

City of Winnipeg
Water and Waste Department
South End Water Pollution Control Centre Monitoring Data
January 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-Jan-08 | 44.9 | 10 | 22 | 7 | 27 | 1,212 | 3.80 | 4.7 | 4.4 | 30 | 29 | 15 | 6.86 | 360 | 360 |
| 2-Jan-08 | 44.6 | 11 | 19 | 5 | 29 | 1,293 | 4.33 | 4.7 | 4.4 | 17 | 29 | 14 | 6.68 | 920 | 920 |
| 2-Jan-08 | 45.2 | 8 | 22 | 5 | 29 | 1,310 | 4.18 | 4.9 | 4.4 | 24 | 29 | 15 | 6.64 | 740 | 740 |
| 4-Jan-08 | 48.0 | 6 | 20 | 7 | 29 | 1,391 | 4.64 | 5.4 | 4.4 | 28 | 29 | 15 | 6.75 | 150 | 74 |
| 5-Jan-08 | 46.8 | 7 | 16 | 6 | 27 | 1,264 | 4.13 | 4.8 | 4.3 | 24 | 28 | 15 | 6.72 | 74 | 74 |
| 6-Jan-08 | 47.8 | 7 | 14 | 4 | 28 | 1,338 | 4.20 | 4.2 | 4.3 | 25 | 28 | 15 | 6.69 | 74 | 74 |
| 7-Jan-08 | 49.8 | 11 | 28 | 8 | 37 | 1,843 | 3.97 | 3.6 | 4.3 | 25 | 28 | 14 | 6.68 | 230 | 230 |
| 8-Jan-08 | 47.4 | 9 | 26 | 6 | 28 | 1,328 | 4.33 | 4.9 | 4.3 | 28 | 28 | 15 | 6.59 | 9,200 | 9,200 |
| 9-Jan-08 | 47.3 | 7 | 21 | 5 | 28 | 1,325 | 4.67 | 4.2 | 4.3 | 26 | 28 | 14 | 6.75 | 110 | 110 |
| 10-Jan-08 | 47.0 | 8 | 23 | 5 | 28 | 1,315 | 3.82 | 4.6 | 4.3 | 29 | 28 | 14 | 6.70 | 230 | 230 |
| 11-Jan-08 | 47.3 | 8 | 23 | 6 | 27 | 1,277 | 4.04 | 4.4 | 4.3 | 29 | 28 | 13 | 6.66 | 360 | 74 |
| 12-Jan-08 | 48.5 | 6 | 20 | 6 | 26 | 1,262 | 3.72 | 4.2 | 4.3 | 28 | 27 | 14 | 6.75 | 23 | 23 |
| 13-Jan-08 | 49.0 | 14 | 17 | 6 | 26 | 1,275 | 3.91 | 3.9 | 4.3 | 27 | 27 | 14 | 6.83 | 36 | 36 |
| 14-Jan-08 | 46.8 | 8 | 20 | 4 | 26 | 1,218 | 4.32 | 4.1 | 4.3 | 23 | 27 | 13 | 6.66 | 36 | 36 |
| 15-Jan-08 | 46.3 | 7 | 15 | 4 | 30 | 1,390 | 4.93 | 4.9 | 4.3 | 28 | 27 | 14 | 6.68 | 36 | 36 |
| 16-Jan-08 | 45.7 | 7 | nr | nr | 30 | 1,370 | 5.78 | 4.3 | 4.3 | 27 | 27 | 14 | 6.78 | 23 | 23 |
| 17-Jan-08 | 45.9 | 8 | 21 | 5 | 31 | 1,424 | 6.24 | 6.5 | 4.4 | 31 | 27 | 13 | 6.74 | 230 | 92 |
| 18-Jan-08 | 47.3 | 5 | 15 | 5 | 30 | 1,420 | 5.25 | 6.0 | 4.5 | 30 | 27 | nr | 6.70 | 230 | 230 |
| 19-Jan-08 | 48.3 | 6 | 17 | 4 | 30 | 1,449 | 4.69 | 4.5 | 4.6 | 27 | 26 | 13 | 6.68 | 23 | 23 |
| 20-Jan-08 | 48.2 | 10 | 18 | 9 | 28 | 1,348 | 4.40 | 4.3 | 4.6 | 29 | 27 | 11 | 6.78 | 230 | 230 |
| 21-Jan-08 | 49.7 | 9 | 22 | 6 | 29 | 1,440 | 4.26 | 4.1 | 4.6 | 27 | 27 | nr | 6.71 | 92 | 92 |
| 22-Jan-08 | 45.9 | 8 | 20 | 5 | 30 | 1,377 | 3.83 | 3.9 | 4.6 | 27 | 27 | 14 | 6.78 | 360 | 360 |
| 23-Jan-08 | 45.2 | 7 | 20 | 7 | 32 | 1,445 | 4.46 | 4.4 | 4.6 | 28 | 27 | 13 | 6.87 | 920 | 920 |
| 24-Jan-08 | 47.1 | 11 | 14 | 5 | 31 | 1,461 | 4.62 | 4.4 | 4.6 | 30 | 27 | 14 | 6.78 | 92 | 92 |
| 25-Jan-08 | 48.3 | 7 | 13 | 6 | 31 | 1,497 | 5.30 | 4.3 | 4.6 | 26 | 27 | nr | 6.86 | 360 | 360 |
| 26-Jan-08 | 49.3 | 8 | 12 | 6 | 30 | 1,479 | 4.81 | 4.7 | 4.6 | 27 | 27 | 13 | 6.78 | 36 | 36 |
| 27-Jan-08 | 50.0 | 10 | 12 | 6 | 29 | 1,450 | 3.90 | 4.2 | 4.6 | 25 | 27 | 14 | 6.71 | 360 | 360 |
| 28-Jan-08 | 51.4 | 7 | 15 | 7 | 29 | 1,491 | 4.08 | 4.5 | 4.6 | 31 | 27 | nr | 6.46 | 23 | 23 |
| 29-Jan-08 | 47.8 | 8 | 13 | 5 | 30 | 1,433 | 4.07 | 4.4 | 4.6 | 31 | 27 | 13 | 6.82 | 920 | 920 |
| 30-Jan-08 | 47.7 | 8 | 17 | 6 | 30 | 1,430 | 4.27 | 4.6 | 4.6 | 29 | 27 | 13 | 6.72 | 3,600 | 2,300 |
| 31-Jan-08 | 47.1 | 10 | 14 | 6 | 30 | 1,412 | 5.13 | 5.4 | 4.6 | 33 | 27 | 13 | 6.78 | 920 | 230 |
| Max: | 51.4 | | | | | | | | | | | | | | |
| Min: | 44.6 | | | | | | | | | | | | | | |
| Average: | 47.5 | 8 | 18 | 6 | 29 | 1,386 | 4.45 | 4.6 | | 27 | | 14 | 6.73 | | |
| Geo.Mean: | | | | | | | | | | | | | | 186 | 159 |

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 98.6 ML/D per clause 26 of Licence 2716.

- (6) Bracketed Coliform results not used in the Geometric Mean calculation.
- (7) Raw wastewater flows in excess of 100 ML/D will by-pass the secondary process.
- (8) The results for Total Nitrogen and Phosphorus are lower than normal due to technical difficulties with our analysis. Total Phosphorus and Total Nitrogen results are corrected based on the recovery of a quality control standard