

KEY DRINKING WATER PARAMETERS 2009

TREATED WATER AT PLANT

Water Quality Parameter	Units	Drinking Water	Limit ^a	Major Source
BASIC WATER CHEMISTRY		(< or ≤ means not detected)		
Colour	TCU ^b	<2 – 2.6	≤15 ^e	Erosion of natural deposits in watershed.
Hardness as CaCO ₃	mg/L	141 – 262	500 mg/L ^e	Erosion of natural deposits in watershed.
pH	pH	7.14 – 8.03	6.5-8.5 ^e	Influenced by the dissolved minerals in water and water treatment.
Temperature	°C	1.1 – 20.0	≤15°C ^e	Surface water temperature.
Total dissolved solids	mg/L	141 – 301	≤500 ^e	Erosion of natural deposits in watershed.
Turbidity	NTU ^c	<0.04 – 0.18	1.0 ^g	Suspended particles in solution.

INORGANIC SUBSTANCES

Aluminum	mg/L	0.015 - 0.206	0.1 ^f	Plant treatment.
Arsenic	mg/L	<0.0005	0.01	Erosion of natural deposits in watershed.
Barium	mg/L	0.0261 – 0.0756	1.0	Plant treatment.
Cadmium	mg/L	<0.0005	0.005	Erosion of natural deposits in watershed.
Calcium	mg/L	35 – 68	No limit	Erosion of natural deposits in watershed.
Free chlorine residual	mg/L	0.71 – 1.69	≥0.2	Plant treatment.
Chromium	mg/L	<0.0005 – 0.0019	0.05	Erosion of natural deposits in watershed.
Copper	mg/L	<0.0005 – 0.0032	≤1.0 ^e	Erosion of natural deposits in watershed.
Fluoride	mg/L	0.64 – 0.80	1.5	Naturally occurring and plant treatment.
Iron	mg/L	<0.03	≤0.3 ^e	Erosion of natural deposits in watershed.
Lead	mg/L	<0.0005	0.01	Erosion of natural deposits in watershed.
Magnesium	mg/L	11 – 19	No limit	Erosion of natural deposits in watershed.
Manganese	mg/L	<0.0005 – 0.0028	≤0.05	Erosion of natural deposits in watershed.
Mercury	mg/L	<0.000001 – 0.000003	0.001	Erosion of natural deposits in watershed.
Nickel	mg/L	<0.0005 – 0.0024	No limit	Erosion of natural deposits in watershed.
Nitrite + Nitrate as Nitrogen	mg/L	0.011 – 0.17	10	Erosion of natural deposits in watershed.
Potassium	mg/L	0.42 – 2.6	No limit	Erosion of natural deposits in watershed.
Sodium	mg/L	1.7 – 11.9	≤200 ^e	Erosion of natural deposits in watershed.
Sulfate	mg/L	38 - 77	≤500 ^e	Erosion of natural deposits in watershed.
Zinc	mg/L	<0.002	≤5.0 ^e	Erosion of natural deposits in watershed.

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MICROBIOLOGICAL ORGANISMS				
<i>E. coli.</i>	MPN/100 mL ^d	<1	0	Domestic animals, wildlife and human waste.
Total Coliform	MPN/100 mL ^d	<1	0	Soil, domestic animals and wildlife.
<i>Giardia</i>	Cysts/100 L	<1	No limit	Domestic animals, wildlife and human waste.
<i>Cryptosporidium</i>	Oocysts/100 L	<1	No limit	Domestic animals, wildlife and human waste.

TREATED WATER IN DISTRIBUTION SYSTEM

Water Quality Parameter	Units	Drinking Water	Limit ^a	Major Source
VOLATILE ORGANIC SUBSTANCES				
Total trihalomethanes ^h	mg/L	0.0214	0.1	By-product of chlorination.

MICROBIOLOGICAL ORGANISMS

<i>E. coli.</i> ⁱ	MPN/100 mL ^d	<1	0	Domestic animals, wildlife and human waste.
Total coliform ⁱ	MPN/100 mL ^d	<1	0	Soil, domestic animals and wildlife.

a Limit stipulated by Guidelines for Canadian Drinking Water Quality or Alberta Government operating approval for aesthetic, health and operational reasons.

b TCU = True Colour Units.

c NTU = Nephelometric Turbidity Units, a measure of water clarity.

d MPN = Most-Probable Number.

e Aesthetic objective, which is not a health-related limit.

f Federal operational guidance value, which is not a health-related limit.

g Lower limits are stipulated for some operation conditions.

h Annual average values.

i Samples collected in conjunction with microbiological sampling as required in The City of Calgary's Approval to Operate.

NOTE: mg/L = milligrams per litre, or parts per million (ppm).