

## Water Treatment Plant

### December Report 2024

### 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	0.054	0.3
Chloramines	mg/L	1.85	n/a <sup>1</sup>
Nitrate-N	mg/L	0.18	10
Fluoride	mg/L	0.74	1.5
Trihalomethanes	mg/L	0.012	0.1
Aluminum	mg/L	0.043	2.9
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	182	n/a <sup>2</sup>
TDS - total dissolved solids	mg/L	220	≤ 500
Sulfate	mg/L	46.0	≤ 500
Sodium	mg/L	13.2	≤ 200
Iron	mg/L	< 0.01	≤ 0.3
Manganese	mg/L	< 0.005	≤ 0.02

<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

## Treated Water - Distribution System

### BACTERIOLOGICAL / SECONDARY DISINFECTION

	Dec 2/2024		Dec 9/2024		Dec 17/2024		Dec 23/2024		Dec 30/2024	
	Sample Results		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	Cl <sub>2</sub>	Bac T
Sample 1 North Lethbridge			1.72	N	1.80	N	1.74	N		
Sample 2 North Lethbridge	1.87	N	1.69	N			1.55	N		
Sample 3 North Lethbridge	1.78	N	1.76	N	1.97	N	1.73	N	1.78	N
Sample 4 North Lethbridge	1.76	N	1.80	N						
Sample 5 North Lethbridge	1.38	N			1.87	N				
Sample 6 North Lethbridge	1.71	N			1.95	N			1.92	N
Sample 7 North Lethbridge	1.97	N	1.88	N	1.94	N	1.81	N	1.94	N
Sample 8 North Lethbridge										
Sample 9 North Lethbridge	0.88	N			1.27	N	1.29	N		
Sample 10 North Lethbridge							1.82	N	1.91	N
Sample 11 North Lethbridge	1.93	N	1.76	N	1.91	N	1.83	N	1.85	N
Sample 12 North Lethbridge			1.60	N	2.02	N	1.46	N	1.52	N
Sample 13 North Lethbridge							1.59	N	1.67	N
Sample 14 North Lethbridge			1.50	N						
Sample 15 North Lethbridge	1.79	N	1.62	N						
Sample 16 North Lethbridge					1.98	N				
Sample 17 North Lethbridge			1.74	N	1.86	N	1.71	N		
Sample 18 South Lethbridge	1.69	N	1.20	N			1.76	N	1.88	N
Sample 19 South Lethbridge	1.92	N			1.83	N	1.78	N	1.91	N
Sample 20 South Lethbridge	1.90	N	1.84	N	1.96	N	1.80	N	2.01	N
Sample 21 South Lethbridge										
Sample 22 South Lethbridge										
Sample 23 South Lethbridge	2.06	N	2.02	N	1.99	N	1.92	N	2.05	N

	Dec 3/2024		Dec 9/2024		Dec 17/2024		Dec 23/2024		Dec 30/2024	
	Sample Results		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	Cl <sub>2</sub>	Bac T
Sample 23 West Lethbridge	1.69	N					1.62	N	1.61	N
Sample 24 West Lethbridge			1.59	N			1.80	N		
Sample 25 West Lethbridge			1.73	N						
Sample 26 West Lethbridge	1.63	N			1.81	N	1.70	N		
Sample 27 West Lethbridge	1.86	N	1.77	N	1.88	N				
Sample 28 West Lethbridge	1.82	N			1.86	N				
Sample 29 West Lethbridge							1.73	N		
Sample 30 West Lethbridge	1.75	N	1.55	N	1.71	N	1.80	N	1.88	N
Sample 31 West Lethbridge	1.86	N	1.74	N	1.87	N				
Sample 32 West Lethbridge	1.69	N					1.63	N	1.70	N
Sample 33 West Lethbridge	1.97	N	1.88	N	1.90	N	1.83	N	1.87	N
Sample 34 West Lethbridge	1.87	N	1.83	N						
Sample 35 West Lethbridge	1.87	N					1.79	N	1.74	N
Sample 36 South Lethbridge					1.85	N				
Sample 37 South Lethbridge					1.49	N			1.84	N
Sample 38 South Lethbridge			1.62	N	1.61	N			1.27	N
Sample 39 South Lethbridge							1.95	N	2.05	N
Sample 40 South Lethbridge	1.97	N	1.80	N	1.83	N	1.90	N	1.99	N
Sample 41 South Lethbridge	1.84	N	1.65	N			1.66	N	1.87	N
Sample 42 South Lethbridge										
Sample 43 South Lethbridge			1.60	N	1.76	N				
Sample 44 South Lethbridge			1.43	N	1.49	N	1.46	N	1.58	N
Sample 45 South Lethbridge	1.79	N	1.96	N					1.94	N

**Total Negative (N) =** 126  
**Total Positive (P) =** 0  
**Total Re-Samples =** 0

Chlorine Residual Minimum = 0.88 mg/L  
 Chlorine Residual Maximum = 2.06 mg/L  
 Chlorine Residual Average = 1.77 mg/L