

Water Treatment Plant March 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 | 0.063 | 0.3 |
| Chloramines | mg/L | 1.92 | n/a ¹ |
| Nitrate-N | mg/L | 0.18 | 10 |
| Fluoride | mg/L | 0.77 | 1.5 |
| Trihalomethanes | mg/L | 0.007 | 0.1 |
| Aluminum | mg/L | 0.0360 | 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 | | 7.49 | 7.0 - 10.5 |
| Hardness | mg/L | 198 | n/a ² |
| TDS - total dissolved solids | mg/L | 245 | ≤ 500 |
| Sulfate | mg/L | 57.1 | ≤ 500 |
| Sodium | mg/L | 17.4 | ≤ 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

| | Mar 4/2024 | | Mar 12/2024 | | Mar 19/2024 | | Mar 25/2024 | |
|----------------------------|-----------------|-------|-----------------|-------|-----------------|-------|-----------------|-------|
| | 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 | | | 1.88 | N | 1.81 | N | | |
| Sample 2 North Lethbridge | 1.57 | N | 1.80 | N | | | 1.65 | N |
| Sample 3 North Lethbridge | 1.79 | N | 1.82 | N | 1.86 | N | 1.73 | N |
| Sample 4 North Lethbridge | | | | | 1.90 | N | | |
| Sample 5 North Lethbridge | | | | | | | 1.48 | N |
| Sample 6 North Lethbridge | 1.90 | N | 1.88 | N | | | 1.83 | N |
| Sample 7 North Lethbridge | 1.89 | N | 1.87 | N | 1.89 | N | 1.88 | N |
| Sample 8 North Lethbridge | | | | | | | | |
| Sample 9 North Lethbridge | 1.59 | N | 1.75 | N | | | 1.44 | N |
| Sample 10 North Lethbridge | 1.92 | N | 1.91 | N | | | | |
| Sample 11 North Lethbridge | 2.07 | N | 1.92 | N | 1.91 | N | 1.85 | N |
| Sample 12 North Lethbridge | 1.74 | N | | | | | | |
| Sample 13 North Lethbridge | 1.57 | N | | | 1.68 | N | 1.77 | N |
| Sample 14 North Lethbridge | | | 1.69 | N | | | 1.44 | N |
| Sample 15 North Lethbridge | 1.30 | N | | | | | | |
| Sample 16 North Lethbridge | | | | | 1.90 | N | | |
| Sample 17 North Lethbridge | | | 1.94 | N | 1.84 | N | | |
| Sample 18 South Lethbridge | | | | | 1.70 | N | 1.80 | N |
| Sample 19 South Lethbridge | | | 1.88 | N | 1.87 | N | | |
| Sample 20 South Lethbridge | 2.01 | N | 1.99 | N | 1.85 | N | 1.89 | N |
| Sample 21 South Lethbridge | 1.86 | N | | | 1.86 | N | 1.78 | N |
| Sample 22 South Lethbridge | | | | | | | | |
| Sample 23 South Lethbridge | 2.08 | N | 2.03 | N | 1.96 | N | 2.01 | N |

| | Mar 5/2024 | | Mar 13/2024 | | Mar 18/2024 | | Mar 25/2024 | |
|----------------------------|-----------------|-------|-----------------|-------|-----------------|-------|-----------------|-------|
| | 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 | 1.67 | N | | | 1.72 | N | | |
| Sample 24 West Lethbridge | | | | | 1.79 | N | 1.71 | N |
| Sample 25 West Lethbridge | 1.92 | N | 1.88 | N | | | 1.77 | N |
| Sample 26 West Lethbridge | | | | | 1.71 | N | 1.61 | N |
| Sample 27 West Lethbridge | 1.98 | N | 1.89 | N | | | 1.75 | N |
| Sample 28 West Lethbridge | 1.93 | N | | | 1.81 | N | | |
| Sample 29 West Lethbridge | 1.78 | N | | | | | 1.66 | N |
| Sample 30 West Lethbridge | 2.00 | N | 1.91 | N | 1.89 | N | 1.81 | N |
| Sample 31 West Lethbridge | | | | | | | 1.74 | N |
| Sample 32 West Lethbridge | 1.89 | N | 1.77 | N | | | | |
| Sample 33 West Lethbridge | 1.85 | N | 1.91 | N | 1.89 | N | 1.83 | N |
| Sample 34 West Lethbridge | | | 1.83 | N | | | | |
| Sample 35 West Lethbridge | | | | | | | | |
| Sample 36 South Lethbridge | | | | | | | | |
| Sample 37 South Lethbridge | | | 1.86 | N | 1.81 | N | 1.79 | N |
| Sample 38 South Lethbridge | | | 1.86 | N | 1.81 | N | | |
| Sample 39 South Lethbridge | 2.03 | N | 2.20 | N | 1.94 | N | 1.89 | N |
| Sample 40 South Lethbridge | 2.03 | N | 1.99 | N | 1.95 | N | 1.90 | N |
| Sample 41 South Lethbridge | 1.99 | N | | | 1.88 | N | | |
| Sample 42 South Lethbridge | | | 1.92 | N | 1.91 | N | | |
| Sample 43 South Lethbridge | | | 1.83 | N | 1.64 | N | 1.70 | N |
| Sample 44 South Lethbridge | 1.69 | N | 1.68 | N | | | | |
| Sample 45 South Lethbridge | 2.02 | N | | | | | 1.89 | N |

Total Negative (N) = 104
 Total Positive (P) = 0
 Total Re-Samples = 0

Chlorine Residual Minimum = 1.30 mg/L
 Chlorine Residual Maximum = 2.20 mg/L
 Chlorine Residual Average = 1.83 mg/L