



Notice of Meeting and Meeting Agenda Environmental Services Committee

Wednesday, March 30, 2022

9:30 AM

6th Floor Boardroom
625 Fisgard St.
Victoria, BC V8W 1R7

Special Meeting

B. Desjardins (Chair), N. Taylor (Vice Chair), D. Blackwell, L. Helps, M. Hicks, G. Holman, G. Orr, J. Ranns, K. Williams, R. Windsor, C. Plant (Board Chair, ex-officio)

The Capital Regional District strives to be a place where inclusion is paramount and all people are treated with dignity. We pledge to make our meetings a place where all feel welcome and respected.

1. Territorial Acknowledgement

2. Approval of Agenda

3. Chair's Remarks

4. Presentations/Delegations

The public are welcome to attend CRD Board meetings in-person.

Delegations will have the option to participate electronically. Please complete the online application for "Addressing the Board" on our website and staff will respond with details.

Alternatively, you may email your comments on an agenda item to the CRD Board at crdboard@crd.bc.ca.

5. Special Meeting Matters

5.1. [22-192](#) Resource Recovery - Construction Demolition and Renovation Waste Opportunities

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

That staff return to committee in June with financial implications, timing and resource requirements to trial the beneficial use of construction, demolition and renovation waste with Lafarge and existing biosolids thermal processing proponents, along with new thermal technology vendors.

Attachments: [Staff Report: Resource Recovery - Construction Demolition & Reno Waste](#)

5.2. [22-194](#) Residential Curbside Recycling Program - Update

Recommendation: The Environmental Services Committee recommends to the Capital Regional District Board:
That this report be received for information.

Attachments: [Staff Report: Residential Curbside Recycling Program - Update](#)

6. Adjournment

The next meeting is April 20, 2022.

To ensure quorum, please advise Jessica Dorman (jdorman@crd.bc.ca) if you or your alternate cannot attend.

**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, MARCH 30, 2022**

SUBJECT **Resource Recovery – Construction Demolition and Renovation Waste Opportunities**

ISSUE SUMMARY

To seek direction on an opportunity to pilot beneficial use of construction, demolition and renovation waste.

BACKGROUND

The Capital Regional District's (CRD) 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 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. Staff are currently investigating opportunities to divert materials from the mixed general refuse (garbage stream) at Hartland Landfill and recycle, repurpose or recover these materials for beneficial use, supporting a circular economy. A staff report on this topic is planned for the April 2022 Environmental Services Committee meeting.

Concurrently, and as a condition of provincial approval of the CRD's short-term Biosolids Beneficial Use Strategy, the CRD is investigating thermal technologies as a long-term beneficial use option for biosolids produced at the Residuals Treatment Facility. As part of this investigation, the CRD will be conducting pilot studies at three existing facilities within North America to examine their viability for thermally processing the CRD's biosolids.

Additionally, the Township of Esquimalt is undertaking investigations into the suitability of integrated resource management (IRM) gasification to process Esquimalt's municipal solid waste (MSW), kitchen scraps and yard/garden waste streams. At the July 14, 2021 CRD Board meeting, staff were directed to support and facilitate, where possible, the IRM business case process the Township of Esquimalt is undertaking.

In response to this context, CRD staff reached out to the three proponents participating in the biosolids thermal technologies pilot studies to determine if it would be possible to trial gasification of MSW as part of the biosolids thermal technologies pilot trial. One proponent is unable to run such tests at their facility, as their permits do not allow for it. Two proponents indicated that while MSW can't be thermally processed directly, with significant pre-processing of MSW into suitable feedstock, a trial is possible. Based on the information on pre-processing and feedstock requirements provided by the proponents, staff have determined that material coming into the landfill as construction, demolition and renovation waste, and then further processed on-site, could be developed into a material meeting the feedstock requirements. Construction, demolition and renovation waste includes wood and wood products, asphalt shingles, carpet, underlay and other flooring, and accounted for an estimated 31,200 tonnes in 2021, or approximately 19.5% of the material received at Hartland Landfill. Further information about how these material categories will be targeted for diversion from the mixed general refuse stream will be included in the April Environmental Services Committee material stream diversion staff report.

Under the CRD's approved short-term Biosolids Beneficial Use Strategy, biosolids are currently transported and utilized as an alternative fuel at the Lafarge cement plant, displacing conventional fossil fuels. Pre-processed clean demolition waste could also be piloted for use as an alternative fuel at Lafarge.

If directed, staff will work with the biosolids thermal technologies proponent, the Township of Esquimalt and Lafarge to better understand the costs, timeframe and pre-processing requirements to pilot thermal technologies for beneficial use of construction, demolition and renovation waste.

The procurement process, examining thermal processing of biosolids, identified three proponents. As this procurement was focused specifically on biosolids, it's possible that an expanded procurement seeking proponents for thermal processing of construction, demolition and renovation waste may identify other vendors or opportunities.

In addition, CRD staff will be working with the Township of Esquimalt in support of their gasification business case, and potential capital project, which could provide an additional opportunity to pilot thermal technologies to processing municipal solid waste.

Alternative 1

The Environmental Services Committee recommends to the Capital Regional District Board: That staff return to committee in June with financial implications, timing and resource requirements to trial the beneficial use of construction, demolition and renovation waste with Lafarge and existing biosolids thermal processing proponents, along with new thermal technology vendors.

Alternative 2

That staff return to committee with more information.

IMPLICATIONS

Financial Implications

The biosolids thermal processing pilot project has a budget of \$450,000. Because of the feedstock pre-processing requirements, it is anticipated that trialing thermal processing of construction, demolition and renovation waste may cost more than trialing thermal processing of biosolids. Further analysis is required to understand the financial implications associated with piloting beneficial use opportunities for construction, demolition and renovation waste with the current proponents, and expanding the procurement to incorporate new feedstock, technology and vendors.

Alignment with Existing Plans & Strategies

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 pilot of beneficial use opportunities for clean demolition waste could identify beneficial use opportunities that could support the region in meeting the Solid Waste Management Plan targets.

CONCLUSION

Staff have identified opportunities to trial beneficial use of construction, demolition and renovation waste through gasification and incineration. Further analysis is required to understand the implications associated with either piloting beneficial use opportunities for construction, demolition and renovation waste with the current biosolids thermal technology proponents or expanding the procurement to incorporate additional feedstock, technology and vendors.

RECOMMENDATION

The Environmental Services Committee recommends to the Capital Regional District Board: That staff return to committee in June with financial implications, timing and resource requirements to trial the beneficial use of construction, demolition and renovation waste with Lafarge and existing biosolids thermal processing proponents, along with new thermal technology vendors.

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



**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, MARCH 30, 2022**

SUBJECT **Residential Curbside Recycling Program – Update**

ISSUE SUMMARY

To provide the Environmental Services Committee with an update on the status of the Capital Regional District's (CRD) residential curbside recycling program.

BACKGROUND

Since 2014, the CRD has been contracted by Recycle BC, the not-for-profit organization that is responsible for residential packaging and paper product recycling in BC, to provide residential curbside recycling services in this region. In turn, the CRD contracts Emterra Environmental to provide the actual collection service. All collected recyclable materials are owned by Recycle BC and it maintains a separate contract with GFL Environmental to receive, process and market its recyclable materials. Between mid-November 2021 and February 2022, the curbside recycling program experienced challenges with the daily completion of service due to a variety of weather and pandemic related conditions.

This began with the flooding that occurred in November that resulted in collections in Sooke being suspended on November 15 due to road corridors in to and out of the community being flooded. Flooding in the Fraser Valley also resulted in Recycle BC's glass recycler being flooded for approximately two weeks, meaning glass collection had to be temporarily suspended in the capital region and province-wide for a comparable period of time. When glass collection was renewed, there was a significant backlog of glass that needed collecting that, when all backlogged glass was placed out for curbside collection, strained Emterra's ability to fully complete each day's routes. The flooding also severely impacted BC's road system and resulted in Recycle BC not being able to truck some recyclable materials to end-markets. This resulted in recyclable material having to be stockpiled at the local processing facility, straining the facility's ability to consistently receive additional recyclable materials until the backlog of material could be cleared.

The challenges experienced due to flooding were followed by the impacts of snowfall in the region, beginning on December 27 and continuing into mid-January 2022. Snowfall resulted in the complete cancellation of all collection on three days and collection only where possible for several other days. Those residences that were not able to be serviced were asked to hold on to their recyclables until their next scheduled collection day, or to take it to a depot, where possible. While some residents did drop-off their recyclables at a depot, the vast majority simply held on to their materials and added to their stockpile in between collections. When combined with the increased volumes resulting from the holiday season, it resulted in very high volumes of materials being placed out for collection on subsequent collection days, again straining Emterra's ability to complete each day's collections. This knock-on effect continued for several weeks until the backlog could be fully cleared.

In addition to the flood and snow service disruptions, Emterra’s ability to provide collection was also impacted over the same time period by:

- difficulties with keeping collection trucks operating due to an inability to obtain parts, as a result of global supply chain issues
- a labour shortage due to a surge in staff falling ill with the Omicron variant of COVID-19
- challenges with recruiting and retaining staff in a competitive labour market, particularly for truck drivers; and
- a labour disruption on February 15 and 16

Emterra’s issues were further exacerbated by challenges experienced by Recycle BC’s processing contractor happening at the same time, including the breakdown of essential processing equipment, and difficulties with being able to transport recyclable materials to end-markets that gave rise to storage constraints.

Both Emterra and Recycle BC responded to the conditions that arose, and the curbside blue box program has now returned to normal operations. Emterra responded by bringing in additional collection trucks and crews from off-island, retaining a dedicated in-house mechanic and raising wage rates. Recycle BC and its processing contractor GFL Environmental responded by securing additional storage and seeking to diversify their end-markets. In recognition of the extraordinary circumstances that resulted in these service disruptions, the CRD supported efforts to clear the backlog of recyclable materials and stabilize the program by requesting and funding two dedicated special Saturday collections in January.

CONCLUSION

Between mid-November 2021 and February 2022, the curbside recycling program experienced challenges with the daily completion of service due to a variety of weather and pandemic related conditions. The CRD’s collection contractor, and Recycle BC’s recyclables processing contractor, both made extraordinary efforts to respond to these circumstances by adding additional resources and modifying their operating practices. With the end of inclement weather and easing of pandemic conditions, these efforts have helped to restore residential curbside recycling service to normal levels.

RECOMMENDATION

The Environmental Services Committee recommends to the Capital Regional District Board: That this report be received for information.

Submitted by:	Russ Smith, Senior Manager, Environmental Resource Management
Concurrence:	Larisa Hutcheson, P. Eng., General Manager, Parks & Environmental Services
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