



## STAFF REPORT

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**DATE:** July 6, 2023 **FILE:** 0550 Board

**TO:** Chair and Directors,  
Regional Board

**FROM:** David Leitch  
Chief Administrative Officer

**RE:** CORTES ISLAND SEPTAGE MANAGEMENT FEASIBILITY STUDY – GRANT OPPORTUNITY

### **PURPOSE/PROBLEM**

To consider the submission of an application to the Provincial Infrastructure Planning Grant Program (IPGP) to partially fund the Cortes Island Septage Management feasibility study.

### **EXECUTIVE SUMMARY**

Domestic wastewater on Cortes Island is managed through private on-site septic systems. Local residents would like to understand whether it is economically feasible and environmentally preferable to operate a composting facility to manage septage on-island. The objective of the feasibility study would be to assess whether a compost system could provide for local septage management at a similar cost to current pump-out costs and if this would result in an improved community outcome. The study would also identify the potential benefits and risks (environmental, social, economic) associated with development of such a system.

If successful, the IPGP grant will cover up to \$10,000 toward the cost to complete the study. The remaining costs have been considered in the 2023 budget for the service under function 340, a shared function between Electoral Areas B and D.

### **RECOMMENDATIONS**

1. THAT the report from the Chief Administrative Officer be received.
2. THAT an application to the Infrastructure Planning Grant Program for \$10,000 be submitted to assist with funding to complete the Cortes Island Septage Management feasibility study.

Respectfully:



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Dave Leitch  
Chief Administrative Officer

**Prepared by** Sheena Fisher, Engineering Services Coordinator

Attachments: SYLVIS Environmental Proposal - Cortes Island Septage Management Feasibility Study  
Extract from the 2023-2027 Financial Plan

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## PROPOSAL

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### Cortes Island Septage Management Feasibility Study

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*Presented to:* Sheena Fisher and Wolfgang Parada, Strathcona Regional District Engineering Services

*Presented by:* Mark Teshima, SYLVIS Environmental

*Presentation date:* Revised June 16, 2023

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#### **BACKGROUND**

Cortes Island is an island in British Columbia, north of the Strait of Georgia, that is home to approximately 1,035 people<sup>1</sup> and approximately 400 homes. Cortes Island has no centralized wastewater treatment, so homes typically operate a septic system to collect domestic wastewater and manage solids. These systems require a maintenance cleanout on average every three years. Historically, a farm on the island would accept septage as a feedstock for a compost system that would return the nutrients from domestic septage to the land; however, the farm is no longer accepting septage and residents must pay approximately \$700 every three years to pump out their tank for transport off-island.

SYLVIS has been approached to assess the potential feasibility and requirements to develop a workable composting option for island septage, and to assess if this is a more cost effective and environmentally beneficial option for Island residents.

#### **PROJECT OBJECTIVES**

Residents of Cortes Island would like to understand whether it is economically feasible and environmentally preferable to operate a composting facility to manage septage on-island. The objective of the feasibility study will be to assess whether a compost system could function to provide local service for septage management at a similar cost to current pump out costs, and if this results in an improved community outcome. The study will also identify the potential benefits and risks (environmental, social, economic) of developing such a system.

#### **SCOPE OF WORK**

The following scope of work is proposed to achieve the project objective.

#### **Part 1: Feasibility Study for Septage Management in an On-island Compost System**

SYLVIS will determine the feasibility of an on-island compost facility for domestic septage by providing the following which are assumed to be a part of a successful compost system:

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<sup>1</sup> <https://srd.ca/wp-content/uploads/2019/06/Cortes-Community-Profile.pdf>

- Identify benefits, drawbacks, considerations, and risks of developing a septage reception and composting facility for Cortes Island. These include:
  - Environmental benefits
  - GHG/carbon footprint consequences
  - Costs
  - Management and public health considerations
- Identify a steady source of woody biomass or other carbon source that could be mixed with incoming septage to achieve a material that will compost well.
- Determine a liquid decant receiving system or alternative process for managing excess septic liquid decant within a compost system.
- Identify compost systems suitable for purpose based on annual volumes and practices and determine the cost to purchase.
- Identify barriers to compost system operation such as operator or feedstock availability, or odour generation during composting.
- Identify regulatory requirements to compost septage and potential ongoing operational considerations to achieve regulatory requirements through such mechanisms as compost quality sampling / analysis or compost process data logging.

SYLVIS will compare the current cost for residents to cleanout their septic systems, assumed to be approximately \$100,000 annually (based on 400 homes over 3 years at \$700 per home), to the estimated cost to transport septage to a dedicated compost system on the island, including composter operation. This will form the basis for the recommendation to further develop an on-island composting solution for septage management.

**Deliverables:**

- Technical memorandum summarizing the outcomes of the feasibility study and a recommendation for further process selection and system design.
- Determination to proceed with Part 2, or to terminate the project.

**Part 2: Compost Process Selection and System Design**

Based on the determination from the feasibility study, this future scope of work will provide the necessary specifications for a compost system, providing guidance for regulatory, logistical, engineering, and operational requirements to calculate detailed capital and operational project costs.

**Deliverable:**

- A detailed cost estimate and recommendation for equipment selection and operational requirements / costs.

As part of overall project management, SYLVIS will provide monthly project status updates by email.

## BUDGET

Budgeted fees and disbursements associated with the project parts are as follows:

Project Part	Task Name	Fees	Disbursements	Total
Part 1	Feasibility Study for Septage Management in an On-island Compost System	\$16,000	\$0	\$16,000
Part 2	Compost Process Selection and System Design	TBD	TBD	TBD
<b>Total</b>		<b>\$16,000</b>	<b>\$0</b>	<b>\$16,000</b>

*Note: fees and disbursements are exclusive of applicable taxes*

Invoices for work completed to date will be issued monthly. Payment terms are net 30 days. Interest compounded at 2% per month will be charged on overdue accounts.

## SCHEDULE

The work proposed above will occur according to the following schedule assuming a notice of award by July 31, 2023:

Project Task	Task Name	Deliverable	Due Date
Part 1	Feasibility Study for Septage Management in an On-island Compost System	Feasibility study technical memorandum	October 13, 2023
Part 2	Compost Process Selection and System Design	Detailed cost development and recommendation	TBD

## CONCLUSION

Should the work outlined in this proposal be approved, SYLVIS would require written confirmation of approval or provision of a Purchase Order before project initiation. SYLVIS can provide a proposal for additional services upon request. Should you have any questions please contact Mark Teshima at SYLVIS at 604-777-9788.

This proposal is valid for 60 days from the date of receipt. The contents of the proposal are intended solely for the Strathcona Regional District and are provided in confidence.

## ACCEPTANCE OF PROPOSAL

Acceptance of this proposal may be provided to SYLVIS through email, the provision of a Purchase Order, or by having a designated authority sign, and return the proposal, in its entirety, to SYLVIS by mail, emailed scan, or facsimile.

I ACCEPT THIS PROPOSAL ON BEHALF OF STRATHCONA REGIONAL DISTRICT. I AM AUTHORIZED TO ENGAGE SYLVIS TO UNDERTAKE THE SCOPE OF WORK IDENTIFIED IN THIS PROPOSAL:

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NAME, TITLE, ORGANIZATION

Date

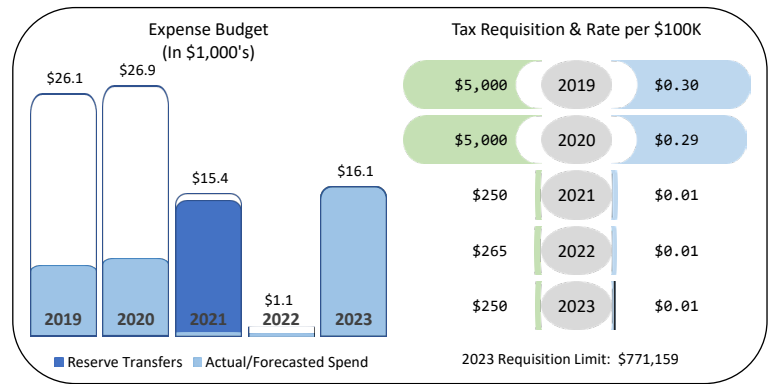
## 340 - Liquid Waste

## Electoral Area Services

### Service Description

This function was established on March 25, 2002 through Bylaw 2422, to provide development, management, and administration of liquid waste management for Electoral Area B (Cortes Island) and Electoral Area D (Oyster Bay-Buttle Lake).

The maximum levy for this service is \$0.05 per \$1,000 of assessed value of Electoral Area B and Electoral Area D.



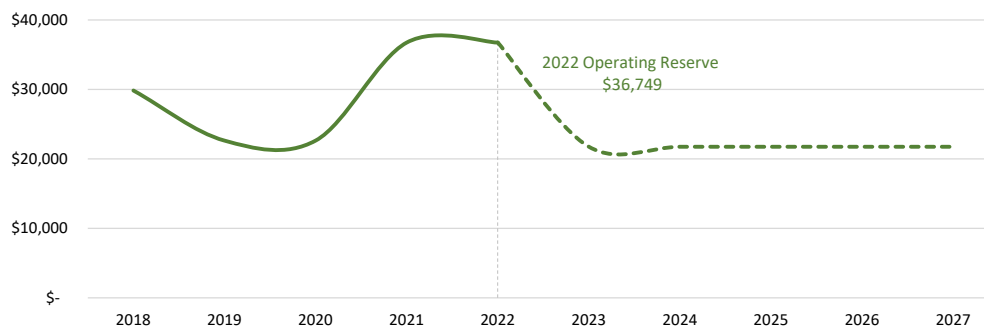
### Operating Budget:

	2022 Projection	2022 Budget	2023 Budget	2024 Budget	2025 Budget	2026 Budget	2027 Budget
<b>Revenue:</b>							
Property tax requisition	\$ 265	\$ 265	\$ 250	\$ 1,070	\$ 1,078	\$ 1,086	\$ 1,094
Transfers from reserves	-	-	15,000	-	-	-	-
Prior year surplus	810	810	812	-	-	-	-
	<u>1,075</u>	<u>1,075</u>	<u>16,062</u>	<u>1,070</u>	<u>1,078</u>	<u>1,086</u>	<u>1,094</u>
<b>Expense:</b>							
Operating expenses	263	1,075	16,062	1,070	1,078	1,086	1,094
	<u>263</u>	<u>1,075</u>	<u>16,062</u>	<u>1,070</u>	<u>1,078</u>	<u>1,086</u>	<u>1,094</u>
<b>Surplus/(Deficit)</b>	<b>\$ 812</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

### Tax Requisition:

	Residential	Utilities	Major Industry	Light Industry	Business And Other	Managed Forest Land	Rec/Non Profit	Farm
Amount requisitioned	\$ 196	\$ 2	\$ 7	\$ 1	\$ 7	\$ 36	\$ 1	\$ 0
Tax rate (per \$100K)	\$ 0.01	\$ 0.03	\$ 0.02	\$ 0.03	\$ 0.02	\$ 0.03	\$ 0.01	\$ 0.01
<b>Average requisition, per constituent:</b>								
Area B	\$ 0.06	\$ 0.05	\$ -	\$ 0.02	\$ 0.04	\$ 0.04	\$ 0.03	\$ 0.00
Area D	0.07	0.08	7.13	0.04	0.17	0.14	0.06	0.00
Regional Average	\$ 0.07	\$ 0.06	\$ 7.13	\$ 0.03	\$ 0.10	\$ 0.09	\$ 0.04	\$ 0.00

### Reserves Summary:



### Budget Commentary and Service Goals:

- \$15,000 Contingency budget for possible Septic Sludge Management study on Cortes.