REGIONAL DISTRICT OF NANAIMO

Decourcey Raw Well Water Analysis
Between 3274 & 3284 Bisell Road

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

Orange font indicates non-compliance with the Aesthetic Objective (AO) in the Canadian Drinking Water Guidelines (CDWG)

Red font indicates non-compliance with the Maximum Acceptable Concentration (MAC) in the CDWG

	Units	CDWG		October 11 2016	September 19 2017	October 23 2018	October 22 2019	October 16 2020	November 2 2021	November 8 2022	October 16 2023	October 30 2024
Miscellaneous Inorganics												
Fluoride	mg/L	1.5	MAC	0.2	0.17	0.15	0.15	0.14	0.1	0.14	0.14	<0.05
Alkalinity (total as CaCO)	mg/L			214	207	202	200	180	150	200	190	100
Anions												
Dissolved Sulphate	mg/L	500	AO	22	21.9	25.6	25	25	15	24	24	7.8
Dissolved Chloride	mg/L	250	AO	55	70	99	91	140	63	130	110	11
Nitrite	mg/L	1	MAC	<0.0050	<0.0050	<0.0050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Miscellaneous												
Apparent Colour	Colour Unit			5	10	5	<5	5	<5	<5	<5	4.3
Nutrients												
Total Ammonia	mg/L			0.094	<0.020	0.094	0.078	0.029	<0.015	<0.015	<0.015	<0.015
Physical Properties												
Conductivity	µS/cm			637	649	746	700	850	510	890	800	260
pH	pH	7.0:10.5	AO	7.99	8.41	8.27	8.09	7.94	7.26	7.96	7.6	6.78
TDS	mg/L	500	AO	356	350	406	390	470	300	470	460	180
Turbidity	NTU			0.22	0.25	0.32	0.33	0.19	0.83	0.61	0.4	0.57
Microbiological Parameters												
E.coli	MPN/100mL	<1	MAC	<1	<1.0	<1.0	0	0	0	0	0	0
Total Coliforms	MPN/100mL	<1	MAC	**3.1**	<1.0	<1.0	**27**	**32**	0	0	0	0
Calculated Parameters												
Total Hardness (CaCO)	mg/L			34.4	35.8	46.3	49.8	57.5	34.8	59.7	50.5	71.9
Nitrate	mg/L	10	MAC	0.126	<0.020	<0.020	0.066	0.042	0.366	0.038	0.022	0.337
Elements												
Total Mercury	mg/L	0.001	MAC	<0.00001	<0.00001	0.0000048	0.0000084	0.0000036	0.0000032	0.0000043	0.0000032	0.0000028
Total Metals												
Total Aluminum	mg/L	0.1	OG	0.0067	0.0128	0.0054	0.0067	<0.003	0.0309	0.0101	0.0056	0.0152
Total Antimony	mg/L	0.006	MAC	<0.0005	<0.0005	<0.00050	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Total Arsenic	mg/L	0.01	MAC	0.00031	0.00025	0.00023	0.00023	0.00017	0.00018	0.00019	0.0002	0.00015
Total Barium	mg/L	1	MAC	0.0064	0.0068	0.0093	0.0091	0.0115	0.0094	0.0102	0.0093	0.0056
Total Beryllium	mg/L			<0.0001	<0.0001	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Bismuth	mg/L			<0.001	<0.001	<0.0010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Boron	mg/L	5	MAC	0.148	0.152	0.133	0.129	0.115	0.09	0.116	0.131	<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	<0.00001
Total Chromium	mg/L	0.05	MAC	<0.001	<0.001	<0.0010	0.0011	<0.001	<0.001	0.0014	<0.001	<0.001
Total Cobalt	mg/L			<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Total Copper	mg/L	1	AO	0.00422	0.00206	0.00156	0.00187	0.00143	0.00184	0.00609	0.00466	0.00691
Total Iron	mg/L	0.1	AO	0.0133	0.0186	0.013	0.0803	<0.005	0.0406	0.0306	0.0172	0.0785
Total Lead	mg/L	0.01	MAC	0.00026	0.0002	0.00023	0.00023	<0.0002	<0.0002	0.00028	0.0003	0.00331
Total Manganese	mg/L mg/L	0.02 0.12	AO MAC	0.0145	0.0094	**0.0304**	**0.0265**	**0.0503**	**0.0334**	0.0091	0.0099	0.0065
Total Molybdenum	mg/L			<0.001	<0.001	<0.0010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Nickel	mg/L			<0.001	<0.001	<0.0010	<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	<0.0001
Total Silicon	mg/L			6.43	7.18	7.75	7.67	7.8	6.96	7.85	8.21	6.48
Total Silver	mg/L			<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Total Strontium	mg/L			0.147	0.142	0.203	0.209	0.255	0.123	0.228	0.214	0.167
Total Thallium	mg/L			<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Total Tin	mg/L			<0.005	<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	<0.005
Total Uranium	mg/L	0.02	MAC	0.00015	0.00014	<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	<0.005
Total Zinc	mg/L	5	AO	<0.005	0.0067	0.007	0.0065	0.0061	0.0093	0.0104	0.0095	0.0114
Total Zirconium	mg/L			<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Calcium	mg/L			10.5	11.1	14.2	15.5	17.8	10.6	18.6	15.3	22.8
Total Magnesium	mg/L			1.98	1.99	2.63	2.71	3.18	2.03	3.23	2.96	3.66
Total Potassium	mg/L			0.651	0.663	0.857	0.811	0.97	0.673	0.895	0.883	0.347
Total Sodium	mg/L	200	AO	126	130	142	128	144	96.8	148	155	23
Total Sulphur	mg/L			7	7.4	8.2	7.6	8.4	3.8	7.3	7.7	<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.