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REPORT TO ENVIRONMENTAL SERVICES COMMITTEE MEETING OF WEDNESDAY, OCTOBER 21, 2020

SUBJECT 2019-2022 Landfill & Recycling Service Planning

ISSUE SUMMARY

To provide the Environmental Services Committee with an overview of relevant initiatives undertaken by the Environmental Resource Management, Environmental Protection and Engineering Services divisions in 2020 and planned for 2021 to deliver on approved Board Priorities and Corporate Plan.

BACKGROUND

The Capital Regional District (CRD) Board completed its strategic planning early in 2019 and approved the CRD Board Strategic Priorities 2019-2022.

The four priorities are:

1. Community Wellbeing – Transportation & Housing
2. Climate Action & Environmental Stewardship
3. First Nations Reconciliation
4. Advocacy, Governance & Accountability

The priorities were confirmed at the annual check-in on May 13, 2020.

The 2019-2022 CRD Corporate Plan is aligned to the Board direction. It highlights the initiatives the CRD needs to deliver over the Board's four-year term to address the region's most important needs. The Corporate Plan identified six initiatives under Landfill & Recycling, which fall under the Environmental Services Committee's mandate.

Appendix A *Community Need Summary – Landfill & Recycling 2021* is a summary of the planned activities for 2021. It contains details about core service levels, new initiatives proposed and performance metrics.

Appendix B *Landfill & Recycling – Initiatives Progress Report* provides insight into what has been delivered through the nine delivery initiatives approved last year, for delivery in 2020.

The Service Planning process gathered information necessary to assemble a provisional budget for Committee and Board review. The purpose of this report is to explain how the Environmental Resource Management, Environmental Protection and Engineering Services divisional program of work connects to the Board Priorities, Corporate Plan and provisional budget.

ALTERNATIVES

Alternative 1

The Environmental Services Committee recommends to the Capital Regional District Board:

That Appendix A, Community Need Summary – Landfill & Recycling, be approved as presented and advanced to the October 28, 2020 provisional budget review process.

Alternative 2

The Environmental Services Committee recommends to the Capital Regional District Board:

That Appendix A, Community Need Summary – Landfill & Recycling, be approved as amended and advanced to the October 28, 2020 provisional budget review process.

IMPLICATIONS

Financial Implications

Initiatives identified in the Corporate Plan (including Board Priorities) cannot be undertaken without resourcing. The Board determines resourcing through its annual review and approval of financial plans. To support the Board's decision-making, staff, through the service planning process, provide recommendations on funding, timing and service levels.

During this years' service planning process, staff have been mindful of the fiscal challenges facing the region in the months ahead. To that end, any budget increase or other impacts have been mitigated as much as possible.

Service Delivery Implications

The Community Need Summary provides an overview of all work that needs to be undertaken in order to meet our regulatory requirements, satisfy Board direction and meet the needs of the communities we serve.

Alignment with Board & Corporate Priorities

Staff have identified four initiatives that will have budget implications for 2021 (Table 1).

Table 1: Community Needs Summary – Landfill & Recycling, Delivery Initiatives

#	Initiative	Description	Year(s)	FTE impacts in 2021	Budget Impacts in 2021
9a-1.1	Resource Recovery, Senior Project Coordinator	Facilitation of resource recovery initiatives at Hartland	2021 to 2023	1 Term extension	Included in Provisional Budget
9b-0.1	Hartland Waste Technician	Monitoring and enforcement of WorkSafeBC material handling protocols	2021	0.5 ongoing	Included in Provisional Budget
9b-0.2	Hartland Landfill Attendant	Enhance staffing complement to respond to increase in material volumes dropped-off at Harland depot	2021 to 2025	2 x 0.5 ongoing	Included in Provisional Budget
9b-0.3	Food Waste Attendant	Consolidation and trucking of food waste materials brought to Hartland depot	2021 to 2023	1 Term	Included in Provisional Budget

Delivery Initiatives

In April 2020, the Capital Regional District (CRD) announced approval in principle of an agreement where FortisBC will purchase renewable natural gas (RNG) generated from Hartland Landfill for beneficial use in its natural gas distribution system. Once finalized, the agreement would allow for FortisBC to purchase and distribute Hartland-generated RNG that would result in greenhouse gas emission reductions of approximately 264,000 tonnes of CO₂e over the 25-year project life – equivalent to removing 2,240 cars from the road for 25 years.

- 9a.1.1 – Resource Recovery Senior Project Coordinator: extend a two-year term position for another three years; this position facilitates key Hartland resource recovery initiatives as they are developed (e.g., renewable natural gas and potentially organics processing).

The Hartland public drop-off depot receives garbage, recyclables and household hazardous materials. Today, over 80 items from 28 product categories are accepted for recycling. Material volumes dropped off at the public depot have doubled over the last decade. Over the same time period, the staffing complement has only increased by 50 per cent (ongoing positions) and auxiliary spend has increased by 20 per cent.

In order to maintain existing service levels and ensure the safe continued operation of the depot, the following initiatives have been put forward to address some of the pressures experienced. All four initiatives seek to increase the staffing complement to support key aspects of the Hartland services operation:

- 9b-0.1 – Hartland Waste Technician: increase an existing part-time position to full-time; this position monitors and enforces WorkSafeBC material handling protocols to ensure workers' safety with respect to renovation waste.
- 9b-0.2 – Hartland Landfill Attendant: creation of two part-time ongoing positions; the positions will address the pressure resulting from the increase in solid waste volume and ensure we can maintain Hartland's six-day-a-week operations and reduce the overall spend on auxiliary resources.
- 9b-0.3 – Food Waste Attendant: create a two-year term position; the position will be responsible for managing the consolidation and trucking of food waste materials brought to the Hartland food scraps transfer station by commercial haulier. This role used to be performed by the Landfill Attendants but those resources are now fully tasked.

The cost of the four initiatives will be recovered through the Hartland tipping fees and renewable natural gas revenue.

CONCLUSION

Staff have been progressing initiatives and actions identified in the Corporate Plan, including Board Priorities. The Board determines resourcing through its annual review and approval of financial plans. As per previous years, to support the Board's decision-making, staff are providing recommendations on funding, timing and service levels through the service and financial planning processes.

RECOMMENDATION

The Environmental Services Committee recommends to the Capital Regional District Board:

That Appendix A, Community Need Summary – Landfill & Recycling, be approved as presented and advanced to the October 28, 2020 provisional budget review process.

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

ATTACHMENTS

Appendix A: 2021 Community Need Summary – Landfill & Recycling
Appendix B: Landfill & Recycling – Initiatives Progress Report

Landfill & Recycling

Strategy

Target Outcome

We envision minimizing waste disposal and maximizing waste diversion

Strategic Context

Strategies

- [Solid Waste Management Plan](#) – guides how the region will manage solid waste, including recyclables, compostable material and garbage from homes, businesses and institutions, as well as construction and demolition sites
- [Hartland Environmental Programs](#) – the Hartland Landfill Environmental Programs provide a comprehensive program to monitor and evaluate the effects of landfilling operations on the environment.

Trends, risks and issues

- Hartland public drop-off area is experiencing increased customer volumes of homeowners dropping off garbage and recycling. Increased WorkSafe requirements when receiving homeowner renovation and demolition materials at the landfill.
- Ongoing consideration of solid waste resource recovery projects to maximize the environmental/economic benefits associated with waste diversion and disposal.
- A new Solid Waste Management Plan (SWMP) is currently being drafted and should be completed and approved by the Province by the end of 2021.
- The ongoing efforts to engage with local communities regarding the application of biosolids at Hartland Landfill is likely to continue for the next five years during development of the long-term biosolids management plan.

Services

Core Services Levels	
Service	Levels
<p>Diversion Services</p> <p>Responsible for solid waste management planning in the Capital Region, including policy and program development to increase waste reduction or recycling.</p>	<ul style="list-style-type: none"> • Planning & policy development activities include the SWMP and the administration of 49 contracts and agreements and Compost Facilities Bylaw • Delivery of the recycling programs, which include curbside collection from 123,000 households and packaging, printed paper and glass collection from six electoral area depots. Today, Hartland recycling facility collects over 80 items from 28 product categories
<p>Landfilling Services</p> <p>Ensure regional landfill capacity with the operation of the CRD's Hartland Landfill. Ongoing capital and operating investments are made at Hartland to ensure compliance with BC Ministry of Environment landfill regulations, including leachate and landfill gas management infrastructure.</p>	<ul style="list-style-type: none"> • Administration of five contracts and agreements • Residential service at bin area (9am-6pm weekdays, 9am-2pm Saturdays) • Commercial service at active face (7am-5pm weekdays, 9am-2pm Saturdays)
<p>Resource Recovery Services</p> <p>Installation and operation of landfill collection and utilization infrastructure at Hartland Landfill to ensure landfill gas (methane) destruction and compliance with provincial environmental regulations. Seek to maximize the environmental and financial benefits of Hartland Landfill gas utilization.</p>	<ul style="list-style-type: none"> • Electricity generation using landfill gas generates enough electricity to power 1,600 homes
<p>Hartland Environmental Programs</p> <p>Monitoring, assessment and technical reporting to support regulatory compliance and contaminant reduction at Hartland Landfill</p>	<ul style="list-style-type: none"> • Regulatory compliance monitoring of surface water, groundwater, landfill gas and leachate

Community Need



2021 Summary

<p>Engineering Services</p> <p>Provide engineering feasibility studies, detailed design, tendering, construction management and commissioning services that support a number of community needs (Landfill & Recycling, Parks & Environmental Resource Management, Health Facilities, Climate Action, Recreation and Electoral Areas).</p>	<ul style="list-style-type: none"> • Lead or support the planning, design and project management of over a dozen construction projects averaging \$3.5 to \$5 million annually • Projects include ongoing contract management of the solid waste filling and aggregate production contracts, as well as smaller projects related to landfill gas collection, leachate management, environmental controls and emergency response preparation • Engineering Services also manages an additional 15-20 projects each year for other CRD facilities • Lead engineering and procurement on the RNG and Kitchen Scraps and Organics Processing Capital Projects
<p>Support Services</p> <p>The core services listed rely on the support of several corporate and support divisions to effectively operate on a daily basis. These services are reported on in the Accountability Community Need Summary.</p>	<ul style="list-style-type: none"> • Services include Human Resources & Corporate Safety, Corporate Communications, Asset Management, Financial Services, Information Technology & GIS, Information Services, Legislative Services, Facility Management, Fleet Management, Legal Services, Risk & Insurance and Real Estate Services.

Initiatives					
Ref	Initiative	Description	Year(s)	Status	2021 impacts
9a-1.1	Senior Project Coordinator, Resource Recovery	Position to facilitate Hartland resource recovery projects (including RNG and potentially organics processing)	2021 - 2023	NEW Not started	1.0 ^{Term}
9b-0.1	Hartland Waste Technician	Increase resourcing from half to 1FTE to monitor and enforce WorkSafe BC material handling protocols	2021	NEW Not started	1.0 ^{Ongoing}
9b-0.2	Hartland Landfill Attendant	Conversion of two part-time auxiliary positions to ongoing to meet increasing volumes of waste at public drop off area	2021	NEW Not started	2 x 0.5 ^{Converted}

Community Need



2021 Summary

9b-0.3	Food Waste Attendance	Term position to facilitates the consolidation and trucking of materials brought to the Hartland kitchen scraps transfer station by commercial waste haulers	2021 - 2022	NEW Not started	1.0 ^{Term}
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Initiative approved in prior years which have now been delivered or absorbed in Core Services:

- 9a-1 – Resource Recovery and Waste Reduction
- 9a-2 – Infoline Support *
- 9b-1 – Public Awareness of Extended Producer Responsibility
- 9b-2 – SWMP Update
- 9b-3 – Controlled Waste Permits *
- 9b-4 – Electronic Stewardship Attendant *
- 9c-1 – Changing Recycling Markets
- 9d-1 – Hartland Landfill Longevity
- 9e-1 – Organic Waste Processing Procurement

*New – Initiatives not in the 2019-2022 Corporate Plan

Business Model

Funding

Who contributes

- Every jurisdiction in the region – not requisition/tax based – user fee-for-service based
- Support Services: varies per service

Funding Sources

- Landfill tipping fees and recycling program revenues

Reporting Structure

- [Environmental Services Committee](#)
- Project based reporting for Environmental Engineering: Parks Committee, Electoral Areas Committee, Recreations

Community Need Key Performance Indicator (KPI)			
Definition and Source	2019 Actual	2020 Forecast	2021 Target
<p>Metric 1: Solid waste disposal target rate of 350 kg/person per year by 2020</p> <p>Annual kilos of solid waste per capita; calculation based on provincial Municipal Solid Waste methodology</p>	382	360	350
<p>Metric 2: Capture 75% of landfill gas at Hartland landfill</p> <p>Percentage of landfill gas captured at Hartland Landfill; data from CRD staff measurement and calculation</p>	66%	65%	70%
<p>Metric 3: Waste compaction rate at Hartland Landfill of 850 kg/m³</p> <p>Kilos per cubic metre; data from CRD staff measurement</p>	1,160	950	950
Discussion			
<p>Link to Target Outcome</p> <p>The landfill and recycling metrics focus on minimizing waste disposal and maximizing waste diversion (Metric 1) while ensuring they are done efficiently (Metric 3) and environmentally sustainably (Metric 2).</p> <p>Discussion</p> <ul style="list-style-type: none"> • Metric 1: Currently, the capital region’s waste disposal rate is at 382 kg/person per year, which is better than the provincial average of 506 kg/person (2017) and well on the way to the target set by the province of 350kg/capita. • Metric 2: There is a target set by the province to capture 75% of landfill gas. • Metric 3: Effective waste compaction results in efficient use of landfill airspace and the prolonged use of existing landfill capacity. 			

Landfill & Recycling

Initiatives approved in 2020 Budget		
Ref	Initiative	Progress to date
5b-2	Landfill Gas Usage	Ongoing - the collection of landfill gas is part of the core service Progressing - agreement in principle for FortisBC to purchase renewable natural gas (RNG) generated from Hartland Landfill for beneficial use in the FortisBC natural gas distribution system
9a-1	Resource Recovery and Waste Reduction	Ongoing - new opportunities are evaluated as waste diversion programs and resource recovery technologies mature.
9a-2	Infoline Support *	Part of core service - recruitment completed and now part of day-to-day operations, topped up with auxiliary hours.
9b-1	Public Awareness of Extended Producer Responsibility	Ongoing - provincial programs and associated awareness opportunities continue to evolve.
9b-2	SWMP Update	Ongoing - Stage 1 consultation on draft plan complete
9b-3	Controlled Waste Permits *	Part of core service - recruitment completed and now part of day-to-day operations.
9b-4	Electronic Stewardship Attendant *	Completed - attendant hired
9c-1	Changing Recycling Markets	Ongoing - markets continue to mature and evolve.
9d-1	Hartland Landfill Longevity	Ongoing - part of Solid Waste Management Plan consultation.
9e-1	Organic Waste Processing Procurement	Ongoing - implementation of procurement strategy starting spring 2021.

* New - Initiatives not in the 2019-2022 Corporate Plan