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FILE Scotch Creek Community Sewer and Water  
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 and Water System Plan for Scotch Creek. The Liquid Waste Management Plan (LWMP) for Area F, completed in July 2009, recommends that a new community sewer system and wastewater treatment plant should be constructed for the Scotch Creek area. A feasibility study for a community water system (Scotch Creek Water Study, Urban Systems, 2007) has also been carried out, recommending that a community water supply system should also be constructed in Scotch Creek.

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 and Scotch Creek Water Study will be evaluated.

Section 2 outlines the possible capital costs associated with the new Community Sewer and Water Systems based on previous options from the LWMP and Scotch Creek Water Study; it is noted that 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 for the Community Sewer System for Scotch Creek will be between \$16 million to \$27 million and approximately \$20 million for a Community Water System. This TM presents the financing and funding methodology and background which will be used in the later evaluation of technical options.

## 2 Community Sewer and Water System Capital Costs

This section summarizes the earlier plans for community sewer and water infrastructure proposed in the LWMP and Scotch Creek Water Study including the types of infrastructure required, and their approximate size and service life.

### 2.1 Community Sewer System Infrastructure Costs

The previous LWMP presents two preferred options for a regional treatment facility for Scotch Creek:

- New secondary treatment plant on LSIB land with ground disposal via rapid infiltration basins
- New tertiary treatment plant at Old Roan Farm with lake outfall

The LWMP did not allow for phases, as such, but did present two levels of cost estimate. One to service ultimate build-out flows, and the other to service flows after 10 years of growth in Scotch Creek.

It should be noted that the actual implementation options are still being developed and the LWMP options are presented here as an only indication of the likely costs.

#### 2.1.1 Secondary Treatment Plant on LSIB Land

The LWMP proposes the use of aerated lagoons at the LSIB, suitable for year round discharge to ground using rapid infiltration basins and spray irrigation of reclaimed water in the summer. Since it was anticipated that disposal to ground would occur all year round, no allowance was made for effluent storage. The costs estimates from the LWMP are summarised in Table 2.1.

**Table 2.1 - LWMP Costs for Treatment Facility on LSIB Land**

INFRASTRUCTURE COMPONENT	ESTIMATED CAPITAL COST (\$million)	
	10 YEAR HORIZON	ULTIMATE FLOWS
Wastewater Collection System	\$7.8	\$7.8

Treatment Facility (aerated lagoons)	\$2.9	\$3.5
Disposal (rapid infiltration and spray irrigation)	\$0.4	\$3.4
<b>SUBTOTAL</b>	<b>\$11.1</b>	<b>\$14.7</b>
Engineering and Contingencies (35%)	\$3.9	\$5.1
Land Acquisition Fees and Allowances	\$0.2	\$0.5
Administration and Interim Financing (5%)	\$0.5	\$0.7
<b>TOTAL CAPITAL COST</b>	<b>\$15.7</b>	<b>\$21.0</b>

Fixed infrastructures such as pipes, manholes and structures (including the aerated lagoons) generally have a service life of 50-100 years. Mechanical and electrical equipment such as pumps, aerators and control panels generally have a service life of 20 years.

### 2.1.2 Tertiary Treatment Facility at Roan Farm

Biological nutrient removal (BNR) suitable for a discharge to Shuswap Lake was considered in the LWMP. Spray irrigation of reclaimed water in the summer is also allowed for. No allowance was made for effluent storage. The cost estimates from the LWMP are summarised in Table 2.2.

**Table 2.2 - LWMP Costs for Treatment Facility at Roan Farm**

INFRASTRUCTURE COMPONENT	ESTIMATED CAPITAL COST (\$million)	
	10 YEAR HORIZON	ULTIMATE FLOWS
Wastewater Collection System	\$7.8	\$7.8
Treatment Facility (BNR)	\$4.9	\$5.7
Disposal (lake outfall and spray irrigation)	\$0.6	\$3.5
<b>SUBTOTAL</b>	<b>\$13.3</b>	<b>\$17.0</b>
Engineering and Contingencies (35%)	\$4.6	\$6.0
Land Acquisition Fees and Allowances	\$0.2	\$3.2
Administration and Interim Financing (5%)	\$0.6	\$0.9
<b>TOTAL CAPITAL COST</b>	<b>\$18.7</b>	<b>\$27.1</b>

Fixed infrastructures such as pipes, manholes and structures generally have a service life of 50-100 years. Mechanical and electrical equipment such as pumps and control panels generally have a service life of 20 years.

## 2.2 Community Water System Infrastructure Costs

The Scotch Creek Water Study put forward a single, phased option for a community water system. The concept was for a deep lake intake, with filtration and UV and chlorine disinfection. The cost estimate from the Scotch Creek Water Study is summarised in Table 2.3. Note that Scotch Creek Water Study does not break the costs down by phase.

It should be noted that the actual implementation options are still being developed and the Scotch Creek Water Study option is presented here as an only indication of the likely costs.

**Table 2.3 – Scotch Creek Water Study Costs for Community Water System**

INFRASTRUCTURE COMPONENT	ESTIMATED CAPITAL COST (\$million)
Lake Intake and Pumping Station	\$1.3
Water treatment plant	\$4.5
Reticulation (including hydrants, surface reinstatements and service connections)	\$6.2
Reservoir	\$3.0
SUBTOTAL	\$15.0
Engineering and Contingencies (35%)	\$5.3
<b>TOTAL CAPITAL COST</b>	<b>\$20.3</b>

Fixed infrastructures such as pipes, hydrants and structures generally have a service life of 50-100 years. Mechanical and electrical equipment such as pumps and control panels generally have a service life of 20 years.

## 3 Existing Financial Policies

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

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

These four elements are discussed in the following sections.

### 3.1 Official Community Plan

The CSR D completed an Official Community Plan (OCP) for the North Shuswap Area F in 2012. 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 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 ten principles, which include:

Principle #1 “To use all measures to protect sensitive ecosystems, wildlife habitats and watersheds, in collaboration with all other jurisdictions that have authority in the North Shuswap. Every effort must be made to protect the quality of Shuswap Lake.”

Principle #7 “To take a region-wide approach to correct inferior water and sewage treatment systems and work toward comprehensive, affordable water service, and a Liquid Waste Management Plan that takes into account the latest technologies, and fully protects 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 F, 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, potable water treatment or distribution or for future Community Sewer or Water Systems.

### **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 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 Scotch Creek, 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.

### **3.5 Scotch Creek Water Study Funding Strategy**

The Scotch Creek Water Study identifies that securing Provincial/Federal funding would reduce the capital cost of a community water system to the community. For phased implementation, the Study also proposes that all developments benefiting from the community water system contribute to a trust fund administered by CSRD for the purpose of providing facilities to service ultimate development. It is proposed that these contributions are weighted depending on expected capacity for each development.

## **4 Private User Contributions**

There is some indication anecdotally that either business associations or developers may be interested in making financial contribution to Community Sewer and Water Systems 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 and market sounding level. It should be noted that any form of “gifting agreements” with developers should be reviewed to confirm those are legally allowable.

## 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 (DBB)	DESIGN-BUILD-FINANCE (DBF)	DESIGN-BUILD-OPERATE-MAINTAIN (DBOM)	DESIGN-BUILD-FINANCE-OPERATE-MAINTAIN (DBFOM)
Ownership of Asset	Municipality		Municipality	Municipality	Municipality
Needs Assessment					
Investment Decision					
Project Planning					
Design	Consultant selected on qualifications and price	Qualified general contractor selected by tender	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. Financing may be for all or a portion of total capital cost.
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			
Maintenance					
Rehabilitation	Municipal staff or design contract and tendered construction contract	Municipal staff or design contract and tendered construction contract			
Expansion	Design contract and tendered construction contract	Design contract and tendered construction contract			
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.

#### 5.4.1 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.

#### **5.4.2 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 for 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, two viable companies operate in BC which could participate in Area F 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. In addition to these two, correspondence was received from a local Scotch Creek group who provided an unsolicited proposal. While this proposal is not within a true P3 context (which would involve CSRD conducting a public assent process, developing an indicative design and service area, and competitively selecting of a qualified private entity), it does indicate business interest in such a potential venture.

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 more 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 and Water Systems 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 and Water Systems.



## 7 Implementation Strategy

Based on the discussion above, the preferred procurement option for the Community Sewer and Water Systems will utilize the Traditional Approach. Under this option, the CSRD will retain a consultant to design the Community Sewer and Water Systems 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 and Water Systems.

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.

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 and Water Systems.

#### **Specified Area Bylaw (Local Service Area Establishment Bylaw)**

A specified area bylaw is required to establish the proposed Community Sewer and Water System. This bylaw will identify the properties that will connect to the sewer collection/water distribution systems. 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).

The Saratoga community would need to be a further sub-area within the specified service area since they have already financed an operational water system that will contribute to the wider Scotch Creek community. While the Saratoga community will benefit from additional storage capacity, this is only a portion of the overall infrastructure, and they would be using only a portion of that. Therefore, it is assumed Saratoga community would not be charged for the water system even though they would be part of the specified area.

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.

It is also noted that there is \$500,000 currently being held in reserve for the supply of water to Captain's Marina. Once a water supply system is in place and Captain's Marina is connected, the money will be released to CSRD.

### **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 and water pipes. All properties typically pay a wastewater Parcel Tax and/or water Parcel Tax (whether or not they are connected to the regional systems). This allows the local government to build reserves for future capital projects.

The existing budget for the North 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.

Users of existing CSRD water systems (e.g. Saratoga) are already charged parcel tax.

The funds borrowed from the MFA can be recovered by implementing sewer and water parcel taxes 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 some residents in Scotch Creek, living in areas not scheduled to be serviced until later phases of the project, may be 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 or water system do not pay a User Fee.

### **User Fee Bylaw**

It is recommended 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 and use more water. The proposed User Fee would only be applied to those properties within the service area for the Community Sewer and Water Systems.

## **7.3 Connection Costs**

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

- \$2,000 - \$5,000 per parcel for gravity connections
- \$6,000 – \$10,000 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.

Water connection costs would approximately \$2,000 to \$4,000 per connection depending on connection size and whether metering would be considered.

## **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 and Scotch Creek Water Study. It is proposed that the regional treatment facilities 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.



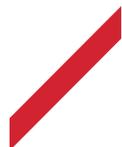
## **7.5 Implementation Steps**

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. Cost indications from interested parties with Scotch Creek do not show that a P3 delivery will decrease the project cost. Therefore, P3 would likely only be investigated if no Government grant could be obtained.

CSRD already has policies in place for collecting money for operation and maintenance of Community Sewer and Water Systems.

### **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.

