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FILE Sorrento/Blind Bay Community Sewer System
Plan
SUBJECT TM2 – Financing Methodology

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Executive Summary

Opus DaytonKnight (Opus) has been engaged by Columbia Shuswap Regional District (CSRD) to develop a Community Sewer System Plan for Sorrento and Blind Bay. The Liquid Waste Management Plan (LWMP) for Area C, completed in January 2009, recommends that a new community sewer system and wastewater treatment plant should be constructed for the Sorrento, Blind Bay and Reedman Point area.

This technical memorandum (TM) investigates what servicing and financing methodologies are available for implementation of the project capital elements and how implementation options under the LWMP will be evaluated.

Section 2 outlines the possible capital costs associated with the new Community Sewer based on previous options from the LWMP which range from \$14 million to \$25 million; other less expensive options for a smaller service area may be possible. Section 3 reviews the existing financial policies of CSRD.

Section 4 summarizes information about the potential private sector contributions, while Section 5 summarizes the likelihood and relevance of alternative delivery models such as P3.

Section 6 presents opportunities of senior government funding and Section 7 presents the financial evaluation methodology which will be used in comparing technical options as they are developed.



1 Background

While the technical options are still being developed, the likely costs of an initial phase Community Sewer System for Sorrento and Blind Bay will be between \$10 million to \$30 million. This TM presents the financing and funding methodology and background which will be used in the later evaluation of technical options.

2 Community Sewer System Capital Costs

This section summarizes the Community Sewer infrastructure proposed in the LWMP including the types of infrastructure required, and their approximate size and service life. The LWMP presents two preferred options for a regional treatment facility for Sorrento/Blind Bay:

- Upgrade existing Shuswap Lake Estates Sewage Treatment Plant (STP)
- Construct new regional treatment facility at Balmoral

The LMWP proposed that any community sewer system be constructed in two or more phases. The first phase will connect priority areas along the lakeshore to a regional treatment facility. Pipeline and pumping infrastructure installed during this first phase will be sized for the entire service area. Subsequent phases will connect more properties and expand the treatment facility as required.

It should be noted that the actual implementation options are still being developed and the infrastructure costs for those option are covered in TM4. The LWMP options are presented here as an only indication of the likely costs.

2.1 Conveyance Infrastructure

The LWMP sets out a preliminary design for conveyance systems for Blind Bay, Sorrento and Reedman Point. The layout of the conveyance systems is the same regardless which treatment option is selected. The LWMP also provides a cost estimate for constructing the conveyance infrastructure. The costs for each of the treatment options are summarised by infrastructure type in Table 2.1. The anticipated service life for each type of infrastructure is also indicated.

Table 2.1 – LWMP Conveyance Costs

CONVEYANCE COMPONENT	ESTIMATED CAPITAL COST (\$million)			ANTICIPATED SERVICE LIFE
	PHASE 1	PHASE 2/3	TOTAL	
Sanitary Manholes	\$0.6	\$2.4	\$3.0	50-100 years
Gravity Sewer Pipe	\$6.3	\$24.0	\$30.4	50-100 years
Lift Stations	\$1.8	\$1.4	\$3.2	20 years
Forcemains	\$2.8	\$1.3	\$4.1	50-100 years
Total	\$11.4	\$29.2	\$40.6	

Note: Costs are rounded from the LWMP values.

2.2 Treatment Infrastructure

Expansion of Shuswap Lake Estates STP

In 2007 UMA/AECOM carried out a service condition assessment and valuation of the existing Shuswap Lake Estates STP. At the time the assessment took place the STP consisted of two aerated lagoons, effluent storage reservoir and chlorination. Chlorinated effluent from the reservoir is transferred to a series of ponds on the Shuswap Lake Estates golf course where it is used for irrigation. Since 2007, Shuswap Lake Estates have added a third aerated lagoon and upgraded the blower system for the existing lagoons. In 2007 the estimated value of the STP (excluding land value) was \$1.7 million. The land value was estimated at \$1.3 million.

If the existing Shuswap Lake Estates STP is chosen as the regional treatment facility, we understand that minimal work on the treatment facility is required for the first phase. The current capacity of the STP is 1,000 m³/day (but the MOE permit only allows 426 m³/day). Prior to the second/third phases of implementation, the STP would require expansion. The LWMP assumes that the expansion would consist of the addition of a fine screen filter for primary treatment and three rotating biological contactor (RBC) units. Table 2.2 summarises the estimated costs and service life for the upgrades to the Shuswap Lake Estates STP.

Table 2.2 – LWMP Costs for Shuswap Lake Estates STP Upgrade

TREATMENT COMPONENT	ESTIMATED CAPITAL COST (\$million)			ANTICIPATED SERVICE LIFE
	PHASE 1	PHASE 2/3	TOTAL	
Purchase of Shuswap Lakes STP	\$3.0 ^(a)	\$0.0	\$3.0	Approx. 30 years ¹
Upgrade to existing STP including fine screen filter, RBC equipment and instrumentation	\$0.0	\$3.1	\$3.0	Mechanical and electrical - 20 years Other equipment – 50 years
Total	\$3.0	\$3.1	\$6.1	

Note (a): Of the purchase cost, \$1.3 million is land value based on appraisal. CSRD does not agree with the land appraisal rationale and value, and feels that the \$1.3 million is too high.

New Regional Treatment Facility at Balmoral

The LWMP assumed secondary treatment using a mechanical treatment process (rotating biological contactors, RBC) for a new regional treatment facility in the Balmoral area. Further consideration of this option is likely to result in partially-mixed aerated lagoons being the recommended treatment process. Cost estimates have not been carried out for lagoons, therefore Table 2.3 summarises the estimated capital costs and expected service life for the components of the new regional treatment facility at Balmoral assuming an RBC treatment process. The costs for aerated lagoons are expected to be comparable.

¹ Based on UMA/AECOM Cost Estimate Report

Table 2.3 – LWMP Costs for New Regional Treatment Facility at Balmoral

TREATMENT COMPONENT	ESTIMATED CAPITAL COST (\$million)			ANTICIPATED SERVICE LIFE
	PHASE 1	PHASE 2/3	TOTAL	
Land purchase	\$0.3	\$0.0	\$0.3	
Civil works and structural works (including roads, piping, fencing and buildings)	\$0.7	\$0.8	\$1.5	50-100 years
Primary treatment (fine screen filter)	\$0.8	\$0.0	\$0.8	50 years
Secondary Treatment (RBC)	\$1.5	\$1.9	\$3.4	20 years
Mechanical and electrical works	\$0.6	\$0.6	\$1.2	20 years
Total ²	\$4.2	\$3.7	\$7.9	

2.3 Disposal Infrastructure

The exact details of the effluent disposal system are dependent on the treatment option selected. However, the intended disposal method proposed in the LWMP is very similar for both treatment options. The primary method of disposal is reuse via irrigation of surrounding farmland and the required infrastructure consists of an effluent storage reservoir, infiltration basin and associated piping and pumping.

For the Shuswap Lake Estates STP option, the infrastructure associated with disposal of the effluent will be constructed at Phase 2. Even though there is already an effluent storage reservoir at the existing Shuswap Lake Estates STP, a smaller additional reservoir is still required. Table 2.4 provides a breakdown of the estimated capital costs for the effluent disposal infrastructure and an indication of the expected service life for the components for the upgrades to the Shuswap Lakes Estates STP.

Table 2.4 – LWMP Effluent Disposal Cost for Shuswap Lake Estates STP

DISPOSAL COMPONENT	ESTIMATED CAPITAL COST (\$million)			ANTICIPATED SERVICE LIFE
	PHASE 1	PHASE 2/3	TOTAL	
Pipeline to reservoir	\$0.0	\$0.9	\$0.9	50-100 years
Effluent Storage Reservoir (including land purchase)	\$0.0	\$4.2	\$4.2	50-100 years
Effluent forcemain from STP to infiltration basin	\$0.0	\$4.0	\$4.0	Pumps 20 years Other 50-100 yrs
Infiltration basin (backup secondary disposal)	\$0.0	\$1.0	\$1.0	20 years
Total	\$0.0	\$10.1	\$10.1	

² Includes \$250,000 plus contingency and engineering for 'general requirements'

For the regional treatment facility at Balmoral the disposal infrastructure would be constructed at Phase 1. Table 2.5 provides a breakdown of the estimated capital costs for the effluent disposal infrastructure and an indication of the expected service life for the components.

Table 2.5 – LWMP Effluent Disposal Cost for New Regional Facility at Balmoral

DISPOSAL COMPONENT	ESTIMATED CAPITAL COST (\$million)			ANTICIPATED SERVICE LIFE
	PHASE 1	PHASE 2/3	TOTAL	
Pipeline to reservoir	\$0.2	\$0.0	\$0.2	50-100 years
Effluent Storage Reservoir (including land purchase)	\$4.0	\$2.0	\$0.6	50-100 years
Effluent forcemain from STP to infiltration basin	\$4.0	\$0.0	\$4.0	Pumps 20 years Other 50-100 years
Infiltration basin	\$1.0	\$0.0	\$1.0	20 years
Total	\$9.2	\$2.00	\$11.2	

2.4 Summary

Table 2.6 provides a summary of the cost breakdown for the two preferred treatment options from the LWMP. The anticipated service life for mechanical and electrical equipment is 20 years. For all other components, including structures, pipelines and roads the anticipated service life is 50 - 100 years.

Table 2.6 – Summary of LWMP Capital Costs

COMPONENT	ESTIMATED CAPITAL COST (\$million)					
	EXPANSION OF SHUWAP LAKE ESTATES STP			NEW REGIONAL TREATMENT FACILITY AT BALMORAL		
	PHASE 1	PHASE 2/3	TOTAL	PHASE 1	PHASE 2/3	TOTAL
Conveyance	\$11.4	\$29.2	\$40.6	\$11.4	\$29.2	\$40.6
Treatment	\$3.0	\$3.1	\$6.1	\$4.2	\$3.7	\$7.9
Disposal	\$0.0	\$10.1	\$10.1	\$9.2	\$2.0	\$11.2
Total	\$14.4	\$42.4	\$56.8	\$24.8	\$34.9	\$59.7



3 Existing Financial Policies

Four high level elements make-up and govern CSRD approaches to paying for capital infrastructure:

- The Official Community Plan
- CSRD Five Year Financial Plan
- LWMP recommendations, and
- Existing Sewer Acquisition Strategy.

These four elements are discussed in the following sections.

3.1 Official Community Plan

The CSRD is in the final stages of completing a new Official Community Plan (OCP) for the South Shuswap Area C. While the OCP does not specifically address financial policies, it does discuss options, such as user-pay. Further, the OCP, which is arguably the highest-level policy document produced by a local government, establishes community priorities such as protecting water quality and managing development in a sustainable manner.

The CSRD started the OCP process in 2006 when an Advisory Group was formed. Work continued over the subsequent years and several public meetings were held. The OCP Bylaws were presented to the Board in November 2012 for first and second readings.

The new OCP recognizes that Shuswap Lake is the heart of the community and the Plan clearly identifies the need to service the area with a new Community Sewer System in order to protect the Lake. More specifically, the OCP includes nine principles, which include.

Principle #1 “All measures to protect and restore the natural environment will be used, and emphasis will be placed on Shuswap Lake, White Lake and their interlinked watersheds and foreshores.”

Principle #7 “A region-wide approach to correct inferior water and sewage treatment systems and a comprehensive, affordable liquid wastewater management plan that takes into account the latest technologies is supported, in order to fully protect groundwater, lakes and streams.”

Further, an entire section (Section 2) of the OCP develops a sustainability principle dedicated to protecting the Shuswap Lake and identifies the need to protect the water quality of Shuswap Lake and to maintain healthy aquatic and groundwater environments and protect people from contaminated water.

Therefore, this OCP provides the foundation and justification for applying for senior government grants.

3.2 Five Year Financial Plan

The CSRD's Five Year Financial Plan describes a source of funds and how those funds are allocated for wastewater management.

Existing revenue sources for Area C, primarily from a parcel tax, provide approximately \$50,000 annually. Approximately 80% of the annual expenses, (\$40,000) is allocated for monitoring water quality. No funds are allocated for wastewater collection or treatment or for a future Community Sewer System.

3.3 LWMP Funding Strategy

The LWMP contains a brief discussion of financial considerations associated with wastewater management. The LWMP states that a borrowing bylaw would be required to fund a portion of the proposed sewer infrastructure, using a loan from the Municipal Finance Authority. The LWMP also states that the Regional District is familiar with borrowing bylaws and recommends the Treasurer prepare the necessary bylaws.

The LWMP identifies several by-laws associated with implementing the Community Sewer System. Two of the most important of these by-laws are:

- By-Law to create a defined service area (Local Service Area Establishment Bylaw).
- By-Law to authorize borrowing for debt service of loans (Loan Authorisation Bylaw).

There are a number of financial considerations which are not discussed in the LWMP. Many of these issues are reviewed in report titled "Sewer System Acquisition Study" which was prepared by Urban Systems Ltd. in February 2010.

3.4 Sewer Acquisition Strategy

The CSRD Sewer Acquisition Strategy, was updated and revised in February 2011 (Revision 5). This strategy addresses the policies and procedures associated with and transfer of ownership of new and existing sewer systems. A similar strategy existing for water system acquisition and the CSRD has had good success with these strategies in several system acquisitions. Many of the concepts outlined in this Study apply to the procurement and financing policies required for the construction and operation of a new Community Sewer System covered under cost recovery (policy number's 27 to 33). For Sorrento and Blind Bay, the process involves:

- Pursuing senior government grants to offset major capital costs (where six funds are identified).
- After the grant amounts (if any) have been secured, establishing a borrowing by-law and making provision for electoral assent (only those properties that benefit from the borrowing would be responsible for the debt payments).
- Establishing sewer user rates, parcel taxes, and other charges for full cost recovery phased over an appropriate time period. New developments will bear the cost of capital infrastructure as appropriate.

4 Private User Contributions

There is some indication anecdotally that either business associations or developers may be interested in making financial contribution to a Community Sewer System above and beyond the parcel tax, connection charges and user fees that would be assessed. CSRD has indicated such contributions not involve any reciprocal benefits in any way. While community interest in this concept is being evaluated on the political level, to date, no interested parties have been identified and no commitments have been indicated. It should be noted that any form of “gifting agreements” with developers should be reviewed to confirm those are legally allowable for use in sanitary sewer purposes as the CSRD has the ability to levy Developer Cost Charges instead.

5 Project Delivery Options

Besides a traditional project delivery, alternative project delivery methods such as design-build-finance-operate are possible though infrequently used for wastewater infrastructure. This section reviews the factor and potential for alternative delivery.

5.1 Background – Traditional Delivery

Traditional project delivery involves separate steps of (a) retaining an engineering consultant to design the infrastructure, (b) tendering construction documents to the public and (c) awarding the construction to the lowest price bid from a qualified company. Following construction, the CSRD would be responsible for operation and maintenance of any new facilities, either directly or through service contracts with outside company. This delivery is very common and the majority of wastewater infrastructure projects use this approach.

5.2 Alternative Delivery

Alternative project delivery models (such as private-public-partnerships, or P3 projects), have become more common with federal and provincial infrastructure projects over the past few decades. Several major transportation and health care projects have been delivered through private-public partnerships where the projects involve financing, design and construction services, and maintenance.

The William R. Bennett Bridge is a good example of a provincial P3 project. SNC-Lavalin was retained to design, build, finance, operate, maintain and rehabilitate the bridge. The cost for this contract is estimated to be \$179 million over 30 years.

Senior governments have also created resources that local governments can utilize to assess the Private-Public Partnership option for infrastructure projects. Partnerships BC and PPP Canada were created by the province of BC and the federal government to deliver P3 projects. These agencies have a mandate to assist local governments that are interested in a P3 project. The P3 Canada Fund has recently been renewed with a federal contribution of \$1.25 billion. Table 5.1 shows the primary delivery models used in practice (taken from PPP Canada’s Water / Wastewater Sector Study).

Table 5.1 - P3 Models Source: *“Improving the delivery of public infrastructure by achieving better value, timeliness and accountability to tax payers through public-private partnerships”*, PPP Canada.

PROJECT RESPONSIBILITY	TRADITIONAL BUILD (DBB)	DESIGN-BID-BUILD (DBF)	DESIGN-BUILD-FINANCE (DBF)	DESIGN-BUILD-OPERATE-MAINTAIN (DBOM)	DESIGN-BUILD-FINANCE-OPERATE-MAINTAIN (DBFOM)	
Ownership of Asset	Municipality	Municipality	Municipality	Municipality	Municipality	
Needs Assessment						
Investment Decision						
Project Planning						
Design	Consultant selected on qualifications and price	Qualified special purpose DBF contractor selected on design and price	Qualified special purpose P3 partner selected on design, O&M plan, and price.	Qualified special purpose P3 partner selected on design, O&M plan, and price.		
Construction	Qualified general contractor selected by tender					
Construction (short-term financing)	Generally not required since municipality pays general contractor for construction progress					
Operation	Municipal staff	Municipal staff	Qualified special purpose P3 partner selected on design, O&M plan, and price.	Qualified special purpose P3 partner selected on design, O&M plan, and price.		
Maintenance	Municipal staff or design contract and tendered construction contract	Municipal staff or design contract and tendered construction contract				
Rehabilitation	Design contract and tendered construction contract	Design contract and tendered construction contract				
Expansion	Design contract and tendered construction contract	Design contract and tendered construction contract	Municipality	Municipality		
Financing (long term)	Municipality	Municipality			Municipality	Municipality (portion)
Funding						
Asset Sponsorship						
Pricing						



5.3 Reference Projects

Table 5.2 provides details of example projects in Canada that have utilised the delivery methods from Table 5.1.

Table 5.2 – Canadian Projects Delivered Using Alternative Methods

PROJECT NAME	PARTIES INVOLVED	DELIVERY METHOD	COMMENTS
Port Hardy Water and Sewer	District of Port Hardy and EPCOR	DBO	The 1999 agreement to provide water and wastewater services was one of the first P3s in B.C. The agreement included construction of a new water treatment plant (\$3.67 million) and a long term (20 year) performance guarantee to manage the water and wastewater systems
Sooke Sewer	District of Sooke and EPCOR	DBO	The sewer system and WWTP were constructed by EPCOR in 2005 for \$23 million and are now being operated by EPCOR for a five year term
City of Langford Sewer	City of Langford and Corix (West Shore Environmental Services Inc.)	DBOM	The agreement is to construct, own, operate and maintain extensions to the City's sewage collection system and to operate and maintain the existing sewers.

5.4 Advantages of P3

In general, P3 provides two major advantages. First, a P3 project allows a local government to outsource work which requires specific skills that the local government does not have. Second, a P3 project allows the local government to transfer risks (at a cost) to the private sector.

Outsourcing

A P3 project will allow local governments to outsource skills and knowledge. This may be a preferred option if a local government wished to pursue new infrastructure, but does not have the internal resources necessary to operate and maintain the proposed infrastructure.

A district energy system is a good example of a project that a local government may wish to develop on a P3 basis. There are several private BC based organizations that have considerable experience in the energy sector and specifically district energy systems. Further, there are very few local governments with experience in this area resulting in virtually no cross training and local government groups or organizations that offer support. Given this, it can be very difficult for a local government to develop the skills and expertise necessary to operate and maintain a district energy system.



Risk Transfer

By utilizing the private sector, a P3 project allows a local government to assign risks to the party which are in the best position to control and manage the risk. Some risks that are commonly considered for a P3 project include capital costs, operations, maintenance practices, asset renewal (capital replacement), staff recruitment, training, and environmental risks. There are also potentially significant risks associated with revenue and expenses.

In the case of the district energy system example, a local government may wish to enter into a contract with an experienced energy utility to design, build, finance and operate a district energy system. However, the local government may want to remain responsible for setting rates and fees.

5.5 Disadvantages of P3

P3's can often involve complex business arrangements – and development of the business case phase requires experts in legal and financing areas. There can be complicated terms and payment schedules for the design and construction phase of new infrastructure. Also, P3 agreements normally involve long term contract commitments for the operation and maintenance of infrastructure. Payment schedules may refer to asset renewal schedules, capital replacement requirements, maintenance standards, and operating efficiencies. In order to effectively manage P3 agreements, local governments must dedicate sufficient resources for contract administration.

5.6 Past CSRD Experience

In 2012 CSRD made submissions to Round 4 of the PPP Canada application for a \$77.5 million wastewater infrastructure project (which combined Area C and Area F servicing) – requesting approximately 25 percent funding for a DBFOM project delivery. This application was denied in September 2012. The application was assessed on a merit-based process and did not receive a favourable review due to project readiness considerations and financial viability. PPP Canada indicated that the application would not be retained for further consideration.

5.7 Alternative Delivery Potential CSRD

With only a few exceptions in BC, wastewater treatment systems are operated by local governments. While CSRD does have an existing relationship with a local water infrastructure company, there are only two viable companies in BC to operate the Area C facilities based on current track records: EPCOR and Corix. Contacts to both companies were made.

Rick McCallum, the General Manager for Corix in BC, was interviewed. Corix have extensive experience in DBO projects in the region, and are starting to become involved in DBFO arrangements. He commented that for this type of project, they would have potential interest if involved in a DBFO or DBO arrangement. At the time of writing, EPCOR response has not been received.



Since interest from private operating companies is relative to the revenue potential, identifying core revenue from user fees and connection charge, as well as opportunistic fees such as pump-out fees for septage pump-out-truck fleet, is necessary. For example, if a mandatory septage pump-out by-law were passed by CSRD, this would increase interest by private companies if they were to also include that service.

6 Senior Government Funding

As noted above, local governments often receive senior government grants for infrastructure projects. Fortunately, the 2013 federal budget includes significant support for infrastructure projects. In fact, the Build Canada Plan includes \$47 billion in new funding in support of local and economic infrastructure projects, starting in 2014-2015.

The Build Canada Plan includes the following funding envelopes:

- **Community Improvement Fund**: \$32.2 billion over ten years to support community infrastructure projects consisting of the Gas Tax Fund and Goods and Service Tax (GST) rebates. The goal is to help finance roads, public transit, recreational facilities and community infrastructure across Canada. It will provide consistency for financial planning purposes and funds can be used for a broader range of infrastructure priorities than in the past.
- **New Building Canada Fund**: \$14 billion for to support major economic projects that have national, regional and local significance. This fund has two components:
 - \$4 billion National Infrastructure Fund that focuses on projects that have national significance, such as highways and trade corridor related infrastructure; and
 - \$10 billion Provincial-Territorial Infrastructure Fund that will support projects of national, provincial and local significance. Funds can be used for a broad range of projects including highways, drinking water, wastewater, and innovation.
- **Renewed P3 Canada Fund**: \$1.25 billion to support innovative ways to build infrastructure projects faster and provide better value through public-private partnerships. The goal is to renew the P3 Canada Fund by providing additional financing.

The proposed Community Sewer System appears to align very well with the goals and objectives of the Build Canada Plan. Given this, it can be assumed, for financial planning purposes, that the CSRD will be successful in obtaining some level of funding assistance through this program.

In order to be successful with a grant application, it should be recognized that the funding program is a competitive process.

There is only one federal funding program in place at this time and it is called the Green Municipal Fund (GMF). Applicants are eligible for low cost loans of up to 80% of eligible project costs to a maximum of \$10 million, and grants of up to 20% of eligible project costs to a maximum of \$1.0 million. A single application for each project would need to be made to the Federation of Canadian Municipalities.



The new Build Canada Plan (BCP) announced in this year's Federal Budget is expected to be in place for 2013/2014. This will be a joint Federal/Provincial Program that will likely be administered by the Ministry of Community, Sport and Cultural Development (MCSCD) as has been the case for prior programs. A single application for each project will need to be submitted to MCSCD who will coordinate the review process with the Federal Government. Prior programs did not have restrictions on upper limits for project costs, and provided 2/3 funding (1/3 Federal and 1/3 Provincial) on eligible project costs. The total eligible BCP grant would be calculated on the total project costs net of all other funding sources.

Details of the Build Canada Plan application criteria are expected to be released over the next few months. Based on previous infrastructure funding programs, the projects that are most likely to receive funding will align well with the grant goals and objectives which include value for money (i.e., a good business plan), support economic development, protect the environment and demonstrate sustainable practices.

The grant application process can be completed at the same time a local service area is established as the electors in the proposed local service area will be asked to approve the project and related borrowing. CSRD has typically always secured the grant before moving into the public assent process which helps to leverage the assent process and so the actual amount of borrowing is known. In the past, senior government has been agreeable to this approach.

6.1 Summary of Potential Sources

At this time, there appear to be approximately three major sources of grant funding available:

- General Strategic Priority Fund - Federal Gas Tax fund which is administered by the UBCM in British Columbia
- Gas Tax – Up to \$1.0 million may be available in funding from the CSRD Community Works Fund
- Green Municipal Fund (GMF) – Grants up to \$1.0 million
- Build Canada Fund (BCP) – Grants up to 2/3 of eligible project costs (expected in 2014/2015).

Given the magnitude of the Build Canada Plan, and the flexibility associated with several funding envelopes (Community Infrastructure Fund and the Building Canada Fund), this grant opportunity should be the primary focus for the proposed Community Sewer System.

7 Implementation Strategy

Based on the discussion above, the preferred procurement option for the Community Sewer System will utilize the Traditional Approach. Under this option, the CSRD will retain a consultant to design the Community Sewer System and will seek competitive bids for the construction of the proposed works. The CSRD will also be required to build internal resources to operate and maintain the Community Sewer System.



It can also be assumed that the CSRD will likely receive some level of grant funding assistance through the Build Canada Plan. This grant typically funds 2/3 of major infrastructure projects, therefore, for financial planning purposes, it is estimated that the CSRD may obtain a grant in the amount of 2/3 of Phase 1.

These grants are provided through a competitive process where communities must demonstrate to the grant administrator that their project provides the best overall value and benefits. Given this, it is important to develop a strategy and to be well prepared for funding opportunities early in the application process. Typically, well organized financial (cost-benefit), environmental and economic arguments are necessary to obtain infrastructure grants. Political involvement is almost always necessary. The CSRD should have up-to-date studies complete for its higher priority capital projects by the end of 2013. The new grant program will likely be multi-year therefore additional applications can be made in subsequent years.

The remaining 1/3 of the capital cost will be the CSRD's responsibility. This portion of infrastructure cost is normally recovered through a parcel tax applied to the property owners that receive the wastewater collection services. The capital costs can be recovered over a long term period to make the project affordable to the property owners.

7.1 CSRD Financing of Capital Costs and Debt Servicing

Although a government grant will significantly decrease the capital costs to the CSRD, there will still be a large amount of funding required to construct the Community Sewer System. As shown in Table 7.2, CSRD may be expected to contribute between \$4 million to \$5 million for the first Phase.

Specified Area Bylaw (Local Service Area Establishment Bylaw)

A specified area bylaw is required to establish the proposed Community Sewer System. This bylaw will identify the properties that will connect to the sewer collection system. The specified area will be consistent with a User Fee Bylaw (which is necessary to finance operating expenses as discussed below) and a Parcel Tax Bylaw (which is necessary to finance the capital expenses).

Similar projects using a Specified Area Bylaw to collect payment from homeowners have built in some flexibility. For example, owners could pay the total sum right away, or pay over a 20 year term at the CSRD's borrowing rate (most likely a low rate from the Municipal Finance Authority). Also, owners could be provided the option to payout any amount owing at any time; this allows property owners to extinguish the wastewater debt for any reasons; such as selling the property.

Borrowing Bylaw (Loan Authorisation Bylaw)

The CSRD can borrow funds from the Municipal Finance Authority (MFA) to finance its share of the capital expenses. The CSRD will be required to establish a borrowing bylaw for this purpose.



Assent of the Electors

A public assent process basically asks taxpayers if they are in favour of a new service or borrowing funds for a new service. The process usually involves a referendum, formal petition, or an alternative approval process such as a counter petition.

Under the Environmental Management Act, local governments are authorized to established service areas for community sewer systems without an elector asset process if a Liquid Wastewater Management Plan is in place, and if there was sufficient public consultation during the development of the Liquid Wastewater Management Plan. The CSRD records show there was thorough public consultation, therefore, it can be assumed that assent of the electors is not required for the borrowing bylaw.

Parcel Tax Bylaw

A Parcel Tax is normally established for capital costs, such as sewer mains. All properties typically pay the wastewater Parcel Tax (whether or not they are connected to the regional sewer system). This allows the local government to build reserves for future capital projects. The existing budget for the South Shuswap includes a wastewater Parcel Tax and funds are established for administration, monitoring, public information, studies and surveys. This revenue source is expected to decrease by about 50% in the next year primarily due to less funds allocated for surveys and public information.

The funds borrowed from the MFA can be recovered by implementing a sewer parcel tax to the properties within the Specified Area. This scenario of borrowing funds from the MFA, and recovering expenses from the properties that receive the services, is commonly implemented for municipal infrastructure works.

It should be noted that Frontage Taxes are also used by local governments, particularly for water distribution and sewer collection infrastructure financing.

Parcel taxes are normally applied to all properties within a service area at the same time. It is anticipated that uniform application of a parcel tax in Sorrento and Blind Bay in this manner may be problematic, due to residents who are living in areas not scheduled to be serviced until later phases of the project being reluctant to pay a parcel tax for a service they will not receive immediately.

7.2 Operating and Maintenance Costs

Operating costs are generally recovered through User Fees which come into effect when a building is connected to the sewer system or an Occupancy Permit is authorized. This means that vacant properties and parcels not able to connect to the sewer system do not pay a User Fee.

User Fee Bylaw

The Stage 3 Wastewater Management Plan recommends that homeowners be charged User Fees based on assessed value of improvements (excludes land value). This is on the basis that houses with higher assessed improvement values are larger and have more bathrooms, and therefore

generate more sewage. The proposed User Fee would only be applied to those properties within the service area for the Community Sewer System.

7.3 Connection Costs

From the LWMP, the anticipated connection costs to a sewer system, which individual property owners would be responsible for, are:

- \$4,300 per parcel for gravity connections
- \$4,900 per parcel for pumped connections

If the CSRD is interested in ensuring that property owners install good quality pump stations, one way to make this happen is for the CSRD to provide the pump stations at no cost to the homeowner, and make the cost of the pump stations part of the project budget. This would add additional cost, but also decreases the risk of failure due to poor quality pumping stations.

7.4 Other Considerations

The current review process will attempt to identify additional phasing or staging opportunities that might be considered in order to reduce the initial capital construction costs identified in the Stage 3 LWMP. It is proposed that the regional treatment facility be constructed in two or more phases in order to reduce the initial capital construction costs and make the project more affordable. The use of future Gas Tax revenues should not be considered as a source of revenue for debt servicing.

7.5 Implementation Steps

Once a technical solution is developed, the recommended implementation steps are:

- 1) Update project capital costs and current financing information.
- 2) Review project, cost and financing information with the MCSCD (Engineering and Financial Services staff), seeking support for the project from the Ministry prior to making a grant application.
- 3) Submit grant application to the Ministry on program announcement.

If grant application is successful then,

- 4) Prepare Local Service Area Establishment and Loan Authorization Bylaws
- 5) Complete public consultation processes
- 6) Obtain elector support to bylaws
- 7) Obtain Ministry approval of bylaws
- 8) Seek interim financing arrangements
- 9) Gain construction contract approval
- 10) Gain other Financial Bylaw approvals



8 Conclusions and Recommendations

It is expected that the Federal Government will announce a new capital infrastructure program later this year. Recent federal-provincial (BC) programs have considered sanitary sewer a high priority community consideration, and that is expected to continue. A level of funding of from one-half to two-thirds would be expected under a new program.

The potential contributions from other programs offering assistance for capital infrastructure programs are not expected to be significant due to the size of the project.

P3's can be a very complex business arrangement and would likely only be recommended if no Government grant could be obtained.

CSRD already has policies in place for collecting money for operation and maintenance of a community sewer system.

Findings:

- Gas tax grants are available up to \$1 million
- Green Municipal Fund provides loans up to 80% to maximum of \$10 million
- Private investors may come forward but no amounts are known at this time.

