

**City of Winnipeg**  
**Water and Waste Department**  
**North End Water Pollution Control Centre Monitoring Data**  
**February 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-Feb-10	144.9	17	26	8	27	3,956	1.60	2.4	4.7	30	33	13	6.65	1,100	330
2-Feb-10	145.9	17	23	8	25	3,691	1.59	2.4	4.6	29	33	14	6.87	330	130
3-Feb-10	147.8	12	24	6	27	3,917	1.61	2.1	4.5	31	32	13	6.81	490	490
4-Feb-10	148.1	25	32	9	27	3,969	1.49	2.4	4.4	31	32	15	6.76	79	49
5-Feb-10	148.1	15	34	8	28	4,132	1.45	2.2	4.3	31	32	14	6.70	2,300	280
6-Feb-10	144.4	19	26	9	28	4,014	0.81	1.5	4.2	30	32	13	7.00	490	330
7-Feb-10	143.4	18	27	8	27	3,915	1.00	1.6	4.1	31	32	14	6.81	1,700	346
8-Feb-10	147.8	21	34	9	26	3,784	1.08	1.7	3.9	30	32	15	6.74	170	26
9-Feb-10	141.7	20	27	7	24	3,401	1.14	1.7	3.8	28	32	14	6.69	ns	ns
10-Feb-10	154.0	14	34	8	26	4,019	1.42	2.1	3.7	29	32	14	6.65	70	21
11-Feb-10	146.8	22	34	9	26	3,831	1.55	2.2	3.6	31	31	14	6.84	23	23
12-Feb-10	144.8	12	36	8	26	3,736	1.08	1.9	3.5	32	31	14	6.76	310	110
13-Feb-10	138.4	17	28	8	26	3,612	0.86	1.7	3.4	35	31	13	7.03	79	49
14-Feb-10	135.9	19	32	8	26	3,506	0.84	1.7	3.2	32	31	14	6.87	70	33
15-Feb-10	140.9	24	42	10	27	3,748	1.30	2.2	3.1	33	31	14	6.99	790	790
16-Feb-10	142.7	19	34	8	28	3,953	1.31	2.1	3.0	32	31	13	6.66	130	79
17-Feb-10	144.6	21	33	9	26	3,789	0.94	1.8	2.9	34	31	14	6.88	330	330
18-Feb-10	144.5	29	36	9	26	3,786	0.76	1.5	2.8	34	31	14	6.64	330	230
19-Feb-10	140.7	25	47	10	27	3,771	0.81	1.6	2.7	34	31	14	6.71	206	170
20-Feb-10	141.9	19	41	11	28	4,002	0.76	1.6	2.5	38	32	13	6.78	2,400	1,300
21-Feb-10	140.5	30	46	9	29	4,060	0.64	1.6	2.4	37	32	14	6.79	790	280
22-Feb-10	153.7	26	>76	>38	28	4,288	0.46	1.5	2.3	35	32	14	6.80	490	330
23-Feb-10	143.0	36	43	11	27	3,875	0.75	1.7	2.2	33	32	13	6.80	230	230
24-Feb-10	143.0	30	37	10	27	3,847	0.97	2.1	2.2	37	32	13	6.81	46	46
25-Feb-10	136.6	32	47	12	26	3,565	0.90	1.8	2.1	27	32	12	6.64	330	110
26-Feb-10	143.1	35	50	17	28	4,021	0.84	1.9	2.0	32	32	13	6.65	110	220
27-Feb-10	136.9	36	52	14	29	3,915	0.95	2.2	2.0	37	32	11	6.79	490	490
28-Feb-10	147.6	32	44	11	28	4,162	0.68	1.9	1.9	38	32	12	6.75	490	220
<b>Max:</b>	154														
<b>Min:</b>	136														
<b>Average:</b>	<b>144</b>	<b>23</b>	<b>37</b>	<b>10</b>	<b>27</b>	<b>3,867</b>	<b>1.06</b>	<b>1.9</b>		<b>33</b>		<b>13</b>	<b>6.78</b>		
<b>Geo.Mean:</b>														<b>288</b>	<b>157</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 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.
- (8) Total Nitrogen results are calculated from TKN and nitrate values.