

**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, APRIL 20, 2022**

SUBJECT **Meeting the Solid Waste Management Plan Targets through Material Stream Diversion**

ISSUE SUMMARY

To seek direction from the Capital Regional District Board on implementation of the Solid Waste Management Plan.

BACKGROUND

The Capital Regional District's (CRD) Solid Waste Management Plan (SWMP), approved by the Board in May 2021, targets an annual disposal rate of 250 kg per capita by 2031. The plan also sets a goal to surpass the provincial per capita waste disposal target and aspires to achieve a disposal rate of 125 kg per capita annually.

The plan enables the CRD to take action in several interconnected areas to increase diversion of materials from the landfill in support of waste reduction targets. On this basis, staff propose implementing a suite of policies designed to divert material from the mixed general refuse (garbage) stream at Hartland Landfill and recycle, repurpose or recover these materials for beneficial use, supporting a circular economy. These policies include:

- expanding landfill bans to new material streams that that can be recycled, repurposed or otherwise recovered
- developing new reduced tipping fee rates for source-separated materials to encourage source separation of banned materials that could be recycled or recovered
- increasing the Hartland tipping fee for mixed general refuse to discourage materials that could be separated from ending up in the general refuse stream, and to partially offset the cost of reduced tipping fees for source-separated recyclable/recoverable materials
- expanding material stream diversion services at Hartland to ensure that banned materials diverted from the general refuse end up in alternative processing streams or end markets
- expanding enforcement of landfill material bans

The expanded diversion services would apply to material streams, such as wood, roofing shingles, textiles, carpet and backing, flooring, rigid plastics, furniture and mattresses, accounting for approximately 35% of the waste stream¹. The CRD is also investigating expanding landfill bans to these material streams. The effectiveness of the proposed policies in diverting materials out of the general refuse stream and into source-separated streams is largely dependent on the rate that tipping fees are set, along with the level of enforcement on the new material bans.

The tipping fee for general refuse will need to increase over time, while the tipping fee for separated loads of some divertible materials will need to be set at a rate below general refuse, in order to incent segregation. Amendments to the tipping fee are being considered for implementation starting June 1, 2023.

¹ Based on 2016 waste composition data. The CRD is conducting a new waste composition study in 2022.

One potential unintended consequence of these policies is waste migration. This is where waste is exported to out-of-region landfills, avoiding the region's waste diversion policies. Waste migration is counter to the aim of reducing waste overall, and can make the CRD's waste system financially unsustainable, as the tipping fees for waste generated within the region are paid to out-of-region facilities, leaving a smaller portion of the waste to cover the entirety of the system's fixed costs.

To mitigate against waste migration, staff recommend initially setting tipping fees and enforcement levels, with a view to aligning with the current market conditions. This is anticipated to result in waste diversion consistent with the SWMP targets and to set the region on a path to meeting the SWMP target of 250 kg per capita per year by 2031. Staff recommend continually evaluating the effectiveness of waste diversion policies, and modifying as necessary for efficacy, and to meet the diversion targets. Staff will be returning to the Environmental Services Committee in May 2022 with additional approaches to addressing the risk of waste migration through waste flow management.

Once materials are diverted from the general refuse stream, they are available for further processing (reuse, recycle or resource recovery) to become part of a circular economy. In the short term, materials that are collected through the expanded diversion services at Hartland will be processed on site, or by the private sector through contract. The CRD may also consider providing an incentive to the private sector to operate transfer or processing facilities at other locations. The CRD's investigation into integrated resource management identified that material stream pre-processing is required for many of the resource recovery technologies evaluated. Strategy 15D of the SWMP is to continue to conduct research, investigate and report out on emerging waste management technologies (including alternatives to landfilling, such as integrated resource management and gasification). Materials diverted from the general refuse stream could be used as a feedstock for such technology in the future.

The next steps for material stream diversion are outlined below:

- initiate a procurement process to understand private sector options and costs for further processing (reuse, recycle or resource recovery) of materials that are diverted from the general refuse stream
- return to the Environmental Services Committee with detailed financial implications based on information received through the procurement
- return to the Environmental Services Committee in January 2023 with proposed revisions to the Hartland Tipping Fee and Regulation Bylaw No. 3881 to come into effect June 1, 2023

Staff will also bring this report to the Solid Waste Advisory Committee for information and will present proposed policies to the Local Government and Industry Solid Waste Working Groups.

ALTERNATIVES

Alternative 1

The Environmental Services Committee recommends to the Capital Regional District Board: That staff be directed to initiate a procurement process for further processing of divertible materials, and return to the Environmental Services Committee in January 2023 with financial implications and proposed amendments to the Hartland Tipping Fee and Regulation Bylaw No. 3881 and associated operational implications.

Alternative 2

That staff be directed to return with further information.

IMPLICATIONS

Financial Implications

As solid waste diversion alternatives are implemented, diverted waste streams are expected to result in lower revenues and higher costs to the service. The magnitude of the changes will be sensitive to which policy alternatives are implemented, pricing levels within the market, and the waste industry's response to these changes.

Tipping fee rate alternatives are being evaluated to offset the incremental impacts of reaching diversion targets and will be considered by committee in advance of a proposed amendment to the Hartland Tipping Fee and Regulation Bylaw No. 3881 in January 2023.

Service Delivery Implications

Beginning in mid-2023, new material categories will be banned from the general refuse stream and new tipping fee categories will be established for source-separated loads of these materials. Staff will determine which material categories can be banned from the general refuse stream based on the results of the procurement process. It is anticipated that material bans will include clean wood waste and mixed/contaminated wood waste, and could also include:

- flooring, carpeting and textiles
- asphalt shingles
- mattresses and box springs and furniture
- rigid plastics

The tipping fee for these materials will be set lower than general refuse tipping fees to encourage source separation. The CRD will consolidate separated loads of these materials and contract with the private sector for subsequent processing, recycling, repurposing or recovery.

General refuse is inspected when it is delivered to Hartland, and if a load contains excessive amounts of banned items, the hauler is subject to ticketing under the Hartland Tipping Fee and Regulation Bylaw No. 3881, in addition to the cost of disposal.

Staff will be seeking to amend the Hartland Tipping Fee and Regulation Bylaw No. 3881 to enable various enforcement strategies to ensure banned materials stay out of the general refuse stream. This could include denying the use of Hartland to those who repeatedly ignore disposal bans.

CONCLUSION

The CRD's Solid Waste Management Plan, approved by the Board in May 2021, targets an annual disposal rate of 250 kg per capita by 2031. The plan enables the CRD to take action in several interconnected areas to increase diversion of materials from the landfill in support of waste reduction targets. Staff propose implementing a suite of policies designed to divert material from the mixed general refuse stream and, as a first step, initiating a procurement process to understand private sector options and costs for further processing (reuse, recycle or resource

recovery) of materials that are diverted from the general refuse stream. Staff will return with the results of the procurement process before proposing modifications to the Hartland Tipping Fee and Regulation Bylaw No. 3881 to meet the SWMP targets.

RECOMMENDATION

The Environmental Services Committee recommends to the Capital Regional District Board: That staff be directed to initiate a procurement process for further processing of divertible materials, and return to the Environmental Services Committee in January 2023 with financial implications and proposed amendments to the Hartland Tipping Fee and Regulation Bylaw No. 3881 and associated operational implications.

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