

WATER FACILITY EVALUATION REPORT Health Protection

Premises Name	Tel: (604) 414-8448	
Savary Shores Improvement District	Fax:	
Premises Address	Inspection Date	Time Spent
Savary Shores Savary Island, BC V0N 2G0	March 21, 2025	4 hours
Operator (Person in Charge)	•	
Janine Reimer		
Inspection Type		
Evaluation		

Observed Violations

There are no observed violations.

Section Details

Comments

Drinking Water System Annual Evaluation Report Prepared by: Jack Davidson, Drinking Water Officer (DWO) For: Savary Shores Improvement District Water System (SSID) Operator: Kerby Fisher (and Janine Reimer)

System Overview

The SSID water system is sourced from two drilled wells:

- Well 1 111 feet, WTN #44211, Date: 1969
- Well 2 110 feet, WTN #108810, Date: 2011

Both wells draw water from the main aquifer on Savary Island. The aquifer consists of a lens of freshwater extending several meters above mean sea level, overlain by an unsaturated zone approximately 25 to 30 meters thick. Compact silty layers above the main aquifer slow the downward infiltration of precipitation and form discontinuous perched aquifers. There is no water treatment or disinfection, as the groundwater is assumed not to be under the direct influence of surface water. However, this assumption merits further investigation due to relatively elevated nitrate concentrations occurring in the aquifer.

The system alternates between the wells during operation. Well water is directed to two storage tanks before distribution to 216 connections, serving a seasonal population of up to 500 people. Groundwater is pumped directly to the upper 10,000-Imperial-gallon reservoir tank and then gravity-fed to the lower 40,000-Imperial-gallon tank for distribution. The upper tank is the main supply source for the upper section of the distribution system, while the lower tank supplies the lower section.

Chemical Assessment

The most recent full-spectrum reports for Wells 1 and 2, conducted in September 2024, confirmed that all health-related chemical parameters meet the safe limits established by the **Guidelines for Canadian Drinking Water Quality (GCDWQ)**.

Nitrate levels, while higher than desirable, fluctuate within acceptable limits (generally between **2 and 4** mg/L).

Bacteriological Assessment

Sampling Compliance:

• Met the frequency requirements of **Schedule B** of the Drinking Water Protection Regulation (DWPR) – 6 monthly bacteriological samples required.

Met the potability standards specified in Schedule A of the DWPR - 90% of samples must be

free of total coliform, and no sample may have more than 10 total coliform bacteria. **Summary of 2024 Sampling Data:**

• Distribution System Sampling: 86 samples collected from 6 sites (~7.2 samples per month).

- Raw Water Sampling: 24 samples collected (1 sample/month/well).
- Total Coliform: Detected in zero samples (0%), with no consecutive detections.
- **E. coli:** Not detected in any sample (0%).

Summary of Issues and Activities

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System Operator and Administrator Performance:

- Demonstrates a thorough understanding of operations and maintenance.
- · Works quickly and diligently to maintain system function and improve where possible.

Collaborates effectively with VCH DWO, the SSID Board, consultants, contractors, and residents. **Treatment:**

 \cdot The water system currently operates without treatment or disinfection and relies on the quality and protection of its source water, supplemented by routine bacteriological and chemical sampling.

The **Groundwater at Risk of Containing Pathogens (GARP)** status of the aquifer remains uncertain. Historical challenges with nitrate contamination suggest a potential pathway for contamination (mostly viral), raising questions about the susceptibility of the semi-confined aquifer to pathogen intrusion from the high density of sewage systems.

At this time, VCH does not consider a permanent water quality advisory to be warranted.

However, further investigation is required to assess the potential for viral transmission, including a hydrogeological assessment. VCH will continue to review emerging data and engage in discussions with relevant stakeholders to determine if additional protective measures are necessary.

Monitoring & Maintenance:

- · Excellent record-keeping usage (meters), bacteriological, chemical, and maintenance.
- · Maintenance procedures are consistently upheld.
- · Regular flushing protocols are in place.
- Excellent bacteriological sampling frequency.

SSID completes biannual full-spectrum chemical analysis as well as nitrate testing. Nitrate counts fluctuate but remain below **MAC (Maximum Acceptable Concentration).** VCH acknowledges SSID's efforts to determine the causes of nitrate levels and explore ways to reduce concentrations in the catchment area.

Infrastructure:

• **Storage:** The bottom of the upper tank is somewhat degraded – options for repair or replacement are being assessed.

• **Distribution System:** Fire hydrant replacement program is ongoing.

Advisories and Notifications

In 2024, SSID recorded multiple overgrown counts (LT1 GTR200).

• The operator and administrator worked with VCH to develop chlorine-shocking procedures for the tank and distribution system.

Water users were appropriately notified.

Requirements

- 1. Good Sampling Practices:
 - o Submit at least six distribution system samples and 2 raw water sample per month.
- 2. Full Chemical Analysis:
 - o Conduct biannual full-spectrum chemical analysis as well as nitrate testing.
- 3. Communication:
 - o Keep VCH DWO informed of system maintenance and water quality changes.
 - o Ensure proper communication of advisories to water users.

4. Emergency Response Planning:

- o Review and update the Emergency Response Plan by June 2025.
- o A template has been provided with the inspection report.
- 5. Annual Report:

- o Submit the 2024 annual report for water system users by June 2025.o A template and water sample range report have been provided with this inspection report.

Your prompt attention to these matters is appreciated. For assistance or further clarification, please contact the VCH DWO.

Action	Taken

Information Exchanged

Hazard Rating For Your Facility:

🛛 Low 🗌 High Moderate

DWO

DWO Printed Name Jack Davidson