REGIONAL DISTRICT OF NANAIMO

French Creek Distribution (Tap Water) Analysis
1228 Sunrise Drive

CDWG=Canadian Drinking Water Guidelines
MAC=Maximum Acceptable Concentration
OG= Operational Guidance Value
AO= Asthetic Objective

Orange font indicates non-compliance with the Aesthetic Objective in the Canadian Drinking Water Guidelines (CDWG)
Red font indicates non-compliance with the Maximum Acceptable Concentration (MAC) in the CDWG

	Units	CDWG		May 8 2017	May 7 2018	May 13 2019	May 21 2020	May 6 2021	May 5 2022	May 25 2023	May 9 2024
Miscellaneous Inorganics											
Fluoride	mg/L	1.5	MAC	0.12	0.11	0.11	0.11	0.096	<0.05	<0.05	<0.05
Alkalinity (total as CaCO)	mg/L			144	127	137	130	140	49	51	48
Anions											
Dissolved Sulphate	mg/L	500	AO	26.4	27.6	28.4	36	29	3.7	2.9	2.7
Dissolved Chloride	mg/L	250	AO	12	11	12	13	14	4.2	4.7	3.7
Nitrite	mg/L	1	MAC	<0.0050	<0.0050	<0.005	<0.005	<0.005	0.183	<0.005	<0.005
Miscellaneous											
Apparent Colour	Colour Unit			10	20	<2	20	20	<5	<5	<2.0
Nutrients											
Total Ammonia	mg/L			0.11	0.028	<0.015	0.061	<0.015	<0.015	<0.015	<0.015
Physical Properties											
Conductivity	µS/cm			344	336	354	350	360	120	130	120
pH	pH	7.0:10.5	AO	8.27	8.12	8.14	8.09	8.16	7.14	7.22	7.35
TDS	mg/L	500	AO	204	198	210	210	210	66	72	78
Turbidity	NTU			1.85	1.37	1.33	1.5	1.1	5	<0.1	<0.1
Microbiological Parameters											
E.coli	MPN/100mL	<1	MAC	<1.0	<1.0	0	0	0	0	0	0
Total Coliforms	MPN/100mL	<1	MAC	<1.0	<1..0	0	0	0	0	0	0
Calculated Parameters											
Total Hardness (CaCO)	mg/L			181	144	154	154	150	49.6	55	49.4
Nitrate	mg/L	10	MAC	<0.020	<0.020	<0.02	<0.02	<0.02	0.183	0.289	0.242
Elements											
Total Mercury	mg/L	0.001	MAC	<0.00001	<0.000002	<0.000002	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Total Metals											
Total Aluminum	mg/L	0.1	OG	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.03	0.0039
Total Antimony	mg/L	0.006	MAC	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Total Arsenic	mg/L	0.01	MAC	0.00012	<0.0001	<0.00012	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Barium	mg/L	1	MAC	0.0191	0.015	0.0156	0.0163	0.163	0.0186	0.0026	0.0025
Total Beryllium	mg/L			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Bismuth	mg/L			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Boron	mg/L	5	MAC	<0.050	<0.050	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Cadmium	mg/L	0.005	MAC	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Total Chromium	mg/L	0.05	MAC	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Cobalt	mg/L			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Total Copper	mg/L	1	AO	0.0009	0.00102	0.00119	0.00096	0.00112	0.0135	0.00784	0.01
Total Iron	mg/L	0.3	AO	0.125	0.123	0.11	0.104	0.0905	0.781	<0.005	0.0053
Total Lead	mg/L	0.01	MAC	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00154	0.00059	0.0006
Total Manganese	mg/L	0.02 0.12	AO MAC	**0.142**	**0.127**	**0.107**	**0.105**	**0.124**	**0.124**	<0.001	<0.001
Total Molybdenum	mg/L			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Nickel	mg/L			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Selenium	mg/L	0.05	MAC	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Silicon	mg/L			15.6	12.5	11.4	11.7	11.7	5.54	6.23	6.2
Total Silver	mg/L			<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Total Strontium	mg/L			0.163	0.146	0.137	0.15	0.153	0.0394	0.0336	0.0315
Total Thallium	mg/L			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001
Total Tin	mg/L			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Titanium	mg/L			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Uranium	mg/L	0.02	MAC	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Vanadium	mg/L			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Zinc	mg/L	5	AO	<0.005	<0.005	<0.005	<0.005	<0.005	0.0166	<0.005	<0.005
Total Zirconium	mg/L			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Calcium	mg/L			44.7	34.9	37.3	37.5	35.7	15.2	15.4	15
Total Magnesium	mg/L			16.9	13.7	14.7	14.5	14.7	2.83	4.01	2.93
Total Potassium	mg/L			3.05	2.32	2.49	2.5	2.53	0.284	0.17	0.154
Total Sodium	mg/L	200	AO	14.1	11.7	12.2	12	12.3	3.11	3.49	3.3
Total Sulphur	mg/L			10.9	8.8	9.4	9.7	8.8	<3	<3	<3

Notes below about Manganese (2019) from: https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html

Type	Parameter (published, reaffirmed)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
I = Inorganic chemical parameter	Manganese (2019)	0.12	AO: <0.02	Dissolution of naturally-occurring minerals commonly found in soil and rock. Other sources include industrial discharge, mining activities and leaching from landfills.	**Health Basis of MAC:** Effects on neurological development and behaviour; deficits in memory, attention, and motor skills. **Other:** Formula-fed infants (where water containing manganese at levels above the MAC is used to prepare formula) may be especially at risk.	AO based on minimizing the occurrence of discoloured water, consumer complaints and staining of laundry.

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1381 Gilley Cres

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	Units	CDWG		May 13 2019	May 21 2020	May 6 2021	May 19 2022	May 25 2023	May 9 2024
Volatiles									
Total Trihalomethanes	mg/L	0.1	MAC	0.024	0.024	0.025	0.0068	0.003	0.0049
Bromodichloromethane	mg/L			0.0076	0.0077	0.0075	0.0018	0.0013	0.0015
Bromoform	mg/L			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chlorodibromomethane	mg/L			0.003	0.0032	0.0036	<0.001	<0.001	0.0012
Chloroform	mg/L			0.014	0.013	0.014	0.005	0.0018	0.0023