

DATE: November 3, 2021**FILE:** 5340-04**TO:** Chair and Directors
Electoral Areas Services Committee**FROM:** Russell Dyson
Chief Administrative OfficerSupported by Russell Dyson
Chief Administrative OfficerR. Dyson**RE: Septic System Regulatory Program Options – Update**

Purpose

To provide an update on septic system regulatory program implementation considerations.

Recommendation from the Chief Administrative Officer:

THAT staff be directed to investigate options for environmental monitoring in the priority areas as identified in the staff report dated November 3, 2021.

Executive Summary

Management of wastewater in the electoral areas of the Comox Valley Regional District (CVRD) is primarily provided by private onsite wastewater systems, or septic systems, of which there are approximately 9,000. Prior analysis of groundwater in some areas has shown evidence of septic system failure. In 2005, the province enacted the *Severage System Regulation* (SSR), replacing the prior *Sevage Disposal Regulation*, and switching from a health authority oversight model to a professional reliance model. A CVRD study completed in 2020 identified options for a regional district role in septic system management, and provided a high-level assessment of risks associated with septic systems in CVRD electoral area neighborhoods.

- In fall 2018, the CVRD launched a septic education program to help inform electoral area residents about proper septic system care and maintenance. Septic education programs are considered a foundational piece in the management of septic systems.
- Additional management program options identified for the CVRD include mandatory pump-outs, mandatory inspection or mandatory inspection and maintenance.
- Higher risk areas in the CVRD electoral areas generally include areas of higher residential lot density, including Royston, Union Bay, Saratoga Beach, Bates Beach and Ships Point.
- Highest priority areas for septic system management programs include areas of higher residential lot density where drinking water is provided by private wells. Areas where environmental risk is high are also of high priority due to proximity to sensitive environmental features.
- Environmental monitoring work could help confirm the level of public and environmental health risk and provide rationale for future septic regulatory program implementation in priority areas. If a program were put in place in the future, follow up monitoring work could be conducted to confirm program effectiveness.

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Government Partners and Stakeholder Distribution (Upon Agenda Publication)

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Background/Current Situation

Since 2016, the CVRD has been investigating options for an enhanced regional district role in septic systems management. The first step in this was establishing the septic systems education program that has been in place since the fall of 2018. The program includes a dedicated webpage, and is supported by education workshops, occasional social media outreach and sharing of resources from industry associations (such as during Western Canada Onsite Wastewater Management Association’s Septic Week). Since 2018, a total of 10 workshops (6 in-person, 4 virtual) have been hosted, with a total attendance of 350 residents. At this point, almost all electoral area neighborhoods have been provided the opportunity to attend either an in-person or virtual workshop. A return to in-person workshops will occur when appropriate according to pandemic status and overall corporate direction.

In regards to septic regulatory options, per the direction provided at Electoral Areas Services Committee (EASC) in May 2020, staff have been in contact with Island Health with the objective of establishing a data sharing agreement for septic system filings. Limited progress has been made at this time, due to COVID-related capacity constraints with Island Health staff. Though a data sharing agreement would be optimal for efficient records management in the event a CVRD regulatory program proceeds, it could come at a later stage of the process.

In the interim, based on the information provided in the WSP study completed in 2020 and the staff report presented to EASC in May of 2020 ([link](#)), the following additional information is provided for the committee’s consideration.

Highest Priority Areas for Participation

A preliminary screening of septic system failure risk was completed by WSP, based partially on a 2008 EBA/Tetrattech GIS analysis of geomorphological factors contributing to poor septic system performance, as well as an assessment of residential dwelling density and potable water sources. This screening identified seven areas at an elevated risk of septic system failures, as summarized in Table 1 below.

Table 1 – Areas at elevated risk of septic system failures

Area	Considerations
Robinson Lake	<ul style="list-style-type: none"> • ~50 lots, most under 0.2ha, all on private wells • Near sensitive freshwater habitat • High consequence of failure for public and environmental health
Saratoga Beach	<ul style="list-style-type: none"> • ~600 lots, many under 0.2ha, most on CVRD water system • Evidence of groundwater contamination in prior study • High consequence of failure for environmental health • Low consequence of failure for public health

Bates Beach	<ul style="list-style-type: none"> • ~200 lots, most under 0.2ha, most on private wells • Near sensitive freshwater habitat • High consequence of failure for public and environmental health
Royston/Gartley Point/Kilmarnock	<ul style="list-style-type: none"> • Over 300 lots, most under 0.2ha, all on CVRD water system • Proximity to Baynes Sound • Evidence of groundwater contamination in prior study • High consequence of failure for environmental health • Low consequence of failure for public health
Union Bay	<ul style="list-style-type: none"> • Over 300 lots, most under 0.2ha, all on CVRD water system • Proximity to Baynes Sound • Evidence of groundwater contamination in prior study • High consequence of failure for environmental health • Medium consequence of failure for public health
Ships Point	<ul style="list-style-type: none"> • Over 200 lots, most under 0.2ha, most on community water system • Proximity to Baynes Sound • High consequence of failure for environmental health • Low consequence of failure for public health
Hornby Island – Grassy Point, Whaling Station Bay, Sandpiper, Shingle Spit	<ul style="list-style-type: none"> • Over 300 lots, many under 0.2ha, most on private wells • Recent reports of E.coli presence in groundwater • Medium consequence of failure for environmental health • High consequence of failure for public health

Current Island Health subdivision standards stipulate a minimum lot size of 1 hectare for any area where properties are serviced by private wells, assuming adequate native mineral soil depth. Of the high risk areas listed above, three include areas where most properties are on private wells, and have many properties less than 0.2 hectares in size. When considering areas for potential program implementation, the following are potential criteria:

- High consequence of failure for public health and high/medium consequence for environmental health
- Drinking water provided by private wells
- Lot sizes generally do not meet current Island Health subdivision standards

Using these criteria, three of the high risk areas listed in Table 1 above would be highest priority for mandatory maintenance program implementation – Robinson Lake, Bates Beach and portions of Hornby Island. These areas include a total of approximately 550 lots.

For areas with community water supply, current Island Health subdivision standards stipulate a minimum lot size of 0.2 hectares, assuming adequate native mineral soil depth. The remaining four high-risk areas listed in Table 1 (Saratoga Beach, Royston/Gartley Point, Union Bay, and Ships Point) above include many properties that do not meet this criteria, and given the risk to sensitive environmental features, these areas are also a high priority for mandatory maintenance program implementation or other enhanced wastewater management options.

As a means of confirming the public and environmental health risk profile and providing baseline data from which to measure the effectiveness of future program implementation, groundwater, surface water and/or marine monitoring study work should be considered as an initial next step for

these areas. This could involve gaining access to private drinking water well testing results on an aggregate level, establishing new monitoring wells, surface water sampling and/or accessing provincial or federal government records. On Hornby Island, this work could be undertaken in collaboration with Hornby Water Stewardship. Staff will report back to the EASC in mid-2022 with a proposed scope and budget for this monitoring work.

Program Option Selection

The WSP report described four septic management program options, including cost estimates for program implementation across the CVRD's three electoral areas. The option of a homeowner education program is now in place in the CVRD; additional septic management program options include the following:

- Mandatory Pump-Out
- Mandatory Inspection
- Mandatory Inspection and Maintenance

Schedule A to this report includes a further description of these three options as well as their respective advantages and disadvantages. In general, areas with a higher risk profile would see the greatest benefit from a more comprehensive inspection-based program.

Consideration of Assent Process Options

While adoption of a bylaw establishing a regulatory service for septic maintenance could be adopted by director consent, authorizing a method of funding for an associated management program to support the regulatory requirements would likely be required per the following guidance from the province:

“Because regulatory powers directly affect what people can or cannot do in a regional district, there are often requirements a regional district must meet before exercising its regulatory powers. For example, a regional district must have participating area approval of a service before regulations can be established and enforced for that particular service.” ([link](#))

Moving into a regulatory role for septic systems would be a significant expansion of CVRD influence in the lives of rural residents, many of whom value the independence from government that rural living can provide. The Province provides a “Regulatory Best Practices Guide” for local governments considering regulatory services ([link](#)). Included in this guide is a spectrum of approaches that can be taken for resolving issues; monitoring is one such approach. Establishing environmental monitoring in priority areas as discussed above would be consistent with this guidance.

Another key consideration in regulatory approaches is consulting with those who are affected by the issue. Evidence of community consultation will also be considered by the Province if the CVRD were to seek Cabinet approval of an Order in Council authorizing the CVRD to take a role in regulating septic systems. Alongside or following groundwater monitoring in priority areas, engagement with property owners in these areas could include strategies such as newsletters to provide background information on the rationale for groundwater monitoring and benefits of septic system management programs, and surveys to gather information on attitudes and practices regarding maintenance and management of septic systems.

Should there be a CVRD Board recommendation to proceed with establishing a septic system regulatory program in the future, next steps would include:

1. Submit resolution to Ministry of Municipal Affairs seeking sewage system regulatory authority through Cabinet approval of an Order in Council.
2. Confirming the method of participating area approval (assent voting, alternative approval process or electoral area consent).

3. Initiate community engagement per approved engagement plan.
4. Draft service establishment and regulatory bylaws for first, second and third readings.
5. Continued engagement with Island Health regarding chosen program delivery option and to continue discussions regarding a data sharing agreement for information collected by CVRD.

Policy Analysis

The British Columbia *Public Health Act, Sewerage System Regulation* (SSR) regulates wastewater systems that serve a single family residence or duplex, and sewerage systems with a domestic sewage flow of up to 22,700 litres per day that service a single lot or lots with a shared interest. Under the SSR, it is the responsibility of the homeowner to ensure that appropriate system maintenance is carried out.

Section 304 of the *Local Government Act* (Health Protection Authority) enables regional districts, subject to the *Public Health Act*, to enact bylaws that regulate or prohibit activities for the purposes of maintaining, promoting or preserving public health, or to undertake other measures it considers necessary for these purposes.

Options

The following options have been developed for the committee's consideration.

1. Investigate options for environmental monitoring in the seven high risk areas as listed in Table 1 of this report.
2. Do not proceed with further work on management of septic systems in CVRD electoral areas at this time.

Continued investigation of septic system education and/or regulation options is included as a key electoral area initiative in the board's strategic planning process for the 2022-2026 financial planning period, and will help reduce public and environmental health risks in several electoral area communities. Groundwater and surface water monitoring can also support watershed management initiatives and result in greater watershed stewardship. For these reasons, Option 1 is recommended.

Financial Factors

Mandatory maintenance program cost estimates provided in the WSP report ranged from \$1.1-1.8 million, assuming program implementation across all three electoral areas. For program implementation across all seven high risk areas listed in Table 1, annual program costs would range from \$330,000 to \$580,000. These program costs assume the CVRD would be collecting taxation to pay for and arrange pump-outs and/or inspections. Program taxation impacts could be reduced if responsibility for pump-out and/or inspection costs were left to individual property owners; however, overall costs to individual property owners would likely be the same or higher.

Legal Factors

Under the *Sewerage System Regulation*, it is the responsibility of homeowners to ensure that regular maintenance and monitoring of their onsite wastewater management system is completed (Schedule B). There is currently no supporting provincial regulatory mechanism in place in BC to ensure that this responsibility is adhered to. However, if there is evidence of a public health hazard related to existing onsite wastewater systems, Island Health has the authority to inspect and take corrective action. Island Health can also hold liable the owner of the system, and/or the Authorized Person the owner hired to design, install or maintain the system.

Authority to move into a regulatory role for onsite wastewater management is granted to regional districts through Section 304 of the *Local Government Act*. As public health is an area of concurrent provincial/local government authority, guidance from provincial staff suggests an amendment to the *Comox Valley Regional District Regulation* to allow for CVRD management of onsite sewage systems

would be required. This would require Cabinet approval of an Order in Council, which is typically a 6-12 month process.

There is no precedent in BC of local government regulation of septic systems within electoral areas. Obtaining a legal opinion on risks and benefits to CVRD of proceeding with regulatory program implementation would be an additional option for the board's consideration; however, this has not been identified as a requirement by provincial staff.

Regional Growth Strategy Implications

All CVRD onsite wastewater management initiatives are developed to align with the goals and objectives of the Comox Valley Regional Growth Strategy (RGS) to “provide affordable, effective and efficient services and infrastructure that conserves land, water and energy resources.”

The mapping work completed in support of the study has identified that many of the high-risk areas for septic systems correlate with those areas designated as Settlement Expansion Areas (SEA) or Settlement Nodes (both part of the Core Settlement Areas).

In regard to settlement expansion areas, the RGS states the following: “Given the number and density of private systems located on the fringe of Municipal Areas, there is a need to develop a long-term strategy to prevent public health concerns before they arise.... As a result, it is the long-term intention of the growth management strategy that existing neighbourhoods within designated SEAs will eventually be provided with publicly owned water and sewer services.” Settlement Nodes are also designated as such subject to the provision of appropriate water and sewer services.

The RGS also states that for existing developments outside of Core Settlement Areas, where there are demonstrated onsite health related issues, publicly owned sanitary sewer services should be made available.

Intergovernmental Factors

Staff will continue to consult with Island Health during program assessment to ensure their support. Island Health staff have provided some high-level information on septic system filings received in the CVRD since the 2005 implementation of the SSR. If the CVRD were to proceed with a mandatory maintenance program that requires access to detailed septic system filing records, a data sharing agreement with Island Health would be required in order to obtain access to these records, and to share with Island Health information gathered by the CVRD program.

Interdepartmental Involvement

Engineering Services has taken the lead in preparing this report, with assistance from Corporate Services.

Citizen/Public Relations

According to Ministry of Municipal Affairs staff, evidence of community engagement on mandatory maintenance program options would be one consideration in Cabinet's deliberation of an Order in Council granting the CVRD the necessary regulatory authority to manage onsite sewage systems. Outside of the current septic education program, past engagement on onsite system management has been through the 2014 Rural Comox Valley Official Community Plan update process, and the prior South Sewer Project liquid waste management plan process.

Attachments: Schedule A – Summary of Maintenance Program Types
Schedule B – Sewerage Systems Regulation Roles and Responsibilities

Program Type	Description	Advantages	Disadvantages
Mandatory Pump-Out Program	A program requiring septic system pump-outs at a set interval (i.e. 5 years)	<ul style="list-style-type: none"> ● Familiar, due to similarities with Capital Regional District's Onsite Wastewater Management Program ● Lower cost than inspection-based programs 	<ul style="list-style-type: none"> ● Requires administrative capacity to track pump-out records ● “One size fits all” approach may not be appropriate for all systems or household use patterns (i.e. two-person household vs larger family or addition of carriage home), and may result in public pushback ● Can create perception that systems are being maintained, even though pump-outs are only one component of proper septic care and maintenance
Mandatory Inspection Program	Each septic system participating in the program is inspected by an Authorized Person, and the homeowner is provided with a maintenance plan	<ul style="list-style-type: none"> ● Flexible, inspection based approach provides homeowners with information tailored to the needs of their system ● Can develop an inventory of onsite systems, and thus help improve understanding of cumulative impacts ● Can have measurable impact through identification of system maintenance requirements 	<ul style="list-style-type: none"> ● Requires administrative and technical capacity to coordinate and conduct inspections ● May be considered intrusive by some homeowners ● Requires a mechanism to enforce inspections ● Does not include enforcement capacity for required maintenance

Program Type	Description	Advantages	Disadvantages
Mandatory Inspection and Maintenance Program	Similar to the Mandatory Inspection Program, with the addition of an enforcement component to ensure maintenance plan is followed by homeowner	<ul style="list-style-type: none"> • Inspection-based approach identifies required maintenance and enforcement ensures maintenance is completed • Can have measurable impact through identification of systems that require maintenance and follow up to ensure maintenance is completed • Can develop an inventory of onsite systems, and thus help improve understanding of cumulative impacts 	<ul style="list-style-type: none"> • Requires administrative, technical and enforcement capacity to coordinate and conduct inspections, and confirm required maintenance is completed • High level of intrusiveness may not be popular with some homeowners

Sewerage Systems Regulation Roles and Responsibilities

