



## City Of Brantford Water System

### Treatment Operators Analysis

February 2019

Source	Parameter	Units	MAC	AO/OG	Minimum	Maximum	Average
Grand River	Ammonia	mg/L			0.26	0.74	0.46
Brantford POE	Ammonia	mg/L			0.25	0.46	0.35
Grand River	True Colour	PtCo			11.0	34.0	20.0
Brantford POE	True Colour	PtCo		5	0.0	4.0	1.0
Brantford POE	Aluminum	mg/L		0.100	0.015	0.058	0.034
Grand River	UV254				0.109	0.209	0.148
Brantford POE	UV254				0.029	0.063	0.047
Brantford POE	Fluoride	mg/L	1.50		0.140	0.750	0.630
Brantford POE	Free chlorine	mg/L			0.10	0.10	0.10
Brantford POE	Combined Chlorine	mg/L	3.00		2.40	2.90	2.56
Brantford POE	Total Chlorine	mg/L			2.50	3.00	2.66

**MAC** - Maximum Acceptable Concentration

**AO/OG** - Aesthetic Objective/Operational Guideline

**Combined Chlorine** - The concentration of residual chlorine that is combined with ammonia (NH<sub>3</sub>), 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**  
**SCADA Data - Monthly Averages**  
 February 2019

<i>Water Treatment Plant</i>			
Source	Parameter	Units	Monthly Average
Grand River	Flow Rate	ML/d	35.03
Brantford POE	Flow Rate	ML/d	31.56
Grand River	Turbidity	NTU	17.63
Filter 1	Turbidity	NTU	0.041
Filter 2	Turbidity	NTU	0.047
Filter 3	Turbidity	NTU	0.039
Filter 4	Turbidity	NTU	0.038
Filter 5	Turbidity	NTU	0.032
Filter 6	Turbidity	NTU	0.043
Filter 7	Turbidity	NTU	0.034
Filter 8	Turbidity	NTU	0.036
Brantford POE	Turbidity	NTU	0.053
CCC Effluent	Log Removal		9.34
Brantford POE	Combined Chlorine	mg/L	2.54
Brantford POE	Pressure	psi	94.69

<i>Distribution System</i>			
Source	Parameter	Units	Monthly Average
Tollgate Reservoir	Total Chlorine	mg/L	2.46
Park Rd. Reservoir	Total Chlorine	mg/L	2.42
Northwest Reservoir	Total Chlorine	mg/L	2.61
Albion St. Booster	Pressure	psi	90.02
Tollgate Reservoir	Pressure	psi	58.46
Park Rd. Reservoir	Pressure	psi	79.25
Northwest Reservoir	Pressure	psi	84.48
Bell Lane	Pressure	psi	48.79
Fifth Ave	Pressure	psi	100.59
Lawren Harris	Pressure	psi	64.14
St. Andrews	Pressure	psi	93.90
Empey St.	Pressure	psi	82.49

**Definitions:**

**SCADA** - Supervisory Control and Data Acquisition

**CCC** - Chlorine Contact Chambers

**Log Removal** – a shorthand term for log<sub>10</sub> 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 (NH<sub>3</sub>), 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.