Public Participation Summary Report
Procurement Delivery

Core Area Wastewater Treatment Project

February 24, 2010 - J. Loveys
Core Area Liquid Waste Management Committee

Public Participation Procurement Delivery

Core Area Wastewater Project

February 2010

This report serves as a summary of the public participation program and key findings regarding procurement delivery of the wastewater treatment project for the Capital Regional District. This report represents the views of participants who elected to engage in the process and should not be considered statistically valid.

The structure of the report:

1. General Observations
2. Public and Stakeholder Public Participation Program / Procurement Delivery
3. Community Principles for the Wastewater Treatment Project
4. Key Themes Heard
5. Summary of the Open Houses
   - Framework for Key Outcomes
   - Results of Mapping Exercise
6. Summary of the Community and Business Organizations' Workshop
   - Workshop Objectives and Format
   - Framework to Document Key Outcomes
7. Objectives of CALWMC Delegations
8. Summary of Online Public Queries
9. Supporting Documents
   - Appendix 1- Advertisements of the Open Houses and Delegations to CALWMC
   - Appendix 2 - Brochure and FAQ Sheet available at Open Houses and Workshop
   - Appendix 3 - Ernst & Young Draft Discussion Paper dated 29 January 2010
   - Appendix 4 – Open House Comment Form
   - Appendix 5 - Key Outcomes from Comment Form (Open Houses and website)
   - Appendix 6 - List of invited community and business organizations workshop participants
   - Appendix 7 – Summary of Online Public Queries

General Observations

On 25 November, 2009, the Core Area Liquid Waste Management Committee (CALWMC) endorsed a distributed wastewater treatment plan for the core area of the Capital Regional District.

Both the Community Engagement Framework approved 8 April 2009 and the CRD Spectrum of Public Participation, play a key role in aligning the public participation program regarding procurement delivery. All of which incorporates a variety of techniques, methods for public input and therefore, increases the degree of public transparency of the issue.

From the onset of this public process, it became obvious how the different interpretations and applications of key words and statements such as transfer of risk, efficiency and flexibility became difficult to quantify and qualify among participants.

Public and Stakeholder Participation Program Procurement Delivery

Below is the summary of the Public Participation Program outlined in the 13, January, 2010 report.

In an effort to engage the community specifically regarding the procurement options for the wastewater project; a public and stakeholder program has been designed to begin in mid February. CRD staff intend to utilize multiple public participation techniques and facilitation styles to ensure all perspectives are heard. Throughout this program, the discussion paper authored by Gary Morrison of Ernst & Young will be available to residents and community stakeholders to comment on.

Two public open houses will be scheduled for mid February and will provide an opportunity for residents to become more informed on the topic, to engage CRD staff in a dialogue about the their key issues and, have their opinions be recorded.

A full day community stakeholders' workshop has been specifically designed to allow for more in depth discussions to occur on key issues and opportunities brought forward by the participants. To ensure a well balanced discussion occurs, CRD staff are looking to engage a wide spectrum of community stakeholders who represent a range of perspectives on this issue.

Following the open houses and community workshop, a special CALWMC meeting will be scheduled and publicized. This will provide members of the public an opportunity to specifically address the Committee on this issue.

A staff report will be submitted to the 24 February CALWMC which will include the community workshop's key outcomes, a summary of public opinions gathered from the two open houses and, any comments received through www.wastewatermadeclear.ca web page.

Community Principles for the Wastewater Treatment Project

Over a series of workshops and validation sessions, the following Community Principles were developed by the community in the spring of 2009. On 27, May 2009, the CALWMC adopted these Community Principles for future decision making and therefore, are reflected in this report.

Social Principles

- Equity and Pride
- Awareness and Education
- Respect for the Community Character

Economic Principles Comments from which the Principles Evolved

- Value and Performance
- Accountable and Responsible
- A Long Term Economic Plan

Environmental Principles Comments from which the Principles Evolved

- Ensure Environmental Best Practices
- Protect and Reduce Long Term Environmental Impact Demonstrate
- "Green" Leadership

Key Themes Heard

Throughout the public participation program which included; two open houses, one community and business organizations workshop and public online queries; repetitive key themes were heard and are recorded in no order of priority:

- A community desire to have a locally built, publicly owned and managed treatment facility(ies)
- How the issue of procurement is philosophical in nature and therefore polarizing
- The existence of fear from perceived failed provincial and national public private partnership ventures
- The expressed desire for continued, honest public input into future decisions
- The need for political will to continue to move this project forward
- For the overall project to take a phased project packaging and implementation approach
- Recognition that the Business Case was a missing element in the public process
- The inability to agree on how to quantify the economic loss or gains for the community

Summary of the Open Houses held 10 /11 February, 2010

Two Open Houses were offered to residents with a total of 186 different people attending. Five elected officials also attended however, are not included in the overall number.

10 February held at Ambrosia Conference and Event Centre, Victoria from 3pm – 8pm..... 73 attended
11 February held at Emmanuel Baptist Church, Saanich from 3pm to 8pm..... 113 attended

Objectives of the Open Houses:

- For the CRD to listen and gain a better understanding of residents concerns
- For the CRD to gather feedback through a comment form on procurement options
- For the CRD to have transparency surrounding the issue and for the issue to have a presence in the community
- On the CRD Spectrum of Public Participation, this technique would be considered an example of both *Inform and Educate* (brochures, display boards, staff available for questions) and *Gather Information* (comment form)

Framework to Document Key Outcomes:

Appendix 4 documents the comment form used throughout the two Open Houses and website. Appendix 5 summarizes those key findings captured in the 143 completed forms. Six forms were discounted due to the author living all together outside of the Capital Regional District. The applied framework to document the findings stems from the six procurement models documented in the work of Ernst & Young. There is also an Observation section included.

Results of Mapping Exercise:

Open House participants were asked to select a coloured sticker based on where they reside. They were then asked to place it on the wall chart based on their preferred procurement model for the wastewater treatment project. The results of this exercise are captured below.

Procurement Mapping Exercise	February 10 & 11, 2010				
Municipality	Design Bid Build (DBB) (Public)	Construction Management at Risk (CMAR)	Design Build (DB)	Design Build Operate (DBO)	Design Build Operate Maintain (DBFO) (P3)
Colwood	7	0	0	0	0
Esquimalt	3	0	0	0	0
Langford	6	0	0	0	0
Oak Bay	13	2	2	0	1
Saanich	68	4	4	1	3
View Royal	3	0	0	0	0
Victoria	44	5	2	0	0
Total	144	11	8	1	4

Summary of the Community and Business Organizations Workshop held 16, February, 2009

A workshop was specifically designed as an opportunity to engage in a dialogue with an identified wide spectrum of community and business organizations. Appendix 4 contains the list of invited participants. A total of 12 different organizations actually participated.

Objectives of the Workshop:

- For the CRD to listen and gain a better understanding of community organizations and businesses concerns
- For the CRD to gather feedback and comments on procurement options outlined in the Ernst & Young Potential Program Delivery Options Discussion Paper dated 29 January, 2010
- An opportunity for participants and CRD staff - together, to suggest and explore other alternatives or models of procurement
- For the CRD to have transparency surrounding the issue
- On the CRD Spectrum of Public Participation, this technique would be considered an example of both *Discuss* (morning) and *Engage* (afternoon)

Format of the Workshop:
(10am to 3pm with a ½ hour break for lunch)
Note: All participants remained together as a group

Session Focus: CRD presenting and participants commenting

Presentation from Gary Morrison from Ernst & Young

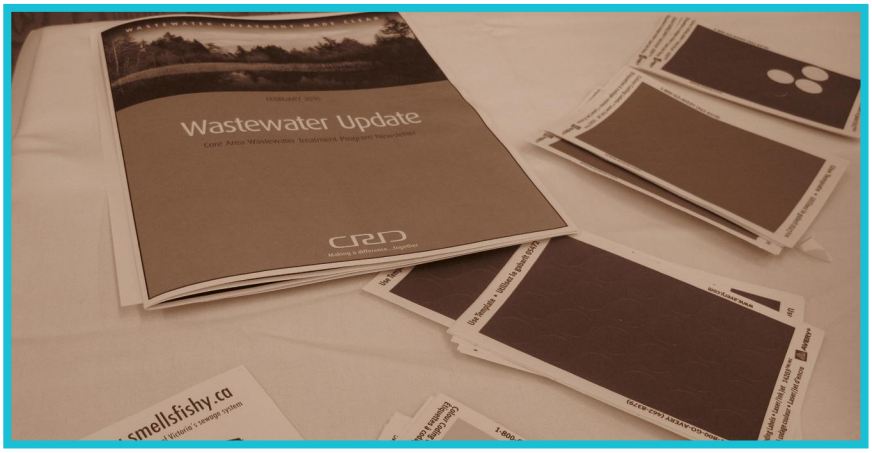
- Power point presentation format followed by open facilitated question and answer period
- Revised Discussion Paper dated 29 January, 2010 was available and used as the basis of the discussion
- Participants comments were captured in the framework of: opportunities, challenges and any hidden consequences for each model presented

Session Focus: Participants presenting and CRD listening

- An open opportunity for participants to present alternative models for discussion
- A key step for CRD staff and consultants to listen to new approaches and positions on the issue
- A facilitated question and answer period for any aspect of the alternatives or CRD models

Session Focus: Building agreement on key issues and opportunities

- Facilitated and live recorded the discussion in an attempt to build agreement on key issues
- Open discussion on any material presented by CRD consultants or participants
- A series of probing questions were asked to ensure everyone had an opportunity to express their issues



Summary of Procurement Delivery Workshop

Focus: CRD presenting / participants' feedback

Core Area Wastewater Project / February 16, 2010

Model	*Opportunities*	*Challenges*	*Any Hidden Consequences?*
Design – Bid – Build	A strongly expressed need for reasonable size packaging of project components of the overall project to allow for the opportunity for regional contractors to participate The need for phasing of the project The overall public financing and borrowing costs are less and therefore more efficient The need for public accountability and transparency can be met The ability to be a leader in innovation and environmental sustainable practices Opportunity to build a local workforce, develop and sustain a skilled labour base	CRD retains the risk CRD retains any cost over runs	The unknown potential of losing provincial funding Unknown impacts of life cycling of facilities Possible increased financial risk to CRD
Construction Management at Risk	Provides certain level of cost certainty Ability to move quicker to construction stages Local contractors are expected to bid appropriately Project management expertise will be utilized	Final end costs could rise	

Model	*Opportunities*	*Challenges*	*Any Hidden Consequences?*
Progressive – Design – Build	An opportunity to 'fast track' when required CRD maintains the schedule	Finding an experienced contract general company	Limited regional economic development opportunities
Performance – Design – Build	The ability to pass the perceived risk	Ensuring the contractor has the financial resources to handle risk	
Design – Build – Operate – Maintain	Ability to tap into outside expertise and innovation Incorporates emerging technologies	Complexity in contracts and challenging to understand Locked in term of contract reduces flexibility for CRD Limited flexibility in design changes Few potential competitors for entire project; out of reach of local competitors The past experience and potential for local firms to lose talent, facilities	The potential to push local sector wages down
Design – Build- Operate-Maintain-Finance	Innovative financing for the project Ability to tap in quickly to emerging technologies	High costs of private borrowing and financing An opportunity to selling commodities to consumers Limited public oversight	Potential for contractual issue to rise Potential for operator failure which then leads to a lack of knowledge and expertise within the CRD to operate CRD blind to the status of system drawings, required operator manuals and designs Unclear of the impacts of changing economics and interest rates Possible jeopardizing of the overall quality of end products

Summary of Procurement Delivery Workshop

Focus: Participants presenting /CDR listening

CoreArea Wastewater Project / February 16, 2010

Model	*Opportunities*	*Challenges*	*Any Hidden Consequences?*
Construction Management	A strongly expressed need for reasonable size packaging of project components of the overall project to allow for the opportunity for regional contractors to participate The need for phasing of the project The overall public financing and borrowing costs seemingly are less The need for public accountability and transparency can be met The ability to be a leader in innovation and environmental sustainable practices		The unknown potential of losing provincial funding

Objectives of the CALWMC Delegations scheduled 25, February, 2010

- An opportunity for members of public to speak and present their opinions directly to the CALWMC members
- For CALWMC members to listen to the delegates and ask questions
- For the CRD to have transparency surrounding the issue

This step still needs to occur at the time of this report however, it is included in the documentation as part of the public participation program

- On the CRD Spectrum of Public Participation, this technique would be considered an example of *Gather Information*

Summary of Online Public Queries

Appendix 6 contains 19 online responses received between 2009/2010 which specifically relate to the procurement delivery issue.

Supporting Documents

Appendix 1 - Advertisements of the Open House and Delegations to CALWMC
Appendix 2 - Brochure and FAQ Sheet available at Open Houses and Workshop
Appendix 3 - Ernst & Young Draft Discussion Paper dated 29 January 2010
Appendix 4 - Open House Comment Form
Appendix 5 - Framework of Key Outcomes from Comment Form (Open House and website)
Appendix 6 - List of invited community and business organizations workshop participants
Appendix 7 - Summary of Online Public Queries

Advertisements of the Open House and Delegations to CALWMC

Capital Regional District

Community Open Houses

Wastewater Treatment Project

The Capital Regional District invites you to comment on procurement issues at a public open house in your community.

Come and learn more about the various components of the Core Area Wastewater Treatment Program and the procurement options under consideration for system construction and operation. The CALWMC would like to receive public input on the procurement options and the criteria that will be used to evaluate them. Plan to attend these Open Houses where everybody has a say.

The following open houses are coming to your community:

Ambrosia Conference & Event Centre - Burnaby Room
638 Fisgard Street, Victoria
Wednesday, February 10, 2010 from 3 - 8 pm

Emmanuel Baptist Chuch
2121 Cedar Hill X Road, Saanich
Thursday, February 11, 2010 from 3 - 8 pm

For more information, please visit
www.wastewatermadeclear.ca
or call 250.360.3001.

Advertisements of the Open House and Delegations to CALWMC

Capital Regional District

Notice of
Core Area Liquid Waste Management Committee (CALWMC) Special Meeting

Procurement Models for Wastewater Treatment

The Capital Regional District is moving forward with wastewater treatment for the region. A series of procurement models have been recommended to the CRD. Choosing a procurement model will determine whether a public or private body will be responsible for designing, building, operating and maintaining the Core Area Wastewater System.

A special CALWMC meeting has been scheduled to allow the public to comment directly to the Committee on issues and concerns relating to procurement.

The committee meeting is open to the public. Registration is required for speakers only. Viewing attendance does not require registration. To pre-register to speak, please visit www.wastewatermadeclear.ca or call 250.360.3001. Speaker comments will be limited to five (5) minutes.

The CRD would also appreciate receiving a copy of each attendee's speaking notes from the meeting, if possible. Notes will be collected as part of the public consultation record and used as input in the Committee's decision.

The special Committee Meeting will take place on:

Thursday, February 25, 2010 from 4 – 6:30 pm
CRD Board Room, 6th Floor, 625 Fisgard Street

As space is limited, a second meeting may be added if there is sufficient expressed interest. Those people who RSVP will be provided details.

APPENDIX 2

Next Steps

Using information gathered at the public open houses, views of stakeholders and comments noted at the CALWMC meeting, CALWMC will make a recommendation for a procurement model to the CRD Board in early March. This recommendation will then proceed to the March 10 Board meeting.

Upcoming Public Consultation

The CRD is holding a special CALWMC meeting to provide opportunity for the public to comment directly to the committee regarding wastewater procurement.

Thursday, February 25, 4 – 6:30 pm
CRD Board Room, 625 Fisgard Street

Registration to attend the meeting is not required. **Registration is required for those who wish to speak to the Committee.** Presentations will be limited to five (5) minutes. To pre-register, please visit **www.wastewatermadeclear.ca** or call 250.360.3001.

How to Stay Informed

The most comprehensive source for information on the wastewater project is the CRD's wastewater website, **www.wastewatermadeclear.ca**. Designed to spearhead the project, the website is continually updated with the latest discussion papers, reports, notices on upcoming consultation sessions and general advancements of the project.

Residents can also contact the CRD to submit comments or ask a question. Fill out our online feedback form, call or write to us:

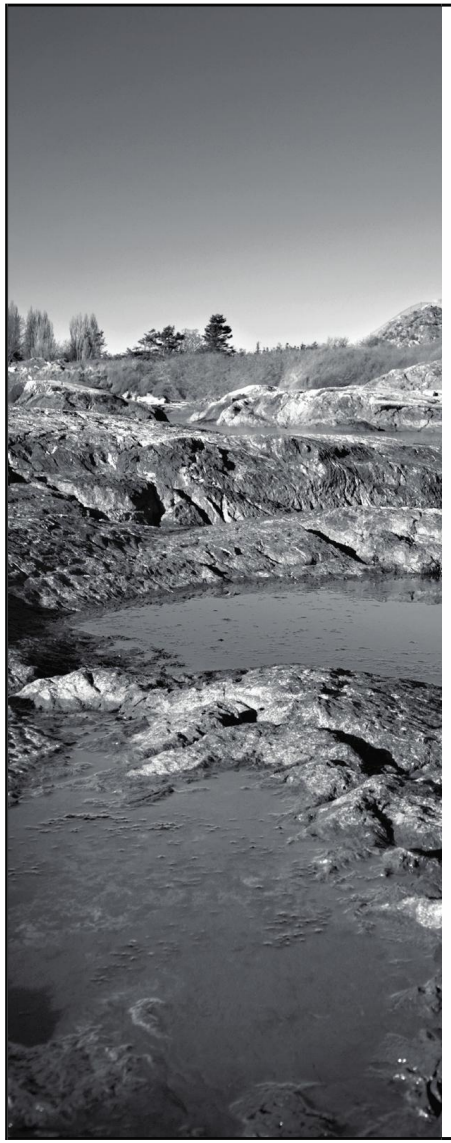
Wastewater Treatment Project
625 Fisgard Street, Box 1000
Victoria BC V8W 2S6

FEBRUARY 2010

Wastewater Update

Core Area Wastewater Treatment Program Newsletter

Making a difference...together

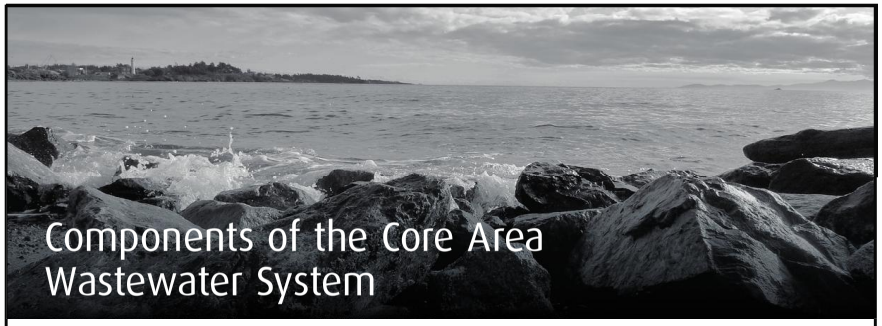


What is involved in treating our wastewater?

Wastewater treatment is a complex undertaking, and one that will involve a host of experts to design, build and operate. Behind the important decisions of where to locate plants, how many to build and what facilities should look like, lies the important issue of procurement. Who should be responsible for designing, building, operating and maintaining the wastewater system? Should the operation of the utility belong to the public sphere or the private? Should the private sector finance a portion of the project? What are the available options and how would each system function?

The CRD is exploring these issues, with expectation of a decision on procurement by April 2010. Open house sessions in February 2010 will provide information on this issue to the public, whose responses and comments will be considered by the Core Area Liquid Waste Management Committee (CALWMC). A procurement workshop with local stakeholders will aid the CRD's decision. The public will also have an opportunity to speak to CALWMC on this issue.

In the following pages, residents can find information on the variety of options available for procuring a wastewater system in the CRD's Core Area, including public, private and hybrid models. Take the time to learn about how wastewater treatment operation could function in the Core Area. It's one of the most important decisions you can participate in during the tenure of the wastewater project.



Components of the Core Area Wastewater System

The majority of the collection and conveyance systems in the region are owned and operated by individual municipalities. As part the CRD's Letters Patent, the CRD is required to maintain trunk sewers to receive wastewater from the municipalities and to provide wastewater treatment and disposal. The CRD's conveyance, treatment and disposal system includes trunk sewers, pumping stations and forcemains that bring wastewater to Macaulay Point and Clover Point for screening and disposal to the ocean. The CRD system is operated and maintained by the CRD.

The implementation of wastewater treatment for the Core Area will require many additional components, including conveyance systems, new treatment plants, a biosolids facility and outfalls. Decisions on procurement will affect how the additional infrastructure is financed, constructed, operated and maintained.

The Core Area Wastewater Project includes treatment facilities at the following locations:

- Saanich East liquids only plant
- McLoughlin Point plant
- West Shore liquids only plant
- Clover Point wet weather facility

The conveyance system will include infrastructure to convey wastewater to these locations. As well, new outfalls will be required for the Saanich East and West Shore wastewater treatment plants. The Core Area Project will also include a central biosolids facility (energy centre) at Hartland landfill or at a site in the Upper Victoria Harbour.

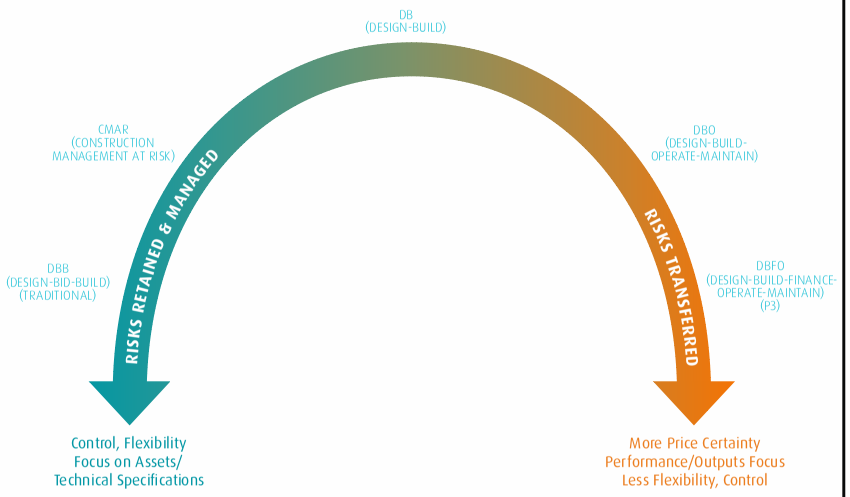
The Energy Centre will include sludge thickening facilities prior to anaerobic digestion, dewatering and drying facilities. Resource recovery at this facility will include phosphorous recovery, biogas and dried biosolids as an energy substitute. Decisions are required on how these facilities should be procured—options include procuring the energy centre separately or as part of bundled procurement with treatment plants.

APPENDIX 2

Types of Procurement Methods: Market Sounding Research Findings

In 2009 the CRD completed market sounding research with industry and stakeholder groups on procurement options for wastewater treatment. This allowed the CRD to learn about stakeholders' views, interest in and benefits and weaknesses of various procurement options. The details of each option are explored on the following pages.

Spectrum of Procurement Contracts



What has the CRD done so far to study business/procurement options?

To date, the CRD has completed a significant amount of research on procurement options for the Core Area wastewater system.

- A Federal Government business case (request for funding) was submitted to the Federal Government in November 2009.
- A procurement strategy was conducted in Summer 2009 to gauge interest from public and private sectors in resource recovery and procurement options.
- Procurement options workshops took place for CALWMC members in October 2009. A discussion paper, which can be found on **www.wastewatermadeclear.ca** as subsequently published.
- The CRD conducted a market sounding and industry consultation questionnaire in Fall 2007.

Evaluation Criteria

To assist in selecting a procurement option for the wastewater treatment project, the CRD will use a Multi-Assessment Criteria (MCA), which is similar to the Triple Bottom Line assessment used thus far in the project. MCA will assess the environmental, social and economic factors associated with procurement choices. Some of the key considerations are listed below.

Environmental Evaluation Criteria

- Regulatory compliance
- Sustainability, resource recovery and greenhouse gas emissions impacts
- Opportunities to adopt best practices for design, construction and operations
- Permitting needed to begin construction

Social Evaluation Criteria

- Staff recruitment and retention; existing staff impact
- Ownership of facilities
- Public acceptance
- Flexibility; level of CRD control; economic impact and benefits to the region and province
- Customer service impacts

Financial/Risk Evaluation Criteria

- Risk allocation and schedule goals
- Level of competition, complexity and feasibility of during the procurement
- Cost certainty for the CRD
- Capital cost; operational costs and efficiencies; lifecycle maintenance costs

Types of Procurement Methods

1 | DESIGN-BID-BUILD (DBB)

The DBB model of procurement is a traditional, public model. Engineering consultants would be contracted by the CRD to provide high level design of the components of the wastewater treatment program. The various components would be put out for public tender with the lowest bidder awarded the contract. Operation and maintenance of the facility would be the responsibility of the CRD. DBB is a common approach used by public sector agencies, and provides a greater focus on the assets and technical specifications of a project.

KEY FEATURES

- CRD controls the bidding process
- Allows for greater public input and discussion
- Government retains ownership and control of assets
- Provides for greater phasing of components, integration of new technologies
- CRD retains some risks and potential for greater cost, schedule and lifecycle risks

2 | CONSTRUCTION MANAGEMENT AT RISK (CMAR)

CMAR is similar to a DBB model of procurement in that facilities are publicly owned and operated. In a CMAR model, however, a construction manager would be hired by the CRD to provide preconstruction services such as constructability, innovation, schedule and cost estimating as the design for facilities progresses. This would allow both design and construction processes to take place concurrently. The CMAR model under consideration by the CRD would also provide for a Guaranteed Maximum Price (GMP), (once the scope is clearly defined) stipulated under contract between the Construction Manager and the CRD.

KEY FEATURES

- Allows for fast tracking and early construction start with early price predictability
- CRD maintains control and ability to influence design
- Provides for greater flexibility, more public input and discussion
- Government retains ownership and control of assets
- CRD retains some risks and potential for greater cost and schedule and lifecycle risks

3 | PROGRESSIVE-DESIGN-BUILD (PRODB)

A PDB model of procurement places greater responsibility on private contractors to develop both high level and detailed design requirements for wastewater facilities. Primary equipment selection, space planning and layouts would be defined for the CRD by bidders; basic requirements for a wastewater system would be defined by the CRD.

KEY FEATURES

- CRD maintains schedule flexibility and standards for equipment
- Provides some price certainty once contracts are finalized
- Increased responsibility on bidder for design and construction risk
- Government retains ownership and control of assets
- Potential for use of short lifecycle equipment or equipment failure and thus greater long term cost
- Lack of long term warranties if bidder staff do not operate facilities
- Potential limiting of innovation to only the construction phase

4 | PERFORMANCE-DESIGN-BUILD (PERDB)

In a Performance DB model the CRD would transfer greater design responsibility to private bidders. Approximately 10% of facility design work, as well as setting minimum standards for certain equipment, would be completed by the CRD. Flexibility in this model exists through choice of specific wastewater systems, equipment and materials that would be used, as detailed plans can be provided for critical areas. However, the majority of design and construction materials are made by the private sector, opening the project up to both innovation or corner cutting. After a comprehensive proposal process, the CRD would select a contractor to design and build the facilities for a guaranteed maximum price.

KEY FEATURES

- CRD may specify detailed design and clear standards for key equipment
- Some price certainty is provided once plans are finalized
- Design and most construction risk rests with private builder
- Government retains ownership and control of assets
- Potential for use of short lifecycle equipment or equipment failure and therefore greater long term cost
- Potential limiting of innovation to the construction phase
- CRD would maintain and operate the system

5 | DESIGN-BUILD-OPERATE-MAINTAIN (DBO)

The DBO model of procurement represents the commonly understood Public-Private Partnership (P3) to procure and operate infrastructure. Using a competitive procurement process a team comprised of an operator, engineering consultant and general construction contractor, together with specialist services providers, would be selected to design, build, operate and maintain wastewater facilities over a long term period.

KEY FEATURES

- Potential for an integrated wastewater system
- Use of lower cost public financing rather than third party debt/equity
- Some risk transfer provided for CRD; potential innovation
- Government retains ownership and control of assets
- Lack of flexibility in design alterations and phasing alternatives, once an agreement is in place
- Potential for use of short lifecycle equipment or equipment failure and therefore greater long term cost

6 | DESIGN-BUILD-FINANCE-OPERATE-MAINTAIN (DBFO)

A DBFO model is an arrangement between a public sector body and a private sector body which results in the private sector providing infrastructure and/or services traditionally delivered by the public sector. Bidders are responsible for assembling a team of firms to collaborate in the delivery of wastewater treatment for the CRD. A key element of a DBFO is transfer of some risk from the public to the private sector partner.

KEY FEATURES

- Potential for an integrated wastewater system
- Some risk transfer provided for CRD; potential innovation
- Government retains ownership and control of assets
- Service provider responsible for hiring operations staff
- Lack of flexibility in design alterations and phasing alternatives, once an agreement is in place
- Potential for use of short lifecycle equipment or equipment failure and therefore greater long term cost
- Third party financing would be higher than CRD obtained financing for a portion of the project
- Operating contract could require voter assent, resulting in delays
- More difficult to terminate contract with financing component.

APPENDIX 2

Procurement is a complex issue, with many components that need to be integrated into the Core Area Wastewater Program. There are a variety of options available to the CRD; each model has unique advantages and disadvantages. Residents are encouraged to learn as much as possible on the procurement issue before making a recommendation or submitting comments to the CRD. Below are some links which detail the pros and cons of procuring infrastructure through public or private means.

Further Information

Canadian Centre for Policy Alternatives **www.policyalternatives.ca**

Partnerships BC **www.partnershipsbc.ca/files/faqs.html**

Canadian Council for Public Private Partnerships **www.pppcouncil.ca**

Public Private Partnerships **www.p3canada.ca/faq.php**

Canadian Union of Public Employees **www.cupe.ca**

www.wastewatermadeclear.ca

Core Area Wastewater Treatment Project

Wastewater Treatment Procurement

Frequently Asked Questions

What is procurement?

Procurement is the way in which the wastewater program will be brought to life, through design, construction, operation and maintenance. Choosing a procurement model will involve determining whether a public or private body will complete these tasks. Procuring the project publicly will mean the CRD, or CRD contractors, would design, build, operate and maintain wastewater facilities. Private procurement would involve delegating these responsibilities to a private body.

What is a P3?

P3 stands for Public Private Partnership. This model of procurement works with private bidders to design, build, operate and maintain an infrastructure project.

Why is the CRD considering options other than a publicly operated utility for the wastewater program?

The CRD will work with both the Provincial and Federal governments on funding for the wastewater program. Each government body will provide one third of the needed funding. Any provincially funded projects in BC exceeding $50 million must comply with the requirements of the Province's Capital Asset Management Framework (CAMF). CAMF requires the CRD to review the use of alternative procurement methods in its business case, including public-private partnerships (P3).

www.wastewatermadeclear.ca

Has the CRD chosen a procurement method for the Wastewater Program?

No. CRD staff and the Core Area Wastewater Management Committee want to make sure that every procurement option is evaluated objectively, so that the program may proceed in a manner which provides the best economic, environmental and social benefit to the region. There is no obligation to go with a P3 model in order to retain Provincial funding.

What options for procurement is the CRD considering for the Wastewater Program?

There are six models under consideration by the CRD. They were developed by the CRD's consultants, in tandem with stakeholder market sounding research. The models range from a fully public, traditional option to a privatized option. Hybrid combinations of these options could also be considered.

How do the different options actually work?

For a detailed description of all models under consideration, the best place to look is the wastewater treatment brochure on procurement, available at the Procurement Open Houses or online at www.wastewatermadeclear.ca. The various models offer greater or lesser CRD control over aspects of facility design, cost and operation responsibility.

Is it possible that more than one procurement option could be used?

A hybrid of two models could be used for procurement, which would use features from both.

How is the CRD evaluating procurement options?

CRD consultants Ernst and Young prepared a final draft discussion paper entitled "Potential Program Delivery Options" which outlines various procurement options and provides preliminary assessment criteria evaluating the environmental, social, environmental and financial issues of each procurement option. A draft of this discussion paper is currently available for public viewing on www.wastewatermadeclear.ca in the "Procurement Business Plan" folder in the Document Archive.

Additionally, the Committee has approved the use of a Business Case Peer Review Team to provide objective oversight in reviewing procurement options for designing, constructing and operating the region's wastewater treatment facilities. The new Business Case Peer Review Team members have no previous involvement in the CRD project thus bringing a fresh perspective to bear; they have no preconceived ideas of the best solution and none have any vested interest in the outcome of the project.

When will a final procurement decision be made?

The Peer Review Team will present their analysis on Feb 24th to the Core Area Liquid Waste Management Committee (CALWMC). CALWMC will then recommend a model to the CRD Board for approval. Procurement decisions will be finalized by April 2010.

How can residents find out more about procurement or give feedback and comments?

On February 10th and 11th, the CRD will host two Procurement Open Houses. These community events will provide information on the components of the Core Area Wastewater Treatment Program, the procurement options under consideration and the criteria developed to date to evaluate them for system construction and operations. They will also give residents a chance to ask questions of staff and provide feedback to the CRD and the CALWMC on the procurement issue.

What are some examples of public, hybrid and P3 procurements for a comparable infrastructure?

PUBLIC

- Whistler Wastewater Treament Plant
- Pine Creek Wastewater Treatement Plant (Calgary)

HYBRID

- Sooke Wastewater Collection and Treatment System

P3

- Abbotsford Regional Hospital and Cancer Centre (ARHCC) Project
- The Vancouver Convention Centre Expansion Project (VCCEP)
- The Britannia Mine Water Treatment Plant

DISCUSSION PAPER

Capital Regional District

Core Area Wastewater Management Program

Potential Program Delivery Options

REVISED UPDATE

January 29th, 2010

Introduction

This discussion paper summarizes the procurement delivery options to be analyzed by the Capital Regional District (CRD) in its business case for the Core Area and West Shore Wastewater Program (the "Program"). It also identifies the preliminary evaluation criteria to be used in the business case for procurement analysis purposes.

Importantly, this discussion paper does not evaluate the procurement options. Such evaluation work is ongoing by the CRD and will be included in the final business case submitted to the Province of British Columbia in support of funding for the Program.

The CRD is seeking Provincial funding support of approximately $306-million. In British Columbia, all projects in excess of $50-million must comply with the requirements of the Province's Capital Asset Management Framework (CAMF).[1] CAMF requires the CRD to review the use of alternative procurement methods in its business case including public-private partnerships ("PPP or P3").

The CRD's preferred configuration for the Program is referred to as "Option 1A" and has been documented in the engineering report "*CRD Core Area Wastewater Treatment Program Wastewater Treatment Plant Option 1A*" prepared by Stantec Consulting Ltd. and Brown & Caldwell, December 08, 2009. The biosolids treatment plan is documented in the report entitled "*Core Area Wastewater Program Biosolids Management Plan Option 1*".

This discussion paper identifies each of the major components of the Program from a procurement perspective. It also summarizes criteria that can be used to evaluate various delivery methods for each component.

The scope of the Program is summarized in Appendix A.

Appendix B contains a summary of the *Market Sounding & Stakeholder Consultation*, April 2008, related to (i) procurement packaging, and (ii) procurement options.

Appendix C contains a summary of potential procurement options considered by CRD.

Appendix D reviews how each procurement approach fits each major component of the Program.

Appendix E includes a summary of typical risk allocations under various procurement contracting approaches.

[1] Details on the Province's requirements are documented here:
http://www.fin.gov.bc.ca/ocg/fmb/manuals/CPM/05_Capital_Asset_Mgmt.htm

The actual procurement plans for each of the major components of the Program will not be finalized and implemented until CRD has established funding commitments from the Provincial and Federal governments.

Program Delivery Planning Methodology

The CRD has significant flexibility in the types of procurement approaches it uses for the major components of the Program. Each of the major components can feasibly be delivered using a variety of procurement methodologies – from traditional design-bid-build to public-private partnership. Given the risk profile, overall scale, and specialized technical requirements of certain components of the Program, it is likely that a variety of contracting strategies will be required for successful implementation. There is no one-size-fits-all approach to delivery of wastewater infrastructure. Virtually every type of procurement methodology has been successfully used for delivery of wastewater projects across North America. This was confirmed during the market sounding and stakeholder consultation process conducted by the CRD and its advisors (April 2008).

Thus the CRD and its advisors implemented the following approach to procurement planning:

1. Identified the major components of the Program for procurement planning.

2. Identified the major procurement options to be analyzed in the business case to ensure the CRD's goals for risk transfer, value for money and social, environmental and financial goals will be achieved. A short-list of three[2] (3) major procurement methods are described below – Traditional, Hybrid and Public-Private Partnership.

3. Identified the key evaluation criteria to be used to assess each procurement option.

This discussion paper summarizes all three of the above steps. The actual evaluation of procurement options and a recommendation on the preferred procurement approach will be finalized in the business case submitted by the CRD to the Province.

[2] Appendix C summarizes the procurement approaches considered. These approaches were reviewed and matched to each major component by the CRD and its advisors based upon the stakeholder consultation and market sounding process.

Program Major Components

The table below breaks out the Program into its major components. Some of the major components have a unique risk profile, technical requirement or other characteristic allowing for stand-alone procurement (e.g. tunnel and outfalls). Other major components can be feasibly packaged together for bulk procurement at the discretion of the CRD (e.g. wastewater treatment facilities and the energy centre).

Program Major Component	Description
A. Conveyance system, pumping stations and storage facilities	The CRD currently operates the conveyance and pumping infrastructure for the main trunk lines within the region. CRD will continue to operate and maintain the new conveyance, pumping and storage facilities. New facilities will be procured in a conventional design bid build procurement. It is anticipated that pumping, conveyance and storage facilities will be procured in separate contracts because each type of work requires specialized contractors with different skill sets.
B. Wastewater treatment plants (liquids only)	The Core Area Program includes two main wastewater treatment facilities at Saanich East and McLoughlin Point, with a third pumping station and limited wet weather primary treatment facility at Clover Point. The existing Macaulay Point pumping station must be closely integrated into these wastewater treatment plants ("WWTP"). The West Shore Program includes an additional WWTP. Each of the WWTPs could be procured separately or all the WWTPs could be bundled together as a single procurement.
C. Energy Centre / Biosolids Facility	The Energy Centre could be procured separately or as part of a bundled procurement with the WWTP facilities. Based upon feedback received during the market sounding process, it would be desirable to have the main Core Area WWTP facility and biosolids facility operated by a single entity because the operation of these processes must be carefully coordinated.
D. Specialized construction work (Outfalls and Tunnel)	The outfalls and tunnel in the Program require specialized engineering and building expertise and thus the CRD has determined that they should be procured separately to "de-risk" the other major work packages and also foster competition among the small number of specialized firms that can provide these services.

E. Resource recovery which includes the following	The key factor in determining packaging and procurement options is the level of assumed integration with each WWTP and the Energy Centre. Resource recovery that can be physically separated from the WWTPs can be procured more flexibly than components that are integrated directly into the WWTP treatment process. The major resource recovery opportunities are anticipated to be as follows: • Biogas from Energy Centre digesters • Collection of fats, oils and greases (FOG) as well as other kitchen wastes and organics for inclusion in the digestion process • Biosolids reuse for energy generation of digested biosolids (e.g. cement kilns) • Struvite recovery • Water recovery from WWTPs • Heat recovery from wastewater effluent • Energy usage in heating district • Other (e.g. energy from digested biosolids used on-site for heat generation) See the table below for details on the bundling of each resource recovery component.
F. Special agreements with BC Hydro, University of Victoria and Terasen gas etc.	The CRD will review these special opportunities on a case-by-case basis and determine if direct negotiations and arrangements should be established between the CRD and each possible partner. Business arrangements for such opportunities will be reviewed as the Program moves forward. Under such special arrangements, the CRD will require any third party wastewater/service provider seeking to partner with such organizations to do so (i) on a non-exclusive basis, (ii) to inform CRD of all discussions related to work on the Program, and (iii) to provide CRD with the right, but not the obligation, to be a joint signatory to any agreement relating to the CRD Program.
G. Long-term plans to manage inflow and infiltration	Given complexity and overlapping jurisdiction issues of I&I, the CRD anticipates that I&I will continue to be managed by each client municipality within the CRD.
H. Demand Management and Source Control Programs	The CRD manages a variety of source control and demand management programs to control contaminants entering the wastewater system and also manage water consumption during summer dry months. All such programs shall remain controlled and managed by CRD.

Resource Recovery Bundling Assumptions

Resource Recovery Component	Bundling with Other Major Component(s)
Biogas from Energy Centre digesters	Can be structured as stand-alone procurement arrangement with clarification of interfaces with Energy Centre operator (if different from biogas service provider). Interface issues to be managed related to access to digesters, quality and quantity of biogas generated by digesters, etc. During the market sounding process Terasen indicated an interest in providing such a stand-alone biogas arrangement. There are also likely other parties who would be interested in purchasing biogas from the Energy Centre. These could include fleet vehicle operators and new developments or industry in close proximity of the Energy Centre.
FOG and Organics Collection	Current collections in the region are provided by private sector firms and the CRD is currently reviewing potential options. It is anticipated that the Energy Centre operator (or CRD) would receive a tipping fee for accepting such organic and kitchen wastes. It is also expected that any required pre-treatment and mixing of such organics prior to blending with the digester would be provided by the Energy Centre operator.
Biosolids reuse for energy generation of digested biosolids (e.g. cement kilns)	This component can be structured as a stand-alone arrangement between the Energy Centre operator (the CRD or other party) and the end-user of the biosolids (e.g. cement kiln operators). Alternative innovative applications could be considered during the procurement phase through use of an “alternative bid” process under a Design-Build or DBFO procurement approach.
Struvite recovery	Preliminary investigations suggest at least one party may be interested in providing this service on a stand-alone basis.
Water recovery from WWTP’s	The membrane bioreactor (MBR) technology currently contemplated for water recovery is fully integrated into the WWTP. Thus separation of this service from general WWTP operations would be challenging. If implemented, water recovery is anticipated to be the responsibility of the WWTP operator with users being charged on a consumption basis. A separate water delivery contractual arrangement and sales program

	could be implemented by the CRD if desired to pre-sell and distribute such water to the end-user.
Heat recovery from wastewater effluent	Heat recovery may be used on-site for buildings. Such uses are clearly integrated into WWTP and Energy Centre operations. Heat recovery could be implemented as an option within a WWTP proposal as an add-on alternative bid.
Energy usage in heating district	Generation of energy for use in a heating district could be structured as an extension of the WWTPs or Energy Centre. The CRD would provide access to treated effluent for heat recovery (within the lot lines of each WWTP) to a potential third party partner. A service provider would be responsible for implementation of the heating district outside the lot lines of each WWTP – including piping ambient or hot water to users and, where necessary, retrofitting buildings or integrating into new buildings. The CRD anticipates such arrangements could be structured as stand-alone agreements, possibly as an allowed "alternative bid" during the procurement process if a Design-Build or DBFO approach to procurement is used. These opportunities would be subject to ensuring sufficient demand or market is available for this heat.

Potential Procurement Methods

Appendix C summarises the procurement methodologies considered by the CRD for the components of the Program. Appendix D matches these procurement methodologies to each major component the Program. Based upon the feedback from the *Market Sounding and Stakeholder Consultation*[3] and input from CRD's engineering and business advisors, the CRD has identified the following three major procurement methods to be analyzed in the business case.

As directed by the CRD, in all procurement options the conveyance system, pumping stations, outfalls and tunnel will be procured using a Construction Management at Risk approach or conventional design bid build approach. The CRD would be responsible for operating and maintaining the conveyance system, tunnel and outfalls.

Each of these options is summarized in the table below with procurement assumptions for each major Program component identified.

Option A: Traditional Approach

This option generally uses Construction Management at Risk ("CMAR") or design bid build ("DBB") for delivery of the major components of the Program.

The CMAR approach would involve the CRD engaging an Engineering Consultant as well as a Construction Manager at the early project stages to refine the concept design, develop the detailed design and prepare a comprehensive project budget and schedule. Through a competitive process, the owner would hire a Construction Manager on a fee basis to work with the Engineering Consultant to provide preconstruction services including constructability, innovation, schedule and cost estimating input as the design progresses. Construction can start on early work packages on a sequential tender bases and once the overall design reaches the 80 to 90% stage the construction manager would provide a Guaranteed Maximum Price ("GMP") for the project. The construction manager typically enters a guaranteed maximum price and schedule with CRD or stipulated lump sum price contract.

The construction manager would tender each package and enter multiple trade contracts with suppliers and sub-contractors and be responsible for ensuring the project is brought in at or below the GMP. The construction manager assumes responsibility for the performance of the trade contracts (subcontracts) much as a general contractor would under traditional procurement.

[3] Appendix B includes a summary of the results of the *Stakeholder Consultation and Market Sounding Process*. The full report is available online at the CRD's document archive: http://www.wastewatermadeclear.ca/media/archived-documents/

Under a design bid build approach the CRD engages an engineering consultant to prepare the design and contract documents. The consultant tenders the project, evaluates tenders and administers the construction contract. Under both the CMAR and DBB arrangement the Owner assumes risks for unknowns or design omissions.

The CRD will be responsible for operating all facilities upon completion of construction.

The CRD will also retain the risk for long-term maintenance of the facilities and overall integration of the various components.

Delivery and operations of resource recovery components of the Program would vary by type of resource as described in more detail in the table below.

Option B: Hybrid Approach

This option utilizes a variety of procurement methodologies. These options were evaluated in detail in Appendix D and matches to each major component.

The option generally uses the Design-Build approach to procurement for the wastewater treatment facilities, plus a design, build, finance, operate and maintain ("DBFO") approach for the Energy Centre and West Shore treatment plant. Construction Management at Risk or design bid build is assumed for the conveyance system, outfalls and tunnel. Depending on scheduling requirements it is also possible that some of the treatment facilities could be delivered using CMAR.

The CRD would operate the WWTP's developed as design-build or CMAR, and would also be responsible for all maintenance and repair risks beyond the warranty period (typically two years from completion of construction). The CRD would also operate and maintain the conveyance system and pumping stations. Components developed using a DBFO approach would be operated and maintained by a third-party service provider under a long-term contract. The CRD would own all facilities regardless of the procurement method.

The Design-Build approach to procurement is described in Appendix C.

Delivery and operations of resource recovery components of the Program would vary by type of resource as described in more detail in the table below.

Option C: Public-Private Partnership Approach

This option generally uses a DBFO or DBO approach to procure the WWTP's and Energy Centre. As described in Appendix D, for the purposes of this analysis a large DBFO

procurement package has been selected for McLoughlin Point WWTP, Saanich East WWTP, Clover WWTP and the Energy Centre. A stand-alone DBFO is also included for the West Shore WWTP.

Resource recovery responsibility would generally be managed by DBFO service providers as described below.

DBO Versus DBFO

For analysis purposes this discussion paper assumes a DBFO approach for certain components of the Program. The CRD wishes to consult with the Province on the utilization of the design-build-operate (DBO) approach to procurement for these components during final procurement implementation. The CRD is flexible on the selection of DBO versus DBFO for delivery. While recognizing the DBFO approach has stronger risk transfer attributes, the CRD also acknowledges the DBO approach may generate more interest from wastewater industry specialist firms. Since only the Provincial piece of funding is anticipated to be financed using a DBFO approach, the CRD will work with the Province to structure the funding arrangements to meet expectations and mutual interests of the stakeholders.

Procurement Options for Each Major Program Component

Procurement Packages	Procurement Option A "Traditional"	Procurement Option B "Hybrid"	Procurement Option C "PPP/DBFO"
A. Conveyance System - trunk conveyance - pumping stations - storage facilities - monitoring & control	Design-Bid-Build CRD operates and maintains	Design-Bid-Build CRD operates and maintains	Design-Bid-Build CRD operates and maintains
B1. West Shore WWTP	Design, Bid, Build or Construction Management at Risk CRD operates and maintains	Stand-alone DBFO[a]	Stand-alone DBFO[a]
B2. Saanich East WWTP	Design, Bid, Build or Construction Management at Risk CRD operates and maintains	Construction Management at Risk CRD operates and maintains	Bundled DBFO[a] package including: Saanich East McLoughlin Point Clover Point Energy Centre/Biosolids Facility
B3. McLoughlin Point WWTP	Design, Bid, Build or Construction Management at Risk CRD operates and maintains	Design-Build CRD operates and maintains	
B4. Clover Point WWTP	Design, Bid, Build or Construction Management at Risk CRD operates and maintains	Design-Build CRD operates and maintains	
C. Energy Ctr./Biosolids Ctr.	Design, Bid, Build or Construction Management at Risk CRD operates and maintains	Stand-alone DBFO[a]	
D1. Outfalls	Traditional Procurement (either Design-Bid-Build or Construction Management at Risk) CRD operates and maintains	Traditional Procurement (either Design-Bid-Build or Construction Management at Risk) CRD operates and maintains	Traditional Procurement (either Design-Bid-Build or Construction Management at Risk) CRD operates and maintains

[a] Note all DBFO options are anticipated to generally use a maximum of up to 1/3 private sector financing for capital costs. The other 2/3 of financing for capital costs are assumed to be provided by the CRD and the Federal government. It is possible such components may be procured using a design-build-operate approach. The CRD will consult with the Province prior to making a final decision on this matter.

D2. Tunnel	Traditional Procurement (either Design-Bid-Build or Construction Management at Risk) CRD operates and maintains		Traditional Procurement (either Design-Bid-Build or Construction Management at Risk) CRD operates and maintains		Traditional Procurement (either Design-Bid-Build or Construction Management at Risk) CRD operates and maintains	
E. Resource Recovery	Biogas from Energy Centre digesters	Stand-alone DBFO for gas upgrading and sales to distribution network.	Biogas from Energy Centre digesters	Stand-alone DBFO for gas upgrading and sales to distribution network.	Biogas from Energy Centre digesters	Part of DBFO contract.
	FOG and Organics Collection	CRD outsources collection under rolling contract.	FOG and Organics Collection	CRD outsources collection under rolling contract.	FOG and Organics Collection	Responsibility for collections transferred to DBFO service provider.
	Biosolids reuse for energy generation of digested biosolids (e.g. cement kilns)	Cement kiln sales CRD negotiates and manages	Biosolids reuse for energy generation of digested biosolids (e.g. cement kilns)	Cement kiln sales CRD negotiates and manages	Biosolids reuse for energy generation of digested biosolids (e.g. cement kilns)	Part of DBFO contract. Assumes cement kiln, no land uses.
	Struvite recovery	Stand-alone DBFO	Struvite recovery	Stand-alone DBFO	Struvite recovery	Part of DBFO contract.
	Water recovery from WWTPs	CRD builds, manages, operates	Water recovery from WWTPs	CRD builds, manages, operates	Water recovery from WWTPs	Part of DBFO contract.
	Heat recovery from wastewater effluent	Used on-site at WWTPs to heat buildings	Heat recovery from wastewater effluent	Used on-site at WWTPs to heat buildings	Heat recovery from wastewater effluent	Part of DBFO contract. Assume used on-site at WWTPs to heat buildings
	Energy usage in heating district	CRD WWTPs function as “platform enablers” for possible separate DBFO for	Energy usage in heating district	CRD WWTPs function as “platform enablers” for possible separate DBFO for	Energy usage in heating district	Optional part of DBFO contract. No heating district assumed implemented in current analysis.

Resource Recovery ….continued		heating loop.		heating loop.		
	Other	No additional resource recovery currently included in analysis.	Other	CRD to consider limited "alternative bid" proposals for other resource recovery at Biosolids/Energy Centre as well as WWTPs built as design-build during procurement. No additional resource recovery currently included in analysis.	Other	CRD to consider limited "alternative bid" proposals for other resource recovery during procurement. No additional resource recovery currently included in analysis.
			Same as Traditional Approach except for more flexible "alternative bid" process in procurement implementation.		For analysis purposes, similar resource recovery assumptions have been used in the DBFO option, however all such applications are assumed to be rolled under the large DBFO contract. An "alternative bid" process will also be used to allow further flexibility in resource recovery under this option.	
F. Special Agreements (for example, such parties may include one or more of the following: BC Hydro, Terasen Gas, UVic, Royal Roads etc.)	CRD negotiates special off-take agreements directly with each party.		CRD negotiates special off-take agreements directly with each party.		CRD enters tri-partite negotiations with DBFO service provider and each special party.	
G. Inflow & Infiltration Management	CRD and Client Municipalities to coordinate maintenance and repairs over long-term.		CRD and Client Municipalities to coordinate maintenance and repairs over long-term.		CRD and Client Municipalities to coordinate maintenance and repairs over long-term.	

Preliminary Assessment Criteria of Delivery Options

The business case will use a multiple-criteria assessment ("MCA") approach for evaluation of procurement options. The MCA approach is flexible and takes into consideration a variety of qualitative issues when making procurement decisions. The preliminary list of assessment criteria are identified below. Criteria are selected based upon CRD's overall goals and objectives for the Program as well as input from CRD staff and advisors[4].

Environmentally-Orientated Criteria

Criteria	Issues Considered
a) Regulatory Compliance	The extent to which each delivery option complies with regulatory requirements and can adapt to meet changes in regulatory requirements in the future.
b) Sustainability and greenhouse gas emissions impacts including for Resource Recovery etc.)	The extent to which each delivery option incorporates measures for resource recovery and also reduces impacts on climate change.
c) Opportunities to adopt best practices	The extent to which each delivery option offers opportunities to adopt best practices in design, construction or operations.
d) Permitting	The extent to which each delivery option allows for timely achievement of the required Federal and Provincial permits to begin construction.

Socially-Orientated Criteria

Criteria	Issues Considered
a) Staff recruitment and retention, and impact on existing staff	The extent to which each delivery option allows for the recruitment, training and retention of qualified and competent staff. The extent to which each delivery option has an impact on relationships with existing staff, their collective agreements, and staff in other CRD areas of work.
b) Ownership of Facilities	Who will own the facilities (land, buildings and engineering equipment)?

[4] CRD also utilized evaluation from other wastewater projects including the Pima County report entitled *Regional Optimization Master Plan Alternative Delivery Methods*, August 2008.

c) Public acceptance and communications impact	Consideration of the likely public acceptance of each of the delivery options.
d) Flexibility and control to make changes during the development and operations phases	The extent to which each delivery option allows the CRD to make changes during the development phase of the project whilst not impacting adversely on schedule or cost. The extent to which each delivery option allows the CRD to make changes during the operations phase of the project whilst not impacting adversely on schedule or cost (e.g. changes for inflow and infiltration, resource recovery technologies, a more distributed collection and treatment, future changes in regulation, expansion, plus input from neighbours surrounding facilities). The ability of the CRD to protect the public interest during both the design and construction phase and during long term operations.
e) Customer Service	How each delivery option provides the required levels of service to the member municipalities in a timely manner (including changes in growth patterns and service requirements, septic tank utilization etc.) and how concerns of local residents can be addressed?
f) Regional economic impact	The ability for the delivery option to provide maximum economic benefit to the CRD and British Columbia in terms of jobs and other economic benefits.

Financial and Risk-Orientated Criteria

Criteria	Issues Considered
a) Risk Allocation Goals	Consideration of how the proposed delivery option allocates risks with the objective of transferring risks to the party best able to manage each risk. This would include consideration of the guarantees that the public sector entity would receive in respect of long-term performance of the assets and the ability of the CRD to enforce the risk allocation over the duration of the contract.
b) Procurement and Implementation Schedule	How each delivery model affects the proposed project procurement and implementation schedule? This criterion considers financial incentives for timely completion together with levels of complexity associated with each delivery option. It also considers budget and schedule risks during the procurement phase.
c) Level of competition	The extent to which each delivery option impacts on the likely market

during the procurement	interest in the project to ensure that there is competitive tension in the procurement process.
d) Cost certainty	The extent to which each delivery option provides the CRD with price certainty during the design and construction phase as well as over the long-term operational period.
e) Complexity of immediate and future procurement	Feasibility of procurement packaging plan and ability to implement with CRD's multi-year, multi-component build-out Program.
f) Lifecycle maintenance	The extent to which each delivery option manages and provides for long-term lifecycle costs and minimises deferred maintenance of the facilities.
g) Risk adjusted capital cost	The risk adjusted capital costs of each delivery option.
h) Operational efficiencies	The potential for operational efficiencies that could be achieved by each delivery option.
i) Risk adjusted whole life cost (NPC)	The risk adjusted net present cost of the project over the life of the contract.

The final business case will analyze each procurement method and assess each component of the Program against these criteria. Only after completion of the financial analysis, risk analysis and MCA analysis will a recommendation be feasible on procurement matters.

APPENDIX A

Summary Scope of Program

The Program includes the following work that is scheduled for completion by the end of 2016.

Summary of the Core Area Program

Major Core Area Components	Scope of Work in Component
Conveyance & Trunk Sewer Upgrades	• Upgrades to existing forcemain at Clover Point pump station • Upgrades to the Macaulay outfall • Conveyance works between Macaulay Point and McLoughlin Point • Conveyance works between Clover Point and McLoughlin Point.
Macaulay Point Pump Station	• Upgrade and expansion of Macaulay Point Pump station to transfer flows to the McLoughlin Point plant. • A new forcemain to transfer flows from Macaulay pump station to McLoughlin WWTP.
Wastewater Treatment Facilities	• A new 16.1 Ml/d Saanich East (liquids only) secondary treatment plant for flows up to 1.75 times average dry weather flow (**ADWF**). Flows between 1.75 ADWF and up to four times ADWF shall receive primary treatment. Biosolids are returned to the conveyance system for downstream treatment. Note effluent up to two times ADWF will satisfy secondary-level treatment requirements through the use of an innovative strategy of blending flows from membrane bioreactor in this facility. A new outfall is proposed at this facility. • A new 84.2 Ml/d McLoughlin Point secondary treatment plant serving the Macaulay sewerage catchment for flows up to two times ADWF from the northwest trunk (Macaulay catchment) and from Clover Point, and primary treatment for flows up to four times ADWF. • Some expansion work of the existing Macaulay Point pump station linking to the Macaulay Point outfall. Treated effluent from the new McLoughlin treatment facility will be conveyed to the Macaulay Point pump station for discharge through the existing and new outfall at that location.
Clover Point Pumping Station	• A pump station at Clover Point that will pump two times the ADWF at this location to McLoughlin Point for secondary treatment.

	• Wet weather flows over two times ADWF up to four times ADWF will receive primary treatment. • Extreme wet weather flows over four times ADWF shall be screened and discharged.
Biosolids Treatment Facility	A centralized biosolids facility will be implemented for the Combined Program. The current biosolids management plan (**BMP**) contemplates a centralized biosolids facility at the Hartland Landfill site. The plan includes a sludge conveyance pipe from the McLoughlin Point WWTP to the Hartland Landfill biosolids facility. (As noted later, a biosolids processing and resource recovery facility at an upper harbour industrial site is also under consideration.) The CRD has conducted an extensive analysis of alternatives for the BMP. The current plan for the BMP is referred to as Option 1. The CRD's biosolids facility will process the biosolids generated by primary and secondary treatment in a manner that will optimize opportunities for beneficial use by: • using thermophilic anaerobic digestion to stabilize and reduce solids, kill pathogens and generate methane gas (biogas) for use onsite or offsite in the natural gas distribution system, • drying some or all of the digested biosolids and selling it as a fuel for cement kilns, paper mills or other energy facilities; and / or • Extraction of Struvite (phosphate) from dewatering centrate for use as fertilizer. The biosolids facility will treat sludge to produce equivalent USEPA Class "A" standard. The BMP uses year 2030 as the design horizon. The table below shows the expected flows and loads for the CAWTP. The flows shown represent the dry weight per day of the estimated biosolids generation. These estimates are based on Option 1A system configuration with a population equivalent of 493,000 (342,000 population plus 151,000 population equivalent, industrial, commercial and institution). See to Appendix 3 for details.

Item	Average Day (kg/day)	Peak day (kg/day)
Primary Solids	12,700	20,200
Secondary Solids	16,800	24,500
Total Raw Solids	29,400	44,700
Total Raw Volatile Solids	24,700	37,500

Outfalls and Tunnels	Treated wastewater from the WWTPs will be discharged to the marine environment through existing outfalls. Some upgrade work on the outfalls is necessary, including: • Twinning of the existing major marine outfall at Macaulay Point, and • Expansion and extension of the existing marine outfall at Finnerty Cove. • Tunnel works for conveyance between Clover Point and McLoughlin Point.
Resource Recovery & Sustainability Initiatives	• Each secondary treatment plant will produce reclaimed water suitable for irrigation, toilet flushing and other uses. • Generation of methane gas at the biosolids facility for use onsite or offsite in the natural gas distribution system. • Biosolids digesters shall include adequate capacity to accept clean food waste and/or fats, oils and greases (**FOG**) to enhance production of biomethane by up to 50%. • Will recover waste heat from the digesters to pre-heat sludge feed (reducing heat required by digesters). • Reuse of digested biosolids for sale as fuel for cement kilns, paper mills, or other energy facilities, Extraction of Struvite (phosphate) from biosolids for use as fertilizer. • Possible implementation of heat recovery exchangers for heating district (under review).
Operations	• CRD shall ensure ongoing operations of the facilities (including the possibility of contracting with third party providers for certain services).

Summary of West Shore Program

The CRD is working with the West Shore communities of Colwood and Langford to establish a plan for the implementation of wastewater management systems in those areas. The current plan includes the following facilities for the West Shore Program:

Major West Shore Components	Scope of Work in Component
Wastewater Treatment Facilities	• A 14 Ml/d West Shore secondary treatment plant for liquid-only flows up to two times ADWF from the northwest trunk, and primary treatment for flows up to four times ADWF.
Biosolids Facility	• The current plan assumes biosolids are returned to the conveyance system for downstream treatment at the Core Area centralized biosolids facility.
Conveyance & Trunk Sewer Upgrades	• Conveyance works between West Shore and McLoughlin Point. • Onshore conveyance from WWTP to shoreline of outfall.
Outfall	• A new outfall extending from West Shore WWTP shoreline to southern marine discharge.
Resource Recovery & Sustainability Initiatives	• Resource recovery components of West Shore Program expected to be similar in breadth to planned Core Area Program initiatives.

Appendix B

SUMMARY OF THE MARKET SOUNDING AND STAKEHOLDER CONSULTATION REPORT, April 2008

The CRD conducted an extensive industry and stakeholder consultation in 2008 to obtain market feedback on procurement packaging options. The results of the market sounding were documented in the report "*Market Sounding & Stakeholder Consultation*", April 11, 2008. This report is available on the CRD's website at www.WastewaterMadeClear.com.

The overall Core Area and West Shore system being planned by CRD can generally be grouped into four distinct physical components (the "Technical Components"):

1. Wastewater Treatment Plants ("WWTP's") generally assumed at Macaulay Point area, Clover Point area, West Shore plus Saanich East in accordance with *The Path Forward* report;
2. Biosolids Plant and Plant Management;
3. On-Shore Linear Structures (conveyance systems and associated pumping stations); and
4. Marine outfalls (generally assumed on West Shore plus Finnerty Cove).

Subject Area of Interest to CRD	Summary of Feedback
Contract Packaging	• There was broad divergence in views on recommendations for the procurement packaging strategy. Eight (8) respondents stated that they recommended the overall Project be procured as a single system or a small number of large component packages, whereas twelve (12) respondents recommended breaking it down to a number of well-defined components. Six (6) of the respondents hedged their opinions by presenting arguments for both single and multiple procurement packages. • Respondents that favored the consolidated large-scale approach typically assumed the new linear infrastructure to be constructed would most likely be operated and maintained by the CRD.
Benefits & Weaknesses of Large-Scale Packaging Procurement	• The arguments in favour of procuring the Technical Components in a large package included lower life-cycle costs through integration efficiencies, greater risk transfer, single source accountability, and reduced procurement costs. • The weaknesses of packaging the work into a single large procurement included the need for a large contract bond by the prime contractor (thereby limiting the number of firms who could bid); insufficient due diligence information available to allow firms to bid; difficulty for firms locking-in costs over a long-term contract and procurement phasing plan; and, the nature of CRD's plan requires some flexibility and phasing which is not well suited to single

	package procurement.
Benefits & Weaknesses of Multi-Component Packaging Procurement	• The arguments in favour of breaking procurement into multiple packages are that it would increase the number of firms that could bid (smaller firms); it would allow CRD more flexibility for procurement (using different procurement approaches for components); and it may diversify risk across multiple parties during implementation. • The weaknesses of using multiple procurement packages were that it would require CRD to manage interface risk among packages; it would require CRD to manage multiple procurement contracts; it may lead to scheduling challenges and delays; it may limit innovation across the overall system (but innovation within each package may be improved); and, there may be higher procurement costs.

Procurement Options	• Overall, there was no clear preferred procurement option among respondents. Respondents argued convincingly in their submissions and follow-up discussions for a variety of procurement methodologies – from traditional procurement to full public-private partnership approaches.
	• Multiple respondents supported a DBFO for one or more components of the project as long as the CRD could address key issues related to:
	  ○ supply of additional due diligence materials,
	  ○ establishment of reasonable risk transfer expectations, and
	  ○ confirmation of clear political-level support for the procurement.
	• The design-bid-build traditional procurement approach was generally acknowledged as providing CRD with the most flexibility.
	• Those respondents supporting a DBFO approach to contracting and procurement cited the following reasons:
	  ○ Risk transfer
	  ○ Lowest life-cycle cost
	  ○ Greater potential for innovation
	  ○ Greater cost certainty
	  ○ Single point of accountability
	• Respondents who suggest a mixed approach to procurement for each Technical Component cited the following reasons:

	○ CRD flexibility. ○ Control over procurement scheduling. • Respondents who preferred more traditional approaches to procurement like design-bid-build (DBB) cited the following reasons: ○ Allows more public input and discussion. ○ Complexity of CRD's system requires flexibility in procurement over multiple years for phasing of components, integration of new technologies and accommodation of water reuse and renewable technologies. ○ Allows CRD to achieve scheduling targets.
Operations	The arguments in support of <u>CRD assuming responsibility</u> for operations and maintenance of all WWTP's included: • The historically positive Canadian experience with public sector responsibility for operations and maintenance, • Allowing continuation of existing CRD responsibilities of maintaining resources and current operations and maintenance, and • Public operation allows flexibility to accommodate future advances in treatment technology, water reuse and sustainability targets (as noted "*One of the disadvantages of multi-decade [*DBFO contracts*] is that changes in technology or requirements are not easily accommodated*…"). The arguments in support of the <u>private sector assuming</u> responsibility for operations and maintenance of WWTP's included: • Ability of CRD to transfer risk to private sector, • A perception that the private sector may be able to provide better career opportunities for personnel (thus easier to hire and retain senior, qualified staff), • Perception of improved innovation, • Clear delineation of responsibilities for performance and control/regulation, and • CRD realizes greater cost certainty.

Appendix C

Description of Potential Delivery Options

The CRD conducted an extensive industry and stakeholder consultation on procurement as described in the report "*Market Sounding & Stakeholder Consultation*", April 2008. The following table summarizes the potential delivery options identified as feasible during the market sounding process.

Procurement option	Strengths	Weaknesses
Design-Bid-Build ("DBB") Under a design bid build approach the CRD engages an engineering consultant to prepare the design and contract documents. The consultant tenders the project, evaluates tenders and administers the construction contract. Under this arrangement the Owner assumes risks for unknowns or design omissions. Such arrangements require design work to be completed to a high level and thus there is limited room for innovation once design documents have been approved by CRD. Associated project and construction management services are either included in the scope of the Engineering Consultant responsible for the design or awarded as a separate contract(s). Operation and maintenance of the completed facilities is either the responsibility of the CRD or a private sector operator(s).	• Common approach used by public sector agencies. • Understood by advisors and supplier community. • CRD retains control of the bidding process for each sub-component of the Program. • Bonding flexibility. Allows CRD to break up the bidding of the Program into smaller pieces that can be delivered by smaller firms (with lower bonding capacity). • Allows more public input and discussion. • Provides flexibility in procurement over multiple years for phasing of components, integration of new technologies and accommodation of renewable technologies. • Allows CRD to achieve scheduling targets.	• Integration risks. CRD remains responsible for ensuring integration of the components of each facility plus the overall Program. • Cost and Schedule Risks. Sometimes leads to scope expansion and changes, creating both delays and higher costs. • Requires CRD to hire new operators for all new facilities. • Commissioning and transition from development phase to operations phase can be challenging (and at CRD risk). • Lifecycle risks. CRD will be responsible for all costs after expiry of warranties in 1-2 years after completion.

Construction Management at Risk (Construction Manager as Constructor, not Agent) ("CMAR") The CMAR approach would involve the CRD engaging an Engineering Consultant and Construction Manager at the early project stages to refine the concept design, develop the detailed design and prepare a comprehensive project budget and schedule. Through a competitive process the owner would hire a construction manager on a fee basis to work with the engineer to provide preconstruction services including constructability, innovation, schedule and cost estimating input as the design progresses. Construction can start on early work packages on a sequential tender bases and once the overall design reaches the 80 to 90% stage the construction manager would provide a Guaranteed Maximum Price ("GMP") for the project. The construction manager typically enters a guaranteed maximum price and schedule with CRD under a cost-plus arrangement or stipulated price contract. The construction manager would tender each package and enter multiple trade contracts with suppliers and sub-contractors and be responsible for ensuring the project is brought in at or below the GMP. The construction manager assumes responsibility for the performance of the trade contracts (subcontracts) much as a general contractor would under traditional procurement. The	• Allows fast-tracking (over-lapping permitting, design and construction). • Allows for early construction start with early price predictability. • CRD maintains control and ability to influence design. • Flexibility for change. • Allows CRD to achieve schedule targets. • Allows more public input and discussion.	• Cost certainty not known before construction commencement. • Integration risks. CRD remains responsible for ensuring integration of the components of each facility plus the overall Program. • Cost and Schedule Risks. Sometimes leads to scope expansion and changes, creating both delays and higher costs. • Requires CRD to hire new operators for all new facilities. • Commissioning and transition from development phase to operations phase can be challenging (and at CRD risk). • Lifecycle risks. CRD will be responsible for all costs after expiry of warranties in 1-2 years after completion.

Engineering Consultant typically enters a guaranteed maximum price and schedule with CRD under a cost-plus arrangement or stipulated price contract. The CRD will be responsible for operating all facilities upon completion of construction. The CRD will also retain the risk for long-term maintenance of the facilities and overall integration of the various components. Delivery and operations of resource recovery components of the Program would vary by type of resource as described in more detail in the table below.		
Alliance Partnering ("AP") Through a competitive process a private sector consortium would be selected to partner with the CRD and its stakeholders working together to develop and deliver the Project. In order to ensure adequate levels of competition exist during the process there would be a series of gateway reviews to ensure competitive tension is maintained and value for money is achieved.	• Good for projects with ambiguous scope. • Good when fast-tracking is required.	• Few precedents in Canada. • Less certainty around costs. • May lead to schedule delays.
Design-Build Design build, as contemplated by the CRD, involves developing the design to no more than 25% to 30% completion of drawings. A point where major design requirements are defined to a greater extent or level of detail rather than just providing a high level	• Allows CRD to maintain schedule flexibility for staging of procurement. • Allows CRD to specify detailed design and clear standards for equipment to reduce the risk of long term maintenance and operability issues. • Provides CRD with price certainty once	• For equipment not specified by CRD, bidders may suggest equipment which has a short maintenance lifecycle and thus long-term whole life costs to CRD will be higher. Long-term warranties (beyond 2 years) are not provided by bidders if their staff do not operate the facilities, thus CRD

performance requirements and specifications. Issues such as primary equipment selection, space planning and layouts for maintenance are defined to provide the Owner with better long term operability and performance. This does not preclude the design builder from innovation and providing alternative bids, provided that the proposal meets the Owner's basic facility requirements.	plans are finalized and fixed price contract entered with design-build firm. • Design builder is responsible for many design and construction risk (mainly equipment and designs no specified in the bid documents). • Allows more input into design phase and facility development. • Allows CRD to provide input into the quality of critical process equipment specified for inclusion in the base design and enables standardization for maintenance purposes.	is at risk to equipment failure costs after the expiry of the warranty period. • If extensive design work is specified by CRD as part of the bid documents then innovation and competition may be limited to the construction phase. This may be mitigated by allowing bidders to provide a "base case" bid conforming to such requirements plus "alternative bids" which deviate from the specified plans and include innovative new designs and solutions for consideration by Owner. • The complexity of the CRD Program may make it difficult to the CRD to define end requirements.
Design-Build-Operate-Maintain ("DBO") ▪ Using a competitive procurement process a "team" comprising an Operator, Engineering Consultant and General Construction Contractor together with specialist service providers is selected to design, build, operate and maintain the facilities over a long-term period.	• Provides integrated solution for CRD and potential for efficiencies through integrated planning of entire system over whole life. • Uses public financing which has lower cost than third party debt and equity. • Achieves some risk transfer for CRD. • Offers potential for innovation. • Offers cost certainty for CRD at bid phase. • One party is accountable for performance. • Government retains ownership and control of assets. • Service provider assumes responsibility for hiring operations staff.	• Lack of flexibility to change design once accepted by CRD. • May require a large contract bond by the prime contractor (thereby limiting the number of firms who could bid). • Requires CRD to conduct further due diligence prior to the procurement phase which could impact on the timeline. • The nature of CRD's plan requires some flexibility and phasing which is not well suited to single package procurement.

Design-Build-Finance-Operate-Maintain "("DBFO") ▪ A DBFO is an arrangement between a public sector body and a private sector party, resulting in the private sector party providing infrastructure and/or services that are traditionally delivered by the public sector. A key element of a DBFO is transfer of risk from the public partner to the private sector partner. ▪ Bidders are responsible for assembling a team of firms – from wastewater engineering/designers to operators and financiers. All would collaborate for the delivery of the performance requirements of CRD.	• Provides integrated solution for CRD and potential for efficiencies through integrated planning of entire system over whole life. • Achieves greater risk transfer at some cost for CRD. • Offers potential for innovation. • Offers cost certainty for CRD at bid phase. • One party is accountable for performance. • Government retains ownership and control of assets. • Service provider assumes responsibility for hiring operations staff. • Lenders will carry out on-going diligence and monitoring throughout the term of the project.	• Lack of flexibility to change design once accepted by CRD. • Costly and complex bidding process. • Significant time required to prepare bid documents to ensure interests of CRD are protected. • May be a lack of capacity in the marketplace to deliver the larger components. • May require a large contract bond by the prime contractor (thereby limiting the number of firms who could bid). • Requires CRD to conduct further due diligence prior to the procurement phase which could impact on the timeline. • The nature of CRD's plan requires some flexibility and phasing which is not well suited to single package procurement. • Availability of third party financing remains uncertain in post-credit crisis environment. • Cost of third party financing will be higher than CRD cost of MFA funds. • If length of operating contract exceeds five years then voter assent may be required to enter such contract, further delaying the implementation process.

Appendix D

Delivery Options for Major Components of Program

This appendix summarizes how each major component of the Program was evaluated against the delivery options considered in Appendix C.

Under all options the CRD directed that conveyance and pumping stations shall be procured using a traditional approach (with CRD operating such facilities over the long-term). This approach has been used successfully in the past by CRD and has resulted in smaller local contractors providing competitive bids.

Importantly, the CRD is exploring the opportunity of acquiring an alternative site for the Energy Centre which may allow this facility to be combined with the main McLoughlin Point WWTP. Under such an arrangement a large-scale bundled procurement would likely be considered. If this is implemented then cost information may significantly change as it may be possible to combine facilities and / or reduce the number of facilities constructed. This option would be subject to further technical and financial assessment.

The West Shore communities (Langford and Colwood) have expressed an interest in implementing a procurement plan separate from the Core Area. Thus, for the purposes of the business case the liquid-only wastewater treatment facility in the West Shore is assumed to be procured separately in all options.

The CRD wishes to consult with the Province on the funding of DBFO components of the Program and would consider using a DBO approach or a DBFO approach for implementation of the preferred option. A DBO approach would require the Province's funding contribution is advanced as a grant during construction to the Program.

The three main delivery options considered in this discussion paper are described below.

Option C: Public-Private Partnership Procurement

The CRD conducted a review of various procurement options available for each major component of the Program as well as the requirements of the Province under Capital Asset Management[5] policy 5.3. Since the CRD is seeking Provincial funding support of over $300-million for the Program, the business case submitted to the Province must consider a public-private partnership (PPP or P3) as the base case procurement option. This P3 option is described in this discussion paper as "**Option C: P3 Procurement**".

To ensure compliance with Provincial expectations, Option C assumes all major components of the Program are delivered using a using a DBFO approach (including resource recovery components). The CRD chose to analyze a large-scale bundling plan in Option C including the three Core Area WWTPs and the Energy Centre packaged together in a single bundled

[5] The Provincial capital planning policy requires a review of alternative procurement options in any business case seeking funding over $50-million from the Province of British Columbia. These requirements are documented here:
http://www.fin.gov.bc.ca/ocg/fmb/manuals/CPM/05_Capital_Asset_Mgmt.htm

procurement (implemented over several years). Such an approach has the following benefits (based upon market sounding feedback):

- anticipated lower life-cycle costs through integration efficiencies
- greater risk transfer (fewer integration challenges for the CRD)
- single source accountability, and
- reduced procurement costs.

Plus this bundled approach will be applicable if the CRD acquires an alternative site that allows consolidation of the downtown WWTP and Energy Centre.

This large-scale package has a total estimated capital cost of approximately $665-million and represents a significant procurement opportunity. The CRD notes that under current Provincial funding assumptions, only one-third of this amount would be funded using non-public sector sources (a $222-million DBFO). Despite current challenging financial markets, this scale of DBFO is believed to be feasible. The risk of this large package is that few Canadian firms could pursue it, and the competitive process would be limited to a small number of large scale global firms. Implementing such a plan as a DBO may improve the competitiveness of the procurement and attract more bidders.

Option C also assumes the West Shore is procured using a stand-alone DBFO approach.

The CRD acknowledges this option could also be procured using three separate or phased DBFO procurements: One DBFO for the liquid-only wastewater treatment facilities in the Core Area (McLoughlin Point, Clover Point and Saanich East), one for the West Shore and a separate DBFO for the Biosolids/Energy Centre.

The outfalls and tunnel were specifically carved out of this procurement package to "de-risk" the DBFO plans and facilitate a more competitive overall procurement (including the outfall on the West Shore). The number of firms able to provide specialized marine work required for the outfalls and tunnel is limited in the Pacific Northwest. Therefore CRD's advisors recommended separating these components from core wastewater treatment facilities and procuring the specialized components using a more traditional approach. This will ensure bidders to the main WWTP facilities are not limited due to the limitations on availability of service providers (sub-contractors) on the marine outfall and tunnel components. Overall competitions and value for money is anticipated to be optimized using this approach.

Option A: Traditional Procurement

The CRD Core Area Liquid Waste Management Committee ("CALWMC" or the "Committee") expressed an interest in reviewing the value for money attributes of a traditional approach to procurement. Thus, "**Option A: Traditional**" was added to the business case analysis. Option A procures all components of the Program using the traditional design-bid-build or construction management at risk. Such approaches have been used for the majority of major wastewater treatment facilities constructed in Canada.

Option A and Option C establish “bookends” for analysis purposes.

Option B: Hybrid Approach

The CRD also wanted to analyze an intermediate option that included a variety of procurement approaches. Such an approach may provide overall benefits to the project. This option is evaluated in detail below.

Multi-Criteria Assessment of Option B: Hybrid Approach Components

This table summarizes the preliminary screening and assessment of procurement options for the major components of the Program under a Hybrid delivery.

For assessment purposes, the major components are evaluated together as follows:

1. Conveyance System
2. Outfalls and Tunnel
3. Wastewater treatment facility (including West Shore, Saanich East, McLoughlin Point and Clover Point)
4. Energy Centre / Biosolids Facility.

1. Conveyance System

As noted above, the CRD has directed that the conveyance system will be procured using a traditional approach or design-bid-build ("**DBB**") and/or construction management at risk ("**CMAR**"). This analysis has not evaluated how CMAR versus DBB will be used for each major component; while the risk profile of each differs, it is noted that for the purposes of the overall business case analysis the differences between DBB and CMAR are not material. Each would be considered a traditional approach by the Province and each would leave many risks to be managed by the CRD (although CMAR would generally transfer a few more risks during construction to service providers).

2. Outfalls and Tunnel

As noted above in the discussion of *Option C: P3 Approach*, there are a limited number of firms possessing expertise in marine outfall design/construction as well as marine tunnelling. Therefore, to de-risk the treatment facility work packages it was concluded by the entire CRD advisory team that these work packages be separated from the procurement of wastewater treatment facilities and procured separately. This approach should improve competition for treatment facilities and the outfalls/tunnel.

Given the risk profile of the outfalls and tunnel, the CRD's advisors recommend using a traditional approach to procurement of these work packages. It is extremely difficult for any party to estimate the risks of building such components and hence any bidder under a design-build or DBFO approach (whereby construction risks are typically transferred to the bidder) is expected to significantly pad the procurement budget to account for worst-case scenario implementation. The CRD would effectively pay for the worst-case scenario price. Therefore, it is recommended the CRD retain the risks of these packages and manages such risks diligently during implementation.

3. Wastewater Treatment Facilities

Criteria	DBB or CMAR "Traditional"	Design-Build	DBO or DBFO "P3"
a) Regulatory Compliance	**Good** Allows more flexibility for future change.	**Good** Design will only meet current standards unless procurement specifically requests additional items in future.	**Good** Allows enforcement of penalties. Allows financial incentive for certain types of performance. Has clear responsibility for ownership of interface and single point of responsibility.
b) Sustainability and greenhouse gas emissions impacts including for Resource Recovery etc.)	**Acceptable** Resource recovery limited to what is specified in the Program plan. Easier to expand plans in future.	**Good** More innovation possible through alternative bid process today Push toward minimizing costs will limit amount of resource recovery to what is economically viable or CRD's minimum specified standards. Integration of future new technologies easier when CRD managed operations Innovation will be most important in the Energy Centre / Biosolids Facility	**Best for Energy Centre** **Good for WWTPs** More innovation possible through alternative bid process today Push toward minimizing costs will limit amount of resource recovery to what is economically viable or CRD's minimum specified standards. Innovation will be most important in the Energy Centre / Biosolids Facility. Once plan finalized, further changes during 25-year life of agreement are limited.

c) Opportunities to adopt best practices	**Good** More flexibility to adopt new best practices in future.	**Acceptable** Future changes may be at premium if long-term operator in place (eg contract negotiation).	**Acceptable** Future changes may be at premium if long-term operator in place (eg contract negotiation).
d) Permitting	**Good**	**Good**	**Acceptable** Slow start may lead to delays in some permitting. Completion by 2016 achievable in current schedule (but tight with little slack).

Socially-Orientated Criteria

Criteria	DBB or CMAR "Traditional"	Design-Build	DBO or DBFO "P3"
a) Impact on existing staff and recruitment of new staff	**Manageable** CRD would be responsible for hiring the +/-40 people required to operate the facilities. Given the tight labour market for wastewater operations specialists this may be a challenge at commissioning and start-up, however the long build-out schedule will provide CRD with adequate time to	**Same as CMAR approach**. DB contractor can be retained during early years to assist with commissioning and training of staff. Some DB suppliers will provide a short operational transition period to train CRD staff.	**Good** Contractor would be responsible for all staff hiring, training and retention. CRD would simply manage contractual arrangements with suppliers and not day-to-day operations. Large operators already have access to trained operators and plant managers, thus transition will be

	secure staff.		easier (however any operator will face challenges hiring staff or to moving people to Victoria given its high cost of housing).
b) Ownership of Facilities	**Owned by CRD**	**Owned by CRD** CRD will require land and facilities to be owned by the CRD.	**Owned by CRD** CRD will require land and facilities to be owned by the CRD.
c) Public acceptance and communications impact	**Good**	**Acceptable**	**Extremely Challenging in Some CRD Communities** Involvement of the private sector in operations is anticipated to be highly contested. West Shore communities and councils are generally more receptive than other areas.
d) Level of CRD control and flexibility to make changes to Program during design, construction and operations phase	**Best flexibility for CRD** CRD generally controls all aspects of design, construction and operations.	**Some flexibility during early design stage plus total CRD control during operations.** Construction managed by winning bidder.	**Limited flexibility for CRD after procurement bid accepted**. Limited control for CRD after selection of winning bidder. Contract agreements regulates how CRD controls Program after commencement of construction and during operations.
e) Customer Service	**Very Good**	Same as Traditional Approach	Good but must rely on operating contract to force private sector

	Will match quality of existing customer service within the CRD. Will lead to more direct contact between public and CRD. Good for **Saanich East** where significant public interest is required and responsiveness needed for public feedback.		parties to respond to difficult situations with customers. Incentives and penalties can be structured in operating contract to ensure operator responds to all customer complaints in a timely manner. Establishes clear responsibility for operations performance and aligns interests of CRD staff, political representatives and public to force performance of private sector operator.
f) Economic impact	**Best** Smaller work packages used during construction phase may allow for more local representation.	**Good** More bids likely to be received with small to mid-size packages.	**Good** Large DBO and DBFO firms expected to bid, however local sub-contractors will be used by such firms. Thus expenditures remain in community and most jobs (similar to other approaches). If non-BC firm wins then some dividends/profit and small overhead/administration fees will likely flow outside community.

Financial and Risk-Orientated Criteria

Criteria	DBB or CMAR "Traditional"	Design-Build	DBO or DBFO "P3"
a) Risk[6] Allocation Goals	**More Risks Typically Retained by CRD** (retained risks remain under CRD control to manage). No single party guarantees project overall performance. CRD retains equipment failure risk after +/-2 year warranty on most equipment (and may face paying 100% of such costs if equipment fails). CRD typically retains most risks, including performance of each treatment plant plus overall integration risks. CRD will rely on bonding and recourse to suppliers in case of problems. For components where risk are very difficult for anyone to ascertain (e.g. outfalls and tunnel), Traditional approach may fit best.	**Good risk transfer for construction.** **Limited risk transfer for operations.** Care required to ensure only risks that can be managed by service providers are transferred (otherwise CRD will pay a premium for risk transfer). CRD retains long-term construction, design and overall performance risks after expiry of warranty period (typically after 2 years). CRD is fully responsible for long-term operations and maintenance costs and problems. Parts of design liability for plant performance plus all of construction liabilities transferred to contractor for +/-2 years after completion. Care required to ensure only risks that can be managed by service providers are transferred (otherwise CRD will pay a premium for risk transfer).	**More Risk Typically Transferred to Proponent for Energy Centre and WWTPS.** CRD will pay for risk transfer during bid phase (versus retaining and managing such risks in other options). Care required to ensure only risks that can be managed by service providers are transferred (otherwise CRD will pay a premium for risk transfer). Enforced through project agreement. Under DBFO leading consortium sponsor responsible for providing financing (DBO relies upon corporate guarantee to sponsor and contractual recourse). Financing typically leads to a greater level of due diligence being directed at service providers – both during construction as well as during long-term operations. Service provider motivated to ensure performance of operations otherwise CRD can withhold some payments

[6] See Appendix E for an overview of typical risks for each type of procurement contract.

			(which in turn typically triggers lender review of activities of service provider). If bidders cannot assess risks (e.g. on outfalls and tunnel), then they may pad budgets and over-compensate for risk exposure. Revenue risks for resource recovery from Energy Centre could be transferred to service provider.
b) Procurement and Implementation Schedule	**Allows quick start** May have longer overall construction design/construction period/duration. Risk of delays and scope changes.	**Allows quick start**	**Slower start, more front-end due diligence required for procurement planning.** Current plans allow completion by 2016, however assumes shortest construction duration to achieve 2016 deadline (could add to costs to achieve schedule).
j) Level of competition during the procurement	**Good** Significant competition expected for smaller work packages during the construction phase. No competition during design phase.	**Good** Variety of work packages allows multiple bidding. Size of work packages should allow participation of local, national and international bidders. Design-build components may see greater variety of non-standard technical/innovative solutions.	**DBFO may be challenging for larger Program components in current tight post-credit-crisis environment.** DBO approach is very common in wastewater treatment industry. The CRD could expect multiple bids during an offering of one or more components of the Program (if packages are not too large). DBFO approach is becoming a common approach to procurement in

			Canada. Several Canadian firms have an understanding of the contract structure and issues and thus will be able to bid. Access to financing may be a challenge for all firms in this approach (post-credit crisis). If financing is limited to no more than $300-million (one third of Program costs) then financing in Canada should be available at competitive rates and will facilitate a competitive bid process. If then entire Program is rolled into a large DBFO procurement then significant financing challenges may limit the bidding process. Recent large-scale WWTP offerings in North America have struggled to attract multiple bidders.
k) Cost certainty	**Limited**. Exposed to more inflation and surprises during the process. Cost certainty is the slowest to achieve of all options, and significant expenditures required on planning/design to achieve such cost certainty. This does exposes the CRD to potential cost and schedule over-runs.	**Good**. Earliest price certainty for construction phase in DB contracts. Surprises possible during the process if parts of scope undefined (particularly if alternative bids allowed).	**Best**. Construction, operations and maintenance costs all defined at completion of procurement phase in +/-2 years. Surprises possible during system operation and the process if parts of scope undefined (particularly if alternative bids allowed). Some contractual risks which may

			impact long term costs.
l) Complexity of immediate and future procurement	**Least complex.**	**Medium complexity.**	**Highly complex.**
m) Lifecycle maintenance	**Risky for CRD after expiry of warranty period (+/-2 years)** CRD selects all aspects of design and thus can ensure compliance with regulations as well as ensuring input of surrounding residents is followed. CRD responsible for long-term maintenance (which may lead to deferral of major capital repairs during years of fiscal restraint). CRD typically sees a small number of design based upon guidance of leading technical advisors. Such designs have not been broadly "market tested" to ensure innovation is maximized.	**Risky for CRD after expiry of warranty period (+/-2 years)** CRD responsible for specifying minimum standards of performance and output specifications used during procurement. Risk of equipment failure and high maintenance requirements after two-year warranty period which may impact quality and maintainability. This can be mitigated through properly prepared procurement documents.	**DBFO Best** **DBO Good** Transfer of operations responsibility to service provider ensures long-term risks and maintenance and lifecycle costs are taken into consideration by bidders. Thus long-term quality maintenance risks will be monitored and managed by service provider.
n) Risk adjusted capital cost	The following efficiencies are projected in the current plan under each type of procurement approach (based upon an assessment of the CRD's technical advisors):		

Cost Items	Traditional Option	DB Delivery Option	PPP/DBFO Delivery Option
Engineering Allowance [1]	N/A (budget currently assumed allowance of 15% of Direct Costs)	Estimated 4% of Direct Costs savings (thus budget assumes **Engineering Allowance of 11% of Direct Costs**)	Estimated 3% of Direct Costs savings (thus budget assumes **Engineering Allowance of 12% of Direct Costs**)
Administration & Program Mgt Allowance[1]	N/A (budget currently assumed allowance of 6% of Direct Costs)	Estimated 1% of Direct Costs savings (thus budget assumes Administration Allowance of 5% of Direct Costs)	Estimated 1% of Direct Costs savings (thus budget assumes Administration Allowance of 5% of Direct Costs)
Savings on Process Equipment	N/A	2% of Equipment Costs	2% of Equipment Costs
Savings on Project Efficiencies and Innovation	N/A	3% of Construction Costs	4% of Construction Costs
Discount for One Large DBFO [2]	N/A	N/A	1% of Construction Costs

Notes:
1 Engineering, program management and administration costs are adjusted to reflect efficiencies in various procurement methods.
2 Efficiencies due to single contract execution.

Source: Stantec Consulting Ltd.

o) Operational efficiencies	The following operational savings are estimated based upon a review of the management of operations of each component. Note this review only identified possible savings from reduced staffing levels under the DBFO approach. Such savings depend on packaging choices.

WWTP Facility	Traditional Option		Hybrid Option		P3 Option	
	Management & Staff Level	Annual Cost (incl. benefits)	Management & Staff Level	Annual Cost (incl. benefits)	Management & Staff Level	Annual Cost (incl. benefits)
Saanich East	8	$690,000	8	$690,000	5	420,000
Clover Point	4	280,000	4	280,000	3	230,000
McLoughlin Pt.	14	1,160,000	14	1,160,000	11	910,000
West Shore	7	610,000	5	420,000	5	420,000
Energy Centre	8	650,000	5	360,000	5	360,000
	41	**$3,390,000**	**36**	**$2,910,000**	**29**	**$2,340,000**
			Estimated Savings:	*$480,000*		*$1,050,000*
			Savings as % of Total Operating Costs:	*2.7%*		*5.8%*

Source: Stantec Consulting Ltd.

The estimates for DBFO operations are believed to be the maximum savings available for labour under private sector operations.

No savings in chemicals or power consumption have been included at this stage as it is assumed that all delivery methods would have qualified operators who would be capable of optimization of processes to minimize consumption.

The staff levels have been benchmarked with similar sized facilities in Western Canada including the City of Saskatoon.

p) Risk adjusted whole life cost	An full risk-adjusted whole life analysis of each component of the Program plant under each procurement approach was not conducted. Instead, the team made the packaging decisions based upon the above more subjective information and high-level financial summaries.

	DBB or CMAR "Traditional"	Design-Build	DBO or DBFO "P3"
OVERALL ASSESSMENT	Feasible Approach, used on many other similar wastewater procurements in Canada and USA. As noted in Appendix E this approach transfers fewest risks to service providers. Best flexibility and control for CRD, particularly for integrating new resource recovery technologies. Slowest to establish cost certainty (and requires significant expenditure in plans/due diligence before such costs locked). CRD vulnerable to surprises in operating and maintenance cost changes.	Risks transferred during design and construction. CRD has exposure to long-term equipment risks and overall performance risks. CRD also exposed to risks from operations performance. CRD retains flexibility during operations. Fastest construction cost certainty (at reasonable cost), CRD vulnerable to operations and lifecycle cost risks after +/- 2 year warranty expiry. Good approach for WWTPs using standard technologies (with well-understood operations and maintenance profiles). If innovation required in technology then this approach is less better fit. Good approach for sites with construction challenges (limited site area, poor ground conditions).	As noted in Appendix E this approach generally achieves best risk transfer goals. Will be challenging to implement in some CRD communities (however West Shore communities appear less concerned than others). Best approach for Energy Centre/Biosolids facility since risks technology innovation and possible resource recovery revenues could be transferred to operators. Large projects requiring significant financing may find DBFO approach risky. DBO approach good for Energy Centre and WWTPs (competitive market place will allow multiple bidders for most major components). Good overall integration planning if multiple components rolled into same procurement package. Complexity of CRD system may make challenging to implement this approach to procurement for entire Program.

Overall Assessment for Each Major Component

	DBB or CMAR "Traditional"	Design-Build	DBO or DBFO "P3"
Energy Centre / Biosolids	**Higher Risk but Feasible** Innovation would generally be limited to current plans but more innovation can be explored in the pre design phase and through value engineering.	**Good** Allows some flexibility and innovation potential through alternative bid process. CRD retains risk for long-term operations (and risks of equipment failure +/-2 years warranty period).	**Best** **Will maximize innovation in most technology-driven component of Program.** **Will transfer risk of innovation to private operators, as well as some revenue/cost risks.** **Interfaces with WWTP must be managed (ideally same operator handles both WWTP and solids processing).** **Could be procured as stand-alone unit or combined with one or more WWTPs (e.g. McLoughlin Point).** **Ideally, biosolids treatment co-located on same site as WWTP to ease integration.**
Saanich East WWTP	**Good for public acceptance and responsiveness and enables most public consultation. Risk of change orders (and associated higher costs).** **Allows quickest start.** **Flexibility may lead to scope creep and change orders (resulting in higher costs for CRD).** **Allows flexibility for integration of future**	Good Allows some innovation through alternative bid process. Transfers some risks during design and development to private sector, however CRD remains at risk for operations and long-term maintenance. Since most liquid treatment technologies are known, a DB approach may provide	Good Good transfer of risk for construction, operations and maintenance. Slow start. Long-term contract locks in CRD to solution defined in next few years. Limited flexibility to make changes to plan after procurement. Risk that DBFO or DBO solution may not

	technologies (possible collaborations with UVic). **Construction risks on site expected to be minimal (high, dry, flat location). Preservation of trees will be a major concern. Thus CMAR or DBB may allow such control without exposing CRD to excessive construction risks.** **CRD directed selection of CMAR for this component.**	best balance of cost, risk, flexibility/control and innovation.	be responsive for community requirements (however this could be managed through establishing architectural and design standards during procurement process).
Clover Point WWTP (primary)	Feasible Risks during construction would not be transferred adequately to builder. CRD operations would ensure responsiveness to surrounding community concerns of odour and noise. CRD is currently operating pumping and screening facility at this site and understands the operational challenges at this site and public sensitivity. Unusual operating requirements of this site (peak flow events) require special attention and integration with conveyance system. This site may be best managed by the CRD (which operates conveyance). Architectural, landscape and odour control are important at this site and will require public input.	**Best** **Good risk transfer during construction stage (expected to be challenging at this site).** **Limited site flexibility and possibility of this component being deferred or dropped entirely from the Program.** **CRD operations would ensure responsiveness to surrounding community concerns of odour and noise.** **Unusual operating requirements of this site (peak flow events) require special attention and integration with conveyance system. This site may be best managed by the CRD (which operates conveyance).** **Technical team recommended selection of DB for this component.**	Limited on stand-alone basis Good risk transfer for all stages of project – construction, operations and maintenance. This plant requires minimal operating staff and treatment facilities are infrequently used (only during peak-flow events a few days per year). Thus operations should be managed and combined with other operating WWTPs. This is not a good stand-alone DBFO or DBO. Innovation for site development and operations (allowing remote management) could add value to this procurement.

McLoughlin Point WWTP	Feasible Large, complex WWTP could expose CRD to cost management risks. Construction risk is significant at this location. Traditional approach would allow good interactions for adjacent Department of National Defence (and possible collaborations). Integration of this plant with Energy Centre would be preferred.	**Good** **Risks of limited site area will require diligent approach to layout and train design. Technology choices are also driven by small site area.** **Room for innovation during construction to optimize treatment technology and site layout.** **CRD exposed to long-term equipment maintenance risk and operations risk.** **CRD operations would ensure responsiveness to surrounding community concerns of odour and noise.** **DB approach may allow collaborations for development of lands on adjacent properties.** **DB approach allows early start to Program and increases likelihood of achieving 2016 target completion date.**	Good Risks of limited site area will require innovative approach to layout and train design. Technology choices are also driven by small site area. If a new site location is identified that allows this plant to be combined with the Energy Centre then the CRD should reassess how such a package will be procured. Attractive DBFO or DBO opportunity. Component is large enough to attract interest from Canadian and global firms. Large DBFO or DBO at largest WWTP may be challenge for community to accept.
West Shore WWTP	Feasible Best plan for staging of facilities given the complexities of conveyance system in Langford and Colwood and siting issues. Opportunity to continue conveyance of wastewater to Mc Loughlin site until development density increases.	Good DB allows good risk transfer during contractions and some innovation through alternative bid process. CRD/West Shore would remain responsible for operations and maintenance risks of facility. CRD operations would ensure responsiveness to surrounding community concerns of odour and noise.	**Good** **Attractive stand-alone DBFO or DBO opportunity. Component is large enough to attract interest from Canadian and global firms.** **West Shore communities believed to be receptive to alternative forms of procurement.** **West Shore interested in pursuing resource recovery and partnering with**

			innovative firms to maximize revenues. **DBFO or DBO approach would allow good risk transfer, especially for innovation.** **Termination of long-term contract may be challenging (easier for DBO approach than DBFO).**
Outfalls & Tunnel	**Best** **Some risks cannot be clearly defined, therefore, transferring to other parties may be an expensive approach to management. Costs likely minimized through CRD retaining risks and managing them through construction.** **Long-term operations requirements expected to be minimal (and thus easy to manage).** **Separating these components from other procurements anticipated to facilitate more competitive bid for other major components (allowing specialist firms to focus on their area of expertise).** **Small number of specialist firms available to perform marine outfall work in Pacific Northwest. Thus, CRD could arrange a competitive bid with such firms (as well as other service providers).** **Minimal innovation anticipated for these components, and minimal ongoing operations. Attractiveness as DBFO limited.**	Acceptable Small number of specialist firms available to perform marine outfall work in Pacific Northwest. Thus, CRD could arrange a competitive bid with such firms (as well as other service providers). Minimal innovation anticipated for these components, and minimal ongoing operations.	Worst Risks are difficult to define for marine outfalls and tunnel work, thus most bidders may pad budget (and the CRD could over-pay for risk transfer). Minimal innovation anticipated for these components, and minimal ongoing operations. Attractiveness as DBFO or DBO limited. Few value-added opportunities available.

Based upon this assessment and input from the CRD's technical/engineering team, the CRD selected the following delivery methods for each major component of the Program under the Hybrid Option. This could change pending the outcome of further consolidated siting investigations.

Component	Preferred Procurement Approach to be Analyzed in the Hybrid Option
Conveyance / Pumping Stations	DBB or CMAR
Outfalls & Tunnel	DBB or CMAR
Energy Centre / Biosolids	DBFO
Saanich East WWTP	CMAR
Clover Point WWTP (primary)	Design-Build
McLoughlin Point WWTP	Design-Build
West Shore WWTP	DBFO
Resource Recovery	Depends upon component and level of integration into other physical facilities. To be reviewed on a case-by-case base. Thus, use alternative procurement approach and assess opportunities at time of bid.

APPENDIX E

Summary of Risks Intrinsic to Each Approach to Procurement

The risk profile of the Program is directly related to the procurement approach and legal contracting structured established for each major component. Generally speaking, DBFO approaches to procurement transfer more risk to the private sector party, while traditional approaches to procurement tend to retain risks which the CRD must therefore manage. The table below summarizes how risks are typically allocated based upon the contracting structure between the CRD and service providers. This summary allocation is based upon high level assumptions about how the CRD would implement each contracting relationship. The final risk allocation among parties will not be known until contracts are finalized.

Regardless of contracting structure and delivery method chosen, the CRD will still face a number of risks associated with implementation of the Program. The CRD recognizes these risks and will implement a risk management plan to manage such risks as it moves forward with plans.

The CRD anticipates it must manage the following risks regardless of procurement methodology – all are anticipated to be retained by the CRD:

1. Site selection for WWTPs and Energy Centre
2. Rezoning of various sites by each municipality
3. Funding delays by senior levels of government
4. Changes in scope of Program at request of the CRD or public
5. Approval timing by CALWM Committee during procurement phase
6. Discharge Permit Liability – the CRD remains ultimately liable under the Discharge Permit, the private operator is responsible for the contractual service levels
7. Force Majeure – natural hazard events that have catastrophic impacts, which are outside the control of either contractual party
8. Operating performance requirements - establishing appropriate contractual service levels for operations and maintenance of the facilities
9. Regulation – future changes in applicable regulations

Risk Allocations Typically Intrinsic to Each Approach to Procurement

	CMAR or DBB Methodologies			Design-Build Methodology			DBFO / DBO Methodologies		
	Higher Level of Transfer	Higher Level of Retention	Shared	Higher Level of Transfer	Higher Level of Retention	Shared	Higher Level of Transfer	Higher Level of Retention	Shared
Contract Negotiations – lack of clarity in specifications / documents and overall negotiations between the CRD and service providers			✓			✓			✓
Design –flaws in final design		✓		✓*Note 1*			✓		
Construction – general risk during construction phase		✓		✓			✓		
Geotechnical Risk - associated with the plant site		✓				✓			✓
Process Technology – effectiveness of the technology chosen for treatment of wastewater		✓		✓*Note 2*			✓		

	CMAR or DBB Methodologies			Design-Build Methodology			DBFO / DBO Methodologies		
	Higher Level of Transfer	Higher Level of Retention	Shared	Higher Level of Transfer	Higher Level of Retention	Shared	Higher Level of Transfer	Higher Level of Retention	Shared
Integration risk of conveyance system and WWTPs		✓			✓				✓*Note 3*
Integration risk of WWTPs and Energy Centre system and WWTPs		✓			✓				✓*Note 4*
Operating - general operations associated with the WWTP		✓			✓		✓		
Maintenance – long-term lifecycle maintenance risks for major equipment failure		✓			✓ *Note 5*		✓		
Resource Recovery – revenues lower than expected, or costs higher than expected		✓			✓		✓		
Resource Recovery – technology risks		✓			✓		✓		

Risk Notes:

1. The level of risk transfer under design-build will depend upon the detail specified in procurement documents. If designs are largely completed (drawings over 30-50% level) then the CRD will be exposed to design risk since much of the designs are largely specified to bidders. If documents include a lower level of specification then such design risks are more effectively transferred to the bidders.

2. As with the design comment above, if the CRD includes specific technologies in its procurement documents as a specified solution then the CRD will effectively retain the risk of such technology failures. Bidders would then take responsibility for installation under the DB approach.

3. Since the CRD will build and manage the conveyance system along with associated pumping stations and storage facilities, it is anticipated that the CRD will establish an arrangement whereby it commits to providing volumes of wastewater within a defined range to each WWTP. Bidders will therefore have clarity over the assumed design capacity requirements and operating performance expectations. If volumes fall outside of such range then the CRD may incur punitive costs. This issue is particularly important for the CRD since I&I is a significant problem and leads to frequent peak-flows of highly dilute water. A biological treatment process could be "washed out" in such circumstances of the flows are extreme. The CRD would be obligated to manage flows within the agreed range to avoid such under-performance.

4. In the Hybrid option, the current operators of the WWTPs and the Energy Centre are different. While most operating performance risks could be transferred to private operators, the CRD is anticipated to remain responsible for ensuring interfaces among WWTP and Energy Centre are managed and disputes resolved. For example, in the case of the West Shore WWTP managed by a third party private operator and the Energy Centre managed by the third party operator, there remains room for disputes about sludge chemistry and volume which must be captured in the various procurement documents. Since the CRD is responsible for stitching such procurement documentation together, there is room for the CRD to retain some risks in this area.

5. Typical design-build contracts include a warranty for 1-2 years after commissioning. Thus, the CRD would be exposed to operating risks and lifecycle maintenance risks after expiry of the warranty period.

APPENDIX F

GLOSSARY

These definitions are taken from the BC Municipal Sewage Regulations as well as AE et al 2008-2009 discussion papers prepared by Associated Engineering Ltd. and CH2M Hill.

"**Average Annual Flow**" or "**AAF**" – an estimate of the total flow at a given site for an entire year, including both dry and wet weather periods.

"**Average Domestic Flow**" or "ADF" – the average flow coming purely from the "Total Population Equivalents", i.e. excludes all sources of I&I.

"Average Dry Weather Flow" or ADWF means the daily municipal sewage flow to a sewage facility that occurs after an extended period of dry weather such that the inflow and infiltration has been minimized to the greatest extent practicable and is calculated by dividing the total flow to the sewage treatment facility during the dry weather period by the number of days in that period. In CRD this typically occurs between the months of April to September.

"Biosolids" means inorganic or organic solid residuals from a sewage facility, or septic tank sludge, resulting from a municipal sewage treatment process which has been sufficiently treated to reduce vector attraction and pathogen densities, such that it can be beneficially recycled.

"**BOD**" biochemical oxygen demand.

"**cBOD5**" carbonaceous 5-day biochemical oxygen demand.

"**CEPT**" chemically-enhanced primary treatment.

"Core Area Program" composed of Victoria, Esquimalt, View Royal, Oak Bay and Saanich plus two First Nations communities.

"**DBB**" means Design Bid Build.

"**DBFO**" means Design, Build, Finance, Operate and Maintain.

"**DB"** means design-build with design drawings and planning to approximately the +/-10% level.

"**DB 30%"** means design-build with design drawings and planning to approximately the 25% to 30% level (high level of detail).

"**DBO**" means design, build, operate and maintain.

"Effluent" means the liquid resulting from the treatment of municipal sewage;

"**ICI Equivalents**" or "**ICI**" – an estimate of the contribution of flow from industrial, commercial, and institutional activities, expressed as a number of fulltime residential population equivalents.

"**Inflow & Infiltration**" or "**I&I**" means water that enters the sanitary sewer system from direct stormwater connection (inflow) or indirectly through the land (infiltration), or both. Can be expressed as a return period based value (i.e. 25-Year Return I&I).

"**Microconstituents**" include hundreds of compounds, which encompass endocrine disrupting compounds (EDC's), pharmaceutically-active compounds (PhAC's) and Personal Care Products (PCP's). These compounds are typically present in raw wastewater at ng/L to ug/L concentrations, 5 to 6 orders of magnitude less than the concentration of conventional pollutants.

"**Peak Domestic Flow**" or "PDF" – the peak flow coming purely from the "Total Population

Equivalents", i.e. excludes all sources of I&I. Expressed as a short duration average, (i.e. 15-minutes), suitable for use in hydraulic design.

"**Peak Dry Weather Flow**" is the peak daily flow that usually occurs once in the morning and then again in the evening.

"**Peak Wet Weather Flow**" is the peak flow rate that occurs at the height a rainfall or snowmelt event. "**PWWF**" = PDF + I&I. Expressed as a return period based value (i.e. 25-Year Return PWWF).

"**Per-Capita Rate**" – the average flow associated with each "Total Population Equivalent", expressed as L/per/day.

"Primary Treatment" means any form of treatment, excluding dilution, that consistently produces an effluent quality with a BOD5 not exceeding 130 mg/L and TSS not exceeding 130 mg/L.

"Septic Tank" means a watertight vessel into which municipal sewage is continually conveyed such that solids within the municipal sewage settle, anaerobic digestion of organic materials occurs and an effluent is discharged;

"Sewage" or "**Base Sanitary Flow**" refers to water that is contaminated with waste matter of domestic, commercial, industrial, or natural origin. The average person uses almost 225 litres of water per day performing routine activities such as bathing, recreation and body waste elimination.

"Secondary Treatment" means any form of treatment, excluding dilution, that consistently produces an effluent quality with a BOD5 not exceeding 45 mg/L and TSS not exceeding 45 mg/L, except for lagoon systems for which the effluent quality is not to exceed a BOD5 of 45 mg/L and a TSS of 60 mg/L.

"**Total Population Equivalents**" = "Residential Population" + "ICI". Also known as **"Contributory Population Equivalent"** means the number of persons and equivalent commercial and industrial contribution connected to the municipal sewage collection system based on the most current census data.

"**Tributary Area**" or "Area" – the estimated sewered land area associated with a catchment.

"**TSS**" means total suspended solids or non-filterable residue.

"West Shore Program" composed of the communities of Colwood and Langford.

"**WWTP**" wastewater treatment plant.

Core Area Wastewater Treatment Project

Wastewater Treatment Procurement Models

Open House Comment Form

Having examined the display panels showing the options for wastewater treatment procurement, please share your views on the following questions.

Is there one model from the presented procurement options that you prefer? If so, why?

In addition to the options presented in the display materials, is there another option for procurement that should be considered? If yes, please identify the option and why it would be more suitable.

Have you attended any other Wastewater Treatment Open House sessions, Workshops or Community Dialogues?

☐ YES ☐ NO If yes, which session did you attend?

What municipality do you live in?

☐ COLWOOD
☐ ESQUIMALT
☐ LANGFORD
☐ OAK BAY
☐ SAANICH
☐ VICTORIA
☐ VIEW ROYAL
OTHER _____

Do you have any additional comments on the procurement model options? (Please use additional paper if needed.)

Please place your completed comment form in the "Comment Form" box. Thank you!

www.wastewatermadeclear.ca

Open House Comments Form

Additional comments:

Framework of K ey Outcomes from Comment Form (Open House and website)

Making a difference...together

Appendix E: Summary of key findings from completed comment forms

Model	Why?	Another Option to Consider	Additional Comments
Design Bid Build Number of responses received: 132	Overwhelming concern expressed with PPP models, the transparency, fairness and lack of public oversight and accountability Strong will expressed for public safety and equitable access No one should profit from a service which is fundamentally a necessity of life Longer term maintenance should not be left to a private company PPP cost more The concern over the transfer of risk / CRD is holding all the risk at the end of the day To maintain control and decision making authority of the largest CRD project Fear of a private company closing and the CRD having to take control Fear of the lack of quality / a need to maintain high standards Better interest rates for government Greater flexibility for government Feel a PPP will cost more in the long run Disbelief in the PPP funding lure of the Province or any private company PPP do not have a good long term record and are not financially sustainable The need to support our local contractors PPP do not stand up to scrutiny The concern that other public utilities will follow in the direction of a PPP The lack of documentation around the transfer of risk of a PPP model There is no such thing a no risk	Construction Management at Risk No – trust in local government rep's over private companies No – CRD covered options well	"Get on with it" Keep costs manageable And mindful of the taxpayers of the region Speedy process and construction takes place Limit / mitigate the environmental impacts Capital costs are risky and PPP lack proper oversight Concern over the bias Provincial record and being held hostage for 1/3 of the funding How this becomes and ideological question Remain open to innovative technology Concern over the lack of transparency of a PPP The creation of local jobs Economic development opportunities for the region Presentation was well done and easy to understand Concern for multinational companies profiting from residents PPP do not transfer risk Failure of many past PPP Local politicians must stand up to the Province For the system to be the best technology and innovative Concern over the lack of heat recovery Lack of confidence in private companies Support for individual contractors being involved in the construction under contract The work on Ernst and Young seems biased toward PPP Partnership BC is biased towards PPP The public purse is at risk We pay higher rates with PPP More focus on pollution and source control Not for this project, it's too complex, maybe for a highway or other project The language of 'risk transfer' is a ruse and red herring

Framework of Key Outcomes from Comment Form (Open House and website)

Model	Why?	Another Option to Consider	Additional Comments
Construction Management at Risk Number of responses received: 9	There would be a construction manager who would oversee the project/process Through RFP's, bidders would provide details that they will perform to, CRD still can retain control. Construction could start early, the public still ahs control on how it's run and the price is predictable. Like the idea of a construction manager to mitigate dispute Belief that this project is not suitable for a PPP Public ownership and control is ensured Allows for the best construction management team to be hired but the CRD retains the oversight Any transfer of risk has not been demonstrated Because the design and contract will lie with the same body for accountability Public ownership with the most innovation and resource recovery / district energy	Design Bid Build Progressive Design Build Option where the public votes on a private company that is environmentally sustainable to handle the project	Too many models to really understand all the pro's and con's of each. No PPP under any circumstance. Emphasis the need for local services and procurement wherever possible An opportunity for local economic stimulus by sub contractors and quality long term jobs that the public sector offers. Government retention of ownership and control is essential Don't believe the risks can be transferred. The only no started is PPP
Progressive Design Build Number of responses received: 0			
Performance Design Build Number of responses received: 2	It would maintain the balance with continued public ownership with some risk of price increase Allow more innovation to occur Provide for optional choice for more than one design builder		Priority should be on the most efficient means of designing and building a system. The CRD should maintain the long term maintenance.
Design Build Operate Maintain Number of responses received: 0			

Framework of Key Outcomes from Comment Form (Open House and website)

Model	Why?	Another Option to Consider	Additional Comments
Design Build Operate Maintain Finance Number of responses received: 0			

Observations:

It was easier to identified people's preference for the wastewater treatment project to be a public utility then necessarily Design Bid Build over Construction Management at Risk.

Similar types of comments for a public wastewater treatment project were noted numerous times.

CRD Directors to able to view all comment forms.

List of invited community and business organizations workshop participants

CORE AREA WASTEWATER TREATMENT PROJECT
PROCUREMENT DELIVERY WORKSHOP
FEBRUARY 16, 2010

LIST OF RECOMMENDED STAKEHOLDERS

Victoria Labour Council
Mike Eso – President

Public Service Alliance of Canda
Nick Humphreys

CUPE Local 1978
Kim Manton – Campaign Coordinator

CUPE National
Blair Redlin – Researcher

Canadian Centre for Policy Alternatives
Iglika
Public Policy Chair

Western Canadian Wilderness Committee
Gwen Barlee
Policy Director

John Knappett
Knappett Construction Ltd.

Scansa Construction Ltd
Kory Gronnestad

Maeve Lydon
Associate Director – Community Programming
Office of Community Based Research

Ronald Parks
Forensic Accountant at Blair Mackay Mynett Valuations Inc.

Marvin Shaffer
Marvin Shaffer and Associates Ltd.
Consulting Economists

Calvin Sandborn
Legal Director of the Environmental Law Centre – Uvic

George Heyman
Executive Director of the Sierra Club of BC

Greater Victoria Water Watch Coalition
Janet Gray

Susan Grace Draper
KAIROS BC/Yukon Regional Rep

Oliver Brandes
Senior Research Associate and Associate Director of
POLIS Project on Ecological Governance

Jim McIsaac
T Buck Suzuki

Jim Bennett or Glenn Terrell
Government Liaison Executive Officer
Victoria Real Estate Board

Victoria Downtown Business Association
Ken Kelly
General Manager

Victoria Chamber of Commerce
Bruce Carter
Chief Executive Officer

West Shore Chamber of Commerce
Ingrid Vaughan
General Manager

University of Victoria
Neil Connelly
Director, Campus Planning and Sustainability

Royal Roads University
Steve Grundy
Associate VP and Chief Information Officer

Camosun College
Vice–President, Administration & Chief Financial Officer
Peter Lockie

Canadian Federation of Independent Business
Brian Bonney, Director of Provincial Affairs, B.C.

Urban Development Institute
Travis Lee, President, Tri-Eagle Developments

List of invited community and business organizations workshop participants

CORE AREA WASTEWATER TREATMENT PROJECT
PROCUREMENT DELIVERY WORKSHOP
FEBRUARY 16, 2010

LIST OF RECOMMENDED STAKEHOLDERS

Association of Professional Engineers
Victoria Chapter
Magnus McElroy
Chair

Vancouver Island Construction Association
Greg Baynton
President

Air and Wastewater Association
Victoria Chapter
Eric Taylor

BC Wastewater Association
Colwyn Sunderland
President
or Chief Executive Officer
Daisy Foster

RBC Capital Markets
Vancouver, BC

West Shore Economic Development Association
Jim Hartshorne, Keycorp Consulting Ltd.

Canadian Council for Public-Private Partnerships
Jane Peatch, Executive Director

Graeme Bethell
General Manager
Corix|West Shore Environmental Services

Epcor
Terri Moore, Government Relations/Research
Analyst

Public Works Association of BC
Jeanette Austin

Summary of Online Public Queries

2009/2010 Summary of Online Comments and Inquires	Number of Comments
Believes a Public Project should be owned and operated by the Public	15
Believes project should not be open to private companies	10
Concerned that Private profit motives not in public best interest	5
Feels private contracts are high risk to taxpayers	5
Believes Province is pushing P3 procurement on project	2
Supports a P3 Model for procurement	1
Supports DBB model of procurement	1
Supports ProDB model of procurement	1
Supports CMAR model of procurement	1
Believes role of private companies should not extend beyond construction contracts	1

Comment 1: I am principally concerned about how this project will be financed / managed. I believe it must stay in the public domain. I absolutely oppose anything to do with PPP. (private, public, partnership). There is only one wallet that pays for this type of undertaking and I do not want my money to be wasted with PPP. The current BC Gov't has a fixation on 3"Ps" and I am not convinced that any utility should ever be out of the public ownership / responsibility. Whatever decision CRD makes regarding number and placement of treatment plants is best left to the experts in this field. Do your best.

Comment 2: Why don't we just put little micro-treatment plants in our homes, have the government to subsidize development/installation instead of building a horribly expensive infrastructure, and mandate inclusion in all new homes. We could recycle the heat from wastewater ourselves instead of having most of it seep into the ground on its way to Colwood. The technology developed could be marketed to the rest of the world, and used in communities that cannot afford to build a sewage treatment plant. Homeowners would be responsible for maintaining the same as they are presently for their furnaces or roof. Jobs created for installation and maintenance would be ongoing and local instead of major infrastructure jobs delivered to big out of province corps in the P3 world, boom and bust and gone when it's done.

Comment 3: My partner went to the Community dialogue in Fairfield, and brought back your pamphlets, together with the worksheet for the core area wastewater project. I have just completed the survey on your website, and find two major problems: 1) the survey is quite different from the questions asked on the worksheet. I am therefore going to complete the worksheet and send it in to you as well. 2) I find the multiple questions on the survey are very loaded, as you make us decide between aspects which may have similar importance. But the survey does not allow me to give two or more emphases. For instance: to choose between social, environmental and economic priorities is nuts! They're ALL extremely important. Also the one which says things about noise, storing chemicals, lowering of property values in residential areas near the new plant. Why assume that property values would decrease? If the facility is well built and maintained, and has some park-like area around it, the property values may in fact increase !You also assume, in the survey, that all property owners are reluctant to pay more taxes. The question about cost is inadequate. Those of you who were at the Community Dialogue in Fairfield were apparently surprised to learn that many of us would be more than willing to contribute to an efficient, state of the art, perhaps beautiful, facility, which turns waste into renewable energy, and has no destructive effect on the environment.! We would be proud of it! And I say this as a retired person on a small income! I am very disappointed that the survey does NOT allow me to give my real choice on most of these questions. I did, but there were these ugly red labels saying that “each answer has to be unique", which forced me to choose between the three remaining scores, which I didn't want to do! There is another aspect about cost which is never mentioned : The survey does not look ahead enough : I understand the bottom line is probably how much finance you can/could count on to build it (therefore, I suppose ,the blackmail of the Provincial Govt. to insist on PP3 arrangement). BUT, if the facility is only built for the next , say 20 years, it will be outdated and inadequate then, and then what will you do ? Build more.....at what cost then? What is VERY important now, is to look into the future of this city, population increase, land scarcity,

water scarcity, climate change, increased energy costs, etc....and design something which will be efficient, and good to look at, and create energy for a HUNDRED years at least !!!! That's really the only option that you have! So to H..... With the cost. Do it RIGHT! I hope my comments are useful, and I look forward to your reactions. I'm sorry that I was unable to come to the Dialogue, owing to illness.

Comment 4: I am very concerned with the speed in which this project is being fast paced through its process. I do not feel that adequate time has been given to allow for the maximum sober thought, nor to allow for proper public input. Much of the publicity supplied via print media has given only a few days or the same day notice of the meetings. This is a multi-billion dollar project that is being rushed through more quickly than the very flawed CREST process, which was the result of inadequate public process nor proper consideration and study. I have looked into the sewage issue for the CRD area in some depth over the years, and as politically incorrect as our dumping of raw sewage into the ocean is, it is NOT the environmental problem it appears to be at first blush. This project is stealing very valuable fiscal resources from projects which require much greater attention for our area. While we waste money on this kind of project, we continue to add major carbon output to the environment. It is a bit like worrying about getting cancer 20 years from now, when one's head is about to be cut off. Completely misplaced and illogical. There is a need to identify major points of source pollution and control it with legislation or education or both. There is a need to reduce the amount of water that ends up in the waste water stream to begin with. Using taxes to replace toilets with more up to date or more environmentally sound types probably makes a lot more sense at a considerably lower cost. Why didn't the province give the CRD options to reducing the mature of the outflow rather than the knee-jerk "waste water treatment" answer? My personal hope is that a new government in the next week will give its head a shake and abandon this foolishness, and the money reallocated for more meaningful and important environmental causes. However, should this idiocy have to continue to its end, I see only a few methods of accomplishing something of value. There should be numerous waste treatment facilities throughout the CRD. Small is beautiful, for many reasons. It allows for experimenting with several different technologies on a small scale to figure out which work best, and to adapt them to the type of industry and population of an area. It may also save money, because less opposition to the facilities from nearby neighbours if the impact is less, and it allows for the facility to be altered into something else once the realization hits that source control is much more logical than this type of program. It also allows for retrofitting little by little should new technologies come along and for better types of higher levels of treatment to be activated when and where required. Any sewage treatment system considered should produce reasonable revenue. Waste is wasteful. The more things that can be extracted and reused from the waste stream, the cleaner the effluent, and the more valuable the treatment becomes both in terms of efficiency and it terms of creating revenue. Sewage contains high levels of valuable materials that can be used as fuel, soil conditioners, and chemicals. With the right bacterial action enzymes and valuable byproducts can be made which can be used in everything from manufacturing to pharmaceuticals. This project should be done in small stages to prevent major retrofitting needed due to errors. Personally, I would like as little money as possible spent on this project, so the resources will still be available when we realize how the money actually should be spent for more pressing issues, rather than as a way to quiet our tourist critics. Middle ground and middle cost compromise is the worst answer. It will probably result in an "adequate" but non-self-supporting system, while either going small and inexpensive, or going costly and state of the art, "may" result in a self-sustaining system that breaks even and at least justifies the expense by paying back over time. As much as possible, keep it simple. The more complex the concept, the more there is to fail, not work to begin with, or become obsolete, and ultimately become more costly when parts aren't available or personnel moves on and no one knows how things work. As I stated before, I feel we are going down a dangerously steep road here that will both bankrupt us and not accomplish what is intended. A few people will end up with their pockets full of coin due to contracts or high paid consulting jobs, and the taxpayer will once again be left literally holding the bag. I have no confidence in this process, nor in the agencies that are pushing for it. I believe the motives are neither pure nor clear other than in the for-profit economy which uses tax money to build infrastructure which is then found to be (or considered to be) unsustainable, at which point, it is given away to private enterprise to administer and again the taxpayer is billed. I believe the whole process taking place is very similar to that which was used for CREST, and that was a massive failure. If this project "must" move ahead, the train needs to be slowed down considerably so some sober thought and good reasoning can be entertained. When so many scientists and others who have wisdom are being ignored, and artificial deadlines are being

created, this usually points to some hungry people who want things done before the true motives can be sorted out. I expect I will be saying "I told you so" before too long, but that won't help the huge tax burden this project will have created, nor will it allow for the money to be recovered so it can be spent where it is really needed. At the end of the day I don't suspect the marine ecology will be any better off for it, and yet projects that might have actually helped will no longer be affordable. So, in conclusion, don't do it at all and work on source reduction, or if you must, do it in small sections to see if it works, and do it at the least expense so that it can be fixed later, once the "big rush" is over.

Comment 5: You should seriously...very seriously consider a P3 for this project. Bringing in professionals with extensive experience is truly the way to go. I presently work within the framework of a P3 and it is beneficial to both the employees and the community. Having the expertise to back up the workers on the ground is invaluable. Whether it be one plant or a series of smaller plants go P3.

Comment 6: I appreciate the efforts for public comment and communication. I received the Wastewater Update in the mail for July/August 2009 and read it thoroughly. I thought the layout and explanation was clear. My main concern is the cost and ownership of any system like this. I am very concerned about private or profit making companies owning or running /maintaining a system that concerns all of us. As well I am concerned about any public/private sharing enterprise. I haven't heard much of this aspect of the project. Could you kindly direct me so I may learn more of the financing economics of the project? Once again, many thanks for this opportunity to speak.

Comment 7: I want to commend the CALWMC for their public consultation process, both the past open houses as well as the upcoming Aug 12th and 19th sessions. This is showing good leadership and governance, thank you. I do wish to see more of this public consultation process when it comes to the procurement process as well./I believe that it is absolutely imperative that throughout this process that we also see the leadership of each and every ctte member stand up and be counted. I would hope that you as a ctte. consider not only the next few years down the road in this process but the long term ramifications of all decision making. I also hope that you set the bar high and that the CRD becomes known for their foresight and planning to be innovative with our new wastewater treatment plan. Let us not go the direction of 'old' technology - in this area we have much available to us to set high standards. Yes, that might mean education and changing practices by all of us, we want you to tell us to make changes./ Last but not least. I ask that you keep all management and operation of the entire system in PUBLIC hands. I refer to a line on page 12 of the Ernst and Young discussion paper on Procurement Analysis Planning that refers to the overall input Partnerships BC (PBC) has in identifying any deviations in the business case from PBC best practices. What are PBC best practices and why on earth should Partnerships BC have the ability to 'tweak' any report? Partnerships BC does not, I believe, have the public at heart or our future, when they make decisions. Please show leadership of strength and integrity and stand up for our local systems of governance. Yes, we need Prov and Federal assistance but we don't need to partner with the Global Private sector to meet our local needs.

Comment 8: I appreciate the opportunity that the CRD is providing for public input into the decision making process on the development of a waste treatment plan for our region. I am writing to stress how important I believe it to be that the management and operation of whichever waste management system is chosen be kept in PUBLIC hands. It is absolutely essential that a P3 process is not used. The sustainability of our communities is much too crucial for it to be in the hands of companies which expect to turn a profit.. Various governments have come to recognize the multitude of problems of the P3 model for providing public infrastructure such as exposing taxpayers to higher risk over the lifetime of complex 30 to 40 year-long contracts, as well as often funding projects which end up costing more over the long-run. Engaging in a Ps is short-sighted. /We need PUBLIC CONTROL over the waste management system/Once again, I thank you for the opportunity to submit my input to you.

Comment 9: I only have the hard copy of this letter sent to Saanich Mayor Leanard. There is a copy in the file. It expresses concern about lack of public information regarding procurement. Sentiment is that "sewage treatment, water services and drainage should be owned by the public and operated as a public utility".

Comment 10: I only have the hard copy of this letter sent to Saanich Mayor Leanard. There is a copy in the file. It expresses concern about lack of public information regarding procurement. Sentiment is that "sewage treatment, water services and drainage should be owned by the public and operated as a public utility".

Comment 11: I am deeply concerned that the procurement process for secondary sewage treatment is strongly biased in favour of the P3 model. It is no secret that both our Federal and Provincial Governments favour this model. I recently learned that the legal firm charged with designing the business case for the P3 model has a strong affiliation with Partnership's BC (set up by the Provincial Government to promote P3's). Just out of curiosity, who is presenting the case for the 'Public Model'? I am adamantly opposed to the P3 model for our secondary sewage treatment facility! Private Public Partnerships do not serve the best interests of the public, but instead serve the best interests of private corporations. I will not bore you with a long list of P3 fiascos and failures. Suffice it to say the P3 model does not remove risk from the public, nor does it reduce the costs to the public(quite the contrary on both counts). Private corporations are concerned with making a profit, and keeping their shareholders happy. And, even if you have the most wonderful private corporation with lots of integrity, private corporations can be taken over by other private corporations. Private corporations are itching to get into the public service domain because there is easy money (and lots of it) to be made with little or no risk to them. Oh, they may tell you that the contract they sign, assigns all risk to them, but the recent economic meltdown should tell you, that such contracts are meaningless when things go awry, afoul and amuck (though these contracts do cost a chunk of change to be written up). And should we want to regain public control when things don't work out, because of NAFTA, this becomes an expensive, if not impossible proposition. I hope you can act with the highest integrity and the public interest in this matter and Keep Our Sewage System PUBLIC. Thank you for the opportunity to voice my concerns.

Comment12: Thanks a lot for all the work you have done."I don't mind if one person craps in my (hypothetical) swimming pool but I object to the whole family doing it". The same applies to the dumping of millions of gallons of "crap" into the ocean. Your plans are great. I love the 1A siting of plants. DEFINATELY I want the project kept in the public domain. NO P3's, NO Privatization. I love the idea of the resource recovery and the option to incorporate new technologies in the future. Good Luck with your planning and I hope all municipalities will get on board and give you 100% support.

Comment 13: Keep this project in the public domain NO P3's, NO privatization

Comment 14: I support 100% publicly owned and operated waste water management. I also support a 100% publicly owned water supply. We must repel any private interest in Canada's fresh water, arguably the most precious resource in the world. We should emulate nations with successful waste water treatments that utilize the energy derivatives from the process. It may not appear to be cost-effective now, however in future it will most certainly be so. BC (CRD) should be leaders in this endeavor.

Comment 15: I am glad that you undertook this important initiative. I totally object to this privatization trend, I don't think it is of benefit to the consumer at all. We recently had a very unfortunate experience that makes me react to this option. Converting our road (Rowils Crescent in Langford) to sewer approximately two or three years ago was presented as a recommended option by the City of Langford. The City offered to subside the grinder pumps. This whole project was commissioned to four different private businesses, not counting the city, to undertake, we accepted, and paid to have the new grinder pump and sewer installed on our property. Work for this project was completed. The problems started to show after two years when we had a sewer back-up (which was fixed partially). Because the private system needs to operate for profit, not one of the private companies wanted to help. Because it is a thin profit margin the private companies operate under, we encountered, and are still encountering, great difficulty to resolve the matter. Each company denied the responsibility, five months have passed and we are still without complete resolution at this time. We have made dozens of phone calls and sent letters. It has been a great inconvenience! The public service system is much more dependable to undertake big civil projects to service the public, because it has a higher standard of service, any matters of issue would be more hastily resolved, there will be no concern about profitability, also less compromise with public safety, and after all, the user will know who is responsible.

Comment 16: I am inclined towards the Construction Management at Risk model of those currently under consideration for the proposed wastewater project. Moreover, I am strongly opposed to any model featuring P3 elements that materially diminish direct involvement and accountability of public bodies and staff, particularly regarding day to day operation of facilities with respect to the quality and management of such an important public resource as water since the profit motive inherent in P3 projects tends to work against public good considerations.

Comment 17: I would like the CRD to deal with sewage treatment using the Procurement Option #2, CMAR. We (the members of this community) must keep control of waste water. I strongly disagree with using the P3 method of funding this project.

Comment 18: As a recently retired public servant I know that P3 projects don't work, and that they actually cost more for less. I'm in favour of Option 1-3 - it makes sense to have the private sector involved in construction - but it is clear they do not actually take on the risk in a true P3.

Comment 19: Based on experience with private operation of services in Ontario, I do not want " for profit " sewage treatment in Victoria and insist that it should be operated and managed by the CRD as a public utility. In fact given what the Victoria scientific community asserts on this issue I do not also support secondary treatment of sewage in Victoria.

Public Participation Summary Report

Procurement Delivery

Core Area Wastewater Treatment Project

625 Fisgard Street, PO Box 1000
Victoria, BC, Canada V8W 2S6
www.crd.bc.ca