



Committee of the Whole Report

Report Number: CA2022-004

Meeting Date: May 3, 2022

Title: **Lindsay-Ops Landfill Future Infrastructure and Operations Study**

Description: This report seeks Council direction on a plan required to manage the anticipated effects on the Lindsay-Ops Landfill of the closure of the Laxton and Fenelon Landfills and population growth.

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Recommendation(s):

That Report CA2022-004, **Lindsay-Ops Landfill Future Infrastructure and Operations Study**, be received;

That the Lindsay-Ops Landfill Future Infrastructure and Operations Study, attached as Appendix A to Report CA2022-004, be endorsed;

That Recommendations B and C identified in the aforesaid study, and as summarized in the capital plan outlined in Table 1 of Report CA2022-004, be approved for the purposes of planning and budgeting; and

That the growth-related components of capital needs arising from the foregoing approvals be financed by development charges to the extent permitted by applicable legislation.

Department Head: _____

Financial/Legal/HR/Other: _____

Chief Administrative Officer: _____

Background:

At its meeting of November 19, 2019, Council adopted the following resolution:

CR2019-641

That Report WM2019-012, Making Waste Matter: Integrated Waste Management Strategy Update, be received;

That Council approves the integrated waste management strategy update for implementation with the following accelerated amendments;

That an immediate focus be placed on public education;

That an immediate enhanced online presence be implemented regarding recycling;

That a \$10/ton increase to the tipping fees be implemented in January 2020 and the increase in revenue be used to offset additional operating costs to enhance diversion; and

That the by-law for allowable recyclables in waste be amended to reduce the amount from 20% to 10% starting in early 2020.

One of the initiatives identified in the Integrated Waste Management Strategy is development of a plan for managing the impact of the eventual closure of the Fenelon and Laxton Landfills. As these sites are well-used, their closure will shift a considerable amount of demand to the City's other landfills. That shift carries major implications for infrastructure, operations and remaining site life at those landfills. The Lindsay-Ops Landfill is expected to receive the overwhelming majority of this added pressure if substantial mitigating measures are not taken to divert that pressure to landfills at which it can be better managed.

As such, the City retained WSP to prepare the Lindsay-Ops Landfill Future Infrastructure and Operations Study, which is attached hereto as Appendix A and funded by the 2020 Tax-Supported Special Projects Budget. The study examines and assesses various ways in which the City can manage the anticipated effects on the Lindsay-Ops Landfill of the closure of the Fenelon and Laxton Landfills as well as growth and development throughout the City. The purpose of this report is to present Council with the study and request that Council endorse the recommended strategy and plan emanating therefrom.

That endorsement is required to provide clear direction on this matter and to enable staff to properly plan and implement appropriate solutions.

Rationale:

The City disposes of waste and collects recyclables at its five operating landfills: Lindsay-Ops, Somerville, Eldon, Fenelon, and Laxton. From 2017 to 2019 the Fenelon and Laxton Landfills received an average of 11,056 and 1,257 tonnes of waste per year, respectively. Recyclables were also collected and managed at these sites. Approved waste disposal capacity at the Fenelon and Laxton Landfills is nearing exhaustion. Based on the remaining site life calculations reported in the 2019 Annual Monitoring Report, these landfills are anticipated to exhaust their approved capacities by 2024 in the absence of expansion or alternative mitigation measures.

The Lindsay-Ops Landfill currently receives approximately 27,500 tonnes of waste per year. Closure of the Fenelon and Laxton Landfills would be anticipated to increase that flow by approximately 34% if the demand at those landfills were not maintained on-site (through conversion of the landfills into transfer stations) or diverted elsewhere. Even in absence of the closures, significant capital and operational improvements to the Lindsay-Ops Landfill are nevertheless needed to address deficiencies and the pressures of growth. That is why the City commissioned the Lindsay-Ops Landfill Future Infrastructure and Operations Study to develop, assess and recommended options for such improvements. The City retained WSP in 2020 to prepare that study.

Despite its title, the study is not confined to examination of the Lindsay-Ops Landfill due to interdependence between landfills. The study considers options that would mitigate or eliminate the diversion of demand to the Lindsay-Ops Landfill arising from the closure of the Fenelon and Laxton Landfills. Minimization of such diversion in turn minimizes the capital and operational improvements needed at the Lindsay-Ops Landfill to ensure an acceptable level of service is provided for the balance of that landfill's site life to 2035. To maintain that year at 2035, the study examines the case for expanding the Fenelon and Laxton Landfills and then converting them into transfer stations upon their closure.

After thorough examination, WSP concludes the study by recommending the following three-pronged strategy:

Expansion of Fenelon and Laxton Landfills: The City is permitted to expand the Fenelon and Laxton Landfills by up to 40,000 and 21,500 cubic metres, respectively, without going through an environmental assessment process. Applications and designs for the expansions are already underway and funded through the 2022 Tax-Supported Special Projects Budget. The expansions are expected to extend the site lives of the Fenelon and Laxton Landfills by 3 and 5 years, respectively, and to generally continue the current level of operating costs at those landfills accordingly. The expansions are a cost-effective and speedy way of creating landfill capacity and avoiding the shortening of site lives of various landfills which would otherwise receive more waste sooner. The expansions will also provide the City time to design, obtain approval for and implement capital and operational improvements required at the Fenelon, Laxton and Lindsay-Ops Landfills.

Conversion of the Fenelon and Laxton Landfills into Transfer Stations: Provided the ongoing applications for their expansion are approved, the Fenelon and Laxton Landfills would be expected to close in 2027 and 2029, respectively, although the former year would be conservative if Council's recent decision to close the Fenelon Landfill during winter seasons is maintained going forward. At time of closure, WSP recommends that these landfills be converted into transfer stations so as to maintain service levels for users continuing to bring waste and recyclables to the landfills' sites. These waste and recyclables would then be taken to the Eldon and Somerville Landfills for disposal and processing, thus avoiding a major shift in demand to the already-congested Lindsay-Ops Landfill. With ample remaining disposal and service capacities, the Eldon and Somerville Landfills are well-positioned to sustain this redirection over the foreseeable future, thus providing for an effective and efficient long-term solution to the closure of the Fenelon and Laxton Landfills.

Capital and Operational Improvements to Lindsay-Ops Landfill: Even with the Fenelon and Laxton Landfills converted into transfer stations, improvements are still needed at the Lindsay-Ops Landfill. Demand there is already exceeding service capacity and, due to growth, is anticipated to be 20% higher than it was in 2019 by the time approved capacity is exhausted in 2035. If no measures are taken to address this developing problem, then the Lindsay-Ops Landfill will become overwhelmed by traffic, causing unacceptable congestion and deterioration of service. As noted in the study, there are a number of ways to enhance service capacity at the Lindsay-Ops Landfill. Provided that the Fenelon and Laxton Landfills are converted into transfer stations, however, improvements to the Lindsay-Ops Landfill can be reduced to only those needed to

address deficiencies and accommodate growth. Accordingly, WSP recommends the capital and operational improvements outlined in Options 3 and 6 identified in the study. These entail replacement of the two existing weigh scales, addition of a second inbound weigh scale, relocation of the outbound weigh scale, construction of a new access road, expansion of the inbound weighing area, reconfiguration and expansion of the drop-off areas for waste and recyclables, and addition of two staff positions.

Recommendations B and C of the study are designed to implement the foregoing strategy, and staff concurs with that approach. Table 1 below outlines the capital plan developed by Corporate Assets Division for implementation of these recommendations. Included in that table are estimated capital and added operating costs based on the study's findings. As reflected by Table 1, added operating costs associated with the improvements to the Lindsay-Ops Landfill will be largely offset by reductions in those associated with converting Fenelon and Laxton Landfills into transfer stations. It is expected that much of this offsetting effect will be achieved through reallocation of staff and other resources.

Table 1: Capital Plan for Implementation of WSP's Recommendations B and C

Landfill	Capital Plan Component	Estimated Cost (Rounded 2020\$)		Estimated Budget Timing	
		Capital (\$)	Added Operating (\$/Year)	Design and or Approval	Construction
Fenelon	Expansion by 40,000 Cubic Metres	90,000		2022	2024
	Conversion into Transfer Station	20,000	(75,000)	2027-2030	2027-2030
Laxton	Expansion by 21,500 Cubic Metres	300,000		2022	2024
	Conversion into Transfer Station	20,000	(65,000)	2029-2030	2029-2030
Lindsay-Ops	Drop-Off Area Reconfiguration	20,000	80,000	2023	2023
	Weighing Area Improvements	1,700,000	90,000	2023	2023
	Total	2,150,000	30,000		

As noted in the study, the needed improvements to the Lindsay-Ops Landfill are driven by growth. It is therefore expected that the capital costs associated with those improvements will be partially recoverable through development charges. As per the Development Charges Act, however, such recovery will be limited to the extent to which the capital costs are attributable to waste diversion as opposed to waste disposal. The precise degree of capital cost recovery through development charges will be determined through the Development Charges Background Study underway.

Other Alternatives Considered:

Presented in the Lindsay-Ops Landfill Future Infrastructure and Operations Study are various alternatives to the recommendations of this report.

Alignment to Strategic Priorities

The recommendations of this report support waste reduction and diversion as well as responsible financial and asset management, and hence align with the strategic priorities of “A Healthy Environment” and “Good Government” identified in the City’s 2020-2023 Strategic Plan.

Financial/Operation Impacts:

The financial impacts of the recommendations of this report are estimated in Table 1 above in 2020 dollars. Provided Council approves the recommendations of this report, the capital plan presented in Table 1 will be incorporated into the Long-Term Financial Plan currently being finalized and will thereafter be managed annually as needed through the budget process.

Consultations:

Manager of Environmental Services

Public Review Committees for Lindsay-Ops and Fenelon Landfills

Attachments:

Appendix A: Lindsay-Ops Landfill Future Infrastructure and Operations Study



Lindsay-Ops Landfill
Future Infrastructure a

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