

**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, JUNE 15, 2022**

SUBJECT **Construction, Renovation and Demolition Waste – Thermal Pilot**

ISSUE SUMMARY

To provide an update on the beneficial use of construction, renovation and demolition waste.

BACKGROUND

At the March 30, 2022 Environmental Services Committee (ESC) meeting, staff were directed to return to the ESC with financial implications, timing and resource requirements to trial the beneficial use of construction, renovation and demolition (CR&D) waste with Lafarge, and existing biosolids thermal processing proponents, along with new thermal technology vendors. CR&D 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.

Staff have met with representatives from the biosolids thermal pilot vendors, and while initial discussions indicated that a trial with proponents participating within the biosolids thermal pilots may be possible, the vendors subsequently identified permitting and technical feasibility issues that will not allow the addition of new sources of feedstock to the existing thermal pilots. However, pre-processed CR&D waste could be sent to Lafarge for thermal processing.

At the April 20, 2022 ESC meeting, staff presented new policies that will divert materials from the landfill in support of meeting the Solid Waste Management Plan targets. These policies will result in new material streams diverted from general refuse. In the short term, these materials will be processed at Hartland on site, or by the private sector. In the longer term, these materials present a new feedstock stream that will need to be recycled, repurposed or recovered in support of a circular economy.

The Capital Regional District's (CRD) Solid Waste Management Plan strategy 15d commits the CRD to conduct research, investigate and report out on emerging waste management technologies, including alternatives to landfilling, such as integrated resource management and gasification.

ALTERNATIVES

Alternative 1

The Environmental Services Committee recommends to the Capital Regional District Board: That staff proceed with next steps to conduct research, investigate and report out on emerging waste management technologies, including a short-term pilot of thermal destruction of construction, renovation and demolition waste at Lafarge.

Alternative 2

That this report be referred back to staff for more information.

IMPLICATIONS

Financial Implications

The cost to trial CR&D waste at Lafarge is estimated to be \$232/tonne, which represents a loss for direct revenue at \$110/tonne tipping fees, but a surplus when the cost of creating air space is accounted for.

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 investigation of thermal treatment of CR&D waste could support the region in meeting the Solid Waste Management Plan targets.

CONCLUSION

The CRD’s Solid Waste Management Plan strategy 15d commits the CRD to conduct research, investigate and report out on emerging waste management technologies, including alternatives to landfilling, such as integrated resource management and gasification. Staff are initiating a process of research, investigation and reporting on municipal solid waste processing alternatives that mirrors the process the CRD is following to plan for long-term management of biosolids.

RECOMMENDATION

The Environmental Services Committee recommends to the Capital Regional District Board: That staff proceed with next steps to conduct research, investigate and report out on emerging waste management technologies, including a short-term pilot of thermal destruction of construction, renovation and demolition waste at Lafarge.

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

ATTACHMENT

Appendix A: Results of Biosolids Feasibility and Financial Implications