

ADMINISTRATION RESPONSE TO WASTE COLLECTIONS AUDIT

Recommendation

That the September 4, 2024, City Operations report CO02588, be received for information.

Requested Action	Information only		
ConnectEdmonton's Guiding Principle	ConnectEdmonton Strategic Goals		
CONNECTED This unifies our work to achieve our strategic goals.	Climate Resilience		
City Plan Values	LIVE. PRESERVE.		
City Plan Big City Move(s)	Greener as we grow	Relationship to Council's Strategic Priorities	Climate adaptation and energy transition Conditions for service success
Corporate Business Plan	Serving Edmontonians		
Council Policy, Program or Project Relationships	<ul style="list-style-type: none"> 25-year Waste Strategy Bylaw 20363 - Waste Services Bylaw 		
Related Council Discussions			

Executive Summary

- In 2023 and 2024, the Office of the City Auditor (the Auditor) conducted an audit of the City's waste collections service to determine whether it is effectively supporting waste reduction and helping divert waste from landfill in alignment with the 25-year Waste Strategy.
- The Auditor determined the City is effectively managing its curbside collection program.
- The Auditor also identified areas of improvement, specifically how Waste Services collects, manages and uses data in curbside collection. This includes how non-collections are reported and archived, the division of internal and external service providers, and its cart management inventory processes.
- Administration accepts all of the Auditor's recommendations.

REPORT

Waste Services is a utility within the City of Edmonton, which provides essential residential waste management services, including collection services. By collecting, processing and disposing of waste generated by residential customers, Waste Services serves Edmontonians and furthers the City's goals of Climate Resilience and Greener As We Grow.

The 25-year Waste Strategy established a goal of four-stream (food scraps, garbage, recycling and yard waste) at-home waste sorting and collection for homes with curbside collection. In 2021, curbside collection was transformed through the Edmonton Cart Rollout, which fundamentally changed how residents set out waste in Edmonton, while improving collector safety and making waste processing more efficient by:

- Providing all existing and new curbside collection customers with a garbage (black) and food scraps (green) cart.
- Requiring residents to sort their waste into the appropriate waste stream.
- Reducing the amount of waste set out on a weekly basis through volume limits.
- Changing collection schedules to biweekly garbage collection and weekly (biweekly in winter) food scraps collection.
- Moving to a system of seasonal yard waste collection, with four pick-up days (two in spring and two in fall) of unlimited amounts of yard waste.
- Introducing automated collection vehicles to accommodate new garbage and food scraps collection. Recycling and yard waste continue to be collected by hand.

In the first full year of four-stream curbside collection in 2022, the overall residential waste diversion rate increased to 37 per cent from 27 per cent¹. The residential diversion rate continued improving in 2023, reaching 41 per cent². Approximately 265,000 homes currently receive curbside collection in Edmonton³. These homes are serviced by an approximate 50/50 split of City staff and contracted providers. The curbside collection section plans for over 30 million service visits every year, not including seasonal yard waste collection.

Waste Services uses a variety of data collection sources including public engagement, 311, a Waste Customer Support Team (CST), waste characterization studies, GPS and waste outreach teams to provide effective waste collection service. The overhaul of curbside collection and integration of new technology into Waste Collection Services offered an opportunity to incorporate more data-driven insights into its operations. A cart asset management system was purchased to track the status of new cart inventory. This system included a service verification application, which provided Administration with additional opportunities to collect data in the field. Analyzing each of these different sources of data enables Waste Services to obtain insights on resident behaviour, determine areas of improvement and enhance service delivery.

¹ [2022-2023 Waste Services Annual Service Plan](#), page 22.

² [2023-2024 Waste Services Annual Service Plan](#), page 25.

³ [2023-2024 Waste Services Annual Service Plan](#), page 13. Number of homes receiving curbside collection has increased since publication.

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Audit Recommendations and Responses

Waste Services accepts all four of the Auditor's recommendations, and recognizes and values opportunities to improve how data is used in the curbside collection program. The use of current data gathering and monitoring in curbside collection is less than three years old, and implementing these recommendations will lead to an improved program.

Audit Recommendation 1

We recommend that the Waste Services Branch implement data quality assurance and quality control processes for its service verification application to improve data integrity for decision making and reporting.

Curbside collection staff service an average of 800 to 1,200 homes per collector, per day. Proper cart spacing and placement of waste is critical to collections staff for safe, efficient waste collection. When waste is unable to be collected, or not set out at all, collectors use a tool within the broader service verification application. This tool includes a three-button set up in their trucks to report the non-collection status of a home's waste set-out. The three buttons are currently configured as Spacing, Non-Compliant and Not Out. When a collector encounters no cart or a non-compliant cart set-out at a home, they push the button at the site, marking it as a non-collection and moving on. This information is included in a missed collection dashboard used by Waste Services to provide proof and validate the reason for non-collections with 311 and CST.

Multiple data sources are used to report and track non-collections. When missed collections are reported to the City by residents, 311 and CST process the inquiries and close those that do not require additional work, like waste being set out on the wrong day. More than 30 million collections were completed in 2023, and approximately 15,000 reports of missed collections were forwarded to Waste Collection Services for further investigation. Upon investigation, approximately 50 per cent were missed collections requiring action from the City, while the remaining investigations showed waste was not properly set out. This means that missed collections requiring action from the City accounted for approximately 0.025 per cent of total completed collections.

Waste Services also has an established waste outreach program, which has been used to observe and record non-compliance data in curbside collection in recent years. Administration recognizes it is unlikely all true missed collections are reported, meaning the actual number of missed collections is higher than tracked. While non-collections continue to be monitored using other data tracking systems, the digital data collection system recently introduced to curbside collection is newer and requires improvement.

Administration will work towards improving data quality and processes by implementing a data retention plan (archiving) for its existing missed collection dashboard, as well as developing and implementing a standard operating procedure with defined data review intervals aimed at validating the data related to the service verification application. In addition, a summary report of button-push data will be made available to supervisors and contract inspectors. The improved data quality is intended to inform future decisions to improve resident non-compliance.

Implementation date: June 30, 2025

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Audit Recommendation 2

We recommend that the Waste Services Branch enhance training and guidance documents for collectors using the service verification application to improve data quality.

The Auditor's recommendation will support more consistency when non-compliance is reported and allow Waste Services to assess the difference between non-collection and non-compliance. How to use the Spacing, Non-Compliant and Not Out buttons is communicated to collectors during onboarding, including definitions of correct and incorrect set-outs, yet continued or periodic training is not currently offered. The findings of this audit have confirmed that collectors will benefit from ongoing training to ensure consistency in their use of the system.

Administration will develop and administer formal training documents regarding use of the service verification buttons by collectors. Recurrency training will also be defined to ensure consistent and ongoing use of the in-truck buttons. Systems and reporting will also be developed to review button activations versus tipped carts.

Implementation date: June 30, 2025

Audit Recommendation 3

We recommend that the Waste Services Branch assess the division of internal and external service providers for collection services to determine if it continues to provide the best value for the City and residents.

The current approximate 50/50 division of internal and external service providers was approved by Council in 1989. Curbside collection has changed significantly since the 50/50 division was established – Edmonton was one of the first major municipalities to introduce a curbside recycling program in 1988, when the City's population was under 600,000 people⁴. The City has sought to maintain this division since, despite changes to the overall program.

The City uses multiple contractors to provide curbside collection service, allowing Administration to compare costs between internal and external service providers and foster a competitive market for collection services. Using multiple contractors also reduces risk to the City if a contractor is unable to continue providing services. Although multiple contractors are used in Edmonton, Administration monitors their performance to strive for consistent service delivery across contracted areas of the City.

This 50/50 division of service is maintained with every new round of contracts, yet the Auditor's recommendation for formal review will allow for a more structured analysis of curbside collection service. The continued implementation of the 25-year Waste Strategy, along with the greater complexity of waste management, require more strategic and data-driven analysis when determining service levels and providers.

Administration will develop an assessment of the division of internal and external service providers to inform its service approach in advance of the next round of curbside collection contracts. The assessment will establish a clear understanding of the strategic, operational and financial considerations of internal, external or blended collection services.

⁴ City of Edmonton. [Population History](#).

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Implementation date: December 31, 2026

Audit Recommendation 4

We recommend that the Waste Services Branch improve inventory management to provide more oversight over City cart assets.

While ratepayers are responsible for the day-to-day maintenance and use of their waste carts, they are City assets linked to the property. Over 500,000 carts for garbage and food scraps were procured by the City in advance of the Edmonton Cart Rollout, and approximately 16,000 new carts are delivered each year. The City tracks this information in a cart asset management system and maintains stock of extra carts for exchanges and repairs in both a City and vendor yard. Each cart has radio-frequency identification (RFID) technology that can identify which address and EPCOR account is linked to the cart. Because carts need to be accessible to collectors to pick up waste, they are also accessible to the general public, potentially leading to carts being removed from a property.

When carts are reported missing or damaged by a resident, they contact the CST. The CST marks the cart as lost or damaged in the cart asset management system and issues a work order to deliver a new cart with a new serial number. Crews collect the appropriate cart from a central yard and deliver the new cart to the resident's address, updating the cart asset management system. This is the same process used for cart maintenance or cart exchanges, and takes approximately five days to complete. Carts are required at curbside collection for garbage and food scraps, and the efficient replacement of carts may have contributed to discrepancies in cart inventory data to preserve service delivery for Edmontonians.

Administration will develop and implement a standard operating procedure to regularly validate and reconcile cart inventory levels based on the statuses in the master asset listing of the service verification application. This action will improve oversight of cart inventory, appropriate procurement and preserve an available supply of carts to meet resident needs. This procedure will include more physical counts of cart supply and improved monitoring of reported lost carts.

Implementation date: March 31, 2025

Community Insight

Waste Services maintains multiple points of contact for residents to look up information about their curbside collection, report missed collection, request cart exchanges and repairs, or submit general feedback. 311, CST, WasteWise, and the City's website⁵ allow for residents to contact the City. Digital, printable versions of curbside collection materials are on the City's website for residents, including welcome brochures and the What Goes Where poster⁶. Educational videos on the City's website help residents understand how to set out waste to comply with the Waste Services Bylaw and support collectors as they work their routes.

An October 2023 survey assessing satisfaction with City services identified that residents perceive waste collection as a very or somewhat important civic service (91 per cent), are very or

⁵ City of Edmonton. [edmonton.ca/CurbsideCollection](https://www.edmonton.ca/CurbsideCollection)

⁶ City of Edmonton. [edmonton.ca/WastePublications](https://www.edmonton.ca/WastePublications)

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somewhat satisfied with their waste services (67 per cent) and believe the current investments in waste should remain the same (60 per cent)⁷. Waste collection was identified as one of the top three City services for resident satisfaction, along with Fire Rescue Services and parks, sports fields and green spaces.

GBA+

Administration developed a variable waste utility rate for curbside collection customers as part of the Edmonton Cart Rollout, encouraging ratepayers to choose a garbage cart size and utility rate aligned with their needs. Three garbage cart sizes (120L, 240L, 360L) are available to customers based on the amount of waste they produce, and are assigned to reflect the cost of providing service while encouraging waste reduction. The 360 litre cart is only available to households producing home medical waste or with seven or more people in the household.

The City also offers the Assisted Waste Collection program to Edmontonians who have difficulty moving waste to the designated set-out location. Approximately 90 per cent of these customers use the program for curbside collection. A specialized team of collectors visit a home the day before and after their designated curbside collection date to set out waste and put carts back on the property. This service is offered at no extra charge, as the cost is subsidized by all ratepayers.

WasteWise is an app offered by the City making information on waste collection more accessible to Edmontonians. It provides Edmontonians with collection schedules, sorting tips, notifications before collection days and more. 14 languages⁸ are included in WasteWise. Users can customize their notifications and receive them in-app, through their online calendar, an email or a phone call. Waste calendars can also be printed out through WasteWise. The WasteWise app has been installed over 250,000 times, including approximately 28,000 new mobile installs in 2023⁹, and while an exact breakdown on collection services is not available to Administration (e.g. WasteWise users moving between services or owning/managing multiple properties), it is assumed the majority of users receive curbside collection service.

Environment and Climate Review

Curbside collection helps the City achieve the goals of the 25-year Waste Strategy by facilitating proper waste diversion from residential homes. Effective and efficient waste collection encourages residents to sort their waste at homes, helping the City process waste at local facilities and reduce the number of trucks transporting waste to landfill.

⁷ [City of Edmonton Service Satisfaction - Online Survey](#), Advanis, October 2023

⁸ English, Czech, German, Spanish, French, Hungarian, Japanese, Khmer, Korean, Punjabi, Portuguese, Russian, Vietnamese or Simplified Chinese

⁹ [2023-2024 Waste Services Annual Service Plan](#), page 13.