

**City of Winnipeg  
Water and Waste Department  
North End Water Pollution Control Centre Monitoring Data  
July 2008**

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-08	220.9	7	22	3	12	2,651	2.25	2.5	2.7	19	22	16.5	7.12	92	92
2-Jul-08	204.9	9	25	3	14	2,807	2.59	3.0	2.6	21	21	18.4	7.02	230	92
3-Jul-08	189.7	9	29	3	16	3,016	2.72	3.1	2.6	23	21	16.0	7.01	360	360
4-Jul-08	190.6	ns	ns	ns	ns	ns	ns	ns	2.6	ns	21	17.8	6.77	230	230
5-Jul-08	172.5	7	27	4	17	2,950	3.07	3.6	2.5	26	20	17.7	6.85	230	230
6-Jul-08	164.7	8	21	3	17	2,800	3.16	3.5	2.6	26	21	18.0	6.78	920	360
7-Jul-08	286.5	23	37	13	12	3,438	2.26	3.0	2.6	21	21	11.3	6.87	(460000)	(460000)
8-Jul-08	204.3	7	22	3	10	2,027	2.26	2.8	2.7	19	21	11.6	7.60	2,300	360
9-Jul-08	177.9	7	16	2	15	2,686	3.10	3.5	2.7	26	22	18.0	6.75	50	50
10-Jul-08	172.9	11	25	5	16	2,749	3.24	3.8	2.8	28	22	18.0	6.75	300	170
11-Jul-08	305.2	8	26	3	9	2,875	1.96	2.2	2.8	15	22	18.0	6.57	220	170
12-Jul-08	303.1	19	25	8	10	2,913	1.89	2.2	2.8	17	22	17.2	6.83	170	130
13-Jul-08	230.0	6	17	2	7	1,511	2.00	2.1	2.8	18	22	16.0	6.80	5,000	50
14-Jul-08	203.0	6	31	3	11	2,152	2.59	3.2	2.9	21	22	16.0	6.76	500	50
15-Jul-08	229.8	10	28	3	11	2,574	2.70	3.0	2.9	22	22	17.2	6.66	220	110
16-Jul-08	200.3	7	33	3	12	2,484	3.00	3.3	2.9	23	22	17.6	6.72	30	8
17-Jul-08	187.5	9	37	4	13	2,494	3.23	3.8	2.9	25	22	18.0	6.65	50	30
18-Jul-08	183.4	9	40	5	13	2,421	3.22	3.8	3.0	25	22	18.2	6.65	70	50
19-Jul-08	177.9	10	33	4	13	2,313	3.31	3.8	3.0	26	22	18.0	6.81	40	17
20-Jul-08	175.6	10	31	4	12	2,072	3.06	3.8	3.0	29	22	19.0	6.56	50	50
21-Jul-08	171.3	10	36	3	14	2,398	3.29	3.9	3.0	31	22	18.0	6.54	130	50
22-Jul-08	177.9	9	33	4	13	2,366	3.22	3.2	3.1	26	23	19.0	6.52	1,100	1,100
23-Jul-08	196.0	8	27	4	16	3,077	3.31	3.8	3.1	31	23	18.0	6.64	17	11
24-Jul-08	191.2	9	26	4	13	2,486	2.75	3.2	3.1	23	23	19.0	6.60	2,400	4
25-Jul-08	172.6	9	49	4	16	2,779	3.16	3.7	3.1	35	23	18.5	nr	50	4
26-Jul-08	154.4	8	43	3	16	2,532	3.41	3.9	3.1	35	23	18.0	6.76	70	50
27-Jul-08	151.6	9	33	4	16	2,486	3.59	4.0	3.1	25	23	19.0	6.67	23	4
28-Jul-08	165.2	18	nr	9	17	2,825	3.50	4.2	3.2	32	24	18.0	6.68	26	21
29-Jul-08	252.0	8	26	4	9	2,293	1.97	2.5	3.3	20	24	20.0	6.57	900	170
30-Jul-08	174.6	8	29	4	15	2,549	2.43	2.9	3.3	30	25	20.0	6.64	nr	2
31-Jul-08	172.1	7	31	4	17	2,857	2.95	3.6	3.3	34	25	19.0	6.60	70	50
<b>Max:</b>	305														
<b>Min:</b>	152														
<b>Average:</b>	<b>199</b>	<b>10</b>	<b>30</b>	<b>4</b>	<b>13</b>	<b>2,586</b>	<b>2.84</b>	<b>3.3</b>		<b>25</b>		<b>17.6</b>	<b>6.76</b>		
<b>Geo.Mean:</b>														<b>169</b>	<b>54</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.