

# Waste & Recycling

Led by: Director of Waste & Recycling Services

## Service Description

Waste & Recycling service is focused on enabling Calgarians to reduce and manage their waste responsibly, now and into the future. The service delivers residential Black Cart, Blue Cart, Green Cart programs, container collection, as well as several community-based waste reduction and diversion programs. The service also manages operations and environmental performance at The City's three active and five closed landfill sites. Waste & Recycling is responsible for planning, delivering and maintaining its assets to meet current and future service needs.

## Service Updates

### Key Service Results

Spring Pulse Survey provided Waste & Recycling with a satisfaction rating of 86 per cent and an importance rating of 98 per cent for our services.

The Fall Survey of Calgarians found that satisfaction levels have been maintained for residential cart service: black cart 90 per cent, blue cart 93 per cent and green cart 91 per cent.

Calgarians diverted over 137,000 tonnes of material through their use of the residential Blue and Green Cart Programs in 2023. By recycling, we conserve resources putting them back in to use again. Food and yard waste collected in the green carts are processed to make high quality compost, a nutrient-rich soil amendment. The success of the Green Cart Program has meant that The City needs to expand the Compost Facility to process even more food and yard waste.

The Spyhill Waste Management Facility successfully renewed its 10-year regulatory Approval to Operate.

### Service Challenges

Service delivery was maintained through a variety of weather events like extreme cold weather, heavy snowfalls, heat warnings, and air quality advisories. Implementation of business continuity plans adjusted operations and applied safety practices that are right for the conditions.

Infrastructure projects have faced delays for regulatory approvals, purchase order issuance and supply chain issues that impact our timelines. Acquiring vehicles, equipment, software, specialists, and contractors are challenged by inflation, supply change issues and limited availability. Capital budgets and infrastructure investment plans have been adjusted to address inflation, pricing changes and business priorities. To mitigate this risk, projects are starting earlier, improved internal communication channels, and we increased the number of spare vehicles and extended vehicle lifecycle. Project managers are working closely with service delivery partners to prioritize and respond to service needs.

### Trends & Potential Uncertainties

The Waste Management Facilities had higher than expected volumes of waste from large commercial customers and hydrovac waste haulers. Commercial customers are expected to maintain or increase volumes with current economic conditions. Hydrovac waste is expected to decrease as disposal requirements and costs change.

The City is working closely with provincial regulators and involved parties to determine what an Extended Producer Responsibility model will look like for Calgary. The City intends to continue as collections service provider for blue cart material, and hazardous and special products and is assessing the opportunities, implications and transition plan for April 2025 single-family homes and October 2026 multi-family service.



# Measuring Our Performance

## Legend

— Actuals

■ Expected Future Performance

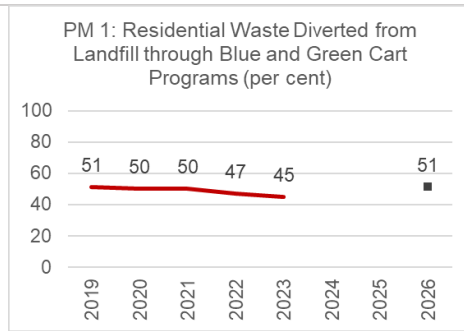
→ Progressing as planned

⊖ Not progressing as planned

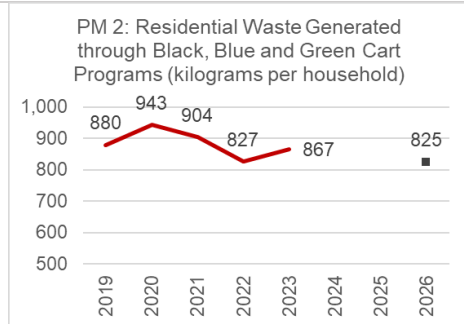
## Performance Measures

## Story behind the numbers

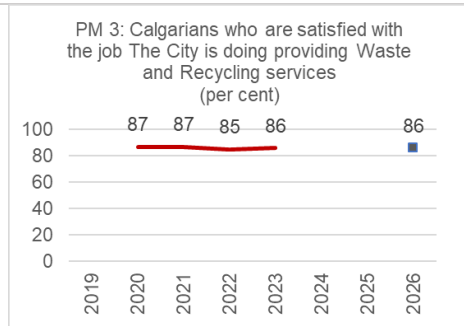
## Status



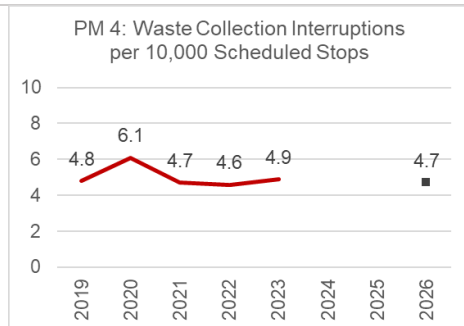
Calgarians continue to divert significant waste from landfill through the Blue and Green Cart programs. There's been a slight decrease in diversion recently, partially due to weight of material, partially due to higher rates of residue from our recycling and composting facilities. There should be an improvement with the new state-of-the-art recycling facility opening in 2024 and the expansion of the composting facility in 2025. Reducing divertible material in the garbage plays a critical role in curbing greenhouse gas emissions from landfills. We continue to invest in infrastructure that actively contributes to climate innovation.



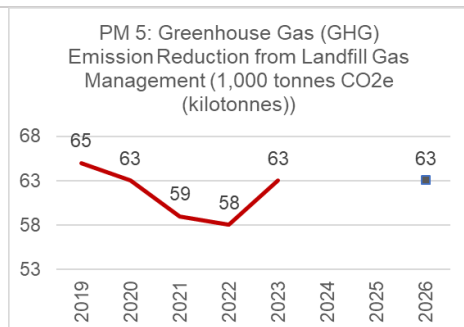
Residential garbage collected is gradually returning to normal levels after a surge during pandemic restrictions, a trend seen nationwide. Material collected in the Blue and Green Carts have increased since 2022 but are below pandemic levels. Our ongoing communication and education efforts aim to help Calgarians reduce how much waste they generate, recycle and compost as much as they can, and sort material properly. Reducing waste decreases how much we need to invest to process materials, and reducing contamination in the Blue and Green Carts increases the value of Calgary's recyclables and improves compost quality for a cleaner environment.



Results continue to show that Calgarians are satisfied with the job The City is doing providing waste and recycling services. This measure increased by one point compared to 2022. It's reasonable to expect that this baseline will moderately improve as we work towards the Council focus area of modernizing government and Waste & Recycling Services' goals of delivering value through waste services and strengthening business and financial management.



Interruptions to waste collection are within normal ranges. There was an increase due to weather and utility work preventing access to carts. In the pilot areas for residential black cart collection serviced by our contractor there was a rise in uncollected carts, due to both overfilling and improper cart placement as specified in the Waste Bylaw. The increase was offset by reduced missed collections as the contracted drivers have become more familiar with their routes. We continue to work with the contractor to find the balance between educating residents and providing good customer service to ensure seamless waste collection for Calgarians.



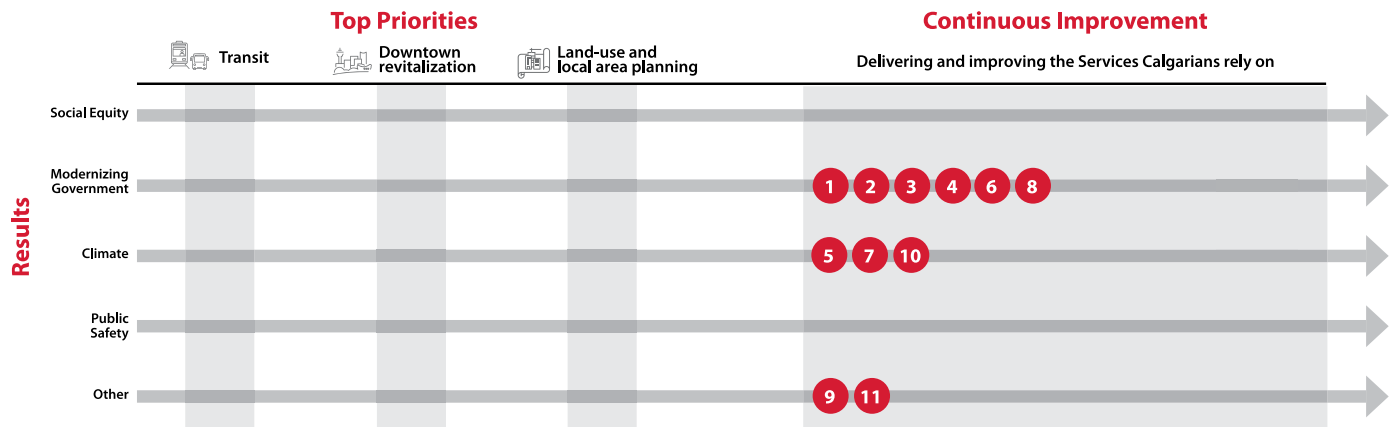
Landfill gas emissions are generated over decades after waste is disposed of and contribute to climate change. Methane is a potent greenhouse gas (GHG) that is emitted when organic materials decompose in a landfill. We are investing in upgrades to landfill gas management infrastructure at all three landfill sites. We expect that these upgrades will reduce emissions from landfill gas in the coming years, significantly contributing towards Council's commitment to reduce GHG emissions to net zero by 2050.











# Progress on Service Delivery

## Alignment with Council Refined Priorities and Result Areas



- Legend**
- Completed
  - Progressing as planned
  - Not progressing as planned
  - Not started
  - Initiative number

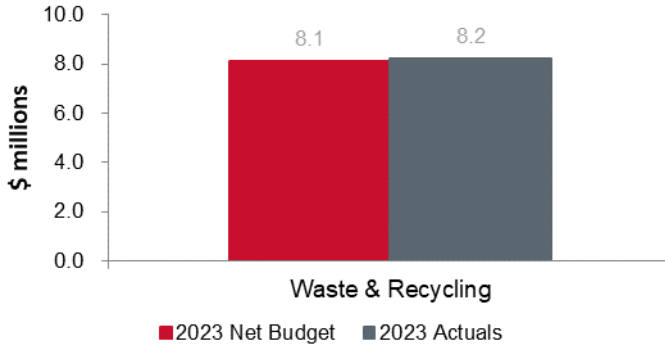
Initiative	Initiative Update	Status
1 Deliver safe and efficient waste processing and disposal services at The City's waste management facilities by complying with regulatory requirements and continually improving assets and operations in response to service demand.	Waste Management Facilities are an essential service for Calgary and the region. Customer demand at Waste Management Facilities has increased since mid-2022. The higher tonnage is largely driven by commercial customers. Waste & Recycling continues to prepare for and invest in landfill cell development and the Household Hazardous Waste Transfer Station, which will be operational in Q2 2024 to improve safety, handling and processing of these types of materials. Spyhill Waste Management Facility successfully renewed its 10-year regulatory Approval to Operate.	
2 Provide safe and reliable collection services for residential black, blue and green cart programs by adjusting to demand, continually improving service performance and investing in technology and responding to growth.	We provide residential cart collection through contracted and City-delivered services. Customer satisfaction levels as measured in the Fall Survey of Calgarians has been maintained for residential cart services (Black Cart 90 per cent, Blue Cart 93 per cent and Green Cart 91 per cent).  Residential customer growth rates were higher than originally forecast for the three cart-based programs (Black, Blue and Green). The City continues to provide a high level of safe and reliable service. Residential black, blue and green cart volumes trended within normal seasonal levels in 2023.	
3 Continue supporting Calgarians and the community to reduce and manage their waste responsibly by providing community-wide waste management programs.	Community-wide waste management programs help Calgarians with proper options for waste disposal. The City continues to provide Community Recycling Depots and Household Hazardous Waste Drop-off locations, support Community Clean-ups, and respond to illegal dumping. Waste & Recycling received a Calgary Police Service, Chief's Award for improvements to how bear spray is safely and properly disposed. Two new depots were opened in response to city growth, the Marlborough Community Recycling Depot, and the Seton Household Hazardous Waste depot.	
4 Provide safe and reliable container collection services to multi-residential developments, businesses and organizations through investments in technology and responding to customer needs.	Waste & Recycling focuses on providing safe, reliable and efficient service delivery to multi-residential developments, businesses and organizations. Our reputation as a reliable service provider has increased customer growth in this segment throughout 2023. We continue to explore advancing technology options for waste collection.	
5 Enable Calgarians to move towards zero waste and a more circular economy by improving access to and participation in waste reduction and diversion through communications, education, enforcement and engagement with customers.	Two new circular economy pilots, Circular Economy Grant and Circular Economy Program, designed to enable, empower and educate individuals, organizations and/or communities to participate in activities that result in reduction, reuse or diversion of waste. The 2023 compost giveaway had over 10,700 attendees picking up complementary compost processed from the Green Cart Program. To improve Blue and Green Cart Program performance, the Spot Check Program included over 12,000 door-to-door visits, checking 150,000 blue and green carts in 95 communities.	

Initiative	Initiative Update	Status
6 Improve customer experience by designing and adapting services to be equitable and inclusive reflecting what Calgarians need and expect, through customer engagement, partnerships, pilots and modernization.	Spring Pulse Survey provided Waste & Recycling a satisfaction rating of 86 per cent and an importance rating of 98 per cent for our services. We expanded engagement opportunities to empower Calgarians to dispose of waste properly through existing programs (school tours, English as a Second Language programs and public events) and topics like circular economy. Developed and implemented a Bear Smart Best Practices initiative in wildlife affected areas. Other pilots launched this year were Adopt an Alley, Curbside Community Treasure Hunt, and the Throw 'N' Go Enhancement project.	
7 Contribute to corporate climate change actions by reducing greenhouse gas emissions through strategies to manage organic waste, expand landfill gas management and improve energy efficiencies of fleet and facilities.	The City has invested in landfill gas collection systems, the Compost Facility Expansion Project and construction of a landfill gas to electricity project, to reduce greenhouse gas emissions from landfills. Three landfill gas collection enhancement projects applied for alternative funding to advance greenhouse gas reduction objectives. The Landfill Gas Management Plan was updated, and a related Carbon Offset Credit Plan is under development. Waste & Recycling's programs and campaigns aim to reduce food and yard waste from going into the landfill to prevent the creation of greenhouse gases.	
8 Continue advancing provincial and regional waste management solutions, including Extended Producer Responsibility (EPR), through alignment with legislation, advocacy, collaboration and partnerships.	The Government of Alberta passed Extended Producer Responsibility (EPR) legislation in 2022, shifting financial and operational responsibility for collecting, processing and recycling designated materials from municipalities to producers. EPR starts with Paper and Packaging Products (blue cart materials), and Hazardous and Special Products, some of what we call household hazardous waste. Work has focused on identifying opportunities and managing risks related to EPR. WRS is working with regulators and other parties involved to determine what this program could look like in Calgary.	
9 Continue strengthening Waste & Recycling business and financial management through implementation of the business and financial plans that are responsive to customer needs, Council's Strategic Direction and Calgary's changing economic environment.	Waste & Recycling implemented the Council-approved 2023 rates for the Blue, Black and Green Cart Programs, while maintaining the garbage tag fee, basic sanitary rate and minimum load charges at 2022 levels. Business, capital and financial plans have been reviewed and updated to respond to the changing economic environment, additional customers and new waste tonnage projections.	
10 Continue developing and delivering the Waste & Recycling Infrastructure Investment Plan in collaboration with Infrastructure Services.	The Waste & Recycling Infrastructure Investment Plan, mostly delivered by Infrastructure Services, includes projects to maintain assets, fulfill regulatory and environmental requirements and enable service delivery. The Compost Facility Expansion Project has completed detailed design; with approvals of budget and the borrowing bylaw this project will move into construction in 2024. Other key projects include landfill cell construction, expanded landfill gas collection system, landfill gas to electricity production and a Household Hazardous Waste Transfer Station.	
11 Continue providing a positive work environment through a commitment to safety, employee engagement, development and inclusion.	Waste & Recycling is committed to strengthening our safety culture to provide a positive work environment for our staff and strives to be an employer of choice. We offer diverse safety, developmental and wellness opportunities to employees through communications, orientations, wellness activities, initiatives and education. These include focused safety topics, safety incident investigations and employee engagement, and Learning & Development programs (training, career dialogues, supporting front-line leaders and mentoring for all staff).	



## Service Updates on Financial Performance

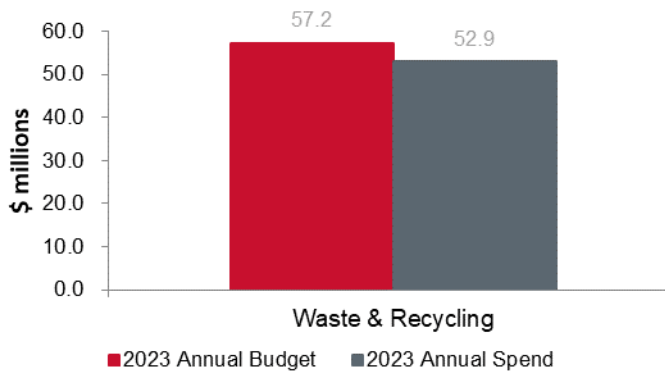
### Net Operating Budget and Actuals as of December 31, 2023



### Operating Budget Updates - 2023 net operating budget vs actuals:

The Waste & Recycling service is funded through a combination of tax-support and self-supported revenues. Tax-supported activities had a net zero variance, with an actual spend of \$8.2 million. Self-supported programs had a year-end variance of zero after transferring the operating surplus of \$14.3 million to reserve. The transfer to reserve was larger than budget by \$8.0 million, primarily due to higher than budgeted landfill tipping fee revenue from additional waste tonnage. The reserve is used to fund capital expenditures and the asset retirement obligation for landfill closure and post closure care costs.

### Capital Budget and Spend as of December 31, 2023



### Capital Budget Updates - 2023 total capital budget vs 2023 spend:

Closing out 2023, the capital budget for the service line was \$57.2 million with an actual spend of \$52.9 million (92.4 per cent). Capital investments focused on infrastructure required to process and dispose of waste materials, environmental protection systems, Waste Management Facility internal access roads, and infrastructure related to facilities and equipment, such as the Household Hazardous Waste transfer station.

In 2023, capital delivery in support of the of the service faced challenges with cost escalations and inflationary pressures along with procurement, resourcing and supply chain disruptions affecting the availability of materials.

2023 major capital projects and actual spending include:

- Facilities and General Equipment \$17.7 million
- Capping & Cell Construction \$12.9 million
- Landfill Gas Management Infrastructure \$6.9 million
- Compost Facility Expansion Project \$4.3 million
- Carts, Bins and Containers \$3.3 million