



**REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE
MEETING OF WEDNESDAY 24 JUNE 2009**

SUBJECT **JUNE 2009 PROGRESS REPORT TO THE MINISTER OF ENVIRONMENT – CORE AREA WASTEWATER MANAGEMENT PROGRAM**

PURPOSE

To obtain approval from the Core Area Liquid Waste Management Committee (CALWMC) of the draft June 2009 progress report to the minister of environment on the Core Area Wastewater Management Program (CAWMP).

BACKGROUND

The minister of environment, in his letter dated 08 July 2008, extended the deadline for submitting a major Liquid Waste Management Plan amendment to 31 December 2009. This extension was subject to the submission of a progress report on or before 31 December 2008 and a second progress report on or before 30 June 2009.

The December 2008 progress report was submitted to the minister on schedule. The draft June 2009 progress report consists of the documents noted below.

- **Cover letter to the Honourable Barry Penner Minister of Environment** (*Attached*)
- **Appendix A - Summary of Work Completed from January to June 2009 and Work Proposed to the end of 2009**
 1. Core Area Wastewater Management Program - Program Development Phase Conceptual Planning - Activity Status as of 30 June 2009. This document includes findings and description of selected wastewater management direction. (*Attached*)
 2. Staff Report EHQ 09-54 Adoption of Wastewater Management Strategy (*Not attached - submitted to CALWMC 27 May 2009 and 02 June 2009*)
 3. Peer Review Team final report which incorporates a comprehensive executive summary (*Not attached – submitted to CALWMC 13 May 2009*).
 4. Public Consultation Summary Report (*Not attached – submitted to CALWMC 27 May 2009*)
 5. Update on First Nations consultation/engagement (*Attached*)
 6. Wastewater Facility Siting and Evaluation – 2009 Work Program and Budget (*Not attached - submitted to CALWMC 10 June 2009 as Appendix A of staff report EHQ 09-59*).
 7. Business Case Development: Discussion Paper on Procurement Analysis Planning: Scope and Options (*Not attached - submitted to CALWMC 24 June 2009 with staff report EHQ 09-70*)
 8. Marine Environmental Impact Study and Wastewater Characterization Summary (*Attached*)
 9. Project schedule chart to mid 2010 (*Attached*)
- **Appendix B - Consultant team summary report** (to be provided to committee members and the minister of environment by the end of June 2009)

Presentations on at least 23 discussion papers prepared by the consultant team have been made to the committee since early 2007. These discussion papers are posted on the web at www.wastewatermadeclear.ca/media/archived-documents and copies are available upon request.

ALTERNATIVES

1. That the CALWMC approve the attached draft June 2009 progress report on the CAWMP and direct staff to submit it to the minister of environment.
2. That the CALWMC amend the draft progress report prior to submitting it to the minister of environment.

FINANCIAL IMPLICATIONS

A new borrowing bylaw will be required to fund much of the proposed 2009 work. The required Bylaw No. 3615 was endorsed by the CALWMC at its meeting of 10 June 2009.

SUMMARY/CONCLUSIONS

The required June 2009 progress report to the minister of environment on the Core Area Wastewater Management Program is attached.

RECOMMENDATION

That the Core Area Liquid Waste Management Committee approve the attached June 2009 draft progress report on the Core Area Wastewater Management Program and direct staff to submit it to the minister of environment.

Dwayne Kalynchuk, PEng
Project Director, Core Area Wastewater Treatment

COMMENTS

SBM:hr:jta
Attachments: 5

June 2009

The Honourable Barry Penner
Minister of Environment
PO Box 9047 Stn Prov Govt
Victoria, BC V9W 9E2

Dear Minister Penner:

**RE: CAPITAL REGIONAL DISTRICT – CORE AREA WASTEWATER MANAGEMENT PROGRAM
– JUNE 2009 PROGRESS REPORT**

The Capital Regional District (CRD) is pleased to submit this June 2009 progress report on the Core Area Wastewater Management Program. The report has been prepared in response to your request of 08 July 2008.

Since the last progress report, dated 15 December 2008, the CRD has made substantial progress in planning for wastewater treatment, some highlights of which are as follows:

- The CRD's Core Area Liquid Waste Management Committee (CALWMC), at its meeting of 2 June 2009, endorsed a distributed wastewater management strategy (referred to as Option 1 in the attached documents) aimed at providing affordable wastewater treatment while optimizing resource recovery and minimizing the generation of greenhouse gases.
- A peer review team of wastewater treatment and resource recovery experts from across North America was engaged to review and comment on the program planning work done to date. These internationally recognized experts provided advice on how to most cost-effectively treat wastewater while taking into account environmental and social values.
- An extensive community engagement program was developed and is being implemented. The program incorporates education and information (website, open houses and advertising), community dialogues (small group exercises and workshops) regarding the project's guiding principles, and a community validation process in which feedback is provided on the findings from the community dialogues.
- A summary report, with related discussion papers, was prepared by the program's consultant team of Associated Engineering, CH2M Hill, and Kerr Wood Leidal Associates, which provides a concise description of the conceptual planning work done to date.
- The CRD purchased a potential wastewater treatment plant site in Saanich East and the identified and evaluated other potential treatment sites in the core area and west shore.
- A review of environmental effects of wastewater facility siting, construction and operation has been initiated. These assessments involve technical analysis and public comment on draft findings.

In your letters of 14 December 2007 and 24 February 2009, you listed six objectives for moving forward:

1. Meet the regulatory standard for liquid waste.
2. Minimize total project cost to the taxpayer by maximizing economic and financial benefits, including beneficial reuse of resources and generation of offsetting revenue.
3. Optimize the distribution of infrastructure based on number 2 above.
4. Aggressively pursue opportunities to minimize and reduce greenhouse gas emissions (e.g., reduced requirement of energy for pumping purposes, and beneficial re-use of energy).
5. Optimize "smart growth" results (e.g., district services, density, "Dockside Green"-like innovation).
6. Examine the opportunity to save money, transfer risk and add value through a public private partnership.

The documents attached in Appendices A and B are listed below. They focus on addressing these objectives and explain how the CRD will continue to appropriately engage the public and First Nations in planning and development of the overall wastewater management program.

Appendix A includes the following documents which summarize the work done to date and outline the work planned for the remainder of the year:

1. Program development phase – conceptual planning with findings and description of selected wastewater management direction
2. Adoption of wastewater management strategy (staff report to the CRD's CALWMC)
3. Peer Review Team Final Report, which incorporates a comprehensive executive summary
4. Public Consultation Summary Report
5. Update on First Nations consultation/engagement
6. Wastewater facility siting and evaluation – 2009 work program and budget
7. Business case development: discussion paper on procurement analysis planning – Scope and Options
8. Summary of the Marine environmental impact study and wastewater characterization
9. Project schedule to mid 2010

Appendix B includes the consultant team summary report with related discussion papers.

Meeting the regulatory standard (objective 1) is a basic goal of the overall program and it is fully addressed in the consultant team summary report (Appendix B) and the attached discussion papers.

Minimizing the total program cost to the taxpayers while maximizing economic and financial benefits (objectives 2 and 3) are important values that have influenced the development of all the wastewater management options described in the discussion papers on Distributed Wastewater Management and the discussion paper on Biosolids Management also emphasizes these priorities. The updated cost estimates provided in the Capital and Annual Operating and Maintenance Costs discussion paper are based on these values, as are the further refined cost estimates and costs-per-user that are due to be submitted to you in December.

Achieving objective 4 regarding minimizing greenhouse gas (GHG) emissions has been a major focus of the consultant team and CRD staff. GHG reduction is addressed in the discussion papers attached as part of Appendix B.

The CRD wastewater program supports Smart Growth in the region (objective 5). Smart Growth principles dealing with compact form, urban growth boundaries, mixed-use development, and efficient use of resources are reflected in Core Area Official Community Plans and the CRD's Regional Growth Strategy. These plans formed the basis of wastewater flow calculations, the identification of areas that provide opportunities for energy and water reuse from wastewater, including district heating, and the design of facilities that complement present and future neighbourhoods.

Objective 6 is being comprehensively addressed by the CRD's business case consultant and the first portion of their report is attached under Appendix A(7). In addition to carrying out environmental and social reviews for the various wastewater facilities, the CRD will conduct environmental impact studies (EIS) as specified in your letter of 14 December 2007 and required by the municipal sewage regulation. These studies will cover the entire wastewater treatment system including each land based facility and each new effluent discharge location. The result of the land based EIS and preliminary results for the marine based EIS will be provided to you in December. However, it is expected that further work will be

needed to complete the marine based EIS until 2010. A summary of the status of these studies is provided in attachments A(6) and A(8).

Your feedback on the strategy outlined above, more fully described in the attached documents, would be appreciated.

The CRD remains committed to finding the best solution for wastewater treatment in the core area and west shore, one which satisfies the triple bottom line values of social, economic and environmental responsibility.

Based on the substantial progress made to date, I am confident that the CRD will provide you, on schedule, with the Liquid Waste Management Plan amendment you requested by the end of 2009.

The CRD appreciates the funding commitment for program planning work contained in the contribution agreement dated 11 February 2009 between the CRD and the governments of Canada and British Columbia. Obtaining a similar agreement as soon as possible to fund the procurement phase of the program is a high priority for the Board.

In this regard, I would like to request a meeting with you and the Honourable Bill Bennett, Minister of Community Development, to discuss this progress report, related funding issues, and how we can move forward with this important environmental program.

Should you or your ministry staff have any questions about the attached documents, please have your staff contact Dwayne Kalynchuk, Project Director, Core Area Wastewater Treatment by telephone at 250-360-3092 or by e-mail at dkalynchuk@crd.bc.ca.

Yours sincerely,

Geoff Young
Board Chair

Attachments: ?

cc: CRD Board of Directors
Randy Alexander, Regional Environmental Protection Manager, Ministry of Environment
Kelly Daniels, Chief Administrative Officer, CRD
Dwayne Kalynchuk, Director, Wastewater Treatment Project, CRD

CAPITAL REGIONAL DISTRICT
CORE AREA WASTEWATER MANAGEMENT PROGRAM
PROGRAM DEVELOPMENT PHASE – CONCEPTUAL PLANNING

ACTIVITY STATUS AS OF 30 JUNE 2009

BACKGROUND

The report entitled, *The Core Area Wastewater Management Program – Program Development Phase – Report to the Minister of Environment*, dated June 12, 2008 documented the progress that had been made in planning the Core Area Wastewater Management Program. The report also highlighted the proposed activities to complete the conceptual planning phase, based on an extended schedule. In his letter dated July 8, 2008, the Minister accepted the proposed schedule change, subject to the submission of a progress report on or before December 31, 2008 and a second progress report on or before June 30, 2009. The proposed Liquid Waste Management Plan (LMWP) amendment is to be submitted to the minister by December 31, 2009.

The conceptual planning is being carried out by the consultant team of Associated Engineering, CH2M Hill and Kerr Wood Leidal Associates. The first status report was submitted in December 2008, as part of the overall CRD Report. This second progress report provides the status of the conceptual planning to June 30, 2009, based on the originally proposed deliverables and milestones.

STATUS OF ACTIVITIES TO 30 JUNE 2009

The primary activity has been the development of a series of discussion papers. These discussion papers were intended to inform the CRD Core Area Liquid Waste Management Committee (CALWMC) on critical program issues, technical information and possible wastewater management strategies. The information developed has been used by the CALWMC to select the wastewater management strategy for the Core Area Wastewater Management Program.

The list of discussion papers is shown in Table 1. The series of discussion papers from Activity 030 to 035, inclusive, were intended to provide the background data for the major activity, 036, the development of distributed wastewater management strategy options. Activities 037 and 038 provide details on the proposed Biosolids Management Strategy and on the cost estimates, respectively. The summary report provides a concise discussion of the conceptual planning work and on the selected wastewater management strategy.

As part of the distributed wastewater management strategy, three option series were developed.

- Option 1 Series: Resource Recovery on a Regional Basis – the Fewest Plants
- Option 2 Series: Resource Recovery based on a Combined Regional – Local Basis
- Option 3 Series: Resource Recovery a Local Scale – the Largest Number of Plants

A sustainability assessment framework (SAF) approach was used by the consultant team, the CRD staff and the CALWMC to assess the three strategic directions from a triple bottom line perspective. Feedback from the public consultation process was used to set and weight the criteria.

The discussion papers and the summary report will be completed by June 30, 2009, as per the original schedule.

FINDINGS

Several key findings of the option evaluation are discussed below:

Wet Weather Flow Management

Goals and targets for wet weather flow management, including the elimination of combined sewer overflows (CSO) and the reduction of sanitary sewer overflows (SSO) have already been set in the LWMP. The analysis has concluded that the best approach to achieve these goals is a combination of sewer separation in the CSO areas, the continued management of the sanitary sewer system asset through replacement and remediation and the treatment of surplus wet weather flows at the end of the pipe, with discharge to the non-embayed marine environment. Wet weather flow treatment is proposed primarily at Clover Point, with some surplus wet weather flows treated at Saanich East, McLoughlin Point and South Colwood.

Secondary Wastewater Treatment Technologies

While it was not the intent to make final decisions on wastewater treatment technology, the option development has yielded some conclusions. The CRD should consider a blending of technologies that aim at providing an effluent quality that meets the final use. The opportunity for potential water reuse and the need for small plant footprints suggest that membrane bioreactor (MBR) technologies may be an appropriate choice for the dry weather treatment technology. This would be combined with high-rate primary treatment technologies that would be aimed at producing an effluent that meets the goals for wet weather discharges. By blending the effluent streams prior to marine discharge, the CRD can have the potential for water reuse and a cost effective dry weather / wet weather treatment strategy.

Biosolids / Organic Residuals Management

The analysis has concluded that the basic strategy for biosolids management should be anaerobic digestion and biomethane production with the fuel used in the community natural gas system. The dewatered and digested biosolids can best be managed through a multi-use zero waste strategy. A small portion of the biosolids could go to a willow-coppice demonstration project. This is an emerging biosolids management approach that has significant benefits in terms of greenhouse gas management and production of a value-added final product. The remaining biosolids could then be further dried for use as a green fuel. The initial target customer would be the cement manufacturing sector, where the current use of coal would be off-set by the use of the dried biosolids fuel. In order to not fully rely on third-party contracts, the thermal destruction of the dried biosolids, either alone or in conjunction with solid waste residuals management should also be pursued.

Water Reuse

Given the long term population growth and the potential impacts of climate change, water reuse may emerge as a key part of the overall watershed management strategy in the decades ahead. It is thus critical that the wastewater management strategy be planned so that this can be incorporated. All strategic directions under consideration provide this opportunity.

Heat Energy Recovery

The work has concluded that there are potential opportunities in the short term and even greater opportunities in the longer term for heat energy recovery from wastewater effluent. All strategies provide these opportunities. The differences are in the locations of the opportunities. As with water reuse, the major issue is economics and timing. As heat recovery from effluent is an “add-on” technology, the key is locating the plants in the right locations to take advantage of future opportunities. Examples of this are wastewater treatment plants that are located in areas of new community development, so that the source of the heat is located in close proximity to a future district heating system.

In developing the options, some common themes or conclusions emerged. These are:

1. A wastewater treatment plant is required at or near Macaulay Point / McLoughlin Point.

This is one of the two existing major wastewater discharge points. In order to develop a cost effective overall strategy, a facility at least handling the surplus wet weather flow is required at this location. As the Macaulay Point site does not appear to be available, the CRD is currently in discussions with Imperial Oil and the Department of National Defence on the use of the McLoughlin Point properties.

2. A wet weather flow relief point is required at Clover Point.

This is the second of the two existing major wastewater discharge points. Given the significant wet weather flows at this point, it makes sense in all scenarios to develop this site as a wet weather flow relief point. It should be possible to site this facility almost entirely underground.

3. Wastewater treatment plants in the east and west area of the sewerage area are required.

In all scenarios, wastewater treatment plants in Saanich East and in the vicinity of the South Colwood area in the west are required. The major reason for this is their location within the sewerage area and their ability to contribute to the overall management of wastewater dry weather and wet weather flow. The capacity of the Saanich East plant is essentially governed by the build-out of the upstream sewerage area. This plant is situated to take advantage of the resource recovery partnering opportunities with the University of Victoria. There is some flexibility in the sizing of the South Colwood plant, as the flows can be split with other decentralized plants in the West Shore area. Again, this plant is well situated to take advantage of resource recovery opportunities through local community development.

THE SELECTED WASTEWATER MANAGEMENT DIRECTION

The SAF analysis concluded that Option 1 was the preferred direction. The Option 1 strategy would see the development of a distributed wastewater management system incorporating three wastewater treatment plants – Saanich East, McLoughlin Point and the West Shore – and a wet weather flow facility at Clover Point. Heat energy can be recovered from the effluent from the three secondary plants to provide supplement heat to local district energy systems. Local water reuse opportunities can also be developed, either now or in the future. The expected capital cost of the first stage project is about \$1.2 billion.

During the peer review process, the peer review team suggested that given the challenges and uncertainties in the development of the McLoughlin Point site, consideration be given to combining the functions of the McLoughlin Point plant and the South Colwood plant into a single, larger plant in South Colwood. Two variations on this theme were developed (Options 1B and 1C). The original Option 1 was renamed 1A for clarity.

At the 02 June 2009 meeting of the CALWMC, the following motion was passed:

- 1) *That the Capital Regional District (CRD) proceed with Option 1 with further investigation of variations on the strategy, including:*
 - a) *Continued analysis of Options 1a, 1b and 1c through the triple bottom line analysis, including an assessment of biosolids integration with solid waste activities and functions.*
 - b) *Investigation of a wastewater heat recovery system and delivery mechanism in James Bay.*
 - c) *Integration of inflow and infiltration management with appropriate phasing of the wet weather strategy at Clover Point.*
 - d) *Relocation of the solids processing from the liquid processing site to allow potential integration with solid waste activities and functions.*

- e) *Further development of the biosolids management plan to reduce operational risks associated with biosolids end uses.*
 - f) *Complete siting investigations in Saanich East/North Oak Bay.*
 - g) *Investigation of opportunities for heat recovery and water reuse with the University of Victoria.*
 - h) *Research the possibility of a single larger site in the event that the McLoughlin Point site is not selected.*
 - i) *Evaluation of the financial and rate impacts of the costs and revenues, including revenues and/or carbon tax benefits of resource recovery and use for each option; and*
- 2) *That the CRD look at options for sewage treatment in the West Shore by working in cooperation with the Administrators and Engineers of Colwood and Langford.*

The conceptual planning phase of the Project has been completed. The above activities will commence in July 2009 as part of the Pre-Implementation Phase.

Table 1
Discussion Papers

Activity	Discussion Paper Number	Title
Project Management	030-DP-1	Program Development and Implementation
Integrated Resource Management Strategy	031-DP-1	A Decision-Making Framework for the Wastewater Biosolids Management Program
	031-DP-2	Investigation of Examples of IRM in Sweden
	031-DP-3	Biosolids Management/Organic Residuals Energy and Resource Recovery
	031-DP-4	Flow Energy Management and Pressure Energy Recovery
	031-DP-5	Phosphorus Recovery
	031-DP-6	Heat Recovery
	031-DP-7	Water Reuse
	031-DP-8	Urine Separation
	031-DP-9	Biosolids / Organic Residuals Strategy Evaluation

Activity	Discussion Paper Number	Title
Greenhouse Gas Management Strategy	032-DP-1	Methodology to Assess GHG Management Performance
Wastewater Flow Management Strategy	033-DP-1	Existing and Future Scenarios: Populations, ICI Equivalents, and Inflow & Infiltration
	033-DP-2	Design Flow Tables
	033-DP-3	Sanitary and Combined Overflow Locations
Macaulay Point / McLoughlin Point WWTP	034-DP-1	Liquid Process Alternatives Evaluation
	034-DP-2	Solids Processing Alternatives Evaluation
Clover Point Wet Weather Flow Management Plant	035-DP-1	Wet Weather Management Strategies for Clover Point Wet Weather Plant
	035-DP-2	Conceptual Alternatives for Clover Point Wet Weather Plant
Distributed Wastewater Management	036-DP-1	Identification and Evaluation of Resource Recovery Opportunities
	036-DP-3	Sustainability Assessment Framework Analysis
	036-DP-4	Proposed Distributed Wastewater Management Strategy
Biosolids / Resource Management Facility	037-DP-1	Biosolids Management - Facility Planning and Implementation
Cost Estimates	038-DP-1	Capital and Annual Operating and Maintenance Costs
Summary Report		Summary Report - Core Area Wastewater Treatment Project

**UPDATE ON FIRST NATIONS CONSULTATION/ENGAGEMENT
JUNE 2009**

INITIATIVES TO DATE

The Capital Regional District's (CRD) approach to working with First Nations on the Core Area Wastewater Management Program is to create a clear understanding of roles, responsibilities and expectations at the front end of the program to ensure the potential of a strong working relationship throughout its completion. As a result, the CRD has entered into a protocol with the province to form a partnership on consultation and engagement by outlining those issues which are the responsibility of the CRD, and those that ultimately lie with senior governments.

Within that agreement, the province retains overall responsibility for consultation with First Nations including outlining which First Nations need to be engaged and to what extent. The CRD is taking the "on the ground" responsibility for making sure First Nations are well informed about the project, have real opportunities to provide input, and can see how that input is being used, where practical, in the design and construction of the project. If issues remain, it will then be the provincial or federal government's responsibility to respond to, and, where appropriate accommodate assertions concerning potential impacts on a First Nation's existing aboriginal or treaty rights.

In addition to the protocol with the provincial government, the CRD has taken the following steps to engage First Nations on the wastewater management program:

- The CRD has renewed its secondment of a senior official from the Province with a strong background in aboriginal relations to help work with First Nations on these issues.
- The CRD and the province have signed tripartite protocols (attached) with the Songhees, Esquimalt, and Beecher Bay Nations laying out a common understanding of the consultation/engagement process (the Esquimalt protocol is awaiting provincial ratification).
- The CRD is also trying to address other issues with these First Nations which have the potential to affect progress on a good working relationship on this project.
- The Province has provided initial capacity funding to the Songhees, Beecher Bay and Esquimalt Nations to support the consultation process.
- The CRD has met with federal agencies to ensure a common understanding with regard to consultation duties with First Nations if federal decisions are required to complete the project.
- The CRD has met with federal officials to clearly state its expectation that if federal Crown land is needed to complete the project, the federal government will deal fairly with both the CRD and affected First Nations to ensure the project can be achieved on a win-win basis.
- The CRD has entered into the information sharing process in earnest with Songhees, Esquimalt and Beecher Bay Nations on project design and siting work recording interests and providing these records to MOE officials (summary of interests chart on next page).
- At the request of the Tsawout First Nation, the CRD has provided an overview of the wastewater treatment project to that First Nation and will be providing a formal briefing to Tsawout Chief and Council on June 24. The CRD will work with ministry of environment officials to determine whether a more formal consultation process should be entered into with the Tsawout.
- The CRD has provided information packages to the Tseycum, Tsartlip and Pauquachin Nations to keep them informed on the project even though provincial officials have not advised that consultation should be pursued with these communities.

GOALS FOR THE REMAINDER OF 2009

- Continue to provide information to First Nations on project design, gather interests and feedback, and use that information where possible in project design.

- Resolve issues, as possible, and refer those not resolvable within the CRD legislative mandate to the provincial or federal government.
- Provide information to other interested First Nations not directly affected by the program.
- Continue to use the wastewater management program as a vehicle to address other relationship issues between the CRD and First Nations.

It is important to recognize that consultation and engagement with First Nations is not an endeavor that can be accomplished by simply setting a deadline. Given the complexities of the wastewater management program, the legal requirement and genuine desire to engage and consult with First Nations in a meaningful way, and the number of other important endeavors taxing these First Nation's capacity, this pursuit can be expected to require more effort and possibly more time than was envisioned at the inception of the project.

First Nation Engagement Chart

First Nation	Status	Interests Identified to Date	Engagement on other Issues	Next Steps
Songhees	Consultation MOU signed	<ul style="list-style-type: none"> • Use of federal Crown land • Impacts to the foreshore • Protection of natural resources • Any outfall located near Chatham and Discovery Islands • Affects on marine species • Affects on archaeological sites • Adequate sewage capacity for Songhees lands including future Treaty Settlement Land 	<ul style="list-style-type: none"> • Regional Growth Strategy • E&N rail trail 	<p>Continue Meeting to gather interests.</p> <p>Next meeting early July</p>
Esquimalt	Consultation MOU signed by Esquimalt and CRD, awaiting BC ratification	<ul style="list-style-type: none"> • Meaningful participation in the project and concerns about the timelines for input • Impacts on the environment including the foreshore and marine species 	<ul style="list-style-type: none"> • Sewer infrastructure • Regional Growth Strategy • E&N rail trail 	<p>Continue Meeting to discuss the project and examine Esquimalt participation</p> <p>Next meeting Early July</p>

First Nation	Status	Interests Identified to Date	Engagement on other Issues	Next Steps
Beecher Bay	Consultation MOU signed	<ul style="list-style-type: none"> • Location of any outfall near Albert Head • Use of Crown land for sewage treatment in the Western Communities 	<ul style="list-style-type: none"> • Sea to sea greenbelt • Beecher Bay sewage treatment plant 	<p>Continue Meeting to gather interests.</p> <p>Next meeting July</p>
Tsawout	Information package provided	<ul style="list-style-type: none"> • May have concerns about the extension of the Finnerty Cove outfall affect on fishing and marine species • Affects of discharges into inland water bodies 	<ul style="list-style-type: none"> • Expansion of service agreement • Partnering on foreshore restoration • Tsawout sewage treatment plant 	Briefing with Chief and Council on wastewater project this summer
Saanich Tribes <ul style="list-style-type: none"> • Tsartlip • Tseycum • Pauquachin 	Information package provided			Continue to forward information packages and be prepared to provide information

CORE AREA AND WEST SHORE WASTEWATER TREATMENT MARINE ENVIRONMENTAL IMPACT STUDY AND WASTEWATER CHARACTERIZATION

MARINE ENVIRONMENTAL IMPACT STUDY SUMMARY

Environmental Impact Studies (EIS) are required under the British Columbia Municipal Sewage Regulation. The CRD initiated the EIS work for two of the most likely marine outfall locations (*i.e.*, Albert Head and Finnerty Cove) at the end of 2007.

The “Stage 1” EIS for Albert Head and Finnerty Cove were completed in March 2009 and the process generally followed the steps outlined in Section 5.1 of the Ministry of Environment’s “Environmental Impact Study Guideline”. Specifically, the “Stage 1” EIS involved compiling existing information and characterizing the potential environmental conditions and effects associated with the proposed outfalls using conservative (*i.e.*, worst-case) estimates of future effluent quality, outfall design, and seasonal current and weather patterns. In addition, information about commercial, recreational, and First Nations fisheries and aquaculture resources in the proposed areas was compiled. Known rare and endangered species were also documented along with non-consumptive (*e.g.*, recreational) uses of the proposed outfall areas. Uncertainties were identified and used to prioritize gaps in the existing knowledge, and provide recommendations for the pre-discharge baseline environmental monitoring (*i.e.*, “Stage 2” of the EIS). The final “Stage 1” EIS document (Golder Associates, 2009) incorporated comments from Ministry of Environment staff in Nanaimo both in program design and review of the findings.

A proposed “Stage 2” design was developed by Golder Associates based on the results of the “Stage 1” assessment. The proposed program was reviewed by Ministry of Environment staff in May 2009 and was initiated immediately thereafter. This first round of sampling involved “Spring-season” water-column and background characterization at the Albert Head and Finnerty Cove locations. The remainder of the “Stage 2” assessment will be put out to bid through a competitive process during summer 2009 and the successful proponent will be required to undertake more detailed oceanographic modeling, field-based oceanographic characterization (*e.g.*, current meters), baseline environmental and aquatic resource studies, and more refined predictions of effluent quality and outfall design starting in August/September 2009. It is anticipated that this “Stage 2” EIS process will take a total of approximately two years to complete for Albert Head and Finnerty Cove.

If additional potential outfall locations are identified by the CRD during the summer of 2009, they will be reviewed in light of the “Stage 2” EIS for Albert Head and Finnerty Cove. If the additional locations are near to either Albert Head or Finnerty Cove, the data collected for these two sites may be sufficient to meet the EIS needs for the additional locations. It is anticipated that ongoing dialogue with Ministry of Environment staff will resolve the most appropriate means of addressing any additional outfall locations.

WASTEWATER CHARACTERIZATION SUMMARY

Treatment design engineers will require detailed wastewater characterization data to determine future treatment plant capacities and process requirements. Since December 2008, CRD staff have been undertaking a comprehensive dry-weather, wet-weather and storm sampling effluent monitoring program at Macaulay and Clover points, as well as more frequent daily sampling. It is anticipated that these sampling programs will continue at Macaulay and Clover for at least the remainder of 2009, but more likely until spring 2010 to ensure adequate wet-weather data. This sampling will provide the daily, weekly and seasonal loading information required by future design engineers.

Depending on decisions made during the summer of 2009, additional up-stream sampling may also be required if future decentralized treatment plant locations are identified by the CRD.

