

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

December 2010

| Date | Raw Sewage | Final Effluent 24 Hour Composite | | | | | | | | | Final Effluent Grab Sample | | | |
|------------------|-------------|-------------------------------------|----------|----------|----------------|------------------|------------------|-----------|----------------|-----------|-------------------------------|-------------|----------------|------------|
| | Daily Flow | TSS | cBOD5 | Ammonia | | Ortho Phosphorus | Total Phosphorus | | Total Nitrogen | | Temp. | pH | Fecal Coliform | E.Coli |
| | ML | (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-Dec-10 | 25.8 | 4 | 2 | 4.18 | 108 | 0.44 | 0.6 | 0.6 | 8 | 7 | 1 | 7.99 | 43 | 43 |
| 2-Dec-10 | 26.0 | 4 | 2 | 4.17 | 108 | 0.48 | 0.5 | 0.6 | 8 | 7 | 1 | 7.86 | 43 | 43 |
| 3-Dec-10 | 27.0 | 5 | 2 | 4.41 | 119 | 0.49 | 0.6 | 0.6 | 8 | 7 | 1 | 8.01 | 9 | 9 |
| 4-Dec-10 | 27.9 | 6 | nr | 4.37 | 122 | 0.51 | 0.7 | 0.6 | 7 | 7 | 1 | 7.93 | 93 | 23 |
| 5-Dec-10 | 28.7 | 5 | nr | 4.51 | 130 | 0.56 | 0.7 | 0.6 | 6 | 7 | 1 | 7.93 | 93 | 93 |
| 6-Dec-10 | 27.4 | 4 | nr | 4.88 | 133 | 0.59 | 0.6 | 0.6 | 8 | 7 | 1 | 7.85 | 93 | 93 |
| 7-Dec-10 | 26.9 | 5 | 2 | 5.06 | 136 | 0.36 | 0.6 | 0.6 | 8 | 7 | 1 | 7.82 | 430 | 430 |
| 8-Dec-10 | 27.0 | 4 | 2 | 5.34 | 144 | 0.68 | 0.9 | 0.6 | 8 | 7 | 1 | 7.76 | 430 | 430 |
| 9-Dec-10 | 27.1 | 4 | <2 | 5.22 | 142 | 0.78 | 0.9 | 0.6 | 9 | 7 | 1 | 7.67 | 230 | 230 |
| 10-Dec-10 | 27.1 | 12 | 3 | 5.57 | 151 | 0.76 | 1.0 | 0.6 | 9 | 7 | 1 | 7.67 | 430 | 150 |
| 11-Dec-10 | 28.0 | 8 | 2 | 5.68 | 159 | 0.81 | 1.1 | 0.6 | 10 | 7 | 1 | 7.68 | 430 | 150 |
| 12-Dec-10 | 28.5 | 6 | nr | 5.68 | 162 | 0.86 | 1.1 | 0.6 | 8 | 7 | 1 | 7.67 | 430 | 430 |
| 13-Dec-10 | 27.3 | 4 | nr | 6.11 | 167 | 0.91 | 1.3 | 0.6 | 10 | 8 | 0 | 7.69 | 230 | 230 |
| 14-Dec-10 | 26.9 | 5 | 3 | 6.47 | 174 | 0.99 | 1.4 | 0.7 | 10 | 8 | 1 | 7.64 | 2,300 | 2,300 |
| 15-Dec-10 | 26.7 | 6 | 3 | 6.58 | 175 | 1.04 | 1.2 | 0.7 | 11 | 8 | 1 | 7.44 | 930 | 430 |
| 16-Dec-10 | 26.5 | 9 | 3 | 6.72 | 178 | 1.08 | 1.3 | 0.7 | 11 | 8 | 1 | 7.62 | 430 | 430 |
| 17-Dec-10 | 26.4 | 7 | nr | 6.96 | 184 | 1.12 | 1.4 | 0.8 | 10 | 8 | 1 | 7.65 | 1,500 | 1,500 |
| 18-Dec-10 | 27.2 | 6 | nr | 7.35 | 200 | 1.20 | 1.5 | 0.8 | 11 | 8 | 1 | 7.56 | 2,300 | 2,300 |
| 19-Dec-10 | 27.8 | 7 | 3 | 7.14 | 198 | 1.26 | 1.5 | 0.8 | 10 | 8 | 1 | 7.58 | 2,300 | 2,300 |
| 20-Dec-10 | 26.3 | 7 | 4 | 7.22 | 190 | 1.24 | 1.6 | 0.9 | 10 | 8 | 1 | 7.52 | 230 | 230 |
| 21-Dec-10 | 25.4 | 8 | 4 | 6.72 | 171 | 1.24 | 1.5 | 0.9 | 10 | 9 | 1 | 7.60 | 2,100 | 2,100 |
| 22-Dec-10 | 25.4 | 8 | 4 | 7.16 | 182 | 1.30 | 1.5 | 0.9 | 11 | 9 | 1 | 7.46 | 2,400 | 2,400 |
| 23-Dec-10 | 25.6 | 7 | 5 | 6.88 | 176 | 1.32 | 1.7 | 1.0 | 10 | 9 | 0 | 7.46 | 2,300 | 2,300 |
| 24-Dec-10 | 26.2 | 5 | 7 | 7.14 | 187 | 1.39 | 1.8 | 1.0 | 10 | 9 | 1 | 7.52 | 4,300 | 2,300 |
| 25-Dec-10 | 23.6 | <4 | 3 | 6.86 | 162 | 1.42 | 1.8 | 1.1 | 10 | 9 | 0 | 7.51 | 1,500 | 1,500 |
| 26-Dec-10 | 23.9 | 6 | 2 | 7.03 | 168 | 1.50 | 1.7 | 1.1 | 10 | 9 | 1 | 7.45 | 2,300 | 2,300 |
| 27-Dec-10 | 24.5 | 6 | 3 | 6.74 | 165 | 1.38 | 1.7 | 1.1 | 10 | 9 | 1 | 7.48 | 2,300 | 2,300 |
| 28-Dec-10 | 24.2 | 5 | 5 | 6.61 | 160 | 1.35 | 1.7 | 1.2 | 10 | 9 | 0 | 7.38 | 2,300 | 930 |
| 29-Dec-10 | 23.9 | 6 | 5 | 6.85 | 164 | 1.38 | 1.7 | 1.2 | 9 | 9 | 1 | 7.65 | 230 | 230 |
| 30-Dec-10 | 24.2 | 8 | 4 | 6.54 | 158 | 1.47 | 1.8 | 1.2 | 10 | 9 | 1 | 7.40 | 430 | 430 |
| 31-Dec-10 | 24.8 | 6 | 5 | 6.20 | 154 | 1.34 | 1.8 | 1.3 | 11 | 10 | 1 | 7.44 | 230 | 93 |
| Max: | 28.7 | | | | | | | | | | | | | |
| Min: | 23.6 | | | | | | | | | | | | | |
| Average: | 26.3 | 6 | 3 | 6 | 159 | 1.01 | 1.3 | | 9 | | 1 | 7.64 | | |
| Geo.Mean: | | | | | | | | | | | | | 496 | 399 |

Notes:

- (1) * = 30 day rolling average
- (2) Effluent ammonia load based upon Raw Sewage flows and Final Cell NH3-N concentrations
- (3) nr - not recorded or no result; na - not analyzed; ns - no sample
- (4) Final Effluent flow data unavailable
- (5) Where < values are reported 50% of the MDL is used for calculated results
- (6) Licence No. 2669 E RR
- (7) Total Nitrogen results are calculated from TKN and nitrate values.