



City Of Brantford Water System
SCADA Data - Monthly Averages
 December 2019

| <i>Water Treatment Plant</i> | | | |
|------------------------------|-----------|-------|-----------------|
| Source | Parameter | Units | Monthly Average |
| Grand River | Flow Rate | ML/d | 39.00 |
| Brantford POE | Flow Rate | ML/d | 30.97 |

| | | | |
|---------------|-----------|-----|-------|
| Grand River | Turbidity | NTU | 5.31 |
| Filter 1 | Turbidity | NTU | 0.032 |
| Filter 2 | Turbidity | NTU | 0.038 |
| Filter 3 | Turbidity | NTU | 0.037 |
| Filter 4 | Turbidity | NTU | 0.037 |
| Filter 5 | Turbidity | NTU | 0.026 |
| Filter 6 | Turbidity | NTU | 0.044 |
| Filter 7 | Turbidity | NTU | 0.026 |
| Filter 8 | Turbidity | NTU | 0.040 |
| Brantford POE | Turbidity | NTU | 0.056 |

| | | | |
|--------------|-------------|--|------|
| CCC Effluent | Log Removal | | 8.54 |
|--------------|-------------|--|------|

| | | | |
|---------------|-------------------|------|------|
| Brantford POE | Combined Chlorine | mg/L | 2.63 |
|---------------|-------------------|------|------|

| | | | |
|---------------|----------|-----|-------|
| Brantford POE | Pressure | psi | 94.64 |
|---------------|----------|-----|-------|

| <i>Distribution System</i> | | | |
|----------------------------|----------------|-------|-----------------|
| Source | Parameter | Units | Monthly Average |
| Tollgate Reservoir | Total Chlorine | mg/L | 2.49 |
| Park Rd. Reservoir | Total Chlorine | mg/L | 2.48 |
| Northwest Reservoir | Total Chlorine | mg/L | 2.59 |

| | | | |
|---------------------|----------|-----|-------|
| Albion St. Booster | Pressure | psi | 90.45 |
| Tollgate Reservoir | Pressure | psi | 59.73 |
| Park Rd. Reservoir | Pressure | psi | 79.29 |
| Northwest Reservoir | Pressure | psi | 86.18 |
| Bell Lane | Pressure | psi | 48.09 |
| Fifth Ave | Pressure | psi | 99.94 |
| Lawren Harris | Pressure | psi | 65.15 |
| St. Andrews | Pressure | psi | 93.45 |
| Empy St. | Pressure | psi | 83.04 |

Definitions:

SCADA - Supervisory Control and Data Acquisition

CCC - Chlorine Contact Chambers

Log Removal – a shorthand term for log₁₀ removal, used in reference to the physical-chemical treatment of water to remove, kill, or inactivate pathogenic organisms.

Combined Chlorine - The concentration of residual chlorine that is combined with ammonia (NH₃), organic nitrogen, or both in water as chloramine, yet is still available to oxidize organic matter and act as a disinfectant. Combined chlorine can be accurately estimated as the difference between the measured total chlorine and measure or known free chlorine residual.



City Of Brantford Water System
Treatment Operators Analysis
 December 2019

| Source | Parameter | Units | MAC | AO/OG | Minimum | Maximum | Average |
|---------------|-------------------|-------|------|-------|---------|---------|---------|
| Grand River | Ammonia | mg/L | | | 0.01 | 0.25 | 0.08 |
| Brantford POE | Ammonia | mg/L | | | 0.25 | 0.57 | 0.37 |
| Grand River | True Colour | PtCo | | | 5.0 | 34.0 | 17.0 |
| Brantford POE | True Colour | PtCo | | 5 | 0.0 | 1.0 | 0.0 |
| Brantford POE | Aluminum | mg/L | | 0.100 | 0.025 | 0.119 | 0.065 |
| Grand River | UV254 | | | | 0.110 | 0.185 | 0.154 |
| Brantford POE | UV254 | | | | 0.044 | 0.067 | 0.057 |
| Brantford POE | Fluoride | mg/L | 1.50 | | 0.150 | 1.040 | 0.710 |
| Brantford POE | Free chlorine | mg/L | | | 0.10 | 0.10 | 0.10 |
| Brantford POE | Combined Chlorine | mg/L | 3.00 | | 2.40 | 2.80 | 2.63 |
| Brantford POE | Total Chlorine | mg/L | | | 2.50 | 2.90 | 2.73 |

MAC - Maximum Acceptable Concentration

AO/OG - Aesthetic Objective/Operational Guideline

Combined Chlorine - The concentration of residual chlorine that is combined with ammonia (NH₃), organic nitrogen, or both in water as chloramine, yet is still available to oxidize organic matter and act as a disinfectant. Combined chlorine can be accurately estimated as the difference between the measured total chlorine and measure or known free chlorine residual.