



Bowser Village SEWER SERVICE

Information Meeting #3

July 19th, 2017

Dan Huang
MCIP, RPP

Shaun Heffernan
MCIP, RPP

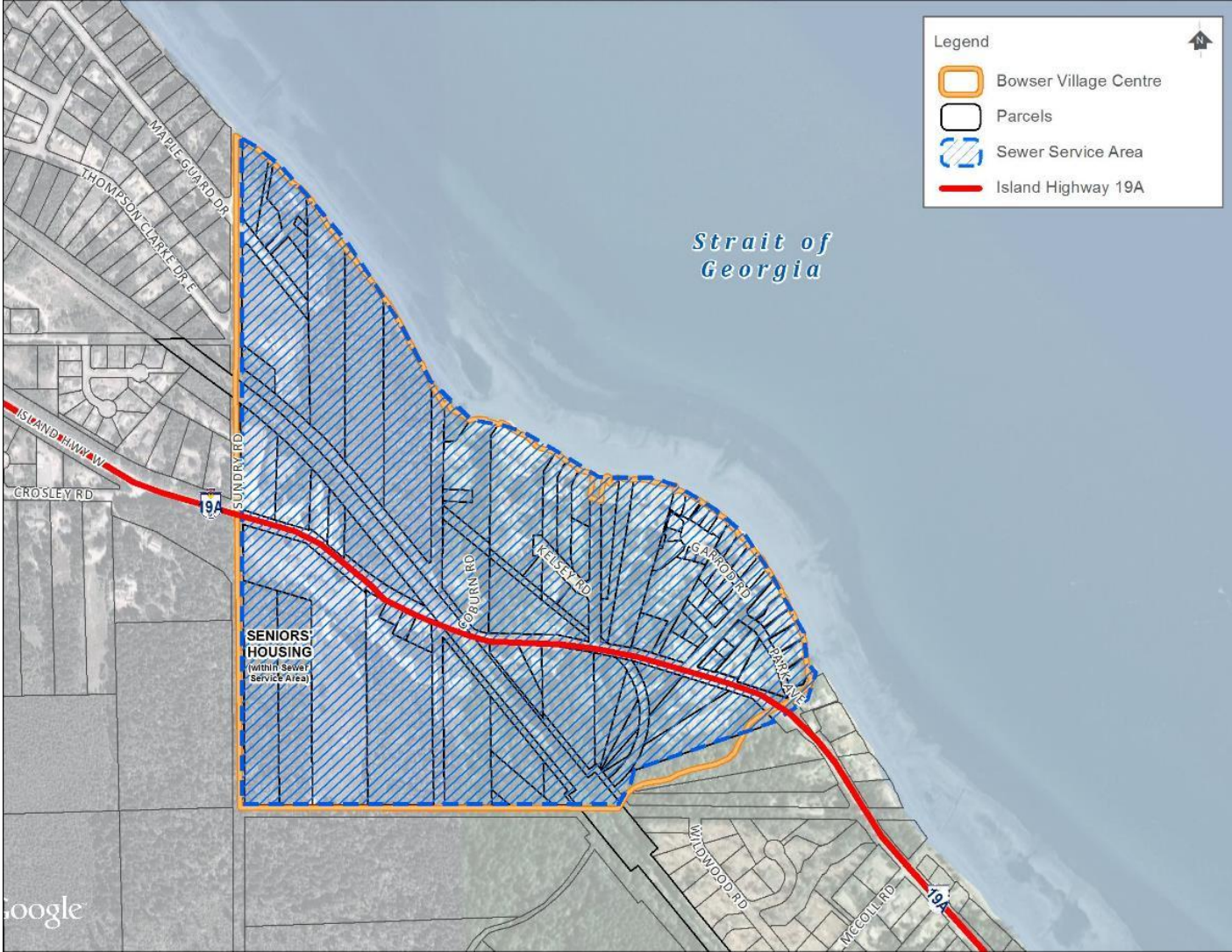
URBAN
systems

Welcome

Thank you for
Coming!

This meeting is about sanitary sewer service
in the Bowser Village Centre.

Thank you



Purpose of this Meeting

Purpose

The purpose of this meeting is to:

1. present the final sewer servicing design and costs;
2. discuss proposed method of payment for any borrowing costs to fund the non-grant portion of the project;
3. present final proposed parcel tax rates to fund the non-grant portion of the project; and
4. discuss legal requirements and process to establish the sewer service and borrowing bylaw.

Ground Rules

For tonight's meeting, we would like to suggest a few ground rules:

1. Although everyone is welcome to attend, this meeting will focus on information pertaining to the proposed parcel tax that will impact the residents / taxpayers of the Bowser Village Centre.
2. Please be respectful of everyone's opinions and ideas, and make sure you get your questions answered, either during or after the presentation.

Background

2013

-

2016

- Rural Village Centre Study identified Bowser as one of the RDN Rural Village Centres with the most potential to evolve into a complete community (2013).
- RDN awarded \$300,000 of Federal Gas Tax Grant Funding to undertake a sewer servicing study for Bowser Village Centre (2014).
- Concepts for sewer servicing developed (2016)
- Treatment plant siting and sizing (2016)
- Service area was defined (2016)
- Number of units for servicing determined (2016)
- Community presentation (July 11, 2016)

Background

APRIL
-
MAY
2017

- The Bowser Village Wastewater project was awarded a Clean Water and Wastewater Fund Grant of approximately \$7.6 million representing 83% senior government funding up to project costs of \$9.15 million. Any amount over \$9.15 million would be funded at 100% **local** dollars.
- A preliminary community meeting was held on May 29th, 2017 to discuss the process to establish the Service Area and elector approval for borrowing for the construction of the Treatment Plant, Collection System and Outfall.

Background

**JUNE
2017**

On June 26th, the RDN and Urban Systems Ltd. presented the design and costs for the sewer system and proposed a new cost recovery strategy using Development Cost Charges (DCCs) to recover the majority (85%) of costs not covered by the \$7.6 million dollar grant.

This meeting was attended by over 70 people who provided a wide range of feedback.

Background

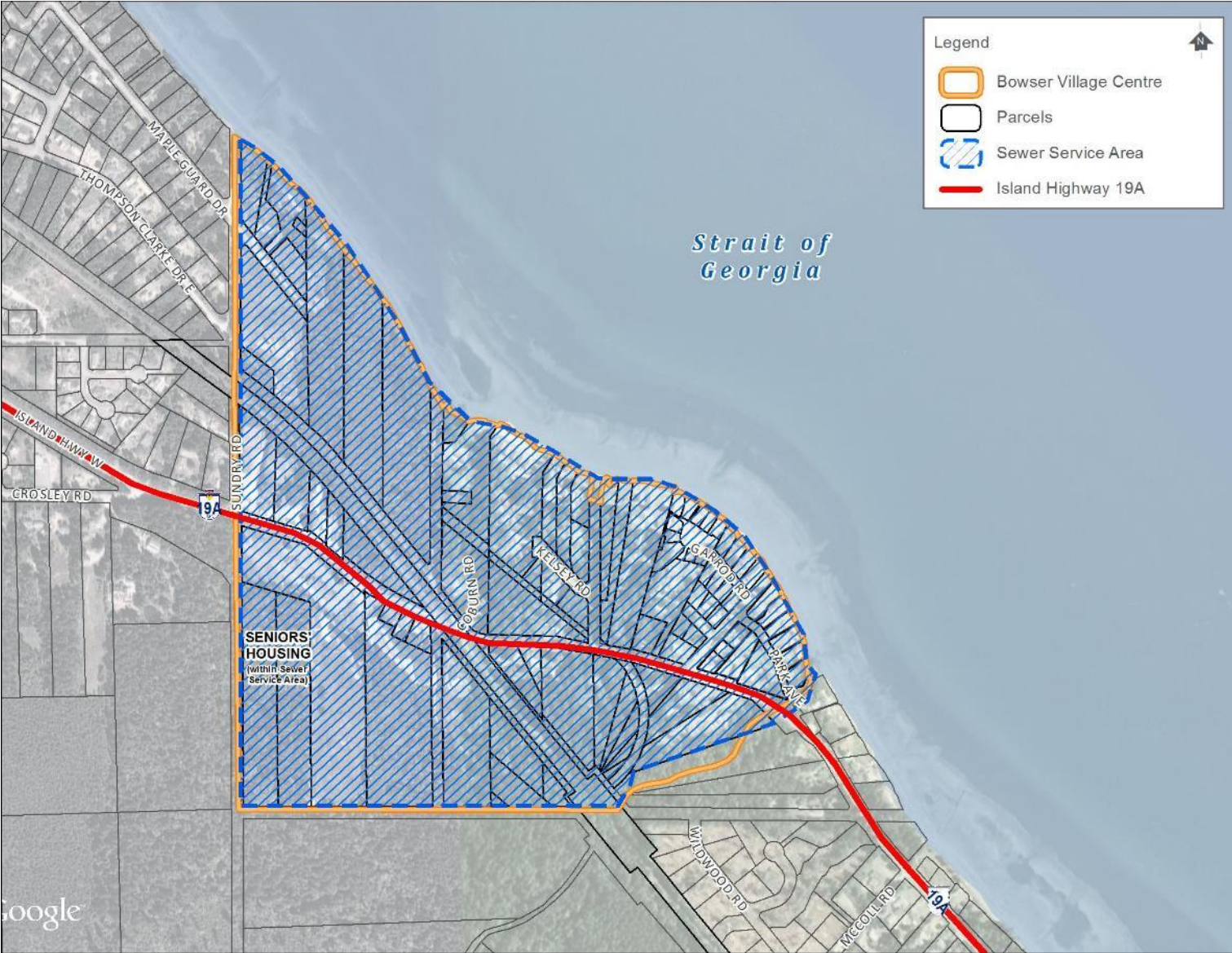
**JULY
2017**

Based on the final sewer system design the project team (RDN and USL) have refined parcel tax and confirmed the viability of utilizing **Development Cost Charges (DCCs)** to recover the majority of costs not covered by the grant.

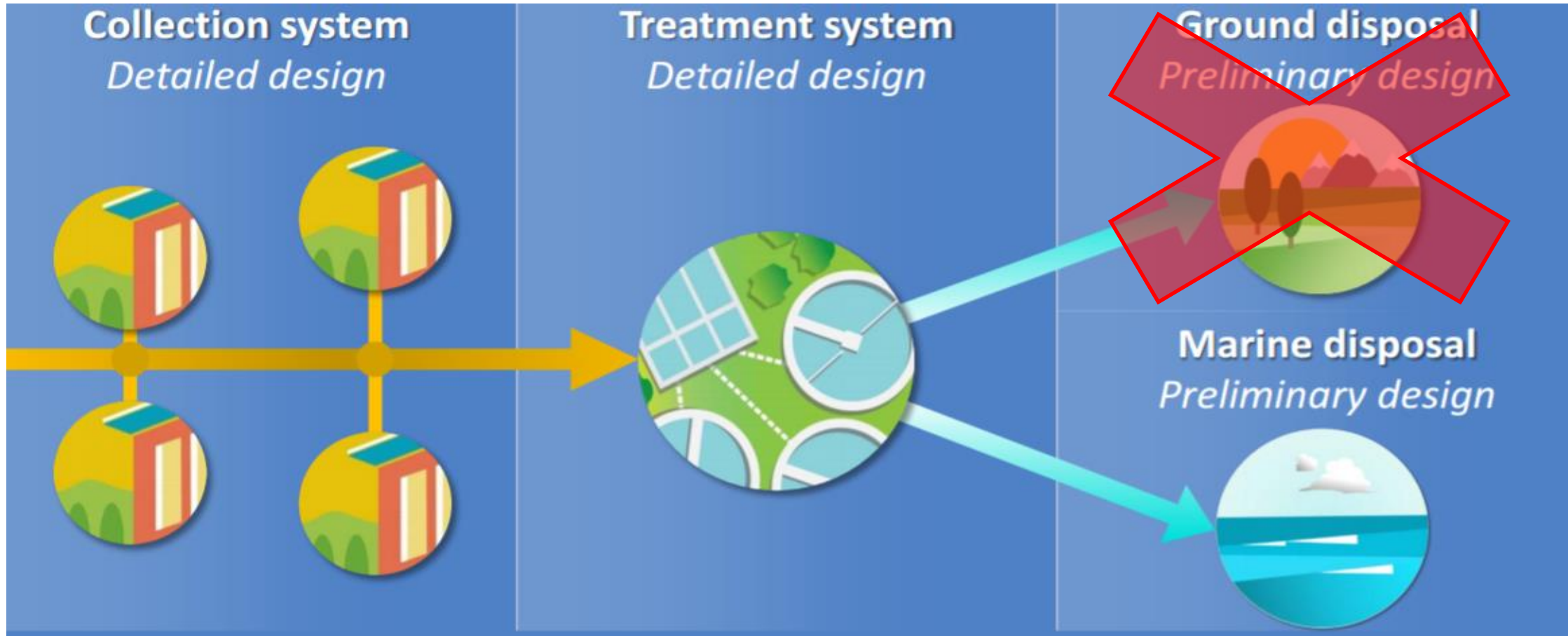
Today we will present the final costs and help to initiate the petition process.

Proposed Sewer Service Area

The proposed service area covers all of the parcels located in the Bowser Village Centre



Project Components














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

PUMP STATION 2

SALISH SEA



LEGEND

-  SANITARY FORCE MAIN (SFM)
-  SANITARY GRAVITY MAIN (SGM)
-  LOW PRESSURE FORCE MAIN (LPS)
-  MANHOLE
-  PUMP STATION
-  RESIDENTIAL SEPTIC PUMP
-  WASTE WATER TREATMENT PLANT (WWTP)
-  PARK AND OPEN SPACE
-  SERVICE BOUNDARY
-  PUMP STATION CATCHMENT AREA
-  LOW PRESSURE SYSTEM CATCHMENT AREA (LPS)

PUMP STATION 3
CATCHMENT AREA

LPS CATCHMENT
AREA

LPS CATCHMENT
AREA

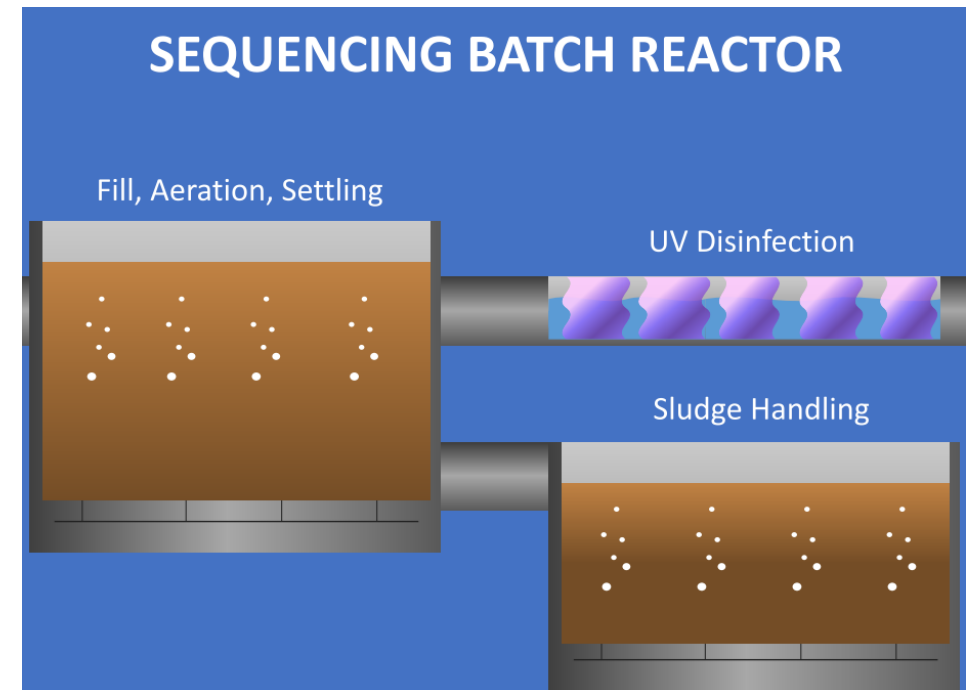
PUMP STATION 1

PUMP STATION 1
CATCHMENT AREA



Wastewater Treatment Plant

- The WWTP capacity is based on a 2036 (20 year) design population of approximately 625 people.
- Based on an average of 2.1 people per household (Statistics Canada) it is estimated the proposed sewer system could support a total of 298 equivalent single residential units.
- The plant is designed for secondary wastewater treatment using a Sequencing Batch Reactor (SBR) treatment process with UV disinfection.
- The plant will meet all provincial and federal guidelines for wastewater treatment, and can be expanded in the future (Phase 2) through the addition of treatment cells.



Collection and Pump System

- The collection system has been designed to accommodate all current and future flows.
- Two pump stations will be required to transfer the wastewater to the treatment plant.
- Individual pumps will be paid for by the RDN, installation will be paid by the property owners.



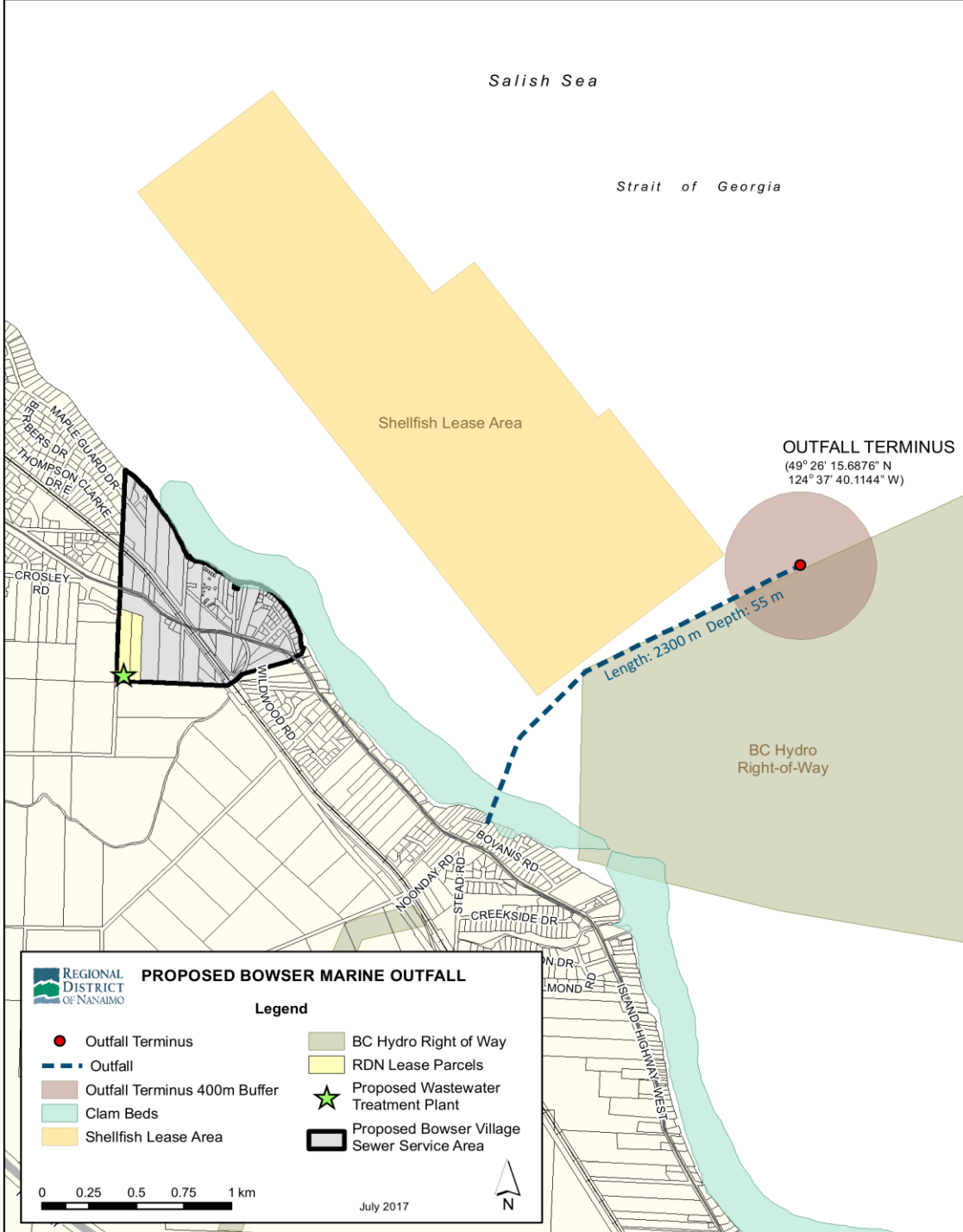
Nanoose Pump Station #2 Electric Kiosk



Nanoose Pump Station #2 Generator

Marine Outfall

- Several options for effluent disposal were evaluated. Due to ground and soil conditions, no suitable option was found for ground disposal.
- The engineering consultant (Stantec) has recommended marine disposal, to be designed to meet all environmental regulations.
- The proposed marine outfall will be approximately 2.3 kilometres in length, at a depth of approximately 55 metres.
- The proposed outfall will be outside the 400 metre offset from any aquaculture leases.
- The design will be further refined during the detailed design phase (throughout 2017).



Marine Outfall Next Steps

If the petition is successful next steps in moving this project forward and confirming the marine outfall will be to:

- Complete environment habitat surveys and water column sampling;
- Conduct an open house early Fall 2017;
- Complete detailed design for the Outfall;
- Follow through with outfall permitting process.

Proposed Taxation Area

The proposed taxation area will cover 99 parcels located in the village centre.

All strata properties in the service area will be required to pay parcel taxes.



Cost Overview

Project Component	Cost (\$)
Wastewater Treatment Plant (WWTP)	\$ 4,262,962
Collection System	\$ 3,877,154
Marine Outfall	\$ 2,541,395
Total Cost	\$10,681,511
Total Number of Parcels	99

Proposed Cost Recovery Method

- We are recommending that the Regional District look to recover the majority of costs not covered by the grant through **Development Cost Charges (DCCs)**.
- Potential developers would enter into a front-ender agreement with the RDN and ‘**pre-buy**’ **development units**, which would allow future development to pay for a large portion of the sewer system in advance.
- The remaining costs not covered by DCCs or the grant will be significantly reduced and paid for by existing parcel owners.
- Local developers have committed to purchasing 177 DCC units, for a total contribution of **\$2.64 million**.
- Parcel taxes will be levied on existing parcel owners on an per area basis because it is more fair for current users who occupy properties with limited development potential.

How do DCCs Work?

DCCs pay for the costs of developing and upgrading community infrastructure to meet the needs of growth.

In Bowser, Sewer DCCs will be paid by developers on a per unit basis for access to the excess capacity in the sewer system required to support their new developments.

Fee will be paid by:

1. Applicants for **subdivision approval** or
2. Applicants for **building permits**.



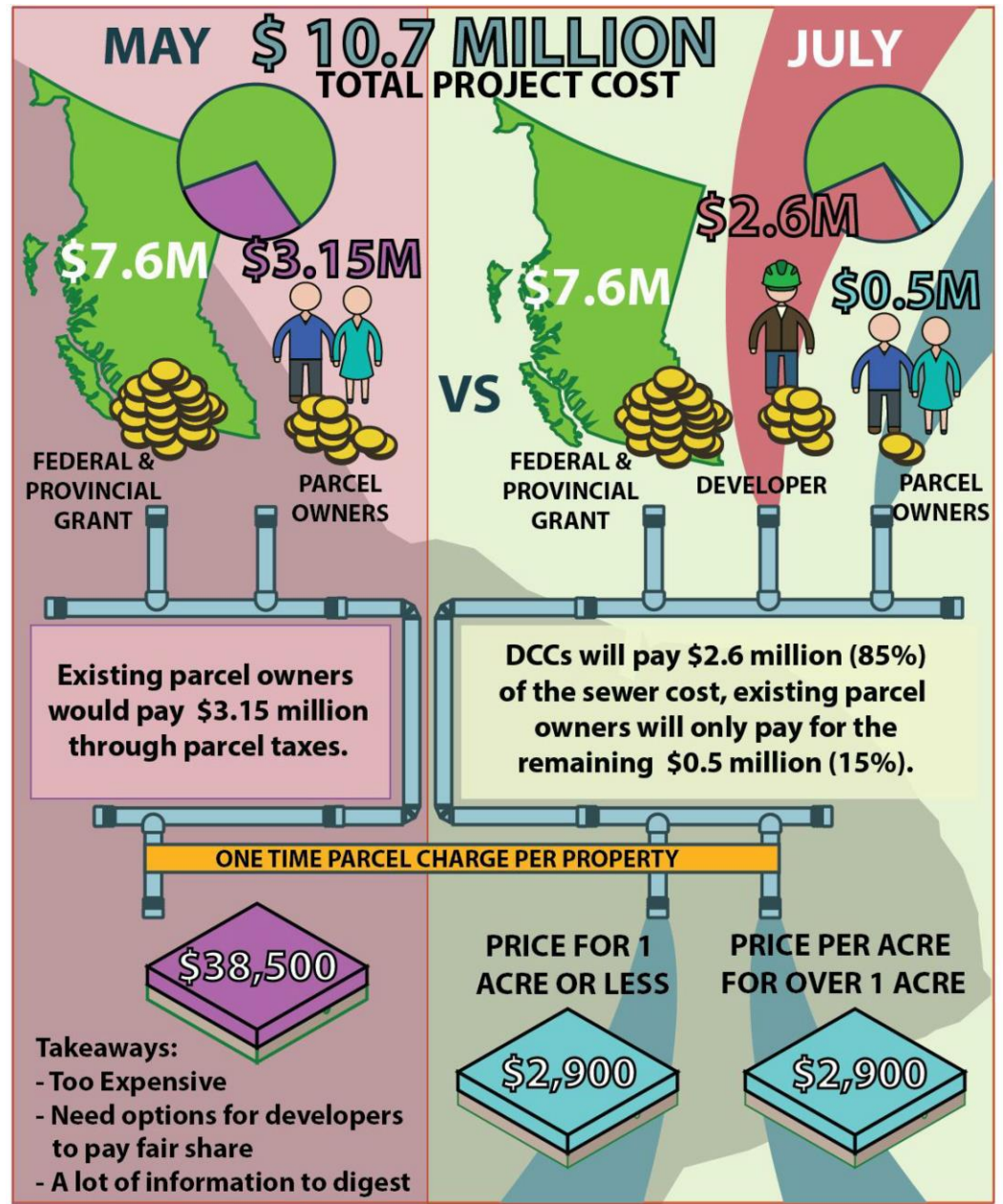
Proposed Charge for Current Parcel Owners

DCCs will pay for 85% (\$2.64 million) of the remaining money to develop the sewer after the \$7.6 million dollar grant is applied. **Existing parcel owners will be required to pay for the remaining 15% a total of approximately \$0.5 million.**

It is recommended that this money is recovered from current parcel owners in two ways based on the **area (m²)** of each parcel.

1. Parcels **one acre or less** will be charged a flat fee of **\$2,900** (74 parcels)
2. Parcels **greater than one acre** will pay on a per metre (m²) basis at a rate of **\$0.717 per m² or \$2,900 per acre.**

Combined these two charges will generate approximately **\$0.5 million** from existing parcel owners.



Parcel Tax –Charge By Area (m²)

Parcel Size		Proposed Tax One Time Charge	Proposed Tax Financed over 20 years (20 years @ 4%)
One Acre or Less		\$2,900	\$224 per year
Parcels Greater than One Acre	1.00 acres	\$2,900	\$224 per year
	2.00 acres	\$5,800	\$448 per year
	5.00 acres	\$14,500	\$1,120 per year
	10.00 acres	\$29,000	\$2,240 per year
	Largest	\$34,488	\$2,663 per year

Operations and Maintenance Costs

- Operations and maintenance costs are also 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. These will be in addition to the proposed cost estimates.
- Operations and maintenance costs will be split between a parcel tax (33%) to be paid by all parcels and a user fee (66%) charged as a separate fee on all properties and units receiving sewer services.
- Vacant properties will not pay the separate O+M fee.

Operations and Maintenance Costs

- Annual operations and maintenance costs are currently estimated at \$120,000 for the first year and \$150,000 for each subsequent year.
- With 99 parcels covering 90 connections this works out to approximately \$1,280 per parcel for the first year.
- As new development occurs operations and maintenance costs will be spread out amongst a larger number of properties.

Operations and Maintenance Costs

- The table below shows how O+M costs per unit could go down depending on the number of units develop between now and 2020.

Year	Total Annual Cost	Total O+M Costs
Year 1 (2019) — Current Units	\$120,000	\$1,280
Year 2 (2020) - (+ 30 units)	\$150,000	\$1,220
Year 2 (2020) - (+ 60 units)	\$150,000	\$980
Year 2 (2020) - (+ 90 units)	\$150,000	\$820

- At full capacity of Phase 1 of WWTP (286 units) it works out to about \$525 per parcel per year (about \$44 per month).

Parcel Tax including Operations and Maintenance Costs

First Year of Operation – One-time Charge

Parcel Size		Parcel Tax and O + M Costs		
		One time Sewer Charge By Area	O +M (Annual– Tax and User Fee)	Total By Area
One Acre or Less		\$2,900	\$1,280	\$4,180
Parcels Greater than One Acre (\$0.70 per m ²)	1.00 acre	\$2,900	\$1,280	\$4,180
	2.00 acres	\$5,800	\$1,280	\$7,080
	5.00 acres	\$14,500	\$1,280	\$15,780
	10.00 acres	\$29,000	\$1,280	\$30,280
	Largest	\$34,488	\$1,280	\$35,768

Parcel Tax including Operations and Maintenance Costs

First Year of Operation - Financed

Parcel Size		Parcel Tax and O + M Costs		
		Annual Sewer Charge By Area	O +M (Annual– Tax and User Fee)	Total By Area
One Acre or Less		\$224 per year	\$1,280	\$1,500
Parcels Greater than One Acre	1.00 acre	\$224 per year	\$1,280	\$1,500
	2.00 acres	\$448 per year	\$1,280	\$1,730
	5.00 acres	\$1,120 per year	\$1,280	\$2,400
	10.00 acres	\$2,240 per year	\$1,280	\$3,520
	Largest	\$2,663 per year	\$1,280	\$3,940

On-site Costs

- Property owners will be responsible for the cost of installation and hook-up to the sewer system at their property line.
- All property owners with buildings will be required to pump out their septic tank, fill it with sand and connect to the sewer main at their property line within one year of sewer availability.
- On-site costs vary widely depending on the location of the building on a property and topography of the parcel receiving the sewer service. The typical on-site cost of installation for a single-family residence ranges from \$1,000 - \$5,000; this is a one-time cost.

On-site Costs

- A number of properties will also require on-site pumps due to topography and design restrictions.
- On-site pumps will be provided by the RDN, but property owners will be required to pay for installation and ongoing maintenance.
- The cost of ongoing maintenance for an on-site pump is usually fairly low - approximately \$100 per year.

Project Considerations

- Project initiation is subject to receiving extension of grant to March 31, 2019;
- Project initiation is subject to receiving \$2.65 million from developers;
- Capital costs are subject to final tender process, etc.
- Schedule subject to permitting and final tendering process.

Local Service Establishment Process

Property owners in the proposed service area will decide if this project goes ahead.

- Based on our review, given the potential impact to property owners, the timing, and cost of a referendum, the RDN has selected the **petition process** to establish the proposed sewer service.
- In order for the petition to be valid, it must be signed by the **owners of at least 50% of the parcels** to be charged for the proposed service, and the persons signing must represent **at least 50% of the net taxable value of all land and improvements** within the proposed service area.
 - Residents get one vote for every property they own.
 - If a property is jointly owned, the majority of owners must agree to sign the petition.
 - For strata properties every unit or share owner gets a single vote.

Next Steps

If proceeding with establishing the sewer service:

- Owners introduce a petition to the RDN.
- If the petition is approved, develop a Local Service Establishment Bylaw and Loan Authorization Bylaw with confirmed local service area and collection method.
- Bring bylaw(s) forward for review and adoption by the RDN Board.
- On approval of bylaws, provincial/federal funding is released and project is able to move forward.

Deadline for the return of petitions is August 11th, 2017

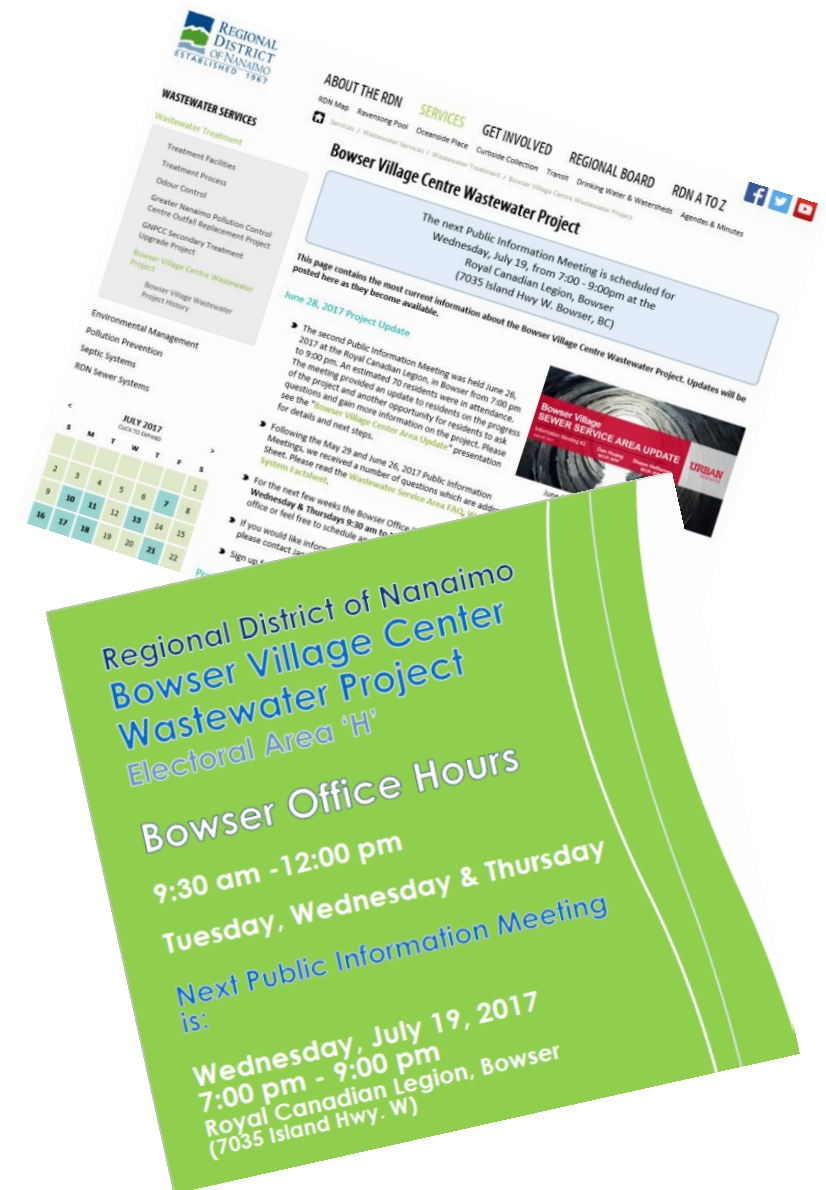
Next Steps

If **not** proceeding with establishing the sewer service:

- The sewer project will not be approved and will not be constructed.
- Provincial/federal funding providers notified; funding returned.

Additional Resources

- Bowser Office Hours Tuesday, Wednesday, Thursday from 9:30 am to Noon
(Rm 204, Magnolia Crt)
- Project webpage www.rdn.bc.ca/bowser
 - Project history & updates
 - Frequency Ask Questions & Factsheets
 - Via website sign up for Project Email Alerts



Thank You

For More Information Project Contacts Are Listed Below:

For RDN please contact :
Randy Alexander
ralexander@rdn.bc.ca

For Urban Systems please contact:
Dan Huang
dhuang@urbansystems.ca

The logo for URBAN systems, featuring the word "URBAN" in a bold, red, sans-serif font above the word "systems" in a smaller, red, sans-serif font. The logo is positioned on a light gray rectangular background.

URBAN
systems