

Notice of Meeting and Meeting Agenda Environmental Services Committee

Wednesday, April 26, 2017

9:30 AM

6th Floor Boardroom
625 Fisgard St.
Victoria, BC V8W 1R7

C. Hamilton (Chair), R. Atwell (Vice Chair), D. Blackwell, B. Desjardins, F. Haynes, L. Helps, M. Hicks,
W. McIntyre, J. Ranns, M. Tait, K. Williams, R. Windsor

1. Approval of Agenda

2. Adoption of Minutes

- 2.1. [17-341](#) Minutes of the March 22, 2017 Environmental Services Committee Meeting

Recommendation: That the minutes of the March 22, 2017 Environmental Services Committee meeting be adopted as circulated.

Attachments: [Minutes](#)

3. Chair's Remarks

4. Presentations/Delegations

- 4.1. [17-343](#) Delegation: Carolyn Whittaker, Surfrider Foundation, Re: Agenda Item 5.4. Motion with Notice: Model Bylaw for the Elimination of Single-Use Plastic Bags

Attachments: [Delegation: Carolyn Whittaker](#)

5. Committee Business

- 5.1. [17-287](#) Advanced Integrated Resource Management - Next Steps

Recommendation: [The original motion was changed at the meeting to the following: That the Integrated Resource Management Work Plan be amended in box Q3 2017 in the first bullet following the wording "...Ministry of Environment (MoE) staff" and before "for feedback and alignment" to include the wording "and First Nations".]

That the Integrated Resource Management Advisory Committee recommend to the Environmental Services Committee:

1. That the Integrated Resource Management Work Plan be submitted to the Minister of Environment by May 31, 2017; and

2. That this report be forwarded to the Core Area Liquid Waste Management Committee, the Saanich Peninsula Wastewater Commission and the Core Area Wastewater Treatment Project Board for information.

Attachments: [Staff Report: Advanced Integrated Resource Management - Next Steps](#)
[Appendix A: Letter from Minister of Environment - Nov. 18, 2016](#)
[REVISED: Appendix B: Proposed Integrated Resource Management Work Plan](#)
[Appendix B: Proposed Integrated Resource Management Work Plan](#)
[Appendix C: Initial Assessment of Responses to RFEOI - HDR Inc.](#)
[Presentation: Slide](#)

5.2. [17-316](#) Environment Canada's Intensity-Duration-Frequency Curves

Recommendation: That the Environmental Services Committee recommend to the Capital Regional District Board:
That the Board Chair write a letter to the Minister of Environment and Climate Change requesting that regional Intensity-Duration-Frequency curves be updated.

Attachments: [Staff Report: Environment Canada's Intensity-Duration-Frequency Curves](#)

5.3. [17-317](#) 2017 Hartland Capital Projects Update

Recommendation: That the Environmental Services Committee receive this report for information.

Attachments: [Staff Report: 2017 Hartland Capital Projects Update](#)
[Appendix A: 2017 Hartland Capital Project Descriptions](#)
[Appendix B: 2017-2021 Hartland Landfill Capital Plan](#)

5.4. [17-338](#) Motion with Notice: Model Bylaw for the Elimination of Single-Use Plastic Bags

Recommendation: That the Environmental Services Committee direct staff to develop a model bylaw for the elimination of single use plastic bags using the draft Single Use Plastic Bag bylaw attached as a starting point.

Attachments: [Motion with Notice: Model Bylaw for Elimination of Single-Use Plastic Bags](#)
[Attachment 1: Draft Model Bylaw - Single-Use Plastic Bag](#)
[Attachment 2: Memo from Surfrider Foundation - June 2015](#)

6. New Business

7. Adjournment

Next Meeting: May 24, 2017

To ensure quorum, please advise Pat Perna (pperna@crd.bc.ca) if you or your alternate CANNOT attend.

Meeting Minutes

Environmental Services Committee

Wednesday, March 22, 2017

9:30 AM

6th Floor Boardroom
625 Fisgard St.
Victoria, BC V8W 1R7

PRESENT:

Directors: C. Hamilton (Chair), R. Atwell (Vice Chair), D. Blackwell, F. Haynes (9:33),
B. Desjardins (Board Chair), L. Helps, M. Hicks, W. McIntyre, J. Ranns, K. Williams, R. Windsor (9:45)
Staff: R. Lapham, Chief Administrative Officer; L. Hutcheson, General Manager, Parks and
Environmental Services; G. Harris, Senior Manager, Environmental Protection; B. Reems, Corporate
Officer; P. Perna, Committee Clerk (Recorder)

OTHERS PRESENT: Alternate Director C. Day

ABSENT: Director M. Tait

The meeting was called to order at 9:30 am.

1. Approval of Agenda

MOVED by Director Helps, **SECONDED** by Director Blackwell,
That the agenda for the March 22, 2017 Environmental Services Committee
meeting be approved as circulated.
CARRIED

2. Adoption of Minutes

- 2.1. [17-241](#) Minutes of the January 25, 2017 Environmental Services Committee Meeting

MOVED by Director Blackwell, **SECONDED** by Director Helps,
That the minutes of the January 25, 2017 Environmental Services Committee
meeting be adopted as circulated.
CARRIED

3. Chair's Remarks

The chair remarked in recognition and memory of Director Vic Derman who passed away and offered condolences to his family on behalf of the committee.

4. Presentations/Delegations - None.

5. Committee Business

5.1. [17-162](#) Environmental Services Committee Terms of Reference

MOVED by Director Blackwell, **SECONDED** by Director Helps,
That the Environmental Services Committee recommend to the Capital Regional District Board:

That the Environmental Services Committee 2017 Terms of Reference be approved as presented.

CARRIED

5.2. [17-219](#) Capital Regional District Regional Climate Action Strategy

F. Haynes arrived at 9:33 a.m.

L. Hutcheson introduced the report and G. Harris spoke to the Regional Climate Action Strategy presentation.

Discussion ensued on the following:

- the oil to heat pump subsidy
- the building code being updated
- where the energy goes and the agreement with BC Hydro
- estimates of oil tanks still in use
- the need to commit to reducing greenhouse gases
- the need to get the Federal and Provincial Government to sign on to the CRD's strategy as opposed to the just the Ministry's strategies
- recognizing other municipalities that contribute significantly

MOVED by Director Helps, **SECONDED** by Director Desjardins,
That the Environmental Services Committee recommend to the Capital Regional District Board:

That the CRD Regional Climate Action Strategy be approved and staff be directed to forward this report to municipal councils for information.

MOVED by Director Ranns, **SECONDED** by Director Williams,
That the main motion be amended to include after the words "Climate Action Strategy be approved" with "with the direction to staff to include recognition for the contribution from Municipal and Electoral Areas towards natural assets in terms of forested and agricultural areas".

CARRIED

OPPOSED: Director Windsor

MOVED by Director Helps, **SECONDED** by Director Desjardins,
That the main motion be further amended to add "That the CRD Regional Climate Action Strategy be accepted as amended."

CARRIED

MOVED by Director Helps, **SECONDED** by Director Desjardins,
That the Environmental Services Committee recommend to the Capital Regional District Board:

That the CRD Regional Climate Action Strategy be approved with the direction to staff to include recognition for the contribution from Municipal and Electoral Areas towards natural assets in terms of forested and agricultural areas and that staff be directed to forward this report to municipal councils for information.

CARRIED

5.3. [17-223](#) Community Energy and Emissions Inventory

L. Hutcheson provided an overview of the report.

**MOVED by Director Desjardins, SECONDED by Director Helps,
That the Environmental Services Committee recommend to the Capital Regional
District Board:**

**1. That the Board Chair write a letter to the Premier requesting that the on-road
transportation sector be included in future Community Energy and Emissions
Inventories;**

**2. That this staff report be referred to the CRD Planning and Protective Services
Committee, the CRD Transportation Committee and municipal councils for
information; and**

**3. That the removal of the on-road transportation activities from the Community
Energy and Emissions Inventory be brought to the UBCM through the following
motion:**

**On-road transportation sector required in the Community Energy and Emissions
Inventory**

**Whereas the on-road transportation sector is a critical component of the
Provincial Community Energy and Emissions Inventory (CEEI);**

**And whereas this sector has been removed from CEEI for all communities outside
the lower mainland;**

**Therefore be it resolved that the provincial government include the on-road
transportation sector in future CEEI.**

CARRIED

5.4. [17-222](#) Hartland Landfill Enforcement Approach

L. Hutcheson provided an overview of the report.

Discussion ensued on the following:

- fines working as a deterrent
- fines based on number of offences
- large summary of the fines are for kitchen scraps
- provision of a summary of kitchen scrap waste at the landfill

**MOVED by Director Helps, SECONDED by Director Windsor,
That the Environmental Services Committee receive this report for information.
CARRIED**

6. Correspondence**6.1.** [17-238](#) Letter from District of Highlands re CRD Free-Cycle Initiative (March 3, 2017) and CRD Response (March 17, 2017)

**MOVED by Director Blackwell, SECONDED by Director Helps,
That these two items of correspondence be received for information.
CARRIED**

6.2. [17-229](#) Letter from City of Victoria and Various Partners to Request a Reduction in Tipping Fees Associated with the HEAT Initiative (March 2, 2017)

Discussion ensued on the following:

- waiving tipping fees for volunteers providing roadway cleanup
- pilot project and policy for waiving tipping fees and looking at the quantities and frequency of disposing accumulated household items
- health and safety concerns
- the type of materials being cleaned up
- program for looking at items disposed from homes that can be reduced or reused

MOVED by Director Helps, **SECONDED** by Director Blackwell,
That this item of correspondence be received for information.
CARRIED

7. New Business - None.

8. Adjournment

MOVED by Director Blackwell, **SECONDED** by Director Helps,
That the March 22, 2017 Environmental Services Committee meeting be
adjourned at 10:30 am.
CARRIED

Chair

Recorder

From: Legserv
Subject: FW: Addressing the Board - Submission

Sent: Wednesday, April 19, 2017 9:44 PM
To: Legserv <Legserv@crd.bc.ca>
Subject: Addressing the Board - Submission

Your name::
Carolyn Whittaker

I represent::
Surfrider Foundation

Municipality/Electoral Area in which you reside::
Esquimalt

I wish to address::
Environmental Services Committee

Meeting Date::
April 26, 2017

Agenda Item::
Single Use Plastic Bag Bylaw

My reason(s) for appearing (is/are) and the substance of my presentation is as follows::
To reinforce the importance of taking a regional approach to reducing single-use plastic bags through enacting a bylaw that would impose a ban and/or mandatory bag levy.

I will have a PowerPoint or video presentation and will submit it at least 24 hours in advance of the meeting.:
No

The meeting and my presentation will be webstreamed live via the CRD website and recorded.:
I understand.

**REPORT TO INTEGRATED RESOURCE MANAGEMENT ADVISORY COMMITTEE
MEETING OF WEDNESDAY, APRIL 12, 2017**

SUBJECT **Advanced Integrated Resource Management – Next Steps**

ISSUE

To present a summary of the results of the Request for Expressions of Interest for Advanced Integrated Resource Management and outline next steps.

BACKGROUND

At its February 8, 2017 meeting, the Capital Regional District (CRD) Board approved the Advanced Integrated Resource Management (IRM) Project – Request for Expressions of Interest (RFEOI) documentation and directed staff to proceed with issuing an RFEOI. The RFEOI is intended to explore the market interest in beneficially using locally available solid waste and liquid waste residual materials as feedstock for an IRM facility. The information gathered by the RFEOI process will help to initiate the requirement for assessing IRM options, as stipulated in Amendment No. 11 of the Core Area Liquid Waste Management Plan (CALWMP), outlined in Appendix A.

The CALWMP requires the CRD to submit, by May 31, 2017, a work plan that outlines the steps and schedule the CRD will implement to develop a definitive plan for the beneficial reuse of biosolids by June 30, 2019. The CRD is proposing that the CALWMP requirements be met by providing the province with a comprehensive Integrated Resource Management Work Plan (Appendix B).

The CRD received ten RFEOI submissions that propose a variety of IRM technologies, feedstocks and end uses. Appendix C presents an initial high-level assessment of the responses to the RFEOI, prepared by the CRD's independent IRM specialist, HDR Consultants.

The implementation of a full-scale IRM facility, potentially including a pilot project, will likely take about four years, with up to two years for the permitting process and another two years for construction and commissioning of an IRM facility. Development of an IRM facility in the CRD will be subject to significant policy implications and extensive legal, technical, environmental, consultation and notification requirements. In addition, the IRM project will require stringent regulatory approvals, which could include a waste discharge authorization, completion of an environmental impact study and issuance of an operational certificate. Staff will work closely with provincial Ministry of Environment staff to ensure the MOE is proactively engaged on issues that may impact the approval requirements and timelines for this project. Regardless, the best case approval scenario will still require short-term storage, at Hartland landfill, of Class A biosolids generated by the Residual Treatment Facility, starting January 2021.

The CRD's proactive IRM approach is consistent with the requirement by the Minister of Environment for a plan for the beneficial reuse of biosolids, as it integrates solid and liquid waste streams to maximize resource recovery and generate energy/revenue through combined processing of some or all of these materials. The Integrated Resource Management Work Plan outlines the steps required to address the regulatory, technical and policy implications that will allow for the development of a plan for the beneficial reuse of biosolids as part of an integrated

waste management solution. This work plan will be submitted to the Minister of Environment by May 31, 2017.

NEXT STEPS

- May 2017 – once approved by CRD Board, staff will submit the IRM Work Plan to the Province to fulfill the May 31, 2017 deadline under the CRD's Core Area Liquid Waste Management Plan
- June 2017 – staff will present a detailed evaluation and assessment of IRM options based on RFEOI submissions to the IRM Advisory Committee
- June 2017 – staff will present, as required by the CALWMP, a jurisdictional biosolids review and an assessment of the full spectrum of biosolids beneficial uses
- July 2017 – staff will present a draft IRM Project Plan to the IRM Advisory Committee for feedback prior to starting the IRM procurement process

ALTERNATIVES

Alternative 1

That the Integrated Resource Management Advisory Committee recommend to the Environmental Services Committee:

1. That the Integrated Resource Management Work Plan be submitted to the Minister of Environment by May 31, 2017; and
2. That this report be forwarded to the Core Area Liquid Waste Management Committee, the Saanich Peninsula Wastewater Commission and the Core Area Wastewater Treatment Project Board for information.

Alternative 2

That staff be directed to revise the Integrated Resource Management Work Plan for review by the Environmental Services Committee at its April 26, 2017 meeting.

ECONOMIC IMPLICATIONS

The range of estimated IRM technology costs will be summarized in the detailed RFEOI analysis, to be completed by HDR Consultants for the June 2017 IRM Advisory Committee meeting.

ENVIRONMENTAL IMPLICATIONS

Integrated resource management contributes to sustainability by maximizing beneficial reuse opportunities that recover resources from waste, generate energy, reduce greenhouse gas emissions, and extend the life of Hartland landfill.

The IRM technologies that end up being considered by the CRD will have to be assessed based on the environmental risk of potential contaminants contained in the various available feedstocks.

CORE AREA WASTEWATER TREATMENT IMPLICATIONS

The Core Area Wastewater Treatment Plant Residual Treatment Facility (RTF) procurement has been structured to ensure that up to 50% of raw residuals produced at the McLoughlin treatment plant can bypass the RTF. This contractual and operating flexibility supports the viability of IRM solutions that rely upon the incorporation of both raw residuals and Class A biosolids.

CONCLUSION

The Capital Regional District is working on an integrated resource management solution that integrates solid and liquid waste streams to maximize resource recovery and revenue generation through combined processing of some or all of these regional materials. The CRD received ten Request for Expressions of Interested submissions that propose a variety of IRM technologies, feedstocks and end uses. This report presents an initial assessment of the results of the Request for Expressions of Interest for an Advanced Integrated Resource Management Project.

RECOMMENDATION

That the Integrated Resource Management Advisory Committee recommend to the Environmental Services Committee:

1. That the Integrated Resource Management Work Plan be submitted to the Minister of Environment by May 31, 2017; and
2. That this report be forwarded to the Core Area Liquid Waste Management Committee, the Saanich Peninsula Wastewater Commission and the Core Area Wastewater Treatment Project Board for information.

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

RS:ac

Attachments: Appendix A – Letter from Minister of Environment, November 18, 2016
Appendix B – Proposed Integrated Resource Management Work Plan
Appendix C – Initial Assessment of Responses to RFEOI – HDR Inc.



Reference: 305517

November 18, 2016

Jane Bird
 Chair, Core Area Wastewater Treatment Project Board
 Capital Regional District
 PO Box 1000, 625 Fisgard Street
 Victoria BC V8W 2S6

Dear Ms. Bird:

Thank you for your letter of November 17, 2016, regarding my conditional approval of Amendment No. 11 to the Core Area Liquid Waste Management Plan (CALWMP). As requested in your letter, I will clarify my conditional approval of Amendment No. 11 to the CALWMP and have also considered your request to modify my condition for Integrated Resource Management.

To address your concerns, I am revising my September 30, 2016, Conditional Approval of Amendment No. 11. This revised Conditional Approval of Amendment No.11 supersedes my September 30, 2016, decision.

To clarify, Amendment No. 11 includes, but is not limited to, the following:

1. A single 108 megalitre/day wastewater treatment plant located at McLoughlin Point within the Township of Esquimalt capable of tertiary treatment for flows up to 2 times Average Dry Weather Flow (ADWF) for the Core Area up to 2040. For flows that are greater than 2 times ADWF but not more than 3 times ADWF for the Clover Point catchment and up to 4 times ADWF for the Macaulay catchment, primary treatment will be guaranteed. Construction of the wastewater treatment plant will be completed by December 31, 2020.
2. Commitment to advance studies for a wastewater treatment proposal in Colwood, including up to \$2 million to complete the required technical studies and environmental impact assessments.
3. Conveyance of sewage sludge to the Hartland landfill for processing into Class A biosolids, as defined under the Organic Matter Recycling Regulation, for beneficial use and optimization for potential opportunities for integrated resource management.

...2

As a condition of my approval and in accordance with Section 24 (5) of the *Environmental Management Act*, I require the Capital Regional District (CRD) develop a definitive plan for the beneficial reuse of biosolids that does not incorporate multi-year storage of biosolids within a biocell. The Ministry of Environment understands that the plan may need to include short-term storage and/or management options as part of implementing the beneficial reuse plan, but the CRD is strongly encouraged to minimize the need for this. Further, I am amending the deadline for submission of the plan from December 31, 2017, to June 30, 2019, under the condition that the CRD submit, by May 31, 2017, a plan that outlines the procedural steps and schedule it will implement to achieve the definitive plan.

The CRD must ensure that the definitive plan for beneficial reuse of biosolids is supported by an assessment of the full spectrum of beneficial uses and integrated resource management options available for the proposed Class A biosolids produced at the Hartland Landfill, and incorporates a jurisdictional review of how similar-sized and larger municipalities within British Columbia, North America and further abroad, successfully and beneficially reuse biosolids. Ministry staff will assist as necessary and can share the ministry's jurisdictional review of how other similar-sized and larger municipalities reuse biosolids.

The beneficial reuse option selected for treated biosolids must meet the requirements for beneficial use specified in the Canadian Council of Ministers of the Environment *Canada-Wide Approach for the Management of Wastewater Biosolids* (October 11, 2012) and be based on scientific evidence. This definitive plan for the beneficial reuse of biosolids will replace the current proposal to use a biocell for storage.

Please continue to work with staff in the Environmental Protection Division of the Ministry of Environment to ensure that the proposed wastewater treatment facility is registered under the Municipal Wastewater Regulation prior to operation of the plant. Please also inform ministry staff of all beneficial uses of biosolids being considered, in order to ensure all necessary forms of authorization are obtained in advance of discharge.

Additionally, the CRD should continue to engage First Nations and the public on all aspects of the CALWMP.

Be advised that the ministry intends to publically post any reports or other documents received by the CRD on the ministry website related to this conditional approval, the CALWMP and this activity regulated under the *Environmental Management Act*.

Approval of Amendment No.11 to the CALWMP does not authorize entry upon, crossing over or use for any purpose of private or Crown lands or works, unless and except as authorized by the owner of such lands or works. The responsibility for obtaining such authority shall rest with the local government. This amendment is approved pursuant to the provisions of the *Environmental Management Act*, which asserts it is an offence to discharge waste without proper authorization. It is also the regional district's responsibility to ensure that all activities conducted under this plan amendment are carried out with regard to the rights of third parties and comply with other applicable legislation that may be in force.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mary Polak', written in a cursive style.

Mary Polak
Minister

cc: Honourable Peter Fassbender, Minister of Community, Sport and Cultural Development
AJ Downie, Director, Environmental Protection Division, Ministry of Environment
Robert Lapham, Chief Administrative Officer, Capital Regional District
Larisa Hutcheson, Interim Project Director, Core Area Wastewater Treatment Project,
Capital Regional District
Sharon Singh, Associate, Bennett Jones Vancouver

PROPOSED INTEGRATED RESOURCE MANAGEMENT WORK PLAN

June 2017	<ul style="list-style-type: none"> • Core Area Liquid Waste Management Plan biosolids requirements: jurisdictional review, assessment of full spectrum of beneficial uses • Detailed review and assessment of Request for Expressions of Interest submissions
July 2017	<ul style="list-style-type: none"> • Draft Integrated Resource Management (IRM) Project Plan • Pre-Request for Qualifications (RFQ) consultation/scope definition for IRM facility
Q3 2017	<ul style="list-style-type: none"> • Review Draft IRM Project Plan with Ministry of Environment (MoE) staff and First Nations for feedback and alignment • Issue Request for Pre-Qualifications (RFPQ) for IRM facility
Q4, 2017	<ul style="list-style-type: none"> • Review/evaluate results of IRM RFPQ and evaluate the feasibility of an integrated solution • Work with MoE staff to finalize IRM Project Plan (including a public consultation plan and timeline)
Q1, 2018	<ul style="list-style-type: none"> • Present full business case and identification of qualified vendors from IRM RFPQ process • Determine regulatory requirements for IRM pilot (if warranted) • Obtain permits for IRM pilot (if warranted)
Q1, 2018 up to Q1, 2019	<ul style="list-style-type: none"> • Conduct IRM pilot project (if warranted) • IRM Request for Proposals (RFP) scope definition and develop IRM RFP document • Secure IRM feedstock commitments/agreements • Confirm IRM resource reuse opportunities • CRD Board decision to proceed • Issue RFP for full-scale advanced IRM facility • Evaluation of IRM RFP submissions and negotiations with preferred bidder • Review of financing options • Determine regulatory approvals and environmental requirements for preferred IRM facility
2019/2020	<ul style="list-style-type: none"> • Permitting process for the long-term advanced IRM facility <ul style="list-style-type: none"> - legal - technical - environmental (EIS) - public consultation, as required • Design and engineering of long-term advanced IRM facility
June 30, 2019	<ul style="list-style-type: none"> • Submit definitive IRM Plan to the Minister of Environment
January 1, 2021	<ul style="list-style-type: none"> • Residual treatment facility starts operation and produces Class A biosolids • Short-term Class A biosolids storage, if required
2021 & 2022	<ul style="list-style-type: none"> • Construction and commissioning of long-term advanced IRM Facility
January 1, 2023	<ul style="list-style-type: none"> • IRM facility starts operation

PROPOSED INTEGRATED RESOURCE MANAGEMENT WORK PLAN

June 2017	<ul style="list-style-type: none"> Core Area Liquid Waste Management Plan biosolids requirements: jurisdictional review, assessment of full spectrum of beneficial uses Detailed review and assessment of Request for Expressions of Interest submissions
July 2017	<ul style="list-style-type: none"> Draft Integrated Resource Management (IRM) Project Plan Pre-Request for Qualifications (RFQ) consultation/scope definition for IRM facility
Q3 2017	<ul style="list-style-type: none"> Review Draft IRM Project Plan with Ministry of Environment (MoE) staff for feedback and alignment Issue Request for Pre-Qualifications (RFPQ) for IRM facility
Q4, 2017	<ul style="list-style-type: none"> Review/evaluate results of IRM RFPQ and evaluate the feasibility of an integrated solution Work with MoE staff to finalize IRM Project Plan (including a public consultation plan and timeline)
Q1, 2018	<ul style="list-style-type: none"> Present full business case and identification of qualified vendors from IRM RFPQ process Determine regulatory requirements for IRM pilot (if warranted) Obtain permits for IRM pilot (if warranted)
Q1, 2018 up to Q1, 2019	<ul style="list-style-type: none"> Conduct IRM pilot project (if warranted) IRM Request for Proposals (RFP) scope definition and develop IRM RFP document Secure IRM feedstock commitments/agreements Confirm IRM resource reuse opportunities CRD Board decision to proceed Issue RFP for full-scale advanced IRM facility Evaluation of IRM RFP submissions and negotiations with preferred bidder Review of financing options Determine regulatory approvals and environmental requirements for preferred IRM facility
2019/2020	<ul style="list-style-type: none"> Permitting process for the long-term advanced IRM facility <ul style="list-style-type: none"> legal technical environmental (EIS) public consultation, as required Design and engineering of long-term advanced IRM facility
June 30, 2019	<ul style="list-style-type: none"> Submit definitive IRM Plan to the Minister of Environment
January 1, 2021	<ul style="list-style-type: none"> Residual treatment facility starts operation and produces Class A biosolids Short-term Class A biosolids storage, if required
2021 & 2022	<ul style="list-style-type: none"> Construction and commissioning of long-term advanced IRM Facility
January 1, 2023	<ul style="list-style-type: none"> IRM facility starts operation



Capital Regional District

Initial Assessment, Responses to RFEOI No. 16-1894

Advanced Integrated Resource Management (IRM)

1. Introduction

The Capital Regional District (CRD) issued RFEOI No. 16-1894 as a part of the CRD's exploration of waste management options. Specifically, the CRD desires to better understand the current market capabilities for an integrated waste management solution to manage residues from the Region's existing solid and future liquid waste management facilities. To explore market capabilities, the CRD determined that it would engage the market through an RFEOI and potentially through a subsequent procurement process.

Further the CRD wishes to explore the possibility of integrating solid and liquid waste management interests and maximize resource recovery through integrated processing of some or all of these materials and generate energy/revenue. Completion of the IRM RFEOI process is a critical step in the development of a more definitive IRM plan

2. Overview of RFEOI No. 16-1894

The RFEOI identified that the CRD is seeking a solution or solutions to manage some or all of the following materials:

1. 35,000 tonnes per year of biosolids;
2. 120,000 to 135,000 tonnes per year of general municipal refuse;
3. 8,000 to 12,500 tonnes per year of controlled waste (including screenings and sludge from existing wastewater plants);
4. 15,000 to 20,000 tonnes per year of source separated household organics (kitchen scraps and compostable paper, not including yard and garden wastes); and,
5. 15,000 to 18,000 tonnes per year of yard and garden wastes.

The potential outcome of the RFEOI process could include undertaking a pilot project or directly proceeding to development of a full-scale IRM facility capable at minimum of providing a beneficial reuse solution for the material streams as identified above. The RFEOI clearly indicated CRD is interested in identifying integrated options that present region-wide and/or sub-regional solutions.

Information requested in the RFEOI included:

1. General corporate information;
2. A technical overview of the processing technology;
3. Information regarding reference facilities;
4. Information regarding preferred contract terms, contract structure and allocation of responsibilities; and,
5. Information regarding the need for and interest in undertaking a pilot.

3. Review of RFEOI Responses

The RFEOI was issued on February 16, 2017 and closed on March 20th, 2017. Ten submissions were received. The initial review and assessment of these submissions indicates that:

1. Overall there was a good response to the RFEOI. A reasonable number of submissions were made. Submissions were generally complete and addressed the specific information that was requested.
2. The majority of the respondents are represented in Canada and/or have team members in Canada. This should be helpful during future procurement stages.
3. The majority of respondents proposed approaches capable of integrated resource management including most if not all of the identified CRD solid and liquid waste streams.
4. All of the respondents indicated that their technology was capable of managing the biosolids stream identified in the RFEOI although in some cases there was a lack of clarity as to how exactly it would be managed. In some cases the submissions indicated that they could manage biosolids or sewage sludge.
5. The diverse feedstock sources tend to attract different treatment technologies. Respondents generally focused on organic processes (aerobic/anaerobic) to process organic wastes (biosolids, food waste, yard/garden wastes, the organic fraction recovered from mixed solid waste) and mechanical/thermal processes (RDF, gasification) for mixed waste sources.
6. Reference projects of singular technologies tended to be relevant in terms of similar feedstock, while reference projects from multi-technology proposals tended to reflect only individual components and not the combined systems, as proposed.
7. The majority of respondents prefer that the CRD provide the site for the IRM facility. Many prefer that the CRD owns the IRM facility.
8. The type of business offerings in the submissions were quite varied. Many respondents are open to a variety of development models (DB, DBOM, DBOOT, etc.).
9. The majority of respondents reported their technology as being proven (operating at a commercial level) and do not recommend that the CRD undertake a pilot project. Those

respondents that did not put forward a proven technology, were more interested in, or recommended that the CRD undertake a pilot.

A detailed evaluation of the RFEIOI submissions is currently underway, and will be used to support the detailed assessment of IRM options.

CALWMP Requirements

Advanced IRM Investigations

Timeline

CALWMP
Work Plan and
Biosolids Review
Requirements

CALWMP
Definitive Plan
Requirement

RFEOI (10 Submissions)

IRM Work Plan

Detailed RFEOI Evaluation

IRM Project Plan Preliminary

Request for Pre-Qualification

IRM Project Plan Finalized

**CRD Board IRM Decision
to Proceed**

IRM Procurement

Permitting and Design

Construction

April 2017

May 2017

June 2017

July 2017

November 2017

January 2018

March 2018

April 2018

2019-2020

2021-2022

**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, APRIL 26, 2017**

SUBJECT Environment Canada's Intensity-Duration-Frequency Curves

ISSUE

To consider asking the federal government to update important climate data (i.e., rainfall Intensity-Duration-Frequency (IDF) curves) for our region.

BACKGROUND

Rainfall IDF curves are a common tool used to provide information on the probability of heavy rainfall events of various intensity and duration. An IDF curve is created by using historical data and by performing a probability distribution analysis to predict the level of rainfall that will occur for a certain frequency of time.

IDF curves provide engineers and other end users with information such as the maximum amount of rainfall that can be expected locally in a "1-in-5-year" or a "1-in-100-year" event. For local government engineers, this information is critical for the design, sizing and management of rainwater infrastructure (e.g., stormwater drains, curb sizes, gutter requirements). IDF curve data are also used to plan for flooding and emergency response.

Based on observed recent data, Environment Canada IDF curves appear outdated. Because they were built using rainfall data from the 1960s through the 1990s, the local IDF curves do not accurately represent our current or future predicted climate. However, Environment Canada has data that can be used to update the region's IDF curves and is prioritizing regions that request IDF curve updates.

ALTERNATIVES

That the Environmental Services Committee recommend to the Capital Regional District (CRD) Board:

Alternative 1

That the Board Chair write a letter to the Minister of Environment and Climate Change requesting that regional Intensity-Duration-Frequency curves be updated.

Alternative 2

That this report be referred back to staff for further information.

CLIMATE CHANGE IMPLICATIONS

A key prediction of regional climate change will be a shift in rainfall patterns, both in seasonality and intensity. During the development of the draft *Climate Projections of the Capital Region* report, municipal and CRD engineers requested that new IDF curves be developed with the projected precipitation data. This new information would allow engineers and end users to plan better for future increases in rainfall as a result of climate change.

Current IDF curves were created using historical data and assume that conditions are constant over time. Environment Canada will create IDF curves based on the most recent data only (i.e., they don't include climate projections to forecast future IDF curves). This would give us information for more applicable, current conditions. Further, the release of the most recent precipitation data and associated IDF curves could be used by local governments to generate regional, climate-adapted IDF curves as a logical next step.

ECONOMIC IMPLICATIONS

Global warming has a direct impact on the climate change-associated costs borne by local governments. For example, long-term infrastructure built today needs to be designed for future rainfall or it may have to be replaced or upsized prior to the end of its design life.

Updated Environment Canada meteorological data and associated IDF curves would help local governments to better manage the needs of today, and provide a stronger foundation for the development of climate-adapted IDF curves. These curves would enable the region's engineers and end users to better design, size and manage rainwater infrastructure, which could result in a reduction of future damage (e.g., flooding) to public and private assets.

STRATEGIC PRIORITIES IMPLICATIONS

Advocating for the updating of Environment Canada's IDF curves and offering to provide CRD rainfall data relates to these strategic priorities identified in the Board's 2015-2018 CRD Strategic Plan:

1. Advocate to senior levels of government for programs and regulations to reduce emissions and/or prepare for climate change.
2. Pursue strategic partnerships to help achieve community mitigation and adaptation targets.

Updated IDF curves are essential for many services within the CRD and for all local governments. Besides their relevance for water and wastewater infrastructure planning, and emergency planning, updating the IDF curves also supports the goals and actions within the CRD Regional Climate Action Strategy, CRD Integrated Watershed Management Program, and the 2012 Strategic Plan for the Greater Victoria Water Supply System.

CONCLUSION

Updated Environment Canada data and IDF curves will benefit multiple services within the CRD, as well as all local governments in the region. IDF curves provide all tiers of government and climate action partners with critical data for the design, sizing and management of rainwater-related infrastructure. The CRD Board's request that Environment Canada update its IDF curves would provide more accurate information for the region's local governments in planning for current and future rainfall events.

RECOMMENDATION

That the Environmental Services Committee recommend to the Capital Regional District Board:

That the Board Chair write a letter to the Minister of Environment and Climate Change requesting that regional Intensity-Duration-Frequency curves be updated.

Submitted by:	Glenn Harris, Ph.D., R.P.Bio., Senior Manager, Environmental Protection
Concurrence:	Larisa Hutcheson, P.Eng., General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

AB:cam

**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, APRIL 26, 2017**

SUBJECT 2017 Hartland Capital Projects Update

ISSUE

To provide information on the Environmental Resource Management (ERM) projects planned for 2017 as identified under the Hartland Capital Works Projects Five-Year Plan (2017 to 2021).

BACKGROUND

The Capital Regional District (CRD) Board approved the 2017 Capital Project and Operating Plans for the ERM Division at its March 22, 2017 meeting. The capital projects identified in the ERM plan include capital works under these areas:

1. leachate management
2. landfill gas system
3. cover systems
4. general site infrastructure
5. aggregate production for internal use
6. landfill gas utilization
7. Hartland north onsite access improvements

Appendix A provides a brief description and budget for the 2017 projects. There are a total of 12 projects planned for 2017 under the areas listed above, with a total budget of \$12.75 million. The Landfill Gas Utilization project, listed as \$10 million, is currently under review with FortisBC. The review will assess the viability and financial business case for a renewable natural gas project at Hartland. Staff will report back to the Environmental Services Committee in 2017 on the outcomes of this analysis, and if recommended for implementation, an amendment to the 5-year capital plan identifying expenditure requirements for project development over the upcoming several years.

The projects identified in Appendix A are funded through the capital funds on hand generated by an annual transfer from the operating budget. Appendix B provides the 2017-2021 Hartland Landfill Capital Plan that was included in the 2017 budget documentation.

ECONOMIC IMPLICATIONS

Appendix A details the proposed capital improvements with the projects being funded through the capital funds on hand generated by annual transfer from the operating budget. Hartland capital improvements are required to meet regulatory and environmental requirements and are designed and tendered to minimize costs and maximize value. Contracts will be let and awarded in accordance with CRD procurement policy.

CONCLUSION

Each year, infrastructure upgrades are required at Hartland landfill for site infrastructure, including leachate collection, gas collection and reuse/destruction, cover system installation and general site access, and health and safety requirements. Twelve projects with budget estimates totalling \$12.75 million have been identified for 2017.

RECOMMENDATION

That the Environmental Services 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
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

GC:mer

Attachments: Appendix A – 2017 Hartland Capital Project Descriptions
Appendix B – 2017-2021 Hartland Landfill Capital Plan

2017 HARTLAND CAPITAL PROJECT DESCRIPTIONS

NO.	PROJECT TITLE AND DESCRIPTION	BUDGET
1	Gas and Leachate Collection Pipe Extension	\$200,000
	To meet BC Ministry of Environment regulations, gas wells and leachate collectors are installed in each lift of refuse and have to be connected to the existing header system to collect methane gas. Well heads, valves, condensation traps, monitoring points and piping have to be installed to each gas well and leachate collector. The gas is then conveyed to the gas plant, and the leachate is conveyed to the lined storage lagoons and then discharged into the municipal sewer. Cost estimate is derived from historical construction information.	
2	Aggregate Production for Internal Use	\$500,000
	Producing aggregate annually from in-situ rock provides the CRD with a number of benefits, including: prolonging the landfill life (creating landfilling airspace), providing aggregate for on-site needs, effective interception of shallow groundwater inflows, cost and space savings by not having to import aggregate, and reduced social and environmental impacts by not having to truck in aggregate. Cost estimate is derived from historical tender data.	
3	Strip Overburden/Prepare Base for Cell 4 Aggregate Production	\$250,000
	This project is set up to strip overburden ahead of annual aggregate production from the future cell 4 landfilling area to ensure accurate rock removal volumes are estimated ahead of the aggregate production contract. Significant cost savings are realized by accurately surveying the pre-blast surfaces and continuing QA surveys through construction.	
4	Progressive Closure External Faces	\$150,000
	As specified under the BC Ministry of Environment's Landfill Criteria for Municipal Solid Waste, completed landfill areas and slopes must be closed with a progressive closure system on an annual basis. The closure system consists of a clay or synthetic cover placed over a gravel drainage layer. This progressive closure system stays in place until economies of scale make it cost effective to proceed with installation of a final closure system.	

NO.	PROJECT TITLE AND DESCRIPTION	BUDGET
5	Ground/Surface Water Monitoring Upgrades	\$50,000
	An annual surface water quality monitoring report is required to meet current landfill regulations. To facilitate this, water samples are regularly taken and analyzed to ensure that the landfill is in compliance with surface water quality guidelines. Monitoring upgrades are required to increase the efficiency and effectiveness of this monitoring program. Repair damaged monitoring wells, reinstallation of monitoring wells and replacement of specialized equipment. Decommissioning or replacing required to confirm hydraulic trap efficacy and ensure compliance with the Hartland Landfill Operational Certificate and applicable BC Acts and Regulations. Assumes redrilling and equipment installation at four locations (86s) in Phase 2 refuse. Routine repair, reinstallation and replacement of monitoring wells and specialized equipment, as required, to ensure compliance with the Hartland Landfill Operational Certificate and applicable BC Acts and Regulations.	
6	Aggregate Stockpile Area Clearing - West	\$600,000
	Aggregate production is completed annually within Hartland's active footprint to produce aggregate materials for landfilling operational needs (daily cover, deck construction, roads) and other ongoing projects at Hartland. Current aggregate storage areas are being filled with refuse as the landfill grows, and future areas are required for aggregate storage. This project will cover tree removal and leveling of the West pad.	
7	Hartland North Onsite Access Improvements	\$600,000
	This project will complete required access improvements to Hartland North and adjacent lands to connect the existing active landfilling area to the Residual Treatment Facility at Hartland North. The work includes construction of a 12 m wide access road that incorporates a corridor for installation of future utilities and additional infrastructure to enhance synergies between the two facilities.	
8	Hartland Landfill Cell Development Master Plan	\$50,000
	This master plan will include individual cell development plans, access roads, gas/leachate/stormwater collection systems, interim and progressive closures, and stormwater diversion systems. This master plan will be updated once every 5 years to optimize air space utilization and address any unanticipated site conditions or solid waste management program changes.	

NO.	PROJECT TITLE AND DESCRIPTION	BUDGET
9	Food Waste Transfer Station Relocation	\$25,000
	In order to minimize leachate runoff from site and reduce residential complaints surrounding odour migration, the food waste transfer station (FWTS) must be relocated. It is proposed that the FWTS be moved within the leachate collection footprint of the landfill.	
10	Hartland Environmental Performance Model – Scoping/Procurement	\$25,000
	Hartland's groundwater/leachate/surface water monitoring programs being completed and environmental monitoring compliance is being met. The groundwater, leachate, and stormwater systems must be input into a modeling software so real-time monitoring can be completed.	
11	Landfill Criteria – Conformance Assessment	\$100,000
	The Landfill Criteria for Municipal Solid Waste guidelines have been finalized by the Ministry of Environment. Conformance requirements must be analyzed and met. A report must be created addressing Hartland's conformance requirements. A strategic plan must be made where the CRD can then ask for exceptions to the requirements, or design completed to meet the requirements. Cost estimate is derived from historical in-house and consultant cost data. The Hartland Operational Certificate will require renewal, including several requests for exemptions. The work will require engagement with the Ministry of Environment and consultant input.	
12	Landfill Gas Utilization	\$10,000,000
	The amount of landfill gas being collected currently exceeds the capacity of the 1.6 MW generator and the surplus gas is being combusted and disposed of by the candlestick flare. Gas utilization options will be evaluated to determine the best use of gas, including economic, environmental and social benefits. Board review and endorsement of gas utilization strategy will be sought prior to finalization of capital expenditures.	

CAPITAL REGIONAL DISTRICT
CAPITAL EXPENDITURE PLAN SUMMARY - 2017 to 2021

1.521 Environmental Resource	Carry Forward	2017	2018	2019	2020	2021	TOTAL
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EXPENDITURE

Buildings	0	0	0	0	0	0	0
Equipment	237994	253000	253000	253000	253000	253000	1502994
Land	0	0	0	0	0	0	0
Engineered Structures	1649294	12885000	2860000	1730000	2085000	3135000	24344294
Vehicles	0	55000	40000	40000	40000	40000	215000
	1,887,288	13,193,000	3,153,000	2,023,000	2,378,000	3,428,000	26,062,288

SOURCE OF FUNDS

Capital Funds on Hand	865,276	12,885,000	2,860,000	1,730,000	2,085,000	3,135,000	23,560,276
Debenture Debt (New Debt Only)	0	0	0	0	0	0	0
Equipment Replacement Fund	237,994	308,000	293,000	293,000	293,000	293,000	1,717,994
Grants (Federal, Provincial)	0	0	0	0	0	0	0
Donations / Third Party Funding	0	0	0	0	0	0	0
Reserve Fund	784,018	0	0	0	0	0	784,018
Short Term Loans	0	0	0	0	0	0	0
	1,887,288	13,193,000	3,153,000	2,023,000	2,378,000	3,428,000	26,062,288

CAPITAL REGIONAL DISTRICT CAPITAL PLAN

CAPITAL BUDGET FORM
2017 & Forecast 2018 to 2021

Service #: 1.521
Service Name: Environmental Resource Management

No.	Capital Exp.Type	Capital Project Description	Asset Class	Funding Source	Total Project Budget	Carry Forward	2017	2018	2019	2020	2021	5 - Year Total
16-01	New	Hartland North New Kitchen Scraps Proc Facility Planning	S	Cap	10,000	10,000						10,000
16-02	New	Micro Tunnel Inspection Chamber Retrofit	S	Cap	175,000	175,000						175,000
16-03	New	Leachate Line Manhole Chamber Upgrades	S	Cap	500,000	500,000						500,000
16-04	Renewal	Paving of Service Roads	S	Cap	100,000	64,294						64,294
16-05	New	Aggregate Stockpile Area Clearing - East	S	Cap	115,982	115,982						115,982
		Aggregate Stockpile Area Clearing - East	S	Res	484,018	484,018						484,018
		Total for Aggregate Stockpile Area Clearing - East			600,000	600,000						600,000
16-06	Replacement	Replacing of Small Equipments	E	ERF	1,437,994	237,994	240,000	240,000	240,000	240,000	240,000	1,437,994
16-07	New	Fire Safety Upgrades- lagoon work/fire pump etc	S	Res	300,000	300,000						300,000
17-01	New	Gas & Leachate Collection Pipe Extension	S	Cap	1,400,000		200,000	200,000	200,000	400,000	400,000	1,400,000
17-02	Renewal	Aggregate Production for Internal Use	S	Cap	4,425,000		810,000	1,100,000	935,000	935,000	935,000	4,715,000
17-03	Renewal	Strip Overburden Prepare Base for Cell 4 Aggregate Production	S	Cap	250,000		250,000					250,000
17-04	Renewal	Progressive Closure of External Faces	S	Cap	950,000		150,000	200,000	200,000	200,000	200,000	950,000
17-05	Renewal	Ground/Surface Water Monitoring Upgrades	S	Cap	150,000		75,000		75,000			150,000
17-06	New	Aggregate Stockpile Area Clearing- West	S	Cap	600,000		600,000					600,000
17-07	Replacement	Computer Equipment	E	ERF	65,000		13,000	13,000	13,000	13,000	13,000	65,000
17-08	New	Hartland North Onsite Access Improvements	S	Cap	600,000		600,000					600,000
17-09	Replacement	Vehicle Replacements	V	ERF	215,000		55,000	40,000	40,000	40,000	40,000	215,000
17-10	New	Hartland Landfill Cell Development Master Plan	S	Cap	200,000		50,000	150,000				200,000
17-11	Renewal	Food Waste Transfer Station Relocation	S	Cap	25,000		25,000					25,000
17-12	New	Hartland Environmental Performance Model - Scoping/Procurement	S	Cap	25,000		25,000	150,000				175,000
17-13	New	Landfill Criteria- Conformance Assessment	S	Cap	100,000		100,000					100,000
17-14	New	Landfill Gas Utilization	S	Cap	10,000,000		10,000,000					10,000,000
18-01	New	Interim Covers - West and North Slopes	S	Cap	800,000			200,000	200,000	200,000	200,000	800,000
18-02	Renewal	Pavement Resurfacing of Main Haul Road	S	Cap	200,000			200,000				200,000
18-03	New	Cell 3 Bottom Lift Gas Wells / Leachate Drain	S	Cap	300,000			300,000				300,000
18-04	New	Annual Leachate Drain Flushing	S	Cap	200,000			50,000	50,000	50,000	50,000	200,000
18-05	Renewal	Controlled Waste & Asbestos Area Development	S	Cap	200,000			150,000	50,000			200,000
18-06	New	Lower Lagoon Liner and Storage Volume Expansion	S	Cap	825,000			75,000			750,000	825,000
18-07	New	Augmentation of Leachate Capture at Lower Leachate Lagoon	S	Cap	85,000			85,000				85,000
19-01	New	Wetlands Assessment	S	Cap	20,000				20,000			20,000
20-01	New	Cell 3 Liner Extension	S	Cap	900,000					300,000	600,000	900,000
Total					25,657,994	1,887,288	13,193,000	3,153,000	2,023,000	2,378,000	3,428,000	26,062,288

Future

No.	Capital Exp.Type	Capital Project Description	Asset Class	Funding Source	Total Project Budget	Carry Forward	2017	2018	2019	2020	2021
22-01		Sedimentation Pond Relining	S	Res	350,000						
22-02		Upper lagoon Permanent Aeration System	S	Res	80,000						
22-03		Long Term Leachate Treatment Option Analysis	S	Res	75,000						
22-04		Site Electrical Upgrades - Lagoon Area and Others	B	Res	200,000						
23-01		Fire Safety- Water Supply/Storage	S	Res	3,500,000						
24-01		Hartland Front End Relocation	S	Res	2,000,000						
25-01		Hartland Energy Park	S	Res	1,000,000						

Funding Source Codes

Debt	= Debenture Debt (new debt only)
ERF	= Equipment Replacement Fund
Grant	= Grants (Federal, Provincial)
Cap	= Capital Funds on Hand
Other	= Donations / Third Party Funding
Res	= Reserve Fund
STLoan	= Short Term Loans

Asset Class

L	- Land
S	- Engineering Structure
B	- Buildings
V	- Vehicles
E	- Equipment

Capital Expenditure Type

New	Expenditure for new asset only
Renewal	Expenditure replaces an existing asset and extends the service ability or enhances technology in delivering that service
Replacement	Expenditure replaces an existing asset

**MOTION FOR APRIL 26, 2017
ENVIRONMENTAL SERVICES COMMITTEE**

SUBJECT **Model Bylaw for the Elimination of Single-Use Plastic Bags**

ISSUE

A report providing information on the merits of directing staff to develop a model bylaw for the elimination of single-use plastic bags.

BACKGROUND

The City of Victoria is following the lead of other Canadian small towns and major cities and moving in the direction of the elimination of single use plastic bags. The City does not propose that the Region do the same or that other local governments in the region go in this direction at this time.

Yet waste management is a regional issue. In anticipation that other local governments in the region may want to move in the direction of eliminating single use plastic bags in the future, it seems both logical, prudent, and in line with good customer service that the CRD create a model bylaw to help ensure coherence across the region.

RECOMMENDATION

That the Environmental Services Committee Direct staff to develop a model bylaw for the Elimination of Single Use Plastic Bags using the draft Single Use Plastic Bag bylaw attached as a starting point.

Submitted by Director Helps

SINGLE-USE PLASTIC BAG BYLAW

BYLAW NO. XXX

NO. XXX
SINGLE-USE PLASTIC BAG BYLAW

A BYLAW OF THE CITY OF X LOCAL GOVERNMENT

The purpose of this Bylaw is to prohibit the sale or free distribution of single-use plastic bags within the city of X Local Government.

Contents

PART 1 – INTRODUCTION

- 1 Title
- 2 Definitions

PART 2 – REGULATIONS

- 3 Sales and distribution by a person
- 4 Sales and distribution by a business
- 5 Alternatives
- 6 Reusable container use

PART 3 – EXEMPTIONS

- 7 Permitted distribution by a business

PART 4 – ENFORCEMENT

- 8 Authority
- 9 Fines
- 10 Daily fines

PART 5 – GENERAL PROVISIONS

- 11 Severability
- 12 Coming into force

Under its statutory powers, including sections 8(3)(j) and 9(1)(b) of the *Community Charter*, and section 2(1)(a) of B.C. Regulation 235/2008 [*Spheres of Concurrent Jurisdiction - Environment and Wildlife Regulation*], the Council of the City of X Local Government enacts the following provisions:

PART 1 – INTRODUCTION

Title

- 1 This Bylaw may be cited as the “SINGLE-USE PLASTIC BAG BAN BYLAW”.

Definitions

- 2 In this Bylaw

“Biodegradable Plastic bag” or “Compostable Plastic Bag”

means any bag which is composed of, in whole or part, biodegradable plastic,

Ox-biodegradable plastics, Plastarch Material (PSM), polylactide or any other plastic resin composite that is intended to degrade at a faster rate than non-biodegradable plastic film.

“Customer”

means any person purchasing food, goods, or materials or renting goods or materials from a retail business.

“Door-Hanger Bag”

means a bag designed to fold flyers, coupons or other advertisements and intended to be left on the door of homes.

“Designated Officer”

means the person(s) authorized by City Council to enforce any part of this Bylaw.

“Retail Business”

means a business that sells or offers for sale or rent goods or services by retail to the public.

“Reusable Container”

means other than a single-use plastic bag, a bag, box or other container that is specifically designed and manufactured for multiple reuse that is:

- (i) made of cloth or other machine washable fabric; or
- (ii) made of other durable material suitable for reuse

“Single-Use Plastic Bag”

means any bag made with less than 2.25 millimeters thick polyethylene, including biodegradable bags.

PART 2 – REGULATIONS

- 3 No person shall sell or provide single-use bags free of charge or allow single-use plastic bags to be sold or provided free of charge.
- 4 No person employed by or acting on behalf of a person carrying on a retail business shall sell or provide single plastic bags free of charge or allow single-use plastic bags to be sold or provided free of charge.
- 5 Nothing in this Bylaw shall preclude owners of retail businesses from making alternatives to single-use plastic bags, such as reusable containers and bags, available for sale or free of charge to customers.
- 6 No retail business shall deny the use of any reusable bag by a customer for the transport of purchased items.

PART 3 – EXEMPTIONS

- 7 A retail business shall be permitted to provide bags for the following circumstances:
- (i) bags used by customers inside retail businesses established to package bulk items, but not limited to such as fruit, vegetables, nuts, grains, candy or small hardware items such as nails and bolts;
 - (ii) bags used to contain or wrap frozen foods, meat or fish, flowers or potted plants, whether pre-packaged or not;
 - (iii) bags used to protect prepared foods or bakery goods;
 - (iv) bags provided by pharmacists to contain prescriptions drugs;
 - (v) door-hanger bags;
 - (vi) laundry-dry cleaning bags; and
 - (vii) bags sold in packages containing multiple bags intended for such uses including, but not limited to garbage bags, pet waste bags, yard waste bags, or recycling bags.

PART 4 - ENFORCEMENT

- 8 A designated officer may enter any retail business established and may make examinations, investigations and inquires for enforcement purposes.
- 9 Every person or retail business who contravenes a provision of this Bylaw is guilty of an offence and is subject to the penalties imposed by this Bylaw, the Ticket Bylaw and the *Offence Act*.
- 10 Each day that a contravention of a provision of this Bylaw continues is a separate offence.

PART 5 – GENERAL PROVISIONS

- 11 If any provision or part of a provision of this Bylaw is declared by any court or tribunal of competent jurisdiction to be illegal or inoperative, in whole or in part, or inoperative in particular circumstances, the balance of the Bylaw or its application in any other circumstances shall not be affected and shall continue to be in full force and effect.
- 12 This Bylaw shall come into force on the date of adoption.

“X”
CORPORATE ADMINISTRATOR

“X”
MAYOR

MEMORANDUM

June 26, 2015

Re: Municipal Authority to enact a bylaw banning plastic bags

The following memorandum outlines the authority the City of Victoria has to enact a bylaw banning plastic bags.

I. Brief Conclusions

There is overlapping authority between municipalities in British Columbia and the Province in respect of the protection of the natural environment. However, the Province has specifically provided that municipalities may regulate, prohibit, and impose requirements in relation to polluting or obstructing, or impeding the flow of, a stream, creek, waterway, watercourse, waterworks, ditch, drain or sewer, whether or not it is located on private property. Pursuant to this power specifically designated by the Province, a bylaw banning plastic bags is within the jurisdiction of the City of Victoria to enact to prevent single-use plastic bags from pollution and obstructing local waterways.

The first part of this memorandum reviews some of the laws that apply to the power of a municipality to protect the natural environment. The second part of this memorandum applies the law to indicate the source of the City of Victoria's authority to enact a bylaw banning plastic bags.

II. The law

The *Community Charter* (the "*Charter*") is one of the major pieces of legislation that gives municipalities the powers required to meet the needs of their communities.¹

Pursuant to the *Charter*, some of the purposes of a municipality include providing for stewardship of the public assets of its community,² and fostering the economic, social and environmental well-being of its community.³

A. The general power of a municipality to regulate for the protection of the environment

Section 8(3) (j) of the *Charter* sets out that a municipal council may, by bylaw, regulate, prohibit and impose requirements in relation to the protection of the natural environment. This power includes the power to regulate, prohibit and impose requirements, as applicable, respecting persons, property, things and activities in relation to the matter.⁴

¹ Ministry of Community, Sport & Cultural Development: Online at:
http://www.cscd.gov.bc.ca/lgd/gov_structure/community_charter/faqs.htm

² *Community Charter*, (the "*Charter*"), SBC 2003, c 26, s 7(c).

³ See note 1, s 7(d).

⁴ See note 1, s 8(7)(b).

In addition, the term “regulate” is defined in the *Charter* and it includes - authorize, control, inspect, limit and restrict, including by establishing rules respecting what must be done or not be done, in relation to the persons, properties, activities, things or other matters being regulated.⁵

It should be noted that this particular power may not be used to do anything that a council is specifically authorized to do under Part 26 [*Planning and Land Use Management*] or Part 27 [*Heritage Conservation*] of the [Local Government Act](#).⁶ These parts of the *Local Government Act* do not appear to grant specific authorization for the implementation of a bylaw banning plastic bags.

The *Charter* goes on to provide examples of this particular municipal power to regulate, which includes the following powers:

- a) to provide that persons may engage in a regulated activity only in accordance with the rules established by bylaw;
- b) to prohibit persons from doing things with their property;
- c) to require persons to do things with their property, to do things at their expense and to provide security for fulfilling a requirement.

B. Shared jurisdiction with British Columbia

The *Charter* sets out that these powers provided to the municipality are subject to any specific conditions and restrictions established under the *Charter*, or under another Act, and must be exercised in accordance with the *Charter* unless otherwise provided.⁷

One of the restrictions on the power of a municipality to regulate in relation to the protection of the natural environment is found in section 9 of the *Charter*, which concerns areas of shared jurisdiction with British Columbia. Section 9(1)(b) specifically provides that bylaws for the protection of the natural environment fall into a “sphere of concurrent authority” with the Province. This means that in recognition of the Provincial interest in this matter, a municipality may not adopt a bylaw for the protection of the natural environment unless the bylaw is:

- a) in accordance with a regulation under subsection (4),
- b) in accordance with an agreement under subsection (5), or
- c) approved by the minister responsible.⁸

i. *Regulations under subsection 4*

Under subsection 4, the minister responsible, which in this case appears to be the Minister of Water, Land and Air Protection, may enact regulations that do the following:

- (a) Establish matters in relation to which municipalities may exercise authority either:
 - i. by specifying the matters in relation to which they may exercise authority, or
 - ii. by providing that the restriction only applies in relation to specified matters;

⁵ See note 1, Schedule, Definitions and Rules of Interpretation.

⁶ See note 1, s 8(7)(c).

⁷ See note 1, s 8(10).

⁸ See note 1, s 9(3).

- (b) provide that the exercise of the municipal authority is subject to the restrictions and conditions established by the regulation;
- (c) provide that the exercise of the municipal authority may be made subject to restrictions and conditions specified by the minister responsible or by a person designated by name or title in the regulation.⁹

The Province has passed a regulation under subsection 4 called the *Spheres of Concurrent Jurisdiction - Environment and Wildlife Regulation* (the “*Environment Regulation*”),¹⁰ which specifies the matters a municipality may regulate on in respect of protecting the natural environment. Section 2(1) (a) of the *Regulation* provides that a municipality may:

“regulate, prohibit and impose requirements in relation to polluting or obstructing, or impeding the flow of, a stream, creek, waterway, watercourse, waterworks, ditch, drain or sewer, whether or not it is located on private property”.

This above power gives the City of Victoria the clear jurisdiction to enact a bylaw banning single-use plastic bags in order to prevent the single-use plastic bags dispensed by local businesses from finding their way into local waterways, which cause pollution and obstruction.

Furthermore, this provision is not subject to any restrictions in the *Regulation*, and there are no other provisions in the *Regulation* that appear relevant to implementing a bylaw banning plastic bags.¹¹

The content of the *Regulation* is managed by way of a Consultation Agreement between the Ministry of Water, Land and Air Protection, the Union of BC Municipalities, and the Ministry of Community, Aboriginal and Women’s Services (the minister responsible for the *Charter*). Over time, the parties to the Agreement are able to monitor, review and potentially amend the *Regulation*. The Agreement provides that municipalities can bring forward proposals for amending the *Regulation*, which will be reviewed by a committee and possibly recommended. Presently, Section 5 of the Agreement establishes areas where municipal bylaws for the protection of the natural environment will not be considered. These areas include:

- Environmental agreements;
- Pesticide management;
- Waste management;
- Contaminated sites;
- Special wastes;
- Water management;
- Air management;
- Parks and protected areas; and
- Wildlife and fish recreation.

⁹ See note 1, s 9(4).

¹⁰ *Environment and Wildlife Regulation*, BC Reg 235/2008.

¹¹ The *Cumulative Regulation Bulletins* 2014 and 2015 do not indicate any non-consolidated amendments to this *Regulation* that may be in effect. Available online at: <http://www.qp.gov.bc.ca/statreg/bulletin/index.htm#list>

While these are broad categories, the Agreement provides specific details about the types of bylaws that are restricted. These details do not specifically apply to a bylaw banning single-use plastic bags.

ii. Agreements under subsection 5

Subsection 9(5) provides that the minister responsible may enter into an agreement with one or more municipalities that has the same effect in relation to the municipalities as a regulation that could be made under subsection (4).

iii. Ministerial approval

A municipality may also seek approval from the minister responsible to implement a bylaw respecting the natural environment if it has not been granted the authority to do so through a subsection (4) regulation or a subsection (5) agreement.

III. The application of the law to the facts

The City of Victoria, by way of the *Charter*, has the general authority to enact bylaws for the protection of the natural environment. However, British Columbia has concurrent authority or shared jurisdiction with municipalities in respect of the protection of the natural environment. As a result of this overlap, a municipality may only validly regulate in this particular area if it does so in accordance with a regulation established by the Province, an agreement made with the Province, or an approval issued by Province.

Pursuant to the provincial *Environment Regulation*, municipalities have the authority to:

regulate, prohibit and impose requirements in relation to polluting or obstructing, or impeding the flow of, a stream, creek, waterway, watercourse, waterworks, ditch, drain or sewer, whether or not it is located on private property.

As noted, this above power gives the City of Victoria the clear jurisdiction to enact a bylaw banning single-use plastic bags in order to prevent the single-use plastic bags dispensed by local businesses from finding their way into local waterways, which cause pollution and obstruction.

Further, the power to regulate in respect of the protection of the natural environment includes the power to limit and restrict in relation to the matter being regulated, in this case, single-use plastic bags. Therefore, it is within the power of the City of Victoria to enact a bylaw that imposes an outright ban on the sale and distribution of single-use plastic bags.