

**City of Winnipeg**  
**Water and Waste Department**  
**North End Water Pollution Control Centre Monitoring Data**  
**November 2007**

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-Nov-07	170.9	10	49	5	27	4,614	3.18	3.0	3.5	nr	31	17.9	6.85	38	38
2-Nov-07	188.7	9	38	5	28	5,284	3.53	3.6	3.5	32	31	18.0	6.93	93	23
3-Nov-07	159.1	8	46	5	30	4,773	3.63	4.7	3.5	39	31	17.4	6.94	43	43
4-Nov-07	159.5	7	38	5	30	4,785	3.72	4.6	3.5	36	31	18.3	6.94	430	75
5-Nov-07	168.3	13	>77	6	26	4,376	3.27	3.6	3.5	nr	31	17.9	6.98	2,100	430
6-Nov-07	171.9	7	59	5	20	3,438	3.25	nr	3.5	nr	31	17.7	6.86	430	150
7-Nov-07	172.2	10	46	4	26	4,477	3.13	nr	3.5	nr	31	17.8	6.8	36	15
8-Nov-07	171.8	8	> 79	6	30	5,154	3.28	3.7	3.5	31	31	18.0	6.82	36	4
9-Nov-07	153.6	10	21	5	30	4,608	2.98	3.6	3.6	34	31	16.7	7.07	36	15
10-Nov-07	154.6	7	16	4	35	5,411	3.80	4.6	3.7	40	31	16.8	7.03	92	23
11-Nov-07	154.6	8	16	4	34	5,256	3.85	4.0	3.7	35	32	17.8	7.02	9,200	9,200
12-Nov-07	157.5	8	29	4	33	5,198	3.92	4.3	3.7	34	32	17.6	7.12	43,000	7,500
13-Nov-07	159.9	9	34	5	32	5,117	3.71	4.2	3.7	36	32	17.7	7.00	230	92
14-Nov-07	161.1	7	33	4	32	5,155	3.70	3.6	3.7	nr	32	17.8	7.03	360	230
15-Nov-07	158.6	11	55	6	33	5,234	3.73	3.9	3.7	32	32	17.8	6.87	240	43
16-Nov-07	157.8	8	28	5	33	5,207	4.00	4.5	3.7	37	32	17.7	6.84	430	430
17-Nov-07	154.7	10	33	8	32	4,950	3.98	3.4	3.7	26	32	16.6	7.13	4,300	430
18-Nov-07	159.4	10	28	5	31	4,941	3.90	4.2	3.7	34	32	16.5	7.11	9,200	9,200
19-Nov-07	172.7	9	30	5	29	5,008	3.33	4.1	3.7	35	32	16.0	6.80	230	36
20-Nov-07	161.1	9	30	7	30	4,833	3.49	3.1	3.8	28	32	16.0	6.83	360	92
21-Nov-07	157.6	9	38	6	31	4,886	3.71	3.5	3.8	31	32	16.5	6.99	930	930
22-Nov-07	157.5	11	38	9	30	4,725	3.62	3.8	3.9	32	32	16.2	6.95	430	430
23-Nov-07	160.0	10	33	7	30	4,800	3.63	4.0	3.9	33	33	14.0	6.75	430	21
24-Nov-07	263.2	7	35	6	31	8,159	3.79	4.2	3.9	40	33	15.6	7.12	930	23
25-Nov-07	154.6	11	38	5	31	4,793	3.84	4.8	3.9	41	34	15.6	7.04	92	36
26-Nov-07	161.7	11	42	7	33	5,336	4.01	3.5	3.9	29	34	12.0	6.88	360	360
27-Nov-07	156.6	10	47	5	31	4,855	3.95	2.9	3.9	27	34	11.0	6.91	720	150
28-Nov-07	157.7	ns	ns	ns	ns	ns	ns	ns	3.9	ns	34	13.2	6.91	92	36
29-Nov-07	156.8	11	50	6	31	4,861	3.62	4.0	3.9	37	34	15.9	6.93	920	36
30-Nov-07	154.9	7	36	6	31	4,802	3.79	4.2	3.9	36	34	15.6	6.81	360	150
<b>Max:</b>	263														
<b>Min:</b>	154														
<b>Average:</b>	<b>165</b>	<b>9</b>	<b>39</b>	<b>6</b>	<b>30</b>	<b>5,001</b>	<b>3.63</b>	<b>3.9</b>		<b>34</b>		<b>16.5</b>	<b>6.94</b>		
<b>Geo.Mean:</b>														<b>384</b>	<b>116</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 2684RR.
- (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) The results for Total Nitrogen and Phosphorus are lower than normal due to technical difficulties with our analysis. Total Phosphorus and Total Nitrogen results are corrected based on the recovery of a quality control standard