

Water Treatment Plant

December Report 2023

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	0.061	0.3
Chloramines	mg/L	1.96	n/a ¹
Nitrate-N	mg/L	0.19	10
Fluoride	mg/L	0.76	1.5
Trihalomethanes	mg/L	0.009	0.1
Aluminum	mg/L	0.0450	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		7.56	7.0 - 10.5
Hardness	mg/L	196	n/a ²
TDS - total dissolved solids	mg/L	241	≤ 500
Sulfate	mg/L	50.9	≤ 500
Sodium	mg/L	14.9	≤ 200
Iron	mg/L	< 0.01	≤ 0.3
Manganese	mg/L	< 0.005	≤ 0.02

¹ 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.

² 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 4/2023		Dec 11/2023		Dec 18 2023		Dec 19/2023	
	Sample Results		Sample Results		Sample Results		Sample Results	
	Cl ₂	BacT	Cl ₂	BacT	Cl ₂	BacT	Cl ₂	BacT
Sample 1 North Lethbridge							1.82	N
Sample 2 North Lethbridge			1.92	N			1.81	N
Sample 3 North Lethbridge	1.86	N	1.95	N	1.90	N	1.90	N
Sample 4 North Lethbridge							1.94	N
Sample 5 North Lethbridge	1.46	N						
Sample 6 North Lethbridge	1.91	N						
Sample 7 North Lethbridge	1.92	N	2.01	N	1.91	N	1.91	N
Sample 8 North Lethbridge	1.89	N			1.92	N		
Sample 9 North Lethbridge	0.96	N	1.25	N			1.12	N
Sample 10 North Lethbridge			1.85	N			1.91	N
Sample 11 North Lethbridge	1.92	N	1.99	N	1.98	N	1.96	N
Sample 12 North Lethbridge							1.84	N
Sample 13 North Lethbridge	1.62	N	1.79	N	1.80	N	1.69	N
Sample 14 North Lethbridge	1.31	N			1.51	N		
Sample 15 North Lethbridge			1.83	N	1.78	N		
Sample 16 North Lethbridge					1.93	N		
Sample 17 North Lethbridge	1.93	N					1.88	N
Sample 18 South Lethbridge			1.77	N	1.64	N		
Sample 19 South Lethbridge			1.94	N	2.01	N		
Sample 20 South Lethbridge	1.90	N	1.92	N	1.99	N	1.93	N
Sample 21 South Lethbridge					1.88	N		
Sample 22 South Lethbridge								
Sample 23 South Lethbridge	2.04	N	2.03	N	1.96	N	1.93	N

	Dec 5/2023		Dec 12/2023		Dec 18/2023		Dec 19/2023	
	Sample Results		Sample Results		Sample Results		Sample Results	
	Cl ₂	BacT	Cl ₂	BacT	Cl ₂	BacT	Cl ₂	BacT
Sample 23 West Lethbridge	1.59	N	1.65	N			1.69	N
Sample 24 West Lethbridge	1.76	N			1.87	N		
Sample 25 West Lethbridge	1.80	N					1.90	N
Sample 26 West Lethbridge			1.80	N	1.73	N		
Sample 27 West Lethbridge					1.89	N		
Sample 28 West Lethbridge	1.72	N					1.83	N
Sample 29 West Lethbridge			1.80	N			1.79	N
Sample 30 West Lethbridge	1.91	N	1.81	N	1.84	N	1.82	N
Sample 31 West Lethbridge							1.91	N
Sample 32 West Lethbridge			1.79	N				
Sample 33 West Lethbridge	1.91	N	1.93	N	1.94	N	1.85	N
Sample 34 West Lethbridge					1.96	N		
Sample 35 West Lethbridge	1.78	N			1.90	N		
Sample 36 South Lethbridge	1.91	N	1.92	N				
Sample 37 South Lethbridge	1.68	N			1.73	N		
Sample 38 South Lethbridge			1.75	N			1.65	N
Sample 39 South Lethbridge	1.98	N	1.94	N	1.93	N		
Sample 40 South Lethbridge	1.92	N	1.94	N	1.94	N	1.92	N
Sample 41 South Lethbridge			1.92	N	1.83	N		
Sample 42 South Lethbridge	1.82	N	1.89	N	1.94	N		
Sample 43 South Lethbridge	1.57	N					1.71	N
Sample 44 South Lethbridge	1.17	N	1.32	N			1.51	N
Sample 45 South Lethbridge					1.92	N		

Total Negative (N) = 101
 Total Positive (P) = 0
 Total Re-Samples = 0

Chlorine Residual Minimum = 0.96 mg/L
 Chlorine Residual Maximum = 2.04 mg/L
 Chlorine Residual Average = 1.81 mg/L