

# Water Treatment Plant

## September Report 2021

### Water Quality Summary

#### Acronyms

**MAC** = Maximum acceptable concentration established by Health Canada  
**AO** = Aesthetic objective (no health based limit) suggested by Health Canada  
**NTU** = Nephelometric Turbidity Unit  
**mg/L** = milligrams per litre or one part per million

#### Health Related

Parameter	Units	Result	MAC
Turbidity	NTU	0.057	0.3
Chloramines	mg/L	2.33	n/a <sup>1</sup>
Nitrate-N	mg/L	0.02	10
Fluoride	mg/L	0.83	1.5
Trihalomethanes	mg/L	0.020	0.1
Chromium	mg/L	<0.0005	0.05
Lead	mg/L	<0.0001	0.005
Manganese	mg/L	<0.005	0.12

#### Non Health Related

Parameter	Units	Result	AO
pH		7.55	7.0 - 10.5
Hardness	mg/L	150	n/a <sup>2</sup>
TDS - total dissolved solids	mg/L	178	≤ 500
Sulfate	mg/L	32.6	≤ 500
Sodium	mg/L	9.9	≤ 200
Iron	mg/L	<0.01	0.05
Manganese	mg/L	<0.005	≤ 0.02
Aluminum	mg/L	0.165	n/a <sup>3</sup>

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<sup>1</sup> Guideline value not necessary due to low toxicity at concentrations found in drinking water. Chloramine residuals in most Canadian drinking water distribution systems are typically below 4 mg/L.

<sup>2</sup> Although hardness may have significant aesthetic effects, a guideline has not been established because public acceptance of hardness may vary considerably according to the local conditions; major contributor to hardness (calcium & magnesium) are not of direct public health concern

<sup>3</sup> Operational Guidance Value of < 0.1 mg/L total aluminum. There is no consistent, convincing evidence that aluminum in drinking water causes adverse health effects in humans.

## Treated Water - Distribution System

### BACTERIOLOGICAL / SECONDARY DISINFECTION

	Sep 7/2021		Sep 13/2021		Sep 21/2021		Sep 27/2021	
	Sample Results		Sample Results		Sample Results		Sample Results	
	Cl <sub>2</sub>	Bac T	Cl <sub>2</sub>	Bac T	Cl <sub>2</sub>	Bac T	Cl <sub>2</sub>	Bac T
Sample 1 North Lethbridge	1.47	N	1.61	N	1.68	N	1.37	N
Sample 2 North Lethbridge								
Sample 3 North Lethbridge	1.60	N	1.70	N	1.75	N	1.52	N
Sample 4 North Lethbridge								
Sample 5 North Lethbridge					1.41	N		
Sample 6 North Lethbridge			1.85	N			1.62	N
Sample 7 North Lethbridge	1.75	N	1.79	N	1.84	N	1.70	N
Sample 8 North Lethbridge	1.69	N	1.78	N	1.81	N	1.61	N
Sample 9 North Lethbridge								
Sample 10 North Lethbridge	1.58	N					1.62	N
Sample 11 North Lethbridge	1.77	N	1.93	N	1.83	N	1.73	N
Sample 12 North Lethbridge			1.27	N	1.49	N	1.20	N
Sample 13 North Lethbridge	0.57	N	1.31	N	1.35	N		
Sample 14 North Lethbridge	1.33	N						
Sample 15 North Lethbridge			1.52	N			1.36	N
Sample 16 South Lethbridge	1.31	N	1.60	N	1.69	N	1.56	N
Sample 17 South Lethbridge					1.40	N	1.40	N
Sample 18 South Lethbridge	1.47	N			1.52	N		
Sample 19 South Lethbridge	1.74	N	1.76	N			1.65	N
Sample 20 South Lethbridge	1.58	N	1.42	N				
Sample 21 South Lethbridge								
Sample 22 South Lethbridge	2.00	N	2.13	N	1.97	N	1.96	N

	Sep 7/2021		Sep 13/2021		Sep 20/2021		Sept 28/2021	
	Sample Results		Sample Results		Sample Results		Sample Results	
	Cl <sub>2</sub>	Bac T	Cl <sub>2</sub>	Bac T	Cl <sub>2</sub>	Bac T	Cl <sub>2</sub>	Bac T
Sample 23 West Lethbridge	1.31	N						
Sample 24 West Lethbridge	1.26	N	1.43	N			1.45	N
Sample 25 West Lethbridge	1.47	N	1.59	N	1.64	N	1.48	N
Sample 26 West Lethbridge								
Sample 27 West Lethbridge	1.58	N	1.70	N	1.57	N	1.39	N
Sample 28 West Lethbridge	1.50	N	1.62	N	1.57	N		
Sample 29 West Lethbridge	1.35	N			1.49	N		
Sample 30 West Lethbridge	1.73	N	1.81	N	1.60	N	1.38	N
Sample 31 West Lethbridge			1.73	N	1.64	N		
Sample 32 West Lethbridge								
Sample 33 West Lethbridge	1.59	N	1.71	N	1.74	N	1.57	N
Sample 34 West Lethbridge			1.56	N			1.44	N
Sample 35 West Lethbridge	1.49	N						
Sample 36 South Lethbridge							1.44	N
Sample 37 South Lethbridge	1.12	N			0.92	N	0.81	N
Sample 38 South Lethbridge			1.48	N				
Sample 39 South Lethbridge					1.72	N	1.57	N
Sample 40 South Lethbridge	1.63	N	1.71	N	1.80	N	1.63	N
Sample 41 South Lethbridge			1.77	N	1.68	N		
Sample 42 South Lethbridge								
Sample 43 South Lethbridge	1.31	N	1.23	N	1.27	N		
Sample 44 South Lethbridge							0.38	N
Sample 45 South Lethbridge								

**Total Negative (N) = 98**  
**Total Positive (P) = 0**  
**Total Re-Samples = 0**

Chlorine Residual Minimum = 0.38 mg/L  
 Chlorine Residual Maximum = 2.13 mg/L  
 Chlorine Residual Average = 1.54 mg/L