

**City of Winnipeg  
Water and Waste Department  
North End Water Pollution Control Centre Monitoring Data  
July 2016**

Licence 2684 RRR	File # 1071.10	Final Effluent 24 Hour Composite							Final Effluent Grab Sample					
		Date	Raw Sewage Daily Flow	TSS	BOD5	cBOD5	Ammonia	Ortho Phosphorus	Total Phosphorus	Total Nitrogen	Temp.	pH	Fecal Coliform	E.Coli
				(mg/L)	(mg/L)	(mg/L)	(kg NH3-N/day)	(mg/L-P)	(mg/L-P)*	(mg/L-N)*	(°C)	(units)	MPN/100 mL	
1-Jul-16	186.0	7	12	5	2,250	1.80	1.9	27.1	18.5	6.79	9	9		
2-Jul-16	165.4	9	12	5	1,918	2.04	1.9	27.2	18.5	6.78	23	9		
3-Jul-16	184.0	10	14	6	1,932	2.35	1.9	27.2	18.0	6.85	15	4		
4-Jul-16	245.0	22	37	25	2,867	2.55	2.0	27.0	18.1	6.70	210	210		
5-Jul-16	124.7	12	14	7	1,234	2.08	2.0	26.8	19.2	6.60	43	43		
6-Jul-16	183.8	10	12	6	2,371	2.34	2.0	26.7	18.8	6.66	74	30		
7-Jul-16	166.3	8	11	6	2,311	3.06	2.0	26.6	18.6	6.66	930	430		
8-Jul-16	165.4	11	12	6	2,399	3.11	2.1	26.6	18.5	6.64	1,500	740		
9-Jul-16	173.1	14	14	7	2,475	3.21	2.1	26.4	19.1	6.70	93	20		
10-Jul-16	155.3	10	11	7	1,817	2.91	2.2	26.2	18.8	6.52	23	9		
11-Jul-16	166.8	29	33	17	2,002	3.00	2.2	26.1	21.6	6.53	43	23		
12-Jul-16	330.4	62	35	17	1,962	1.26	2.2	26.0	18.9	6.66	430	150		
13-Jul-16	<b>392.9</b>	16	15	7	1,359	0.93	2.2	25.5	18.2	6.70	(240)	(240)		
14-Jul-16	196.6	7	10	5	1,472	2.41	2.2	25.2	18.5	6.66	23	23		
15-Jul-16	182.6	10	10	5	1,643	2.86	2.2	24.3	18.8	6.67	930	430		
16-Jul-16	173.4	10	11	5	1,623	3.29	2.3	23.3	19.6	6.57	93	15		
17-Jul-16	188.3	11	13	6	1,292	3.10	2.4	23.3	19.0	6.54	43	43		
18-Jul-16	173.3	11	11	5	1,279	3.02	2.4	23.4	19.1	6.57	240	43		
19-Jul-16	170.4	23	23	10	1,658	3.59	2.6	23.7	19.2	6.54	150	93		
20-Jul-16	226.5	77	14	7	2,401	2.43	2.6	23.5	19.6	6.58	9	4		
21-Jul-16	317.3	9	11	6	1,437	1.45	2.6	23.1	20.4	6.49	430	430		
22-Jul-16	183.3	8	41	6	1,708	1.96	2.7	23.0	20.4	6.52	43	43		
23-Jul-16	317.7	33	37	17	1,995	1.77	2.7	22.6	20.3	6.55	(>110,000)	(>110,000)		
24-Jul-16	258.3	7	7	5	958	1.49	2.7	22.3	20.0	6.56	240	43		
25-Jul-16	180.1	6	7	5	865	2.73	2.7	22.6	19.6	6.52	240	240		
26-Jul-16	172.3	10	9	5	1,110	2.88	2.8	22.9	19.8	6.50	380	140		
27-Jul-16	168.9	7	10	6	1,439	2.91	2.9	23.1	19.8	6.47	74	43		
28-Jul-16	161.9	9	11	6	1,314	3.00	3.0	23.2	19.4	7.17	430	74		
29-Jul-16	156.3	12	11	8	1,352	3.71	3.1	23.3	20.4	6.44	43	43		
30-Jul-16	137.3	12	10	7	1,028	3.68	3.1	23.3	20.5	6.42	430	430		
31-Jul-16	133.0	15	11	7	721	4.38	3.2	23.6	19.9	6.45	240	93		
<b>Max:</b>	392.9													
<b>Min:</b>	124.7													
<b>Average:</b>	<b>197.9</b>	<b>16</b>	<b>16</b>	<b>8</b>	<b>1,684</b>	<b>2.62</b>			<b>20</b>	<b>6.83</b>				
<b>Total Flow:</b>	<b>6136.2</b>													
<b>Geo.Mean:</b>											<b>121</b>	<b>58</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