



## **FEASIBILITY STUDY**

### **ELECTORAL AREA C WHARVES SERVICE**

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April 2022

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*(Cover photo: Surge Narrows wharf, courtesy of McElhanney Ltd)*

## Executive Summary

This report is prepared in response to a resolution passed by the Strathcona Regional Board on March 8, 2017 which directed as follows:

THAT a bylaw to establish a wharves service for Electoral Area C be prepared for consideration by the Board.

Based on this direction, research was conducted into the establishment of a service to cover capital and operating costs associated with the wharf facilities that were divested by Transport Canada to the Regional District in 2014. These facilities are located at Owen Bay, Port Neville and Surge Narrows within Electoral Area C. The other locally owned wharf facilities in Electoral Area C are located at Evans Bay, Granite Bay and Hoskyn Channel but are considered park assets and not within the scope of this study.

As a result of the foregoing research a number of recommendations are herewith presented for the consideration of the Regional Board including:

- THAT a service be established to ensure that capital and operating costs can be met in accordance with the Transport Canada divestiture agreement and good engineering practice;
- THAT the entirety of Electoral Area C (Discovery Islands-Mainland Inlets) be designated as the area benefiting from the wharves service;
- THAT the costs of operating the service that cannot be recovered by other means should be secured through taxation of real property within the area benefiting from the wharves service;
- THAT property taxes for the wharves service would most appropriately be levied against both land and improvement assessments within the benefiting area.

Prior to 2014 the wharf facilities in question were operated and managed by Transport Canada. When these assets were transferred to the Regional District under Transport Canada's port divestiture program, approximately \$2.9 million was provided to the Regional Board for much needed capital upgrades and maintenance. Those upgrades must be completed by 2024 and any divestiture funds remaining after that deadline must be returned to Transport Canada.

The transfer of ownership did not provide sufficient resources for long-term or ongoing operational or maintenance costs which is the reason for this initiative. Having a service in place will ensure that regular and appropriate maintenance of the wharf infrastructure can be undertaken as required. In the event the Regional District fails to establish a service, all costs related to maintenance or non-maintenance of the wharf infrastructure (including legal costs and damage awards) would need to be charged to the electoral area administration service.

For the reasons outlined above, it is recommended that the Regional Board give serious consideration to the establishment of a wharves service for Electoral Area C.

## Introduction

The intent of this study is to examine the feasibility of establishing a service to cover the costs of operating and maintaining wharf infrastructure for Electoral Area C. The wharves in question represent important and vital infrastructure for local residents, businesses and recreational users throughout the area. Historically, the maintenance and upgrading of the wharves in question was the responsibility of the Government of Canada. However, in 2014 the decision was made by Canada to divest itself of these facilities and turn them over to local authorities that had an interest in ensuring their continued operation.

At that time the Strathcona Regional District made a decision to accept responsibility for the wharves and an agreement was entered into that provided \$2.9 million in funding to ensure that major upgrades and repairs to these facilities would be done. Under the terms of the agreement, the Regional District was given until 2024 to effect the necessary upgrades following which any funds remaining would have to be returned to Transport Canada.

There is still much work required to be done at these facilities including maintenance, repair or replacement of the following within the next 2-10 years:

### Wharves

- approaches
- topsides
- decking
- stringers
- pile caps
- piles
- fender piles

### Floats

gangways  
floats  
mooring dolphins  
seaplane floats



Figure 1 – Port Neville wharf  
(McElhanney Ltd., 2021)

The wharves in question are predominantly wood construction and, in order to withstand the harsh marine environment, the various components must be inspected, maintained and replaced as necessary to ensure their long-term viability and the safety of the boating public.



## Background

There are a number of public wharf facilities within the boundaries of Electoral Area C. Some of these wharves have been divested to the Regional District from Transport Canada on the understanding that they will be upgraded and maintained to proper standards. These include wharves located at Port Neville, Owen Bay and Surge Narrows. Other wharves owned by the Regional District in Electoral Area C are currently operated in connection with community parks and are not included in this study.



Figure 2 – Typical configuration of wharf piles and cross-bracing.

(McElhanney Engineering Ltd. 2021)

The 3 wharves that are the subject of this study are believed to have sufficient funds set aside for capital improvements that will meet applicable engineering standards. However, since they are not associated with any Regional District service there is no reliable source of funding to cover operating and maintenance costs over the long term. Therefore, the purpose of this study is to identify the amount of revenue that would be required in a typical year and in an extraordinary year to ensure that proper maintenance of this infrastructure can be done. Based on estimates from consulting engineers that were retained to investigate such costs, it is estimated that between \$41,500 and \$50,000 would be required in an average year to perform such maintenance. It has also been estimated that in years when storm damage has occurred that the cost of maintenance could be higher. These costs would need to be met by the Regional District using whatever funding is available through local channels such as property taxation.



Figure 3 – Owen Bay wharf  
(McElhanney Engineering Ltd. 2019)

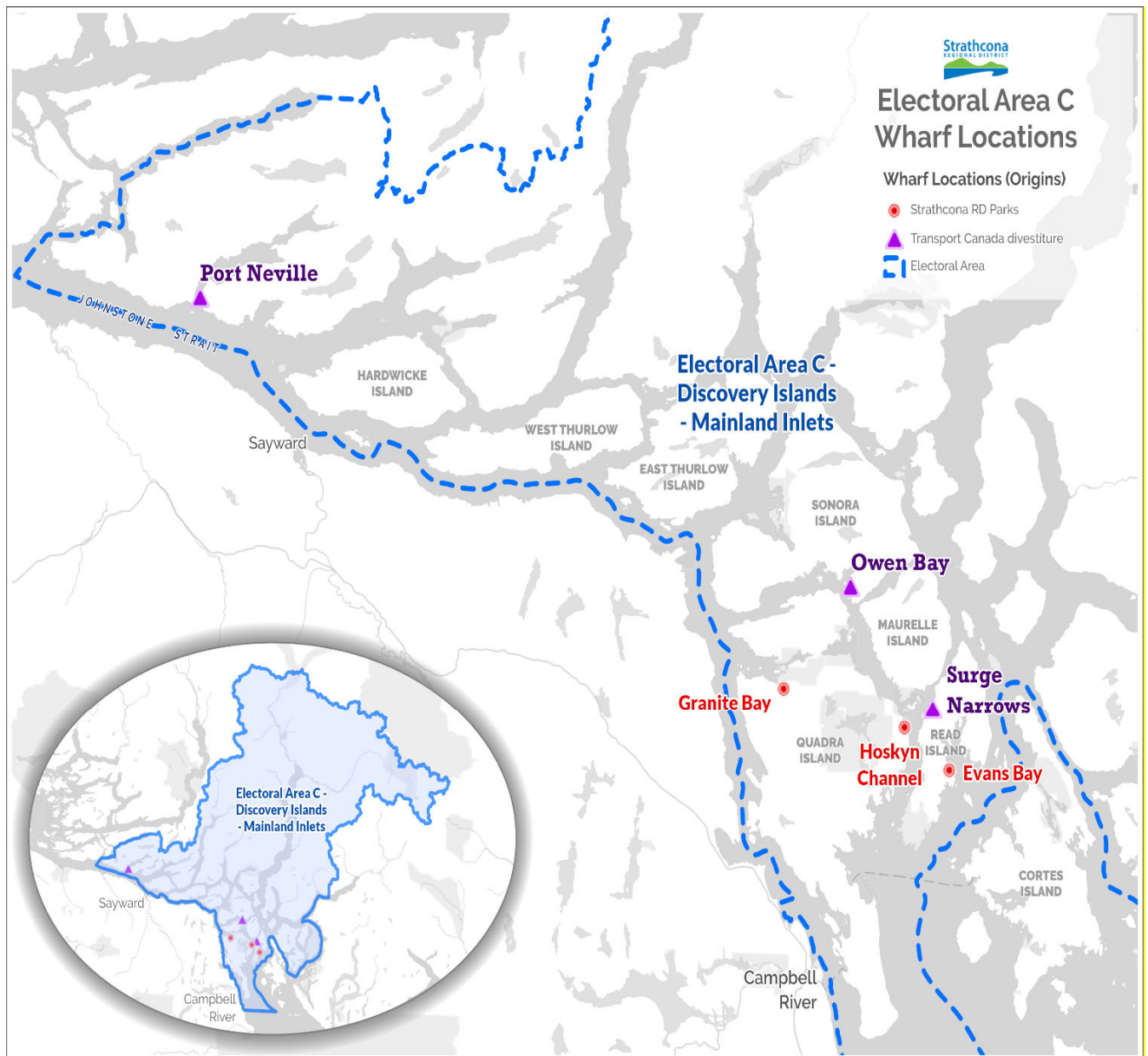


Figure 4 – Location map of SRD wharves in Electoral Area C

## Capital and Operating Costs

As a result of the upgrades and improvements that have been or will be funded through the Transport Canada divestiture agreement, there is little in the way of capital expenditure that must be funded through local contributions. However, to ensure that the area receives full benefit of the work already undertaken, it is necessary to have a program that ensures regular maintenance and repairs are done to this important infrastructure.

A breakdown of the anticipated costs associated with the proposed wharves service is shown in the following table. The maintenance tasks shown are based on the recommendations from McElhanney Engineering Ltd. which conducted condition assessment studies of the wharf facilities in late 2021 and early 2022.

**Table 1: Annual Maintenance Cost Estimates for Wharves Infrastructure**

Item	Annual Cost Estimate*	Five-Year Cost Estimate
Wharf Inspection and Reporting	\$2,500	\$15,000
Routine Maintenance & Repairs	\$15,000	\$100,000
Engineering Costs	\$5,000	\$40,000
Insurance	\$17,500	\$87,500
Administration and Overhead	\$1,500	\$7,500
<b>Total</b>	<b>\$41,500</b>	<b>\$250,000</b>

\*It should be noted that some costs will vary on an annual basis and are therefore projected using a five-year cycle.

Based on the preceding information it is estimated that annual operational costs will vary between \$41,500 and \$ 50,000 in a given year, and possibly higher in years when additional inspection, maintenance or repair tasks must be performed. It is also noted that insurance costs constitute a major portion of the annual cost of wharf operations due to the specialty nature of such insurance and the high premiums associated with marine liability policies.

For the purpose of investigating the cost implications to homeowners, businesses and others in the service area the higher number will be used throughout this report.

## Service Area Boundaries

With respect to the proposed Electoral Area C wharves service, it was necessary to determine the geographic area which would receive a benefit from having existing and future infrastructure in place. Accordingly, four distinct benefiting area scenarios were considered for this study:

Option A - properties immediately adjacent to the wharf facilities.

Option B – all properties within Electoral Area C.

Option C – all properties within Electoral Area C (except those on the mainland of BC).

Option D - all properties within the Strathcona Regional District.

Not unlike roads, schools, libraries and other public infrastructure, the connection between infrastructure and the beneficiaries of that infrastructure may not be immediately apparent. Different ways in which the benefits of infrastructure may be determined include the desirability of living in an area (ie. market value of real estate) or the popularity of an area with tourists. The concept may be subtle and is distinct from the concept of ‘users’ of the infrastructure.

Additional information on the different service areas that were considered and the issues relevant to each is shown in the table below.

**Table 2: Comparison of Possible Service Area Alternatives for Electoral Area C Wharves Service**

Benefiting Area Scenario	Comments
A. Properties adjacent to wharf facilities	A large number of properties receiving benefit from the wharves service would not pay towards infrastructure upkeep or maintenance.
B. Properties located within the boundaries of Electoral Area C.	-Reflects the unique marine culture and heritage of Electoral Area C. -Acknowledges the historical significance of wharf facilities in the area.
C. Properties located within the boundaries of Electoral Area C (except properties on BC Mainland).	Arbitrarily excludes properties that share Electoral Area C’s marine heritage.
D. All properties within the Strathcona Regional District	Properties located outside of Electoral Area C would receive little or no direct benefit from the wharves service.

After careful consideration of the pros and cons associated with each of these alternatives and, respecting the principle that those properties receiving benefit from a Regional District service should contribute to its funding, it was concluded that a benefiting area boundary that included all properties within Electoral Area C would be the most appropriate.



## Potential Revenue Sources

Having considered the issue of an appropriate boundary for the wharves service and the annual budgetary requirements to maintain the related infrastructure, it was necessary to consider possible sources of revenue that could be used to ensure annual maintenance and repair needs would be met. The following list includes the various sources of funding that are typically relied upon for covering the costs of local infrastructure operations and maintenance.

User Fees - As with all local government services, the incorporation of user fees is always attractive as it can help to minimize reliance on property taxes. Currently the only revenues being generated from operation of these wharf facilities is a license fee of approximately \$250 annually for the Post Office at the Surge Narrows location. It is not known how long this source of revenue will be available in the future. In the event other fees are implemented in relation to the use of wharf infrastructure, these would be available to offset the amount of taxes required from the service area.

Grants - Revenue received by way of grants is another possible source of funding, however such funding is usually reserved for capital works rather than ongoing maintenance costs. Since the proposed budget for the service is based on annual maintenance and upkeep (rather than major capital improvements) it is suggested that reliance on grant funding to cover these costs would probably lead to the wharves being maintained at a lower standard that does not meet proper engineering guidelines or public expectations.

Donations – Although the Regional District is able to accept voluntary donations to cover operating costs for any service (and to issue tax receipts for such donations), the Regional District is not aware of any donations being received in the past to support public wharves infrastructure. Should such contributions be received in the future they could be used to offset reliance on other revenue sources.

Property Taxation - The use of property taxation in such circumstances is often the only reliable method for ensuring that sufficient financial resources are available when needed to attend to scheduled and unscheduled maintenance requirements. As with all Regional District services, the use of property taxes to operate a service must be limited to the area deemed to benefit from the existence of the service.

Based on the foregoing, it is suggested that accessing the local property tax base (while not the only source of funding) is probably the most reliable method for ensuring that sufficient funding is available to meet the annual requirements associated with wharf operations and maintenance.

## Property Taxation Options

If the annual costs of maintaining wharf infrastructure are to be shared collectively within the service area through a system of property taxation, it will be necessary to consider the various types of taxation that are available and to select the method deemed most appropriate. Following are the most common types of property taxes that are used, depending on the nature of the service and the relationship of the service to the properties benefiting from the service:

- taxation of land only (based on the value of the land)
- taxation of improvements only (based on the value of the improvements)
- taxation of land and improvements (based on the value of the land and improvements)
- taxation of each property at a uniform rate (parcel tax)
- taxation of each property based on road frontage or parcel area (frontage tax or area tax)

While no perfect taxation system exists, it is generally accepted that the most appropriate system would be one that has the strongest relationship between the benefit received by properties and the amount of tax paid by those properties. In the present case, it is believed that the benefit received is strongly correlated to the value of assets which is the default system for Regional District requisitions. This philosophy would tend to discourage the use of parcel taxes, frontage taxes or area taxes as preferred methods for sharing costs since these systems are typically related to utility infrastructure such as water distribution or community sewer systems.

The table below illustrates the relative costs projected for the wharves service using a variety of property taxation methods. As may be seen, the sharing of costs based on land and improvement assessments not only yields a lower tax rate in comparison to other methods but also recognizes the broad constituency that would benefit from a proper maintenance program. For the reasons outlined above, it is suggested that the fairest and most appropriate method of sharing annual service costs would be through a tax on land and improvements with the amount of taxation for each property based on the value of that property.

**Table 3: Analysis of Residential Rates Using Various Property Taxation Formulas**

Taxation Method	Occurrences	Assessment Values (2022)	Annual Residential Rate
Land only	2,546	\$723,871,442	\$0.0627 per 1,000 of taxable land assessments
Improvements only	1,909	\$559,291,256	\$0.0808 per 1,000 of taxable improvement assessments
Land and improvements	2,907	\$1,283,162,698	\$0.0353 per 1,000 of taxable land and improvement assessments
Uniform parcel tax	2,663	n/a	\$18.78 per separate parcel of land
Frontage or area tax	Data not available		

## Tax Rate Calculations

Using land and improvement assessments as the basis for allocating annual costs it is possible to estimate the tax rates that would likely result if the maximum annual requisition was levied within the proposed service boundary. The calculations in the table below are based on 2022 property valuations supplied by the Assessment Authority of BC and, while property values may change over time, the calculations are believed to be accurate enough for purposes of this study.

**Table 4: Calculation of Annual Tax Rates for Electoral Area C Wharves Service**

Assessment Class	Occurrences	2022 Net Taxable Values	Conversion Factor	Converted Assessments	% Share	Requisition Share	Tax Rate* (per \$1,000)
1. Residential	2,310	\$1,191,156,824	0.100	\$119,115,682	84.1	\$42,044	0.0353
2. Utility	26	1,752,600	0.350	613,410	0.4	217	0.1235
3. Supportive Housing	-	-	0.100	-	-	-	-
4. Major Industry	-	-	0.340	-	-	-	-
5. Light Industry	143	6,216,600	0.340	2,113,644	1.4	746	0.1200
6. Business/Other	241	70,632,600	0.245	17,304,987	12.2	6,109	0.0865
7. Managed Forest Land	51	5,843,600	0.300	1,753,080	1.2	619	0.1059
8. Rec./Non-Profit	64	6,707,700	0.100	670,770	0.4	237	0.0353
9. Farm	72	852,774	0.100	85,277	0.1	30	0.0353
<b>Total</b>	<b>2,907</b>	<b>\$1,283,162,698</b>		<b>\$141,656,850</b>	<b>100.0</b>	<b>\$50,000</b>	

\*Note: the various tax rates shown for different property classes is a result of the Province of BC rural property taxation system which uses converted (weighted) assessments when calculating tax rates.

Whether or not the maximum requisition will be required in any given year would be determined when that specific year's budget is being considered. Generally speaking, property taxation would only be relied upon when other sources of revenue are not sufficient to cover the anticipated operational and maintenance costs for that year.

## Annual Property Owner Costs

On the assumption that the annual costs of maintaining the wharves infrastructure are to be supported by all properties located within Electoral Area C, it is possible to estimate the annual costs to be borne by the owners of homes, businesses and other types of property within the area. The table below provides an estimate of those costs for each type of property found within the service area based on the value of that property. Property owners can easily determine the estimated annual costs for their specific property by using the rates shown in the table below or by multiplying the applicable tax rate shown in Table 4 against their assessed values as specified in their most recent property assessment notice.

**Table 5: Annual Wharves Service Costs\* by Property Class and Valuation**

Taxable Value	Class 1 (Residential)	Class 2 (Utilities)	Class 5 (Light Industry)	Class 6 (Business & Other)	Class 7 (Managed Forest)	Class 8 (Rec/Non-Profit)	Class 9 (Farm)
50,000	\$1.76	\$6.15	\$5.97	\$4.31	\$5.27	\$1.76	\$1.76
100,000	3.52	12.31	11.95	8.61	10.55	3.52	3.52
200,000	7.04	24.62	23.90	17.22	21.10	7.04	7.04
300,000	10.56	36.93	35.85	25.83	31.65	10.56	10.56
400,000	14.08	49.24	47.80	34.44	42.20	14.08	14.08
500,000	17.60	61.55	59.75	43.05	52.75	17.60	17.60
600,000	21.12	73.86	71.70	51.66	63.30	21.12	21.12
700,000	24.64	86.17	83.65	60.27	73.85	24.64	24.64
800,000	28.16	98.48	95.60	68.88	84.40	28.16	28.16
900,000	31.68	110.79	107.55	77.49	94.95	31.68	31.68
1,000,000	35.20	123.10	119.50	86.10	105.50	35.20	35.20

\*It should be noted that some of the costs of maintaining these wharf facilities is currently being covered out of the Transport Canada divestiture funding which will not be available over the long term.

Each owner of property will have their individual perspective on whether the value of the service being provided by the wharves infrastructure warrants the cost to their property of maintaining that infrastructure. For this reason, the decision to establish a wharves service is subject to approval of the electors by assent voting or alternative approval process.

The options available for seeking the approval of the electors are described in more detail in the following sections of this report.



## Approval Process

In the event it is decided to proceed with establishment of a wharves service, there are several steps that must be undertaken by the Regional Board including the presentation of the initiative to the electors for approval:

Step 1 - A service establishing bylaw must be introduced and given first 3 readings by the Regional Board. The bylaw must set out the nature of the service to be provided, the geographic area that would benefit from the service, the method of taxation to be employed for recovering annual costs, and the maximum amount that can be requisitioned each year from property owners for the service.

Step 2 - The Regional Board must decide whether it will seek approval of the electors for the establishing bylaw through an assent voting process or alternative approval process (AAP).

Step 3 - The service establishing bylaw must be submitted to the Inspector of Municipalities for approval.

Step 4 - Once approved by the Inspector of Municipalities the service establishing bylaw may then be submitted for approval by the electors. If assent voting is to be used, the approval threshold is a simple majority of the votes cast by qualified electors. If using an alternative approval process, the threshold for approval is less than 10% of the electors objecting in writing to passage of the bylaw. An assent voting process is relatively expensive (especially when used for a small geographic area) while an AAP is much more cost effective while still allowing elector opposition to an initiative to be accurately gauged.

Step 5 – If elector approval is received the Regional District may proceed to adopt the service establishing bylaw.

Given the relatively high cost associated with the assent voting option, it is recommended that serious consideration be given to using an AAP for obtaining elector assent. Should the bylaw fail to receive elector approval using that method, the ability to use an assent voting process would still be an option and, depending on the number of electors who objected via AAP, there may be a rationale for continuing with that process.

A proposed schedule with milestones for establishing the proposed Electoral Area C wharves service is outlined below.

## Implementation Schedule

The following table provides more detailed information on the various steps that would need to be undertaken to implement a wharves service assuming that the initiative is to be established using an alternative approval process (AAP). The dates shown are approximate only and are the earliest dates for which the corresponding action could be taken.

**Table 6: Schedule of Milestones for Creation of Electoral Area C Wharves Service**

Schedule	Action
April 13, 2022	Electoral Areas Services Committee reviews report and recommends process for establishing Electoral Area C wharves service be initiated.
April 27, 2022	Regional Board considers feasibility study and authorizes preparation of establishment bylaw for Electoral Area C wharves service.
May 11, 2022	Regional Board gives first 3 readings to Bylaw No. [REDACTED], being Electoral Area C Wharves Service Establishing Bylaw 2022, and authorizes approval of the electors to be obtained by alternative approval process (AAP).
May 16, 2022	Bylaw No. [REDACTED] submitted to Inspector of Municipalities for approval under s.342 of <i>Local Government Act</i> .
July 6, 2022	Inspector of Municipalities approval received for Bylaw No. [REDACTED].
July 13, 2022	Regional Board establishes elector response form, elector response deadline and determines total number of eligible electors for AAP.
July 20, 2022	First publication of AAP notice for Bylaw No. [REDACTED].
July 27, 2022	Second publication of AAP notice for Bylaw No. [REDACTED].
September 9, 2022	Deadline for filing AAP responses with Regional District.
September 21, 2022	If elector approval received, Regional Board adopts Bylaw No. [REDACTED].
October 31, 2022	Deadline* to provide copy of Bylaw No. [REDACTED] to BC Assessment Authority for tax coding purposes.
March 22, 2023	Regional Board adopts 2023 operating budget for Electoral Area C wharves service.
July 4, 2023	Deadline for payment of property taxes for wharves service.

\*Not applicable if service area includes all of Electoral Area C.