

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

December 2019

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-Dec-19	149.4	9	15	5	4,094	2.67	3.6	32.3	13.7	6.87	<10	10		
2-Dec-19	153.9	11	21	6	4,308	2.43	3.6	32.9	ns	ns	ns	ns		
3-Dec-19	151.2	24	27	11	4,582	2.34	3.6	33.5	14.7	6.71	20	<10		
4-Dec-19	146.3	14	15	7	4,096	2.02	3.6	34.0	15.0	6.62	20	<10		
5-Dec-19	146.6	19	23	7	4,206	2.04	3.6	34.6	14.1	6.90	<10	30		
6-Dec-19	141.0	12	18	6	4,652	2.05	3.6	35.3	14.8	6.89	30	40		
7-Dec-19	143.8	9	13	6	4,430	2.37	3.6	36.0	14.9	6.81	10	30		
8-Dec-19	136.0	11	13	8	4,257	1.99	3.5	36.6	14.3	6.76	70	50		
9-Dec-19	143.0	10	15	6	4,289	1.74	3.5	37.1	14.6	6.82	<10	<10		
10-Dec-19	139.9	12	15	7	4,575	1.96	3.5	37.6	13.5	6.65	<10	20		
11-Dec-19	140.3	14	14	7	4,658	1.32	3.4	37.8	13.7	6.86	<10	20		
12-Dec-19	138.3	11	16	7	4,716	1.32	3.3	37.9	14.3	6.90	20	20		
13-Dec-19	135.5	10	15	7	4,470	1.94	3.3	38.3	13.8	6.88	230	260		
14-Dec-19	156.9	11	18	7	5,194	1.80	3.2	38.7	14.0	6.97	60	60		
15-Dec-19	132.6	11	18	8	4,401	1.60	3.2	39.0	13.5	6.88	50	90		
16-Dec-19	129.6	8	17	7	4,343	1.56	3.1	39.2	14.3	6.88	<10	<10		
17-Dec-19	134.7	14	19	8	4,485	1.42	3.1	39.9	14.0	6.85	10	20		
18-Dec-19	141.3	11	18	8	4,846	1.16	3.0	40.5	14.1	6.79	40	90		
19-Dec-19	128.4	11	18	8	4,148	0.78	2.9	40.9	14.2	6.81	20	50		
20-Dec-19	139.4	12	13	8	4,626	1.14	2.8	41.2	14.5	6.77	110	50		
21-Dec-19	132.4	15	16	8	4,475	1.16	2.7	41.4	14.7	6.79	160	170		
22-Dec-19	125.4	13	13	8	4,301	1.06	2.6	41.7	14.3	6.77	140	110		
23-Dec-19	137.8	16	9	6	4,781	1.19	2.5	42.2	14.8	6.75	30	30		
24-Dec-19	137.3	16	13	6	4,586	1.21	2.4	42.6	14.7	6.74	120	160		
25-Dec-19	122.6	16	18	8	3,789	1.24	2.4	43.4	14.3	6.73	320	300		
26-Dec-19	124.7	15	25	10	4,126	1.40	2.4	44.2	14.3	6.94	90	60		
27-Dec-19	133.6	16	21	9	5,210	1.42	2.4	44.6	14.6	6.93	10	20		
28-Dec-19	125.8	17	28	10	4,867	1.50	2.3	45.0	14.6	6.99	300	160		
29-Dec-19	121.6	19	23	10	4,633	1.50	2.3	45.7	14.1	6.96	160	190		
30-Dec-19	134.1	19	23	9	5,003	1.74	2.3	46.3	14.5	6.84	220	260		
31-Dec-19	137.5	26	28	11	5,223	2.02	2.3	47.0	14.4	6.91	510	320		
Max:	156.9													
Min:	121.6													
Average:	137.4	14	18	8	4,528	1.65			14.3	6.83				
Total Flow:	4,260.7													
Geo.Mean:											38	45		

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