

City of Winnipeg
Water and Waste Department
South End Water Pollution Control Centre Monitoring Data
May, 2006

| 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 | MPN/100 mL |
| 1-May-06 | 88.5 | 7 | <10 | 5 | 16 | 1,416 | 2.55 | 2.4 | 1.6 | 21 | 19 | 14 | 6.83 | 2,300 | 120 |
| 2-May-06 | 81.2 | 8 | 12 | 6 | 16 | 1,299 | 2.45 | 2.6 | 1.6 | 23 | 19 | 13 | 7.00 | 75 | 75 |
| 3-May-06 | 86.3 | 5 | <10 | 5 | 16 | 1,381 | 2.47 | 2.5 | 1.6 | 22 | 20 | 13 | 6.84 | 430 | 430 |
| 4-May-06 | 69.0 | 4 | <10 | 4 | 20 | 1,380 | 3.16 | 3.1 | 1.7 | 27 | 20 | 13 | 6.90 | 230 | 93 |
| 5-May-06 | 66.7 | 9 | 45 | 5 | 21 | 1,401 | 3.06 | 2.9 | 1.7 | 28 | 20 | 14 | 6.77 | 93 | 43 |
| 6-May-06 | 66.6 | 7 | 9 | 4 | 21 | 1,399 | 3.05 | 3.0 | 1.8 | 29 | 21 | 14 | 6.87 | <3 | <3 |
| 7-May-06 | 93.6 | 9 | 26 | 16 | 17 | 1,591 | 2.84 | 3.2 | 1.9 | 27 | 21 | 14 | 6.82 | 4 | 4 |
| 8-May-06 | 93.2 | 5 | <10 | 4 | 13 | 1,212 | 2.21 | 2.7 | 1.9 | 23 | 22 | 14 | 6.79 | 93 | 93 |
| 9-May-06 | 86.2 | 7 | 10 | 6 | 15 | 1,293 | 2.37 | 2.5 | 1.9 | 22 | 22 | 15 | 6.79 | 38 | 4 |
| 10-May-06 | 81.4 | 6 | <10 | 5 | 15 | 1,221 | 2.44 | 2.4 | 2.0 | 21 | 22 | 14 | 6.88 | 93 | 93 |
| 11-May-06 | 73.4 | 12 | 18 | 6 | 18 | 1,321 | 2.72 | 2.8 | 2.1 | 26 | 22 | 13 | 6.83 | 430 | 230 |
| 12-May-06 | 71.5 | 23 | 62 | 6 | 18 | 1,287 | 2.80 | 3.0 | 2.2 | 25 | 23 | 13 | 6.82 | 75 | 43 |
| 13-May-06 | 71.7 | 5 | <10 | 4 | 18 | 1,291 | 3.23 | 3.4 | 2.3 | 27 | 23 | 14 | 7.01 | 9 | 9 |
| 14-May-06 | 69.1 | 9 | 12 | 6 | 19 | 1,313 | 3.26 | 3.7 | 2.4 | 28 | 23 | 14 | 7.04 | 23 | 23 |
| 15-May-06 | 67.9 | 6 | 17 | 6 | 20 | 1,358 | 2.88 | 2.9 | 2.5 | 28 | 23 | 14 | 7.12 | 930 | 430 |
| 16-May-06 | 65.5 | 6 | 19 | 5 | 20 | 1,310 | 3.28 | 3.5 | 2.6 | 28 | 24 | 14 | 6.93 | 230 | 93 |
| 17-May-06 | 64.7 | 6 | 19 | 4 | 21 | 1,359 | 2.87 | 3.4 | 2.7 | 29 | 24 | 14 | 6.96 | 230 | 230 |
| 18-May-06 | 65.1 | <4 | 15 | 4 | 23 | 1,497 | 3.20 | 3.5 | 2.8 | 29 | 25 | 15 | 6.84 | 230 | 230 |
| 19-May-06 | 62.8 | <4 | 38 | 5 | 23 | 1,444 | 3.61 | 3.8 | 2.9 | 25 | 25 | 14 | 6.85 | 380 | 230 |
| 20-May-06 | 64.4 | <4 | 12 | 5 | 19 | 1,224 | 2.94 | nr | 2.9 | 22 | 25 | 15 | 6.89 | 43 | 43 |
| 21-May-06 | 56.3 | <4 | 51 | 3 | 21 | 1,182 | 3.01 | nr | 2.9 | 27 | 25 | 15 | 6.95 | <3 | <3 |
| 22-May-06 | 59.4 | <4 | 15 | 4 | 22 | 1,307 | 3.47 | 3.3 | 2.9 | 26 | 25 | 15 | 7.06 | 4 | 4 |
| 23-May-06 | 62.3 | 5 | 16 | 4 | 23 | 1,433 | 3.22 | 3.0 | 2.9 | 26 | 25 | 15 | 6.17 | 4 | 4 |
| 24-May-06 | 60.9 | <4 | 21 | 4 | 24 | 1,462 | 3.37 | 3.4 | 3.0 | 29 | 25 | 15 | 6.71 | 93 | 23 |
| 25-May-06 | 60.5 | 4 | 20 | 4 | 24 | 1,452 | 3.85 | 3.9 | 3.0 | 31 | 26 | 15 | 6.73 | 23 | 9 |
| 26-May-06 | 59.4 | <4 | 39 | 4 | 26 | 1,544 | 4.13 | 3.9 | 3.1 | 34 | 26 | 15 | 6.75 | 230 | 230 |
| 27-May-06 | 66.1 | <4 | 14 | 6 | 22 | 1,454 | 3.23 | 5.5 | 3.2 | 29 | 26 | 16 | 6.76 | 43 | 4 |
| 28-May-06 | 80.0 | 12 | nr | nr | 19 | 1,520 | 2.63 | 2.8 | 3.2 | 23 | 26 | 16 | nr | 9 | 4 |
| 29-May-06 | 69.6 | 6 | nr | nr | 19 | 1,322 | 2.47 | 2.6 | 3.1 | 25 | 26 | 15 | 6.72 | 150 | 150 |
| 30-May-06 | 62.8 | 5 | 12 | 4 | 22 | 1,382 | 2.77 | 3.0 | 3.1 | 29 | 26 | 15 | 6.84 | 2,100 | 75 |
| 31-May-06 | 61.0 | 8 | 17 | 3 | 25 | 1,525 | 3.30 | 3.6 | 3.2 | 32 | 27 | 15 | 6.87 | 43 | 43 |
| Total: | 2187 | | | | | | | | | | | | | | |
| Max: | 93.6 | | | | | | | | | | | | | | |
| Min: | 56.3 | | | | | | | | | | | | | | |
| Average: | 70.6 | 8 | 19 | 5 | 20 | 1,374 | 2.99 | 3.18 | | 26 | | 14 | 6.84 | | |
| Geo.Mean: | | | | | | | | | | | | | | 67 | 35 |

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.