



Subject: *Construction & Demolition (C&D) Landfill Operations & 2nd Generation Landfill Potential at the Waste Management Centre*

To: Executive Committee

Date Prepared: December 6, 2023

Related Motions: C22(272) July

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Summary

In July 2022 staff provided a report to Executive Committee related to changes for the management of construction & demolition materials, currently landfilled at the East Hants Waste Management Centre. Those regulations are now in phase 1, with plans and compliance is required by July 2024.

As part of that discussion staff were directed to return to Executive Committee on feasibility to construction a 2nd generation landfill, one that would receive both construction and regular wastes, whereas East Hants ships regular garbage to the GFL landfill in West Hants.

Financial Impact Statement

Facility 3rd party assessment (review for land/options, conceptual level cost estimates) = \$40,000 - \$50,000. This will be less of only considering C&D and opting to delay further review of Landfill.

Recommendation

Staff recommend that Council approve a consultant review of the Waste Management Centre landfill options, to include at minimum the evaluation of the C&D landfill (current capacity, future growth/expansion options under new regulation requirements). The addition of 2nd generation landfill feasibility would be included based on Council interest.

Recommended Motion

Move that the Infrastructure & Operations Committee recommend that Council direct staff to include in the 2024-25 budget an evaluation of the Waste Management Centre C&D landfill for current capacity, future growth/expansion options under the new provincial regulations to be funded from Waste Management Centre Operating Reserves.

Or

Move that the Infrastructure & Operations Committee recommend that Council direct staff to include in the 2024-25 budget an evaluation and costing of constructing a 2nd generation landfill at the East Hants Waste Management Centre that would include Construction & Demolition materials, to be funded from Waste Management Centre Operating Reserves.

Background

When regulations changed requiring all 1st generation landfills to close by December 31, 2005 many of those locations transitioned to Construction & Demolition (C&D) Debris landfills. Since January 1, 2006 East Hants has operated a C&D landfill at our Georgefield location.

Staff are currently working on creating education (signage, communications) related to changes in construction waste sorting requirements to prepare our residents and facility customers for regulation compliance. Until staff understand the actual quantities of material impacted, we are working on a few options for processing - direct to landfill, pre-processing (chipping) and then landfilling, or an alternative market for materials.

East Hants Solid Waste Stats

- Fiscal 2022-2023 transferred 6,000 tonnes of waste for landfilling
- Currently in Year 17 of 25 for waste processing; contract expires December 31, 2031
- Fiscal 2022-2023 included just over 3,300 tonnes of construction waste landfilled at the WMC.
 - o Current projection, from a wood waste study expected to be finalized by the end of 2023, is that 20-25% of construction waste will be required to go to landfill as a result of new C&D regulations pending education and facility setup. This would = 825T.

Discussion

Construction & Demolition Debris Regulation Changes

The current C&D landfill cell is in high use, with increase growth in the municipality as a whole, more renovation work to properties, and natural disaster impacts. Under the new regulations cell design will change, requiring an additional layer added above the soil liner, prior to construction specific measurements (water table) for one-year prepared by hydrogeological testing methods and submitted for review and approval to the department, to list just a few changes to past processes.

Recent 2nd Generation Landfill Cell Construction

In preparation of this report staff contacted two municipal 2nd generation landfill operations to understand recent costs associated with construction of their most recent cells, and a high-level understanding of additional infrastructure needs.

Location 1

- Cell constructed in 2021
- Cost \$3.76M
- Landfills 22,000 tonnes annually

Location 2

- Cell constructed in 2023
- Cost \$6M (previously \$3.4M for same size)
- Landfills 65,000 tonnes annually

Additional Notes:

- Leachate collection and processing systems (one location has upgrades underway at a cost of approx. \$3.2M)
- Future gas collection systems (under review by Province)
- Additional equipment is required depending on landfilling process to ensure compaction (reduce voids)

Disposal Options

~~Under the current Solid Waste Resource Collection & Disposal Bylaw (10400) the East Hants Waste Management Centre is the only approved location in East Hants for material requiring disposal may be taken.~~