

Library Reference 5.2 Flow-weighted average of limnological parameters, 2011, in Onondaga Lake tributaries, with standard error of estimate.

| Parameter | Units | Nine Mile Creek | | Harbor Brook | | Onondaga Creek @ Kirpatrick Street | | Ley Creek | |
|------------------------------|-------------|-----------------|-------|---------------|-------|------------------------------------|-------|---------------|-------|
| | | Concentration | RSE | Concentration | RSE | Concentration | RSE | Concentration | RSE |
| 5-day BOD | mg/l | 2.9 | 12.4% | 2.3 | 34.9% | 2.4 | 17.3% | 3.8 | 23.1% |
| Total Alkalinity | mg/l | 203 | 1.8% | 247 | 5.8% | 222 | 2.2% | 194 | 4.6% |
| Total Organic Carbon | mg/l | 3.0 | 17.6% | 2.1 | 26.6% | 2.3 | 22.5% | 6.9 | 7.8% |
| TOC-filtered | mg/l | 2.7 | 13.3% | 1.9 | 28.2% | 2.2 | 23.9% | 6.5 | 7.4% |
| Total Inorganic Carbon | mg/l | 46.7 | 1.8% | 57.7 | 6.1% | 51.3 | 2.5% | 45.2 | 5.8% |
| Total Kjeldahl Nitrogen as N | mg/l | 0.68 | 9.4% | 0.59 | 24.7% | 0.52 | 12.7% | 0.76 | 12.8% |
| Organic Nitrogen as N | mg/l | 0.50 | 12.6% | 0.54 | 25.7% | 0.47 | 14.2% | 0.55 | 14.0% |
| Ammonia as N | mg/l | 0.174 | 8.9% | 0.063 | 22.9% | 0.051 | 13.4% | 0.213 | 15.7% |
| Nitrate as N | mg/l | 0.893 | 8.2% | 1.38 | 5.6% | 0.919 | 5.4% | 0.324 | 17.6% |
| Nitrite as N | mg/l | 0.022 | 14.4% | 0.013 | 35.6% | 0.028 | 42.5% | 0.016 | 25.2% |
| Arsenic | ug/l | 2.0 | 3.4% | 2.0 | 2.2% | 2.0 | 13.5% | 2.0 | 3.1% |
| Total Phosphorus | ug/l | 75.5 | 19.3% | 74.8 | 26.7% | 94.7 | 27.7% | 80.1 | 25.0% |
| Soluble Reactive Phosphorus | ug/l | 14 | 28.2% | 27 | 16.7% | 8 | 26.4% | 13 | 14.4% |
| Silica | mg/l | 4.090 | 4.3% | 4.98 | 4.4% | 5.173 | 7.4% | 5.978 | 5.4% |
| Calcium | mg/l | 169.4 | 2.2% | 195.1 | 5.8% | 105.8 | 2.0% | 98.4 | 4.6% |
| Sodium | mg/l | 93.0 | 5.1% | 158.9 | 10.4% | 237.5 | 6.9% | 197.3 | 15.9% |
| Sulfate | mg/l | 147.5 | 5.7% | 287.4 | 6.6% | 84.1 | 4.1% | 81.2 | 6.2% |
| Chloride | mg/l | 235.0 | 3.7% | 268.4 | 9.7% | 369.2 | 7.0% | 310.7 | 17.8% |
| Total Suspended Solids | mg/l | 28 | 28.3% | 19 | 58.2% | 60 | 51.9% | 15 | 44.6% |
| Total Dissolved Solids | mg/l | 868 | 2.9% | 1145 | 5.6% | 950 | 5.0% | 854 | 9.7% |
| Zinc | ug/l | 16 | 28.0% | 6.3 | 27.9% | 8.1 | 28.7% | 10 | 21.8% |
| Copper | ug/l | 2.5 | 10.4% | 2.5 | 28.8% | 3.2 | 23.1% | 2.5 | 22.2% |
| Chromium | ug/l | 2.0 | 18.4% | 2.0 | 32.2% | 2.0 | 33.9% | 2.0 | 25.5% |
| Cadmium | ug/l | 0.80 | 9.4% | 0.80 | 10.8% | 0.80 | 11.5% | 0.80 | 6.9% |
| Lead | ug/l | 2.0 | 15.2% | 2.0 | 22.9% | 2.0 | 31.4% | 2.4 | 32.3% |
| Iron | mg/l | 1.18 | 19.6% | 0.60 | 53.2% | 2.6 | 47.9% | 1.0 | 33.2% |
| Magnesium | mg/l | 25.6 | 1.8% | 35.9 | 5.1% | 22.6 | 2.2% | 18.8 | 4.9% |
| Manganese | ug/l | 70.2 | 9.5% | 28.8 | 33.6% | 82.2 | 24.4% | 101.5 | 10.9% |
| Nickel | ug/l | 3.8 | 5.0% | 3.8 | 12.2% | 3.8 | 30.5% | 3.8 | 9.4% |
| Fecal Coliforms | cells/100ml | 405 | 98.0% | 2,627 | 116% | 732 | 53.5% | 893 | 50.5% |

RSE = relative standard error of the concentration estimate. ** METRO BOD5, NH3-N, TP, TSS based on observations made daily,

Calculated using a multiple regression algorithm relating concentration to flow, season, and trend with residual interpolation.

METRO TKN based on observations made 5 times each 2 week period. Other values are based on data collected bi-weekly; heavy metals sampled quarterly.

Calculations use the laboratory reported minimal reportable limit (MRL) when observations were below the MRL.

Flow-weighted average of limnological parameters, 2011, in Onondaga Lake tributaries, with standard error of estimate. (Continued)

| Parameter | Units | Trib. 5A | | METRO Effluent ** | | METRO By-Pass | | East Flume | |
|------------------------------|-------------|---------------|--------|-------------------|-------|---------------|-------|---------------|-------|
| | | Concentration | RSE | Concentration | RSE | Concentration | RSE | Concentration | RSE |
| 5-day BOD | mg/l | 3.0 | 23.2% | 2.7 | 5.3% | 69.5 | 9.1% | 4.1 | 17.9% |
| Total Alkalinity | mg/l | 160 | 3.5% | 169 | 2.8% | 244 | 15.7% | 219 | 5.6% |
| Total Organic Carbon | mg/l | 3.5 | 8.9% | 5.7 | 5.9% | 14.3 | 19.0% | 3.9 | 7.5% |
| TOC-filtered | mg/l | 3.3 | 8.3% | 4.9 | 4.5% | 11.5 | 19.8% | 3.6 | 7.3% |
| Total Inorganic Carbon | mg/l | 36.8 | 4.8% | 42.0 | 2.9% | 57.7 | 16.6% | 48.3 | 5.6% |
| Total Kjeldahl Nitrogen as N | mg/l | 0.58 | 55.7% | 1.1 | 4.2% | 9.0 | 4.6% | 1.2 | 12.7% |
| Organic Nitrogen as N | mg/l | 0.33 | 13.5% | 0.87 | 19.2% | 4.2 | 18.3% | 0.58 | 14.2% |
| Ammonia as N | mg/l | 0.244 | 139.1% | 0.300 | 7.2% | 4.94 | 6.5% | 0.571 | 19.0% |
| Nitrate as N | mg/l | 1.219 | 16.5% | 9.64 | 5.8% | 1.76 | 33.2% | 4.60 | 7.7% |
| Nitrite as N | mg/l | 0.034 | 31.8% | 0.028 | 26.4% | 0.101 | 52.9% | 1.457 | 53.4% |
| Arsenic | ug/l | 2.0 | 15.3% | 2.1 | 7.3% | 2.1 | 3.1% | 4.2 | 18.8% |
| Total Phosphorus | ug/l | 89.6 | 12.1% | 78.2 | 4.5% | 1,070 | 5.5% | 160 | 16.7% |
| Soluble Reactive Phosphorus | ug/l | 25 | 20.0% | 3 | 31.6% | 315 | 10.5% | 93 | 19.5% |
| Silica | mg/l | 8.698 | 7.6% | 5.436 | 2.9% | 6.75 | 17.4% | 11.2 | 6.5% |
| Calcium | mg/l | 160.0 | 4.2% | 152.1 | 4.7% | 116.3 | 20.2% | 159.0 | 6.7% |
| Sodium | mg/l | 217.052 | 6.0% | 246.6 | 12.8% | 196.2 | 35.3% | 391.6 | 10.7% |
| Sulfate | mg/l | 84.8 | 8.7% | 152.0 | 4.2% | 99.7 | 32.3% | 217.5 | 9.2% |
| Chloride | mg/l | 462.3 | 6.4% | 421.0 | 10.3% | 267.8 | 39.1% | 616.4 | 11.7% |
| Total Suspended Solids | mg/l | 10 | 95.4% | 4.9 | 5.7% | 61 | 7.5% | 16 | 49.1% |
| Total Dissolved Solids | mg/l | 1148 | 5.6% | 1195 | 4.8% | 887 | 26.8% | 1614 | 8.4% |
| Zinc | ug/l | 9.0 | 64.2% | 20.2 | 4.6% | 45.5 | 11.3% | 36.3 | 42.2% |
| Copper | ug/l | 8.5 | 42.7% | 9.8 | 4.9% | 26.6 | 85.6% | 5.2 | 48.3% |
| Chromium | ug/l | 12.7 | 48.1% | 7.7 | 8.5% | 8.0 | 85.4% | 2.3 | 35.2% |
| Cadmium | ug/l | 0.80 | 8.6% | 0.82 | 11.5% | 5.0 | 5.4% | 0.80 | 29.5% |
| Lead | ug/l | 3.4 | 46.6% | 2.0 | 7.2% | 20 | 7.6% | 2.0 | 58.9% |
| Iron | mg/l | 1.0 | 67.9% | 1.40 | 6.3% | 2.1 | 11.9% | 0.41 | 51.1% |
| Magnesium | mg/l | 15.8 | 3.3% | 22.6 | 2.9% | 21.1 | 23.0% | 25.7 | 7.1% |
| Manganese | ug/l | 81.8 | 37.2% | 42.6 | 8.2% | 64.2 | 11.6% | 28.1 | 17.3% |
| Nickel | ug/l | 96.4 | 31% | 14.5 | 5.1% | 16.5 | 85.7% | 3.8 | 14.9% |
| Fecal Coliforms | cells/100ml | 50 | 422% | 584 | 58.6% | 42,478 | 39.2% | 474 | 69.5% |

RSE = relative standard error of the concentration estimate. ** METRO BOD5, NH3-N, TP, TSS based on observations made daily,

Calculated using a multiple regression algorithm relating concentration to flow, season, and trend with residual interpolation.

METRO TKN based on observations made 5 times each 2 week period. Other values are based on data collected bi-weekly from

Calculations use the laboratory reported minimal reportable limit (MRL) when observations were below the MRL.