



## City Of Brantford Water System

### Treatment Operators Analysis

August 2020

Source	Parameter	Units	MAC	AO/OG	Minimum	Maximum	Average
Grand River	Ammonia	mg/L			0.04	0.16	0.09
Brantford POE	Ammonia	mg/L			0.16	0.55	0.33
Grand River	True Colour	PtCo			9.0	27.0	19.0
Brantford POE	True Colour	PtCo		5	0.0	4.0	0.0
Brantford POE	Aluminum	mg/L		0.100	0.074	0.203	0.129
Grand River	UV254				0.130	0.237	0.165
Brantford POE	UV254				0.029	0.054	0.038
Brantford POE	Fluoride	mg/L	1.50		0.600	0.830	0.730
Brantford POE	Free chlorine	mg/L			0.10	0.10	0.10
Brantford POE	Combined Chlorine	mg/L	3.00		2.20	2.90	2.69
Brantford POE	Total Chlorine	mg/L			2.30	3.00	2.79

**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

August 2020

Water Treatment Plant			
Source	Parameter	Units	Monthly Average
Grand River	Flow Rate	ML/d	42.57
Brantford POE	Flow Rate	ML/d	39.45

Grand River	Turbidity	NTU	5.83
Filter 1	Turbidity	NTU	0.046
Filter 2	Turbidity	NTU	0.065
Filter 3	Turbidity	NTU	0.056
Filter 4	Turbidity	NTU	0.047
Filter 5	Turbidity	NTU	0.041
Filter 6	Turbidity	NTU	0.050
Filter 7	Turbidity	NTU	0.044
Filter 8	Turbidity	NTU	0.047
Brantford POE	Turbidity	NTU	0.065

CCC Effluent	Log Removal		26.00
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Brantford POE	Combined Chlorine	mg/L	2.68
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Brantford POE	Pressure	psi	94.27
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Distribution System			
Source	Parameter	Units	Monthly Average
Tollgate Reservoir	Total Chlorine	mg/L	2.07
Park Rd. Reservoir	Total Chlorine	mg/L	1.80
Northwest Reservoir	Total Chlorine	mg/L	2.26

Albion St. Booster	Pressure	psi	89.69
Tollgate Reservoir	Pressure	psi	60.43
Park Rd. Reservoir	Pressure	psi	78.86
Northwest Reservoir	Pressure	psi	84.95
Bell Lane	Pressure	psi	47.50
Fifth Ave	Pressure	psi	99.30
Lawren Harris	Pressure	psi	64.74
St. Andrews	Pressure	psi	93.41
Empey St.	Pressure	psi	82.06

#### Definitions:

**SCADA** - Supervisory Control and Data Acquisition

**CCC** - Chlorine Contact Chambers

**Log Removal** – a shorthand term for  $\log_{10}$  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.