

Understanding the Proposed Options and Tax Impacts

The total amount of money borrowed to construct the sewer system will need to be recovered through a parcel tax. Parcel taxes will be charged on both developed and vacant land where sewer services are provided. The proposed parcel tax would be charged either on a per parcel basis, or by area (m2).

Table 1.0 below shows the overall one-time potential financial impact on residents and developers, while **Table 2.0** provides the comparison based on financing the parcel charge over a 20-year period. The parcel sizes are based on typical parcels within the Bowser Village Centre for existing residential parcels (0.15 and 0.25 acres) as well as potential development parcels (approximately 5 and 10 acre parcels).

The comparison tables show a wide variation between the per parcel and per area charge. As shown, the per area charge favours the smaller parcels (with less development potential) whilst the per parcel charge favours larger parcels.

Table 1 - Parcel Tax Comparison – One Time Charge

Parcel Size	Base Case Scenario		Expansion Scenario	
	By Parcel	By Area m ²	By Parcel	By Area m ²
Smallest	\$30,000	\$1,900	\$38,500	\$2,300
0.15 acre		\$3,300		\$4,050
0.25 acre		\$5,500		\$6,750
0.50 acre		\$11,000		\$13,500
1.00 acre		\$22,000		\$27,000
2.00 acres		\$44,000		\$54,000
5.00 acres		\$110,000		\$135,000
10.00 acres		\$220,000		\$270,000
Largest	\$264,000	\$319,000		

Table 2 - Parcel Tax Comparison – Financed (20 Years)

Parcel Size	Base Case Scenario		Expansion Scenario	
	By Parcel (per year)	By Area (per m ² per year)	By Parcel (per year)	By Area (per m ² per year)
Smallest	\$2,050	\$130	\$2,900	\$158
0.15 acre		\$225		\$275
0.25 acre		\$375		\$463
0.50 acre		\$750		\$925
1.00 acre		\$1,500		\$1,850
2.00 acres		\$3,000		\$3,700
5.00 acres		\$7,500		\$9,250
10.00 acres		\$15,000		\$18,500
Largest	\$18,150	\$21,900		

Operations and Maintenance

Operations and maintenance (O+M) costs are required to pay for the ongoing operation of the wastewater treatment plant, pumps and collection systems, as well as replacing parts of the system as they age. Operations and maintenance costs are not included in the project costs presented as operations and maintenance costs will be charged as a separate fee on all properties and units receiving sewer services.

The annual operations and maintenance costs are currently estimated at \$150,000 per year. This works out to approximately \$2,050 per parcel per year for the Base Case Scenario, reducing to \$1,875 per parcel per year for the Expansion Scenario. As new development occurs, O+M costs will be spread out amongst a larger number of properties and will likely decrease.

On-site Costs

A number of individual properties will require on-site pumps due to topography and design restrictions. The pumps will be provided by the Regional District, but property owners will be required to pay for installation and ongoing maintenance.

Total on-site installation costs will vary widely depending on the location of the building on a property and the topography of the parcel receiving the services. The typical on-site cost of installation for a single-family residence ranges from \$1,000 to \$5,000. This is a one-time cost.

Once the sewer mains are in place, parcels with existing buildings will be required to hook up within one year.

Next Steps

This newsletter accompanies a Public Information Meeting with Bowser Village property owners on **May 29, 2017**. Over the next month, Regional District staff and consultants will be working closely with property owners individually, to answer any questions you might have. We will reconvene with owners at a second Public Information Meeting on **June 26, 2017** to review input received by property owners, and ideally formalize the **petition process** to create the local sewer service for the Bowser Village.



Bowser Village Centre Sewer Service

Information Newsletter #1 – May 2017

Introduction

The Regional District of Nanaimo (RDN) is undertaking a process to establish a new sewer service area for the Bowser Village Centre. In 2013, the Rural Village Centre Study identified Bowser as one of the Rural Village Centres, providing the potential to evolve into a compact, complete community. Sewer servicing has been identified as a key component to achieving this vision.

In 2014, a Federal Gas Tax Grant funded a wastewater servicing study for the area, which led to the creation of a detailed engineering design and costs for a potential sewage collection, treatment and disposal system. In early 2017, the Bowser Village Wastewater project was awarded a Clean Water and Wastewater Fund Grant of approximately \$7.6 million, representing 83% in senior government funding up to a project cost of \$9.15 million (costs above that would be funded entirely by local property owners).

Even with the grant, borrowing will still be required to fund up to the remaining costs to complete the project. The RDN has retained Urban Systems to assist the residents of the Bowser Village (refer to location map) to gain a better understanding of the opportunities and costs related to establishing a local sewer service area.



Project Components

The sewer systems can be broken into three major components – Collection System, Wastewater Treatment Plant (WWTP), and Effluent Disposal.

The WWTP capacity is based on a 20-year design population of approximately 600 people based on average water consumption results. Using an average of 2.1 people per household, it is estimated that Phase 1 of the proposed treatment plant could support 286 units, which is an additional 200+ units above the current parcels in the Bowser Village.

Several options were evaluated for effluent disposal, including either disposal to ground or to the marine environment. Due to ground and soil conditions, no suitable option was found for ground disposal. Two potential marine disposal options were evaluated that could meet regulatory siting and discharge quality criteria. Therefore, the engineering consultant (Stantec) has recommended marine disposal for the treated effluent.

For More Information ...

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Options for Sewer Collection Systems

Through the initial design and analysis, it has been determined that there are two potential sewer collection system options to deliver sewer services within the Bowser Village Centre, described in more detail below. These two collection system options are defined by the areas of the community the service will be provided.

Base Case Scenario

This scenario services the core properties (73) within the Bowser Village Centre which have access from the Island Highway.

Although located within the Village Centre, this scenario does not include properties accessed from Maple Guard or Henry Morgan Drive, as well as two properties south of the rail corridor.

This design minimizes the number of RDN pump stations (1), and is the most cost-effective option whilst servicing the most parcels.



Expansion Scenario

An expansion scenario has also been presented, which provides sewer service for all properties in the Bowser Village Centre.

This option adds additional costs, including an additional pump station and extra sewer main, in order to add 7 more parcels (shown in yellow) to the service area for a total of 80 parcels.



Cost Comparison

The estimated capital costs for the base case and expansion scenario are shown below. Note that the costs for the WWTP and the Marine Outfall are the same for both scenarios, at \$4.3 million and \$2.5 million respectively. The difference in the two options, therefore, is in the collection system, estimated at \$3.0 million for the base case and \$3.9 million for the expansion scenario. The expansion scenario adds approximately \$900,000 in capital costs for an additional 7 properties.

Estimated Project Costs	Base Case Scenario	Expansion Scenario
Wastewater Treatment Plant (WWTP)	\$ 4,262,962	\$ 4,262,962
Collection System	\$ 2,964,076	\$ 3,877,154
Marine Outfall	\$ 2,541,395	\$ 2,541,395
Total Cost	\$ 9,768,433	\$10,681,511
Total Number of Parcels	73	80

Cost Recovery – by parcel or by area

Based on the cost estimates for the base case and expansion scenario, once the senior government grant is accounted for, the total amount to be funded locally is approximately \$2.2 million or \$3.1 million respectively. This amount is to be borrowed by the Regional District of Nanaimo through 20-year debenture, resulting in potential annual payments of about \$150,000 or \$215,000 respectively (per year for 20 years), for all properties.

There are two potential calculation methods to recover the local portion of the capital costs – based on either a per parcel charge (the same charge for the 73 or 80 properties), or on an area-based charge (varying charges based on square metres of lot area). The table below identifies some of the various considerations for each of the cost recovery methods (by parcel or by area).

Parcel Tax Option	Considerations
By Parcel	<ul style="list-style-type: none"> Costs will go down as more units develop - cost based on number of user connections. Large parcels with higher development potential pay the same as everyone else. Non-developers pay the same as potential developers
By Area	<ul style="list-style-type: none"> Based on the development potential of a site. Fairer for current users who occupy properties with limited development potential. Large property owners with no development interest will pay more.