



2012 Drinking Water Quality Test Results SUMMARY TABLE

Vars Communal Well System

Physical, Microbiological, Chemical, & Radiological test results

2012 Water Production = 333 m³/d

Notes:

* Guidelines for Canadian Drinking Water Quality (Health Canada) & Ontario Drinking Water Standards (Ministry of Environment)

** Calculated parameter based on individual analytes

mg/L = milligram per Litre = part per million (ppm)

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Physical Tests

Parameter	Unit of measure	Vars Treated Water (average)	Health-based Drinking Water Guideline*	Aesthetic or Operational Guideline*
Colour	TCU	3	--	5.0
Turbidity	NTU	0.64	--	5.0
Temperature	degree C	10.6	--	15.0
Conductivity	m-mhos/cm	457	--	--

Microbiological Tests

Parameter	Unit of measure	Vars Treated Water (average)	Health-based Drinking Water Guideline*	Aesthetic or Operational Guideline*
Total Coliforms	cfu/100mL	0	0	--
E.coli	cfu/100mL	0	0	--
Heterotrophic Plate Count (HPC)	cfu/mL	nd	--	500

Chemical - General

Parameter	Unit of measure	Vars Treated Water (average)	Health-based Drinking Water Guideline*	Aesthetic or Operational Guideline*
pH	log ₁₀	7.68	--	6.5 - 8.5
Alkalinity	mg/L CaCO ₃	213	--	30 - 500
Total chlorine (free) ⁴	mg/L	1.02	0.25 - 3.00	--
Bromide	mg/L	0.004	--	--
Bromate	mg/L	nd	0.01	--
Chlorite	mg/L	nd	--	--
Chlorate	mg/L	0.18	--	--
Chloride	mg/L	14.3	--	250
Fluoride	mg/L	0.16	1.5	--
Calcium	mg/L	60.6	--	--
Magnesium	mg/L	11.2	--	--
Potassium	mg/L	3.72	--	--
Sodium	mg/L	23.2	20	200
Sulphate	mg/L	16.6	--	500
Phosphates	mg/L	.014	--	--
Total Phosphorous	mg/L	0.013	--	--
Cyanide	mg/L	nd	0.2	--
Total Hardness**	mg/L CaCO ₃	179.4	--	80 - 100
Calcium Hardness**	mg/L CaCO ₃	151.4	--	--

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Parameter	Unit of measure	Vars Treated Water (average)	Health-based Drinking Water Guideline*	Aesthetic or Operational Guideline*
Magnesium Hardness**	mg/L CaCO ₃	28.0	--	--
Ammonia	mg/L N	0.03	--	--
Total Kjeldahl Nitrogen	mg/L N	0.02	--	--
Organic Nitrogen**	mg/L N	nd	--	0.15
UV254 Absorbance	Absorbance/cm	0.022	--	--
Nitrate	mg/L N	nd	10.0	--
Nitrite	mg/L N	nd	1.0	--
Dissolved Organic Carbon	mg/L	1.4	--	5.0

Chemical - Inorganic Metals

Parameter	Unit of measure	Vars Treated Water (average)	Health-based Drinking Water Guideline*	Aesthetic or Operational Guideline*
Aluminum	mg/L	0.0081	--	0.100
Antimony	mg/L	nd	0.006	--
Arsenic	mg/L	nd	0.010 ² / 0.025 ³	--
Barium	mg/L	0.2927	1.0	--
Beryllium	mg/L	nd	--	--
Bismuth	mg/L	nd	--	--
Boron	mg/L	0.0572	5.000	--
Cadmium	mg/L	nd	0.01	--
Chromium	mg/L	0.0002	0.05	--
Chromium VI	mg/L	0.00005	--	--
Cobalt	mg/L	0.0001	--	--
Copper	mg/L	0.1459	--	1.00
Iron	mg/L	0.0131	--	0.30
Lead	mg/L	.0009	0.010	--
Manganese	mg/L	0.0181	--	0.05
Mercury	mg/L	nd	0.001	--
Molybdenum	mg/L	0.0002	--	--
Nickel	mg/L	0.0012	--	--
Selenium	mg/L	nd	0.010	--
Silver	mg/L	nd	--	--
Strontium	mg/L	0.387	--	--
Thallium	mg/L	nd	--	--
Tin	mg/L	0.0001	--	--
Titanium	mg/L	nd	--	--

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Parameter	Unit of measure	Vars Treated Water (average)	Health-based Drinking Water Guideline*	Aesthetic or Operational Guideline*
Tungsten	mg/L	nd	--	--
Uranium	mg/L	nd	0.02	--
Vanadium	mg/L	0.0004	--	--
Zinc	mg/L	0.0105	--	5.0
Zirconium	mg/L	0.0001	--	--

Radiological Parameters

Parameter	Unit of measure	Vars Treated Water (average)	Health-based Drinking Water Guideline*	Aesthetic or Operational Guideline*
Gross-Alpha Radioactivity	Bq/L	nd	0.010 ⁵	--
Gross-Beta Radioactivity	Bq/L	0.1000	1.00 ⁵	--
Radon	Bq/L	nd	--	--
Tritium	Bq/L	nd	7000	--

Chemical - Disinfection By-Products

Parameter	Unit of measure	Vars Treated Water (average)	Health-based Drinking Water Guideline*	Aesthetic or Operational Guideline*
Chloroform	µg/L	13.1	--	--
Bromodichloromethane	µg/L	4.3	--	--
Dibromochloromethane	µg/L	1.8	--	--
Bromoform	µg/L	0.3	--	--
Total Trihalomethanes (TTHMs) ¹	µg/L	22.7	100.0	--
Monochloroacetic Acid	µg/L	nd	--	--
Monobromoacetic Acid	µg/L	nd	--	--
Dichloroacetic Acid	µg/L	5.5	--	--
Dibromoacetic Acid	µg/L	nd	--	--
Trichloroacetic Acid	µg/L	8.4	--	--
Bromochloroacetic Acid	µg/L	2.0	--	--
Bromodichloroacetic Acid	µg/L	3.6	--	--
Chlorodibromoacetic Acid	µg/L	nd	--	--
Tribromoacetic Acid	µg/L	nd	--	--
Total Haloacetic Acids (HAA5)	µg/L	14.1	80.0 ²	--
Total Haloacetic Acids (HAA9)	µg/L	19.5		

Chemical - Trace Organic Parameters

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Parameter	Unit of measure	Vars Treated Water (average)	Health-based Drinking Water Guideline*	Aesthetic or Operational Guideline*
1,1-Dichloroethylene	µg/L	nd	14	--
1,2-Dichlorobenzene	µg/L	nd	200	3
1,2-Dichloroethane	µg/L	nd	5	--
1,4-Dichlorobenzene	µg/L	nd	5	1
2,3,4,6-Tetrachlorophenol	µg/L	nd	100	1
2,4,5-Trichlorophenoxyacetic Acid (2,4,5-T)	µg/L	nd	280	20
2,4,6-Trichlorophenol	µg/L	nd	5	2
2,4-Dichlorophenol	µg/L	nd	900	0.3
2,4-Dichlorophenoxyacetic Acid (2,4-D)	µg/L	nd	100	--
Alachlor	µg/L	nd	5	--
Aldicarb	µg/L	nd	9	--
Aldrin	µg/L	nd	--	--
Aldrin + Dieldrin	µg/L	nd	0.7	--
Atrazine	µg/L	nd	--	--
Atrazine + N-dealkylated metabolites	µg/L	nd	5	--
De-ethylated Atrazine	µg/L	nd	--	--
Azinphos-methyl	µg/L	nd	20	--
Beniocarb	µg/L	nd	40	--
Benzene	µg/L	nd	5	--
Benzo(a)pyrene	µg/L	nd	0.01	--
Bromoxynil	µg/L	nd	5	--
Carbaryl	µg/L	nd	90	--
Carbofuran	µg/L	nd	90	--
Carbon tetrachloride	µg/L	nd	5	--
Chlordane - alpha	µg/L	nd	--	--
Chlordane - gamma	µg/L	nd	--	--
Chlordane total	µg/L	nd	7	--
Chlorpyrifos	µg/L	nd	90	--
Cyanazine	µg/L	nd	10	--
DDD - para, para	µg/L	nd	--	--
DDE - para, para	µg/L	nd	--	--
DDT - ortho, para	µg/L	nd	--	--
DDT - para, para	µg/L	nd	--	--
DDT + metabolites	µg/L	nd	30	--

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Diazinon	µg/L	nd	20	--
Dicamba	µg/L	nd	120	--
Dichloromethane	µg/L	nd	50	--
Diclofop - methyl	µg/L	nd	9	--
Dieldrin	µg/L	nd	--	--
Dimethoate	µg/L	nd	20	--
Dinoseb	µg/L	nd	10	--
Diquat	µg/L	nd	70	--
Diuron	µg/L	nd	150	--
Ethylbenzene	µg/L	nd	--	2.4
Glyphosate	µg/L	nd	280	--
Heptachlor	µg/L	nd	--	--
Heptachlor + Heptachlor Epoxide	µg/L	nd	3	--
Heptachlor Epoxide	µg/L	nd	--	--
Hexachlorocyclohexane - gamma (Lindane)	µg/L	nd	4	--
Malathion	µg/L	nd	190	--
MCPA	µg/L	nd	100	--
Methoxychlor	µg/L	nd	900	--
Metalochlor	µg/L	nd	50	--
Metribuzin	µg/L	nd	80	--
Monochlorobenzene	µg/L	nd	80	30
Methyl-tert -Butyl Ether (MTBE)	µg/L	nd	--	15
Nitrilotriacetic Acid	µg/L	nd	400	--
N-Nitrosodimethylamine (NDMA)	µg/L	nd	0.040 ² / 0.009 ³	--
Oxychlorane	µg/L	nd	--	--
Paraquat	µg/L	nd	10	--
Parathion	µg/L	nd	50	--
Pentachlorophenol	µg/L	nd	60	30
Phorate	µg/L	nd	2	--
Picloram	µg/L	nd	190	--
Polychlorinated Biphenyls (PCBs)	µg/L	nd	3	--
Prometryne	µg/L	nd	1	--
Simazine	µg/L	nd	10	--
Temephos	µg/L	nd	280	--
Terbufos	µg/L	nd	1	--
Tetrachloroethylene	µg/L	nd	30	--

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Toluene	µg/L	nd	--	24
Triallate	µg/L	nd	230	--
Trichloroethylene	µg/L	nd	5	--
Trifluralin	µg/L	nd	45	--
Vinyl Chloride	µg/L	nd	2	--
Xylene - meta & para	µg/L	nd	--	--
Xylene - ortho	µg/L	nd	--	--
Xylene - total	µg/L	nd		300