

Water Treatment Plant

December 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	0.071	0.3
Chloramines	mg/L	1.91	n/a ¹
Nitrate-N	mg/L	0.12	10
Fluoride	mg/L	0.82	1.5
Trihalomethanes	mg/L	0.008	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		7.56	7.0 - 10.5
Hardness	mg/L	148	n/a ²
TDS - total dissolved solids	mg/L	165	≤ 500
Sulfate	mg/L	23.0	≤ 500
Sodium	mg/L	4.8	≤ 200
Iron	mg/L	<0.01	0.05
Manganese	mg/L	<0.005	≤ 0.02
Aluminum	mg/L	0.032	n/a ³

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

³ 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

	Dec 1/2021		Dec 6/2021		Dec 14/2021		Dec 20/2021	
	Sample Results		Sample Results		Sample Results		Sample Results	
	Cl ₂	Bac T	Cl ₂	Bac T	Cl ₂	Bac T	Cl ₂	Bac T
Sample 1 North Lethbridge					1.78	N		
Sample 2 North Lethbridge	1.75	N	1.96	N				
Sample 3 North Lethbridge	1.76	N	1.78	N	1.63	N	1.63	N
Sample 4 North Lethbridge								
Sample 5 North Lethbridge	1.44	N						
Sample 6 North Lethbridge	1.69	N	1.81	N			1.80	N
Sample 7 North Lethbridge	1.76	N	1.88	N	1.97	N	1.75	N
Sample 8 North Lethbridge					1.81	N		
Sample 9 North Lethbridge								
Sample 10 North Lethbridge			1.88	N	1.91	N	1.73	N
Sample 11 North Lethbridge	1.91	N	1.87	N	1.99	N	1.85	N
Sample 12 North Lethbridge	1.67	N	1.49	N	1.78	N	1.40	N
Sample 13 North Lethbridge			1.61	N			1.58	N
Sample 14 North Lethbridge			1.27	N	1.36	N	1.20	N
Sample 15 North Lethbridge							1.71	N
Sample 16 South Lethbridge	1.65	N	1.75	N	1.80	N	1.70	N
Sample 17 South Lethbridge			1.66	N				
Sample 18 South Lethbridge	1.78	N			1.91	N	1.76	N
Sample 19 South Lethbridge	1.87	N	1.88	N	2.00	N	1.79	N
Sample 20 South Lethbridge	1.73	N			1.91	N		
Sample 21 South Lethbridge								
Sample 22 South Lethbridge	2.08	N	2.16	N	2.08	N	2.07	N

	Dec 1/2021		Dec 6/2021		Dec 13/2021		Dec 21/2021	
	Sample Results		Sample Results		Sample Results		Sample Results	
	Cl ₂	Bac T	Cl ₂	Bac T	Cl ₂	Bac T	Cl ₂	Bac T
Sample 23 West Lethbridge					1.54	N	1.50	N
Sample 24 West Lethbridge	1.63	N	1.63	N	1.67	N	1.54	N
Sample 25 West Lethbridge	1.81	N	1.76	N	1.74	N		
Sample 26 West Lethbridge			1.72	N				
Sample 27 West Lethbridge	1.76	N	1.82	N	1.80	N		
Sample 28 West Lethbridge	1.74	N			1.73	N		
Sample 29 West Lethbridge							1.61	N
Sample 30 West Lethbridge	1.75	N	1.82	N	1.77	N	1.89	N
Sample 31 West Lethbridge	1.78	N	1.80	N				
Sample 32 West Lethbridge							1.77	N
Sample 33 West Lethbridge	1.84	N	1.80	N	1.85	N	1.78	N
Sample 34 West Lethbridge	1.84	N			1.77	N	1.73	N
Sample 35 West Lethbridge	1.70	N			1.70	N	1.68	N
Sample 36 South Lethbridge								
Sample 37 South Lethbridge							1.76	N
Sample 38 South Lethbridge			1.68	N				
Sample 39 South Lethbridge							1.92	N
Sample 40 South Lethbridge	1.94	N	1.90	N	1.89	N	1.86	N
Sample 41 South Lethbridge	1.89	N	1.85	N	1.82	N		
Sample 42 South Lethbridge								
Sample 43 South Lethbridge	1.58	N	1.67	N	1.63	N	1.64	N
Sample 44 South Lethbridge								
Sample 45 South Lethbridge			1.90	N	1.77	N		

Total Negative (N) = 100
Total Positive (P) = 0
Total Re-Samples = 0

Chlorine Residual Minimum = 1.20 mg/L
 Chlorine Residual Maximum = 2.16 mg/L
 Chlorine Residual Average = 1.76 mg/L