Capital Regional District
625 Fisgard St.,
Victoria, BC V8W 1R7

Notice of Meeting and Meeting Agenda
Core Area Liquid Waste Management Committee

Wednesday, February 24, 2016 | **9:05 AM** | **6th Floor Boardroom**

L. Helps (Chair), R. Atwell (Vice-Chair), M. Alto, D. Blackwell, J. Brownoff, C. Day (for C. Hamilton), V. Derman, B. Desjardins (Board Chair), B. Isitt, N. Jensen, C. Plant, Chief R. Sam, D. Screech, L. Seaton, Chief A. Thomas, L. Wergeland (for S. Brice), G. Young

1. Approval of Agenda

2. Adoption of Minutes

2.1. **16-276** Adoption of Core Area Liquid Waste Management Committee Minutes of January 27 and February 10, 2016

Recommendation: That the following minutes of the Core Area Liquid Waste Management Committee be adopted:
1. January 27, 2016
2. February 10, 2016

Attachments: 2016-01-27 Minutes CALWMC

2016-02-10 Minutes CALWMC

3. Chair's Remarks

4. Presentations/Delegations

5. Committee Business

5.1. **16-50** Motion with Notice: Examine Feasibility of Single Facility at McLoughlin Point or Macaulay Point (Director Jensen)

Recommendation: 1. That the Technical Oversight Panel (TOP) working with CRD staff and CRD consultants be requested to examine the feasibility of locating a single facility at either McLoughlin Point or Macaulay Point within the current zoning.
2. That in the event TOP concludes that the CRD property at Macaulay Point requires more land to be a feasibly sized site, that CRD staff be directed to renew inquiries with the new Minister of National Defence with a view to partnering with First Nations to acquire adjoining land at Macaulay Point.

Attachments: Whereas & Motion: Feasibility McLoughlin or Macaulay (Jensen)

5.2. **16-277** Report from the CRD Integrated Resource Management Task Force

Recommendation: That the following be received for information:
(a) Report from the CRD Integrated Resource Management Task Force
(b) Staff comments on the Integrated Resource Management Task Force report.

Attachments: Report from IRM Task Force

Attachment: Staff Comments - IRM Task Force Report

5.3. 16-278 Recommended Option - Core Area Sewage Treatment and Resource Recovery

Recommendation: That the Core Area Liquid Waste Management Committee recommend to the CRD Board:

1. That a conditional Liquid Waste Management Plan Amendment No. 10 be prepared and submitted to the Minister of Environment with the following elements:
a) A centralized tertiary wastewater treatment plant with capacity for 108 ML/D at Rock Bay
b) The BC Hydro/Transport Canada lands as the preferred wastewater treatment site
c) Provision for a modular 10 ML/D tertiary wastewater treatment plant servicing Colwood at the corner of Ocean Boulevard and Island Highway to be phased in dependent on budget and final cost considerations determined in consultation with Colwood
d) Hartland Landfill as the preferred site for biosolids processing with technology to be confirmed by a Request for Statements of Interest process
2. Proceed with a Request for Statements of Interest process to select a biosolids processing technology
3. That the preferred option be formally communicated to all senior levels of government involved in funding the project including the Province, 3P Canada and Infrastructure Canada.
4. That staff be directed to finalize, subject to Board approval, Options to Purchase on the lands in Rock Bay as identified in Appendix H and initiate rezoning with the City of Victoria.
5. That the Westside and Eastside Select Committees be dissolved and that outstanding technical work from the Westside Select committee to refine wet weather design be incorporated in the refinement of RFP and costing analysis, dependent on approval of the Ministry of Environment.
6. That staff be directed to bring back to committee an implementation plan and schedule including resourcing requirements for additional staffing and/or consulting expertise focused on procurement, project management and gasification.

Attachments: Staff Report: Recommended Option Core Area SewageTreatment

Appendix A: Proposed Work Plan Overlay, January 2016

Appendix B: Technical Memorandum #4 - Analysis Summary

Appendix C: Technical Oversight Panel Report #10

Appendix D-1: Public Consultation Summary Report

Appendix D-2: Westside Public Engagement Summary Document

Appendix D-3: Eastside Community Dialogue Public Consultation

Appendix D-4: Core Area Wastewater Survey - Summary Results

Appendix E: Projected Capital Cost by Option - Bar Chart and Table

Appendix F: Annual Estimated Cost Per Household

Appendix G: Table-Carbon Footprint, Wastewater (Liquids) Treatment

Appendix H: Orthophoto of Rock Bay Site

Appendix I: Briefing Note–BC Hydro/Transport Canada Lands Rock Bay

5.4. 16-189 Fairness and Transparency Advisor Report - January 2016

Recommendation: That the Fairness and Transparency Advisor Report - January 2016 be received for information.

Attachments: Report: Fairness and Transparency Advisor Report January 2016

5.5. 16-184 2016 CRD Board Standing Committee Terms of Reference and Work Programs (CALWMC)

Recommendation: 1. That the attached report "Update to 2016 Capital Funding - Core Area Wastewater Program" be received for information; and
2. That the terms of reference for the 2016 Core Area Liquid Waste Management Committee as attached in Appendix A be approved; and
3. That the Core Area Liquid Waste Management Committee recommend to the Capital Regional District Board:
That the Committee priorities and work program as outlined in the Priorities Dashboard, be confirmed.

Attachments: Staff Report 1: CRD Board Standing Committee TOR and Work Programs (CAL

Appendix A: Terms of Reference CALWMC

Appendix B: Priorities Dashboard CALWMC

Appendix C: 2016-2019 Service Plan CALWMC

Staff Report 2: Update to 2016 Capital Funding

Schedule A: 2016 Capital Funding–Core Area Wastewater Program (Oct. 2015)

Schedule B: Updated Ramping Up to Treatment (Jan. 2016)

Schedule C1: Requisition Cost Sharing (B1 from Oct. 2015)

Schedule C2: 2016 Cost Sharing Allocation (B3 from Oct. 2015)

Schedule D: Updated Proposed Work Plan Overlay (Jan. 2016)

5.6. 16-199 Available Funding Options - Core Area Wastewater Program

Recommendation: That the Core Area Liquid Waste Management Committee recommend to the Capital Regional District Board:
That the report Available Funding Options - Core Area Wastewater Program be received for information.
(WP Colwood, Esquimalt, Langford, Oak Bay, Saanich, Victoria, View Royal)

Attachments: Staff Report: 2016 Available Funding Options - Core

5.7. 16-206 Regional Water System - Supply and Demand

Recommendation: That the Core Area Liquid Waste Management Committee receive the staff report for information.

Attachments: Staff Report: Regional Water System - Supply and Demand

5.8. 16-201 Westside Wastewater Treatment and Resource Recovery Select Committee Agenda Package and Motion

Recommendation: 1. That the Westside Wastewater Treatment and Resource Recovery Select Committee agenda package of February 2, 2016, be received for information.
2. In relation to item 5.1 of the Westside agenda, the Westside Select Committee recommends to the Core Area Liquid Waste Management Committee:
That the Eastside undertake a similar analysis and that the results of the two studies be applied to a single plant and a two-plant option.

Attachments: 2016-02-02 Agenda Package WWTRRSC

5.9. **16-280** Eastside Wastewater Treatment and Resource Recovery Select Committee 17 Feb 2016 Agenda Package for Information

Recommendation: That the Eastside Wastewater Treatment and Resource Recovery Select Commtitee agenda package of February 17, 2016, be received for information.

Attachments: 2016-02-17 Agenda Pkg EWTRRSC

5.10. **16-49** Motion with Notice: Accountability and Representation in Governance of Components of Eastside and Westside Sub-systems

Recommendation: BE IT RESOLVED THAT the Core Area Liquid Waste Management Committee directs staff to report back at the next meeting on procedural changes and/or governance enhancements that will ensure that each participant who is anticipated to use or pay for a component of the eastside or westside wastewater treatment sub-systems is included in the governance system directing the design and eventual operation of that component of the system.

Attachments: Background & Motion: Accountability and Representation (Young)

5.11. **16-257** Motion with Notice: Mechanism for Future Options (Derman, Plant)

Recommendation: That the Core Area Liquid Waste Committee ask the Chair to bring forward a program for future directions that clearly puts in place mechanisms to allow substantially different options to come forward in the future. Furthermore, such options should be able to include differences in siting, technology, overall system design and waste streams involved.

Attachments: Rationale & Motion: Mechanism for Future Options (Derman/Plant)

5.12. **16-258** Motion with Notice: Compliance with Charter Goals (Derman, Plant)

Recommendation: That the Core Area Liquid Waste Committee establish a process for thoroughly evaluating the consistency of currently proposed options with the goals and commitments established under the Project Charter. Furthermore, that the Core Area liquid Waste Committee not proceed further with any of the proposed options until it has been established that they are substantially compliant with Charter goals and commitments.

Attachments: Rationale & Motion: Compliance with Charter Goals (Derman/Plant)

6. Correspondence

6.1. **16-302** Correspondence from Harbour Resource Partners to Chair Desjardins and CRD Board of Directors, 18 Feb. 2016, re: Harbour Resource Partners Affordable and Bylaw Compliant Solution for the CRD CALWMP Liquid Treatment Plant

Recommendation: That the 18 Feb. 2016 correspondence from Harbour Resource Partners be received for information.

Attachments: Letter: HRP To CRD Board 2016-02-18 McLoughlin Solution

6.2. **16-303** Correspondence from Esquimalt and Songhees Nations to Director Helps, Chair, and Core Area Liquid Waste Management Committee, 19 Feb. 2016, re: CRD Sewage Treatment Facility-Rock Bay Lands

Recommendation: That the 19 Feb. 2016 correspondence from Esquimalt and Songhees Nations be received for information.

Attachments: Letter: Esquimalt & Songhees Nations 2016-02-19 Rock Bay Lands

6.3. 16-304 Correspondence from Burnside Gorge Community Association, 22 Feb. 2016

Recommendation: That the 22 Feb. 2016 correspondence from the Burnside Gorge Community Association be received for information.

Attachments: Letter: Burnside Gorge Community Association 2016-02-22

7. New Business

8. Adjournment

8.1. 16-108 Reference: Core Area Liquid Waste Management Committee Project Charter

Attachments: Project Charter

Next Meeting: Feb. 26, 1:00 PM
Next Regular Meeting: March 9, 2016

Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Meeting Minutes
Core Area Liquid Waste Management Committee

Wednesday, January 27, 2016 | **9:00 AM** | **6th Floor Boardroom**

PRESENT
DIRECTORS: L. Helps (Chair), R. Atwell (Vice-Chair), J. Albany (for Chief R. Sam), M. Alto (9:05), S. Brice, D. Blackwell, J. Brownoff, V. Derman, C. Hamilton, L. Hundleby (for B. Desjardins, Board Chair), B. Isitt (9:01), N. Jensen, C. Plant, D. Screech, L. Seaton, Chief A. Thomas, G. Young
STAFF: R. Lapham, Chief Administrative Officer; L. Hutcheson, General Manager, Parks and Environmental Services; D. Lokken, General Manager, Finance and Technology; T. Robbins, General Manager, Integrated Water Services; A. Orr, Senior Manager, Corporate Communications; D. Telford, Senior Manager, Environmental Engineering; B. Reems, Corporate Officer, and N. More, Committee Clerk (Recorder)
ALSO PRESENT: Alternate Director C. Day

The meeting was called to order at 9:00 a.m.

1. Approval of Agenda

MOVED by Director Plant, SECONDED by Director Hamilton,
That the agenda be approved with the supplementary agenda.

MOVED by Director Derman, SECONDED by Director Plant
That the motion be amended to add the delegation Derek Randall to item 4.
CARRIED

MOVED by Director Plant, SECONDED by Director Hamilton,
That the agenda be approved with the supplementary agenda and with the addition of the delegation Derek Randall to item 4.
CARRIED
UNANIMOUS

2. Adoption of Minutes

2.1. 16-112 Adoption of the Minutes of January 13, 2016

MOVED by Director Jensen, SECONDED by Alternate Director Hundleby,
That the January 13, 2016, minutes be corrected to show Alternate Director Day present in place of Director Hamilton, and the minutes be adopted as amended.
CARRIED

3. Chair's Remarks

Chair Helps remarked on an amendment to be made to Technical Memo #3.

Director Isitt entered the meeting at 9:01 a.m.

Chair Helps encouraged the Committee to stay focused on a united direction to get a plan in place and the project underway to serve the taxpayers.

4. Presentations/Delegations

Director Alto entered the meeting at 9:05 a.m.

4.1. 16-152 Annie Gibson

Annie Gibson spoke in support of the motion presented in item 7.2. She was concerned with deadlines and felt the plan for a single facility at McLoughlin or Macaulay point was shovel-ready, approved, cheaper than other options, and would do more for less on land already owned by the CRD that includes resource recovery. The delegation provided a written submission, on file at Legislative and Information Services.

This delegation was presented.

4.2. 16-153 Michelle Coburn

Michelle Coburn spoke to item 7.2 as a member of the Victoria Sewage Treatment Alliance in support of sewage treatment and in favour of making information on the existing plan, known as Seaterra, with the MacLoughlin Point location, available during the public engagement process. She suggested if the Committee could not come to a decision, then a request could be made of the Province for a new administrative process and the provincially-approved plan could be activated through such a directive. The delegation provided a written submission, on file at Legislative and Information Services.

This delegation was presented.

4.3. 16-154 Norma Brown

Norma Brown spoke against the motion in item 7.2. She felt Esquimalt rights according to the project charter would be denied and that the Esquimalt site should be protected.

This delegation was presented.

4.4. 16-155 John Farquharson

John Farquharson spoke as a member of the Sewage Treatment Action Group regarding item 6.1. He felt the word "transformational" in the Minister's letter would apply to an optimized, integrated resource management system using gasification, suggested it be labelled as option 9, and was concerned that the information on this option was not included in the public engagement process. He was concerned that the Integrated Waste Management Task Force would report out on February 29, after the Committee's scheduled date to decide on an option.

This delegation was presented.

4.5. 16-156 Fillippo Ferri

Fillipo Ferri spoke against the motion in item 7.2. He felt the funding was not in jeopardy, the last plan fell apart due to poor public relations and a poor consultation process, and to put the McLoughlin Point, single-plant plan back on the table showed a lack of understanding as to why the previous plan failed and could set the current process up for failure. He encouraged the Committee to stay on the current path and move toward a plan agreeable to all.

This delegation was presented.

4.7. 16-157 Bryan Gilbert

Bryan Gilbert, who registered to speak to the motion in item 7.2, expressed his dissatisfaction with the decision-making process. He spoke in favour of going to tertiary treatment and took the position that there was evidence that the gasification idea was a viable option.

This delegation was presented.

4.6. 16-158 Derrick Randall

Derrick Randall spoke in favour of the motion in item 7.2. He felt there were benefits to building at MacLoughlin Point, the design of the plant met the requirements, and the main rationale for not using the MacLoughlin site had been public opinion. He expressed that if the advantages of the MacLoughlin site were explained clearly, public opposition would subside. The delegation provided a written submission, on file at Legislative and Information Services.

This delegation was presented.

5. Committee Business

The Committee sought clarification on the decision process. Staff summarized that a decision on the option was scheduled to be made on February 24, 2016. The next steps included providing the decided-upon option to theTechnical Oversight Panel, submitting the option to a confirmation process, including a municipal re-zoning process for the chosen site or sites, a Liquid Waste Management Plan amendment process, an RFP over the summer, and then more firm decisions on technology.

5.1. 16-122 Technical Oversight Panel Report #8

The Committee sought clarification on whether the Technical Oversight Panel was within its terms of reference in meeting with the Chair of the Core Area Wastewater Treatment Project Commission. The question was requested to be answered at the next meeting of the Committee when the Chair of the Technical Oversight Panel would be present.

MOVED by Director Screech, SECONDED by Director Brownoff,
That the report be received for information.
CARRIED
OPPOSED Atwell, Derman

5.2. 16-130 Technical Oversight Panel Minutes for Information - January 11 and 12, 2016

MOVED by Director Blackwell, SECONDED by Alternate Director Hundleby,
That the Technical Oversight Panel minutes of January 11 and 12, 2016, be received for information.
CARRIED

6. Correspondence

6.1. 16-109 Correspondence: Honourable Amarjeet Sohi, Minister of Infrastructure and Communities, to Mayor Helps, City of Victoria, 19 Jan 2016, re Core Area Liquid Waste Management Plan

On the motion, the Committee sought clarification on the 2020 deadline. Chair Helps provided clarification that the Ministry expected the Capital Regional District to follow the regulations within the timeline, but there was some indication that once construction began, there might be flexibility.

MOVED by Director Brice, SECONDED by Alternate Director Hundleby,
That the correspondence be received for information.
CARRIED

7. Motion with Notice

7.1. 16-49 Motion with Notice: Accountability and Representation in Governance of Components of Eastside and Westside Sub-systems

MOVED by Director Isitt, SECONDED by Director Plant,
BE IT RESOLVED THAT the Core Area Liquid Waste Management Committee directs staff to report back at the next meeting on procedural changes and/or governance enhancements that will ensure that each participant who is anticipated to use or pay for a component of the eastside or westside wastewater treatment sub-systems is included in the governance system directing the design and eventual operation of that component of the system.

MOVED by Director Isitt, SECONDED by Director Plant,
That the motion be postponed until the next meeting.
CARRIED

7.2. 16-50 Motion with Notice: Examine Feasibility of Single Facility at McLoughlin Point or Macaulay Point (Director Jensen)

Director Jensen withdrew the motion but gave notice that he would move the motion at the next meeting, on February 10, 2016.

This item was withdrawn.

8. New Business

There was none.

9. Motion to Close the Meeting

9.1. 16-110 Motion to Close the Meeting

MOVED Director Brownoff, SECONDED by Director Hamilton,
That the meeting be closed in accordance with the Community Charter Part 4, Division 3, 90 (1) (a) personal information about an identifiable individual who holds or is being considered for a position as an officer, employee or agent of the regional district or another position appointed by the regional district; and (k) negotiations and related discussions respecting the proposed provision of a regional service that are at their preliminary stages and that, in the view of the board, could reasonably be expected to harm the interests of the regional district if they were held in public; and (2)(b) the consideration of information received and held in confidence relating to negotiations between the regional district and a provincial government or the federal government or both, or between a provincial government or the federal government or both and a third party.
CARRIED

The Committee moved to the closed session at 9:47 a.m.
The Committee rose from the closed session at 10:55 a.m. without report.

10. Adjournment

MOVED by Director Derman, SECONDED by Alternate Director Hundleby,
That the meeting be adjourned at 10:55 a.m.
CARRIED

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CHAIR

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RECORDER

Capital Regional District
625 Fisgard St.,
Victoria, BC V8W 1R7

Meeting Minutes
Core Area Liquid Waste Management Committee

Wednesday, February 10, 2016 | **9:00 AM** | **6th Floor Boardroom**

PRESENT
DIRECTORS: L. Helps (Chair), R. Atwell (Vice-Chair), M. Alto (9:01), S. Brice, D. Blackwell, V. Derman, B. Desjardins (Board Chair), C. Hamilton, B. Isitt (9:06), N. Jensen, C. Plant, V. Sanders (for J. Brownoff), D. Screech, L. Seaton, G. Young
STAFF: R. Lapham, Chief Administrative Officer; L. Hutcheson, General Manager, Parks and Environmental Services; T. Robbins, General Manager, Integrated Water Services; A. Orr, Senior Manager, Corporate Communications; R. Sharma, Senior Manager, Financial Services; D. Telford, Senior Manager, Environmental Engineering; B. Reems, Corporate Officer, and N. More, Committee Clerk (Recorder)
ALSO PRESENT: Director D. Howe, Alternate Director C. Day; T. Coady, Technical Overview Panel; B. Eaton, Chair, Core Area Wastewater Treatment Program Commission; A Gibbs, Public Assembly; C. Houghton, Aurora Innovations;
ABSENT: Chief R. Sam, Chief A. Thomas

The meeting was called to order at 9:00 a.m.

1. Approval of Agenda

MOVED by Director Plant, SECONDED by Director Desjardins,
That the agenda be approved.

MOVED by Director Blackwell, SECONDED by Director Derman,
That item 6.2 be heard after item 5.4
CARRIED

MOVED by Director Desjardins, SECONDED by Director Blackwell,
That item 8.1 be heard after item 6.2
CARRIED

MOVED by Director Derman, SECONDED by Director Plant,
That two notices of motion be given under New Business.
CARRIED

MOVED by Director Plant, SECONDED by Director Desjardins,
That the agenda be approved with the following amendments:
That item 6.2 be heard after item 5.4, that item 8.1 be heard after item 6.2, and that two notices of motion be given under New Business.
CARRIED

2. Adoption of Minutes

There were no minutes available.

3. Chair's Remarks

Chair Helps remarked on the day's agenda.

4. Presentations/Delegations

4.1. 16-225 Delegation: D. Langley, re items 5.1, 5.2, and 5.3

David Langley felt the financial information on water reuse should be assessed by the Committee and presented to the public before a decision was made on the level of water reuse, if any, from sewage treatment. The delegation provided a written submission, on file at Legislative and Information Services.

4.2. 16-226 Delegation: Robert Drew, re items 5.3, 5.4, 5.8 and 6.2

Robert Drew asked that the Committee consider a number of measures to minimize environmental risk to the inner harbour and the Gorge waterway if Rock Bay were chosen, including using a distributed system to limit the site footprint. The delegation provided a written submission, on file at Legislative and Information Services.

4.3. 16-227 Delegation: John Farquharson, re item 5.3

John Farquharson felt critical information was missing from the public consultation process. The delegation provided a PowerPoint presentation, on file at Legislative and Information Services.

4.4. 16-228 Delegation: Diane Carr, re item 5.3

Diane Carr was concerned that the Integrated Resource Management Task Force will report after the decision on an option set has already been made. She spoke to the same PowerPoint presentation provided by John Farquharson.

4.5. 16-229 Delegation: Bryan Gilbert re items 5.1, 5.2, 5.3, 5.4 and 6.2

Bryan Gilbert spoke in favour of distributed sites, especially the RITE plan, and was critical of the Committee's deliberations.

4.6. 16-232 Delegation: Carole Witter re item 6.2

Carole Witter spoke against the motion in item 6.2. She expressed that the report from the peer review team in 2009 gave five reasons why McLoughlin would be the wrong site, the new process invited each municipality to put forward locations, and McLoughlin was not put forward by Esquimalt.

5. Committee Business

5.1. 16-204 Technical Oversight Panel (TOP) Report #9 and Minutes of January 22, 2016

T. Coady provided highlights of the Technical Oversight Panel report, including the engineering comments on Technical Memo #3. The Committee sought clarification on the costing methods and the examination of deep-shaft technology.

T. Coady clarified that speaking with the Chair of the Core Area Wastewater Treatment Project Commission on lessons learned from the previous project was within the Technical Oversight Panel terms of reference as part of the mandate to oversee the consultant work for the benefit of the new project, to ensure what is delivered will be set up for success by identifying gaps in deliverables of the planning phase and requirements for implementation.

The Committee sought further clarification on Technical Memo #3 and the engineering comments from the Panel.

On the main motion, the Committee sought further clarification.

MOVED by Director Blackwell, SECONDED by Director Screech,
That Technical Memo #3 (Final) be received for information and the engineering opinions be accepted for information.

MOVED by Director Isitt, SECONDED by Director Plant,
That Director Atwell be allowed to speak for five more minutes
CARRIED
OPPOSED Blackwell, Sanders, Screech, Seaton, Young

The question was called on the main motion.
CARRIED
OPPOSED Atwell, Derman

The Committee went into recess at 10:43 a.m.
The Committee reconvened at 10:48 a.m.

5.2. 16-186 Technical Memorandum #3 (Final) - Costing and Financial Analysis

Directors Alto, Isitt and Young entered the meeting at 10:49 a.m.

E. Lee provided a verbal update on Technical Memo 3 (Final).

On the main motion, the Committee sought clarification on several points.

MOVED by Director Blackwell, SECONDED by Director Screech,
That the Core Area Liquid Waste Management Committee receive Technical Memo #3 (Final) - Costing and Financial Analysis prepared by Urban Systems/Carollo Engineers for information.

MOVED by Director Isitt, SECONDED by Director Plant,
That Director Atwell be allowed to continue speaking for five more minutes.
CARRIED

The question was called on the main motion.
CARRIED
OPPOSED Atwell, Derman

5.3. 16-205 Public Consultation Update - Presentation

A. Gibbs and C. Houghton presented a summary of the public participation, including, workshops, open houses, stakeholder meetings, online survey, and emails. The public input will be reflected in the report on February 24, 2016.

The Committee sought clarification on the survey. A question early in the survey was meant to allow respondents to choose not to answer before going on to the rest of the survey. On the motion, the Committee discussion included the following points:
- the potential to taint the data by adding a new answer selection
- the qualitative nature of the survey

MOVED by Director Derman, SECONDED by Director Plant,
That the consultant be asked to include a selection of "none of the above" for the survey question and separate the data of those who responded before and after the new selection was made available.
CARRIED
OPPOSED Alto, Desjardins, Hamilton, Screech

MOVED by Director Desjardins, SECONDED by Director Atwell
That the meeting be extended.
CARRIED

The Committee went into recess at 12:04 p.m.
The Committee reconvened at 12:11 p.m.

8. Motion to Close the Meeting

8.1. 16-207 Motion to Close the Meeting

MOVED by Director Desjardins, SECONDED by Director Blackwell,
That the meeting be closed in accordance with the Community Charter Part 4, Division 3, 90 (1) (a) personal information about an identifiable individual who holds or is being considered for a position as an officer, employee or agent of the regional district or another position appointed by the regional district; (c) labour relations or other employee relations; (e) the acquisition, disposition or expropriation of land or improvements, if the board considers that disclosure could reasonably be expected to harm the interests of the regional district; (j) information that is prohibited, or information that if it were presented in a document would be prohibited, from disclosure under section 21 of the Freedom of Information and Protection of Privacy Act; (k) negotiations and related discussions respecting the proposed provision of a regional service that are at their preliminary stages and that, in the view of the board, could reasonably be expected to harm the interests of the regional district if they were held in public; and (2)(b) the consideration of information received and held in confidence relating to negotiations between the regional district and a provincial government or the federal government or both, or between a provincial government or the federal government or both and a third party.
CARRIED

The Committee moved to the closed session at 12:13 p.m.
The Committee rose from the closed session at 1:18 p.m. without report.

Items 5.4 to 6.2 were not considered due to time constraints.

5.4. 16-189 Fairness and Transparency Advisor Report - January 2016

5.5. 16-184 2016 CRD Board Standing Committee Terms of Reference and Work Programs (CALWMC)

5.6. 16-199 Available Funding Options - Core Area Wastewater Program

5.7. 16-206 Regional Water System - Supply and Demand

5.8. 16-201 Westside Wastewater Treatment and Resource Recovery Select Committee Agenda Package and Motion

6. Motion with Notice

6.1. 16-49 Motion with Notice: Accountability and Representation in Governance of Components of Eastside and Westside Sub-systems

6.2. 16-50 Motion with Notice: Examine Feasibility of Single Facility at McLoughlin Point or Macaulay Point (Director Jensen)

7. New Business

7.1 Notice of Motion: Mechanism for Future Options

Notice of Motion was given by Directors Derman and Plant and a print copy of the motion was distributed to the Committee, for consideration at the next meeting.

7.2 Notice of Motion: Compliance with Charter Goals

Notice of Motion was given by Directors Derman and Plant and a print copy of the motion was distributed to the Committee, for consideration at the next meeting.

9. Adjournment

MOVED by Director Plant, SECONDED by Director Blackwell,
That the meeting be adjourned at 1:18 p.m.
CARRIED

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CHAIR

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RECORDER

Notice of Motion

Core Area Liquid Waste Management Committee

WHEREAS the estimated costs for sewage treatment received by the Core Area Liquid Waste Management Committee (CALWMC) on December 9, 2015 set out the estimated costs to be borne by local residents for the five current options, and

WHEREAS the December 9, 2015 estimated costs to be borne by local residents range from twice to over three times as much as the earlier McLoughlin project proposal , and

WHEREAS costs borne by local residents would rise further if provincial and federal funding lapses due to the effluxion of time, and

WHEREAS a motion approved by CALWMC on December 9, 2015 has the potential for creating a sixth option involving a separate treatment facility for the municipalities of Langford and Colwood which may in turn reduce the size of a single facility required for the remaining five municipalities in order to meet the federal and provincial requirements, and

WHEREAS the CRD owns properties at McLoughlin Point and Maccaulay Point that are both currently zoned for sewage treatment and which may feasibly accommodate a smaller plant within the current zoning in the event the new Langford/Colwood initiative currently under consideration moves forward,

THEREFORE BE IT RESOLVED

1. That the Technical Oversight Panel (TOP) working with CRD staff and CRD consultants be requested to examine the feasibility of locating a single facility at either McLoughlin Point or Macaulay Point within the current zoning.

2. That in the event TOP concludes that the CRD property at Macaulay Point requires more land to be a feasibly sized site, that CRD staff be directed to renew inquiries with the new Minister of National Defence with a view to partnering with First Nations to acquire adjoining land at Macaulay Point.

Notice Given by Director Nils Jensen

Report From The CRD Integrated Resource Management Task Force

February 24, 2016

Purpose of the Task Force

The CRD Integrated Resource Management (IRM) Task Force was created to examine the question of whether an IRM approach to managing waste streams might provide substantial financial benefit and substantially improved environmental outcomes to the region and its residents. In its terms of reference, the task force has been asked to define the scope and parameters of Integrated Resource Management objectives, to recommend options to the CRD Board for endorsement and to recommend to the board a process for broadly seeking submissions from the private sector for implementing the recommended initiative.

Phase 1 – Proof of Concept

Initially, the task force has examined the question of whether IRM approaches exist and are feasible today or remain a desired outcome for the future. To answer this question the task force has entertained presentations from four potential providers. Each provider was given a list of questions to be answered and the opportunity to provide additional information. Presentations lasted 50 – 70 minutes followed by 20 – 25 minutes for questions from task force members.

*It should be noted that none of the information in this report represents any attempt by the task force to suggest a preferred provider. Instead, information provided aims to establish "proof of concept".

Providers, in order of appearance, included:

1. **Pivotal IRM**

   This potential provider offers a distributed approach to dealing with all of the region's waste streams. Wastewater treatment would utilize Membrane Bioreactor technology while Advanced Gasification would be used for biosolids, municipal solid waste (MSW) and kitchen scraps. Both technologies are well established and have operated successfully for at least 10 years. In the case of Advanced Gasification, commercial experience with biosolids in the mix is limited to six months' continuous operation. According to Pivotal, testing has indicated that with the right mix of sludge and wood, biosolids can be successfully and beneficially gasified. A distributed solution is the preferred approach, however, a 1 ½ acre site for processing and pelletizing solid wastes prior to gasification would be required.

   Beneficial use of resources would include heat, cooling and potential water re-use on the liquid side along with production of syngas(electricity), heat, biochar and water on the solid side.

   Pivotal has already developed a complete application for managing waste streams in the capital region. While much of this is proprietary and has not been disclosed to the Task Force, the company expects total project capital costs would be in the $250 - $400 million range. Optimal

procurement, infrastructure and design choices would move the final capital cost closer to the $250 million figure. The company has also indicated that with optimization, life cycle costs could be revenue positive given the multiplicity of revenue streams involved. Pivotal has expressed a willingness to be flexible in determining contractual arrangements with the CRD and has suggested that a profit sharing partnership is a possibility.

On the environmental side, wastewater treatment would be to a level of tertiary disinfected. This "very clean" effluent could initially be used to recharge aquifers and streams and would offer the ability to develop extensive water re-use around distributed plants over time. Greenhouse gas (GHG) mitigation is projected to be the equivalent of removing 24,000 cars from regional roads.

The principles in Pivotal IRM are local, however, the company has partnered with large and well established Canadian and US infrastructure and construction companies. According to Pivotal, these companies are able to guarantee and fund the project, in accordance with CRD's procurement and risk management preferences.

Pivotal has indicated a willingness and ability to insure performance and structure a project so that the CRD would be insulated from financial risk. Finally, given Pivotal was the first presenter, the task force has considered a "high level" evaluation of the viability of the wastewater treatment, the gasification technologies and the feasibility of projections for GHG mitigation. If this evaluation is carried out, results are expected to be available in the near future.

2. **Ark Power Dynamics**

Rather than presenting a complete solution to dealing with the region's waste streams, Ark Power Dynamics showcased a specific technology called "The Ark Reformer". This technology appears to be a unique, patented adaptation of plasma arc technology and is described by the company as follows:

"*an **internally generated** high-energy sustained reaction zone converting 'feed stocks' into their simplest molecules - hydrogen, carbon monoxide, and other compounds forming a synthetic gaseous mixture used to generate electricity or produce valuable fuel and chemical by-products."*

While the company has not presented a solution for treating waste water, Ark has indicated that the reformer is able to deal with all carbon based materials including biosolids, kitchen scraps and MSW. The company indicates the reformer offers advantages of a small footprint, the ability to treat waste that has up to 75% moisture content, thus eliminating the need for drying, and the ability to produce substantial amounts of Sulphur free crude oil, substantial amounts of syngas and residual "fertilizer" material. Furthermore, Ark indicates that the reformer creates no emissions and completely destroys pathogens and emerging chemicals of concern.

At present, Ark has no completed projects in operation. However, a pilot plant has operated successfully in Arkansas and has tested a variety of feed stocks. As such, the reformer is probably the least tested of the technologies presented to the task force. This does not mean it is without considerable potential. Ark would utilize one central, 100 ton per day processing plant

requiring a site of approximately 10 acres. A substantial part of that site would be taken up by a small “tank farm” necessary to store the synthetic crude produced while waiting transport to nearby refineries. Cost for the hundred ton per day facility is estimated to be approximately $50 million. The company indicated that Hartland Landfill would provide a suitable location. GHG mitigation would be considerable over the lifespan of any project given the substantial renewable resources that would be created.

Finally, Ark has indicated an ability to insure the CRD against risk and has indicated a willingness to enter into a profit sharing relationship.

3. **Hydra Renewable Resources**

Hydra would provide a complete solution encompassing all waste streams. Primarily, this would be through a distributed system with waste water being treated by Salsnes Filters and “CBUM” modules. Effluent produced would be “very clean”. Solid wastes would be handled by “Bio-Green Pyrolytic Reactors” along with final stage distillation columns for renewable diesel fuel production. Again, the technologies chosen appear to be well established with at least 10 years of successful operation. It is unclear, however, whether sewage sludge has been utilized in the mix of solids being processed. While the approach suggested is distributed, Hydra would include a 4 acre central site for pre-processing solid wastes prior to utilizing the pyrolytic reactors.

Beneficial use of resources would include heat and water re-use on the liquid side along with production of renewable diesel fuel, syngas (electricity), heat and biochar on the solid side. Hydra also promotes the possibility of substantial food production in a “coolhouse greenhouse” and indicates their model for treating wastes produces no residuals requiring disposal.

Hydra suggests a financial model that would require no upfront capital investment by the CRD. Instead the company would seek a 30 year lease on existing CRD infrastructure. In return, Hydra would build and operate all new infrastructure, maintain existing CRD infrastructure and provide the CRD with a substantial annual lease payment. Sale of renewable resources would pay for the company’s investment and operating costs as well as provide for profit margins. At the end of the lease, the company would return all infrastructure to the CRD with a remaining life expectancy of at least 10 years for plants the company built. Hydra describes this model as “BOOT” (build, own, operate and transfer) and is ready to guarantee no job or benefit loss in the transition to a lease system. Again, GHG mitigation would be significant over the lifespan of the project given the substantial renewable resources that would be created. At present, Hydra has no completed projects on the ground. However, a project for Kingston, Jamaica is ready to proceed while several other projects are at various stages of planning.

Hydra has partnered with established larger firms including amongst others: the Mace Group (project and construction management), Hyder Consulting (wastewater design),the Ramboll Group (mechanical, electrical and sustainability design) and DLA Design (architectural design). Finally, Hydra has indicated a willingness and ability to insure performance and structure a project in a manner that would remove financial risk from the CRD.

4. **Highbury Energy**

Rather than presenting a complete solution to dealing with the region’s waste streams, Highbury Energy would provide a dual bed fluid dynamic gasification system to deal with biosolids and, potentially, other solid wastes. High value syngas would be produced from the

gasification process and could produce a variety of energy products for heating, cooling and electrical generation. Additional processing, could produce renewable liquid fuels such as diesel.

Highbury indicates that their gasification process provides a number of advantages in comparison to earlier generations of gasification including: conversion of low grade biomass, lowered capital costs through a patent-pending tar removal process, lower operating costs with a system that continuously runs on its own energy, production of high BTU syngas and production of syngas that is relatively clean.

Highbury Energy appears to be a company that has emerged in 2009 from the workings of a gasification research group at the University of British Columbia. The company is able to point to a body of research which includes gasification tests of a variety of materials including biosolids. These tests have taken place at a "lab scale" and involve smaller batches of material (kilograms per day) than would be expected with a demonstration level pilot. While demonstration level or larger installations do not appear to currently exist, the company points out that its process is scalable and expresses interest in establishing a demonstration level (tons per day) pilot.

Highbury has partnered with a number of established larger companies including the Eaton Group, MGX Minerals and Noram.

Summary of Benefits Suggested for a IRM Approach

The four presentations to the task force resulted in many situations where at least two of the potential providers suggested similar beneficial outcomes including:

Potential cost advantages

- Reduced, or nearly eliminated, need for new liquid waste conveyancing infrastructure. In the case of Rock Bay, this could be $250 million or more (distributed system in particular)
- Reduced, or nearly eliminated, property acquisition costs (distributed system)
- Opportunity to utilize a "just on time" approach to infrastructure needs (distributed system)
- Avoidance of future infrastructure costs through the ability of the selected technology to handle multiple waste streams. e.g. no separate facility for kitchen scraps
- Increased revenue through the creation of additional marketable resources (crude oil, biodiesel, syngas, biochar, heat and potentially water)
- Opportunity, through siting of distributed plants, to "set the stage" for increased future water re-use. Purple pipe system could be expanded on an "as needed" basis
- Opportunity to lower costs to taxpayers by transferring existing tipping fee revenues
- Ability to substantially extend the life of the Hartland Landfill
- Creation of value in the region through technology and/or job growth.
- Avoided costs to construct new outfalls
- Substantially reduced capital costs and virtually eliminated life cycle costs through transfer of existing revenue and creation of new revenue (Contractual agreements could transfer revenues to the CRD annually)

Potential environmental advantages

- Very substantially increased GHG mitigation

- Elimination of the need to handle residual" "treated" biosolids. In all cases, very little or no residual material is created
- Opportunity, if so chosen, to increase levels of recycling through "pre-sorting"
- Production of very clean tertiary disinfected level effluent suitable for supplementing steams and aquifers and/or for future water re-use
- Near elimination of emerging chemicals from both liquid wastes and biosolids
- Ability to meet and exceed all current legislative requirements for discharge and emission regulations

Potential process advantages

- For distributed approaches on the liquid side, an opportunity to substantially avoid re-zoning if publicly owned and zoned sites are utilized e.g. existing pump stations. Liquid treatment technology could be underground

It should be noted, however, that several presenters emphasized orally, or in their literature, that maximum benefit will be achieved not just by technology but by a process of overall system design developed **from the outcomes desired**. In other words, cost reduction and environmental gain must become the goals around which a proposed system is designed and built. This allows the marriage of technology, sites and opportunities for resource recovery to be optimized in a manner that an "add-on approach" is unlikely to obtain.

Presentation from Dr. Jon O'Riordan

The task force also received a presentation from Dr. Jon O'Riordan. Dr. O'Riordan is a former British Columbia Deputy Minister of the Environment. Currently, he is a consultant dealing with IRM approaches to waste streams. In his presentation, Dr. O'Riordan indicated that an IRM approach can provide lower net costs and increased environmental benefits in current circumstances. He strongly emphasized the need to frame decisions in the context of an emerging "world of climate change" and other ecological issues. He is of the belief that traditional approaches, not centered around the need to meet these challenges, can no longer be considered appropriate. Dr. Riordan went on to explain how many proposed IRM approaches could meet existing provincial regulation and accomplish permitting without any requirement for legislative change. Finally, he expressed doubt about the ability of "standard" procurement processes to encourage innovation and suggested the need to consider new procurement paradigms that would promote and accommodate innovative solutions

Conclusions

Based on the considerable investigation carried out to date, the IRM task force concludes it is very likely that IRM approaches to dealing with waste streams exist and are feasible today. Several of the presentations feature proven technologies. In addition, potential providers indicate they have partnered with substantial firms well recognized in the construction and wastewater industries. Presenters have indicated that these partnerships create a willingness and ability to fund a project, guarantee performance and insulate CRD residents from financial risk. The task force does not wish to question the

potential provider's credibility. Nevertheless, additional research will need to be carried out to insure that appropriate contractual arrangements do in fact exist.

The task force also concludes that IRM approaches could provide financial and environmental benefits so substantial that a compelling case for IRM likely exists. Capital costs for a completed project dealing with all waste streams have been projected to be in the $250 - $400 million range. In addition, lifecycle costs are generally proposed to be revenue positive with at least one provider suggesting revenues would be sufficient to cover all capital costs. Without question, these cost estimates need further substantiation. Nevertheless, they are much lower than could be accomplished with current waste practices and waste projects being planned at the CRD. Similarly, estimates for GHG reduction are much greater than what could be expected from current practices and projects being planned. GHG reduction is increasingly critical in today's world and is likely a very important consideration for federal and provincial funding partners. Given these possibilities, it is likely IRM approaches could offer considerable benefits for the Core Area Liquid Waste Committee and the region as a whole. The task force recommends that current and future regional waste management decisions must take place in an environment that **fully investigates and appropriately evaluates IRM approaches**.

The task force agrees with Dr. O'Riordan's contention that all significant infrastructure projects now, and in the future, must aim to optimally address the emerging world of climate change and other significant ecological issues. Solution sets for infrastructure projects must be **designed around** this outcome and other desired outcomes such as lowered net costs and value for money. The task force further agrees that current "standard" procurement processes are likely unsuitable for encouraging innovation and optimally reaching desired outcomes. Consequently, other more appropriate procurement paradigms need to be investigated and potentially engaged. It is clear that a robust and competitive environment is emerging for IRM approaches to waste stream management. With a lack of existing treatment infrastructure, the CRD is well placed to take advantage of this environment, but must establish mechanisms to broadly engage the widespread ingenuity emerging in the private sector.

Finally, the task force recognizes that the various technologies for treating solid wastes proposed in the four presentations generally do not have an extensive track record of including biosolids in the process mix. The task force recommends that a "demonstration level" pilot of at least one of the proposed solid waste technologies should be conducted in the region as soon as possible. The task force will provide an updated report to the CRD Board at its March, 2016 meeting. In this report, the task force will recommend a path to accomplishing such a pilot and describe next steps the task force intends to carry out including:

- further investigation of possible technologies and solution providers
- additional research into the viability of technologies presented
- investigation into potential obstacles presented by current provincial regulation
- analysis and recommendation as to how any regulatory obstacles might be overcome
- examination of procurement methods best suited to attracting comprehensive, innovative IRM applications
- Examination of processes necessary to appropriately evaluate applications and select from amongst them

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ERM 16-27

REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE
MEETING OF WEDNESDAY, FEBRUARY 24, 2016

SUBJECT **Staff Comments – Integrated Resource Management Task Force Report**

ISSUE

To provide staff comments on the Integrated Resource Management Task Force Report (February 24, 2016).

BACKGROUND

The General Manager of Parks & Environmental Services, or designate, provides strategic support and acts as a liaison to the Task Force. The General Manager, or designate, has attended all of the Task Force meetings.

The conclusions outlined in the February 24 Task Force report are based on information provided by the Integrated Resource Management (IRM) technology providers and consultants that were invited by the Task Force to make presentations. The technology providers' presentations highlighted the advantages of IRM and their respective technologies. The information presented has not been independently reviewed by Capital Regional District (CRD) staff or engineering consultants. As indicated in the Task Force report, a pilot project (or even a technology feasibility study or literature review) could allow the CRD to better understand and manage any potential risks associated with proposed innovative IRM technologies. Alternatively, as highlighted by Dr. O'Riordan, a robust infrastructure procurement model, or expression of interest process, that validates technology providers' risk mitigation claims would help to address and acknowledge potential technology maturity and reliability concerns.

Dr. O'Riordan provided comments regarding BC gasification regulatory requirements and highlighted that there are emissions requirements (BC Ministry of Environment Waste Discharge permit) for gasification and a renewable fuel standard (Renewable and Low Carbon Fuel Requirements Regulation) for combustion of fuel from gasification for the production of electricity.

In addition to the above-mentioned requirements for a gasification project, there are a number of steps that need to be completed prior to a waste discharge permit or approval being issued by the Ministry of Environment, including a draft application and pre-application meeting with Ministry staff. During the pre-application meeting, Ministry staff will provide direction on the level of legal, technical and notification/consultation requirements, as well as air emissions and bottom/fly ash management. The Ministry processes completed applications on a "first in-first out" principle. As of January 27, 2016, the Authorizations-South region, which includes the CRD, had 214 waste discharge applications in the application queue.

A small-scale, temporary gasification pilot may be processed under a waste discharge approval for a demonstration period of up to 15 months, which is not renewable and would have fewer regulatory requirements than a permanent facility. A permanent gasification facility would require a waste discharge permit, amendments to both the Solid and Liquid Waste Management Plans, an operational certificate, more detailed technical assessments and extensive public consultation.

In addition, any gasification facility would have to meet all municipal land use and bylaw requirements. Facilities located on federal lands would be subject to separate regulations.

RECOMMENDATION

That the Core Area Liquid Waste Management Committee receive this report for information.

Submitted by:	Russ Smith, Senior Manager, Environmental Resource Management
Concurrence:	Larisa Hutcheson, P.Eng., General Manager, Parks & Environmental Services

RS:dd

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EHQ 16-25

REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE
MEETING OF WEDNESDAY, FEBRUARY 24, 2016

SUBJECT **Recommended Option – Core Area Sewage Treatment and Resource Recovery**

ISSUE

To provide the Core Area Liquid Waste Management Committee (CALWMC) with a recommendation on a Liquid Waste Management Plan amendment that best meets the Project Charter, considering all factors and supporting elements including *Technical Memorandum #4 (Final) – Costing and Financial Analysis*, as prepared by Urban Systems and Carollo Engineers, outcomes of public consultation and reporting from the Technical Oversight Panel (TOP).

BACKGROUND

In March 2015, the CRD Board approved a Proposed Work Plan Overlay, amended most recently in January 2016 and attached as Appendix A. This Overlay guides the work of the CALWMC on three phases of work to develop, plan and implement a wastewater treatment and resource recovery project for the Core Area. This Work Plan Overlay was the basis to receive a one-year extension to March 31, 2016 from 3P Canada to the Conditional Financial Agreement for the Biosolids Energy Centre, and represents broadly the timelines committed to other funders for moving the project forward to completion.

Commencing June 2014 and January 2015 respectively, the Westside and Eastside Select Committees engaged in in-depth public engagement activities to share information with the public and seek public input on a range of factors, including siting for wastewater treatment facilities, level of treatment, technologies and overall social, economic and environmental benefits of the projects. Technically feasible siting options for facilities came forward from municipal councils through to the Select Committee for consultation with the public. With the support of consultants, Urban Systems, preferred sites were then used as a basis for the numerous Westside and Eastside system configuration options, which were also shared for feedback with the public.

This work was presented to the CALWMC in July 2015 and formed the basis of the next phase of options development. The Core Area Liquid Waste Management Committee has since worked in collaboration with the Westside and Eastside Select committees, municipal and First Nations councils and staff over the past eight months to execute the Options Development Phase of the project. The work has been guided by an overarching Project Charter, appended to this agenda, which articulates goals, commitments, roles and timelines and budget for the work, all leading to the recommendations presented below.

A number of key roles were brought into the Project Charter to build trust and achieve the highest level of accountability, transparency and fairness to the project. A Fairness and Transparency Advisor was appointed by the Board in August 2015. Ms Kim Collette, reporting directly to the CALWMC, has monitored the process and received, investigated and reported on complaints received from all parties to ensure that the process to date has been fair, transparent, impartial and objective.

The Board also established a Technical Oversight Panel (TOP) to provide independent oversight of the engineering and project analysis work done by the engineering team developing the system configurations and options for consideration. The TOP has worked diligently since August 2015 to review all assumptions, technical and costing factors and conclusions brought forward by the engineering team and provided independent advisement to the CALWMC. The TOP also provided independent advisement to the committee on private sector approaches to the project, scanned by the TOP to understand at a high level the wastewater marketplace and innovations developing in this business area.

The Capital Regional District (CRD) Board retained the engineering team of Urban Systems, partnered with Carollo Engineers, in August 2015 to conduct a costing and feasibility analysis of option sets for the conceptual configuration of sewage treatment and resource recovery for the Core Area. Technically feasible option sets were developed by the engineering team in consultation with municipal staff and with the concurrence of the Select committees. The process involved the evaluation of technically feasible options in consideration of municipal and public acceptance of the sites.

Urban Systems/Carollo have submitted a series of four technical memos to the CALWMC over the past 6 months. *Technical Memo #1 (Final) – Background and Technical Foundation*, provided project background, preliminary criteria, considerations for decision making and option set evaluation methodology for the Siting Options Development Phase of the project. *Technical Memo #2 – Review and Refine Option Sets*, provided four siting option sets, along with preliminary site feasibility, technology needs and considerations, resource recovery opportunities and methodology for comprehensive costing and financial analysis. At the direction of the CALWMC, this memo was amended to include a fifth option, namely a full tertiary centralized option 1b.

Building on the work presented in the first two technical memos, *Draft Technical Memo #3 – Costing and Financial Analysis* was initially submitted to the Committee in draft form on December 9, 2015. Upon consideration of the analysis provided, the CALWMC directed the consultants to develop and cost an additional 3-plant option that would include a separate secondary or tertiary treatment plant, conveyance and disposal system to serve Colwood and Langford.

At its January 13, 2016 meeting, the CALWMC approved the motion to proceed with public consultation on the 1, 2, 3, 4 and 7 plant options (7 options in total) presented in the revised *Draft Technical Memo #3*, with an additional option that would include full tertiary at all plants in the 3-plant option (Rock Bay, Esquimalt Nation and Colwood). Due to the late identification of the 3-plant tertiary option, a full technical and financial analysis of this option could not be completed in time to be included as a full option in the public consultation process. Instead, a single question was added to the community survey informing respondents of the potential for a variation of the 3-plant option and asked if this option should be considered.

Technical Memo #3 (Final) was approved by the CALWMC on February 10, 2016. *Technical Memo #4 – Analysis Summary (Final),* providing a summary of Technical Memos #1, #2 and #3 and the conclusions arrived at by Urban Systems and Carollo Engineers is included as Appendix B. The TOP report #10 providing comment on Technical Memo #4 is included as Appendix C.

Each of the Technical Memos prepared by Urban Systems (with the exception of Technical Memo #4) were initially presented in draft form to the CALWMC, were vetted and endorsed by the TOP before coming back to committee for final receipt and have all been presented to the Technical and Community Advisory Committee (TCAC) for comment and feedback.

Final public consultation specific to the agreed-on options sets and necessary to submit a plan amendment to the Minister has taken place between January 13 and February 20. This process has been multi-faceted and supported by the CALWMC, the respective Select Committees, the Technical and Community Advisory Committee, as well as the Eastside Public Advisory Committee. Some events and activities have been jointly conducted, including a comprehensive website, a community postcard and an online/paper survey. A joint open house was also held at the Songhees Wellness Centre. The Westside and Eastside processes also delivered unique elements tailored to the respective communities, including social media, advertising, open houses, workshops, stakeholder meetings and a storefront walk-in centre. Summaries for both Westside and Eastside consultation, along with an overarching consultation process report and a survey summary report, is included in Appendix D.

ALTERNATIVES

That the Core Area Liquid Waste Management Committee recommend to the CRD Board:

Alternative 1

1. That a conditional Liquid Waste Management Plan Amendment No. 10 be prepared and submitted to the Minister of Environment with the following elements:

    a) A centralized tertiary wastewater treatment plant with capacity for 108 ML/D at Rock Bay
    b) The BC Hydro/Transport Canada lands as the preferred wastewater treatment site
    c) Provision for a modular 10 ML/D tertiary wastewater treatment plant servicing Colwood at the corner of Ocean Boulevard and Island Highway to be phased in dependent on budget and final cost considerations determined in consultation with Colwood
    d) Hartland Landfill as the preferred site for biosolids processing with technology to be confirmed by a Request for Statements of Interest process

2. Proceed with a Request for Statements of Interest process to select a biosolids processing technology

3. That the preferred option be formally communicated to all senior levels of government involved in funding the project including the Province, 3P Canada and Infrastructure Canada.

4. That staff be directed to finalize, subject to Board approval, Options to Purchase on the lands in Rock Bay as identified in Appendix H and initiate rezoning with the City of Victoria.

5. That the Westside and Eastside Select Committees be dissolved and that outstanding technical work from the Westside Select committee to refine wet weather design be incorporated in the refinement of RFP and costing analysis, dependent on approval of the Ministry of Environment.

6. That staff be directed to bring back to committee an implementation plan and schedule including resourcing requirements for additional staffing and/or consulting expertise focused on procurement, project management and gasification.

Alternative 2

1. That a conditional Liquid Waste Management Plan Amendment No. 10 be prepared as a basis for approval and submitted to the Minister of Environment with the following elements:

    a) A centralized tertiary wastewater treatment plant with capacity for 108 ML/D at Rock Bay
    b) The BC Hydro/Transport Canada lands as the preferred wastewater treatment site
    c) Provision for a modular 10 ML/D tertiary wastewater treatment plant servicing Colwood at the corner of Ocean Boulevard and Island Highway to be phased in dependent on budget and final cost considerations determined in consultation with Colwood
    d) Hartland Landfill as the preferred site for biosolids processing with technology to be confirmed by a Request for Statements of Interest process

2. Include within the LWMP amendment provision for a process under which the CRD would invite the submission of project concepts for an integrated liquid and solids treatment solution. The submissions would include sufficient detail to allow for meaningful evaluation of the project concepts against each other and against the base case, including details regarding sites, technology, a feasibility assessment, demonstration of compatibility with current infrastructure, compliance with provincial and federal requirements and demonstration of significant fiscal advantages over the base case including financial backing.

3. That the above approach be formally communicated to all senior levels of government involved in funding the project including the Province, 3P Canada and Infrastructure Canada.

4. That staff be directed to finalize, subject to Board approval, Options to Purchase on the lands in Rock Bay as identified in Appendix H.

5. That the Westside and Eastside Select Committees be dissolved and that outstanding technical work from the Westside Select Committee to refine wet weather design be incorporated in the refinement of RFP and costing analysis, dependent on approval of the Ministry of Environment.

6. That staff be directed to bring back to committee the resourcing requirements and process to retain additional staffing and/or consulting expertise focused on procurement, project management and integrated waste technologies.

FINANCIAL IMPLICATIONS

Appendix E provides the capital costs of the options, as presented by Urban Systems/Carollo Engineers, ranging from $1.031 billion to $1.348 billion, with operating costs ranging from $21.8 million to $26.6 million annually at 2030. These costs represent high-level conceptual estimates that must be refined prior to establishing a firm project budget.

Appendix F provides the estimated annual costs per household of the options for each of the municipal and First Nation participants (after grants). Cost sharing is based on the projected design capacity benefits for each participant to the year 2030. Phasing of some components over and above regulatory requirements could substantially reduce initial capital costs, allowing debt servicing to be funded by growth.

Treating to a tertiary level, above the regulatory requirements, represents an approximate additional $100 million (+10%) in capital, averaging approximately $84 (+20%) per household across the service area. Costs for the options as developed by Urban Systems/Carollo are higher than the previous program. One goal of the Project Charter is to produce an innovative project that brings in costs at less than original estimates. Cost estimates will continue to be refined as more detailed planning and optimization of system design is carried out both in the detailed planning and procurement phases of the project.

Alternative 2 provides an opportunity to explore system design and configurations that may result in financial savings; however, proposals that reallocate existing revenue streams and costs would need to be evaluated for overall financial impact. This process would be driven at the outset by private sector innovation rather than by siting constraints imposed by municipal councils and public feedback. This approach is a departure from the methodology proposed in the Project Charter in an attempt to better meet the stated Goals and Commitments. Any new sites that come forward from the process would, in the first instance, be presented to the host municipal council for high-level support as achieved in the process to date. A staff and consulting team with extensive experience in a variety of procurement models, financial analysis and risk assessment would be needed to execute this process.

CONSULTATION IMPLICATIONS

Key overall themes were observed and recorded over the course of the comprehensive pubic consultation process, as follows:

- Concern for overall costs and how the project will affect taxes
- Support for higher level of treatment and level of water quality being discharged into the ocean
- Support for increased opportunities for heat and water re-use

Eastside

- Support for a higher level of treatment (tertiary) as a benefit to the receiving environment with relatively minor additional costs
- Support for future innovation in terms of heat and water reuse, but an understanding those might well have additional costs right now
- Support for less complexity in the system (one or two plants), with consideration for phasing in smaller plants as future growth or opportunity arises

- Concern for overall increase in the cost of the project, an understanding of the additional costs from the Rock Bay location for conveyancing, and desire to include other locations, and technologies where those costs might be lower (closer proximity to the existing outfalls)
- Two groups that continued to express opposition to the options are the residents who continue to believe treatment is not required, and those who continue to believe that a fully distributed tertiary option with full integration of waste streams is the best approach.

For Rock Bay, there is base acceptability for a liquids plant with the following concerns:
- Little or no support for solids processing in Rock Bay
- Requirement for noise and odour control
- Commitment to manage construction impacts
- Excellence in design and ongoing process for community involvement
- Desire for integration with recreation, business and culture on site and meaningful amenities
- Addressing potential housing values risk
- Selection of actual site that is least disruptive and highest benefit to community in terms of mixed use and recreation

Westside
- Concerns over costs and cost allocations; how costs will affect people on septic systems
- Support for a higher treatment level that deals with substances such as pharmaceuticals and micro-plastics; concerns around discharge quality
- Support for water re-use and heat recovery and energy extraction opportunities
- Very little negative feedback from participants on the proposed sites either in this round of engagement, or in the earlier SiteSpeak online survey; an understanding that facilities can successfully be integrated into community
- Interest, primarily from members of the business community, to further explore a "Westside Solution" with a single facility to treat wastewater generated by participating westside communities

REGULATORY IMPLICATIONS

The Minister directed the CRD to proceed with planning for sewage treatment for the Core Area on July 21, 2006 under the Municipal Wastewater Regulations. In addition, the federal Wastewater Systems Effluent Regulations came into effect on January 1, 2015 requiring municipal wastewater quality to be equivalent to secondary treatment levels. The CRD received transitional authorizations that allow for Macaulay and Clover wastewater to temporarily exceed federal effluent quality limits, but which require treatment equivalent to secondary to be in place by December 31, 2020.

The recommended centralized tertiary treatment plant at Rock Bay will meet provincial and federal effluent quality requirements and will bring the Core Area system into compliance with both provincial and federal regulations. However, construction of the facility is not expected to be complete until after December 31, 2020 (likely 2023-2024). These timelines would be further extended if ultimate system facilities trigger an Environmental Risk Assessment, as would be required for a gasification facility. The legal and regulatory implications of missing the 2020 deadline as a requirement of the transitional authorizations are not known, but could result in orders or fines.

ENVIRONMENTAL IMPLICATIONS

Implementation of secondary treatment will meet all regulatory limits for conventional parameters and reduce the levels of many contaminants of concern (e.g., pharmaceutical and personal care products, as well as plasticizers and flame retardants) entering the marine environment, relative to existing preliminary treatment levels. However, the recommendation to install tertiary treatment will further reduce, although not fully eliminate, the contaminant load in the liquid effluent destined for the ocean. This will reduce the potential environmental and human health risks even further than what secondary treatment alone would have achieved. The level of contaminant reduction will depend on both the specific tertiary treatment technology installed and the type of contaminants and will be investigated during the pre-procurement planning.

CLIMATE CHANGE IMPLICATIONS

The relative carbon footprint of the liquid treatment options as outlined in Technical Memo #3 is included in Appendix G. The procurement process and statement of environmental outcomes will need to focus on reducing energy requirements of the tertiary treatment process, as this factor increases carbon footprint.

Both of the solids processing options costed by Urban Systems/Carollo create and reduce greenhouse gas emissions. Performance of these technologies, accounting for the introduction of other waste streams, will be analyzed in the Request for Statements of Interest process. Alternative 2 may offer greater benefits regarding reduction of greenhouse gas emissions and relative carbon footprint that are yet to be determined.

The conceptual design for the preferred option accounts for up to 10 ML/D of effluent for local reuse. Local policy development is required to support water reuse and heat recovery systems to their maximum potential, as such systems face financial challenges.

SITING IMPLICATIONS

A number of siting options have been identified within the Rock Bay area and shared through the consultation process. The lands currently owned by Transport Canada and BC Hydro, slated to be transferred in fee simple property to Matullia (an economic development company owned by the Songhees and Esquimalt Nations), are the preferred sites for wastewater treatment for several reasons:

Site remediation:	this property is the only proposed site that has environmental remediation pending completion on the majority of the area
Tenancy:	this is the only proposed property that has only minor encroachments from existing tenants
Willing Seller:	the owners of the site area – BC Hydro, Transport Canada and Matullia – are all willing sellers
Timing:	access to the site is anticipated to be available in 2016, as there are few tenants that need to be moved and remediation activities are winding up
Comparable Cost:	costs for this site are comparable to other options in Rock Bay

An orthophoto of the site area is presented in Appendix H. A history of the site and information regarding recent remediation activities is presented in the Briefing Note included in Appendix I. In order to realize the full potential of the site as an integrated, multi-use development, it is proposed that only wastewater treatment be located in this area. The site is not uniformly shaped, leading to design constraints for facility layout that will be exacerbated when siting biosolids processing here as well. Removing the biosolids processing facility from the design scope allows for greater flexibility, opportunities for better integration in the community and maximizes secondary development potential.

Hartland landfill offers distinct advantages as a biosolids processing site in order to provide for integration with other waste streams such as wood waste, yard and garden, kitchen scraps and/or municipal solid waste residuals, as many of these waste streams are currently directed to and managed at this facility. Siting biosolids processing at Hartland allows for synergies with the existing power generation facility, use of landfill gas as a fuel source and represents a more remote location relative to Rock Bay.

The Hartland landfill is designated as a biosolids processing centre in the current Liquid Waste Management Plan and Solid Waste Management Plan, is owned by the CRD and appropriately zoned, and initial environmental impact studies have been conducted.

The preferred site in Colwood is the "Park and Ride" located at the corner of Ocean Boulevard and Island Highway. Although a distinct preference was not heard from the public during this final round of consultation, the advantage of this site over the Juan de Fuca Recreation Centre is sole ownership by the City of Colwood.

INTER-GOVERNMENTAL IMPLICATIONS

The decision to revise the Core Area Liquid Waste Management Plan has provided an opportunity for the Region to bring the participating First Nations into the decision-making arena from the beginning of the process, rather than limiting the relationship to that of information sharing and consultation. The Songhees and Esquimalt Nations have shown leadership and good will throughout the process and have played an integral role in the option development by being the first to offer technically feasible locations for both the East and Westside solution sets. Throughout the evaluation process, both Nations have joined the rest of the Core members in making this project a priority and have focussed their staff resources on expediting the due diligence required to assist with the next level of feasibility assessment of those sites.

In addition to the political significance of First Nations participation in the governance on this project, Esquimalt and Songhees Nations have also expressed their optimism that the recommended option offers potentially transformative economic development opportunities for their respective communities, by way of complementary development on the lands surplus to the treatment plant's footprint.

In March 2014, the City of Colwood received approval in principle from the CRD Board to pursue a separate wastewater treatment system. Since this time and in parallel with the Core Area process, Colwood has continued to pursue an alternative approach to wastewater treatment that would see high-quality tertiary effluent be discharged for irrigation and groundwater recharge. Provision for a stand-alone treatment plant is proposed to be incorporated into the Liquid Waste Management Plan (LWMP) amendment to recognize this objective. The plant could be built by

modular design to accommodate growth and financial capacity of the community. Under the Municipal Wastewater Regulations, treatment redundancy is necessary for Colwood at the centralized wastewater treatment plant.

In anticipation of a land-use decision making process within the City, Victoria Council passed a resolution on January 14, 2016 that includes a commitment to a greatly expedited process that works to facilitate approvals, where possible, within project funding deadlines. City staff have been working in collaboration with CRD staff and a planning consultant in preparation of a zoning application within Rock Bay. The formal rezoning process would not commence until specific sites are identified by the CRD Board and immediate next steps include development of design guidelines.

GOVERNANCE IMPLICATIONS

The Westside and Eastside Select Committees have focused on option set development, project approaches and consultation methods that best meet the unique needs of the respective communities. The Select Committees have also provided an avenue to obtain consent for siting, given the requirement for land-use decision making at a local level. In order to collectively move forward with a new Core Area LWMP and to focus the efforts of staff and consultants, the Select Committees are proposed to be dissolved.

TIMING IMPLICATIONS

The current Work Plan Overlay contemplates completion of the Planning Phase of the project by December 2017. During this phase, all necessary funding agreements, environmental assessments, studies and permits, in addition to land-use approvals, would be completed. It is anticipated that additional time, beyond December 2017, may be necessary to complete the planning stage and obtain approvals if gasification is pursued.

Alternative 2, pursuing a pre-procurement process for integrated resource management, may also add additional time over-and-above the two-year Planning Phase to carry out the process, overcome any regulatory hurdles that may emerge and conduct environmental reviews.

CONCLUSION

A considerable level of effort and body of work has been conducted over the past year and half, according to the Work Plan Overlay and guided by the goals and commitments in the Project Charter. The staff recommendation is based on many factors and provides the Committee with the elements for an amendment to the Core Area Liquid Waste Management Plan and next steps to move the project forward.

RECOMMENDATION

That the Core Area Liquid Waste Management Committee recommend to the CRD Board:

1. That a conditional Liquid Waste Management Plan Amendment No. 10 be prepared and submitted to the Minister of Environment with the following elements:

a) A centralized tertiary wastewater treatment plant with capacity for 108 ML/D at Rock Bay
b) The BC Hydro/Transport Canada lands as the preferred wastewater treatment site
c) Provision for a modular 10 ML/D tertiary wastewater treatment plant servicing Colwood at the corner of Ocean Boulevard and Island Highway to be phased in dependent on budget and final cost considerations determined in consultation with Colwood
d) Hartland Landfill as the preferred site for biosolids processing with technology to be confirmed by a Request for Statements of Interest process

2. Proceed with a Request for Statements of Interest process to select a biosolids processing technology

3. That the preferred option be formally communicated to all senior levels of government involved in funding the project including the Province, 3P Canada and Infrastructure Canada.

4. That staff be directed to finalize, subject to Board approval, Options to Purchase on the lands in Rock Bay as identified in Appendix H and initiate rezoning with the City of Victoria.

5. That the Westside and Eastside Select Committees be dissolved and that outstanding technical work from the Westside Select committee to refine wet weather design be incorporated in the refinement of RFP and costing analysis, dependent on approval of the Ministry of Environment.

6. That staff be directed to bring back to committee an implementation plan and schedule including resourcing requirements for additional staffing and/or consulting expertise focused on procurement, project management and gasification.

Submitted by:	Larisa Hutcheson, P.Eng., General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

LH:cl

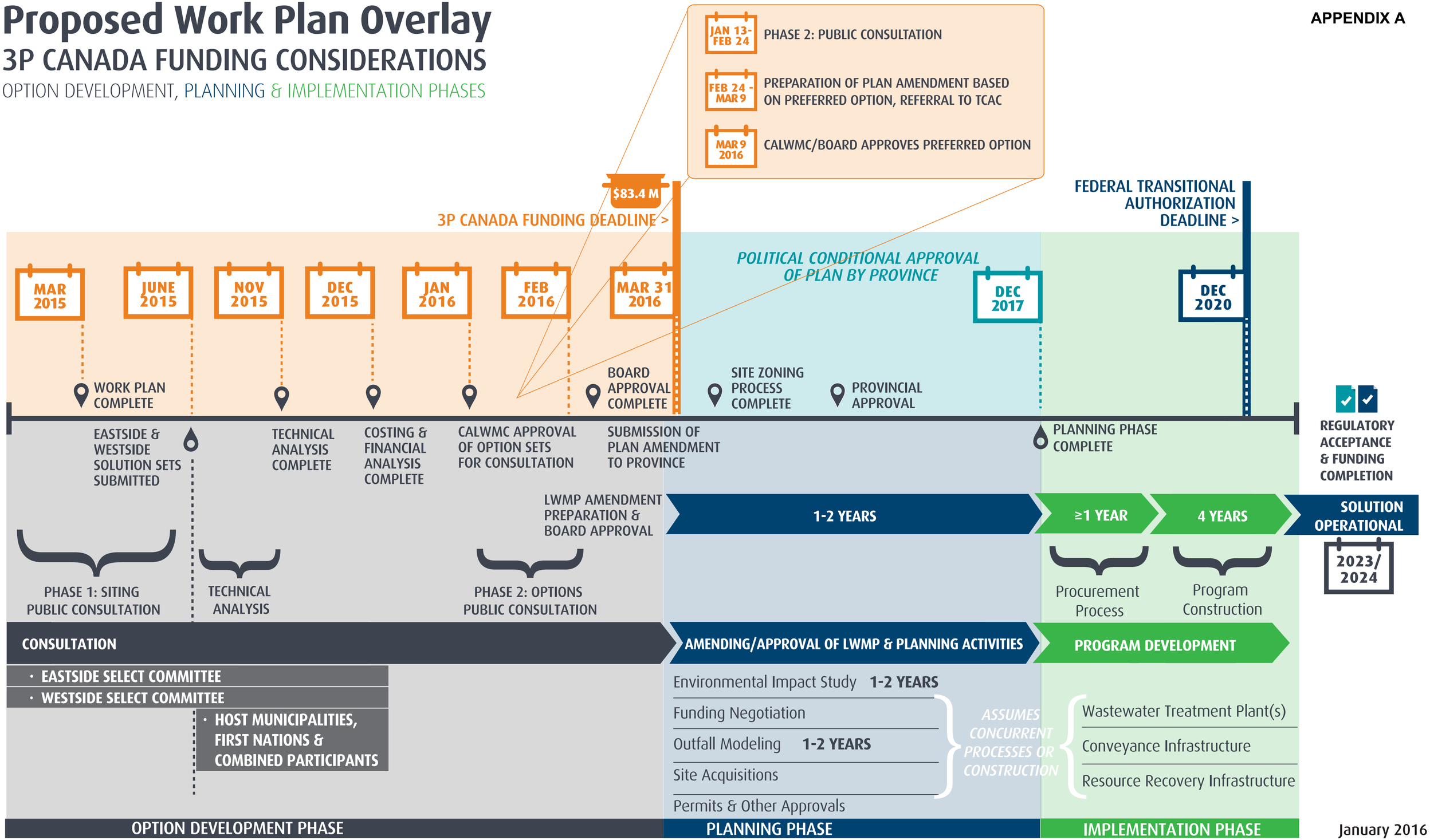
Attachments:
Appendix A – Proposed Work Plan Overlay, January 2016
Appendix B – Technical Memorandum #4 – Analysis Summary
Appendix C – Technical Oversight Panel Report #10
Appendix D-1 – Public Consultation Report Summary Report
Appendix D-2 – Westside Public Engagement Summary Document
Appendix D-3 – Eastside Community Dialogue Public Consultation
Appendix D-4 – Core Area Wastewater Survey – Summary Results
Appendix E – Projected Capital Cost by Option – Bar Chart and Table
Appendix F – Annual Estimated Cost Per Household (at 2030 and after grants)
Appendix G – Table – Carbon Footprint for Wastewater (Liquids) Treatment
Appendix H – Orthophoto of Rock Bay Site
Appendix I – Briefing Note – BC Hydro/Transport Canada lands in Rock Bay

APPENDIX A

Proposed Work Plan Overlay

3P CANADA FUNDING CONSIDERATIONS

OPTION DEVELOPMENT, PLANNING & IMPLEMENTATION PHASES



January 2016

APPENDIX B

Capital Regional District

Core Area Liquid Waste Management Plan

Phase 2: Wastewater Treatment System Feasibility and Costing Analysis

Technical Memorandum #4 – Analysis Summary

Project: 1692.0037.01
urbansystems.ca
402 – 645 Fort Street
Victoria, BC, V8W 1G2

carollo
Engineers...Working Wonders With Water™

URBAN systems

Table of Contents

Appendices

EXECUTIVE SUMMARY

Phase 2 centers on technical and financial analysis regarding wastewater treatment and resource recovery for the Core Area. Regional services require clear definition of levels of service. Technical findings on their own do not justify a specific direction, rather, it is the synthesis of technical, public and political needs and aspirations that determine the direction for level of services. Technical Memorandum #4 summarizes the technical and financial analysis to support Committee decision-making. Phase 2 policy areas include:

Water Reuse: Water innovation and stewardship drives the concept for reuse, however there are technical and financial challenges to overcome. Phase 2 findings suggest that any reuse systems could be introduced incrementally when customers and water rates validate their installation. The two plant option (Colwood and Rock Bay) enables a notable increase in water reuse from a single central plant.

Solids Recovery[1]: The decision to integrate municipal and wastewater solids in the near-term shapes the location of solids recovery. Phase 2 findings suggests that Hartland Landfill offers distinct advantages if there is direction by the Committee to process both wastewater and municipal solids on a regional scale. Alternatively, to pursue solids recovery at Rock Bay would focus capacity on primarily wastewater solids.

Level of Treatment: Secondary treatment fulfills regulatory requirements yet tertiary treatment offers enhanced water quality but with increased capital and operating costs. Rock Bay Secondary provides up to 10% tertiary treatment: selecting 100% tertiary treatment is a local decision regarding preferred level of service based on public and political input. The capital costs to achieve 100% tertiary treatment is similar to a two-plant, sub-regional option.

Conveyance and Site Design: The cost and routing of conveyance infrastructure requires appropriate resources and collaboration with municipal partners to mitigate against neighborhood interruption. Direction by the Committee to prioritize routing optimization and site design reflects technical and public findings through the planning process.

Number of Facilities and Location: Among the seven option sets, a central plant (Rock Bay) or two plant option set lowers complexity and enables economies of scale to lower costs e.g. two plants at Esquimalt Nation and Rock Bay is roughly equivalent in capital cost to *1 Plant Rock Bay Tertiary*. There are technical and financial disadvantages to increasing the number of plants. However, adding more facilities could be done incrementally to service growth or if reuse/recovery systems prove their feasibility beyond the 2030 scenario, in locations such as Colwood, East Saanich and Esquimalt.

These technical policy areas can be combined with public input and preferences for the Committee's benefit of selecting levels of service, siting and infrastructure for establishing the plan forward.

[1] The Request for Statements of Interest (RFSI) process will yield market-specific economic and feasibility information to decide on an effective approach to wastewater solids recovery.

1.0 PHASE 2 APPROACH AND METHODOLOGY

1.1 Phase 2 Objectives

The Project Charter details the aspirations and commitments set out by the Core Area Liquid Waste Management Committee (the Committee). Current treatment standards in the Core Area include screening prior to outfall which triggers new works to comply with federal and provincial regulations. Phase 2 provides the analysis and results to illustrate options for new levels of service to meet and exceed the looming regulatory changes. Each technical memorandum delivered to the Committee outlines the ingredients for service delivery, engineering, treatment, recovery and financial considerations, including:

- Capital and operational requirements for secondary, tertiary and/or sidestream tertiary treatment;
- Water reuse including locations, potential customers, pricing considerations and capital/operating requirements;
- Heat recovery economics and the opportunity to build systems when energy pricing supports it;
- Solids recovery including the location, options for wastewater byproducts only and the opportunity to integrate wastewater services with solid waste services; and
- Collection and conveyance infrastructure including outfalls, pump stations, trunk mains and the opportunity to manage flows on a core area-wide basis, or, sub-regionally.

The information summarized in this memo and presented throughout Phase 2 provides the technical basis for the Committee to assess trade-offs and establish the next level of service. Combining the technical data with public input meets legislative requirements but goes further to enable this Committee to deliver on its commitments to ratepayers to decide on preferred concepts for wastewater treatment and resource recovery.

Representative Design

Representative design includes provisionally selecting technologies and processes to illustrate how they perform against technical criteria. While analysis and reporting will refer to provisional solutions including costs estimates that are based on representative technologies, the process outcomes are not locked-in, which allows for further innovations by the market at the time of procurement. Representative design helps the process to allow for fair comparisons among the 7 option sets and provides a placeholder for innovation until the market responds to the opportunity in delivering a regional treatment solution in the Capital Region.

1.2 Phase 2 Methodology

Life-cycle costing analysis provides the Committee with financial information on seven wastewater option sets for treatment and resource recovery. Phase 2 life-cycle

costing analysis should be integrated with the results of recent public consultation so as to buttress the technical findings with community aspirations: a thoughtful blend of public, political and technical outcomes from Phase 2 supports the Committee in making a decision on a preferred system for wastewater treatment.

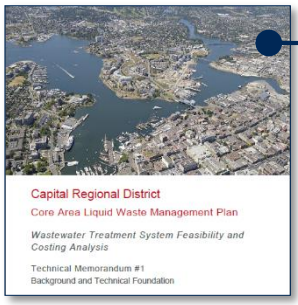
The Phase 2 methodology includes technical criteria and analysis that reflects the goals of Phase 2 as outlined in the Project Charter. These criteria frame the technical choices and how to characterize the performance of the seven option sets. In other words, this approach builds in public preferences to date to design the option sets, but later, this approach also ensures that performance results are framed by how well they deliver on local service expectations. Public education, dialogue and reflection on the technical results of Phase 2 helps to refine the regional aspirations and further informs the Committee on selecting a preferred direction. Later, technical criteria can be combined with the results of public consultation so that implementation of the project, including procurement processes and private sector proposals, that can respond to the concrete objectives and requirements that emerge from this process.

Cost Estimating

Cost estimates for the seven option sets reflect the terms of reference set by the Committee and adhere to senior government guidelines for public works and government services. Each option set includes a detailed list of works and their capacities including pipes, pump stations, treatment plants, solids recovery and other infrastructure to build the proposed system. Industry-relevant unit rates apply to the list of works to create construction costs. Various factors such as overhead and profit, engineering fees, project management, interim financing and escalation overlay the construction costs to develop program-budget costs. The resulting costs are well suited to public consultation and appropriate for decision making to narrow down to a preferred concept.

Levels of service, costs and environmental performance frame the comparison among the seven option sets. Ratepayer feedback on proposed levels of service are essential to assessing criteria including thresholds for affordability and environmental expectations. Each option outlines its capital and operating costs as well as revenue estimates alongside its level of service which allows stakeholders to weigh the trade-offs among the alternatives. Because the technical criteria go beyond financial, option set characterizations are broad and allow for a deeper appreciation of the costs and benefits of services, such as water reuse, heat recovery and distributed systems. While no single alternative can fully address the range of criteria, it is the presentation of the alternatives and the ensuing debate that will help to clarify the technical-social feedback that supports Committee direction.

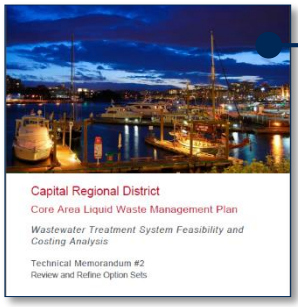
Overall, the four technical memos provide the detailed account of the Phase 2 technical methodology including analysis and results.



Technical Memorandum #1

Background and Technical Foundation

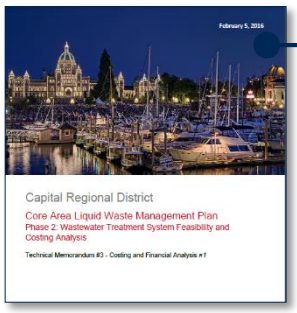
Details the overall Phase 2 methodology, summarizes design flows, explains the role of representative design, describes how option sets will be developed and itemizes cost estimating factors (Appendix C).



Technical Memorandum #2

Review and Refine Option Sets

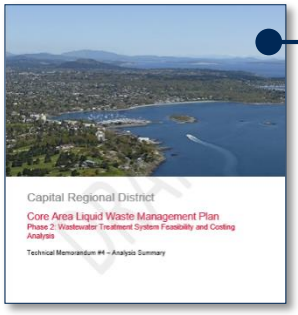
Details the representative technologies for costing and effluent performance, outlines the solids treatment and recovery options, itemizes the infrastructure and system components (e.g. lineal meters of pipe, cubic meters of capacity) and confirms the level of service for treatment and infrastructure across the option sets (Appendix B).



Technical Memorandum #3

Costing and Financial Analysis

Details the capital, operating and life-cycle costing results, summarizes the overall technical characterization of each option set, identifies the financial feasibility of resource recovery and lays out policy considerations for public and political direction (Appendix A).



Technical Memorandum #4

Analysis Summary

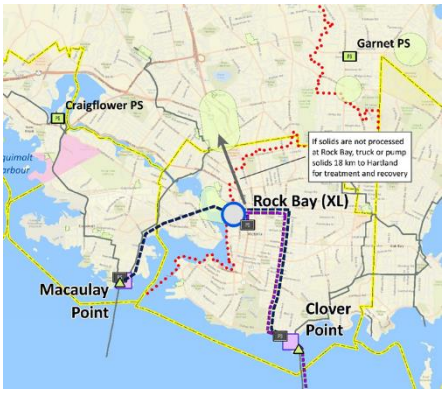
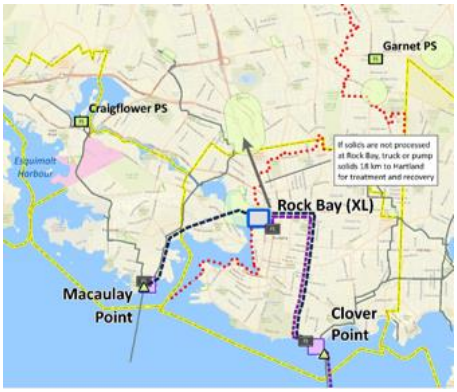
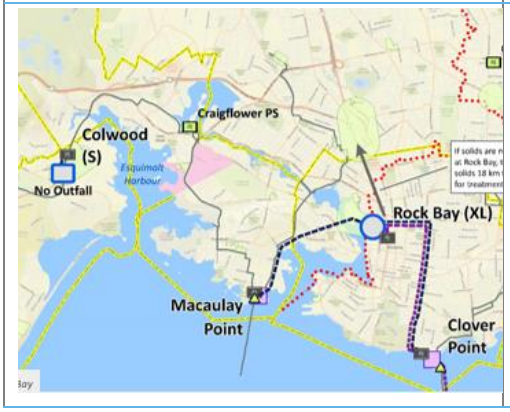
The content of Technical Memorandum #4 supports future engagement with senior government (e.g. funders, regulators) and Committee implementation activities. Results for option set costs, solids treatment, heat and water recovery and criteria performance form most of Technical Memorandum #4. Decision-making considerations stem primarily from the technical findings to help frame key policy choices for the Committee as they decide on a preferred concept for funding and ultimately a formal LWMP amendment. Life-cycle costing and overall option set performance frames the choices for the Committee in setting the level of service.

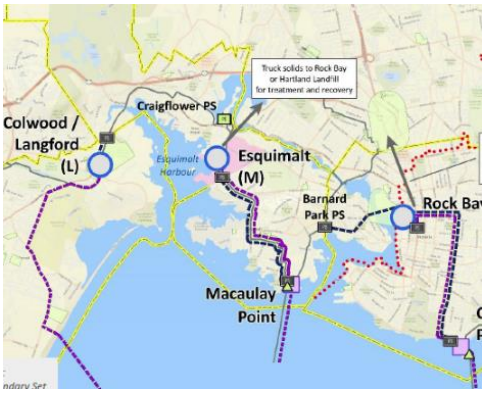
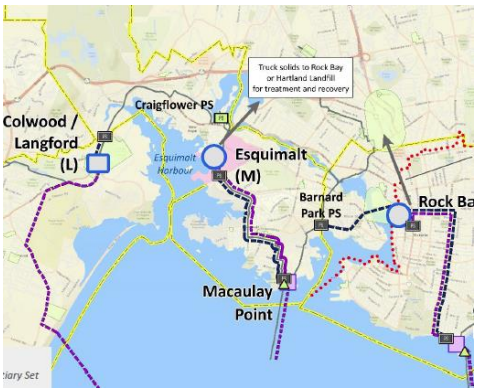
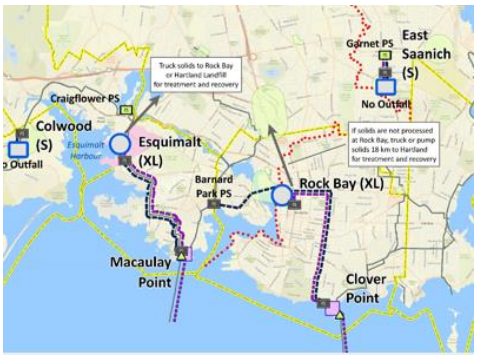
2.0 OPTION SETS SUMMARY RESULTS

2.1 Summary Table of Key Results

Table 2-1 below provides an executive summary of the seven option sets including their description and summary performance. The location, level of treatment and cost implications frame the key levels of service considerations for collection and liquid treatment infrastructure.

Table 2-1: Option Set Summary

Area	Description	Performance	
	**Rock Bay Central Secondary** The 1 Plant secondary treatment (1a) option set centralizes all flows at Rock Bay, including up to 10MLD for local reuse. This option set addresses the need to meet pending regulations and provides for the base level of service.	Capital 2030 **$1,031M**	2030 Operating **$21.8M** Est. Resource Income up to **$0.9M**
		Rank: Low Operating Cost **1st**	Rank: Low Carbon & Energy Footprint **1st**
	**Rock Bay Central – Tertiary** The 1 Plant full tertiary (all flows) treatment (1b) option set centralizes all flows at Rock Bay, including up to 10MLD for local reuse. This option set represents a clear sentiment towards water stewardship by raising levels of service for treated effluent quality.	Capital 2030 **$1,131M**	2030 Operating **$26.4M** Est. Resource Income up to **$0.9M**
		Rank: Low Operating Cost **6th**	Rank: Low Carbon & Energy Footprint **3rd**
	**2 Plant: Rock Bay + Colwood** The 2 Plant option set treats over 80% of flows to secondary levels, on top of up to 20% tertiary quality effluent. This option set represents a notable increase in water reuse from the 1-plant option with minimal extra conveyance infrastructure.	Capital 2030 **$1,088M**	2030 Operating **$22.8M** Est. Resource Income up to **$2.4M**
		Rank: Low Operating Cost **2nd**	Rank: Low Carbon & Energy Footprint **2nd**

Area	Description	Performance	
	**3 Plant Secondary: Colwood/Langford, Esquimalt Nation and Rock Bay** The 3 Plant option set treats over 80% of flows to secondary levels, on top of up to 20% tertiary quality effluent from sidestream re-use facilities at Esquimalt and Rock Bay. The secondary plant at Colwood/Langford allows for sub-regional flow management, including locating capacity for future growth in the Westshore.	Capital 2030 **$1,125M** Rank: Low Operating Cost **3rd**	2030 Operating **$23.0M** Est. Resource Income up to **$1.6M** Rank: Low Carbon & Energy Footprint **4th**
	**3 Plant Tertiary*: Colwood/Langford (*tertiary), Esquimalt Nation and Rock Bay** The 3 Plant Tertiary option set treats 70% of flows to secondary levels, on top of up to 30% tertiary quality effluent from the Colwood/Langford plant on top of sidestream re-use facilities at Esquimalt and Rock Bay. This option increases water reuse to three systems and raises effluent quality to levels similar to the 4 plant option at a lower cost.	Capital 2030 **$1,178M** Rank: Low Operating Cost **4th**	2030 Operating **$24.0M** Est. Resource Income up to **$2.8M** Rank: Low Carbon & Energy Footprint **6th**
	**4 Plant: Rock Bay, Colwood, East Saanich and Esquimalt Nation** The 4 Plant option set is a sub-regional system treating over 75% of flows to secondary levels, on top of up to 25% tertiary quality effluent. This option set represents the middle ground for distributed facilities and includes water reuse systems in four major growth centers.	Capital 2030 **$1,195M** Rank: Low Operating Cost **5th**	2030 Operating **$25.3M** Est. Resource Income up to **$3.8M** Rank: Low Carbon & Energy Footprint **5th**

Area	Description	Performance	
	7 Plant: Rock Bay, Colwood, East Saanich, Esquimalt Township, View Royal, Langford and Core Saanich The 7 Plant option set is a sub-regional system treating up to 45% of flows to tertiary quality, including tertiary treatment for all flows on the Westside. This option set represents a highly distributed system which maximizes the potential for water reuse and situates facilities in 7 growth areas.	Capital 2030 **$1,348M**	2030 Operating **$26.6M** Est. Resource Income up to **$4M**
		Rank: Low Operating Cost **7th**	Rank: Low Carbon & Energy Footprint **7th**

2.2 Resource Recovery Feasibility Analysis

Recovery of resources available in both the liquids and solids is highly dependent on the market conditions, energy prices, environmental credits and the overall cost for the projects. Many resources can be considered and market responses based on supply or demand, and use or disposal, and price or cost will shape the preferred concept in the core area.

Solids Management and the Advantage of a RFSI

The Project Charter indicates that any option set must incorporate sustainable practices into the design and consideration of the solids management alternatives. Anaerobic digestion and gasification provide two energy positive processes that directly align with the terms of reference and the goals and commitments of Phase 2.

» **Anaerobic Digestion** is a process that maintains the wastewater solids at near body temperatures (35-39 degrees C) without the presence of air. Under these mesophilic[2] conditions the bacteria consume themselves and produce an energy-rich byproduct (methane).

Liquid Resources

- *Hydraulic/Nutrients*
- *Thermal*
- *Mechanical*

Solids Resources

- *Nutrients*
- *Energy*
- *Bio plastics*
- *Organic Soil Amendment*
- *Biomethane*
- *Biofuels*
- *Carbon Dioxide*
- *Electricity*

[2] Thermophillic digestion is an alternative to mesophilic which can reduce the time required for digestion but also requires greater heat/energy needs.

- Anaerobic digestion can reduce the organic content of the solids by 35-50% and the overall mass of the solids by 30%.
- Anaerobic digestion is the industry standard for stabilization and energy recovery in the wastewater industry.
- Anaerobic digestion typically produces 1,377 kg of wet cake at 20% dry solids per ML of treated wastewater.
- Methane gas from the digestion process would be cleaned of hydrogen sulfide and siloxanes and diverted to the c*ombined heat and power* units for the generation of power and heat. The heat generated in the engines will be used to provide the necessary heat for the digestion process and the electricity used to offset the electrical use of the mechanical equipment at the plant.

Hartland versus Rock Bay

Solids treatment and resource recovery is an important servicing decision which relates to technology, economics, environmental performance and location. Responses from the private sector will further address three of the four factors, yet location remains an important decision by the Committee. Hartland Landfill and Rock Bay offer different advantages and challenges. Neighborhood impacts, cost of land, costs of solids conveyance, integration of other municipal wastes and the destination of final residuals frames the opportunity with each site. Hartland Landfill provides distinct technical advantages including integration with other municipal waste, synergies with existing cogeneration facilities and greater flexibility in preparing (e.g. storing) residuals for market reuse. Alternatively, Rock Bay sites reduce infrastructure needs. Responses from the RFSI become more reliable with a single site.

» **Gasification** is a thermal/chemical process that converts the organic carbon in the wastewater solids into a synthetic gas that offers energy recovery potential but also may be processed into higher value items like plastics or as feedstock for biodiesel production. As this process is thermally based, it is critical that the energy content of the feed stocks be sufficient to maintain the high temperatures and derive energy out of the process.

- Gasification has been used in the municipal solid waste market as the energy content of these materials is typically sufficient for an efficient and energy positive operation.
- Gasification proponents claim to process 70% to 90% of the carbon content of the liquid waste solids feed; leaving mostly inorganic ash.
- Gasification will typically produce 14-60 kg of ash or biochar per ML of waste treated.
- Gasification generates syngas which can fuel a steam-boiler-turbine to generate power. The addition of municipal solid waste should enhance the thermal-energy process to yield significant amounts of excess thermal energy.

Key results of the capital, operating and life cycle costing analysis for solids recovery include:

- Capital costs for anaerobic digestion and gasification are deemed comparable, at $258M and $233M, respectively.
- Net present value results between anaerobic digestion and gasification can be considered roughly equal at this conceptual level (the capital cost uncertainty for gasification prevents a clear conclusion on net present value); statements of interest from the wastewater solids market will determine whether better net present value scenarios exist.
- Operational costs for gasification may be less than anaerobic digestion by a notable margin; this is primarily related to the mass of solids still present in the digested sludge and the potential cost of its disposal/reuse; market innovation on the reuse of biochar and biosolids will have a significant effect on the operating costs for either technology (which further justifies the value of market engagement).
- Operational costs for gasification decrease further as other municipal solid waste materials are added (relative to anaerobic digestion) because more energy offsets emerge.

Two financially comparable solids-energy recovery options positions the CRD to canvass the private sector to determine the most cost-effective and environmentally-beneficial alternative.

RFSI Considerations

A request for statements of interest (RFSI) details the aspirational and obligatory (e.g. risk management, financial assurance) objectives of the CRD in solids recovery, and also serves to identify and assess all of the potential market opportunities to improve upon the alternatives identified in Phase 2. The RFSI provides the CRD the option of evaluating the best technologies in a single, formal process and further informs the manufacturers on the goals of the CRD for the processing and disposal of the solids generated through the process.

The RFSI process will also provide opportunity for innovation by encouraging practical, resourceful and complete solutions to recover biosolids including their organics and energy. The RFSI should include the definition of the two *bookend*-type options (anaerobic digestion or gasification) as viable options for the CRD to implement in a way that challenges the market to produce options that are more innovative.

By being goal driven, market solutions will adhere to the progress made during Phase 2 including direction by the Committee and aspirations of the public. The RFSI can identify goals like:

1. Proposed process must recover and export energy
2. Proposed process should integrate municipal solid waste and wastewater solids
3. Proposed Process must recover and export ammonia

4. Proposed process must minimize carbon emissions
5. Proposed process must not rely on land application or landfilling of solids processed

The comprehensive list of requirements would be detailed to suit political and technical needs, for alignment with senior government funding opportunities (committed or not) and reflect key input received by the public through ongoing public consultation. The RFSI package should include extensive information on the resources available and the types of responses to be submitted.

Heat Recovery

Charter goals and commitments related to heat recovery comes from public interest in the economic and environmental feasibility of beneficial heating systems from wastewater throughout the Core Area. Analysis for Phase 2 covers planning projections, supply and demand, heating economics, service infrastructure, costs and income possibilities.

Heat recovery typically occurs via district heating systems (DHS) in select locations which are highly suited for heat distribution. Three primary factors influence the efficient distribution of excess heat energy from a wastewater facility: supply, demand and infrastructure requirements. All option sets provide treatment facilities near growth centers. Typically, the most feasible DHS scenario arises where infrastructure costs are lowest and amount of demand is greatest. Key economic factors that drive the financial viability of heat recovery include value of the heat supplied (e.g. $/GJ) relative to the cost of infrastructure and operations.

Cost-Income Analysis

Current record lows in natural gas prices combined with increasing electricity prices is narrowing the economic advantage that heat pump technology offers. For example, one unit of natural gas heat currently has a value of $14 per GJ, while a unit of heat pump heat at current electricity prices has a value of $11.67 per GJ. When infrastructure and utility operations costs are included, the price differential is largely eliminated which means district heating systems struggle to yield a positive return. Capital and operating costs estimates developed for Phase 2 identify 0.5:1 income to cost ratio. Overall, current energy prices coupled with the cost of DHS infrastructures results in insufficient revenues that may cover operating investments but do not payback capital investments in a reasonable time period.

Ingredients for Successful Heat Recovery

Heat recovery from wastewater has serious potential in broader district heating systems when the ingredients in Table 2-2 are applied:

Table 2-2: Ingredients for Successful Heat Recovery

INGREDIENT	APPLICATION
Secure partnerships with reliable building owners who are ready to invest in heating system infrastructure	*New development; preference to single-owner buildings; public agencies*
Low-infrastructure district heating systems	*New buildings situated 'on top' of effluent pipes or adjacent treatment plants*
Natural gas prices significantly exceed electricity pricing	*Future conditions may present this opportunity*
Lens on cost-effective heat recovery utilities	*Business cases based on reinvesting incomes into the utility; unlikely to offset other wastewater costs*
Public support inherent in triple-bottom line business case	*Seek out public input on the concept noting that implementation likely to occur when these ingredients for success can be met (likely in the future)*

Heat recovery from treated effluent is an attractive energy off-set strategy especially when economic conditions justify the business case for any system. Heat recovery systems in the Core Area should remain an ongoing dialogue among public, private and governmental stakeholders so that when conditions align, the CRD can partner with municipalities and developers to implement cost-effective options.

Water Recovery

When treated to a high enough standard, treated effluent can be reused instead of potable water. Water recovery target markets should deliver on the following key themes:

- Demonstrate reliable long-term demands and incomes
- Support community amenities such as stream and aquifer augmentation
- Reduce the scope of infrastructure needs
- Pursue future partnerships with industry
- Service large tracts of irrigable land such as parks and green spaces
- Demonstrate synergy with conventional public utility services
- Service growth centers where new developments can be encouraged to include additional plumbing systems for toilet flushing or irrigation

A servicing approach that meets these themes typically presents the lowest capital cost for system set up, provides long-term demands, supports community amenities such as parks and growth and generally conforms to public utility service delivery. Combined, land application and regional growth centers provide for lower-barrier locations for reuse.

Summary of Water Reuse across the Core Area

Treated effluent systems require their own, separate infrastructure for distribution. Each facility would include a pumping station which raises system pressures to cover the range of elevations and flows and also includes pipes based on conceptual routes. The capacity of each water reuse system is based on the 2030 flows with consideration to long-term flow increases. Life-cycle costing includes capital allowances for reuse systems including distribution pipes and pump facilities. Pricing for reclaimed water is proposed at 80% of potable water retail rates for toilet substitution and 80% of wholesale CRD potable rate for land application. Reuse by aquifer recharge (if pursued) will not result in revenue.

Water Reuse Feasibility Summary

Results of the cost-revenue and feasibility analysis for water reuse include five key outcomes:

- If pursued, revenues for water reuse are set to be phased-in as customers confirm partnerships with CRD or the municipality for service, gradually over a 20-year period. The feasibility of securing new customers should be explored further so that supply matches demand and there is long-term pricing security.
- Water reuse provides for innovative uses of treated effluent however it is unlikely to present a positive business case until (if) potable supplies become unreliable. Revenues from water re-use will be challenged to cover both the operating and capital financing costs of their delivery systems, and will likely create an overall operating deficit.

Flows and Capacities

Flow quality and quantity are fundamental ingredients to designing and costing wastewater treatment systems because they dictate the size of pipes, pumps and treatment systems. Municipalities and the CRD regularly explore and clarify dry weather (e.g. routine, non-rain events) and wet weather flows (e.g. irregular, weather dependent flow). The 2030 design-flow projection of 108MLD for dry-weather periods has municipal and Committee support, which provides a strong foundation to technical analysis. Regulations stipulate the redundancy requirements and expectations for treatment between 0x to 2x ADWF and 2x to 4x ADWF, and beyond. Going forward, the incentive to reduce flows, mitigate I/I, conserve potable water use and regulate the source quality of wastewater can help to defer treatment plant capacity upgrades.

- Further study is needed to discern which revenues are actual new incomes that do not result in a loss in income to the potable water utility. Generally, however, installing two sets of pipes providing a similar level of service in the same area can lead to some level of redundancy and added cost to be borne by the taxpayer.
- While the seven plant option set would provide a higher level of service and boost enhanced tertiary water quality, it may not provide greater reuse opportunities beyond the four plant option for a long time: this is because supply would likely exceed demand.
- Pursuing full tertiary treatment for all flows would be driven partly for water reuse but largely to achieve enhanced water quality that is ultimately returned to the environment.

3.0 CONSIDERATIONS FOR DIRECTION

3.1 Overall Summary

Phase 2 centers on technical and financial analysis regarding wastewater treatment and resource recovery for the Core Area. Regional services require clear definition of levels of service. Technical findings on their own do not justify a specific direction, rather, it is the synthesis of technical, public and political needs and aspirations that determine the direction for level of services. Technical Memorandum #4 summarizes the technical and financial analysis to support Committee decision-making. Phase 2 policy areas include:

Water Reuse: Water innovation and stewardship drives the concept for reuse, however there are technical and financial challenges to overcome. Phase 2 findings suggest that any reuse systems could be introduced incrementally when customers and water rates validate their installation. The two plant option (Colwood and Rock Bay) enables a notable increase in water reuse from a single central plant.

Solids Recovery[3]: The decision to integrate municipal and wastewater solids in the near-term shapes the location of solids recovery. Phase 2 findings suggests that Hartland Landfill offers distinct advantages if there is direction by the Committee to process both wastewater and municipal solids on a regional scale. Alternatively, to pursue solids recovery at Rock Bay would focus capacity on primarily wastewater solids.

Level of Treatment: Secondary treatment fulfills regulatory requirements yet tertiary treatment offers enhanced water quality but with increased capital and operating costs. Rock Bay Secondary provides up to 10% tertiary treatment: selecting 100% tertiary treatment is a local decision regarding preferred level

[3] The Request for Statements of Interest (RFSI) process will yield market-specific economic and feasibility information to decide on an effective approach to wastewater solids recovery.

of service based on public and political input. The capital costs to achieve 100% tertiary treatment is similar to a two-plant, sub-regional option.

Conveyance and Site Design: The cost and routing of conveyance infrastructure requires appropriate resources and collaboration with municipal partners to mitigate against neighborhood interruption. Direction by the Committee to prioritize routing optimization and site design reflects technical and public findings through the planning process.

Number of Facilities and Location: Among the seven option sets, a central plant (Rock Bay) or two plant option set lowers complexity and enables economies of scale to lower costs e.g. two plants at Esquimalt Nation and Rock Bay is roughly equivalent in capital cost to *1 Plant Rock Bay Tertiary*. There are technical and financial disadvantages to increasing the number of plants. However, adding more facilities could be done incrementally to service growth or if reuse/recovery systems prove their feasibility beyond the 2030 scenario, in locations such as Colwood, East Saanich and Esquimalt.

These technical policy areas can be combined with public input and preferences for the Committee's benefit of selecting levels of service, siting and infrastructure for establishing the plan forward.

Making a difference...together

APPENDIX C

REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE
MEETING OF WEDNESDAY, FEBRUARY 24, 2016

SUBJECT **Technical Oversight Panel (TOP) Report #10**

ISSUE

TOP summary of recent period to February 15, 2016.

BACKGROUND

1. Summary of planning stage work with reference to the project charter and TOP Terms of Reference:

The Core Area Liquid waste management committee (CALWMC) engaged the Technical Oversight Panel (TOP) August 12, 2015 to oversee Planning Phase 2 of Urban Systems and Carollo's (the consultants') work. TOP referenced the Final Project Charter dated November 2, 2015, the consultant scope of services Appendix A, and the TOP terms of reference dated August 12, 2015 in its work. TOP met on several occasions face to face and via teleconference. All meetings were public and recorded by CRD staff, except for a few closed sessions relating to land issues. TOP also had over twenty presentations from various private vendors who presented options ranging from complete solutions to minor components. The objective for the planning phase was to develop site options and to describe processing options for both liquid and solid waste treatment with costing. TOP's role was to provide expertise and advice to the consultants.

2. Project costing considerations:

The costing of the options sets submitted by the consultants represent a pre-concept order of magnitude value with a range of -15% to +25% per the consultants scope of services. Soft costs including engineering, project management, interim financing and cost escalation through the construction period are included in each option set. Long term financing following grant disbursement and project completion is not included but the interest rate given by CRD for long term financing are high and an aggressive loans broker could, in all probability, shave some points or fractions off the current proposed percentages. Operations costs for each option are included. Revenue income for water re-use are included, but should be viewed with caution pending definition of the re-use product and the capital expenditures necessary to produce it, and the market demand. At this very early stage, with so many unknowns, there are considerable financial risks and the contingency provision is quite high. Pending more specific detail from later stages, TOP believes this provision to be prudent. Following the selection of an option set, TOP advises that a project plan should be developed as early as possible covering all stages of the project and including a financing and expenditure pro-forma indicating projected funding draw downs and monthly expenditures in detail. This plan will form the basis of a regular reporting process.

The costs of a single plant are less than the costs of the multiple plant options. TOP believes the single plant option for the 108MLD plant to be the most cost effective for both capital and operating/equipment costs.

3. Project administration considerations:

The key to success in any project rests with the overall management. This applies through all the various project stages to project completion. Reference to the "Lessons Learned" report from The Commission highlights some of the shortcomings of the past, and indicates actions necessary to obviate them as the program moves ahead to definition stage. The report identifies that the key to a successful project is building trust between the parties which requires openness and good communications with regular reporting of both progress and costs. Also referenced is the need for a 'Champion" closely identified across the spectrum as the person in charge, and the need for a supportive Board.

TOP and CRD staff met with the chair and vice chair of the Core Area Waste Water Treatment Program Commission on February 5, 2016 to review their "Lessons Learned" document with regard to the consultant deliverables for the planning stage. TOP has identified gaps between the current planning stage consultant deliverables, and the Commission's position on handover deliverables as outlined in their "Lessons Learned" document. The Commission believes that technical decisions on technologies, effluent quality targets, energy generation targets, water reuse targets, operational layouts, plant locations, waste transport, and base cases and optional upgrades will need to be confirmed before their oversight of the implementation phase can begin. This will require expertise in plant operations and layout, major project delivery phasing, urban design and rezoning, gasification and other solid waste to energy technologies, and tertiary treatment technologies. At this time, several TOP members are prepared to continue to provide technical oversight to support the CRD role with the new consultants (Stantec) as they confirm technical decisions. The CRD has confirmed that TOP has completed its work with this report. TOP advises the CALWMC to engage a new TOP, or augment the CRD team, with the technical oversight skillsets to support the technical decisions outlined above, prior to handing the project over to the Commission for implementation.

4. Site option considerations:

The TOP and the consultants were provided with over thirty sites by the CALWMC as they emerged from public consultations conducted by the CRD. The sites ranged in size from less than an acre, suitable only for small ancillary plants, to multi-acre sites suitable for larger central plants. None of the major sites were close to the existing outfalls and all required extensive infrastructure upgrades. TOP explored options for feasible sites near outfalls, but none were forthcoming; thus the consultant team was limited to exploring options within the given sites and has proposed land options that are sufficient in size to accommodate the facilities. Given the sites available, TOP believes the single plant at Rock Bay is the most appropriate site for the initial 108MLD plant.

5. WWTP considerations:

Effluent criteria, under the current CCME regulations is driven by the Environmental Risk Assessment (ERA). This exercise is key to move the project forward to design and implementation, can take upwards of a year to complete, and is specific to the outfall location and flow volumes of the option selected. TOP advises that once the site selection is complete and the LWMP has been filed with the regulatory and funding agencies, the CRD should immediately begin discussions with the regulators to arrive at effluent criteria and outfall requirements for specific selected sites.

Current reports show that water consumption in the area has been falling steadily for some time shedding doubt on the likelihood of a local market for tertiary treated water. However, the WWTP will discharge directly to the ocean, and tertiary treatment does a better job of addressing

emerging contaminants of concern and of meeting newer and stricter regulations. Costs for tertiary treatment membranes are coming down. As reflected in TM#4, TOP has advised base levels of treatment for several option sets along with advanced level of treatment using membranes in other options. TOP believes that the additional cost of using membranes or other comparable technology to achieve a higher tertiary level of treatment is justified.

The flows have been decreasing steadily over the last 5 years and this trend is not reflected in the flow projections for the plant designs. This trend may be the result of I&I reduction programs, and thus there is a need to determine what impact I&I reductions will have over time. The current design of 195 l/d/p is lower than the national average of 325 l/d/p and TOP believes that this is a reasonable assumption for the planning phase. Regulatory approval for lower capacity for the system cannot be assumed so TOP believes the flows as reflected in the TM#4 are prudent at this time, but increases in 2045 and 2060 capacity requirements may not be as high as currently projected.

6. Bio-solid waste treatment considerations:

With the restrictions on disposal of sludge on the island, and in the landfill, anaerobic digestion (AD) should not be considered as a viable sludge solution moving forward. The base case for sludge disposal should be sludge drying, which will reduce the volume of sludge by 70% and leave a material that can be gasified, subjected to pyrolysis or used as a secondary fuel. Dewatering and drying of the sludge will have a big impact on the gasification or other waste to energy technology from an energy balance perspective. The consultants have provided the cost of centrifuges for the sludge dewatering as this is a standard technology for this application. TOP advises that the base case for sludge disposal should be sludge drying, not AD, and a higher level of sludge dewatering using more efficient technologies than the centrifuge shown in TM#4 should be considered in an effort to maximize energy recovery from sludge.

A comprehensive solids waste plan should be implemented so that the CRD can gain the maximum benefits from gasification (or other solution) and energy recovery. The processing of other waste streams will require additional capital investment to preprocess the waste into a usable feedstock. The selection of technologies to process solid waste to energy should accommodate feedstocks including the components of the municipal solid waste (MSW) which have fuel value (plastics, wood, paper, food waste etc), the course screenings form Clover Point and Macaulay Point, and the septage collected from within CRD. TOP believes that a sludge line from Rock Bay to Hartland to integrate the bio-solid waste stream with the MSW stream will be cost effective and provide optimal resource energy recovery to the community.

The solids handling portions of this project has a higher technology risk than the liquid treatment portion of the project. TOP would advise the CALWMC to consider a solid waste handling ‘performance based’ RFSI that invites providers to provide proposals for gasification or pyrolysis combined with efficient dewatering.

TOP advises the CALWMC that the consultant will need a gasification expert on staff, and that the CRD will need to build operational gasification expertise.

Private Vendors - TOP has prepared draft summary statement for each provider that will be finalized and available to the public and the CALWMC by the end of February 2016. Some third parties have suggested procurement and operating costs considerably lower than the consultant’s costs reported in TM#4 but TOP has not pursued these submissions as they will be made redundant with the submission of detailed proposals at the procurement stage.

ALTERNATIVES

That TOP recommends that:

1. *That the Core Area Liquid Waste Management Committee receive this document for information and accept the recommendations.*

2. *That the Core Area Liquid Waste Management Committee receive this document for information, and revise and accept the recommendations.*

3. *That the Core Area Liquid Waste Management Committee receive this document for information and not accept the recommendations.*

IMPLICATIONS

SOCIAL IMPLICATIONS
Confidence in the project must be restored to attract the full participation of the market. Meeting private vendors supports the building of this trust. Addressing the Lessons Learned in the transition from the planning to the implementation phases will reduce uncertainty in the marketplace and increase fairness and transparency.

ENVIRONMENTAL IMPLICATIONS
Establishing high effluent quality deliverables for treatment levels, and establishing a coordinated approach to the liquid waste bio-solids and the municipal solid waste stream will have positive environmental implications.

ECONOMIC IMPLICATIONS
TM#3R1 indicates that the single plant option is more cost effective than the multiple plant options. Financing costs will need to be addressed. Addressing the Lessons Learned in the transition from the planning to the implementation phases will increase the competitiveness of the bids.

INTERGOVERNMENTAL IMPLICATIONS
The base cases as laid out in TM#3R1 reflect the scope of work given to the consultants, but not the preferred options for treatment of solid waste combined with MSW. Discussions with the Provincial Ministry and the Federal P3 group will be required if funding is to be secured for the preferred alternatives to AD.

GROWTH MANAGEMENT IMPLICATIONS
The report on flow and 2030 and 2045 targets is an important piece of the growth management of this project. The 2016 study by the CRD on water supply will inform 2045 targets. Design and construction will be to the 2030 targets.

CONCLUSIONS

TOP believes it is important for the CALWMC to understand that the *deliverables coming out of the planning stage* are not sufficient for the Commission to begin the implementation stage as many technical decisions remain unmade. The gaps as identified in the Commission's "Lessons Learned" document include technical decisions relating to technologies, effluent quality targets, energy generation targets, water reuse targets, operational layouts, plant servicing, waste transport, and performance metrics for base cases and optional upgrades. TOP advises the CALWMC to engage a new TOP, or to augment the CRD team, with the technical oversight

skillsets needed to support the new concept phase consultant team in their generation of technical decisions as outlined above, prior to handing the project over to the Commission for the implementation phase of the work.

With regard to the *site options*, TOP has reviewed the draft TM#3 and TM#4 and supports the central plant option as the most cost effective initial WWTP solution for a population of approximately 300,000. If a large, appropriately sized site near an outfall was put forward by a municipality, that would be the preferred site, but as such a site was not provided by the participating municipalities to the consultants, Rock Bay is acceptable to TOP among the sites that were provided. A central site allows the growth capacity response and redundancy requirements to be aggregated, which is most efficient. If desired, future modular expansion will also be possible at distributed sites to accommodate growth once the initial infrastructure is in place. TOP believes the single plant option for the 108MLD plant to be the most cost effective for both capital and operating/equipment costs. Given the sites available, TOP believes the single plant at Rock Bay is the most appropriate site for the initial 108MLD plant.

The TOP position on the *WWTP technology* is that the RFP call should be very clear and consistent in all aspects to attract the market back to the project with confidence. The WWTP RFP should be performance based to meet ministry and other standards for effluent quality and flow volumes. TOP advises that once the site selection is complete and the LWMP has been filed with the regulatory and funding agencies, the CRD should immediately begin discussions with the regulators to arrive at effluent criteria and outfall requirements for specific selected sites. Regulatory approval for lower flow capacity for the system cannot be assumed so TOP believes the flows as reflected in the TM#4 are prudent at this time, but increases in 2045 and 2060 capacity may not be as high as currently projected.

TOP's position on water reuse is that reuse piping is both costly and unnecessary as there is no water supply issue now, but that reuse might be considered in the future should conditions change. TOP's position on level of treatment is that money should be spent now on tertiary with preference towards the use of membranes as the membrane costs are coming down in price in a competitive market, and most communities are moving toward tertiary treatment if they can, considering that the regulations will be more stringent over time. TOP understands that the CRD's objective is to be a steward of the environment. Although the regulations are not yet in place, TOP believes it would be advisable for this community to consider tertiary treatment systems as they do a better job with the emerging contaminants of concern. Tertiary treatment now will also support water reuse later. TOP believes that the additional cost of using membranes or other comparable technology to achieve this higher tertiary level of treatment is justified.

TOP's position on *bio-solid treatment* is that the liquid sludge should be piped as sludge up to Hartland landfill site to limit potential odor issues at Rock Bay, and the trucking of sludge through the city. TOP believes that sludge processing at Hartland will be the most cost effective way to process the bio-solids for the community as other municipal solid waste streams may be integrated. TOP believes that a sludge line from Rock Bay to Hartland to integrate the bio-solid waste stream with the MSW stream will be cost effective and will provide optimal resource energy recovery to the community. Ministry discussions will be required to develop these integrated solid waste treatment options and funding for them.

Anaerobic digestion is not an option in TOP's opinion because there is no local use for the digested sludge. A clear high level specific acceptance criteria should be developed outlining the bio-solid waste treatment objectives considering the local constraints, such as no land application. TOP advises that the base case for sludge disposal should be sludge drying, not AD. A higher level of sludge dewatering using more efficient technologies than the centrifuge shown in TM#4

should be considered in an effort to maximize energy recovery from sludge. TOP advises that the Solid Waste (bio-solids) RFSI call should allow for efficient dewatering, generating secondary solid fuels, as a base case with gasification, pyrolysis or other acceptable thermal processing options.

The conclusions of TM#4 anticipate a cost effective, established technology baseline that allows for easy upgrades to both tertiary treatment on the WWTP side, and to gasification and integration with the municipal solid waste stream on the SWTP side.

Summary of TOP conclusions:

1. **The CALWMC should engage a new TOP, or augment the CRD team, with the technical oversight skillsets required to support technical decisions in the concept phase, prior to handing the project over to the Commission for the implementation phase.**

2. ***A* project plan should be developed as early as possible covering all stages of the project and including a financing and expenditure pro-forma.**

3. **A single plant at Rock Bay is the most appropriate site for the initial 108MLD plant.**

4. **CRD should immediately begin discussions with the regulators to arrive at effluent criteria and outfall requirements for specific selected sites.**

5. **Tertiary level of treatment is justified.**

6. **A sludge line from Rock Bay to Hartland to integrate the bio-solid waste stream with the MSW stream will be cost effective and will provide optimal resource energy recovery to the community.**

7. **The base case for sludge disposal should be efficient sludge drying, not AD.**

8. **The CALWMC should consider a solid waste handling 'performance based' RFSI that invites providers to provide proposals for efficient dewatering and drying to create a feedstock for gasification, pyrolysis or other thermal processing options.**

RECOMMENDATION

That TOP recommends:

1. That the CALWMC receive this TOP Report #10 for information.
2. That the CALWMC accept TM#4, the Summary Report, as complete.

Submitted by:	Teresa Coady, Chair, Technical Oversight Panel

TC:ll

Public Consultation Summary Report

Core Area Wastewater Treatment Project

February 24, 2016

Core Area Wastewater Treatment Project

Public Consultation Summary Report

This report serves as a summary of the activities for Phase 2 of the Core Area consultation process and will provide an overview of the metholodogy used to promote and collect feedback from Core Area residents.

About the Wastewater Treatment Project

The Core Area wastewater project is a highly visible, debated and discussed project in the region as it is one of the largest infrastructure projects this region has ever seen.

In 2006, an environmental report commissioned by the Ministry of Environment noted the contamination of seabed sites near the outfalls. As a result, in 2006 the CRD was mandated by the B.C. Ministry of Environment to plan for and initiate secondary treatment for the region. In 2012, the federal government passed a law requiring all high-risk Canadian cities to provide secondary sewage treatment by 2020 at the latest. The CRD's core area was deemed to be in the high risk category.

Following the previous unsuccessful attempts to advance treatment and resource recovery, the member municipalities of the Core Area Liquid Waste Management Committee, in collaboration with the CRD, committed to deepening public involvement and engaging citizens in the identification of sites, design and technology that would be used to treat wastewater.

In June 2014, the municipalities of Langford, Colwood, View Royal, Esquimalt and the Songhees Nation formed the Westside Select Committee to begin planning for a new project to treat sewage and recover resources in those municipalities and the nation. In January 2015, a similar body, the East Side Select Committee - comprised of Saanich, Oak Bay, and Victoria – was formed to develop a similar plan for the Eastside municipalities. The two select committees branded their consultation processes as Westside Solutions and Eastside Community Dialogues.

Core Area Timelines

The scope of Phase 2 includes completing the Options Development Phase by submitting an amendment to the Liquid Waste Management Plan and receiving conditional approval from the Minister of Environment. An approved plan amendment is required to be submitted to PPP Canada by March 31, 2016 as a condition to securing the PPP Canada portion of the federal funding grants.

The Proposed Work Plan Overlay (pg. 20) , which was adopted and submitted to 3P Canada in March 2014, provides the overarching timelines and milestones through the completion of the project.

The next phase of the project is the Planning Phase, which includes detailed site assessments such as environmental and social reviews, submission of detailed business cases (as may be required by funding agencies), indicative design, finalized cost sharing agreements and the procurement of infrastructure.

Core Area Funding

The CRD secured funding from federal and provincial governments to support this capital project based on the total cost of the 2010 wastewater treatment project (estimated at $788 million).

We are working towards a new project for the Core Area. When a new project has been chosen, the grants will be re-examined by the funders to see how they fit with the new project and reapportioned based on the system components of the new project.

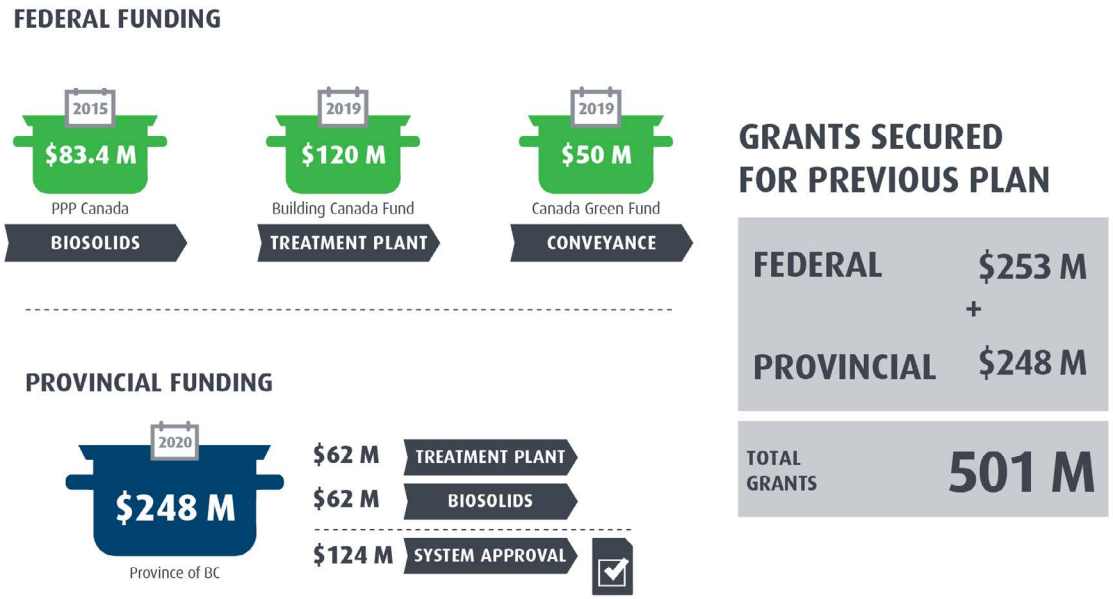
Secured Grants

The grants are maximum amounts and are subject to change depending on which project is chosen.

Federal contribution: $253 million
- Building Canada Fund ($120 million)
- Green Infrastructure Fund ($50 million)
- P3 Canada ($83.4 million)

Provincial contribution: $248 million

CRD contribution: To be determined when a new project is chosen



Core Area Commitments

In partnership with the public, the Core Area Liquid Waste Management Committee (CALWMC) will deliver a sewage treatment and resource recovery system that is proven, innovative and maximizes the benefits for people and the planet – economic, social, and environmental – for the long term.

Goals and Commitments

The Core Area Wastewater project will deliver the following goals and meet the following commitments. Each of these goals has a corresponding metric and at project completion the CALWMC can determine whether it achieved its goals.

Goals

- Meet or exceed federal regulations for secondary treatment by December 31, 2020
- Minimize costs to residents and businesses (life cycle cost) and provide value for money
- Produce an innovative project that brings in costs at less than original estimates
- Optimize opportunities for resource recovery to accomplish substantial net environmental benefit and reduce operating costs
- Optimize greenhouse gas reduction through the development, construction and operation phases and ensure best practice for climate change mitigation

Commitments

- Develop and implement the project in a transparent manner and engage the public throughout the process
- Deliver a solution that adds value to the surrounding community and enhances the livability of neighbourhoods
- Deliver solutions that are safe and resilient to earthquakes, tsunamis, sea level rise and storm surges
- Develop innovative solutions that account for and respond to future challenges, demands and opportunities, including being open to investigating integration of other parts of the waste stream if doing so offers the opportunities to optimize other goals and commitments in the future
- Optimize greenhouse gas reduction through the development, construction

Phase 1: Siting Consultation

Through the first phase of consultation, the Eastside and Westside Select Committees completed separate engagement processes as a way to deeply engage with residents of their respective communities. As a

result of the success of this approach, the Select Committees continued with separate engagement processes, but planned various integrated public engagement tactics, while continuing to maintain the focus on responding to specific community processes and values.

During the first phase of consultation this past spring, municipalities put forward sites that were technically feasible to host a wastewater treatment facility. Core Area residents had an opportunity to learn more information about the potential sites through the many Open Houses, Workshops and Innovation Days. Residents were also encouraged to complete a survey, or email their queries to Westside Solutions or Eastside Community Dialogues.

Based on public priorities and emerging technical, social, economic and environmental considerations, the number of potential sites were reduced.

Using only the "publicly acceptable" and "possibly acceptable site with conditions" sites, Option Sets were developed based on a functional approach to the treatment of liquids and residual solids. The option sets were developed with the assistance of the Technical Oversight Panel, Project Charter goals and commitments, feedback and input gathered from the public and the established technical criteria. The Option Set considerations include site size, treatment of liquids and residuals, treatment level, resource recovery opportunities (including future growth areas), cost components and engineering standards.

Phase 2: Option Set Consultation

Over several months of technical analysis, seven wastewater treatment options for the Core Area communities were commissioned. Each of the options provides differences with respect to locations of treatment, levels of service for treated effluent, piping and conveyancing, infrastructure and opportunities for water reuse and heat recovery at select locations. Each option provides a representative approach for developing a more refined plan once the approach is approved.

Through a 4-week period between January 25 and February 20 the Eastside and Westside engagement teams worked to engage the Core Area municipalities of Langford, Colwood, View Royal, Esquimalt, Oak Bay, Saanich and Victoria, and both Esquimalt and Songhees Nations, in a dialogue about the wastewater treatment options.

Through this process we have engaged with residents both face-to-face and online, through several methods and mediums to reach as much of the Core Area as possible. We have gained a strong and demonstrable picture of citizen' priorities, challenges, technical and project preferences, and valuable information about acceptable siting in the Core Area.

This report will articulate the approach, activities, methodologies, areas of learning and some key outputs that have guided the work, as well as a wealth of material and resources appended to provide the documentary evidence of how we arrived here.

Core Area Community Engagement
Phase 2: Shared Activities & Promotion

In all cases of exemplary public participation, integrating public input to key decision making points is a requirement. Therefore, the timelines that were already endorsed by the CALWMC formed the timelines for the public engagement framework. The Eastside and Westside Consultants and CRD staff worked to align the public participation process and used a variety of techniques to build inclusive and meaningful engagement experiences for members of the public.

The Eastside Community Dialogues community engagement plan was presented to the Eastside Select Committee and endorsed on October 21, 2015. The Westside Solutions communiy engagement plan was presented and endorsed by the Westside Select Committee on October 27, 2015. These documents continue to provide the over arching direction for engagement and decision making. The CALWMC endorsed an intergrated public consultation approach on November 4, 2015 that identified opportunities for shared acitivites, communication and promotion. The shared approaches identified in the plan continue to provide the direction and strategy for joint consultation activities.

The following is an overview of the integrated consultation elements:

Consultation Webpage

The objectives were:

- Provide a central location for Core Area residents to find wastewater information
- Restructure CRD site for ease of access to information
- Shared public education to encourage a common understanding

The objectives were accomplished by:

- Acquiring a unique URL: www.CoreAreaWastewater.ca
- Restructuring the web interface and navigation
- Ongoing website updates with complete posting of reports and notices

As a result of feedback from the first phase of consultation in the spring, the wastewater planning webpage was restructured prior to the consultation to provide residents with easier access to information. A wastewater library was created to house all of the documents associated with the project (by year and document type). In addition to this, a wastewater history page was created to provide a summary of the project by year, with details associated with the respective year for those looking for more specific information.

The re-vamped website was given a unique URL, www.CoreAreaWastewater.ca. This URL was chosen because it is a simple URL for residents to remember when used in print and radio advertising. The URL was used as a redirect link, meaning it redirected users to the existing wastewater planning page. During the launch of consultation, the redirect link was changed from the wastewater planning page to direct users to the public consultation page for users to easily find information on how to participate in the consultation.

Website Analytics: Jan 13-Feb 19, 2016

Overall the CRD wastewater planning pages saw an audience of **3,256 unique views** during the consultation period. The media room had **316 visitors** in direct relation to the wastewater news releases. In addition to this, there were **3,099 unique views** on the numerous wastewater event pages. These numbers were primarily driven through promotion on social media.

Web Location	URL	Unique Page Views
Core Area Wastewater Planning	/project/wastewater-planning/public-consultation	3,256
Media room (wastewater specific news releases)	/about/news	316
Events (wastewater specific events)	/about/events	3,099

Core Area Online Survey

In consultation with Ipsos Reid, the project engineering consultants, and a user experience survey designer, an online survey was developed on Fluid Surveys for Core Area residents to provide their feedback on each of the option sets. The survey offered users the opportunity to learn about each of the option sets through a series of links and resources built into the survey, while providing feedback on the level of acceptibility for each of the options. Residents who wanted to provide more detailed feedback were able to provide input on treatment technology and resource recovery. The survey was promoted on the homepage of the CRD website, on the wwwCoreAreaWastewater.ca webpage and a link was placed on the sidebar of every wastewater page. In addition to this, the survey was promoted through several paid, earned and social media channels.

Residents were able call the CRD Wastewater Communications Coordinator for a copy of the paper survey to be mailed to them. A total of 72 paper surveys were mailed to Core Area residents in which 17 copies were completed and returned. It was found that some of the residents who received paper copies of the surveys attended an event to find out more information before completing the survey.

Survey Participation

A total of 1,357 surveys were completed online.

Muncipality	Total % (n=1,357)	West % (n=361)	East % (n=937)
Saanich	34		50
Victoria	29		42

Muncipality	Total % (n=1,357)	West % (n=361)	East % (n=937)
Esquimalt	9	34	
Colwood	7	26	
Langford	6	24	
Oak Bay	6		8
View Royal	4	16	
Songhees Nation	<1	<1	
Esquimalt Nation	0	0	
Other (specify)	2		
Prefer not to answer	2		

Paid Media

A robust paid media plan was developed to promote the activites during the consultations through a number of different channels.

The objectives were:

- Coordinate ad buys to minimize paid advertising costs
- Minimize confusion by advertising one coordinated message
- Promote joint consultation activities

Print Advertising: Times Colonist

There were a total of **12 ads** placed in the Times Colonist between **January 23 – February 18.** These ads focused on promoting community events and the online survey.

- The Times Colonist reaches **69% of Victoria's adults – 213,000 people** - (in print or online) every week
- Readers spend an average of **40 minutes reading** the weekday edition of the Times Colonist
- The Times Colonist delivers to **98,000 doorsteps** in Greater Victoria (paid daily and Thursday ExtraExtra edition)

Below is an example of two of the Times Colonist ads placed during the consultation period.

Print Advertising: Black Press

There were a toal of **10 ads** placed in 7 Black Press local papers (Saanich, Victoria, Oak Bay and Goldstream) between **January 20 –February 12**. Integrated East and West ads were placed in four of the papers, Eastside event ads were placed in three of the Eastside papers (Victoria, Saanich, Oak Bay) and Westside ads were placed in Westside papers (Goldstream and Victoria Black Press local paper).

- Reach of the four Core Papers (SVOG): 79,402 (Saanich News: 31,204, Victoria News: 23,971, Oak Bay News: 6,546, Goldstream News Gazette: 17,681) Readers spend an average of 30 minutes reading the local Black Press papers
- **72%** of Black Press readers are between the **ages of 25-69**

Below is an example of a Westside ad (left) placed in the Goldstream Gazetter Black Press local paper and an example of an Eastside ad placed in the Victoria, Oak Bay and Saanich Black Press local paper.

Online Advertising

An online advertising campaign was launched in coordination with the print advertising campaign as a way to reach the online demographic.

Used Victoria homepage

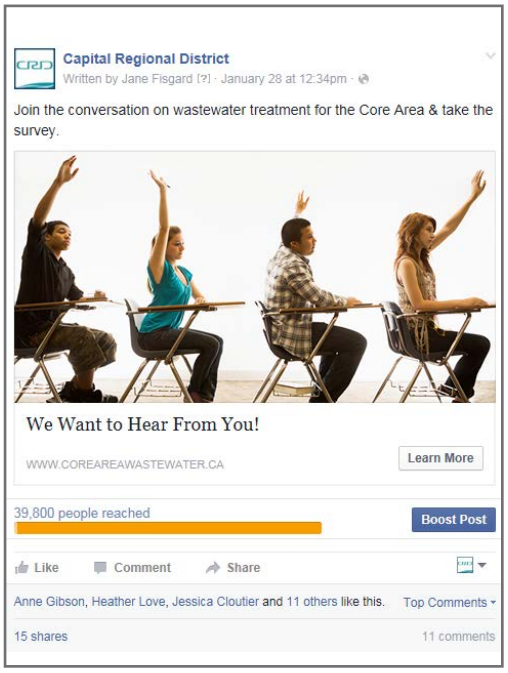
This ad was placed on the Used Victoria homepage during Ferbruary to promote the online survey and drive traffic to public consultation page on the CRD website.

UsedEverywhere Stats & Demographics

- 1.75 million unique views per month
- 51 million views per month
- 12.7 page views per visit
- 61% female and 39% male users
- 64% of users are between the ages of 14-49

Facebook Advertising

A set of Facebook ads were placed aiming to increase awareness of the online survey. Below is a sample of the ad on Facebook and Instagram that was placed during the consultation period.



These ads reached a total of **39,610 unique individuals** across the region and received **768 ad clicks** . The audience who has the highest engagement rate was **male and females between the ages of 18–24.** A breakdown of the results of the advertising campaign is available below.

Radio Advertising

- Radio advertising on six local stations (103.1 KISS FM, 98.5 The Ocean, 107.3 KOOL FM, CFAX 1070 AM, 91.3 The Zone, 100.3 The Q
- Secured 4 x 30 second slots each day for a total of 116 insertions on each radio station over the campaign period
- February 18-19: purchased an additional three time slots during the Zone News Updates with Jason Lamb, which ran from 6am-9am and on the Q 8am Weather Updates and 4pm Weather Updates (for a last push to the survey)

Example of Radio Script:

"The conversation on sewage treatment has started.
JOIN IN.
If you live in Oak Bay, Saanich or Victoria, come to a workshop or open house with Eastside Community Dialogues.
If you live in a Westside Community, join Westside Solutions at an open house nearby.
You'll learn about all the treatment options—so you can compare costs, sites, and environmental performance.
AND you'll be able to have your say with the right audience.
For event details and the most up-to-date info
on how you can participate in the conversation,
visit Core Area Wastewater dot CA"

Television Advertising

Closed Captioning spot on CFAX tv for the last week of promotion (**283,900 impressions, which is 283,900 viewers**). Campaign was designed and built into **prime time shows**.

Earned Media

There were three earned media opportunities to promote this phase of the consultation process.

January 14, 2016: CALWMC Seeking Public Input on Approaches to Wastewater Treatment
link: https://www.crd.bc.ca/about/news/2016/02/05/sewage-train-is-headed-safely-for-the-station-opinion-article

January 26, 2016: Core Area Wastewater Consultation Launches with Online Survey and Consultation Opportunities
link: https://www.crd.bc.ca/about/news/2016/01/26/core-area-wastewater-consultation-launches-with-online-survey-and-consultation-opportunities

February 5, 2016: Sewage train is headed safely for the station-Opinion Article by Director Helps
Link: https://www.crd.bc.ca/about/news/2016/02/05/sewage-train-is-headed-safely-for-the-station-opinion-article

In addition to this, an advisory was sent to the media inviting them to the Storefront on Tuesday January 26, 2016 to kick-off consultation activities.

Core Area Wastewater Related News

There were several other news articles related to the project that were printed during the consultation.

List of Relevant Newspaper Articles

- January 19, 2016: Treatment plant cost-sharing concerns continue at CRD http://www.goldstreamgazette.com/news/365791961.html
- January 20, 2016: Jensen reiterates position to re-look at McLoughlin http://www.oakbaynews.com/news/365972371.html
- January 20, 2016: Wastewater options open for feedback http://www.oakbaynews.com/news/365973471.html
- January 20, 2016: New wastewater bid doesn't trigger an 'option 6' http://www.oakbaynews.com/news/365972131.html
- January 20, 2016: Cost-sharing concerns continue at CRD http://www.oakbaynews.com/news/365972021.html
- January 21, 2016: Region's waste water options to be opened up for public scrutiny http://www.goldstreamgazette.com/news/366097151.html
- January 24, 2016: Seaterra plan still the best option http://www.timescolonist.com/opinion/letters/seaterra-plan-still-the-best-option-1.2157235
- January 26, 2016: Comment: It's time to look at lower-cost sewage options http://www.timescolonist.com/opinion/op-ed/comment-it-s-time-to-look-at-lower-cost-sewage-options-1.2158277
- January 26, 2016: Saanich may go it alone on sewage, mayor says http://www.timescolonist.com/news/local/saanich-may-go-it-alone-on-sewage-mayor-says-1.2158411

- January 26, 2016: Langford Mayor says Trudeau comments from 2012 merit "re-look" at sewage treatment project http://www.cfax1070.com/News/Top-Stories/Langford-Mayor-says-Trudeau-comments-from-2012-mer
- January 27, 2016: Guest opinion: Time to give McLoughlin another look http://www.oakbaynews.com/opinion/letters/366744431.html
- January 27, 2106: Jensen cools heels on proposal to revisit McLoughlin sewage plant http://www.timescolonist.com/news/local/jensen-cools-heels-on-proposal-to-revisit-mcloughlin-sewage-plant-1.2160542#sthash.ZSV6kVrg.dpuf
- January 28, 2016: Consultation begins for wastewater treatment plant http://www.vicnews.com/news/366861021.html
- February 2, 2016: Jensen presses pause on McLoughlin site http://www.oakbaynews.com/news/367405241.html
- February 4, 2016: Editorial: Time dwindling for sewage input http://www.saanichnews.com/news/368887731.html
- February 4, 2016: Prime Minister is on record opposing sewage expenditure http://www.goldstreamgazette.com/opinion/letters/367761241.html
- February 7, 2016: Esquimalt still gets waterfront sewage plant http://www.timescolonist.com/opinion/letters/esquimalt-still-gets-waterfront-sewage-plant-1.2166929
- February 9, 2016: Mike Harcourt: Protect our oceans, and get it done already http://www.timescolonist.com/opinion/op-ed/mike-harcourt-protect-our-oceans-and-get-it-done-already-1.2167730#sthash.QleAP18Q.dpuf
- February 11, 2016: Saanich mayor calls for more consultation http://www.saanichnews.com/news/368388741.html
- February 11, 2016: Saanich homeowners face $116 tax jump as sewage costs http://www.timescolonist.com/news/local/saanich-homeowners-face-116-tax-jump-as-sewage-costs-grow-1.2170326
- February 11, 2016: Letters: Sewage talk Feb. 12, 2016 http://www.goldstreamgazette.com/opinion/letters/368505881.html
- February 12, 2016: Sewage plan needs to be carefully thought out http://www.timescolonist.com/opinion/letters/sewage-plan-needs-to-be-carefully-thought-out-1.2171650
- February 12, 2016: Comment: Original sewage plan is still the best choice http://www.timescolonist.com/opinion/op-ed/comment-original-sewage-plan-is-still-the-best-choice-1.2171640#sthash.P7QJIS4U.dpuf
- February 14, 2016: Comment: Rock bay sewage plant site makes no sense http://www.timescolonist.com/opinion/op-ed/comment-rock-bay-sewage-plant-site-makes-no-sense-1.2172053
- February 14, 2016: Despite lack of detail on options, CRD turns to public on sewage http://www.timescolonist.com/news/local/despite-lack-of-detail-on-options-crd-turns-to-public-on-sewage-1.2150774#sthash.6xvALsQJ.dpuf
- February 16, 2016: Sewage task force seeks alternative plan http://www.saanichnews.com/news/368887731.html

In addition to the print and online news, there were numerous radio and television interviews:

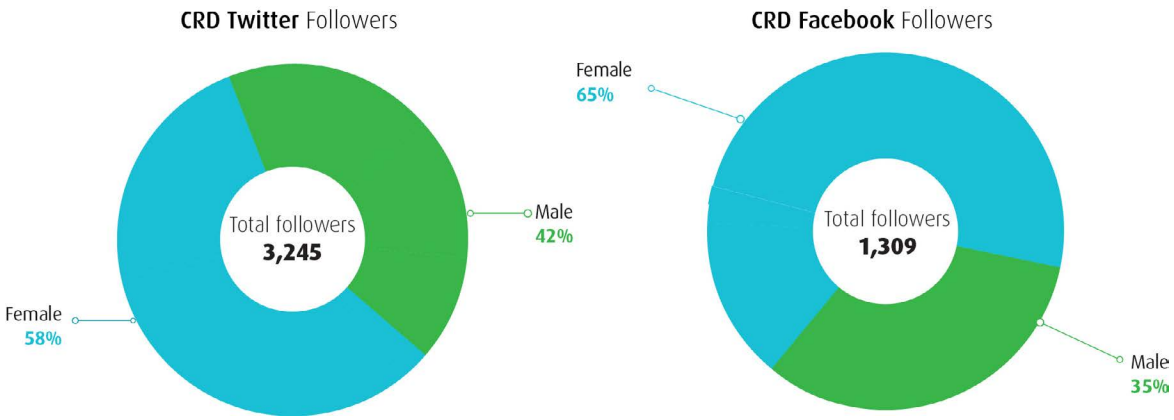
- CFAX (Victoria) CFAX Ian Jessop 16-Feb-2016, 13:07 Grover - sewage treatment
- CFAX (Victoria) CFAX Ian Jessop 11-Feb-2016, 14:34 Atwell - sewage treatment
- CFAX (Victoria) CFAX 10-Feb-2016, 12:05 CRD sewage plan
- CFAX Ian Jessop 04-Feb-2016, 14:07 Gilbert - Victoria sewage treatment
- CFAX Terry Moore 03-Feb-2016, 17:50 Shauffler - CRD sewage
- CFAX Terry Moore 02-Feb-2016, 16:36 Desjardins - CRD sewage
- CFAX Ian Jessop 02-Feb-2016, 14:06 Broadland/Campbell - sewage treatment
- CFAX Ian Jessop 01-Feb-2016, 14:06 Regier - sewage treatment
- CFAX Terry Moore 29-Jan-2016, 15:35 Helps - sewage treatment
- CFAX Ian Jessop 28-Jan-2016, 14:36 Atwell - CRD sewage treatment
- CFAX 28-Jan-2016, 12:00 Screech - CRD sewage treatment
- CFAX Pamela McCall 28-Jan-2016, 10:06 Anderson - sewage treatment
- CFAX Mornings with Al Ferraby 28-Jan-2016, 08:21 Screech - CRD sewage treatment
- CFAX Terry Moore 27-Jan-2016, 15:35 Hamilton - sewage treatment plan
- CFAX Ian Jessop 27-Jan-2016, 13:05 Gilbert - sewage plan alternative
- CFAX 27-Jan-2016, 13:00 Helps - sewage plan

- CFAX 27-Jan-2016, 11:30 Helps - sewage treatment
- CFAX Pamela McCall 27-Jan-2016, 11:35 Helps - sewage plan
- CFAX 27-Jan-2016, 07:03 Young/Atwell - sewage treatment
- CBC On the Island 27-Jan-2016, 07:50 Price - sewage treatment
- CFAX Terry Moore 26-Jan-2016, 16:34 Atwell - sewage treatment
- CFAX 26-Jan-2016, 12:00 Helps - sewage treatment options
- CBC On the Island 26-Jan-2016, 07:40 Atwell - sewage treatment
- CBC On the Island 26-Jan-2016, 07:50 Young - Burnside-Gorge neighbourhood
- CFAX Ian Jessop 15-Jan-2016, 14:21 Atwell - CRD sewage treatment
- CFAX Ian Jessop 14-Jan-2016, 14:37 Atwell - CRD sewage treatment
- CFAX Frank Stanford 14-Jan-2016, 09:06 Desjardins - CRD priorities
- CFAX Mornings with Al Ferraby 14-Jan-2016, 07:21 Desjardins - sewage treatment
- CFAX Terry Moore 13-Jan-2016, 17:07 Jensen - CRD sewage
- CFAX 13-Jan-2016, 14:01 Helps/Atwell - sewage treatment
- CFAX 13-Jan-2016, 13:01 Atwell/Brice - sewage cost sharing
- CBC On the Island 13-Jan-2016, 07:12 Desjardins - sewage treatment
- CHEK 27-Jan-2016, 17:09 Vickers/Atwell/Helps/Jensen - sewage treatment plant
- CHEK 26-Jan-2016, 17:00 Helps- sewage treatment
- CHEK 13-Jan-2016, 17:07 Knappett - sewage treatment plant
- CIVI 27-Jan-2016, 17:01 Anderson/Helps - CRD sewage
- CIVI 26-Jan-2016, 17:00 Helps/Atwell/Jensen - CRD sewage

Social Media

The social media strategy for this phase of consultation focused on supporting and promoting both the Eastside and Westside public engagement processes through CRD social media accounts, while driving traffic to a central location on the CRD website.

CRD Social Media Demographics



Key Messages

- Inform the public of wastewater events
- Inform the public of ways to participate in the consultation (survey, events, Storefront, etc.)
- Promotion of the online survey
- Provide members of the public information about the option sets
- Provide members of the public the opportunity to learn about wastewater treatment

Content was primarily promoted though CRD social media channels: Twitter and Facebook, using Eastside and Westside hashtags to differentiate information where applicable and appropriate.

- #Eastside or #EastsideDialogues
- #Westside or #WestsideSolutions
- #CoreAreaWastewater or #CRDwastewater

Social Media Results

Twitter

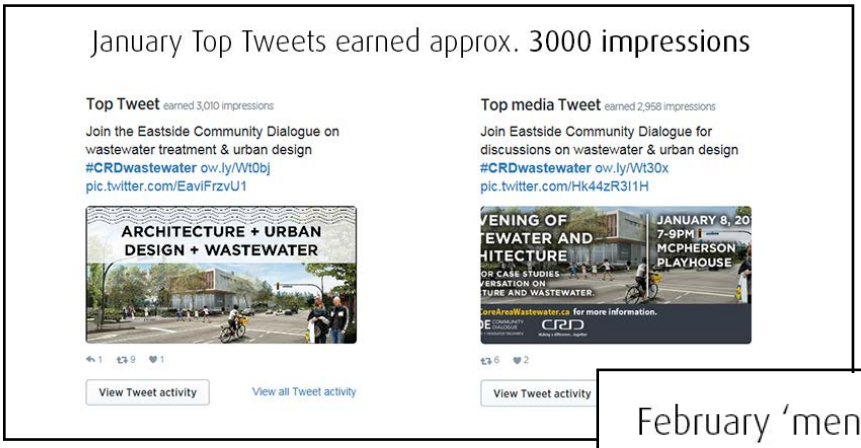
The CRD generated a total of 61 Core Area wastewater tweets sent between January 13 and February 20 on their Twitter platform. There were a total of 82 re-tweets and 33 likes on the outgoing messages.

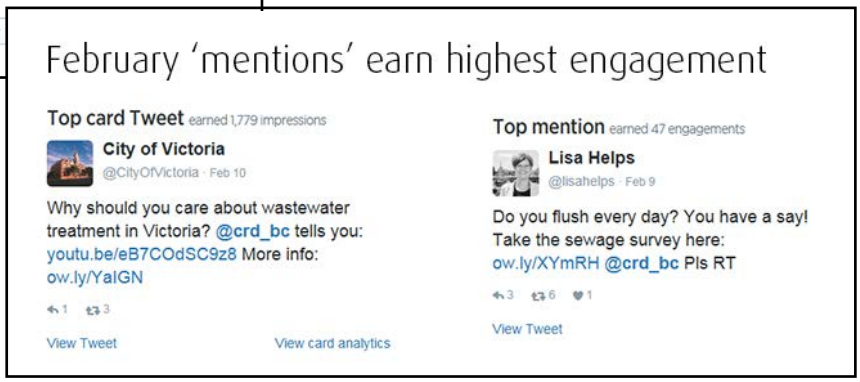
61 tweets

82 retweets

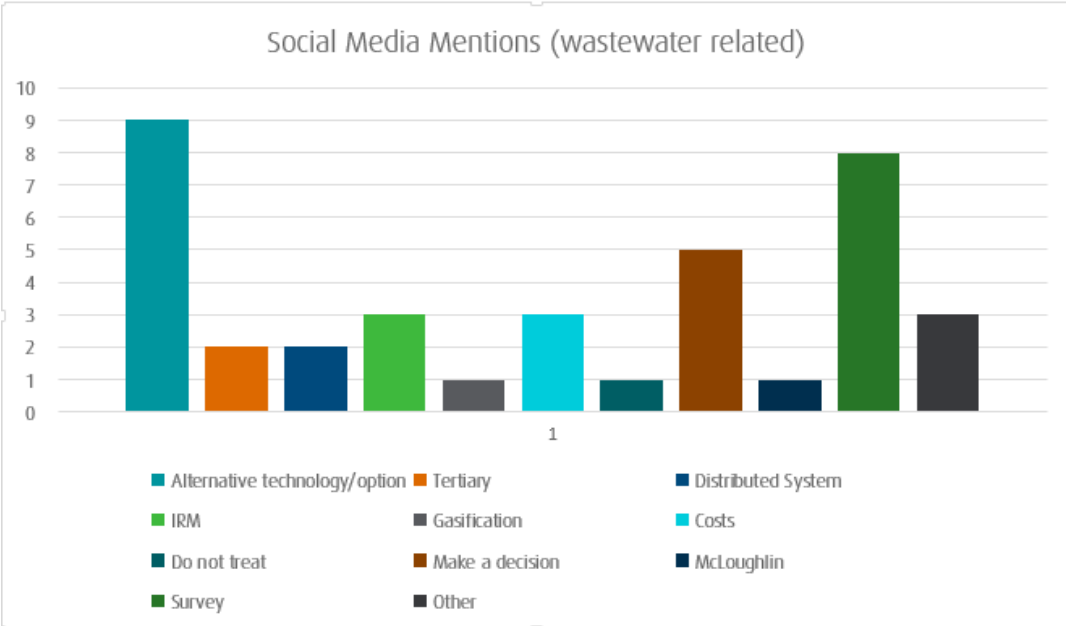
33 likes

Social Media Engagement & Top Tweets





During the consultation the CRD received 30 mentions related to Core Area wastewater. These mentions ranged in themes from concerns regarding costs, comments regarding the survey and promotion of other options and technologies. Below is a figure displaying the frequency of these themes.

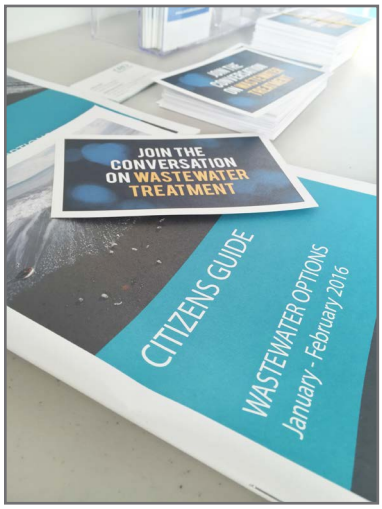


CRD Storefront

The Capital Regional District storefront property located at 625 Fisgard Street facing Centennial Square was used as one of the many channels for Core Area residents to engage in the Core Area Wastewater consultation process. Open to all citizens, the storefront property held hours of 11am to 7pm on weekdays.

The space was utilized to provide the public the opportunity to:

- Be guided through the options
- Ask questions
- Pick up literature surrounding wastewater and the options
- Pick up printed copies of the questionnaire
- Submit completed questionnaires
- Fill out a feedback form
- Enter to win a stand-up-paddle board



What information was provided?

- Boards showing configuration of each of the options
- Boards showing the sites under consideration for each of the options
- Discussion Guides
- Booklet with site profiles from the survey
- Westside: Fact Sheet 1, Fact Sheet 2, Fact Sheet 3, Brochure and details on each of the Westside Sites
- CRD Source Control information and outreach set-up
- Ipad/Laptop to complete survey
- Paper copy of the survey
- Wastewater Communication Coordinator's business card
- Feedback form for residents
- Light refreshments
- Projector – looping Bruce Haden and Cascadia presentation

Store Front Weekly Reporting

Week One: January 24, 2016 to January 30, 2016
Overall Traffic: 60 People

During this week many citizens stopped by to pick up information and voice concerns.

Tuesday, January 26, 2016: Press Conference
This press conference was attended by many media outlets including the Times Colonist, CHEK, CTV, and CBC. Speaking at the conference was the Mayor of Victoria, Lisa Helps, who is also the chair of the Eastside Wastewater committee and the Core Area Wastewater committee, and the Mayor of Colwood, Carol Hamilton who is also the chair of the Westside Wastewater committee. Also in attendance were members of Surfrider Vancouver Island, who donated a Stand Up Paddle board to the project, and many CRD staff.

Wednesday, January 27, 2016
The storefront opened to the public.

Week Two: January 31, 2016 to February 6, 2016
Overall Traffic: 45 People
Traffic slowed during this week, but residents continued to visit the Storefront to voice their concerns.

Week Three: February 7, 2016 to February 13, 2016
Overall Traffic: 30 People
Traffic slowed again during this week due to modified hours to accomodate the public events.

Week Four: February 14, 2016 to February 20, 2016
Overall Traffic: 50 People

Traffic slowed for the first half of the week then increased from Wednesday to Friday with people returning their hand written surveys. Two workshops hosted within the storefront during this time.

Tuesday, February, 16, 2016

A lunch meeting with CUPE was held in the back of the storefront with 4 attendees.
A workshop to host environmental activists was held hosting 25 people.

General Observations

- The majority of visitors were from Eastside communities, but the Westside communities were also represented
- Many visitors wanted to collect more information prior to completing the survey
- The majority of visitors came during work hours (between 11am and 5pm)

Other Channels of Promotion

Postcard Mailer

As a tactic to extend the reach of Core Area wastewater promotions, the CRD mailed a postcard to all residents and businesses in the Core Area through unaddressed mail. The postcard identified the different ways that residents and businesses could provide feedback on the options, including the option of being mailed a paper copy of the survey.

approx. ***97,000 postcards*** were delivered to Core Area residents

62,442 Houses **28,518** Apartments **6,123** Businesses

There was an immediate uptake after the postcards were delivered to Core Area mailboxes. Over 70 paper copies of surveys were mailed out to Core Area residents and many residents visited the CRD Storefront.

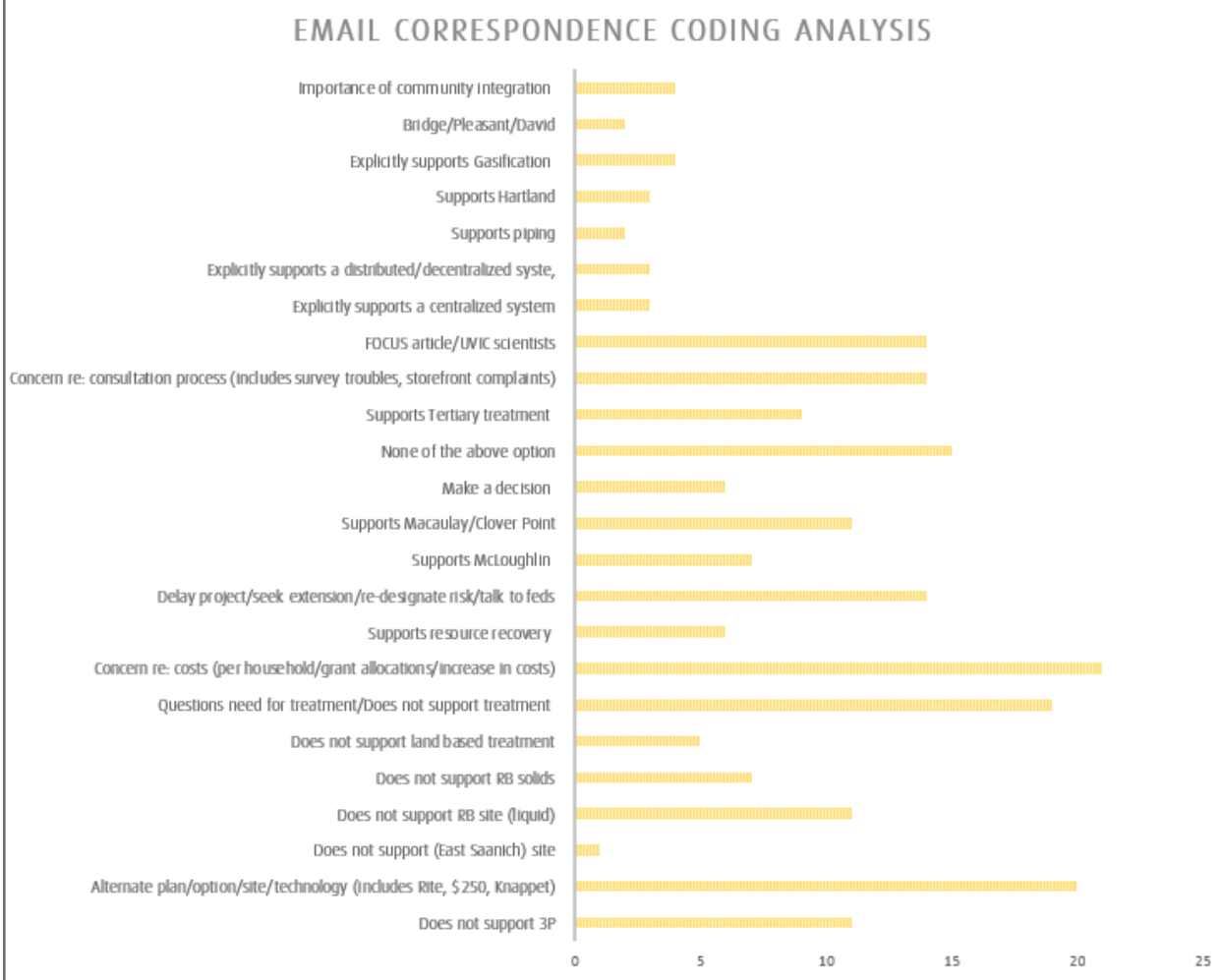
Why should you care about treatment video

As a tactic for reaching younger audiences, the CRD developed a 'why should you care about wastewater treatment" video that idenitified why wastewater treatment is of important concern to Core Area residents. This video was used in social media promotion and was played during Open House and Workshop events.

Email Correspondence

Residents were encouraged to provide their direct feedback to wastewater@crd.bc.ca. Correspondence was also collected through eastside@crd.bc.ca, info@westsidesolutions and correspondence received by the CRD Board, CRD reception, or other Core Area directors. These emails were tracked for qualitative analysis and responded to as required. Throughout the consultation period, the CRD received over 80 emails with feedback regarding the project. These emails can be found as part of the appendices in this document.

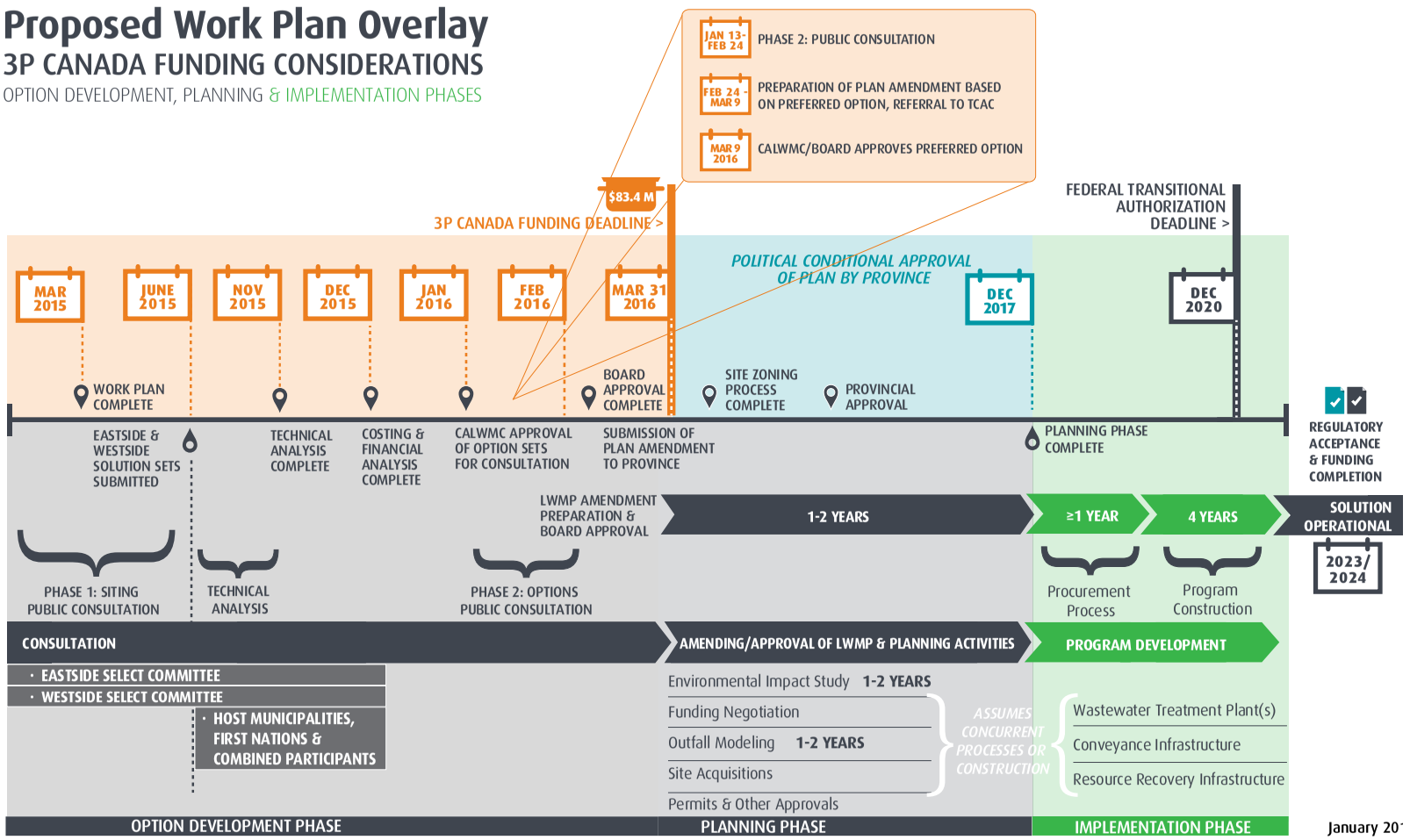
Below is a table of the general themes that were identified through the correspondence analysis.



Public Consultation Summary

The Eastside and Westside consultation reports will summarize the findings from this phase of the consultation process. A report from Ipsos Reid will provide an outline of the survey results and a comprehensive review of summary comments will be available (see separate appendice).

WORKPLAN OVERLAY



Correspondence Emails

Good Evening:

As I understand the challenges you are facing, I have some thoughts and visualized proposal.

As the Interchange at McKenzie plans are still being debated, why not combine both Capital projects into one?

Plan: Heading south on Hwy 1 on the south side of Admirals (right hand side heading into town) there is a large open area. Just behind Tillicum Mall, close to Cuthbert Homes Park.

(1) Locate the treatment plant at this intersection, while designing the new interchange.

(2) Intake could come from all municipalities with an achievable pipeline system. The City of Victoria is not far, Western Communities are not far, Oak Bay Municipality would be the greatest distance but still achievable with an appropriate grid system, and yes this plant would be in Saanich, however so is the mass in flux of $ coming into that municipality for the already planned Interchange.

(3) For discharge, an outflow pipeline proposal to feed it from the Treatment Plant. >>> From developed site, cut through across Tillicum along Obed (or alternate) then along Gorge Rd, ending parallel to Pleasant Street, south of Halkett Island.

Visualization:

(1) A building that would incorporate>>> Cement structure housing Plant, with large glass (5 stories) windows facing the Highway. Housing a Tourism Facility (Prominently shown on the outside glass facade), Cultural Exhibits and small shop leasing opportunities.
(2) On top of Treatment Plant, but next to Tourism facility , would be a 5 Story Parking Structure (ground stability would need to be verified before construction). Feeder lanes off the overpass right into the Parking area.

(3) There would be a Main Bus Hub. >>>
B.C. Transit for McKenzie, Admirals, and Douglas St. routes heading south, and Hwy 1 to Western Communities heading north.

Tour buses and Wilson's/Pacific Coach etc. would also link to this hub providing bus service North Up Island, and along Mckenzie to Airport and B.C. **Ferries.**

Regards,

To whom it may concern,

I have never heard any discussion about the feasibility of the gravel pit on Metchosin Rd in Colwood as a possible site for a treatment plant.
We now pump into the Strait and it would seem to be much simpler and cost effective to extend the line to the pit and treat it there. I realize that the site is now privately owned but it is also in the process of being redeveloped. Surely something could be worked out.
Thanks for your efforts,

After watching these issues over the years, I am appalled that the CRD is now engaged in what amounts to a project selection crap shoot. (Pun intended).

(A) How are we taxpayers suppose to make choices when almost everything is still in flux. And, we've already spent $65 million with nothing to show for it.

(B) Whatever happens (short of not building anything) the taxpayers will be tremendously burdened with tax increases that many (specially on fixed incomes) will not be able to bear. With a $billion plus price tag being floated around that implies a tax increase of $500-800 for everybody, the reality (example-Johnson Street Bridge) is that what starts out as a billion ends up being two or three billion ($1500 per taxpayer?) and there won't be any turning back. On top of it all is the "velocity of money" effect that will see increases of price of most consumer goods in Victoria while simultaneously reducing the amount of money we consumers have to spend.

(C) The scientific evidence seems to be that the existing method of treatment is NOT harming the environment and in fact makes the sea life in the Straits more healthy than other spots. Is the CRD dismissing all the experts from UVic that have publicly said there is no need to build anything. There is a huge likely-hood that, if built, it could be the biggest white elephant in history.

(D) Prime Minister Trudeau is also on record as saying that further treatment would not provide much if any improvement in Greater Victoria's discharges into the waterways.

(E) It looks like the rush is on to build "something" in order to grab the federal and provincial money on offer. What short-sightedess!

I urge CRD to at least offer taxpayers an option of voting for "no solution" so our politicians get clear feedback on how disastrous any one of the other seven choices will be.

Correspondence Emails

Hi:

I've chosen this method to respond to your survey for a very specific reason.

I am absolutely horrified that you are surveying average citizens on extremely technical solutions to a very complex issue.

I definitely do not want my "next door neighbour" making a decision for me on one of the most costly and complicated issues in our area. That's what we elect you people for and what we expect the experts that you hire to do. There are very few people out there that have anything close to the knowledge required to make a sound and reasonable judgement call on this.

It's nice to be kept in the loop on what's happening, but that should be the limit to it where citizens are concerned.

I truly hope that reasonable minds will prevail or we're all in big trouble.

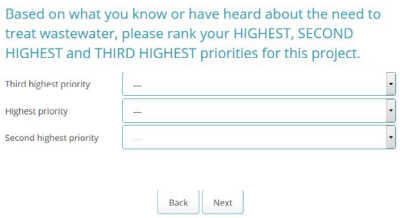
Thank you.

I am highly interested in this topic, went to the website you have advertised re public consultation, and started to look at the online survey. Neither your website materials nor survey discuss the option of staying with the current ocean based disposal. Because you don't permit that option, your consultation is illegitimate.

The facts are that if science-based decision making is used, the current system would be retained, and that both the Federal and Provincial mandates on this issue can be changed. If the public really does want to spend $1b for a land based system, despite the science saying its unnecessary, then only through a fair plebiscite can the issue be resolved democratically.

Your survey is useless. It does not ask the most important question, Is secondary treatment necessary? The answer: no.

I can't think of a reason to skew metrics like these, but i have to share that your first question in the survey could be perceived as trying to manipulate / confuse results because of its design.



The text says highest, second highest and third, but the field options start at third, highest, then second. Majority of readers will not play close attention, and you will not get the accuracy of responses you are looking for. If you're going to ask the question, common logic dictates you should make it easy for a person to provide their answer.

Respectfully,

Dear Sir/Madame:

Thank you for inviting the public to provide input regarding the proposed wastewater treatment plant or plants in Greater Victoria. There is a reason why consensus has been found to be impossible and this is because wastewater treatment is unnecessary and undesirable. Solid scientific research shows that the Clover Point outfall has produced a thriving ecosystem and there is no threat of bacterial contamination. It is time we took on the Federal government and the general attitude of Canadians, backed by this excellent research! I believe that Canada's media will support a balanced and interesting debate over this issue.

Please leave things as they are and work to change the Federal government unnecessary mandate!

Best regards,

Correspondence Emails

Rather than reply to a series of prescribed questions with a selection of prescribed answers, I would like to make a more personal response.

My understanding of how major projects of this nature should proceed is that having ascertained that there is a situation which needs addressing the appropriate levels of government hire experts to advise on the necessity, feasibility and costs of such proposals and then we the public entrust our elected officials to weight this advice and make an informed decision as to which is the best course of action, public consultation being part of the process.

Sadly this has not been the experience for Greater Victoria residents and now we are faced with a choice of options, none of which are a solution to the perceived problem and most of which carry an unacceptable price tag.

This whole mess has been a political failure of the highest degree.

My reading of the media reports is that first off the present practice is the most scientifically valid approach and that land based secondary or tertiary sewage treatment will only compound the problem rather than solving it.
The three levels of government, federal, provincial and municipal, have not worked together to solve the problem and this lack of cooperation has been compounded by local municipal officials grandstanding their opposition to proposed solutions.

Let us not be pushed into a poor decision and if the promised money from higher levels of government is taken off the table then let's just abandon the whole thing.

sincerely,

Although I filled out your survey, I was not able to vote for my favored approach which is to do nothing. Scientists have said that we have a unique situation here and wastewater treatment is not required. Because your survey does not allow this option - the results will not be valid.

We think it is time that the Capital Region asks the provincial and federal governments to listen to scientists and public health experts like Dr. Shaun Peck and not force Greater Victoria to spend millions of dollars on sewage treatment that is not necessary at this time and may do more harm to the environment than our unique present system. It is not too late to stop this emotionally charged process and use our tax dollars more wisely by improving the present system, e. g. dilapidated storm drains etc..

I would like to suggest a more Eco-friendly alternative rather than the old conventional approach that doesn't work for this island. Time to move forward and away from the old way of thinking. See link below.

http://www.naturalflow.co.nz

Ms. Mayor,

I know that Montreal dumped 8 billion litres of raw sewage into the St. Lawrence, but I read all over social media that Victoria, B.C., dumps raw sewage into their water routinely.

What do you have to say about that?

Instead of the Project Goals which include meeting regulations etc.
Who made this decision?

Goals are observable and measurable end results.
Commitments are a willingness to give your time and energy to.

Goals are what we have to achieve. For me one of the key goals is meeting Federal regulations.

Both shd be in survey. Plus the priority setting is confusing, who ever lists third priority, then highest and then second. Even description says first, second and third.

To me I already think survey is flawed for average citizens who know nothing about details, just concepts.

Correspondence Emails

i tried to take the sewage questionaire. it was very long with too many pages. Mostly got it filled out when i lost it, due to trying to go back a page. But my main reaction was that it was less a questionnaire than a sales pitch. None of the 7 options was acceptable. Reasons: too costly and all depended on Rock Bay for the Victoria part. Rock Bay will require totally unacceptable tearing up of Cook Street and enormous costs.. There are cheaper options that have much less disruption being discussed on the radio. Slow down the process; don't be governed by the senior governments' threat of withdrawing funding in case artificial deadlines are not met.

Secondary treatment is unnecessary and will burden the taxpayers of the CRD for capital and operational costs forever. When future historians look at the demise of our wonderful city, there is no question the massive waste of taxpayer dollars will be viewed as the major factor in our regions livability. The "environment" that is the supposed rationale for this boondoggle would be much better served by a rail based regional transit system that will reduce carbon spewing motor vehicles from our traffic choked roadways. In addition, walk by the homeless camp at the courthouse and explain to me with a straight face how sewage treatment is needed now. It's so sad really that the Victoria region continues to be haunted by the government of Gordon Campbell and later by the Harper regime.

Sadly, this note is (aptly, I guess) the equivalent of "pissing in the wind". Oh well, for the record....

Regretfully,

Have you actually tried to complete the survey yourselves? When you get to the end of it, there is no submit button. Once you've completed it, you get in a loop on the NEXT button that I can't seem to find my way out of.

Am I missing something here?

Please provide a response to the article in the February 2016 edition of FOCUS magazine - Option 10: our best bet to avoid sewercide - by David Broadland. Thanks

I completed and submitted your questionnaire on wastewater treatment as best I could. The questionnaire was somewhat bias, for the following reasons:

(1) It did not offer a choice of leaving things as they presently are (primary-treated sewage discharged at two sites).

(2)It finished with requiring three choices in no particular order of priority.

(3) It did not offer the option of a below-ground treatment system at Clover Point, that is reportedly much cheaper than any of the choices presented for consideration.

Hi,

Your survey, likely by design, forces the takers into one of the seven options plus the 3b, which will show that the public agrees to one of the options vs a true result with a none of the above.

It does not allow
- the taker/public to state none of the above
- the option to revisit the one site in Esquimalt
- the ability to suggest other options ie the vertical shaft option at Clover Point.

Even the comments/note field at the end is very unfriendly, it should be a multiline text box not a single line.

Also the website states "The current total cost of the wastewater treatment program is estimated to be $788* million. The CRD has secured funding from federal and provincial governments to support this capital project." The options should be within that figure not significantly above that figure.

Finally Now that we have a Prime Minister who has stated specifically that he does not believe there is a need for treatment and that the money could be better spent you should ask Ottawa to revisit the 2020 requirement, which was meant to safeguard drinking water supply.

Kind Regards,

Correspondence Emails

I am simply not going to complete your survey if you insist that I must choose three options.

I will only be satisfied with one option and that is ONE plant- tertiiary treatment. I moved from Edmonton with a much greater population and one plant - no problems odor or otherwise. There is only 1 acceptable option here for this population, one plant.

I have lived here five years and I cannot believe the ridiculous delay, indecision and carrying on about sewage treatment.

Make a decision.

I have just completed the survey and it is very hard to believe you will be obtaining any useful information from the collective responses. It may make everyone feel good about inviting community comments, but the comments, for the most part, will be provided without sufficient knowledge to be meaningful. Certainly that is the case in my response. I could be very supportive of information sessions which highlighted the various proposals and options being considered by those responsible for making the decision, but turning the process into near-referendums is an abdication of responsibility by our elected officials, and an opportunity for all those disaffected folks to hi-jack the process. Once the decision is made that we should be doing some treatment of our wastewater, obtain the appropriate professional advice and recommendation, elicit proposals, and make the decision. Waste water treatment is a very well established industry and it should not take this long to make a decision. Thank you.

There must have bee a flaw in the selection process and the results should be invalidated.

The process chose the most expensive design and most disruptive for existing infrastructure while rejecting on a technicality a superior, technologically advanced and much cheaper to build design by world renown NORAM from Vancouver.

sewage project
As a tax payer I should be making a decision re: sewage project on all projects not only on the most expensive and outdated!!!!!!!!!!!!!

This is a question from your section :

CORE AREA WASTEWATER SURVEY

Why do we need to treat wastewater?

My opinion is:

We don't need it, and it is just a waste of taxpayers money !!!

Many years ago an engineering study found that Victoria's geographical position (end of the island) takes care of the waste into the sea, compared to other cities, like Vancouver or Seattle, where they need water treatment before the discharge.

Some observations:

Wastewater water treatment for Victoria is one massively expensive PR exercise. In simple terms treatment is ineffective for pharmaceuticals, toxins and the like and seemingly unnecessary for biological matter as there is plenty of oxygen available in the Strait of Juan de Fuca to treat it naturally. It is now 2016 and people are turned off by the thought of an 1816 treatment (despite any credible proof that there is actually any harm) therefore some PR is needed here.

Since the bulk of the wastewater is already in a pipe the worst idea I can think of is to turn that pipe around and point it at yourselves, not only right at yourselves but upwind most days and upstream twice a day. What is this preoccupation with having to treat it right on top of ourselves? We don't even have a cost effective plan for the byproducts.

Make a bigger and better pipe, get the wastewater completely contained in that pipe and then run it anywhere but into downtown Victoria. Metchosin is one huge glacial gravel pit. The pit already carved out of that landscape should have been acquired years ago for this purpose instead of present efforts trying to turn that sow's ear into a silk purse. Metchosin could probably run tax free just charging Victoria for treating the regional sewage. Out in Metchosin you could barge the byproduct for use in coastal reforestation projects. Run the liquid out into the Strait as before, if there is ever an problem with the treatment plant (extreme weather event for example) flip a switch and run everything out into the Strait until remedied.

Lindsay Taylor, Communication Coordinator, CRD Waste water Survey 2016

Sorry Lindsay we just cannot bring our selves to complete your survey. We are amazed after attending and participating in so many meetings and hearing so many good things about today's available technology that the proposed option basically falls back on a major plant using secondary treatment. And secondly we believe the questionnaire format is designed to support a Rock Bay location, which we do not support.
Our comments on the proposal are attached above.
Thank you,
PS. We did attend the Gordon Head United Church show and tell on Sunday

Attachment: LWMP Innovation Potential Alternatives Ignored

The CRD is asking for public input for their 2016 Liquid Waste Management Plan (LWMP). We appreciate being given the opportunity but are amazed at how complicated and overly expensive the whole process has become. There is a very simple solution out there and it should be explored - follow the existing pipes, utilize the existing infrastructure, install as little new piping and pumping stations as possible, locate sites west and east along the trunk lines, and consider all solid waste for final treatment using gasification to create energy and utilize as much grey water as possible where possible. And then provide a business case for the project.

All the current 7 options offered are traditional centralized and expensive, ranging from $880m for the defunct McLoughlin Plan to $1.3 billion for the various 7 Rock Bay Options.A large part of the extra cost is being spent on new piping and pumping which will also have social and business cost related to construction.The main reason for the extra new piping is that the chosen location, Rock Bay, is not located near existing trunk lines. Rock Bay in the inner harbour is also located on soil that will liquefy in an earth quake.

The CRD says it is looking at Integrated Resource Management which, if optimized, will save billions of dollars over the long term. Yet for the LWMP the CRD is aware of 3 viable sewage treatment alternatives, put together by qualified professionals that will cost significantly less, $300-600m, and has excluded these alternative options from the process and the 7 options presented for public consideration. We need the CRD to include these innovative solutions that save money and have greater environmental and social benefits. The public needs this information prior to making any site determination or input to the 2016 LWMP.

We can better assess option sets if we have them up front not after and before the die is cast. Otherwise it will be too late to create a plan that will look forward to the future but instead will capture the past to meet a bureaucratic and now obviously changeable deadline. We agree with the CRD that all Waste Resource Management needs to be integrated and optimized. As such an innovative distributed tertiary liquid waste system plan that makes use of existing trunk lines and facilities deserves serious consideration as does gasification to deal with the solids.

Your survey form should allow one to generate their own priorities not give only 8 tailor made responses. We shudder at the results forthcoming from your 8 choices and focus on specific communities.

Given the 7 proposed options are not acceptable to us:
Our top Priorities are:
1. Keep costs affordable; include the 3 less costly professionally developed alternatives for public consideration.
2. Minimize environmental, social and business disruptions
3. Integrate waste management and develop an innovative solution using tertiary and gasification technology in a distributed system.
4. Negotiate a different time line with senior governments.

One example selected from the sites currently identified by both West & East Side solutions located along or close to the existing trunk lines would be the following: Using sites going from lower to higher elevations: This seems logical and doable and deserves design and costing for tertiary treatment and included as part of the option set prior to asking for input from the public.

1. Macaulay Point/wet weather – small plant to pick up in between areas below - ADWF 4%

West trunk
Esquimalt First nations ADWF 18%
Colwood (golf course or Juan de Fuca) AWDF 9%
Total AWDF 63%
Captures flows from Langford down

North East trunk
Victoria Works Yard AWDF 18%
Marigold PS AWDF 14%
Captures flows from Saanich east and VicWest

2. Clover Point/Wet weather AWDF14%
Currie PS/Windsor Park AWDF 14%
Gordon Head/ Cadboro Bay 2 AWDF 9% ..... continues on the following page

continued.....

Total AWDF 37%
This captures flows from the east side
Grand Total AWDF 100%
A distributed system along existing trunk lines would use existing outfalls and tertiary treatment would provide safer water than secondary treatment during wet weather and potentially usable water for each location.
ADWF = the average dry weather flow

I am unable to support any of the options in the Wastewater Options Questionnaire. They all ignore the amazing natural resource we have in the cold water and currents in the Strait of Juan de Fuca.

It is a fiction that Victoria dumps raw sewage into the Strait. Primary Treatment (also called Preliminary) as it exists at Macaulay and Clover Point plants consists of filtering out all solids larger than the diameter of a pencil, waiting while the remainder settles, then skimming the fats off the top, then discharging the water at the upper part of the tank into the ocean and leaving the solids at the bottom to settle and compact further until they are removed at periodic cleaning.

Bottom feeders are an integral part of a healthy marine environment. What they currently get from us is very little different from the naturally occurring marine debris, and they, like every other living being, do want to eat.

In the options presented to us, this system will continue up to the point of discharge into the ocean when it will be diverted through expensively and disruptively built pipelines for secondary and/or tertiary treatment. This is a tragic waste of the rare natural resource that Victoria has in the Strait of Juan de Fuca. The water temperature and currents exists at only a couple of other cities on the planet. One, San Diego, was not required to put in secondary treatment. The Canadian Federal decision to require secondary treatment was because almost all Canadian cities are situated on fresh water. They don't have a Strait of Juan de Fuca.

We only barely failed the first assessment. Why has the CRD chosen to ignore this amazing natural resource instead of working with it? Look in the February 2016 copy of FOCUS magazine (p.p. 12-15) for an innovative method of upgrading our sewage outfall without bankrupting expenses or construction of any new pipelines. It uses the natural resources we already have. It mixes and dilutes the primarily treated sewage so it will meet the Fisheries Act regulations, at about one fifth the cost of the cheapest CRD proposal.

The University of Victoria Marine Scientists have been saying this for years. The CRD is acting as though it is deaf to science.

I attended the workshop at Victoria Conference Centre on Feb. 10. and have been following the sewage debate for a few years.

First, from all the scientific literature I have studied on the subject, I don't feel that Victoria needs a land-based sewage treatment facility. The present system -- according to the preponderance of science information -- works not only well, but better than would any land-based facility.

My first question is, has any request been made to the federal or provincial authorities that Victoria. because of its unique Juan de Fuca strait location, be exempted from their orders that a treatment facility be built?

That said, however, it seems that the Victoria area councils have acceded to the senior governments' demands and that some sort of plant will be built, and the question now is where to locate it, or them.

My suggestion for a site is Clover Point. I do so because many of the sanitary sewers lines already lead there, their effluent screened and sent several kilometres out into the strait and there discharged into cold tide-flushed currents through a number of different outlets.

Certainly there would be disruption at Clover Point for a year or two. But with a camouflage design and careful landscaping, after a while the facility would blend in with its surroundings and be barely noticeable.

I'd like to see some photos of attractively concealed treatment plants in other communities.

Correspondence Emails

I have begun this survey twice, been interrupted and lost my data so I will just tell you my thoughts. From what I read, secondary treatment does nothing further to eliminate toxins that the natural action of the sea takes care of. Tertiary treatment will take care of toxins from drugs, etd, so if we are going to do this, we need to do tertiary treatment. I am, of course, in favour of a small footprint, no great trucking of waste, and the reuse and sale of anything that can be salvaged. Unfortunately, I am very wary of the ever rising costs and the fact that $78 million has already been spent on consultation!! I live on a self-funded pension so rising property taxes are of concern. I am also aware that there are new, more innovative solutions being put forward that would cost a great deal less. Given the Johnson Street bridge fiasco, I have grave reservations about the process to date. I urge the CRD to ask for an extension and a variance based on the scientific analysis of our particular situation done by several marine scientists. There are any number of local scientists you could bring into this process. There is only so much the citizenry can bear, financially, environmentally and philosophically.

Thank you for your open house and presentation last week. I would like to provide you with my input to the project as follows.

Although in the future, I can see that there would be a growing need for additional sites, due to the limited time frame remaining to the City to act, I would suggest proceeding with just the one Plant plan at this time. Perhaps others could be phased in as needed in the future. This also eliminates the need to coordinate with other jurisdictions at this time. It sounds like there are already facilities and synergistic opportunity to process material at the Hartland Landfill. Let's take advantage of that existing infrastructure. I would prefer to see material pumped there rather than trucked.

Site location: I would like to suggest one of the Bridge St./Pleasant Street/David Street locations, partially just to avoid the need and time delay in having to negotiate with First Nations. Whichever location, it would be nice to be able to develop a waterfront pathway system that connects the Goose Trail through Burnside/Gorge to the Bay Street Bridge. Perhaps the Store Street location could be acquired as a new location for disrupted business?

Please take the processing to the Tertiary Level. I would prefer the gasification process for processing the waste.

Let's get it done! Thank you

Hello

After attending the consultation briefing at the Burnside Gorge community centre for residents of this area, on Feb 14th 2016, I would like to say I am not in favour of solids processing at RockBay.

Thank you

The science says a treatment plant is unnecessary. Besides the money, what about all the new greenhouse gases? Taking a tiny portion of the money, and spending it on the net positive benefits on not going ahead with this. Thank You

About EastSide Waste Water treatment plan(s):

I've attended several information sessions in this public consultation process including the first one at the Belfry Theatre and then a follow-up session at the Ocean Pointe Resort. The latest session I attended was on Feb. 9th at the Burnside Gorge Community Centre. I have also followed information online and in print.

I am interested in learning more about the questions raised in several recent Focus articles - in December 2015 and January 2016. Many points have been raised by local scientists and investigative journalists. There were a number of us at that Feb. 9th meeting who felt that the objections/concerns raised in the Focus articles were not adequately addressed but that the decision to treat our sewage by 2020 was a given. For those of us questioning the very premise of these "principles", it was disheartening and discouraging. In all the work I've been following since the beginning of this public participation process, I haven't seen these points specifically discussed by the CRD. Could you point me to where these may have been addressed?

The engineer at the Feb. 9th meeting mentioned that there was contamination at the Clover Point outfall discovered in 2007 (2009?) but didn't know how much or of what kind. Has there been any more recent studies about the sewage impact here in Victoria? What about the suggestion that the CRD petition the feds to lower our status from high to low/medium and to delay implementation till these very reasonable points have been addressed. Looking forward to learning more.

Respectively,

Publicly owned and operated services are a vital part of our community. In this time of economic uncertainty, and the low canadian dollar, keeping costs low should be one of our main priorities. Public run facilities cost less and have less risk involved. With local government involved the wastewater project will be more transparent and less secretive. 30 years is too long for a private corporation to make money off of the CRD resident's sewage - P3 no more!

Tertiary treatment is the only trreatment removing 99% of impurities, not just "sewage", but all unseen chemicals poured down drains and flished down toilets, especially "unseen chemicals"!

Our poor sick oceans and ground waters require care NOW!

We don't want "outfalls"

Why can't it be done RIGHT the first time, spend the $ for our grandchildren.

On May 26, 2015 Chek News presented a piece "Could a sewage treatment ship solve Greater Victoria's problem". Please watch the 5 min. short on Google. Search EnviroNor As. It is the first listing. On the home page scroll down to "watch the concept" in the green box. It Is a very explanatory presentation from this Norwegian Company. EnviroNor AS is an experienced company specializing in aqua recovery on an industrial scale. They use tankers or barges to hold the mechanical operations thus using NO valuable land. The ship can sit 5 plus kms. off shore so no neighbourhoods disturbed, virtually unseen, unheard and odourless (to us on shore). Therefore the municipal infrastructures remain the same, leading to Clover Point and out from there. We MUST get the pharmaceuticals, heavy metals and micro plastics filtered out to realize true sewage treatment. These innovations are on the forefront and the ship hulls can be designed to take advantage of future technologies. This may not be so easily done on land with formed solid cement structures. There would be NO need for water and sludge lines and/or trucks to run through neighbourhoods as the clean water is simply dispersed into the Straits and the sludge can be barged away for agricultural purposes.

A ship has a far better chance of riding out a major earthquake (and/or a fifteen foot tsunami wave) than an on shore station and it's underground supply lines. The damage to houses could be dreadful with old infrastructure in ruins. That should be the true worry. In the worst case scenario, the sewer ship is disabled, at least the outfall would still disperse safely into the sea as it currently does. An earthquake would likely result in zero ship damage and quick repairs could be be made to hoses and connections. Not so much with cement stations and underground lines. In the presentation, Sigmund Larsen indicates one ship could serve a population of 250,000. TWO ships could be supplied for the $783 million current quote with room to grow. Eastside interested? Or any extra Westside money could go toward upgrading the aging infrastructure, sure to be another big necessary burden to the taxpayers in the future.

PLUS there are two navy ships going to scrap that would likely be candidates for housing the EnviroNor As equipment and would look completely normal as if patrolling in our straits.

OR two years ago I suggested "seconding" 5 acres of the 128 acres of Federal Land at Albert Head currently being used as a cadets retreat. The headland is high enough to have natural tsunami protection. It offers woodlands for camouflage of it's existence and has no neighbours to upset. Clean treated water would be dispersed right into the sea. And, again, no sludge trucking or piping through miles of neighbourhoods. And no new infrastructure is required. The current outflow pipes are extended and redirected underwater to Albert Head.

OR my friend suggested using Ross Bay (right next to Clover Point outlet) as the treatment station sight and install a grass sports field and clubhouse on top as exampled in Portland Oregon. Another company has suggested a deep well sight at Clover Point. Again that location saves money for future upgrading of infrastructure by not rerouting the whole system.

After five years of going nowhere it's time to think outside the box. The new cable ferry has come to Denman Island and the sky hasn't fallen yet.

Why aren't any innovative ideas being considered? Not one concept has been accepted by anyone. Time to expand your horizons and present acceptable alternatives to the taxpayers. Please take a moment to watch the presentation.

Yours VERY sincerely

The necessary option is to approach senior levels of government to insist upon a full environmental impact assessment before proceeding further which would include a professional evaluation of the current system including the benefits of organic nutrients in the marine environment.

Lindsay Taylor, Communication Coordinator, CRD Waste water Survey 2016

Sorry Lindsay we just cannot bring our selves to complete your survey. We are amazed after attending and participating in so many meetings and hearing so many good things about today's available technology that the proposed option basically falls back on a major plant using secondary treatment. And secondly we believe the questionnaire format is designed to support a Rock Bay location, which we do not support.
Our comments on the proposal are attached above.
Thank you,
PS. We did attend the Gordon Head United Church show and tell on Sunday

As a taxpayer and retired research chemist I cannot support spending 1 Billion or more on a sewage treatment system that transfers poisonous and other pollutants from the liquid portion to the solid portion. This would require very expensive handling and treatment on land and could lead to serious land (or air) pollution, and hence just does not make sense.

The only real solution is to prevent poisons and pollutants from entering the sewage in the first place.

Reading the article "Option 10" by David Broadland in the February issue of FOCUS I am impressed by this far less expensive and common sense solution .

This "Option 10", as well as confirmed viable tertiary treatment, should be given full consideration.

I have followed the Waste Water Treatment issue for more than five years. Over the past year, and since the McLaughlin Point proposal was rejected by the Esquimalt Council, I have attended open houses, workshops and community forum. I have read many articles and heard many opinions.

I am still not completely convinced that we need treatment. I am of the view that education, source control and strict enforcement of source control regulations will allow us to differ the decision until 2040. However, that said, should you wish to have the treatment done by 2020 as per the current Federal and Provincial laws, I suggest you pause and consider the recently proposed site and technology options which are cost effective and produce better outcome.
At the recent workshop on Saturday at UVic I heard that the present seven options and coat ranging from $1.031 to $1.348 billion is good enough for 2030 and after that we will need additional about $250 million to extend the life until 2045. Also, I have now read that the old McLaughlin point proposal can be brought back at a cost of about $830 million.

I am of the view that the treatment plants located at Clover Point and Macaulay Point (near or adjacent to the current out falls) will save us cost and improve the over all outcome.

I urge CRD Committees (East and West sides) and CRD board to

(a) Considering obtaining extension to year 2040 from Federal and Provincial authorities and

(b) Pause and evaluate the new proposals (known as Knapette Proposal) and reconsider McLaughlin Point.

Thank you. Yours truly,

Considering that the experts all say we'd be doing more harm than good by treating our sewage on land... why are we still planning to do that? Shouldn't we listen to the experts and leave well enough alone. Just tell the critics what the experts say about Victoria's system.

Sorry for the late reply; I was out of town. I do not support the current rushed process and support the position set out by Brian Grover in the TC Comment today. What is needed is to lay out the various options - fully costed, and put those before the public in a referendum. The current and rushed process is a sham and shame and is too costly. Ms. Helps attempt to railroad her Mayor colleagues into a decision at high cost and for a totally inadequate system is unseemly and un justified.

To: CRD
Re: Wastewater Survey

Given the limited options 1A and 2 are not significant enough to account for the greater price of the latter., especially if there are cpst pveruns connected with the greater amount of piping in the second option. We're only shifting a 10% improvement related to tertiary treatment. While I like the idea of 100% tertiary in option 1B, I am concerned about its higher cost carbon and energy footprint as well as cost.

Other options are laying out more pipe and more complexity along with more costs to be paid by a fairly small urban population already watching the costs of the Blue Bridge escalate.

There already is a controversy whetehr the science says we need to treat effluent as it is now discharged into the ocean. The main provlem is treatment of pharmaceuticals and storm water from the streets, but none of these options is a 100% fix.

For now I would rather we fulfill our minimum legal requirement with the least exposure of the public to cost overuns.

However, in planning with a view to the future, we should be building a system that would allow the add-on of tertiary treatment at some point down the road when the greater size of the urban area can afford to pay for it. We need something basic that we can afford right now and can add the gold paint to later.

Yours sincerely,

The below email correspondence is a combination of 27 emails from one individual.

I totally agree with the argument in John Drew's letter to the editor (see hyperlink below) of February 14, 2016, that any treatment plant constructed in Rock Bay will undoubtedly spill sewage into the Gorge waterway at some point during its lifetime. Accordingly, I am totally opposed to any treatment plant being constructed on the BC Hydro/Transport Canada site...

Under all of the options that the public is to choose from, the BC Hydro/Transport Canada site, south of Bay Street and immediately west of Government Street, is designated for some type of treatment facility. Looking at the information in the wastewater portion of the CRD's web site and in the Citizen's Guide, I found the aerial photograph of the site really unhelpful. The aerial photograph 1/ is from such a high level that one cannot make out the users of surrounding properties 2/ has been cropped so that the reader does not see the short distance to downtown Victoria 3/ has only the three street names Bay, Douglas and Government marked on it 4/ does not specify Pembroke Street as the southern boundary of this site 5/ does not specify Princess Street as the northern boundary of this site. There should have been a ground level photograph of the site so the general public can appreciate the size of the site, its gently sloping nature from Government Street, its western frontage onto the Gorge, etc. In response to my questions about the poor mapping, I was told that the CRD did not want to overburden the general public with too much information. In this case, I believe the CRD deliberately did not want to draw the public's attention to the geographical implications of using this site for a treatment plant....

I strongly object to the public consultation open houses and workshops displaying a photo of Barcelona's treatment facility. Within the Barcelona administrative area, there are 1.6 million people and the population is 4.7 million when one includes the area beyond the administrative area. Clearly, there is no reasonable comparison between what a city of that size can do in terms of beautification and aesthetics for its treatment facilities versus what the CRD can do when its wastewater area population is only 300,00 people. Yet, at both the CRD Workshop and the CRD Open House that I intended, both the facilitator and the engineer on-hand intimated we can also have a similarly beautiful facility. This was just one instance of the CRD trying to minimize any fears that we could land up with an ugly looking treatment plant site on the BC Hydro and Transport Canada properties....

At both the Work Shop and the Open House that I intended, it was suggested by the moderator and the Urban Systems person present, that there is the potential for other non-wastewater facilities on the BC Hydro/Transport Canada site in Rock Bay. When talking to Dan Wong, the Planner from Urban Systems, at the February 12 Open House, I asked him specifically to tell me how much land mightbe left over for other uses/users under the various options being discussed. Dan explained that it depends on which option is finally chosen and what technologies are applied for the chosen option, however, he said that the seven plant option would likely result in the least and smallest wastewater treatment facilities on the BC Hydro/Transport Canada site. I then asked Dan how much of the site would likely be required under Option 1A, assuming trucking rather than piping to Hartland. I could not get an answer from him. Under this option, I fear that practically all of the site will be needed. However, if that is incorrect, then I further fear that the CRD will want to retain, for future possible use, those parts not needed immediately. That would mean that the chance of using some of the Store Street site for other significant uses will be lost forever... I have be unable to obtain any information about the remediation work carried out on the BC Hydro/Transport Canada site. I am concerned about how the remediated soils on the site will react if there is a reasonably strong earthquake, let alone a gigantic one as is currently being forecast sometime in the future. When I raised this issue with the Urban Systems engineer at the February 10, 2016 Eastside Workshop at Victoria Conference Centre, he suggested that this site is no worse than thousands of other sites within the CRD and, regardless, any issues related to ground stability can be resolved as part of the construction of a treatment plant at the BC Hydro/Transport Canada site. My

response to the above is that it does not make sense putting a community's key infrastructure on a site that is potentially more vulnerable to liquefaction than other sites, and doing so only increases the capital cost of the project and the possibility of cost overruns. Based on this issue alone, I am opposed to a treatment plant being built on the BC Hydro/Transport Canada site.... It is generally acknowledged that the North and South Poles are melting faster than previously projected and that, as a consequence, sea levels are going to rise quicker than expected. So I am left asking myself, why is the CRD proposing, under all of the options currently under discussion, that there will be treatment plant on the BC Hydro/Transport Canada site which is not very high above sea level? I am sure that the project engineers would love the challenge of building huge walls to stop water coming into the site, raising structures off the ground or developing some other novel solution. However, all potential remedies mean the expenditure of even more money on a project that is already going to hurt financially the 300, 000 residents within the treatment area. As far as I am concerned, it is total madness building a treatment plant on low lying land in Rock Bay that will be subject to rising sea levels....

The public has been asked to pick sites under the current public consultation process, without any knowledge about the BC Hydro/Transport Canada site. We should have been told about the possible risks and implications of any digging into the recently remediated soils there. For example, will any such digging dredge up new contaminants and/or cause an inflow of contaminants into the remediated site? If either of these possibilities exists, then it seems totally inappropriate to put any treatment plant on this site after $70 million has been spent to remediate it....

The BC Hydro/Transport Canada site is basically the same grade as Government Street on the east side. From that street, the property then slopes gently westward to the property's Gorge frontage. Similarly, the property gently slopes from south to north. Given the overall flatness of the site and the lack of major natural impediments within the site, I am concerned that any buildings over two or three stories in height are going to be easily visible by people and vehicles using Government Street for ingressing and egressing downtown Victoria. More important to me, than the heights of any buildings, is the height of the 4 or more treatment tanks that will go on the site. The CRD has been really careful not to tell the general public, as part of the public consultation process, what the diameter, and particularly the height of those tanks, likely will be. As for any suggestion that the CRD has no idea, whatsoever, what the possible height of the tanks might be, is totally ludicrous, as they could not complete a rough estimate of the total project cost without first making some assumptions in that regard. At the Eastside Public Workshop on the second floor of the Conference Centre, I asked the engineer and moderator what the likely height of the tanks might be and they suggested about the height of that room, which I would guess is about 40 feet to the underside of the ceiling. I have looked, using the Internet, at actual site photographs for projects shown in the Citizens Guide and on the table-top information boards, and quite clearly some of the tanks on those touted projects are way higher than 40 feet. After the public consultation ends on February 20, I fear that the engineers will take over and build whatever they feel is necessary for an efficient treatment facility. I have a very sick feeling that, at the end of the day, the citizens of Capital Region and particularly the citizens of the City of Victoria will find themselves stuck with a giant towering project (regardless of any attempts at aesthetics) that overwhelms the neighbourhood. Rather than take the chance of that possibility, I believe we need to kill the idea of any treatment plant at the BC Hydro/Transport Canada site , which is adjacent to Government Street, one of our only three arterial roads running north out of the City of Victoria.... Yates Street is the City of Victoria's most important and central street running east-west through downtown. The BC Hydro/Transport Canada site is located on the west side of Government, essentially between Pembroke Street and Queens Avenue . If one

looks at a City of Victoria map, one can quickly count that Pembroke is seven streets north of Yates, while Queens Avenue is nine streets north of Yates. Next, Chinatown is located basically on Fisgard Street. Pembroke Street is only four streets north of that, while Queens is six streets north of it. I am totally baffled how anyone can suggest that it is makes any sense placing a wastewater treatment facility so close to Chinatown and particularly downtown Victoria...While it is stating the obvious, people need to be reminded that the City of Victoria is blocked on the south, east and in Vic West from major redevelopment, unless it is prepared to become involved in a huge fight over the destruction of a huge swath of existing housing in those areas. Accordingly, the only logical direction for future redevelopment is north in the area bounded by Fisgard on the south, Bay Street to the North, Douglas Street on the East and Government Street on the west. Regardless how the area is currently zoned, this "mixed use" area is just begging for redevelopment. Many of the older buildings in the area are in poor condition, while many of the newer ones are cheaply built. Not surprisingly, a significant portion of the value of the properties in this area is in the land. Over the next 50 years, the area could go through a fantastic evolution. However, I fear that will be stopped in its tracks if the CRD manages to get away with building a wastewater treatment plant on the BC Hydro/Transport Canada site. If the CRD project is too overwhelming and too visible from Government Street, then the indicated area above will become a dead zone. We cannot let that happen. The citizens of Victoria need to tell the Mayor and her elected colleagues that having a treatment plant adjacent to Government Street between Pembroke St. and Queens Avenue would destroy the future northern extension of the City of Victoria... The construction of any wastewater treatment plant on the BC Hydro/Transport Canada site will not have a positive impact on surrounding land values, in contrast to the significant land value increases that typically result from nearby major redevelopment projects in urban areas. If anything, there is a significant chance that a treatment plant in Rock Bay will decrease surrounding land values. This is another reason why Council for the City of Victoria should reject use of the BC Hydro/Transport Canada site for any type of treatment plant... It is very obvious that the CRD has reached separate understandings with BC Hydro and Transport Canada with respect to the process by which it will acquire their respective properties and the sale price to be paid in each case. Yet, no information whatsoever has been available to the public about this matter, as part of the current public consultation process. This lack of information has created a lot of confusion and questions amongst the general public and increased suspicion of elected and non- elected CRD and the City of Victoria officials. One would have thought officials would have learned from past secrecy mistakes.... On June 9, 2012, the Times Colonist had an article "First Nations buy prime land". In the article, there is a reference that this (i.e., the Transport Canada lands) could be "... the first step towards what could one day be a bustling downtown development". The article also mentions that the BC Hydro site will be sold after it is remediated and that "The City of Victoria has been hoping Rock Bay would develop as a future employment district , including a possible high tech business area. " In other words, before the CRD 's current plan to put some type of treatment plant at the BC Hydro/Transport Canada site, there have been thoughts about the redevelopment potential of the Rock Bay area south of Bay Street, particularly those land west of Government Street. More recently, there was a letter in the Times Colonist on November 24, 2015 entitled "Consider Rock Bay for an arts district" . There also has been talk about putting a Casino on the Transport Canada site, which would not be incompatible with arts activities. No doubt, there are more potential uses for the BC Hydro and Transport Canada lands. My understanding is that when large properties come up for redevelopment within the City of Victoria, the proponent is required to go through an extensive process to obtain thoughts and ideas from the general public as to the best uses for the property and the acceptability of the developer's ideas and plans. Why is this not happening with respect to the BC Hydro and Transport Canada lands? I would argue that "due process" has been lost in the CRD's panic to find a solution to its wastewater treatment problem. We need to stop

and have a public discussion as to what the people of the City of Victoria want to happen within respect to the BC Hydro/Transport Canada site. The site is close to be finished in terms of remediation at the huge cost of $70 million. The opportunity to revitalize the area along the eastside of the Gorge waterway north of Capital Iron is just too important to the long term health and vitality of the City of Victoria...

I support the need for, at least, a secondary treatment system for Greater Victoria. However, as an urban land and retired BC Government economist, I feel it is totally wrong to put a sewage treatment plant in Rock Bay for the following reasons: - the BC Hydro/Transport Canada site is too close to downtown Victoria - use of the BC Hydro/Transport Canada site will make long term redevelopment of the lands between Fisgard and Bay Street much harder, if not impossible, over the next 50 or more years - locating a treatment plant alongside one of the three main arterial roads (Government, Douglas and Blanchard) leading north out of downtown Victoria does not make sense geographically or aesthetically - the BC Hydro/Transport Canada site is too low and will be subject to flooding if sea levels rise as projected - at some point, there will be a sewage spill from any wastewater treatment facility constructed on the BC Hydro/Transport Canada site and, when it happens, the impact will be devastating to shorelines and properties to the south - the BC Hydro/Transport Canada site is too valuable to be used for a treatment plant (over $70 million spent for remediation) - with wide and lengthy community input, we can find far better uses for the amazingly large and remediated BC Hydro/Transport Canada site...

On December 17, 2015, I sent the four pages of questions (see immediately below) to Mayor Helps. Below the questions (many of which are with respect to the BC Hydro/Transport Canada site) is Mayor Helps' response of the same date, indicating that Qs & As would be desirable. In subsequent conversations with Amanda Gibbs, the CRD's public consultations consultant, I first was advised that CRD engineers would be willing to meet with me. That message later changed to words indicating that answers would be more challenging to get. As a result, on February 11, 2016, I sent the email at the bottom asking for a CRD Engineer to call me to arrange a meeting, but I never received a call. Next, at the February 12 Open House in the Vic West Community Centre, one of the staff indicated that she would try to send whatever answers she could get, but that it would likely be on a piece-meal basis.

As of the writing of this email, I have NOT received any answers whatsoever to any of my questions.

From my experience and from talking to other people, the lack of adequate information from the CRD has been one of the biggest frustrations for the general public in completing the online survey and the hand out survey on an informed basis. I believe that if the public had been given a more reasonable amount of information, their answers to the surveys would probably have been significantly different.... On December 17, 2015, I sent the four pages of questions (see Appendix (number)) to Mayor Helps. Below the questions (many of which are with respect to the BC Hydro/Transport Canada site) is Mayor Helps' response of the same date, indicating that Qs & As would be desirable. In subsequent conversations with Amanda Gibbs, the CRD's public consultations consultant, I first was advised that CRD engineers would be willing to meet with me. That message later changed to words indicating that answers would be more challenging to get. As a result, on February 11, 2016, I sent the email at the bottom asking for a CRD Engineer to call me to arrange a meeting, but I never received a call. Next, at the February 12 Open House in the Vic West Community Centre, one of the staff indicated that she would try to send whatever answers she could get, but that it would likely be on a piece-meal basis. As of the writing of this email, I have NOT received any answers whatsoever to any of my questions. From my experience and from talking to other people, the lack of adequate information from the CRD has been one of the biggest frustrations for the general public in completing the online survey and the hand out survey on an informed basis. I believe that if the public had been given a more reasonable amount of information, their answers to the surveys would probably have been significantly different... I had the opportunity to walk 20 feet or so onto the site one day late last fall when the Pembroke Street gate was inadvertently left open. I was blown away by its huge size (over 8 acres), its gentle slope westward, its frontage on Rock Bay and its remediated state (at a cost of $70 million). I think it is fair to state that there will likely never be another piece of property, of this size and in this condition, in the City of Victoria available for re-development. I would simply suggest that, if the plywood hoarding around the BC Hydro/Transport Canada site had not been there for a six month period prior to the current public consultation process, a very large number of people would have had an opportunity to go by the site and to think seriously about it. If that ability to see the site had occurred, I believe that the majority of the general public in the CRD would today be totally rejecting any wastewater treatment use of that site...

At one of the public forums, I asked the Urban Systems consultant who was present, how much of the total BC Hydro/Transport Canada site would be required for the one plant option (i.e., Option 1A) assuming the treatment plant waste would be trucked to Hartland He said that most of it. If the consultant's response was accurate, then I cannot help but hope that the CRD has already reached some type of understanding with the Songhees and Esquimalt First Nations who will receive Transport Canada's Rock Bay property once remediation is completed. However, the total lack of land acquisition information at the public forums has resulted in a great many rumors and speculation. Some people think that the CRD will lease the land being acquired by the First Nations and then build at least part of any approved treatment plant on that parcel. Hopefully that approach is not being contemplated by the CRD. Putting key community infrastructure on leased land would give the landlord the opportunity to demand exorbitantly higher land rents after the conclusion of the initial long term land lease. Others are guessing that the First Nations will quickly flip the ownership of the Transport Canada property to the CRD. Under this circumstance, if the CRD has not already negotiated a firm price for the First Nations property, there are major concerns that the minimum purchase price will suddenly skyrocket as soon as CALWMC approves any one of the current options presently up for discussion. Needless to say, a much higher land cost, than currently estimated, would immediately push up all of the total projected cost figures assumed by the CRD. Another speculation is that the First Nations, if there is not a firm deal for the CRD to purchase their newly acquired land, will suddenly renounce their willingness to sell the Transport Canada lands that they will be acquiring and announce they will instead build a casino on the property, which would be a smart alternative actions in terms of jobs and long term income for the bands. A further fear, if this happens, is that the First Nations could build a casino on the former Transport Canada property without any zoning and/or other approvals from the City of Victoria. Long and short, the failure of the CRD to provide the public any information about its land plans and needs, has made it virtually impossible for the public to provide any comments on this important issue, and has left the public wondering if land acquisition issues related to the BC Hydro/Transport Canada site could still kill the whole project, as all of the options include use of the Rock Bay site... 1/ February 7, 2016: my formal request to Amanda Gibbs for public viewing access to the BC Hydro/Transport Canada site 2/ February 11, 2016: formal response from Amanda Gibbs re: public viewing access to the BC Hydro/Transport Canada site 3/ February 12, 2016: my request to Mayor Helps to instruct staff again to make a serious effort to find a suitable and safe solution 4/ February 14, 2015: my email expressing frustration with

new "no parking" signs suddenly on Government Street beside site and requesting Mayor Helps intervention 5/ February 14, 2015: Mayor Helps instructions to municipal and regional staff to find a solution. My belief is that staff at BC Hydro, Transport Canada and the CRD do not want the public to have any opportunity to view the site, as they fear that it could result in a public backlash about the proposed use of the site for a wastewater treatment plant. As a result, every effort has been made to thwart my proposal. As of the sending of this email, I still have not receive any word when public access will be available. Given that the deadline for the public to submit its viewpoints is tomorrow, Friday, at 4:30 pm and given that almost all surveys and letters/emails will now have been completed and/or submitted, any last minute opening tomorrow, if announced, would be totally useless. The bureaucracies have won again!!!! At the two public forums that I attended, there were references, by both Urbans Systems representatives, to the fact that the area north of Fisgard is "industrial" land. Clearly, the consultants were driving this point home in hopes that would convince the public sufficiently to agree to putting a sewage treatment plant (which interestingly is normally deemed a "utility") on the BC Hydro/Transport Canada site. What never came up in the forums is the different actual uses around there today. 1/ The Area North of Bay Street and West Douglas Street: This area is filled with a really wide variety of industrial users, The area is very stable and important in terms of jobs and supplying a really broad assortment of services to CRD residents, There is little likelihood that the area will be used much differently in the future 2/ The Area Bounded by Fisgard on the South, Bay Street to the North, Douglas Street on the East and Government Street on the West: This area would typically be called "mixed use", It has some residential at the north and south ends, but predominately it is non-residential, Non- residential uses here are really varied and include retail stores, warehouses, offices, industrial manufacturers, etc., The buildings tend to be older and tired or newer but cheaply built, Most of the value of the properties in this area is in the land, The area is logically the really long term future development area for the City of Victoria (even if not so reflected in current plans), The area is in transition and has the potential to look very different in 50 years time. 3/ The Area from the Gorge on the West to Government Street on the East, and from Capital Iron North to Bay Street: This area is made up of large parcels owned and used by relatively few companies, Materials handling is a major activity north of Capital Iron, The area has the potential to be redeveloped depending upon what happens with the BC Hydro/Transport Canada site. So why is the above important? Quite simply, if the CRD lands up constructing on the BC Hydro/Transport Canada site anything less than an absolutely beautiful wastewater treatment facility, the redevelopment potential of the two latter areas above will either be impaired or totally thwarted. Based upon the pictures that I have now looked at of other newer, wastewater treatment facilities, I do not believe there is, or can be, a totally beautiful treatment plant site. Even if such a site exists somewhere today, that type of development, realistically, is not going to happen in the CRD simply because we don't have the population base necessary to be able to pay the capital costs and the operating costs that go along with such a beautiful facility, despite the best of intentions and initial claims. Unfortunately, there were too many, overly positive comments by staff about Victoria being able to achieve a "platinum" quality level of development....

On February 15, 2016, I sent the photo on page 9 of the Citizen's Guide to the Brightwater Treatment Centre and asked the purpose of the two different parts of the building shown in the photo and whether they are directly involved in the actual treatment of wastewater? Below is the response that I received.... Thanks for the inquiry! The building in this picture is part of our education and community center; not the wastewater treatment plant. The way it was labeled in the caption is definitely misleading. I attached a graphic of our site. The beige colored buildings on the right/center are the buidings of the wastewater treatment plant. You can see where the education and community center buildings are as well. Let me know if you have any further questions....

Please refer to the following web page: https://www.portlandoregon.gov/bes/article/40645 The second (bottom) photo on this page shows a building similar looking to that on page 8 of the Citizens Guide, but shot from another direction. It was only after looking at that photo on the Oregon web page that I went back and re-read the caption under the photo on page 8 of the CRD's Citizens Guide, and finally caught the word "support" in the picture explanation, which I had previously totally missed. So, at the Eastside Open House on February 12, I showed the photo on page 8 of the Citizens Guide to some of the participants there. Everyone I asked said they thought the building in the CRD's photo was a treatment plant. In other words, the photo on page 8 of the Citizens Guide is totally (and deliberately?) misleading. I would also draw your attention to the photo of the Columbia Treatment Facility site shown at the top of this web page. The picture shows lots of huge tanks and what I assume are a large number of settling ponds. Clearly, the Columbia site is huge, yet the facility only services around 600,000 residential and commercial customers, just double our number of users. I am left wondering why the CRD did not include this photo instead in its Citizens Guide, as I presume the Store Street site will look relatively similar in layout as the Columbia site at the end of the day....

It is really important to note that the CRD did not let the general public know, as part of the public consultation process, about land parcels on the west side of Government Street, north from Capital Iron to Bay Street. I suspect that an analysis of that type of information would show that: 1/ there are not a lot of properties owned by totally different owners within this specified area 2/ the small number of properties in this specified area tend to be very large 3/ the BC Hydro/Transport Canada property sits basically in the middle of the few properties between Capital Iron and Bay Street and, as a result, can make or break future re-development of the area 4/ most of the land on either side of the BC Hydro/Transport Canada site is used predominately for raw materials handling 5/ the area is similar in many ways to Granville Island and has an incredible long-term opportunity for consolidation and/or redevelopment. I believe the CRD deliberately did not disclose any maps and/or lists of land information out of fear that the public would suddenly not support a treatment plant in Rock Bay.... Below is the email that I sent on January 31, 2016 to Mayor Helps complaining about the CRD's Online Survey. I subsequently received two emails from staff (see further below), neither of which addressed my most important concern which was that the computer forced me to fill in sections that I did not want to complete (as I was opposed to the other choices) before it would allow me to proceed to the next page of the online survey.

Within the first few days of February, I learned from staff that, at that point in time, over 1500 attempts had been made to start the online survey, but less than 900 (can't remember the actual figure) had actually managed to complete it.

It was only at the Eastside Open House on February 12 that I learned that the online survey had been "repaired", effective as of February 13, to make it more flexible for respondents. I further learned that the CRD has kept the online survey responses for "before" and "after" the repair totally separate. What now really concerns me is that, notwithstanding that answers by the "before" group were forced, the CRD still intends to count, record and disseminate this group's answers. I am sure that there were other people who faced the same dilemma as I did - fill in reluctantly and continue or quit (which many seem to have done). Long and short, I feel that the online survey results from the "before" group should be totally ignored and destroyed. They just are not an accurate reflection of peoples true feelings.... At the February 12, 2016 Eastside

Open House at the Vic West Community Centre, I asked Dan Wong of Urban Systems how the cost estimate for the Rock Bay Single Plant Option (i.e., Option 1A) was developed. He explained that an "indicative design" (a term apparently used by planners) or preliminary concept would be created indicating what type and size of facilities would need to go on the site based on estimated inflows and outflows. With that conceptual information in hand, the engineers would then develop ballpark cost estimates for each piece of infrastructure that would go the site, and then the figures would be totaled. While some members of the public would not have wanted such detailed information, the CRD would have appeared much more open and transparent if it had had a copy of the "indicated design(s") available for public viewing. Being able to see the "indicative designs" might also have allowed the public to learn the amount of excess land that possibly might be available for non-wastewater uses (e.g., a casino) under the seven options. For example, Dan explained to me that if one wanted to have the maximum amount of excess land for non-wastewater uses, then the seven plant option would best provide that, as it would reduce the infrastructure required at the BC Hydro/Transport Canada site....

At the February 12, Eastside Open House, Dan Wong, the Urban Planner with Urban Systems, explained that, very deliberately, the public is only being asked for its input on the various site options. Once CALWMC decides which option to proceed with, Mr. Wong further explained that the CRD and the City of Victoria officials would decide which specific technologies would be used for each specific component of the treatment facility (ies) to be built (after consultations with private sector equipment supplies); finalize the project plans; and then call for tenders. What particularly worries me about the above approach presented by Mr. Wong is that it basically is saying "trust us, we know what we are doing". Quite frankly, I don't agree with providing these two levels of government an unfettered ability to resolve every last detail on their own after February 20. In light of past local public-sector construction botch-ups, I have no confidence whatsoever that either one or both levels of government can pull off this huge project on time and on budget, let alone under budget. It is absolutely essential that there be a future opportunity for the general public, at least in those communities where there will be one or more major new facilities constructed (if not in all communities participating in this project) to have input on the detailed drawings for the facility (ies), before the drawings are sent out for tenders. I would argue that we require public input on other types of developments once drawing are sufficiently completed, so why should this wastewater project be exempt from this requirement. Otherwise, one or more communities could face the potential of having to live forever with an ill-designed project.....

I am writing to congratulate the "back-room boys" at the CRD for coming up with such a brilliant set of site options that, if people react as anticipated, will have the majority of votes going to their preferred option of a single plant on the BC Hydro/Transport Canada site. On first blush, the wording of the 8 provided, personal priority options looks really wide and reasonable. However, I would suggest that the authors of the online survey know that many of the priority options tend to be "philosophical". Only the choice " How the project costs will affect my taxes" really hits respondents immediately on what the direct impact will be on them. I believe the bureaucrats hope that most people, except avid environmentalists, will gravitate to this financial aspect as their top concern. If that happens to be actually the case when the online survey results are tabulated, then that will, in turn, likely mean that the majority of respondents will have chosen a single plant option. Any good bureaucrat would have known from the beginning that presenting the public with only two or three plant site options would have resulted in screams. So, to still keep the bureaucrats' preferred option (some form of the one plant option) as the likeliest option chosen by the public, they made sure that all other options would be considerably more expensive. However, the wild card for the bureaucrats is the seven plant option that they know will attract a relatively large number of votes. If this happens, the bureaucrats are hoping that the politicians on CALWMC will be too scared to approve that option because of the huge negative backlash that will come from everyone else due to the totally unacceptable tax load created by Option #7. So, in advance of the results of this whole public consultation process, I would ask the CRD bureaucracy to take a bow! In various materials provided as part of the consultation process, there are parallel photos of a digester and a gasifier, with captions "What could a "digester" (or "gasifier") look like?" The digester photo does not name where this actual unit is located, indicate it capacity, tell its actual height (it appears to be at least 75 feet tall), or advise the viewer whether the pictured digester is the size likely needed by the CRD. Similarly, the gasifier photo does not name where this actual unit is located, tell its capacity, or advise the viewer whether the pictured gasifier is the size likely needed by the CRD. What is important to note, however, is that it is easy to tell that the pictured gasifier is only 4 stories in height. Why is the above missing information critically important? The answer is because people, in completing either the questionnaire or online survey, are asked to choose which of the two technologies they prefer. Without any other information, respondents are forced to rely on the photos to make their decision and would most likely choose the gasifier simply due to its apparent low height, in comparison to the huge height of the digester that no person would find acceptable in Rock Bay or, for that matter, in any other populated area of the CRD. Long and short, I would argue that all questionnaire and online survey responses related to gasifier and digester matters should be totally ignored when compiling result, due to inadequate information provided to respondents in advance and due to the biased nature (intended or otherwise) of the two photographs in question.

Consider Rock Bay for an arts district

B.C. Hydro's remediated lands at Rock Bay total 1.73 hectares. This is probably one of the last really large parcels near downtown that will ever be available in the foreseeable future for redevelopment. Before deciding to use much or, worst still all, of the site for sewage-processing facilities, we need to ask the bigger question: Are there other potential uses that would yield even greater long-term economic and social benefits?

For example, this area could be designated as our future entertainment district. Imagine how the area north of Chatham Street would change if this site became the home of a new Maritime Museum; a performing-arts centre with state-of-the-art, multiple performance facilities inside and outside overlooking the waterfront ; a training facility for students of ballet, theatre, music and art; new museums.

These types of core activities would, in turn, attract a wide variety of other activities to the area, such as restaurants, banquet facilities and art galleries. Instead of a dead sewage-treatment zone, we could have a fun area where people would love to go and be any time of day.

Many of the existing arts facilities in Victoria are old and inadequate and need to be replaced. If we don't plan now for where these types of activities should occur and be built over the long term, then the health of our whole arts sector will suffer.

Ian Back
Victoria

NOV 24/15 T/C

CORRESPONDENCE

I attended the Burnside Gorge meeting on Feb. 14, and wanted to reconfirm my input values to the survey I completed online several weeks ago. Discussion with the CRD engineer at the open house and info at the meeting has help confirm my opinions. I live in the Selkirk waterfront (330 Waterfront Cresc) so Rock Bay 2 locations are very close.

Site location: I have no strong opinion on the "3-4" Rock Bay sites. It should be chosen for best overall project cost impact, ensuring flexibility for construction to mitigate cost over runs. (I believe the Store front location may have native rights issues to acquire site and the stretched site layout may increase construction cost so it may not be best one)
Solids Handling: This should be done at the Heartland site using a pipeline. Heartland is better suited to integrate with other activities that happen out there and ensure that power generated is easily tied into a power grid. Power may also be generated from the other garbage. The heartland site seems to have synergies that can be incorporate with the solids processing. Bring food wastes into the Rock Bay site will increase truck traffic in a congested area of the city and this increased traffic noise is a concern for me.

I support tertiary treatment. It seems like the right thing to be doing for the environment (treating of drugs and other chemicals that end up in the waste water). As planned mitigation of noise, smell, traffic and the final layout (visual) , including minimizing of excessive & harsh lighting are important to me. Beatification of the streets and surrounding area is desired to increase pedestrian/ cycling use enjoyment.

I believe I read or heard that in 50 years (long after me) there are plans for increased waste water handling in area outside Rock Bay to handle future needs. Future needs are important to consider in today's plans.

I have no comment on all the surrounding area plant sites

Subject: Don't lose an opportunity to replicate Vancouver's successful Granville Island and False Creek

Decades ago, Vancouver's False Creek and Granville Island were heavily industrialized lands that blighted the landscape of the nearby shoreline. Today, these areas are a delightful part of Vancouver, and a central core to many of the city's best offerings.

The area south of Bay Street is similar to the False Creek and Granville Island that once was. With the Store Street Site soon-to-be remediated totally, and given the area's proximity to downtown, the ocean shoreline, the Gorge waterway, etc., this area is positioned as an ideal place for future development in Victoria for higher density residential units, parks, museums, walkways, etc.

The sudden inclusion of the BC Hydro/Transport Canada site as the location for a wastewater treatment facility, under all 7 of the CRD's options, is distressing.

No one lives at South Rock Bay, so perhaps politicians feel that it is easier to suggest this alternative than Ogden Point, Clover Point and other sensitive areas near residential properties. However, to turn these lands over for a wastewater treatment plant is a travesty for future generations of Victorians.

Keep it entirely 'public'. No P3s.

Against Privatization:

We need transparency with our wastewater system. Environmental responsibility is a key factor in wastewater planning and should not be left to profiteers behind closed doors. We need more public jobs to support BC families. We need to know exactly where our taxes are going and the taxpayers have a right to employment from those funds. We don't want a shady corporation who can flee when things go wrong because it will be BC taxpayers cleaning up the mess. Keep it local, keep it green, and keep our own people employed!

NO P3s they are a ripoff.BC AG C.Bellringer's report states the obvious reasons to keep this project publicly owned.

Treatment happens naturally in our receiving event, thus treatment is not necessary. Continue with Source Control Programs. Big waste of money if constructed. If it is wastefully construction, then at the very least it MUST BE PUBLICLY RUN; absolutley no privatization or P3.

We desperately need a solution to the sewage waste created by those living in the city of Victoria. This is an opportunity to build a state of the art sewage plant. We could even be the first city in the world to use waste as a fuel for our transportation system. Also, storms and seawage discharge will become even more common in the furture as global climate changes progresses. We need action on the development of a sewage treatment system in the capital city of this province and we need it now.

Attention: LIndsay Taylor

Because the time is short and I cannot get the paper version of the survey in time to you, I would like to give you a brief opinion on wastewater (sewage).

I Live in Victoria.
Importance: 1. level of water Quality... environment.
2. How the project ...taxes.
3. Opportunities...recovery.
My choice is Number 5,,,,(seven smaller plants) This seems very acceptable to me: Smaller, multiple plants, shorter distance of liquids being piped, use of land already in public realm 45% tertiary treatments in some plants, and the greatest return of income, plus the best use of resources.

the most acceptable would be 7plant followed by 4 plant with east Saanich and then three plant with tertiary.

Some thoughts: It seems to me that as each developer of a previous non-resident area (such as Royal Bay) should be taxed to pay for some form of treatment IN HIS DEVELOPMENT AREA. Or, put in a tertiary treatment as part of the development. It can be put underground and the area above would be dedicated as a park, or green space. Isn't there already a treatment in the McPhillips subdivision? Development should be halted in Royal Bay immediately until a treatment centre is installed as part of the condition of development. Why should the taxpayers have to foot the bill for someone's profit?

In Fullerton, California, the sewage treatment plant is a tourist attraction, no smell.

Treatment of solids could be spread about the region. They could use both the Anaerobic and Gasification systems in the CRD perhaps half and half, if suitable. Use the energy produced to serve the local area. It's about time Victoria caught up with the rest of the world.

Dear Lindsay,

I would like to submit a few comments to be included in report.

First, as an ex-committee member of the EPAC- I resigned from this committee because of lack of leadership and, decisions were being made without the knowledge of the Eastside Public Advisory committee. The first round of Ipsos Survey questions were up and running prior to being vetted with the committee. There was a lack of leadership from our elected officials from the beginning of the Public Advisory meetings - adopting Roberts Rules and functioning without a Chair or Vice Chair for months.

Second, I don't believe there is any transparency in this process. A perfect example is how the timelines don't match - public sessions and survey finished on Feb 20th doesn't coincide with the Final reports on sites, costs & technology being presented CALWM committee on Feb 24th, and final reports to the Province on the 29th. How is the public to respond in an informed way by the 20th when the information that has been sadly lacking is presented on the 24th.

Clearly this is not a fair and transparent process that has final decisions coming after public sessions are completed. Also, how does a taxpayer make a decision on Options when they all include the same site? Where is the comparison??

In closing, I would like to add that this year marks 10th year involved with ensuring a fair & transparent process is adopted. As an engaged citizen with The Process it seems to me that if the same people are directing the end results, and outdated information is being stitched together and used as a foundation for the Plan, we will never have the meaningful consultation that the public has been demanding from the CRD.

I believe the operation and maintenance of the final product should remain in public hands rather than with a private company under contract. Tehre have been too many horror stories, cost overruns, local govts taking over because private companies do not do their job to the same standard. They are more interested in profit as their bottom line. It does not pay to go private. Having a private company build the plants under contract would be fine, however, but not to operate them. Operation should be left to local govts of some sort and civic workers.

Hi,
I previously attended a workshop at Burnside-Gorge and an open house at Esquimalt City Hall and spoke with representatives of the engineering firm (Urban Systems) present at each. I submitted comments online earlier today. However, my comments pertaining to processing of solids were fairly long and it was difficult to ensure they were coherent, given the comment format (1 line visible, no chance to review in entirety) on the survey website. I thought I'd better also email these comments, which may / probably look similar to the ones I submitted online. I hope I don't contradict myself!
I was pleased to see reference to "gasification". My initial concern is that the technologies under that general umbrella term vary greatly and the public guide doesn't reflect that. For example, there are pyrolysis technologies at the demonstration or newly-commercial stage that far surpass older technologies with respect to: (1) smaller footprint and ability to be increased in capacity over time (2) ability to handle a highly variable organic feedstock (including municipal organic waste) and be reliable doing so (3) producing more than just gas and electricity, (i.e., bio-oil similar to diesel, gas, and biochar) and (4) increased energy recovery. The proportion of the different products is controllable via reaction temperatures and other conditions. If heavy metal input is minimized (generally considered to be a minor issue in the CRD), the biochar is "clean", i.e., organic "emerging" chemicals of concern that have been examined have been destroyed in the process. The biochar can be a very good soil conditioner. It can contribute to soil carbon sequestration and potentially improve soil productivity or it can be combusted to provide energy. Soil carbon sequestration or increases in soil productivity may not be considered a benefit from the CRD perspective, but are a societal benefit.
In the survey, we are given a choice of anaerobic digestion or "gasification", told that one or the other would be located at one site, either Rock Bay or Hartland, and asked for an opinion. Respondents, by and large, won't appreciate the range of gasification approaches (including footprint and suitability for use in multiple locations in conjunction with liquid waste treatment) and will express preferences based on incomplete, if not misleading, information. It may be possible to have smaller-footprint cost-effective pyrolysis plants at each of several liquid waste treatment plants, if that path is taken; if so, that changes assumptions about how many and where solids plants should be. This isn't fairy-tale stuff. An analogous approach (small power plants fueled by pyrolysis of biosolids and organic waste) is under development in Birmingham UK. I'm concerned the limited choice of options in the public guide and survey and the responses to those limited choices will bias any report proceeding to the CRD liquid waste committee.
The survey states that the CRD should "canvass the market" to determine cost-effective and environmentally-beneficial alternatives. This is imperative. CRD must, not should, do this. The survey also states that information from that canvassing exercise can provide "possibilities" but also states, "these are not proposed options". Perhaps this means options for this survey. Otherwise, it sounds like the canvassing exercise will not matter. I hope that is not true!
My final point is that the CRD may decide arbitrarily not to consider solids processing technologies that don't have a minimum of 5 or 10 years of "proven" "reliable" "operational" service. I understand the need to be conservative. However, older anaerobic digestion and gasification technologies come with their own problems, including capital expense, an inability to effectively deal with problems inherent in sludge and municipal organic waste, and poor recovery of resources. It would make far more sense to slowly and thoroughly examine newer technologies that can effectively deal with these problems and maximize resource recovery in the process. Then, select a new technology that has good evidence of performance, even at a demonstration level, rather than select something that is "proven" operationally (to be mediocre) and be stuck with long-term costs. Pyrolysis technologies have advanced a great deal in the past few years because there is such a need world-wide to minimize the environmental impacts of 8 billion humans' waste and to recover the energy and other resources contained within it. Those improvements and associated testing should shorten the time needed for a technology to be considered "proven".
In short, if necessary, delay the commitment to a full-fledged single biosolids plant if it means ending up with something much less costly and more effective environmentally.
So yes, canvass the marketplace for gasification (pyrolysis) approaches and emphasize the need to do so in this report, don't be wedded to the idea of 1 type of plant in 1 location, and be flexible in timelines and what is considered "proven" technologies. Better to be slow and get the right technology for the 21st century, rather than settle on something proven, but inadequate, from the 20th century.
I hope this is of some use.
Regards,

Please do not put the sewage plant in Rock Bay ! As waterfront home owners in Vic West we object to the potential dangers to the waters of the gorge and inner habour . Thank you for considering our concerns.

I am great disappointed by the set of commentaries and clearly much shaping is being done. I had expected better. Please know that my choice is not represented by the value set being presented as criteria for selection and justification.

Hi Lindsay,

As I mentioned in a previous e-mail, I took the survey and submitted it a number of weeks ago.
Afterwards I was left with more questions than answers.
The RITE a plan meeting on Feb 8th brought up a number of issues for consideration.
The CRD Surfrider meeting on Tues the 16th gave me further information.
Rather than fill the survey in again I'm summarizing what I consider important points.

We need to provide the best possible treatment; most effectively, efficiently, economically and safely; while best serving the environment at least environmental cost.

Tertiary treatment is most desirable. As the population grows more toxins, microbeads and microfibres etc. will enter the water system. Bring the water treatment to the highest standard now. It has been mentioned that secondary treatment facilities could be retrofitted for the purpose of tertiary treatment in the future but this would be a time consuming and expensive process involving yet more debate, studies and process work at increased cost even before construction begins. It has already taken decades to get to the point we are at now.

Gasification appears safer, more environmentally suitable and compact and a cost effective way of dealing with residual solids.
As I understand it much of the infrastructure is in place to transfer it to the Hartland Landfill site.

Provide the best distribution of outfall sites to deal with infiltration and inflow after severe rains so that the water doesn't have to go back into the wastewater treatment system. Make repairs to existing conveyance systems

Rock Bay is pivotal in each of the options we are given. We need enough majour treatment sites to: provide back up for system failure resulting from earthquake situation, and adequately provide for the needs of growing outlying communities. Sites that are available now might not be years down the road. Use the sites that have already been approved or that have expressed an interests in development for water processing and multi-use facility. Optimize the use of existing conveyance infrastructure providing upgrades where necessary.

Thanks for providing me with this venue to more precisely express my concerns and preferences.
Wishing you and the team all the best of success for the outcome of this process.

1. Has the new federal government re-confirmed the Conservative's mandate that Southern Vancouver Island must provide sewage treatment by 2020? We understand that the new Prime Minister does NOT support this.

2. Has the new government confirmed financial support for sewage treatment?

3. Has the new federal government been contacted to request an extension of time if this must proceed?

4. All of the sewage proposals for construction and operational costs drastically exceed the affordability for the cities and citizens. Wastewater treatment must be affordable.

The Core Area Wastewater Survey presupposes that we are in favour of the land-based sewage treatment approach. We are unable to complete the survey because we are opposed to the proposed treatment approach.
Recent findings by DFO researchers have determined that the current proposed multi-billion dollar land-based approach will have a negligible benefit to the marine environment thus there is no justification to pursue this folly.

The CRD may lobby the DFO to reclassify our outfalls from high risk to low and use the time to allow scientists to carry out further research and to reduce even further the already negligible harm to the marine environment by preventing the mixing of stormwater and wastewater and identify and reduce/eliminate point sources of toxic materials before they enter the wastewater.

Sincerely,

I wrote the letter below in June of 2014. Rather than spend time rewriting the basically same opinion I had then, I am simply sending the same email again. Some of the names of agencies may have changed during that nearly two year period, but my suggestions, reasoning and sentiment have not, so below are my opinions of the best way to approach the issues if they actually require a solution, which I am not convinced they do. Personally, I still think this project has been rushed into, pigheadedly, without the right people at the table, and that now would be a perfect time to go back to the federal and provincial governments and ask for additional time to have the whole matter proper evaluated, in terms of its value relative to its costs. I still believe source reduction is much better than trying to remove the most dangerous elements in sewage after the fact. A billion dollar program of education, collection of toxic materials, and updated grey water segregation would go a long way in reducing the amount of materials to be dealt with, and the toxicity of it.

However, if we must develop sewage treatment facilities, small is beautiful. It reduces the amount of movement of the materials, and the infrastructure to do that, it allows for pinpointed treatment, it allows for even distribution of impact, and it requires smaller landmass per unit.

My 2014 commentary follows below:

Sometimes amalgamation makes sense, economically, environmentally, logistically while maintaining fairness, and yet sometimes it does not.

I have maintained that sewage treatment is NOT on of these, for numerous reasons. Municipalities within the CRD differ considerably in the demographics within them, the residential density, industries, even the concentration and types of pharmaceuticals which might be used. By allowing each municipality or groups of municipalities to determine their sewage treatment, the methodologies can be fine tuned to their needs. One population might wish to pay added amount to bring the system to a higher level than required by the federal and provincial laws. One area may have greater issues with certain types of water pollution than another. By being able to customize to the population density and demographics, better treatment options may be possible.

Doing so may also reduce the amount of distance the sewage has to travel. It can also reduce the impact any one neighbourhood has from the treatment facility, since each can be smaller, and how and where the sewage sludge will be dealt with. Basically, it it just fairer for each municipality to be responsible for it's own populations sewage.

There are also other advantages to such non-centralized systems, budgets will be more personalized and deal with within a smaller district, making individual municipalities and their politicians more responsive and responsible to their citizens, a variety of treatment technologies can be used, and as such the larger community can learn which work better for their purposes. Further, should retrofits be necessary over time, they can be done in smaller increments and at different times, as required. Should there be a failure of one system, due to breakdown of equipment, floods, earthquake or other disaster, it may be possible to shuttle sewage from other districts to a different treatment facility temporarily.

Final costs are an issue I am unable to directly comment upon. Would a centralized save money? I have my doubts. Whenever a massive project with nearly $1 billion involved and several layers of government, waste creeps in. I suspect this has already been the case with the CRD involvement. I also suspect that the committee, by is nature, and form may contain the wrong mix of people to be making these types of decisions. Hopefully, municipalities will bring in experts and stake holders to make better use of the funds. It appears to me the CRD has become way too politicized and stuck in their approaches, and too afraid of scraping bad ideas. There is a type of momentum that develops in such dynamics that can cause things to run off the rail, which is what I believe may have occurred. Too many politicians and to many egos dealing with too much money and not enough knowledge or understanding. And perhaps too many outside consultants who see dollar signs over efficiencies. Also, the CRD, as a non -elected body, can get away with bad decisions by pointing fingers. Municipal politicians do not get that luxury.

As a result of the above, I am writing in advance of next Wednesday's CRD meetings urging you to support the motion put forward by Director Desjardins.

I believe centralized sewage treatment is an error, and that a moratorium on the Seaterra project is needed so that a sober reconsideration of the options can be considered and acted upon. I think new eyes are needed to prevent the entrenchment which appears to be taking place, and that the other financial stakeholders (provincially and federally) should be told that there is not consensus and that time is needed to establish another game plan, even if it somewhat alters the timeline of the completion of the projects.

Individual municipalities, or smaller groups thereof should be provided with some small grants to begin to look into the options open to them, and Seaterra should be suspended during that time. If each municipality can develop their own viable costed option, Seaterra should be disbanded at that time or developed into a coordinating agency for money transfers and the like.

Rushing into a likely bad decision to meet an arbitrary final date would be a irrevocable mistake. Now is the time to wind down and regroup to avoid that.

Thank you.

The CALWMC has provided several options shown below for the public to consider and state their preferences. The current (phase 2) process started with good intentions but has now been shown to be flawed and misguided:

- Sites were selected via a public consultation process that did not provide necessary or sufficient information for the public to make truly informed choices
- One site selected in the flawed process became a key component of all options to the exclusion of other viable alternatives
- System layouts developed for the selected sites by the consultants lacked innovation and imaginative design
- Concepts have not been developed to the appropriate level of detail by the consultants as required to prepare reliable cost estimates or to provide sufficient information for an engaged public to make informed decisions
- Suggestions from the public for alternative concepts have been rejected before obtaining detailed information and without proper evaluation
- Alternative options proposed by private proponents have not been included
- Cost estimates for treatment prepared by the consultants seem grossly inflated compared to costs for the previous McLoughlin option and other options provided by private proponents
- Cost estimates for additional conveyance infrastructure needed for the listed options have not considered the significant construction impacts and ongoing risks imposed on the residents and businesses located adjacent to the pipeline routes, particularly along Cook Street, but also in Esquimalt and Victoria West
- The cost savings and revenue generation potential of an integrated resources management (IRM) approach using advanced gasification has not been considered

	ONE PLANT	ONE PLANT	TWO PLANT	THREE PLANT	THREE PLANT	FOUR PLANT	SEVEN PLANT
	Rock Bay **Secondary**	Rock Bay **Tertiary**	Rock Bay & Colwood **Secondary & Tertiary**	Esquimalt Nation, Rock Bay & Colwood **Secondary**	Esquimalt Nation, Rock Bay & Colwood **Tertiary**	Esquimalt Nation, Rock Bay, Colwood & East Saanich	Langford, Colwood, View Royal, Rock Bay, East Saanich, Saanich Core & Esquimalt
CAPITAL COST	$1.031 billion	$1.131 billion	$1.088 billion	$1.125 billion	$1.1776 billion	$1.195 billion	$1.348 billion
OPERATING COST	$21 million	$26.4 million	$22.8 million	$23 million	$24 million	$25.3 million	$26.6 million
EST. ANNUAL INCOME	Up to $0.9 million	Up to $0.9 million	Up to $2.4 million	Up to $1.6 million	Up to $3.8 million	Up to $3.8 million	Up to $4 million
QUALITY OF WATER AFTER TREATMENT	**90%** secondary, **10%** tertiary for water re-use	**100%** tertiary for some water re-use	**80%** secondary, **20%** tertiary for water re-use	**90%** secondary, **10%** tertiary for water reuse, **100%** secondary at Colwood	**100%** tertiary at Colwood, **90%** secondary at Rock Bay & Esquimalt Nation and **10%** tertiary	**75%** secondary, **25%** tertiary for water reuse	**55%** secondary, **45%** tertiary for water reuse

The CRD must reject the options shown above and continue with an open inclusive consultation process in an IRM context. Other options are viable and could provide significantly greater benefits to the residents for lower capital and life cycle costs.

I noted that the 2030 costs of over $250 million (per Appendix D from a CALWMC meeting) for each option was not included as a line item in the citizens guide estimated costs or in the survey.

When I asked at a workshop why it was excluded, the Urban Systems person said it was related to "different funding". That is nonsense as we are discussing capital costs.

To exclude these costs is a significant omission of pertinent facts and indicates a lack of openness and clarity in presenting information in a citizen's guide and survey for the taxpayers.

The costs are relevant as the best case for construction is:

- Decision on option 2016
- Approvals complete 2018
- Start construction 2019
- Plant(s) commissioned 2023
- Major upgrade of the plant 2030

A major upgrade of any plant 7 years after commissioning is extremely relevant in any business decision (wastewater or otherwise). To dismiss the above by suggesting the 2030 costs are not relevant due to inflation and discounting is inappropriate as nominal costs are easy for the taxpayer to understand and do no make any assumptions.

I wish to add my name as a Saanich Resident that I support the key concerns over public ownership of the wastewater treatment system as expressed below:

- Public ownership and operation have been a key theme throughout consultation, CRD residents clearly see the importance of public infrastructure and that should be honoured.
- While ideally the entire project would be publicly owned and operated, we ask that the CRD honour their previous commitment and not have any expansion of the P3 portion of the project.
- We remain concerned about the existing P3 and would like to see a plan to transition the solids-energy recovery portion into public delivery as quickly as possible. 30 years is too long for a private corporation to make money off of CRD resident's sewage.
- We remain concerned about the oversight commission lacking transparency and accountability. Once the commission begins their work there should be some type of feedback mechanism in place for the public that is structured and broadly accessible

Core Area Liquid Waste Management Committee:

It is very distressing to see CRD elected officials and staff blindly going forward with an unnecessary, ill-advised, and inappropriate project. In so doing, you have already wasted an unconscionable amount of public funds, propose to waste an unbelievable amount in future on a huge project with essentially no benefit, and are failing to do your jobs as elected officials and professionals,.

The federal regulations which are being used as the primary justification are poorly written, do not recognize the physical characteristics of the greater Victoria situation, and are not being applied correctly. It is the responsibility of elected officials and CRD professionals to challenge such inappropriate application of inappropriate regulations.

The strong statements of a large variety of independent scientists and professionals against this proposed project are a clear indication that something is seriously wrong with what is happening. These experts have no vested interest one way or another on this issue, and in some cases risk negative consequences of speaking up. The ongoing unwillingness of elected officials to consider and act on this input is truly shocking.

You are strongly encouraged to change course on this insane process and engage the province and federal governments with a view to starting over with a realistic assessment of the need and consideration of options for the future.

Yours truly,

Sorry – your south Vancouver Island system is so dysfunctional I'm not going to support it with yet more "input". Stupid, inefficient and stunningly expensive are the applicable concepts. You guys couldn't organize a piss-up in a brewery.

We are on septic and pay all our costs for maintenance and upkeep of this system. We have been told we will never get on a city sewage line. I am very concerned about my costs for this sewage treatment plan as I will never use it. I understand the "greater good". But I need to be able to afford this as well. Please please please keep our cost down!

Hello Councillor Judy Brownoff,

As a Saanich taxpayer and resident, I would like to express my support for Nels Jensen's motion to include McLoughlin Point and its provincially approved plan in the option set for treatment sites and plans. It may not be chosen, but I believe it should be put back on the table as a viable option. As a member of the GVWWC, I participated in the process and public consultations for the original sewage treatment plans and site options. There was much good work done in those years. The CRD must honestly consider all options and then make a decision and get this project moving forward. I along with many of my friends and neighbours are anxiously awaiting the outcome. Let's make it one we can be proud of.

Respectfully submitted

Re: Wastewater treatment

For reference, I am a Civil Engineer with 25 years experience including wastewater treatment, general infrastructure and management of large projects.

I am concerned that the planning process had identified at a preliminary basis a possible treatment plant site for Clover Point, however when design options were presented to the public (i.e. now) this option has not been pursued. I have reviewed the publicly shared information and have seen reasons why various sites were dismissed, but NO BASIS for relegating or rejecting the Clover Point site. WHY has no design case been developed or costed for Clover Point?

I do recognize site space may be limited but could be increased either through:
- expropriation of nearby lands; or
- "reclaiming" land from the ocean / building into the ocean somewhat. This is a very common practice (e.g. Netherlands).

Advantages of using the Clover Point site include:

[1] no piping of sewage to Rock Bay or other locations
- associated cost and disturbance impact savings
- associated reduction in pumping costs FOREVER
- faster construction time

[2] existing land use is as an outfall
- no need for rezoning or issues with community pushback regarding zoning
- no increased exposure of a community to sewage exposure than there already is

[3] likely faster permitting and construction (see #1 and #2)

[4] dollars spent will be more effective towards treatment instead of towards buying pipes and ripping up roads, parks etc

[5] likely MUCH lower capital cost (land, pipes etc)

[6] likely MUCH lower operating cost (pumping sewage to Rock Bay etc and pumping effluent back to Clover Point)

I also recognize that the Clover Point site may or may not not be suitable for the Westside sewage flows, however if that is the case there are alternate West Shore sites available and under separate consideration.

I look forward to a rigourous response to address this concern. thank you,

I agree with Robert Drew's February 14 op-ed entitled "Rock Bay sewage-plant site makes no sense."

McLoughlin Point was a comparatively remote waterfront site. Rock Bay is in the heart of our city, and its site has higher and better uses than a sewage plant. A spill at Rock Bay would risk contamination of our upper harbour. The building of a pipeline from Rock Bay to the ocean outfall at Clover Point would entail digging a massive trench through the heart of downtown Victoria, at great cost to our economy and especially our valued tourist industry.

I urge you to reject the Rock Bay site.

Respectfully yours,

WE attended the session with options at the session on January 30, 2016 at Gordon Head United Church. We asked several questions of someone who gave only vague answers to our queries. We found this session premature as there are other options in our view to consider. They were not on display. At this point we would be most reluctant to see a system in place that is not 100% tertiary treatment.

I'm less than satisfied with the options the CRD is now proposing for sewage treatment. The workshop at UVic last weekend was ridiculous. Those who organized it had to field a lot of questions, and often the response was, "I have it, and I'll get that for you" - information that should have already been on the screen.

Details about further costs to the taxpayer post 2030 were brought up by an audience member. But not included, nor were the tax implications for citizens based on where they live. Lame excuses from the organizers as to why this info was printed or on the screen. "Tertiary treatment requires more energy" - so what? and then the notion of heat recovery was dismissed because of the low cost of natural gas at present. What??? Tertiary treatment will remove micro plastics which few of us think about .... a sleeping enemy of ocean life. I don't agree with Rock Bay. I don't understand why all choices have been narrowed to this one site, for ALL the options you propose.

I've followed this exercise for over a year. I don't understand why existing outfalls and pumping stations didn't make the grade for a reasonable distributed system.

I also fail to understand why the CRD hasn't been more forceful in educating all citizens that noise, smell and appearance are not to be feared; by presenting existing examples from other parts of the world, where sewage treatment plants co-exist very nicely with resident neighbours or in parks. This lack of education certainly influenced resident's feelings and therefore, choices of not-in-my-backyard, resulting in the current poor options, in my opinion.

Proposing to incur $200 million for new pipes to Clover Point is outrageous; not to mention disruption of a major artery like Cook Street. I know, the CRD hasn't identified that as a route; but we all know that's the plan.

I'm told the CRD thought it was too costly to pipe from the Vanderkoeve property on W Burnside, yet supports piping from Clover Point to Rock Bay.

The CRD board of politicians decided 10 acres would be required for a treatment plant - how did they arrive at this number?

If you listen to the RITE group and Mayor Attwell, there are reasonable alternatives. And what about the latest proposal for Clover Point by the Crystal Clear group of respected local professionals?

Whoever is running the CRD show - and that includes politicians who are eager to get this done without due diligence - AND DUE CONSIDERATION OF COST IMPLICATIONS TO ALL TAXPAYERS - don't have my trust.

And finally, the online survey is a joke.

I would like to take the survey as advertised in today's OakBayNews(January 20) but none of the web sites have the survey .Having said that,I am quite dismayed at this headlong rush for treatment when their is no demonstrated need for it nor a solution to the residual sludge problem(dumping it in Hartland is no solution !) . Also,why are you looking at Rockbay as a site ?Do you seriously think such a facility downtown and at the head of the Gorge and at the bottom of the inner harbour is a good idea ??As for funding from the Feds and the province,does anyone seriously think they will not provide funding when push comes to shove ?Creating this hysterical atmosphere and then landing on dubious sites and ultimately saddling the taxpayer with huge tax increases is really a dubious proposition.

Jansens suggestion to use Mcloughlin Point makes huge sense.If the CRD really wants to be pushy ,then that is an issue they should dig their heels in on.The site makes the most sense.Of course the issue of what to do with the sludge would still need to be dealt with.What does every other waste treatment plant do with their theirs?Surely we don't have to reinvent the wheel on this issue !?!

How does the CRD reconcile the methodology it has chosen to estimate cost per household with the actual method adopted by the City? As well, the CRD currently uses the water consumption figures provided to it by the City in assigning sewage fees to the citizens of Victoria, and not simply dividing costs by the number of households.

You are planning to spend (more of) OUR money UNWISELY .... Please respect and LISTEN TO THE CONTRARY VOICES (UVic scientists, ARREST) and invest INTELLIGENTLY to maximize the genuine benefit to our local environment while protecting the WALLETS of we municipal citizens, many of who will be struggling to stay in our homes in light of our tough economy and spiralling taxation and cost of living ... Thankyou for minding we ofttimes silent and struggling majority

A dogma that rejects the potentials of innovation has been leading this project.

The CRD knows that advanced gasification as part of integrated waste/resource management is cheap compared to anaerobic digestion. The latter ranges in costs between $250 and $350 million. The former ranges in cost between $50 to $100 million. So, why then did the CRD not hire true expertise in this area? The "expert" who costed the "gasification" system at $233 million hasn't ever designed or implemented such a project.

Another example of the dogma that rejects innovation has been the lack of consideration for the benefits of tertiary treatment. Once the water is clean and ready for human contact it can be discharged locally. Just like the system that Urban Systems designed in Tsawwassen.

These two alone have lead the CRD to ignore, suppress and hide any potential vendors that might compete with the $250 million proposal, the Biowater/Pivotal proposal, that the CRD has been aware of since, at least, June 9 2015.

Chair Lisa Helps wrote an oped and stated
"At the end of this year-long process, there remain on the one hand those whose only acceptable option is a fully distributed tertiary system with advanced gasification sites scattered throughout the region. Our consultants and technical oversight panel — all highly qualified, capable and independent professionals — have considered this option.

They've found that there are many elements of this proposal that can be incorporated into whichever plan we land on. But they've given us their independent, professional opinion that the proposal doesn't meet current provincial regulations."

From http://www.timescolonist.com/opinion/op-ed/mayor-lisa-helps-sewage-train-is-headed-safely-for-the-station-1.2165135

If the statement "Our consultants and technical oversight panel ...(have) given us their independent, professional opinion that the proposal doesn't meet current provincial regulations." is true and if the process is fair, open and transparent then there must be a body of evidence to support the statement. Since the rejected proposal's goal was to save 100's of millions of dollars and this sum is so staggering, one can expect the body of evidence to be substantial and well documented.
I have asked the Chair and many others in the CRD for this information some time ago without an answer.

Next, think back to Phase 1 where sites were selected. This "public process" was conducted without giving the public anything they needed to know. What is the cost? What size will it be? Will it be above or below ground? Will it be secondary or tertiary? Will there be water amenities? etc etc. None of these questions had answers for the public. This was noted by CRD Directors:
· Absent real cost information, people chose a site thinking they had real cost information. Young
· We were ill advised to do what we did as the public had no capacity to evaluate the sites Derman
· Very hard for the public to pick sites based on the information we provided Brownoff
· Some of the now eliminated sites would still be there if people had known they were part of a small decentralized system. They were fearful Plant

A few recent concerns from the Transparency and Fairness Advisor have raised concerns about the process. Most notably the survey. The Eastside Public Advisory Committee (EPAC) did not review that survey. (Due largely to a completely unrealistic compressed time schedule.) All they saw was a schematic layout for a few pages of the survey. They certainly were not asked to review the question that forced people to "chose three options" without the option to select none of the above. Because of this problem and the switch, mid-stream, to allow for "none of the above", The Transparency and Fairness Advisor has said the survey results should not be used as a quantitative measure; it can only be used qualitatively.

The entire process risks being rejected because it fails to comply with statutory mandates. The cost estimates according to the TOP are not even Class D. (Feb 13th CALWMC meeting).

The cost savings and revenue generation potential of an integrated resources management (IRM) approach using advanced gasification has not been considered even though its potential has been known for months if not years.

The CRD must reject the options they have proposed and provide more information on solutions that use innovation to save 100's of millions of dollars.

The annual estimated cost per household has been calculated by the CRD at $509 for Victoria, including annual debt and operating costs. This was calculated using a projected population equivalent (PPE) of 135,609 divided by 3 PPE to obtain 45,203 households.

However, the City of Victoria calculates our sewage fees on the basis of our total annual water consumption. Using the City's methodology, and our annual water consumption figures reveals that my wife and I, in a single family house with a small yard, currently pay 45% more than a couple in a condominium, because of our lawn, shrub and tree watering, even though our respective sewage contributions to the system would be the same.

On that basis, the cost to a couple owning a singe family house with a small yard could be over $700 per annum... not $509...higher than any other municipality...most of which do not use total annual water consumption to calculate sewage fees.

How does the CRD reconcile the methodology it has chosen to estimate cost per household with the actual method adopted by the City? As well, the CRD currently uses the water consumption figures provided to it by the City in assigning sewage fees to the citizens of Victoria, and not simply dividing costs by the number of households.

What happened to the Haro Woods plan? That property was purchased by Saanich specifically for a treatment plant for the Finnerty Cove outfall. Waste water could be diverted from Gyro Park back to the Haro Woods plant. It could treat more than half of the waste water generated by Saanich and treated effluent discharged via the Finnerty Cove outfall or piped along to Clover Point.

Proposing a central plant around Cedar Hill X Road and Shelbourne is just a plan for a revolution.

I think the whole topic of treatment is questionable in the first place. Previous scientific research, carried out by highly qualified professionals demonstrated that the current outfalls have minimal impact on the ocean receiving environment.

I do not believe that the operating costs are accurately reflected in the plants selected. My experience has been that operating costs are more in the range of 8 to 10% or capital costs. That would almost triple the proposed operating costs stated in the estimates. This is a critical item because operating costs are not covered by any grants. it would virtually cripple the Victoria citizens if they had to pay an additional $1000 per household for operations let alone the capital and replacement costs of the system.

There are a lot of options to review and the CRD has done an inordinate amount of work to evaluate the most effective systems. How this area knelt to the ground because one municipality decided that they did not want the treatment plant where it already is has me baffled.

I like the concept of optimizing recovery of heat, treated water and combustible by products of treatment but ONLY if we have to treat. I am not convinced that the federal government or the provincial government is prepared to enforce treatment. How could they accomplish that?

I prefer to delay this project until a more cost effective and environmentally practical treatment methodology is available.

So , went and checked out the storefront after leaving the mtg and brought home the info sheets. Apparently the display boards were on the way but apparently the pictures are the same as ones on the website , will check it out. I hope the physical set up becomes more interesting and what is presented a consequence of time shortage not lack of interest in getting public feedback (no paper or pens in view,not even a computer to be seen .(who is in charge of this public engagement-- ? The press announcements yesterday would make you think it was a big deal but sure isn't the impression at the site.Nice young woman at the door and I did put my name in the draw for a paddle board tho.I wonder wasn't a consultation layout ready to go in Dec. and what did that have on offer? I was prepared that the motion to add McLoughlin would not be debated today but do wish it was available for viewing somewhere. Hope I didn't disappoint with my bit today and don't know what happened to xxxxx and xxx . So many points to make but ultimately I hope the people who have to pay start to hear there is a project ready to go. Isn't that what this latest salvo is about? Cheers

Verbal Feedback from Storefront:

- There are too many options, it is too confusing
- Want more Eastside materials
- Online survey not user friendly
- McLoughlin should be here
- I'd like to see the flow boundaries of where the flows lead to
- What about Colwood residents on septic? Will we have to pay?
- I'd like to see a topographic map with elevation
- The CRD is misleading people by saying wastewater goes down the drain as that water can be re-used
- There should be the household costs per municipality for each option largely displayed
- I have a concern re: trucking and piping to Hartland
- Why was there no mention of commercial or business annual cost in comparison to the resident cost?
- When will infrastructure be improved so that cross contamination and overflow of sewage no longer occurs (Cordova Bay) closed most of last winter!
- It has been over 15 years that Uplands residents fought to avoid upgrades. When will this issue be resolved?
- No Hartland (no pumping) should treat at Rock Bay
- What do we do with our sludge?
- There should be mock up of plants - what would it look like?
- There should be size of plant footprints available
- I do not think we need to treat
- I think this is ridiculous that we are still talking about this - need to move on with it
- I'm worried about how this will affect my taxes
- How much have we already paid for this and how much and for how long will we be paying?
- Household costs - are they the same after 30 years - inflation?
- We should look at the kinetic proposal and the Clover point site - why would we pump from clover to rock bay to treat?
- How and where is the storm sewer connected to the sanitary sewer and is there a possibility of the reverse of this flow?
- 'East Saanich' is misleading because it is not a municipality
- Misleading information for public in citizens guides
- If Colwood can do tertiary without outfalls then why can't others?
- Where in the circled area would the saanich plant go?

1. a) When/how was the testing carried out to say that we need to increase our treatment levels?
b) Are these requirements federal or provincial?
c) What we the conditions during testing? For example, a hot summer day, a windy day, during the dick migration?
2. a) Please explain the tendering system.
b) He would like it to be implemented where a third party expert creates the blue prints and designs, and those documents are put out to tender. That way everyone is bidding to do the exact same work.
3. a) How will this project be funded? Where does the loan come from? What is the interest? What do the monthly payments boil down to?

- b) He would like to see or talk about the amortization plan.
- "Why are we spending so much time and effort into sewage treatment, when I believe that this is not necessary, is there any proof or evidence from knowledgeable people justifying an expense of this nature?
- I believe there is more revenue needed for education and health, these should have a priority over sewage treatment
- SEWAGE TREATMENT IS NOT NECESSARY, OR HASN'T BEEN PROVEN TO BE NECESSARY"
- How does primary, secondary and tertiary treatment differ when it comes to prescription drugs being taken out of the wastewater?
- Infrastructure Question: When will the infrastructure be improved so that cross contamination and overflow of sewage no longer occurs? (example: Cadboro Bay closed most of last winter!) It has been >15 years that uplands residents fought to avoid upgrades. When will this issue be addressed?

Verbal Feedback Through Phone: Why would you disrupt Rock Bay? Why wouldn
't we put it at Clover Point? The CRD is doing nothing and never will. I have no faith that this committee will make a decision. We should be looking at the Kinetic proposal at Clover Point.

Verbal Feedback Through Phone: I would like to know more about the present operating costs (including the costs of monitoring). How could our current system be improved? I&I? Source Control? Improve the system by getting people hooked up to the system. There's already acidification in the ocean. In terms of opportunity, if we need to have a plant, it would be nice to have a learning centre where people can learn about the treatment process, ocean issues and climate change.

Verbal Feedback Through Phone: I think that we should sponsor people from the government to meet the UVIC scientists to discuss how they do their sampling (including the Mayor of Seattle). We need evidence based decision making and we should not be pressed into a decision because we've been designated as high risk.

Verbal Feedback Through Phone: I support a 100% tertiary process (1B). I prefer Anaerobic Digestion. Any plan that is with Esquimalt as a Saanich resident I want nothing to do with. Saanich is the closest to Farmlands - I would support a Saanich going alone option if Esquimalt remains as part of this process as they will continue to disrupt. I would prefer to keep solids processing at Rock Bay.

Public Consultation Summary Report

Core Area Wastewater Treatment Project

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Victoria, BC, Canada V8W 2S6
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Westside Public Engagement Summary Document

Introduction

The Westside Select Committee launched the Westside Solutions Project in October of 2014. The Select Committee participants initially were from Colwood, Esquimalt, Langford, View Royal, and Songhees Nation. Esquimalt Nation officially became part of the Committee in the fall of 2015.

The scope of the Select Committee included both technical and public engagement activities including:

- Evaluation of existing technologies
- Evaluation of treatment levels
- Evaluation of resource recovery opportunities
- Site selection criteria
- Site selection
- Public engagement for wastewater and resource recovery options

Throughout the process the Committee has operated in an open and transparent fashion and has endeavored to inform, educate and involve Westside residents and stakeholders in decisions about Westside wastewater treatment and resource recovery.

During Phase I of the project the Westside Select Committee undertook a number of successful initiatives to fulfill their mandate, including open houses, innovation days, roundtables, community events, and online and telephone surveys. The public input around these programs helped guide the information and concepts that have been brought forward into Phase II of the overall project for the Core Area Liquid Waste Management Committee (CALWMC) of the Capital Regional District (CRD).

Phase II has consisted of a more thorough technical evaluation of possible sites and scenarios for wastewater treatment for both Eastside and Westside communities. As of January 13, 2016, the results of the technical work has been part of a concentrated public engagement process that was guided by an approved set of sound principles and clear objectives – recognizing the challenges in delivering a program of this size and complexity in a short period of time.

Over the course of the entire process to date, and through the efforts of municipal staff and consultants, thousands of residents have participated in the public consultation process.

- ✓ Principles:
  - Accessibility
  - Transparency
  - Diversity
  - Expanding Civic Literacy
  - Clear decision-making process
- ✓ Objectives:
  - maximize public engagement on sites, scenarios and costs
  - educate options benefits/drawbacks
  - educate on resource recovery options
  - identify further information requirements
  - engage a wider demographic for wider public feedback
  - identify and address concerns of citizens
  - Solicit constructive input to help guide decision making
  - general public acceptance

Overview

Methodology:

To help reach and engage the maximum number of Westside residents a number of tactics were engaged. These included utilizing earned media and paid advertising done in conjunction with the Eastside, social media, open houses, Westside newsletter and targeted meetings. Materials specific to the Westside along with a more comprehensive guide to the options was made available online, at public events, and at municipal halls and the CRD.

Survey:

The broadest reaching engagement tool was an online open survey targeted at residents across the Core Area. The survey was designed to give citizens the opportunity to examine and evaluate the seven options put forward for treatment of liquid waste and the two possible locations and technologies for treatment of solids. The options were developed by technical consultants, overseen by the Technical Oversight Panel and approved for consultation by the Directors of the CALWMC.

- ✓ Earned media
  - Press releases
  - Editorial meetings
  - Events
- ✓ Social media
  - Twitter
  - Facebook
  - Web sites
- ✓ Paid advertising
  - Black Press
  - Online TC
  - Used Victoria
  - Facebook
  - Postcard drop
- ✓ Targeted meetings and open houses
  - Community/neighbourhood associations
  - Business associations
- ✓ Online feedback
- ✓ Newsletter

Participation	Westside % just Westside communities (n=361)	Westside % to total participation across Core Area	Westside % of population in Core Area
Westside overall	100	27	28
Esquimalt	34	9	5.6
Colwood	26	7	5.7
Langford	24	6	11.9
View Royal	16	4	3.7
Songhees Nation	<1	<1	<1
Esquimalt Nation	0	0	<1

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Westside Wastewater Treatment & Resource Recovery

A total of 361 residents completed the online survey. While there was higher percentage of participation per population by Colwood and Esquimalt residents, and a lower percentage of participation per population by Langford residents, the overall participation by Westside residents is virtually equal to its population.

Liquid Treatment:

Acceptability for liquid treatment - Westside residents	One plant secondary	One plant tertiary	Two plant	Three plant secondary	Three plant tertiary	Four plant	Seven plant
Very acceptable	33	34	23	9	10	5	6
Somewhat acceptable	35	32	30	20	17	18	9
Not very acceptable	14	14	18	29	23	23	16
Not at all acceptable	17	16	26	38	46	50	66
No opinion	2	4	3	4	4	4	3
Very + Somewhat Acceptable	***68***	***66***	***53***	***29***	***27***	***23***	***15***

Please choose 3 options, in no particular order, that are in your view, acceptable options for wastewater treatment.	Pre-change	Post change
Two Plant - Rock Bay &Colwood - Secondary & Tertiary	69	51
One Plant - Rock Bay - Tertiary	70	47
One Plant - Rock Bay - Secondary	62	43
Three Plant Esquimalt Nation, Rock Bay & Colwood - Tertiary	25	20
Three Plant - Esquimalt Nation, Rock Bay & Colwood - Secondary	21	15
Seven Plant - Langford, Colwood, View Royal, Rock Bay, East Saanich, Saanich Core & Esquimalt	13	10
Four Plant - Esquimalt Nation, Rock Bay, Colwood & East Saanich	10	11
No answer	9	33

WESTSIDE SOLUTIONS
Westside Wastewater Treatment & Resource Recovery

Solids Treatment:

Preference for solids treatment site	West %
Hartland Landfill	35
Rock Bay	37
No preference	28

Q. Please rank your top three considerations among the following:	Top consideration	Top 1st, 2nd or 3rd consideration
Truck traffic for moving solids	20	42
Ability to be integrated with waste like food scraps, wood and construction waste, yard waste	16	41
Proximity of facilities to residential and business	13	42
Disposal of treated solids	11	45
Ability to generate resources like gas	13	35
Potential emissions	12	34
Piping to move solids	6	28
Ability to integrate into place	8	24

Priorities:

Ranking of your HIGHEST, SECOND HIGHEST and THIRD HIGHEST priorities for this project.	Highest priority	Highest 1st, 2nd or 3rd priority
How the project costs will affect my taxes	45	75
Level of water quality being discharged into the ocean	26	51
Opportunities for water reuse and heat recovery	9	43
Location of the treatment plants	10	36
How the treatment facilities will integrate with my neighbourhood and community	5	24

Completing the project on time	4	30
How construction will impact the quality of life in my neighbourhood	1	12
How truck traffic will impact the quality of life in my neighbourhood	0	12

Open Houses:

Westside hosted four Open Houses for Westside residents and participated in a joint Open House at Songhees Wellness Centre with the Eastside. The Open Houses were not as well attended as the ones hosted last year at this time – however there was a very interested and engaged public that did come to the events. As well – it should be noted that all the Open Houses were well supported by municipal staff and politicians.

Participation	Date	Attendance
Langford	February 10, 2016	~20
Songhees Wellness Centre (Joint with Eastside)	February 11, 2016	~30
Colwood	February 13, 2016	~75
Westshore and Esquimalt Chambers	February 15, 2016	~20
View Royal	February 15, 2016 (AM)	~30
Esquimalt	February 16, 2016	~85

Correspondence

Residents of the Westside who were unable to attend the Open Houses and/or were unwilling to complete a survey were encouraged to email coreareawastewater.ca, staff or consultants to voice their concerns and ideas. As most emails received did not specifically identify were the respondent resided it is difficult to quantify which proportion of those who wrote in were from the Westside. However, it should be noted that themes coming from correspondence coincided with the quantitative data collected through the survey and at Open Houses.

All correspondence will be made available in accordance with *Freedom of Information and Privacy Act.*

Qualitative Themes:

1. Financial

The priority concern of Westside residents is perceived cost escalations for the overall project. This issue was exacerbated by the comparison to the previous plan in spite of it being at a more preliminary stage in the process (the initial estimate for the previous plan was $1.2B in 2007) and the claims put forward by citizen advocates of a less costly solution.

There are also concerns by citizens regarding the cost allocations published with the options and that they were unfair to smaller municipalities. Specifically there is a great deal of anxiety for those on septic and what, if anything, they

should contribute to the overall system. This is a particular concern of Colwood residents as 70% are currently not on the sanitary system – but as there are those on septic in Langford and View Royal there are potential impacts there as well.

The issue of protecting the grants was raised occasionally – however people who participated in the events were more concerned about getting the scale of the project to the right size and then convincing senior levels of government to support that plan financially.

2. Environmental

In spite of the financial concerns there is still a great degree of concern for the quality of discharge into the environment. Concerns mainly centre most notably around the discharge of pharmaceuticals and micro-plastics, their impact on wildlife and the aquatic eco-system, and potential impacts on human health. Regardless of costs – there are a substantial number of residents who would be willing to pay more to do what they see as the right thing and protect the environment.

There is also a substantial interest in the opportunities for recovery of both heat and water. Particular interest to residents is not only the potential for both benefitting the environment, but also creating a revenue stream to offset costs. Of recovery potential – water reuse was the most mentioned by participants.

3. Community impacts

In July of 2015 Westside Solutions conducted a public education and survey on proposed sites for wastewater treatment on the westside. From that consultation sites were narrowed into the six (6) that were part of the current initiative. As residents had already weighed in on site selection – there was very little negative feedback on Westside sites.

As well – because of the previous technical and public engagement work done on the Westside there is an interest by some members in the community to pursue a “Westside Solutions” that would have a single plant that would treat wastewater generated on the westside, and potentially all wastewater currently being discharged out the McCaulay outfall.

In earlier engagement events, the Westside has put an emphasis on community integration. While residents are always concerned that there will be a negative impact – there is a much higher level of comfort that any facility can be a positive addition to a neighbourhood, and not a negative. However, concern over impacts of truck traffic and disruption during construction must be acknowledged and minimized during construction and in operation.

4. Other

Other issues that were raised with some frequency at events include:

- confusion on why Rock Bay is in every option
- no analysis of impact on business taxes
- no analysis of impact on tourism if the stalemate continues
- frustration over conflicting information
- frustration of the length of time it is taking to make a decision

WESTSIDE SOLUTIONS
Westside Wastewater Treatment & Resource Recovery

Conclusion

The Westside Select Committee's engagement strategy for the current phase of the Core Area project was built on a number of previous successful public engagement initiatives. As well as collaborating with the Eastside on the survey and advertising, over the course of the past few weeks the participating communities promoted activities and materials on their websites, at municipal halls and through social media; hosted five (5) Open Houses (including a joint Open House with the Eastside); communicated directly with community associations and citizens in person and through correspondence; and participated in a breakfast meeting with members of the Esquimalt and Westshore Chambers of Commerce.

Key themes that emerged include:

- concerns over costs and cost allocations;
- how application of costs will affect people on septic systems;
- concerns around discharge quality and having a treatment level that deals with substances such as pharmaceuticals and micro-plastics; and
- opportunities for water re-use and energy extraction.

There was very little negative feedback from participants on the proposed sites either in this round of engagement, or in the earlier SiteSpeak online survey that appears to speak to an understanding that facilities can be integrated into communities successfully. As well there is some interest, primarily from members of the business community, to further explore a "Westside Solution" with a single facility to treat wastewater generated by participating west-side communities as per the Engineering consultants report delivered to the Select Committee in November, 2015.

Public sessions were fairly well attended, had a cross section of residents – including many new faces - and were very respectful. It was clear that people who come to the public events came to learn more about the issue so as to contribute positively to the solution. It noted and appreciated by many citizens that the Westside public events were very well supported by municipal staff and politicians.

APPENDIX D-3

EASTSIDE COMMUNITY DIALOGUE

wastewater treatment + resource recovery

PUBLIC CONSULTATION

Eastside Wastewater Dialogues | February 2016

PHASE 2

Making a difference...together

CONTENTS

INTRODUCTION

Meaningful infrastructure planning involves citizens, in particular those whose lives and communities are most affected by decisions on large projects. In this case, our consultation team has engaged the public on conceptual plans for federally and provincially mandated wastewater treatment to serve the Core Area of the Capital Regional District.

Involving citizens does not remove decisions from the hands of identified subject matter experts and elected representatives. Instead, it provides the public with genuine opportunities for input.

More opportunities to seek input can improve transparency and leave both decision-makers and the public with improved technical and planning literacy and a deeper understanding of the issues, ongoing concerns and priorities surrounding major projects.

Beginning in September 2015, the consultation team in support of the Eastside Select Committee (elected directors from Saanich, Oak Bay and Victoria) commenced planning for a second phase of consultation and engagement on specific option sets for wastewater treatment and solids processing in the Core Area. The team was tasked with creating a plan for taking option sets – developed, costed and sited – to the public for input and to test "acceptability" and listen for support and challenges.

The second phase of public input was initially scheduled for December, and then December and early January 2016. Despite the fact that promotion and outreach for consultation had begun in early December, due to ongoing CALWMC and technical deliberations, the consultation was re-scheduled for a period of one month between January and February 2016. Much of the information that would form the basis for public input, was available in near to final drafts on the CRD website and visible to the public for review from late November on, including costing information that was released in late 2015 and early 2016.

New option sets emerged in mid-January for inclusion in the consultation process.

While the first phase of consultation used deliberative approaches to surface priorities, challenges, values and ideas in the strategic planning of this infrastructure, this phase was intended to address the public's interest in more information around specific sites, proposed activities, levels of treatment and costs. It was also developed to test the acceptability of conceptual solutions for treatment and resource recovery. In short: we were asked to test options that had emerged through a municipal, technical and public process and then to subsequently gather public input and report back.

This document describes the approach for analyzing and reporting on the feedback provided by public participants in the Eastside process from January – February 2016, and to outline how it intersects with overall public engagement across the Core Area. It describes the process for planning and carrying out engagement activities and for reviewing and analyzing data generated through that process. This reporting is presented to help inform decisions by the Core Area Liquid Waste Management Committee and its constituent municipalities related to wastewater treatment in the Capital Regional District.

SUMMARY OF EASTSIDE PARTICIPATION

Participation in workshops, open houses, storefront drop-ins and meetings: **260**

Storefront: **185**

Participation in survey overall: **1357**

Survey participation from Eastside communities: **937**

Questionnaires and feedback forms: **68**

We will share:

- Approach and methodology
- Planning for Consultation
- Activities
- Themes and Priorities
- Challenges and Opportunities
- Appendices and Resources

APPROACH AND METHODOLOGY

Background/ Project Foundations:

The CRD and its municipal partners have engaged the public across the Core Area, to gather input that will inform decisions about wastewater treatment solutions. The work of engaging citizens has been divided between Westside and Eastside Select Committees, the latter including Victoria, Saanich and Oak Bay. Our approach starts from the perspective that durable solutions have three components: they are technically and practically feasible, municipally sanctioned and publicly supportable.

Following the previous unsuccessful attempts to advance treatment and resource recovery, the member municipalities of the Core Area Liquid Waste Management Committee, in collaboration with the CRD, committed to engage citizens in the identification of sites, planning approach and levels of service that would be used to treat wastewater. The foundational approach to this renewed effort was to broaden and deepen public involvement where there was a sense that both municipalities and key publics needed to be involved earlier, more deeply and with greater transparency throughout the process.

Timelines were established that allowed the process to meet deadlines set by the federal and provincial governments. At this time, provincial and federal contributions are available to offset a portion of local government investments, providing the Capital Regional District achieves a solution that meets already-established federal and provincial criteria for municipal-scale wastewater treatment and completes all political approvals and amendments by March 2016.

In summer 2015, using the suite of sites that had been advanced by the three Eastside municipalities, and the information we learned from the public about base principles for site acceptability, and models for treatment and recovery, the technical and planning team from Urban Systems team began to analyse and iterate loose option sets, to test assumptions, and offer potential directions forward for further study and analysis and feedback. The Urban Systems team developed models based on the existing “sewer sheds”, analysis of flow scenarios, and available land, and identified approaches for treatment and recovery. The approach enabled analysis and costing of several key options that reflected the bundles of the priorities, siting information and values that were provided through public input.

Following this first phase of engagement, the team of technical consultants, the Technical Oversight Panel (TOP) and CRD staff took public, technical and municipal input from phase one, and worked to forge, fine-tune and assess

option sets. They were guided by the development of a project charter that set goals and commitments for the work.

Following this work, a second round of engagement has provided citizens with the opportunity to compare multiple concept based option sets , including design elements, and approaches for resource recovery and energy generation, in order to inform the final decision. The level of detail was increased due to citizen requests during phase one of consultation. Accordingly, phase two provided detailed information including: specific sites, a comparison between costs (life-cycle and household), benefits and performance between secondary and tertiary treatment, an expanded set of centralized and distributed models of delivery, and information about two models of solids processing: anaerobic digestion and gasification.

The initial targets agreed to by the Eastside and Westside Select Committees asked that all public engagement in the first phase be complete by late July 2015, and initially, that all subsequent consultation be complete by December 2015. The second phase of consultation was delayed by ongoing deliberation on technical, municipal and costing information related to option sets presented by Urban Systems, the TOP and CRD staff. Accordingly, the second phase of public consultation was not given a go ahead until January 15th, 2016. Following this decision, the team planned, scheduled and promoted activities to launch public consultation by January 25th. Seven wastewater

option sets and two approaches as well as sites for anaerobic digestion and gasification were prepared for public for input and dialogue. Consultaiton activities were completed by February 20th with an initial report to the CALWMC by February 22, 2016.

Approach in Brief:

The challenge of such an undertaking in a short period of time is significant given the great variation among the Core Area's population in terms of expertise in the subject matter, awareness about the issue, and ability to participate in face-to-face activities. Despite this challenge and the difficulty of engaging multiple communities in an extremely short period of time, the process resulted in over 1300 touchpoints across the Eastside over 26 days.

There are two important considerations that guide understanding of this second phase of consultation on wastewater planning for the Core Area.

- First, the second phase of the project July 2015 – February 2016 has been guided by a project charter, developed and sanctioned by the Core Area Liquid Waste Management Committee. It outlines the commitment to treat wastewater by 2020, as well as goals and commitments in project planning overall. Public input informed the charter, alongside political and technical considerations.

- Second, while citizen engagement in the first phase of project planning looked at upstream explorations of the infrastructure planning (core values, priorities, challenges and desired outcomes) the second phase dealt mainly with how the project could proceed at the level of concept – specific options for review and input related to site, levels of treatment and approaches to resource recovery. Again, the lens was designed to identify options that were technically and practically feasible, municipally sanctioned and publicly supportable.

The mandate of the second phase of consultation was to provide the public with an opportunity to see and comment on a range of potentially practical options that emerged from the analysis of the consulting technical team of Urban Systems and Carollo and Associates and the Technical Oversight Panel (TOP).

The public was provided with summary materials and the capacity to review all technical background and detailed technical investigations online at www.coreareawastewater.ca. Our team was open to all input, and solicited feedback on trade-offs and comparisons on costs, levels of treatment, sites and possible approaches to solids processing.

PROJECT CHARTER

The project is guided by a set of goals and commitments that have been identified by CRD staff, elected directors, and informed by citizen and stakeholder input.

THE GOALS ARE TO:

- Meet or exceed federal regulations for secondary treatment by December 31, 2020
- Minimize costs to residents and businesses (life cycle cost) and provide value for money
- Produce an innovative project that brings in costs at less than original estimates
- Optimize opportunities for resource recovery to accomplish substantial net environmental benefit and reduce operating costs
- Minimize greenhouse gas production through the development, construction and operation phases and ensure best practice for climate change mitigation

THE COMMITMENTS ARE TO:

- Develop and implement the project in a transparent manner and engage the public throughout the process;
- Deliver a solution that adds value to the surrounding community and enhances the livability of neighbourhoods;
- Deliver solutions that are safe and resilient to earthquakes, tsunamis, sea level rise and storm surges;
- Develop innovative solutions that account for and respond to future challenges, demands and opportunities, including being open to investigating integration of other parts of the waste stream if doing so offers the opportunities to optimize other goals and commitments in the future; and
- Minimize greenhouse gas production through the development, construction and operation phases and ensure best practice for climate change mitigation

Planning for Consultation

Citizen advisors – the Eastside Public advisory Committee have served as a wisdom council and sounding board in the development of the public consultation process, materials and promotion of the process. They gave input in the development of a phase 2 plan and have received draft materials for review, but as often, the pace of the process has meant they are offering constructive strategic input without an expecatation of sign off. Members of the Committee have also been concerned with the governance and mandate of the committee over the last four months.

Planning Process - Input

We sought input from the Eastside Select Committee, the Technical and Community Advisory Committee and the Eastside Public Advisory Committee in the development of a phase 2 public engagement plan.

Education and Outreach in Advance of Consultation

We were asked to reach out to stakeholder groups in advance of the second phase of consultation. We met with the Burnside Gorge Residents Association, the Gorge Tillicum Residents Association and the Gordon Head Residents Association. We reached out to all community associations through our existing lists and SCAN – the Saanich Community Association Network, promoted participation. We also brought back architect Bruce Haden alongside local architects from Cascadia Architecture, to deliver an educational conversation about possibilities for wastewater, architecture and urban design in the region. Plans for outreach to schools and broader community groups were challenging in the face of deadlines and schedules. Newsletters and email updates to a growing eastside list provided updates as they were available to citizens and organizations in advance of consultation.

Core Principles:

Based on our work to date and the feedback from participants, consultants, elected directors and citizen advisors, this phase of work was grounded in key principles. These include:

1. Accessibility: We are committed to ensuring that clear information – technical, costing, performance, governance – is made available to citizens in a range of formats and accessible to a range of learners.

2. Transparency: Ensuring that all project information is made public in as rapid and clear a manner as possible.

3. Diversity: In the context of public problem solving, diversity refers to the different skills, knowledge, and

interests of participants, as well as ethnocultural background, age, and economic backgrounds. Diversity is essential for effective public problem solving.

4. Expanding Civic Literacy: That we make a sincere effort to reach out to the broader community with basic information about the role, importance and basic technical info about wastewater treatment. We will attempt to expand knowledge and engagement throughout the exercise.

5. Clear decision-making process: Being extremely clear about how public input is gathered, reported and how it feeds decision making by whom and when.

Methodology for Phase Two Consultation

At the next level of detail, the consultation methodology was organized around several commitments including:

- To identify the timelines and the decisions to be made and by whom;
- To ensure participants have access to information and multiple opportunities to offer input;
- To inform the public of the conceptual alternatives and identify key trade-offs;
- To provide a range of types of engagement to allow people with varying levels of time and commitment to participate; and
- To solicit input and reflect it back to the public and decision-makers rapidly.

ACTIVITIES IN DETAIL

Website – CoreAreaWastewater.ca December 2015
Feedback on the website during earlier phases of consultation, resulted in the CRD streamlining its online presence for wastewater planning and developing a direct and focused address to point the public to activities and resources. This became a clearinghouse for the latest planning information and engagement activities.

Storefront – Centennial Square CRD offices
January 26 – February 19
Because of the rapid nature of the consultation and the season, we determined that it would be important to provide a stop for citizens seeking information, resources, questionnaires and accessibility to boards and other materials provided at open houses. We were open weekdays from 11-7pm and some shifts on the weekend to ensure that we provided access after working hours . As well, we used the space to host various stakeholder meetings, a media launch and briefings. Through sign ins and daily counts we estimate 185 drop-ins to the CRD storefront.

Open Houses and Workshops – January 30 – February 17
We held a range of open houses and 90-minute workshops during the period of consultation. At each open house we had engagement and technical staff present provide briefings, answer questions and listen to input. These sessions included:

- January 30, Gordon Head United Church – Open House (40 participants)
- February 9, Burnside Gorge Community Centre – Workshop (22 participants)
- February 10, Victoria Conference Centre – Workshop (26 participants)
- February 11, Songhees Wellness Centre – Open House (26 participants)
- February 13, University of Victoria, Cadboro Commons – Workshop (35 participants)
- February 14, Burnside Gorge Community Centre – Open House (22 participants)

Focused Briefings with Community Organizations and Stakeholder Groups February
We reached out the Saanich Community also held a range of stakeholder focused briefings that including:

- January 25, Burnside Gorge Community Association Briefing (12 participants)
- February 12, Victoria West Community Association Briefing and Dialogue (30 participants)

- February 12, Rock Bay Business Briefing (2 participants + 5 calls and door knocking discussions)
- February 14, Burnside Gorge Community Association, Residents Briefing and Dialogue (22 participants)
- February 15, Greater Victoria Chamber of Commerce and Tourism Victoria Briefing (4 participants)
- February 15, Local place making, tech and cultural creative briefing (3 participants)
- February 16, Local conservation organizations (35 participants)
- February 16 CUPE briefing and conversation (5 participants)
- February 17, Burnside Gorge Residents Briefing and Dialogue (7 participants)

At each meeting we attempted to do the following: inform participants of the process and how their feedback would be incorporated; a briefing on all of the seven option sets and the two approaches and sites for solids processing; and an attempt to answer questions and gather comments. We offered questionnaires, feedback forms, an invitation to email thoughts and we captured comments and key themes via flipchart and detailed notes. The sessions varied in size, although common to all were smaller groups participating than in the first phase of engagement. We developed notes and themes from each conversation, which will be appended in the final report.

Self Selecting Survey January 25 – February 20

A self-selecting, open-link survey developed with advice from IPSOS Reid provided survey takers with information including municipally focused costing on each option, followed by a summary of concepts and their comparative performance. It provided a range of open-ended and multiple choice questions. This was a non-representative sample, and generated strongly-felt sentiments from those who seek to ensure that their positions are heard. There was a limit of four responses from each IP address to ensure that there was not at attempt to overload the survey with responses from one source. We were not tasked with asking participants to vote on options, but to share information and test options for acceptability and to gather commentary. We were not asked to test other options, but gave space for participants to opt out of questions or to provide detailed comments. The CALWMC decided to change a question at the mid-point in the survey. This had an impact on the results. The survey was developed with guidance from the citizen committee and was shown in beta and draft form to the Eastside and CALWMC. Questions were developed with assistance from Kyle Braid of IPSOS Reid. Despite the skewing of data from the change mid-

survey, overall the data provided quantitative analysis showing the most prominent issues in the minds of survey participants. The survey included open questions, which may identify additional areas of interest and concern in the minds of the public.

Print questionnaires: We distributed print versions of the questionnaire at all events, through municipal halls, at the storefront and on demand by phone or email. We mailed out dozens and picked up dozens at the municipal halls and other outlets. We included the data from the 68 completed print surveys.

Direct emails to wastewater@crd.bc.ca
We invited the public to send direct feedback via email, which was then subsequently coded for review and inclusion into the Core Area Report.

Promotion of Process
Ensuring citizens were aware of the opportunities to engage and could find our materials was a key pillar in our work. The channels we used to promote participation include:

Earned media
Media launch of consultation on January 26th.

Paid Media
Advertising in regional and community print media, radio ads and digital media.

Email Outreach
Using the CRD's list of community associations and individuals who expressed interest in the project, we would send out updates on all events.

Networks
Using networks through citizen advisors, directors and team members, we were able to promote the process and key events.

Materials Development
Developing videos, booklets and key information packages that offered visualization of challenging technical info.

THEMES AND PRIORITIES

Our goal is to provide an accurate reflection of the feedback from citizens on issues, themes and options for consideration by decision-makers, and articulate these in a manner that will assist subject matter experts and decision-makers understand their relevance for the decisions required.

There was a broad diversity of opinions, values and ideas expressed during the second phase of consultation. Examining all the data inputs, we were able to identify several strong themes that point to public priorities and concerns with the option sets and alternatives:

Levels of Treatment – Wastewater Treatment Options

Throughout our conversations in open houses and in workshops, via the written questionnaires, emails and as a finding in the survey, we heard a strong interest in tertiary treatment. This aligns with priorities gathered during the first phase of the consultation process around improving the quality of what goes into the ocean and an interest in water reuse.

There was specific concern identified for pharmaceuticals, household and industrial materials, micro-plastics and other chemical inputs and the ability to remove these inputs through tertiary treatment. Another line of inquiry focused on not simply meeting but exceeding government standards. Another theme identified a commitment to tertiary level of treatment in order to maximize the investment of infrastructure dollars and to prepare for future shifts in base requirements. Additionally, there were sentiments expressed around water reuse and future-proofing the region through a period of climate shift, and to recognize water as a valuable commodity now and in future.

Divergence:

Where we heard diverging streams on this theme was through

- questioning of the cost benefit analysis of tertiary versus secondary
- survey results showing nearly even support for one plant secondary and tertiary and lower for multiple plants
- survey results showing significantly higher support for one plant with tertiary treatment than for multiple plants providing tertiary treatment

Complexity, Cost and Options – Wastewater Treatment Options

Another rising theme for participants was the balance between cost, performance and environmental benefit. **This was manifest in support for one and two plant solutions** through the survey, during open houses and via questionnaires. Respondents weighed the impacts, benefits with cost overall and complexity of the options. Respondents reported that one and two plant options could provide increased levels of treatment and innovation with lower levels of complexity, conveyance infrastructure and environmental impact than options with more plants. The priorities articulated in a representative survey in spring 2015, identified priorities as preventing harmful materials from entering land and ocean and cost align with the public's ongoing balancing between cost and environmental performance. There was also a theme present around the opportunities to be responsive to growth or need in future, but while achieving a base level of service quickly. A number of participants discussed that while they are interested in possibilities for heat and water resource incomes with more distributed systems, they are weighing the costs and impacts of the operating costs and infrastructure. Many are coming down in favour of less complexity for one plant and two plant options with consideration for smaller plants in growth centres as need or opportunity emerges.

Divergence:

Where we heard diverging themes:

- interest in single plant but concerns for Rock Bay as a site and its need for conveyance to Clover Point.
- Concerns for resilience of single plant and scale of single plant sites versus smaller distributed sites

Feedback Re: Alternatives Outside of Wastewater Options Presented for Review

Many respondents provided strong feedback on the proposed options. The commentary coalesced around key themes:

1. A concern with rising costs;
2. Concern with siting , particularly costs and disruption of conveyance in Victoria;
3. Some respondents still feel that no treatment is required;
4. Interest in design alternatives, such as distributed systems and revisting sites already considered and rejected during phase one of consultation.

These themes and response can be summarized as follows:

“Return to McLoughlin”

In the context of media outreach by directors and a motion to bring this previous plan back to the table, we heard some commentary that supports reviving this option. We heard this in survey comments, via questions at meetings, and in emails and questionnaires. The interest in this option focused mainly on an assumption of lower cost in comparison to the options that emerged and were put in front of the public through the current and agreed upon process. Also, by siting at McLoughlin, some respondents argued it would avoid disruption of proposed infrastructure from Rock Bay to Clover Point.

“Innovation and Lower Cost Alternatives”

There is a group of community advocates who have been longtime observers of wastewater planning and past participants in this process. Individuals have attended some consultation events and have been promoting alternative options that feature other sites that were not advanced during this process. This group is interested in options like “deep shaft” technology that was explored by the Technical Oversight Panel as well as a $250 million fully tertiary distributed option proposed by several community members and reviewed by all the technical teams. Some citizens who attended public meetings have expressed doubt about the environmental regulations that call for redundancy of pipes. In summary, the commentary can be summarized as promoting a distributed option that would result in 100% tertiary treatment with less need for ocean outfalls or back up infrastructure.

“Concern with Conveyance and Cost”

Some participants focused on the fact that all the options required new infrastructure from a facility at Rock Bay to Clover Point. There was concern with the cost of the new infrastructure, compared to costs of infrastructure at other sites that are not currently under consideration, as well as concern with the possible disruption to the downtown core of Victoria.

“No Need To Treat”

Despite the commitment of the Core Area Liquid Management Committee, some people question the need for treatment and therefore the need for any additional infrastructure. Another theme of conversation emerged around delaying the investment in treatment until a later date. This theme appeared in comments and questions from some participants.

Solids Processing:

While the survey shows even support for solids processing either at Hartland or Rock Bay, we heard concern about these sites during community conversations and from emails and questionnaires.

1. Residents of Rock Bay and Burnside were concerned about seeing processing of solids in closer proximity to residential neighbourhoods, and identified piping to Hartland to minimize truck traffic and impact on the neighbourhood. Without more information about design and impacts on the local community, Rock Bay and Burnside residents opposed solids processing in their neighbourhood.
2. Overall, there was concern for safety and possible environmental impacts of both anaerobic digestion and gasification.
3. There was a strong interest in further study of the opportunities for integrating municipal solid waste with wastewater solids provided at Hartland.

STAKEHOLDER ENGAGEMENT

We met with a range of organizations and communities to try to ensure we could canvass a broader group than those who might be highly attuned to the conversation on wastewater, but who may be impacted by any decisions or approaches going forward. They included:

- Burnside Gorge Community Association, local residents and business owners
- Greater Victoria Chamber of Commerce and Tourism Victoria
- Conservation organizations including Surfrider Foundation, T. Buck Suzuki and Sewage Treatment Alliance
- Designers, urbanists and business owners
- CUPE

Burnside Gorge Community

Perhaps the most significant activity during this short period, and where we put a good deal of energy was reaching out to residents and business people in the Rock Bay and Burnside Gorge areas. We held two workshops, one open house, one lunch mixer and several focused briefings for local residents, as well as meeting with the Board of Directors of the Burnside Gorge Community Association. We promoted these events through:

- The listserv of the Burnside Community Centre through the support and assistance of staff and board
- On site flyers and leaflets
- By leafletting businesses and the surrounding neighbourhoods
- Through our existing outreach and mail drops, including print, radio and mail outs to every household.

We had approximately 12 residents at one workshop and 32 at two subsequent briefing workshops, with open attendance of approximately 20 at an open house. We have also received numerous emails and questionnaires from residents.

We provide information about the options, as well as the two sites in question: the BC Hydro/ Transport Canada site and the mix of sites at Pleasant Street, the Municipal Works and David, closer to Point Ellice. We discussed the footprint, proposed activities, the opportunities for mixed use on the sites, the benefits and implications of various forms of treatment.

What we heard:

- Residents of the area feel that there is a mistaken perception among people in the region and among decision-makers, that Burnside Gorge is a solely industrial rather than residential community. There were concerns about the long-term implications of siting a large wastewater treatment plant because:
  - » the neighbourhood has a higher density of renters who tend to be more transient and may not participate as vigorously as those in other neighbourhoods;
  - » there are residents who have barriers to participation based on economic need; and
  - » the neighbourhood is often seen as a destination for siting industrial, activities that other neighbourhoods reject
- There was also a concern that not enough time was dedicated to consultation and more detailed information about possible local impacts was requested.
- There were mixed levels of support and opposition to wastewater treatment, and strong opposition to establishing solids processing in the area. Participants expressed this through concern for increased construction and operational traffic, as well as concerns for environmental impacts closer to residential neighbourhoods.
- There was some expression of concern for the loss of the industrial waterfront, as well as concern about state of remediation on either site.
- There were caveats that could affect support for any wastewater project in the neighbourhood:
  - » A commitment to the highest level of odour and noise control
  - » Commitments to manage and mitigate construction disruption to a minimum of what was proposed for the previous project in Esquimalt
  - » Addressing possible risk to property values
  - » Selection of a site that will cause the least disruption to business and community with the highest benefit in terms of mixed use and recreation.
  - » Excellence in design including strong design input by the community through ongoing involvement in project planning

- » Place making for recreation, business, education and culture onsite
- » Meaningful amenities packages that bring benefit to community
- » Access to waterfront and desire for harbour path and improved connectivity between downtown and Selkirk neighbourhood

Business Voices:

We had challenges getting numbers of business people out to events but had a robust conversation with the CEO of the Greater Victoria Chamber of Commerce as well as a small number of business people in the Rock Bay/ Burnside neighbourhood. We promoted these conversations through existing Chamber networks and the local business list of the Burnside Gorge Community Association.

We heard that:

- There is concern about rising costs and challenges that could be posed to local business by conveyance infrastructure in the downtown core of Victoria.
- There is concern about the ability to implement options with high complexity versus a one or two plant option – multiple site option sets versus the previous plan and/ or the lowest cost option available through the existing options.
- There is frustration and fatigue with the pace and getting something done
- There is concern for the state of remediation on the existing sites.
- There is some interest in improvements to the business zones in Rock Bay, especially for businesses like food and beverage and breweries, and the possibility to bring more animation and customers to the zones. For some businesses close to the existing industrial uses, there is a hope that a new wastewater plant could address air quality and disruption challenges posed by the existing industrial uses.

CUPE:

Following a detailed briefing, the Canadian Union of Public Employees have provided a detailed position on the proposed options. It is attached to this report.

Conservation organizations:

A group of conservation organizations attended a briefing and offered overall feedback on the option sets.

- Many were concerned that the process was headed for more delay and being derailed. Get on with it – was a strong sentiment
- A commercial fisher and long-time activist asked to flag that secondary removes a lot from the effluent and asked that the fastest most approach be taken to expedite treatment.
- There were questions about McLoughlin and whether it is a better or more feasible site
- Questions about the possibility of a hybrid model – with secondary and tertiary add-ons and plants as needed
- There were questions about technologies for treating solids and questions about openness to technologies outside of gasification and anaerobic digestion, like fluidized bed. Commentary about high heat and ability to remove toxins from sludge was provided.
- There were questions about McLoughlin as a backup to the existing option sets.

- There were questions about the costing post 2030 and whether demand would require new infrastructure.
- Overall, interest in moving ahead and finding most expeditious model for getting treatment to improve marine environment.

Creative Focus Group:

A group of three local creative and place makers gathered to discuss opportunities for urban design and wastewater. One of the participants was a former wastewater engineer, who expressed a desire to see wastewater infrastructure celebrated and used to educate – both children and the public – on the processes that help the city run.

Another local creative imagined improved public connectivity through either of the sites in Rock Bay and into local neighbourhoods, as well as the possibility of co-locating tasting rooms for local breweries in a mixed use setting.

Challenges For Consultation:

The original plan for consulting residents of the Eastside communities were developed in alignment with best practices for consultation on large infrastructure projects, including:

- Sufficient time and notification;
- Ourtreach to communities that are challenged to participate;
- A welcoming environment including food and sufficiently detailed background materials
- Accessible opportunities
- Multiple touchpoints that allow for participation despite varied working schedules
- Online and in-person opportunities

There were numerous challenges posed by the consultation:

1. **Scheduling Changes**
   We reached out to communities, planned, scheduled and began to promote consultation in early to mid December. It was frustrating and confusing to some stakeholders that we had to cancel our activities and then reach out again to reschedule. In some cases, this undermined trust in the process and confidence that input would be appropriately considered.

2. **Period of Consultation**
   We were given a short period of time to plan, schedule and promote consultation as well as to implement the formal consultation during the period of a month. More time would have meant we could have reached more citizens and stakeholders, allowing for a fuller conversation and understanding of the various perspectives.

3. **Diversity of Voices – Consultation Framework**
   While it is expected and welcome to hear a diversity of voices with a range of perspectives during a consultation period, many citizens came to events feeling overwhelmed by the competing information in the public domain. They reported being confused by CALWMC directors who were promoting alternatives to those being presented as part of the agreed-upon process. This resulted in staff having to manage anger and confusion by stakeholders, as well as try to support learning and input on already complicated option sets.

4. **Balance of Information**
   We were tasked with trying to provide information in such a way that allowed those who areless involved to participate. We attempted to provide high level summaries and comparisons, while linking to more detailed technical information as needed. While some respondents reported being overwhelmed by information, others requested more detail. It was challenging to get the balance correct.

5. **Emotional Debate**
   We had highly emotional participants, who frequently yelled at staff during the consultations. This was to be expected, but where challenges became highly charged is when advocates tried to prevent other participants from filling out questionnaires. This became especially challenging for the team in communities like Burnside Gorge, where local residents wanted more information about sites and impacts, and residents from outside the neighbourhood sought vocal debate and challenge. While louder voices could dominate, quieter voices at open houses and in smaller groups gave us a good picture of the overall debate.

OVERALL FINDINGS

In summary, our team attempted to balance a range of perspectives, voices and the expression of positional interests. We stand by the data and synthesis of commentary through multiple channels. Many participants came to learn and give feedback on the existing options. Still others pushed for alternatives. We listened for the range of commentary and have tried to reflect it as clearly and carefully as possible. We thank the citizens who participated, most of whom were thoughtful, curious, engaged and care deeply about their communities.

This report has been prepared by the consulting team of Amanda Gibbs, Principal, Public Assembly in support of the Eastside Select Committee and Core Area Liquid Waste Management Committee.

APPENDICES – TO BE INCLUDED IN FINAL REPORT

1. Session notes and flipcharts
2. Questionnaires
3. Letter from Canadian Union of Public Employees
4. Verbatim results from Eastside
5. Eastside Consultation Plan
6. Minutes from Eastside Public Advisory Committee, TCAC, CALWMC related to consultation planning, as required.

CUPE·SCFP | Canadian Union of Public Employees
Syndicat canadien de la fonction publique

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Wastewater Planning Consultation Representatives,

Thank you for this opportunity to provide some feedback on sewage treatment in the Capital Regional District. As many politicians have noted this is the largest infrastructure project that the CRD will take on for the foreseeable future and getting it done right is important not only to current residents, but also for future residents.

CUPE Local 1978 represents approximately 950 members in Greater Victoria, and is affiliated to both CUPE BC and CUPE National. CUPE is the largest public sector union in Canada with 635,000 members nationwide.

CUPE has been involved in the process to develop a wastewater treatment plant for the CRD from the beginning. Our primary concern is that this new infrastructure be publicly owned and operated and we, along with allies and residents, have advocated for this all through the process.

While this phase of consultation has not focused on procurement, we want to ensure that decision makers are still mindful that public ownership and operation is important to CRD residents.

Below we have briefly outlined the reasons we believe publicly owned and operated infrastructure is the right decision for CRD residents and we have also included a few comments and concerns we hope will be considered moving forward.

Please do not hesitate to contact us should you need further clarification on anything below.

Thank you,

Rick Illi
CUPE Local 1978 President

Benefits to Publicly Owned and Operated Infrastructure

- **Protecting the environment and public control are linked.** Public control means the public interest, and not private corporate interests, will drive decisions. Local government decisions are most often done in public and are much more accountable and transparent than those made by private corporations. And in the end, environmental risk and damage always end up as a public concern and responsibility.
- **Privatization costs more.** Public-private partnerships or P3s are a taxpayer rip-off. They cost more than public operation. Private corporations take on P3 projects to make money. They answer to shareholders, not the public or taxpayers. Private financing costs more and the "mark up" for taking on risk and meeting profit targets adds significantly to the cost of P3 projects. British Columbia's Auditor General, Carol Bellringer recently offered strong evidence of this in her annual report where she found that government is paying nearly twice as much for borrowing through P3s as it would if it borrowed the money itself.
- **Taxpayers "run the risk" in the end.** If things go wrong, private corporations can walk away. Government and taxpayers cannot. We end up with the problem and ultimately pay to clean up the economic and sometimes, environmental mess.
- **P3s lock us into decades-long contracts.** They lock our local governments and communities in to 30-or-more-year contracts. This limits current and future generations having a say in a key part of their community. Multi-decade contracts also limit how flexible our communities can be in terms of using new technologies or responding to new information.
- **P3 deals are very complex and secretive.** P3 deals are secretive and negotiated behind closed doors. By the time they are finished, the contracts are huge and incomprehensible even to the staff of cities that are "purchasing" the service.
- **Focusing on local employment and economic development.** When private corporations run the show contracts often go to big corporations and we lose local investment, tax resources and jobs. We want local government to be able to offer the next generations challenging jobs that pay decently and allow the students of today to stay in our communities and have successful careers. Investing in public services is part of that.

Public ownership and operation as a theme during public consultation

There has been many opportunities for public input both when developing the current funded and approved plan, and also over the past year while the CRD has explored new options for sewage treatment. One thing that residents have consistently said is that this infrastructure should be publicly owned and operated.

Most recently during phase one of the consultation the survey for the Westside showed that the majority of respondents (67 percent) supported a public option. On the Eastside, open-link survey respondents ranked 'publicly owned and operated' as one of the top three most important criteria when developing a sewage treatment facility. And, at other engagement events where there was opportunity for dialogue there was talk about the provision of public sector jobs, and opportunities to keep water and heat resources in public hands.

CRD residents clearly see the importance of public infrastructure and that should be honoured.

No further expansion of Private Operation

During the initial planning phase for sewage treatment there was a robust discussion about procurement, and after hearing from residents the CRD board went ahead with a plan that included a fully public wastewater treatment plant and a P3 solids energy recovery centre. While ideally the entire project would be publicly owned and operated, we ask that the CRD honour their previous commitment and not have any expansion of the P3 portion of the project.

We have heard the commitment to maintain the current balance of funding with respect to limiting the P3 component to the solids-energy recovery portion. We were pleased to have this confirmation both in writing and as part of the Chair's report from Director Helps at the January 27 CALWMC meeting that other than the portion of the project that is already P3, the CRD is not contemplating expanding the private or public-private procurement or operating model portion of the current funding plan.

We believe that despite these assurances, it is critical to ensure that new P3 procurement opportunities do not arise as the project moves forward, for example as part of the Commission's mandate.

Private Transition back to Public

We remain concerned about the existing P3 and would like to see a plan to transition the solids-energy recovery portion into public delivery as quickly as possible.

CUPE suggests that any portion of the project that does go ahead as a P3 should be transitioned back into public hands in a timely manner. 30 years is too long for a private corporation to make money off of CRD resident's sewage.

P3 Funding

Although we understand that it is not the CALWMC's intention to re-examine procurement or funding options we would encourage elected officials to ask the new federal government if the $83 million committed to the solids energy recovery centre must remain tied to the Public Private Partnership fund.

It is our understanding that the new Federal Government is currently examining the P3 fund and its future. If the P3 fund was eliminated would the CRD be able to have an entirely publicly owned and operated project? Or would this project's funding be grandfathered and remain a P3? We believe these are questions that should be answered before moving forward with the procurement and implementation phases of this project.

Core Area Wastewater Treatment Program Commission Oversight

While we understand that the CRD is bound to have a commission in place to oversee the implementation phase of the eventual plan because of the Provincial funding agreement, if there is any opportunity to change the shape or scope of the commission we believe that this would be in the best interest of CRD residents.

Currently the commission has no elected representation, and we worry that in this form it could lack transparency and accountability. Once the commission begins their work there should be some type of feedback mechanism in place for the public that is structured and broadly accessible.

The Commission will also be in charge of procurement, and while the CRD's CAO has informed us that the Commission must implement the project based on CRD policies and the funding agreements in place, we want to reiterate that there should be no further expansion of private funding or operation.

Integration of Municipal Solid Waste

The Integrated Resource Management Task Force has been working to explore the potential integration of municipal solid waste with liquid solid waste and will report on their findings at the end of this month.

CUPE local 1978 members currently work at Hartland Landfill and should integration occur we have concerns around whether this would expand the private operation of this project.

The CRD should also consider the subcontractors and contracting out language in CUPE local 1978's collective agreement should they want to proceed with integration.

"ARTICLE 29, SUB-CONTRACTORS 29.01 All sub-contractors of the District shall provide wages which are at least equal to those specified in this Agreement when work of a similar or same nature is performed."

"ARTICLE 36, CONTRACTING OUT 36.01 No regular employee shall be laid off and placed on the recall list, terminated, or failed to be recalled to their classification as a result of contracting out."

cope491

CORE AREA WASTEWATER SURVEY
Summary Results
February 22, 2016

Background

This document is a summary of the 1,357 valid and complete responses to the Core Area Wastewater Survey.

A total of 1,390 respondents completed the survey before the deadline of noon February 20, 2016, but 33 of these surveys were dropped from the results because they came from IP Addresses with more than the maximum 4 allowed surveys per IP Address (note: the first 4 completed surveys from these IP addresses are included in these results).

Survey results shown are percentages rounded to the nearest whole number. Some columns may not add to 100% due to rounding. Some summary statistics may not match component parts due to rounding.

Survey results are shown among all respondents, as well as broken out by Western and Eastern Communities, defined as follows:

Western Communities (361 interviews)

- Esquimalt (121 interviews)
- Colwood (95 interviews)
- Langford (88 interviews)
- View Royal (56 interviews)
- Songhees Nation (1 interviews)
- Esquimalt Nation (0 interviews)

Eastern Communities (937 interviews)

- Saanich (465 interviews)
- Victoria (393 interviews)
- Oak Bay (79 interviews)

An additional 59 respondents said they live in another community (n=29) or preferred not to say where they live (n=30).

This document was prepared by Kyle Braid, Vice-President of Ipsos Public Affairs. He is responsible for any errors or omissions.

Initial Priorities: Highest Priority

Q. Based on what you know or have heard about the need to treat wastewater, please rank your HIGHEST, SECOND HIGHEST and THIRD HIGHEST priorities for this project.	Total (n=1,357) %	West (n=361) %	East (n=937) %
How the project costs will affect my taxes	43	42	44
Level of water quality being discharged into the ocean	29	26	30
Opportunities for water reuse and heat recovery	10	10	9
Location of the treatment plants	9	11	7
Completing the project on time	5	4	5
How the treatment facilities will integrate with my neighbourhood and community	4	5	3
How construction will impact the quality of life in my neighbourhood	1	2	1
How truck traffic will impact the quality of life in my neighbourhood	1	1	1

Initial Priorities: Highest or Second or Third Priority

Q. Based on what you know or have heard about the need to treat wastewater, please rank your HIGHEST, SECOND HIGHEST and THIRD HIGHEST priorities for this project.	Total (n=1,357) %	West (n=361) %	East (n=937) %
How the project costs will affect my taxes	72	71	72
Level of water quality being discharged into the ocean	53	52	53
Opportunities for water reuse and heat recovery	43	41	42
Location of the treatment plants	42	43	41
Completing the project on time	29	25	31
How the treatment facilities will integrate with my neighbourhood and community	28	32	27
How truck traffic will impact the quality of life in my neighbourhood	11	13	9
How construction will impact the quality of life in my neighbourhood	9	12	9

Municipality

Q. In which of the following municipalities or areas do you live?	Total (n=1,357) %	West (n=361) %	East (n=937) %
Saanich	34		50
Victoria	29		42
Esquimalt	9	34	
Colwood	7	26	
Langford	6	24	
Oak Bay	6		8
View Royal	4	16	
Songhees Nation	<1	<1	
Esquimalt Nation	0	0	
Other (specify)	2		
Prefer not to answer	2		

Acceptability: One Plant - Secondary Treatment

Note: Question was not asked of the 30 respondents who did not indicate where they live.

Q. In your view, how acceptable is this option for treatment of liquid waste in the Core Area?	Total (n=1,327) %	West (n=361) %	East (n=937) %
Very acceptable	30	33	30
Somewhat acceptable	31	35	29
Not very acceptable	13	14	12
Not at all acceptable	25	17	28
No opinion	2	2	2
Very + Somewhat Acceptable	***61***	***68***	***58***

Acceptability: One Plant - Tertiary Treatment

Note: Question was not asked of the 30 respondents who did not indicate where they live.

Q. In your view, how acceptable is this option for treatment of liquid waste in the Core Area?	Total (n=1,327) %	West (n=361) %	East (n=937) %
Very acceptable	28	34	27
Somewhat acceptable	27	32	26
Not very acceptable	14	14	14
Not at all acceptable	27	16	31
No opinion	3	4	2
Very + Somewhat Acceptable	***56***	***66***	***52***

Acceptability: Two Plant – Option

Note: Question was not asked of the 30 respondents who did not indicate where they live.

Q. In your view, how acceptable is this option for treatment of liquid waste in the Core Area?	Total (n=1,327) %	West (n=361) %	East (n=937) %
Very acceptable	19	23	17
Somewhat acceptable	30	30	30
Not very acceptable	17	18	18
Not at all acceptable	30	26	32
No opinion	4	3	4
Very + Somewhat Acceptable	***49***	***53***	***47***

Acceptability: Three Plant - Secondary Treatment

Note: Question was not asked of the 30 respondents who did not indicate where they live.

Q. In your view, how acceptable is this option for treatment of liquid waste in the Core Area?	Total (n=1,327) %	West (n=361) %	East (n=937) %
Very acceptable	7	9	7
Somewhat acceptable	21	20	22
Not very acceptable	27	29	26
Not at all acceptable	41	38	42
No opinion	3	4	3
Very + Somewhat Acceptable	***29***	***29***	***28***

Acceptability: Three Plant - Tertiary Treatment

Note: Question was not asked of the 30 respondents who did not indicate where they live.

Q. In your view, how acceptable is this option for treatment of liquid waste in the Core Area?	Total (n=1,327) %	West (n=361) %	East (n=937) %
Very acceptable	9	10	9
Somewhat acceptable	21	17	22
Not very acceptable	22	23	22
Not at all acceptable	44	46	44
No opinion	4	4	3
Very + Somewhat Acceptable	***30***	***27***	***30***

Acceptability: Four Plant Option

Note: Question was not asked of the 30 respondents who did not indicate where they live.

Q. In your view, how acceptable is this option for treatment of liquid waste in the Core Area?	Total (n=1,327) %	West (n=361) %	East (n=937) %
Very acceptable	6	5	6
Somewhat acceptable	17	18	16
Not very acceptable	23	23	23
Not at all acceptable	50	50	51
No opinion	4	4	4
Very + Somewhat Acceptable	***23***	***23***	***22***

Acceptability: Seven Plant Concept

Note: Question was not asked of the 30 respondents who did not indicate where they live.

Q. In your view, how acceptable is this option for treatment of liquid waste in the Core Area?	Total (n=1,327) %	West (n=361) %	East (n=937) %
Very acceptable	7	6	7
Somewhat acceptable	10	9	11
Not very acceptable	16	16	16
Not at all acceptable	64	66	63
No opinion	3	3	3
Very + Somewhat Acceptable	***17***	***15***	***18***

Three Acceptable Options: Pre-Change

Note: A 'None of the Above' option was added after 986 surveys. These results are before the change.

Q. Please choose 3 options, in no particular order, that are in your view, acceptable options for wastewater treatment.	Total (n=986) %	West (n=274) %	East (n=669) %
Two Plant - Rock Bay &Colwood - Secondary & Tertiary	66	69	65
One Plant - Rock Bay - Tertiary	63	70	60
One Plant - Rock Bay - Secondary	59	62	58
Three Plant Esquimalt Nation, Rock Bay & Colwood - Tertiary	28	25	28
Three Plant - Esquimalt Nation, Rock Bay & Colwood - Secondary	20	21	19
Seven Plant - Langford, Colwood, View Royal, Rock Bay, East Saanich, Saanich Core & Esquimalt	15	13	16
Four Plant - Esquimalt Nation, Rock Bay, Colwood & East Saanich	13	10	15
No answer	12	9	13

Three Acceptable Options: Post-Change

Note: A 'None of the Above' option was added after 986 surveys. These results are after the change.

Q. Please choose 3 options, in no particular order, that are in your view, acceptable options for wastewater treatment.	Total (n=371) %	West (n=87) %	East (n=268) %
Two Plant - Rock Bay &Colwood - Secondary & Tertiary	33	51	28
One Plant - Rock Bay – Tertiary	30	47	25
One Plant - Rock Bay – Secondary	28	43	23
Three Plant Esquimalt Nation, Rock Bay & Colwood – Tertiary	13	20	11
Three Plant - Esquimalt Nation, Rock Bay & Colwood – Secondary	9	15	8
Four Plant - Esquimalt Nation, Rock Bay, Colwood & East Saanich	7	10	6
Seven Plant - Langford, Colwood, View Royal, Rock Bay, East Saanich, Saanich Core & Esquimalt	7	11	5
None of the above	55	33	62
No answer	2	1	3

Final Priorities: Highest Priority

Q. Now that you have seen all 7 options, please rank your HIGHEST, SECOND HIGHEST and THIRD HIGHEST priorities for this project.	Total (n=1,357) %	West (n=361) %	East (n=937) %
How the project costs will affect my taxes	44	45	44
Level of water quality being discharged into the ocean	28	26	29
Opportunities for water reuse and heat recovery	10	9	9
Location of the treatment plants	8	10	7
How the treatment facilities will integrate with my neighbourhood and community	5	5	4
Completing the project on time	4	4	5
How construction will impact the quality of life in my neighbourhood	1	1	1
How truck traffic will impact the quality of life in my neighbourhood	<1	0	<1

Final Priorities: Highest or Second or Third Priority

Q. Now that you have seen all 7 options, please rank your HIGHEST, SECOND HIGHEST and THIRD HIGHEST priorities for this project.	Total (n=1,357) %	West (n=361) %	East (n=937) %
How the project costs will affect my taxes	72	75	72
Level of water quality being discharged into the ocean	52	51	53
Opportunities for water reuse and heat recovery	43	43	43
Location of the treatment plants	36	36	35
Completing the project on time	30	24	33
How the treatment facilities will integrate with my neighbourhood and community	26	30	25
How truck traffic will impact the quality of life in my neighbourhood	11	12	10
How construction will impact the quality of life in my neighbourhood	10	12	10

Interest in Variation of 3 Plant Option

Q. There is a potential for a variation of the 3 Plant Option - 3 Plant Fully Tertiary Option. Would this option interest you?	Total (n=1,357) %	West (n=361) %	East (n=937) %
Yes	39	37	39
No	61	63	61

Site Preferred for Solids

Q. Now that you have seen both sites for treatment of wastewater solids in the Core Area, is there a site that you prefer?	Total (n=1,357) %	West (n=361) %	East (n=937) %
Hartland Landfill	36	35	37
Rock Bay	36	37	35
No preference	28	28	28

See Challenges with Sites

Q. Do you see challenges with the sites?	Total (n=1,357) %	West (n=361) %	East (n=937) %
Yes	61	59	60
No	39	41	40

See Opportunities with Sites

Q. Do you see opportunities for these sites?	Total (n=1,357) %	West (n=361) %	East (n=937) %
Yes	65	68	64
No	35	32	36

Solids Considerations: First Consideration

Q. Please rank your top three considerations among the following:	Total (n=1,357) %	West (n=361) %	East (n=937) %
Truck traffic for moving solids	19	20	18
Ability to be integrated with waste like food scraps, wood and construction waste, yard waste	14	16	14
Proximity of facilities to residential and business	14	13	14
Disposal of treated solids	13	11	13
Ability to generate resources like gas	12	13	12
Potential emissions	12	12	12
Piping to move solids	9	6	9
Ability to integrate into place	7	8	7

Solids Considerations: First or Second or Third Considerations

Q. Please rank your top three considerations among the following:	Total (n=1,357) %	West (n=361) %	East (n=937) %
Disposal of treated solids	44	42	45
Truck traffic for moving solids	41	41	42
Potential emissions	41	42	41
Ability to be integrated with waste like food scraps, wood and construction waste, yard waste	40	45	38
Ability to generate resources like gas	36	35	37
Proximity of facilities to residential and business	33	34	32
Piping to move solids	29	28	29
Ability to integrate into place	25	24	26

Age

Q. How old are you?	Total (n=1,357) %	West (n=361) %	East (n=937) %
Under 18	<1	<1	<1
18 to 24	1	1	1
25 to 34	8	7	8
35 to 44	14	15	13
45 to 54	18	24	16
55 to 64	27	25	27
65 to 74	23	20	26
75 or older	4	4	4
Prefer not to answer	5	4	5

Own or Rent

Q. Do you own or rent your home?	Total (n=1,357) %	West (n=361) %	East (n=937) %
Own	83	88	81
Rent	11	7	13
Other	2	1	2
Prefer not to answer	4	4	4

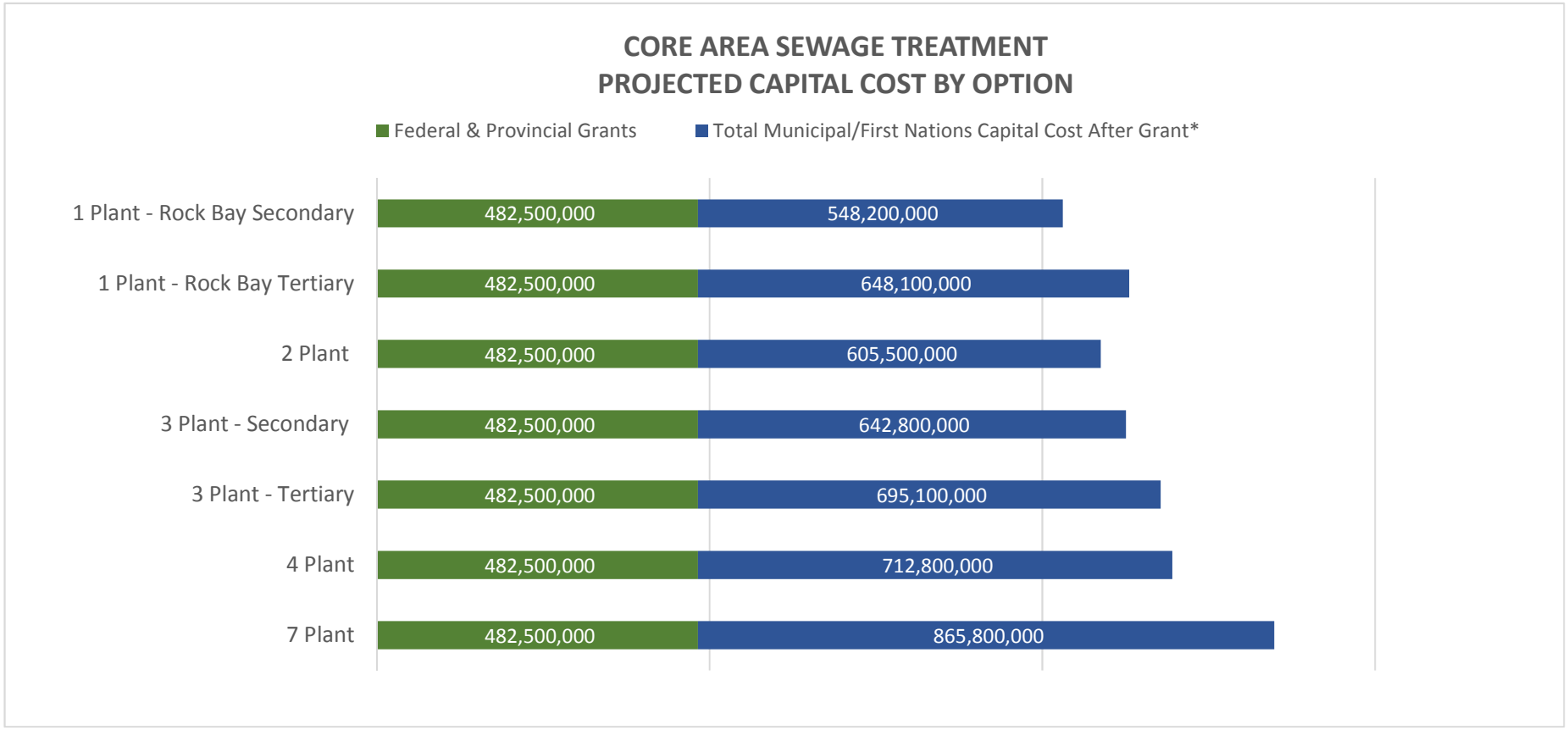
Sewer or Septic

Q. Is your home on septic or sewer service?	Total (n=1,357) %	West (n=361) %	East (n=937) %
Sewer	86	75	92
Septic	11	24	5
Other	1	<1	1
Prefer not to answer	2	1	2

Own Business in Core Area

Q. Does anyone in your household own a business in the Core Area?	Total (n=1,357) %	West (n=361) %	East (n=937) %
Yes	14	12	15
No	79	83	77
Prefer not to say	7	4	8

APPENDIX E


CORE AREA SEWAGE TREATMENT
PROJECTED CAPITAL COST BY OPTION
Federal & Provincial Grants
Total Municipal/First Nations Capital Cost After Grant*
1 Plant - Rock Bay Secondary
482,500,000
548,200,000
1 Plant - Rock Bay Tertiary
482,500,000
648,100,000
2 Plant
482,500,000
605,500,000
3 Plant - Secondary
482,500,000
642,800,000
3 Plant - Tertiary
482,500,000
695,100,000
4 Plant
482,500,000
712,800,000
7 Plant
482,500,000
865,800,000

Core Area Waste Water Treatment Program Options - Costing

Options	Capital Cost	Federal and Provincial Grants	Total Municipal/First Nations Capital Cost After Grant*	Operating Costs (at 2030)
1 Plant - Rock Bay Secondary	1,030,700,000	482,500,000	548,200,000	21,765,000
1 Plant - Rock Bay Tertiary	1,130,600,000	482,500,000	648,100,000	26,435,000
2 Plant	1,088,000,000	482,500,000	605,500,000	22,810,000
3 Plant - Secondary	1,125,300,000	482,500,000	642,800,000	22,987,000
3 Plant - Tertiary	1,177,600,000	482,500,000	695,100,000	24,062,000
4 Plant	1,195,300,000	482,500,000	712,800,000	25,345,000
7 Plant	1,348,300,000	482,500,000	865,800,000	26,630,000

APPENDIX F

ANNUAL ESTIMATED COST PER HOUSEHOLD (at 2030)
(after grant)

	1 Plant - Rock Bay Secondary	1 Plant - Rock Bay Tertiary	2 Plant	3 Plant - Secondary	3 Plant - Tertiary	4 Plant	7 Plant
Annual Debt	42,082,080	49,779,460	46,521,955	49,499,240	53,520,164	54,875,524	66,822,382
Annual Operating	21,765,000	26,435,000	22,810,000	22,987,000	24,062,000	25,345,000	26,630,000
Total Annual Cost	63,847,080	76,214,460	69,331,955	72,486,240	77,582,164	80,220,524	93,452,382
Oak Bay	591	705	590	561	573	573	590
Saanich	365	437	364	377	379	437	509
Victoria	513	611	512	495	504	504	519
Esquimalt	455	546	454	827	785	724	1,075
View Royal	430	511	429	849	809	593	987
Colwood	254	302	767	415	626	864	711
Langford	415	493	414	490	632	572	793

***Based on Design Capacity
First Nations purchased overall capacity therefore household costs not applicable

URBAN systems

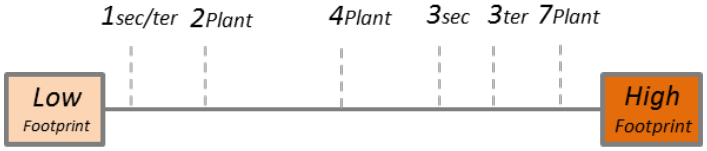
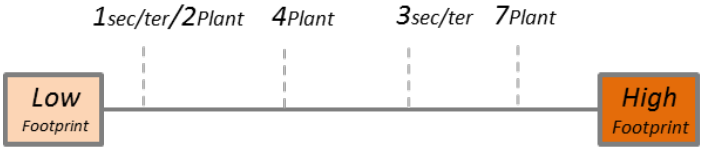
EXCERPT FROM TECHNICAL MEMORANDUM #3 – COSTING AND FINANCIAL ANALYSIS

(February 2016)

Carbon Footprint for Wastewater (Liquids) Treatment

Key factors for carbon and energy footprint in wastewater treatment and conveyance relate to extent of construction, energy use for treatment, energy use for conveyance and trucking to distribute solids to a central solids-energy recovery facility. Table 3-7 outlines the factors and their considerations with respect to how the option sets qualitatively perform against each other for low to high carbon footprint.

Table 3-7: Carbon Footprint for Option Sets

FACTOR	CONSIDERATION	RELATIVE CARBON FOOTPRINT
Extent of Construction	Scope of new infrastructure, total building footprint, redundant facilities.	
Energy use for treatment	Level of treatment	
Energy use for conveyance	Pumping distance, pressure for raw, treated and reclaimed effluent; overall efficiency	
Trucking to distribute solids to a recovery facility	Distance for trucking and number of trips per day	

Qualitative performance of the criteria reveals the overall carbon and energy ranking of the option sets for wastewater treatment (liquids) including, in order of smallest to largest footprint: Rock Bay – Secondary; 2 Plant, Rock Bay – Tertiary, 3 Plant – Secondary, 4 Plant, 3 Plant – Tertiary, and 7 Plant.

Rock Bay Site

Making a difference...together

Transport Canada Property

BC Hydro Property

Private Property

Metres

0 50 100 150

Projection: UTM ZONE 10N, NAD83

Making a difference...together

Briefing Note

Date: February 3, 2016

Subject:

BC Hydro/Transport Canada lands in Rock Bay

Summary/Background Information:

Environmental/Contaminated Sites: The Rock Bay site is a contaminated site that was used as a coal gasification plant from 1862 to 1952. Additional industrial uses, including a tannery, sawmills and general infillings, contributed to contamination of soil, groundwater, sediments and soil vapour with hydrocarbons, metals and other substances.

BC Hydro and Transport Canada have worked to clean up their lands since 2004. Between 2004 and 2006, more than 200,000 tonnes of contaminated soil was removed. Remediation is ongoing for most of the site (including both BC Hydro and TC properties).

BC Hydro has obtained a legal instrument (Certificate of Compliance or COC) from the BC Ministry of Environment for their western portion of their property and intend to achieve similar legal instruments for all of its property.

It is anticipated that the BC Hydro property COCs will be risk-based and thus the properties will have final use restrictions. The likely risk management measures/restrictions are typical of former contaminated sites and could include:

- ground floor commercial/industrial land use will be permitted,
- no ground floor park or residential use, however 2nd storey and above should be permitted,
- slab on grade construction
    - no habitable spaces such as offices or below-grade parking, however,
    - below grade industrial tanks are expected to be permitted,
- health and safety management for construction workers,
- soil vapour mitigation (HVAC) required in buildings, and
- performance verification requirements (i.e., ongoing monitoring/reporting to confirm that risk management measures are continuing and sufficient).

BC Hydro has indicated they will work with the CRD to ensure the COC allows for construction related to wastewater treatment including the construction of underground tanks.

Transport Canada lands are federal and not subject to provincial legal regime. Federal properties are typically remediated to a standard similar to provincial requirements, however, the absence of a legal instrument (COC) would result in additional environmental consulting work prior to any development.

Heritage assets: There are two heritage designated buildings on the site that will need to be managed. The statement of significance regarding the Powerhouse heritage building (2110

Store Street) requires maintenance of exterior and chimney. The CRD is awaiting statement of significance for heritage designated Administration building (502 Pembroke St.). Two of the three floors of the Administration Building are currently occupied for office use.

Recent Developments:

The Rock Bay properties have been identified as a potential location for a future wastewater treatment site.

In support of this option, the CRD is negotiating an Option to Purchase that involves BC Hydro, Transport Canada and Matullia (a First Nations Economic Development Corp). All three parties have indicated they are willing sellers to the CRD. Negotiations are underway regarding additional adjacent private properties. Purchases would be contingent on environmental and engineering due diligence evaluations. The CRD is expecting to acquire this land in Fee Simple.

Due Diligence on the lands has just commenced and more information will be forthcoming. Dr. Pam Shaw (urban planner) has been contracted by the CRD to support rezoning activities.

Related Content:

Engineering Risks

Given the remediation and risk assessment activities that have occurred at the Rock Bay properties, redevelopment is likely to include specialized engineering planning and implementation. Engineering efforts should plan for potential management of existing significant public utilities (2 storm drains), seismic upgrading of existing heritage buildings/structures, design of excavation/construction in areas previously remediated (i.e., site compaction data, backfill quality, and/or dewatering requirements).

City of Victoria Community Planning

The City of Victoria is working with the CRD on the potential rezoning of the site. Residential land use may be considered but due to the COC limitations will be above ground floor. The City of Victoria is actively involved in local area planning with the Burnside Gorge Community Association.

Monthly Report to the CRD from the Fairness and Transparency Advisor
January 2016

This report provides a summary of the FTA's activities for the Core Area Sewage Treatment Project for the period from **January 1st to January 29th, 2016.**

FTA Activities

Monitoring Role

During this period, the FTA continued to review and monitor upcoming meetings of the various committees, flagging any potential issues associated with transparency, impartiality, or fairness. In this capacity, the FTA also reviewed minutes of committee meetings.

Complaints

A significant aspect of the FTA's mandate and role is to screen and (if eligible) review submitted complaints regarding the wastewater planning process. The table below summarizes the FTA's activities in this capacity for the reporting period.

January 2016 Complaints Statistics

Number of applications received	4
Number of "eligible" complaints	4
Number of decisions rendered	4
Number of Complaints previously reported	4

Four (4) formal complaints were received, screened and reviewed during this reporting period. This brings the number of formal complaints received by the FTA up to and including January 29th to eight (8). A summary of the recent complaints and the FTA's decisions are provided below.

Complaint #5 (ID no. 396328)

The FTA received notice of complaint no. 396328 ("the complaint") on Monday January 11th and proceeded with screening the complaint.

Summary of complaint:

The complainant raised issue with the timely availability of information on the consideration and evaluation of viable project options. The specific issue which gave rise to this complaint related to the lack of availability of a staff report which formed the basis of an agenda item at January 13th CALWMC meeting.

Summary of findings:

The final decision on the complaint was issued by the FTA on Wednesday January 13th and later posted to the CRD website.

In investigating this complaint, the FTA found that two documents were temporarily unavailable through hyperlinks. The links were re-established within 24 hours and the documents could at all times be found within the agenda package. As a result, the FTA found that the processes related to the January 13th CALWMC meeting were adequate with respect to fairness and transparency.

Complaint #6 (ID no. 397183)

The FTA received notice of complaint no. 397183 ("the complaint") on Saturday January 23rd and proceeded with screening the complaint.

Summary of complaint:

The main issue raised in this complaint related to the suppression of information. It was alleged that important information which would inform the CALWMC's decision-making was being withheld from both the public and the committee.

Specifically, this complaint raised issue with the Technical Oversight Panel's (TOP's) procedures for making decisions and providing recommendations to the CALWMC, including a) incomplete disclosure in the minutes of deliberations among TOP members; b) TOP 'voting' processes; and c) restrictions on Panel members from making public comment and/or sharing information regarding Panel deliberations.

Summary of findings:

The final decision on the complaint was issued by the FTA on Friday January 29th and later posted to the CRD website.

Overall, the FTA found no evidence of information suppression through the procedures of the TOP. The FTA found no flaws in how the Panel has provided advice or recommendations as it relates to managing the various perspectives of panel members and moving those deliberations forward through to the CALWMC.

Complaint #7 (ID no. 397185)

The FTA received notice of complaint no. 397185 ("the complaint") on Saturday January 23rd and proceeded with screening the complaint.

Summary of complaint:

The complaint raised issue with respect to whether information provided to the public about gasification has been based on technical expertise. In particular, the complainant called into question the expertise of Urban Systems (and Carollo Engineers) and raised procedural concerns relative to the TOP's management of views / expertise on gasification, through its deliberative processes.

Summary of findings:

The final decision on the complaint was issued by the FTA on Friday January 29th and later posted to the CRD website.

With respect to this issue around the suppression of expert views, the FTA resolved that the upcoming consultation will shed light on the expertise, perspectives, and views on the various options under consideration. The current consultation may identify practical problems and as such, is a credible tool for providing a quality check on the assessment of costs. As such, procedurally, the FTA found no fault with respect to the process.

Complaint #8 (ID no. 397206)

The FTA received notice of complaint no. 397206 ("the complaint") on Saturday January 23rd and proceeded with screening the complaint.

Summary of complaint:

The complainant raised issue with unexplained discrepancies in comparing old and new project cost estimates. The complainant stated that these new costs contain significant unexplained inconsistencies with the previous costing estimates (e.g., the 2011 McLoughlin Wastewater Treatment Plan bid), calling into question the current costing process.

Summary of findings:

The final decision on the complaint is forthcoming from the FTA and will be posted to the CRD website.

Other Issues

On Tuesday January 12, the FTA held a discussion with the TOP to provide advice on a procedural matter concerning the TOP's process for making recommendations.

Activities Summary

Provided in the table below is a summary of the FTA's Project hours devoted to each of the abovementioned activities.

January 2016 Activities

Activity	Hours Worked
Setting up procedures	0
Monitoring	3.4
Meetings	0
Complaints	115.1
Other admin	8.3
Advice	1.7
Total	**128.5**

The total number of hours to be billed for this period (spanning January 1st to January 29th) is 128.5 hours, which totals $24,180.50 before tax.

The FTA has billed a total of $93,416.50 for 472.5 hours worked on the project from August 2015 to January 29th, 2016.

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REPORT TO THE CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE
MEETING OF WEDNESDAY, FEBRUARY 10, 2016

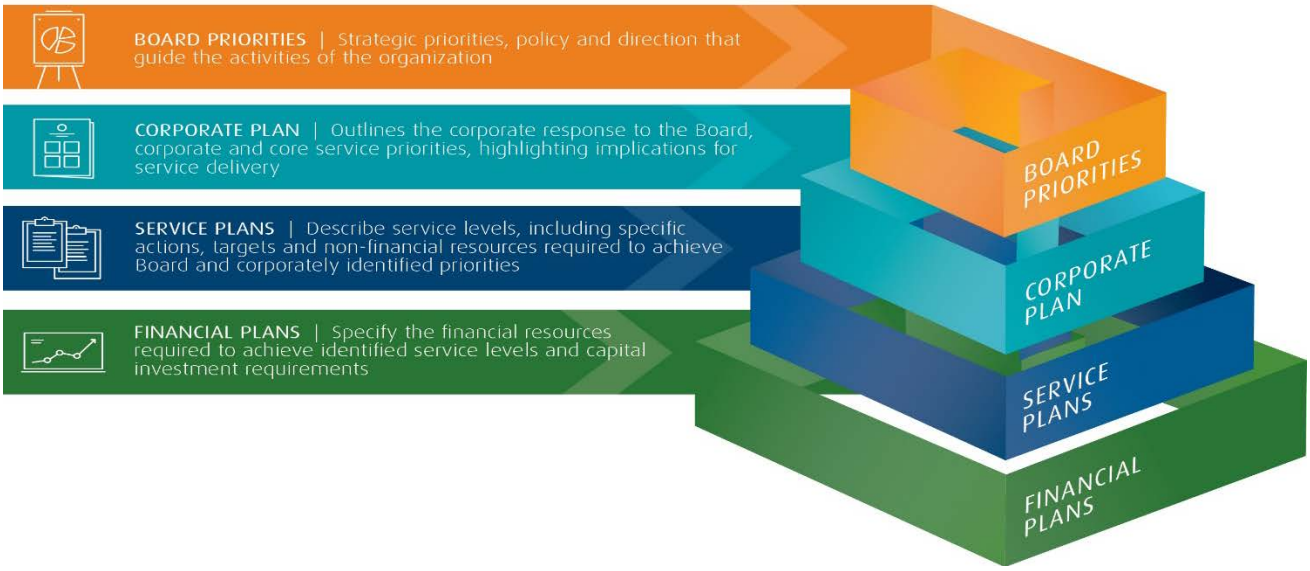
SUBJECT **2016 CRD Board Standing Committee Terms of Reference and Work Programs**

ISSUE

To establish the Terms of Reference for the 2016 CRD Board Standing Committees including a high-level orientation for committee members and an update on the 2015-2018 Board Strategic Priorities and 2015-2018 Corporate Plan Initiatives.

BACKGROUND

In 2015, the following 2016 to 2019 planning cycle was initiated to establish a longer-term focus regarding the allocation of resources required to deliver the programs and services need by the community, and to accomplish Board priorities:



In May 2015, the Board approved the *CRD Board Strategic Priorities 2015-2018* (the "*Board Priorities*") that identifies 12 strategic areas and 51 priorities to be initiated over the four-year term. The corresponding *CRD Corporate Plan 2015-2018* (the "*Corporate Plan*") was then developed to introduce corporate strategies and actions aimed at achieving the Board priorities.

As part of the planning process, in the Fall 2015, each Board standing committee reviewed the relevant departmental and divisional service plans. The multi-year service plans outlined core service information, including key service drivers such as trends, service levels, workforce considerations, and performance measures and provided the committee an opportunity to make service amendments as necessary.

Each year, the Board Chair determines the Board standing committee structure and governance model to assist the Board in accomplishing its strategic initiatives along with the corporate and divisional initiatives. The authority to establish standing committees is provided by Section 795(2) of the *Local Government* Act and the CRD Board Procedures Bylaw.

To assist the Board Chair with this determination, the Governance Committee was tasked with making recommendations regarding the Board standing and select committee structure. These recommendations were approved by the Board on December 9, 2015 and the resulting Board Standing Committees were established by the Board Chair for 2016:

- Committee of the Whole
- Core Area Liquid Waste Management
- Electoral Area Services
- Environmental Services
- Finance
- Governance
- Planning, Transportation and Protective Services
- Regional Parks

At its meeting held January 13, 2016, the Board received the terms of reference for the 2016 Board Standing Committees and referred them to the respective Standing Committees for review and approval. The proposed terms of reference for the 2016 Core Area Liquid Waste Management Committee are attached as Appendix A.

In addition to the above, the Board directed that a status update on the 2015-2018 Board Priorities and Corporate Plan be prepared for each committee for review and confirmation. The *Priorities Dashboard* is attached as Appendix B.

As part of the orientation for this inaugural committee meeting, staff will provide a high-level overview that covers aspects of the service, governance and, staff roles and responsibilities.

ALTERNATIVES

Alternative 1:

1. That the terms of reference for the 2016 Core Area Liquid Waste Management Committee as attached in Appendix A be approved; and
2. That the Core Area Liquid Waste Management Committee recommend to the Capital Regional District Board:
   That the Committee priorities and work program as outlined in the *Priorities Dashboard,* be confirmed.

Alternative 2:

That the Core Area Liquid Waste Management Committee recommend to the Capital Regional District Board:

1. That the terms of reference be amended; and/or
2. That the Committee priorities and work program outlined in the *Priorities Dashboard* be amended.

IMPLICATIONS

The terms of reference that have been developed for each committee identify the mandate/purpose of the committee, its establishment and authority, the composition, procedures and staff resources. For the most part, the committees are structured around specific service areas and the terms of reference identify the primary staff liaison(s) for each committee. The terms of reference for the Core Area Liquid Waste Management Committee remain unchanged from 2015.

Committee Work Program
The Board priorities, Corporate Plan initiatives and divisional initiatives have been grouped by committee in the attached Priorities Dashboard to outline the work program for the Committee. In addition, the Dashboard also identifies the current status or progress to date on these various initiatives and proposed next steps. More detail about the strategies, actions or initiatives to achieve these priorities is included in the Corporate Plan and Service Plan (Appendix C).

The terms of reference and the Priorities Dashboard provide the committee with an opportunity to confirm the work program for 2016. Any changes to the work program may have an impact on service levels, the budget, and the ability of staff to deliver their work efficiently.

CONCLUSION

The terms of reference for the 2016 Core Area Liquid Waste Management Committee are attached for consideration. The terms of reference, along with the Priorities Dashboard and high-level orientation, will serve to clarify the mandate, responsibilities and procedures governing the Committee.

RECOMMENDATIONS

1. That the terms of reference for the 2016 Core Area Liquid Waste Management Committee as attached in Appendix A be approved; and
2. That the Core Area Liquid Waste Management Committee recommend to the Capital Regional District Board:
   That the Committee priorities and work program as outlined in the *Priorities Dashboard,* be confirmed.

Submitted by:	Brent Reems, MA, LLB, Senior Manager, Legislative & Information Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

BR:ss

Attachments: Appendix A – 2016 Committee Terms of Reference
Appendix B – Priorities Dashboard
Appendix C – Service Plans

Terms of Reference

CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE

PREAMBLE

The Capital Regional District (CRD) Core Area Liquid Waste Management Committee (CALWMC) is a standing committee established by the CRD Board and will oversee and make recommendations to the Board regarding the Core Area Liquid Waste Management Plan and certain aspects of the Core Area Wastewater Treatment Program (CAWTP).

The Committee's official name is to be:

Core Area Liquid Waste Management Committee

1.0 PURPOSE

The mandate of the committee is to oversee and make recommendations to the Board regarding the:

- Administration and regulatory reporting for the Core Area Liquid Waste Management Plan
- Core area trunk sewers and sewage disposal systems
- Opportunities for resource recovery

In relation to the CAWTP, the mandate of the committee is as outlined in section 11 of Core Area Wastewater Treatment Commission Bylaw No. 1, 2012 (Bylaw No. 3851). Appendix A outlines how the CAWTP Commission will liaise with the Committee and the Regional Board.

The committee will act as the steering committee of the Technical and Community Advisory Committee, as outlined in Appendix B.

In addition, the committee will consider recommendations to the CRD Board from Select committees established to develop core area subregional wastewater treatment and resource recovery options and Liquid Waste Management Plan amendments, as outlined in Appendix C.

2.0 ESTABLISHMENT AND AUTHORITY

- The committee will make recommendations to the Board for consideration
- The Board Chair will appoint the Committee Chair, Vice Chair and committee members

3.0 COMPOSITION

The membership is comprised of all directors on the CRD Board from the following municipalities that are participants in the Core Area Liquid Waste Management Plan:

- Colwood
- Esquimalt
- Langford
- Oak Bay
- Saanich
- Victoria
- View Royal
- An elected representative and alternate from each of the Songhees Nation and Esquimalt First Nation Councils (Board Procedures Bylaw No. 3828)

All Board members are permitted to participate in standing committee meetings, but not vote, where an item of local significance is on the agenda (Board resolution Nov. 12, 2014).

4.0 PROCEDURES

- The committee shall meet monthly except August and December and have special meetings as required at the call of the Committee Chair

- The agenda will be finalized in consultation between staff and the Committee Chair and any committee member may make a request to the Chair to place a matter on the agenda

- With the approval of the Committee Chair and Board Chair, committee matters of an urgent or time sensitive nature may be forwarded directly to the Board for consideration

- A quorum is a majority of the committee membership and is required to conduct committee business

5.0 RESOURCES AND SUPPORT

- The General Manager Integrated Water Services and General Manager Parks and Environmental Services will act as a liaison to the committee with support from other departments as required

- Corporate Communications will assist the department in the delivery of Core Area Liquid Waste Management Plan communication services

- Minutes and agendas are prepared and distributed by the Legislative and Information Services department

APPENDIX A

LIAISON BETWEEN CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE (CALWMC) AND CORE AREA WASTEWATER TREATMENT PROGRAM (CAWTP) COMMISSION

In accordance with Capital Regional District (CRD) procedures and the Core Area Wastewater Treatment Commission Bylaw No. 1, 2012 (Bylaw No. 3851), the CAWTP Commission will liaise with the CALWMC and/or CRD Board as follows:

- Prior to appointing a Program Director
- Preparing a monthly written report to update and make the CALWMC and the Board aware of the progress of the Program and any significant issues
- Collaborating with the CALWMC to draft the sections of the Request for Proposals that promote innovation
- Preparing an annual Program cash flow forecast before September 30 each year as part of its comprehensive financial accounting reporting
- Preparing draft reports as required to permit the Board to report to senior governments
- Providing additional information to the CALWMC and/or Board upon request
- All documents and reports to be considered by the Board as outlined in section 10 of the Commission Bylaw are to be reviewed by the CALWMC

APPENDIX B

STEERING THE TECHNICAL AND COMMUNITY ADVISORY COMMITTEE CORE AREA AND WEST SHORE SEWAGE TREATMENT

In accordance with the Terms of Reference of the Technical and Community Advisory Committee Core Area and West Shore Sewage Treatment (TCAC) approved by the Capital Regional District Board (CRD), August 14, 2013, the Core Area Liquid Waste Management Committee (CALWMC) will steer the TCAC as follows:

- Make recommendations to the CRD Board to appoint TCAC members
- Make requests to TCAC for appropriate technical and community consultation advice and input in order to facilitate informed decision-making in a variety of CAWTP matters, including:
  - 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
- Receive for information or consideration of recommendations such technical and community consultation reports from TCAC as requested by CALWMC
- Dissolve the TCAC at the end of the planning stage of the Core Area and West Shore sewage treatment project or at a time determined by the CALWMC

APPENDIX C

WASTEWATER TREATMENT AND RESOURCE RECOVERY SELECT COMMITTEES

In accordance with the Terms of Reference of the Westside Wastewater Treatment and Resource Recovery Select Committee (the "Select committee") approved by the CRD Board, November 12, 2014, the Select committee will report its findings to the Board through the Core Area Liquid Waste Management Committee (CALWMC). The mandate of the Select committee is to:

- Evaluate options and develop a conceptual plan for a wastewater treatment and resource recovery plan for participating jurisdictions. The conceptual plan will:
  - optimize existing infrastructure, where practical
  - be developed in a collaborative manner with the participants
  - be environmentally sound
  - have decisions based on the best business case scenario that maximizes benefit to the best value for taxpayers
  - meet the unique needs of the Westside in a proactive and timely way
  - be an efficient and cost effective process
  - form the basis for an amendment to the Core Area Liquid Waste Management Plan
- Engage and consult with Westside residents

The committee will continue until it has made its final report to the Board.

In accordance with the Terms of Reference of the Eastside Wastewater Treatment and Resource Recovery Select Committee (the "Select committee") approved by the CRD Board, the Select committee will report its findings to the Board through the Core Area Liquid Waste Management Committee (CALWMC). The mandate of the Select committee is to:

- Evaluate options and develop a conceptual plan for a wastewater treatment and resource recovery plan for participating jurisdictions. The conceptual plan will:
  - optimize existing infrastructure, where practical
  - be developed in a collaborative manner with the participants
  - be environmentally sound
  - decisions will be based on the best business case scenario that maximizes benefit to the best value for taxpayers
  - meet the unique needs of the Eastside in a proactive and timely way
  - the process will be efficient and cost effective
  - form the basis for an amendment to the Core Area Liquid Waste Management Plan (CALWMP)
- Engage and consult with Eastside residents

The Committee will also:

- Consider the results of work done by individual councils as instructed by those Councils
- Report any work done by the Committee to the affected municipality

The Committee is tasked with working with the Westside committee and Westside municipalities to explore potential common facilities and use of current CRD assets.

Priorities Dashboard > Core Area Liquid Waste Management Committee

CONDITION LEGEND

No issues / Proceeding as planned

Potential or emerging issue/problem

Problem/issue has arisen

Ahead of schedule / Timing has changed

Priority	Also Reviewed By	Status and Condition			Resolution by Board/ Committee	Comments	Next Steps	
		Not Started	In Progress	Completed			Action	Timing
INTEGRATED WASTE MANAGEMENT Acquire additional expertise on technologies and solutions (including centralized/decentralized approaches and gasification) to liquid and solid waste treatment.			✓			Established the Technical Oversight Panel (TOP); retained engineering consultants with expertise in solid and liquid waste management	▸ Complete Amendment No. 10 to Liquid Waste Management Plan for submission to Province	▸ *Q1, 2016*

Service Plan for Core Area Liquid Waste Service

2016-2019
October 2015

Capital Regional District

Capital Regional District
Core Area Liquid Waste Service
470 Island Highway, Victoria, BC
T: 250.474.9600 www.crd.bc.ca

Making a difference...together

Table of Contents

1 Overview

1.1 Scope

The Capital Regional District (CRD) provides wastewater management to residential, commercial, industrial and institutional customers, equivalent to a population of approximately 330,000 persons distributed throughout the Core Area communities. These communities include the cities of Victoria, Langford and Colwood, the districts of Oak Bay and Saanich, the Township of Esquimalt, the Town of View Royal and the Songhees and Esquimalt First Nations communities. In 2006, the CRD commenced the planning for the expansion and upgrading of the wastewater management system with the principal goal of moving from the existing preliminary level of treatment to secondary treatment.

The municipalities of Esquimalt, Oak Bay and Victoria are fully served by sewers. The majority of properties in View Royal have sewers but a few still remain outside of the service area. A large, predominantly rural area of Saanich is outside of the sewerage service area. Increasing areas of Colwood and Langford are served by sewers, with plans for further expansion. In the long term, both municipalities are expected to be fully served by sewers.

Properties not served by sewers utilize onsite septic systems or small treatments plants to provide wastewater treatment. These onsite systems primarily rely on tile fields or other distribution methods for ground disposal of treated effluent.

The Core Area Liquid Waste Service as a whole is delivered and supported by a number of CRD services and programs delivered by various CRD departments and divisions. The main service and program areas are described below in Section 2.

1.2 Primary Contacts

Core Area Wastewater Planning, Regulatory, Scientific and Technical Programs

Name: Larisa Hutcheson

Title: General Manager, Parks and Environmental Services

Contact Information: 250.360.3085, lhutcheson@crd.bc.ca

Core Area Wastewater Conveyance System Operations and Engineering

Name: Ted Robbins

Title: General Manager, Integrated Water Services

Contact Information: 250.360.3061, trobbins@crd.bc.ca

CRD Administration and Finance

Name: Robert (Bob) Lapham

Title: Chief Administrative Officer

Contact Information: 250.360.3285, rlapham@crd.bc.ca

Core Area Liquid Waste role: Liaise between the Core Area Wastewater Treatment Program Commission, the Core Area Liquid Waste Management Committee and the CRD Board; co-Chair the Agreement Management Committee (AMC) which includes establishing and implementing a detailed audit plan.

Name: Diana Lokken

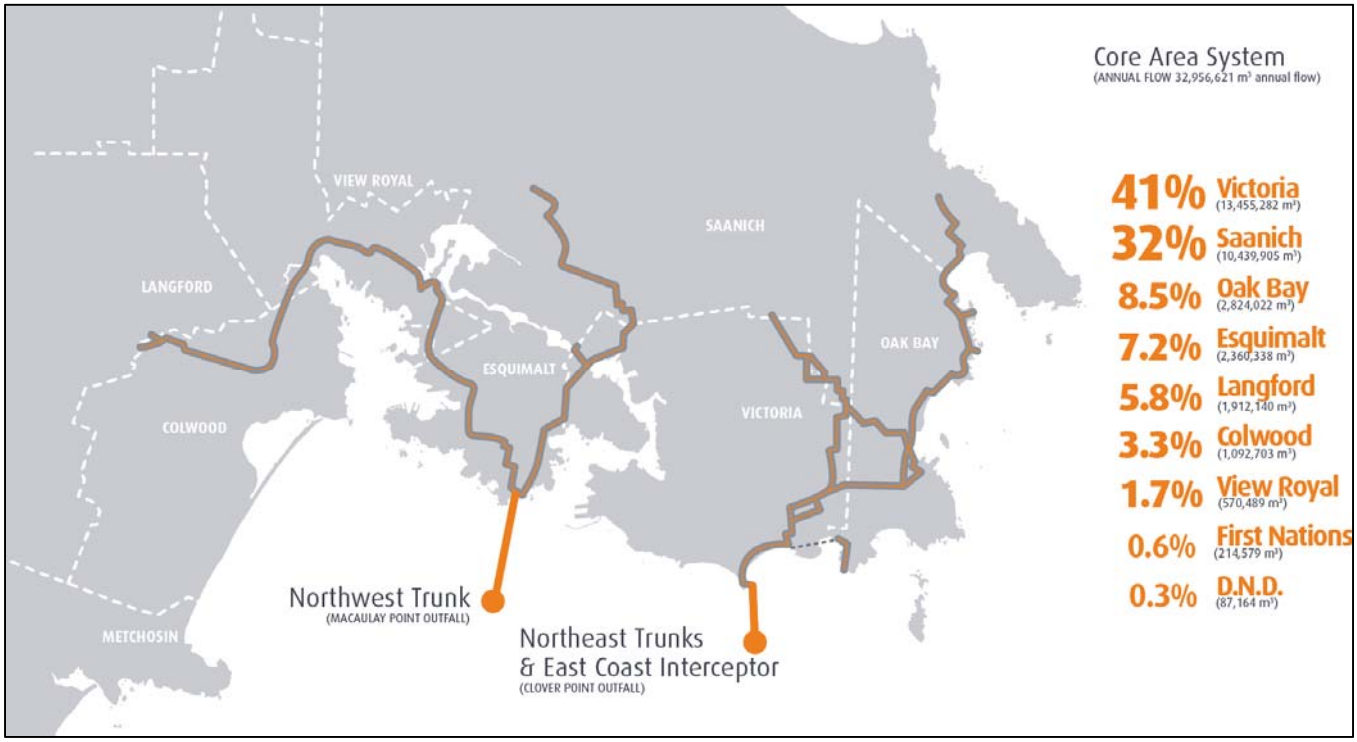
Title: General Manager, Finance & Technology, (Finance Officer)

Contact Information: 250.360.3010, dlokken@crd.bc.ca

Core Area Liquid Waste role: Overall financial responsibility, responsibility to negotiate and administer contribution agreements with senior levels of government, real estate transactions.

2 Services & Programs

2.1 Regional Trunk System Overview*



*2014 Actual Flows

2.2 Conveyance System Operations & Engineering

The services provided under this function include the operation, maintenance, engineering and capital project delivery for the Core Area Wastewater System including wastewater collection, conveyance, screening and disposal through the ocean outfalls.

The conveyance system is primarily composed of the four trunks:

North West Trunk - The North West Trunk sewer system includes the Macaulay Point pump station and outfall, as well as the Marigold, Craigflower and Lang Cove pump stations and interconnecting trunk sewer main infrastructure.

Operating costs are recovered by requisition to all participating members based on member percentage of total sewage input. Costs for the North West Trunk are shared by Saanich, Victoria, Esquimalt, View Royal, Colwood, Langford, Songhees First Nation and Esquimalt First Nation under a separate agreement.

North East Trunk – Clover - The North East Trunk Clover sewer system includes the Clover Point pump station and outfall, as well as the Harling Point pump station and interconnecting trunk sewer main infrastructure.

Operating costs are recovered by requisition to all participating municipalities based on each participant's percentage of total sewage input. Costs for the North East Trunk Clover are shared by Victoria, Saanich and Oak Bay.

North East Trunk – Bowker - The North East Trunk Bowker sewer system includes the Trent pump station and interconnecting trunk sewer main infrastructure.

Operating costs are recovered by requisition to all participating municipalities based on each participant's percentage of total sewage input. Costs for the North East Tunk Bowker are shared by Victoria, Saanich and Oak Bay.

East Coast Interceptor - The East Coast Interceptor Trunk sewer system includes seven pump stations, the largest being the Currie Road pump station in Oak Bay and the Penrhyn pump station in Saanich East, as well as the interconnecting trunk sewer main infrastructure. The East Coast Interceptor conveys sewer flows to the North East Trunk Clover for eventual discharge at Clover Point.

Operating costs are recovered by requisition to all participating municipalities based on each participant's percentage of total sewage input. Costs for the East Coast Interceptor are shared by Victoria, Saanich and Oak Bay.

These services are delivered by the Infrastructure Operations Division and the Infrastructure Engineering Division, both under the Integrated Water Services Department.

2.3 Planning, Regulatory, Scientific & Technical Support Programs

The services provided under this function include the planning for and administration of the Core Area Liquid Waste Management Plan (CALWMP) and Treatment Program, and the programs that fulfill the commitments made under the CALWMP, including the Infiltration and Inflow Management Program, the Wastewater and Marine Environment Program, the Regional Source Control Program, the Stormwater Quality Management Program, the Harbours Environmental Action Program, the On-site Septic System Program, and Management of Trucked Liquid Waste. These services and programs are delivered by technical and scientific staff in the Environmental Planning & Engineering Division, the Environmental Partnerships Division, and the Environmental Protection Division.

Core Area Liquid Waste Management Plan (CALWMP) - The CRD completed a Liquid Waste Management Plan in July 2000 to serve the municipalities of Colwood, Esquimalt, Langford, Oak Bay, Saanich, Victoria, View Royal, and the Songhees and Esquimalt Nations. The plan provides a strategy for managing liquid wastes for the next 25 years, and was approved by the Minister of Environment in March 2003. Since that time, the Plan has had nine amendments.

Infiltration and Inflow Management Program - Infiltration and inflow (I&I) refers to rainwater and groundwater that enters the sanitary sewer. A certain amount of I&I is unavoidable and is accounted for in routine sewer design. However, when I&I exceeds design allowances, sewer capacity is consumed and may result in overflows, risks to health, damage to the environment and increased conveyance costs. The purpose of the program is to reduce the amount of rainwater and groundwater entering the sanitary sewer system when it is cost-effective to do so. Reduction of I&I in the system lowers the risk of sanitary sewer overflows and can decrease the costs of conveying and treating wastewater.

Wastewater and Marine Environment Program – The Wastewater and Marine Program provides regulatory compliance monitoring and scientific assessment services on behalf of Integrated Water Services to assess the potential effects of the outfalls on the marine environment and human health. The program includes assessment

of wastewater flows, surface water and water column quality and assessment of the seafloor and organisms living near the outfall. The results are shared internally to guide the efforts of the Regional Source Control Program. The Wastewater and Marine Program works closely with regulatory agencies to ensure compliance and provides scientific assessment and annual reporting for the general public. The monitoring and analysis follows a rigorous quality assurance and quality control regime in the field and in the laboratory that ensures the quality of the data collected.

Regional Source Control Program - The Regional Source Control program is a pollution prevention initiative aimed at reducing the amount of contaminants that industry, businesses, institutions and households discharge into the district's sanitary sewer systems. The program has been active region-wide since the adoption of the CRD's Sewer Use Bylaw in August 1994. Source Control is a cost effective way of reducing the impacts of wastewater on the environment.

Stormwater Quality Management Program - The Stormwater, Harbours and Watersheds Program (SHWP) plans, promotes and coordinates the management of stormwater quality in the LWMP area, in consultation with the municipalities, the Department of National Defence and First Nations.

Harbours Environmental Action Program - The Harbours Environmental Action Program (HEAP) coordinates environmental protection and improvement efforts in Victoria and Esquimalt harbours, Portage Inlet, the Gorge Waterway and Esquimalt Lagoon. HEAP works with community groups, municipal partners and other agencies to achieve the following goals: decrease contaminant inputs, protect and enhance habitat quality, set environmental quality objectives, achieve environmentally protective land uses, monitor environmental quality.

On-Site Septic System Program - Septic systems, also known as on-site sewage systems, are an effective treatment option when designed, installed and maintained properly. Lack of maintenance, such as regular pump-outs, is the number one cause of system failure in the CRD. The program provides administration and implementation of CRD Bylaw 3479 which outlines maintenance requirements for on-site septic systems. The bylaw requires owners with Type 1 systems (septic tanks) to have pumped out their system every five years. Owners of Type 2 or Type 3 systems (often package treatment plants) are required to maintain their system according to the maintenance plan for the system, and ensure it is maintained by an Authorized Person at least once per calendar year.

Management of Trucked Liquid Waste - Many industrial, commercial and institutional operations produce liquid waste that is not suitable for discharge to the sanitary sewer or storm water system. These wastes are generated at operations such as: restaurants (grease interceptors), car washes (vehicle wash interceptors), automotive repair shops (oil water separators), parking lots (catch basins / stormwater rehabilitation units), dry cleaners (PERC from dry cleaning machines), photo processors (fixer), and laboratories (various chemicals). These by-products are considered to be high-strength liquid wastes or obstructive wastes and it is therefore illegal to discharge these wastes to the sanitary sewer system or the storm drain system. Proper disposal of these wastes requires a licensed hauler to pick up the waste, and transport it to a proper disposal facility.

3 Core Area Wastewater Treatment Program

Project Overview

The municipalities of Victoria, Saanich, Oak Bay, Esquimalt, View Royal, Colwood and Langford collectively are participants of the Core Area Liquid Waste Management Service which is managed and operated by the Capital Regional District (CRD) in accordance with the Core Area Liquid Waste Management Plan (CALWMP).

CALWMP is a 25-year plan under the Environmental Management Act which outlines CRD's wastewater management strategies, including wastewater treatment.

The CALWMP is the main planning document for the core area's wastewater treatment program. The current plan was developed under the direction of the Core Area Liquid Waste Management Committee and CRD Board, with input from experts and the public and was approved by the BC Minister of Environment.
The approved plan consists of a centralized wastewater treatment plant, a resource recovery centre to process residual solids and a conveyance system of pump stations and pipes throughout the core area to convey wastewater to the treatment facilities.

Currently, the Core Area Liquid Waste Management committee is underway with a planning and option development phase that includes further public consultation and technical and financial analysis of alternative options for the treatment program, including configurations and technologies.

3.2 Project Charter

At the October 2, 2015 meeting the CALWMC adopted a Project Charter outlining the goals, vision, roles/responsibilities, objectives, budget and schedule for the program along with a revised project schedule and an updated work plan overlay. The Project Charter, and the goals and commitments within it, will continue to inform the Core Area Liquid Waste planning process.

For the complete 10-page document, please see *Appendix 5.1, Core Area Sewage and Resource Recovery System 2.0, Phase 2, Project Charter*.

3.3 Project Overlay

Considering funding and regulatory deadlines, a work plan overlaid with key deadlines was prepared, revised and adopted (at the October 2, 2015 CALWMC meeting) highlighting milestones for the option development, planning and implementation phases of the project.

Please see *Appendix 5.2, Proposed Work Plan Overlay – 3P Canada Funding Considerations*.

3.4 Project Work Plan

With a high level project overlay in place, a more detailed work plan was presented and adopted (at the October 2, 2015 CALWMC meeting) specifying the actions to be taken in order to meet the required LWMP amendment deadline of March 31, 2016.

Please see *Appendix 5.3, LWMP Amendment Schedule – Amendment Considerations*.

4 Governance & Financial Information

The CRD has the authority to collect, convey, treat and dispose of sewage as detailed under the service establishment bylaw (CRD Bylaw 2312).

Core Area Liquid Waste Management Committee – The CRD Core Area Liquid Waste Management Committee is a standing committee established by the CRD Board to oversee and make recommendations to the Board regarding the Core Area Liquid Waste Management Plan and aspects of the Core Area Wastewater Treatment Program (CAWTP). The mandate of the committee is to oversee and make recommendations to the Board regarding the administration and regulatory reporting for the Core Area LWMP, core area trunk sewers and sewage disposal systems and opportunities for resource recovery. With regards to the CAWTP and the Program Commission, the committee is also responsible for reviewing all documents and reports prepared by the Commission for submission to the Board, advise the Commission on local issues that may affect the Program, advise the Board on matters being considered by the Commission that may affect the Program, monitor the financial and Program construction performance of the Commission, review any Program changes being recommended by the Commission for Board consideration and appoint a representative to an agreement management committee under the contribution agreements.

Core Area Wastewater Treatment Commission – The Core Area Wastewater Treatment Program Commission was established by the CRD Board for the purpose of administering the Program, including conducting procurement processes, completing the Program within established budget and timeframe, achieving the best overall value for money of the Program and the best overall triple bottom line outcomes for the Program, and ensure Program compliance with all applicable Provincial and Federal regulations and Contribution Agreements.

For a detailed description of each stakeholder's role and responsibilities, please see *Appendix 5.4, Planning Process – Core Area Liquid Waste Management Plan Roles, Input & Relationships*.

4.1 Financial Overview

Trunk Sewers and Sewage Disposal was the second service established for the CRD. This service was established by Letters Patent in 1967. The Service was established with flexibility to incorporate service expansion and fairness in costing for both Capital and Operating Costs. During the 1990s, as provincial legislation changed, the Core Area and West Shore municipalities and portions of the Juan de Fuca Electoral Area (Songhees & Esquimalt Nation lands) were established as a Liquid Waste Management Planning area for those participants.

Annual Operating cost sharing is calculated on prior year flows, whereas Capital Project cost sharing is calculated on future Design Capacity Benefit.

Annual Cost Sharing for the operation of various Wastewater Systems (North West and Western Communities Trunk, Bowker System, East Coast Interceptor, etc) is based on annual flows from the prior year for each Wastewater System. There are various meters throughout the system that allow engineering staff to calculate the annual volumes of flow received from each participant (municipality/first nation), by system and sub system. The costs for each system are then divided amongst the participants based on those flows and then requisitioned/invoiced on an annual basis.

Maintenance Reserve – there is a maintenance reserve for operations, funded by system/sub system, and drawn from by system/sub system – thus preserving the operating cost sharing. Any operating surplus is transferred to the Capital Reserve. Since the cost sharing for Capital projects is different from Operating, when funds go into the Capital reserve, they are segregated by participant contribution, not by system.

Capital project cost sharing is based on future Design Capacity Benefit. Expected capacity for each participant is calculated and costs are shared on that basis. Funding for these projects comes from a combination of Debt, Grants, Capital Reserve and Annual Requisition.

Design Capacity Benefit – capital costs and net annual debt costs for the four trunks and facilities are apportioned on the basis of the design capacity benefit that each participating area derives from each component of the system. Where the benefit is not an increase in capacity, the design capacity benefit is based on the existing maximum allocated capacity for each participant and for each facility.

Capital Reserve – since funds are segregated by participant, capital project funding is drawn from individual participant envelopes, based on design capacity benefit from the infrastructure project. Up until 2013, there were no budgeted annual contributions to the Capital Reserve to fund eventual Secondary (or higher) waste water treatment infrastructure. In 2013, an annual contribution program was commenced to provide funding towards the capital cost of NEW infrastructure. Funds from these segregated reserves have also been used for consulting services to support planning and public engagement processes for the Eastside and Westside Select Committees, according to municipally agreed upon cost-sharing.

Core Area Wastewater Treatment Program – This project is expected to have a significant ongoing NEW operating cost and debt servicing cost, in the order of $40 million dollars. In 2013 the committee commenced an annual ramp up of participant costs, to smooth the increase in eventual annual costs over a number of years. The annual funding (2015 amount $15 million) is providing working capital, funding any new annual debt servicing costs for the project, and down payment on total capital costs which will reduce the longer term on going debt servicing costs for the project.

Liquid Waste Management Plan – this budget is funded on the current design capacity benefit flows for the new Core Area Wastewater Treatment Program.

For a diagram outlining the cash flow of the Core Area Operating Budget, the Capital Budget and the Liquid Waste Management Plan Budget, please see *Appendix 5.5, Core Area Sewer Funding Cash Flow*.

5 Appendix

The following documents are attached:

5.1 Core Area Sewage and Resource Recovery System 2.0, Phase 2, Project Charter

5.2 Proposed Work Plan Overlay – 3P Canada Funding Considerations

5.3 LWMP Amendment Schedule – Amendment Considerations

5.4 Planning Process – Core Area Liquid Waste Management Plan Roles, Input & Relationships

5.5 Core Area Sewer Funding Cash Flow

Appendix 5.1

CORE AREA SEWAGE AND RESOURCE RECOVERY SYSTEM 2.0

Phase 2: Analysis, Options Costing and Public Engagement

Project Charter - FINAL

October 2, 2015

TABLE OF CONTENTS

1. VISION

In partnership with the public, the Core Area Liquid Waste Management Committee (CALWMC) will deliver a sewage treatment and resource recovery system that is proven, innovative and maximizes the benefits for people and the planet – economic, social, and environmental – for the long term.

2. BACKGROUND

In 2006, an environmental report commissioned by the Ministry of Environment noted the contamination of seabed sites close to Capital Regional District (CRD) outfalls where the region's wastewater is discharged. As a result, the Province mandated that the CRD plan for and initiate secondary sewage treatment for the region.

In 2007, the CRD received a letter from the Ministry of Environment giving six directives for the Core Area Liquid Waste Management Plan (LWMP). These six directives continue to inform the goals and commitments of this project.

Minister's Requirements:

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 reuse 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

In 2012, the federal government passed a law requiring all high-risk Canadian cities to provide secondary sewage treatment by 2020 at the latest. The CRD's core area was considered to be in the high-risk category.

Between 2009 and 2014, the CALWMC, CRD staff and consultants, and the Core Area Wastewater Program Commission (the Commission) worked to create and implement a publicly acceptable sewage treatment and resource recovery system for the Core Area.

While the approved CALWMP continues to identify McLoughlin Point as the location for the wastewater treatment facility, in April 2014, the CRD's revised McLoughlin Point rezoning application did not meet the zoning requirements for Esquimalt. In June 2014, the plan to build one regional plant at McLoughlin Point was put on hold by the CRD Board, in response to public input.

In June 2014, Langford, Colwood, View Royal, Esquimalt and the Songhees Nation formed the Westside Select Committee to begin planning for a new project to treat sewage and recover resources in those municipalities and the Nation. In September 2015, Esquimalt Nation joined the Westside Select Committee. In January 2015, a similar body – the Eastside Select

Committee, comprised of Saanich, Oak Bay and Victoria – was formed to develop a similar plan for the Eastside municipalities.

Since June 2014 and January 2015, respectively, both Select Committees have been engaged in in-depth public engagement activities to share information with the public, build trust, and seek public input on a range of factors including, but not limited to, level of treatment, treatment technologies, siting of treatment plants, costs, risks and long-term social, economic and environmental benefits.

In July 2015, both select committees presented their work and recommendations to the CALWMC. The CALWMC approved the solution sets and recommendations from the Eastside Select Committee, including potential sites and direction with regard to investigating secondary and tertiary treatment, anaerobic digestion and gasification, and resource recovery and revenue generation. The CALWMC received a presentation from the Westside Select Committee outlining five technically preferred sites and two scenarios, detailing its technical work to date. The Committee accepted the Westside Select Committee's proposal to carry on with further public engagement and more detailed costing and engineering analysis as per its terms of reference to be presented to the CALWMC as more fully-developed solutions in fall 2015.

The work of the Eastside and Westside Select Committees, the CALWMC and the public between June 2014 and July 2015 lays the groundwork for the current project, *Core Area Sewage and Resource Recovery System 2.0.*

3. GOALS AND COMMITMENTS

The *Core Area Sewage and Resource Recovery System 2.0* project will deliver the following goals and meet the following commitments. *NB goals should be measurable. Each of these goals needs a corresponding metric so at project completion, the CALWMC can determine whether it achieved its goals.*

Goals

a) Meet or exceed federal regulations for secondary treatment by December 31, 2020

b) Minimize costs to residents and businesses (life cycle cost) and provide value for money

c) Produce an innovative project that brings in costs at less than original estimates

d) Optimize opportunities for resource recovery to accomplish substantial net environmental benefit and reduce operating costs

e) Optimize greenhouse gas reduction through the development, construction and operation phases and ensure best practice for climate change mitigation

Commitments

a) Develop and implement the project in a transparent manner and engage the public throughout the process

b) Deliver a solution that adds value to the surrounding community and enhances the livability of neighbourhoods

c) Deliver solutions that are safe and resilient to earthquakes, tsunamis, sea level rise and storm surges

d) Develop innovative solutions that account for and respond to future challenges, demands and opportunities, including being open to investigating integration of other parts of the waste stream if doing so offers the opportunities to optimize other goals and commitments in the future

e) Optimize greenhouse gas reduction through the development, construction and operation phases and ensure best practice for climate change mitigation

4. SCOPE

The scope of this phase of the *Core Area Sewage and Resource Recovery System 2.0* project, is to complete the Options Development Phase, by submitting an amendment to the Liquid Waste Management Plan and receiving conditional approval from the Minister of Environment of an Amendment for the Core Area. This Plan amendment will be approved by the provincial and federal funding agencies. Completion of this phase includes securing sites for all facilities (wastewater treatment and resource recovery).

The scope of this phase does not include detailed site assessments such as Environmental and Social Reviews, submission of detailed business cases (as may be required by funding agencies), indicative design, finalized cost sharing agreements or the procurement of infrastructure.

5. KEY STAKEHOLDERS

The graphic illustration (see Attachment 1) outlines all of the *Core Area Sewage and Resource Recovery 2.0* project stakeholders and displays the relationships between them. For a description of the roles and responsibilities of each stakeholder, please see Section 6.

6. ROLES AND RESPONSIBILITIES

Project Lead (TBD)

Federal Government – In 2012, the federal government passed a law requiring all high-risk Canadian cities to provide secondary sewage treatment by 2020 at the latest. The CRD's Core Area was considered to be in the high-risk category. The federal government agreed to contribute up to $253 million towards the project out of three different funding programs: Building Canada Fund ($120 million), Green Infrastructure Fund ($50 million) and 3P Canada ($83.4 million).

- Secondary treatment mandated by 2020
- Funding up to $253 million

Provincial Government – In 2006, an environmental report commissioned by the Ministry of Environment noted the contamination of seabed sites close to CRD outfalls where wastewater is discharged. As a result, the CRD was mandated by the province to plan for and initiate secondary wastewater treatment for the region. Provincial funding agreements provide a maximum of $248 million towards the project.

- Funding up to $248 million
- Approval of LWMP amendment and regulatory requirements

Capital Regional District Board (CRD Board) – The CRD Board is responsible for selecting final site locations and securing lands for wastewater treatment facilities, obtaining the rezoning of lands, approving the architectural design for facilities, and approving funding agreements and the budget. The CRD Board is responsible for delivering the project outlined in the Vision.

- Final approving body for funding, budget and major decisions
- Collect and disburse the local portion of the funding of $287 million

Core Area Liquid Waste Management Committee (CALWMC) – A standing committee of the CRD Board, the CALWMC consists of Directors from municipalities and First Nations participating in the Core Area Liquid Waste Management Plan (CALWMP). The committee is responsible for overseeing the CALWMP and making recommendations to the CRD Board about the CALWMP and certain aspects of the Core Area Wastewater Treatment Program.

- Standing Committee of CRD Board
- Responsible for overseeing CALWMP

Core Area Liquid Waste Management Committee (CALWMC) Chair – The CALWMC Chair is selected by the Chair of the CRD Board annually. The CALWMC Chair is responsible for participating in CALWMC agenda meetings and chairing CALWMC meetings. The Chair is also responsible for building and maintaining relationships, and liaising with the Chair of the Core Area Wastewater Program Commission and the Chair of the Technical Oversight Panel. The CALWMC Chair is the public face of the project and is responsible for communicating with other public bodies at the political level, as well as with the media.

Core Area Liquid Waste Management Committee (CALWMC) Vice Chair – The CALWMC Vice Chair is responsible for fulfilling the roles and responsibilities of the CALWMC Chair in the Chair's absence.

Westside Wastewater Treatment and Resource Recovery Select Committee – In June 2014, Westside participants (Colwood, Esquimalt, Langford, View Royal, and Songhees Nation) formed the Westside Wastewater and Resource Recovery Select Committee to evaluate Westside treatment options and develop a sub-regional wastewater treatment and resource recovery plan. The member municipalities' role is to provide political input and take feedback from the public and report to the Westside Select Committee. The participating municipalities also have zoning authority. In September 2015, the Esquimalt Nation joined the Westside Select Committee. The Songhees and Esquimalt Nation representatives provide political input to the Westside Select Committee. The Committee reports to the CALWMC and is supported by CRD staff, Westside staff, consultants and a technical working group.

The Westside Select Committee participants initiated the Westside Solutions Project as a way to engage residents to work collectively to identify solutions for wastewater treatment and resource recovery that meet the unique needs of the Westside communities. The Westside option sets consider flow scenarios that include Eastside flows from Vic West and Saanich West. This work, along with the work from the Eastside Select Committee, will inform the *Core Area Sewage and Resource Recovery 2.0* project and the amendment to the Liquid Waste Management Plan.

- Representatives from Colwood, Esquimalt, Langford, View Royal and Songhees Nation
- Reports to CALWMC
- Evaluates options to develop a sub-regional wastewater treatment plan
- Supported by CRD staff, Westside municipal staff, consultants and a technical working group

Eastside Wastewater Treatment and Resource Recovery Select Committee – In January 2015, Oak Bay, Saanich and Victoria formed the Eastside Wastewater and Resource Recovery Select Committee to engage with their communities and develop wastewater treatment options that meet the needs of the Eastside municipalities. The role of the participating municipalities is to provide political input and take feedback from the public and report to the Eastside Select Committee. The participating municipalities also have zoning authority. The Eastside Select Committee reports to the CALWMC and is supported by CRD staff, participating municipal staff and consultants.

The Eastside option sets consider a regional option, which includes all flows from Eastside and Westside, as well as a sub-regional and distributed option that includes flows from Eastside municipalities only and Eastside Clover Point outfall catchment flows. The Eastside Select Committee's plan, in combination with the work from the Westside Select Committee, will inform the *Core Area Sewage and Resource Recovery 2.0* project and could form the basis for an amendment to the CALWMP.

- Representatives from Oak Bay, Saanich and Victoria
- Reports to CALWMC
- Working to develop wastewater treatment options for Eastside municipalities
- Supported by CRD staff, participating municipal staff, and consultants

CRD Chief Administrative Officer – The CAO oversees all administrative operations and staff, ensures CRD Board policies are implemented, oversees the operations and functions of the CRD, and aligns the organization to achieve strategic priorities set by the Board. This includes working with federal and provincial staff to coordinate funding agreements and providing advice to the CRD Board regarding potential risks and opportunities for the CRD Board.

- Oversees CRD operations and staff
- Works with partners and stakeholders
- Provides advice to the CRD Board

General Manager of Parks & Environmental Services – The GM of Parks & Environmental Services provides general direction and leadership to CRD staff and advises the CALWMC and the Eastside and Westside Wastewater Treatment and Resource Recovery Select Committees regarding the technical and legal aspects of the CALWMP and the wastewater treatment

planning process. The General Manager's role is also to provide information to the Core Area Municipalities' CAOs and First Nations Administrators.

- Provides general direction and leadership to CRD staff
- Advises on technical and legal aspects of the CALWMP
- Informs Core Area Municipal CAOs and First Nation Administrators about the project

General Manager of Finance & Technology – The GM of Finance & Technology is the Chief Financial Officer for the CRD. The GM of Finance and Technology is responsible for the budget and all financial services, information technology and geographic information services (IT & GIS), property and real estate services, insurance and risk management, facilities management, and arts development for the Capital Region.

Corporate Officer – The CRD Corporate Officer provides support and procedural advice to the CRD Board and the CALWMC, and is responsible for maintaining the official records of these bodies. The officer also processes requests for records in accordance with the Freedom of Information and Protection of Privacy Act.

First Nations Liaison – The First Nations Liaison serves as a point of contact for First Nations communities involved with the project and provides departmental support and assistance in the areas of service delivery, referral processes, outreach, engagement and relationship building.

Manager, Corporate Communications – The Senior Manager of Corporate Communications provides professional expertise and leads the CRD Corporate Communications team, which works with the General Manager of Parks & Environmental Services and the CAO on overall communications for the CRD Board. There is a communications coordinator dedicated to working on the CALWMP.

Technical Oversight Panel (ToP) – The role of the Technical Oversight Panel is to review the costing and feasibility studies developed by the Engineering Team during the planning phase of the project and to ensure that the studies for the wastewater treatment options include the necessary due diligence. The Technical Oversight Panel will also advise on how to best engage the private sector in this phase of the project. Fundamental to providing independent technical oversight and confirming due diligence is to ensure that the engagement of the private sector in this phase of the project and the innovative solutions that may come forward is informed by, not necessarily bound by (as per the ToP Terms of Reference), decisions to date regarding sites, option sets, timelines, definitions of treatment and other potential limitations on analysis and costing.

The role of the ToP does not include public consultation, media interaction, land acquisition and rezoning, contract management or direction of the Engineering Team The ToP receives information from and liaises with the Engineering Team (Urban Systems and Carollo Associates), and provides feedback and recommendations to the CALWMC. The Chair of the ToP reports to the CALWMC biweekly. The ToP liaises with the Eastside and Westside Select Committee.

- Independent Technical Oversight Panel
- Reviews costing and feasibility studies

- Reports findings to the CALWMC

Independent Engineering Resources – The Independent Engineering Team's role is to conduct the Feasibility and Costing Analysis (Urban Systems partnered with Carollo) for the CALWMP Wastewater Treatment System. The Engineering Team is also working with the Westside Select Committee to do a more detailed analysis on the Westside flows. The team provides information to and liaises with the ToP, and reports to and receives direction from the CALWMC. Additional external resources may be required for staff to prepare the LWMP amendment. The team is assessing the feasibility of a regional and sub-regional system in the Core. The team is also looking at a distributed system option based on the potential sites put forward from the Eastside Select Committee and Westside Select Committee.

- Conducts feasibility and costing analysis
- Assesses feasibility of regional and sub-regional systems in the Core Area
- Assists with preparation of LWMP amendment

Fairness and Transparency Advisor (FTA) – The FTA's role is to act as a point of contact for the public to submit complaints regarding the process of costing the options, working with the host jurisdiction(s) and preparing an amendment to the LWMP and to ensure that the process is fair, transparent, impartial and objective. The FTA is independent of the CRD. The FTA's role is to investigate appropriate complaints and report to the Board, through the CALWMC, the results of an investigation, to help strengthen the fairness, transparency or objectiveness of the process followed. The FTA is to provide monthly status reports to the CALWMC. The role of the FTA does not restrict the public from going to other sources for complaints and requests to review processes, such as the office of the Ombudsperson.

- Independent of the CRD
- Investigates public complaints regarding process
- Ensures process is fair, transparent, impartial and objective

Core Area Wastewater Treatment Program Commission (the Commission) – As part of the funding negotiations with the Province, the CRD was required to establish an independent non-political governance body to manage, implement and commission the Core Area Wastewater Treatment Program. The Commission governs the implementation and operation of the Wastewater Treatment Program and oversees the procurement process for all components of the Program. The Commission operates autonomously of the CALWMC and Regional Board; however, the Commission is required to seek CRD Board and funder approval on predetermined items as detailed in the CRD Commission bylaw. Several steps have been taken to scale back operations and reduce costs as the CRD continues its planning work to find a new solution to wastewater treatment. The Commission remains in place waiting to implement whatever system of wastewater projects the CRD Board decides upon, and is approved by the Province.

- Independent Commission required by Province
- Manages implementation and operations of the Wastewater Treatment Program
- Oversees procurement process

Technical and Community Advisory Committee (TCAC) – The Technical and Community Advisory Committee is an LWMP requirement of the province, and provides technical and

community consultation advice and input to the CALWMC. The TCAC assists the CALWMC in making appropriate recommendations to the CRD Board in the following areas: (a) plant design criteria and treatment technology, including opportunities for resource recovery, sludge management, odour control and general plant design criteria, (b) number and location of treatment plants, and (c) timing/scheduling of treatment.

- Provides technical and community consultation advice
- Makes recommendations regarding design criteria, treatment technology, number and location of treatment plants, and schedule for treatment

Eastside Public Advisory Committee (EPAC) – The Eastside Public Advisory Committee takes input from the public and provides guidance to the Eastside Wastewater and Resource Recovery Select Committee on the public consultation process.

- Takes input from the public
- Provides Eastside Select Committee on the public consultation process

Core Area CAOs + First Nation Administrators – The Core Area CAOs and First Nations Administrators are the principle policy advisors to councils, and provide support to the Eastside and Westside Select Committees. The Core Area CAOs and First Nations Administrators receive project-specific information and updates from the CRD's General Manager of Parks & Environmental Services regarding the progress of the CALWMC and the Eastside and Westside Select Committees.

- Principle policy advisors
- Receive project information
- Provide recommendations from municipal staff perspective

Municipal Councils – The role of municipal councils is to make land-use decisions for facility siting and to negotiate development agreements with the CRD.

Westside Communications Team – The Westside Communications Team is made up of Communications Coordinators from Colwood, Esquimalt, CRD and Aurora Consultants. The Team provides communication and public consultation support to the Westside Select Committee.

Eastside Communications Team – The Eastside Communications Team consists of a consultant from Public Assembly and the CRD Communications Manager and CRD CALWMP Communications Coordinator. The Eastside Communications Team provides communication and public consultation support to the Eastside Select Committee.

Westside Technical Team – The Westside Technical Team consists of municipal staff, supported by Urban Systems. The technical team provides technical information and input to the Westside Select Committee.

- Comprised of municipal staff and supported by Urban Systems and Aurora Innovations for facilitation and coordination support
- Provides technical advice to the Westside Select Committee

Eastside Technical Team – The Eastside Technical Team is comprised of municipal staff and supported by Urban Systems and CRD Staff. The Technical Team provides support and input to the Eastside Select Committee.

- Comprised of municipal staff; provides support and information to the Eastside Select Committee

7. MILESTONES

The Proposed Work Plan Overlay, which was adopted and submitted to 3P Canada in March 2014, provides the overarching timelines and milestones through the completion of the project (Attachment 2). A draft schedule identifying key tasks and milestones of the feasibility and costing exercise to be achieved by the end of 2015 during Phase 2 of the Core Area Sewage and Resource Recovery System 2.0 project is included for discussion (Attachment 3). The scheduling and implementation of the public consultation on the preferred solution sets (after the costing analysis) is anticipated to occur in early December, but is dependent on all of the deadlines being met up until that point.

A detailed schedule is under development and will be circulated for comment.

8. BUDGET

Funding for the project will be drawn from the Core Area Liquid Waste Management Plan operating reserve, funded by all participants in the service based on projected design capacity for 2030. A total budget of $1,250,000 has been identified to support this phase of the project, including engineering and public consultation consulting fees, Technical Oversight Panel honorarium and disbursements, Fairness and Transparency Advisor, public consultation process delivery and CRD staff time.

Phase 2 Budget

Item	Cost
Project Oversight (FTA & ToP)	$280,000
Public Consultation	$240,000
Feasibility and Costing Analysis	$450,000
Property and Zoning	$75,000
LWMP Amendment No. 10	$75,000
Staff and Wages	$300,000
Miscellaneous and Legal	$30,000
TOTAL	$1,450,000

9. CONSTRAINTS, ASSUMPTIONS, RISKS AND DEPENDENCIES

a) Constraints

- The timelines for this phase of the project are extremely aggressive with no buffer
- The schedule is dependent on multiple parties and governance bodies meeting their sub-project schedules

b) Assumptions

- The Minister of Environment will provide direct *conditional* approval of the Liquid Waste Management Plan upon submission to the Province

c) Risks

- The costing analysis and public consultation processes will be subject to criticism due to time constraints
- The governance model of the project is complex, leading to miscommunication or contradictory decision making
- Municipal councils do not endorse siting preferences of the CRD Board
- Potential loss of senior government funding if timelines are not met

d) Risk Mitigation

- Ensure regular, open reporting of all parties to the Core Area Liquid Waste Management Committee to ensure "no surprises" when public consultation is formally conducted
- Engage in close municipal council and staff involvement as preferred sites emerge and municipal planning/siting processes are initiated
- Ensure ongoing and open discussions with the funding agencies to ensure "no surprises" when the LWMP amendment is submitted for approval and the project is submitted for funding
- Ensure transparent and deep engagement with the community
- Ensure there is enough time required to rezone and that there is public support for rezoning

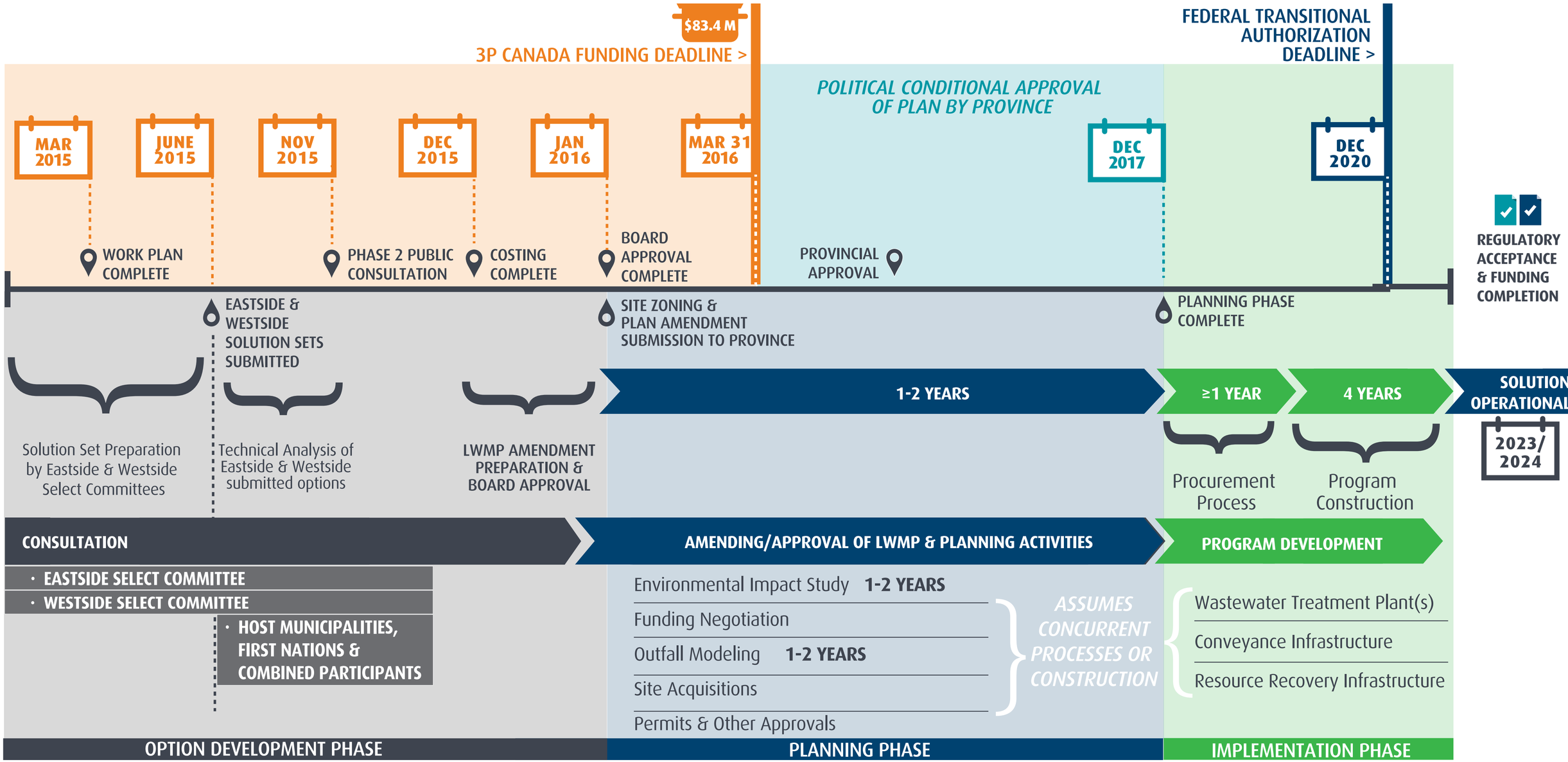
Attachments:	Attachment 1:	Planning Process – Core Area Liquid Waste Management Plan – Roles, Input & Relationships
	Attachment 2:	Proposed Work Plan Overlay – 3P Canada Funding Considerations
	Attachment 3:	Proposed Feasibility and Costing Analysis Schedule (Urban Systems) – August 31, 2015

Appendix 5.2

Proposed Work Plan Overlay

3P CANADA FUNDING CONSIDERATIONS

OPTION DEVELOPMENT, PLANNING & IMPLEMENTATION PHASES

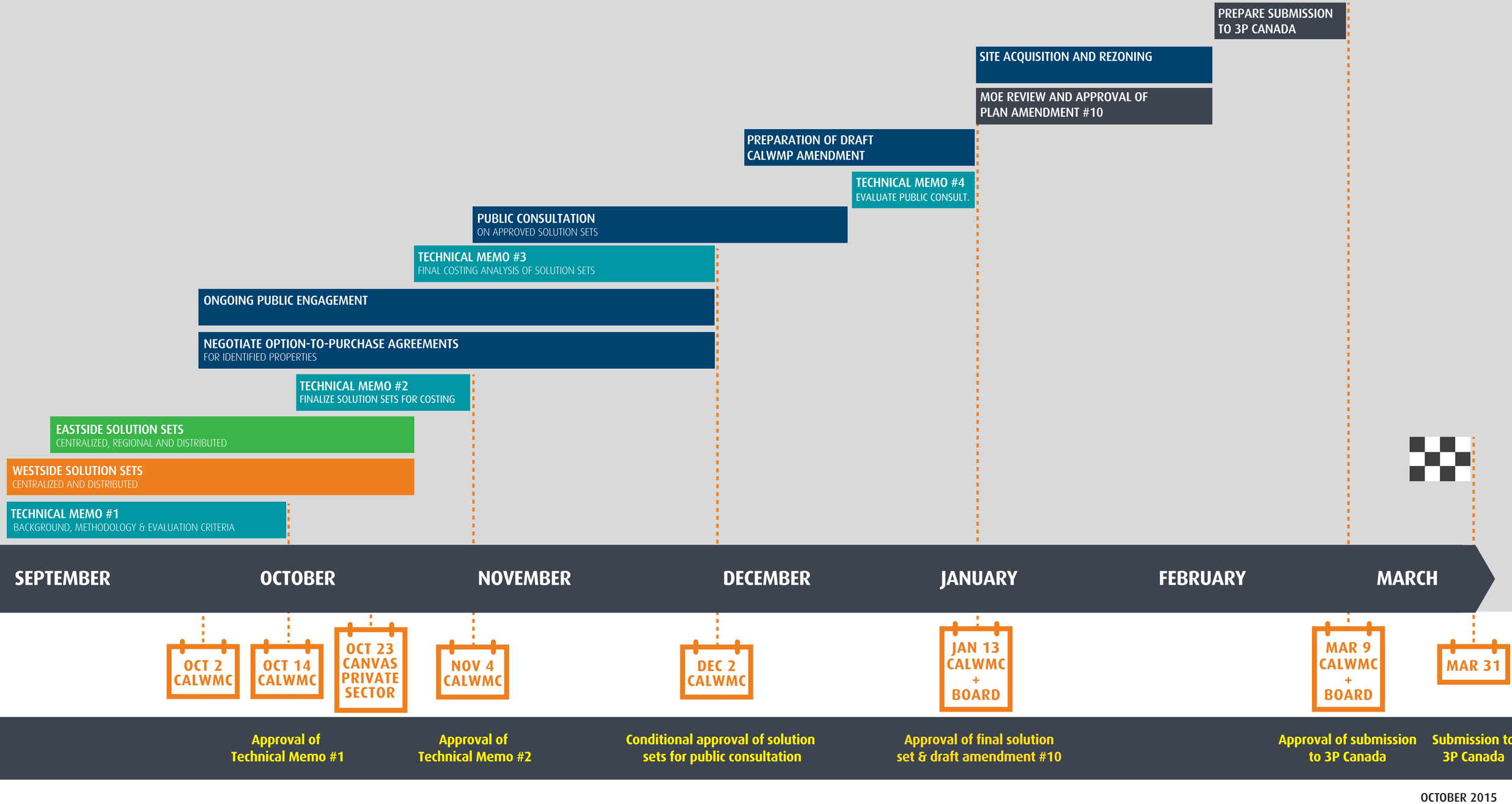


OCTOBER 2015

Appendix 5.3

LWMP AMENDMENT SCHEDULE

AMENDMENT CONSIDERATIONS



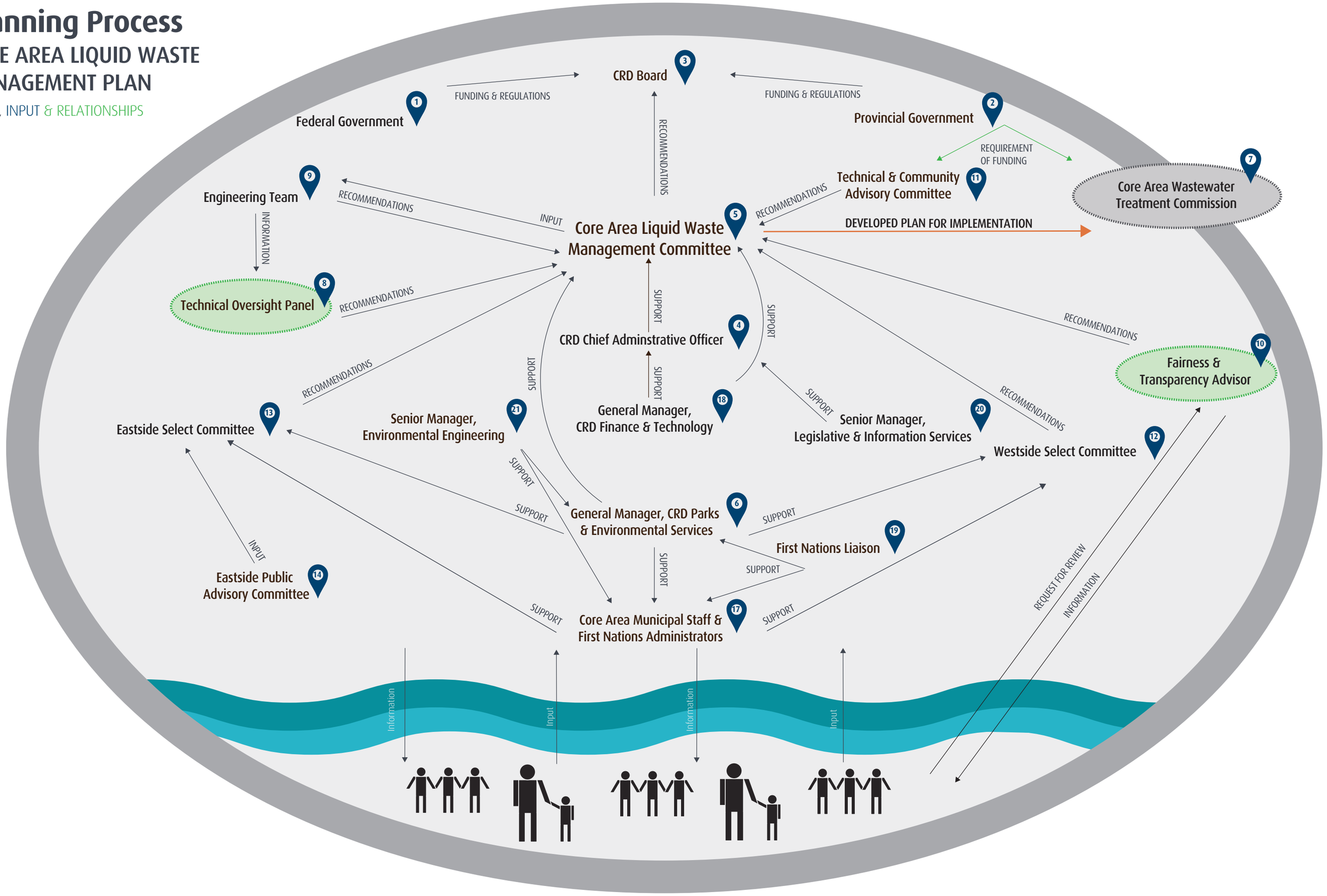
OCTOBER 2015

Appendix 5.4

Planning Process

CORE AREA LIQUID WASTE MANAGEMENT PLAN

ROLES, INPUT & RELATIONSHIPS



Appendix 5.4
Planning Process CORE AREA LIQUID WASTE MANAGEMENT PLAN

ROLES, INPUTS & RELATIONSHIPS

1) Federal Government – In 2012, the federal government passed a law requiring all high-risk Canadian cities to provide secondary sewage treatment by 2020 at the latest. The CRD's Core Area was considered to be in the high-risk category. The federal government agreed to contribute up to $253 million towards the project out of three different funding programs: Building Canada Fund ($120 million), Green Infrastructure Fund ($50 million) and 3P Canada ($83.4 million).

2) Provincial Government – In 2006, an environmental report commissioned by the Ministry of Environment noted the contamination of seabed sites close to CRD outfalls where wastewater is discharged. As a result, the CRD was mandated by the province to plan for and initiate secondary wastewater treatment for the region. Provincial funding agreements provide a maximum of $248 million towards the project.

3) Capital Regional District Board (CRD Board) – The CRD Board is responsible for selecting final site locations and securing lands for wastewater treatment facilities, obtaining the rezoning of lands, approving the architectural design for facilities, and approving funding agreements and the budget. The CRD Board is responsible for delivering the project outlined in the Vision.

4) CRD Chief Administrative Officer – The CAO oversees all administrative operations and staff, ensures CRD Board policies are implemented, oversees the operations and functions of the CRD, and aligns the organization to achieve strategic priorities set by the Board. This includes working with federal and provincial staff to coordinate funding agreements and providing advice to the CRD Board regarding potential risks and opportunities for the CRD Board.

5) Core Area Liquid Waste Management Committee (CALWMC) – A standing committee of the CRD Board, the CALWMC consists of Directors from municipalities and First Nations participating in the Core Area Liquid Waste Management Plan (CALWMP). The committee is responsible for overseeing the CALWMP and making recommendations to the CRD Board about the CALWMP and certain aspects of the Core Area Wastewater Treatment Program.

6) General Manager of Parks & Environmental Services – The GM of Parks & Environmental Services provides general direction and leadership to CRD staff and advises the CALWMC and the Eastside and Westside Wastewater Treatment and Resource Recovery Select Committees regarding the technical and legal aspects of the CALWMP and the wastewater treatment planning process. The General Manager's role is also to provide information to the Core Area Municipalities' CAOs and First Nations Administrators.

7) Core Area Wastewater Treatment Program Commission (the Commission) – As part of the funding negotiations with the Province, the CRD was required to establish an independent non-political governance body to manage, implement and commission the Core Area Wastewater Treatment Program. The Commission governs the implementation and operation of the Wastewater Treatment Program and oversees the procurement process for all components of the Program. The Commission operates autonomously of the CALWMC and Regional Board however, the Commission is required to seek CRD Board and funder approval on predetermined items as detailed in the CRD Commission bylaw. Several steps have been taken to scale back operations and reduce costs as the CRD continues its planning work to find a new solution to wastewater treatment. The Commission remains in place waiting to implement whatever system of wastewater projects the CRD Board decides upon, and is approved by the Province.

8) Technical Oversight Panel (ToP) - The role of the Technical Oversight Panel is to review the costing and feasibility studies developed by the Engineering Team during the planning phase of the project and to ensure that the studies for the wastewater treatment options include the necessary due diligence. The Technical Oversight Panel will also advise on how to best engage the private sector in this phase of the project. Fundamental to providing independent technical oversight and confirming due diligence is to ensure that the engagement of the private sector in this phase of the project and the innovative solutions that may come forward is informed by, not necessarily bound by (as per the ToP Terms of Reference), decisions to date regarding sites, option sets, timelines, definitions of treatment and other potential limitations on analysis and costing.

The role of the ToP does not include public consultation, media interaction, land acquisition and rezoning, contract management or direction of the Engineering Team The ToP receives information from and liaises with the Engineering Team (Urban Systems and Carollo Associates), and provides feedback and recommendations to the CALWMC. The Chair of the ToP reports to the CALWMC biweekly. The ToP liaises with the Eastside and Westside Select Committee.

9) Independent Engineering Resources - The Independent Engineering Team's role is to conduct the Feasibility and Costing Analysis (Urban Systems partnered with Carollo) for the CALWMP Wastewater Treatment System. The Engineering Team is also working with the Westside Select Committee to do a more detailed analysis on the Westside flows. The team provides information to and liaises with the ToP, and reports to and receives direction from the CALWMC. Additional external resources may be required for staff to prepare the LWMP amendment. The team is assessing the feasibility of a regional and sub-regional system in the Core. The team is also looking at a distributed system option based on the potential sites put forward from the Eastside Select Committee and Westside Select Committee.

10) Fairness and Transparency Advisor (FTA) - The FTA's role is to act as a point of contact for the public to submit complaints regarding the process of costing the options, working with the host jurisdiction(s) and preparing an amendment to the LWMP and to ensure that the process is fair, transparent, impartial and objective. The FTA is independent of the CRD. The FTA's role is to investigate appropriate complaints and report to the Board, through the CALWMC, the results of an investigation, to help strengthen the fairness, transparency or objectiveness of the process followed. The FTA is to provide monthly status reports to the CALWMC. The role of the FTA does not restrict the public from going to other sources for complaints and requests to review processes, such as the office of the Ombudsperson.

11) Technical Community and Advisory Committee (TCAC) - The Technical and Community Advisory Committee is an LWMP requirement of the province, and provides technical and community consultation advice and input to the CALWMC. TCAC assists the CALWMC in making appropriate recommendations to the CRD Board in the following areas: (a) plant design criteria and treatment technology, including opportunities for resource recovery, sludge management, odour control and general plant design criteria, (b) number and location of treatment plants, and (c) timing/scheduling of treatment.

12) Westside Wastewater Treatment and Resource Recovery Select Committee - In June 2014, Westside participants (Colwood, Esquimalt, Langford, View Royal, and Songhees Nation) formed the Westside Wastewater and Resource Recovery Select Committee to evaluate Westside treatment options and develop a sub-regional wastewater treatment and resource recovery plan. The member municipalities' role is to provide political input and take feedback from the public and report to the Westside Select Committee. The participating municipalities also have zoning authority. In September 2015, the Esquimalt Nation joined the Westside Select Committee. The Songhees and Esquimalt Nation representatives provide political input to the Westside Select Committee. The Committee reports to the CALWMC and is supported by CRD staff, Westside staff, consultants and a technical working group.

The Westside Select Committee participants initiated the Westside Solutions Project as a way to engage residents to work collectively to identify solutions for wastewater treatment and resource recovery that meet the unique needs of the Westside communities. The Westside option sets consider flow scenarios that include Eastside flows from Vic West and Saanich West. This work, along with the work from the Eastside Select Committee, will inform the Core Area Sewage and Resource Recovery 2.0 project and the amendment to the Liquid Waste Management Plan.

13) Eastside Wastewater Treatment and Resource Recovery Select Committee - In January 2015, Oak Bay, Saanich and Victoria formed the Eastside Wastewater and Resource Recovery Select Committee to engage with their communities and develop wastewater treatment options that meet the needs of the Eastside municipalities. The role of the participating municipalities is to provide political input and take feedback from the public and report to the Eastside Select Committee. The participating municipalities also have zoning authority. The Eastside Select Committee reports to the CALWMC and is supported by CRD staff, participating municipal staff and consultants.

The Eastside option sets consider a regional option, which includes all flows from Eastside and Westside, as well as a sub-regional and distributed option that includes flows from Eastside municipalities only and Eastside Clover Point outfall catchment flows. The Eastside Select Committee's plan, in combination with the work from the Westside Select Committee, will inform the Core Area Sewage and Resource Recovery 2.0 project and could form the basis for an amendment to the CALWMP.

14) Eastside Public Advisory Committee - The Eastside Public Advisory Committee takes input from the public and provides guidance to the Eastside Wastewater and Resource Recovery Select Committee on the public consultation process.

15) Westside Technical Team - The Westside Technical Team consists of municipal staff, supported by Urban Systems. The technical team provides technical information and input to the Westside Select Committee.

16) Eastside Technical Team - The Eastside Technical Team is comprised of municipal staff and supported by Urban Systems and CRD Staff. The Technical Team provides support and input to the Eastside Select Committee.

17) Core Area CAOs and First Nation Administrators - The Core Area CAOs and First Nations Administrators are the principle policy advisors to councils, and provide support to the Eastside and Westside Select Committees. The Core Area CAOs and First Nations Administrators receive project-specific information and updates from the CRD's General Manager of Parks & Environmental Services regarding the progress of the CALWMC and the Eastside and Westside Select Committees.

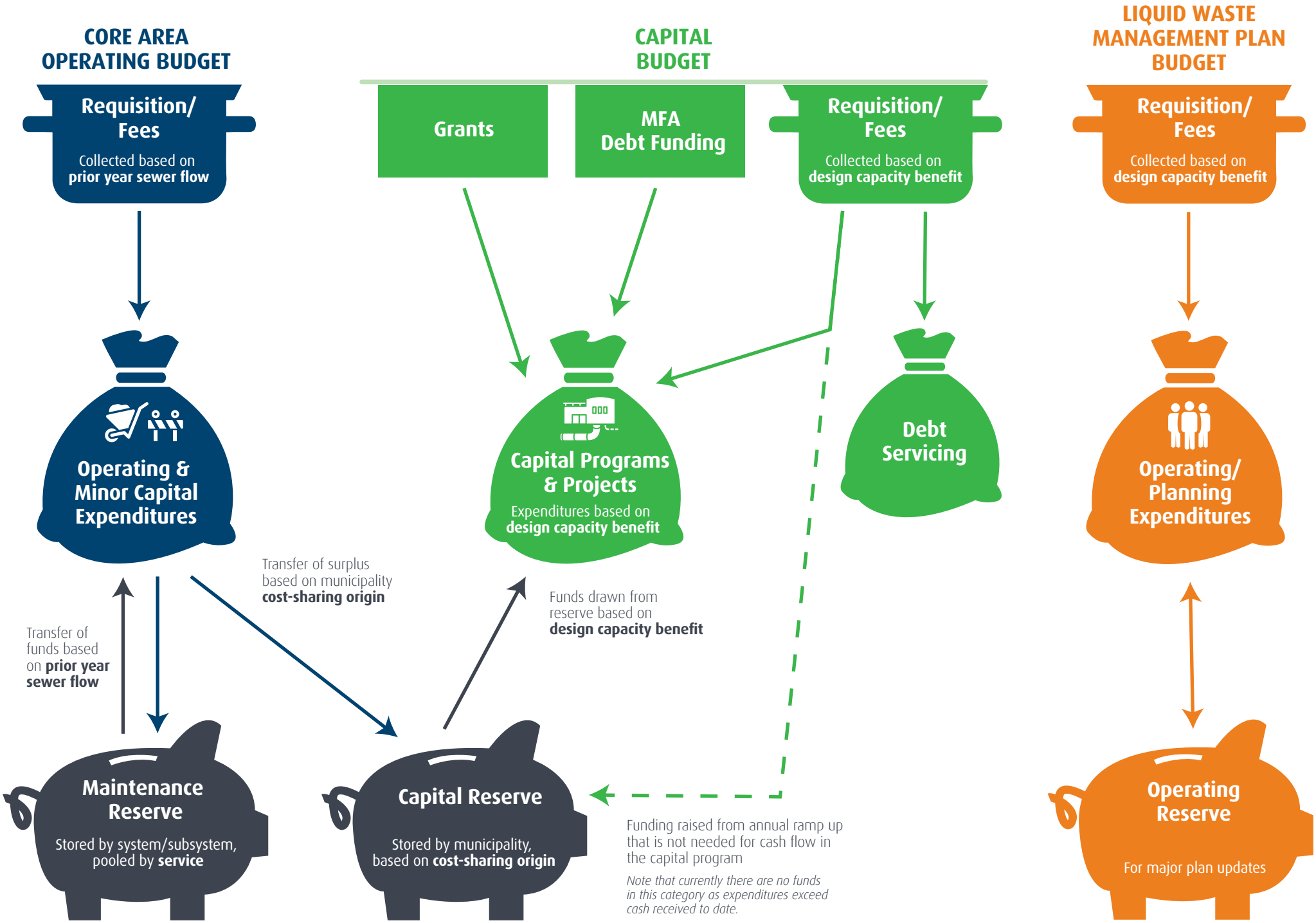
18) GM of Finance & Technology - The GM of Finance & Technology is the Chief Financial Officer for the CRD. The GM of Finance and Technology is responsible for the budget and all financial services, information technology and geographic information services (IT & GIS), property and real estate services, insurance and risk management, facilities management, and arts development for the Capital Region.

19) First Nations Liasion - The First Nations Liaison serves as a point of contact for First Nations communities involved with the project and provides departmental support and assistance in the areas of service delivery, referral processes, outreach, engagement and relationship building.

20) Senior Manager, Environmental Engingeering (Dan Telford) - The Sr. Manager of Environmental Engineering supports the GM of Parks and Environmental Services as well as provides support for the Core Area Chief Administration Officers and First Nations Administrators.

21) Corporate Officer - The CRD Corporate Officer provides support and procedural advice to the CRD Board and the CALWMC, and is responsible for maintaining the official records of these bodies. The officer also processes requests for records in accordance with the Freedom of Information and Protection of Privacy Act.

Appendix 5.5
Core Area Sewer Funding Cash Flow



Making a difference...together

REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE
MEETING OF WEDNESDAY, FEBRUARY 10, 2016

SUBJECT **Update to 2016 Capital Funding – Core Area Wastewater Program**

ISSUE

To update the Core Area Liquid Waste Management Committee (CALWMC) on approved 2016 capital funding and 2016 Capital Plan.

BACKGROUND

At the CALWMC held on October 28, 2015, a report was presented outlining both the Projects and Funding and the Annual Requisition Funding for the Core Area Wastewater Treatment Program (Schedule A). The report outlined the Core Area Sewer Infrastructure Upgrade Projects planned for 2016, including both the estimated costs and cost sharing allocations for each project, along with the Capital Plan through to 2020.

It was stated in the report, that finance and engineering staff would evaluate the $23.9 million of expenditures to determine which components have future value to the project. This work was projected to be part of the 2015 year-end financial audit. After joint technical sessions with the auditors, and in reference to Public Sector Accounting Board standards (PS3150 – Tangible Capital Assets) there is currently no ability to make an evaluation of which costs have future value.
This audit review will now take place for the 2016 year-end financial statement, although staff will begin this work once the project has been defined.

Schedule B – Ramping Up to Treatment has been updated from the original report to reflect the decision of the CALWMC and CRD Board to retain the Annual Requisition level at $15 million for the 2016 year.

Schedule D – The most recent Proposed Work Plan Overlay has been added to show the revised timing related to the project.

ALTERNATIVES

1. That the Core Area Liquid Waste Management Committee receive this report for information.

2. That the Core Area Liquid Waste Management Committee request additional information.

FINANCIAL IMPLICATIONS

When the new sewage project is defined to sufficient detail, CRD finance and engineering staff will be able to evaluate which past costs have value to the newly defined sewage project.

CONCLUSION

When the sewage project is defined, identified costs will be expensed with the associated funding from the previous annual requisitions of the project.

RECOMMENDATION

That the Core Area Liquid Waste Management Committee receives this report and recommends to the Capital Regional District Board:

That Update to 2016 Capital Funding - Core Area Wastewater Program be received for information.

Submitted by:	Amber Genero, MA, CPA, CMA, Manager, Accounting Services
Concurrence:	Diana E. Lokken, CPA, CMA, General Manager, Finance & Technology
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

AG:ab

Attachments: Schedule A – 2016 Capital Funding – Core Area Wastewater Program
Schedule B – Updated Ramping Up to Treatment (reflects decision from November 4, 2015 Board Meeting)
Schedule C-1 – Requisition Cost Sharing
Schedule C-2 – 2016 Cost Sharing Allocation
Schedule D – Updated Proposed Work Plan Overlay

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REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE
MEETING OF WEDNESDAY, OCTOBER 28, 2015

SUBJECT **2016 Capital Funding – Core Area Wastewater Program**

ISSUE

To propose the 2016 Core Area Wastewater Program annual capital program projects and funding and the annual increase in the levy to fund the Core Area Wastewater Treatment Program (Program).

BACKGROUND

Core Area Wastewater Service Annual Capital Program – Projects and Funding

The Capital Reserve Fund for the Core Area Wastewater Service is comprised of funds held for each participant in the service. The funds in reserve are raised through two sources:

1. Annual operating budget requisition surplus – Funding for annual operating expenses is requisitioned or invoiced based on actual annual flows from the prior year for each of the four Core Area wastewater trunk systems. If operating surpluses exist, the surplus funds are directed to each participant's share of the Capital Reserve Fund based on the 'flow-based' operating cost sharing.

2. Capital budget requisition – As necessary to meet annual capital funding requirements (cash or debt servicing), funding is requisitioned or invoiced based on a design capacity apportionment basis. That is, the design capacity benefit that each participant derives from each improvement or component of the system.

In recent years, annual capital programs have been partially or fully deferred while the treatment program planning process has been underway and until conveyance system configuration impacts are better understood. However, there are now several capital projects on the trunk sewer infrastructure components that need to be completed to avoid operational and service impacts. The proposed 2016 projects and cost sharing apportionments are attached in summary as Schedule B-3. It is expected that most of the proposed projects will not be affected by changes in conveyance system configuration due to the location or nature of the project, however, staff have identified two pump station structural improvement projects that could be deferred.

The total value of the proposed 2016 Core Area Annual Capital Program is $2,095,000. Schedule B-3 also notes the Capital Reserve Fund balances held for each participant in the service. It is projected that there will be sufficient funding in reserves for each participant to fund the proposed 2016 capital program. The five year (2016-2020) capital plan value is currently projected to be $14.176 million and would require new funding, either through planned reserve fund contributions or debt financing. For the 2017 budget, long term funding options for the annual capital program will be brought to the Committee for consideration and the Committee can give further consideration to the annual capital projects with more certainty regarding treatment program impacts on the conveyance system.

Core Area Wastewater Treatment Program – Annual Requisition Funding

When the Program was approved in 2012, there had been no capital reserve built up over the years to provide for the eventual cost of sewage treatment within the Core Area. In 2013 the estimated eventual combined operating and debt servicing costs for the Program was estimated to be an additional $35 to $40 million annually, see Schedule A (Ramping Up to Treatment).

The Core Area Liquid Waste Management Committee (Committee) approved a plan to requisition funds in an orderly, predictable manner to reach the estimated on going combined operating and debt servicing costs by 2019/2020. This plan includes an annual levy increase of $5 million per year. The additional cash flow was intended to provide working capital; pay for debt servicing costs for any new debt incurred from 2013 onward and to provide cash to reduce the ongoing borrowing costs where available. To date the project expenditures and annual debt servicing costs have exceeded the funds received through this plan. There is currently over $7 million in temporary borrowing to fund the Program.

Additionally, funding for the Eastside and Westside Select Committees has been taken from the annual requisition. This has resulted in $2.02 million of the requisition funding no longer available for the new Program. For cost sharing reasons, of the $2.02 million, $540,432 is allocated to the Westside participants (26.76%) and $1,479,120 is allocated to the Eastside participants (73.24%). Since the Eastside Select Project is budgeted at $658,877 the remainder of their funds, $820,243 has been transferred to the individual Capital Reserve balances for Victoria, Saanich, and Oak Bay, as noted in Schedules B-1, B-2, and B-3.

Further to an October 14 report to the Committee (Project Expenditures to Date) there is $23.9 million of expenditures that may have ongoing value to the new Program; however, there will be a portion of these costs that will have no future value (sunk costs) once the new configuration has been determined. As part of the 2016 first quarter work for the 2015 financial audit, engineering and finance staff will work together to evaluate which costs have ongoing and future value to the Program. The sunk costs will be expensed with associated funding from the previous annual requisitions. Staff are unable to perform this valuation until the new configuration has been determined and costing has been completed by the consultants, which is projected to be available for the first quarter of 2016. The expense of the sunk costs reduces requisition funding available for the new Program.

The Committee has engaged consultants and is working on a new Program. Configurations for the eventual new program have not yet been finalized; therefore, revised costing is currently unavailable. The additional costs of new land acquisitions will be a costs incurred solely by CRD. New costing information is currently unavailable; therefore, maintaining the orderly requisition ramp up is a prudent course of action. It is recommended that the levy for 2016 be budgeted at $20 million as originally planned.

ALTERNATIVES

1. That the Core Area Liquid Waste Management Committee:

   A. Approve the 2016 annual capital program projects, cost sharing apportionments and utilization of the capital reserve funding including a $20 million program requisition in the 2016 Core Area Sewage Treatment budget. by participant; and

   B. Direct staff to amend the 2016 annual capital program, cost sharing and funding plan.

2. That the Core Area Liquid Waste Management Committee determine a different requisition increase for 2016.

OPERATIONAL IMPLICATIONS

Further deferral of the most of the proposed annual capital projects could have operational and service impacts if the infrastructure deficiencies are not addressed.

FINANCIAL IMPLICATIONS

The Committee is currently working on the project and new configuration, but given that updated configuration and costs are unavailable, there is no budget upon which to set a different plan of requisition increases.

CONCLUSION

Although work is actively underway to identify a new configuration and new land sites, there is no costing currently available for the new Program, thus there is no updated budget upon which to set a different plan of requisition increases to reach the estimated future annual ongoing debt and operating costs.

RECOMMENDATION

That the Core Area Liquid Waste Management Committee:

A. Approve the 2016 annual capital program projects, cost sharing apportionments and utilization of the capital reserve funding including a $20 million program requisition in the 2016 Core Area Sewage Treatment budget. by participant; and

B. Direct staff to amend the 2016 annual capital program, cost sharing and funding plan.

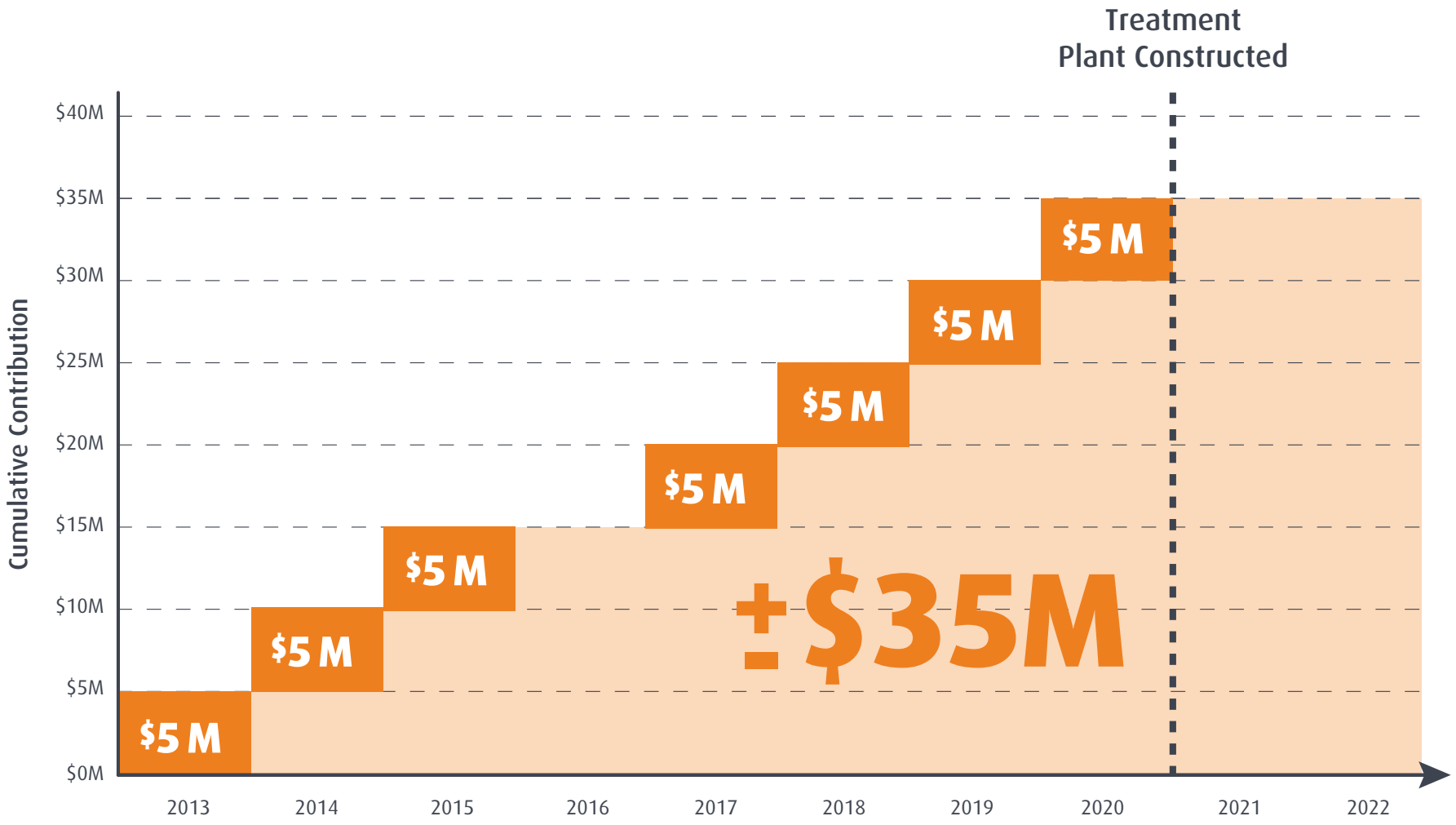
Submitted by:	Amber Genero, MA, CPA, CMA, Manager, Accounting Services
Concurrence:	Diana E. Lokken, CPA, CMA, General Manager, Finance & Technology
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

AG:sb
Attachments: Schedule A – Ramping Up to Treatment
Schedule B-1 – Requisition Cost Sharing
Schedule B-2 – Summary of Core Area Municipal Capital Reserve Balances
Schedule B-3 – 2016 Cost Sharing Allocation

Ramping Up to Treatment

Estimated capital cost of currently approved LWMP

$248M



UPDATED FEBRUARY 3, 2016

Requisition Cost Sharing

MUNICIPALITIES:	Requisition Breakdown	Transfer to Individual Municipality Reserve
Colwood	4.26%	
Esquimalt	6.65%	
Langford	12.66%	
View Royal	3.19%	
Westside Select Committee Only	26.76%	
Oak Bay	6.45%	72,263
Saanich	30.54%	342,041
Victoria	36.25%	405,938
Eastside Select Committee Only	73.24%	820,243
Total for all other costs (Debt operating costs, Sewer Capital Funding, etc)	100.00%	

COMMITTEES:	Budget		Funding by Proportion	
Westside Select Committee				
Phase 1 to Aug 15 Actual	366,870			
Phase 2 Budget to Dec 15	173,562			
Funded by Requisition	540,432	26.76%	540,432	
Eastside Select Committee				
Phase 1 to Aug 15 Actual	443,877			
Phase 2 Budget to Dec 15	215,000			
Funded by Requisition	658,877	73.24%	1,479,120	820,243
Total to Dec 15	1,199,309		$ 2,019,552	
Core area LWMP Options Development				
Phase 2 (To March 2016)	1,450,000			
Funded by Reserve Accnt - LWMP			$ 1,450,000	

* Extra Eastside drawdown to balance Westside project funding transferred to Core Trunk Sewer Reserve (estimate)

COST SHARING ALLOCATION
Core Area Sewers Infrastructure Upgrade Projects for 2016
(Schedule G of the 2016 Budget)

(Cost sharing based on 2015 flows - 2016 flows to be updated Februaly 2016)

Date: October 23, 2015

Estimated YrEnd Balance Before Adjustments			$ (2,248,946.60)	$ (2,072,973.93)	$ (1,207,565.95)	$ (203,320.98)	$ (98,972.17)	$ (382,173.04)	$ (209,801.35)	$ (4,090.90)	$ (191,952.61)	$ -
Estimted Extra Eastside drawdown to balance Westside project funding			$ (405,938.26)	$ (342,041.35)	$ (72,263.41)							
Revised Estimated YrEnd Balance			$ (2,654,884.86)	$ (2,415,015.28)	$ (1,279,829.36)	$ (203,320.98)	$ (98,972.17)	$ (382,173.04)	$ (209,801.35)	$ (4,090.90)	$ (191,952.61)	$ -
Item	**Improvement**	**Area**	**Estimated Cost**	**Victoria**	**Saanich**	**Oak Bay**	**Langford**	**Colwood**	**View Royal**	**Songhees Nation**	**Esquimalt Nation**	**Esquimalt**	**DND**
1	Odour Control Improvements Phase 2	NWT	$ 60,000	24.30% $ 14,581.46	25.38% $ 15,229.52		8.33% $ 4,995.50	7.81% $ 4,684.97	6.17% $ 3,699.37	1.04% $ 621.06	0.38% $ 229.52	21.76% $ 13,055.81	4.84% $ 2,902.79
2	Manhole Rehabilitation Phase 2	NWT W	$ 145,000				23.81% $ 34,523.81	22.33% $ 32,377.73	17.63% $ 25,566.28	2.90% $ 4,198.84	1.09% $ 1,586.23	20.79% $ 30,138.35	11.45% $ 16,608.75
3	Lang Cove PS Upgrades	NWT W	$ 35,000				23.81% $ 8,333.33	22.33% $ 7,815.32	17.63% $ 6,171.17	2.90% $ 1,013.51	1.09% $ 382.88	20.79% $ 7,274.77	11.45% $ 4,009.01
4	Marigold Pump Station Detailed Structural Assessment	NWT N	$ 80,000	37.37% $ 29,896.19	39.03% $ 31,224.91					0.03% $ 27.68		22.28% $ 17,826.99	1.28% $ 1,024.22
5	Macaulay Pt Outfall Coating & Shoreline Protection	NWT	$ 80,000	24.30% $ 19,441.94	25.38% $ 20,306.03		8.33% $ 6,660.67	7.81% $ 6,246.62	6.17% $ 4,932.49	1.04% $ 828.08	0.38% $ 306.03	21.76% $ 17,407.74	4.84% $ 3,870.39
6	Old Craigflower PS Demolition	NWT W	$ 145,000				23.81% $ 34,523.81	22.33% $ 32,377.73	17.63% $ 25,566.28	2.90% $ 4,198.84	1.09% $ 1,586.23	20.79% $ 30,138.35	11.45% $ 16,608.75
			$ 545,000										
7	Beach Drive Trunk Root Removal and CCTV	NET	$ 150,000	57.69% $ 86,531.59	13.16% $ 19,737.78	29.15% $ 43,730.63							
8	NET Odour Control Improvements	NET	$ 20,000	57.69% $ 11,537.54	13.16% $ 2,631.70	29.15% $ 5,830.75							
9	Harling Point Pump Sta Upgrade Pre-Design Phase	NET	$ 150,000	57.69% $ 86,532	13.16% $ 19,738	29.15% $ 43,731							
10	NET Flow Meter Auditing Study	NET	$ 25,000	57.69% $ 14,421.93	13.16% $ 3,289.63	29.15% $ 7,288.44							
11	Clover Point Siphon Repair	NET	$ 60,000	57.69% $ 34,612.63	13.16% $ 7,895.11	29.15% $ 17,492.25							
12	Clover Point Ventilation Assessment	NET	$ 75,000	57.69% $ 43,265.79	13.16% $ 9,868.89	29.15% $ 21,865.32							
			$ 480,000										
13	ECI Odour Control Improvements	ECI	$ 20,000	16.15% $ 3,230.69	27.86% $ 5,572.94	55.98% $ 11,196.37							
14	ECI Root Removal and CCTV Program	ECI	$ 310,000	16.15% $ 50,075.72	27.86% $ 86,380.62	55.98% $ 173,543.66							
15	ECI Flow Meter Auditing Study	ECI	$ 50,000	16.15% $ 8,076.73	27.86% $ 13,932.36	55.98% $ 27,990.91							
16	Penrhyn Pump Station Structural Improvements	ECI	$ 80,000	16.15% $ 12,922.77	27.86% $ 22,291.77	55.98% $ 44,785.46							
17	Humber Pump Station Mechanical Upgrades	ECI	$ 15,000	16.15% $ 2,423.02	27.86% $ 4,179.71	55.98% $ 8,397.27							
18	Rutland Pump Station Mechanical Upgrades	ECI	$ 30,000	16.15% $ 4,846.04	27.86% $ 8,359.41	55.98% $ 16,794.55							
19	Currie Minor PS Backflow Preventor Relocation	ECI	$ 40,000	16.15% $ 6,461.38	27.86% $ 11,145.89	55.98% $ 22,392.73							
20	McMicking Point PS Structural & Access Upgrades	ECI	$ 30,000	16.15% $ 4,846.04	27.86% $ 8,359.41	55.98% $ 16,794.55							
			$ 575,000										
21	NET-B Root Removal and CCTV	NET B	$ 300,000	21.16% $ 63,492.07	2.45% $ 7,341.27	76.39% $ 229,166.67							
22	Doncaster Trunk Rehabilitation	NET B	$ 125,000	21.16% $ 26,455.03	2.45% $ 3,058.86	76.39% $ 95,486.11							
23	Net-B Odour Control Improvements	NET-B	$ 20,000	21.16% $ 4,232.80	2.45% $ 489.42	76.39% $ 15,277.78							
24	Net-B Flow Meter Auditing Study	NET-B	$ 50,000	21.16% $ 10,582.01	2.45% $ 1,223.54	76.39% $ 38,194.44							
			$ 495,000										
				$ 1									
		Total per Municipality/City		**$538,464.96**	**$302,256.57**	**$839,958.53**	**$89,037.12**	**$83,502.38**	**$65,935.60**	**$10,888.02**	**$4,090.89**	**$115,842.02**	**$45,023.91**
Remaining Reserve Estimated 2016				$ (2,116,419.90)	$ (2,112,758.70)	$ (439,870.83)	$ (114,283.86)	$ (15,469.79)	$ (316,237.45)	$ (198,913.33)	$ (0.00)	$ (31,086.69)	

Proposed Work Plan Overlay

3P CANADA FUNDING CONSIDERATIONS

OPTION DEVELOPMENT, PLANNING & IMPLEMENTATION PHASES

- JAN 13-FEB 24: PHASE 2: PUBLIC CONSULTATION
- FEB 24 - MAR 9: PREPARATION OF PLAN AMENDMENT BASED ON PREFERRED OPTION, REFERRAL TO TCAC
- MAR 9 2016: CALWMC/BOARD APPROVES PREFERRED OPTION

$83.4 M

3P CANADA FUNDING DEADLINE >

FEDERAL TRANSITIONAL AUTHORIZATION DEADLINE >

POLITICAL CONDITIONAL APPROVAL OF PLAN BY PROVINCE

MAR 2015 — WORK PLAN COMPLETE

JUNE 2015 — EASTSIDE & WESTSIDE SOLUTION SETS SUBMITTED

NOV 2015 — TECHNICAL ANALYSIS COMPLETE

DEC 2015 — COSTING & FINANCIAL ANALYSIS COMPLETE

JAN 2016 — CALWMC APPROVAL OF OPTION SETS FOR CONSULTATION

FEB 2016

MAR 31 2016 — BOARD APPROVAL COMPLETE — SUBMISSION OF PLAN AMENDMENT TO PROVINCE

DEC 2017 — SITE ZONING PROCESS COMPLETE — PROVINCIAL APPROVAL — PLANNING PHASE COMPLETE

DEC 2020 — REGULATORY ACCEPTANCE & FUNDING COMPLETION

LWMP AMENDMENT PREPARATION & BOARD APPROVAL: 1-2 YEARS

≥1 YEAR: Procurement Process

4 YEARS: Program Construction

SOLUTION OPERATIONAL 2023/2024

PHASE 1: SITING PUBLIC CONSULTATION

TECHNICAL ANALYSIS

PHASE 2: OPTIONS PUBLIC CONSULTATION

CONSULTATION

- EASTSIDE SELECT COMMITTEE
- WESTSIDE SELECT COMMITTEE
- HOST MUNICIPALITIES, FIRST NATIONS & COMBINED PARTICIPANTS

AMENDING/APPROVAL OF LWMP & PLANNING ACTIVITIES

- Environmental Impact Study **1-2 YEARS**
- Funding Negotiation
- Outfall Modeling **1-2 YEARS**
- Site Acquisitions
- Permits & Other Approvals

ASSUMES CONCURRENT PROCESSES OR CONSTRUCTION

PROGRAM DEVELOPMENT

- Wastewater Treatment Plant(s)
- Conveyance Infrastructure
- Resource Recovery Infrastructure

OPTION DEVELOPMENT PHASE | PLANNING PHASE | IMPLEMENTATION PHASE

January 2016

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REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE
MEETING OF WEDNESDAY, FEBRUARY 10, 2016

SUBJECT **Available Funding Options – Core Area Wastewater Program**

ISSUE

The Core Area Liquid Waste Management Committee (CALWMC) has requested information on other potential funding opportunities available for the Core Area Wastewater Program.

BACKGROUND

At the CALWMC meeting held on October 2, 2015, the following motion was passed:

That staff prepare a report focused on all funding options available.

Staff have researched grants currently available that may be appropriate for the Core Area Wastewater Program.

Green Municipal Fund (GMF) Water Capital Projects – Federation of Canadian Municipalities (FCM) GMF offers below-market loans (up to $30 million), in combination with grants (up to $5 million). FCM will accept applications year-round, with waste and water sector funding approvals being made twice a year. Acceptable Wastewater Systems projects must include at least one tertiary treatment process. Disinfection treatments are not considered tertiary treatments for this purpose, and sludge treatment projects are not eligible for GMF funding.

New Building Canada Fund – National and Regional Projects (PTIC-NRP) – is an allocation based program that supports medium to large scale infrastructure projects across 14 categories, including wastewater and includes $9 billion for projects that are nationally and regionally significant. The grant requirements state that projects with eligible costs over $100 million will be required to undergo a P3 screen, however, there have been recent announcements that this requirement may be removed. No specific application details are available, but eligible recipients are instructed to contact the Ministry of Transportation and Infrastructure.

Recent comments from the federal government indicate that there may be new versions of grant programs coming in the near future and staff will report out to the committee as they evolve.

ALTERNATIVES

1. That the Core Area Liquid Waste Management Committee receive this report for information.
2. That the Core Area Liquid Waste Management Committee request additional information.

FINANCIAL IMPLICATIONS

GMF provides up to $5 million in grants for wastewater projects; the scope of applications that can be submitted under this program appear to be negligible compared to the scope of CRD's Core Area Wastewater Treatment program. Subject to federal government policy changes, the New Building Canada Fund documentation currently requires projects to undergo an additional P3 screening that may potentially impact the overall procurement process for the project. Although additional grants may benefit the project, further research on stacking of grants will be required, particularly in light of the existing funding agreements with the province and federal government.

CONCLUSION

The committee requested information on other grant opportunities, high level research has identified two grant programs that may potentially be considered. Neither of these grant programs appear to be suitable to provide funding for CRD's Core Area Wastewater Program.

RECOMMENDATION

That the Core Area Liquid Waste Management Committee receives this report and recommends to the Capital Regional District Board:

That Available Funding Options - Core Area Wastewater Program be received for information.

Submitted by:	Amber Genero, MA, CPA, CMA, Manager, Accounting Services
Concurrence:	Diana E. Lokken, CPA, CMA, General Manager, Finance & Technology
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

AG:ab

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REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE
MEETING OF WEDNESDAY, FEBRUARY 10, 2016

SUBJECT **REGIONAL WATER SYSTEM - SUPPLY AND DEMAND**

ISSUE

The Regional Water Supply and demand projections relate to various aspects of the Core Area Wastewater Treatment Program, including treatment design capacity and water reclamation viability.

BACKGROUND

Current and future water supply and demand projections have been updated and are generally consistent with the projections outlined in the most recent update of the Strategic Plan for the Greater Victoria Water Supply System (April 2012), known as the Regional Water Supply System.

Water Demand

When considering current water demand for the operation of the supply system, two demand figures are considered:

1. Gross per capita demand - Gross per capita demand represents supply level demand derived from the total volume of water that passes through the Regional Water Supply disinfection system divided by the total population served, including all customer sectors (residential, institutional, commercial, industrial, agricultural), as well as non-revenue water. Non-revenue water is water related to leakage in the transmission system, fire protection water, system flushing water and metering anomalies. Gross per capita demand for the Regional Water Supply System is 340 litres per capita per day.

2. Municipal per capita demand – Municipal per capita demand represents the average demand at the customer level across all sectors, derived from water billing data. Municipal per capita demand for the Regional Water Supply System is 240 litres per capita per day.

A future (2030) municipal water demand has been projected at 200 litres per capita per day. This is based on the expected continuing trend of declining demand across the region at a rate of approximately 1% per year. The declining demand is largely related to declining indoor demand resulting from ongoing household conversions to low flow fixtures and high efficiency appliances, as well as declining outdoor demand as public attitudes and behaviour towards discretionary outdoor water use change. These current and projected per capita demand rates are consistent with the per capita demand rates used by Urban Systems in developing current and future wastewater design flows for the Core Area Program. These rates were restated in the January 13, 2016 staff report to the Core Area Liquid Waste Management Committee – *Follow Up to Technical and Financial Information Requests*, under Appendix F (December 23, 2015 Memorandum from Urban Systems – *Design Flows).*

Water Supply Capacity

The primary water supply area for the Regional Water Supply System is the Sooke Water Supply Area, comprised of 6,720 hectares of catchment land, which provides source water to the Sooke Lake Reservoir, the primary reservoir for the Regional Water Supply System. Sooke Lake Reservoir has a total storage volume of 160.32 million cubic metres, of which 92.7 million cubic metres are useable for water supply. The Regional Water Supply System currently serves a population of approximately 350,000. Based on future water demand projections and assuming no significant shifts in climate or precipitation patterns, it is estimated that the Sooke Lake Water Supply Area and Reservoir could support an additional population of approximately 170,000.

The Leech Water Supply Area was acquired by the Capital Regional District (CRD) in 2007 as the future water supply area for the Regional Water Supply System. It has currently been estimated that the Leech Water Supply Area will not be required to supplement source water to the Sooke Lake Reservoir to meet the Regional Water Supply System demands until 2072 with a moderate population growth rate (up to 1% per year) or 2046 with a higher population growth rate (1% - 2% per year). As noted previously, the actual year the Leech Water Supply Area will be required will be subject to changing water demand and climate change impacts, as well as actual population growth rates.

CONCLUSION

The current average municipal per capita demand across the Regional Water Supply System is 240 litres per capita per day. Demand across the Region is expected to continue to decline at approximately 1% per year. Based on demand and population growth projections, it has been estimated that the Sooke Lake Reservoir will meet the Regional Water Supply System demands until 2046 or 2072 depending on the growth scenarios. The Regional Water supply and demand projections relate to various aspects of the Core Area Wastewater Treatment Program, including treatment design capacity and water reclamation viability.

RECOMMENDATION

That the Core Area Liquid Waste Management Committee receive the staff report for information.

Submitted by:	Ted Robbins, B.Sc., C.Tech., General Manager, Integrated Water Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Notice of Meeting and Meeting Agenda

Westside Wastewater Treatment and Resource Recovery Select Committee

Tuesday, February 2, 2016 **1:00 PM** **Colwood Council Chambers, 3300 Wishart Road**

C. Hamilton (Co-Chair), B. Desjardins (Board Chair), Chief R. Sam, D. Screech, L. Seaton, Chief A. Thomas, S. Young

1. Approval of Agenda

2. Adoption of Minutes

2.1. **16-177** Adoption of the Westside Wastewater Treatment and Resource Recovery Select Committee Minutes of January 8, 2016

Recommendation: That the minutes of the Westside Wastewater Treatment and Resource Recovery Select Committee meeting of January 8, 2016, be adopted.

Attachments: 2016-01-08 Minutes Westside WTRR Select Committee

3. Chair's Remarks

4. Presentations/Delegations

5. Committee Business

5.1. **16-150** Technical and Financial Work Required to Analyze Westside Participants' Dry Weather Flows

Recommendation: That the Westside Select Committee direct staff to retain the services of an engineering consultant to proceed with the analysis of dry weather flows for Westside communities within an amount not to exceed $60,000 (excluding GST).

Attachments: Staff Report: Tech & Financial Analysis - Westside Dry Weather Flows

Appendix A: Peak 24 Hour Sanitary Flows

5.2. **16-161** Feasibility and Costing Analysis of an Additional Option Set (5c) to Treat Sewage to Tertiary Levels

Recommendation: That the Westside Select Committee receive this report for information.

Attachments: Staff Report: Feasibility & Costing Analysis of Additional Option Set (5c)

5.3. **16-166** Public Engagement - Verbal Update

Recommendation: That the public engagement verbal update be received for information.

5.4. **16-167** Eastside Wastewater Treatment and Resource Recovery Select Committee - Verbal Update

Recommendation: That the Eastside Wastewater Treatment and Resource Recovery Select Committee verbal update be received for information.

6. Motion with Notice

6.1. 16-163 Motion with Notice: Options for Wastewater Treatment (Director Hamilton)

Recommendation: WHEREAS: It is critical that there be positive action taken to meet funding deadlines and regulatory requirements for waste water treatment for the Capital Regional District;
BE IT RESOLVED that: Capital Regional District (CRD) staff be directed to support municipalities and First Nations who want to explore options for waste water treatment that are economically responsible, technically feasible, environmentally sound and meet current provincial and federal deadlines;
AND THAT funding be provided from the sewage treatment budget to support an independent assessment of alternative locations to McLoughlin and Hartland, with full and regular engagement of staff and elected representatives from participating municipalities, First Nations and the public;
AND THAT any decisions taken to amend the Liquid Waste Management Plan be done in an open and transparent public process;
AND THAT any further money spent be recoverable under the funding arrangement with the Provincial and Federal Governments and that clarity be sought that the funding arrangement with Provincial and Federal governments be able to support the communities to the extent it supported the CRD driven process.

Attachments: Motion: Options on Wastwater Treatment (Hamilton) RevAug2014

7. New Business

8. Adjournment

Next Meeting: March 1 (To Be Confirmed)

To ensure quorum, please advise Nancy More (250-360-3024) if you or your alternate CANNOT attend.

Capital Regional District
625 Fisgard St.,
Victoria, BC V8W 1R7

Meeting Minutes
Westside Wastewater Treatment and Resource Recovery Select Committee

Friday, January 8, 2016 | **10:30 AM** | **6th Floor Boardroom**

PRESENT
DIRECTORS: B. Desjardins (Co-Chair), D. Blackwell (for S. Young), C. Day (for C. Hamilton, Co-Chair), D. Screech, L. Seaton
STAFF: R. Lapham, Chief Administrative Officer; L. Hutcheson, General Manager, Parks and Environmental Services; D. Lokken, General Manager, Finance and Technology; L. Taylor, Communications Coordinator, Corporate Communications; B. Reems, Corporate Officer, and N. More, Committee Clerk (Recorder)
ALSO PRESENT: Director R. Atwell, Alternate Director M. Sahlstrom; K. Anema, View Royal; J. Bowden, Langford; I. Howat, Colwood; L. Hurst, J. Miller, Esquimalt; S. Brubacher, Urban Systems; C. Houghton, J. O'Reardon, Aurora Innovations; R. Sansom, Turner Lane Development Corp.
ABSENT: Chief R. Sam, Chief A. Thomas

The meeting was called to order at 10:32 a.m.

1. Approval of Agenda

Chair Desjardins directed the Committee members, alternate members, municipal staff, and consultants seated at the Board table to introduce themselves.

MOVED by Director Blackwell, SECONDED by Director Seaton,
That the agenda be approved with the supplementary agenda.
CARRIED

2. Adoption of Minutes

2.1. **16-22** Adoption of the Minutes of November 24, 2015

MOVED by Director Screech, SECONDED by Director Blackwell,
That the minutes of November 24, 2015, be adopted.
CARRIED

3. Chair's Remarks

Chair Desjardins remarked on her new role as Chair of the Capital Regional District Board and announced that she would no longer serve as co-chair of the Westside Wastewater Treatment and Resource Recovery Select Committee and that a decision on electing a co-chair would be made at a future meeting.

4. Presentations/Delegations

4.1 **16-55** 4.1 Delegation Bryan Gilbert

B. Gilbert felt that a 100% distributred tertiary with advanced gasification system was possible, could be referred to as a "$250 million option", and should be presented to the public before any discussion of cost sharing allocation. The delegation provided a written submission, on file at Legislative and Information Services.

This delegation was presented.

5. Committee Business

5.1. 16-24 Feasibility and Costing Analysis of an Additional Option Set to Treat Westside Sewage, Including a Wastewater Treatment Facility and Disposal Service for Colwood and Langford

S. Brubacher of Urban Systems, with the aid of a PowerPoint presentation, presented the information including on option sets 5A and 5B, and capital costs relative to the other option sets.

The Committee requested that presentations be provided ahead of the meetings in agenda packages.

The Committee sought clarification on the "soft" costs, the magnitude of cost changes due to changes in conveyance and method of discharge, the discussion between Colwood and the Ministry on regulations regarding ground discharge and beneficial re-use of water.

L. Hutcheson provided highlights of the staff report. J. Miller provided information from the Westside technical committee's standpoint.

The Committee sought clarification on the need for an outfall as a backup to ground discharge, details on the costing, and regulations in relation to wet and dry flows.

MOVED by Director Screech, SECONDED by Alternate Director Day,
That the Westside Select Committee receive this report for information and forward it to the Core Area Liquid Waste Management Committee for consideration.
CARRIED

5.2. 16-25 Public Consultation Update

C. Houghton presented an update on the public engagement process with the aid of a PowerPoint presentation. She remarked on shared aspects of the Eastside Wastewater Treatment and Resource Recovery Select Committee public engagement. Topics in the presentation included principles and objectives, challenges, examples of public engagement activities that have been implemented, and the online survey platform.

Chair Desjardins clarified that a preliminary report would be provided around February 10, 2016, and a final report around February 19, 2016.

The Committee sought clarification on an Eastside public engagement event in Victoria on January 8, 2016.

MOVED by Director Screech, SECONDED by Director Blackwell,
That the Westside Wastewater Treatment and Resource Recovery Select Committee receive this update for information.
CARRIED

5.3. 16-14 Core Area Sewage and Resource Recovery System Cost Sharing

On the motion, the Committee discussed the allocation of costs for regional services, the future development of the region, and the timing of the discussion in relation to current information. L. Hutcheson provided highlights of the staff report, and reported on the decision taken by the Eastside Select Committee on January 6, 2016, to recommend retaining the current cost sharing model.

Chair Desjardins summarized the cost sharing options.

The Committee sought clarification on the direction given to staff to provide the cost sharing information.

Moved by Director Blackwell, SECONDED by Director Screech,
That it be recommended to the Capital Regional District Board:
That the current cost sharing under Bylaw No. 2312 "Liquid Waste Management Core Area and Western Communities Service Establishment Bylaw No. 1, 1995", as amended, and based on design capacity benefit, be retained.
CARRIED
OPPOSED Day, Desjardins

On the motion, it was clarified that the scope of the motion is for all options and that the enlarged scope of work would be serviced by Westside municipal staff and consultants.

MOVED by Director Screech, SECONDED by Director Blackwell,
WHEREAS current cost estimates for wastewater treatment and resource recovery are very conservative and default to the worst case scenario for costing specifically regarding costs related to four (4) times the dry weather flows; and
WHEREAS Westside communities have in large part successfuly dealt with their inflow and infiltration (I&I) issues and have greatly reduced the potential of having flows exceed the two (2) times the dry weather flows; and
WHEREAS the participating communities remain committed to adhering to the goal stated in the approved Westside Project Framework that the solution be "based on the best business case scenario that maximizes benefit to the best value for taxpayers"; therefore
BE IT RESOLVED that the Westside initiate the technical and financial work required to evaluate the potential cost savings for Westside residents by analysing two (2) times the dry weather flows, and that after being presented to the Westside Select Committee, the results of this work be used as a basis to engage with the Province as regulator in determining acceptable flow levels, with costs subsequently reduced for Westside participants.
CARRIED

5.4. 16-26 Cost Comparison of Budgets - New Options Versus Previous Plan

L. Hutcheson provided highlights of the staff report.

MOVED by Director Screech, SECONDED by Director Blackwell,
That the report be received for information.
CARRIED

5.5. 16-29 Westside Concept Planning - Phase 2 Budget Update No. 3

MOVED by Director Screech, SECONDED by Director Blackwell,
That the report be received for information.
CARRIED

5.6. 16-28 Eastside Select Committee Verbal Update

L. Hutcheson reported on the January 6, 2016, Eastside Select Committee meeting, and Director Atwell provided further highlights.

This update was presented.

6. Motion with Notice

6.1. 15-311 Referral of Motion with Notice: Options for Wastewater Treatment (Director Hamilton)

MOVED by Alternate Director Day, SECONDED by Director Blackwell,
That consideration of the motion referred from the Core Area Liquid Waste Management Committee be postponed to the next meeting.
CARRIED

7. New Business

There was none.

8. Adjournment

MOVED by Director Screech, SECONDED by Director Blackwell,
That the meeting be adjourned at 11:43 a.m.
CARRIED

_____
CHAIR

_____
RECORDER

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EEE 16-18

REPORT TO WESTSIDE WASTEWATER TREATMENT AND RESOURCE RECOVERY SELECT COMMITTEE MEETING OF TUESDAY, FEBRUARY 2, 2016

SUBJECT **Technical and Financial Analysis of Westside Participants' Dry Weather Flows**

ISSUE

To provide a technical and costing analysis to evaluate the potential cost savings for Westside residents by analyzing 2 times the average dry weather flows (ADWF).

BACKGROUND

The Westside Technical Committee, consisting of technical staff and consultants from the participating communities, has been working collaboratively to influence treatment option sets (or scenarios) proposed for the Westside currently being considered to treat Core Area communities' wastewater.

At the meeting of January 13, 2016, Urban Systems presented to the Core Area Liquid Waste Management Committee (CALWMC) Appendix A showing the peak 24 hour sanitary flows for the last five years for each of the Westside municipalities. The graphs include the actual average annual flows over that period of time and the allocated design capacity or ADWF requested by the municipalities. Also shown are the 2, 3 and 4 times allocated design capacities used in determining the level of treatment required as flows increase.

Under the Municipal Wastewater Regulation, the Minister of Environment (MOE) requires a minimum of full secondary treatment for flows that are 2xADWF and primary treatment for flows that are between 2xADWF and 4xADWF. Flows greater than 4xADWF require only preliminary treatment (screening). These requirements are also reflected in the Core Area Liquid Waste Management Plan. However, if the applicant can demonstrate that there is an acceptable level of risk to the environment and public health, the MOE has the discretion to waive the primary treatment requirement for flows greater than 2xADWF. If primary treatment is not required, the treatment costs for the Westside should be reduced from estimates prepared by CRD consultants.

On January 8, 2016, the Westside Select Committee passed a motion to have the average dry weather flow data analyzed and to evaluate the potential technical and financial benefits.

The Westside Technical Committee has developed the following Terms of Reference and budget to fulfill the direction given by the Select Committee. An independent engineering firm, retained through a competitive process, would:

1. Obtain and review raw data on flows in the main sewers in each of the Westside municipalities by accessing the CRD data base including comment on data reliability.

2. Determine if the possible Westside plants (Colwood, Esquimalt First Nation) could be designed to only treat 2xADWF at the design horizons of 2030 and 2045.

3. If it were determined that one or both of the plants could not meet the requirements of only 2xADWF, determine if one or both plants would have to be designed for accepting flows at the 3xADWF boundary condition.

4. Once it has been established what flow condition each plant could operate under, outline potential cost savings at each potential plant site.

5. Recommend to the Westside Select Committee if there is a basis for approaching MOE to negotiate a new boundary condition (i.e., 2xADWF or 3xADWF) for either or both proposed treatment plants on the Westside.

The results of the analysis would be reported to the Select Committee by the end of March 2016. Regardless of the option selected by the CALWMC, an analysis of dry weather flows is critical to determining size and capacity for redundancy in treating the wastewater.

ALTERNATIVES

That the Westside Select Committee direct staff to:

Alternative 1

Retain the services of an engineering consultant to proceed with the analysis of dry weather flows for Westside communities within an amount not to exceed $60,000 (excluding GST).

Alternative 2

Delay analysis until the CALWMC has selected the preferred Core Area wastewater treatment option set for the amendment to the Liquid Waste Management Plan.

FINANCIAL IMPLICATIONS

The maximum budget for the analysis of dry weather flows for Westside communities shall not exceed $60,000 (excluding GST) and can be charged to the Westside Select Committee Phase 2 Budget, which has $66,714 of uncommitted funds available for this assignment.

WESTSIDE STAFF COMMITTEE

The Westside Staff Committee is in agreement with this report.

RECOMMENDATION

That the Westside Select Committee direct staff to retain the services of an engineering consultant to proceed with the analysis of dry weather flows for Westside communities within an amount not to exceed $60,000 (excluding GST).

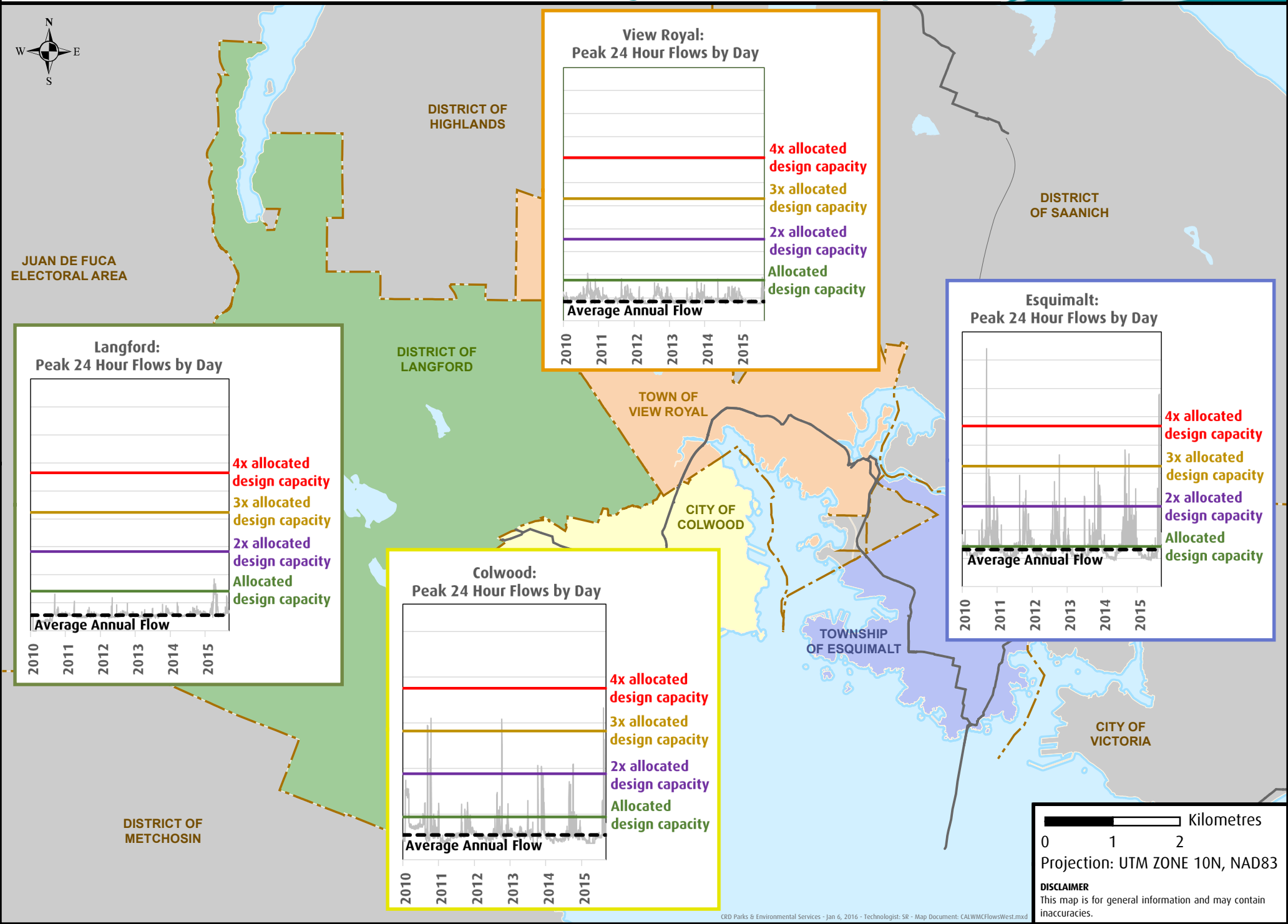
Submitted by:	Dan Telford, P.Eng., Project Manager, Core Area Wastewater and Resource Recovery Project
Concurrence:	Larisa Hutcheson, P.Eng., General Manager, Parks & Environmental Services

CH/DT:cl

Attachment: Appendix A – Peak 24 Hour Sanitary Flows: Colwood, Esquimalt, Langford and View Royal

Peak 24 Hour Sanitary Flows: Colwood, Esquimalt, Langford, and View Royal

APPENDIX A



DISCLAIMER
This map is for general information and may contain inaccuracies.

CRD Parks & Environmental Services - Jan 6, 2016 - Technologist: SR - Map Document: CALWMCFlowsWest.mxd

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EHQ 16-19

REPORT TO WESTSIDE WASTEWATER TREATMENT AND RESOURCE RECOVERY SELECT COMMITTEE MEETING OF TUESDAY FEBRUARY 2, 2016

SUBJECT **Feasibility and Costing Analysis of an Additional Option Set (5c) to Treat Sewage to Tertiary Levels**

ISSUE

To provide a feasibility and costing analysis for an additional siting option set (5c) to the Core Area Liquid Waste Management Committee (CALWMC) and Westside Select Committee that would treat all wastewater to tertiary levels.

BACKGROUND

Under the direction of the Westside Technical Committee, Urban Systems and Carollo Engineers prepared and presented a report titled *Westside Wastewater Treatment Plant Siting Analysis – Phase 2* to the Westside Select Committee on October 27, 2015 that included an order of magnitude costing for 1, 2 and 4 plant option sets.

Subsequent to that report, Urban Systems and Carollo integrated the Westside Technical and financial analysis with sites and scenarios brought forward by the Eastside Select Committee in conjunction with the core area Technical Oversight Panel. The resulting analysis, titled *Core Area Liquid Waste Management Plan Phase 2: Wastewater Treatment System Feasibility and Costing Analysis – Technical Memorandum #3 Costing and Financial Analysis (Draft)*, was presented to the CALWMC on December 9, 2015.

Upon consideration of the analysis provided, the CALWMC requested that additional information including a modified option set to be developed, costed and analyzed for a wastewater treatment plant conveyance and disposal system to serve Colwood and Langford flows (secondary and tertiary).

The Westside Technical Committee met with representatives from Urban Systems and agreed that as all current options, with the exception of the one plant and two plant options, have wastewater generated on the Westside treated entirely at potential Westside facilities, this modified option set would have impacts on flows and options for the other Westside participants that needed to be considered.

Urban Systems and Carollo developed and presented their technical analysis and costing of two option sets – labelled 5a and 5b – to the Westside Select Committee on January 8, 2016 and to the CALWMC on January 13.

At the January 13 CALWMC meeting, the staff recommendation to proceed with public consultation on existing options (seven in total) was approved with the amendment “with the addition of 5c as per the discussion of Rock Bay, Esquimalt Nation and Colwood plants all increased to tertiary plants.”

Due to the lack of budget capacity and the tight timelines, a full technical analysis and costing was not possible and could not be included as a full option in the consultation initiative. Instead, a single question informing respondents that there is a potential for a variation of the three plant option and asking if this option should be considered.

The results of the consultation, including interest in this new option, will be reported in full to the CALWMC on February 24, 2016. Results will include an indication of how individuals within specific municipalities, or groupings of municipalities, have responded to questions within the survey.

CONCLUSION

Results from the survey and other engagement activities should be analyzed to determine public interest on option 5c before further work is considered.

WESTSIDE STAFF COMMITTEE

The Westside Technical Committee is in agreement with this report.

RECOMMENDATION

That the Westside Select Committee receive this report for information.

Submitted by:	Dan Telford, P.Eng., Project Manager, Core Area Wastewater and Resource Recovery Project
Concurrence:	Larisa Hutcheson, P.Eng., General Manager, Parks & Environmental Services

CH:cl

MOTION FOR WHICH NOTICE HAS BEEN GIVEN: OPTIONS FOR WASTEWATER TREATMENT (DIRECTOR HAMILTON)

WHEREAS: It is critical that there be positive action taken to meet funding deadlines and regulatory requirements for waste water treatment for the Capital Regional District;

BE IT RESOLVED that: Capital Regional District (CRD) staff be directed to support municipalities and First Nations who want to explore options for waste water treatment that are economically responsible, technically feasible, environmentally sound and meet current provincial and federal deadlines;

AND THAT funding be provided from the sewage treatment budget to support an independent assessment of alternative locations to McLoughlin and Hartland, with full and regular engagement of staff and elected representatives from participating municipalities, First Nations and the public;

AND THAT any decisions taken to amend the Liquid Waste Management Plan be done in an open and transparent public process;

AND THAT any further money spent be recoverable under the funding arrangement with the Provincial and Federal Governments and that clarity be sought that the funding arrangement with Provincial and Federal governments be able to support the communities to the extent it supported the CRD driven process .

(Revised, August 2014)

Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Notice of Meeting and Meeting Agenda

Eastside Wastewater Treatment and Resource Recovery Select Committee

Wednesday, February 17, 2016 | **2:30 PM** | **6th Floor Boardroom**

L. Helps (Chair), V. Derman (Vice Chair), M. Alto, R. Atwell, S. Brice, J. Brownoff, B. Isitt, N. Jensen, C. Plant, G. Young

1. Approval of Agenda

2. Adoption of Minutes

2.1. **16-250** Adoption of the Minutes of the January 6, 2016, Meeting of the Eastside Wastewater Treatment and Resource Recovery Select Committee

Recommendation: That the minutes of the January 6, 2016, meeting of the Eastside Wastewater Treatment and Resource Recovery Select Committee be adopted.

Attachments: 2016-01-06 Minutes EastsideWTRRSC

3. Chair's Remarks

4. Presentations/Delegations

4.1. **16-10** Presentation: Eastside Public Advisory Committee - Verbal Update

5. Committee Business

5.1. **16-251** Eastside Public Consultation Update - Verbal Update

5.2. **16-248** Eastside Concept Planning - Phase 2 Budget Update No. 3

Recommendation: That the Eastside Wastewater Treatment and Resource Recovery Select Committee receive this budget update for information.

Attachments: Staff Report: Eastside Concept Planning - Phase 2 Budget Update No. 3

Appendix A: Budget Table

5.3. **16-13** Westside Wastewater Treatment and Resource Recovery Select Committee - Verbal Update

5.4. **16-252** Minutes of the Eastside Public Advisory Committee for Information

Recommendation: That the January 6, 2016, minutes of the Eastside Public Advisory Committee be received for information.

Attachments: 2016-01-12 Minutes Eastside Public Advisory Committee

5.5. **16-253** Motion (1) from January 12 Meeting of the Eastside Public Advisory Committee

Recommendation: That the Eastside Select Committee provide direction on what they need of Eastside Public Advisory Committee, whether to continue to work as a focus group for the consultant, or to function as a public advisory committee and if so, what advice they need from the Eastside Public Advisory Committee.

5.6. **16-254** Motion (2) from January 12 Meeting of the Eastside Public Advisory Committee

Recommendation: That the Eastside Select Committee provide the Eastside Public Advisory Committee with a project timeline backing up from federal funding deadlines that provides key milestones.

6. New Business

7. Adjournment

Next Meeting: TBA

To ensure quorum, please advise Nancy More (250-360-3024) if you or your alternate CANNOT attend.

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Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Meeting Minutes
Eastside Wastewater Treatment and Resource Recovery Select Committee

Wednesday, January 6, 2016 | **2:30 PM** | **6th Floor Boardroom**

PRESENT
DIRECTORS: L. Helps (Chair), V. Derman (Vice Chair), R. Atwell, S. Brice, J. Brownoff, B. Isitt, J. Loveday (for M. Alto), K. Murdoch (for N. Jensen), C. Plant, G. Young
ALSO PRESENT: Board Chair B. Desjardins; A. Gibbs, Public Assembly; C. Houghton, Westside Solutions; S. Marks, Eastside Public Advisory Committee
STAFF: R. Lapham, Chief Administrative Officer; L. Hutcheson, General Manager, Parks and Environmental Services; D. Lokken, General Manager, Finance and Technology; A. Orr, Senior Manager, Corporate Communications; B. Reems, Corporate Officer, and N. More, Committee Clerk (Recorder)

The meeting was called to order at 2:30 p.m.

1. Approval of Agenda

MOVED by Director Plant, SECONDED by Director Brice,
That the agenda be approved with the addition of the delegations and item 6.1.
CARRIED

2. Adoption of Minutes

2.1. **16-8** Adoption of the Minutes of October 21, 2015

MOVED by Director Derman, SECONDED by Alternate Director Loveday,
That the minutes of October 21, 2015, be adopted.
CARRIED

3. Chair's Remarks

The Chair remarked that the Commitee had a decision to make on what to recommend to the Core Area Liquid Waste Management Committee on item 5.2, Cost Sharing Options.

4. Presentations/Delegations

4.1. **16-10** Presentation: Eastside Public Advisory Committee - Verbal Update

S. Marks spoke on behalf of the Eastside Public Advisory Committee and expressed that Phase 1 of the public engagement process had been succesful and had resulted in an indication that the majority public opinion was to avoid delays and minimize cost to the taxpayer. She recommended that the Eastside Wastewater Treatment and Resource Recovery Committee act promptly to finalize decisions so the next phase of public engagement can proceed. She

expressed concern over the relevancy of the Eastside Public Advisory Committee if the Select committee decisions were not forthcoming.

The Committee sought clarification on what basis the remarks were made about public opinion and requested that recommendations coming from the Eastside Public Advisory Committee come from motions made at the Eastside Public Advisory Committee meetings.

This Presentation was presented.

4.2. 16-16 Delegation: David Langley, re item 5.2

D. Langley was concerned that the information in item 5.2 was not an adequate basis for review of cost sharing options or recommendations to the Core Area Liquid Waste Management Committee and posed a series of questions highlighting information he felt was missing. The delegation provided a written submission, on file at Legislative and Information Services.

This Delegation was presented.

4.3. 16-21 Delegation: Bryan Gilbert re items 5.1 and 5.2

B. Gilbert felt that a 100% distributred tertiary with advanced gasification system was possible, could be referred to as a "$250 million option", and should be presented to the public before any discussion of cost sharing allocation. The delegation provided a written submission, on file at Legislative and Information Services.

This Delegation was presented.

5. Committee Business

5.1. 16-11 Eastside Public Consultation Update

With the aid of a PowerPoint presentation, A. Gibbs presented a summarization and highlights of plans for public engagement, and showed a sample of the survey being planned. She also provided a handout of a draft public guideline on the basics of wastewater treatment and resource recovery. She requested that if there were additional options, they would be presented to the public within the process already planned out.

The Committee sought clarification on the scope of the public consultation and provided feedback on the draft public guideline and on the plan.

MOVED by DIrector Derman, SECONDED by Alternate Director Murdoch,
That the Eastside Public Consultation Update be received for information.
CARRIED

5.2. 16-14 Core Area Sewage and Resource Recovery System Cost Sharing

L. Hutcheson provided highlights of the report. D. Lokken discussed the costing methodology and provided highlights of the appendix to the report.

On the motion, the Committee discussed the timing and value of deciding on a change to the cost sharing allocation. Discussion points included:
- wastewater treatment costs are as yet undetermined
- resource recovery could provide unknown benefits
- funding model took time and negotiation with municipalities
- changes would require 2/3 majority

MOVED by Director Isitt, SECONDED by Director Young,
That it be recommended to the Core Area Liquid Waste Management Committee:
That it be recommended to the Capital Regional District Board:
That the current cost sharing under Bylaw No. 2312 "Liquid Waste Management Core Area and Western Communities Service Establishment Bylaw No. 1, 1995", as amended, and based on design capacity benefit, be retained.
CARRIED
OPPOSED Atwell, Derman and Plant

MOVED by Director Brownoff, SECONDED by Alternate Director Murdoch,
That the report be received for information.
CARRIED
OPPOSED Plant and Isitt

MOVED by Director Plant, SECONDED by Director Isitt,
That the decision and recommendation to retain the current cost design capacity benefit cost sharing be forwarded to the Westside Wastewater Treatment and Resource Recovery Select Committee.
CARRIED

5.3. 16-12 Eastside Concept Planning - Phase 2 Budget Update No. 2

L. Hutcheson provided highlights of the report. On the motion, the Committee sought clarification on the flow data and budget details.

MOVED by Director Plant, SECONDED by Director Isitt,
That the Eastside Wastewater Treatment and Resource Recovery Select Committee receive this budget update for information.
CARRIED

5.4. 16-13 Westside Wastewater Treatment and Resource Recovery Select Committee - Verbal Update

Chair Desjardins reported that she will no longer be co-chair of the Westside Wastewater Treatment and Resource Recovery Select Committee.

This verbal update was presented.

5.5. 16-9 Minutes of the Meetings of the Eastside Public Advisory Committee of October 27, November 10, December 1, and December 15, 2015 for Information

MOVED by Director Derman, SECONDED by Alternate Director Loveday,

That the Eastside Public Advisory Committee minutes of October 27, November 10, December 1, and December 15, 2015, be received for information.
CARRIED

6. New Business

6.1. 16-19 Amendment to Section 7.0 of the Eastside Public Advisory Committee Terms of Reference

Chair Helps summarized that due to time constraints, herself as Chair and Director Derman as 2015 Vice Chair of the Eastside Wastewater Treatment and Resource Recovery Select Committee had withdrawn from attending the Eastside Public Advisory Committee meetings in 2015.

MOVED by Director Derman, SECONDED by Alternate Director Murdoch,
That it be recommended to the Core Area Liquid Waste Management Committee to recommend to the Capital Regional District Board:
That section 7.0 of the terms of reference for the Eastside Public Advisory Committee be amended to add the words "or designated members", as follows: "The Chair and Vice Chair or designated members of the Eastside Select Committee will also Chair and Vice Chair the Eastside Public Advisory Committee."
CARRIED

The Commitee discussed the frequency of the Eastside Public Advisory Committee meetings and the opportunity to participate as chair or co-chair.

MOVED by Alternate Director Loveday, SECONDED by Director Plant,
That Director Atwell attend as chair of the next Eastside Public Advisory Committee meeting.
CARRIED

7. Adjournment

MOVED by Alternate Director Loveday, SECONDED by Director Plant,
That the meeting be adjourned at 4:17 p.m.
CARRIED

_____
CHAIR

_____
RECORDER

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EHQ 16-24

REPORT TO EASTSIDE WASTEWATER TREATMENT AND RESOURCE RECOVERY SELECT COMMITTEE
MEETING OF WEDNESDAY, FEBRUARY 17, 2016

SUBJECT **Eastside Concept Planning – Phase 2 Budget Update No. 3**

ISSUE

To provide the Eastside Wastewater Treatment and Resource Recovery Select Committee (Eastside Select Committee) with a monthly budget update.

BACKGROUND

A detailed operating budget for the identification of potential treatment sites and public consultation phase with actual expenses and commitments is provided to the Eastside Select Committee on a monthly basis. Phase 1 of the Concept Planning for this project was completed and closed out on August 31, 2015. The Phase 1 Final Budget Update No. 5 was approved by the Committee on September 16, 2015. The actual expenditures for Phase 1 equaled $443,877. Phase 1 invoices that were received after September 29 have been added to the Phase 2 budget, in the Revised Budget column of Appendix A.

Phase 2 of the Concept Planning for this project commenced on September 1, 2015 and at its October 21, 2015 meeting, the Eastside Select Committee received and approved Phase 2 Budget Update No. 1.

Phase 2 Budget Update No. 3 provides actual expenses and outstanding commitments to January 31, 2016, as summarized in Appendix A.

FINANCIAL IMPLICATIONS

Under the Core Area Wastewater Treatment Program budget, requisitioned funds can only be apportioned on the cost sharing basis on which they were raised. The cost sharing of the Program budget is currently apportioned based on 2030 design capacity, 70% average dry weather flow and 30% average annual flow, as previously declared by each participant. This cost sharing may be revisited by the participants in the service. The Eastside collectively accounts for 73.24% of the requisition funds raised. The funds raised by the three Eastside municipal participants will be shared as follows:

Oak Bay	8.81%
Saanich	41.70%
Victoria	49.49%

CONCLUSION

Phase 2 Concept planning for this project commenced on September 1, 2015. Due to the accelerated pace of work on the project, invoicing received from some of the suppliers and consultants has tended to lag somewhat. The actual expenditures incurred but invoiced after the reporting cutoff date are carried forward to the following update report. The committee will continue to receive monthly budget reports through the course of this project.

RECOMMENDATION

That the Eastside Wastewater Treatment and Resource Recovery Select Committee receive this budget update for information.

Submitted by:	Dan Telford, P.Eng., Project Manager, Core Area Wastewater and Resource Recovery Project
Concurrence:	Larisa Hutcheson, P.Eng., General Manager, Parks & Environmental Services

DT:mer

Attachment: Appendix A – Eastside Concept Planning – Phase 2 Budget Update No. 3

APPENDIX A

EASTSIDE WASTEWATER TREATMENT AND RESOURCE RECOVERY
SELECT COMMITTEE

Eastside Concept Planning - Phase 2 Budget Update No. 3
January 31, 2016

	BUDGET	REVISED BUDGET (Nov 2015)	ACTUAL	COMMITTED	TOTAL	REMAINING
Outreach						
Consultants						
Outreach and Consultation	157,000	165,976	58,844	107,133	165,976	-
Technical Support	20,000	29,268	9,268		9,268	20,000
Outreach Disbursements	40,000	42,639	11,149		11,149	31,490
Project Management						
Staff and Wages	40,000	40,293	293		293	40,000
Miscellaneous	10,000	10,000	-		-	10,000
Eastside Total	**$ 267,000**	**$ 288,176**	**$ 79,553**	**$ 107,133**	**$ 186,686**	**$ 101,490**

Revised Budget due to late invoices from Phase 1.

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Minutes of a Meeting of the Eastside Public Advisory Committee
Held Tuesday, January 12, 2016, in Room 107, 625 Fisgard St., Victoria, BC

Present: Director R. Atwell (A/Chair), D. Broad, B. Gilbert, J. Knock, S. Marks, B. Mumford, D. Sutton, N. Thambirajah (4:39)
Staff: Lindsay Taylor, Communications Coordinator, Corporate Communications; A. Bains, Manager, Information Services; N. More, Committee Clerk (recorder)
Consultant: A. Gibbs, Public Assembly
Absent: T. Davies, G. Klima

The meeting was called to order at 4:05 p.m.

1. Approval of Agenda

MOVED by B. Gilbert, **SECONDED** by S. Marks,
That the agenda be approved as circulated.

CARRIED

2. Adoption of Minutes

MOVED by D. Broad, **SECONDED** by B. Gilbert,
That the minutes of the December 15, 2015, meeting be adopted as previously circulated.

CARRIED

3. Chair's Remarks

Acting Chair Atwell reported on the activities of the Select committees.

4. Freedom of Information and Protection of Privacy Follow-Up (Angila Bains)

A. Bains clarified points on what constitutes a record, responsibility for records under CRD custody and control, the terms of reference and procedures for reporting out via motions to the Eastside Select Committee, and the role of the Fairness and Transparency Advisor.

5. Role of Committee and Reporting (Discussion)

A. Gibbs reviewed the feedback received from the Eastside Select Committee and the Core Area Liquid Waste Management Committee after the Eastside Public Advisory Committee presentation on January 6, 2016. The Committee discussed its role in light of the decision by the Core Area Liquid Waste Management Committee in December that postponed implementation of the public engagement plan. The Committee was concerned about the clarity of its purpose and considered whether the frequency of its meetings should be decreased or if it should continue to exist.

The Committee discussed formally adopting speaking points before making presentations to the Select Committee and the strength of a carried motion in showing agreement of the members. They discussed the need for advice and discipline, and a communications plan that the politicians commit to.

N. Thambirajah entered the meeting at 4:39 p.m.

The Committee discussed their role, objectives, challenges, and relationship with the Eastside Select Committee. The discussion included the following points:

- The role has been defined as an advisory committee to receive information from the Select Committee, take the information out to public, then take the public feedback and give it back to the Select Committee. The Advisory Committee functions well, but the communication between the Advisory Committee and the Select Committee is lacking.
- In the first phase, the Advisory Committee was fairly clear on their role to make sure of robust public participation. In the current phase, it was unclear what the Eastside Select Committee needed from the Advisory Committee.
- The need for strong political leadership to set the agenda for this committee was identified, unless the committee was meant to be a focus group for the public engagement consultant.

Acting Chair Atwell remarked that the Eastside Select Committee was looking for an innovative solution best for the taxpayer, and a fulsome process that was complete and captured all stakeholders, so people could look back at the end and know the decision was arrived at by following a practice and charting a process.

A. Gibbs remarked that the consultation plan presented to the Core Area Liquid Waste Management Committee was a living document as the deadlines and other things had changed. The first phase was a democracy model, combining statistical results with qualitative information. The current phase would inform the public about the options, receive their feedback, and provide that feedback to decision-makers.

Acting Chair Atwell clarified that the Liquid Waste Management Plan amendment process with the Provincial Ministry provides for a summary indicating the public has been consulted.

6. Review of Updated Materials and Approach to Consultation (including timelines)

A. Gibbs reported that the video of the public event on January 8, 2016 was now available on the CRD website. She provided an update on presentations to the Eastside Select Committee. The info-graphic on the decision-making process was ready for publication.

The Committee discussed the Eastside Select Committee's possible understanding of the work plan and timelines for the Committee. The format for the public consultation was in place and it now depended on input from Technical Memo #3 to add content to the consultation plan.

MOVED by N. Thambirajah, **SECONDED** by D. Sutton,
That the Eastside Select Committee provide direction on what they need of Eastside Public Advisory Committee, whether to continue to work as a focus group for the consultant, or to function as a public advisory committee and if so what advice they need from the Eastside Public Advisory Committee.

CARRIED
Gilbert **OPPOSED**

7. New Business

a) Citizen Experts Presenting to Technical Oversight Panel

B. Gilbert commented on the ruling of the Fairness and Transparency Advisor that the Technical Oversight Panel acted outside of their mandate to hear the presentations from citizen experts on a proposed new option with technology. On the motion, the Committee discussed that this was similar to previous motions, and as before, there were objections based on the scope of the Advisory Committee's terms of reference.

MOVED by B. Gilbert, **SECONDED** by D. Broad,
To recommend to the Core Area Liquid Waste Management Committee that this needs to be corrected and bring in some process that allows in information from other than vendors, engineers, procurement experts, engineers and staff.

DEFEATED
J. Knock, S. Marks, B. Mumford, D. Sutton, N. Thambirajah **OPPOSED**

b) Destination of Residuals

It was moved by B. Gilbert and seconded by D. Broad to clearly define or describe in the public consultation the end location of the residuals but the motion was then tabled.

c) Project Timelines Backing Up From Federal Funding with Key Milestones

MOVED by N. Thambirajah, **SECONDED** by J. Knock,
That the Eastside Select Committee provide the Eastside Public Advisory Committee with a project timeline backing up from federal funding deadlines that provides key milestones.

CARRIED

8. General Discussion: There was none.

9. Adjournment

MOVED by Sutton, **SECONDED** by N. Thambirajah,
That the meeting be adjourned at 6:28 p.m.

CARRIED

_____
CHAIR

_____
RECORDER

CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE
MEETING OF JANUARY 13, 2016

Motion with Notice: Accountability and Representation in Governance of Components of Eastside and Westside Sub-systems

(Director Young, Jan. 2016)

BACKGROUND Under some options for the proposed core area liquíd waste management system that may be considered, part of the total flow volume to the proposed Westside infrastructure will originate from the District of Saanich and City of Victoria. It has also been suggested at the Board table that even if none of the East side flows are treated in the West side system, a part of the costs of these West side systems will be paid by East side taxpayers. The option sets and other preliminary planning undertaken for the Westside sub-system within the Core Area Liquid Waste Management Plan has occurred in the absence of participation, representation and input from the East side municipalities or directors. ln accordance with the principle of representation for users of a service provided by a regional district, it is proposed that the Core Area Liquid Waste Management Committee provide direction to staff to bring forward in a timely way recommendations on procedural changes and/or governance enhancements to ensure that each user of components of the service and each area that is paying for components of the system, are adequately represented in decision-making.

MOTION BE IT RESOLVED THAT the Core Area Liquid Waste Management Committee directs staff to report back at the next meeting on procedural changes and/or governance enhancements that will ensure that each participant who is anticipated to use or pay for a component of the eastside or westside wastewater treatment sub-systems is included in the governance system directing the design and eventual operation of that component of the system.

Notice of Motion to the Core Area Liquid Waste Committee

February 10, 2016 – Directors Derman and Plant

RATIONALE

At its January 13, 2016 meeting, members of the Core Area Liquid Waste Committee debated the issue of whether or not to send proposed sewage treatment options out for public comment. During that debate, a number of directors expressed the belief that the options presented were "representative" only and would not preclude the possibility of other, potentially better, options coming forward in the future. Neither the chair nor staff contradicted these statements.

At the subsequent January 27th meeting of the Core Area committee, a program laid out for future directions, and comments from staff, appeared to limit or eliminate opportunities for substantially different options to come forward in the future. This is inconsistent with the statements and beliefs put forward in the January 13th meeting.

MOTION

That the Core Area Liquid Waste Committee ask the Chair to bring forward a program for future directions that clearly puts in place mechanisms to allow substantially different options to come forward in the future. Furthermore, such options should be able to include differences in siting, technology, overall system design and waste streams involved.

Notice of Motion to the Core Area Liquid Waste Committee

February 10, 2016 – Directors Derman and Plant

RATIONALE

Under the Gordon Campbell government, Environment Minister Barry Penner mandated the Core Area of the Capital Regional District to move to sewage treatment. Subsequently, the minister expressed his desire to have the following goals accomplished:

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

In a 2015 Project Charter for the Core Area Liquid Waste project, similar goals and commitments were established:

Goals and Commitments

The Core Area Sewage and Resource Recovery System 2.0 project will deliver the following goals and meet the following commitments. NB goals should be measurable. Each of these goals needs a corresponding metric so at project completion, the CALWMC can determine whether it achieved its goals.

Goals

- *Meet or exceed federal regulations for secondary treatment by December 31, 2020*
- *Minimize costs to residents and businesses (life cycle cost) and provide value for money*
- *Produce an innovative project that brings in costs at less than original estimates*
- *Optimize opportunities for resource recovery to accomplish substantial net environmental benefit and reduce operating costs*
- *Optimize greenhouse gas reduction through the development, construction and operation phases and ensure best practice for climate change mitigation*

Commitments

- *Develop and implement the project in a transparent manner and engage the public throughout the process*

- *Deliver a solution that adds value to the surrounding community and enhances the livability of neighbourhoods*
- *Deliver solutions that are safe and resilient to earthquakes, tsunamis, sea level rise and storm surges*
- *Develop innovative solutions that account for and respond to future challenges, demands and opportunities, including being open to investigating integration of other parts of the waste stream if doing so offers opportunities to optimize other goals and commitments in the future*
- *Optimize greenhouse gas reduction through the development, construction and operation phases and ensure best practice for climate change mitigation*

With all due respect, for the efforts of those involved in their creation, it is not clear that current options put forward to the Core Area Liquid Waste Committee substantially meet either the Project Charter goals and commitments or Minister Penner's initial requirements:

MOTION

That the Core Area Liquid Waste Committee establish a process for thoroughly evaluating the consistency of currently proposed options with the goals and commitments established under the Project Charter. Furthermore, that the Core Area Liquid Waste Committee not proceed further with any of the proposed options until it has been established that they are substantially compliant with Charter goals and commitments.

AECOM/Graham Joint Venture
Fourth Floor, 3292 Production Way
Burnaby, BC, Canada V5A 4R4
T 604.444.6400 F 604.294.8597

February 18, 2016

Chair Desjardins and the CRD Board of Directors
Capital Regional District
625 Fisgard Street
Victoria, British Columbia
Canada V8W 2S6

BY E-MAIL TO: CRDBoard@crd.bc.ca

Subject: **Harbour Resource Partners Affordable and Bylaw Complaint Solution for the CRD CALWMP Liquid Treatment Plant**

Dear Chair Desjardins and Directors:

Harbour Resource Partners (HRP) remains committed to providing a superior solution for the CALWMP. Accordingly we would like to take this opportunity to remind the board that our winning proposal at McLoughlin Point is demonstrably the best value for money and lowest community impact solution that meets the budget and time constraints for the mandatory treatment plant requirements imposed by the province and committed to by the region. Further, it has the significant benefit of meeting the terms of the senior government grants, thereby preserving this 2/3 funding which otherwise risks being lost forever in 6 weeks time.

Recently we have observed a great deal of misunderstanding and misconception regarding what HRP offered when comparing just the treatment plant element of our winning proposal with the new option sets. We would therefore like to take this opportunity to set the record straight. HRP's offer has the following characteristics that are superior to any other alternatives currently under consideration:

1. Our design is competitively bid at approximately $170M (for the liquid treatment component), compared to $392M and $450M for other options. This is a committed competitive bid as opposed to budget estimates provided by others.
2. We have already negotiated scope and contract terms, and have a design that is six months ahead of other options in development. With no new site remediation, outfall siting study, or other lengthy processes as required with other options we could begin work in 30 days, and be complete by 2020.
3. We have provided to CRD a design which meets future capacity requirements to 2030 and is fully compliant with the current Esquimalt zoning bylaws;

We urge the region to honour the commitment made to the engineering and construction community, the province, and geographic neighbours and proceed to implement our winning proposal for a new state-of-the-art treatment plant at McLoughlin Point without further delay.

Very Truly Yours,

Harbour Resource Partners

Ernie Maschner, DBIA
Respondent Team Lead Director
Harbour Resources Partners
AECOM / Graham Joint Venture
:

Distribution

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CRD Vice Chair Howe
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Director Young
Chief Sam
Chief Thomas

ESQUIMALT NATION

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Victoria, BC, V9A 7K7
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SONGHEES NATION

1100 Admirals Road
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Fax: (250) 386-4161

February 19, 2016

Mayor Lisa Helps
Director/Chair
Core Area Liquid Waste Management Committee
Capital Regional District
c/o City of Victoria
1 Centennial Square
Victoria, BC V8W 1P6

Dear Mayor Helps:

Re: CRD Sewage Treatment Facility – Rock Bay Lands

We are writing in regards to the potential location of the future CRD sewage treatment plant on lands at Rock Bay. As you are aware, we have been working diligently with staff at the CRD to clarify the various issues that will need to be resolved if the CRD ultimately decides that it wishes to locate the facility on lands that are under the control of our two Nations. Those lands include parcels that will come from Transport Canada and from BC Hydro.

While the consolidation of these parcels and the identification of the respective needs of all the parties is complex from a legal, economic, engineering and political perspective, our Nations remain committed to facilitating the plant going on these lands in a timely and cost effective manner if that is the CRD's desire. We are currently examining the possibility of transferring the lands to the CRD by way of an option.

It is the Nations' strong preference that bio solids not be treated on this site. It is our understanding that this may enable us to reacquire portions of this property in the future. As we have noted in the past, it is very important to our communities that we re-establish a First Nation presence in the inner harbour. This area is the heart of our historic past and central to our identity.

For now however, let us reiterate that we are fully committed to assisting the CRD in resolving the difficulties around a sewage treatment plant by bringing forward lands that should meet the CRD's needs.

Best wishes

Chief Andy Thomas

Chief Ron Sam

01183719

Burnside Gorge Community Association
471 Cecelia Road, Victoria, BC V8T 4T4
T. 250-388-5251 | F. 250-388-5269
info@burnsidegorge.ca | www.burnsidegorge.ca

Date: February 22, 2016

To: Directors , Core Area Liquid Waste Management Committee

Dear Directors:

On behalf of the Burnside Gorge Community Association (BGCA), I am writing to share the views of our organization regarding the recent public engagement process, the proposed options for wastewater treatment including solids processing, and the community concerns and benefits that must be fully addressed should a project proceed in our neighbourhood. All options presented to the public include an extra-large treatment plan located in the Rock Bay area of our neighbourhood, and therefore we are the area of the Capital Regional District that stands to be the most directly affected in the short and long term from any wastewater plant.

Two key roles of the BGCA include engaging and consulting with our communities concerning issues and developments important to the lives of residents and businesses, and advocating in the best interests of the community and ensuring a representative voice for of all of those we serve. The information discussed below is focused on our responsibility to represent and advocate for the interests of those who live, work and play in Burnside Gorge. Although the options for wastewater treatment presently have substantial and uncertain implications for property taxes, carbon footprint and other issues highly important to citizens at large, the BGCA is not providing comment on such issues at this time.

<u>Process of public participation</u>

In accordance with the International Institute for Public Participation, BGCA believes that public participation means to involve those who are affected by a decision in the decision-making process. It means providing participants with the information they need to be involved in a meaningful way, and it must include communicating to participants how their input affects the decision.

We acknowledge that the Core Area Liquid Waste Management Committee (CALWMC) has made efforts in recent months to provide citizens of the region with information regarding the selection of sites and technology for a wastewater treatment plant. We must also respectfully inform you that the process for *directly engaging* with Burnside Gorge, as the area that will experience the highest level of impacts from an extra-large plant, has not been meaningful or adequate. Effective consultation with stakeholders is a significant investment in time, and the character of our neighbourhood requires sustained and diverse outreach activities. Although we have greatly appreciated the recent efforts of Ms. Amanda Gibbs of Public Assembly to provide supplemental

information regarding potential impacts of an extra-large plant on key technical factors (noise, traffic, odour and visuals) as well as on community values, the recent four-week public consultation initiatives on the option sets has been very rushed with inadequate notice and too little information to reasonably expect the average local resident to provide an informed opinion. We believe that the Capital Regional District has had many opportunities to come to the Burnside Gorge community for open dialogue much earlier in the process and we were disappointed that there was no response to our invitations. We trust that the CALWMC will proceed differently for any subsequent steps in the process.

Burnside Gorge views on wastewater treatment option sets

As the process of the CRD's outreach to the neighbourhood has been incomplete to date, BGCA is only able to present the perspectives of our Board of Directors, our associated Land Use Committee, and the residents and businesses that were able to attend the limited public information sessions in the neighbourhood. We also do not have the results of the survey that closed on February 20 and we are unclear on whether that survey will capture demographic information including where respondents live.

The views we present below are affected by the fact that we are concerned that the Core Area Wastewater Treatment selection process has not provided even minimal information about the direct adverse impacts that the different types of treatment technologies and locations would have on surrounding residents and businesses through approximately five years of construction and a century of operations. BGCA must state that there are hundreds of residences in multi-family dwellings located within 200 metres of all the Rock Bay sites, and therefore the notion that site selection is more acceptable if not adjacent to single-family dwellings demonstrates a lack of regard for local residents and a lack of awareness that the Rock Bay area may substantially increase its residential and mixed-use dwellings over the next several decades.

We were also disappointed that the process was not able, even at a high level, describe what opportunities, benefits and amenities could be available as potential community improvements that could mitigate the placement of a wastewater plant in the neighbourhood. While we appreciate that some information will become available through the rezoning process, we believe the public needs to have a better understanding of the range of issues and scenarios as part of providing informed views into any questions about site and technology selection.

Based on available information, **BGCA is neither willing nor able to take a position for or against any of the six wastewater option sets presented to the public**. We note that there are three site options described for all option sets within Rock Bay, with no information on whether there is differentiation of adverse impacts to the neighborhood between those sites. Therefore, at this point, we also neither support nor oppose any of the three possible locations for a wastewater treatment plant in Rock Bay.

Based on available information, **BGCA is wholly unsupportive of the processing of bio-solid residuals in Rock Bay, regardless of whether the technology is anaerobic digestion or gasification**. The long-term plan for revitalization of waterfront areas in Rock Bay is essential to our neighbourhood and has been repeatedly raised as a community aspiration in the Local Area Planning process currently underway with the City of Victoria. In our view, the additional land requirements that may be tentatively earmarked for solids processing should instead be dedicated to local public amenities associated with any wastewater facility. We are currently of the view that there are no mitigation measures nor an offsetting amenities package that would reduce or eliminate the 24/7 effects of noise, odour, dust and truck traffic due to solids processing to an acceptable level for the valuable Rock Bay area. We understand that piping solids to Hartland is the least disruptive and most technically effective method in the long term.

<u>Site expectations, design excellence, offsets and community-accrued benefits</u>

The CALWMC Project Charter makes three important commitments that BGCA completely agrees with and would like to see enshrined as covenants and/or conditions of any related processes that may move forward:

- "deliver a solution that adds value to the surrounding community and enhances liveability of neighbourhoods"
- "add benefit to host communities, including meaningful neighbourhood design and potential for needed amenities and co-location with other organizations or community uses"
- "provide the highest level of odour and noise control"

If the CALWMC proceeds with selecting an option set that includes a wastewater treatment plant in Rock Bay, BGCA wishes to share the following expectations regarding neighbour/community benefits, offsetting amenities, and on-site plant design excellence.

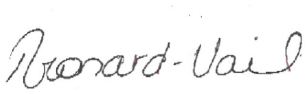
Any wastewater treatment plant and surrounding property should itself be designed and operated as a major community asset, incorporating the highest standards, best ideas and design excellence possible from around the world. An extra-large plant in our neighbourhood must be entirely compatible with attractive, diverse mixed-uses in the immediately adjacent areas. The Burnside Gorge community has generated many ideas to date, and many more will be forthcoming should this project proceed in Rock Bay. The process of gathering feedback and genuinely collaborating with the community on wastewater treatment plant design, reducing disruption, mitigation of negative effects and maximizing benefits requires substantial time and a commitment to open, iterative process and dialogue. Community involvement regarding design, construction, and eventual operational strategy of the site is necessary to ensure the neighbourhood remains a viable place for residential and business growth.

We cannot emphasize enough how important it will be, if a Rock Bay wastewater treatment plant is to move forward, that the CALWMC and the City of Victoria deeply engage with the neighbourhood

at all subsequent stages of decision-making that affect our community. During recent public engagement, the Burnside Gorge community was advised that any project in Rock Bay would include increased waterfront access, view preservation, integration with surrounding streets and developments, and creative ideas about how the site could offer award-winning benefits to the neighbourhood and the region at large. BGCA expects that CALMCW and the City of Victoria will demonstrate an ongoing commitment to work with citizens to make this project exactly right and supportive of local goals.

We appreciate the opportunity to provide comment.

Regards,



Tamara Leonard-Vail
Board Chair

CC: Burnside Gorge Community Association Board of Directors
Carolyn Gisborne, Chair, Burnside Gorge Land Use Committee
Geoff Young, City of Victoria Councillor and Council Liaison to Burnside Gorge
Jonathan Tinney, City of Victoria – Director, Sustainable Planning and Community Development

CORE AREA SEWAGE AND RESOURCE RECOVERY SYSTEM 2.0

Phase 2: Analysis, Options Costing and Public Engagement

Project Charter - FINAL

Approved: October 2, 2015
(updated on November 2, 2015)
(Attachment 2 updated on January 19, 2016)

TABLE OF CONTENTS

1. VISION

In partnership with the public, the Core Area Liquid Waste Management Committee (CALWMC) will deliver a sewage treatment and resource recovery system that is proven, innovative and maximizes the benefits for people and the planet – economic, social, and environmental – for the long term.

2. BACKGROUND

In 2006, an environmental report commissioned by the Ministry of Environment noted the contamination of seabed sites close to Capital Regional District (CRD) outfalls where the region's wastewater is discharged. As a result, the Province mandated that the CRD plan for and initiate secondary sewage treatment for the region.

In 2007, the CRD received a letter from the Ministry of Environment giving six directives for the Core Area Liquid Waste Management Plan (LWMP). These six directives continue to inform the goals and commitments of this project.

Minister's Requirements:

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 reuse 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

In 2012, the federal government passed a law requiring all high-risk Canadian cities to provide secondary sewage treatment by 2020 at the latest. The CRD's core area was considered to be in the high-risk category.

Between 2009 and 2014, the CALWMC, CRD staff and consultants, and the Core Area Wastewater Program Commission (the Commission) worked to create and implement a publicly acceptable sewage treatment and resource recovery system for the Core Area.

While the approved CALWMP continues to identify McLoughlin Point as the location for the wastewater treatment facility, in April 2014, the CRD's revised McLoughlin Point rezoning application did not meet the zoning requirements for Esquimalt. In June 2014, the plan to build one regional plant at McLoughlin Point was put on hold by the CRD Board, in response to public input.

In June 2014, Langford, Colwood, View Royal, Esquimalt and the Songhees Nation formed the Westside Select Committee to begin planning for a new project to treat sewage and recover resources in those municipalities and the Nation. In September 2015, Esquimalt Nation joined the Westside Select Committee. In January 2015, a similar body – the Eastside Select Committee,

comprised of Saanich, Oak Bay and Victoria – was formed to develop a similar plan for the Eastside municipalities.

Since June 2014 and January 2015, respectively, both Select Committees have been engaged in in-depth public engagement activities to share information with the public, build trust, and seek public input on a range of factors including, but not limited to, level of treatment, treatment technologies, siting of treatment plants, costs, risks and long-term social, economic and environmental benefits.

In July 2015, both select committees presented their work and recommendations to the CALWMC. The CALWMC approved the solution sets and recommendations from the Eastside Select Committee, including potential sites and direction with regard to investigating secondary and tertiary treatment, anaerobic digestion and gasification, and resource recovery and revenue generation. The CALWMC received a presentation from the Westside Select Committee outlining five technically preferred sites and two scenarios, detailing its technical work to date. The Committee accepted the Westside Select Committee's proposal to carry on with further public engagement and more detailed costing and engineering analysis as per its terms of reference to be presented to the CALWMC as more fully-developed solutions in fall 2015.

The work of the Eastside and Westside Select Committees, the CALWMC, and the public between June 2014 and July 2015 lays the groundwork for the current project, *Core Area Sewage and Resource Recovery System 2.0.*

3. GOALS AND COMMITMENTS

The *Core Area Sewage and Resource Recovery System 2.0* project will deliver the following goals and meet the following commitments. *NB goals should be measurable. Each of these goals needs a corresponding metric so at project completion the CALWMC can determine whether it achieved its goals.*

Goals

a) Meet or exceed federal regulations for secondary treatment by December 31, 2020

b) Minimize costs to residents and businesses (life cycle cost) and provide value for money

c) Produce an innovative project that brings in costs at less than original estimates

d) Optimize opportunities for resource recovery to accomplish substantial net environmental benefit and reduce operating costs

e) Optimize greenhouse gas reduction through the development, construction and operation phases and ensure best practice for climate change mitigation

Commitments

a) Develop and implement the project in a transparent manner and engage the public throughout the process

b) Deliver a solution that adds value to the surrounding community and enhances the livability of neighbourhoods

c) Deliver solutions that are safe and resilient to earthquakes, tsunamis, sea level rise and storm surges

d) Develop innovative solutions that account for and respond to future challenges, demands and opportunities, including being open to investigating integration of other parts of the waste stream if doing so offers the opportunities to optimize other goals and commitments in the future

e) Optimize greenhouse gas reduction through the development, construction and operation phases and ensure best practice for climate change mitigation

4. SCOPE

The scope of this phase of the Core Area Sewage and Resource Recovery System 2.0 project, is to complete the Options Development Phase, by submitting an amendment to the Liquid Waste Management Plan and receiving conditional approval from the Minister of Environment of an Amendment for the Core Area. This Plan amendment will be approved by the provincial and federal funding agencies. Completion of this phase includes securing sites for all facilities (wastewater treatment and resource recovery).

The scope of this phase does not include detailed site assessments such as Environmental and Social Reviews, submission of detailed business cases (as may be required by funding agencies), indicative design, finalized cost sharing agreements or the procurement of infrastructure.

5. KEY STAKEHOLDERS

The graphic illustration (see Attachment 1) outlines all of the Core Area Sewage and Resource Recovery 2.0 project stakeholders and displays the relationships between them. For a description of the roles and responsibilities of each stakeholder, please see Section 6.

6. ROLES AND RESPONSIBILITIES

Project Lead (TBD)

Federal Government – In 2012, the federal government passed a law requiring all high-risk Canadian cities to provide secondary sewage treatment by 2020 at the latest. The CRD's Core Area was considered to be in the high-risk category. The federal government agreed to contribute up to $253 million towards the project out of three different funding programs: Building Canada Fund ($120 million), Green Infrastructure Fund ($50 million) and 3P Canada ($83.4 million).

- Secondary treatment mandated by 2020
- Funding up to $253 million

Provincial Government – In 2006, an environmental report commissioned by the Ministry of Environment noted the contamination of seabed sites close to CRD outfalls where wastewater is discharged. As a result, the CRD was mandated by the province to plan for and initiate secondary

wastewater treatment for the region. Provincial funding agreements provide a maximum of $248 million towards the project.

- Funding up to $248 million
- Approval of LWMP amendment and regulatory requirements

Capital Regional District Board (CRD Board) – The CRD Board is responsible for selecting final site locations and securing lands for wastewater treatment facilities, obtaining the rezoning of lands, approving the architectural design for facilities, and approving funding agreements and the budget. The CRD Board is responsible for delivering the project outlined in the Vision.

- Final approving body for funding, budget and major decisions
- Collect and disburse the local portion of the funding of $287 million

Core Area Liquid Waste Management Committee (CALWMC) – A standing committee of the CRD Board, the CALWMC consists of Directors from municipalities and First Nations participating in the Core Area Liquid Waste Management Plan (CALWMP). The committee is responsible for overseeing the CALWMP and making recommendations to the CRD Board about the CALWMP and certain aspects of the Core Area Wastewater Treatment Program.

- Standing Committee of CRD Board
- Responsible for overseeing CALWMP

Core Area Liquid Waste Management Committee (CALWMC) Chair – The CALWMC Chair is selected by the Chair of the CRD Board annually. The CALWMC Chair is responsible for participating in CALWMC agenda meetings and chairing CALWMC meetings. The Chair is also responsible for building and maintaining relationships, and liaising with the Chair of the Core Area Wastewater Program Commission and the Chair of the Technical Oversight Panel. The CALWMC Chair is the public face of the project and is responsible for communicating with other public bodies at the political level, as well as with the media.

Core Area Liquid Waste Management Committee (CALWMC) Vice Chair – The CALWMC Vice Chair is responsible for fulfilling the roles and responsibilities of the CALWMC Chair in the Chair's absence.

Westside Wastewater Treatment and Resource Recovery Select Committee – In June 2014, Westside participants (Colwood, Esquimalt, Langford, View Royal, and Songhees Nation) formed the Westside Wastewater and Resource Recovery Select Committee to evaluate Westside treatment options and develop a sub-regional wastewater treatment and resource recovery plan. The member municipalities' role is to provide political input and take feedback from the public and report to the Westside Select Committee. The participating municipalities also have zoning authority. In September 2015, the Esquimalt Nation joined the Westside Select Committee. The Songhees and Esquimalt Nation representatives provide political input to the Westside Select Committee. The Committee reports to the CALWMC and is supported by CRD staff, Westside staff, consultants and a technical working group.

The Westside Select Committee participants initiated the Westside Solutions Project as a way to engage residents to work collectively to identify solutions for wastewater treatment and resource recovery that meet the unique needs of the Westside communities. The Westside option sets

consider flow scenarios that include Eastside flows from Vic West and Saanich West. This work, along with the work from the Eastside Select Committee, will inform the Core Area Sewage and Resource Recovery 2.0 project and the amendment to the Liquid Waste Management Plan.

- Representatives from Colwood, Esquimalt, Langford, View Royal and Songhees Nation
- Reports to CALWMC
- Evaluates options to develop a sub-regional wastewater treatment plan
- Supported by CRD staff, Westside municipal staff, consultants and a technical working group

Eastside Wastewater Treatment and Resource Recovery Select Committee – In January 2015, Oak Bay, Saanich and Victoria formed the Eastside Wastewater and Resource Recovery Select Committee to engage with their communities and develop wastewater treatment options that meet the needs of the Eastside municipalities. The role of the participating municipalities is to provide political input and take feedback from the public and report to the Eastside Select Committee. The participating municipalities also have zoning authority. The Eastside Select Committee reports to the CALWMC and is supported by CRD staff, participating municipal staff and consultants.

The Eastside option sets consider a regional option, which includes all flows from Eastside and Westside, as well as a sub-regional and distributed option that includes flows from Eastside municipalities only and Eastside Clover Point outfall catchment flows. The Eastside Select Committee's plan, in combination with the work from the Westside Select Committee, will inform the Core Area Sewage and Resource Recovery 2.0 project and could form the basis for an amendment to the CALWMP.

- Representatives from Oak Bay, Saanich and Victoria
- Reports to CALWMC
- Working to develop wastewater treatment options for Eastside municipalities
- Supported by CRD staff, participating municipal staff, and consultants

CRD Chief Administrative Officer – The CAO oversees all administrative operations and staff, ensures CRD Board policies are implemented, oversees the operations and functions of the CRD, and aligns the organization to achieve strategic priorities set by the Board. This includes working with federal and provincial staff to coordinate funding agreements and providing advice to the CRD Board regarding potential risks and opportunities for the CRD Board.

- Oversees CRD operations and staff
- Works with partners and stakeholders
- Provides advice to the CRD Board

General Manager of Parks & Environmental Services – The GM of Parks & Environmental Services provides general direction and leadership to CRD staff and advises the CALWMC and the Eastside and Westside Wastewater Treatment and Resource Recovery Select Committees regarding the technical and legal aspects of the CALWMP and the wastewater treatment planning process. The General Manager's role is also to provide information to the Core Area Municipalities' CAOs and First Nations Administrators.

- Provides general direction and leadership to CRD staff

- Advises on technical and legal aspects of the CALWMP
- Informs Core Area Municipal CAOs and First Nation Administrators about the project

General Manager of Finance & Technology – The GM of Finance & Technology is the Chief Financial Officer for the CRD. The GM of Finance and Technology is responsible for the budget and all financial services, information technology and geographic information services (IT & GIS), property and real estate services, insurance and risk management, facilities management, and arts development for the Capital Region.

Corporate Officer – The CRD Corporate Officer provides support and procedural advice to the CRD Board and the CALWMC, and is responsible for maintaining the official records of these bodies. The officer also processes requests for records in accordance with the Freedom of Information and Protection of Privacy Act.

First Nations Liaison – The First Nations Liaison serves as a point of contact for First Nations communities involved with the project and provides departmental support and assistance in the areas of service delivery, referral processes, outreach, engagement and relationship building.

Manager, Corporate Communications – The Senior Manager of Corporate Communications provides professional expertise and leads the CRD Corporate Communications team, which works with the General Manager of Parks & Environmental Services and the CAO on overall communications for the CRD Board. There is a communications coordinator dedicated to working on the CALWMP.

Technical Oversight Panel (ToP) – The role of the Technical Oversight Panel is to review the costing and feasibility studies developed by the Engineering Team during the planning phase of the project and to ensure that the studies for the wastewater treatment options include the necessary due diligence. The Technical Oversight Panel will also advise on how to best engage the private sector in this phase of the project. Fundamental to providing independent technical oversight and confirming due diligence is to ensure that the engagement of the private sector in this phase of the project and the innovative solutions that may come forward is informed by, not necessarily bound by (as per the ToP Terms of Reference), decisions to date regarding sites, option sets, timelines, definitions of treatment and other potential limitations on analysis and costing.

The role of the ToP does not include public consultation, media interaction, land acquisition and rezoning, contract management or direction of the Engineering Team The ToP receives information from and liaises with the Engineering Team (Urban Systems and Carollo Associates), and provides feedback and recommendations to the CALWMC. The Chair of the ToP reports to the CALWMC biweekly. The ToP liaises with the Eastside and Westside Select Committee.

- Independent Technical Oversight Panel
- Reviews costing and feasibility studies
- Reports findings to the CALWMC

Independent Engineering Resources – The Independent Engineering Team's role is to conduct the Feasibility and Costing Analysis (Urban Systems partnered with Carollo) for the CALWMP Wastewater Treatment System. The Engineering Team is also working with the Westside Select Committee to do a more detailed analysis on the Westside flows. The team provides information

to and liaises with the ToP, and reports to and receives direction from the CALWMC. Additional external resources may be required for staff to prepare the LWMP amendment. The team is assessing the feasibility of a regional and sub-regional system in the Core. The team is also looking at a distributed system option based on the potential sites put forward from the Eastside Select Committee and Westside Select Committee.

- Conducts feasibility and costing analysis
- Assesses feasibility of regional and sub-regional systems in the Core Area
- Assists with preparation of LWMP amendment

Fairness and Transparency Advisor (FTA) – The FTA's role is to act as a point of contact for the public to submit complaints regarding the process of costing the options, working with the host jurisdiction(s) and preparing an amendment to the LWMP and to ensure that the process is fair, transparent, impartial and objective. The FTA is independent of the CRD. The FTA's role is to investigate appropriate complaints and report to the Board, through the CALWMC, the results of an investigation, to help strengthen the fairness, transparency or objectiveness of the process followed. The FTA is to provide monthly status reports to the CALWMC. The role of the FTA does not restrict the public from going to other sources for complaints and requests to review processes, such as the office of the Ombudsperson.

- Independent of the CRD
- Investigates public complaints regarding process
- Ensures process is fair, transparent, impartial and objective

Core Area Wastewater Treatment Program Commission (the Commission) – As part of the funding negotiations with the Province, the CRD was required to establish an independent non-political governance body to manage, implement and commission the Core Area Wastewater Treatment Program. The Commission governs the implementation and operation of the Wastewater Treatment Program and oversees the procurement process for all components of the Program. The Commission operates autonomously of the CALWMC and Regional Board; however, the Commission is required to seek CRD Board and funder approval on predetermined items as detailed in the CRD Commission bylaw. Several steps have been taken to scale back operations and reduce costs as the CRD continues its planning work to find a new solution to wastewater treatment. The Commission remains in place waiting to implement whatever system of wastewater projects the CRD Board decides upon, and is approved by the Province.

- Independent Commission required by Province
- Manages implementation and operations of the Wastewater Treatment Program
- Oversees procurement process

Technical and Community Advisory Committee (TCAC) – The Technical and Community Advisory Committee is an LWMP requirement of the province, and provides technical and community consultation advice and input to the CALWMC. TCAC assists the CALWMC in making appropriate recommendations to the CRD Board in the following areas: (a) plant design criteria and treatment technology, including opportunities for resource recovery, sludge management, odour control and general plant design criteria, (b) number and location of treatment plants, and (c) timing/scheduling of treatment.

- Provides technical and community consultation advice

- Makes recommendations regarding design criteria, treatment technology, number and location of treatment plants, and schedule for treatment

Eastside Public Advisory Committee (EPAC) – The Eastside Public Advisory Committee takes input from the public and provides guidance to the Eastside Wastewater and Resource Recovery Select Committee on the public consultation process.

- Takes input from the public
- Provides Eastside Select Committee on the public consultation process

Core Area CAOs + First Nation Administrators – The Core Area CAOs and First Nations Administrators are the principal policy advisors to councils, and provide support to the Eastside and Westside Select Committees. The Core Area CAOs and First Nations Administrators receive project-specific information and updates from the CRD's General Manager of Parks & Environmental Services regarding the progress of the CALWMC and the Eastside and Westside Select Committees.

- Principle policy advisors
- Receive project information
- Provide recommendations from municipal staff perspective

Municipal Councils – The role of municipal councils is to make land-use decisions for facility siting and to negotiate development agreements with the CRD.

Westside Communications Team – The Westside Communications Team is made up of Communications Coordinators from Colwood, Esquimalt, CRD and Aurora Consultants. The Team provides communication and public consultation support to the Westside Select Committee.

Eastside Communications Team – The Eastside Communications Team consists of a consultant from Public Assembly and the CRD Communications Manager and CRD CALWMP Communications Coordinator. The Eastside Communications Team provides communication and public consultation support to the Eastside Select Committee

Westside Technical Team – The Westside Technical Team consists of municipal staff, supported by Urban Systems. The technical team provides technical information and input to the Westside Select Committee.

- Comprised of municipal staff and supported by Urban Systems and Aurora Innovations for facilitation and coordination support
- Provides technical advice to the Westside Select Committee

Eastside Technical Team – The Eastside Technical Team is comprised of municipal staff and supported by Urban Systems and CRD Staff. The Technical Team provides support and input to the Eastside Select Committee.

- Comprised of municipal staff; provides support and information to the Eastside Select Committee

7. MILESTONES

The Proposed Work Plan Overlay, which was adopted and submitted to 3P Canada in March 2014, provides the overarching timelines and milestones through the completion of the project (Attachment 2). A draft schedule identifying key tasks and milestones of the feasibility and costing exercise to be achieved by the end of 2015 during Phase 2 of the Core Area Sewage and Resource Recovery System 2.0 project is included for discussion (Attachment 3). The scheduling and implementation of the public consultation on the preferred solution sets (after the costing analysis) is anticipated to occur in early December, but is dependent on all of the deadlines being met up until that point.

A detailed schedule is under development and will be circulated for comment.

8. BUDGET

Funding for the project will be drawn from the Core Area Liquid Waste Management Plan operating reserve, funded by all participants in the service based on projected design capacity for 2030. A total budget of $1,450,000 has been identified to support this phase of the project, including engineering and public consultation consulting fees, Technical Oversight Panel honorarium and disbursements, Fairness and Transparency Advisor, public consultation process delivery and CRD staff time.

Phase 2 Budget

Item	Cost
Project Oversight (FTA & ToP)	$280,000
Public Consultation	$240,000
Feasibility and Costing Analysis	$450,000
Property and Zoning	$75,000
LWMP Amendment No. 10	$75,000
Staff and Wages	$300,000
Miscellaneous and Legal	$30,000
TOTAL	$1,450,000

9. CONSTRAINTS, ASSUMPTIONS, RISKS AND DEPENDENCIES

a) Constraints

- The timelines for this phase of the project are extremely aggressive with no buffer
- The schedule is dependent on multiple parties and governance bodies meeting their sub-project schedules

b) Assumptions

- The Minister of Environment will provide direct *conditional* approval of the Liquid Waste Management Plan upon submission to the Province

c) Risks

- The costing analysis and public consultation processes will be subject to criticism due to time constraints
- The governance model of the project is complex, leading to miscommunication or contradictory decision making
- Municipal councils do not endorse siting preferences of the CRD Board
- Potential loss of senior government funding if timelines are not met

d) Risk Mitigation

- Ensure regular, open reporting of all parties to the Core Area Liquid Waste Management Committee to ensure “no surprises” when public consultation is formally conducted
- Engage in close municipal council and staff involvement as preferred sites emerge and municipal planning/siting processes are initiated
- Ensure ongoing and open discussions with the funding agencies to ensure “no surprises” when the LWMP amendment is submitted for approval and the project is submitted for funding
- Ensure transparent and deep engagement with the community
- Ensure there is enough time required to rezone and that there is public support for rezoning

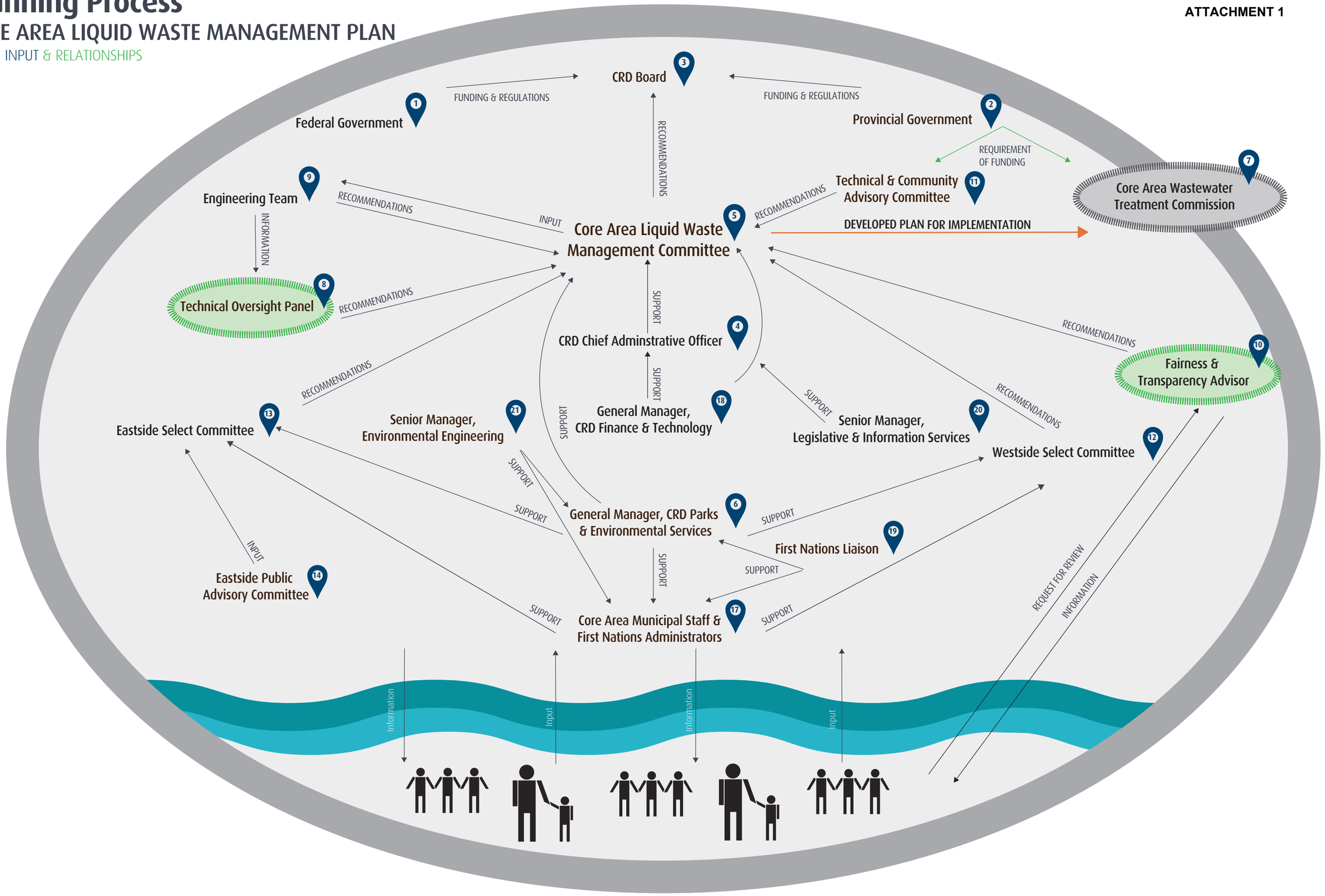
Attachments:	Attachment 1:	Planning Process – Core Area Liquid Waste Management Plan – Roles, Input & Relationships
	Attachment 2:	Proposed Work Plan Overlay – 3P Canada Funding Considerations
	Attachment 3:	Proposed Feasibility and Costing Analysis Schedule (Urban Systems) – August 31, 2015

Planning Process

CORE AREA LIQUID WASTE MANAGEMENT PLAN

ROLES, INPUT & RELATIONSHIPS

ATTACHMENT 1



ATTACHMENT 2

Proposed Work Plan Overlay

3P CANADA FUNDING CONSIDERATIONS

OPTION DEVELOPMENT, PLANNING & IMPLEMENTATION PHASES

JAN 13-FEB 24 — PHASE 2: PUBLIC CONSULTATION

FEB 24 - MAR 9 — PREPARATION OF PLAN AMENDMENT BASED ON PREFERRED OPTION, REFERRAL TO TCAC

MAR 9 2016 — CALWMC/BOARD APPROVES PREFERRED OPTION

$83.4 M

3P CANADA FUNDING DEADLINE >

FEDERAL TRANSITIONAL AUTHORIZATION DEADLINE >

POLITICAL CONDITIONAL APPROVAL OF PLAN BY PROVINCE

MAR 2015 — WORK PLAN COMPLETE

JUNE 2015 — EASTSIDE & WESTSIDE SOLUTION SETS SUBMITTED

NOV 2015 — TECHNICAL ANALYSIS COMPLETE

DEC 2015 — COSTING & FINANCIAL ANALYSIS COMPLETE

JAN 2016 — CALWMC APPROVAL OF OPTION SETS FOR CONSULTATION

FEB 2016

MAR 31 2016 — BOARD APPROVAL COMPLETE

SUBMISSION OF PLAN AMENDMENT TO PROVINCE

DEC 2017 — SITE ZONING PROCESS COMPLETE

PROVINCIAL APPROVAL

PLANNING PHASE COMPLETE

DEC 2020 — REGULATORY ACCEPTANCE & FUNDING COMPLETION

LWMP AMENDMENT PREPARATION & BOARD APPROVAL — 1-2 YEARS

≥1 YEAR — Procurement Process

4 YEARS — Program Construction

SOLUTION OPERATIONAL 2023/2024

PHASE 1: SITING PUBLIC CONSULTATION

TECHNICAL ANALYSIS

PHASE 2: OPTIONS PUBLIC CONSULTATION

CONSULTATION

- EASTSIDE SELECT COMMITTEE
- WESTSIDE SELECT COMMITTEE
- HOST MUNICIPALITIES, FIRST NATIONS & COMBINED PARTICIPANTS

AMENDING/APPROVAL OF LWMP & PLANNING ACTIVITIES

- Environmental Impact Study **1-2 YEARS**
- Funding Negotiation
- Outfall Modeling **1-2 YEARS**
- Site Acquisitions
- Permits & Other Approvals

ASSUMES CONCURRENT PROCESSES OR CONSTRUCTION

PROGRAM DEVELOPMENT

- Wastewater Treatment Plant(s)
- Conveyance Infrastructure
- Resource Recovery Infrastructure

OPTION DEVELOPMENT PHASE | **PLANNING PHASE** | **IMPLEMENTATION PHASE**

January 2016

6.2 Proposed Schedule

URBAN systems

Capital Regional District
Core Area Liquid Waste Management Plan
Wastewater Treatment System Feasiblity & Costing Analysis
RFP 15-1834

Revised August 31, 2015

		2015																				
		August					September					October				November				December			
		Ju.y 27 - Aug 2	Aug 3 - 9	Aug 10 - 16	Aug 17 - 23	Aug 24 - 30	Aug 31 - Sept 6	Sept 7 - 13	Sept 14 - 20	Sept 21 - 27	Sept 28 - Oct 4	Oct 5 - 11	Oct 12 - 18	Oct 19 - 25	Oct 26 - Nov 1	Nov 2 - 8	Nov 9 - 15	Nov 16 - 22	Nov 23 - 29	Nov 31 - Dec 6	Dec 7 - 13	Dec 14 - 20	Dec 21 - 31
Task 1.0 - Background/Technical Foundation																						
1.1	Kick off Meeting					■																
1.2	Assess/Refine Cost Unit Rates							■	■	■												
1.3	Design Criteria							■	■	■												
1.4	Liaise with MoE to Guage Acceptance of Alternative Recovery/Reuse Options							■	■	■												
1.5	Refine Evaluation Criteria for Technical Analysis of the Option Sets							■	■	■												
1.6	Propose Analysis Methodology and Criteria with CALWM Committee										■											
TASK 2.0 - Review and Refine Solution Sets																						
2.1	Quantify Option Sets											■										
2.2	Conveyance and Pumping												■									
2.3	Treatment Including Technology Options							■	■	■	■	■	■									
2.4	Effluent management - Water Reclamation and Outfall							■	■	■	■	■	■	■								
2.5	Solids Residual Resource Recovery							■	■	■	■	■	■	■								
2.6	Energy/Heat Recovery							■	■	■	■	■	■	■								
2.7	Carbon Footprint							■	■	■	■	■	■	■								
2.8	Facility/Community Context														■							
2.9	Liaise with MoE														■							
2.10	Core Area Municipalities and CRD Presentation Meeting														■							
2.11	Finalize Option Sets															■						
TASK 3.0 - Costing and Financial Anaysis																						
3.1	Setup Costing and Financial Framework																■					
3.2	Cost Development (Lifecycle Costs, Operations, Expansions)																	■				
3.3	New Revenues, eg., Resource Recovery																	■				
3.4	Community Allocation																		■			
3.5	Procurement Assessment																		■			
3.6	Review Meeting - Core Area Municipalities and CRD																		■			
TASK 4.0 - Decision Making and Reporting																						
4.1	Prepare Materials for Public Input																			■		
4.2	Develop Materials for Political Engagement																			■		
4.3	Prepare Report: Methodology, and Option Set Details																			■		
4.4	Presentations - Core Area Municipalities																				■	■
4.5	Summarize Zoning Considerations																					■
TASK 5.0 - Engagement with Technical Oversight Panel																						
5.1	Orientation/Workshop								■													
5.2	Conference Calls										■		■				■				■	■
5.3	Review Meetings (in person)														■				■			