



Subject: *Status of Construction & Demolition Landfill Cell (Waste Management Centre)*
To: Executive Committee of Council
Date Prepared: October 30, 2024
Related Motions:
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Approved by: Jesse Hulsman, Director of I&O

Summary

Regulations on the management of construction waste were updated in 2023 with changes to materials approved for disposal in these landfill cells and design requirements for future cells. The Municipality contracted Dillon Consulting to complete a cell analysis, including remaining airspace available and options on constructing a new cell. This report will provide an overview of that work and recommendations for next steps.

Financial Impact Statement

Construction of a new construction & demolition cell at the Waste Management Centre is projected at \$1.4M - \$1.5M. This includes design (\$150,000 - \$175,000) and construction (\$1.25M - \$1.3M). Funding for the design stage will be funded from Solid Waste Operating Reserve (G501) - balance \$702,000 at March 31, 2024.

Recommendation

Staff recommend Executive Committee recommend to Council to approve going to market for design and engineering services for a new construction & demolition debris cell at the Waste Management Centre, in winter 2025.

Recommended Motion

Move that the Infrastructure & Operations Committee recommend that Council approve going to market for design and engineering services in fiscal 2024/25 related for a new construction & demolition debris cell at the East Hants Waste Management Centre. This funding will come from the Solid Waste Operating Reserve (G501). The construction costs of the cell will be included in the 2025/26 Capital Budget.

Background

There are two types of active landfills in Nova Scotia.

- Municipal Solid Waste (MSW) landfills are engineered to contain all regular solid waste materials with a double liner system and leachate collection (higher environmental risk). These are also called 2nd generation landfills, and were made the standard across the province in 2006.
- Construction & Demolition Debris (C&D) landfills are designed with a single liner system and intended for inert materials (less environmental risk). Similar design to original engineered landfills (1 liner system).

The municipality previously managed both regular garbage and construction waste at the Georgefield Landfill Site. This landfill was a 1st generation site, required only 1 liner system. Regulation changes came in early in the 2000s which meant the original landfill required closure by December 31, 2005. In response to this regulation change the municipality began transporting regular garbage to the 2nd generation landfill in West Hants, and a construction & demolition debris landfill cell was opened for use at the rebranded East Hants Waste Management Centre.

The original footprint of the C&D landfill included development of 8 smaller cells. Cell 1 is currently full, and material is now being placed in Cells 2 and 3. The last cell was built in 2010.

Regulations continue to change in an effort to ensure high standards of environmental protection and include new waste diversion programs like electronic waste recycling to banning pressure treated lumber from C&D landfills. Additionally, the design requirements for new or expanding C&D landfills has changed. The recommendation to Council is to construct a new cell that will complete the full previously approved footprint.

Discussion

With growth in East Hants and new requirements for expanding C&D landfill cells there was a need to understand the current airspace still available at the facility, and understand the processes and potential costs to expand. The full report from Dillon Consulting is attached as reference to this report.

Highlights from Dillon Report

- This report looked for efficiencies in developing the remaining area as one cell vs. several small ones to be developed over future years
- Population and waste generation analysis indicates a lifespan of 34 - 44 years should the remaining footprint of the C&D landfill be developed. (this is the staff recommendation)
- Estimated airspace of the current cell is approximately 3 ½ years
- New cell project timeline is estimated at 18-months
- Proposed design, horizontal and vertical, will provide a long-term solution to East Hants' construction waste management. This includes reduced frequency of construction of new cells, support for potential natural disaster debris management, and maximizing the current footprint.

Next Steps

Staff would recommend beginning the design and engineering phase of this project over the 2024/2025 winter. Staff will seek potential funding opportunities, specifically related to response to future natural disasters and sustainable community infrastructure.

Project Proposed Timeline

January 2025	Issue RFP for Detailed Design & Engineering Services
February - May 2025	Award Contract; Work begins on detailed design, topographic survey, and geotechnical investigation
April - July 2025	NSECC Approval Process*
August 2025 to October 2025	Issue RFP for Construction Contract
November 2025	Award Contract; Project Construction Begins
August/September 2026	Project Closeout & Final Approval
October 2026	New Cell Open for Use

*Consultants believe the work on the approval for the new cell could be started within the design and investigation phase. They have also indicated that period has not typically required the full 90-day turn-around from the department as outlined.

STRATEGIC ALIGNMENT

This work aligns with the Municipality's strategic goal of sustainable infrastructure for now and future growth.

Alternatives

Executive Committee direct staff seek alternative management options for construction waste generated in East Hants.
