City of Winnipeg
Water and Waste Department
North End Water Pollution Control Centre Monitoring Data
July 2009

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)*	(^{o}C)	(units)	MPN/100 mL	
1-Jul-09	252.7	11	12	5	13	3,184	1.47	2.1	3.0	17	20	15	7.06	240	79
2-Jul-09	241.5	4	13	5	13	3,188	1.77	2.3	3.0	16	20	17	7.16	170	130
3-Jul-09	240.2	7	14	5	14	3,387	1.73	2.1	3.0	19	20	18	6.95	170	130
4-Jul-09	237.8	5	13	5	14	3,282	1.71	2.1	3.0	18	20	18	7.05	230	27
5-Jul-09	213.2	8	14	5	13	2,686	1.80	2.1	3.0	15	20	18	7.09	110	70
6-Jul-09	219.6	9	18	5	14	3,096	2.28	2.7	3.0	17	20	18	7.05	240	240
7-Jul-09	209.8	7	18	5	15	3,084	2.10	2.6	3.0	21	20	17	6.96	110	33
8-Jul-09	204.8	14	20	5	17	3,441	2.32	2.9	3.0	21	20	18	7.05	240	130
9-Jul-09	**516.4**	61	37	15	7	3,801	1.00	1.6	3.0	12	20	18	6.91	(54000)	(17000)
10-Jul-09	377.8	5	13	4	9	3,434	1.08	1.4	2.9	13	20	18	7.05	33	11
11-Jul-09	245.3	4	12	3	13	3,165	1.70	2.0	2.9	16	19	16	7.20	330	170
12-Jul-09	193.9	8	13	3	14	2,715	2.34	2.7	2.9	nr	19	16	7.37	1,300	140
13-Jul-09	198.7	6	20	4	15	2,921	2.62	3.1	2.9	nr	19	17	6.89	460	130
14-Jul-09	363.8	55	37	16	10	3,747	1.77	2.6	2.8	16	19	20	6.98	330	330
15-Jul-09	**509.9**	15	23	6	6	3,014	0.74	1.2	2.8	10	19	18	7.29	(13000)	(2800)
16-Jul-09	334.0	10	14	3	9	2,846	1.37	1.7	2.7	12	19	17	7.22	1,300	280
17-Jul-09	266.3	<4	17	4	11	2,796	1.71	2.0	2.6	16	18	17	7.14	350	70
18-Jul-09	236.6	7	13	3	11	2,626	2.02	2.4	2.6	16	18	16	7.22	170	110
19-Jul-09	212.0	5	nr	nr	11	2,332	2.14	2.5	2.6	17	18	16	7.23	110	17
20-Jul-09	237.7	7	28	4	10	2,448	2.14	2.7	2.5	15	17	18	7.17	170	79
21-Jul-09	212.1	6	32	4	12	2,503	2.29	2.7	2.4	17	17	18	6.98	350	110
22-Jul-09	211.1	6	19	<2	14	3,019	2.43	2.8	2.4	22	17	18	6.98	170	23
23-Jul-09	205.0	6	30	3	16	3,178	2.61	3.0	2.4	25	17	18	6.90	220	94
24-Jul-09	202.9	4	22	4	15	2,983	2.84	3.2	2.3	24	17	19	6.91	1,300	790
25-Jul-09	182.3	<4	25	4	14	2,552	2.81	3.2	2.3	26	17	15	7.45	79	79
26-Jul-09	175.3	4	23	3	13	2,331	3.10	3.4	2.3	22	17	16	7.05	49	22
27-Jul-09	216.6	4	38	4	14	3,097	3.17	3.6	2.4	25	18	16	6.87	49	13
28-Jul-09	190.0	8	32	3	16	2,945	3.03	3.4	2.5	24	18	17	6.78	330	79
29-Jul-09	278.2	21	38	12	15	4,090	2.84	3.4	2.5	25	18	17	6.84	170	27
30-Jul-09	304.3	13	31	7	9	2,678	1.74	2.2	2.5	15	18	16	6.76	330	170
31-Jul-09	**406.4**	25	32	11	6	2,402	1.25	1.7	2.5	14	18	15	6.72	(130)	(79)
Max:	516														
Min:	175														
Average:	**261**	**11**	**22**	**5**	**12**	**2,999**	**2.06**	**2.5**		**18**		**17**	**7.04**		
Geo.Mean:														**215**	**79**

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.