



INVITATION TO CONSULTANTS – REQUEST FOR PROPOSAL

CAPITAL REGIONAL DISTRICT CORE AREA AND WEST SHORE SEWAGE TREATMENT DECISION INFORMATION REPORT

Background and Purpose

On July 21, 2006, the Minister of Environment, Barry Penner, directed the Capital Regional District (CRD) to "submit to me for approval no later than June 30, 2007, an amendment to the CRD Core Area Liquid Waste Management Plan detailing a fixed schedule for the provision of sewage treatment." A copy of the Minister's letter is attached in Appendix 1.

We have a mission to be local government leaders in providing cost effective, innovative and environmentally responsible sewage treatment, committed to the triple bottom line, to the residents in the core communities (Esquimalt, Colwood, Langford, Oak Bay, View Royal, Saanich, Victoria). As a result, we are looking for an experienced and qualified engineering firm with a track record of broad-based thinking and innovative problem solving to work with the 13 member Steering committee, staff and an Advisory committee to provide the essential background information and analysis to enable informed, innovative and cost effective decisions on all facets of the sewage treatment solution.

To enable the CRD to move forward on this matter, decisions will need to be made in a number of areas, including the following:

- Plant design criteria and treatment technology including:
 - opportunities for resource recovery
 - sludge management
 - odour control
 - general plant design criteria
- Number and location of treatment plants
- Timing / scheduling of treatment

The purpose of this request for proposal (RFP) is to select a suitable consultant to prepare a report which will provide sufficient relevant and accurate information to adequately inform the Steering committee and the community about the areas listed above. The triple bottom line approach, which considers economic, social and environmental factors, shall be used to evaluate alternatives.

Terms of Reference

The work includes:

1. Existing Sewerage Systems

As shown on Figure A, the core area sewerage is divided into two systems. The northwest system, which includes the West Shore system, discharges to the ocean through the Macaulay Point pump station and outfall. The northeast trunk and east coast interceptor system discharges to the ocean through the Clover Point pump station and outfall.

Review the configuration and capacity of the existing trunk sewer systems, wastewater flow and quality data, and CRD plans and expectations for reduction of inflow and infiltration in the core area to fully develop the options discussed in this RFP. The CRD will provide recent flow and population equivalent projections developed by the CRD and its consultant for trunk sewer design. The consultant may rely on these projections, except for the West Shore for which new information will need to be obtained from the West Shore municipalities.

2. Design Criteria

Develop appropriate design criteria for year 2065 for trunk sewer design and for determination of land requirements for wastewater treatment facilities. Design criteria should also include but not be limited to:

- reuse of water
- reuse of energy
- considerations for integration with other community and CRD facilities such as the landfill
- odour standards
- sludge management standards / criteria
- other community values that may be appropriate

Both quantity and quality criteria must be established for design purposes. The impact of CRD plans and expectations for reduction of inflow and infiltration must be factored into the designs and costing provided. Assume that effluent quality will be in accordance with the provincial *Municipal Sewage Regulation*.

3. Wastewater Treatment Technologies

Review and discuss the merits of established¹ wastewater treatment technologies for the provision of treatment and for sludge treatment to achieve Class A biosolids and the options for beneficial use of the biosolids.

Also review and discuss the relative merits of promising innovative¹ technologies, compared to established technologies, in particular technologies which provide new opportunities for resource recovery (to include proposals received in the International REI on Innovative and Emerging Technologies). As the level of effort required to review the submissions submitted in response to the REI cannot be determined at this time, proponents are directed to allow for 100 hours of effort.

Provide an assessment of the opportunity for and viability of options for recovery of resources such as energy, soil nutrients, and irrigation or process water, appropriate for the types of residential, commercial and industrial and recreational land uses within the Liquid Waste Management Plan (LWMP) sewerage area and the availability of agricultural and forest land within and outside of the LWMP boundaries. The standards in the *Municipal Sewage Regulation* should be used to assess options for the production and use of reclaimed water.

4. Timing of Treatment

Starting at the point when the locations for facilities have been determined, and without reference to specific dates, provide a realistic schedule for the design and construction of the wastewater conveyance, treatment and disposal facilities envisaged herein, including pipelines, pumping stations, treatment plants, sludge processing facilities and outfalls. Include the time required to obtain approvals for outfall locations and rights-of-way in the schedule. Compare the time frame for

¹ The terms *established* and *innovative* are used in the context of definitions developed by the Water Environment Research Foundation for the stages in the development of technology – embryonic, innovative and established. Embryonic processes are described as laboratory or bench scale, innovative as demonstration and limited use, and established as operating in several full-scale operations.

various methods of procurement including the time required for preparation of documents and selection of proponents.

5. Land Requirements

Determine the range of land requirements for the primary and secondary treatment options from the most compact technologies to the least compact technologies, sized for design criteria projected to 2065. Indicate which options can be grouped together with essentially the same land requirements. Determine minimum land requirements with nominal buffer areas and more desirable land requirements with reasonably-sized buffer areas. Assume that odour control facilities must be sized to eliminate odours at the property line, commensurate with the buffer areas assumed and the design criteria set by the Committee.

6. Number of Treatment Plants

Develop capital and life cycle cost estimates for the following options:

- Options currently not envisioned here that may be determined as potentially viable as a result of the REI on Innovative and Emerging Technologies and input from the Advisory Panel.
- Compact, buried treatment plants at Clover Point and Macaulay Point with sludge processing at a separate facility. This is the option currently in the Core Area LWMP. The consultant will need to review the information developed previously by Stantec Consulting Ltd. and presented in the report entitled *Conceptual Design of Sewage Treatment Plants for Macaulay Point and Clover Point*, dated January 2006, modify the concepts developed by Stantec as the consultant considers appropriate and update the cost information. The costs to provide additional outfall capacity at Macaulay Point in the future and to provide additional sewerage capacity to accommodate new flow projections for the West Shore communities will need to be included in the cost estimates. The consultant will also need to review plans developed previously for sludge processing and beneficial use and update costs. The requirements for a review of sludge management are outlined in a separate section.
- Treatment plants at Clover Point, Macaulay Point and on the West Shore, to accommodate wastewater from Colwood, Langford and possibly View Royal. For this option, assume that sludge from plants at Clover Point and Macaulay Point would be stabilized at a separate sludge processing facility. Cost estimates are required for two options for the West Shore plant: a compact, buried plant with minimal land requirements and a conventional above-ground plant with appropriate screening, landscaping and buffer. Cost estimates will include the cost of conveyance to divert flows from the West Shore to the new plant, the reduced cost of the plant at Macaulay, the impact on the need for additional outfall capacity at Macaulay, and the cost of a new outfall at an appropriate location. It is not intended that sites for a treatment plant and outfall on the West Shore will be chosen as part of this exercise but, for the purpose of preparing cost estimates, locations will have to be assumed.
- A single treatment plant on the West Shore to serve the entire LWMP sewerage area. Cost estimates are required for two options for the West Shore plant: a compact, buried plant with minimal land requirements and a conventional above-ground plant with appropriate screening, landscaping and buffer. Costs developed for this option will include the cost to convey sewage from Clover Point and Macaulay Point to the West Shore plant, the cost to divert sewage from the West Shore to the plant and the cost of a new outfall. The consultant is required to develop and compare costs to convey sewage from Clover Point and Macaulay Point to the West Shore using land and marine routes. Develop separate capital and operating cost estimates to include sludge stabilization at this facility to enable cost comparisons with provision of a separate facility for sludge stabilization.
- A single treatment plant at an offshore location, situated on fill, a stable barge, or on pilings. The intention of this option is to develop broad cost estimates to determine the relative cost of a

land-based plant vs. an offshore plant for the three scenarios above, in order that CRD directors will have a basis to decide whether they wish to give further consideration to this type of option. For the fill and piling options, make assumptions about water depth and bottom conditions based on typical conditions in suitable locations within the LWMP area, using neither the best nor worst case, and state those assumptions.

- A small, decentralized treatment plant with recovery of high quality water and energy for a commercial or industrial use. The intention of this option is to develop broad cost estimates for a decentralized treatment example with resource recovery in order that CRD directors will have a basis to decide whether they wish to give further consideration to this type of option. Based on options for resource recovery discussed under item 3, in particular the recovery of high quality water for beneficial use, the consultant should develop cost estimates for treatment to produce high quality water and include the cost to intercept and convey sewage to the decentralized treatment plant and the cost to convey the treated water to the user. The reduction in cost to convey and treat the waste at a central facility and the cost saving for the purchase of water by the user are to be included in the cost estimates. The scenario developed may be based on an actual potential user, or a hypothetical user, based on typical commercial or industrial developments that could use reclaimed water. In either case, no specific potential user should be identified; the scenario should be presented as a typical case. The standards in the *Municipal Sewage Regulation* should be used to assess options for the production and use of reclaimed water.

7. Sludge Management

Options for sludge management were reviewed by Dayton and Knight Ltd. and presented in a report entitled *Sludge Management Options Study*, dated June 2004. Arising from that study, a sludge management plan was prepared in March 2005. The plan envisages that sludge from treatment plants at Clover Point and Macaulay Point would be conveyed by truck to a separate site for stabilization and be beneficially used, primarily on forest land. Two locations have been identified as potential sites for sludge stabilization and as potential sludge composting sites in the future.

The final report shall contain a synopsis of options for sludge management to achieve class A biosolids designed for the lay reader, including the reasons for using the various options, typical costs and opportunities for resource recovery and beneficial use. The synopsis should include a discussion about some of the promising innovative options, particularly if they provide new resource recovery options. However, the discussion of innovative options should include information about their current stage of their development. The consultant is expected to review CRD plans for sludge management and make recommendations for alternative sludge management options that may be more appropriate for the treatment options discussed above. The *Organic Matter Recycling Regulation* provides the provincial standards for the production and use of organic matter, including biosolids.

8. Available Documentation

The consultant shall review relevant past reports, including the following:

- Capital Regional District, *Core Area Liquid Waste Management Plan*, July 2000 (Approved 2003)
- Capital Regional District, *Core Area LWMP Sludge Management Plan*, March 2005
- Dayton and Knight Ltd., *Capital Regional District, Core Area LWMP Sludge Management Options Study, "Final"*, June 2004
- Capital Regional District, *Core Area LWMP Progress Report on Land Acquisition for a Sludge Processing Facility*, March 2005
- Stantec Consulting Ltd., *Capital Regional District, Conceptual Design of Sewage Treatment Plants for Macaulay Point and Clover Point, Final Report*, January 2006

- Stantec Consulting Ltd., *Capital Regional District, Pilot Testing of Wastewater Treatment Technologies, Final Report*, February 2005

Additional reports that may be of interest include:

- CH2M Hill Engineering Ltd., *Liquid Waste Management Plan – Stage II, Sewage Treatment Options and Locations of Sites*, April 1991
- Stanley Associates Engineering Ltd., *Site Selection and Cost Estimates Colwood/Langford Regional Sewage Treatment Plant*, June 1990
- Dayton & Knight Ltd., *Capital Regional District, Core Area Decentralized Sewage Treatment*, January 2000
- Stubblefield, W.A., et al., members of Scientific and Technical Review Panel, *Scientific and Technical Review, Core Area Liquid Waste Management Plan*, July 2006
- El-Din, M.G., Smith, D.W. and Guest, R.K., *Review of New and Alternative Liquid Waste Management Systems*, Appendix H of *Scientific and Technical Review, Core Area Liquid Waste Management Plan*, July 2006

Submission of Proposals

Proposals shall be submitted in two envelopes in accordance with the *Policy and Procedure for Engaging Consultants*, attached as Appendix 2. Envelope #1 shall contain the **technical proposal**. Envelope #2 shall contain the **fee proposal**.

Budget

A budget breakdown for consulting time for different aspects of the work shall be provided as part of the fee proposal. The maximum budget available for this work is \$200,000, plus GST. The fee proposal shall be submitted in a separate envelope from the technical proposal.

Information Required

The following information is required from firms submitting a proposal:

1. the proponent's vision of the project and understanding of the CRD's objectives
2. a clear statement of the roles and responsibilities of the various participants in the project
3. a discussion of opportunities for phasing the reporting of the results to facilitate early consideration of some of the options by CRD Directors
4. a discussion of unique aspects of the consulting team, or its approach to certain requirements of the terms of reference, which might enhance the outcome of the project and add value to the information required
5. in tabular form, an estimate of each team member's time allocation to each aspect of the project, based on the requirements indicated and the consultant's vision for the project
6. a project schedule indicating significant milestones and proposed meetings with the CRD
7. a statement of commitment that personnel named in the proposal will be available for the duration of the project, except where prevented by circumstances beyond the control of the consultant
8. the location of project personnel while working on this project
9. a budget for consulting services (envelope #2) described in the terms of reference, including budget breakdown with expenses and GST clearly identified

10. as part of the fee proposal (envelope #2), a schedule of charge-out rates for each team member that will apply for the duration of the project

Meetings

Proponents shall allow for the following meetings:

- an initial meeting with CRD staff to discuss the work
- an initial meeting with staff of the West Shore municipalities to discuss needs for increased capacity and to receive information relevant to those needs
- monthly progress meetings with staff
- monthly meetings with the Steering committee to present results
- monthly meetings with the Advisory committee to present results
- a final meeting with staff to discuss the draft report prior to completion of the final report
- presentation of the results at two meetings of the Core Area Liquid Waste Management committee

Schedule

The timeframe available to complete the required report is from approximately November 8, 2006 to March 30, 2007.

Confirmation of Qualifications and Experience

Proponents are requested to confirm that the proposed project team and its involvement in the project remains as indicated in the submission of qualifications. If any changes are proposed, this should be made clear in the proposal submission.

Evaluation of Proposals

Submissions will be evaluated on the basis of the information provided in accordance with the evaluation forms attached to the *Policy and Procedure for Engaging Consultants* (Appendix 2). Care should be taken to ensure that sufficient information is provided so that an informed evaluation can be carried out in each of the areas where points are to be assigned.

For this assignment, the technical evaluation will include an interview of each of the proponents by the Core Area Liquid Waste Management committee (the Steering committee). Each member of the Steering committee that is present for the interview will assign points in accordance with the evaluation forms attached to the *Policy and Procedure for Engaging Consultants*. The average of the points awarded by the committee members will be recorded as the consensus score of the Steering committee.

The written submissions will be evaluated by a staff evaluation panel in accordance with the evaluation forms attached to the *Policy and Procedure for Engaging Consultants*. The consensus score of the staff evaluation panel will be added to the consensus score of the Steering committee to obtain the technical evaluation score for each proponent.

Submission of Proposals

Proposals will be received up to noon local time on Wednesday, November 1, 2006. Three copies of all documents are requested. Responses to this RFP should be submitted to:

Sally McMurray
Capital Regional District
P.O. Box 1000, 625 Fisgard Street
Victoria, BC V8W 2S6
Telephone: (250) 360-3046

CAPITAL REGIONAL DISTRICT

POLICY AND PROCEDURE FOR ENGAGING CONSULTANTS

Purpose

To obtain consulting services that represents the best value for money.

Policy

- 1) For projects under \$35,000, consultants will be selected from the consultants list based on specific expertise and hourly rates.
- 2) Where the required level of effort is not clear, a budget will be set out in the Request for Proposals.
- 3) Since the value of consulting services is highly dependent on the qualifications, experience and knowledge of the consultant, for projects over \$35,000 selection will be based 50% on expertise and 50% on quoted price. Points distribution should be specific to the project.
- 4) For assignments of \$35,000 or more, each consultant proposal will be evaluated by a team of three or more people using selection criteria provided in the Request for Proposal, as set out in Appendix A and Appendix B of this policy. An overall merit ranking for each proposal will be produced.
- 5) A list of qualified consultants will be maintained by each Department. The list will be updated regularly after advertising locally.
- 6) Consultants will be selected in accordance with the following table:

POLICY AND PROCEDURE FOR ENGAGING CONSULTANTS	
0 - \$35,000	Consultants will be selected from the consultant list based on hourly rates, and specific expertise for the assignment. Work will be shared between consultants as far as possible.
\$35,000 - \$100,000	For unusual assignments, written proposals will be solicited by advertising and for routine assignments by invitation to at least three consultants on the consultant list. Proposals will be evaluated as described in Appendix A and Appendix B. A copy of this policy, including a project specific evaluation form, will be provided as part of the proposal call information package.
\$100,000 +	For unusual assignments, consultants will be invited by advertising to submit credentials for evaluation and short listing prior to a proposal call. For routine assignments, written proposals will be solicited by advertising (without a credential call). Proposals will be evaluated as described in Appendix A and Appendix B. A copy of this policy, including a project specific evaluation form will be provided as part of the proposal call information package.

- 7) In situations where only one consultant is identified for a consulting task, which is estimated to be in excess of \$35,000 in total for all phases of the work, the approval for the appointment of the consultant will be obtained from the applicable committee/commission.

Approved by the CRD Board 10 November 1992

Amended by the CRD Board 10 June 1998

Amended by the CRD Board 14 October 1998

Amended by Administration for consistency and legal form 27 October 2005

APPENDIX A

EVALUATION PROCEDURES

Both technical merit and cost are awarded a maximum of 500 points each, for a total potential of 1,000 evaluation points. Technical proposals will be opened and marked out of a total score of 500 points against the evaluation grid, an example of which is in Appendix B, before any financial proposals are opened. Each technical presentation will be evaluated on the basis of the firm's experience, competence of its personnel and acceptability of the method proposed.

A firm's technical proposal shall be deemed qualified only if it complies with all requirements contained in the Request for Proposal.

Only proposals whose technical scores are within 15% of the proposal awarded the highest technical score will have their financial proposals opened and evaluated. All other financial proposals will be returned unopened upon appointment of the selected firm. The only exception to this policy is when the proposal of the second-ranked firm is more than 15% below the highest technical score and still technically qualified. In such a case, the second-ranked firm would have its financial proposal opened to avoid a non-competitive situation.

In all cases, the Capital Regional District reserves the right to cancel the competition and call for new proposals.

Financial proposals can be awarded a maximum of 500 points. The financial proposal with the lowest cost of fees will be awarded 500 points, which will be added to the technical score, resulting in the firm's total score. The percentage by which each of the remaining firms' proposed costs exceeds the cost of the lowest qualified proposal will be the percentage by which the 500 points is reduced, prior to adding it to the technical score resulting in each firm's total score.

For example, if the proposed cost of Firm A exceeds the lowest proposed cost (Firm B) by 10%, Firm A will add 500 minus (10% of 500), or 450 points to its technical score. The firm receiving the highest total score will be judged to have the best value to the Region.

COSTS INCLUDED IN PROPOSAL EVALUATION

All personnel fees, salaries, wages, reimbursable expenses and GST, will be taken into account in the proposal evaluation.

DEBRIEFING

Subsequent to final selection of a firm for contract award, all other proposing firms have the right to receive a debriefing on the strengths and weaknesses of their proposal. Points awarded by evaluation teams for both technical and financial proposals will remain confidential and may not be divulged to any proposing firm.

APPENDIX B
EVALUATION FORMS

**TECHNICAL EVALUATION OF PROPOSALS
CORE AREA AND WEST SHORE SEWAGE TREATMENT DECISION INFORMATION REPORT**

FORM 1 of 2: STEERING COMMITTEE EVALUATION FORM

Committee member: _____

Member's score out of 150 points:

Earth Tech (Canada) Inc.
Golder Associates
Focus Corporation _____

Stantec Consulting Ltd.
Brown and Caldwell Consultants _____

Associated Engineering (BC) Ltd.
CH2M Hill
Kerr Wood Leidal Associates _____

**TECHNICAL EVALUATION OF PROPOSALS
CORE AREA AND WEST SHORE SEWAGE TREATMENT DECISION INFORMATION REPORT**

FORM 2 of 2: STAFF PANEL EVALUATION FORM

PAGE 1 of 2: Qualifications, Experience and Local Knowledge

		P O I N T S	CONSULTANTS			
1. THE FIRM (35)						
1.1	Experience with similar projects*	30				
1.2	General related project experience	5				
TOTAL FIRM		35				
2. THE PERSONNEL (175)						
2.1 Project Manager/Director (55)						
	(a) Experience with similar projects*	30				
	(b) Qualifications of Project Manager/Director	15				
	(c) Local knowledge	10				
2.2 Project Team (120)						
	(a) Experience with similar projects*	60				
	(b) Qualifications of team members	40				
	(c) Local knowledge	20				
TOTAL PERSONNEL		175				
		210				

* Experience with similar projects refers to planning, siting, designing and cost estimating large sewage treatment plants, pump stations, outfalls and pipelines (including marine pipelines), with particular emphasis on a track record of innovation and experience with projects involving resource recovery.

**TECHNICAL EVALUATION OF PROPOSALS
CORE AREA AND WEST SHORE SEWAGE TREATMENT DECISION INFORMATION REPORT**

FORM 2 of 2: STAFF PANEL EVALUATION FORM

PAGE 2 of 2: The Method and Level of Effort

		P O I N T S	CONSULTANTS			
Brought forward						
3.	<u>THE METHOD AND LEVEL OF EFFORT</u> (140)					
3.1	Project "vision" and understanding of the CRD's objectives	40				
3.2	Roles/responsibilities definition	20				
3.3	Proposals for briefing or involving the CRD during the project	15				
3.4	Quality and clarity of submission	15				
3.5	Proposed level of effort	35				
3.6	Value added	15				
TOTAL METHOD		140				
TOTAL STAFF EVALUATION		350				
STEERING COMMITTEE CONSENSUS SCORE		150				
TOTAL TECHNICAL COMPONENT		500				

**TECHNICAL EVALUATION OF PROPOSALS TO PREPARE
A CORE AREA AND WEST SHORE SEWAGE TREATMENT DECISION INFORMATION REPORT**

COMBINED TECHNICAL AND FINANCIAL EVALUATION

To be applied as described in Appendix A and only to those proposals with a technical merit rating within 15% of the highest rated technical proposal.

FIRMS	Consulting Fee	Percent above Lowest Fee	Financial Proposal Score	Technical Proposal Score	Total Score