ROCKY VIEW COUNTY

Balzac Water Treatment Plant Summary

January 1, 2021 to Dec 31, 2022

		Balzac Treated Water (Entering the Distribution System)				
Parameter	**Units**	**Minimum**	**Maximum**	**Average**	**Maximum Acceptable Concentration or Guideline[1]**	**Common Source**
Aluminum	mg/L	0.0136	0.0517	0.03265	< 0.100 (O) Annual Avg	Naturally occuring and plant treatment process chemicals
Ammonia	mg/L as N	<0.005	0.0067	<0.0067	No Guidelines	Naturally occurring; released agricultural or industrial wastes
Antimony	mg/L	0.00014	0.00023	0.000185	0.006	Erosion of natural deposits in watershed
Arsenic	mg/L	0.00064	0.00079	0.000715	0.01	Erosion of natural deposits in watershed
Atrazine + metabolites	mg/L	<0.0002			0.005	Leaching and/or runoff from agricultural use
Barium	mg/L	0.0562	0.0632	0.0597	1	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
Boron	mg/L	<0.010	0.018	<0.018	5	Naturally occurring; leaching or runoff from industrial use
Bromate	mg/L	<0.00030	0.00071	<0.00071	0.01	Possible contamination in hypochlorite solution
Bromoxynil	mg/L	<0.00005			0.005	Leaching and/or runoff from agricultural use
Cadmium	mg/L	<0.000005	0.0000054	<0.0000054	0.005	Erosion of natural deposits in watershed
Calcium	mg/L	47	47.6	47.3	No Guidelines	Erosion of natural deposits in watershed
Carbon Tetrachloride	mg/L	<0.0005			0.002	Industrial effluents and leaching from hazardous waste sites
Chloramines	mg/L	0.1			3	Formed in the presence of both chlorine and ammonia
Chloride	mg/L	29.6	39	34.3	≤250 (A)	Naturally occurring, dissolved salt deposits, highway salt
Chlorpyrifos	mg/L	<0.0001			0.09	Leaching and/or runoff from agricultural use
Chromium	mg/L	<0.0005			0.05	Erosion of natural deposits in watershed
Colour	TCU	<0.5			15 (A)	Erosion of natural deposits in watershed
Coliforms, *E.Coli*	MPN/100mL	<1	<1	<1	0	Domestic animals, wildlife, human waste
Coliforms, Total	MPN/100mL	<1	<1	<1	0	Soil, domestic animals and wildlife
Copper	mg/L	0.00563	0.00755	0.00659	2, <1(A)	Erosion of natural deposits in watershed
Cyanazine	mg/L	<0.0001			No Guidelines	Leaching and/or runoff from agricultural use
Cyanide	mg/L	<0.02			0.2	Industrial and mining effluents; Release from organic compounds.
Cyanobacterial Toxins - As Microcystin, Total	mg/L	<0.0002			0.0015	Naturally occurring; released from blooms of blue-green algae
Diazinon	mg/L	<0.0001			0.02	Run off from agricultural or other uses.
Dicamba	mg/L	<0.0001			0.12	Leaching and/or runoff from agricultural use
1,2-Dichlorobenzene	mg/L	<0.0005			0.2	Releases or spills from industrial use
1,4-Dichlorobenzene	mg/L	<0.0005			0.005	Releases or spills from industrial use
1,2 Dichlorethane	mg/L	<0.0005			0.005	Releases or spills from industrial use
Dichloromethane	mg/L	<0.001			0.05	Industrial and municipal wastewater discharges
2,4-Dichlorophenol	mg/L	<0.0003			0.9	By-product of chlorination.
2,4 D (2,4-Dichlorophenoxy acetic acid)	mg/L	<0.00005	0.00007	<0.00007	0.1	Leaching and/or runoff from use as a weed controller
Diclofop-methyl	mg/L	<0.0001			0.009	Leaching and/or runoff from use as a weed controller
Diuron	mg/L	<0.001			0.15	Leaching and/or runoff from use in controlling vegetation
Dimethoate	mg/L	<0.0001			0.02	Leaching and/or runoff from agricultural use
Ethylbenzene	mg/L	<0.0005			0.14	Emissions, effluents or spills from petroleum and chemical industries
Fluoride[2]	mg/L	0.069	0.090	0.0795	1.5	Erosion of natural deposits in watershed
Glyphosate	mg/L	<0.0002			0.28	Leaching and/or runoff from use as a weed controller
Haleoacetic Acid, Total	mg/L	0.0124	0.0458	0.0265	0.08 (Annual Average)	By-product of chlorination
Hardness, Total	mg/L as $CaCO_3$	206	217	211.5	No Guidelines	Erosion of natural deposits in watershed
Iron	mg/L	<0.01			≤0.300 (A)	Erosion of natural deposits in watershed
Lead	mg/L	0.000128	0.000141	0.0001345	0.005	Leaching from plumbing (pipes, solder, brass fittings, lead service lines)
Magnesium	mg/L	21.7	22.7	22.2	No Guidelines	Erosion of natural deposits in watershed
Malathion	mg/L	<0.0001			0.19	Leaching and/or runoff from agricultural and other uses
Manganese	mg/L	0.00028	0.00931	0.004795	0.12, ≤0.02(A)	Erosion of natural deposits in watershed
Mercury	mg/L	<0.000005			0.001	Erosion of natural deposits in watershed
Methoxychlor	mg/L	<0.000008			No Guidelines	Leaching and/or runoff from agricultural and other uses
Metolachlor	mg/L	<0.0001			0.05	Leaching and/or runoff from agricultural and other uses
Metribuzin	mg/L	<0.0001			0.08	Leaching and/or runoff from agricultural use
Monochlorobenzene	mg/L	<0.0005			0.08	Releases or spills from industrial effluents
Nitrate	mg/L as N	0.045	0.137	0.091	10 (as N)	Erosion of natural deposits in watershed
Nitrite	mg/L as N	<0.01			1 (as N)	Erosion of natural deposits in watershed
Nitrilotriacetic Acid (NTA)	mg/L	<0.20			0.4	Sewage contamination
Pentachlorophenol	mg/L	<0.0005			0.06	By-product of chlorination
pH	pH units	7.75	8.17	7.96	7-10.5 (O) 6.5-8.5 (AEP)	Influenced by dissolved minerals in water, temp, and treatment process
Picloram	mg/L	<0.0001			0.19	Leaching and/or runoff from agricultural and other uses
Silver	mg/L	<0.00001			No Guidelines	Naturally occurring (erosion and weathering of rocks and soils)
Simazine	mg/L	<0.0001			0.01	Leaching and/or runoff from agricultural and other uses
Sodium	mg/L	33.6	34.7	34.15	≤200 (A)	Erosion of natural deposits in watershed
Sulphate	mg/L	93.7	103	98.35	≤500 (A)	Erosion of natural deposits in watershed
Sulphide	mg/L	<0.0015			≤0.05 (A)	Reduction of sulphates by sulphate-reducing bacteria; industrial wastes
Selenium	mg/L	0.000172	0.000300	0.000236	0.05	Naturally occurring (erosion and weathering of rocks and soils)

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Terbufos	mg/L	<0.0001			0.001	Leaching and/or runoff from agricultural and other uses
Tetrachloroethylene	mg/L	<0.0005			0.01	Industrial effluents or spills
2,3,4,6-Tetrachorophenol	mg/L	<0.0005			0.1	By-product of chlorination; industrial effluents and use of pesticides
Tolulene	mg/L	<0.0005			0.06	Emissions, effluents or spills from petroleum and chemical industries
Total Dissolved Solids	mg/L	310	335	322.5	500 (A)	Erosion of natural deposits in watershed
Total Organic Carbon	mg/L	<0.0015			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-Trichorophenol	mg/L	<0.0005			0.005	By-product of chlorination; industrial effluents and spills
Trifluralin	mg/L	<0.0001			0.045	Runoff from agricultural uses
Trihalomethanes, Total	mg/L	0.0274	0.118	0.0624	0.1 (Annual Average)	By-product of chlorination
Uranium	mg/L	0.000015	0.000076	0.0000455	0.02	Industrial effluents or spills
Vinyl Chloride	mg/L	<0.0005			0.002	Industrial effluents; degredation product from organic solvents in groudwater; leaching from PVC pipes
Xylenes (total)	mg/L	<0.0005			0.09	Emissions, effluents or spills from petroleum and chemical industries
Zinc	mg/L	<0.003			≤5.000 (A)	Erosion of natural deposits in watershed/leaching from plumbing fixtures

Legend

[1] Maximum acceptable concentrations and guidelines as determined by Health Canada and the Alberta Environment and Parks liscense to operate

[2] East Balzac does not add flouride to treated water

(O) Operating guidance as determined by Health Canada

(A) Aesthetic Objective as determined by Health Canada

(AEP) Alberta Environment and Parks provincial guideline

< Indicates not detected above the specified parameter (less than)

mg/L = mililgrams per litre, or parts per million

TCU = True Colour Units

MPN = Most Probable Number

Links

Health Canada Guidelines for Canadian Drinking Water Quality, Summary Table (Sept 2020)

Health Canada Water Quality - Reports and Publications

Alberta Environment and Parks