

City of Winnipeg
Water and Waste Department
North End Water Pollution Control Centre Monitoring Data
June 2008

| 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-Jun-08 | 176.5 | 6 | 26 | 4 | 25 | 4,413 | 2.69 | 3.1 | 3.2 | 29 | 35 | 15 | 7.00 | 2,300 | 2,300 |
| 2-Jun-08 | 176.5 | 9 | 36 | 5 | 29 | 5,101 | 3.33 | 3.8 | 3.2 | 32 | 35 | 15 | 6.81 | 230 | 230 |
| 3-Jun-08 | 174.2 | 5 | 34 | 3 | 29 | 5,052 | 3.19 | 3.7 | 3.2 | 33 | 34 | 16 | 6.93 | 920 | 920 |
| 4-Jun-08 | 174.3 | 8 | 37 | 4 | 30 | 5,194 | 3.30 | 3.7 | 3.2 | 38 | 34 | 16 | 6.86 | 2,300 | 920 |
| 5-Jun-08 | 169.4 | 16 | 49 | 8 | 30 | 5,150 | 3.59 | 4.5 | 3.2 | 35 | 34 | 18 | 6.80 | 1,500 | 1,500 |
| 6-Jun-08 | 533.3 | 45 | 54 | 14 | 9 | 4,768 | 1.16 | 2.1 | 3.2 | 13 | 33 | 14 | 6.77 | (460,000) | (460,000) |
| 7-Jun-08 | 433.4 | 10 | 22 | 4 | 7 | 3,003 | 0.96 | 1.4 | 3.1 | 12 | 32 | 13 | 7.33 | (230) | (230) |
| 8-Jun-08 | 274.0 | 10 | 18 | 4 | 10 | 2,729 | 1.60 | 2.0 | 3.1 | 13 | 31 | 14 | 7.19 | 2,300 | 2,300 |
| 9-Jun-08 | 555.3 | 37 | 29 | 13 | 5 | 2,560 | 0.95 | 1.4 | 3.0 | 10 | 30 | 14 | 7.12 | (23,000) | (23,000) |
| 10-Jun-08 | 464.7 | 11 | 16 | 4 | 9 | 4,280 | 1.34 | 1.7 | 2.9 | 13 | 29 | 13 | 7.28 | (92) | (92) |
| 11-Jun-08 | 339.8 | 18 | 16 | 9 | 13 | 4,485 | 1.72 | 2.2 | 2.9 | 16 | 29 | 14 | 7.25 | 23 | 23 |
| 12-Jun-08 | 571.0 | 19 | 34 | 8 | 11 | 6,452 | 1.47 | 2.0 | 2.9 | 17 | 29 | 13 | 7.29 | (230) | (230) |
| 13-Jun-08 | 391.4 | 13 | 24 | 5 | 17 | 6,536 | 1.83 | 2.2 | 2.9 | 23 | 29 | 14 | 7.45 | (360) | (360) |
| 14-Jun-08 | 335.1 | 17 | nr | nr | 15 | 4,993 | 1.72 | 1.9 | 2.8 | 19 | 28 | 14 | 7.25 | 230 | 230 |
| 15-Jun-08 | 273.8 | 6 | 28 | 3 | 17 | 4,737 | 2.33 | 2.2 | 2.8 | 23 | 28 | 14 | 7.29 | 92 | 92 |
| 16-Jun-08 | 251.0 | 5 | 24 | 4 | 20 | 4,970 | 2.61 | 2.7 | 2.8 | 24 | 27 | nr | 7.25 | 4 | <3.0 |
| 17-Jun-08 | 234.4 | 6 | 12 | 3 | 22 | 5,110 | 2.68 | 2.9 | 2.8 | 24 | 27 | 15 | 7.09 | 36 | 36 |
| 18-Jun-08 | 245.1 | 7 | 27 | 4 | 23 | 5,711 | 2.85 | 3.0 | 2.8 | 26 | 27 | 16 | 7.03 | 3,600 | 3,600 |
| 19-Jun-08 | 232.7 | 8 | 26 | 3 | 24 | 5,585 | 3.07 | 3.4 | 2.8 | 28 | 27 | 16 | 6.94 | 92 | 92 |
| 20-Jun-08 | 221.6 | 4 | 20 | 3 | 23 | 5,008 | 2.90 | 3.2 | 2.8 | 27 | 26 | 16 | 6.90 | 36 | 36 |
| 21-Jun-08 | 260.0 | 15 | 25 | 10 | 19 | 4,888 | 2.57 | 3.0 | 2.8 | 23 | 26 | 16 | 6.97 | 36 | 36 |
| 22-Jun-08 | 200.7 | 7 | 17 | 3 | 17 | 3,312 | 2.02 | 2.3 | 2.8 | 20 | 25 | 17 | 6.81 | 360 | 360 |
| 23-Jun-08 | 195.5 | 9 | 19 | 4 | 22 | 4,379 | 3.00 | 3.5 | 2.8 | 28 | 25 | 16 | 6.92 | 230 | 230 |
| 24-Jun-08 | 247.5 | 7 | 21 | 3 | 18 | 4,505 | 2.52 | 3.0 | 2.8 | 21 | 24 | 17 | 6.71 | 3,600 | 2,300 |
| 25-Jun-08 | 189.1 | 8 | 24 | 3 | 24 | 4,557 | 3.13 | 3.4 | 2.8 | 26 | 25 | 17 | 7.01 | 230 | 230 |
| 26-Jun-08 | 186.2 | 7 | 25 | 2 | 26 | 4,785 | 3.38 | 3.9 | 2.9 | 28 | 25 | 18 | 6.89 | 360 | 360 |
| 27-Jun-08 | 322.7 | 45 | 55 | 19 | 17 | 5,325 | 2.24 | 2.7 | 2.8 | 19 | 24 | 18 | 6.91 | 3,600 | 3,600 |
| 28-Jun-08 | 556.1 | 24 | 25 | 10 | 5 | 2,714 | 0.83 | 1.2 | 2.7 | 7 | 23 | 17 | 7.02 | (92) | (92) |
| 29-Jun-08 | 307.3 | 7 | 16 | 3 | 9 | 2,637 | 1.48 | 1.7 | 2.7 | 16 | 22 | 16 | 7.03 | 92 | 92 |
| 30-Jun-08 | 257.2 | 8 | 23 | 4 | 12 | 3,112 | 2.07 | 2.3 | 2.7 | 19 | 22 | 17 | 7.51 | 74 | 74 |
| Max: | 571 | | | | | | | | | | | | | | |
| Min: | 169 | | | | | | | | | | | | | | |
| Average: | 298 | 13 | 27 | 6 | 18 | 4,535 | 2.28 | 2.7 | | 22 | | 15 | 7.05 | | |
| Geo.Mean: | | | | | | | | | | | | | | 268 | 242 |

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 2684RR.
- (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 Phosphorus and Total Nitrogen results are corrected based on the recovery of a quality control standard.