

**City of Winnipeg
Water and Waste Department
North End Water Pollution Control Centre Monitoring Data
December 2015**

Licence 2684 RRR	Raw Sewage	Final Effluent 24 Hour Composite							Final Effluent Grab Sample			
		TSS	BOD5	cBOD5	Ammonia	Ortho Phosphorus	Total Phosphorus	Total Nitrogen	Temp.	pH	Fecal Coliform	E.Coli
1-Dec-15	156.8	11	17	NR	3,936	3.77	4.5	35	15	6.94	93	93
2-Dec-15	146.6	10	19	8	3,944	4.01	4.5	35	15	6.89	150	43
3-Dec-15	144.1	9	16	7	3,862	3.88	4.4	35	16	6.97	NR	NR
4-Dec-15	142.6	11	20	8	3,793	4.14	4.5	35	16	6.90	NR	NR
5-Dec-15	141.8	15	18	8	3,644	4.02	4.5	35	16	6.89	150	74
6-Dec-15	143.9	12	22	9	3,713	3.67	4.5	36	16	6.99	430	430
7-Dec-15	149.9	13	19	8	3,568	3.57	4.5	36	15	6.86	24,000	24,000
8-Dec-15	150.9	33	20	8	3,712	3.81	4.5	36	15	6.97	240	93
9-Dec-15	150.2	16	21	10	3,950	3.78	4.5	36	15	6.87	240	93
10-Dec-15	150.8	15	26	10	3,770	3.82	4.5	36	15	6.85	240	240
11-Dec-15	147.4	12	21	8	3,846	3.80	4.5	36	15	6.97	430	240
12-Dec-15	142.9	19	26	9	3,674	3.94	4.5	36	15	6.91	210	210
13-Dec-15	141.6	13	24	10	3,582	3.86	4.5	36	15	6.98	150	150
14-Dec-15	146.5	14	24	9	3,310	3.41	4.5	36	15	6.91	430	430
15-Dec-15	145.8	16	27	9	3,483	3.82	4.4	36	15	6.90	43	43
16-Dec-15	143.5	14	26	10	3,773	3.94	4.4	36	15	6.89	23	23
17-Dec-15	145.6	14	28	11	3,916	3.87	4.4	36	15	6.88	7	7
18-Dec-15	145.5	13	21	9	3,695	4.21	4.4	36	15	6.88	43	43
19-Dec-15	141.5	15	25	9	4,174	4.16	4.4	36	15	7.00	15	15
20-Dec-15	137.8	14	25	10	3,900	4.07	4.4	36	15	7.11	15	7
21-Dec-15	141.5	13	27	10	3,734	3.87	4.4	36	16	6.85	15	7
22-Dec-15	139.0	43	25	9	3,809	4.02	4.4	36	16	6.86	430	430
23-Dec-15	138.9	9	24	11	3,653	3.76	4.4	36	16	6.91	23	23
24-Dec-15	139.6	15	24	10	3,642	3.88	4.4	36	16	7.05	23	23
25-Dec-15	115.8	13	22	9	2,929	3.94	4.4	36	16	6.93	43	43
26-Dec-15	116.6	16	28	10	3,346	4.08	4.4	37	15	7.05	43	43
27-Dec-15	125.3	14	30	10	3,696	4.10	4.4	37	15	6.99	93	93
28-Dec-15	127.5	20	13	11	3,978	2.83	4.4	36	15	7.20	1,500	1,500
29-Dec-15	130.5	51	28	21	4,333	1.29	4.3	37	15	6.96	4,300	4,300
30-Dec-15	132.2	23	23	19	4,192	3.22	4.3	37	15	7.12	7,500	3,800
31-Dec-15	133.6	10	20	12	3,795	3.39	4.3	37	15	7.05	4,300	4,300
Max:	156.8											
Min:	115.8											
Average:	140.5	17	23	10	3,753	3.74			15	6.95		
Total Flow:	4356.0											
Geo.Mean:											163	130

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