



District of North Saanich Water Distribution System
2025 Annual Water Quality Report



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1.0 Introduction

This report is the 2025 annual water quality report for water samples collected within the North Saanich water distribution system. Water samples are collected by Capital Regional District (CRD) staff and analytical testing is done at the CRD Water Quality Lab. The quality of the drinking water is assessed against standards for allowable levels of E. coli, total coliforms, turbidity and chlorine residual. Samples are collected monthly from testing locations throughout the system. Monthly and weekly summary reports of water quality data are also posted on the CRD website at - [Water Quality Report | Capital Regional District](#)

2.0 Water Supply System

The District of North Saanich purchases bulk water from the Capital Regional District (CRD). The main source of water is from the Sooke Lake Reservoir. Water from the reservoir is treated at the Goldstream Water Treatment Plant and distributed through large transmission water mains across the Greater Victoria Area. The Saanich Peninsula Water System provides water for distribution to customers by Central Saanich, North Saanich and Sidney. It is served by Regional Supply Main No.4 which fills reservoirs to which the North Saanich distribution network is connected.

Information on the Regional Water Supply can be found at - [Greater Victoria's Water Supply | Capital Regional District](#)

Information on the Saanich Peninsula Water Supply System can be found at - [Saanich Peninsula | Capital Regional District](#)

Four CRD reservoirs supply the North Saanich Distribution system, which consists of approximately 150 km of water mains, through 13 pressure zones controlled by 34 District-owned pressure reducing valve (PRV) stations and 5 CRD-operated PRV stations. The system is designed to supply domestic water during periods of high demand but also have the capacity and storage for fire protection.

A schematic of the system is shown in Appendix A.

3.0 Vancouver Island Health Authority Water System Operating Permit

The operation of the District drinking water system must comply with the British Columbia Drinking Water Protection Act (BCDWPA) and the Drinking Water Protection Regulation (BCDWPR). This legislation and regulation determine water quality standards and minimum sampling frequency that must be met. The Vancouver Island Health Authority (VIHA) and the

Drinking Water Officer (DWO) inspect and determine the terms and conditions that must be met to ensure compliance under the BCDWPA and BCDWPR.

The terms and conditions for the North Saanich permit include:

1. Minimum bacteriological sampling frequency is 13 distributions per month.
2. Maintain a drinking water sampling as prescribed.
3. Ensure water system operators meet requirements of certifications per Environmental Operators Certification Program (EOCP) classification of water supply system.
4. Develop, review, update, and submit copy of Emergency Response Plan to district Drinking Water Officer on annual basis.
5. Provide and make public, within six months of the end of the calendar year, an Annual Report.
6. Develop and maintain a flushing program for the distribution system.

3.1 Bacteriological Sampling

The CRD performs water sampling and testing on the District of North Saanich distribution system to meet the requirements of the British Columbia Drinking Water Protection Regulation. Testing ensures the following water quality standards are met:

Parameter	Standard
Escherichia coli (E. Coli)	No detectable E. Coli per 100 ml
Total coliform bacteria	
a) 1 sample in 30 day period	No detectable total coliform bacteria per 100 ml
b) More than 1 sample in 30 day period	At least 90% of samples have no detectable coliform bacteria per 100 ml and no sample has more than 10 total coliform bacteria per 100 ml
	No detectable total coliform from consecutive samples from the same site

Further information on drinking water quality can be found at - [Drinking Water Quality | Capital Regional District](#)

2025 District of North Saanich Water Sampling Results

From CRD Greater Victoria Drinking Water Quality – 2025 Annual Report

In 2025, eight sampling locations were used by the CRD Water Quality Monitoring Program to monitor the bacteriological quality of the water in the North Saanich Distribution System. North Saanich sampling stations are part of the daily distribution sampling runs by CRD staff.

Sample Collection. In 2025, 217 bacteriological and 73 water chemistry samples were collected from the North Saanich Distribution System (Table 7). Based on current population data for the District of North Saanich, 13 samples are required for bacteria testing each month. Table 7 shows the number of monthly samples collected and analyzed for compliance.

Bacteriological Results. No total coliform bacteria were found in any sample from the North Saanich Distribution System in 2025. This system therefore complied with the 10% total coliform-positive limit and the 10 CFU/100 mL maximum limit every month in 2025 (Table 7).

None of the samples contained *E. coli* in 2025 (Table 7).

Table 7 - 2025 Bacteriological Quality of the North Saanich Distribution System

Month	Samples Collected	Total Coliforms (CFU/100mL)				<i>E.coli</i> (CFU/100mL)	Turbidity		Chlorine Residual	Water Temp.
		Samples TC > 0	Percent TC>0	Resamples TC > 0	Samples TC > 10	Samples >0	Samples Collected	Samples >1 NTU	Median mg/L as CL ₂	Median ° C
JAN	19	0	0	0	0	0	2	0	1.32	8.4
FEB	17	0	0	0	0	0	1	0	1.4	7
MAR	19	0	0	0	0	0	1	0	1.4	8
APR	16	0	0	0	0	0	2	0	1.46	9.6
MAY	16	0	0	0	0	0	1	0	1.62	12.2
JUN	16	0	0	0	0	0	1	0	1.63	14.6
JUL	21	0	0	0	0	0	2	0	1.61	17.2
AUG	19	0	0	0	0	0	1	0	1.66	19.1
SEP	19	0	0	0	0	0	1	0	1.6	19.1
OCT	21	0	0	0	0	0	1	0	1.51	15.4
NOV	16	0	0	0	0	0	1	0	1.43	12.3
DEC	18	0	0	0	0	0	1	0	1.4	10.5
Total:	217	0	0	0	0	0	15	0	1.51	12.4

Notes:

TC = Total Coliforms, *E. coli* = *Escherichia coli*, Cl₂ = chlorine, NTU = Nephelometric turbidity unit

> = Greater than, mg/L = milligrams per litre, °C = degrees Celsius

Chlorine Residual. The annual median chlorine residual in the North Saanich Distribution System was

1.51 mg/L (Table 7). The lowest monthly median was in January (1.32 mg/L) and the maximum monthly median was in August (1.66 mg/L) (Figure 34, Table 7). In general, chlorine residuals were adequate and were slightly higher and more consistent than in previous years.

Water Temperature. The annual median water temperature in the North Saanich Distribution System was 12.4°C, with monthly medians ranging between 7.0°C (February) and 19.1°C (August, September) (Table 7).

3.2 Environmental Operators Certification Program (EOCP) Requirements

The EOCP sets standards and processes for certifying water system operators and is recognized under the Drinking Water Protection Regulation. This helps ensure water systems are maintained by staff with adequate knowledge and training to provide safe water to their water users.

The District of North Saanich distribution system is classified as a Level II system through the EOCP. The District employs three certified level II water distribution operators and two certified level I operators.

3.3 Emergency Response and Contingency Plan

The District maintains an Emergency Response and Contingency Plan (ERCP) to provide a step-by-step approach to response and recovery from a drinking water emergency. This is an essential tool required by the BCDWPA and the BCDWPR to promptly and effectively manage an emergency.

This plan, updated annually and provided to the Vancouver Island Health Authority (VIHA) and the Drinking Water Officer (DWO), describes procedures to follow when an emergency is identified including key contacts, mitigation, public notification and recovery.

A summary of the District ERCP shall be posted on the District website when the current review is completed.

3.4 Uni-Directional Flushing Program

Flushing of the District distribution system is performed annually between March and June. Flushing by opening hydrants or flush valves removes sediments and biofilms from the system to help maintain water quality.

In general, the system is flushed from high elevations to low elevation within each pressure zone. This ensures any disturbed sediment is carried through the system and removed. The build up of sediment can restrict the pipe size and lower the capacity of the network. Annual flushing helps minimize this build up to maintain proper flow and water quality.

The District follows a Standard Operating Procedure (SOP) to guide this work to ensure

- it is completed for the whole system
- is completed safely
- that notification is provided for the areas flushing is to occur

- that discharge of flushed water is directed to an appropriate stormwater system and will not be harmful to the environment
- that valves and hydrants are inspected when operated and maintenance needs records to proactively maintain the system.

4.0 Water System Maintenance

4.1 Fire Hydrant Maintenance

The District maintains almost 600 fire hydrants across our water system. Ensuring these are functional and ready for use is a critical component of emergency response. Many hydrants are operated during the flushing program and any concerns are noted at that time. All hydrants are pressure tested or inspected each year to keep them in working order. Any issues are repaired or monitored for future action.

4.2 Valve Maintenance

The water distribution system contains many valves that can be used to isolate part of the network to allow shutdowns for repairs or servicing. These need to be functional and working in times of need to ensure parts of the system can be repaired and to limit the impacts of a shutdown to as few residents as possible. The District operates and tests valves on an ongoing basis to ensure they will perform when needed.

4.3 Water System Breaks

The District repaired two watermain breaks in 2025. When the District is notified of a watermain break, the area is isolated through the use of valves and repairs can begin. Affected residents are notified of the issue and encouraged to limit use of water until repaired. When the fix is complete, the quality of the water in the area is tested before residents are advised to continue normal use.

4.4 Pressure Reducing Valves

Water pressure in the municipal distribution system is primarily achieved by connection to the CRD reservoirs around the District. The CRD maintains dedicated transmission mains that supply the reservoirs and pump water to be stored at a higher elevation to be released into the North Saanich Distribution network. If left unchecked, parts of the system at a much lower elevation than the reservoirs would have very high water pressure, potentially damaging the municipal and private systems.

To control the pressure, the District maintains thirty four pressure reducing valve (PRV) stations to regulate pressure in the watermain at points around the network. The District is divided into

thirteen pressure zones by these PRV stations that maintain consistent pressure within a zone and relatively consistent pressure from zone to zone.

The valving and components of these stations are inspected and maintained on an ongoing basis.

4.5 Water System Master Plan

The District maintains and updates a Water System Master Plan. This is a long term planning document that evaluates the performance of the entire water network and recommends repairs to address system age, areas of low water flow or pressure or to support areas of planned development. The long term plan allows effective budgeting to maintain the system and to help it match the pace of growth and demand in the District.

5.0 Summary

Testing of drinking water in the District of North Saanich distribution system showed it was of good quality for consumption. All measurements indicated no presence of E. Coli bacteria and total coliforms count also zero.

The District of North Saanich meets the conditions of the Water System Operating Permit issued by the Vancouver Island Health Authority. These conditions ensure the system is appropriately monitored and tested, that the operators of the system are certified to operate and maintain the system, and that routine procedures are in place to help ensure the safety and function of the system.

Appendix A

