

Community Need

2023 Summary



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 continues to experience increased customer volumes, likely resulting from strong housing market activity. Increased WorkSafe BC requirements when receiving homeowner renovation and demolition materials at the landfill.
- The kitchen scraps transfer station is being relocated on-site and will require continued staffing to ensure diversion and processing of the segregated food waste materials.
- Ongoing consideration of solid waste resource recovery projects to maximize the environmental/economic benefits associated with waste diversion and disposal.
- The new Solid Waste Management Plan (SWMP) was endorsed by the CRD Board in May 2021 and submitted to the Province of British Columbia shortly thereafter. Though it approved the SWMP, the Board expressed a desire in its deliberations to achieve waste reduction levels greater than the targets it laid out in it.
- The ongoing efforts to engage with local communities regarding the beneficial use of biosolids at the Hartland landfill is likely to continue for the next five years during the development of the long-term biosolids management plan.

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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 ↳ Service level maintained, see initiative 9b-0.3 • Delivery of the recycling programs, which include curbside collection from 132,232 households and packaging, printed paper and glass collection from six electoral area depots. Today, the 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-5pm 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 ↳ Service level adjustments: the existing landfill gas powered electricity generation facility will be decommissioned in 2023. The Hartland power plant will be replaced by a Renewable Natural Gas facility that will upgrade landfill gas into pipeline quality Renewable Natural Gas for distribution on the Fortis BC gas system.
<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
<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 Asset Management, Facility Management, Financial Services, Information Technology & GIS, Information Services, Human Resources & Corporate Safety, Corporate Communications, Legislative Services, Legal Services, Risk & Insurance and Real Estate Services

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Initiatives					
Ref	Initiative	Description	Year(s)	2023 impacts ¹	
9b-0.3	Food Waste Attendant	Extension of term position to facilitate the consolidation and trucking of materials brought to the Hartland kitchen scraps transfer station by commercial waste haulers	2023 – 2025	1.0 FTE Term extension	(\$3.7K) Sale of service

Business Model

Funding
<p>Who contributes</p> <ul style="list-style-type: none"> • Every jurisdiction in the region – not requisition/tax based – user fee-for-service based • Support Services: varies per service <p>Funding Sources</p> <ul style="list-style-type: none"> • Landfill tipping fees as well as Extended Producer Responsibility and recycling program revenues

Reporting Structure
<ul style="list-style-type: none"> • Environmental Services Committee

¹ Budget impacts reflect full program costs, including cost of staffing.

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Performance			
Definition and Source	2021 Actual	2022 Forecast	2023 Target
<p>Metric 1: Solid waste disposal target rate of 350 kg/person per year by 2030 Annual kilos of solid waste per capita; calculation based on provincial Municipal Solid Waste methodology</p>	400kg/capita	410kg/capita	375kg/capita
<p>Metric 2: Capture 75% of landfill gas at Hartland landfill Percentage of landfill gas captured at Hartland Landfill; data from CRD staff measurement and calculation</p>	70.6%	73%	75%
<p>Metric 3: Waste compaction rate at Hartland Landfill of 850 kg/m³ Kilos per cubic metre; data from CRD staff measurement</p>	No compaction tests completed	921 kg/m ³ (average of 2022 tests)	850 kg/m ³

Discussion

Link to Target Outcome

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).

Discussion

- Metric 1 – per capita disposal rates have been on the rise due to a very active real estate market but rates are expected to decline as market conditions cool.
- Metric 2 – landfill gas capture continues to improve with additional capital investment and enhanced landfill gas collection techniques.
- Metric 3 – recent waste volume increases have resulted in challenges associated with waste compaction effectiveness. Hartland engineering is working with our heavy equipment contractor to improve compaction.

Community Need

Initiative Progress Report



Landfill & Recycling

Initiatives approved in 2020, 2021 & 2022			
Ref	Initiative	% complete	Progress to date
9a-1	Resource Recovery and Waste Reduction	Ongoing	Lead: Environmental Resource Management (2020) Ongoing – new opportunities continue to be evaluated and, where feasible, have been incorporated into the final draft of the new CRD Solid Waste Management Plan.
9a-1.1	Senior Project Coordinator, Resource Recovery	100%	Lead: Environmental Resource Management (2021) Completed – included in the 2021 and subsequent Environmental Resource Management budgets.
9a-1.2	Solid Waste Initiatives Coordinator	100%	Lead: Environmental Resource Management (2022) Completed – position has been filled.
9a-2	Infoline Support	100%	Lead: Environmental Protection (2020) Part of core services.
9b-0.1	Hartland Waste Technician	100%	Lead: Environmental Resource Management (2021) Completed – position has been filled.
9b-0.2	Hartland Landfill Attendant	100%	Lead: Environmental Resource Management (2021) Completed – position has been filled.
9b-0.3	Food Waste Attendant	100%	Lead: Environmental Resource Management (2021) Completed – position has been filled.
9b-1	Public Awareness of Extended Producer Responsibility	100%	Lead: Environmental Resource Management (2020) Part of core services.
9b-2	Solid Waste Management Plan Update	100%	Lead: Environmental Resource Management (2020) Completed – the Solid Waste Management Plan and next steps were approved by the CRD Board on May 12, 2021. Final plan was submitted to the province in June 2021.
9b-2.1	Communications Assistant (ERM SWMP support)	100%	Lead: Environmental Resource Management (2022) Completed – position has been filled.
9b-3	Controlled Waste Permits	100%	Lead: Environmental Protection (2020) Part of core services.

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Initiative Progress Report

Initiatives approved in 2020, 2021 & 2022			
Ref	Initiative	% complete	Progress to date
9b-4	Electronic Stewardship Attendant	100%	Lead: Environmental Resource Management (2020) Completed
9c-1	Changing Recycling Markets	Ongoing	Lead: Environmental Resource Management (2020) Ongoing – periodic updates provide to Environmental Services Committee.
9d-1	Hartland Landfill Longevity	100%	Lead: Environmental Resource Management (2020) Completed – in concurrence with 9b-2 the final draft of the Solid Waste Management Plan includes a goal of extending Hartland landfill life until at least 2100.
9d-1	Landfill Maintenance Worker	100%	Lead: Environmental Resource Management (2022) Completed – position has been filled.
9e-1	Organic Waste Processing Procurement	100%	Lead: Environmental Resource Management (2020) Completed – May 2021, Board directed staff to continue with the status quo of hauling and processing of organics at private out-of-region facilities.

Community Needs

Business Plan Update

Landfill & Recycling

Planning for 2023 and beyond

The CRD became responsible for solid waste disposal for the region in 1973 when, at the request of the CRD Board, the Province of B.C. established solid waste disposal as a regional function of the CRD. In 1975, the CRD acquired Hartland Landfill and subsequently assumed direct operation of the site in 1985.

Environmental Resource Management is focused on implementing the regional solid waste management plan (waste disposal of 250kg/capita) by trying to extend the life of Hartland landfill, by increasing waste diversion, and by implementing solid waste policies (bans and tip fees) and programs (beneficial use of segregated waste). Waste volumes could also be significantly impacted by local economic conditions.

With the goal of increasing waste diversion volumes, there is a downward landfill revenue trend that will necessitate a need for a comprehensive long-term financial strategy to sustainably fund long-term Hartland operations and capital.

Background

In 2023, two significant Hartland capital investments have been prioritized and accelerated representing over \$50 million in capital that will be invested in this valuable regional asset:

- Installation of a liner at the north end of the Hartland site to better ensure the environmental integrity at the Hartland site
- Investment in a Renewable Natural Gas facility at Hartland landfill, bringing financial and environmental benefits to the region; this requires significant capital funding

In addition, decreased Hartland tipping fee revenues from when CRD waste diversion targets (250 kg/capita) are achieved, will result in a revenue shortfall. Over time, if waste diversion targets are fully achieved, it is very likely that tax requisitions will ultimately be required to support the CRD Solid Waste service. Tax requisitions will need to be built into future five year budgets to support the CRD Solid Waste service.

Increased waste diversion is reflected in the 2023 five year budget and results in the depletion of Environmental Resource Management reserves over the 2023- 2027 forecast period. The forecasted reserve depletion will need to be offset by a corresponding increase in requisition to support the CRD Solid Waste service.