



## City of Calgary Water Treatment Plant Summary

January 1, 2024 to December 31, 2024

PARAMETER	UNITS	Glenmore Treated Water (Entering the Distribution System)			Maximum Acceptable Concentration or Guideline <sup>1</sup>	Common Source
		Minimum	Maximum	Average		
Alkalinity, Total	mg/L as CaCO <sub>3</sub>	102	168	141	No Guidelines	Erosion of natural deposits in watershed.
Aluminum	mg/L	0.022	0.112	0.058	0.100 (O) (Annual Average)	Water treatment process
Ammonia	mg/L as N	<0.05			No Guidelines	Naturally occurring; released from agricultural or industrial wastes.
Antimony	mg/L	<0.0005			0.006	Erosion of natural deposits in watershed
Arsenic	mg/L	<0.0005			0.010	Erosion of natural deposits in watershed
Atrazine + metabolites	mg/L	<0.0010			0.005	Leaching and/or runoff from agricultural or rural use
Barium	mg/L	0.058	0.080	0.067	2.0	Erosion of natural deposits in watershed
Benzene	mg/L	<0.0005			0.005	Releases or spills from industrial use
Benzo[a]pyrene	mg/L	<0.000005			0.00004	Distribution System materials
Beryllium	mg/L	<0.0005			No Guidelines	Contamination from ceramic applications and manufacturing of aerospace, electronics and mechanical industries
Bicarbonate	mg/L as CaCO <sub>3</sub>	102	168	140	No Guidelines	Erosion of natural deposits in watershed
Boron	mg/L	0.004	0.013	0.009	5	Naturally occurring; leaching or runoff from industrial use
Bromate	mg/L	<0.0095			0.01	Possible contamination in hypochlorite solution
Bromoxynil	mg/L	<0.0001			0.03	Leaching and/or runoff from agricultural or rural use
Cadmium	mg/L	<0.00015			0.007	Erosion of natural deposits in watershed
Calcium	mg/L	45	74	57	No Guidelines	Erosion of natural deposits in watershed
Carbonate	mg/L as CaCO <sub>3</sub>	<20			No Guidelines	Erosion of natural deposits in watershed
Carbon Tetrachloride	mg/L	<0.0005			0.002	Industrial effluents and leaching from hazardous waste sites
Chlorate	mg/L	<0.10	0.11	<0.10	1	Possible contamination in hypochlorite solution
Chloride	mg/L	6.6	23.3	12.0	250 (A)	Naturally occurring, dissolved salt deposits, highway salt
Chlorine, free	mg/L	0.87	1.54	1.15	No Guidelines	Water treatment process
Chlorite	mg/L	<0.10			1	Possible contamination in hypochlorite solution, water treatment process
Chlorpyrifos	mg/L	<0.0010			0.09	Leaching and/or runoff from agricultural or rural use
Chromium	mg/L	<0.0005			0.05	Erosion of natural deposits in watershed
Cobalt	mg/L	<0.0005			No Guidelines	Erosion of natural deposits in watershed.
Coliforms, <i>E. coli</i>	MPN/100mL	<1			0	Domestic animals, wildlife and human waste.
Coliforms, Total	MPN/100mL	<1	2.0	<1	0	Soil, domestic animals and wildlife.
Color	CU	<2			15 (A)	Erosion of natural deposits in watershed.
Conductivity at 25°C	uS/cm	387	547	448	No Guidelines	Leaching and/or runoff from agricultural or rural use
Copper	mg/L	<0.0005	0.0005	<0.0005	2 1 (A)	Erosion of natural deposits in watershed.
Cryptosporidium	oocysts/100L	Not Tested			No Guidelines <sup>2</sup>	Domestic animals, wildlife and human waste.
Cryptosporidium, Log Reduction Ratio <sup>3</sup>	no units	1.00	1.33	1.33	>=1	Domestic animals, wildlife and human waste.
Cyanide	mg/L	<0.00050			0.2	Industrial and mining effluents; Release from organic compounds.
Cyanobacterial toxins – total microcystin	mg/L	<0.00010			0.0015	Naturally occurring; released from blooms of blue-green algae
Diazinon	mg/L	<0.0010			0.02	Run off from agricultural or other uses.
Dicamba	mg/L	<0.0002			0.11	Leaching and/or runoff from agricultural or rural use
1,2-Dichlorobenzene	mg/L	<0.0005			0.2 0.003(A)	Releases or spills from industrial use
1,4-Dichlorobenzene	mg/L	<0.0005			0.005 0.001(A)	Releases or spills from industrial use
1,1-Dichloroethylene	mg/L	<0.0005			0.014	Releases or spills from industrial use
1,2-Dichloroethane	mg/L	<0.0005			0.005	Releases or spills from industrial use
Dichloromethane	mg/L	<0.0005			0.05	Industrial and municipal wastewater discharges
2,4-Dichlorophenol	mg/L	<0.0002			0.9 0.0003(A)	By-product of chlorination.
2,4-D	mg/L	<0.0001			0.1	Leaching and/or runoff from use as a weed controller
Diclofop-methyl	mg/L	<0.00005			0.009	Leaching and/or runoff from use as a weed controller
Sum of Dimethoate	mg/L	<0.0050			0.02	Leaching and/or runoff from agricultural or rural use
1,4-Dioxane	mg/L	<0.0010			0.05	Releases or spills from landfills and industrial use
Diquat	mg/L	<0.0070			0.05	Leaching and/or runoff from agricultural or rural use
Diuron	mg/L	<0.00005			0.15	Leaching and/or runoff from use in controlling vegetation
Ethylbenzene	mg/L	<0.0005			0.14 0.0016 (A)	Emissions, effluents or spills from petroleum and chemical industries
Fluoride	mg/L	0.13	0.27	0.21	1.5	Erosion of natural deposits in watershed. <sup>4</sup>



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Giardia	cysts/100L	Not Tested			No Guidelines <sup>2</sup>	Domestic animals, wildlife and human waste.
Giardia, Log Reduction Ratio <sup>3</sup>	no units	1.94	2.26	2.26	>=1	Domestic animals, wildlife and human waste.
Glyphosate	mg/L	<0.010			0.28	Leaching and/or runoff from use as a weed controller.
Gross Alpha	Bq/L	<0.14			0.5	Naturally occurring; emissions from nuclear reactors
Gross Beta	Bq/L	<0.07			1.0	Naturally occurring; emissions from nuclear reactors
Haloacetic Acids, Total	mg/L	0.008	0.040	0.018	0.08 (Annual Average)	By-product of chlorination.
Hardness	mg/L as CaCO <sub>3</sub>	172	290	213	No Guidelines	Erosion of natural deposits in watershed.
Iron	mg/L	<0.010			0.1 (A)	Erosion of natural deposits in watershed.
Lead	mg/L	<0.0005			0.005	Leaching from plumbing (pipes, solders, brass fittings, and lead service lines)
Lithium	mg/L	0.0031	0.0049	0.0041	No Guidelines	Releases or spills from industrial use
Magnesium	mg/L	13.2	25.9	17.4	No Guidelines	Erosion of natural deposits in watershed.
Malathion	mg/L	<0.0010			0.29	Leaching and/or runoff from agricultural or rural use
Manganese	mg/L	<0.0005	0.0011	<0.0005	0.12 0.02 (A)	Erosion of natural deposits in watershed.
MCPA (2-methyl-4-chlorophenoxyacetic acid)	mg/L	<0.00002			0.35	Leaching and/or runoff from agricultural and other uses
MCPP (methylchlorophenoxy propionic acid)	mg/L	<0.00005			No Guidelines	Leaching and/or runoff from agricultural and other uses
Mercury	mg/L	<0.0000019			0.001	Erosion of natural deposits in watershed
Metolachlor	mg/L	<0.0010			0.05	Leaching and/or runoff from agricultural and other uses
Metribuzin	mg/L	<0.0010			0.08	Leaching and/or runoff from agricultural or rural use
Molybdenum	mg/L	0.0006	0.0008	0.0007	No Guidelines	Leaching and/or runoff from industrial, agricultural and other uses
Monochlorobenzene	mg/L	<0.0005			0.08 0.03(A)	Releases or spills from industrial effluents
MTBE (methyl tertiary-butyl ether)	mg/L	<0.0005			0.015 (A)	Spills from gasoline refineries, filling stations and gasoline powered boats; seepage into groundwater from leaking storage tanks
Nickel	mg/L	<0.0005	0.0007	<0.0005	No Guidelines	Leaching from plumbing (pipes, solders, and brass fittings)
Nitrate	mg/L as N	<0.005	0.139	0.054	10	Erosion of natural deposits in watershed
Nitrite	mg/L as N	<0.005			1	Erosion of natural deposits in watershed
Nitritotriacetic acid (NTA)	mg/L	<0.050	0.089	0.070	0.4	Sewage contamination
Nitrogen-Phosphorus Pesticides, Total <sup>5</sup>	mg/L	<0.01			No Guidelines	Leaching and/or runoff from agricultural or rural use
N-Nitrosodimethylamine (NDMA)	mg/L	<0.0000019			0.00004	By-product of chlorination; industrial and sewage treatment plant effluents
Nitrogen, total (TKN)	mg/L	<0.10	0.16	<0.10	No Guidelines	Erosion of natural deposits in watershed
Odour	Scale = 0-12	8.5	11.5	10.0	Inoffensive	Biological, industrial, or treatment disinfection sources
Pentachlorophenol	mg/L	<0.0001			0.06 0.03 (A)	By-product of chlorination
Perfluorooctane Sulfonate (PFOS)	mg/L	<0.000020			0.0006	Synthetic chemical used in consumer products and fire-fighting foams for their water and oil repellent properties.
Perfluorooctanoic Acid (PFOA)	mg/L	<0.000010			0.0002	Synthetic chemical used in consumer products and fire-fighting foams for their water and oil repellent properties.
pH	pH units	7.0	7.8	7.5	7.0 - 10.5 (O)	Influenced by the dissolved minerals in the water, temperature and water treatment processes.
Phosphorus, Total	mg/L	0.002	0.009	0.004	No Guidelines	Leaching and/or runoff from agricultural and other uses
Picloram	mg/L	<0.0002			0.19	Leaching and/or runoff from agricultural and other uses
Potassium	mg/L	0.6	1.5	0.9	No Guidelines	Erosion of natural deposits in watershed.
Polycyclic Aromatic Hydrocarbons <sup>6</sup> (PAH)	mg/L	<0.0001			No Guidelines	Industrial sources
Selenium	mg/L	<0.0005	0.0008	<0.0005	0.05	Naturally occurring (erosion and weathering of rocks and soils) and release from coal ash from coal-fired power plants and mining, refining of copper and other metals
Silicon, dissolved	mg/L	1.08	1.99	1.63	No Guidelines	Erosion of natural deposits in watershed.
Silver	mg/L	<0.001			No Guidelines	Naturally occurring (erosion and weathering of rocks and soils)
Simazine	mg/L	<0.0010			0.01	Leaching and/or runoff from agricultural and other uses
Sodium	mg/L	4.8	15.3	8.0	200 (A)	Erosion of natural deposits in watershed.
Strontium	mg/L	0.331	0.525	0.404	7.0	Erosion of natural deposits in watershed.
Sulphate	mg/L	61	95	77	500 (A)	Erosion of natural deposits in watershed.
Sulphide	mg/L as H <sub>2</sub> S	<0.0018			0.05 (A)	Can occur in the distribution system from the reduction of sulphates by sulphate-reducing bacteria; industrial wastes



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Taste	mg/L	Not Tested			Inoffensive (A)	Biological or industrial sources
Temperature	°C	4.7	22.3	11.4	15 (A)	Surface water temperature.
Terbufos	mg/L	<0.0005			0.001	Leaching and/or runoff from agricultural and other uses
Tetrachlorethylene	mg/L	<0.0005			0.01	Industrial effluents or spills
2,3,4,6-Tetrachlorophenol	mg/L	<0.0005			0.1	By-product of chlorination; industrial effluents and use of pesticides
Thallium	mg/L	<0.0005			No Guidelines	Erosion of natural deposits in watershed.
Tin	mg/L	<0.0005			No Guidelines	Industrial effluents or spills
Titanium	mg/L	<0.0005			No Guidelines	Industrial effluents or spills
Toluene	mg/L	<0.0005			0.06 0.024(A)	Emissions, effluents or spills from petroleum and chemical industries
Total Dissolved Solids	mg/L	233	326	275	500 (A)	Erosion of natural deposits in watershed.
Total Organic Carbon	mg/L	0.6	2.7	1.2	No Guidelines	Erosion of natural deposits in watershed.
Trichloroethylene	mg/L	<0.0005			0.005	Industrial effluents and spills from improper disposals
2,4,6-Trichlorophenol	mg/L	<0.0005			0.005 0.002 (A)	By-product of chlorination; industrial effluents and spills
Trifluralin	mg/L	<0.0010			0.045	Runoff from agricultural uses
Total Trihalomethanes <sup>7</sup> (TTHMs)	mg/L	0.0053	0.0330	0.0164	0.1 (Annual Average)	By-product of chlorination.
Turbidity	NTU	<0.05	0.07	<0.05	1.0	Suspended particles in solution.
Uranium	mg/L	<0.0005	0.0006	<0.0005	0.02	Industrial effluents or spills
Vanadium	mg/L	<0.0005			No Guideline	Naturally occurring (erosion and weathering of rocks and soils)
Vinyl Chloride	mg/L	<0.0005			0.002	Industrial effluents; degradation product from organic solvents in groundwater; leaching from polyvinyl chloride pipes
Virus, Log Reduction Ratio <sup>3</sup>	no units	1.5			>=1	Domestic animals, wildlife and human waste.
Xylenes, total <sup>7</sup>	mg/L	<0.0010			0.09 0.02 (A)	Emissions, effluents or spills from petroleum and chemical industries
Zinc	mg/L	<0.003	0.013	<0.003	5.0 (A)	Erosion of natural deposits in watershed. Leaching may occur from galvanized pipes, hot water tanks and brass fittings.

### Legend

<sup>1</sup> Maximum acceptable concentrations and guidelines as determined by Health Canada and the Alberta Environment and Protected Areas license to operate

<sup>2</sup> Raw water enteric protozoa concentrations are used to determine the log reduction required

<sup>3</sup> Log Reduction Ratios are calculated by the minimum total log reduction achieved / log reduction required

<sup>4</sup> The City of Calgary ceased fluoridation of its drinking water on May 19, 2011

<sup>5</sup> Total concentration calculated based on 13 Nitrogen-Phosphorus regulated pesticides

<sup>6</sup> Total concentration calculated based on EPA 16 Priority PAH compounds

<sup>7</sup> Calculated parameter based on individual analytes

**(O)** Operating guidance as determined by Health Canada

**(A)** Aesthetic Objective as determined by Health Canada

**(AEPA)** Alberta Environment and Protected Areas provincial guidance

< Indicates not detected above the specified value

**Bq/L** = Becquerel per litre

**mg/L** = milligrams per litre, or parts per million (ppm)

**MPN** = Most-Probable Number

**NTU** = Nephelometric Turbidity Units

**CU** = Color Units

### Information Sources

[Health Canada Guidelines for Canadian Drinking Water Quality, Summary Table \(March 2025\)](#)

[Health Canada Water Quality - Reports and Publications](#)

[Alberta Environment & Protected Areas](#)