REGIONAL DISTRICT OF NANAIMO

Water Service Area Annual Report 2022

Nanoose Bay Peninsula Water Service Area

June 2023

REGIONAL DISTRICT OF NANAIMO

Water & Utility Services Department

6300 Hammond Bay Rd, Nanaimo, BC Canada V9T 6N2 | Ph 250-390-6560

Table of Contents

1. Introduction

The following annual report describes the Nanoose Bay Peninsula (NBP) Water Service Area and summarizes the water quality and production data from 2022. This report also includes a summary of inquiries and complaints, completed and proposed maintenance activities, Operator Certification, the Emergency Response & Contingency Plan, and the Cross Connection Control Program. This report is to be submitted to Island Health by the spring of 2023.

2. Nanoose Bay Peninsula Water System

The Nanoose Bay Peninsula Water System was established in 2005 by amalgamating the 7 small water service areas located within the Nanoose Bay Peninsula. The previous service areas, if referred to in this report, are noted as neighbourhoods within the NBP service area. In 2022, the Nanoose Peninsula Water System was comprised of 2264 residential and 67 commercial water service customers.

The water supply is a combination of groundwater wells and surface water from the Englishman River. The water supply is chlorinated and stored in several reservoirs throughout Nanoose Bay.

2.1 Groundwater Wells

Fourteen groundwater production wells are located within the Nanoose Bay Peninsula. Nanoose Wells #2, #3, and #4 are on standby for use during periods of high demand (if required). Nanoose Well #5 has not been in use since 2002, due to saltwater intrusion, and has been permanently converted to a provincial monitoring well. Nanoose Well #6 hasn't been used since 2010 due to operational challenges with chlorination. Nanoose Well #7 was drilled in 2008 but has not yet been approved for community drinking water supply. West Bay #3 experienced reduced production over time and was replaced by West Bay #4, which was drilled in 2019. Fairwinds Well #1 has also experienced reduced production and was replaced by Tippet Road Well #1, which was drilled in 2020.

Well / Name	Well Depth	Wellhead Protection In Place	Treated/Untreated with Chlorine
Wallbrook #1	16.9 m	Yes	Treated
Madrona #4	52.1 m	Yes	Un-treated
Madrona #8	17.1m	Yes	Treated
Nanoose #2	53.3 m	Yes	Treated
Nanoose #3	52.7 m	Yes	Treated
Nanoose #4	59.1 m	Yes	Treated
Nanoose #6	107.0 m	Yes	(Not in use)
Nanoose #7	60.6 m	Yes	(Not in use)
Fairwinds #1	69.8 m	Yes	(Not in use)
Fairwinds #2	75.3 m	Yes	Treated
Fairwinds #3	72.2 m	Yes	Treated
West Bay #4	75.6 m	Yes	Treated
Tippet Rd #1	71.0 m	Yes	Treated
Parker Road	91.4 m	Yes	Treated

A drinking water filtration plant is located at 2480 Nanoose Road, and its purpose is to filter out iron, manganese, and ammonia from Fairwinds Wells #2 & 3, Tippet Road Well #1, and West Bay Well #4. A back-up generator is available in the event of a power outage. In the case of an extended power outage, drinking water will continue to be supplied but it will only be chlorinated, not filtered.

Nanoose Bay Water Treatment Plant

2.2 Reservoirs

Six water storage reservoirs are present in the Nanoose Bay Peninsula Water System as follows;

- Madrona (concrete) - 485 m^3 (100,000 imperial gallons) capacity
- Eagle Heights (concrete) - 341 m^3 (75,000 imperial gallons) capacity
- Dolphin (concrete) - 455 m^3 (100,000 imperial gallons) capacity
- Fairwinds Res #1 (concrete) - 701 m^3 (154,000 imperial gallons) capacity
- Fairwinds Res #2 (concrete) - 701 m^3 (154,000 imperial gallons) capacity
- Arbutus Park (lined concrete, wooden roof) - 568 m^3 (125, 000 imp. gallons) capacity

The Beachcomber reservoir was demolished in 2015. The location of a new water storage reservoir is currently being considered.

2.3 Distribution System

The water distribution system in Nanoose Bay is summarized in the table below. Fire hydrants (287) are located throughout the water service area.

Watermain Material	Length of mains in NBP Water Service Area	Prevalence in Water Service Area
Asbestos-concrete:		
150mm or smaller	9.7 km	12.2%
200mm or larger	2.7 km	3.4%
PVC:		
150mm or smaller	23.2 km	29.1%
200mm or larger	33.5 km	42.1%
Ductile Iron:		
150mm or smaller	0.2 km	0.2%
200mm or larger	10.3 km	13.0%

Note: 'PVC' is poly-vinylchloride (plastic)

3. Water Sampling and Testing Program

Water sampling and testing is carried out weekly in the distribution system. Notably, the chlorine residual levels are tested weekly to ensure the absence of bacterial regrowth in the watermains. The following table includes a summary of all testing:

Timing	Location	Tests
Weekly	RDN (in-house) Laboratory	Total coliforms, E.Coli, pH, TDS, Temperature, Conductivity, Turbidity, Chlorine residual, Salinity
Monthly (Health Dept.)	BC Centre for Disease Control	Total coliforms, E.Coli
Annual Source Water Testing (every Fall)	Bureau Veritas	Complete potability testing of all raw well water, including T-Ammonia
Annual System Water Testing (every Spring)	Bureau Veritas	Complete potability testing of distribution system, including T-Ammonia
Filtration Plant Output Once per month	Bureau Veritas	True colour, Ammonia, Iron, Manganese, and Chloramines

4. Water Quality - Source Water and Distribution System

Up-to-date water quality reports and lab data are posted monthly on the RDN website at www.rdn.bc.ca/nanoose-bay-peninsula. Tables of water quality testing results for both the source water and distribution system are provided at the end of this report under Appendix B.

Stewart Road Pump Station (2020)

5. Water Quality Inquiries and Complaints

Tap water quality has improved over the years with the construction of the Nanoose Bay Peninsula water filtration plant and Englishman River Water Service. Filtered groundwater from the Fairwinds and West Bay wells is mixed with filtered water from the Englishman River (as required) and stored in the same six reservoirs throughout Nanoose Bay.

Several inquiries were received from the Nanoose Bay Peninsula Water Service Area in 2022. Iron and manganese water discolouration was present intermittently in the Fairwinds and Beachcomber areas, which were cleared up by flushing the watermains and water services in these areas. Complaints regarding high water bills were addressed through the RDN's Leak Adjustment Policy.

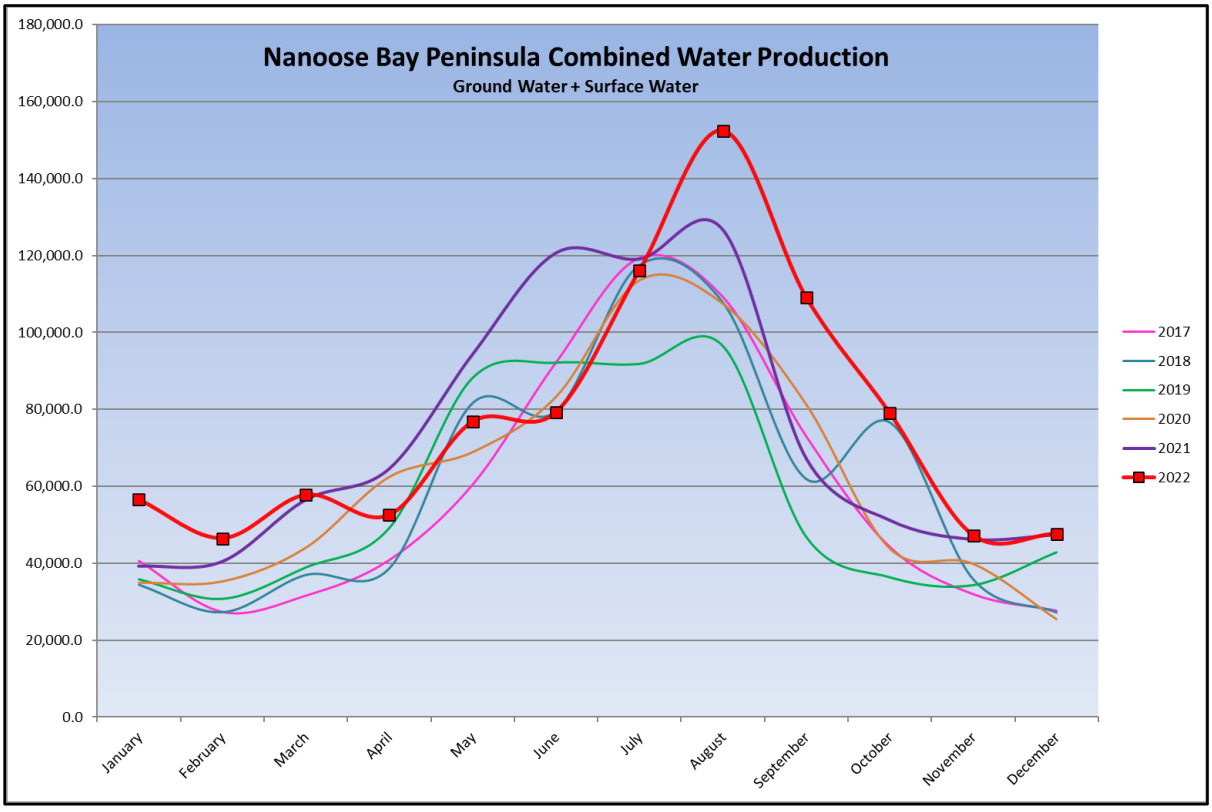
A few inquiries were received about subdivision in Nanoose Bay. Due to the increased water supply available from the Englishman River Water Service, additional water connections are now available. However, these connections are only designed to serve customers already located within the Nanoose Bay Peninsula Water Service (whose properties are large enough to subdivide). More information can be found at https://rdn.bc.ca/connect-rdn-water.

A summary of the water system incidents in 2022 is given in the table below.

Activity in 2022	Date(s)	History/Notes
Boil Water Advisories	None	None
High Turbidity Events	None	None
Equipment Malfunction	None	None
Water Main Breaks	Dec 2022	Schooner Cove Drive
Pump Failures	None	None

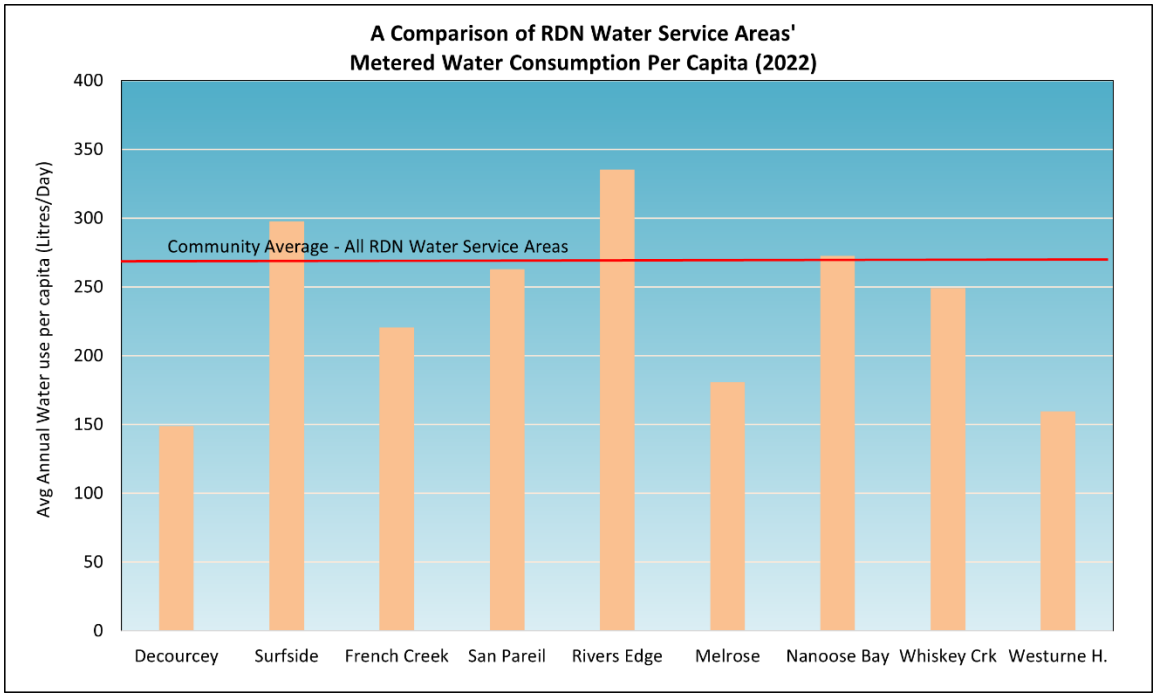
6. Surface Water and Groundwater Production and Consumption

The monthly combined surface and groundwater well production for the past 6 years is shown in the chart below. Production in 2022 was significantly higher than previous years due to high seasonal temperatures. The reliance on groundwater has been reduced due to the year-round use of surface water supply from the Englishman River.



Water Consumption

In the Fall/Winter of 2022, water billing records indicate that the average water usage per home in Nanoose Bay was 0.42 cubic metres per day (92.4 imperial gallons). In the summer, the average water usage was 1.12 cubic metres per day (246 imperial gallons). Based on these figures, the annual consumption per capita is estimated to be 273 L/day (based on 2.4 people/household). This consumption is *1% more* than the RDN system average of 269 L/day/capita in 2022.



7. Maintenance Program

Weekly pump station inspections are carried out to reduce or eliminate the risk of contamination and system failure, and to ensure the consistent application of chlorine for treatment purposes. Watermains are flushed once annually in the Spring. Fire hydrants are serviced once per year (either 'A-level' or 'B-level' maintenance). Water storage reservoirs are drained and cleaned once every 3-4 years, as required. Twenty-four hour on-call coverage is in place to respond to water system emergencies and alarms.

8. Operator Certification

The Regional District Water & Utility Services staff are comprised of one Manager, one Project Engineer, one Engineering Technologist, one Engineering Technician, one Chief Operator, and seven certified operators. The operators receive ongoing training and certification in:

- ✓ Water Treatment
- ✓ Water Distribution
- ✓ Wastewater Collection
- ✓ Cross Connection Control
- ✓ Asbestos Awareness
- ✓ Chlorine Handling
- ✓ WHMIS (Workplace Hazardous Material Information System)
- ✓ TDG (Transportation of Dangerous Goods)
- ✓ Confined Space Awareness
- ✓ Fall Protection
- ✓ First Aid
- ✓ Silica Awareness

Fairwinds
Reservoir No. 1

9. Water System Projects

9.1 2022 Completed Studies & Projects

- Island Health administered Groundwater At Risk of containing Pathogens (GARP) assessment;
- Replaced asbestos-concrete watermains on Outrigger Road, Dolphin Drive, and Dorcas Point Roads;
- Begin Arbutus reservoir decommissioning and replacement feasibility study/review;
- Begin design upgrade to Arbutus booster pump station;
- Began water meter replacement project;
- Corresponded with residents regarding water conservation;
- Utilized leak detection equipment and tracking;
- Set new water rates structure based on rewarding conservation;
- Followed Cross Connection Control program to reduce backflow prevention risks;
- Enforced outdoor sprinkling regulations;
- Advised residents regarding water leak repairs;
- Continued the 2021-2030 Water Conservation Plan;
- Completed regular watermain flushing and hydrant maintenance;
- Maintained a high level of water quality;
- Continued quality control through regular testing and monitoring of water system;
- Continued valve maintenance program.

9.2 2023 Proposed Projects & Upgrades

Tippet Road Well #1 Site (2022)

- Decommission Nanoose Well #6;
- Continue water meter replacement project;
- Andover Road PRV upgrade;
- Continue Arbutus reservoir decommissioning and replacement feasibility study/review;
- Continue design upgrade to Arbutus booster pump station;
- Complete irrigation checks for high-water users;
- Begin billing for metered consumption based on revised water rates;
- Continue watermain flushing program and hydrant maintenance;
- Continue leak detection equipment utilization program;
- Introduce new watermain flushing and metering procedures to promote conservation;
- Continue valve maintenance program;
- Continue the 2021-2030 DWWP Water Conservation Plan; and
- Continue to offer numerous water-saving incentives via rebates.

ERWS Bulk Water Transmission Line Construction near Hwy 19 (2017)

10. Emergency Response & Contingency Plan

The Regional District has an Emergency Response & Contingency Plan (ERCP) that contains procedures and contact information to efficiently respond to water system emergencies such as contamination of water supply, loss of supply, pump failure, and drought management. The ERCP was reviewed and updated in 2022, and copies are available on our website, at each RDN office, in each pumphouse, and in each Water Services vehicle. A copy of the ERCP is also attached to this report in Appendix C. A separate Emergency Response & Contingency Plan has been developed exclusively for the water filtration plant at 2480 Nanoose Road. A copy of this ERCP is located at the plant, at each RDN office and on the RDN website.

11. Supply Security

The RDN continues to effectively manage water supply in Nanoose Bay in response to ongoing demand, development, and the effects of climate change. While this area continues to see new growth via the planned Fairwinds development, initiatives to provide adequate supply and resiliency for the surface and groundwater sources remain a high priority. Reservoir capacity and redundancy are reviewed with regards to water storage during periods of drought, and water is available from multiple sources in the case of an emergency. Surface water from the Englishman River, via the Englishman River Water Service, can be affected by periods of drought, and the RDN continues to work with our partner, the City of Parksville, and provincial agencies to manage this resource. Surface and groundwater quality is regularly tested in all RDN water service areas. The aquifers and streams within the regional district are monitored through the RDN's Drinking Water and Watershed Protection (DWWP) program. The most sustainable way to protect water supply is through demand management (conservation), which is promoted through outreach and stewardship initiatives provided by the RDN's Team WaterSmart, as well as the RDN Water Service Area's Water Conservation Plan 2020-2030. Rebates for well water testing, water smart landscaping, and rainwater harvesting further assist RDN residents to reduce water usage in high demand seasons. A new tiered system for water rates introduced in 2022 will help promote conservation by rewarding low water users with reduced rates and encouraging high water users to seek ways to use less. Additional planning and preparation initiatives will be introduced in the future to support water supply security.

12. Cross Connection Control

The RDN's Cross Connection Control Program was put in place to protect the public health by reducing the risk of contaminants flowing back into the public water supply. The RDN Manager of Water Services is the designated Cross Connection Control Manager.

The RDN's Cross Connection Control Program addresses cross connection threats through operating policies and procedures, as well as assisting customers with backflow preventer selection, installation, testing, maintenance and reporting. The program receives its authority from *RDN Cross Connection Control Regulation Bylaw No. 1788*, and the *British Columbia Building Code, Part 7*, which requires that potable water be protected from contamination. Additionally, a webpage has been established at https://rdn.bc.ca/cross-connection-control-program to educate RDN water service customers about cross connection hazards, and lists the relevant links to current standards and resources.

Two of the RDN's water system operators received certification as backflow assembly testers through the British Columbia Water & Waste Association (BCWWA).

13. Cyber Security

The RDN uses a multi-level approach to cyber-security. Corporate network security is employed via a universal threat management gateway that implements various methods of data security, which includes daily definition updates to block known cyber threats. In addition, all RDN PC's are protected with anti-virus software. RDN water systems are connected to the corporate network via IP-Sec VPN's for remote management by information technology and equipment operators.

Future infrastructure upgrades will see our water systems located on segregated networks to limit the vulnerability from cybersecurity threats.

14. Closing

An annual report for the year 2023 will be prepared and submitted to Island Health in the spring of 2024. Annual reports are also available on our website at: https://www.rdn.bc.ca/nanoose-bay-peninsula.

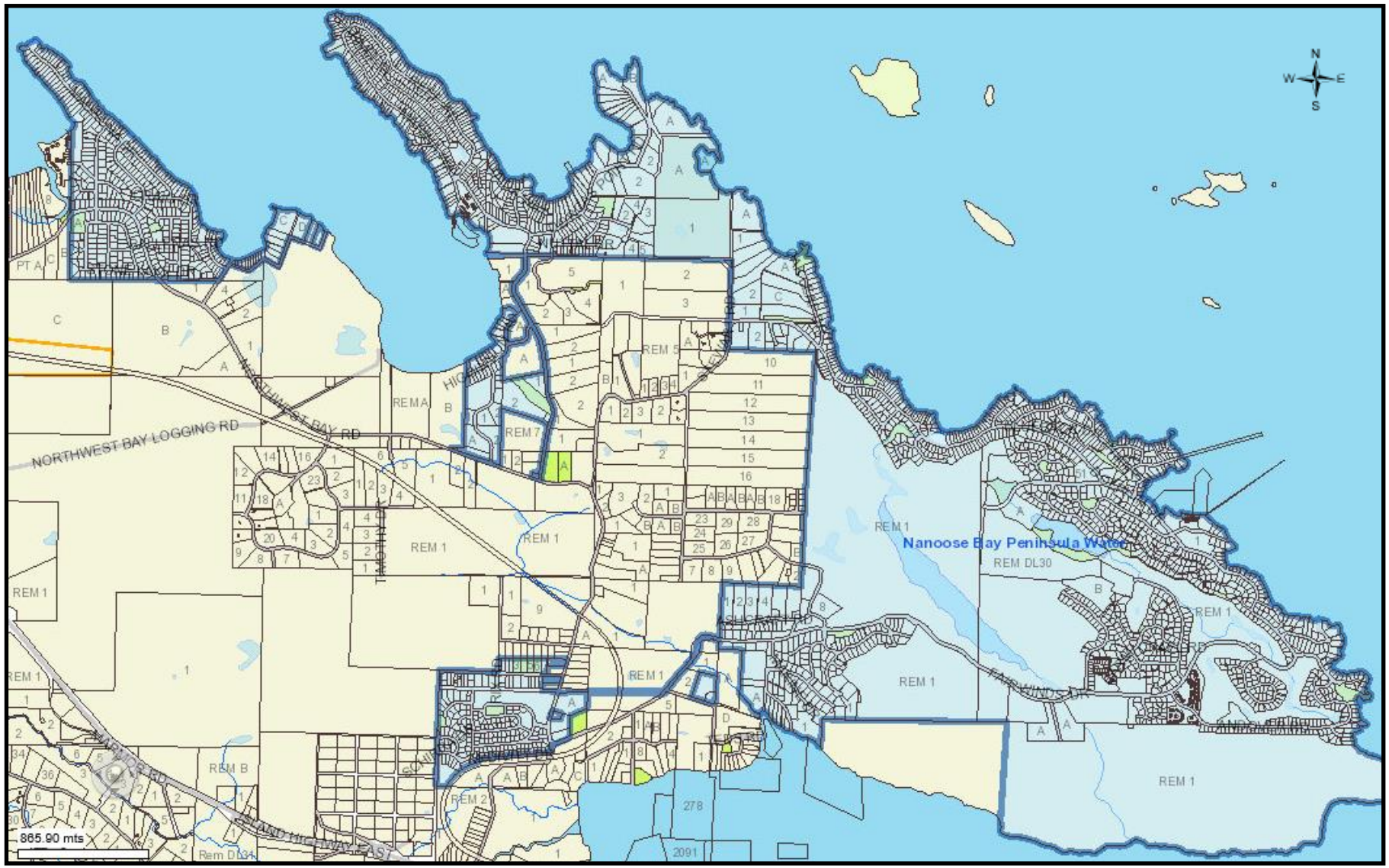
Arrowsmith Lake and Arrowsmith Dam (on headwaters of Englishman River)

APPENDIX A

MAP OF NANOOSE BAY PENINSULA

WATER SERVICE AREA

NANOOSE BAY PENINSULA WATER SERVICE AREA



APPENDIX B

WATER QUALITY TESTING RESULTS

NANOOSE BAY PENINSULA WATER SYSTEM

Facility Location:
2330 Garry Oaks Drive
Nanoose Bay

Facility Information:

Facility Type: 301-10000 (DWT)

Facility Sampling History:

Date Collected	Total Coliform	Total E. Coli	Site Name
01/19/2022	LT1	LT1	Arbutus Sample Port - 2329 Chain Way
01/25/2022	LT1	LT1	Arbutus Sample Port - 2329 Chain Way
02/01/2022	LT1	LT1	Arbutus Sample Port - 2329 Chain Way
03/01/2022	LT1	LT1	Arbutus Sample Port - 2329 Chain Way
04/06/2022	LT1	LT1	Arbutus Sample Port - 2329 Chain Way
05/03/2022	LT1	LT1	Arbutus Sample Port - 2329 Chain Way
06/21/2022	LT1	LT1	Arbutus Sample Port - 2329 Chain Way
07/05/2022	LT1	LT1	Arbutus Sample Port - 2329 Chain Way
08/03/2022	LT1	LT1	Arbutus Sample Port - 2329 Chain Way
09/06/2022	LT1	LT1	Arbutus Sample Port - 2329 Chain Way
10/03/2022	LT1	LT1	Arbutus Sample Port - 2329 Chain Way
11/16/2022	LT1	LT1	Arbutus Sample Port - 2329 Chain Way
12/12/2022	LT1	LT1	Arbutus Sample Port - 2329 Chain Way
01/10/2022	LT1	LT1	Arbutus Sample Port - 2339 Garry Oak Dr.
02/09/2022	LT1	LT1	Arbutus Sample Port - 2339 Garry Oak Dr.
03/09/2022	LT1	LT1	Arbutus Sample Port - 2339 Garry Oak Dr.
04/12/2022	LT1	LT1	Arbutus Sample Port - 2339 Garry Oak Dr.
06/07/2022	LT1	LT1	Arbutus Sample Port - 2339 Garry Oak Dr.
07/13/2022	LT1	LT1	Arbutus Sample Port - 2339 Garry Oak Dr.
08/10/2022	LT1	LT1	Arbutus Sample Port - 2339 Garry Oak Dr.
09/13/2022	LT1	LT1	Arbutus Sample Port - 2339 Garry Oak Dr.
10/12/2022	LT1	LT1	Arbutus Sample Port - 2339 Garry Oak Dr.
11/09/2022	LT1	LT1	Arbutus Sample Port - 2339 Garry Oak Dr.
12/07/2022	LT1	LT1	Arbutus Sample Port - 2339 Garry Oak Dr.
01/05/2022	QRWRT	QRWRT	Arbutus Sample Port - Florence Drive and Anchor Way
01/18/2022	LT1	LT1	Arbutus Sample Port - Florence Drive and Anchor Way

02/15/2022	LT1	LT1	Arbutus Sample Port - Florence Drive and Anchor Way
03/14/2022	LT1	LT1	Arbutus Sample Port - Florence Drive and Anchor Way
04/19/2022	LT1	LT1	Arbutus Sample Port - Florence Drive and Anchor Way
06/13/2022	LT1	LT1	Arbutus Sample Port - Florence Drive and Anchor Way
07/20/2022	LT1	LT1	Arbutus Sample Port - Florence Drive and Anchor Way
08/17/2022	LT1	LT1	Arbutus Sample Port - Florence Drive and Anchor Way
09/20/2022	LT1	LT1	Arbutus Sample Port - Florence Drive and Anchor Way
10/19/2022	LT1	LT1	Arbutus Sample Port - Florence Drive and Anchor Way
11/02/2022	LT1	LT1	Arbutus Sample Port - Florence Drive and Anchor Way
12/06/2022	LT1	LT1	Arbutus Sample Port - Florence Drive and Anchor Way
01/10/2022	LT1	LT1	Beachcomber Sample Port - 1270 Seadog Road
02/09/2022	LT1	LT1	Beachcomber Sample Port - 1270 Seadog Road
03/09/2022	LT1	LT1	Beachcomber Sample Port - 1270 Seadog Road
04/12/2022	LT1	LT1	Beachcomber Sample Port - 1270 Seadog Road
06/07/2022	LT1	LT1	Beachcomber Sample Port - 1270 Seadog Road
07/13/2022	LT1	LT1	Beachcomber Sample Port - 1270 Seadog Road
08/10/2022	LT1	LT1	Beachcomber Sample Port - 1270 Seadog Road
09/13/2022	LT1	LT1	Beachcomber Sample Port - 1270 Seadog Road
10/12/2022	LT1	LT1	Beachcomber Sample Port - 1270 Seadog Road
11/09/2022	LT1	LT1	Beachcomber Sample Port - 1270 Seadog Road
12/12/2022	LT1	LT1	Beachcomber Sample Port - 1270 Seadog Road
01/19/2022	LT1	LT1	Beachcomber Sample Port - 1639 Marina Way
01/25/2022	LT1	LT1	Beachcomber Sample Port - 1639 Marina Way
02/23/2022	LT1	LT1	Beachcomber Sample Port - 1639 Marina Way
03/14/2022	LT1	LT1	Beachcomber Sample Port - 1639 Marina Way
04/19/2022	LT1	LT1	Beachcomber Sample Port - 1639 Marina Way
06/13/2022	LT1	LT1	Beachcomber Sample Port - 1639 Marina Way
07/20/2022	LT1	LT1	Beachcomber Sample Port - 1639 Marina Way
08/17/2022	LT1	LT1	Beachcomber Sample Port - 1639 Marina Way
09/20/2022	LT1	LT1	Beachcomber Sample Port - 1639 Marina Way
10/19/2022	LT1	LT1	Beachcomber Sample Port - 1639 Marina Way
11/16/2022	LT1	LT1	Beachcomber Sample Port - 1639 Marina Way
12/12/2022	LT1	LT1	Beachcomber Sample Port - 1639 Marina Way
01/05/2022	QRWRT	QRWRT	Driftwood Sample Port - 2359 Higginson Rd
01/18/2022	LT1	LT1	Driftwood Sample Port - 2359 Higginson Rd
02/01/2022	LT1	LT1	Driftwood Sample Port - 2359 Higginson Rd
03/01/2022	LT1	LT1	Driftwood Sample Port - 2359 Higginson Rd
04/06/2022	LT1	LT1	Driftwood Sample Port - 2359 Higginson Rd
05/03/2022	LT1	LT1	Driftwood Sample Port - 2359 Higginson Rd
06/29/2022	LT1	LT1	Driftwood Sample Port - 2359 Higginson Rd

07/05/2022	LT1	LT1	Driftwood Sample Port - 2359 Higginson Rd
08/03/2022	LT1	LT1	Driftwood Sample Port - 2359 Higginson Rd
09/06/2022	LT1	LT1	Driftwood Sample Port - 2359 Higginson Rd
10/03/2022	LT1	LT1	Driftwood Sample Port - 2359 Higginson Rd
11/02/2022	LT1	LT1	Driftwood Sample Port - 2359 Higginson Rd
12/06/2022	LT1	LT1	Driftwood Sample Port - 2359 Higginson Rd
01/10/2022	LT1	LT1	Fairwinds Sample Port - 1996 Highland Rd.
02/09/2022	LT1	LT1	Fairwinds Sample Port - 1996 Highland Rd.
03/09/2022	LT1	LT1	Fairwinds Sample Port - 1996 Highland Rd.
04/12/2022	LT1	LT1	Fairwinds Sample Port - 1996 Highland Rd.
06/07/2022	LT1	LT1	Fairwinds Sample Port - 1996 Highland Rd.
07/13/2022	LT1	LT1	Fairwinds Sample Port - 1996 Highland Rd.
08/10/2022	LT1	LT1	Fairwinds Sample Port - 1996 Highland Rd.
09/28/2022	LT1	LT1	Fairwinds Sample Port - 1996 Highland Rd.
10/12/2022	LT1	LT1	Fairwinds Sample Port - 1996 Highland Rd.
11/09/2022	LT1	LT1	Fairwinds Sample Port - 1996 Highland Rd.
12/19/2022	QRWRT	QRWRT	Fairwinds Sample Port - 1996 Highland Rd.
01/05/2022	QRWRT	QRWRT	Fairwinds Sample Port - 2400 Evanshire Cres.
01/25/2022	LT1	LT1	Fairwinds Sample Port - 2400 Evanshire Cres.
02/01/2022	LT1	LT1	Fairwinds Sample Port - 2400 Evanshire Cres.
03/14/2022	LT1	LT1	Fairwinds Sample Port - 2400 Evanshire Cres.
04/19/2022	LT1	LT1	Fairwinds Sample Port - 2400 Evanshire Cres.
05/18/2022	QRWRT	QRWRT	Fairwinds Sample Port - 2400 Evanshire Cres.
06/13/2022	LT1	LT1	Fairwinds Sample Port - 2400 Evanshire Cres.
07/20/2022	LT1	LT1	Fairwinds Sample Port - 2400 Evanshire Cres.
08/17/2022	LT1	LT1	Fairwinds Sample Port - 2400 Evanshire Cres.
09/20/2022	LT1	LT1	Fairwinds Sample Port - 2400 Evanshire Cres.
10/19/2022	LT1	LT1	Fairwinds Sample Port - 2400 Evanshire Cres.
11/16/2022	LT1	LT1	Fairwinds Sample Port - 2400 Evanshire Cres.
12/12/2022	LT1	LT1	Fairwinds Sample Port - 2400 Evanshire Cres.
01/19/2022	LT1	LT1	Fairwinds Sample Port - 3383 Redden Road
02/15/2022	LT1	LT1	Fairwinds Sample Port - 3383 Redden Road
03/21/2022	LT1	LT1	Fairwinds Sample Port - 3383 Redden Road
04/19/2022	LT1	LT1	Fairwinds Sample Port - 3383 Redden Road
06/13/2022	LT1	LT1	Fairwinds Sample Port - 3383 Redden Road
07/20/2022	LT1	LT1	Fairwinds Sample Port - 3383 Redden Road
08/17/2022	LT1	LT1	Fairwinds Sample Port - 3383 Redden Road
09/20/2022	LT1	LT1	Fairwinds Sample Port - 3383 Redden Road
10/19/2022	LT1	LT1	Fairwinds Sample Port - 3383 Redden Road
11/16/2022	LT1	LT1	Fairwinds Sample Port - 3383 Redden Road

12/12/2022	LT1	LT1	Fairwinds Sample Port - 3383 Redden Road
01/25/2022	LT1	LT1	Fairwinds Sample Port - 3465 Cambridge Rd.
02/23/2022	LT1	LT1	Fairwinds Sample Port - 3465 Cambridge Rd.
03/14/2022	LT1	LT1	Fairwinds Sample Port - 3465 Cambridge Rd.
04/27/2022	LT1	LT1	Fairwinds Sample Port - 3465 Cambridge Rd.
06/21/2022	LT1	LT1	Fairwinds Sample Port - 3465 Cambridge Rd.
07/26/2022	LT1	LT1	Fairwinds Sample Port - 3465 Cambridge Rd.
07/26/2022	LT1	LT1	Fairwinds Sample Port - 3465 Cambridge Rd.
08/23/2022	LT1	LT1	Fairwinds Sample Port - 3465 Cambridge Rd.
09/28/2022	LT1	LT1	Fairwinds Sample Port - 3465 Cambridge Rd.
10/24/2022	LT1	LT1	Fairwinds Sample Port - 3465 Cambridge Rd.
11/22/2022	LT1	LT1	Fairwinds Sample Port - 3465 Cambridge Rd.
12/07/2022	LT1	LT1	Fairwinds Sample Port - 3465 Cambridge Rd.
02/15/2022	LT1	LT1	Fairwinds Sample Port - 3500 Fairwind Dr.
02/23/2022	LT1	LT1	Fairwinds Sample Port - 3500 Fairwind Dr.
03/01/2022	LT1	LT1	Fairwinds Sample Port - 3500 Fairwind Dr.
04/06/2022	LT1	LT1	Fairwinds Sample Port - 3500 Fairwind Dr.
06/21/2022	LT1	LT1	Fairwinds Sample Port - 3500 Fairwind Dr.
08/23/2022	LT1	LT1	Fairwinds Sample Port - 3500 Fairwind Dr.
09/28/2022	LT1	LT1	Fairwinds Sample Port - 3500 Fairwind Dr.
10/24/2022	LT1	LT1	Fairwinds Sample Port - 3500 Fairwind Dr.
11/22/2022	LT1	LT1	Fairwinds Sample Port - 3500 Fairwind Dr.
12/07/2022	LT1	LT1	Fairwinds Sample Port - 3500 Fairwind Dr.
01/05/2022	QRWRT	QRWRT	Fairwinds Sample Port - 3541 Shelby Ln.
01/18/2022	LT1	LT1	Fairwinds Sample Port - 3541 Shelby Ln.
02/01/2022	LT1	LT1	Fairwinds Sample Port - 3541 Shelby Ln.
03/01/2022	LT1	LT1	Fairwinds Sample Port - 3541 Shelby Ln.
04/06/2022	LT1	LT1	Fairwinds Sample Port - 3541 Shelby Ln.
05/03/2022	LT1	LT1	Fairwinds Sample Port - 3541 Shelby Ln.
06/29/2022	LT1	LT1	Fairwinds Sample Port - 3541 Shelby Ln.
07/05/2022	LT1	LT1	Fairwinds Sample Port - 3541 Shelby Ln.
08/03/2022	LT1	LT1	Fairwinds Sample Port - 3541 Shelby Ln.
09/06/2022	LT1	LT1	Fairwinds Sample Port - 3541 Shelby Ln.
10/03/2022	LT1	LT1	Fairwinds Sample Port - 3541 Shelby Ln.
11/02/2022	LT1	LT1	Fairwinds Sample Port - 3541 Shelby Ln.
12/06/2022	LT1	LT1	Fairwinds Sample Port - 3541 Shelby Ln.
01/10/2022	LT1	LT1	Fairwinds Sample Port - 3730 Fairwinds Dr.
02/09/2022	LT1	LT1	Fairwinds Sample Port - 3730 Fairwinds Dr.
03/09/2022	LT1	LT1	Fairwinds Sample Port - 3730 Fairwinds Dr.
04/12/2022	LT1	LT1	Fairwinds Sample Port - 3730 Fairwinds Dr.

06/07/2022	LT1	LT1	Fairwinds Sample Port - 3730 Fairwinds Dr.
07/13/2022	LT1	LT1	Fairwinds Sample Port - 3730 Fairwinds Dr.
08/10/2022	LT1	LT1	Fairwinds Sample Port - 3730 Fairwinds Dr.
09/13/2022	LT1	LT1	Fairwinds Sample Port - 3730 Fairwinds Dr.
10/12/2022	LT1	LT1	Fairwinds Sample Port - 3730 Fairwinds Dr.
11/09/2022	LT1	LT1	Fairwinds Sample Port - 3730 Fairwinds Dr.
12/19/2022	QRWRT	QRWRT	Fairwinds Sample Port - 3730 Fairwinds Dr.
07/20/2022	LT1	LT1	Madrona # 8 RAW
10/03/2022	LT1	LT1	Madrona # 8 RAW
10/24/2022	25.6	LT1	Madrona # 8 RAW
01/05/2022	QRWRT	QRWRT	Madrona Sample Port - 1358 Madrona Drive
01/18/2022	LT1	LT1	Madrona Sample Port - 1358 Madrona Drive
02/01/2022	LT1	LT1	Madrona Sample Port - 1358 Madrona Drive
02/15/2022	LT1	LT1	Madrona Sample Port - 1358 Madrona Drive
03/01/2022	LT1	LT1	Madrona Sample Port - 1358 Madrona Drive
04/06/2022	LT1	LT1	Madrona Sample Port - 1358 Madrona Drive
05/03/2022	LT1	LT1	Madrona Sample Port - 1358 Madrona Drive
06/21/2022	LT1	LT1	Madrona Sample Port - 1358 Madrona Drive
07/05/2022	LT1	LT1	Madrona Sample Port - 1358 Madrona Drive
08/03/2022	LT1	LT1	Madrona Sample Port - 1358 Madrona Drive
09/06/2022	LT1	LT1	Madrona Sample Port - 1358 Madrona Drive
10/19/2022	LT1	LT1	Madrona Sample Port - 1358 Madrona Drive
11/16/2022	LT1	LT1	Madrona Sample Port - 1358 Madrona Drive
12/12/2022	LT1	LT1	Madrona Sample Port - 1358 Madrona Drive
01/10/2022	LT1	LT1	Madrona Sample Port - 1556 Arbutus Dr.
02/09/2022	LT1	LT1	Madrona Sample Port - 1556 Arbutus Dr.
03/09/2022	LT1	LT1	Madrona Sample Port - 1556 Arbutus Dr.
04/12/2022	LT1	LT1	Madrona Sample Port - 1556 Arbutus Dr.
06/07/2022	LT1	LT1	Madrona Sample Port - 1556 Arbutus Dr.
07/13/2022	LT1	LT1	Madrona Sample Port - 1556 Arbutus Dr.
08/10/2022	LT1	LT1	Madrona Sample Port - 1556 Arbutus Dr.
09/13/2022	LT1	LT1	Madrona Sample Port - 1556 Arbutus Dr.
10/12/2022	LT1	LT1	Madrona Sample Port - 1556 Arbutus Dr.
11/09/2022	LT1	LT1	Madrona Sample Port - 1556 Arbutus Dr.
12/07/2022	LT1	LT1	Madrona Sample Port - 1556 Arbutus Dr.
01/19/2022	LT1	LT1	Madrona Sample Port - 1565 Stone Lake Dr.
01/25/2022	LT1	LT1	Madrona Sample Port - 1565 Stone Lake Dr.
03/14/2022	LT1	LT1	Madrona Sample Port - 1565 Stone Lake Dr.
04/19/2022	LT1	LT1	Madrona Sample Port - 1565 Stone Lake Dr.
06/13/2022	LT1	LT1	Madrona Sample Port - 1565 Stone Lake Dr.

07/20/2022	LT1	LT1	Madrona Sample Port - 1565 Stone Lake Dr.
08/17/2022	LT1	LT1	Madrona Sample Port - 1565 Stone Lake Dr.
09/20/2022	LT1	LT1	Madrona Sample Port - 1565 Stone Lake Dr.
10/03/2022	LT1	LT1	Madrona Sample Port - 1565 Stone Lake Dr.
11/02/2022	LT1	LT1	Madrona Sample Port - 1565 Stone Lake Dr.
12/06/2022	LT1	LT1	Madrona Sample Port - 1565 Stone Lake Dr.
01/25/2022	LT1	LT1	Nanoose Sample Port - 3119 Swallow Cres.
02/15/2022	LT1	LT1	Nanoose Sample Port - 3119 Swallow Cres.
03/21/2022	LT1	LT1	Nanoose Sample Port - 3119 Swallow Cres.
04/27/2022	LT1	LT1	Nanoose Sample Port - 3119 Swallow Cres.
06/21/2022	LT1	LT1	Nanoose Sample Port - 3119 Swallow Cres.
07/26/2022	LT1	LT1	Nanoose Sample Port - 3119 Swallow Cres.
08/30/2022	QRWRT	QRWRT	Nanoose Sample Port - 3119 Swallow Cres.
09/06/2022	LT1	LT1	Nanoose Sample Port - 3119 Swallow Cres.
10/24/2022	LT1	LT1	Nanoose Sample Port - 3119 Swallow Cres.
11/22/2022	LT1	LT1	Nanoose Sample Port - 3119 Swallow Cres.
12/19/2022	QRWRT	QRWRT	Nanoose Sample Port - 3119 Swallow Cres.
01/19/2022	LT1	LT1	Nanoose Sample Port - 3427 Tyee Cres.
03/01/2022	LT1	LT1	Nanoose Sample Port - 3427 Tyee Cres.
04/06/2022	LT1	LT1	Nanoose Sample Port - 3427 Tyee Cres.
05/03/2022	LT1	LT1	Nanoose Sample Port - 3427 Tyee Cres.
06/29/2022	LT1	LT1	Nanoose Sample Port - 3427 Tyee Cres.
07/05/2022	LT1	LT1	Nanoose Sample Port - 3427 Tyee Cres.
08/03/2022	LT1	LT1	Nanoose Sample Port - 3427 Tyee Cres.
09/28/2022	LT1	LT1	Nanoose Sample Port - 3427 Tyee Cres.
10/03/2022	LT1	LT1	Nanoose Sample Port - 3427 Tyee Cres.
11/02/2022	LT1	LT1	Nanoose Sample Port - 3427 Tyee Cres.
12/07/2022	LT1	LT1	Nanoose Sample Port - 3427 Tyee Cres.
01/10/2022	LT1	LT1	West Bay Sample Port - 2315 Ida Lane
01/18/2022	LT1	LT1	West Bay Sample Port - 2315 Ida Lane
02/09/2022	LT1	LT1	West Bay Sample Port - 2315 Ida Lane
03/09/2022	LT1	LT1	West Bay Sample Port - 2315 Ida Lane
04/12/2022	LT1	LT1	West Bay Sample Port - 2315 Ida Lane
06/07/2022	LT1	LT1	West Bay Sample Port - 2315 Ida Lane
07/13/2022	LT1	LT1	West Bay Sample Port - 2315 Ida Lane
08/03/2022	LT1	LT1	West Bay Sample Port - 2315 Ida Lane
08/10/2022	LT1	LT1	West Bay Sample Port - 2315 Ida Lane
09/13/2022	LT1	LT1	West Bay Sample Port - 2315 Ida Lane
10/03/2022	LT1	LT1	West Bay Sample Port - 2315 Ida Lane
11/02/2022	LT1	LT1	West Bay Sample Port - 2315 Ida Lane

12/06/2022	LT1	LT1	West Bay Sample Port - 2315 Ida Lane
01/05/2022	QRWRT	QRWRT	West Bay Sample Port - 2454 Armstrong Cres.
01/25/2022	LT1	LT1	West Bay Sample Port - 2454 Armstrong Cres.
02/01/2022	LT1	LT1	West Bay Sample Port - 2454 Armstrong Cres.
03/01/2022	LT1	LT1	West Bay Sample Port - 2454 Armstrong Cres.
04/06/2022	LT1	LT1	West Bay Sample Port - 2454 Armstrong Cres.
05/03/2022	LT1	LT1	West Bay Sample Port - 2454 Armstrong Cres.
06/13/2022	LT1	LT1	West Bay Sample Port - 2454 Armstrong Cres.
07/05/2022	LT1	LT1	West Bay Sample Port - 2454 Armstrong Cres.
07/20/2022	LT1	LT1	West Bay Sample Port - 2454 Armstrong Cres.
08/17/2022	LT1	LT1	West Bay Sample Port - 2454 Armstrong Cres.
09/06/2022	LT1	LT1	West Bay Sample Port - 2454 Armstrong Cres.
10/12/2022	LT1	LT1	West Bay Sample Port - 2454 Armstrong Cres.
11/16/2022	LT1	LT1	West Bay Sample Port - 2454 Armstrong Cres.
12/07/2022	LT1	LT1	West Bay Sample Port - 2454 Armstrong Cres.

Interpreting Sample Reports

In VIHA, the results of drinking water sampling are reported using the following coding system:

LT1 Less than 1 (no detectable bacteria) - Meaning: No bacteria present

L1 Less than 1 (no detectable bacteria) - Meaning: No bacteria present

GTR200 means Greater than 200 background colonies on membrane filter per 100 ml of sample

REJCT DELAY3 means sample was too long in transit and was not tested

Regional District of Nanaimo - Water Services Department

Nanoose Bay Peninsula Water Analysis - 2022 Monthly Report

		BC Centre for Disease Control		RDN In-House Laboratory and Spectrophotometer									
Date	Sample Location (Address)	E. coli *	Total Coliform *	E.coli *	Total Coliform *	Temp. (°C)	pH	Free Chlorine Residual (mg/L)	Total Dissolved Solids (mg/L)	Salinity (%)	Conductivity (µS/cm)	Total Iron (mg/L)	Manganese (mg/L)
6-Dec-22	1565 Stone Lake	0	0	0	0	10	7.24	0.29	90.1	0.06	188.9	Fe and Mn are no longer being tested in-house. Please see the annual tap water test results at https://www.rdn.bc.ca/nanoose-bay-peninsula.	
6-Dec-22	2259 Higginson	0	0	0	0	10	7.40	0.79	103.4	0.06	199.9		
6-Dec-22	2315 Ida Lane	0	0	0	0	10	7.60	0.92	101.9	0.10	255.0		
6-Dec-22	3541 Shelby	0	0	0	0	9	7.56	1.06	118.1	0.12	260.0		
6-Dec-22	Florence & Anchor	0	0	0	0	8	7.51	0.63	116.0	0.12	259.0		
7-Dec-22	1566 Arbutus	0	0	0	0	8	7.31	0.82	101.9	0.08	204.9		
7-Dec-22	3427 Tyee	0	0	0	0	9	7.37	0.85	128.0	0.13	268.0		
7-Dec-22	2454 Armstrong	0	0	0	0	9	7.50	0.69	94.1	0.09	198.8		
7-Dec-22	3465 Cambridge	0	0	0	0	8	7.49	0.92	114.4	0.12	249.0		
7-Dec-22	3500 Fairwinds	0	0	0	0	8	7.51	1.10	120.1	0.12	252.0		
7-Dec-22	2339 Garry Oak	0	0	0	0	9	7.58	1.00	118.5	0.12	248.0		
12-Dec-22	1639 Marina Way	0	0	0	0	8	7.15	0.28	91.9	0.10	185.9		
12-Dec-22	1270 Sea Dog	0	0	0	0	8	7.17	0.39	93.2	0.10	177.9		
12-Dec-22	1358 Madrona	0	0	0	0	9	7.08	0.30	83.8	0.08	176.1		
12-Dec-22	2329 Chain Way	0	0	0	0	8	7.39	0.52	135.7	0.14	284.0		
12-Dec-22	NB Elementry			0	0	9	6.99	1.49	158.3	0.16	330.0		
12-Dec-22	2400 Evanshire	0	0	0	0	8	7.19	0.94	129.6	0.13	271.0		
12-Dec-22	3383 Redden	0	0	0	0	8	7.37	0.90	131.2	0.13	275.0		
19-Dec-22	1565 Stone Lake			0	0	7	8.17	0.10	85.40	0.08	179.6		
19-Dec-22	3119 Swallow	0	0	0	0	7	7.60	0.41	74.30	0.07	157.0		
19-Dec-22	2315 Ida Lane			0	0	7	8.30	0.83	53.40	0.05	113.0		
19-Dec-22	3730 Fairwinds			0	0	8	7.56	0.77	122.20	0.12	257.0		
19-Dec-22	1996 Highland	0	0	0	0	8	7.41	0.55	124.50	0.12	261.0		
19-Dec-22	Florence & Anchor	0	0	0	0	7	7.46	0.69	125.60	0.13	263.0		
CDN Drinking Water Guidelines		<1	<1	<1	<1	n/a	7.0-10.5	n/a	500	n/a	n/a	0.3	**0.02** AO **0.12** MAC

Legend:

*** Coliforms are measured in colony forming units (CFU) per 100 millilitres of water (CFU/100mL)**

Green font indicates a value flagged for operational consideration

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

Comments:

Iron and Manganese are no longer being tested in-house.

A full potability scan, including metals and minerals, is completed once per year at an external lab.

Notes below about pH (2015) from https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html#_ftn1

Type	Parameter (published, reaffirmed)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
Treatment-related	pH (2015)	None	7.0-10.5	Not applicable	Not applicable	The control of pH is important to maximize treatment effectiveness, control corrosion and reduce leaching from distribution system and plumbing

Regional District of Nanaimo - Water Services Department

Nanoose Bay Peninsula Water Analysis - 2022 Monthly Report

		BC Centre for Disease Control		RDN In-House Laboratory and Spectrophotometer									
Date	Sample Location (Address)	E. coli *	Total Coliform *	E.coli *	Total Coliform *	Temp. (°C)	pH	Free Chlorine Residual (mg/L)	Total Dissolved Solids (mg/L)	Salinity (%)	Conductivity (µS/cm)	Total Iron (mg/L)	Manganese (mg/L)
3-Nov-22	1565 Stone lake	0	0	0	0	13	7.19	0.36	134.3	0.13	281.0		
3-Nov-22	2259 Higginson	0	0	0	0	n/a	7.45	0.23	89.8	0.09	189.0		
3-Nov-22	3427 Tyee	0	0	0	0	1.25	7.40	0.80	162.8	0.16	339.0		
3-Nov-22	2315 Ida Lane	0	0	0	0	15	7.41	0.35	206.5	0.21	428.0		
3-Nov-22	3541 Shelby	0	0	0	0	12	7.52	1.01	160.5	0.16	334.0		
3-Nov-22	Florence & Anchor	0	0	0	0	12	7.54	0.56	163.1	0.16	340.0		
7-Nov-22	1566 Arbutus	0	0	0	0	12	7.20	0.57	51.9	0.05	109.8		
7-Nov-22	1270 Sea Dog	0	0	0	0	12	7.27	0.39	53.7	0.05	113.7		
7-Nov-22	NB Elementary			0	0	12	7.21	1.18	119.3	0.12	250.0		
7-Nov-22	3730 Fairwinds	0	0	0	0	11	7.25	0.62	128.8	0.13	270.0		
7-Nov-22	1996 Highland	0	0	0	0	11	7.32	0.66	130.8	0.13	273.0		
7-Nov-22	2339 Garry Oak	0	0	0	0	12	7.35	0.99	146.6	0.15	306.0		
16-Nov-22	1358 Madrona	0	0	0	0	12	7.67	0.20	82.4	0.08	173.5		
16-Nov-22	1639 Marina Way	0	0	0	0	12	7.84	0.52	72.1	0.07	152.3		
16-Nov-22	2454 Armstrong	0	0	0	0	11	7.80	0.47	85.1	0.09	180.2		
16-Nov-22	2400 Evanshire	0	0	0	0	11	7.56	1.21	153.1	0.15	320.0		
16-Nov-22	3383 Redden	0	0	0	0	12	7.52	0.90	157.2	0.15	330.0		
16-Nov-22	2329 Chain	0	0	0	0	11	7.51	1.00	165.5	0.16	345.0		
22-Nov-22	1565 Stone lake			0	0	10	7.15	0.65	109.3	0.11	230.0		
22-Nov-22	3319 Swallow	0	0	0	0	9	7.21	0.02	114.5	0.14	301.0		
22-Nov-22	NB Elementary			0	0	10	7.33	n/a	163.2	0.16	337.0		
22-Nov-22	3465 Cambridge	0	0	0	0	10	7.40	0.92	147.5	0.15	308.0		
22-Nov-22	3500 Fairwinds	0	0	0	0	10	7.49	1.12	147.5	0.15	307.0		
22-Nov-22	2339 Garry Oak			0	0	10	7.55	0.98	136.7	0.14	286.0		
29-Nov-22	1566 Arbutus			0	0	10	7.67	0.59	80.1	0.06	196.1		
29-Nov-22	1270 Sea Dog			0	0	10	7.80	0.18	58.4	0.06	123.5		
29-Nov-22	2454 Armstrong			0	0	10	7.64	0.37	109.0	0.11	229.0		
29-Nov-22	1996 Highland			0	0	10	7.67	0.70	142.1	0.14	311.0		
29-Nov-22	2339 Garry Oak			0	0	10	7.48	0.71	126.1	0.13	264.0		
CDN Drinking Water Guidelines		<1	<1	<1	<1	n/a	7.0-10.5	n/a	500	n/a	n/a	0.3	0.02 AO 0.12 MAC

Legend:

*** Coliforms are measured in colony forming units (CFU) per 100 millilitres of water (CFU/100mL)**

Green font indicates a value flagged for operational consideration

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

Comments:

Iron and Manganese are no longer being tested in-house.

A full potability scan, including metals and minerals, is completed once per year at an external lab.

Notes below about pH (2015) from https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html#_ftn1

Type	Parameter (published, reaffirmed)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
Treatment-related	pH (2015)	None	7.0-10.5	Not applicable	Not applicable	The control of pH is important to maximize treatment effectiveness, control corrosion and reduce leaching from distribution system and plumbing

Regional District of Nanaimo - Water Services Department

Nanoose Bay Peninsula Water Analysis - 2022 Monthly Report

		BC Centre for Disease Control		RDN In-House Laboratory and Spectrophotometer									
Date	Sample Location (Address)	E. coli *	Total Coliform *	E.coli *	Total Coliform *	Temp. (°C)	pH	Free Chlorine Residual (mg/L)	Total Dissolved Solids (mg/L)	Salinity (%)	Conductivity (µS/cm)	Total Iron (mg/L)	Manganese (mg/L)
5-Oct-22	1565 Stone lake	0	0	0	0	15	7.70	0.71	94.1	0.09	198.1	Fe and Mn are no longer being tested in-house. Please see the annual tap water test results at https://www.rdn.bc.ca/nanoose-bay-peninsula.	
5-Oct-22	2259 Higginson	0	0	0	0	17	8.08	0.94	62.8	0.06	132.8		
5-Oct-22	3427 Tyee	0	0	0	0	17	7.99	1.20	77.7	0.06	140.1		
5-Oct-22	2315 Ida Lane	0	0	0	0	17	8.25	0.36	84.3	0.08	177.8		
5-Oct-22	3541 Shelby	0	0	0	0	17	7.88	1.25	140.0	0.14	294.0		
5-Oct-22	2329 Chain	0	0	0	0	17	7.82	0.62	131.2	0.13	275.0		
12-Oct-22	1566 Arbutus	0	0	0	0	15	7.31	0.38	135.9	0.13	284.0		
12-Oct-22	1270 Sea Dog	0	0	0	0	17	7.86	0.71	69.5	0.07	146.7		
12-Oct-22	2454 Armstrong	0	0	0	0	17	7.82	0.61	114.3	0.11	240.0		
12-Oct-22	3730 Fairwinds	0	0	0	0	17	7.66	0.81	151.3	0.15	316.0		
12-Oct-22	1996 Highland	0	0	0	0	16	7.65	0.97	150.3	0.15	314.0		
12-Oct-22	2339 Garry Oak	0	0	0	0	14	7.68	1.11	136.7	0.14	286.0		
19-Oct-22	1358 Madrona	0	0	0	0	16	7.66	0.69	94.2	0.09	197.2		
19-Oct-22	1639 Marina Way	0	0	0	0	14	8.30	0.90	75.3	0.07	158.7		
19-Oct-22	NB Elementry	0	0	0	0	12	7.92	1.56	164.1	0.16	342.0		
19-Oct-22	2400 Evanshire	0	0	0	0	15	7.77	1.31	189.5	0.19	394.0		
19-Oct-22	3383 Redden	0	0	0	0	15	7.74	1.22	188.3	0.19	392.0		
19-Oct-22	Florence & Anchor	0	0	0	0	15	7.71	0.74	169.3	0.17	359.0		
24-Dec-22	1565 Stone lake			0	0	15	7.80	0.46	118.0	0.12	247.0		
24-Dec-22	3119 Swallow	0	0	0	0	15	7.69	0.10	161.3	0.16	337.0		
24-Dec-22	2454 Armstrong			0	0	15	7.81	0.57	111.2	0.11	233.0		
24-Dec-22	3465 Cambridge	0	0	0	0	15	7.71	0.97	163.6	0.16	341.0		
24-Dec-22	3500 Fairwinds	0	0	0	0	15	7.74	0.98	160.0	0.16	334.0		
24-Dec-22	2329 Chain			0	0	15	7.71	0.63	157.6	0.16	329.0		
CDN Drinking Water Guidelines		<1	<1	<1	<1	n/a	7.0-10.5	n/a	500	n/a	n/a	0.3	**0.02** AO **0.12** MAC

Legend:

*** Coliforms are measured in colony forming units (CFU) per 100 millilitres of water (CFU/100mL)**

Green font indicates a value flagged for operational consideration

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

Comments:

Iron and Manganese are no longer being tested in-house.

A full potability scan, including metals and minerals, is completed once per year at an external lab.

Notes below about pH (2015) from https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html#_ftn1

Type	Parameter (published, reaffirmed)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
Treatment-related	pH (2015)	None	7.0-10.5	Not applicable	Not applicable	The control of pH is important to maximize treatment effectiveness, control corrosion and reduce leaching from distribution system and plumbing

Regional District of Nanaimo - Water Services Department

Nanoose Bay Peninsula Water Analysis - 2022 Monthly Report

		BC Centre for Disease Control		RDN In-House Laboratory and Spectrophotometer									
Date	Sample Location (Address)	E. coli *	Total Coliform *	E.coli *	Total Coliform *	Temp. (°C)	pH	Free Chlorine Residual (mg/L)	Total Dissolved Solids (mg/L)	Salinity (%)	Conductivity (µS/cm)	Total Iron (mg/L)	Manganese (mg/L)
7-Sep-22	1358 Madrona	0	0	0	0	18	8.30	0.80	58.4	0.06	123.6	Fe and Mn are no longer being tested in-house. Please see the annual tap water test results at https://www.rdn.bc.ca/nanoose-bay-peninsula.	
7-Sep-22	2259 Higginson	0	0	0	0	18	8.52	0.51	57.5	0.06	123.6		
7-Sep-22	3119 Swallow	0	0	0	7	18	8.22	0.05	129.9	0.13	266.0		
7-Sep-22	2454 Armstong	0	0	0	0	18	8.45	0.60	76.7	0.08	161.8		
7-Sep-22	3541 Shelby	0	0	0	0	17	8.29	1.17	138.7	0.14	290.0		
7-Sep-22	2329 Chain	0	0	0	0	17	8.12	0.72	130.7	0.13	274.0		
8-Sep-22	3119 Swallow RE			0	0	18		0.05					
13-Sep-22	1566 Arbutus	0	0	0	0	17	8.29	0.87	72.9	0.07	122.1		
13-Sep-22	1270 Sea Dog	0	0	0	0	17	8.31	0.64	100.1	0.09	134.0		
13-Sep-22	2315 Ida Lane	0	0	0	0	17	8.29	0.36	72.1	0.10	179.2		
13-Sep-22	3730 Fairwinds	0	0	0	0	17	8.15	0.93	138.2	0.14	239.0		
13-Sep-22	1996 Highland			0	0	17	8.19	0.96	136.6	0.14	241.0		
13-Sep-22	2339 Garry Oak	0	0	0	0	17	8.21	1.24	132.6	0.11	235.0		
20-Sep-22	1565 Stonelake	0	0	0	0	16	7.56	0.51	106.4	0.11	224.0		
20-Sep-22	1639 Marina Way	0	0	0	0	15	7.97	0.96	58.6	0.06	124.1		
20-Sep-22	2454 Armstrong			0	0	17	7.98	0.58	71.1	0.07	149.9		
20-Sep-22	2400 Evanshire	0	0	0	0	17	7.75	0.61	147.7	0.14	298.0		
20-Sep-22	3383 Redden	0	0	0	0	17	7.69	0.68	133.3	0.09	199.0		
20-Sep-22	Florence & Anchor	0	0	0	0	17	7.77	0.57	122.0	0.12	255.0		
28-Sep-22	1565 Stonelake			0	0		7.61	0.55	110.1	0.09	200.0		
28-Sep-22	3427 Tyee	0	0	0	0		7.70	0.66	122.1	0.10	239.0		
28-Sep-22	NB Elementry			0	0		7.49	1.21	134.9	0.13	282.0		
28-Sep-22	3465 Cambridge	0	0	0	0		7.44	1.11	141.0	0.14	295.0		
28-Sep-22	3500 Fairwinds	0	0	0	0		7.53	1.05	140.1	0.14	293.0		
28-Sep-22	1996 Highland	0	0	0	0			1.10					
28-Sep-22	2329 Chain			0	0		7.45	0.71	143.0	0.14	299.0		
CDN Drinking Water Guidelines		<1	<1	<1	<1	n/a	7.0-10.5	n/a	500	n/a	n/a	0.3	0.02 AO 0.12 MAC

Legend:

*** Coliforms are measured in colony forming units (CFU) per 100 millilitres of water (CFU/100mL)**

Green font indicates a value flagged for operational consideration

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

Comments:

Iron and Manganese are no longer being tested in-house.

A full potability scan, including metals and minerals, is completed once per year at an external lab.

Notes below about pH (2015) from https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html#_ftn1

Type	Parameter (published, reaffirmed)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
Treatment-related	pH (2015)	None	7.0-10.5	Not applicable	Not applicable	The control of pH is important to maximize treatment effectiveness, control corrosion and reduce leaching from distribution system and plumbing

Regional District of Nanaimo - Water Services Department

Nanoose Bay Peninsula Water Analysis - 2022 Monthly Report

		BC Centre for Disease Control		RDN In-House Laboratory and Spectrophotometer									
Date	Sample Location (Address)	E. coli *	Total Coliform *	E.coli *	Total Coliform *	Temp. (°C)	pH	Free Chlorine Residual (mg/L)	Total Dissolved Solids (mg/L)	Salinity (%)	Conductivity (µS/cm)	Total Iron (mg/L)	Manganese (mg/L)
3-Aug-22	1358 Madrona	0	0	0	0	19	7.35	0.87	62.5	0.60	132.2	Fe and Mn are no longer being tested in-house. Please see the annual tap water test results at https://www.rdn.bc.ca/nanoose-bay-peninsula.	
3-Aug-22	2259 Higginson	0	0	0	0	17	8.00	0.57	58.6	0.06	129.9		
3-Aug-22	3427 Tyee	0	0	0	0	18	7.70	1.04	132.9	0.13	278.0		
3-Aug-22	2315 Ida Lane	0	0	0	0	17	8.28	0.20	64.9	0.06	137.3		
3-Aug-22	3541 Shelby	0	0	0	0	17	7.94	0.98	133.5	0.13	279.0		
3-Aug-22	2329 Chain	0	0	0	0	16	7.79	0.89	163.8	0.16	341.0		
10-Aug-22	1566 Arbutus	0	0	0	0	18	8.04	1.01	77.2	0.08	162.8		
10-Aug-22	1270 Sea Dog	0	0	0	0	19	8.41	0.70	57.8	0.06	122.4		
10-Aug-22	2315 Ida Lane	0	0	0	0	18	8.60	0.20	63.2	0.06	133.4		
10-Aug-22	3730 Fairwinds	0	0	0	0	18	8.19	1.06	131.2	0.13	274.0		
10-Aug-22	1996 Highland	0	0	0	0	17	8.23	1.04	134.9	0.13	266.0		
10-Aug-22	2339 Garry Oak	0	0	0	0	17	7.99	1.40	163.9	0.16	342.0		
17-Aug-22	1565 Stone lake	0	0	0	0	18	7.42	0.30	142.9	0.14	298.0		
17-Aug-22	1639 Marina Way	0	0	0	0	18	7.78	0.73	56.7	0.06	119.9		
17-Aug-22	2454 Armstrong	0	0	0	0	18	7.86	0.52	78.2	0.08	165.2		
17-Aug-22	2400 Evanshire	0	0	0	0	18	7.72	0.97	122.6	0.12	258.0		
17-Aug-22	3383 Redden	0	0	0	0	19	7.61	0.98	136.2	0.14	285.0		
17-Aug-22	Florence & Anchor	0	0	0	0	16	7.52	1.34	168.3	0.17	351.0		
24-Aug-22	1565 Stone lake			0	0	18	7.81	0.25	147.8	0.15	309.0		
24-Aug-22	3119 Swallow			0	0	18	7.60	0.05	131.7	0.13	276.0		
24-Aug-22	2454 Armstrong			0	0	17	8.03	0.65	60.0	0.06	126.8		
24-Aug-22	3465 Cambridge	0	0	0	0	18	7.54	1.20	140.8	0.14	394.0		
24-Aug-22	3500 Fairwinds	0	0	0	0	18	7.60	1.22	141.9	0.14	297.0		
24-Aug-22	2329 Chain			0	0	17	7.55	0.51	159.1	0.16	309.0		
CDN Drinking Water Guidelines		<1	<1	<1	<1	n/a	7.0-10.5	n/a	500	n/a	n/a	0.3	**0.02** AO **0.12** MAC

Legend:

*** Coliforms are measured in colony forming units (CFU) per 100 millilitres of water (CFU/100mL)**

Green font indicates a value flagged for operational consideration

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

Comments:

Iron and Manganese are no longer being tested in-house.

A full potability scan, including metals and minerals, is completed once per year at an external lab.

Notes below about pH (2015) from https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html#_ftn1

Type	Parameter (published, reaffirmed)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
Treatment-related	pH (2015)	None	7.0-10.5	Not applicable	Not applicable	The control of pH is important to maximize treatment effectiveness, control corrosion and reduce leaching from distribution system and plumbing

Regional District of Nanaimo - Water Services Department

Nanoose Bay Peninsula Water Analysis - 2022 Monthly Report

		BC Centre for Disease Control		RDN In-House Laboratory and Spectrophotometer									
Date	Sample Location (Address)	E. coli *	Total Coliform *	E.coli *	Total Coliform *	Temp. (°C)	pH	Free Chlorine Residual (mg/L)	Total Dissolved Solids (mg/L)	Salinity (%)	Conductivity (µS/cm)	Total Iron (mg/L)	Manganese (mg/L)
5-Jul-22	1358 Madrona	0	0	0	0	15	7.61	0.65	65.2	0.06	137.8	Fe and Mn are no longer tested in-house. See Annual Tap Water Results at https://www.rdn.bc.ca/nanoose-bay-peninsula	
5-Jul-22	2259 Higginson	0	0	0	0	16	7.92	0.58	44.9	0.05	94.6		
5-Jul-22	3427 Tyee	0	0	0	0	17	7.54	0.67	139.2	0.14	291.0		
5-Jul-22	2454 Armstrong	0	0	0	0	16	7.92	0.40	63.4	0.06	134.1		
5-Jul-22	3541 Shelby	0	0	0	0	15	7.68	0.86	131.7	0.13	276.0		
5-Jul-22	2329 Chain	0	0	0	0	15	7.61	0.47	138.7	0.14	288.0		
13-Jul-22	1566 Arbutus	0	0	0	0	9	7.80	0.63	78.1	0.06	164.4		
13-Jul-22	1270 Sea Dog	0	0	0	0	17	8.14	0.52	47.3	0.05	100.2		
13-Jul-22	2315 Ida Lane	0	0	0	0	16	7.97	0.22	93.2	0.09	196.0		
13-Jul-22	3730 Fairwinds	0	0	0	0	17	7.86	1.00	143.6	0.14	300.0		
13-Jul-22	1996 Highland	0	0	0	0	15	7.87	0.97	135.0	0.13	282.0		
13-Jul-22	2339 Garry Oak	0	0	0	0	14	7.74	1.40	175.5	0.17	365.0		
20-Jul-22	1565 Stone lake	0	0	0	0	16	7.30	0.54	44.6	0.14	302.0		
20-Jul-22	1639 Marina Way	0	0	0	0	16	7.95	0.86	145.4	0.05	104.1		
20-Jul-22	2454 Armstrong	0	0	0	0	16	7.88	0.52	49.1	0.06	133.5		
20-Jul-22	2400 Evanshire	0	0	0	0	16	7.61	1.01	63.2	0.13	277.0		
20-Jul-22	3383 Redden	0	0	0	0	16	7.64	1.00	131.7	0.13	276.0		
20-Jul-22	Florence & Anchor	0	0	0	0	16	7.68	1.10	44.9	0.11	227.0		
27-Jul-22	1565 Stonelake	0	0	0	0	16	7.35	0.96	149.4	0.15	312.0		
27-Jul-22	3119 Swallow	0	0	0	0	17	7.60	0.59	134.9	0.13	282.0		
27-Jul-22	2454 Armstrong	0	0	0	0	17	8.12	0.79	61.5	0.06	130.0		
27-Jul-22	3465 Cambridge	0	0	0	0	n/a	7.78	n/a	154.6	0.15	322.0		
27-Jul-22	3500 Fairwinds	0	0	0	0	16	7.78	1.20	135.9	0.14	284.0		
27-Jul-22	2329 Chain	0	0	0	0	15	7.62	1.00	177.1	0.18	369.0		
CDN Drinking Water Guidelines		<1	<1	<1	<1	n/a	7.0-10.5	n/a	500	n/a	n/a	0.3	**0.02** AO **0.12** MAC

Legend:

*** Coliforms are measured in colony forming units (CFU) per 100 millilitres of water (CFU/100mL)**

Green font indicates a value flagged for operational consideration

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

Comments:

Iron and Manganese are no longer being tested in-house.

A full potability scan, including metals and minerals, is completed once per year at an external lab.

Notes below about pH (2015) from https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html#_ftn1

Type	Parameter (published, reaffirmed)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
Treatment-related	pH (2015)	None	7.0-10.5	Not applicable	Not applicable	The control of pH is important to maximize treatment effectiveness, control corrosion and reduce leaching from distribution system and plumbing

Regional District of Nanaimo - Water Services Department

Nanoose Bay Peninsula Water Analysis - 2022 Monthly Report

		BC Centre for Disease Control		RDN In-House Laboratory and Spectrophotometer									
Date	Sample Location (Address)	E. coli *	Total Coliform *	E.coli *	Total Coliform *	Temp. (°C)	pH	Free Chlorine Residual (mg/L)	Total Dissolved Solids (mg/L)	Salinity (%)	Conductivity (µS/cm)	Total Iron (mg/L)	Manganese (mg/L)
7-Jun-22	1566 Arbutus	0	0	0	0	14	7.51	0.50	41.2	0.04	87.5	Fe and Mn are no longer tested in-house. See Annual Tap Water Results at https://www.rdn.bc.ca/nanoose-bay-peninsula	
7-Jun-22	1270 Sea Dog	0	0	0	0	14	7.58	0.10	35.2	0.03	74.8		
7-Jun-22	2315 Ida Lane	0	0	0	0	14	7.64	0.22	59.9	0.06	12.5		
7-Jun-22	3730 Fairwinds	0	0	0	0	15	7.48	0.42	134.8	0.13	282.0		
7-Jun-22	1996 Highland	0	0	0	0	14	7.49	0.73	130.2	0.13	273.0		
7-Jun-22	2339 Garry Oak	0	0	0	0	13	7.43	1.08	144.2	0.14	301.0		
13-Jun-22	1565 Stone lake	0	0	0	0	13	8.08	0.47	68.5	0.07	144.4		
13-Jun-22	1639 Marina Way	0	0	0	0	13	8.50	0.50	35.9	0.03	76.2		
13-Jun-22	2454 Armstrong	0	0	0	0	13	8.12	0.36	89.4	0.09	188.2		
13-Jun-22	2400 Evanshire	0	0	0	0	13	7.90	0.97	140.9	0.14	295.0		
13-Jun-22	3383 Redden	0	0	0	0	13	7.93	0.90	135.9	0.13	283.0		
13-Jun-22	Florence & Anchor	0	0	0	0	13	7.88	0.74	138.4	0.14	289.0		
21-Jun-22	1358 Madrona	0	0	0	0	13	7.17	0.39	41.0	0.04	87.0		
21-Jun-22	3119 Swallow	0	0	0	0	13	7.27	0.03	53.8	0.05	113.9		
21-Jun-22	2454 Armstrong			0	0	13	7.29	0.29	95.6	0.10	200.6		
21-Jun-22	3465 Cambridge	0	0	0	0	13	7.37	0.64	151.0	0.15	316.0		
21-Jun-22	3500 Fairwinds	0	0	0	0	14	7.28	0.72	152.6	0.15	317.0		
21-Jun-22	2329 Chain	0	0	0	0	13	7.45	0.83	125.6	0.12	263.0		
29-Jun-22	1565 Stonelake			0	0	14	7.38	0.73	83.1	0.08	173.4		
29-Jun-22	2259 Higginson	0	0	0	0	13	8.09	0.47	40.1	0.04	85.3		
29-Jun-22	3427 Tyee	0	0	0	0	14	8.26	0.55	40.8	0.04	86.3		
29-Jun-22	NB Elementary			0	0	12	7.72	1.59	169.4	0.17	353.0		
29-Jun-22	3541 Shelby	0	0	0	0	14	7.80	1.04	126.4	0.13	264.0		
29-Jun-22	2329 Chain			0	0	14	7.72	0.70	168.8	0.17	351.0		
CDN Drinking Water Guidelines		<1	<1	<1	<1	n/a	7.0-10.5	n/a	500	n/a	n/a	0.3	**0.02** AO **0.12** MAC

Legend:

*** Coliforms are measured in colony forming units (CFU) per 100 millilitres of water (CFU/100mL)**

Green font indicates a value flagged for operational consideration

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

Comments:

Iron and Manganese are no longer being tested in-house.

A full potability scan, including metals and minerals, is completed once per year at an external lab.

Notes below about pH (2015) from https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html#_ftn1

Type	Parameter (published, reaffirmed)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
Treatment-related	pH (2015)	None	7.0-10.5	Not applicable	Not applicable	The control of pH is important to maximize treatment effectiveness, control corrosion and reduce leaching from distribution system and plumbing

Regional District of Nanaimo - Water Services Department

Nanoose Bay Peninsula Water Analysis - 2022 Monthly Report

		BC Centre for Disease Control		RDN In-House Laboratory and Spectrophotometer									
Date	Sample Location (Address)	E. coli *	Total Coliform *	E.coli *	Total Coliform *	Temp. (°C)	pH	Free Chlorine Residual (mg/L)	Total Dissolved Solids (mg/L)	Salinity (%)	Conductivity (µS/cm)	Total Iron (mg/L)	Manganese (mg/L)
3-May-22	1358 Madrona	0	0	0	0	10	7.09	0.51	109.9	0.10	211.0	Fe and Mn are no longer tested in-house. See Annual Tap Water Results at https://www.rdn.bc.ca/nanoose-bay-peninsula	
3-May-22	2259 Higginson	0	0	0	0	9	7.20	0.57	122.4	0.11	222.0		
3-May-22	3427 Tyee	0	0	0	0	10	7.24	0.84	119.9	0.10	239.0		
3-May-22	2454 Armstrong	0	0	0	0	10	7.19	0.70	101.9	0.13	211.0		
3-May-22	3541 Shelby	0	0	0	0	10	7.22	0.96	122.4	0.12	261.0		
3-May-22	2329 Chain	0	0	0	0	10	7.39	1.13	132.1	0.10	277.0		
11-May-22	1566 Arbutus	0	0	0	0	10	7.51	1.07	71.3	0.07	150.4		
11-May-22	1270 Sea Dog	0	0	0	0	10	8.04	0.31	44.6	0.04	94.7		
11-May-22	2315 Ida Lane	0	0	0	0	10	7.60	0.20	120.7	0.12	253.0		
11-May-22	3730 Fairwinds	0	0	0	0	10	7.67	0.62	145.1	0.14	303.0		
11-May-22	1996 Highland	0	0	0	0	10		0.81					
11-May-22	2339 Garry Oak	0	0	0	0	10	7.73	1.05	120.7	0.12	253.0		
18-May-22	1565 Stonelake	0	0	0	0	11	7.82	0.51	105.3	0.11	221.0		
18-May-22	1639 Marna Way	0	0	0	0	10	8.01	0.53	34.8	0.03	74.0		
18-May-22	NB Elementry			0	0	10	7.50	1.02	109.2	0.11	225.0		
18-May-22	2400 Evanshire	0	0	0	0	10	7.65	0.91	133.7	0.13	279.0		
18-May-22	3383 Redden	0	0	0	0	10		0.89					
18-May-22	Florence & Anchor	0	0	0	0	10	7.66	0.51	147.1	0.15	307.0		
24-May-22	1565 Stonelake			0	0	11	7.53	0.77	105.0	0.10	220.0		
24-May-22	3119 Swallow	0	0	0	0	11	7.55	0.34	129.7	0.13	271.0		
24-May-22	2454 Armstrong			0	0	11	7.86	0.51	53.8	0.05	113.9		
24-May-22	3465 Cambridge	0	0	0	0	11	7.61	1.00	128.9	0.13	270.0		
24-May-22	3500 Fairwinds	0	0	0	0	11	7.55	1.09	134.9	0.13	279.0		
24-May-22	2329 Chain			0	0	11	7.51	1.68	199.7	0.20	415.0		
31-May-22	1565 Stonelake			0	0	12	7.86	0.73	41.1	0.04	87.2		
31-May-22	1639 Marina			0	0	12	8.38	0.68	34.8	0.03	74.1		
31-May-22	NB Elementry			0	0	11	7.85	1.36	133.0	0.13	279.0		
31-May-22	2400 Evanshire			0	0	12	7.79	0.96	139.0	0.14	291.0		
31-May-22	3383 Redden			0	0	12	7.76	0.97	132.00	0.13	267.00		
31-May-22	Florence & Anchor			0	0	12	7.78	0.95	133.0	0.13	278.0		
CDN Drinking Water Guidelines		<1	<1	<1	<1	n/a	7.0-10.5	n/a	500	n/a	n/a	0.3	**0.02** AO **0.12** MAC

Legend:

*** Coliforms are measured in colony forming units (CFU) per 100 millilitres of water (CFU/100mL)**

Green font indicates a value flagged for operational consideration

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

Comments:

Iron and Manganese are no longer being tested in-house.

A full potability scan, including metals and minerals, is completed once per year at an external lab.

Notes below about pH (2015) from https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html#_ftn1

Type	Parameter (published, reaffirmed)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
Treatment-related	pH (2015)	None	7.0-10.5	Not applicable	Not applicable	The control of pH is important to maximize treatment effectiveness, control corrosion and reduce leaching from distribution system and plumbing

Regional District of Nanaimo - Water Services Department

Nanoose Bay Peninsula Water Analysis - 2022 Monthly Report

		BC Centre for Disease Control		RDN In-House Laboratory and Spectrophotometer									
Date	Sample Location (Address)	E. coli *	Total Coliform *	E.coli *	Total Coliform *	Temp. (°C)	pH	Free Chlorine Residual (mg/L)	Total Dissolved Solids (mg/L)	Salinity (%)	Conductivity (µS/cm)	Total Iron (mg/L)	Manganese (mg/L)
6-Apr-22	1358 Madrona	0	0	0	0	9	7.35	0.56	93.7	0.09	197.3	Fe and Mn are no longer tested in-house. See Annual Tap Water Results at https://www.rdn.bc.ca/nanoose-bay-peninsula	
6-Apr-22	2259 Higginson	0	0	0	0	9	7.78	0.60	38.2	0.04	80.9		
6-Apr-22	3427 Tyee	0	0	0	0	9	7.58	0.71	124.4	0.12	260.0		
6-Apr-22	2454 Armstrong	0	0	0	0	9	7.77	0.62	93.9	0.09	197.7		
6-Apr-22	3500 Fairwinds	0	0	0	0	9	7.90	0.87	122.7	0.12	255.0		
6-Apr-22	3541 Shelby	0	0	0	0	9	7.87	0.90	122.0	0.13	256.0		
6-Apr-22	2329 Chain	0	0	0	0	9	7.77	0.44	135.0	0.13	282.0		
12-Apr-22	1566 Arbutus	0	0	0	0	9	7.17	0.52	102.2	0.10	214.7		
12-Apr-22	1270 Sea Dog	0	0	0	0	9	7.21	0.58	112.2	0.11	235.0		
12-Apr-22	2315 Ida Lane	0	0	0	0	9	7.48	0.50	88.6	0.09	186.4		
12-Apr-22	3730 Fairwinds	0	0	0	0	9	7.43	0.80	148.6	0.14	296.0		
12-Apr-22	1996 Highland	0	0	0	0	9	7.42	0.89	151.1	0.14	282.0		
12-Apr-22	2339 Garry Oak	0	0	0	0	9	7.69	0.90	117.3	0.12	264.0		
19-Apr-22	1565 Stonelake	0	0	0	0	9	6.87	0.67	99.8	0.10	210.7		
19-Apr-22	1639 Marina Way	0	0	0	0	10	6.99	0.56	118.7	0.12	249.0		
19-Apr-22	NB Elementry			0	0	9	7.12	1.80	114.7	0.11	241.0		
19-Apr-22	2400 Evanshire	0	0	0	0	10	7.22	1.36	170.2	0.17	354.0		
19-Apr-22	3383 Redden	0	0	0	0	10	7.30	0.86	166.6	0.15	320.0		
19-Apr-22	Florence & Anchor	0	0	0	0	9	7.45	0.90	151.7	0.15	317.0		
27-Apr-22	1565 Stonelake			0	0	10	7.23	0.50	104.1	0.10	218.5		
27-Apr-22	3119 Swallow	0	0	0	0	9	7.22	0.36	131.1	0.13	275.0		
27-Apr-22	2454 Armstrong			0	0	9	7.41	0.57	92.8	0.09	195.1		
27-Apr-22	3465 Cambridge	0	0	0	0	9	7.47	1.09	126.3	0.13	265.0		
27-Apr-22	2329 Chain			0	0	8	7.57	0.55	140.1	0.13	281.0		
CDN Drinking Water Guidelines		<1	<1	<1	<1	n/a	7.0-10.5	n/a	500	n/a	n/a	0.3	**0.02** AO **0.12** MAC

Legend:

*** Coliforms are measured in colony forming units (CFU) per 100 millilitres of water (CFU/100mL)**

Green font indicates a value flagged for operational consideration

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

Comments:

Iron and Manganese are no longer being tested in-house.

A full potability scan, including metals and minerals, is completed once per year at an external lab.

Notes below about pH (2015) from https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html#_ftn1

Type	Parameter (published, reaffirmed)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
Treatment-related	pH (2015)	None	7.0-10.5	Not applicable	Not applicable	The control of pH is important to maximize treatment effectiveness, control corrosion and reduce leaching from distribution system and plumbing

Regional District of Nanaimo - Water Services Department

Nanoose Bay Peninsula Water Analysis - 2022 Monthly Report

		BC Centre for Disease Control		RDN In-House Laboratory and Spectrophotometer									
Date	Sample Location (Address)	E. coli *	Total Coliform *	E.coli *	Total Coliform *	Temp. (°C)	pH	Free Chlorine Residual (mg/L)	Total Dissolved Solids (mg/L)	Salinity (%)	Conductivity (µS/cm)	Total Iron (mg/L)	Manganese (mg/L)
1-Mar-22	1358 Madrona	0	0	0	0	8	7.40	0.44	111.1	0.12	266.0	Fe and Mn are no longer tested in-house. See Annual Tap Water Results at https://www.rdn.bc.ca/nanoose-bay-peninsula	
1-Mar-22	2259 Higginson	0	0	0	0	8	8.09	0.63	51.1	0.05	109.2		
1-Mar-22	3427 Tyee	0	0	0	0	8	7.99	0.15	49.6	0.05	94.6		
1-Mar-22	2454 Armstrong	0	0	0	0	8	7.55	0.46	93.7	0.09	196.8		
1-Mar-22	3500 Fairwinds	0	0	0	0	8	7.47	0.90	146.4	0.15	305.0		
1-Mar-22	3541 Shelby	0	0	0	0	8	7.56	0.90	142.4	0.14	303.0		
1-Mar-22	2329 Chain	0	0	0	0	7	7.59	0.70	147.6	0.15	308.0		
9-Mar-22	1566 Arbutus	0	0	0	0	8	8.02	0.78	59.4	0.06	125.6		
9-Mar-22	1270 Seadog	0	0	0	0	9	7.95	0.46	34.8	0.03	73.9		
9-Mar-22	2315 Ida Lane	0	0	0	0	9	7.47	0.54	129.3	0.13	270.0		
9-Mar-22	3730 Fairwinds	0	0	0	0	9	7.78	0.41	129.1	0.13	269.0		
9-Mar-22	1996 Highland	0	0	0	0	9	7.77	0.74	127.8	0.13	268.0		
9-Mar-22	2339 Garry Oak	0	0	0	0	9	7.83	1.22	105.6	0.11	222.0		
14-Mar-22	1565 Stone Lake	0	0	0	0	9	7.33	0.37	109.1	0.11	229.0		
14-Mar-22	1639 Marina Way	0	0	0	0	8	8.09	0.47	39.6	0.04	83.9		
14-Mar-22	NB Elelmentry			0	0	8	7.76	1.15	107.2	0.11	225.0		
14-Mar-22	2400 Evanshire	0	0	0	0	9	7.77	0.85	121.3	0.12	254.0		
14-Mar-22	3465 Cambridge	0	0	0	0	9	7.85	0.91	122.3	0.12	256.0		
14-Mar-22	Florence & Anchor	0	0	0	0	8	7.78	0.65	130.5	0.13	273.0		
21-Mar-22	1565 Stonelake			0	0	8	7.14	0.35	129.3	0.13	271.0		
21-Mar-22	3119 Swallow	0	0	0	0	8	7.37	0.25	123.4	0.12	259.0		
21-Mar-22	2454 Armstrong			0	0	8	7.40	0.60	143.9	0.14	301.0		
21-Mar-22	3383 Redden	0	0	0	0	8	7.71	0.89	122.1	0.12	241.0		
21-Mar-22	2329 Chain			0	0	8	7.39	0.70	155.8	0.16	324.0		
30-Mar-22	1566 Arbutus			0	0	9	7.20	0.56	114.0	0.11	240.0		
30-Mar-22	1270 Seadog			0	0	10	7.58	0.33	48.3	0.05	102.0		
30-Mar-22	3427 Tyee			0	0	10	7.37	0.62	136.5	0.14	284.0		
30-Mar-22	NB Elelmentry			0	0	10	7.64	1.03	112.9	0.11	237.0		
30-Mar-22	1996 Highland			0	0	10	7.65	0.83	139.4	0.14	291.0		
30-Mar-22	2339 Garry Oak			0	0	10	7.54	0.88	119.9	0.12	252.0		
CDN Drinking Water Guidelines		<1	<1	<1	<1	n/a	7.0-10.5	n/a	500	n/a	n/a	0.3	**0.02** AO **0.12** MAC

Legend:

*** Coliforms are measured in colony forming units (CFU) per 100 millilitres of water (CFU/100mL)**

Green font indicates a value flagged for operational consideration

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

Comments:

Iron and Manganese are no longer being tested in-house.

A full potability scan, including metals and minerals, is completed once per year at an external lab.

Notes below about pH (2015) from https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html#_ftn1

Type	Parameter (published, reaffirmed)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
Treatment-related	pH (2015)	None	7.0-10.5	Not applicable	Not applicable	The control of pH is important to maximize treatment effectiveness, control corrosion and reduce leaching from distribution system and plumbing

Regional District of Nanaimo - Water Services Department

Nanoose Bay Peninsula Water Analysis - 2022 Monthly Report

		BC Centre for Disease Control		RDN In-House Laboratory and Spectrophotometer									
Date	Sample Location (Address)	E. coli *	Total Coliform *	E.coli *	Total Coliform *	Temp. (°C)	pH	Free Chlorine Residual (mg/L)	Total Dissolved Solids (mg/L)	Salinity (%)	Conductivity (µS/cm)	Total Iron (mg/L)	Manganese (mg/L)
1-Feb-22	1358 Madrona	0	0	0	0	8	7.94	0.76	77.4	0.08	163.5	Fe and Mn are no longer tested in-house. See Annual Tap Water Results at https://www.rdn.bc.ca/nanoose-bay-peninsula	
1-Feb-22	2259 Higginson	0	0	0	0	7	8.54	0.87	39.9	0.04	84.6		
1-Feb-22	2454 Armstrong	0	0	0	0	8	8.22	0.99	79.0	0.08	166.5		
1-Feb-22	2400 Evanshire	0	0	0	0	7	7.94	1.05	123.7	0.12	259.0		
1-Feb-22	3541 Shelby	0	0	0	0	7	7.86	1.06	127.1	0.12	269.0		
1-Feb-22	2329 Chain	0	0	0	0	7	7.92	0.90	109.1	0.11	230.0		
9-Feb-22	1566 Arbutus	0	0	0	0	8	8.05	0.76	61.0	0.04	128.3		
9-Feb-22	1270 Seadog	0	0	0	0	7	8.13	0.71	37.0	0.06	78.7		
9-Feb-22	2315 Ida Lane	0	0	0	0	7	7.51	0.62	116.7	0.12	245.0		
9-Feb-22	3730 Fairwinds	0	0	0	0	8	7.08	0.99	126.8	0.13	266.0		
9-Feb-22	1996 Highland	0	0	0	0	8	7.04	0.99	114.2	0.11	240.0		
9-Feb-22	2339 Garry Oak	0	0	0	0	8	7.39	1.05	114.8	0.11	241.0		
15-Feb-22	1358 Madrona	0	0	0	0	7	7.10	0.42	99.1	0.10	208.3		
15-Feb-22	3119 Swallow	0	0	0	0	7	7.59	0.20	45.7	0.05	96.6		
15-Feb-22	NB Elementary			0	0	8	7.54	1.35	152.6	0.15	320.0		
15-Feb-22	3500 Fairwinds	0	0	0	0	8	7.76	0.96	128.6	0.13	272.0		
15-Feb-22	3383 Redden	0	0	0	0	7	7.76	0.93	129.9	0.13	266.0		
15-Feb-22	Florence & Anchor	0	0	0	0	9	7.71	0.57	120.8	0.12	253.0		
23-Feb-22	1565 Stonelake			0	0	9	7.39	0.24	124.6	0.12	262.0		
23-Feb-22	1639 Marina Way	0	0	0	0	7	8.16	0.63	43.9	0.04	93.1		
23-Feb-22	2454 Armstrong			0	0	8	8.04	0.45	95.3	0.09	200.7		
23-Feb-22	3465 Cambridge	0	0	0	0	8	7.89	0.84	132.4	0.13	277.0		
23-Feb-22	3500 Fairwinds	0	0	0	0	8	7.91	0.89	131.2	0.13	274.0		
23-Feb-22	2329 Chain			0	0	7	7.86	0.50	128.6	0.13	269.0		
CDN Drinking Water Guidelines		<1	<1	<1	<1	n/a	7.0-10.5	n/a	500	n/a	n/a	0.3	**0.02** AO **0.12** MAC

Legend:

*** Coliforms are measured in colony forming units (CFU) per 100 millilitres of water (CFU/100mL)**

Green font indicates a value flagged for operational consideration

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

Comments:

Iron and Manganese are no longer being tested in-house.

A full potability scan, including metals and minerals, is completed once per year at an external lab.

Notes below about pH (2015) from https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html#_ftn1

Type	Parameter (published, reaffirmed)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
Treatment-related	pH (2015)	None	7.0-10.5	Not applicable	Not applicable	The control of pH is important to maximize treatment effectiveness, control corrosion and reduce leaching from distribution system and plumbing

Regional District of Nanaimo - Water Services Department

Nanoose Bay Peninsula Water Analysis - 2022 Monthly Report

		BC Centre for Disease Control		RDN In-House Laboratory and Spectrophotometer									
Date	Sample Location (Address)	E. coli *	Total Coliform *	E.coli *	Total Coliform *	Temp. (°C)	pH	Free Chlorine Residual (mg/L)	Total Dissolved Solids (mg/L)	Salinity (%)	Conductivity (µS/cm)	Total Iron (mg/L)	Manganese (mg/L)
5-Jan-22	1358 Madrona	0	0	0	0	7	7.66	0.79	83.5	0.08	176.0	Fe and Mn are no longer tested in-house. See Annual Tap Water Results at https://www.rdn.bc.ca/nanoose-bay-peninsula	
5-Jan-22	2259 Higginson	0	0	0	0	6	7.27	0.75	70.8	0.07	147.8		
5-Jan-22	2454 Armstrong	0	0	0	0	7	7.48	0.52	94.5	0.09	198.9		
5-Jan-22	2400 Evanshire	0	0	0	0	7	7.04	1.04	120.2	0.12	252.0		
5-Jan-22	3541 Shebly	0	0	0	0	6	7.18	1.08	121.9	0.12	251.0		
5-Jan-22	Florence & Anchor	0	0	0	0	6	7.44	0.69	120.8	0.12	253.0		
10-Jan-22	1566 Arbutus	0	0	0	0	7	7.10	0.81	63.2	0.06	133.9		
10-Jan-22	1270 Sea Dog	0	0	0	0	5	7.39	0.71	41.7	0.04	88.4		
10-Jan-22	2315 Ida Lane	0	0	0	0	7	7.21	0.53	109.3	0.11	229.0		
10-Jan-22	3730 Fairwinds	0	0	0	0	6	7.36	0.81	133.2	0.13	278.0		
10-Jan-22	1996 Highland	0	0	0	0	7		1.05					
10-Jan-22	2339 Garry Oak	0	0	0	0	7	7.58	1.14	109.4	0.11	229.0		
18-Jan-22	1358 Madrona	0	0	0	0	7	7.18	0.66	80.3	0.08	170.7		
18-Jan-22	3427 Tyee			0	0								
18-Jan-22	2359 Higginson	0	0	0	0	6	8.04	0.84	330.0	0.03	70.7		
18-Jan-22	2315 Ida Lane	0	0	0	0	7	7.79	0.74	126.8	0.13	265.0		
18-Jan-22	3541 Shelby	0	0	0	0	7	7.80	1.29	121.4	0.12	254.0		
18-Jan-22	3382 Redden			0	0								
18-Jan-22	Florence & Anchor	0	0	0	0	7	7.81	1.19	104.9	0.10	220.0		
19-Jan-22	1565 Stone Lake	0	0	0	0	9	7.88	0.56	120.9	0.12	253.0		
19-Jan-22	1639 Marina Way	0	0	0	0	8	8.66	0.85	33.1	0.03	70.3		
19-Jan-22	3427 Tyee	0	0	0	0	8	8.00	0.78	125.0	0.12	257.0		
19-Jan-22	NB Elementry			0	0	8	7.82	1.41	129.9	0.13	272.0		
19-Jan-22	3382 Redden	0	0	0	0	8	7.85	1.24	120.6	0.12	253.0		
19-Jan-22	2329 Chain	0	0	0	0	8	7.77	0.89	122.1	0.12	531.0		
25-Jan-22	1565 Stone Lake	0	0	0	0	9	7.65	0.48	93.6	0.10	202.0		
25-Jan-22	3119 Swallow	0	0	0	0	6	7.92	0.19	122.3	0.12	256.0		
25-Jan-22	1639 Marina Way	0	0	0	0	7	8.82	0.48	34.5	0.03	73.4		
25-Jan-22	2454 Armstrong	0	0	0	0	7	8.05	0.67	101.1	0.10	212.4		
25-Jan-22	3564 Cambridge	0	0	0	0	8	7.90	1.02	124.0	0.12	259.0		
25-Jan-22	2400 Evanshire	0	0	0	0	8	7.38	0.95	117.0	0.12	249.0		
25-Jan-22	2329 Chain Way	0	0	0	0	7	7.39	1.04	102.1	0.10	214.6		
CDN Drinking Water Guidelines		<1	<1	<1	<1	n/a	7.0-10.5	n/a	500	n/a	n/a	0.3	**0.02** AO **0.12** MAC

Legend:

*** Coliforms are measured in colony forming units (CFU) per 100 millilitres of water (CFU/100mL)**

Green font indicates a value flagged for operational consideration

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

Comments:

Iron and Manganese are no longer being tested in-house.

A full potability scan, including metals and minerals, is completed once per year at an external lab.

Notes below about pH (2015) from https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html#_ftn1

Type	Parameter (published, reaffirmed)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
Treatment-related	pH (2015)	None	7.0-10.5	Not applicable	Not applicable	The control of pH is important to maximize treatment effectiveness, control corrosion and reduce leaching from distribution system and plumbing

REGIONAL DISTRICT OF NANAIMO

Tippet Road (new in 2020) Raw Well Water Analysis
2275 Tippet Road

CDWG=Canadian Drinking Water Guidelines
MAC=Maximum Acceptable Concentration
OG= Operational Guidance Value
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		Febuary 25 2021	October 28 2021	October 20 2022	
Miscellaneous Inorganics							
Fluoride	mg/L	1.5	MAC	0.15	0.16	0.17	
Alkalinity (total as CaCO)	mg/L			170	150	150	
Anions							
Dissolved Sulphate	mg/L	500	AO	6.8	9.1	11	
Dissolved Chloride	mg/L	250	AO	12	10	9.1	
Nitrite	mg/L	1	MAC	<0.005	<0.005	<0.005	
Miscellaneous							
Apparent Colour	Colour Unit			15	10	10	
Nutrients							
Total Ammonia	mg/L			1.3	1.2	1.3	
Physical Properties							
Conductivity	µS/cm			330	330	340	
pH	pH	7.0:10.5	AO	7.07	7.83	8.05	
TDS	mg/L	500	AO	170	220	180	
Turbidity	NTU			0.6	0.93	1.1	
Microbiological Parameters							
E.coli	MPN/100mL	<1	MAC	0	0	0	
Total Coliforms	MPN/100mL	<1	MAC	1	0	0	
Calculated Parameters							
Total Hardness (CaCO)	mg/L			97.9	118	125	
Nitrate	mg/L	10	MAC	<0.02	<0.02	<0.02	
Elements							
Total Mercury	mg/L	0.001	MAC	<0.0000019	<0.0000019	<0.0000019	
Total Metals							
Total Aluminum	mg/L	0.1	OG	<0.003	<0.003	<0.003	
Total Antimony	mg/L	0.006	MAC	<0.0005	<0.0005	<0.0005	
Total Arsenic	mg/L	0.01	MAC	0.00362	0.00157	0.00147	
Total Barium	mg/L	1	MAC	0.0095	0.0093	0.0095	
Total Beryllium	mg/L			<0.0001	<0.0001	<0.0001	
Total Bismuth	mg/L			<0.001	<0.001	<0.001	
Total Boron	mg/L	5	MAC	0.073	0.054	0.055	
Total Cadmium	mg/L	0.005	MAC	<0.00001	<0.00001	<0.00001	
Total Chromium	mg/L	0.05	MAC	<0.001	<0.001	<0.001	
Total Cobalt	mg/L			<0.0002	<0.0002	0.00074	
Total Copper	mg/L	2	AO	0.00078	0.00319	0.00253	
Total Iron	mg/L	0.3	AO	**0.317**	**0.543**	**0.575**	
Total Lead	mg/L	0.05	MAC	<0.0002	<0.0002	<0.0002	
Total Manganese	mg/L	0.02 0.12	AO MAC	**0.227**	**0.256**	**0.272**	
Total Molybdenum	mg/L			<0.001	<0.001	<0.001	
Total Nickel	mg/L			<0.001	<0.001	<0.001	
Total Selenium	mg/L	0.05	MAC	<0.0001	<0.0001	<0.0001	
Total Silicon	mg/L			14.2	15.4	16.5	
Total Silver	mg/L			<0.00002	<0.00002	<0.00002	
Total Strontium	mg/L			0.092	0.106	0.112	
Total Thallium	mg/L			<0.00001	<0.00001	<0.00001	
Total Tin	mg/L			<0.005	<0.005	<0.005	
Total Titanium	mg/L			<0.005	<0.005	<0.005	
Total Uranium	mg/L	0.02	MAC	<0.0001	<0.0001	<0.0001	
Total Vanadium	mg/L			<0.005	<0.005	<0.005	
Total Zinc	mg/L	5	AO	<0.005	0.0053	0.0052	
Total Zirconium	mg/L			<0.0001	<0.0001	<0.0001	
Total Calcium	mg/L			22.6	28.8	30.8	
Total Magnesium	mg/L			10.1	11.3	11.8	
Total Potassium	mg/L			2.61	2.46	2.54	
Total Sodium	mg/L	200	AO	23.4	18	19.5	
Total Sulphur	mg/L			<3	<3	3.6	

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.

REGIONAL DISTRICT OF NANAIMO

Fairwinds #3 Raw Well Water Analysis
2301 Nanoose Road
(well water has been sent to the WTP since 2012)

CDWG=Canadian Drinking Water Guidelines — MAC=Maximum Acceptable Concentration

OG= Operational Guidance Value — 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 26 2016	Septmeber 21 2017	November 6 2018	October 24 2019	November 5 2020	October 28 2021	October 20 2022
Miscellaneous Inorganics										
Fluoride	mg/L	1.5	MAC	0.12	0.13	0.14	0.15	0.13	0.14	0.14
Alkalinity (total as CaCO)	mg/L			152	164	156	150	160	160	160
Anions										
Dissolved Sulphate	mg/L	500	AO	11	13.6	11.3	12	12	14	14
Dissolved Chloride	mg/L	250	AO	61	52	47	57	49	51	44
Nitrite	mg/L	1	MAC	<0.0050	<0.0050	<0.0050	<0.005	<0.005	<0.005	<0.005
Miscellaneous										
Apparent Colour	Colour Unit			30	20	20	20	15	10	15
Nutrients										
Total Ammonia	mg/L			1.9	1.8	1.7	1.7	1.9	1.7	1.7
Physical Properties										
Conductivity	µS/cm			512	488	477	470	480	480	480
pH	pH	7.0:10.5	AO	8.14	8.23	8.06	8.08	8.26	7.84	8.05
TDS	mg/L	500	AO	284	276	252	250	270	280	250
Turbidity	NTU			1.11	1.02	0.77	1.2	0.86	0.89	1
Microbiological Parameters										
E.coli	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	0	0	0	0
Total Coliforms	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	0	0	0	0
Calculated Parameters										
Total Hardness (CaCO)	mg/L			149	144	135	138	134	136	141
Nitrate	mg/L	10	MAC	<0.020	<0.020	<0.020	<0.02	<0.02	<0.02	<0.02
Elements										
Total Mercury	mg/L	0.001	MAC	<0.00001	<0.00001	<0.000002	<0.000002	<0.0000019	<0.0000019	<0.0000019
Total Metals										
Total Aluminum	mg/L	0.1	OG	<0.003	<0.003	<0.0030	<0.003	<0.003	<0.003	<0.003
Total Antimony	mg/L	0.006	MAC	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Total Arsenic	mg/L	0.01	MAC	0.00395	0.00379	0.0038	0.00365	0.00344	0.00358	0.00329
Total Barium	mg/L	1	MAC	0.0095	0.0099	0.0091	0.0089	0.0086	0.009	0.0087
Total Beryllium	mg/L			<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
Total Boron	mg/L	5	MAC	0.077	0.090	0.073	0.074	0.073	0.072	0.086
Total Cadmium	mg/L	0.005	MAC	<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
Total Cobalt	mg/L			<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Total Copper	mg/L	1	AO	0.00035	<0.0002	0.00153	<0.0002	0.0002	0.0002	0.0005
Total Iron	mg/L	0.3	AO	**0.561**	**0.556**	**0.513**	**0.526**	**0.52**	**0.511**	**0.517**
Total Lead	mg/L	0.01	MAC	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Total Manganese	mg/L	0.02 0.12	AO MAC	**0.231**	**0.230**	**0.225**	**0.247**	**0.288**	**0.237**	**0.235**
Total Molybdenum	mg/L			<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
Total Selenium	mg/L	0.05	MAC	<0.0001	<0.0001	<0.0001	<0.0001	0.00164	<0.0001	0.00048
Total Silicon	mg/L			14.5	16.8	14.8	14.6	13.5	15.9	17.9
Total Silver	mg/L			<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Total Strontium	mg/L			0.221	0.224	0.218	0.214	0.202	0.221	0.209
Total Thallium	mg/L			<0.00005	<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
Total Titanium	mg/L			<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
Total Vanadium	mg/L			<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	<0.005	0.0057
Total Zirconium	mg/L			<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001
Total Calcium	mg/L			37.1	35.6	33.7	34.9	32.6	33.4	35.3
Total Magnesium	mg/L			13.7	13.4	12.3	12.4	12.7	12.7	13
Total Potassium	mg/L			3.31	3.7	3.45	3.48	3.36	3.51	3.25
Total Sodium	mg/L	200	AO	42.2	39.5	37	36.3	36	35.2	36.5
Total Sulphur	mg/L			4.1	6.6	3.8	5.7	3.8	4.9	5.3

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.

REGIONAL DISTRICT OF NANAIMO

West Bay #4 Raw Well Water Analysis
2473 Nanoose Road
(well water has been sent to the WTP since 2012)

CDWG=Canadian Drinking Water Guidelines MAC=Maximum Acceptable Concentration

OG= Operational Guidance Value 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 24 2019	November 5 2020	October 28 2021	October 20 2022
Miscellaneous Inorganics							
Fluoride	mg/L	1.5	MAC	0.18	0.15	0.16	0.17
Alkalinity (total as CaCO)	mg/L			140	140	140	140
Anions							
Dissolved Sulphate	mg/L	500	AO	6.5	8.2	9.8	9
Dissolved Chloride	mg/L	250	AO	8.2	8.5	8.7	7.6
Nitrite	mg/L	1	MAC	<0.005	<0.005	<0.005	<0.05
Miscellaneous							
Apparent Colour	Colour Unit			20	15	15	10
Nutrients							
Total Ammonia	mg/L			1.1	1.2	1.1	1.2
Physical Properties							
Conductivity	µS/cm			300	310	310	310
pH	pH	7.0:10.5	AO	8.05	8.25	7.8	7.99
TDS	mg/L	500	AO	170	170	210	170
Turbidity	NTU			0.73	0.7	0.64	0.74
Microbiological Parameters							
E.coli	MPN/100mL	<1	MAC	0	0	0	0
Total Coliforms	MPN/100mL	<1	MAC	0	0	0	0
Calculated Parameters							
Total Hardness (CaCO)	mg/L			107	107	106	112
Nitrate	mg/L	10	MAC	<0.02	<0.02	<0.02	<0.02
Elements							
Total Mercury	mg/L	0.001	MAC	<0.000002	<0.0000019	<0.0000019	0.0000034
Total Metals							
Total Aluminum	mg/L	0.1	OG	<0.003	<0.003	<0.003	<0.003
Total Antimony	mg/L	0.006	MAC	<0.0005	<0.0005	<0.0005	<0.0005
Total Arsenic	mg/L	0.01	MAC	0.00043	0.00042	0.00047	0.00051
Total Barium	mg/L	1	MAC	0.006	0.0058	0.006	0.0063
Total Beryllium	mg/L			<0.0001	<0.0001	<0.0001	<0.0001
Total Bismuth	mg/L			<0.001	<0.001	<0.001	<0.001
Total Boron	mg/L	5	MAC	0.062	0.061	0.059	0.061
Total Cadmium	mg/L	0.005	MAC	<0.00001	<0.00001	<0.00001	<0.00001
Total Chromium	mg/L	0.05	MAC	0.0011	<0.001	<0.001	<0.001
Total Cobalt	mg/L			<0.0002	<0.0002	<0.0002	0.00035
Total Copper	mg/L	2	AO	0.00991	0.00203	0.00131	0.0203
Total Iron	mg/L	0.3	AO	**0.569**	**0.548**	**0.518**	**0.552**
Total Lead	mg/L	0.05	MAC	<0.0002	<0.0002	<0.0002	<0.0002
Total Manganese	mg/L	0.02 0.12	AO MAC	**0.218**	**0.191**	**0.191**	**0.205**
Total Molybdenum	mg/L			<0.001	<0.001	<0.001	<0.001
Total Nickel	mg/L			<0.001	<0.001	<0.001	<0.001
Total Selenium	mg/L	0.05	MAC	0.00079	0.00023	<0.0001	<0.0001
Total Silicon	mg/L			13.1	12.8	14.5	15.9
Total Silver	mg/L			<0.00002	<0.00002	<0.00002	<0.00002
Total Strontium	mg/L			0.103	0.0987	0.104	0.109
Total Thallium	mg/L			<0.00001	<0.00001	<0.00001	<0.00001
Total Tin	mg/L			<0.005	<0.005	<0.005	<0.005
Total Titanium	mg/L			<0.005	<0.005	<0.005	<0.005
Total Uranium	mg/L	0.02	MAC	<0.0001	<0.0001	<0.0001	<0.0001
Total Vanadium	mg/L			<0.005	<0.005	<0.005	<0.005
Total Zinc	mg/L	5	AO	<0.005	<0.005	0.0102	0.0062
Total Zirconium	mg/L			<0.0001	<0.0001	<0.0001	<0.0001
Total Calcium	mg/L			27.1	26.8	26.3	28
Total Magnesium	mg/L			9.64	9.8	9.67	10.3
Total Potassium	mg/L			2.44	2.26	2.36	2.45
Total Sodium	mg/L	200	AO	18.7	18	17.5	18.9
Total Sulphur	mg/L			<3	<3	3.2	<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.

REGIONAL DISTRICT OF NANAIMO

Madrona #4 Raw Well Water Analysis
Northwest Bay Logging Road

CDWG=Canadian Drinking Water Guidelines
MAC=Maximum Acceptable Concentration
OG= Operational Guidance Value
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 26 2016	September 20 2017	November 6 2018	October 24 2019	November 5 2020	October 28 2021	October 20 2022
Miscellaneous Inorganics										
Fluoride	mg/L	1.5	MAC	0.13	0.12	0.14	0.16	0.12	0.12	0.13
Alkalinity (total as CaCO)	mg/L			132	132	135	130	140	130	130
Anions										
Dissolved Sulphate	mg/L	500	AO	6.38	6.4	6.3	6.1	6.2	6.9	6.3
Dissolved Chloride	mg/L	250	AO	20	19	22	23	22	17	21
Nitrite	mg/L	1	MAC	<0.0050	<0.0050	<0.0050	<0.005	<0.005	<0.005	<0.005
Miscellaneous										
Apparent Colour	Colour Unit			15	10	10	15	10	<5	5
Nutrients										
Total Ammonia	mg/L			0.34	0.28	0.24	0.31	0.27	0.26	0.27
Physical Properties										
Conductivity	µS/cm			334	322	327	340	340	300	340
pH	pH	7.0:10.5	AO	8.35	8.33	8.23	8.17	8.47	7.93	8.31
TDS	mg/L	500	AO	186	170	170	180	190	190	180
Turbidity	NTU			5.68	0.76	2.25	0.17	0.15	0.19	0.13
Microbiological Parameters										
E.coli	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	0	0	0	0
Total Coliforms	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	0	0	0	0
Calculated Parameters										
Total Hardness (CaCO)	mg/L			42.7	43.4	40.9	39	42	48.5	43.2
Nitrate	mg/L	10	MAC	<0.020	<0.020	<0.020	<0.02	<0.02	<0.02	<0.02
Elements										
Total Mercury	mg/L	0.001	MAC	<0.00001	<0.00001	<0.000002	<0.000002	<0.0000019	<0.0000019	0.0000024
Total Metals										
Total Aluminum	mg/L	0.1	OG	**0.203**	0.0107	0.023	0.0038	<0.003	0.0037	0.0047
Total Antimony	mg/L	0.006	MAC	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Total Arsenic	mg/L	0.01	MAC	0.00962	0.00912	0.00867	0.00871	0.00884	0.0097	0.009
Total Barium	mg/L	1	MAC	0.0135	0.0111	0.0111	0.0114	0.011	0.0117	0.0112
Total Beryllium	mg/L			<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
Total Boron	mg/L	5	MAC	0.165	0.147	0.156	0.155	0.153	0.122	0.171
Total Cadmium	mg/L	0.005	MAC	<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
Total Cobalt	mg/L			<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Total Copper	mg/L	1	AO	0.00104	0.00041	0.0012	0.00048	0.00027	0.00174	0.00049
Total Iron	mg/L	0.3	AO	0.219	0.0179	0.043	0.0113	0.007	0.0164	0.0083
Total Lead	mg/L	0.01	MAC	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Total Manganese	mg/L	0.02 0.12	AO MAC	**0.0257**	**0.0232**	**0.0208**	0.0188	**0.0204**	**0.0257**	**0.021**
Total Molybdenum	mg/L			0.0038	0.003	0.0037	0.0037	0.0034	0.0026	0.0034
Total Nickel	mg/L			<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
Total Silicon	mg/L			7.12	8.01	7.04	6.59	6.61	7.97	8.34
Total Silver	mg/L			<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Total Strontium	mg/L			0.0751	0.0764	0.0784	0.0786	0.0777	0.0887	0.0807
Total Thallium	mg/L			<0.00005	<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
Total Titanium	mg/L			0.0138	<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
Total Vanadium	mg/L			<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	0.008	<0.005
Total Zirconium	mg/L			<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Calcium	mg/L			11.4	11.8	11.1	10.6	11.5	13.3	11.5
Total Magnesium	mg/L			3.46	3.41	3.19	3.06	3.23	3.71	3.53
Total Potassium	mg/L			1.57	1.61	1.61	1.7	1.62	1.72	1.58
Total Sodium	mg/L	200	AO	59.1	53.3	55.9	57.3	54.6	45.2	56.5
Total Sulphur	mg/L			<3.0	<3.0	<3.0	<3	<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.

REGIONAL DISTRICT OF NANAIMO

Madrona #8 Raw Well Water Analysis
1565 Stonelake Drive

CDWG=Canadian Drinking Water Guidelines
MAC=Maximum Acceptable Concentration
OG= Operational Guidance Value
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 27 2015	October 26 2016	Sept 20 2017	November 6 2018	October 17 2019	October 20 2020	October 28 2021	October 20 2022
Miscellaneous Inorganics											
Fluoride	mg/L	1.5	MAC	0.051	0.056	0.052	0.056	<0.05	<0.05	0.052	0.055
Alkalinity (total as CaCO)	mg/L			187	189	194	192	190	210	200	190
Anions											
Dissolved Sulphate	mg/L	500	AO	10.8	11.6	12.9	13.3	15	17	17	16
Dissolved Chloride	mg/L	250	AO	12	13	15	19	20	23	23	20
Nitrite	mg/L	1	MAC	<0.0050	<0.0050	<0.0050	<0.0050	<0.005	<0.005	<0.005	<0.005
Miscellaneous											
Apparent Colour	Colour Unit			5	<5.0	5	<5.0	5	10	<5	<5
Nutrients											
Total Ammonia	mg/L			0.013	0.084	<0.020	<0.020	0.065	<0.015	<0.015	<0.015
Physical Properties											
Conductivity	µS/cm			444	475	486	505	520	550	530	530
pH	pH	7.0:10.5	AO	8.19	8.16	8.38	8.06	8.17	8.3	7.82	8.06
TDS	mg/L	500	AO	246	260	270	276	320	350	340	310
Turbidity	NTU			<0.10	0.12	<0.10	0.12	<0.10	<0.1	<0.1	0.13
Microbiological Parameters											
E.coli	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	<1.0	0	0	0	0
Total Coliforms	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	<1.0	0	0	0	0
Calculated Parameters											
Total Hardness (CaCO)	mg/L			217	232	229	243	234	263	238	242
Nitrate	mg/L	10	MAC	4.56	5.98	7.45	8.78	8.19	9.31	9.2	9.49
Elements											
Total Mercury	mg/L	0.001	MAC	<0.00001	<0.00001	<0.00001	<0.000002	<0.000002	<0.0000019	<0.0000019	0.0000022
Total Metals											
Total Aluminum	mg/L	0.1	OG	<0.003	0.003	<0.003	0.0049	<0.003	<0.003	<0.003	<0.003
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	0.00122	0.00124	0.00115	0.00109	0.00102	0.0011	0.0015	0.00115
Total Barium	mg/L	1	MAC	0.0109	0.0114	0.0124	0.0129	0.0125	0.014	0.0136	0.0125
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	<0.05	<0.050	<0.050	<0.050	<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	0.0012	<0.001	<0.001	<0.001
Total Cobalt	mg/L			<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Total Copper	mg/L	1	AO	0.00464	0.00347	0.00449	0.00789	0.00299	0.00258	0.00846	0.00335
Total Iron	mg/L	0.3	AO	0.006	0.006	<0.005	0.013	<0.005	<0.005	0.0062	<0.005
Total Lead	mg/L	0.01	MAC	0.00025	0.00041	0.00034	0.00071	0.00022	<0.00020	0.00045	<0.0002
Total Manganese	mg/L	0.02 0.12	AO MAC	0.0019	0.0013	<0.001	<0.001	<0.001	<0.001	<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	0.00034	0.00043	0.00042	0.00039	0.00044	0.0005	0.00045	0.00046
Total Silicon	mg/L			10.6	10.1	11.6	10.4	10.2	10.9	10.6	12.3
Total Silver	mg/L			<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Total Strontium	mg/L			0.121	0.12	0.132	0.141	0.133	0.152	0.15	0.136
Total Thallium	mg/L			<0.00005	<0.00005	<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
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	0.00014	0.00015	0.00016	0.00015	0.00016	0.00018	0.00019	0.00016
Total Vanadium	mg/L			0.0076	0.0069	0.0071	0.0068	0.0061	0.0066	0.0064	0.0062
Total Zinc	mg/L	5	AO	<0.005	<0.005	<0.005	0.0071	<0.005	<0.005	0.0064	<0.005
Total Zirconium	mg/L			<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Calcium	mg/L			57.6	63.7	60.9	66.9	65.2	71.8	64.7	66.5
Total Magnesium	mg/L			17.8	17.6	18.8	18.4	17.3	20.4	18.5	18.5
Total Potassium	mg/L			0.853	0.768	0.881	0.873	0.85	0.987	0.901	0.809
Total Sodium	mg/L	200	AO	9.41	9.17	9.55	9.74	8.67	10	9.19	9.19
Total Sulphur	mg/L			5.2	3.9	4.3	3.9	4.5	5.3	5.5	5.8

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.

REGIONAL DISTRICT OF NANAIMO

NB Peninsula WTP Blended Well Water Analysis
2480 Nanoose Road
(raw well water, before treatment process)

CDWG=Canadian Drinking Water Guidelines
MAC=Maximum Acceptable Concentration
OG= Operational Guidance Value
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 26 2016	September 21 2017	November 6 2018	October 24 2019	November 5 2020	October 14 2021	October 20 2022
Miscellaneous Inorganics										
Fluoride	mg/L	1.5	MAC	0.16	0.16	0.16	0.18	0.15	0.16	0.16
Alkalinity (total as CaCO)	mg/L			142	148	146	140	150	150	150
Anions										
Dissolved Sulphate	mg/L	500	AO	8.13	9.4	11.4	9.3	11	11	10
Dissolved Chloride	mg/L	250	AO	15	16	19	17	17	16	21
Nitrite	mg/L	1	MAC	<0.0050	<0.0050	<0.0050	<0.005	<0.005	<0.005	<0.005
Miscellaneous										
Apparent Colour	Colour Unit			20	20	15	20	15	<5	10
Nutrients										
Total Ammonia	mg/L			1.5	1.3	1.4	1.5	1.4	1.3	1.1
Physical Properties										
Conductivity	µS/cm			344	342	363	340	350	350	370
pH	pH	7.0:10.5	AO	8.14	8	8.03	8.05	8.27	8.21	8.03
TDS	mg/L	500	AO	192	190	198	180	200	210	210
Turbidity	NTU			0.96	1.35	0.88	0.88	0.67	0.84	1.6
Microbiological Parameters										
E.coli	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	0	0	0	0
Total Coliforms	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	0	0	0	0
Calculated Parameters										
Total Hardness (CaCO)	mg/L			118	118	121	119	114	124	122
Nitrate	mg/L	10	MAC	<0.020	<0.020	<0.020	<0.02	<0.02	<0.02	<0.02
Elements										
Total Mercury	mg/L	0.001	MAC	<0.00001	<0.00001	<0.000002	<0.000002	<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	<0.003
Total Antimony	mg/L	0.006	MAC	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Total Arsenic	mg/L	0.01	MAC	0.00129	0.00137	0.00178	0.00124	0.00113	0.00144	0.00149
Total Barium	mg/L	1	MAC	0.0076	0.0082	0.0087	0.0074	0.0064	0.0079	0.0087
Total Beryllium	mg/L			<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
Total Boron	mg/L	5	MAC	0.065	0.074	0.067	0.065	0.068	0.064	0.06
Total Cadmium	mg/L	0.005	MAC	<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
Total Cobalt	mg/L			<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Total Copper	mg/L	1	AO	0.00029	0.001	<0.0005	<0.0002	0.00024	<0.0002	0.00124
Total Iron	mg/L	0.3	AO	**0.588**	**0.678**	**0.611**	**0.622**	**0.548**	**0.566**	**0.706**
Total Lead	mg/L	0.01	MAC	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Total Manganese	mg/L	0.02 0.12	AO MAC	**0.23**	**0.238**	**0.252**	**0.243**	**0.212**	**0.238**	**0.312**
Total Molybdenum	mg/L			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Nickel	mg/L			<0.001	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001
Total Selenium	mg/L	0.05	MAC	<0.0001	<0.0001	<0.0001	0.00126	0.00054	<0.0001	<0.0001
Total Silicon	mg/L			13.7	15.6	14.9	14.4	13.2	15.9	16.3
Total Silver	mg/L			<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Total Strontium	mg/L			0.113	0.122	0.136	0.122	0.12	0.13	0.126
Total Thallium	mg/L			<0.00005	<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
Total Titanium	mg/L			<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
Total Vanadium	mg/L			<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	<0.005	<0.005
Total Zirconium	mg/L			<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Calcium	mg/L			29.7	28.2	30.4	30.1	27.8	30.9	30.2
Total Magnesium	mg/L			10.7	11.4	10.9	10.6	10.7	11.4	11.4
Total Potassium	mg/L			2.36	2.78	2.68	2.67	2.57	2.64	2.69
Total Sodium	mg/L	200	AO	23.9	24	25	22.5	23.1	21.2	26.6
Total Sulphur	mg/L			<3.0	3.8	4	3.3	<3	3.5	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.

REGIONAL DISTRICT OF NANAIMO

Nanoose Bay Peninsula Distribution Water Analysis
1566 Arbutus Drive
(°Bulk water online; [M]Parksville water online)

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 14 2014	May 20 2015°	May 11 2016°	May 10 2017	May 2 2018[M]	May 15 2019	May 14 2020	May 27 2021	May 27 2022
Miscellaneous Inorganics												
Fluoride	mg/L	1.5	MAC	0.1	0.044	0.036	0.093	0.06	0.063	<0.05	<0.05	<0.05
Alkalinity (total as CaCO)	mg/L			150	70.4	45.8	158	146	112	35	46	35
Anions												
Dissolved Sulphate	mg/L	500	AO	14.1	5.67	3.51	12.4	8.8	13.7	1.6	2.1	1.6
Dissolved Chloride	mg/L	250	AO	7.6	14	7.6	8.8	22	17	5.8	9.4	5.6
Nitrite	mg/L	1	MAC	<0.05	<0.0050	<0.0050	<0.0050	<0.0050	<0.005	<0.005	<0.005	<0.005
Miscellaneous												
Apparent Colour	Colour Unit			12	5	10	30	5	10	5	10	<5
Nutrients												
Total Ammonia	mg/L			<0.02	0.0072	0.012	0.1	<0.020	<0.015	0.051	<0.015	<0.015
Physical Properties												
Conductivity	µS/cm			366	199	122	336	373	294	89	130	84
pH	pH	7.0:10.5	AO	7.9	7.9	7.8	8.37	8.02	7.93	7.35	7.9	7.75
TDS	mg/L	500	AO	222	100	64	186	188	168	40	82	76
Turbidity	NTU			<0.5	0.24	0.24	0.61	0.28	0.48	0.11	<0.1	<0.1
Microbiological Parameters												
E.coli	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	<1.0	<1.0	0	0	0	0
Total Coliforms	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	<1.0	<1.0	0	0	0	0
Calculated Parameters												
Total Hardness (CaCO)	mg/L			75	70.9	46	128	153	102	21.1	31.6	20
Nitrate	mg/L	10	MAC	0.11	0.301	0.043	0.057	1.83	0.192	0.074	0.377	0.09
Elements												
Total Mercury	mg/L	0.001	MAC	<0.00001	<0.00001	<0.00001	<0.00001	<0.000002	<.000002	<0.0000019	<0.0000019	<0.0000019
Total Metals												
Total Aluminum	mg/L	0.1	OG	<0.025	0.0056	0.0075	<0.003	<0.003	0.059	0.031	0.015	0.0159
Total Antimony	mg/L	0.006	MAC	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Total Arsenic	mg/L	0.01	MAC	0.0036	0.00087	0.00062	0.00292	0.00184	0.00179	0.00037	0.00067	0.00041
Total Barium	mg/L	1	MAC	0.0169	0.0103	0.0073	0.0155	0.0146	0.012	0.0027	0.0044	0.0033
Total Beryllium	mg/L			<0.00025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Bismuth	mg/L			<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Boron	mg/L	5	MAC	0.061	<0.050	<0.050	<0.050	<0.050	<0.05	<0.05	<0.05	<0.05
Total Cadmium	mg/L	0.005	MAC	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Total Chromium	mg/L	0.05	MAC	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Cobalt	mg/L			<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Total Copper	mg/L	1	AO	0.0167	0.0146	0.018	0.00733	0.0102	0.0115	0.00141	0.00209	0.00208
Total Iron	mg/L	0.3	AO	0.023	0.0289	0.0175	0.0092	0.0082	0.0134	<0.005	0.0099	<0.005
Total Lead	mg/L	0.01	MAC	<0.0005	<0.0002	0.00026	<0.0002	0.00028	0.00029	<0.0002	<0.0002	<0.0002
Total Manganese	mg/L	0.02 0.12	AO MAC	0.0842	0.0131	0.0166	0.0775	0.011	0.0462	<0.001	0.0018	0.001
Total Molybdenum	mg/L			0.00121	<0.001	<0.001	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001
Total Nickel	mg/L			<0.0010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Selenium	mg/L	0.05	MAC	<0.0005	<0.0001	<0.0001	<0.0001	0.00015	<0.0001	<0.0001	<0.0001	<0.0001
Total Silicon	mg/L			11.8	6.39	4.41	10.9	10.1	7.12	2.22	2.53	2.17
Total Silver	mg/L			<0.00025	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Total Strontium	mg/L			0.122	0.0666	0.0488	0.111	0.112	0.0947	0.0241	0.0345	0.0215
Total Thallium	mg/L			<0.00005	<0.00005	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Total Tin	mg/L			<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Titanium	mg/L			<0.0025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Uranium	mg/L	0.02	MAC	0.00029	<0.0001	<0.0001	0.00021	0.00019	0.00013	<0.0001	<0.0001	<0.0001
Total Vanadium	mg/L			0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Zinc	mg/L	5	AO	0.0177	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Zirconium	mg/L				<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Calcium	mg/L			39.2	20	13.4	32.7	37.3	27	6.96	9.97	6.45
Total Magnesium	mg/L			13.3	5.08	3.04	11.4	14.5	8.33	0.915	1.63	0.944
Total Potassium	mg/L			1.4	0.518	0.379	1.42	0.993	0.9	0.152	0.224	0.159
Total Sodium	mg/L	200	AO	25.1	8.38	5.99	19.6	17.2	16.2	10.5	13.2	9.26
Total Sulphur	mg/L				<3.0	<3.0	4.6	<3.0	4.6	<3	<3.0	<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.

REGIONAL DISTRICT OF NANAIMO

Nanoose Bay Peninsula Distribution Water Analysis
1961 Harlequin Crescent (~Lot 51 Swallow Crescent)
(°Bulk Water online; [M]Parksville water online)

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 14 2014	May 20 2015°	May 11 2016~°	May 10 2017~	May 2 2018~[M]	May 15 2019	May 14 2020	May 27 2021	May 27 2022
Miscellaneous Inorganics												
Fluoride	mg/L	1.5	MAC	0.15	0.14	0.11	0.32	0.17	0.094	0.079	0.073	<0.05
Alkalinity (total as CaCO)	mg/L			140	120	116	148	145	101	79	87	51
Anions												
Dissolved Sulphate	mg/L	500	AO	8	6.45	6.92	10.6	10.6	8.9	6.1	5.4	3.1
Dissolved Chloride	mg/L	250	AO	41.7	29	26	35	37	29	23	27	13
Nitrite	mg/L	1	MAC	<0.05	<0.0050	<0.0050	<0.0050	<0.0050	<0.005	<0.005	<0.005	<0.005
Miscellaneous												
Apparent Colour	Colour Unit			6	<5	10	10	5	10	5	10	<5
Nutrients												
Total Ammonia	mg/L			<0.02	0.024	0.011	0.18	0.022	<0.015	0.024	<0.015	<0.015
Physical Properties												
Conductivity	µS/cm			415	350	321	416	424	312	240	270	270
pH	pH	7.0:10.5	AO	7.6	8.11	8.05	8.25	8.09	7.89	7.87	8.08	8.1
TDS	mg/L	500	AO	270	196	186	230	212	166	130	150	170
Turbidity	NTU			<0.5	0.12	0.11	0.15	0.12	0.29	0.12	0.11	0.14
Microbiological Parameters												
E.coli	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	<1.0	<1.0	0	0	0	0
Total Coliforms	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	<1.0	<1.0	0	0	0	0
Calculated Parameters												
Total Hardness (CaCO)	mg/L			120	98.7	96.2	112	117	83.7	64.9	71	71.6
Nitrate	mg/L	10	MAC	<0.05	<0.020	0.04	<0.020	<0.020	0.033	<0.02	<0.02	<0.02
Elements												
Total Mercury	mg/L	0.001	MAC	<0.00001	<0.00001	<0.00001	<0.00001	<0.000002	<0.000002	<0.0000019	<0.00000019	<0.0000019
Total Metals												
Total Aluminum	mg/L	0.1	OG	<0.025	<0.003	<0.003	<0.003	<0.003	0.003	0.0178	0.0079	0.007
Total Antimony	mg/L	0.006	MAC	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Total Arsenic	mg/L	0.01	MAC	0.00149	0.00113	0.00088	0.001	0.00124	0.0011	0.00056	0.00084	0.0006
Total Barium	mg/L	1	MAC	0.00805	0.0059	0.0049	0.018	0.0074	0.0063	0.0042	0.0047	0.0047
Total Beryllium	mg/L			<0.00025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Bismuth	mg/L			<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Boron	mg/L	5	MAC	0.074	0.055	<0.050	0.106	0.07	<0.05	<0.05	<0.05	<0.05
Total Cadmium	mg/L	0.005	MAC	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Total Chromium	mg/L	0.05	MAC	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Cobalt	mg/L			<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Total Copper	mg/L	1	AO	0.0058	0.00951	0.0011	0.00121	0.00162	0.00271	0.00131	0.00307	0.0021
Total Iron	mg/L	0.3	AO	0.037	0.0434	0.0243	0.0319	0.0171	0.0201	0.0169	0.0238	0.0323
Total Lead	mg/L	0.005	MAC	<0.0005	0.00053	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00055	0.00027
Total Manganese	mg/L	0.02 0.12	AO MAC	0.009	0.0149	0.0065	0.02	0.0085	0.0052	0.0036	0.0041	0.0063
Total Molybdenum	mg/L			0.00033	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Nickel	mg/L			<0.0010	0.0017	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Selenium	mg/L	0.05	MAC	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Silicon	mg/L			14.6	13.6	12.5	14	14.1	9.56	8.26	8.55	8.83
Total Silver	mg/L			<0.00025	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Total Strontium	mg/L			0.118	0.102	0.102	0.171	0.127	0.0895	0.0723	0.075	0.0722
Total Thallium	mg/L			<0.00005	<0.00005	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Total Tin	mg/L			<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Titanium	mg/L			<0.0025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Uranium	mg/L	0.02	MAC	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Vanadium	mg/L			0.0009	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Zinc	mg/L	5	AO	0.0215	0.0059	0.0069	0.0066	0.008	0.0142	0.0084	0.0175	0.0243
Total Zirconium	mg/L				<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Calcium	mg/L			29.7	25.6	24.2	28.6	29.3	21.7	17.2	18.4	18.5
Total Magnesium	mg/L			10.8	8.43	8.7	9.92	10.8	7.18	5.35	6.12	6.18
Total Potassium	mg/L			2.5	2.06	1.97	2.58	2.57	1.57	1.35	1.43	1.42
Total Sodium	mg/L	200	AO	44.3	28.1	27.1	38.3	38.8	26	23.3	26	27.5
Total Sulphur	mg/L				<3.0	<3.0	3.5	3.3	3.1	<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.

REGIONAL DISTRICT OF NANAIMO

Nanoose Bay Peninsula Distribution Water Analysis
1270 Sea Dog Road
(°Bulk Water online; [M]Parksville water online)

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 14 2014	May 20 2015°	May 11 2016°	May 10 2017	May 2 2018[M]	May 23 2019	May 14 2020	May 27 2021	May 27 2022
Miscellaneous Inorganics												
Fluoride	mg/L	1.5	MAC	0.16	0.036	0.03	0.2	0.098	0.026	<0.05	<0.05	<0.05
Alkalinity (total as CaCO)	mg/L			140	49.3	48	148	129	44.2	39	34	32
Anions												
Dissolved Sulphate	mg/L	500	AO	7.1	4.49	3.67	9.83	7.6	3.9	2.1	1	1.4
Dissolved Chloride	mg/L	250	AO	43.5	11	7.4	37	31	11	8.3	7.6	5.6
Nitrite	mg/L	1	MAC	<0.05	<0.0050	<0.0050	<0.0050	<0.0050	<0.005	<0.005	<0.005	<0.005
Miscellaneous												
Apparent Colour	Colour Unit			6	<5	10	10	5	5	10	10	<5
Nutrients												
Total Ammonia	mg/L			<0.02	0.012	0.014	0.1	<0.020	<0.015	0.38	<0.015	<0.015
Physical Properties												
Conductivity	µS/cm			416	143	124	413	387	128	100	93	76
pH	pH	7.0:10.5	AO	7.6	7.69	7.75	8.27	8.12	7.63	7.69	7.69	7.71
TDS	mg/L	500	AO	278	68	80	232	226	77	48	70	52
Turbidity	NTU			<0.5	0.19	0.17	0.13	0.38	0.34	<0.1	<0.1	0.1
Microbiological Parameters												
E.coli	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	<1.0	<1.0	0	0	0	0
Total Coliforms	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	<1.0	<1.0	0	0	0	0
Calculated Parameters												
Total Hardness (CaCO)	mg/L			120	49.2	45.7	117	136	41.9	25.4	21.6	17.5
Nitrate	mg/L	10	MAC	<0.05	0.037	0.053	<0.020	<0.020	0.026	<0.02	<0.02	<0.02
Elements												
Total Mercury	mg/L	0.001	MAC	<0.00001	<0.00001	<0.00001	<0.00001	<0.000002	<0.000002	<0.0000019	<0.0000019	<0.0000019
Total Metals												
Total Aluminum	mg/L	0.1	OG	<0.025	0.0043	0.0045	<0.003	<0.003	0.009	0.0551	0.0199	0.0203
Total Antimony	mg/L	0.006	MAC	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Total Arsenic	mg/L	0.01	MAC	0.0016	0.00039	0.0004	0.00124	0.00115	0.00044	0.00034	0.00015	0.00016
Total Barium	mg/L	1	MAC	0.00679	0.0067	0.0054	0.0089	0.0096	0.0073	0.0023	0.0034	0.0027
Total Beryllium	mg/L			<0.00025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Bismuth	mg/L			<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Boron	mg/L	5	MAC	0.083	<0.05	<0.050	0.076	<0.050	<0.05	<0.05	<0.05	<0.05
Total Cadmium	mg/L	0.005	MAC	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Total Chromium	mg/L	0.05	MAC	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Cobalt	mg/L			<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Total Copper	mg/L	1	AO	0.0015	0.00137	0.00131	0.00119	0.00159	0.00267	0.00075	0.00112	0.00114
Total Iron	mg/L	0.3	AO	0.072	0.0358	0.0286	0.0475	0.0322	0.026	0.0086	0.0116	0.0143
Total Lead	mg/L	0.01	MAC	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	0.00029	<0.0002	0.00044	0.00163
Total Manganese	mg/L	0.02 0.12	AO MAC	0.017	0.0063	0.0041	0.0094	0.0086	0.008	<0.001	<0.001	<0.001
Total Molybdenum	mg/L			<0.00025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Nickel	mg/L			<0.0010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Selenium	mg/L	0.05	MAC	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Silicon	mg/L			15.7	4.28	4.34	14.1	12.3	3.9	3.03	1.96	2.19
Total Silver	mg/L			<0.00025	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Total Strontium	mg/L			0.119	0.0605	0.0483	0.129	0.122	0.0481	0.0302	0.0262	0.0219
Total Thallium	mg/L			<0.00005	<0.00005	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Total Tin	mg/L			<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Titanium	mg/L			<0.0025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Uranium	mg/L	0.02	MAC	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Vanadium	mg/L			0.0009	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Zinc	mg/L	5	AO	0.0203	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Zirconium	mg/L				<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Calcium	mg/L			30.2	14.6	12.8	29.1	32.4	11.9	7.82	7.26	5.66
Total Magnesium	mg/L			11	3.08	3.32	10.7	13.3	2.99	1.42	0.842	0.825
Total Potassium	mg/L			2.8	0.358	0.37	2.54	1.6	0.344	0.3	0.095	0.123
Total Sodium	mg/L	200	AO	48.6	6.34	5.82	39	23.9	6.4	11.8	10.1	8.92
Total Sulphur	mg/L				<3.0	<3.0	3.6	<3.0	<3	<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.

REGIONAL DISTRICT OF NANAIMO

Nanoose Bay Peninsula Distribution Water Analysis
2315 Ida Lane
(°Bulk Water online; [M]Parksville water online)

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 14 2014	May 20 2015°	May 11 2016°	May 10 2017	May 2 2018[M]	May 15 2019	May 14 2020	May 27 2021	May 27 2022
Miscellaneous Inorganics												
Fluoride	mg/L	1.5	MAC	0.16	0.088	0.1	0.19	0.15	0.048	<0.05	<0.05	<0.05
Alkalinity (total as CaCO)	mg/L			140	85.1	113	153	147	57.4	55	60	51
Anions												
Dissolved Sulphate	mg/L	500	AO	6.3	5.44	7.13	10.2	10.5	5.1	3.5	3	3.1
Dissolved Chloride	mg/L	250	AO	47.4	20	25	39	37	13	13	17	13
Nitrite	mg/L	1	MAC	<0.05	<0.0050	<0.0050	<0.0050	<0.0050	<0.005	<0.005	<0.005	<0.005
Miscellaneous												
Apparent Colour	Colour Unit			6	5	10	10	10	10	10	5	<5
Nutrients												
Total Ammonia	mg/L			<0.02	0.01	0.023	0.094	<0.020	<0.015	0.028	<0.015	<0.015
Physical Properties												
Conductivity	µS/cm			430	246	310	431	418	162	150	180	140
pH	pH	7.0:10.5	AO	7.6	8.02	8.03	8.3	8.11	7.68	7.87	7.98	7.93
TDS	mg/L	500	AO	268	128	164	240	238	78	82	110	72
Turbidity	NTU			<0.5	0.22	0.23	0.24	0.27	0.23	0.39	0.12	0.13
Microbiological Parameters												
E.coli	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	<1.0	<1.0	0	0	0	0
Total Coliforms	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	<1.0	<1.0	0	0	0	0
Calculated Parameters												
Total Hardness (CaCO)	mg/L			120	75.3	92.5	117	128	55.2	39.9	44.8	34.3
Nitrate	mg/L	10	MAC	<0.05	0.037	0.049	<0.020	0.151	0.054	<0.05	<0.05	<0.05
Elements												
Total Mercury	mg/L	0.001	MAC	<0.00001	<0.00001	<0.00001	<0.00001	<0.000002	<0.000002	<0.0000019	<0.0000019	<0.0000019
Total Metals												
Total Aluminum	mg/L	0.1	OG	<0.025	0.0038	<0.003	<0.003	<0.003	0.0068	0.0336	0.0122	0.0138
Total Antimony	mg/L	0.006	MAC	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Total Arsenic	mg/L	0.01	MAC	0.00122	0.0008	0.0009	0.00109	0.00122	0.00059	0.00041	0.00047	0.00036
Total Barium	mg/L	1	MAC	0.00574	0.0052	0.0062	0.0082	0.0068	0.005	0.0028	0.0034	0.0027
Total Beryllium	mg/L			<0.00025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Bismuth	mg/L			<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.001	<0.001
Total Boron	mg/L	5	MAC	0.082	<0.05	<0.050	0.074	0.058	<0.05	<0.05	<0.05	<0.05
Total Cadmium	mg/L	0.005	MAC	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Total Chromium	mg/L	0.05	MAC	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Cobalt	mg/L			<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Total Copper	mg/L	1	AO	0.0041	0.00276	0.00243	0.00124	0.00136	0.00267	0.00095	0.00167	0.0023
Total Iron	mg/L	0.3	AO	0.096	0.0722	0.0781	0.0672	0.0692	0.023	0.0369	0.0269	0.0307
Total Lead	mg/L	0.01	MAC	<0.0005	<0.0002	0.00023	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Total Manganese	mg/L	0.02 0.12	AO MAC	0.017	0.0114	0.0158	0.0098	0.014	0.0066	0.0029	0.0029	0.0043
Total Molybdenum	mg/L			0.00037	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Nickel	mg/L			0.0024	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Selenium	mg/L	0.05	MAC	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Silicon	mg/L			15.9	8.91	11.7	14.6	13.4	5.05	4.93	4.96	4.55
Total Silver	mg/L			<0.00025	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Total Strontium	mg/L			0.124	0.0815	0.094	0.131	0.127	0.0565	0.0446	0.0495	0.0348
Total Thallium	mg/L			<0.00005	<0.00005	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Total Tin	mg/L			<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Titanium	mg/L			<0.0025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Uranium	mg/L	0.02	MAC	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Vanadium	mg/L			0.0007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Zinc	mg/L	5	AO	0.0159	<0.005	0.0076	0.0079	0.0088	0.0103	<0.005	0.0061	<0.005
Total Zirconium	mg/L				<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Calcium	mg/L			31.2	21.3	24.5	30.5	33.2	16.4	12.1	13.4	10.1
Total Magnesium	mg/L			10.3	5.35	7.63	9.87	10.9	3.5	2.35	2.77	2.21
Total Potassium	mg/L			2.9	1.4	1.74	2.7	2.55	0.665	0.729	0.737	0.65
Total Sodium	mg/L	200	AO	51.6	17.2	24.5	41.2	36.6	9.68	15.6	17.1	14.5
Total Sulphur	mg/L				<3.0	<3.0	3.5	3.5	<3	<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.

REGIONAL DISTRICT OF NANAIMO

Nanoose Bay Peninsula Distribution Water Analysis
3500 Fairwinds Drive
(°Bulk Water online; [M]Parksville water online)

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 14 2014	May 20 2015°	May 11 2016°	May 10 2017	May 2 2018[M]	May 15 2019	May 14 2020	May 27 2021	May 27 2022
Miscellaneous Inorganics												
Fluoride	mg/L	1.5	MAC	0.15	0.14	0.12	0.31	0.22	0.093	0.075	0.079	0.088
Alkalinity (total as CaCO)	mg/L			140	118	120	148	133	90.8	77	92	91
Anions												
Dissolved Sulphate	mg/L	500	AO	6.3	6.75	7.11	10.5	9.2	9.3	5.8	5.5	7.6
Dissolved Chloride	mg/L	250	AO	46	32	27	35	34	27	22	28	29
Nitrite	mg/L	1	MAC	<0.05	<0.0050	<0.0050	<0.0050	<0.0050	<0.005	<0.005	<0.005	<0.005
Miscellaneous												
Apparent Colour	Colour Unit			6	<5	15	10	5	10	5	5	<5
Nutrients												
Total Ammonia	mg/L			<0.02	0.019	0.027	0.13	0.04	<0.015	0.018	<0.015	<0.015
Physical Properties												
Conductivity	µS/cm			426	348	329	414	408	289	230	290	280
pH	pH	7.0:10.5	AO	7.7	8.2	8.09	8.25	8.16	7.75	7.99	8.11	8.11
TDS	mg/L	500	AO	276	190	194	230	196	162	130	180	150
Turbidity	NTU			<0.5	0.17	0.16	0.25	0.27	0.39	<0.1	0.17	<.1
Microbiological Parameters												
E.coli	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	<1.0	<1.0	0	0	0	0
Total Coliforms	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	<1.0	<1.0	0	0	0	0
Calculated Parameters												
Total Hardness (CaCO)	mg/L			130	92.2	104	113	123	83.6	62.8	74.8	74.3
Nitrate	mg/L	10	MAC	<0.05	0.024	0.047	<0.020	0.642	0.026	<0.02	<0.02	<0.02
Elements												
Total Mercury	mg/L	0.001	MAC	<0.00001	<0.00001	<0.00001	<0.00001	<0.000002	<0.000002	<0.0000019	<0.0000019	<0.0000019
Total Metals												
Total Aluminum	mg/L	0.1	OG	<0.025	0.0034	<0.003	<0.003	<0.003	0.0061	0.02	0.0077	0.0086
Total Antimony	mg/L	0.006	MAC	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Total Arsenic	mg/L	0.01	MAC	0.00136	0.00111	0.00106	0.0011	0.0011	0.00085	0.00052	0.00089	0.00063
Total Barium	mg/L	1	MAC	0.00503	0.0053	0.0053	0.0236	0.0105	0.0055	0.0033	0.0042	0.0042
Total Beryllium	mg/L			<0.00025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Bismuth	mg/L			<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Boron	mg/L	5	MAC	0.089	0.056	0.053	0.101	0.073	<0.05	<0.05	<0.05	<0.05
Total Cadmium	mg/L	0.005	MAC	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Total Chromium	mg/L	0.05	MAC	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Cobalt	mg/L			<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Total Copper	mg/L	1	AO	0.0179	0.00399	0.00749	0.00216	0.00349	0.00359	0.00166	0.00135	0.00204
Total Iron	mg/L	0.3	AO	0.068	0.0709	0.0752	0.113	0.0394	0.035	0.0144	0.0239	0.0271
Total Lead	mg/L	0.01	MAC	<0.0005	<0.0002	0.00086	<0.0002	0.00061	0.00047	<0.0002	0.00039	0.00041
Total Manganese	mg/L	0.02 0.12	AO MAC	0.016	0.0163	**0.021**	**0.0224**	**0.0214**	0.0107	0.0036	0.0053	0.0079
Total Molybdenum	mg/L			0.00025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Nickel	mg/L			<0.0010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Selenium	mg/L	0.05	MAC	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Silicon	mg/L			17.1	12.3	12.9	14.4	12.7	9.38	8.06	9.14	8.88
Total Silver	mg/L			<0.00025	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Total Strontium	mg/L			0.131	0.103	0.113	0.175	0.146	0.0847	0.0693	0.0788	0.0726
Total Thallium	mg/L			<0.00005	<0.00005	<0.00005	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	<0.00001
Total Tin	mg/L			0.0006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Titanium	mg/L			<0.0025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Uranium	mg/L	0.02	MAC	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Vanadium	mg/L			0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Zinc	mg/L	5	AO	0.0326	<0.005	0.029	0.007	0.0208	0.0188	0.0071	0.0119	0.0107
Total Zirconium	mg/L				<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Calcium	mg/L			31.6	23.7	25.4	28.7	30.8	21.9	16.6	19.5	19.1
Total Magnesium	mg/L			11.6	8	9.98	10.2	11.2	7.05	5.15	6.35	6.46
Total Potassium	mg/L			3.1	1.94	2.34	2.67	2.13	1.56	1.27	1.51	1.45
Total Sodium	mg/L	200	AO	54	27.2	32.4	39.4	32.9	25.8	22.6	26.9	28.7
Total Sulphur	mg/L				<3.0	3.2	3.7	3.2	<3	<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.

REGIONAL DISTRICT OF NANAIMO

Nanoose Bay Peninsula Distribution Water Analysis
3383 Redden Road
(°Bulk Water online; [M]Parksville water online)

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 14 2014	May 20 2015°	May 11 2016°	May 10 2017	May 2 2018[M]	May 15 2019	May 14 2020	May 27 2021	May 27 2022
Miscellaneous Inorganics												
Fluoride	mg/L	1.5	MAC	0.15	0.14	0.12	0.32	0.18	0.098	0.074	0.08	0.085
Alkalinity (total as CaCO)	mg/L			140	116	121	147	145	96.8	76	96	87
Anions												
Dissolved Sulphate	mg/L	500	AO	6.4	6.35	7.35	10.4	9.4	8	5.7	5.6	6.3
Dissolved Chloride	mg/L	250	AO	46.8	29	27	36	39	27	21	28	27
Nitrite	mg/L	1	MAC	<0.05	<0.0050	<0.0050	<0.0050	<0.0050	<0.005	<0.005	<0.005	<0.005
Miscellaneous												
Apparent Colour	Colour Unit			5	5	15	10	5	5	5	<5	<5
Nutrients												
Total Ammonia	mg/L			<0.02	0.024	0.012	0.17	<0.020	<0.015	0.023	<0.015	<0.0015
Physical Properties												
Conductivity	µS/cm			428	341	337	413	422	293	230	290	270
pH	pH	7.0:10.5	AO	7.6	8.12	8.12	8.3	8.21	7.89	7.97	8.13	8.11
TDS	mg/L	500	AO	284	176	204	234	256	160	130	190	140
Turbidity	NTU			<0.5	0.21	0.18	<0.10	0.1	0.3	0.12	<0.1	0.11
Microbiological Parameters												
E.coli	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	<1.0	<1.0	0	0	0	0
Total Coliforms	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	<1.0	<1.0	0	0	0	0
Calculated Parameters												
Total Hardness (CaCO)	mg/L			120	94.7	99.4	115	118	77.9	61.3	74.7	69.9
Nitrate	mg/L	10	MAC	<0.05	0.024	0.045	<0.020	0.119	0.029	<0.02	<0.02	<0.02
Elements												
Total Mercury	mg/L	0.001	MAC	<0.00001	<0.00001	<0.00001	<0.00001	<0.000002	<0.000002	<0.0000019	<0.0000019	<0.0000019
Total Metals												
Total Aluminum	mg/L	0.1	OG	<0.025	<0.003	0.0093	<0.003	<0.003	0.0044	0.0224	0.0078	0.0093
Total Antimony	mg/L	0.006	MAC	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Total Arsenic	mg/L	0.01	MAC	0.00138	0.00112	0.00108	0.00107	0.00124	0.0009	0.00051	0.0009	0.00062
Total Barium	mg/L	1	MAC	0.00472	0.0051	0.0051	0.0227	0.006	0.0056	0.0032	0.0042	0.0038
Total Beryllium	mg/L			<0.00025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Bismuth	mg/L			<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Boron	mg/L	5	MAC	0.084	0.052	0.053	0.105	0.071	<0.05	<0.05	<0.05	<0.05
Total Cadmium	mg/L	0.005	MAC	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Total Chromium	mg/L	0.05	MAC	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Cobalt	mg/L			<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Total Copper	mg/L	1	AO	0.004	0.00345	0.00117	0.00107	0.0012	0.00257	0.00135	0.00187	0.00252
Total Iron	mg/L	0.3	AO	0.073	0.0816	0.0782	0.0299	0.0241	0.0341	0.0142	0.0276	0.0255
Total Lead	mg/L	0.01	MAC	<0.0005	0.00021	<0.0002	<0.0002	<0.0002	0.00023	0.0003	0.0005	0.0012
Total Manganese	mg/L	0.02 0.12	AO MAC	0.016	0.0192	0.0205	0.0057	0.0067	0.0111	0.0035	0.0062	0.0072
Total Molybdenum	mg/L			0.00037	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Nickel	mg/L			<0.0010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Selenium	mg/L	0.05	MAC	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Silicon	mg/L			16.5	12.8	13.3	14	13.4	8.84	7.71	9.06	8.46
Total Silver	mg/L			<0.00025	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Total Strontium	mg/L			0.127	0.101	0.105	0.18	0.131	0.0873	0.0681	0.0773	0.0686
Total Thallium	mg/L			<0.00005	<0.00005	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Total Tin	mg/L			<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Titanium	mg/L			<0.0025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Uranium	mg/L	0.02	MAC	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Vanadium	mg/L			0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Zinc	mg/L	5	AO	0.0482	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Zirconium	mg/L				<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Calcium	mg/L			30.5	25	24.9	29.1	29.1	20.4	16.3	19.2	18.1
Total Magnesium	mg/L			11.2	7.86	9.08	10.3	10.9	6.55	5.03	6.47	6.02
Total Potassium	mg/L			3.1	1.93	2.13	2.65	2.48	1.51	1.25	1.55	1.35
Total Sodium	mg/L	200	AO	52.8	28.2	29.6	40.6	38.2	23.9	22.3	26.8	26.9
Total Sulphur	mg/L				<3.0	<3.0	3.7	3.3	<3	<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.

REGIONAL DISTRICT OF NANAIMO

Nanoose Bay Peninsula Distribution Water Analysis
2329 Chain Way
(°Bulk Water online; [M]Parksville water online)

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 14 2014	May 20 2015°	May 11 2016°	May 10 2017	May 2 2018[M]	May 15 2019°	May 14 2020	May 27 2021	May 27 2022
Miscellaneous Inorganics												
Fluoride	mg/L	1.5	MAC	0.15	0.18	0.12	0.33	0.24	0.089	0.084	0.08	0.084
Alkalinity (total as CaCO)	mg/L			140	141	121	150	141	88.7	83	96	88
Anions												
Dissolved Sulphate	mg/L	500	AO	6.4	7.26	7.19	10.4	10.3	8	6.4	5.6	6.4
Dissolved Chloride	mg/L	250	AO	48.9	36	27	36	32	25	24	28	28
Nitrite	mg/L	1	MAC	<0.05	<0.0050	<0.0050	<0.0050	<0.0050	<0.005	<0.005	<0.005	<0.005
Miscellaneous												
Apparent Colour	Colour Unit			6	<5.0	10	10	10	5	5	<5	<5
Nutrients												
Total Ammonia	mg/L			<0.02	0.022	0.012	0.16	<0.020	<0.015	0.081	<0.015	<0.015
Physical Properties												
Conductivity	µS/cm			431	412	331	412	396	260	260	240	270
pH	pH	7.0:10.5	AO	7.6	8.15	8.13	8.28	7.95	7.83	8.03	8.05	8.1
TDS	mg/L	500	AO	284	224	188	234	176	152	160	140	160
Turbidity	NTU			<0.5	0.15	0.17	0.17	0.13	0.43	<0.1	<0.1	0.1
Microbiological Parameters												
E.coli	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	<1.0	<1.0	0	0	0	0
Total Coliforms	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	<1.0	<1.0	0	0	0	0
Calculated Parameters												
Total Hardness (CaCO)	mg/L			130	102	98.9	112	128	72.9	69	61.3	71.1
Nitrate	mg/L	10	MAC	<0.05	<0.020	0.055	<0.020	0.501	0.035	0.036	<0.02	<0.02
Elements												
Total Mercury	mg/L	0.001	MAC	<0.00001	<0.00001	<0.00001	<0.00001	<0.000002	<0.000002	<0.0000019	<0.0000019	<0.0000019
Total Metals												
Total Aluminum	mg/L	0.1	OG	<0.025	<0.003	<0.003	<0.003	<0.003	0.0067	0.0311	0.009	0.0092
Total Antimony	mg/L	0.006	MAC	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Total Arsenic	mg/L	0.01	MAC	0.00214	0.00128	0.0013	0.00151	0.00096	0.00095	0.00118	0.00077	0.00068
Total Barium	mg/L	1	MAC	0.00537	0.0052	0.0048	0.022	0.0177	0.0052	0.0039	0.0034	0.004
Total Beryllium	mg/L			<0.00025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Bismuth	mg/L			<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Boron	mg/L	5	MAC	0.081	0.066	0.051	0.104	0.071	<0.05	<0.05	<0.05	<0.05
Total Cadmium	mg/L	0.005	MAC	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Total Chromium	mg/L	0.05	MAC	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Cobalt	mg/L			<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Total Copper	mg/L	1	AO	0.0047	0.00265	0.0022	0.00358	0.0026	0.00351	0.00133	0.00211	0.00292
Total Iron	mg/L	0.3	AO	0.082	0.0706	0.0788	0.0757	0.0268	0.0259	0.025	0.0154	0.0278
Total Lead	mg/L	0.01	MAC	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00036	0.00046
Total Manganese	mg/L	0.02 0.12	AO MAC	0.021	0.0154	0.0252	0.0215	0.0055	0.0095	0.0058	0.0029	0.0075
Total Molybdenum	mg/L			<0.00025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Nickel	mg/L			<0.0010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Selenium	mg/L	0.05	MAC	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Silicon	mg/L			17.2	14.6	13	13.5	11.9	7.99	9.03	7.23	8.71
Total Silver	mg/L			<0.00025	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Total Strontium	mg/L			0.131	0.112	0.103	0.169	0.152	0.0788	0.075	0.0643	0.0703
Total Thallium	mg/L			<0.00005	<0.00005	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Total Tin	mg/L			<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Titanium	mg/L			<0.0025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Uranium	mg/L	0.02	MAC	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Vanadium	mg/L			0.0009	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Zinc	mg/L	5	AO	0.0236	<0.005	<0.005	0.0105	<0.005	<0.005	<0.005	<0.005	<0.005
Total Zirconium	mg/L				<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Calcium	mg/L			31.9	26.3	25.3	28.3	31.1	19	17.9	16.1	18.4
Total Magnesium	mg/L			11.5	8.86	8.64	10.1	12.3	6.2	5.9	5.13	6.14
Total Potassium	mg/L			3.2	2.39	2.07	2.65	1.85	1.38	1.39	1.14	1.35
Total Sodium	mg/L	200	AO	56.9	35.4	28.7	39.8	28.6	20.6	24.1	22.7	27.5
Total Sulphur	mg/L				<3.0	<3.0	3.6	3.3	<3	<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.

REGIONAL DISTRICT OF NANAIMO

Nanoose Bay Peninsula Distribution Water Analysis
Water Treatment Plant: 2480 Nanoose Road
Treated Water

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 14 2014	May 25 2015	May 11 2016	May 10 2017	May 28 2018	May 27 2019	May 14 2020	May 27 2021	May 30 2022
Miscellaneous Inorganics												
Fluoride	mg/L	1.5	MAC	0.16	0.15	0.15	0.16	0.16	0.15	0.16	0.14	0.16
Alkalinity (total as CaCO)	mg/L			140	136	156	147	144	142	130	140	140
Anions												
Dissolved Sulphate	mg/L	500	AO	6.4	7.29	8.2	9.31	11.1	12	11	9.6	11
Dissolved Chloride	mg/L	250	AO	45.8	39	30	40	48	53	43	48	53
Nitrite	mg/L	1	MAC	<0.05	<0.050	<0.0050	<0.0050	<0.0050	<0.005	<0.005	<0.005	<0.005
Miscellaneous												
Apparent Colour	Colour Unit			6	<5	10	10	<5	<2	5	5	<5
Nutrients												
Total Ammonia	mg/L			<0.02	0.062	0.023	0.2	<0.020	<0.015	0.044	<0.015	<0.015
Physical Properties												
Conductivity	µS/cm			424	413	403	424	450	453	410	440	470
pH	pH	6.5:8.5	AO	7.6	8.02	8.11	8.3	8.18	8.03	8.06	8.19	8.18
TDS	mg/L	500	AO	272	238	216	238	256	268	230	250	290
Turbidity	NTU			<0.5	0.26	0.23	0.15	0.1	0.21	0.15	0.12	0.16
Microbiological Parameters												
E.coli	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	<1.0	<1.0	0	0	0	0
Total Coliforms	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	<1.0	<1.0	0	0	0	0
Calculated Parameters												
Total Hardness (CaCO)	mg/L			120	120	111	117	122	113	118	118	122
Nitrate	mg/L	10	MAC	<0.05	<0.050	<0.020	<0.020	0.020	<0.02	<0.02	<0.02	<0.02
Elements												
Total Mercury	mg/L	0.001	MAC	<0.00001	<0.00001	<0.00001	<0.00001	<0.000002	<0.000002	<0000019	<0.0000019	<0.0000019
Total Metals												
Total Aluminum	mg/L	0.1	OG	<0.025	<0.003	<0.003	<0.003	<0.003		0.003	<0.003	<0.003
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	0.00136	0.00138	0.00112	0.0011	0.00124		0.00104	0.00153	0.00109
Total Barium	mg/L	1	MAC	0.00534	0.0049	0.0049	0.005	0.0045		0.0042	0.0045	0.0046
Total Beryllium	mg/L			<0.00025	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001
Total Bismuth	mg/L			<0.0005	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001
Total Boron	mg/L	5	MAC	0.084	0.066	0.062	0.064	0.07		0.065	0.059	0.06
Total Cadmium	mg/L	0.005	MAC	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001
Total Chromium	mg/L	0.05	MAC	<0.0025	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001
Total Cobalt	mg/L			<0.0005	<0.0005	<0.0005	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002
Total Copper	mg/L	1	AO	0.0083	0.00322	0.00258	0.00279	0.00277		0.0178	0.00675	0.00681
Total Iron	mg/L	0.3	AO	0.103	0.16	0.107	0.0733	0.0623	0.078	0.0353	0.065	0.0564
Total Lead	mg/L	0.01	MAC	0.0006	0.00197	0.00121	0.00159	0.00109		0.00036	0.00026	0.00027
Total Manganese	mg/L	0.02 0.12	AO MAC	0.025	0.0413	0.0292	0.0163	0.0151	0.0208	0.0102	0.0175	0.0165
Total Molybdenum	mg/L			0.00038	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001
Total Nickel	mg/L			<0.0010	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001
Total Selenium	mg/L	0.05	MAC	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001
Total Silicon	mg/L			16.8	16.1	16.6	15.2	15.3		15.7	14.9	16.8
Total Silver	mg/L			<0.00025	<0.00002	<0.00002	<0.00002	<0.00002		<0.00002	<0.00002	<0.00002
Total Strontium	mg/L			0.13	0.121	0.124	0.116	0.126		0.125	0.118	0.122
Total Thallium	mg/L			<0.00005	<0.00005	<0.00005	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001
Total Tin	mg/L			<0.0005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
Total Titanium	mg/L			<0.0025	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
Total Uranium	mg/L	0.02	MAC	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001
Total Vanadium	mg/L			0.0008	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
Total Zinc	mg/L	5	AO	0.0281	0.0055	<0.005	<0.005	<0.005		0.0052	<0.005	<0.005
Total Zirconium	mg/L				<0.0005	<0.0005	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001
Total Calcium	mg/L			31.2	29.6	27.7	29.7	30.3	27.7	29.3	29	30.5
Total Magnesium	mg/L			11.4	11.1	10.3	10.3	11.2	10.7	10.8	11.1	11.1
Total Potassium	mg/L			3.1	2.7	2.65	2.62	2.83	2.68	2.77	2.64	2.49
Total Sodium	mg/L	200	AO	53.5	39.6	35.3	38.3	45.8	45.1	38.5	40.6	44.6
Total Sulphur	mg/L				3.1	<3.0	3.2	<3.0	<3.0	4	<3	3.4

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.