

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

Licence 2684 RRR	File # 1071.10	Final Effluent 24 Hour Composite							Final Effluent Grab Sample					
		Date	Raw Sewage Daily Flow ML**	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-Jun-16	530.2	46	29	17	3,621	0.67	2.7	31.3	13.9	7.16	(>110,000)	(>110,000)		
2-Jun-16	350.0	11	nr	nr	4,095	1.29	2.7	30.7	14.6	7.26	43	23		
3-Jun-16	290.6	13	8	5	4,185	1.44	2.6	30.1	15.1	7.15	430	4		
4-Jun-16	247.7	10	11	6	5,746	2.09	2.6	30.0	15.7	7.21	43	15		
5-Jun-16	229.2	8	11	5	4,332	1.84	2.6	29.6	15.5	7.19	30	30		
6-Jun-16	225.3	10	17	6	4,325	1.66	2.6	29.2	15.5	7.04	9	9		
7-Jun-16	212.8	14	18	7	4,872	2.00	2.6	29.0	15.9	7.08	43	43		
8-Jun-16	221.9	12	23	nr	5,725	1.82	2.5	28.9	16.7	7.09	4	4		
9-Jun-16	200.9	12	25	7	4,942	1.59	2.5	28.9	16.3	7.02	23	4		
10-Jun-16	234.1	10	17	6	5,197	1.55	2.5	29.1	16.5	6.96	43	43		
11-Jun-16	178.4	11	14	6	3,587	1.72	2.4	28.9	17.0	6.87	4	<3		
12-Jun-16	317.2	23	26	12	4,568	1.13	2.4	28.5	15.8	6.97	(>110,000)	(>110,000)		
13-Jun-16	198.2	10	16	6	3,211	1.50	2.3	28.2	16.0	6.89	43	23		
14-Jun-16	187.0	9	13	6	4,189	1.54	2.3	28.1	16.9	6.90	15	15		
15-Jun-16	180.4	9	18	6	5,105	1.59	2.2	28.6	17.5	6.91	430	20		
16-Jun-16	178.5	10	19	7	5,373	1.27	2.2	29.1	17.8	6.94	9	9		
17-Jun-16	360.3	41	32	17	5,620	0.85	2.1	28.6	18.5	6.81	(>110,000)	(>110,000)		
18-Jun-16	205.4	41	nr	nr	3,390	1.43	2.1	28.2	18.5	6.88	43	9		
19-Jun-16	484.8	17	17	10	4,140	0.86	2.0	27.5	18.1	7.02	(>110,000)	(>110,000)		
20-Jun-16	303.0	12	8	6	4,606	0.79	2.0	27.1	17.6	7.15	93	43		
21-Jun-16	236.5	12	9	6	4,375	0.94	1.9	27.1	18.0	7.09	43	43		
22-Jun-16	221.8	8	10	6	3,992	1.24	1.9	27.5	17.9	6.98	43	43		
23-Jun-16	205.5	7	12	4	4,130	1.47	1.9	27.5	17.8	6.98	9	4		
24-Jun-16	195.8	32	23	14	3,466	1.62	1.9	27.7	18.5	6.84	930	930		
25-Jun-16	515.1	23	26	12	3,353	0.61	1.9	27.6	19.0	6.92	(>110,000)	(>110,000)		
26-Jun-16	462.2	30	22	13	2,602	0.64	1.9	27.4	17.0	6.98	(>110,000)	(>110,000)		
27-Jun-16	291.3	8	9	4	2,884	0.78	1.9	27.2	17.6	7.04	740	740		
28-Jun-16	238.7	11	11	5	3,055	1.37	1.9	26.8	17.5	7.01	43	23		
29-Jun-16	230.6	8	17	nr	3,160	1.49	1.8	26.6	18.3	7.04	240	93		
30-Jun-16	222.5	6	13	5	3,026	1.40	1.8	26.8	18.1	6.85	150	43		
Max:	530.2													
Min:	178.4													
Average:	271.9	16	17	8	4,162	1.34			17	7.01				
Total Flow:	8155.7													
Geo.Mean:											48	22		

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