

**City of Winnipeg
Water and Waste Department
South End Water Pollution Control Centre Monitoring Data
April 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)*	(°C)	(units)	MPN/100 mL	
1-Apr-09	69.0	12	16	7	22	1,484	2.91	3.6	4.3	27	33	11	6.72	(490)	(170)
2-Apr-09	58.3	9	15	6	22	1,253	3.09	3.6	4.3	27	32	10	6.94	(7900)	(4900)
3-Apr-09	72.2	9	11	5	20	1,450	2.53	3.3	4.2	28	32	11	6.65	230	230
4-Apr-09	79.7	15	26	11	18	1,458	2.36	3.1	4.1	24	32	10	6.72	(1100)	(330)
5-Apr-09	74.6	15	25	10	18	1,372	2.30	3.2	4.1	24	31	10	6.75	(790)	(790)
6-Apr-09	82.4	21	nr	nr	19	1,532	3.00	3.3	4.0	25	31	10	6.66	(220)	(220)
7-Apr-09	89.1	19	22	9	17	1,479	2.58	2.8	4.0	22	30	10	6.77	(7900)	(7900)
8-Apr-09	110.7	43	32	14	14	1,550	2.30	2.6	3.9	24	30	10	6.80	(4900)	(4900)
9-Apr-09	126.7	ns	ns	ns	ns	ns	ns	ns	3.9	ns	30	9	6.98	(130000)	(130000)
10-Apr-09	122.3	ns	ns	ns	ns	ns	ns	ns	3.9	ns	29	9	6.74	(4900)	(2200)
11-Apr-09	132.2	ns	ns	ns	ns	ns	ns	ns	3.8	ns	29	9	6.75	(2300)	(2300)
12-Apr-09	165.0	ns	ns	ns	ns	ns	ns	ns	3.8	ns	29	9	6.87	(nr)	(nr)
13-Apr-09	216.4	ns	ns	ns	ns	ns	ns	ns	3.8	ns	28	8	7.18	(33000)	(33000)
14-Apr-09	158.3	22	21	13	9	1,496	1.43	2.0	3.8	17	27	8	7.14	(35000)	(24000)
15-Apr-09	141.6	13	22	11	10	1,408	1.42	2.0	3.7	14	27	11	7.14	(160000)	(160000)
16-Apr-09	137.0	12	16	8	12	1,576	1.62	2.1	3.7	14	26	11	7.03	(11000)	(11000)
17-Apr-09	111.6	5	nr	nr	14	1,540	1.84	2.3	3.7	18	26	10	7.09	(13000)	(13000)
18-Apr-09	100.2	<4	<10	6	15	1,543	1.92	2.3	3.6	21	25	10	6.98	(110)	(46)
19-Apr-09	98.0	17	14	8	16	1,548	1.88	2.9	3.5	22	25	nr	6.85	(33)	(17)
20-Apr-09	94.7	8	<10	5	15	1,421	1.94	2.7	3.5	18	24	10	7.18	(24000)	(24000)
21-Apr-09	90.7	67	43	17	16	1,424	2.02	3.8	3.2	27	24	10	6.87	(3300)	(1700)
22-Apr-09	87.0	13	13	6	17	1,506	2.35	3.0	3.0	22	23	11	6.91	(230)	(130)
23-Apr-09	84.4	11	13	5	18	1,503	2.49	3.0	3.0	22	23	12	6.77	(110)	(26)
24-Apr-09	79.7	5	19	6	18	1,451	2.24	2.8	3.0	24	23	12	6.81	(49)	(49)
25-Apr-09	79.3	9	13	6	20	1,569	2.15	2.9	3.0	23	23	11	6.80	(23)	(23)
26-Apr-09	79.3	8	12	6	20	1,593	2.42	2.9	3.0	23	23	11	6.78	(49)	(22)
27-Apr-09	74.9	15	22	8	20	1,490	2.78	3.3	3.0	25	23	12	6.72	(33)	(11)
28-Apr-09	73.4	14	15	7	20	1,431	2.72	3.6	3.0	20	23	12	6.78	(4900)	(700)
29-Apr-09	68.9	11	12	6	20	1,344	2.79	3.7	3.0	26	22	13	6.65	(49)	(22)
30-Apr-09	84.4	18	28	7	19	1,578	2.64	3.4	3.0	20	22	12	6.90	(13000)	(13000)
Max:	216.4														
Min:	58.3														
Average:	103.2	16	18	8	17	1,480	2.31	3.0		22		10	6.86	230	230
Geo.Mean:															

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 98.6 ML/D per clause 26 of Licence 2716.
- (6) Bracketed Coliform results not used in the Geometric Mean calculation because the level of the Red River exceeded a geodetic elevation of 229.0 meters as per clause 27 of license 2716 .
- (7) Raw wastewater flows in excess of 100 ML/D will by-pass the secondary process.