

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

December 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-Dec-10	165.5	10	14	5	20	3,327	3.70	4.4	3.6	32	24	15	6.78	230	29
2-Dec-10	165.3	10	20	5	19	3,091	3.67	4.2	3.6	25	24	16	6.69	23	9
3-Dec-10	166.4	10	29	5	18	2,995	3.55	4.3	3.7	24	25	16	6.72	210	120
4-Dec-10	163.5	11	nr	nr	20	3,254	3.55	4.1	3.7	29	25	14	6.78	15	4
5-Dec-10	161.4	17	nr	nr	20	3,293	3.54	4.2	3.8	29	25	15	6.94	750	15
6-Dec-10	163.7	12	nr	nr	20	3,192	3.59	4.2	3.8	31	26	16	6.78	23	9
7-Dec-10	164.6	10	25	5	21	3,473	3.84	4.4	3.9	31	26	16	6.77	230	230
8-Dec-10	166.6	7	15	5	21	3,465	3.80	4.4	3.9	31	26	16	6.92	23	9
9-Dec-10	168.1	10	22	6	21	3,463	3.77	4.4	4.0	30	27	15	6.67	9	4
10-Dec-10	172.5	11	20	6	21	3,640	3.71	4.5	4.0	30	27	15	6.70	2,100	750
11-Dec-10	166.4	7	25	6	20	3,295	3.33	4.0	4.0	29	27	14	6.83	75	23
12-Dec-10	158.3	11	nr	nr	21	3,261	3.36	3.9	4.0	30	27	14	6.93	43	43
13-Dec-10	162.6	11	nr	nr	21	3,333	3.47	4.0	4.0	31	28	13	6.88	930	430
14-Dec-10	164.7	11	16	4	21	3,409	3.59	4.5	4.1	31	28	13	6.84	150	43
15-Dec-10	166.6	10	21	5	22	3,732	3.78	4.4	4.1	31	28	15	6.63	230	<3
16-Dec-10	162.8	9	21	5	23	3,777	3.69	4.2	4.1	32	29	14	6.82	15	9
17-Dec-10	167.3	8	nr	nr	23	3,764	3.65	4.1	4.1	31	29	14	6.77	2,100	1,200
18-Dec-10	160.7	13	nr	nr	22	3,519	3.58	4.0	4.1	31	29	15	6.81	4	4
19-Dec-10	157.4	10	22	5	22	3,494	3.70	4.4	4.1	34	29	15	6.82	15	4
20-Dec-10	161.5	11	21	4	23	3,634	3.63	4.2	4.2	33	29	15	6.68	4,300	4,300
21-Dec-10	156.0	13	22	5	23	3,604	3.63	4.2	4.2	33	30	14	6.85	93	93
22-Dec-10	158.7	11	19	5	24	3,745	3.78	4.5	4.2	35	30	15	6.76	1,500	1,500
23-Dec-10	155.4	11	20	11	24	3,730	4.10	4.5	4.2	34	30	15	6.73	2,100	2,100
24-Dec-10	154.8	5	28	5	23	3,591	3.87	4.2	4.2	31	30	15	6.91	93	93
25-Dec-10	134.1	14	25	3	23	3,111	3.86	4.2	4.2	31	30	15	6.81	430	430
26-Dec-10	135.8	13	27	4	27	3,653	4.12	4.7	4.3	35	31	14	6.96	9	9
27-Dec-10	143.3	15	28	5	28	3,998	4.16	4.5	4.3	35	31	14	6.95	23	4
28-Dec-10	154.0	12	21	6	25	3,819	3.86	4.5	4.3	32	31	14	6.90	43	15
29-Dec-10	149.7	11	22	6	24	3,518	3.92	4.4	4.3	33	31	14	6.74	23	23
30-Dec-10	153.9	12	24	8	28	4,340	4.35	4.6	4.3	34	31	14	6.75	43	23
31-Dec-10	148.1	8	30	9	24	3,495	3.87	4.5	4.3	34	31	13	6.73	75	75
Max:	173														
Min:	134														
Average:	159	11	22	6	22	3,517	3.74	4.3		31		15	6.80		
Geo. Mean:														102	43

Notes:

- (1) Effluent ammonia load based upon Raw Sewage flows and Final NH3-N concentration
- (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 calculation
- (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.