TORONTO

REPORT FOR ACTION

Update on the City's Long-term Residual Waste Management Work Plan

Date: September 12, 2025
To: Infrastructure and Environment Committee
From: General Manager, Solid Waste Management Services
Wards: All

SUMMARY

As directed by Council, Solid Waste Management Services (SWMS) is providing an update on consultations related to the Council approved Residual Waste Management Work Plan (June 14 and 15, 2023). The report outlines the results from consultations on the public's perceptions of energy-from-waste (for example incineration) as an option to manage residual waste compared to landfilling, the Request for Expression of Interest for public landfills in Ontario, and the use of private landfills in Ontario. The report also outlines the remaining tasks in the 2023 Council approved Work Plan and staff's intent to return to Committee for direction in 2027 once all investigative work for long-term residual waste management has been completed.

RECOMMENDATIONS

The General Manager, Solid Waste Management Services recommends that:

1. The Infrastructure and Environment Committee receive this report for information.

FINANCIAL IMPACT

There is no financial impact resulting from this report.

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the financial impact information.

DECISION HISTORY

At its meeting on June 14 and 15, 2023, City Council adopted Item IE4.1 entitled "Long-Term Residual Waste Management Options for the City of Toronto" that included the revised Residual Waste Management Work Plan outlining short- and medium-term actions that the City can initiate to extend the lifespan of Green Lane Landfill as well as strategic long-term planning activities to manage the City's residual waste. Amongst other decisions, Solid Waste Management Services staff were directed to conduct community consultations on energy-from-waste as an option to manage residual waste and report back to Council prior to entering into procurement processes or negotiations associated with the long-term options of building a new energy-from-waste facility or purchasing facility capacity or partnering with an existing energy-from-waste facility.

The City Council Decision document can be viewed at:
https://secure.toronto.ca/council/agenda-item.do?item=2023.IE4.1

At its meeting on June 8 and 9, 2021, City Council adopted Item IE22.9 entitled "Update on Environmental Assessment Act Amendments Affecting Future Residual Waste Disposal Considerations" which provided information on the potential impacts on Ontario's remaining landfill capacity and an overview of the City of Toronto's residual waste disposal planning considerations as a result of the recent amendments made to the Environmental Assessment Act, 2002.

The City Council Decision document can be viewed at:
http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2021.IE22.9

At its meeting on May 5 and 6, 2021, City Council adopted Item IE21.5 entitled "Authority to Negotiate and Enter into Regional Waste Management Co-operation and Contingency Agreements" authorizing the General Manager, Solid Waste Management Services to enter into agreements with Ontario municipalities and landfill owners, and to negotiate with energy-from-waste facilities in Ontario to provide for contingency and operational redirection capacity for terms not to exceed five (5) years.

The City Council Decision document can be viewed at:
http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2021.IE21.5

At its meeting on September 30, and October 1 and 2, 2020, City Council adopted Item IE12.4 entitled " Mixed Waste Processing Study Update" that directed the General Manager, Solid Waste Management Services to report back to the Infrastructure and Environment Committee with a business case, including a triple bottom line analysis (environment, social and financial) and a utility rate impact assessment on the mixed waste processing of waste with and without thermal processing compared to increased reduction and diversion and traditional landfilling.

The City Council Decision document can be viewed at:
http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2020.IE12.4

At its meeting on July 12, 13, 14, and 15, 2016, City Council adopted item PW14.2 entitled "Final Long Term Waste Management Strategy" and adopted the recommended options and implementation plan, as presented in Attachment 1 to the report (June 2, 2016) from the General Manager, Solid Waste Management Services.

The Waste Strategy placed a priority on maximizing the life of Green Lane Landfill by minimizing the amount of garbage sent for disposal. It also identified options for consideration to provide the City with long term residual waste disposal capacity.

The City Council Decision document can be viewed at:
http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2016.PW14.2

COMMENTS

Background:

In 2024, the City of Toronto (the City) managed over 850,000 tonnes of waste, including approximately 350,000 tonnes of waste diverted from landfill through programs such as the Green Bin organics and Blue Bin recycling. During the same period, approximately 418,000 tonnes of residual waste (garbage) was disposed of at Green Lane Landfill, which included garbage that was brought directly to the landfill from surrounding local communities. The expected life expectancy of Green Lane Landfill is approximately 10 years, with its closure anticipated in 2035.

In 2024, the combined residential diversion rate for single family homes and multi-residential buildings was 51.7%. Even if the City met the Province's ambitious goal of 80% diversion by 2050, as outlined in the Strategy for a Waste Free Ontario, there will still be approximately 260,000 tonnes of residual waste to manage on a yearly basis. A 2023 technical study conducted by a consultant retained by SWMS concluded firmly that the City will require a long-term solution to manage residual waste.

SWMS is currently undertaking a review and update of the Long-term Waste Management Strategy (Waste Strategy), that will continue to prioritize efforts to reduce and divert waste. On-going efforts to reduce waste or improve participation in the City's waste diversion programs will reduce the amount of garbage that requires management, however we are still projected to manage over 500,000 tonnes of waste annually within the 25-year planning horizon. Securing a long-term option to manage the City's residual waste could take up to 10 years, underscoring the urgency to plan now.

Update on progress of the Residual Waste Management Work Plan

The Residual Waste Management Work Plan (Work Plan) approved by City Council in 2023, included short, medium- and long-term options for disposing of residual waste. A copy of the Work Plan can be found in Attachment 1. Short- and medium-term options, such as utilizing short-term landfill contracts with privately owned landfills will modestly help extend the lifespan of Green Lane Landfill while the City continues to study long-term options, but these contracts do not preclude the need for a long-term solution.

Having a long-term solution in place mitigates the risk of not having secured landfill capacity should Green Lane Landfill reach its end-of-life before the next long-term option becomes operational. SWMS anticipates that the process to site, gain regulatory

approval, and build a new residual waste management facility of any kind could take at least 10 years. Statuses of the short-, medium- and long-term options are summarized in Table 1, followed by more detailed information on some of the long-term options in Table 2.

Table 11 – Status of short- and medium-term actions

Options	**Status**
Utilize short-term landfill contracts	SWMS currently maintains alternate disposal contracts with three private landfills. These contracts provide operational contingency as well as the ability to reduce the amount of waste sent to Green Lane Landfill annually.
Pursue medium-term landfill contracts	SWMS issued a Request for Information (RFI) to identify private landfills in Ontario that have current or potential future capacity to accept residual waste from the City. SWMS did not receive any responses to the RFI.
Pursue energy-from-waste contracts	SWMS conducted public and interested party consultations. Results indicate strong support from residents for the City to further explore energy-from-waste.
Consider collect and dispose contracts	SWMS will revisit this option when developing future collection contracts.

Table 2 - Status of long-term options

Options	**Status**
Build a new landfill	Request for Expression of Interest (REOI) was issued to all Ontario municipalities located within a 500km radius of Toronto to identify municipalities interested in engaging in a preliminary discussion as it relates to: • Accepting residual waste from the City; • Selling an existing active landfill to the City; • Becoming a host for the City to build a new landfill; or • Partnering with the City to build a new landfill or expand an existing landfill. The 500km geographical boundary was decided after considering the distance that waste would need to be transported each day, as well as emissions created as a result of hauling the waste. There are 378 municipalities located within this boundary, accounting for 85% of all municipalities in Ontario.

Options	Status
	No municipality expressed interest in partnering with the City in any of the scenarios.
Expand Green Lane Landfill	A technical study conducted by a third-party consultant determined that expansion of the Green Lane Landfill to meet the waste disposal requirements for the City for an additional 25 years is technically feasible.
Build a new energy-from-waste facility	Public and interested party consultations were conducted with results indicating strong support from residents for the City to further explore energy-from-waste.
Purchase facility, capacity, or partner with existing energy-from-waste facility	
Purchase a private landfill with or without the plan to expand	SWMS will issue a RFI to private landfill owners in Ontario to gather information.

The next section of this report provides a detailed summary of the progress on the Work Plan long-term options and presents proposed next steps for consideration.

Update on the community consultation

As part of the Work Plan, City Council directed SWMS to conduct community consultations on the use of energy-from-waste technologies as a potential option to dispose of residual waste, and to report to the Infrastructure and Environment Committee with the results of the consultations before engaging or negotiating with energy-from-waste facilities or vendors.

SWMS conducted these consultations in conjunction with Phase 1 and Phase 2 of the Long-term Waste Management Strategy Update consultations.

Phase 1 Toronto's long-term residual waste management needs and options

Phase 1 of the consultation plan was held throughout December 2024 and was delivered through virtual and in-person events. The objective of this phase was to inform the public and interested parties about the City's current landfill capacity challenges, the difficulties with establishing new landfills in Ontario, and the long-term options identified in the Work Plan which the City is considering for managing residual waste. This education approach was intended to establish a baseline understanding of the project before seeking feedback on public perceptions of the proposed residual waste disposal options, including energy-from-waste (e.g. incineration). No questions were asked to participants during this phase, as it was designed solely to inform.

Phase 2 Perceptions on energy-from-waste (e.g., incineration) technologies compared to landfilling

Phase 2 of the consultations was held throughout May and June 2025. In this phase, feedback was sought from the public and interested parties on their perceptions of the use of energy-from-waste (e.g. incineration) technologies as a potential residual waste disposal option, compared to landfilling. Participants were also asked about the values influencing their views, including environmental, economic and social considerations.

The consultation focused on providing information on:

1. Long-term residual waste capacity constraints
2. Options the City has proposed to explore as part of its long-term Residual Waste Management Work Plan
3. How landfilling and energy-from-waste work along with high-level benefits and challenges associated with both methods
4. Global adoption of energy-from-waste and a comparison of international emissions standards to Ontario's standards

Phase 2 consultations were conducted through an online survey, and independent third-party polling, and a combination of virtual and in-person consultation events.

Results of Online Survey and Public Opinion Polling

An online survey was made available on the Waste Strategy and Residual Waste Management project web pages offering residents and interested stakeholders an opportunity to provide feedback. Coordinated by the City's Public Consultation Unit, the survey included questions related to both residual waste disposal and the update of the Waste Strategy. The survey remained open for 39 days, closed on June 29, 2025, and received responses from more than 11,000 individuals.

The City also retained a consultant specializing in independent polling to conduct statistically-representative public opinion polling of Toronto residents, which is designed to reflect the city's diverse population. The same set of questions was used as the online survey, and was conducted over the course of 25 days, collecting feedback from more than 1,800 residents.

- In both the online survey and public opinion polling, **78%** of respondents indicated they are very familiar or have a limited degree of familiarity with energy-from-waste technology.
- The majority of respondents (**72% of polling participants and 79% of survey participants**) expressed support for the City further exploring energy-from-waste technologies, citing interest in creating usable energy from garbage and reducing the amount of waste going to landfill as some of the main factors driving their preference.
- **64%** of polling participants and **67%** of survey participants believe that Toronto should manage its waste within its own borders.
- The majority of respondents (**93% of polling participants and 94% of survey participants**) advised that their waste diversion habits would either remain

unchanged or would improve if the City decided to further explore energy-from-waste.

Similar to the consultation workshops, survey and polling, respondents also expressed the need for the City to consider and mitigate impacts to the environment and public health for any waste disposal option being explored.

Table 2 - Feedback from residents and interested parties through the online survey

Survey Question	**Survey Response**	**Public Opinion Polling Response**
How familiar are you with energy-from-waste (e.g., incineration) as a garbage management option?	12% of respondents reported being very familiar with energy-from-waste. 66% report having a limited degree of familiarity. 22% report being not familiar at all.	11% of residents reported being very familiar with energy-from-waste. 67% report having a limited degree of familiarity. 23% report being not familiar at all
There are many considerations when the City makes decisions about how to dispose of waste. Select the top two considerations most important to you.	The top three considerations respondents believe should be prioritized are: • Environmental impacts • Creating usable energy from garbage • Public health Other considerations include: • Greenhouse gas emissions • Cost • Odour and noise	The top three considerations residents believe should be prioritized are: • Environmental impacts • Public health • Creating usable energy from garbage Other considerations include: • Cost • Greenhouse gas emissions • Odour and noise

Survey Question	Survey Response	Public Opinion Polling Response
Space limitations make it difficult to build a new landfill in Toronto. Energy-from-waste (e.g., incineration) facilities require less land and can be built in urban settings. Which option do you prefer for managing Toronto's garbage in the future: Toronto should manage its waste within its own borders, even if it means exploring alternatives like energy-from-waste (e.g., incineration); or, Toronto should continue to manage its waste by sending it to other communities to be landfilled or managed in an energy-from-waste (e.g., incineration) facility.	67% of respondents believe that Toronto should manage its waste within its own borders. 17% believe Toronto should continue to manage garbage by sending it to other communities for disposal. 16% are unsure.	64% of residents believe that Toronto should manage its waste within its own borders. 25% believe Toronto should continue manage garbage by sending it to other communities for disposal. 11% are unsure.
If you had to choose between sending garbage to a landfill or to an energy-from-waste (e.g., incineration) facility, which would you prefer?	79% of respondents would prefer to manage garbage through an energy-from-waste facility. 10% have no preference. 10% prefer landfilling.	72% of residents would prefer to manage garbage through an energy-from-waste facility. 19% have no preference. 8% prefer landfilling.

Survey Question	Survey Response	Public Opinion Polling Response
There are currently two energy-from-waste (e.g., incineration) facilities in the Greater Toronto Area, one in Brampton and one in Clarington, that burn garbage to create usable energy. Does knowing this make you more or less supportive of the City exploring energy-from-waste (e.g., incineration) or does it not make a difference?	53% of respondents report being more supportive of the City exploring energy-from-waste after learning there are two existing facilities in the Greater Toronto Area. 33% report that knowing this makes no difference. 6% report being less supportive.	52% of residents report being more supportive of the City exploring energy-from-waste after learning there are two existing facilities in the Greater Toronto Area. 36% report that knowing this makes no difference. 4% report being less supportive.
If garbage were sent to an energy-from-waste (e.g., incineration) facility, would you be more or less likely to use the Blue Bin for recycling and the Green Bin for organics, or would it make no difference?	94% of respondents advise their diversion habits would either be unchanged or would improve. 2% advise they would be less likely to divert waste. 4% are unsure.	93% of residents advise their diversion habits would either be unchanged or would improve. 2% advise they would be less likely to divert waste. 5% are unsure.

Note: Totals may not add up to exactly 100% due to rounding.

Results of Public Meeting and Interest Group Workshops

The events included an in-person public meeting open to all members of the public, and five virtual interest group meetings wherein parties representing environmental organizations, community and social service organizations, waste industry groups, businesses, resident associations, and Indigenous community organizations were invited to attend. Interest group workshops were attended by 94 organizations. The in-person public meeting was attended by 61 individuals, with an additional 21 individuals attending the livestream that was made available on YouTube.

Generally, feedback received from the public meeting and interest group workshops reflected a diversity of views. Some participants expressed that the City should evaluate the merits of energy-from-waste as an alternative to landfilling given the current landfill constraints and capacity issues and its adoption in other parts of the world. In particular, some noted its use in Europe and indicated that the technology has evolved to be protective of human health and the environment. Others cautioned the City about energy-from-waste as a disposal method and indicated that the technology was “green washing” a process that results in increased climate change impacts as well

as air quality and public health impacts. Some participants indicated that a well established and operated landfill, like the City's own Green Lane Landfill, could result in lower greenhouse gas emissions when compared to an energy-from-waste facility. Some participants who were supportive of energy-from-waste also expressed concern for emissions, recommending that the City consider global examples of air quality standards and implement the most stringent standards available to mitigate health and environmental impacts.

Across all workshops, there was a consistent call for the City to prioritize keeping divertible material out of landfill and reducing the amount of residual waste requiring management. Participants also consistently urged the City to ensure that any residual waste disposal option(s) the City decides to further explore is coordinated in a transparent, equitable, and environmentally responsible manner.

A full analysis of the feedback provided through the interest group workshops, online survey, public opinion polling, and inquiries/comments sent via email/phone were captured in the Public Consultation Report for Phase 2 and can be found in Attachment 2.

External research on the public's perceptions of energy-from-waste

A survey conducted by Waste to Resources Ontario (W2RO)[1] in May 2025 echoed the City's survey and polling findings, revealing that there is considerable support from Ontarians for energy-from-waste as a method of residual waste disposal. When polled, 74% of Ontarians reported being supportive of the Government of Ontario investing in energy-from-waste technologies.

More research is required to evaluate energy-from-waste:

Public consultation has demonstrated strong interest and support for energy-from-waste as a potential alternative to landfill disposal. However, the feedback also underscored the importance of thoroughly examining a range of critical considerations, including potential greenhouse gas and air emissions, public health implications, impacts on land and water resources, effects on waste diversion rates, alignment with circular economy objectives, and equity concerns. SWMS is also consulting with Toronto Public Health and the Environment, Climate and Forestry Division, and intends to continue working collaboratively with them through the continued implementation of the Work Plan to ensure that these issues are addressed through a comprehensive, evidence-based, and transparent process that reflects the City's environmental and social commitments and values.

Update on the Green Lane Landfill Expansion Feasibility Study

SWMS retained a consultant to conduct a desktop technical feasibility study to determine whether expansion of Green Lane Landfill is viable. This is the first step in

1 W2RO Public Opinion Poll Shows Overwhelming Public Support for Action on Waste Diversion and Disposal , Link: https://www.w2ro.org/articles/public-opinion-poll-shows-overwhelming-public-support-for-action-on-waste-diversion-and-disposal

understanding if expansion is a possibility. The feasibility study was intended to inform any potential future comprehensive Environmental Assessment (EA), in which options could be formally developed and evaluated and subject to broad consultation. The purpose of the feasibility study was to prepare a conceptual layout of possible expansion options and identify any potential technical constraints associated with these options.

The study considered a 25-year expansion of Green Lane Landfill, from 2036 to 2060, based on City residual waste projections requiring approximately 13.3 million cubic metres of additional airspace to accommodate 12 million tonnes of waste. Due to limited available land on the existing site, the study explored a combination of vertical expansion (building on top of the current landfill) and horizontal expansion onto adjacent City-owned properties. Vertical expansion alone could provide about one third of the future capacity needed, with the remaining two thirds to be realized from horizontal expansion.

The options examined in the study are only intended to illustrate and assess the technical feasibility of a potential Green Lane Landfill expansion. The selection and assessment of options does not imply any preference, nor preclude the consideration of other expansion options in the future.

Regulatory approval for expansion of the Green Lane Landfill site would require completion of a comprehensive EA. The EA process would involve the development of a reasonable range of alternative methods of landfill expansion and a formal comparison of these Alternative Methods using a set of environmental criteria and indicators, subject to public and interested party consultations.

The EA process and receipt of subsequent Environmental Compliance Approvals (ECA) are anticipated to take six to seven years. The study concludes that Green Lane Landfill expansion is technically feasible. Additionally, emphasis is placed on consultations with neighboring Indigenous communities and conservation authorities to ensure minimal adverse effects on the surrounding environment.

SWMS staff will continue to finalize the feasibility study, including any additional financial costing. However, no further work related to expanding the landfill will be undertaken until all other elements of the Work Plan have been completed.

Next Steps

SWMS will continue to advance the Work Plan by examining all long-term options, including a detailed assessment of the feasibility of energy-from-waste (e.g., incineration) technologies.

- SWMS will gather information from technology providers, operators and municipalities and conduct further research to better understand the availability of energy-from-waste technologies in Ontario, their ability to meet leading international standards that are protective of the environment and human health, the costs and

considerations for their operation and/or development and/or partnerships, and their comparability to landfilling.

- SWMS will also procure a consultant to complete an exercise for the feasibility of constructing and operating a new facility within and/or outside of Toronto. The exercise would include potential siting options as well as a high-level costing and environmental review of the facility. The purpose of the exercise would be to determine if it is technically feasible for the City to build a state-of-the-art energy-from-waste facility, based on general land requirements, property availability, potential zoning and taking into account Green Lane's life expectancy.

It is essential that the City gather this information and data to complete a comprehensive evaluation of the environmental, social and economic impacts for each of the available options to inform the City's next steps. Staff will report back to Infrastructure and Environment Committee in 2027 with findings of the above noted work.

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ATTACHMENTS

Attachment 1 –Council-Approved 2023 Residual Waste Management Work Plan
Attachment 2 – Phase 2 - Public Consultation Report