

City of Winnipeg
Water and Waste Department
South End Water Pollution Control Centre Monitoring Data
June, 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-Jun-06 | 60.0 | 6 | 16 | 5 | 25 | 1,500 | 3.61 | 3.4 | 3.2 | 34 | 27 | 16 | 6.81 | <3 | <3 |
| 2-Jun-06 | 59.8 | 5 | nr | nr | 26 | 1,555 | 3.73 | 3.6 | 3.2 | 30 | 27 | 16 | 6.82 | 640 | 640 |
| 3-Jun-06 | 57.5 | <4 | nr | nr | 25 | 1,438 | 3.34 | 3.4 | 3.3 | 30 | 27 | 17 | nr | 23 | 23 |
| 4-Jun-06 | 58.4 | 6 | 13 | 4 | 24 | 1,402 | 3.37 | 3.5 | 3.3 | 30 | 27 | 17 | nr | 23 | 4 |
| 5-Jun-06 | 71.2 | 23 | 34 | 18 | 22 | 1,566 | 5.08 | 5.3 | 3.4 | 29 | 27 | 19 | 6.68 | 750 | 750 |
| 6-Jun-06 | 65.5 | 11 | 18 | 8 | 19 | 1,245 | 1.38 | 1.9 | 3.3 | 24 | 27 | 20 | 6.85 | 230,000 | 230,000 |
| 7-Jun-06 | 60.7 | 6 | 16 | 4 | 35 | 2,125 | 9.19 | 9.4 | 3.5 | 36 | 28 | 20 | 6.82 | 750 | 750 |
| 8-Jun-06 | 58.0 | 6 | <10 | 3 | 30 | 1,740 | 6.59 | 6.8 | 3.7 | 35 | 28 | 18 | 6.82 | 2,300 | 430 |
| 9-Jun-06 | 57.4 | 4 | 17 | 4 | 27 | 1,550 | 4.30 | 4.5 | 3.7 | 32 | 29 | 19 | 6.89 | 230 | 93 |
| 10-Jun-06 | 56.0 | <4 | 10 | <2 | 28 | 1,568 | 3.57 | 3.7 | 3.8 | 32 | 29 | 18 | 6.94 | 21 | 21 |
| 11-Jun-06 | 57.1 | 6 | <10 | 4 | 27 | 1,542 | 3.37 | 3.7 | 3.8 | 31 | 29 | 17 | 6.91 | 750 | 9 |
| 12-Jun-06 | 58.5 | 9 | 12 | 5 | 25 | 1,463 | 3.44 | 3.7 | 3.8 | 29 | 29 | 20 | 7.17 | 750 | 9 |
| 13-Jun-06 | 61.5 | 5 | 17 | 5 | 30 | 1,845 | 8.58 | 9.8 | 4.1 | 33 | 29 | 20 | 6.72 | 230 | 93 |
| 14-Jun-06 | 56.9 | 11 | 18 | 7 | 31 | 1,764 | 7.19 | 8.6 | 4.2 | 43 | 30 | 20 | 6.79 | 4 | 4 |
| 15-Jun-06 | 57.1 | 9 | 14 | 8 | 28 | 1,599 | 5.31 | nr | 4.2 | 29 | 30 | 20 | 6.90 | 15,000 | 15,000 |
| 16-Jun-06 | 59.7 | 11 | 16 | 7 | 25 | 1,493 | 4.59 | 4.7 | 4.3 | 30 | 30 | 18 | 6.81 | 430 | 430 |
| 17-Jun-06 | 56.9 | 8 | 13 | 4 | 25 | 1,423 | 4.03 | 4.0 | 4.3 | 27 | 30 | 18 | 6.78 | 230 | 93 |
| 18-Jun-06 | 61.7 | 10 | 11 | 6 | 22 | 1,357 | 3.74 | 4.2 | 4.3 | 28 | 30 | 21 | 6.79 | 430 | 230 |
| 19-Jun-06 | 57.8 | 8 | <10 | 5 | 24 | 1,387 | 3.91 | 4.6 | 4.4 | 33 | 30 | 18 | 6.72 | 43,000 | 23,000 |
| 20-Jun-06 | 55.9 | 4 | 17 | 6 | 25 | 1,398 | 4.21 | 4.21 | 4.4 | 30 | 30 | 21 | 6.89 | 15,000 | 7,500 |
| 21-Jun-06 | 56.0 | 4 | <10 | 4 | 26 | 1,456 | 3.80 | 3.81 | 4.4 | 30 | 30 | 21 | 6.74 | 750 | 430 |
| 22-Jun-06 | 54.6 | 22 | 37 | 5 | 27 | 1,474 | 3.44 | 3.55 | 4.4 | 28 | 30 | 18 | 6.72 | 430 | 93 |
| 23-Jun-06 | 54.4 | 10 | 16 | <2 | 28 | 1,523 | 3.91 | 4.07 | 4.4 | 31 | 31 | 18 | 6.79 | 43 | 43 |
| 24-Jun-06 | 58.1 | 17 | 27 | 7 | 26 | 1,511 | 3.47 | 4.19 | 4.5 | 31 | 31 | 19 | 6.82 | 75 | 9 |
| 25-Jun-06 | 53.9 | 8 | <10 | <4 | 24 | 1,294 | 2.61 | 3.53 | 4.4 | 37 | 31 | 18 | 6.82 | 93 | 43 |
| 26-Jun-06 | 55.9 | 24 | 23 | 5 | 25 | 1,398 | 3.16 | 4.34 | 4.5 | 36 | 31 | 21 | 6.89 | 93 | 93 |
| 27-Jun-06 | 53.5 | 8 | 39 | 6 | 27 | 1,445 | 3.46 | 4.22 | 4.4 | 35 | 31 | 21 | 6.81 | 150 | 93 |
| 28-Jun-06 | 53.5 | 33 | 27 | 7 | 28 | 1,498 | 3.44 | 4.56 | 4.5 | 35 | 32 | 21 | 6.87 | 93 | 93 |
| 29-Jun-06 | 54.0 | 8 | 16 | 3 | 28 | 1,512 | 3.21 | 3.78 | 4.5 | 35 | 32 | 21 | 6.84 | 150 | 43 |
| 30-Jun-06 | 54.0 | 4 | 14 | 4 | 27 | 1,458 | 4.05 | 4.27 | 4.6 | 34 | 32 | 23 | 6.81 | 930 | 210 |
| Total: | 1736 | | | | | | | | | | | | | | |
| Max: | 71 | | | | | | | | | | | | | | |
| Min: | 53.5 | | | | | | | | | | | | | | |
| Average: | 57.9 | 10 | 17 | 5 | 26 | 1,517 | 4.24 | 4.59 | | 32 | | 19 | 6.83 | | |
| Geo.Mean: | | | | | | | | | | | | | | 327 | 141 |

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.