

**City of Winnipeg  
Water and Waste Department  
South End Water Pollution Control Centre Monitoring Data  
March 2010**

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-Mar-10	47.0	5	14	6	33	1,537	4.17	4.4	4.8	36	38	13	6.52	<2	<2
2-Mar-10	46.2	6	16	5	34	1,590	4.39	4.6	4.8	36	38	13	6.62	27	11
3-Mar-10	47.1	4	14	5	35	1,662	5.14	5.3	4.8	38	38	13	6.51	27	17
4-Mar-10	47.2	54	44	21	35	1,646	7.29	7.8	4.9	40	38	14	6.55	2	2
5-Mar-10	47.9	10	<20	7	33	1,555	3.79	4.6	4.9	37	38	14	6.50	79	49
6-Mar-10	48.7	9	18	8	33	1,606	3.74	4.8	4.9	38	38	14	6.60	<2	<2
7-Mar-10	52.4	92	57	28	31	1,639	3.94	6.5	4.9	43	38	14	6.62	2	2
8-Mar-10	51.2	24	32	11	32	1,617	3.61	4.8	4.9	38	38	14	6.59	14	9
9-Mar-10	58.2	152	98	41	29	1,712	2.92	7.3	5.0	47	39	13	6.78	(790,000)	(790,000)
10-Mar-10	69.3	128	89	50	25	1,725	2.02	5.9	5.0	40	39	13	6.57	22	11
11-Mar-10	79.4	27	20	11	21	1,660	2.10	3.0	5.0	26	38	12	6.84	(2,200)	(2,200)
12-Mar-10	88.1	nr	50	28	18	1,603	2.16	4.0	5.0	25	38	12	6.75	8	8
13-Mar-10	<b>107.0</b>	90	37	20	15	1,616	1.64	3.0	4.9	20	37	11	6.85	(33)	(33)
14-Mar-10	82.3	33	23	12	18	1,473	2.01	3.0	4.8	21	37	11	6.83	49	23
15-Mar-10	73.8	24	17	11	20	1,439	2.47	3.4	4.8	23	36	12	6.99	13	13
16-Mar-10	66.2	19	14	8	22	1,429	2.30	2.9	4.7	23	35	12	6.71	13	<2
17-Mar-10	62.2	9	12	5	24	1,493	3.09	3.5	4.6	25	35	13	6.74	46	21
18-Mar-10	62.2	7	26	6	24	1,517	2.91	3.4	4.6	24	34	13	6.72	33	23
19-Mar-10	59.5	7	16	7	25	1,500	2.70	3.0	4.5	27	34	12	6.77	23	23
20-Mar-10	64.0	32	30	14	26	1,631	2.56	3.7	4.5	30	34	12	6.82	2	2
21-Mar-10	61.2	58	38	19	25	1,511	2.57	4.2	4.5	31	33	11	6.89	14	8
22-Mar-10	59.5	10	16	7	24	1,451	2.95	3.3	4.4	26	33	14	6.71	11	4
23-Mar-10	58.5	26	22	12	26	1,522	2.91	3.8	4.4	30	33	12	6.82	13	13
24-Mar-10	57.5	46	31	15	27	1,530	3.19	4.6	4.4	31	32	12	6.73	170,000	84,000
25-Mar-10	57.5	11	17	6	27	1,552	3.36	3.8	4.4	32	32	13	6.72	33	33
26-Mar-10	60.0	28	26	11	26	1,542	2.93	3.8	4.4	30	32	12	6.79	8	4
27-Mar-10	61.3	47	39	18	26	1,563	3.23	4.8	4.4	36	32	11	6.69	33	13
28-Mar-10	65.4	80	44	17	23	1,498	2.42	4.1	4.4	29	32	12	6.77	23	23
29-Mar-10	62.7	25	22	11	23	1,437	2.71	3.5	4.3	28	31	12	6.78	7	7
30-Mar-10	61.8	10	16	7	23	1,414	2.72	3.3	4.3	28	31	12	6.64	33	7
31-Mar-10	72.4	75	41	16	21	1,485	2.14	4.1	4.3	31	31	12	6.69	33	23
<b>Max:</b>	107.0														
<b>Min:</b>	46.2														
<b>Average:</b>	<b>62.5</b>	<b>38</b>	<b>31</b>	<b>14</b>	<b>26</b>	<b>1,553</b>	<b>3.10</b>	<b>4.3</b>		<b>31</b>		<b>12</b>	<b>6.71</b>		
<b>Geo.Mean:</b>														<b>18</b>	<b>12</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 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.
- (8) Total Nitrogen results are calculated from TKN and nitrate values.