

Water Treatment Plant March Report 2022 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	0.065	0.3
Chloramines	mg/L	1.85	n/a ¹
Nitrate-N	mg/L	0.13	10
Fluoride	mg/L	0.69	1.5
Trihalomethanes	mg/L	0.009	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		7.51	7.0 - 10.5
Hardness	mg/L	160	n/a ²
TDS - total dissolved solids	mg/L	198	≤ 500
Sulfate	mg/L	35.7	≤ 500
Sodium	mg/L	11.5	≤ 200
Iron	mg/L	< 0.01	0.05
Manganese	mg/L	< 0.005	≤ 0.02
Aluminum	mg/L	0.029	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

	Mar 7/2022		Mar 15/2022		Mar 21/2022		Mar 28/2022	
	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	1.97	N			1.71	N	1.64	N
Sample 2 North Lethbridge	1.61	N	1.64	N	1.72	N		
Sample 3 North Lethbridge	1.68	N	1.60	N	1.69	N	1.62	N
Sample 4 North Lethbridge								
Sample 5 North Lethbridge			1.57	N	1.16	N		
Sample 6 North Lethbridge	1.75	N					1.58	N
Sample 7 North Lethbridge	1.86	N	1.74	N	1.72	N	1.75	N
Sample 8 North Lethbridge								
Sample 9 North Lethbridge	1.24	N	1.24	N				
Sample 10 North Lethbridge					1.63	N	1.63	N
Sample 11 North Lethbridge			1.80	N	1.56	N		
Sample 12 North Lethbridge	1.60	N	1.65	N	1.58	N		
Sample 13 North Lethbridge					1.41	N	1.54	N
Sample 14 North Lethbridge					1.56	N		
Sample 15 North Lethbridge			1.63	N	0.88	N		
Sample 16 North Lethbridge	1.73	N	1.65	N			1.71	N
Sample 17 North Lethbridge	1.77	N	1.71	N			1.67	N
Sample 18 South Lethbridge							1.58	N
Sample 19 South Lethbridge							1.65	N
Sample 20 South Lethbridge	1.80	N	1.75	N	1.87	N	1.41	N
Sample 21 South Lethbridge	1.77	N	1.61	N			2.12	N
Sample 22 South Lethbridge								
Sample 23 South Lethbridge	2.08	N	1.89	N	1.91	N	1.91	N

	Mar 1/2022		Mar 8/2022		Mar 14/2022		Mar 22/2022		Mar 28/2022	
	Sample Results		Sample Results		Sample Results		Sample Results		Sample Results	
	Cl ₂	Bac T	Cl ₂	Bac T	Cl ₂	Bac T	Cl ₂	Bac T	Cl ₂	Bac T
Sample 23 West Lethbridge			1.52	N	1.55	N	1.63	N		
Sample 24 West Lethbridge									1.51	N
Sample 25 West Lethbridge									1.62	N
Sample 26 West Lethbridge	1.53	N	1.62	N						
Sample 27 West Lethbridge			1.75	N	1.69	N				
Sample 28 West Lethbridge	1.75	N								
Sample 29 West Lethbridge	1.59	N	1.49	N			1.57	N	1.55	N
Sample 30 West Lethbridge	1.75	N	1.76	N	1.65	N	1.70	N	1.67	N
Sample 31 West Lethbridge					1.68	N				
Sample 32 West Lethbridge	1.53	N	1.62	N			1.55	N		
Sample 33 West Lethbridge	1.73	N	1.71	N	1.76	N	1.68	N	1.58	N
Sample 34 West Lethbridge					1.69	N	1.79	N		
Sample 35 West Lethbridge	1.60	N	1.73	N						
Sample 36 South Lethbridge			1.77	N			1.81	N		
Sample 37 South Lethbridge					1.57	N	1.65	N		
Sample 38 South Lethbridge					1.65	N	1.61	N		
Sample 39 South Lethbridge	1.70	N			1.75	N				
Sample 40 South Lethbridge	1.79	N	1.77	N	1.76	N	1.75	N	1.76	N
Sample 41 South Lethbridge	1.73	N	1.65	N			1.74	N		
Sample 42 South Lethbridge	1.76	N								
Sample 43 South Lethbridge	1.70	N			1.57	N	1.68	N		
Sample 44 South Lethbridge										
Sample 45 South Lethbridge			1.79	N	1.65	N				

Total Negative (N) = 105
Total Positive (P) = 0
Total Re-Samples = 0

Chlorine Residual Minimum = 0.88 mg/L
 Chlorine Residual Maximum = 2.12 mg/L
 Chlorine Residual Average = 1.66 mg/L