

**City of Winnipeg
Water and Waste Department
South End Water Pollution Control Centre Monitoring Data
December 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-Dec-09	47.1	64	101	17	28	1,338	3.93	6.0	5.1	36	34	16	6.48	170	33
2-Dec-09	48.0	7	25	5	28	1,349	3.92	4.5	5.1	36	34	17	6.63	170	49
3-Dec-09	48.2	14	41	6	29	1,403	4.61	5.1	5.1	31	34	15	6.65	17	13
4-Dec-09	49.7	8	28	5	29	1,451	4.00	4.5	5.0	33	34	15	6.49	4	4
5-Dec-09	50.3	22	50	9	28	1,427	3.86	4.9	5.0	33	34	15	6.60	79	79
6-Dec-09	50.0	24	55	12	28	1,410	3.88	5.3	5.0	34	34	16	6.60	220	140
7-Dec-09	46.8	9	21	4	28	1,296	3.73	4.2	5.0	31	34	15	6.39	79	22
8-Dec-09	49.3	6	22	4	29	1,415	3.92	4.0	4.9	nr	34	15	6.42	11	2
9-Dec-09	46.8	5	21	3	28	1,315	3.53	4.0	4.9	nr	35	17	6.54	350	350
10-Dec-09	46.9	6	32	4	29	1,374	3.73	4.2	4.9	nr	35	16	6.68	79	49
11-Dec-09	46.8	9	27	4	29	1,357	3.35	3.7	4.9	nr	34	15	6.45	130	33
12-Dec-09	51.5	6	22	5	29	1,488	3.95	4.3	4.9	31	34	15	6.68	<2	<2
13-Dec-09	52.9	7	15	5	30	1,566	4.01	4.4	4.8	nr	34	15	6.71	330	14
14-Dec-09	52.4	8	17	5	29	1,520	3.92	4.6	4.8	nr	34	15	6.43	8	2
15-Dec-09	48.2	6	13	4	32	1,557	3.95	4.1	4.8	nr	34	nr	6.47	230	27
16-Dec-09	46.5	7	16	4	29	1,362	3.54	4.0	4.8	31	34	15	6.60	79	11
17-Dec-09	48.0	8	17	8	30	1,435	3.62	4.0	4.8	32	33	16	6.61	79	79
18-Dec-09	46.5	7	18	4	29	1,325	3.82	4.3	4.7	30	33	18	6.41	79	49
19-Dec-09	48.8	10	23	9	30	1,459	3.98	4.4	4.7	32	33	17	6.70	460	460
20-Dec-09	49.0	12	25	10	29	1,426	3.97	4.4	4.6	32	33	16	6.70	23	23
21-Dec-09	48.8	7	16	5	29	1,430	3.95	4.5	4.6	30	33	15	6.46	54,000	17,000
22-Dec-09	46.7	4	nr	nr	30	1,410	4.07	4.4	4.6	nr	33	16	6.52	23	23
23-Dec-09	48.0	10	17	4	29	1,382	3.32	3.7	4.6	31	33	16	6.62	14	7
24-Dec-09	47.3	<4	14	4	29	1,362	3.66	4.0	4.5	30	33	15	6.62	8	8
25-Dec-09	44.7	5	16	4	30	1,354	4.03	4.2	4.4	35	33	nr	6.53	17	7
26-Dec-09	46.4	8	13	4	34	1,554	4.47	4.8	4.5	36	33	nr	6.55	<2	<2
27-Dec-09	49.0	4	nr	nr	33	1,622	4.44	4.8	4.4	37	33	15	6.54	<2	<2
28-Dec-09	50.3	6	19	4	33	1,665	4.43	4.6	4.5	nr	33	17	6.58	17	8
29-Dec-09	47.5	8	15	5	30	1,420	4.13	4.7	4.5	33	33	15	6.53	13	8
30-Dec-09	46.2	5	15	4	30	1,363	4.13	4.4	4.4	33	33	17	6.51	33	33
31-Dec-09	45.6	<4	17	4	30	1,354	4.16	4.4	4.4	32	32	nr	6.67	4	4
Max:	52.9														
Min:	44.7														
Average:	48.2	10	25	6	30	1,426	3.94	4.4		33		16	6.56		
Geo.Mean:														39	20

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 2716R.
- (6) Bracketed Coliform results not used in the Geometric Mean calculation.
- (7) Raw wastewater flows in excess of 100 ML/D will by-pass the secondary process.