



SPECIAL INFRASTRUCTURE SERVICES COMMITTEE

Friday, January 25, 2019

SCRD Boardroom, 1975 Field Road, Sechelt, B.C.

AGENDA

CALL TO ORDER: 9:30 a.m.

AGENDA

1. Adoption of Agenda

PETITIONS AND DELEGATIONS

2. Senior Leadership Team
SCRD Solid Waste Management Overview Presentation

REPORTS

3. Senior Leadership Team Annex A
SCRD Solid Waste Management Overview pp 1 - 85
(Voting – All)
4. General Manager, Infrastructure Services Annex B
General Manager, Corporate Services / Chief Financial Officer pp 86 - 93
Rural Area Curbside Collection Services Award Report
(Voting – B, D, E, F)

COMMUNICATIONS

NEW BUSINESS

IN CAMERA

ADJOURNMENT

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Special Infrastructure Services Committee – January 25, 2019

AUTHOR: Senior Leadership Team

SUBJECT: SCRD SOLID WASTE MANAGEMENT OVERVIEW

RECOMMENDATION(S)

THAT the report titled SCRD Solid Waste Management Overview be received for information.

BACKGROUND

In anticipation of this Special Infrastructure Services Committee meeting, staff compiled key supplemental documents as background information for the Committee's consideration.

DISCUSSION

The following documentation is provided for Committee review:

- Attachment A: AVICC Special Committee Long-Term Strategy for Solid Waste – February 25, 2016
- Attachment B: 2015 Waste Composition Study Results – March 3, 2016
- Attachment C: Regional Organics Diversion Strategy – January 18, 2018
- Attachment D: SCRD Solid Waste Long-term Outlook – February 22, 2018
- Attachment E: Sechelt Landfill Closure Update – February 22, 2018
- Attachment F: Tipping Fee Review of Diverted Materials – February 22, 2018
- Attachment G: Recycle BC Program Financial Impacts – July 2018
- Attachment H: AVICC Special Solid Waste Committee – September 20, 2018

As well, the SCRD Solid Waste webpage [Solid Waste Page \(SCRD\)](#) has additional information.

STRATEGIC PLAN AND RELATED POLICIES

There are a number of Strategic Priorities which relate to the overall objective of curbside services such as Embed Environmental Leadership, Ensure Fiscal Sustainability and Enhance Board Structure and Processes.

The [2011 Solid Waste Management Plan](#) continues to be a guiding policy document.

CONCLUSION

This report provides supplemental documents for information.

Reviewed by:			
Manager		Finance / CFO	X – T. Perreault
GM	X – R. Rosenboom	Legislative	
CAO	X – J. Loveys	Other	

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Corporate and Administrative Services Committee – February 25, 2016

AUTHOR: Robyn Cooper, Manager of Waste Reduction and Recovery

SUBJECT: AVICC SPECIAL COMMITTEE LONG-TERM STRATEGY FOR SOLID WASTE

RECOMMENDATION(S)

THAT the report titled “AVICC Special Committee Long-Term Strategy for Solid Waste” be received;

AND THAT the Board provide direction with respect to Sunshine Coast Regional District (SCRD) support for the Long-Term Strategy.

BACKGROUND

The Sunshine Coast Regional District is one of nine BC Regional Districts that form the Association of Vancouver Island and Coastal Communities (AVICC).

In April 2015, AVICC established a Special Committee on Solid Waste Management (AVICC Committee). One key deliverable of the AVICC Committee was to prepare a report that analyzes the state of solid waste amongst the AVICC Regional Districts. The report includes recommendations for a long-term strategy for solid waste management with immediate, short-term and long-term priorities. The report was completed in September 2015 and the AVICC Committee’s goal is to present the long-term strategy to the 2016 AVICC Convention as well as to the BC Provincial Government. Prior to the convention, a resolution supporting the long-term strategy from each of the AVICC Regional Districts is requested.

At the February 11, 2016 Infrastructure Services Committee meeting, Director Greives from the Comox Valley Regional District, and Chair of the AVICC Committee, presented a summary of the AVICC Committee’s work to date and a summary of the long-term strategies identified in the report. Included in the presentation was a draft recommendation for Board consideration:

THAT the Sunshine Coast Regional District confirm support for adopting the AVICC Special Committee’s long-term strategy for solid waste management with immediate, short-term and long-term priorities as attached with the letter received from the AVICC dated November 20, 2015;

AND THAT the Sunshine Coast Regional District confirm support for special committee work at the 2016 AVICC Convention;

AND FURTHER THAT the Sunshine Coast Regional District confirm support for AVICC to continue providing leadership on this initiative.

Developing a recommendation regarding the AVICC Committee's long-term strategy was referred to the February 25, 2016 Corporate and Administrative Services Committee Meeting. The AVICC deadline for receipt of a Board resolution is March 4, 2016.

DISCUSSION

Options and Analysis

Developing a recommendation regarding the AVICC Committee's long-term strategy for solid waste requires considering the immediate, short-term and long-term priorities identified in the report and how they align with the SCRD. The Area of Work for each of the priorities are listed in Table 1 below. The specific recommendation and/or option descriptions for each Area of Work is provided as Attachment A.

It should be noted that the AVICC Committee's long-term strategy does not replace the SCRD's Solid Waste Management Plan (SWMP) and its initiatives. It is however, intended to complement SWMP's and support collaboration amongst the AVICC Regional Districts.

Table 1 – The Area of Work and Priorities from the AVICC Committee's Long-Term Strategy for Solid Waste

Immediate Priorities	Short-Term Priorities	Long-Term Priorities
AVICC partnership	Long-term disposal	Organics waste reduction strategies
Advocacy	Regulations and enforcement	Recycling collection and drop-off programs
-	-	Financially sustainable model
-	-	ICI sector strategy
-	-	C&D sector strategy
-	-	Regulations and enforcement

Option 1 – Support the long-term strategy with modification

A recommendation can be developed that supports the long-term strategy but excludes or modifies the descriptions for the priorities to better align with the SCRD's SWMP.

Option 2 – Do not support the long-term strategy

A recommendation can be developed that does not support the long-term strategy.

STRATEGIC PLAN AND RELATED POLICIES

The priorities identified in the Long-Term Strategy supports the following SCRD SWMP initiatives:

Reduction Initiatives	Recycling Initiatives
Incentive based tipping fees	Curbside collection for recyclables
Material disposal bans	Curbside collection for food scraps
Residential waste reduction education	EPR Management Programs
Waste stream control system	-
C&D waste diversion	-
Business waste diversion	-

One of the options included as part of the Organics waste reduction strategies identified in the long-term strategy refers to reviewing the “business case for a waste-to-energy facility with all AVICC members giving waste as a feedstock.” Waste-to-energy contradicts the SCRD’s SWMP that incorporates the Zero Waste International Alliance definition of Zero Waste which excludes burning or incineration as an option for managing solid waste.

CONCLUSION

The AVICC Committee is seeking SCRD support of their long-term strategy for solid waste in order to present the strategy at the 2016 AVICC Convention.

Board direction is required regarding whether or not to support the AVICC Committee’s long-term strategy prior to a March 4, 2016 deadline set by AVICC. A recommendation supporting the long-term strategy can be developed with modifications or a recommendation can be developed not supporting the long-term strategy.

Reviewed by:			
Manager		Finance	
GM	X - BS	Legislative	
CAO	X - JL	Other	

AVICC Long-Term Strategy for Solid Waste

Immediate Priorities:

Area of Work	Recommendation and/or Option Description	Key Driver	Status
AVICC partnership	Develop a vision and goals for the AVICC including: <ul style="list-style-type: none"> ▪ A communication strategy ▪ A unified education program 	<ul style="list-style-type: none"> ▪ Establish a platform for effective collaboration ▪ Develop clarity of all recycling efforts across the AVICC 	
	Continue to meet regularly – identify one solid waste challenge or opportunity to investigate at each meeting. <ul style="list-style-type: none"> ▪ Establish a 3 to 5 year process to maintain and update the 2015 baseline report information. 	<ul style="list-style-type: none"> ▪ Establish a platform for effective collaboration ▪ Build understanding of priorities 	
Advocacy	Advocate British Columbia MOE and industry groups to review and expand waste reduction and diversion policies.	<ul style="list-style-type: none"> ▪ Adopt and implement new EPR programs ▪ Refine and improve existing EPR programs 	

Short-Term Priorities:

Area of Work	Recommendation and/or Option Description	Key Driver	Status
Long-term disposal	Conduct an assessment to forecast future solid waste disposal demand of AVICC member populations in 20, 40, and 60 years' time.	<ul style="list-style-type: none"> ▪ Ensure accurate data and assumptions for making long-term investment decisions 	
Regulations and Enforcement	Ensure that disposal bans and bylaws are consistent across regions to reduce leakage across borders.		

Long-Term Priorities:

Area of Work	Recommendation and/or Option Description	Key Driver	Status
Organics waste reduction strategies	Review the mid and long-term business case for a WTE energy facility with all AVICC members giving waste as a feedstock.	<ul style="list-style-type: none">▪ Need to effectively manage residual waste	
	Develop a comprehensive AVICC organics strategy that engages the residential and ICI sectors. Build on existing organics systems in place in RDN and CoVRD.	<ul style="list-style-type: none">▪ Reduce per capita garbage generation▪ Increase diversion rate▪ Ensure regional processing capacity aligns with organics diversion strategies (e.g., curbside programs and disposal bans)	
	Conduct an assessment of organic feedstock and analysis of capacity needs along with a review of combined existing and planned organics infrastructure to ensure sufficient processing capacity is in place, either in the private and/or the public sector.		
	Standardize organics curbside collection to provide consistency for materials collected, including food scraps and food-soiled paper.		
Recycling collection and drop-off programs	Establish consistency in materials collected in curbside recycling programs and accepted at depots.	<ul style="list-style-type: none">▪ Increase diversion▪ Optimize services and program efficiency▪ Maximize participation	
	Implement common promotion and education programs throughout the AVICC. Focus on standardizing messaging, colours and system types.		
Financially sustainable model	Explore implications of establishing unified tipping fee: <ul style="list-style-type: none">▪ Impact on revenue;▪ Impact on tonnages disposed;▪ Impact on leakage; and▪ Impact on illegal dumping.	<ul style="list-style-type: none">▪ Establish a sustainable financial model	
	Assess leakage and export of waste by private haulers and private landfills. Explore opportunities for government control of waste collection systems (flow control/franchising).		

Long-Term Priorities (continued):

Area of Work	Recommendation and/or Option Description	Key Driver	Status
ICI sector strategy	Engage the ICI sector in constructive dialogue to identify opportunities for collaboration to address waste diversion issues. Establish an initial network of ICI contacts and use to educate and promote goals (e.g., organics and other disposal bans).	<ul style="list-style-type: none"> ▪ Increase diversion 	
C&D sector strategy	Track all C&D waste generated including what is disposed in the region and what is exported.	<ul style="list-style-type: none"> ▪ Increase diversion ▪ Increase longevity of existing landfill capacity 	
	Expand and add areas to existing landfills to sort and separate recyclable C&D materials while other materials are stockpiled to be used for cover at the landfill or shipped out of region to recycling or beneficial reuse or energy recovery.		
	Develop permit process that requires contractors to assess waste materials generated and develop a diversion strategy, and provide contractors with tools to support them.		
	Ensure all regional districts have requirements that all C&D waste must be disposed of at a licensed facility, and have similar rules regarding the requirement of disposal and diversion.		
Regulations and enforcement	Ensure that accurate and consistent metrics and statistics are taken for all materials (MSW, C&D, Recycling, Organics, etc.) and receiving facilities (including private) are documented in terms of meeting standards and providing accurate data.	<ul style="list-style-type: none"> ▪ Track material generation and movement ▪ Increase diversion ▪ Ensure program costs are efficient 	
	Develop a consistent enforcement strategy to support regulations.		
	Develop standards for odour levels for organic processing		

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Infrastructure Services Committee – March 3, 2016

AUTHOR: Robyn Cooper, Manager of Waste Reduction and Recovery

SUBJECT: 2015 WASTE COMPOSITION STUDY RESULTS

RECOMMENDATION

THAT the report titled 2015 Waste Composition Study Results be received for information.

BACKGROUND

In the SCRD's Solid Waste Management Plan (SWMP), waste composition study results from the Powell River Regional District were used in lieu of SCRD data. Waste composition studies inform waste reduction and diversion programming and are utilized to measure and track effectiveness over time.

In 2014, a portion of the Eco-Fee Reserves was approved to fund a waste composition study of municipal solid waste (MSW) originating from the single family residential collection services on the Sunshine Coast disposing at the Sechelt Landfill. The results of this study were presented at the Infrastructure Services Committee on January 8, 2015.

MSW is also disposed of in the roll-off bins at the Sechelt Landfill and Pender Harbour Transfer Station. Residents and small businesses contribute MSW directly to the roll-off bins at the Sechelt Landfill. Whereas, at the Pender Harbour Transfer Station the roll-off bins also include MSW originating from residences in the Pender Harbour area that have opted for a private collection service.

To determine the waste composition of the MSW in the roll-off bins, a study was conducted in 2015 (also funded from the Eco-Fee Reserve). The 2015 study methodology is consistent with the 2014 study. The first audit was conducted the week of August 10, 2015, and the second audit was conducted the week of November 2, 2015 to reflect the summer and fall seasons.

The purpose of this report is to provide a summary of the results of the waste composition study of the roll-off bins at Sechelt Landfill and Pender Harbour Transfer Station. The full results of the study are included in the report titled "Sunshine Coast Regional District 2015 Waste Composition Audit, Roll-off Bins at Sechelt Landfill and Pender Harbour Transfer Station" and is provided as Attachment A.

DISCUSSION

Analysis – Methodology

Waste from the roll-off bins was sorted into eight primary categories and thirty-seven sub-categories as listed in Table 1.

Table 1 - Primary Sort Categories and Sub-Categories

Fibre	Organics
<ul style="list-style-type: none"> • Boxboard • Cardboard • Newsprint • Paper (office paper, envelopes, flyers) • Other paper (coffee cups, paper plates) 	<ul style="list-style-type: none"> • Food scraps and kitchen waste • Food soiled paper • Pet waste • Yard & garden waste
Glass	Refundables
<ul style="list-style-type: none"> • Any glass container/item that is not refundable 	<ul style="list-style-type: none"> • Glass • Non-Glass
Plastics	Other
<ul style="list-style-type: none"> • Bulky items (including plastic furniture) • Film – all other film plastic • Film (PPP EPR) • Other Plastics • Rigid (PPP EPR) • Styrofoam - all other • Styrofoam (PPP EPR) 	<ul style="list-style-type: none"> • Building materials - gypsum/drywall, • Building materials – metal • Building materials - other • Building materials – textiles (carpets, underlay, drop cloths) • Building materials - wood • Fines • Furniture (not including plastic furniture) • Home medical waste • Household hygiene • Metal: non-building material • Refuse • Textiles (clothing and accessories) • Wood: non-building material
Electronic Waste	Household Hazardous Waste
<ul style="list-style-type: none"> • Other (items not accepted as part of EPR) • Product Care (all items accepted as part of Product Care EPR) 	<ul style="list-style-type: none"> • Batteries • Items accepted through Product Care • All other items

Analysis - Results

It was noted during the study that the composition of waste between each site is quite different; the bins at Sechelt Landfill contained more bulky items while those at the Pender Harbour Transfer Station contained mostly bagged waste.

The results indicated that at the Sechelt Landfill, the largest components by weight of the waste sampled were building materials - textiles (16%), furniture (12%), other textiles (11%) and EPR electronic waste (9%). Whereas at Pender Harbour Transfer Station, the largest components by weight of the waste sampled were food scraps and kitchen waste (19%), building materials - other (9%), food soiled paper (6%) and building materials - textiles (6%). A summary is provided in Table 1.

Table 1 – Summary of 2015 Waste Composition Study results, August and November audits combined

Category			Sechelt		Pender Harbour	
	Sub-Category		Weight (kg)	%	Weight (kg)	%
Organics	Organics	Food scraps and kitchen waste	153.2	3%	339.5	19%
		Yard and garden waste	140.9	3%	21.7	1%
		Pet waste	15.5	0%	44.7	2%
		Food soiled paper	38	1%	113.3	6%
Curbside and Depot Printed Packaging (PPP) Recyclables	Glass	Non-refundable glass (PPP)	29.3	1%	20.6	1%
	Fibre	Paper	213.5	5%	46.3	3%
		Newsprint	5.6	0%	18.4	1%
		OCC	102.8	2%	67.6	4%
		Boxboard	43.7	1%	26.5	1%
		Other paper	13.3	0%	19.7	1%
	Refundables	Glass	15.1	0%	14.9	1%
		Non-glass	15.7	0%	12.9	1%
	Plastic	Film (PPP EPR)	34.3	1%	66	4%
		Rigid (PPP EPR)	43.7	1%	46.5	3%
		Styrofoam (PPP EPR)	5.8	0%	10.4	1%
	Other Stewardship Materials	HHW	Batteries	0.5	0%	1.5
Product Care items			20.5	0%	2.1	0%
Electronic Waste		EPR	399	9%	63.9	3%
Residuals	Other	Building materials – wood	284.2	6%	20.1	1%
		Building materials – metal	8.5	0%	14.8	1%
		Building materials – gypsum/drywall	100.2	2%	39.2	2%
		Building materials – textiles	716.7	16%	104.6	6%
		Building materials – other	253.7	6%	155.9	9%
		Wood: non-building material	14.4	0%	9.7	1%
		Metal: non-building material	33.1	1%	40.3	2%
		Household hygiene	37	1%	27.8	2%
		Home medical waste	1.8	0%	6.6	0%
		Textiles	516.8	11%	112.4	6%
		Refuse	191.2	4%	75.5	4%
		Fines	3.3	0%	8.4	0%
		Electronic Waste - other	1.1	0%	0.4	0%
		HHW - other	3.4	0%	1.9	0%
		Furniture (not including plastic furniture)	551.5	12%	74.4	4%
		Plastic	Film - all other film plastic	41	1%	53
	Styrofoam - all other		2.2	0%	6.1	0%
	Bulky items (including plastic furniture)		306.3	7%	62.4	3%
	Other plastics		236.2	5%	83.8	5%
	Total			4592.4	100%	1832.6

When looking at the results in three broad categories, organics, recyclables and residuals, organics differed significantly between the two sites, 7% at Sechelt Landfill versus 28% at Pender Harbour Transfer Station. Total recyclables were somewhat more comparable, at 24% versus 17%; and residuals were quite disparate at 73% versus 49%. A summary is provided in Table 3 and Figures 1 and 2.

Table 3: Waste composition of roll-off bins by site, August and November audits combined

	Organics					Recyclables			Residuals
	Food scraps and kitchen waste	Yard and garden waste	Pet waste	Food Soiled Paper	Total Organics	Curbside and Depot PPP Recyclables	Other Stewardship Materials	Total Recyclables	
Sechelt Landfill	3%	3%	0%	1%	7%	10%	9%	19%	73%
Pender Harbour Transfer Station	19%	1%	2%	6%	28%	21%	3%	24%	49%
Roll-off Bins Average	11%	2%	1%	4%	17%	16%	6%	22%	61%

Figure 1 – Sechelt Landfill roll-off bins, August and November audits combined

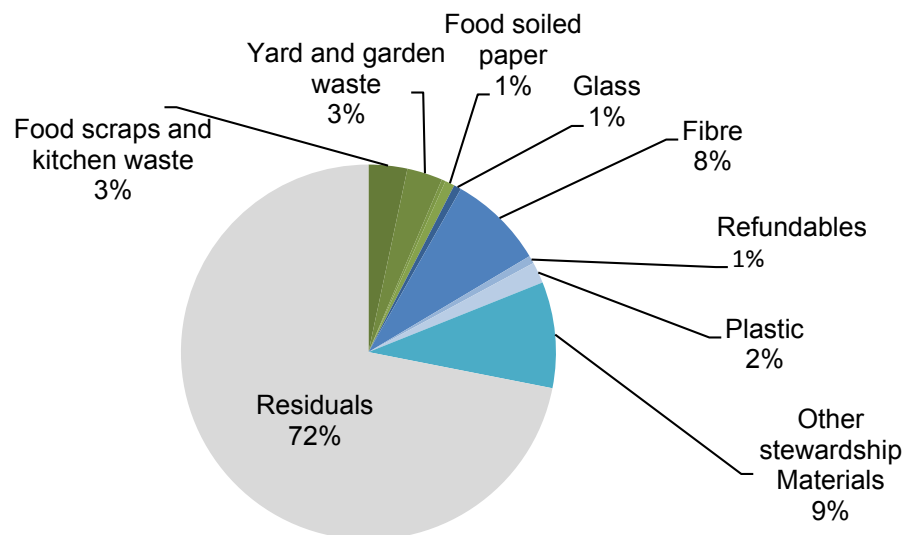
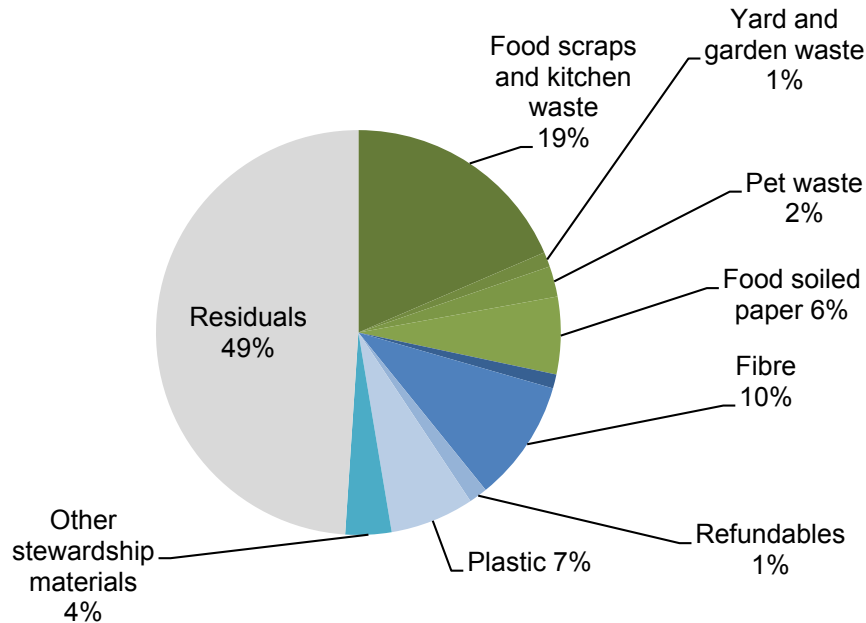


Figure 2 – Pender Harbour Transfer Station roll-off bins, August and November audits combined



Analysis – Next Steps

The results from the 2015 waste composition study will be compared to the 2014 results and incorporated into the development of an organics management strategy to be completed in 2016. Further, the identification of the largest components in the roll-off bins inform where diversion efforts could be targeted, namely, food scraps for Pender Harbour Transfer Station and building materials – textiles for Sechelt Landfill.

STRATEGIC PLAN AND RELATED POLICIES

Strategic Plan

Waste composition studies support one of the Success Indicators of the Embed Environmental Leadership Strategic Priority: “An environmental report card that describes how we have achieved our targets on an annual basis is in place.”

Solid Waste Management Plan

In order to meet the targets set out in the SWMP, waste composition studies inform which material types to target to divert, either by introducing new programs or by improving existing programs.

CONCLUSION

The results of the study will be used to assess the effectiveness of current diversion programs and to develop future programs. The results suggest a number of materials that could be targeted for increased diversion efforts at the Sechelt Landfill and Pender Harbour Transfer Station in order to reach the goal of 65% to 69% diversion by the end of 2016 as stated in the SCRD's Solid Waste Management Plan.

Reviewed by:			
Manager		Finance	
GM	X - BS	Legislative	
CAO	X - JL	Other	

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Infrastructure Services Committee – January 18, 2018

AUTHOR: Robyn Cooper, Manager, Solid Waste Services

SUBJECT: REGIONAL ORGANICS DIVERSION STRATEGY - ADOPTION

RECOMMENDATION(S)

THAT the report titled Regional Organics Diversion Strategy - Adoption be received;

AND THAT the Regional Organics Diversion Strategy be adopted.

BACKGROUND

The following recommendation was adopted at the January 11, 2018 Board Meeting.

004/18 Recommendation No. 9 *Draft Regional Organics Diversion Strategy – Implementation Options*

AND THAT the strategy be amended to reflect a residential food waste ban in 2020;

AND THAT the Draft Regional Organics Diversion Strategy be amended to reflect Implementation Option 1 as outlined in the staff report;

AND FURTHER THAT recommendations from the Draft Regional Organics Diversion Strategy that require funding be brought forward to the Round 1 2018 budget process.

The purpose of this report is to provide an amended Regional Organics Diversion Strategy incorporating Board direction and to seek adoption by the Board.

DISCUSSION

Staff have amended the Regional Organics Diversion Strategy (Strategy) as per Board direction:

2018

- Commercial food waste ban
- Depot drop-off at three locations: Area A, mid-coast and south coast

2019

- Residential curbside food waste collection for Electoral Areas B, D, E and F
- Food waste reduction campaign
- At-home compost coaching program
- Investigation of a composter subsidy program

2020

- Residential food waste ban

The amended Strategy also includes a 0.5 FTE to assist with the implementation of the commercial food waste ban and residential collection as well as to develop and lead the at-home compost coaching program, food waste reduction campaign and composter subsidy program.

Staff recommend adoption of the Strategy.

The Strategy is included as Attachment A.

Timeline for next steps

After the Strategy is adopted, staff will begin following the Timeline in the Strategy.

As the work progresses, additional Board reports will be brought forward as necessary as per the Timeline and the 2018 SCRD Solid Waste Work Plan.

STRATEGIC PLAN AND RELATED POLICIES

A Regional Organics Diversion Strategy supports the Strategic Priority of Embed Environmental Leadership.

The Strategy is in support of the SCRD's Solid Waste Management Plan's targets of 65%-69% diversion and organics diversion is one of the SWMP's reduction initiatives.

CONCLUSION

The SCRD's Regional Organics Diversion Strategy has been amended to reflect Board direction, notably, residential curbside collection for Electoral Areas B, D, E and F and a residential food waste ban in 2020.

Staff recommend adoption.

ATTACHMENT – Regional Organics Diversion Strategy

Reviewed by:			
Manager		Finance	
GM		Legislative	
CAO	X-J. Loveys	Other	



Carey McIver & Associates Ltd.
ENVIRONMENTAL CONSULTANTS

Sunshine Coast Regional District

Regional Organics Diversion Strategy



Prepared by:

Carey McIver & Associates Ltd.

In Collaboration with:

Maura Walker & Associates

Date: January 8, 2018



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Appendices

Appendix 1: Notes to the Financial Statements for the Years Ended December 31, 2016 and 2015.

Appendix 2: Organics Diversion Programs in Comparable AVICC Regional Districts

Appendix 3: Food Waste Diversion Estimates



1 Introduction

Diverting organic waste from landfill disposal is a significant solid waste management issue in BC. This is because organic waste, comprised primarily of yard and garden waste (green waste), food waste and food-soiled paper from businesses and households, not only represents the largest component of landfilled waste (35%-40%), but also generates methane, a potent greenhouse gas, during decomposition in a landfill.

Accordingly, the BC Ministry of Environment (MOE) has established new solid waste management goals as part of its Service Plan: to lower the provincial municipal solid waste (MSW) disposal rate to 350 kilograms per person annually and to have 75% of BC's population covered by organic waste disposal bans by 2020. To meet these goals the MOE is proposing that regional districts, as part of their solid waste management planning process, adopt as a guiding principle, "preventing organic waste including food waste from going into the garbage wherever practical."

The Sunshine Coast Regional District (SCRD) recognized this principle in 2011, when the Board approved and adopted the current Solid Waste Management Plan (SWMP). This plan includes a series of initiatives related to diverting yard and food wastes from disposal that, if implemented, would contribute to meeting the plan's target diversion rate of 65%-69% (315 to 279 kilograms per person) within five years.

Although there has been substantial diversion of green waste from landfill disposal, there has been limited progress with respect to the diversion of food waste (kitchen waste, food scraps and food-soiled paper). This was confirmed in the 2014 SCRD Waste Composition Study which identified food waste as representing 45% of the residential waste stream with green waste at only 2%. Accordingly, the current regional diversion rate sits at 56%, with a corresponding disposal rate of 434 kilograms per person in 2016.

In recognition of the need to increase the diversion of food wastes, the SCRD engaged Carey McIver & Associates Ltd., in collaboration with Maura Walker & Associates (the Project Team), to develop a Regional Organics Diversion Strategy. Building on the initiatives identified in the 2011 SWMP, the objective of this strategy is to provide a financially sustainable road map that will lead to a robust, Sunshine Coast-wide full organics diversion program.

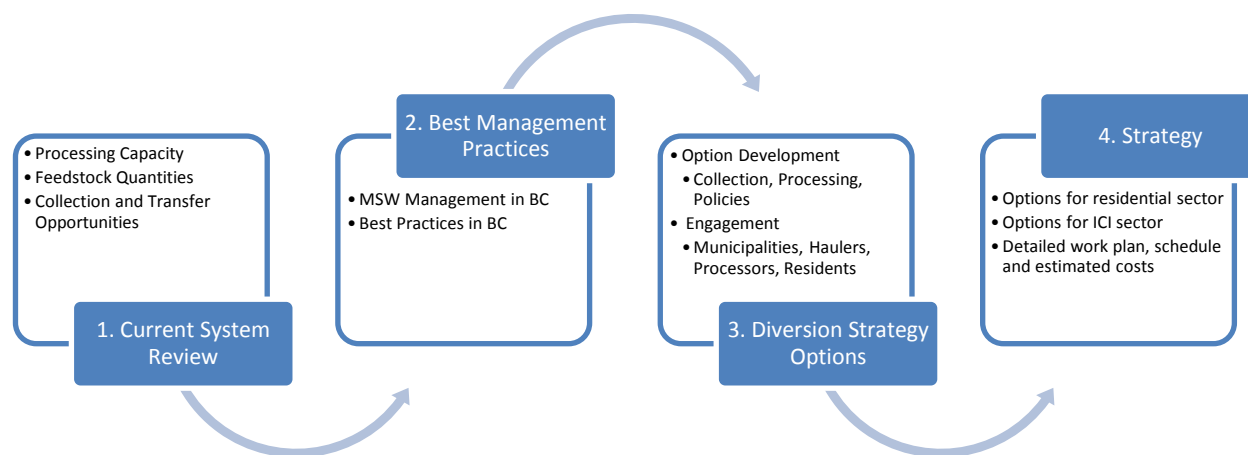
1.1 Objectives and Methodology

To develop a strategy that details the "who, what, where and when" for organics diversion in the SCRD the Project Team undertook two concurrent and intertwined processes: the technical process and the community engagement process.

As indicated in Figure 1-1, the technical process was organized into four key stages: a review of the current system for managing organic wastes in the SCRD; a scan of best practices and innovations in other BC jurisdictions; the development of realistic and practical diversion options for the SCRD and the development of a regional organics diversion strategy.



Figure 1-1: Project Methodology



The community engagement process was interwoven throughout the technical process, beginning with individual contacts with key stakeholders during the current system review, an SCRD coordinated meeting with municipal partners to provide a high-level overview of the strategy development and timelines as well as telephone interviews with hauling companies providing collection services throughout the region.

With respect to engagement with residents, the SCRD included a questionnaire on organics management as part of their series of Community Dialogues held in May 2017 and was made available online from May 8 to June 2, 2017. The feedback from this process has provided valuable insights into the development of the strategy contained in this report.

1.2 Overview and Structure of the Report

The report is structured as follows:

Section 2 outlines the organics diversion initiatives outlined in the 2011 SWMP as well as a description of the current organics management system including existing reduction and collection programs as well as drop-off, processing and disposal facilities.

Section 3 provides examples of best practices in organics management in BC which have informed the new Ministry of Environment (MOE) Service Plan targets for organic waste management. This section also updates the feedstock estimate provided in the 2011 SWMP based on actual data.

Section 4 describes the results of the community and stakeholder engagement process designed to inform the development of organic management options.



Section 5 outlines practical and realistic scenarios to increase organic waste diversion in the SCRD informed by best practices as well as the results of community and stakeholder engagement.

Section 6 outlines the regional organics diversion strategy including a workplan, timeline and estimated cost implications.

2 Current System Review - Organic Waste Management in the SCRD

This section summarizes the current system for managing organic wastes in the SCRD including the status of organics diversion initiatives included in the 2011 SWMP.

2.1 Organic Diversion Initiatives in the 2011 SWMP

In British Columbia, regional districts develop solid waste management plans (SWMP) as required under the provincial Environmental Management Act. These plans are long term visions of how each regional district would like to manage its solid wastes and are updated on a regular basis so that they reflect current needs, local priorities, market conditions, technologies and regulations.

The SCRD's current SWMP was approved and adopted in 2011. The objective of the 2011 SWMP was to adopt zero waste as a guiding principle, to outline a roadmap of practical measures toward the goal, and to achieve the highest level of environmental and human health protection. The plan contains major reduction, reuse, recycle and diversion initiatives that, if fully implemented, would increase diversion from 50% in 2011 to between 65% and 69% in 2016.

Table 2-1 outlines the organic diversion initiatives for yard and food wastes that are included in the 2011 SWMP.

Table 2-1: 2011 SWMP Organics Diversion Initiatives

Initiatives
Reduction
➤ Incentive Based Tipping Fees
➤ Grass-Cycling and Backyard Composting Education
Recycling and Diversion
➤ Curbside Collection of Food Scraps
➤ Yard Waste Composting
➤ Processing Capacity for Food Scraps and Yard Waste

The following sections summarizes the implementation status of these initiatives.



2.2 Current Reduction Programs

Incentive Based Tipping Fees

Tipping fees are the charges that are applied to discarded materials deposited in landfills. The 2011 SWMP outlined how incentive based tipping fees are structured to provide financial incentives that discourage discarding waste into landfills, provided that there are more economical options to divert that material. As indicated in Table 2-2, the current tipping fee structure in the SCRD provides a significant financial incentive to divert yard and garden waste from landfill. The quantities of yard and garden green waste delivered by residents and business to SCRD drop off locations is discussed in Section 2.4.

Table 2-2: Current SCRD Incentive Based Tipping Fee Structure for Organics

Material for Disposal	Tipping Fee
Municipal Solid Waste	\$150 per tonne
Yard and Garden Green Waste	
-Residential self-haul loads less than 5 tonnes	NO CHARGE
-Residential self-haul loads more than 5 tonnes	\$45 per tonne
-Commercial loads	\$45 per tonne

Grass-Cycling and Backyard Composting

Grass-cycling and backyard composting are options that reduce the generation of organic waste. Grass-cycling and backyard composting are considered one of the most sustainable methods for managing organic waste. The 2011 SWMP proposes that the SCRD will promote backyard composting, offer compost training courses, operate a compost demonstration garden and encourage grass-cycling. The SCRD currently promotes its Guide to Backyard Composting and grass-cycling online and at community outreach events and has hosted a limited number of compost training courses. A compost demonstration garden and regular compost training sessions have yet to be implemented.

2.3 Current Collection Programs

Although the 2011 SWMP recommended that municipal and SCRD operated curbside collection services be expanded to include food waste within five years, there has been limited progress to date. As indicated in Table 2-3, except for the pilot project in the Davis Bay community of Sechelt, there are currently no permanent curbside collection services in place for organics, either food waste or green waste on the Sunshine Coast.


Table 2-3: Curbside Collection Services in the Sunshine Coast

Area	2016 Census		Curbside Collection Services			
	Population	Households	Households	Garbage	Recycling	Organics
Municipal						
Sechelt District Municipality	10,216	4,855	4,305	Yes	Yes	No
Town of Gibsons	4,605	2,220	2,056	Yes	No	No
Sechelt Indian Government District	671	290	273	Yes	Yes	No
<i>Municipal Sub-Total</i>	<i>15,492</i>	<i>7,365</i>	<i>6,634</i>			
Electoral Areas						
SCRD Collection Service						
EA B - Halfmoon Bay	2,726	1,250		Yes	No	No
EA D - Roberts Creek	3,421	1,505		Yes	No	No
EA E - Elphinstone	3,664	1,550		Yes	No	No
EA F - West Howe Sound	2,043	945		Yes	No	No
<i>SCRD Service Sub-Total</i>	<i>11,854</i>	<i>5,250</i>	<i>5,675</i>			
EA A - Pender Harbour/Egmont	2,624	1,385	-	No	No	No
<i>Electoral Area Sub-Total</i>	<i>14,478</i>	<i>6,635</i>				
Regional Total	29,970	14,000	12,309			

Table 2-3 provides the population and household count according to the 2016 Census. The household count for curbside collection was provided by each individual service provider. Although the Census household count is not consistent with the service household count, overall the numbers indicate that the majority of households on the Sunshine Coast (roughly 90%) are currently receiving curbside garbage collection services.

While curbside collection programs on the Sunshine Coast are operated by local governments, collection service is provided by private sector contractors, except for the Sechelt Indian Government District. Table 2-4 outlines the contractors and expiry dates for current contracts within the Sunshine Coast.

Table 2-4: Curbside Collection Service Providers 2016

Service Provider	Households 2016	Contractors		
		Garbage	Recycling	Expiry Date
Sechelt	4,305	Direct Disposal	Direct Disposal	February 28, 2019
Gibsons	2,056	Grayco Ventures	NA	February 28, 2019
SIGD	273	In-House	In-House	
SCRD	5,675	Direct Disposal	NA	February 28, 2019

District of Sechelt Organics Collection Pilot Project

The District of Sechelt (DOS) has been operating a small food and green waste collection pilot project to around 500 single family homes in Davis Bay since May 23, 2014. According to the DOS web site, DOS staff will be developing a proposal for Council consideration on District-wide curbside organics collection based upon an analysis of the multi-year project. Under contract to DOS, Grayco Disposal collects the food waste and green waste from Davis Bay and delivers the material to the Salish Soils composting facility at a processing cost of \$80 per tonne.





2.4 Current Drop-Off Facilities

As discussed in Section 2.2, the SCRD provides three locations for residents to drop-off green waste and two locations for businesses to drop-off their green waste.

Residents can drop-off their green waste at the Pender Harbour Transfer Station, Salish Soils in Sechelt or on the South Coast at the drop-off located on the site of the Town of Gibsons Public Works Yard. The residential program is funded from taxation, so the residents are not charged at the time of drop-off. Commercial green waste can be dropped off at the Pender Harbour Transfer Station or the Sechelt Landfill at the current rate of \$45 per tonne. Alternatively, commercial green waste can be delivered to Salish Soils or other private facilities.

Salish Soils also accepts residential and commercial food waste at a cost of \$80 per tonne for larger quantities delivered by commercial hauling companies and \$85 per tonne for self-haul customers. However, clean food waste in 5 gallon buckets and under is free of charge to residential customers.

Figure 2-1 indicates the tonnes of green waste that has been accepted to these facilities over the last five years. In 2016, 4,343 tonnes of green waste was delivered these facilities.

Figure 2-1: Total Green Waste Diverted at SCRD Sites/Services 2012-2016

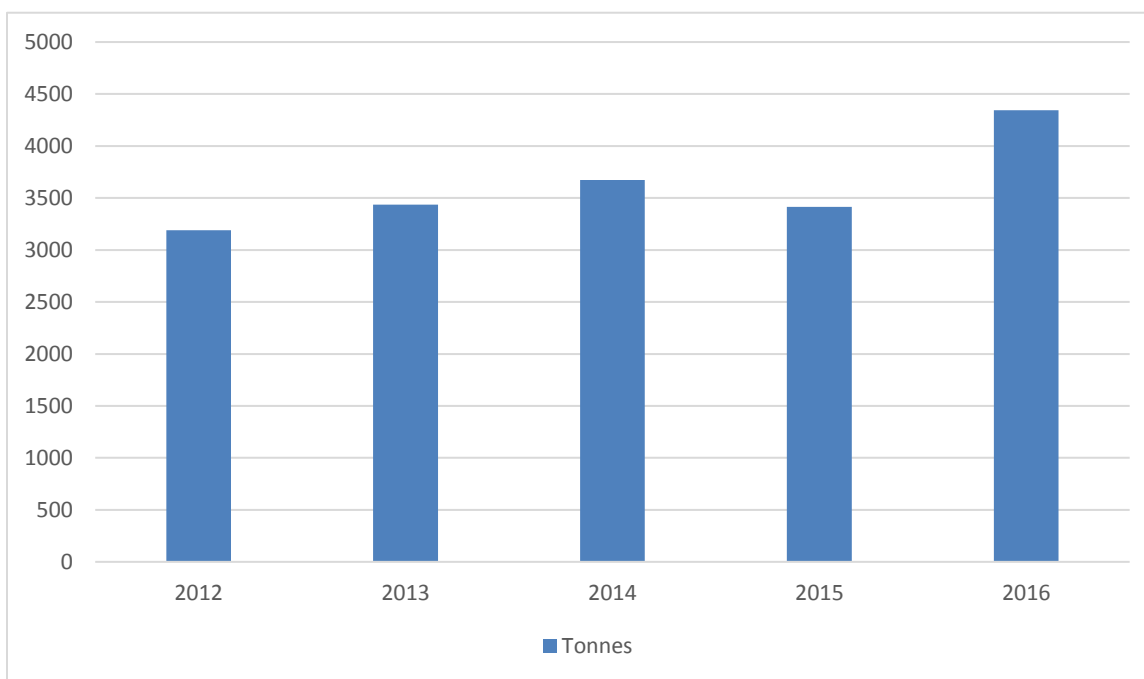
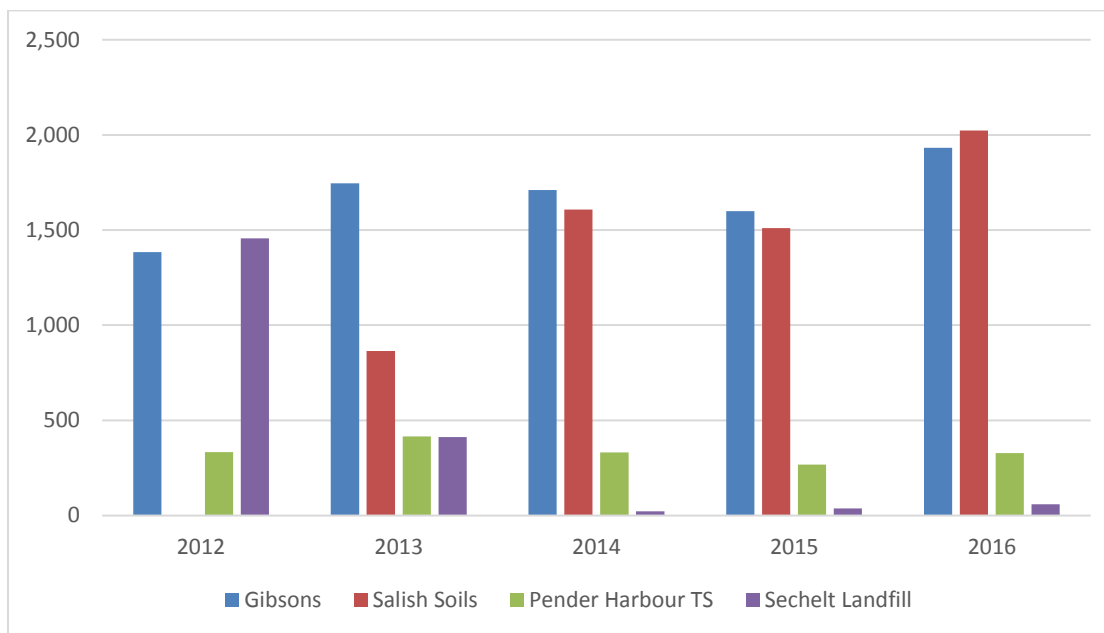


Figure 2-2 indicates the quantity accepted by individual facility. As illustrated in Figure 2-2, Salish Soils began accepting residential and commercial yard waste in 2012 and has since replaced the Sechelt Landfill as the main drop-off facility in the Sechelt area.



Figure 2-2: Total Green Waste Diverted by SCRD Drop-Off Facility – 2012-2016



Note: Does not include commercial green waste delivered to Salish Soils. Pender Harbour Transfer Station is a combination of residential and commercial green waste.

2.5 Current Processing Capacity

Prior to 2012, the SCRD chipped and hauled green waste to Howe Sound Pulp and Paper in Port Mellon, to be used as fuel. However, the 2011 SWMP recognized that establishing local processing capacity for composting green waste would provide the SCRD with the opportunity to also compost food scraps and soiled paper in the future. Consequently the 2011 SWMP recommended that the SCRD continue to support and enhance local composting operations through green waste collection and contracts with private sector operators.



In January 2011, Salish Soils Inc. submitted a notification under the provincial Organic Matter Recycling Regulation (OMRR) that they planned to construct and operate a composting facility on property owned by the Sechelt Indian Band at 5800 Black Bear Road in Sechelt. The OMRR governs the production, quality and land application of certain types of organic matter. Although the Salish Soils facility is not subject to OMRR, the company has met all the requirements of the regulation for a facility of its size.

Salish Soils operates a covered aerated static pile compost facility using the Gore Cover System to produce a Class A compost under the OMRR. The production design capacity of the Salish Soils composting facility is 12,000 tonnes per year of compost made from organic materials including fish waste and green waste. However, the facility is currently processing roughly 6,500 tonnes of compost made from green waste and fish waste, with limited quantities of food waste from the Davis Bay pilot, from residential food waste drop-off as well as from a pilot program in the Powell River Regional District.



2.6 Sechelt Landfill Capacity

The Sechelt Landfill is located approximately 6.5 kilometres northeast of the District of Sechelt, at 4904 Dusty Road. The site is located on Crown Land under a License of Occupation. According to the Notes to the Financial Statements attached to the SCRD's 2016 Financial Audit Report (Appendix 1), the Sechelt Landfill is expected to reach its capacity in 2025. Given the difficulties and costs associated with siting and constructing a new landfill, conserving the capacity of this existing facility is imperative.

3 Best Practices Review

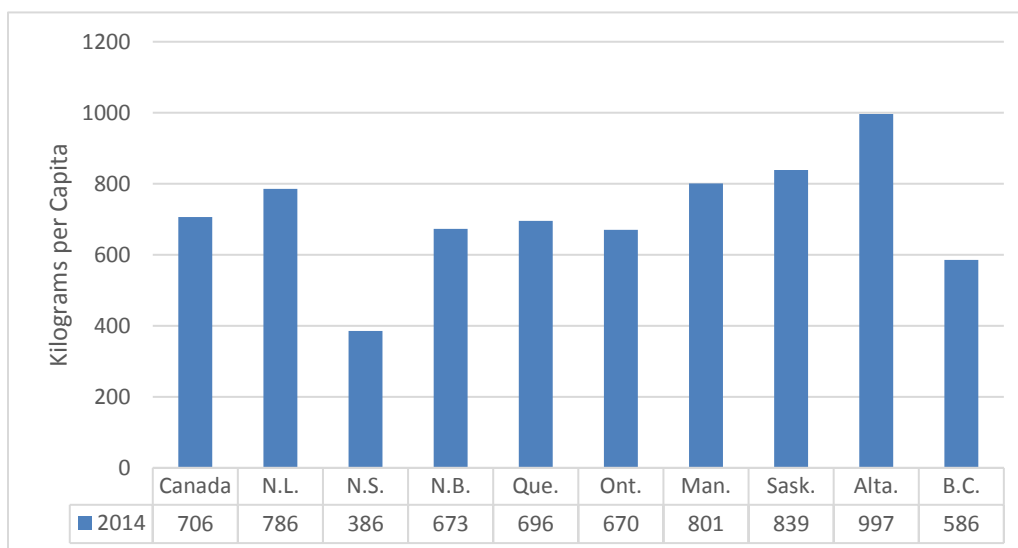
The SCRD does not need to look beyond BC to find examples of best practices in organic waste management. Municipal solid waste management (MSW) is an important environmental issue in BC. Over the last twenty-five years a dynamic system has evolved that provides efficient and effective MSW management services in the province. The following sections provide data on how the MSW management system in BC outperforms systems in similar jurisdictions as well as examples of best practices implemented by local governments in BC that could be applicable to the SCRD.

3.1 MSW Management System Performance in BC

This MSW management system in BC is guided by goals established by the Ministry of Environment (MOE) that aim to maximize waste reduction and diversion in the province. These ambitious goals, initially to reduce MSW disposal by 50% by the year 2000, and currently to reduce the provincial disposal rate to 350 kilograms per capita by 2020, have resulted in a MSW disposal rate that is significantly lower than systems in other provinces.

According to the Statistics Canada Waste Management Industry Survey for 2014, BC has the second lowest per capita MSW disposal rate in Canada. As indicated in Figure 3-1, the only province with a lower disposal rate was Nova Scotia, where organics have been banned from landfill disposal for the last decade.

Figure 3-1: Per Capita Disposal Rates for Canada and Selected Provinces 2014



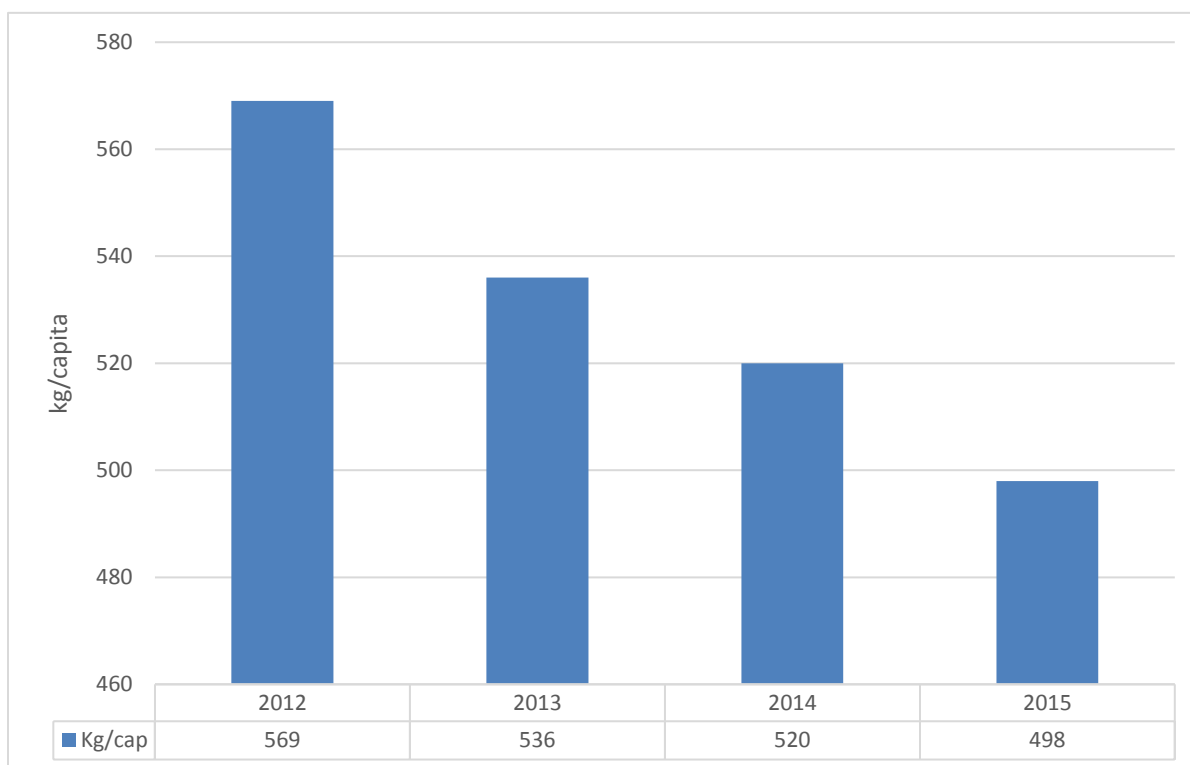
Source(s): Statistics Canada Disposal and Diversion of waste, by province and territory (Waste Disposal Per Capita) CANSIM tables 051-0001 and 153-0041(accessed May 2017)



Statistics Canada collects the BC disposal data from regional districts every two years and aggregates the results to the provincial level. Individual regional district data is not provided in the bi-annual reports. To provide more reliable and consistent annual data on MSW disposal by regional district, the MOE developed the BC Waste Disposal Calculator. The reporting methodology in the BC Calculator is identical to that used by Statistics Canada to ensure comparability between systems.

The BC Waste Disposal Calculator is an on-line reporting tool that has so far collected MSW disposal data for 2012, 2013, 2014 and 2015. The results of each year's data call are posted on Environmental Reporting BC. Figure 3-2 illustrates the results reported to date.

Figure 3-2: Per Capita Disposal Rate for BC 2012-2015



Although there is little variation between the Statistics Canada and BC MOE disposal rates for 2012 (573 and 569 kilograms per capita respectively), there is significant variation between Statistics Canada and BC MOE disposal rates for 2014 (586 and 520 kilograms respectively). This is likely due to the quality control exercised by the BC MOE with respect to ensuring that regional districts are meeting the reporting requirements correctly and consistently.



Individual regional district data for 2015 is presented in Figure 3-3 and indicates that at a reported 421 kilograms per capita, the 2015 disposal rate in the SCRD was less than the provincial average of 498.

Figure 3-3: Regional District Disposal Rates for BC 2015

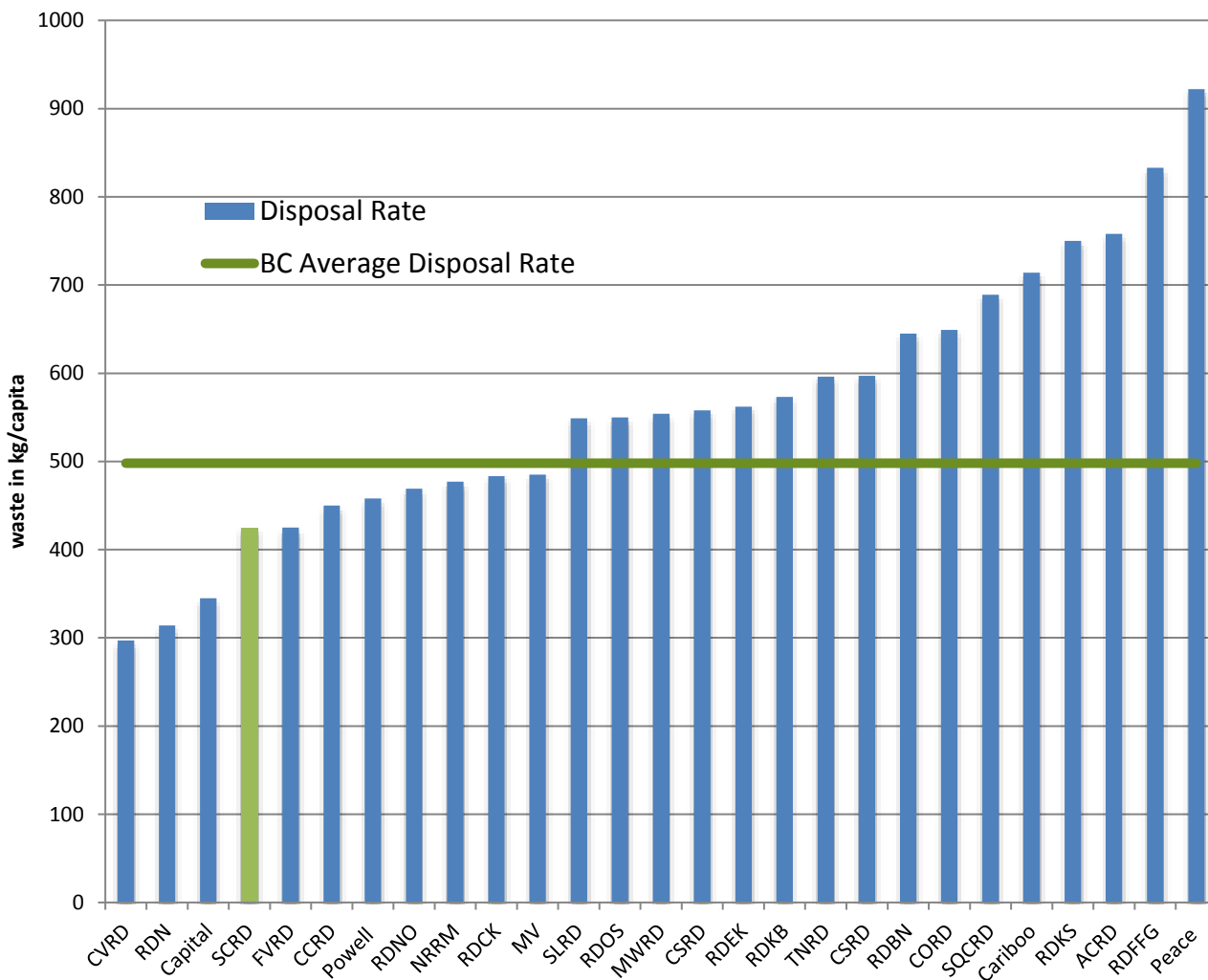
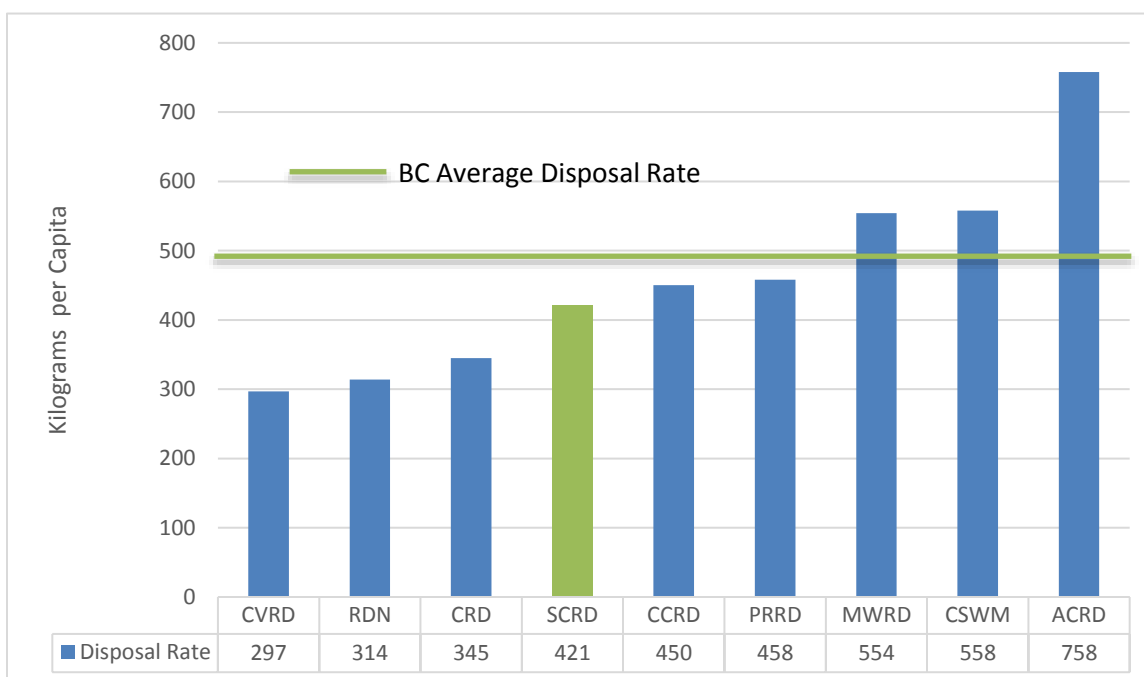




Figure 3-4 presents disposal rates for regional districts belonging to the Association of Vancouver Island Coastal Communities (AVICC) from lowest to highest. As indicated in Figure 3-4, the Cowichan Valley Regional District (CVRD), the Regional District of Nanaimo (RDN), and the Capital Regional District (CRD), all have significantly lower per capita disposal rates than the SCRD. The Central Coast Regional District (CCRD) and the Powell River Regional District (PRRD) have comparable rates while the Regional District of Mount Waddington (RDMW), the Comox Strathcona Waste Management (CSWM) service and the Alberni-Clayoquot Regional District (ACRD) all have disposal rates above the provincial average of 498 kilograms per capita.

Figure 3-4: Disposal Rates for AVICC Regional Districts 2015



The lower disposal rates in the CVRD, RDN and CRD can be attributed, in large part, to the implementation of organics diversion strategies in these three Vancouver Island regional districts. In 2006, both the CVRD and RDN introduced bans on the disposal of commercial organic wastes to reduce GHG emissions, preserve landfill capacity and reduce waste export disposal costs. Residential collection programs followed roughly 5-7 years later in both those regional districts. In 2015, the CRD introduced a ban on the disposal of both residential and commercial organics. More detailed information on programs and policies in comparable AVICC regional districts is provided in Appendix 2.

In 2015, Metro Vancouver also implemented a ban on the disposal of organics from both the commercial and residential sector. As a result, in 2015 roughly 66% of the population of BC was covered by an organic waste disposal ban. There are also numerous municipal curbside food waste collection programs in regional districts that have not implemented disposal bans (e.g. Grand Forks, Abbotsford, and Comox). Consequently, with respect to best practices in organic waste management, these BC local governments can provide practical and effective examples to other regional districts.



3.2 Best Management Practices and Innovations in BC

In 2014, on behalf of the MOE, Maura Walker & Associates (MWA), developed a set of case studies on innovative and effective best management practices by local governments in BC to reduce and recycle organic wastes. Applicable best practices with respect to reduction programs, disposal policies and collection programs are summarized below to provide input to the development of organic waste management options in the SCRD. Best management practices that have been introduced since the development of the MOE case studies are also included. More detailed information on each of the selected case studies is posted on the MOE website

(<http://www2.gov.bc.ca/gov/content/environment/waste-management/recycling/organics/organics-case-studies>)

3.2.1 Reduction Programs

Metro Vancouver Love Food Hate Waste

Based on research in Europe and North America, Canadians may be wasting approximately 25 percent of all the food and drinks that they purchase. Metro Vancouver's Love Food Hate Waste Program aims to change this behaviour by educating consumers about meal planning, and careful cooking and storage. This program is modelled on WRAP United Kingdom's initiatives of the same name, which has seen a 21% reduction in avoidable food waste since its launch in 2007. Metro Vancouver has stated publicly that they are willing to share this program with other regional districts. The BC Ministry of Environment will also provide the US EPA's "Food Too Good to Waste" toolkit to regional districts at no charge. The SCRD could implement either one of these programs at a relatively low cost.



North Shore Recycling Program Compost Coaching



The former North Shore Recycling Program (NSRP) focused on waste reduction, recycling and composting under contract for the three municipalities along the North Shore in Vancouver.

The Compost Coaching program was started in 2007 to reduce organics in the waste stream. A pilot program was conducted in 2008–2009 with full implementation in 2011–2013. The program was developed to address the Metro Vancouver goal of 70% diversion by 2015.

Compost Coaching is an outreach program that focuses on helping residents compost in their own backyards through at-home training which is a Community-Based Social Marketing (CBSM) approach. The program looked at

how much material was composted before and after the training, as well as how much waste was produced per household. In the first year, 156 residents received at-home coaching. This coaching resulted in an additional 36 kg/capita/year of organic material composted on site for households that were already composting and 190 kg/capita/year for households that had not composted before. Households that participated in the program improved their composting skills, produced higher quality compost in a shorter time and reduced hazards from bears and pests. This program invests in sustainable behaviour change instead of the provision of free or subsidized composters.



3.2.2 Disposal Policies

Regional District of Nanaimo Commercial Food Waste Ban

A waste composition study completed in 2004 for the Regional District of Nanaimo (RDN) confirmed that 35% of total waste sent to landfill was compostable organic material. Consequently, in June 2005, in

accordance with the RDN's Zero Waste Plan (2004) and the Organics Diversion Strategy (2005), the RDN introduced a landfill ban on the disposal of food waste from all commercial premises.



This ban was developed and implemented in collaboration with waste haulers, commercial food waste generators and composting companies. This collaborative approach ensured that all stakeholders had at least six months advanced notice.

In particular, waste haulers and their customers were encouraged to devise cost effective systems to comply with the ban that met their individual situation. The RDN's role was to facilitate communication, innovation, competition and compliance, but not get involved in direct program delivery. Enforcement consists of load inspections and surcharges

at disposal facilities by RDN staff as well as on-site education and compliance checks by the RDN's Zero Waste compliance officer.

Program results have been positive and economical. In 2006 (the first year of the disposal ban on commercial food waste), over 4,200 tonnes of commercial food waste was diverted from disposal representing a reduction of 30 kg per capita. As a regulator, the RDN does not pay for collection or processing costs, consequently, at an in-house cost of \$15 per tonne per year, the commercial organics ban has been an extremely cost-effective local government waste diversion initiative.

Diverting this waste from disposal also contributed to reducing the RDN disposal rate from 553 kg per capita in 2005 to 517 kg per capita in 2006. However, since then this amount has levelled off to an average of 3,400 tonnes annually, which represents a recovery rate of 33% and a reduction of 21 kg per capita per year. Nevertheless, the commercial food waste ban and the organics diversion strategy are recognized as one of the most significant contributors to the RDN's per capita disposal rate of 350 kg in 2012.





Capital Regional District Kitchen Scraps Diversion Strategy



In 2012, the Capital Regional District (CRD) approved a Kitchen Scraps Diversion Strategy that applied to both residential and commercial sectors. The strategy was phased-in over two years. From 2013-2014 the CRD offered a \$20 per tonne incentive for haulers to deliver kitchen scraps to approved facilities. In January 2015, the strategy culminated with a full disposal ban on kitchen scraps delivered to the Hartland Landfill. For the ICI sector, private haulers are required to provide food scraps collection services while the residential sector is serviced by a mixture of municipal and private collection services.

Although the CRD had originally secured processing capacity at a private facility in the region, due to odour concerns this option was discontinued and instead food waste is currently transferred to several out-of-region processing facilities. In the meantime, the CRD is investigating options for processing food wastes at the Hartland Landfill. Due to the introduction of the CRD Kitchen Scraps Diversion Strategy, the disposal rate in the CRD declined from 394 kilograms per capita in 2012 to 345 kilograms per capita in 2015.

Metro Vancouver Organics Disposal Ban

Metro Vancouver (MV) also introduced a disposal ban on organics in 2015. From 2012 to 2013 MV staff undertook stakeholder engagement and readiness surveys to inform their detailed planning for an organics disposal ban. In 2014, they announced the Organics Ban Implementation Strategy and continued consultation initiatives prior to the ban effective date of January 2015.



One of the successful components of the Metro Vancouver organics ban was the phased implementation schedule. As indicated in Figure 3-6, for the first six months after the ban was effective, there were no surcharges or penalties applied to loads containing any amount of food waste.

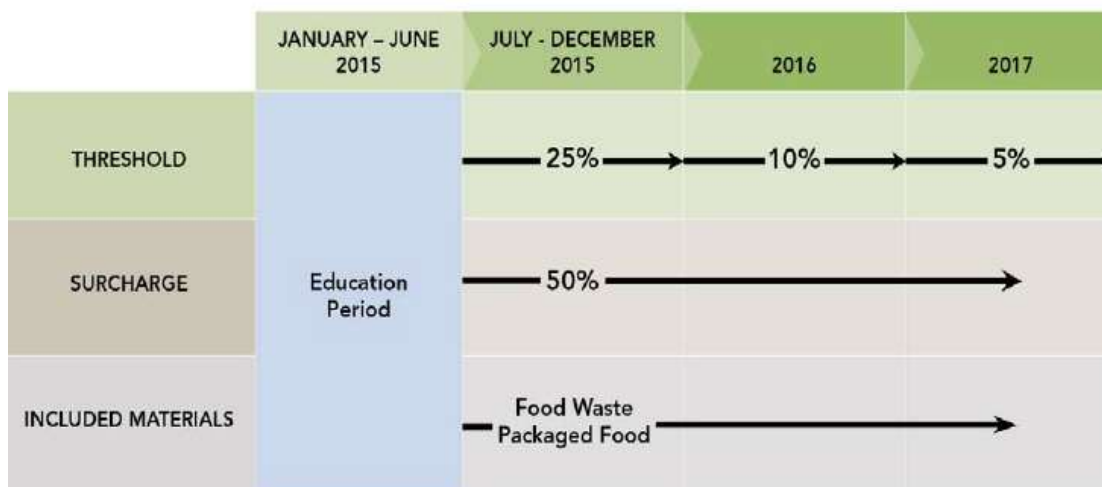
However, following this six-month education period, for the next six months of 2015 any loads containing more than 25 percent food waste were subject to a surcharge of 50% of the MSW tipping fee. The threshold was then reduced to 10 percent in 2016 and 5 percent in 2017.

This declining threshold concept was fully supported by private sector haulers in Metro Vancouver because it allowed them to market their food waste collection services as a “carrot” with the declining threshold as a “stick” to ensure that their customers added separate food waste collection to existing garbage collection service.

Because of the Organics Disposal Ban the per capita disposal rate in Metro Vancouver declined from 520 kilograms per capita in 2014 to 485 kilograms per capita in 2015.



Figure 3-5: Metro Vancouver Organics Disposal Ban Phased Implementation Schedule



3.2.3 Collection Programs

Regional District of Nanaimo Green Bin Collection Program

The Regional District of Nanaimo (RDN) 2004 Zero Waste Plan identified organics diversion as the primary means to reach the goal of 75% diversion from landfill. Commercial and residential food waste diversion programs were essential to achieving this target.



The Green Bin Program, a partnership of the RDN and its member municipalities, was launched in 2010 and provides curbside collection service for food scraps and food soiled paper to over 55,000 single-family households throughout the region, including urban and rural residents.

This was the first large scale residential food waste collection program implemented in BC. Under this program, residents receive weekly collection of food waste and bi-weekly collection of garbage and recyclables on alternating weeks. For garbage, residents can set out one can every other week. For more than one can, residents must purchase tags to set out up to two additional cans every other week.

To save on collection costs as well as greenhouse gas emissions, garbage, food waste and recyclables are collected in split packer trucks, whereby food waste and garbage is collected in the same truck one week and food waste and recyclables are collected in the same truck the next week.

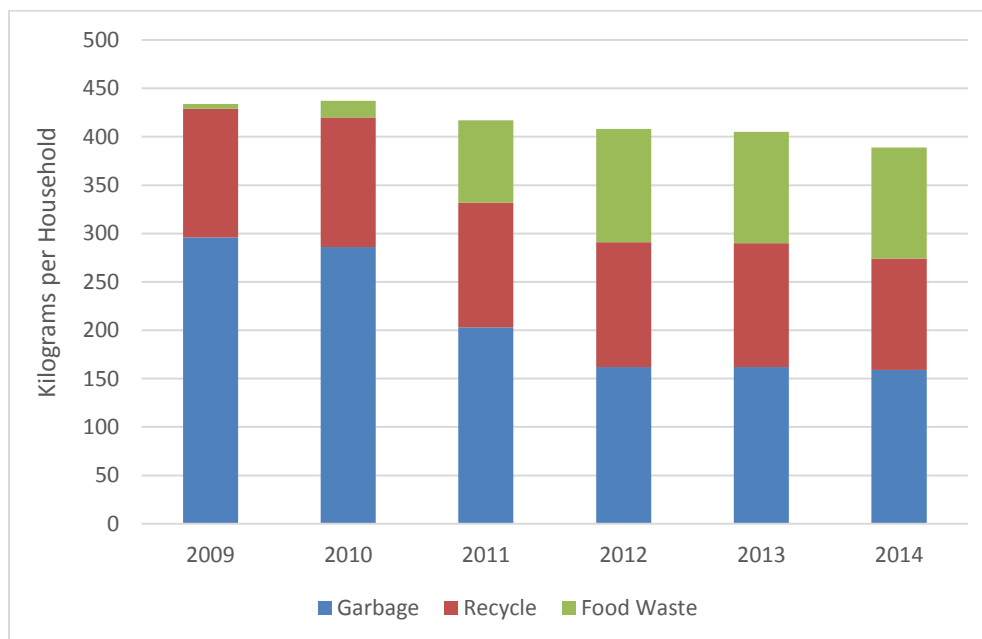
In 2012, the program collected 6,247 tonnes of kitchen scraps from 53,500 households. This represents 117 kg of food scraps per household or 43% reduction in waste sent to disposal. This material is processed at a privately owned and operated composting facility in Nanaimo under a long-term contract with the RDN.



With respect to total waste disposal, in 2012 the RDN Green Bin Program diverted 42 kg per capita from landfill, contributing to a region-wide disposal rate of 350 kg per capita.

Figure 3-6 illustrates the reduction in residential garbage disposal per household from 2009 before the program was introduced to 2014 as result of the Green Bin Program.

Figure 3-6: RDN Annual Curbside Tonnage Per Household 2009-2014



Grand Forks Food Scraps Collection Service

The City of Grand Forks and the Regional District of Kootenay Boundary (RDKB) were one of the first BC local governments outside of Lower Mainland/Vancouver Island to provide residents with a Green Bin Food Scraps curbside collection service. The weekly curbside collection service became available to 1,830 City of Grand Forks' households in October 2012. The organic materials are processed in open windrows at the Grand Forks Landfill.

Prior to implementing the green bin program, Grand Forks collected an average of 264 kg of garbage per household per year. After implementation of the program, garbage collected at the curb decreased to 119 kg per household per year. This equates to a 55% reduction in waste sent to disposal. With the collection of 123 kg of food waste per household annually, the overall diversion rate increased from 18% with recycling collection only to 62% with recycling and food waste collection.



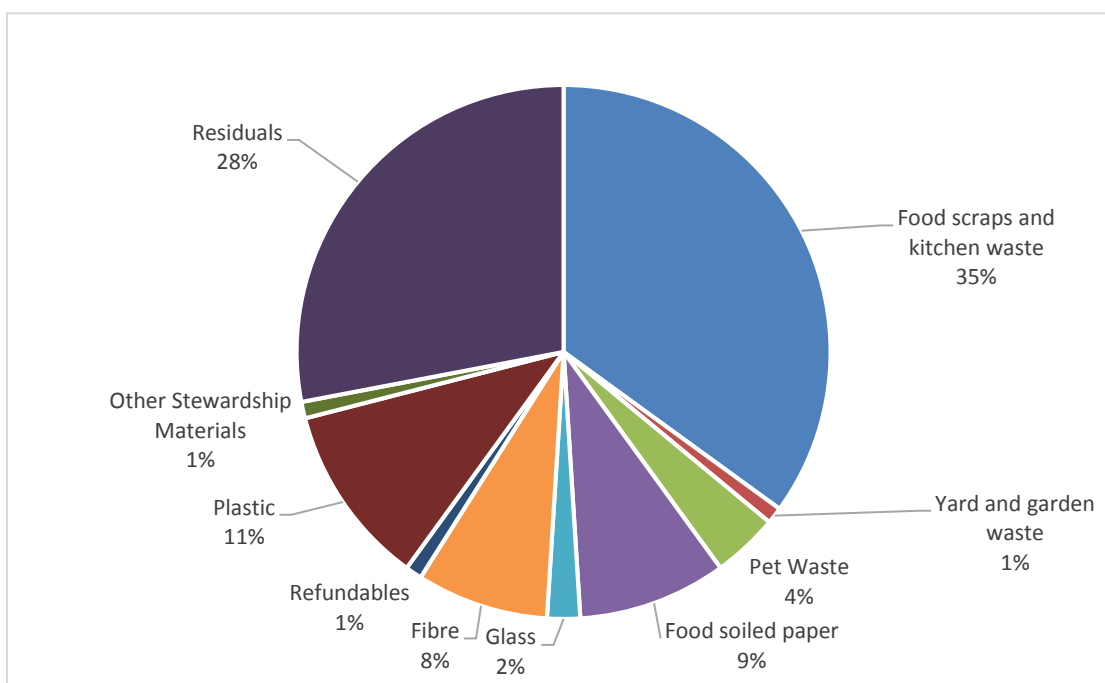


3.2.4 Food Waste Diversion Estimate and Impact to Sechelt Landfill

Prior to the implementation of the programs described in previous sections, program designers relied on waste composition data to estimate the quantity of organic waste that could be diverted from disposal. This method relies on two factors: the percentage of residential and ICI organics in the regional district waste stream and the potential recovery rate for both sectors.

While the SCRD has recent waste composition data for the residential waste stream, as illustrated in Figure 3.7, this 2014 study did not assess the composition of the ICI waste stream. This is important since ICI waste represents 50% of total waste disposal in the SCRD. Although ICI waste composition can be extrapolated from other similar regional district studies, actual diversion data from the programs and policies described in this section on best practices can provide a much more reliable estimate of diversion potential.

Figure 3-7: SCRD Residential Waste Composition All Areas 2014



Appendix 3 provides actual food waste data for residential curbside programs operating in the CVRD and RDN. As indicated in Figure 3-3, in 2015 these two regional districts on Vancouver Island had the lowest disposal rates in BC at 297 and 314 kilograms per capita respectively.

Both regional districts implemented disposal bans on commercial sector food waste in 2006, and all households in the RDN and most of the households in the CVRD have curbside food waste collection service. Based on this data it is reasonable to expect that curbside collection of residential organics in the SCRD would divert 52 kilograms per capita of food waste annually.



In lieu of curbside collection, a drop off depot for food waste can be provided. Using data from a pilot drop-off program in the Powell River Regional District, the recovery rate from a residential drop-off program is estimated to be 10 kilograms per capita per year.

With respect to food waste from the ICI sector, based on data from the RDN, it is reasonable to expect that implementation of a ban on disposal of food waste from this sector would divert an additional 30 kilograms per capita per year.

Table 3-1 applies the recovery rate of 52 kilograms per capita for curbside and 10 kilograms per capita for drop-off from the residential waste sector and 30 kilograms per capital from the ICI sector under three scenarios.

Scenario 1

Scenario 1 assumes that the municipalities will proceed with curbside collection service while SCRD Service will expand to include food waste collection in Electoral Areas B, D, E and F while Electoral Area A relies on a food waste drop-off site. In this scenario, residential food waste diversion is estimated to be 1,400 tonnes per year, which combined with ICI food waste represents a total diversion of 2,300 tonnes per year.

Scenario 2

Scenario 2 assumes that the municipalities will proceed with curbside collection service while the SCRD Service will expand to include food waste collection in Electoral Areas B and D, while Electoral Areas A, E, and F will rely on a food waste drop-off site. In this scenario, residential food waste diversion is 1,152 tonnes per year which combined with ICI food waste represents a total diversion of 2,051 tonnes of food waste annually.

Scenario 3

Scenario 3 assumes that the municipalities will proceed with curbside collection service while all the SCRD Electoral Areas will use a drop-off facility. This equates to 877 tonnes of residential food waste and 899 tonnes of ICI food waste for total diversion of 1,776 tonne per year.

Consequently, the total amount of food waste that could be diverted as feedstock to the Salish Soils composting facility could range from between 2,300 tonnes per year for Scenario 1, to 2,050 tonnes for Scenario 2, and 1,776 tonnes per year for Scenario 3.

Impact to Sechelt Landfill

The SCRD's landfill engineers, XCG Environmental Consultants (XCG) project that the diversion estimates under these three scenarios would provide fifteen, thirteen and eleven months respectively of additional site life at the Sechelt Landfill.



Table 3-1: Food Waste Diversion Scenarios and Impact to Sechelt Landfill

Sector	Households	Persons/ HH	Est. Pop	Scenario 1 (tonnes)	Scenario 2 (tonnes)	Scenario 3 (tonnes)
Residential						
<i>Municipal</i>						
Sechelt District Municipality	4,305	2	9,041	470	470	470
Town of Gibsons	2,056	2	4,318	225	225	225
Sechelt Indian Government District	273	2	628	33	33	33
<i>Municipal Sub-Total</i>				727	727	727
<i>Electoral Areas</i>						
EA B - Halfmoon Bay	1,351	2	2,973	155	155	30
EA D - Roberts Creek	1,627	2	3,579	186	186	36
EA E - Elphinstone	1,675	2	3,686	192	37	37
EA F - West Howe Sound	1,022	2	2,247	117	22	22
EA A - Pender Harbour/Egmont	1,385	2	2,493	25	25	25
<i>Electoral Area Sub-Total</i>				674	425	150
Residential Total				1,401	1,152	877
ICI (@30 kg per capita)						
ICI Total			29,970	899	899	899
TOTAL ALL SECTORS				2,301	2,051	1,776

	Scenario 1 (Months)	Scenario 2 (Months)	Scenario 3 (Months)
Additional Site Life at the Sechelt Landfill	15	13	11



4 Community and Stakeholder Engagement Process

A successful regional organics diversion strategy requires input from all stakeholders including processors, haulers, local governments, and waste generators in the area. This section summarizes the results of the stakeholder engagement process undertaken to date to inform the development of the strategy.

4.1 Processors

As discussed in Section 2.5, Salish Soils operates a composting facility in Sechelt. The Project Team has visited the site and has had several conversations with the Chief Executive Officer, Aaron Joe. Salish Soils is currently operating under capacity and would welcome the additional feedstock that would be available as result of the final SCRD Regional Organics Diversion Strategy.

Although Salish Soils has adequate processing capacity for food and green waste from residential and commercial sources, they would appreciate the added support provided by disposal bans and long-term contracts for feedstock supply. This is the case with most private sector operators. Without adequate feedstocks to operate at design capacity, cash flows are insufficient to provide the necessary funds for equipment maintenance and repair let alone any return on investment. Without long-term processing contracts private facilities have difficulty borrowing funds required for facilities upgrades and improvements, particularly with respect to odour control. These concerns are shared by Salish Soils.

4.2 Haulers

The Project Team contacted three garbage hauling companies operating in the Sunshine Coast, Grayco, Direct Disposal and Harbour Disposal. Both Grayco Disposal and Direct Disposal expressed support for increased organics diversion programs and are confident that their firms could provide food waste collection services for both the residential and ICI sectors. However, Harbour Disposal advised that if commercial food waste was banned from disposal region-wide they would need to purchase a new truck and would require a drop-off option at the Pender Harbour Transfer Station, given their unwillingness at this point to haul food waste to Sechelt.

Although Direct Disposal voiced support for a ban on commercial food waste, they are concerned that any additional feedstock to the Salish Soils composting facility will exacerbate odour issues at the facility. This is a legitimate concern and will need to be addressed in the development of the regional organics diversion strategy. See Section 5.3 for more details.

4.3 Local Governments

In May 2017, the SCRD coordinated a meeting with staff from the District of Sechelt, the Town of Gibsons and the Sechelt Indian Government District to discuss the development of the regional organics diversion strategy. At this meeting, the Project Team provided a high-level overview of the strategy development process and timelines while the member municipalities provided an update on their plans to implement curbside collection of food waste in their respective jurisdictions.

At the meeting Town of Gibsons staff mentioned that they were drafting a survey for residents to obtain input on curbside or depot collection of food waste.



Since the meeting the Town has issued a residential survey and a request for proposals (RFP) for a residential organic waste diversion program. The survey closed on June 30, 2017. The RFP, which closes July 14, 2017, is for a turnkey collection program whereby the successful proponent provides: a communication strategy, an education awareness program, collection methods, equipment required including kitchen and curbside containers, hauling methods and costs, and identifies the permitted processing facilities.

The Town of Gibsons anticipates awarding a contract by September 1, 2017 with service to commence the first week of October 2017. The expiration of the contract arising from this RFP is to coincide with expiration of the Town's curbside garbage collection contract in February 28, 2018.

As discussed in Section 2.3, the District of Sechelt has been operating a food waste collection pilot in the Davis Bay area for several years. District staff present at the meeting advised that Davis Bay residents support the service but may not be willing to pay the extra costs associated with a full roll-out. Due to resource constraints, staff have not been able to proceed with developing a proposal for Council consideration on District-wide curbside organics collection. This should be addressed within the next year.

The Sechelt Indian Government District Council approved a Zero Waste plan last year and will be hiring an educator to support the initiative. The SIGD currently provides weekly garbage and weekly recycling services to their residents. However, SIGD staff are currently reviewing options for weekly collection of food waste and bi-weekly collection of garbage and recyclables.

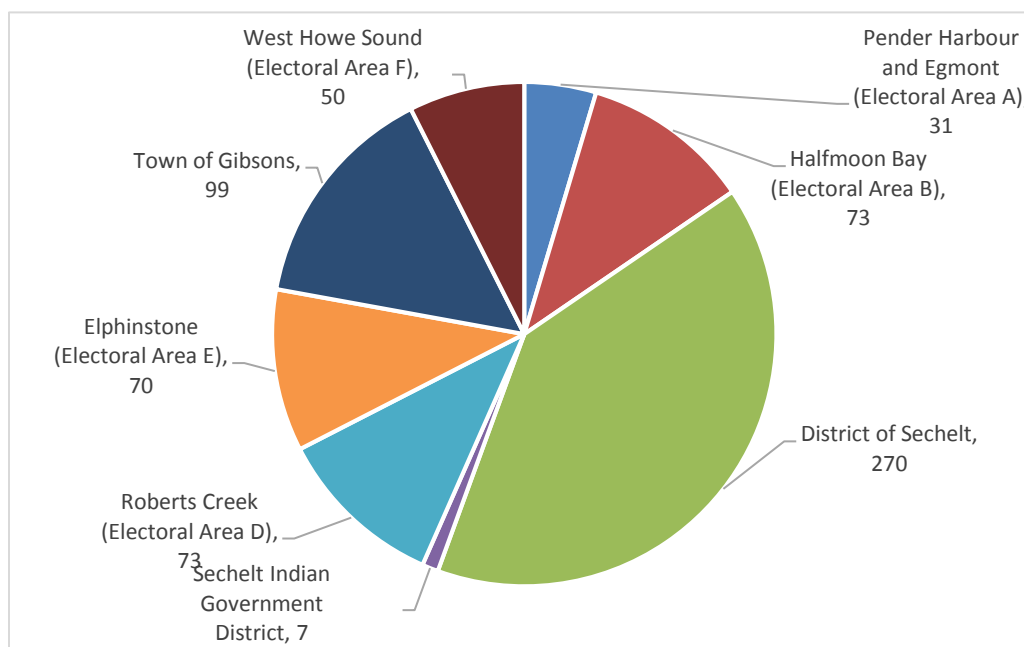
Based on this meeting, municipalities within the SCRD are considering the provision of curbside collection of food waste to their residents. However, with respect to green waste, municipal partners have not expressed an interest in collecting this material at the curb and are content to continue the current system of self-haul to SCRD drop-off depots.

4.4 Residents

From May 8, 2017 to June 2, 2017, the SCRD asked residents to respond to a questionnaire about their current organic waste management practices, their willingness to participate in depot and curbside organic waste collection services, and their concerns about these collection methods. A total of 673 people responded. The distribution of responses by area is illustrated in Figure 4.1



Figure 4-1: Distribution of Questionnaire Response by Area



The questionnaire results indicate a high level of current participation in green waste diversion, including backyard composting and drop-off depots. Detailed information on the survey is outlined in the Public Engagement Report – Organics Diversion Questionnaire.

For food waste management, a wide variety of solutions are used –ranging from backyard composting to feeding animals to using drop-off depots. Table 4.1 shows the prevalence of backyard composting of acceptable food scraps (fruits, vegetables, coffee grounds etc.) and depot use (all food scraps), by area, based on the responses to the questionnaire. There is a significant difference in the prevalence of backyard composting between the Electoral Area respondents (over 50%) and the municipal respondents (36% or less). Depot participation ranged from 3% in Electoral Area A (Pender Harbour) to 14% in the SIGD.

Table 4-1: Backyard Composting and Depot Use by Area

	Backyard Compost Food Scraps (% of area respondents)	Take Food Scraps to Depot (% of area respondents)	Put Food Scraps in the Garbage (% of area respondents)
Area A	55%	3%	65%
Area B	52%	11%	82%
Area D	55%	7%	77%
Area E	57%	6%	86%
Area F	54%	6%	66%
SIGD	0%	14%	86%
Gibsons	36%	6%	91%
Sechelt	32%	7%	82%



The respondents' willingness to participate in curbside organic waste collection services was high in all areas. Table 4.2 shows the percentage of respondents in each area that indicated that their participation would be "highly likely" or "maybe". Except for respondents in Areas A and F, there was generally a higher level of support for curbside collection over depot-based collection.

Table 4-2: Questionnaire Respondents Willingness to Participate in Organic Waste Collection

	Depot Collection			Curbside Collection		
	Highly likely	Maybe	Total	Highly likely	Maybe	Total
	% of respondents, by area					
Area A	61	26	87	55	16	71
Area B	27	36	63	75	14	89
Area D	36	30	66	67	14	81
Area E	46	33	79	66	19	85
Area F	52	24	76	56	16	72
SIGD	57	14	71	86	0	86
Gibsons	49	30	79	83	7	90
Sechelt	29	36	65	82	9	89

The most common concern expressed by respondents was the creation of animal attractants, particularly for bears. Many respondents suggested a willingness to participate in curbside collection if an animal-proof bin could be provided. The other commonly expressed concerns were the cost of the service and the potential for odour, although these concerns were identified with much less frequency than concerns related to attracting animals.

5 Considerations for Strategy Development

To ensure that a sustainable and robust organics diversion program is implemented in the SCRD, environmental, economic and social issues must be given full consideration in the development and selection of a regional organics diversion strategy. The following section outlines the Project Team's understanding of these issues in the SCRD as well as their implications on strategy development.

5.1 Sechelt Landfill Considerations

Landfill Capacity

According to the 2016 Annual Report prepared by XCG Consulting Limited, the Sechelt Landfill will reach capacity in 2027 based on current disposal rates, diversion initiatives, and population projections. If the SCRD fully implements all of the diversion initiatives outlined in the 2011 SWMP, landfill capacity could be extended another 5 years to early 2032. In either case, the SCRD will need to identify additional long-term disposal capacity and in the Project Team's experience this will be a challenging process that will inevitably result in higher disposal costs.

A lack of or shortage of landfill capacity was one of the main drivers for the CVRD and the RDN to implement their organics diversion programs. The CVRD currently exports their residual wastes in response to an unsuccessful landfill siting process. Given the high cost associated with waste export, the



CVRD has pursued a full range of diversion initiatives to reduce their residual disposal costs. The RDN also faced a landfill capacity crisis and after a controversial and failed landfill siting process, chose to conserve existing capacity by promoting maximum waste diversion.

Greenhouse Gas Emissions

As discussed in the 2011 SWMP, the Sunshine Coast Regional District, Town of Gibsons, District of Sechelt and the Sechelt Government District are committed to reducing greenhouse gas (GHG) emissions for the region. An emissions inventory completed in 2009 shows that the Sechelt Landfill contributes roughly 7% of GHG emissions on the Sunshine Coast. Since food waste generates methane, a potent greenhouse gas, during decomposition in a landfill, diverting this waste to a composting facility provides not only a significant reduction in GHG emissions, but also provides residents a low-cost and easy option to address climate change by reducing their household GHG emissions. Consequently, from an environmental perspective, the region wide organics diversion strategy should aim to maximize the diversion of food waste as an effective and efficient means to reduce GHG emissions.

5.2 Supporting Policy Considerations – Disposal Bans

Organic waste disposal bans have proven to be an effective and low-cost policy tool to divert waste and reduce GHG emissions in Metro Vancouver, Capital, Cowichan Valley and Nanaimo regional districts. However, the application of disposal bans for the ICI and residential sectors has varied between regional districts for the reasons discussed below.

In 2005 the RDN and CVRD were the first regional districts in BC to implement disposal bans on food wastes. In both cases the bans applied to commercial food waste and not food waste from the residential sector. This was due to two factors: the availability of privately owned and operated composting facilities and the fact that commercial food waste generators and private haulers could move faster to implement collection programs than local government service providers in the residential sector.

In the RDN, the commercial organics ban achieved significant and early diversion success while providing staff the opportunity to study collection options for the residential sector. This included implementation of a successful curbside collection pilot project. As a result, curbside collection services operated by the City of Nanaimo and the RDN expanded to include food waste in 2010. However, the commercial disposal ban has not been expanded to apply to residential waste since collection services were implemented voluntarily.

In Metro Vancouver and the CRD, the organics disposal bans, effective in 2015, apply to both the commercial and residential sectors. However, because these regional districts do not provide residential curbside garbage collection programs, they allowed for a two-year consultation process with their municipal partners and commercial generators to ensure support for their initiatives. Once municipal support was confirmed, the effective date for the ban was established and implemented in a phased process. In effect, these bans applied to commercial and residential organics because member municipalities were supportive and were given sufficient time to design and implement their collection systems.



5.3 Odour Management at Salish Soils

As discussed in Section 2.5, the Salish Soils composting facility meets the requirements of the Organic Matter Recycling Regulation (OMRR), which falls under the Environmental Management Act. The OMRR governs the production, quality and land application of certain types of organic matter. OMRR sets requirements for compost facilities with respect to:

- Construction and operation;
- Leachate management;
- Odour management;
- Capacity, and,
- Process and quality criteria.

For facilities that process less than 20,000 tonnes per year, OMRR requirements are not too stringent. For facilities that process more than that amount, requirements become more rigorous. Nevertheless, because OMRR requirements were not site specific at the time, the RDN, CVRD, Metro Vancouver and the CRD have all applied their Waste Stream Management Licensing Bylaws or Composting Code of Practice Bylaw to set higher performance standards than OMRR for composting facilities in their regions. This was primarily due to concerns over odour management, which is crucial to successful organic diversion.

In 2016, with more composting facilities expected to come online, OMRR was amended to ensure effective protection of the environment and public health. The amended OMRR requires all compost facilities that process food waste or biosolids, and have a production design capacity to produce 5,000 tonnes of compost or more per year to also apply for a Permit. These new permit requirements include completion by the applicant of an Environmental Impact Study, an Operating Plan, an Odour Management Plan, a Leachate Management and a Public Notification Process.

Although the Salish Soils facility is not subject to OMRR, the company has met all the requirements of the regulation for a facility of its size. And even though its production design capacity is less than 5,000 tonnes of compost per year, Salish Soils has advised the Project Team that they would be willing to apply for a permit under OMRR. Although this would be in the best interests of the SCRD, the permit requirements are expensive and Salish Soils would need to see a corresponding increase in feedstock and associated revenue. Consequently, the regional organics diversion strategy must consider due diligence requirements with respect to environment and public health protection as well ensuring that Salish Soils has the financial ability to meet these requirements.

With respect to processing costs, it is likely that the current Salish Soils tipping fee of \$80 per tonne for large quantities will increase to meet permit requirements. The tipping fees at similar composting facilities in BC are closer to \$100 per tonne to cover higher operating and maintenance and equipment replacement costs, particularly with respect to odour control.



5.4 Geography and Demographics

Communities and settlements in the SCRD are primarily strung out along a long and linear corridor that runs along the southern coastline. This has an impact on waste management infrastructure with respect to the need for drop-off and transfer facilities for communities outside of a reasonable hauling distance to the Sechelt Landfill or, for organics, to the Salish Soils composting facility in Sechelt. There is also the need to consider access to drop-off facilities for island residents as well as tourists and other seasonal visitors. Geography also dictates the need to mitigate bear human conflict with respect to garbage collection and disposal.

5.5 Community Support

Community support is essential to a successful organics diversion program. As discussed in Section 4.4, based on the results of the community questionnaire there is a high-level support for curbside collection of food waste in the SCRD. Nevertheless, residents have expressed concern over cost and wildlife concerns. The regional organics diversion strategy should take these concerns into consideration to ensure that most residents and businesses support food waste diversion.



6 Regional Organics Diversion Strategy

This strategy contains initiatives related to, commercial sector diversion, reduction and residential sector diversion. The estimated costs and implementation schedule is provided in Table 6-1 and a detailed timeline in Table 6-2.

Commercial Food Waste Ban

1. Implement a commercial food waste ban.
2. Implement commercial food waste drop-off at the Pender Harbour Transfer Station.

Residential Food Waste

3. Implement residential food waste drop-off in Pender Harbour, mid-coast, south coast.
4. Implement curbside collection of food waste for all SCRD residences in Electoral Areas B, D, E, and F receiving garbage collection for a March 1, 2019 start.
5. Implement a residential food waste ban.

Reduction Programs

6. Implement a Food Waste Reduction Campaign.
7. Implement an at-home Compost Coaching Program.
8. Investigate a Backyard Composter Subsidy Program.

Table 6-1: Regional Organics Diversion Strategy Costs and Implementation Schedule

	Action	Cost Estimate	Schedule
1.	Implement a commercial food waste ban.	Existing budget	2018
2.	Implement commercial food waste drop-off at the Pender Harbour Transfer Station.	\$10,000	2018
3.	Implement residential food waste drop-off in Pender Harbour, mid-coast and south coast.	TBD	2018
4.	Implement curbside collection of food waste for all SCRD residences in EA's B, D, E, F receiving curbside collection of garbage for a March 1, 2019 start.	TBD	2019
5.	Implement a residential food waste ban.	TBD	2020
6.	Implement a Food Waste Reduction Campaign.	\$10,000*	2019
7.	Implement at-home Compost Coaching Program.	\$10,000*	2019
8.	Investigate a Backyard Composter Subsidy Program.	TBD	2019

*Additional staffing resources will be required.



Table 6-2: Regional Organics Diversion Strategy Implementation Actions and Timeline

Regional Organics Diversion Strategy		2018				2019				2020			
Priority	Implementation Actions and Timeline	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
#1	Establish Food Waste Contracts												
	<i>Regulatory Review</i>												
	<i>Procurement process for processing</i>												
	<i>Procurement process for hauling</i>												
	<i>Board decision reports</i>												
#2	Commercial Food Waste Drop-off at Pender Harbour Transfer Station												
	<i>Establish food waste drop-off (see Food Waste Contracts)</i>												
	<i>Launch</i>												
	<i>Promote program as part of Commercial Food Waste Ban process</i>												
	<i>Evaluate effectiveness (Waste Composition Study)</i>												
#3	Commercial Food Waste Ban												
	<i>Pre-ban consultation and education with haulers and ICI sector</i>												
	<i>Develop communication materials</i>												
	<i>Bylaw amendment - Report</i>												
	<i>Launch Ban: Phase 1 Education and Awareness</i>												
	<i>Launch Ban: Phase 2 Enforcement</i>												
	<i>Ongoing ban communications, enforcement</i>												
	<i>Evaluate effectiveness (Waste Composition Study)</i>												
#4a	Residential Food Waste Drop-off at Pender Harbour Transfer Station												
	<i>Establish food waste drop-off (see Food Waste Contracts)</i>												
	<i>Program promotion</i>												
	<i>Launch</i>												
	<i>Ongoing communications, service delivery, continuous improvement</i>												
	<i>Evaluate effectiveness (Waste Composition Study)</i>												
#4b	Residential Food Waste Drop-off in Sechelt												
	<i>Develop options for drop-off</i>												
	<i>Board decision report</i>												
	<i>Program promotion</i>												
	<i>Launch</i>												
	<i>Ongoing communications, service delivery, continuous improvement</i>												
	<i>Evaluate effectiveness (Waste Composition Study)</i>												



Regional Organics Diversion Strategy		2018				2019				2020			
Priority	Implementation Actions and Timeline	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
#4c	Residential Food Waste Drop-off for South Coast												
	<i>Develop options for drop-off</i>												
	<i>Board decision report</i>												
	<i>Program promotion</i>												
	<i>Launch</i>												
	<i>Ongoing communications, service delivery, continuous improvement</i>												
	<i>Evaluate effectiveness (Waste Composition Study)</i>												
	<i>Undertake feasibility work on South Coast Site to include food waste drop-off</i>												
#5	Curbside Collection of Food Waste												
	<i>Program planning and best practices including wildlife management</i>												
	<i>Issue RFP</i>												
	<i>Contract award –Board decision report</i>												
	<i>Bylaw 431 amendment - Report</i>												
	<i>Develop Outreach and Education Materials, Program Promotion</i>												
	<i>Launch</i>												
	<i>Ongoing communications, service delivery, continuous improvement</i>												
	<i>Evaluate effectiveness (Waste Composition Study)</i>												
#6	At-Home Compost Coaching Program												
	<i>2019 budget consideration – Board decision report</i>												
	<i>Program planning, including community based social marketing</i>												
	<i>Program promotion</i>												
	<i>Launch</i>												
	<i>Program evaluation, continuous improvement</i>												
	<i>Ongoing communication, program delivery</i>												
#7	Investigate Backyard Composter Subsidy												
	<i>2019 budget consideration – Board decision report</i>												
	<i>Best practice research, options and link to Compost Coaching</i>												
	<i>Program planning and promotion (if approved)</i>												
	<i>Launch</i>												
	<i>Program evaluation, continuous improvement</i>												
	<i>Ongoing communication, program delivery</i>												



Regional Organics Diversion Strategy		2018				2019				2020			
Priority	Implementation Actions and Timeline	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
#8	Food Waste Reduction Campaign												
	<i>2019 budget consideration – Board decision report</i>												
	<i>Program planning and promotion (if approved)</i>												
	<i>Launch</i>												
	<i>Program evaluation, continuous improvement</i>												
	<i>Ongoing communication, program delivery</i>												
#9	Waste Composition Study												
	<i>Item included in 2020 financial process</i>												
	<i>Procurement process for consultant services to complete study: residential, ICI, drop-off bins</i>												
	<i>Waste Audit #1</i>												
	<i>Waste Audit #2</i>												
#10	Residential Food Waste Ban												
	<i>Pre-ban consultation and education</i>												
	<i>Develop communication materials</i>												
	<i>Bylaw amendment - Report</i>												
	<i>Launch Ban: Phase 1 Education and Awareness</i>												
	<i>Launch Ban: Phase 2 Enforcement (Q2 2021)</i>												
	<i>Ongoing ban communications, enforcement (Q2 2021)</i>												

Timeline Legend

The timeline uses these indicator colours to assist in understanding the nature and breakdown of each task.

Board Report	
Planning & Design, Education & Outreach, Launch	



Appendix 1: Notes to the Financial Statements for the Years Ended December 31, 2016 and 2015.

Sunshine Coast Regional District

Notes To The Financial Statements

For the Years Ended December 31, 2016 and 2015

9. Provision for Landfill Future Closure and Post-Closure Care Costs:

The Regional District is responsible for the closure and post-closure care costs related to two landfill sites - one in Sechelt and the other in Pender Harbour. The Regional District's estimated liability for these costs is recognized as the landfill site's capacity is used. The recorded liability of \$5,245,705 (2015 - \$4,803,825) represents the portion of the estimated total future costs recognized as at December 31, 2016. The Regional District has set aside funding for future landfill closure and post-closure care costs. The balance of this funding as at December 31, 2016 is \$508,745 (2015 - \$208,109) resulting in a current funding shortfall of \$4,736,960 (2015 - \$4,595,716).

The Sechelt landfill site is expected to reach its capacity in 2027 and the Pender Harbour landfill site reached its capacity and was converted to a transfer station in 2015. The remaining liability to be recognized for the Sechelt landfill site is estimated to be \$1,534,086 (2015 - \$1,632,509) based on the remaining capacity of 212,428 cubic meters, which is 24.17% of the total capacity. As the Pender Harbour landfill site reached its capacity in 2015, there is no remaining liability to be recognized.

The reported liability is based on estimates and assumptions with respect to events extending over the remaining life of the landfill. The liability and annual expense is calculated based on the ratio of usage to total capacity and the discounted estimated future cash flows associated with closure and post-closure activities. In 2016, the Regional District updated the basis for estimating future cash flows to reflect long-term average inflation and discount rates applicable to the Regional District. The impact of this change was a decrease to the recorded liability in 2016 of \$225,382.

In 2016, the BC Ministry of Environment issued updated landfill criteria increasing the minimum post closure care period from 25 years to 30 years. As such, post closure care costs are now expected to continue for 30 years following the year of closure at both the Pender Harbour and Sechelt Landfill sites. The impact of this change was an increase to the recorded liability in 2016 of \$247,426.



Appendix 2: Organics Diversion Programs in Comparable AVICC Regional Districts

A2 1: Organics Diversion Programs in Comparable AVICC Regional Districts

Program Characteristics	CRD	CVRD	RDN	SCRD	PRRD
2016 Population	382,645	84,014	157,599	29,243	20,328
Population Density (Pop/km ²)	154	23	72	8	4
2015 Per Capital Disposal (kg)	345	297	314	421	458
MSW Tipping Fee	\$110	\$140	\$125	\$150	\$220
Green Waste Tipping Fee	\$59	Free	\$55	\$0/\$45	\$45
Food Waste Tipping Fee	\$120	\$90	\$110	\$80	Pilot/Free
Curbside Collection Services:					
Garbage	Bi-Weekly	Bi-Weekly 1 can	Bi-Weekly 1 can	Weekly 1 can	Weekly Tag Based Powell River Only
Food Waste	Weekly/Bi- Weekly Varies by Municipality	Weekly	Weekly	Pilot Pick-up Sechelt only	Pilot Drop-Off
Green Waste	Varies by Municipality	Depot	Depot	Depot Pilot Pick-up Sechelt only	Depot
Recycle	Bi-Weekly	Bi-Weekly	Bi-Weekly	Bi-weekly Sechelt SIGD Weekly	Bi-Weekly Powell River Only
Depot – recycle	Yes	Yes	Yes	Yes	Yes
In-region compost facility	No	Yes	Yes	Yes	No
Organics Ban – ICI	Yes	Yes	Yes	No	No
Organics Ban – Residential	Yes	No	No	No	No
Organics Strategy/Plan	Yes	Yes	Yes	In development	In development



Appendix 3: Food Waste Diversion Estimates

Table A3-1 provides actual food waste diversion data for residential curbside programs operating in the CVRD and the RDN. As indicated in Figure 3-3, these two regional districts on Vancouver Island have the lowest disposal rates in BC at 297 and 314 kilograms per capita respectively. Both regional districts implemented disposal bans on commercial sector food waste in 2006, and all households in the RDN and most of the households in the CVRD have curbside food waste collection service. Based on this data it is reasonable to expect that curbside collection of organics in the SCRD would result in similar diversion results.

Table A3 1: Residential Food Waste Diversion Data in the CVRD and RDN

Curbside Program	Households	Person/HH	Est. Pop	Food Waste		
				Tonnes/yr	kg/hh/yr	kg/cap/yr
RDN						
City of Nanaimo	27,600	2.3	63,480	3,505	127	55
RDN Service Area	28,130	2.2	61,886	3,151	112	51
Total	55,730		125,366	6,656	119	53
CVRD						
Town of Ladysmith	3,410	2.3	7,843	436	128	56
District of North Cowichan	10,640	2.3	24,472	1,075	101	44
Total	14,050		32,315	1,511	108	47
				Average	117	52

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Corporate and Administrative Services Committee – February 22, 2018

AUTHOR: Janette Loveys, Chief Administrative Officer
Robyn Cooper, Manager, Solid Waste Services

SUBJECT: SCRD SOLID WASTE LONG-TERM OUTLOOK

RECOMMENDATION(S)

THAT the report titled SCRD Solid Waste Long-Term Outlook be received.

BACKGROUND

Over the past year, there have been many discussions regarding current and future SCRD solid waste services.

Specifically, two workshops were held:

- Special Infrastructure Services Committee, Solid Waste Workshop - March 2, 2017
- Elected Officials Solid Waste Workshop - October 24, 2017

Staff have worked diligently to prepare work plans which incorporate Board decisions and guiding documents such as the Solid Waste Management Plan (SWMP) and the recently adopted Regional Organics Diversion Strategy.

As a continuation of this work, staff have prepared this report to provide the Committee a solid waste long-term outlook which incorporates an overview of the governance, services and programs and a financial framework to assist the Committee with upcoming service delivery decisions.

At the December 14, 2017 Board meeting, the following resolution was adopted:

346/17 **Recommendation No. 15** *Elected Officials Solid Waste Workshop Summary and Recommended Direction*

THAT the report titled Elected Officials Workshop Summary and Recommended Direction be received;

AND THAT the following agreed upon direction heard at the Elected Officials Solid Waste Workshop be integrated into the Sunshine Coast Regional District (SCRD) Solid Waste work plan:

- Implementation of regional disposal bans for recycling and commercial organics;
- Investigate engineering options for increased capacity at the Sechelt Landfill;

AND FURTHER THAT an updated SCRD Solid Waste work plan be presented at the December 21, 2017 Infrastructure Services Committee meeting.

These decisions continue to provide the foundation for how initiatives, work plans and how staff developed a sustainable financial framework.

DISCUSSION

Governance Framework

Local Government Act

Under the *Local Government Act (LGA)*, Regional Districts are required to manage solid waste and landfill services. A portion of the LGA Part 9, Division 4 – Waste Management is included as Attachment A.

BC Ministry of Environment

The BC Ministry of Environment's (MoE) Environmental Management Act requires Regional Districts to have Solid Waste Management Plans (SWMP).

The MoE sets the criteria for:

- Solid Waste Management Plan development, monitoring and updates
- Landfill development, operations, closure and environmental monitoring
- Performance Measures e.g. solid waste per capita disposal targets

Additionally, the MoE under the Recycling Regulation mandates materials that are to be collected and recycled under Extended Producer Responsibility (EPR) such as paint, batteries, tires and printed paper and packaging that are intended to be fully-funded by the producers of those materials.

SCRD Solid Waste Management Plan

The SCRD's first SWMP was adopted by the Board and approved by MoE in 1996. Most notably, it helped establish tipping fees at the Sechelt and Pender Harbour Landfills, a one can garbage collection program and expansion of landfill diversion programs.

This was followed by an updated SWMP in 2005 and then again in 2011. The 2011 SWMP is the current plan and is not anticipated to be updated until 2021.

The 2011 SWMP sets a diversion rate target of 65%-69% by 2016 and outlines twenty-four initiatives.

Diversion rate is calculated by dividing the diversion by the total waste generated. The 2016 diversion rate was 56%.

Expressing the target as a per capita disposal rate, the target is 279 kg/pp/yr whereas the 2016 disposal rate was 434 kg/pp/yr.

A summary of diversion and disposal rates for 2011-2016 is included as Attachment B.

The SWMP initiatives are in various stages of completion. A timeline for 2016-2020 was adopted by the SCRD Board in December 2015 and is included as Attachment C.

SCRD Bylaws

The SCRD has several bylaws related to Solid Waste Services. There are bylaws originating from 1967 for disposal at Sechelt Landfill (Bylaw 10) and 1969 for collection (Bylaw 22).

Table 1 summarizes the most recent establishing bylaws, the year the bylaws were established, the participants and the associated service bylaws.

Table 1 – Summary of SCRD Solid Waste Bylaws

Establishing Bylaw	Year Established	Bylaw Participants	Service Bylaws
Bylaw 1019 Refuse Disposal Local Service	1994	A, B, D, E, F DoS, SiGD, ToG	Bylaw 405 Landfill Site Regulations, Rules & Fees
			Bylaw 451/452 Sechelt & Pender Landfill Closure Reserve Fund
Bylaw 1021 Refuse Collection Local Service	1994	B, D, E, F	Bylaw 431 Refuse Collection Regulations, Rules & Fees
			Bylaw 654 Refuse Collection Operating Reserve Fund
Pursuant to Section 814 of LGA Reserve fund established under Section 188 of the Community Charter	2012	A, B, D, E, F DoS, SiGD, ToG	Bylaw 653 Regional Solid Waste Operating Reserve Fund
			Bylaw 670 Eco-Fee Reserve Fund

Overview of Current SCRD Solid Waste Services and Programs

Sechelt Landfill and Pender Harbour Transfer Station Services

The SCRD operates the Sechelt Landfill and Pender Harbour Transfer Station in accordance to MoE guidelines and criteria.

Operation commenced under MoE permit in 1971 for the Sechelt Landfill and in 1972 for the Pender Harbour Landfill. Both sites were in operation prior to issuance of permits.

In 1994, through Bylaws 1019 and 405, tipping fees were established and the sites were no longer funded from taxation.

In 2015, the Pender Harbour Landfill was closed and converted into a Transfer Station with garbage delivered to the Sechelt Landfill for burial.

At status quo diversion services and programs, the Sechelt Landfill has approximately eight to ten years remaining until capacity is reached. Actual closure date may vary.

Landfill and Transfer Station Services are funded from tipping fees (user fees). Differential fees are based on material type and associated costs.

The contributions to closure liability and residential green waste are funded from taxation.

Both sites accept garbage from the residential and commercial sectors.

In addition to garbage, the sites each operate a ShareShed where residents can drop-off or pick-up items (for a small fee) as well as both sites accept the following materials for diversion:

- | | |
|---------------|------------------------|
| • Appliances | • Metal |
| • Cardboard | • Paint (Sechelt only) |
| • Drywall | • Propane Tanks |
| • Green Waste | • Tires |
| • Mattresses | • Wood |

Specifically for residential green waste, the SCRD provides depot services at three locations and funds the site, hauling and processing costs from taxation. The drop-off locations for residential self-hauled green waste are:

- South Coast – Town of Gibsons
- Sechelt – Salish Soils
- Pender Harbour – Pender Harbour Transfer Station

Attachment B and C are included with this report as supporting documentation.

Refuse Collection Service

The SCRD implemented garbage collection services in the early 1980's.

In 1994, via Bylaws 1021 and 431, the local service was established to define a refuse collection area within Electoral Areas B, D, E and F and to implement a user fee service instead of taxation.

Weekly collection was provided for up to two resident-owned 77L cans.

The service was provided via contractor.

In 1998, a one can limit was introduced in the SCRD, District of Sechelt and Town of Gibsons. However, extra garbage cans can be collected if an extra garbage sticker is purchased and affixed to the can.

The service also includes a clean-up coupon program, whereby residences receiving collection services receive a coupon as part of their utility bill that allows for one load up to 450 kg to be delivered to the Sechelt Landfill at no cost at the time of delivery. This program also includes a one month drop-off at a South Coast location via contractor. The coupon program is funded from the user fees.

Electoral Area A residents also receive the clean-up coupon via direct mail. This service is funded from the Pender Harbour Transfer Station at an annual cost of \$12,000.

Depot Recycling Services

In 1993, the SCRD began providing some level of funding towards depot operations in Pender Harbour and the South Coast via contractors.

Since 2000, the SCRD has funded depots for residential and commercial recycling on the Sunshine Coast. Locations of the depots and operating models have changed over time, but generally, there has been one depot located in Pender Harbour, one in Sechelt and one located on the South Coast.

Since 2014, all three depots have been operated via contractors and collect residential packaging and printed paper as part of the provincial recycling program led by Recycle BC (formerly MMBC). Commercial sector recycling is not permitted at the depots because the provincial program is currently for residential materials only. The commercial sector is required to hire their own recycling service provider.

Additionally, since the implementation of the provincial recycling program, the SCRD has had a contract with Gibsons Recycling to collect and recycle books. Books are excluded from the Recycling Regulation and would otherwise be disposed as garbage.

The Board has confirmed the depot model with respect to the delivery of solid waste services.

Islands Services

The following is an overview of the history of the Islands Clean-Up Services:

- 1993: the SCRD helped fund a clean-up on Keats Island.
- 1998 – 2001: the SCRD funded 50% of island's clean-ups on a request basis. Island residents organized the services and requested funding.
- 1998: Gambier and Thormanby received funds.
- 2000: Gambier and Keats received funds.
- 2001: Keats and Thormanby received funds.
- 2002: SCRD fully funded and organized the Islands Clean-Up Service.

Since 2002, the SCRD has provided an annual clean-up via contracted barge service for island residents of Keats, Gambier, Thormanby and their surrounding islands.

The barge either travels to individual docks or to a communal drop-off location depending on whether the residences are water-only access or road access.

Additionally, garbage containers are provided at six locations for island residents to deposit their household garbage. There is a separate arrangement and payment structure with each of the operators. This container service began in 2001.

Operator and locations of garbage containers are as follows:

- Harbour Authority of Pender Harbour - Madeira Park Government Dock, Hospital Bay Government Dock
- Buccaneer Bay Marina – Buccaneer Bay
- Secret Cove Marina – Secret Cove
- BC Ferries - Langdale Ferry Terminal
- Gibsons Landing Harbour Authority: Gibsons Government Wharf

Illegal Dumping Program

The SCRD has a Good Samaritan Program that funds the tipping fees for materials that are illegally dumped that are collected by volunteers and self-hauled to either the Sechelt Landfill or Pender Harbour Transfer Station.

Additionally, staff organize an annual Backroad Trash Bash event that is held in a different area on the Sunshine Coast each year and invites volunteers to collect material that has been illegally dumped in the backroads.

The Good Samaritan Program began in 1994 and the Backroad Trash Bash in 2012.

Since 2014, the SCRD hosts an annual collaborative meeting of inter-agencies who are actively working to reduce illegal dumping and raise awareness of the reporting process. The group continues to meet each October following the Backroad Trash Bash to sharing information and opportunities to collaborate.

Education and Outreach Program

In recent history, education and outreach efforts have mostly been limited to advertising including the SCRD website, Facebook, Twitter and local newspapers. This has included focused public awareness campaigns such as: recycling ins and outs, 'Create Memories, Not Garbage,' food waste reduction, and backyard composting.

Staff also attend approximately six community-organized events throughout the year and host one event for Compost Awareness Week.

Eco-Fee Reserve

The Eco-Fee Reserve Fund was established in 2012 via Bylaw 670 to assist with the implementation of the SCRD's SWMP initiatives.

The Eco-Fee Reserve is funded from \$5 per tonne of garbage received at the Sechelt Landfill and Pender Harbour Transfer Station. The annual contributions vary based on the tonnage of garbage. In 2017, the contribution was \$50,000.

Since 2013, the Eco-Fee Reserves funds 50% of the Waste Reduction Coordinator position and since 2015 funds the Waste Reduction Initiatives Program.

Financial Framework

Over the past few months, the SCRD Board and staff had had many discussions with respect to solid waste. In addition, in 2017 in particular, there were a number of incremental contracts increases outside of the budget process related to waste streams and service delivery. All of these decisions were related to continuing to provide a consistent service level which means, the same level of service is costing more and each incremental decision has an accumulative impact to the overall cost.

Two examples to help illustrate the issue:

As mentioned above, two contracts approved in 2017 which had financial implications to Regional Solid Waste were first, the increase in Sechelt Landfill maintenance contract as a result of increased tonnage coming from Pender Landfill in the amount of \$30,000 per year. The second was for Islands Clean-up in the amount of \$28,000 per year. Both of these were "unfunded" in 2017, which resulted in a program deficit to cover these costs.

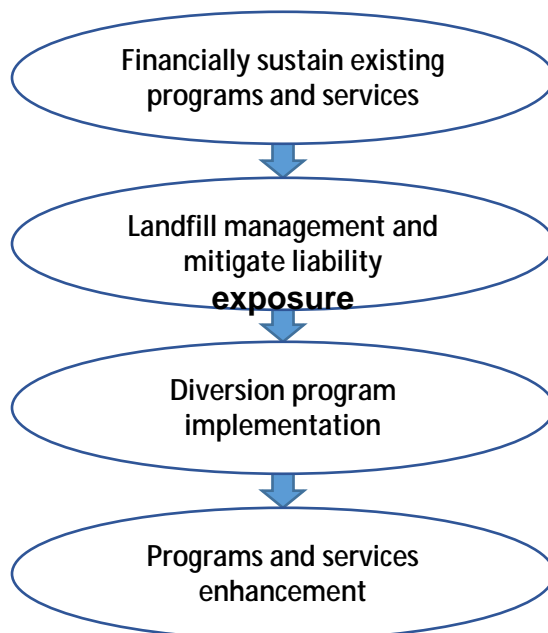
In 2017, the Green waste program was funded in the amount of \$327,750 from taxation. If more material is received than is funded, other sources will have to subsidize the program or a program deficit will occur. For 2017, this was the case and the program cost an additional \$14,879 than what was funded.

Concurrent reports are included in this Committee agenda which address the long term financial sustainability of Solid Waste Services. One is to ensure the Board has a policy discussion on service levels, tipping fees and subsidization. For example, one of the outcomes of the Tipping Fee Review is understanding that many waste streams are being subsidized. For example, in 2017 the SCRD received a marked increase in wood waste, mattresses and cardboard, which are all heavily subsidized materials.

For 2017, these have all had a cumulative impact which has resulted in an annual deficit of \$91,000. Staff will bring a report of impacts and mitigations at the March 5 2018 Round 2 Budget as part of the year-end summary.

Concurrent to the financial decisions, there are other key impacts to further consider are the subsequent reports which go into further details and recommendations primarily with respects to the Sechelt Landfill Liability and Organic Diversion options.

Staff propose a financial framework to assist in discussions when setting priorities for spending.



There is a recognition that there are significant financial impacts and decisions to be made by the Board. The financial framework is a path that staff utilized when assembling all the various components to the solid waste services.

STRATEGIC PLAN AND RELATED POLICIES

This report is in support of two SCRD's Strategic Priorities Ensure Fiscal Sustainability and Embed Environmental Leadership.

In addition, there is policy alignment with the SCRD's Solid Waste Management Plan and SCRD Financial Sustainability Policy.

CONCLUSION

As a continuation of this work, staff have prepared this report to provide the Committee a solid waste long-term outlook which incorporates an overview of the governance, services and programs and a financial framework to assist the Committee with upcoming service delivery decisions.

On December 14, 2017 the SCRD Board adopted a number of priorities which continue to be integrated into the work plan. These decisions continue to provide the foundation for how initiatives, work plans and a sustainable financial framework is being developed by staff.

There is a recognition that there are significant financial impacts and decisions to be made by the Board. The financial framework is a path that staff utilized when assembling all the various components to the solid waste services.

This report provides an overview and a context for upcoming Board decisions.

Attachments:

Attachment A: *Local Government Act* Chapter 1, Part 9, Division 4 – Waste Management

Attachment B: Regional Diversion – Annual Update, report to May 18, 2017 Infrastructure Services Committee

Attachment C: SWMP Initiatives and Timeline

Reviewed by:			
Manager	X-R. Cooper	Finance	X-T.Perreault
GM		Legislative	
CAO	X-J. Loveys	Other	

LOCAL GOVERNMENT ACT

[RSBC 2015] CHAPTER 1

Deposited with Clerk of the Legislative Assembly on December 16, 2015

Part 9 — Regional Districts: Specific Service Powers

Division 4 — Waste Management

Management of solid waste and recyclable material

315 (1) A board may, by bylaw, establish the service of the regulation, storage and management of municipal solid waste and recyclable material, including the regulation of facilities and commercial vehicles used in relation to these matters.

(2) If a board adopts a bylaw under subsection (1), the board has and must exercise its authority in accordance with the *Environmental Management Act* and regulations under that Act.

(3) For the purposes of this section, "municipal solid waste" and "recyclable material" have the same meaning as in the *Environmental Management Act*.

Authority in relation to waste disposal and recycling

316 A board may, by bylaw, do one or more of the following:

(a) require persons to use a waste disposal or recycling service, including requiring persons to use a waste disposal or recycling service provided by or on behalf of the regional district;

(b) require owners or occupiers of real property to remove trade waste, garbage, rubbish and other matter from their property and take it to a specified place;

(c) require the emptying, cleansing and disinfecting of private drains, cesspools, septic tanks and outhouses, and the removal and disposal of refuse from them.

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Infrastructure Services Committee – May 18, 2017

AUTHOR: Robyn Cooper, Manager, Solid Waste Services

SUBJECT: REGIONAL DIVERSION – ANNUAL UPDATE

RECOMMENDATION(S)

THAT the report titled Regional Diversion – Annual Update be received.

BACKGROUND

The BC Ministry of Environment requires all regional districts in BC to have a Solid Waste Management Plan (SWMP).

The SCRD's current SWMP was adopted by the Board in 2011 and outlines twenty-four initiatives that contribute to reaching targets by 2016. There are two targets: diversion and per capita disposal. The diversion target is 65%-69% and the per capita disposal target is 315kg – 279kg.

The purpose of this report is to provide an update on the SCRD's regional diversion from 2011 to 2016, the first five years of the SCRD's SWMP.

DISCUSSION

Regional Diversion Data

The format of the diversion data is consistent with the method utilized in the SWMP and was applied to the five year period of 2011 to 2016. This data was utilized for calculating waste generation, diversion rate and per capita disposal.

A summary of the diversion data is provided in Table 1.

Table 1: SCRD Regional Diversion Data 2011 to 2016

Disposal and Diversion (t)	2011	2012	2013	2014	2015	2016
Disposal						
Pender Harbour Landfill/Transfer Station	1,246	1,155	1,158	1,338	1,816	1,183
Sechelt Landfill	10,923	10,524	9,071	10,447	10,545	11,493
Total disposal	12,169	11,679	10,229	11,785	12,361	12,677
Diversion						
At Landfills	1,444	2,434	2,239	2,200	3,572	4,366
Green Waste	2,499	3191	3,437	3,672	3,415	4,343
Recycling - Curbside	667	701	685	642	631	882
Recycling - Depots	1,257	1,510	1,495	1,367	1,121	1,179
Extended Producer Responsibility	963	983	1,000	1,005	1,068	1,068*
C&D Estimate (as per SWMP)	4,255	4,255	4,255	4,255	4,255	4,255
Total diversion	11,085	13,074	13,112	13,141	14,062	16,092
Total waste generation (disposal + diversion)	23,254	24,753	23,341	24,926	26,423	28,769
Diversion rate (diversion/waste generation)	48%	54%	56%	53%	53%	56%
Population**	28,918	29,222	29,270	29,512	29,390	29,243
Disposal per person per year (kg)	421	400	349	399	421	434

*2016 EPR data not yet available; 2015 data used

**Population estimates based on BC Stats as of May 3, 2017

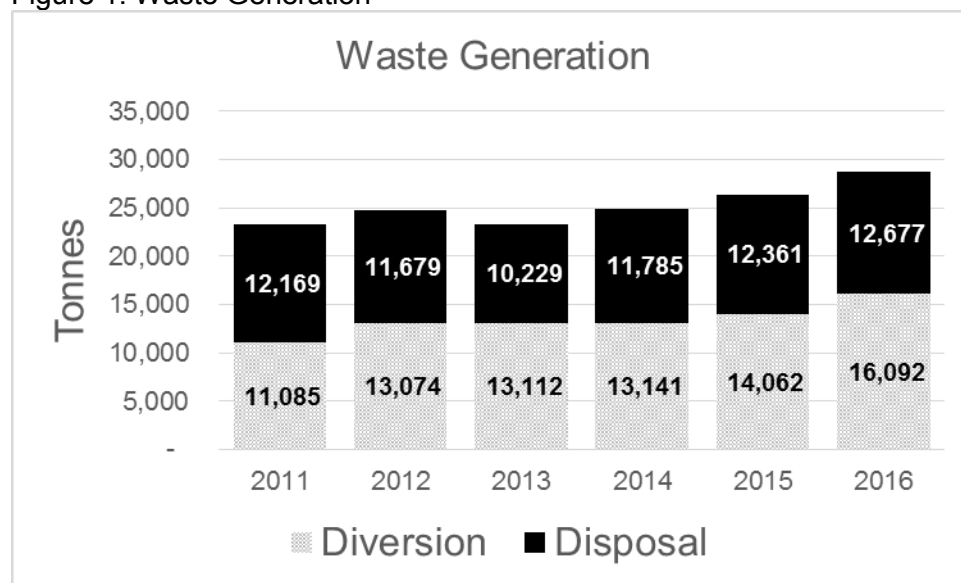
Waste Generation

Waste Generation is the sum of waste disposed and diverted. Disposal means buried in the Pender Harbour Landfill (until 2015) and at the Sechelt landfill. Whereas diversion means diverted from the landfill and includes materials recycled, composted, reused or waste exported for burial elsewhere (e.g. contaminated wood).

The trend since 2013 has been an overall increase to the total waste generated. The primary factors contributing to this increase is a growing economy. It should be noted that where there was an increase in disposal there was an increase in diversion.

A summary of waste generation is provided in Figure 1.

Figure 1: Waste Generation



Diversion Rate

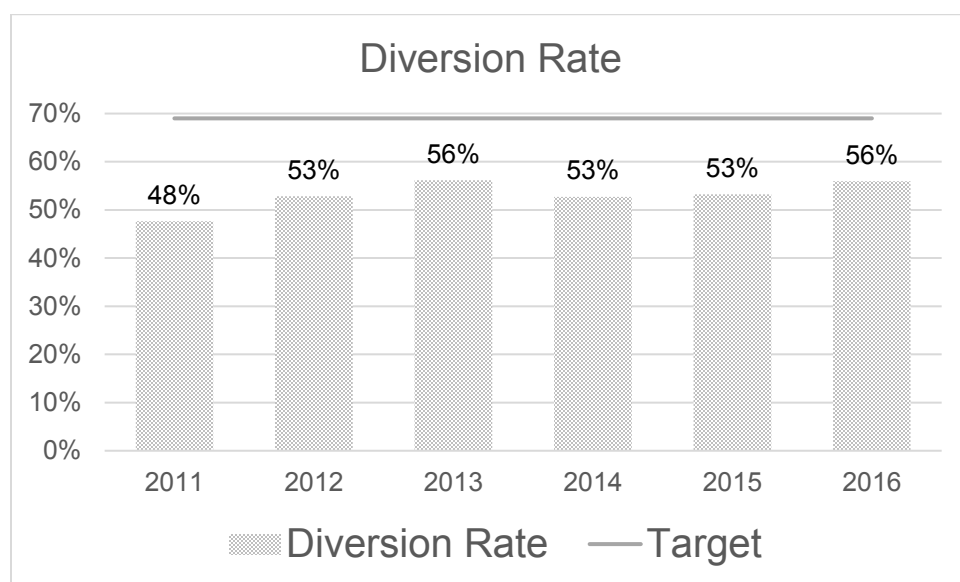
Diversion rate is calculated by dividing the diversion by the total waste generated.

2011 saw the lowest diversion rate at 48%. Since then, despite an overall increase in waste disposal, the diversion rate has remained fairly consistent with an improvement to 56% in 2016. 2016 saw an increase in tonnage in disposal and all types of diversion.

Based on 2016, a further 9%-13% diversion required to achieve the 65%-69% target.

A summary of diversion is provided in Figure 2.

Figure 2: Diversion Rate



Per Capital Disposal

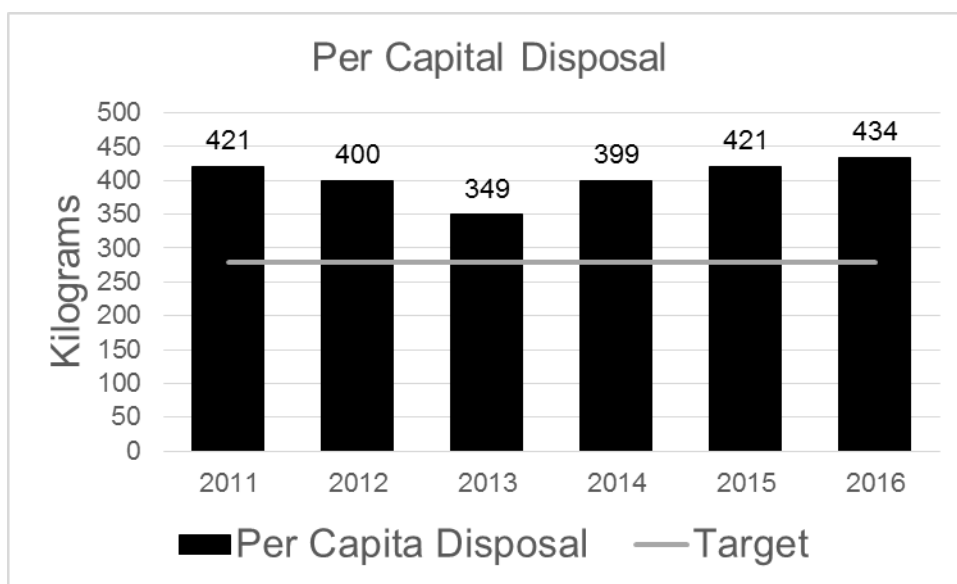
Per capita disposal is calculated by dividing the waste disposed by the population and is expressed in kilograms.

Disposal is typically related to economic trends. Since 2013, there has been a steady increase to the economy and there has been a corresponding increase to disposal.

Based on 2016, a further 155kg reduction is required to meet the 279 kg/pp/yr target.

A summary of per capita disposal is provided in Figure 3.

Figure 3: Per Capita Disposal



Next Steps

As staff prepare the reports on short-term priorities as identified at the March 2, 2017 Special ISC, where appropriate, this regional diversion data will be referenced and recommendations will be provided in order to help achieve the diversion target.

Additionally, work continues on the development of an Organics Diversion Strategy which represents the largest opportunity for diversion.

The diversion data will also be utilized as part of a Five-Year Effectiveness Review of the SWMP that will be initiated in the fourth quarter of 2017. The review is a Ministry of Environment requirement.

Updates to Diversion Data

After the product stewardship agencies release their 2016 annual reports for the extended producer responsibility programs, the regional diversion data will be updated. The plan is to continue to provide solid waste tonnage data as part of the existing quarterly reports (green waste, depot recycling, garbage) and provide regional diversion annually.

Communications Strategy

As part of a project to restructure and update the Solid Waste web pages, a specific web page will be created for diversion data where the information contained in this report will be added. Anticipated completion date is June.

STRATEGIC PLAN AND RELATED POLICIES

This report is in support of the key strategic priority of Embed Environmental Leadership and the Solid Waste Management Plan.

CONCLUSION

The SCRD collects disposal and diversion data and calculates annual waste generation, diversion and per capita disposal rates.

There has been an increasing trend in disposal, diversion and waste generation since 2013. The increase is likely attributable to a steady improvement to the economy.

At the end of 2016, the regional diversion rate was 56% and the per capita disposal was 434kg.

Further diversion and waste reduction is required in order to meet the targets identified in the SCRD's SWMP. Specifically, a 13% increase to diversion and a reduction of waste disposed by 155kg/pp/yr is required to meet the targets.

Staff continue to work on the organics diversion strategy and preparing reports on the short-term priorities as identified at the March 2, 2017 Special ISC. Where appropriate, the regional diversion will be referenced in those reports and recommendations will be provided in order to help achieve the targets

Reviewed by:			
Manager	X – R. Cooper	Finance	
GM		Legislative	
CAO	X – J. Loveys	Other	

SWMP Initiatives & Timeline

2016-2017

Curbside Collection for Food Scraps

Every-other-week (EOW) Garbage Collection
Pay-as-you-throw Garbage Collection

2017-2018

Enhanced Drop-off and Resource Recovery Facilities in:
Pender Harbour, Sechelt, Gibsons

2019

Business Waste Diversion

C&D Waste Diversion

Deconstruction & Salvaging

2020

Community Swap Day Pilot Program

Waste Stream Control System

Land Use Policies

On Hold

Curbside Collection for recyclables



SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Corporate and Administrative Services Committee – February 22, 2018

AUTHOR: Tina Perreault, General Manager, Corporate Services / Chief Financial Officer

SUBJECT: SECHELT LANDFILL CLOSURE UPDATE

RECOMMENDATION(S)

THAT the report titled Sechelt Landfill Closure Update be received;

AND THAT the shortfall for the Sechelt Landfill Closure Liability be funded by an incremental annual taxation increase of \$125,000 per year for four years (2018-2021).

BACKGROUND

The BC Ministry of Environment (MoE) requires an update to the landfill design, operation and closure plan (DOCP) every five years. The Sechelt Landfill's Operational Certificate issued by the MoE stipulates that an updated DOCP be completed and submitted by December 31, 2017. The plan was completed by XCG Consulting Ltd., the Sunshine Coast Regional District's (SCRD) contractor for landfill engineering, and submitted to the MoE on December 22, 2017.

The purpose of this report is to inform the Committee with respect to some of the findings and implications as a result of this project.

DISCUSSION

The level of effort required to complete an updated DOCP is much higher than annual reporting requirements to MoE. Specifically, the update results in a more precise calculation of remaining airspace, and resulting landfill site life.

The key objectives of the plan is¹:

- *Provide an updated fill plan which addresses the need to reduce leachate generation, optimize surface water controls and optimize available landfill airspace;*
- *Provide a closure plan including implementing a low permeability cover system;*
- *Provide a post-closure plan for the landfill; and*
- *Reduce long-term environmental impacts associated with the landfill area.*

¹ DESIGN, OPERATIONS, AND CLOSURE PLAN, SECHELT LANDFILL, SECHELT, BRITISH COLUMBIA, XCG Environmental Engineers & Scientists, December 20, 2017

Prior to the completion of the updated DOCP, the anticipated closure date for the Sechelt Landfill was 2027 or ten years at current diversion programs and services. *Based upon population growth projections and fill rate assumptions presented herein, it is estimated that the Site will reach design capacity in 2025².* It should be noted that the anticipated closure date is based on status quo diversion programs and services. Actual closure may vary and is also reviewed annually by XCG as a condition of the SCRD's external financial audit.

The two major factors that resulted in the reduction of two years in site life are that one of the slopes along the closed section of the landfill is not quite filled to the 3H:1V slope as planned and that waste was not filled directly up to the contact water pond. This is the result of a variety of reasons including waste settling along the slope and operational direction to leave access adjacent to the contact water pond.

Staff are investigating engineering options to increase capacity as a result of the findings. The SCRD Board also provided direction as part of the 2017 Solid Waste workshop to conduct a preliminary investigation for a new landfill site. Both these items will come forward for consideration at a future Committee meeting.

Financial Implications

The change in anticipated closure date from ten to eight years has a material financial impact to the SCRD's landfill closure and post closure liability. As at the end of 2016, the Sechelt Landfill closure liability was estimated at over \$4.8 million. The revised estimate as at December 31, 2017 is \$5,771,361. Since the DOCP was conducted using 2016 data, the 2017 capacity used is in process of being verified from XCG and is subject to change. An update will be provided at the April 26, 2018 Corporate and Administrative Services Committee during the course of presenting the SCRD's 2017 Financial Statements.

Currently, \$300,000 per year is contributed to the Sechelt Landfill Closure Reserves from Taxation. Based on the updated closure date of 2025, if status quo level of contributions continue, there will be an estimated shortfall of \$3.5 million at Final Closure. Even if the closure was delayed to 2027 or beyond with an increase in capacity from implementing engineering options and additional diversion programs, a shortfall in closure contributions would still exist.

A summary of closure reserve contributions at status quo levels is provided in Table 1.

Table 1 – Summary of Sechelt Landfill Closure Reserves at Status Quo Contributions

	2018	2019	2020	2021	2022	2023	2024	2025
Item	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount
Opening Balance in reserve	810,445	1,127,870	1,452,119	1,783,339	(296,998)	(3,383)	296,544	602,920
Investment Income @ 2.15%	17,425	24,249	31,221	38,342	(6,385)	(73)	6,376	12,963
Annual Contribution	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000
Closure Costs	-	-	-	(2,418,679)	-	-	-	(4,435,947)
Closing Balance in Reserve	1,127,870	1,452,119	1,783,339	(296,998)	(3,383)	296,544	602,920	(3,520,065)

² DESIGN, OPERATIONS, AND CLOSURE PLAN, SECHELT LANDFILL, SECHELT, BRITISH COLUMBIA, XCG Environmental Engineers & Scientists, December 20, 2017

As noted in the Table 1, in 2021 a progressive closure phase (Stage H) is required for a projected cost of \$2.4 million (future value) with final closure to occur in 2025. These are noted as the large expenditures in Table 1, however, several smaller maintenance and closure projects are required through this duration (Stage F through Stage K to Final Closure) which may also require funding.

Post closure costs are estimated at \$45,000 per year and the assumption is that it will be funded after the Sechelt Landfill is closed through regular Solid Waste Operations. Current MoE regulations require post closure maintenance and monitoring for a minimum of 30 years, but could be required as much as 100 years.

Options for Funding the Shortfall

Options to fund all or part of the closure reserve shortfall include increasing taxation, raising tipping fees, or imposing a parcel tax. Operating reserves have been committed to past or current projects and funds are not sufficient to allow for this as an option. Zero Waste Operating Reserves are also committed or planned for current and future diversion initiatives.

A summary of options is presented below.

Option 1 – Increase annual taxation incrementally by \$125,000 per year for four years

Increasing taxation by \$125,000 per year for four consecutive years (2018-2021) would fund the estimated closure costs by the projected closure year of 2025 and fund Stage H closure costs required in 2021, leaving a small potential shortfall. This also depends on the annual review of actual air-space available, interest earned on investments and external financial conditions such as inflation.

A \$125,000 increase is equivalent to a 0.69% overall tax increase in 2018, or \$6.03 for an average residential property. The cumulative increase after four years would vary based on property assessment and growth, and is estimated at 2.2% in overall taxation or \$19.28 for an average residential property based on current tax rates.

This option is recommended as this approach balances the requirement to meet the SCRD's future financial liability while allowing time for new fees and charges to take effect, explore engineering options to increase capacity, as well as effects of increased diversion strategies.

Table 2 – Summary of Sechelt Landfill Closure Reserves with Increased Contributions

	2018	2019	2020	2021	2022	2023	2024	2025
Item	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount
Opening Balance in reserve	810,445	1,252,870	1,829,806	2,544,147	979,167	1,800,219	2,638,924	3,495,661
Investment Income @ 2.15%	17,425	26,937	39,341	54,699	21,052	38,705	56,737	75,157
Annual Contribution	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000
Additional Contribution	125,000	250,000	375,000	500,000	500,000	500,000	500,000	500,000
Closure Costs	-	-	-	(2,419,679)	-	-	-	(4,435,947)
Closing Balance in Reserve	1,252,870	1,829,806	2,544,147	979,167	1,800,219	2,638,924	3,495,661	(65,129)

Option 2 – Fully Fund the Shortfall and Tax an additional \$400,000 from 2018-2025

Increasing annual taxation by \$400,000 in 2018, for a total of \$700,000 per year may result in a small shortfall at final closure in 2025 and would fund Stage H closure costs required in 2021, as summarized in Table 3.

This increase is equivalent to a 2.2% tax increase overall, or \$19.28 for an average residential property.

This option is not recommended as it would have a significant impact on the SCRD taxation as a whole in 2018 and doesn't allow for impacts of items listed in Option 1 to take effect.

Table 3 – Summary of Sechelt Landfill Closure Reserves with Increased Contributions

	2018	2019	2020	2021	2022	2023	2024	2025
Item	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount
Opening Balance in reserve	810,445	1,527,870	2,260,719	3,009,324	1,354,346	2,083,464	2,828,259	3,589,066
Investment Income @ 2.15%	17,425	32,849	48,605	64,700	29,118	44,794	60,808	77,165
Annual Contribution	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000
Additional Contribution	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000
Closure Costs	-	-	-	(2,419,679)	-	-	-	(4,435,947)
Closing Balance in Reserve	1,527,870	2,260,719	3,009,324	1,354,346	2,083,464	2,828,259	3,589,066	(69,716)

Option 3 – Tipping fee surcharge

A \$5 per tonne surcharge on tipping fees for municipal solid waste (MSW) would generate approximately \$50,000 in additional revenue annually based on 2017 tonnage. This could be implemented in conjunction with a taxation increase to cover the required contributions.

This option would require an amendment to the Solid Waste Fee Bylaw, which could be included as part of the Tipping Fee Review. Any revenues for this option would not fully materialize until 2019 and would be variable based on tonnage. Since the goal of the Solid Waste Management Plan is to reduce MSW, this source of revenue is projected to decrease over time, is variable based on tonnage and is not a sustainable source of funding which could further reduce funding the liability shortfall. The SCRD already has one of the highest tipping fees for municipal solid waste in the Province so this option is not recommended as this time.

Option 4 – Impose a parcel tax

Bylaw 1019 allows for the imposition of a parcel tax as a method of cost recovery for the service. A high level estimate indicates that a flat rate parcel tax of \$25-\$30 would be required to fund the annual contribution shortfall of \$400,000. The earliest a parcel tax could be imposed would be for 2019 subject to adoption of a parcel tax bylaw and approval of the parcel tax roll. Staff do not recommend proceeding with a parcel tax as it is similar to Option #2.

Timeline for next steps

Based on Board direction, staff will incorporate impacts into the Round 2-2018-2022 Financial Plan in preparation for adoption of Budget on March 22, 2018.

STRATEGIC PLAN AND RELATED POLICIES

This report is in support of the Strategic Priority of Ensure Fiscal Sustainability as well as the Solid Waste Management Plan.

CONCLUSION

An update to the Sechelt Landfill DOCP was recently completed by XCG Consulting Ltd. and submitted to the BC MoE.

During the DOCP update, the airspace remaining and site life was determined to be eight years with an anticipated closure date of 2025 at status quo diversion programs and services.

Existing annual contributions to the landfill closure reserve of \$300,000 are not sufficient to cover the anticipated closure costs.

Options for consideration to increase the contribution to the landfill closure reserve are taxation, raising the tipping fee for municipal solid waste, or implementing a parcel tax.

Staff recommend increasing taxation by \$125,000 per year for four consecutive years (2018-2021) which would fully fund the estimated closure costs by the projected closure year of 2025 and fund Stage H closure costs required in 2021. This option balances the requirement to meet SCRD's future financial liability while allowing time for new fees and charges to take effect, explore engineering options to increase capacity, as well as effects of increased diversion strategies.

Based on Board direction, staff will incorporate impacts into the Round 2-2018-2022 Financial Plan in preparation for adoption of Budget on March 22, 2018.

Reviewed by:			
Manager	X-R. Cooper	CFO/Finance	
GM		Legislative	
CAO	X-J. Loveys	Other	X-B. Wing

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Corporate and Administrative Services Committee – February 22, 2018

AUTHOR: Robyn Cooper, Manager, Solid Waste Services

SUBJECT: TIPPING FEE REVIEW OF DIVERTED MATERIALS

RECOMMENDATION(S)

THAT the report titled Tipping Fee Review of Diverted Materials be received.

AND THAT the Proposed Tipping Fees be approved and incorporated in a bylaw amendment as follows:

Diverted Material	Tipping Fee	Unit of Measure
Green Waste	\$86	Per Tonne
Mattress	\$10	Per Unit
Mattress – Wet	\$15	Per Unit
Mattress (5 or More)	\$35	Per Unit
Propane Tank – Camp Size	\$0.50	Per Unit
Propane Tank – over 25 lbs	\$5.50	Per Unit
Roofing	\$190	Per Tonne
Wood – clean	\$170	Per Tonne

AND THAT a report be provided in the second quarter of 2018 regarding the residential green waste program;

AND FURTHER THAT a letter be sent to the BC Ministry of Environment requesting that mattresses and commercially generated packaging and printed paper be added to the Recycling Regulation.

BACKGROUND

The Sechelt Landfill and Pender Harbour Transfer Station accept a range of materials that are diverted from burial.

Materials accepted for diversion include wood, roofing, metal, gypsum and mattresses.

In 2017, several tender processes were completed for materials that are diverted.

A tipping fee review was conducted in 2017 to compare the existing tipping fees to the updated costs.

The purpose of this report is to inform the Committee of the results of the tipping fee review and make recommendations for updating the tipping fees that are identified in Bylaw 405.

DISCUSSION

The tipping fee review included reviewing the updated pricing from the tender processes along with the 2017 expenditures and associated tonnages.

Expenditures for diverted materials include costs such as pre-processing, bin rental, hauling and processing fees. All of the diverted materials are delivered to the Vancouver area. Based on the material, a combination of these expenditures are incurred.

The results of the tipping fee review varied based on material type. Some materials are fully-funded such as gypsum, whereas, mattresses are only 18% funded (Pender Harbour Transfer Station). The results are summarized in Table 1.

Table 1 – Diverted Materials Tipping Fees Compared to Direct Costs

Diverted Material	Current Tipping Fee	Direct Costs		Unit of Measure	Types of Costs Incurred
		Pender Harbour Transfer Station	Sechelt Landfill		
Cardboard	\$150	\$547	\$224	Per Tonne	Bin rental, hauling, processing
Freon containing	\$40	\$36	\$38	Per Unit	Pre-processing, hauling, processing
Green Waste	\$0 residential \$45 commercial	\$89	\$63	Per Tonne	Hauling, processing
Green Waste - Gibsons	\$0	\$125		Per Tonne	Hauling, processing
Green Waste – Sechelt	\$0	\$47		Per Tonne	Processing
Gypsum	\$265	\$163	\$200	Per Tonne	Hauling, processing
Mattress	\$8 per mattress or boxspring \$5 per crib	\$45	\$33	Per Unit	Bin rental, hauling, processing
Metal	\$70	\$93	\$55	Per Tonne	Hauling, processing
Propane Tanks	\$0 camp size	\$1.65	\$1.65	Per Unit	Pre-processing, hauling, processing
	\$2 up to 25lbs	\$1.75	\$1.75		
	\$5 over 25 lbs	\$5.50	\$5.50		
Roofing	\$165	\$188	\$188	Per Tonne	Hauling, processing
Wood – clean	\$140	\$179	\$166	Per Tonne	Hauling, processing
Wood – dirty	\$265	\$206	\$213	Per Tonne	Hauling, processing

Financial Implications

If the direct costs are not covered by the tipping fee, that results in a deficit position for the specific material type. To be financially sustainable, tipping fees need to cover direct costs.

Residential green waste and mattresses are an exception to this approach and have had prior Board direction to offset the costs by taxation and by surplus from other material types, respectively.

Staff will be preparing a report in Q2 2018 regarding the residential green waste program as contracts are set to expire at the end of 2018.

Proposed tipping fees for the other materials were calculated using the total direct costs of both sites combined divided by the total tonnage or units of both sites combined. For some materials, this approach will result in a surplus for one site (Sechelt) and a deficit for the other site (Pender). Staff do not recommend creating different fees for each site. Throughout most of BC, tipping fees are consistent within a Regional District regardless if the site is urban or rural or receives large or small volumes of materials or customers.

A summary of the proposed tipping fee compared to the current fee is provided in Table 2.

For cardboard, staff do not propose changing the tipping fee as it is currently at the same rate as municipal solid waste (garbage). Raising the rate may result in the material being disposed as garbage which would be undetectable when contained in black bags. Much of the cardboard received at the sites is commercially generated and is thus excluded from the depots for recycling as the depots are for residential materials only as directed by the BC Ministry of Environment's Recycling Regulation. If the cardboard was delivered to the depots, there would be no hauling or processing costs.

For mattresses, a small per unit increase is proposed as well as including a surcharge for wet mattresses (matches the surcharge the SCRD incurs) and applying the full direct costs when delivering five or more mattresses at a time to address commercial businesses that deliver mattresses to the Sechelt Landfill instead of directly to the recycler in Vancouver.

The hauling infrastructure exists for commercial businesses to deliver old mattresses to the recycler located in Vancouver after new mattresses are delivered, creating an ideal situation for an extended producer responsibility program where recycling fees are paid at the point of sale and are dropped off for recycling at no cost. Currently, mattresses are not included in the Recycling Regulation.

For wood – dirty, staff do not recommend adjusting the fee as some of the wood that is scaled through as clean wood is actually dirty upon further inspection by the Site Attendants.

Table 2 – Proposed Changes to Tipping Fees

Diverted Material	Current Tipping Fee	Proposed Tipping Fee	Unit of Measure
Green Waste	\$45 commercial	\$86	Per Tonne
Mattress	\$8	\$10 \$5 surcharge per unit if wet 5 or more - \$35 per unit	Per Unit mattress or boxspring
Propane Tanks	\$0 camp size	\$0.50	Per Unit
	\$5 over 25 lbs	\$5.50	
Roofing	\$165	\$190	Per Tonne
Wood – clean	\$140	\$170	Per Tonne

Timeline for next steps

Based on the Board’s recommendations, staff will prepare an amendment to Bylaw 405 and anticipate bringing it to the April 12, 2018 Board Meeting for 1st, 2nd and 3rd Reading with final adoption at the April 26, 2018 Board Meeting. Outreach regarding the changes will occur during the month of May with a bylaw effective date proposed for June 1, 2018. A timeline showing the bylaw amendment process is provided in Table 3 below.

Concurrently, as per the 2018 Solid Waste Work Plan, staff are preparing a report on recycling and organics ban implementation. This report is anticipated at the end of Q1 2018. Ban implementation will also require an amendment to Bylaw 405 later in the year.

Table 3 – Bylaw 405 Amendment Process Timeline

Task	Date
Tipping Fee Review Report	Feb 22, CAS Meeting
Bylaw 405 Amendment: 1 st 2 nd and 3 rd Reading	Apr 12, 2018 Board Meeting
Bylaw 405 Adoption	Apr 26, 2018 Board Meeting
Bylaw Effective Date	June 1, 2018

STRATEGIC PLAN AND RELATED POLICIES

This report is in support of the Strategic Priority of Ensure Fiscal Sustainability as well as the Solid Waste Management Plan.

CONCLUSION

In 2017, several tender processes were completed for materials that are accepted at the Sechelt Landfill and Pender Harbour Transfer Station for diversion.

A tipping fee review of the diverted materials was conducted to compare the existing tipping fees to the updated costs.

As a result of the review, staff have proposed changes to the tipping fees for some of the material types to ensure the direct costs are funded.

For residential green waste, staff are preparing a report on the program for Q2 2018.

Changing the tipping fees requires an amendment to Bylaw 405.

Based on the Board's recommendations, staff will prepare a bylaw amendment and bring forward in Q2 2018 with the objective of having new tipping fees in effect for June 1, 2018.

Reviewed by:			
Manager		CFO/Finance	X-T. Perreault
GM		Legislative	
CAO	X-J. Loveys	Other	

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Infrastructure Services Committee – July 19, 2018

AUTHOR: Tina Perreault, General Manager Corporate Services / Chief Financial Officer

SUBJECT: RECYCLE BC PROGRAM FINANCIAL IMPACTS

RECOMMENDATION(S)

THAT the report titled Recycle BC Program Financial Impacts be received;

AND THAT the SCRD proceed with a new contract with Recycle BC to provide depot recycling services for residential packaging and paper products for a 5 year period;

AND FURTHER THAT the delegated authorities be authorized to execute the contract prior to October 1, 2018 deadline.

BACKGROUND

At the April 19, 2018 Infrastructure Service Committee meeting, staff provided a report regarding upcoming changes to the Recycle BC Program, whereas, the Sunshine Coast Regional District's (SCRD) contract with Recycle BC, to provide depot recycling services for residential packaging and paper products in three areas on the Sunshine Coast, is set to expire on November 30, 2018. Any new contract with Recycle BC would start on November 30, 2018 and have a 5 year term (December 2023).

At the April 26, 2018 Regular Board meeting a resolution was passed (137/18) to seek confirmation from Recycle BC that Electoral Areas B, D, E and F are eligible to join Recycle BC's curbside recycling program.

The SCRD's depot operation contracts with Gibsons Recycling, GRIPS and Salish Soils are aligned to conclude on November 30, 2018 and will require renewal.

The purpose of this report is to highlight the financial implications of the updated Recycling BC Program for the depot services and seek direction on the contract renewal for the October 1, 2018 deadline. Impacts and next steps related to the depots and curbside recycling services for Electoral Areas B, D, E and F are included.

DISCUSSION

Recycle BC concluded their public consultation period on May 14, 2018 and staff participated in subsequent information sessions (webinars) in June and July 2018. The information sessions covered timelines, process for new agreement, as well as changes to the financial incentives and payment methodology.

Per Recycle BC, the timelines and process for the new agreement are as follows:

- June 22, 2018 –Release of final Depot Statement of Work (SOW) and new offer to collectors. Offer extends to all depot locations currently included in the Recycle BC program.
- October 1, 2018 –Deadline to submit signed SOW
- November 30, 2018 –Effective date of new SOW
- December 31, 2023 –End date of new SOWs (5 year and one month term)

If the above deadlines are not met, Recycle BC cannot guarantee inclusion in the program and if a signed SOW is not submitted by October 1, 2018, Recycle BC will consider the new agreement offer not accepted.

The current Recycle BC program offers financial incentives for depot recycling based on the following:

- Tonnage by material type;
- Per household for education and service administration.

The total financial incentives for the materials received at each depot is variable based on the tonnage and type of material received.

Additionally, for depot recycling services, there are differing rates based on whether or not the depot is in a community where the majority of residents have curbside recycling services. Depots in communities without curbside recycling services receive higher incentive rates.

Currently the depots in Pender Harbour and Gibsons are receiving higher incentive rates than the depot in Sechelt as the District of Sechelt has curbside recycling services. Under the new contract, Recycle BC has set an 80% threshold to determine which incentive rates apply to the depots. Given this amended threshold, only the Sechelt depot is within the threshold and will receive the higher incentive rates.

Financial Implications

The majority of the material type's rates per tonne were increased, with the most significant increases to lighter weight materials such as film plastic and polystyrene.

Starting January 1, 2019, a new category of material will be collected at all Recycle BC depots: other flexible plastic. This includes materials such as crinkly plastic, zipper lock bags, chip bags and mesh produce bags. The rate will be the same as film plastic and Recycle BC anticipates the same tonnage as film plastic.

Table 1 – Summary of Recycle BC Financial Incentives for depot recycling

Material Type	Current Rate per tonne	New Rate per tonne
Printed paper, cardboard, other paper	\$80	\$80
Containers: metal, plastic, mixed	\$120	\$130
Glass	\$80	\$90
Polystyrene – white	\$175	\$800
Polystyrene – coloured	\$175	\$800
Film plastic	\$175	\$500
Other flexible plastic packaging	n/a	\$500

In 2014, the SCRD first implemented the Recycle BC Program for depot recycling services, the SCRD Board directed that the financial incentives for service administration be used to offset internal administration costs and the financial incentives for education be used for education and be included in the budget (Recommendation # 068/15). These amounts are currently \$28,700 per year.

Baling incentives are also paid directly to the depots themselves, if the depot chooses to bale. The baling incentives are in addition to the monthly contract rates.¹ The financial implication of this option would be due to the change in threshold used by Recycle BC. The incentives received for the Sechelt Depot would be at a higher rate than currently.

Currently depot recycling services are funded by taxation and the financial incentives provided by Recycle BC.

Utilizing the 2017 tonnage materials received and applying the new rates, the changes in the rates received for the depots are included in Table 2.

Table 2 – 2019 Forecast Material Incentives

Depot	Tonnage	2017²	Forecast 2019³	Difference 2019-2017
Pender	144	\$13,144	\$17,956	\$4,851
Sechelt	247	\$18,345	\$31,371	\$13,026
Gibsons	813	\$75,439	\$107,274	\$31,835
Non-material incentives	n/a	\$28,700	\$28,000	\$(700)
Total	1,204	\$135,628	\$184,601	<u>\$49,012</u>

The forecasted increase in incentives of approximately \$49,000 from Recycle BC is one factor to the overall financial outlook for recycling and solid waste services. The SCRD still needs to renew its contracts for the three depots in late 2018, determine the financial implications of curbside collection services, and make decisions on other contracts and services for the solid

¹ 2017 Baling Incentives: Gibsons Recycling Depot was paid approximately \$61,100 and GRIPS was paid approximately \$4,800. Salish Soils does not bale.

² 2017 tonnage utilized based on full year of service- 2018 in progress

³ This includes the Other Flexible Plastic Packaging material category which is mandatory Jan 1, 2019.

waste service. Until these processes and values are known, staff are unable to conclude a comprehensive financial outlook for the service.

Eligibility Electoral Areas under Recycle BC Program

As per the report Recycle BC Revised Program Plan – Update received at the April 19, Infrastructure Services Committee meeting the eligibility criteria for new curbside program have changed to:

- A curbside garbage collection program was in place by May 2014;
- The community represents an incorporated municipality; and
- The community has a minimum population of 5,000 residents.

In response to a letter sent to Recycle BC on May 15, 2018 requesting the eligibility of all four Electoral Areas, Recycle BC replied on July 11, 2018 confirming that only Electoral Area B and D meet all three eligibility criteria.

Recycle BC indicated that the SCRD could initiate a contract for curbside collection in Electoral Areas B and D at any time. This allows time for the SCRD to await the outcome of the Request for Proposal for Curbside Collection Services for all areas (B, D, E, and F) and assess the overall financial implications after the tendering process is completed and prior to any contract with Recycle BC or a contractor for curbside collection services is executed. Staff will bring this information back to the Board for their consideration and before confirming the financial feasibility of the desired level of curbside recycling collection.

Intergovernmental and Stakeholder

Staff continue to meet and share information with staff in all four local governments and the three depot owners. On July 9, discussions were held with the four governments with respect to collaboration on tendering processes for curbside. Another meeting is set for July 24, 2018 with staff. Staff recently met with the depot owners as a group and individually to discuss concerns and respond to questions. Reports related to the depot contacts will be forthcoming.

Timeline for next steps

In addition to renewing the Recycle BC contract to provide depot recycling services for residential packaging and paper products by October 1, 2018, there are a number of other deadlines approaching that staff are preparing for. They include:

- August 2018 – Issuance of Request for Proposal for Curbside Collection Services
- September 2018 – Renewal of contracts with SCRD Recycling Depots
- December 1, 2018 – start date of new contracts with Recycle BC and SCRD Recycling Depots
- January 1, 2019 – start date for the collection of other flexible plastic packaging at depots

- March 1, 2018 – Target implementation date for curbside collection services

STRATEGIC PLAN AND RELATED POLICIES

Recycling collection services supports the Strategic Priority of Embed Environmental Leadership.

SCRD's Solid Waste Management Plan's target of 65%-69% diversion identifies bi-weekly garbage, food scraps collection and bi-weekly recycling collection services.

CONCLUSION

The SCR D's contract with Recycle BC to provide depot recycling services for residential packaging and paper products in three areas on the Sunshine Coast is set to expire on November 30, 2018. Any new contract with Recycle BC would start on December 2018 and have a 5 year term. The SCR D must submit a signed SOW by October 1, 2018.

The updated Recycle BC program resulted in an overall increase of the incentives received under the current depot model in the amount of \$49,000, therefore, staff recommend proceeding with signing the revised SOW with Recycle BC prior to the October 1, 2018 deadline. For the SCR D the amount received in the future will depend on if curbside collection services for recyclables is implemented in some or all of the Electoral Areas.

The SCR D also requested confirmation from Recycle BC that Electoral Areas B, D, E, and F are eligible to join Recycle BC's curbside recycling program. Recycle BC sent a letter dated July 11, 2018 confirming that only Electoral Area B and D meet all three eligibility criteria, however, a Request for Proposal for Curbside Collection Services for all areas (B, D, E, and F) will be issued to assess the overall financial implications prior to any contract with Recycle BC or a contractor for curbside collection services is executed.

Reviewed by:			
Manager	X – R. Cooper	Finance	
GM	X – R. Rosenboom	Legislative	
CAO	X – J. Loveys	Other	

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Infrastructure Services Committee – September 20, 2018

AUTHOR: Janette Loveys, Chief Administrative Officer

SUBJECT: ASSOCIATION OF VANCOUVER ISLAND AND COASTAL COMMUNITIES (AVICC)
SPECIAL SOLID WASTE COMMITTEE

RECOMMENDATIONS

THAT the report titled Association of Vancouver Island and Coastal Communities (AVICC) Special Solid Waste Committee be received;

AND THAT the Sunshine Coast Regional District continues to be a member of the AVICC Special Solid Waste Committee.

BACKGROUND

AVICC is one of five area associations of local governments operating under the umbrella of the Union of British Columbia Municipalities (UBCM). AVICC represents the interests of the various local governments of Vancouver Island, Sunshine Coast, Powell River and the Central Coast.

The AVICC Special Committee on Solid Waste Management was developed to share experiences, best practices and to develop a greater understanding of solid waste matters facing the Vancouver Island and Coastal Communities.

DISCUSSION

The Special Committee's vision and goals are:

- **Vision:**
That local governments on Vancouver Island, qathet and the Sunshine Coast are working together to address the opportunities and challenges of managing solid waste and our residents are aware of, and support the need to reduce and manage our waste in a sustainable manner.
- **Goals:**
 1. Ensure information is shared between AVICC local governments to encourage best practices in solid waste management and consistent messaging to our residents.
 2. Collect and maintain appropriate and consistent data associated with solid waste management within the AVICC.
 3. Support an informed and unified voice to assist efforts with the Province, NGOs and other partners in developing effective waste management solutions and policies.

Reports and meeting minutes are available on the [AVICC website](#).

At UBCM, the AVICC Special Committee on Solid Waste Management met with the Honorable Minister Heyman to seek the Ministry of Environment's engagement. Attached is information from the delegation that was left with the Minister titled Working Together on Solid Waste.

Currently Sunshine Coast Regional District (SCRD) staff participate on various sub-committees and continue to see value in working with other regional district staff.

Regional District Chief Administrative Officers (CAO) are now looking to follow up from the UBCM meeting with Minister Heyman and provide guidance to Ministry staff on how to effectively engage and support the work of the Special Solid Waste Committee.

STRATEGIC PLAN AND RELATED POLICIES

Submission of resolutions to AVICC is in alignment with SCRD's strategic value of Collaboration and the SCRD's mission to provide leadership and quality services to our community through effective and responsive government.

CONCLUSION

The AVICC Special Committee on Solid Waste Management was developed to share experiences, best practices and to develop a greater understanding of solid waste matters facing the Vancouver Island and Coastal Communities.

Staff recommend that the SCRD continues to be a member of the AVICC Special Solid Waste Committee.

Reviewed by:			
Manager		Finance	
GM		Legislative	
CAO	X – J. Loveys	Other	

Attachment A - Working Together on Solid Waste

WORKING TOGETHER ON SOLID WASTE

Our request to you

The AVICC Special Committee on Solid Waste Management asks Ministry of Environment staff to participate on its committee and sub-groups, providing the Ministry the advantage for a single group to communicate with rather than 9 separate regional districts.



SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Special Infrastructure Services Committee - January 25, 2019

AUTHOR: Remko Rosenboom – General Manager, Infrastructure Services
Tina Perreault – General Manager, Corporate Services / Chief Financial Officer

SUBJECT: **RURAL AREA CURBSIDE COLLECTION SERVICES AWARD REPORT**

RECOMMENDATION(S)

**THAT the report titled Rural Area Curbside Collection Services Award Report be received;
AND THAT this report be referred to the January 31, 2019 Corporate and Administrative Services Committee.**

BACKGROUND

The Sunshine Coast Regional District (SCRD) provides weekly collection of garbage to residences within a defined collection area in Electoral Areas B, D, E and F, through function 355-Refuse Collection. This service is funded from user fees and the 2018 annual fee for a single-family dwelling was \$146.90.

Residents of Electoral Area A either self-haul to the Pender Harbour Transfer Station or hire a private collection contractor.

The current garbage collection contract for Electoral Areas B, D, E and F is set to expire February 28, 2019 and there are no extension options.

SCRD's Solid Waste Management Plan (SWMP) includes the following new initiatives for curbside collection services:

- Food scraps (weekly)
- Recycling (bi-weekly)
- Bi-weekly garbage collection once food scraps and recycling are implemented

The SWMP has two diversion targets based on which services are implemented in which Electoral Areas:

- A 69% target is based on implementing the above mentioned curbside collection services for Electoral Areas B, D, E and F; and
- A 65% diversion target is based on implementing those services in Electoral Areas B and D only with E and F receiving only weekly garbage collection.

The recently-adopted Regional Organics Diversion Strategy includes the following related to curbside collection services:

- Implement a residential curbside food waste collection service for all SCRD residences that currently receive curbside garbage collection (Electoral Areas B, D, E, F).

The following 2017 Board Recommendations related to collection services were adopted:

346/17 **Recommendation No. 15** *Elected Officials Solid Waste Workshop Summary and Recommended Direction*

AND THAT the following agreed upon direction heard at the Elected Officials Solid Waste Workshop be integrated into the SCRD Solid Waste work plan:

- Implementation of regional disposal bans for recycling and commercial organics.

In February 2018, staff presented a report providing options for the new curbside collection contract. At the March 8, 2018 Board meeting, the Sunshine Coast Regional District passed the following recommendation, excerpt below:

Recommendation No. 11 *Curbside Collection Services – Service Options*

THAT the report titled Curbside Collection Services – Service Options be received;

AND THAT the Curbside Collection Services Request for Proposal include Service Option 1, as follows:

Service Option 1

Garbage	Bi-weekly
Organics	Weekly
Recycling	Bi-weekly - Areas B, D, E, F

Note: The Organics Curbside Collection service includes the collection of food scraps and green waste (yard waste).

A previous Board supported a request to Recycle BC to support the curbside collection of recyclables for Electoral Areas B and D and not for E and F. Due to a change in eligibility criteria by Recycle BC, the Electoral Areas E and F no longer qualify for any support from Recycle BC. On July 11, 2018, SCRD received a letter from Recycle BC confirming their commitment for Electoral Areas B and D only. Consequently, the SCRD would have to fund 100% of the costs associated with the collection and processing of recyclables in Electoral Areas E and F.

DISCUSSION

Procurement Process

In order to meet the new contract start date of March 1, 2019, a Request for Proposal (RFP) was prepared and issued in the fall of 2018. This Proposal was a Joint Venture between the Sunshine Coast Regional District (SCRD), District of Sechelt, and the Sechelt Indian Government District. The Town of Gibsons was invited to participate in the joint RFP process but chose not to.

Overview

The scope of the RFP included the curbside collection services for garbage, organics and recyclables, and the carts associated with those collection services.

The RFP was posted in accordance with best practice to meet public sector procurement standards, and our Trade Agreement obligations. The RFP was posted on BC Bid, SCR D website and advertised in the Coast Reporter on October 11, 2018. A four week bid opportunity was planned. An extension was requested by the vendor community and the Joint Committee agreed to extend to November 23, 2018.

The RFP was designed so proponents could choose to bid on some or all of the services, creating more opportunity for businesses of all sizes. The evaluation criteria were developed on the principle of value for money, with consideration of proposal suitability, safety and environmental programs, and community added value.

Four companies submitted proposals. One proposal was for all services, one was for single collection service and two were for only providing carts. All bids received were compliant and were evaluated as outlined below.

Method of Evaluation

The RFP process was facilitated by the SCR D in collaboration with partnering staff from the District of Sechelt and Sechelt Indian Government District.

The Evaluation Committee's review identified Waste Management as the highest scoring proponent, and overall best value. Their proposal was for all services. Waste Management employs approximately 30 local residents, and offers employees a livable wage, medical and pension benefits, and can successfully fulfil the scope of work requirements.

Assessment of award options

Collection method

Waste Management's proposal includes options for either manual or semi-automated collection of garbage, recyclables and organics.

With manual collection, residents would be responsible for supplying their own receptacles which would be placed at the curb and manually lifted into the collection vehicle by an operator.

With semi-automated collection, the driver will manually bring the container to the truck and lift it into the truck with a mechanical arm. This option requires the purchase of heavy duty collection carts.

Collection Carts

Waste Management's proposal allows for either Waste Management or the SCRD to purchase collection carts. In either case, cart assembly, distribution, inventory, and warranty management are Waste Management's responsibility over the contract life.

If Waste Management purchases the carts they would be financed over time through a higher rate for the collection services. At the end of the contract life the SCRD would become the owner of the carts. Alternatively, the SCRD would purchase the carts upfront through Waste Management and would be responsible for any associated financing.

Based on the borrowing rates available to the SCRD, it is recommended that the desired carts be purchased upfront, financed through a five-year equipment financing loan or Liability Under Agreement through the Municipal Finance Authority. It is estimated that this option will save ratepayers approximately \$650,000 over the life of the contract if all curbside collection services are fully implemented.

Garbage Collection

Waste Management's proposal includes the option that SCRD purchase large carts (134L) that allow for a semi-automated collection method. These could contain almost two times the volume of the ones currently being used (70L).

Alternatively, SCRD could choose a manual collection method and have residents continue to use their own containers. It is expected that the bi-weekly collection of garbage with the container size currently used would not meet the needs of all residents, even if curbside collection services for recycling and organics are implemented.

The estimated cost, inclusive of overhead, and projected annual user rate per household for each option are detailed in the table below:

Option	Projected Annual Cost	Projected User Rate
Manual Collection (Resident supplies cart)	\$422,845	\$74
Semi-automated Collection (SCRD buys cart)	\$490,809	\$86

Organics Curbside Collection

Waste Management's proposal for the collection of food scraps includes the option to supply carts to all residential households. When implementing this service Waste Management will also provide all households outreach materials and a small container for use in the kitchen (a kitchen catcher).

Green waste would be picked up if contained in large fully compostable yard waste bags. These bags could be purchased from Waste Management or from several local retailers.

Implementing an Organics Curbside Collection service would align with the Regional Organics Diversion Strategy as adopted in February 2018. Diverting organics from the landfill is widely considered to be an effective method of extending the lifespan of the landfill. The implementation of this service could also benefit the SCRD in future discussions with regulatory agencies about its long term solid-waste management.

The estimated cost, inclusive of overhead, and projected annual user rate per household for each option are detailed in the table below:

Option	Projected Annual Cost	Projected User Rate
Manual Collection (Resident supplies cart)	\$704,174	\$123
Semi-automated Collection (SCRD buys cart)	\$757,103	\$132

Recycling Curbside Collection

Waste Management would provide carts for the bi-weekly collection of paper and containers (plastic and metal). These materials are selected for curbside collection as they represent the largest streams of recyclable materials. Even following implementation of curbside collection of these recyclables, these materials would continue to be accepted at recycling depots.

Recycle BC will provide additional incentives for implementing the curbside collection of recyclables in Electoral Areas B and D to offset hauling costs and would fully fund processing costs. Implementing this service in these areas would require an amendment to the current contract with Recycle BC, which will take approximately 3 months to complete.

For Electoral Areas E and F, where the SCRD has arranged the processing of the collected recyclables, the initiation of a competitive bid-process would be required.

Our contract with Recycle BC does not allow for SCRD to equalize the costs for providing Recycling Curbside Collection service over the four participating Electoral Areas.

The estimated cost, inclusive of overhead, and projected annual user rate per household for each option are detailed in the table below:

Option with Electoral Area specific costs	Projected Annual Cost	Projected User Rate
<u>Electoral Area B and D</u>		
Manual Collection (Resident supplies cart)	\$63,540	\$20
Semi-automated Collection (SCRD buys cart)	\$108,018	\$34
<u>Electoral Area E and F</u>		
Manual Collection (Resident supplies cart)	\$274,134	\$107
Semi-automated Collection (SCRD buys cart)	\$310,002	\$121

Additional Financial Impacts

Landfill

The implementation of organics and recycling curbside collection by SCRD, combined with those of the District of Sechelt and the Sechelt Indian Government District would result in a diversion of approximately 1,700 tonnes of waste from the Sechelt Landfill annually. Although this results in a savings for the Refuse Collection service, landfill tipping fee revenue will see a reduction of up to \$255,000 (10%) annually. Tipping fees currently fund 100% of landfill operations.

Conversely, the reduction in waste being landfilled will extend the expected lifespan of the Sechelt Landfill by an estimated 9 to 13 months. This would allow contributions to the landfill closure reserve to be spread out over a longer period, allowing for the annual contribution to be reduced by \$85,000. Closure reserve contributions are funded from taxation.

In consideration of the nature of these estimates, particularly with respect to tonnage and density of landfilled waste and the associated impact on landfill lifespan, Staff recommend monitoring the impact that changes to curbside services have on landfill tonnage and density in the first year of implementation. As a contingency, closure reserve funding can be temporarily reallocated to fund landfill operations if necessary during the first year.

Green Waste

The tonnage of green waste residents will drop off at the South Coast drop off site in Gibsons is expected to decrease with the implementation of an Organics Curbside Collection service. This will result in a currently unknown decrease in the green waste hauling costs. Staff will monitor this decrease and report these to the Board after the first whole year of an Organics Curbside Collection service being in place.

Recycling Depots

The implementation of a Recycling Curbside Collection service in Areas B and D would reduce the incentives the SCRD receives from Recycle BC to support the Sechelt depot service by an estimated \$10,000 annually. This is based on reduced tonnages of accepted materials as well as lower incentive rates.

Implementation in Areas E and F would not impact incentive rates but would result in reduced depot volumes. It is estimated this would result in a \$20,000 to \$40,000 reduction based on a 20% to 40% reduction in volume.

Depot services are funded through the Solid Waste service funded from taxation with incentive revenue used to offset taxation. Based on current service levels and contract commitments, any decrease in incentive revenue will need to be offset by higher taxation.

Service level options

Semi-automated collection is recommended for all curbside collection services as the use would be the most convenient option for residents. Given the financial benefit to SCRD, it is recommended that the SCRD purchase the carts from Waste Management.

With respect to the implementation of the curbside collection of organics and recyclables the following options are suggested for consideration:

Option 1: Organics Curbside Collection in all Electoral Areas.

Option 2: Organics Curbside Collection in all Electoral Areas and Recycling Curbside Collection in Electoral Areas B and D.

Option 3: Both Organics Curbside Collection and Recycling Curbside Collection in all Electoral Areas.

The estimated cost, inclusive of overhead, and projected annual user rate per household for each option are detailed in the table below:

Curbside Collection Options	Garbage	Organics	Recycling Areas B&D	Recycling Areas E&F	Total
Option 1	\$86	\$132	-	-	\$218
Option 2	\$86	\$132	\$34	-	\$252
Option 3	\$86	\$132	\$34	\$121	\$252 / \$339

Staff is requesting direction on the preferred Curbside Collection Option.

The annual estimated base cost for the implementation of all three services over the five-year term of the contract is \$4,427,931, plus the estimated capital cost for purchasing of the carts of \$1,523,700.

Timeline for next steps or estimated completion date

Next steps are to award and execute a contract with the successful proponent. The new services will require significant capital investment for new equipment, therefore, the services are not anticipated to begin until late Q4 2019. Arrangements have been made with the current contractor to secure ongoing delivery of the current service until such time.

Therefore, staff do not recommend any material changes to rates for 2019 as financial implications resulting from changes to service delivery, such as reductions to tipping revenues, Recycle BC incentives, and other landfill related impacts will take time to emerge and be confirmed. Staff will bring a subsequent report to a February 2019 Committee meeting for recommended Refuse Collection Bylaw rate changes.

Communications Strategy

Staff and Waste Management will develop and implement a project-specific communication plan. This plan will include notices in newspapers, website and social media as well as door-to-door delivery of detailed information prior to the start of any new services.

STRATEGIC PLAN AND RELATED POLICIES

The implementation of curbside collection services for Organics and Recycling would align with the objectives of the Solid Waste Management Plan and the Regional Organics Diversion Strategy.

CONCLUSION

Waste Management was considered the highest scoring proponent in a competitive and open tendering process for curbside collection services for garbage, recyclables and organics.

Staff request direction on the preferred option for the implementation of curbside collection for organics and recyclables.

Staff recommend the following award options:

- Semi-automated collection for all selected curbside collection services
- Financing of the purchasing of the carts for all selected curbside collection services upfront by the SCRD.

In order to ensure the Committee has sufficient time to consider this report, referral to the January 31, 2019 Corporate and Administrative Services Committee is recommended.

Reviewed by:			
Manager	X – V. Cropp	Finance	
GM		Legislative	
CAO	X – J. Loveys	Other	X – B. Wing