

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

November, 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 | |
| 1-Nov-06 | 49.2 | 4 | 27 | 4 | 25 | 1,230 | 4.39 | 4.8 | 4.5 | 31 | 32 | 16 | 6.89 | 380 | 23 |
| 2-Nov-06 | 47.3 | 5 | 24 | 4 | 24 | 1,135 | 4.80 | 5.6 | 4.6 | 30 | 32 | 16 | 6.94 | 430 | 43 |
| 3-Nov-06 | 49.0 | 5 | 28 | 4 | 25 | 1,225 | 4.91 | 5.6 | 4.7 | 32 | 32 | 16 | 6.93 | 930 | 75 |
| 4-Nov-06 | 49.9 | 8 | 30 | 6 | 24 | 1,198 | 4.43 | 5.3 | 4.7 | 31 | 32 | 16 | 6.89 | <3 | <3 |
| 5-Nov-06 | 53.5 | 8 | 28 | 7 | 22 | 1,177 | 3.91 | 4.9 | 4.7 | 29 | 32 | 17 | 6.87 | 93 | 23 |
| 6-Nov-06 | 51.9 | 5 | 28 | 4 | 21 | 1,090 | 3.47 | 4.1 | 4.7 | 25 | 31 | 16 | 6.62 | 150 | 150 |
| 7-Nov-06 | 52.3 | 5 | 23 | 4 | 23 | 1,203 | 3.86 | 4.8 | 4.7 | 30 | 31 | 18 | 6.57 | 430 | 380 |
| 8-Nov-06 | 57.5 | 7 | 24 | 4 | 21 | 1,208 | 3.67 | 4.5 | 4.7 | 27 | 31 | 19 | 6.68 | 4,300 | 2,300 |
| 9-Nov-06 | 51.2 | 6 | 23 | 4 | 22 | 1,126 | 4.63 | 4.9 | 4.7 | 28 | 31 | 19 | 6.62 | <3 | <3 |
| 10-Nov-06 | 48.6 | 5 | 24 | 4 | 23 | 1,118 | 5.09 | 5.7 | 4.7 | 29 | 31 | 20 | 6.68 | 93 | 4 |
| 11-Nov-06 | 49.4 | 5 | 31 | 5 | 23 | 1,136 | 4.47 | 5.2 | 4.8 | 30 | 31 | 20 | 6.89 | 23 | 9 |
| 12-Nov-06 | 52.0 | 4 | 23 | 4 | 26 | 1,352 | 3.98 | 5.1 | 4.8 | 31 | 31 | 20 | 6.89 | 380 | 230 |
| 13-Nov-06 | 48.5 | <4 | 28 | 4 | 22 | 1,067 | 4.08 | 4.9 | 4.8 | 28 | 31 | 20 | 6.80 | 23 | 23 |
| 14-Nov-06 | 48.2 | 5 | 21 | 3 | 23 | 1,109 | 4.15 | 5.1 | 4.8 | 30 | 30 | 15 | 6.57 | 430 | 11 |
| 15-Nov-06 | 49.1 | 5 | 29 | 4 | 23 | 1,129 | 4.33 | 5.4 | 4.8 | 32 | 30 | 16 | 6.57 | 43 | 43 |
| 16-Nov-06 | 49.3 | 5 | 29 | 3 | 24 | 1,183 | 4.41 | 5.4 | 4.9 | 32 | 30 | 21 | 6.90 | 43 | 43 |
| 17-Nov-06 | 48.8 | 4 | 23 | 4 | 25 | 1,220 | 4.57 | 5.5 | 4.9 | 32 | 31 | 19 | 6.57 | 93 | 43 |
| 18-Nov-06 | 76.8 | 4 | 27 | 5 | 24 | 1,843 | 4.24 | 5.1 | 5.0 | 29 | 31 | 20 | 6.84 | 93 | 4 |
| 19-Nov-06 | 51.7 | 6 | 25 | 6 | 23 | 1,189 | 3.93 | 5.0 | 5.0 | 28 | 30 | 20 | 6.80 | 43 | 23 |
| 20-Nov-06 | 50.7 | 9 | 24 | 7 | 24 | 1,217 | 3.85 | 5.4 | 5.0 | 30 | 30 | 17 | 6.68 | 2,300 | 2,300 |
| 21-Nov-06 | 48.1 | 4 | 20 | 4 | 23 | 1,106 | 3.59 | 4.7 | 5.0 | 31 | 30 | 17 | 6.60 | 930 | 27 |
| 22-Nov-06 | 48.8 | 4 | 20 | 4 | 26 | 1,269 | 4.35 | 5.2 | 5.0 | 31 | 30 | 16 | 6.82 | 150 | 150 |
| 23-Nov-06 | 48.0 | 4 | 28 | 5 | 26 | 1,248 | 4.42 | 5.7 | 5.0 | 33 | 30 | 16 | 6.80 | <3 | <3 |
| 24-Nov-06 | 48.9 | 4 | 25 | 4 | 26 | 1,271 | 4.52 | 5.1 | 5.1 | 33 | 30 | 16 | 6.65 | 230 | 93 |
| 25-Nov-06 | 43.4 | 6 | 24 | 4 | 26 | 1,128 | 4.54 | 5.8 | 5.1 | 35 | 31 | 19 | 6.80 | <3 | <3 |
| 26-Nov-06 | 52.2 | 8 | 26 | 6 | 25 | 1,305 | 4.10 | 5.1 | 5.1 | 32 | 30 | 20 | 6.77 | 230 | 93 |
| 27-Nov-06 | 48.4 | 8 | 26 | 5 | 24 | 1,162 | 4.03 | 4.8 | 5.1 | 31 | 30 | 16 | 6.75 | 2,300 | 2,300 |
| 28-Nov-06 | 48.0 | 5 | 22 | 4 | 26 | 1,248 | 3.90 | 4.6 | 5.1 | 31 | 30 | 16 | 6.59 | 93 | 93 |
| 29-Nov-06 | 47.5 | 7 | 23 | 5 | 27 | 1,283 | 4.05 | 4.9 | 5.1 | 31 | 30 | 15 | 6.72 | 9 | 4 |
| 30-Nov-06 | 48.3 | 6 | 25 | 4 | 27 | 1,304 | 5.11 | 4.9 | 5.1 | 33 | 30 | 14 | 6.60 | 430 | 75 |
| Max: | 76.8 | | | | | | | | | | | | | | |
| Min: | 43.4 | | | | | | | | | | | | | | |
| Average: | 50.6 | 6 | 25 | 5 | 24 | 1,216 | 4.26 | 5.1 | | 30 | | 17 | 6.74 | | |
| Geo.Mean: | | | | | | | | | | | | | | 101 | 37 |

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