28	4,480	3.16	3.7	2.6	35	26	20	6.91	750	200
27-Jul-11	164.6	9	29	7	27	4,494	2.84	3.5	2.6	35	27	20	6.93	230	230
28-Jul-11	160.9	15	40	6	27	4,280	3.21	3.6	2.7	33	27	20	6.92	230	43
29-Jul-11	162.2	16	25	5	25	4,087	3.42	3.9	2.7	34	27	20	6.87	43	7
30-Jul-11	148.7	8	28	6	24	3,628	3.07	3.4	2.7	31	28	20	6.91	230	75
31-Jul-11	134.4	5	30	5	25	3,320	2.84	3.2	2.7	32	28	20	7.00	150	150
<b>Max:</b>	283														
<b>Min:</b>	134														
<b>Average:</b>	<b>189</b>	<b>15</b>	<b>29</b>	<b>6</b>	<b>22</b>	<b>3,977</b>	<b>2.22</b>	<b>2.7</b>		<b>28</b>		<b>20</b>	<b>6.94</b>		
<b>Geo.Mean:</b>														<b>250</b>	<b>93</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.