

Service Plan for Environmental Resource Management

2016-2019
(2018)

Capital Regional District

Date submitted: *August 2017*



Table of Contents

1 Overview..... 1

1.1 Division & Service Summary 1

1.2 Organization Chart..... 2

1.3 Key Trends, Issues & Risks – Service Specific..... 2

1.4 Link to Board Strategic Priorities 3

2 Services..... 4

2.1 Service Levels 4

2.2 Workforce Considerations 7

3 Divisional Initiatives & Budget Implications 7

4 Goals & Performance Indicators..... 10

Contact 10

1 Overview

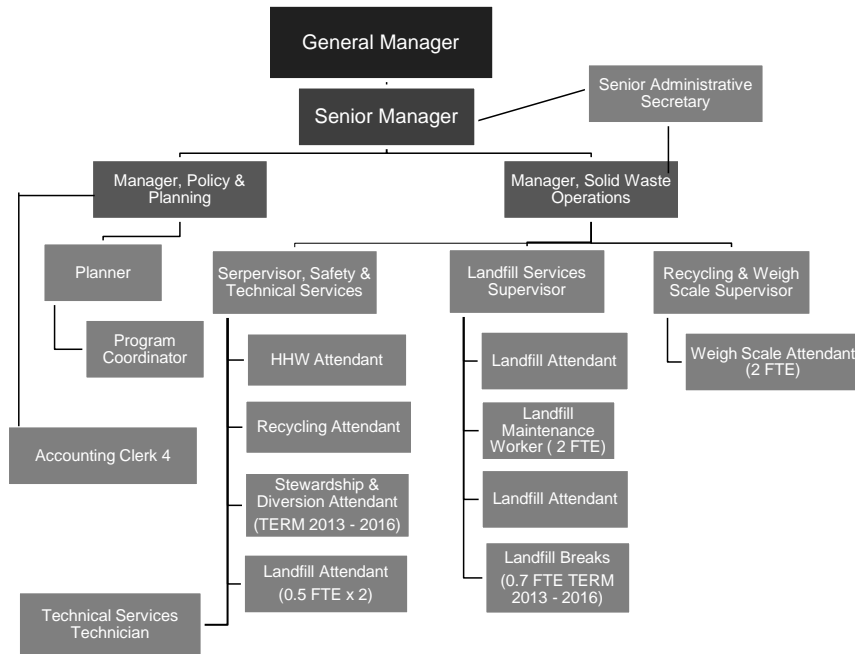
1.1 Division & Service Summary

Environmental Resource Management's (ERM) mission is to efficiently and effectively manage the region's solid waste resources in an environmentally, socially and economically responsible manner. The ERM division is responsible for municipal solid waste management in the Capital Region, including waste reduction, recycling programs and operation of Hartland landfill.

The CRD sees waste as a commodity and seeks the highest and best use for these resources by applying the 5R hierarchy of Reduce, Reuse, Recycle, Resource Recovery and Residual Management. Services range from planning and policy development, bylaw and contract administration to landfill operations. The division is responsible for a new solid waste management plan, facility licensing, recycling and household hazardous waste collection programs, the regional kitchen scraps strategy, community education and support programs, landfill bans, as well as leachate and landfill gas management.

Service Purpose , Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
Diversion Services Planning, Policy Recycling Programs	All jurisdictions in region	Landfill tipping fees Funding from product stewardship programs	Environmental Services Committee (ESC)
Landfilling Services Disposal Services and Environmental Compliance	All jurisdictions in region	Landfill tipping fees	ESC
Recovery Services Landfill gas recovery and electricity generation	All jurisdictions in region	Landfill tipping fees Sale of electricity	ESC

1.2 Organization Chart



1.3 Key Trends, Issues & Risks – Service Specific

Landfill tipping fee revenues are no longer sufficient to fully cover the costs of both landfill operations and diversion programs. A new long-term financial model is required.

Diversion Services

- The CRD's current per capita disposal rate aligns with the Ministry's new waste disposal service target of 350kg/capita by 2020. The remaining waste materials in the landfill will be more difficult and costly to divert.
- Lifecycle management of consumer products is shifting from local governments to producers through Extended Producer Responsibility (EPR) programs, but not always at full cost recovery. There are opportunities to divert more stewardship materials from the landfill.
- Planning and development of in-region kitchen scraps processing capacity is ongoing (annual kitchen scraps diversion appears to have plateaued at 7,500 tonnes).
- A new Solid Waste Management Plan (SWMP) will provide direction for the future.
- Decrease kitchen scraps tonnage projected to be received at the Hartland transfer station in 2018 from 7,500 down to 6,500 tonnes/year. Increase of kitchen scraps tipping fee, to fully recover costs, has resulted in kitchen scraps volumes being taken to lower-cost alternatives

Landfilling Services

- The potential movement of garbage out of region for disposal remains a concern due to possible loss of revenue and reduced environmental oversight.
- Residual material is becoming more costly and difficult to manage as WorkSafe BC identifies an increasing variety of materials that need to be managed with heightened worker safety standards.
- Increasing waste volumes and tipping fee revenue due to healthy local economy and real estate market. Tipping fees budgeted for inflationary increases, \$2/tonne, starting 2018.
- 2017 landfill tipping fee was \$110/tonne. 2018 tipping fee reduced to \$105/tonne to help draw down excess balance in ERM Sustainability Reserve and to proactively manage waste export risk
- Increase general refuse tonnage to be received at Hartland landfill in 2018 from 110,000 to 125,000 tonnes/year. Increased tonnage due to sustained strong construction activity and Highwest landfill taking only selective customers hauling mid-island (non CRD) waste.

Formatted: English (Canada)

Formatted: Right: 0"

Formatted: Font color: Text 1, English (United States)

Recovery Services

- Staff are continually investigating new integration and recovery opportunities to optimize landfill gas recovery and maximize resource recovery revenue.
- Proceed with an integrated resource management (IRM) procurement process based on Board direction.
- Board approval of Core Area Liquid Waste Management Business Case, including conveyance of residuals to Hartland for recovery of resources at an anaerobic digestion facility
- Evaluate Renewable Natural Gas business case as an opportunity to better optimize landfill gas utilization at Hartland landfill potentially integrate with biogas recovery from Hartland North liquid waste digestion facility

1.4 Link to Board Strategic Priorities

The Division has a link to the following strategic priorities:

INTEGRATED WASTE MANAGEMENT

- Realign resources to effectively deliver on Board directives relating to integrated waste management and develop an overarching integrated plan
- Implement an assessment framework on integration opportunities, consider innovative approaches and report on the effectiveness of programs.
- Recruit two four-year term staff to undertake an integrated resource management procurement process.

Formatted: Font: (Default) Calibri, 11 pt, English (United States)

CLIMATE CHANGE

- Realign resources to effectively deliver on Board directives relating to climate change and implement policy and practices to demonstrate leadership in operations

AGRICULTURAL LAND AND FOOD SECURITY

- Review opportunities for regional agricultural incentives and initiate food security educational programming

PUBLIC ENGAGEMENT AND COMMUNICATIONS

- Develop public participation strategies, including implications and performance metrics, as a part of all major initiatives and implement more options for two-way dialogue.

2 Services

2.1 Service Levels

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
Diversion Services					
Planning and Policy Development	SWMP development (currently at Stage 2)	Stage 3 delayed pending Board IRM direction	<u>Stage 3 delayed pending Board IRM direction</u> <u>Complete Stage 3 of SWMP</u>	<u>Re-start SWMP development</u> <u>New-SWMP determines service levels</u>	<u>New SWMP determines service levels</u> <u>Adjust to meet service delivery needs, as required</u>
	Administer 49 agreements and contracts	The number of agreements will increase as the Ministry of Environment adds new Extended Producer Responsibility (EPR) programs (e.g., mattresses, construction & demolition waste)	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
	Administer 5 licensed transfer stations on Salt Spring under the Transfer Station Bylaw	The number of licensed transfer stations will increase if other areas (e.g., North Pender Island) request similar bylaws during the SWMP process	Review and Assess	Adjust to meet service delivery needs, as required	Review and Assess
	Administer Compost Facilities Bylaw (no licensed facilities as of June 2014)	Compost bylaw administration varies with number/types of unlicensed and licensed facilities	Review and Assess	Review and Assess	Review and Assess
Recycling Programs Delivery	Curbside collection of packaging & printed paper (PPP)	Glass to be collected as a separate third stream, as per Multi Material BC (MMBC) requirements	Review and Assess	Review and Assess	Review of MMBC agreement may result in further service level changes

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
	Curbside collection from 123,000 households (HH)	Add new HH (approx. 1,000 HH/year) to collection	No change	Review and Assess	Adjust to meet service delivery needs, as required
	PPP collection from 6 Electoral Area depots	No change	MMBC incentive review may increase depot funding	Review and Assess	Review of MMBC agreements may result in further service level changes
	Hartland recycling facility collects over 80 items from 28 product categories	Increase number of items if Ministry mandates more collection under EPR legislation	Review and Assess	Adjust to meet service delivery needs, as required	Review and Assess
	Education to support all recycling programs	Reduce & revise Hotline service to reflect MMBC funding (reduce to 0.5 FTE)	No change	Review and Assess	Adjust to meet service delivery needs, as required
	Kitchen scraps strategy in place (15,000 tonnes diverted in 2014)	Increase tonnage diverted beyond 15,000 tonnes	Review and Assess	Adjust to meet service delivery needs, as required	Review and Assess
	Household Hazardous Waste (HHW) program (Hartland, mobile events on Salt Spring and Gulf Islands, as well as off-site pickup of orphan HHW materials)	Discontinue HHW collection from Salt Spring and Gulf Islands locations, as well as off-site pickup of orphan HHW materials	No change	No change	No change
Landfilling Services					
Disposal services	Administer five contracts and agreements	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
	Residential service at bin area (Mon – Fri 9 am to 5 pm, Sat 9 am to 2 pm) 45,000 vehicles	Review and Assess	Adjust to meet service delivery needs, as required	Review and Assess	Adjust to meet service delivery needs, as required
	Commercial service at active	Potential new EPR and SWMP	Review and Assess	Review and Assess	Tervita landfill (Highlands) is

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
	face (Mon – Fri 7 am to 5 pm, Sat 9 am to 2 pm) 120,000 tonnes @\$110/tonne	diversion programs will decrease tonnages. Maintain tipping fee rate to prevent leakage of garbage			reaching capacity. Construction & demolition tonnage at Hartland may increase.
	Controlled waste 7,500 tonnes @\$157/tonne	Amend tipping fee rate for asbestos to reflect increased handling costs	Review and Assess	Adjust to meet service delivery needs, as required	Review and Assess
Environmental Compliance	Leachate management (meet or exceed Regional Source Control Program)	No change	No change	No change	No change
	Environmental monitoring (meet or exceed Ministry requirements)	No change	No change	No change	No change
Recovery Services					
Provide Recovery Services	Landfill gas capture (current capture rate 55%)	Increase capture rate to 75% to meet Ministry guideline	Review and assess	Adjust to meet service delivery needs, as required	Review and Assess
	Electricity generation equivalent to powering 1,100 homes	Facility upgrade to maintain or exceed generation	Review and assess	Adjust to meet service delivery needs, as required	Review and assess
				Initiate IRM procurement process based on Board direction	Develop IRM services based on outcome of 2018 procurement process

2.2 Workforce Considerations

	Workforce (FTEs)				
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
Diversion	12.25	12.25	12.25	12.25	12.25
Landfilling	8.26	8.26	8.26	8.26	8.26
Recovery	1.19	1.19	1.19	4.493.19	4.493.19
Total	21.7	21.7	21.7	21.7	21.7
Supplementary	1.7	1.7	1.7	4.73.7	4.73.7
Total	21.7	21.7	21.7	21.723.7	21.723.7

In the 2013 budget, there were two 3-year term positions created. One was a 0.7 FTE Landfill Breaks position to provide daily break relief for up to six landfill employees. The second was a 1.0 FTE Stewardship and Diversion Attendant to address an increasing number of stewardship commodities collected at the Hartland Depot, as well as conduct on-site maintenance.

For 2016, the 0.7 FTE Landfill Breaks position has been added as a permanent position. There is a demonstrated ongoing need to provide break relief to maintain service levels during regular operating hours.

For 2016, the 1.0 FTE Stewardship and Diversion Attendant has been continued for a further 4-year term, renewed annually, and will now provide labour in relation to stewardship commodities, as well as the operation of the new Kitchen Scraps Transfer Station at Hartland. The work associated with this position will continue at a full-time capacity, and be extended annually until 2019, until a long-term decision is made regarding a regional kitchen scraps processing.

For 2018, add a Project Director and Deputy Project Director for two (2) four-year term FTEs to undertake the Integrated Resource Management procurement (RFQ & RFP) process. Funding for these positions would be drawn from the IRM capital budget.

3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Priority Reference	Budget Implications
2016			
Financial Review ERM expenditure adjustments to transition from a growth business model to a program maintenance model Ongoing	2016 budget was adjusted to maintain existing programs Primary Budget Drivers: Service Reductions <ul style="list-style-type: none"> Reduction to Blue Box administration and hotline service levels as a result of new MMBC funded collection contract 	n/a	\$1.44 M reduction overall (\$250,000) continuous

Title & Estimated Completion Date	Description	Priority Reference	Budget Implications
	<ul style="list-style-type: none"> Consolidation of CRD Household Hazardous Waste program at Hartland and elimination of offsite collection programs <p>Program Adjustments/Efficiencies</p> <ul style="list-style-type: none"> Adjustment of kitchen scraps diversion and processing volumes based on current trends Reduction of wood waste diversion and processing costs by using optimizing onsite re-use at Hartland 		(\$140,000) continuous (\$550,000) continuous (\$100,000) continuous
Blue Box Glass Collection To be completed in 2016	Address potential issues arising from separate collection of glass at the curb	Environmental Protection	Supplementary as required
Kitchen Scraps Processing Ongoing	Develop regional kitchen scraps processing capacity	Integrated Waste Management Regional Infrastructure	Supplementary as required
Waste Stream Analysis To be completed in 2016	Conduct waste stream analysis as per Ministry guidelines	Integrated Waste Management	\$125,000 Single supplementary Waste stream analysis
Hartland Landfill & Recycling Facility Operations To be reviewed annually	Maintain service levels by providing break relief. Complete work associated with stewardship materials and kitchen scraps management.	Education, Outreach and Information	\$121,700 Continuous supplementary 0.7 FTE Landfill Breaks position 1.0 Term (up to 4 years) Stewardship and Kitchen Scraps Attendant position
Hartland Landfill Security Ongoing	Review security arrangements	Corporate Development	\$100,000 Continuous supplementary Increased security
Controlled Waste Complete in 2016	Amend controlled waste fees to cover costs of more difficult to manage materials	Environmental Protection	Core budget (cost recovery)
2017 - 2019			
Solid Waste Management Plan Stage-3 Moved to 2018	Conduct public consultation and complete plan for approval by Board and Ministry	Integrated Waste Management	Core budget

Title & Estimated Completion Date	Description	Priority Reference	Budget Implications
Hartland North Improvements	Make necessary capital improvements and operational adjustments at Hartland Landfill to facilitate siting of the sewage project's waste digestion facility at Hartland North	Integrated Waste Management	To be determined
<u>Integrated Resource Management</u>	<u>Recruit two four-year term staff to undertake an integrated resource management procurement process to facilitate Board direction regarding investigation and procurement of Integrated Resource Management infrastructure.</u>	<u>Integrated Waste Management</u>	<u>To be fully determined. Estimated cost of two fully-burdened FTEs, subject to Human Resources review, would be an estimated \$400,000 annually for four years.</u>

4 Goals & Performance Indicators

Service Goals	Indicators or Measures
Diversion Services Manage solid waste in an environmentally, socially and economically responsible manner	<ul style="list-style-type: none">• Adoption of Solid Waste Management Plan by Board and approval of plan by provincial ministry in 2016• Revenue to cost ratio ≥ 1 by 2020 (current ratio is <1)• Decrease waste disposal per capital (target <369 kg)
Landfilling Services Continue to optimize landfill operations	<ul style="list-style-type: none">• Optimize use of landfill cover material at Hartland (target 5:1 garbage to cover ratio)• Increase compaction rate at Hartland (target minimum 850kg/m³)
Recovery Services Optimize landfill gas resource recovery at Hartland	<ul style="list-style-type: none">• Percentage of methane gas captured at Hartland Landfill* (75% target)

*Corporate indicator – multiple divisions may contribute to this measure.

Contact

Name: Russ Smith
Title: Senior Manager
Contact information: 250-360-3080