

Waste Strategy

Comprehensive Waste Management Strategy Waste Diversion Strategy

Recommendation

That Utility Committee recommend to City Council:

1. That the 25-year Comprehensive Waste Management Strategy, as set out in Attachment 2, of the August 29, 2019, City Operations report CR_5829, be approved.
2. That the cessation of new Commercial Waste Collection services be effective October 1, 2019, including commencement of the wind-down and transition of existing commercial collection accounts, and that wind-down exceptions be made for those commercial organizations that are willing to move to three-stream source separation (organics, recyclables and residual garbage) as part of an Early Adopters Program.

Previous Council/Committee Action

At the February 5, 2019, City Council meeting, the following motion was passed:

2. That a final analysis and recommendation for a Zero Waste framework be included as part of the 25-Year Strategy Report to Utility Committee in June 2019.

At the February 1, 2019, Utility Committee meeting, the following motion was passed:

That Administration provide a report to the June 28, 2019, Utility Committee meeting on a final strategy including results of additional citizen engagement on:

1. Source Separated Organics as outlined in Figure 2.1 of Attachment 2 of the February 1, 2019, City Operations report CR_5827.
2. Additional waste diversion and reduction programs.

and that Administration use the recommendations of Waste Free Edmonton, as outlined in M. Gorrie's handout from the February 1, 2019, Utility Committee meeting, as the basis for consultation on single use plastics in Phase 2.

At the March 20, 2018, City Council meeting, the following motion was passed:

5. That Waste Services report to Utility Committee in June 2019 with further recommendations on the Waste Strategy and corresponding amendments to Waste Management Policy C527.

At the November 8, 2016, City Council meeting, the following motion was passed:

3. That a comprehensive waste management strategy, complete with a site master plan of the entire Edmonton Waste Management Centre, be prepared and presented as part of the 2018 Supplementary Operating Budget Adjustment. The strategy shall be all encompassing, including but not limited to a review of overall site design and best practices related to municipal waste collection, waste sorting technologies, composting, anaerobic digestion and construction and demolition waste management.

In addition, a number of other past Council motions have shaped and directed the Waste Strategy. These are included in Attachment 1.

Executive Summary

This report provides an overview of the 25-year Waste Strategy and associated recommendations across seven categories. The 25-year Comprehensive Strategy (Attachment 2) outlines details supporting the new directions under a Zero Waste strategic framework. Recommendations will:

- Formalize Zero Waste as the strategic orientation for the City's Waste Strategy.
- Align with the direction provided in the August 29, 2019 Council Report CR_7173, Single Unit Waste Set-out Business Case.
- Support the move of the multi-unit residential sector and the Industrial, Commercial and Institutional sector to implement a Source Separated Organics Program, effective fall 2022.
- Recommend the cessation of the City's current Commercial Waste Collection Business Line.
- Allow Administration to develop restrictions on certain single-use plastics or single-use disposable materials and bring new guidelines into effect by January 2021.

Report

The 25-year Comprehensive Waste Management Strategy sets the City on a path of transformational change. It reaffirms key commitments - such as 90 percent diversion of waste from landfill, and advances recommendations that will position the City's

Waste Services Utility for the next 25 years. Program development recommendations, along with changes to the City's processing of waste, will take shape over the next seven years. Once programming and new processing facilities are fully operational, they can be evaluated and assessed, and any needed adjustments can be made.

Moving forward, the Strategy will pull on all potential levers to support ConnectEdmonton's strategic goals of Health City, Urban Places, Climate Resilience and Regional Prosperity. Its initiatives are aligned with corporate goals and with the inputs over the last year from multiple streams of analysis and the voices of Edmontonians.

The directions outlined in the 25-year Strategy and associated reports will impact:

- How waste is sorted at homes across the City, in a manner that aligns with new processing practices, and boosts the efficiency and effectiveness of processing at the Edmonton Waste Management Centre. The detailed business case to support the Waste Strategy is included as Attachment 1 in CR_7173.
- The requirements of both residents and the City of Edmonton, as outlined within the proposed Waste Bylaw (CR_6362) which enables implementation and enforcement of the new programming.
- The future direction of the multi-unit residential sector including additional work towards a new waste set-out requiring separation of organic materials from the waste stream.
- The future direction of Industrial, Commercial and Institutional (ICI) sector waste, including additional work towards requiring these sectors to participate in separation of organic waste and recycling by the fall of 2022.
- Commercial business lines, with a proposed wind-down of the current commercial collections, and advancing on previous Council direction to secure an operational partner for the City's current Construction and Demolition Recycling business line.
- The strategic orientation of the waste program, including by emphasizing waste reduction programming, including through restrictions on single-use plastics and other single-use disposables.

The Strategy recommends a new strategic framework – Zero Waste – as a means of focusing the transformation required. Zero Waste focuses on:

- Activities that promote prevention, reduction and reuse of materials.
- Greater emphasis on circular economy innovations that consider waste as a

resource/feedstock in the creation of beneficial projects.

- Measurements beyond diversion, including successful waste reduction.
- Aiming for continuous improvement within the waste system and expansion of performance indicators to capture the full social, environmental and performance impacts of the system.

A Zero Waste Framework is integrated across the strategy, with major initiatives advocating waste reduction including through:

- Citywide source separation of waste, including in the Industrial, Commercial and Institutional sector, to support higher diversion and more effective management of different waste feedstocks (types of waste).
- The development of an organics processing strategy that seeks to make use of organic materials with potential output of renewable natural gas and compost, materials with beneficial environmental impacts.
- Emphasis on maximizing the market potential of refuse derived fuel within the Waste to Biofuels Facility, and through exploration of other market opportunities.
- Enforcement of volume limits on residual garbage, seeking to motivate maximum utility of organic and recycling waste disposal.
- A robust Waste Reduction Strategy, which seeks operational improvements and new community partnerships to support a goal of impacting the City's diversion by up to 10 percent.
- A new focus on innovation through the Alberta Clean Energy Technology Accelerator (ACETA), which aims to use waste feedstocks to support and accelerate the use and valorization of municipal and biomass waste feedstocks to support the circular economy and reduction of greenhouse gas emissions.

Strategy Process and Methods

The Strategy and its components have been informed by inputs assembled or commissioned through Administration. Some of these will continue to inform the program as implementation plans are prepared. Inputs are outlined below.

- Two phases of qualitative and quantitative public engagement activities with single unit and multi-unit residential sectors, and from the Industrial, Commercial and Institutional sector. The engagement processes have collectively received more than 30,000 points of input through online and

telephone surveys, meetings, workshops and public events. City staff were also engaged in both phases to assess impacts of proposed changes to operations.

- An internal review through the Program and Services Review, which assessed the current state of the City's four non-regulated business lines:
 - Commercial Collections
 - Commercial Self-Haul
 - Construction and Demolition Processing
 - Aggregate Recycling
- The February 2018 Waste Services Audit Report, which signaled operational challenges including a need to validate diversion methodology (approved for single unit residential sector by City Council in June 2018).
- A rate variability study (2019).
- A cost of service study (2018).
- Best practice research and market scans conducted internally and by external organizations.
- Submissions made by external waste processing organizations regarding potential technologies, services and processes.
- A Request for Expressions of Interest sent to waste industry members to gauge market interest for operating the City's Construction and Demolition Recycling Facility and to help inform Council's decision to seek an operational partner for this business, as part of the overall strategy work.
- The development, launch and startup of the Initial Cart Rollout to 8,000 households, beginning April 2019 to demonstrate how the system would work, and to provide opportunities to refine operations prior to a potential citywide launch.
- Advancement of the Organics Processing Facilities business case in support of a new organics processing approach, in alignment with the proposed single unit residential set out program.
- Assessments of aligned processing streams such as production of refuse derived fuel, changes to the City's recycling program and planned upgrades for the Materials Recovery Facility have helped to change the single unit set out and validate the proposed path to 90 per cent diversion of single unit residential waste.

Corporate Strategic Alignment and Waste Strategy Development

The 25-year Comprehensive Waste Management Strategy will fundamentally transform service delivery and deliver outcomes and actions that will primarily impact ConnectEdmonton's strategic goal of Climate Resilience. Figure 1 below highlights the strategic goals and strategic directions that will support the waste strategy. In addition, these goals are aligned with the strategic goal of service delivery transformation.

Figure 1. Strategic Goals and Directions

Strategic Directions

Strategic Goals

Under a Zero Waste Framework, maximize efforts to recover, reduce and reuse materials from the waste stream.	<ul style="list-style-type: none">• Reorient waste programming to prioritize waste reduction• Deliver full lifecycle benefits of circular economy orientation• Align with the City's climate change goals and targets
All waste streams, from all sectors, are targeted with the best mix of processes and programs to achieve alignment with Zero Waste	<ul style="list-style-type: none">• Diversion targets of 90% set across all sectors• Emphasis on policy and support over direct market participation.• Education and outreach programs for non-regulated sector.• City Corporation leads by example• Integrated strategy to reduce single-use plastics/other disposables
Align all city programs, processes and solutions to best support the strategy and ensure efficiency and effectiveness of the strategy	<ul style="list-style-type: none">• Year 1-3 focused on the new curb-side set out program:<ul style="list-style-type: none">◦ Phased delivery of new cart system to all single-family residences◦ Alignment with interim and long-term organics processing strategy◦ Customer support to aid education and adaptation, education◦ Focus on waste prevention programming
The Waste system prioritizes customer experience, meeting expectations of customers on service delivery and value for money	<ul style="list-style-type: none">• Maximize community and private sectors partnerships• Deliver stable predictable rate increases• Optional program elements introduced to support customer choice and program flexibility:<ul style="list-style-type: none">◦ Variable rates◦ Extra Waste Collection/drop off opportunities

More detail on the alignment between Council's strategic goals, service delivery transformation and focus and outcomes of the Strategy is contained in Attachment 2.

Performance Management

As Administration implements new programs and processes, there will be ongoing alignment with the City's strategic goals. Edmonton's Strategic Plan and the Corporate Business Plan both provide the direction to coordinate activities and efforts to deliver services with the greatest value to Edmontonians.

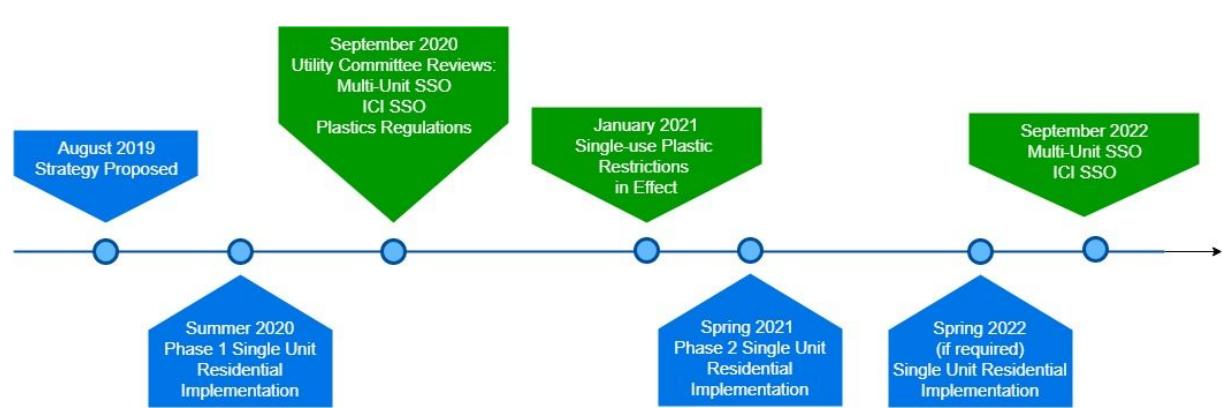
Administration has identified four strategic focus areas to advance business performance across the department: Customer Excellence, Operational Excellence, Financial Accountability and Organizational Excellence. Over the next three years, Waste Services will undertake initiatives that align with the department's strategic direction, while transitioning service and program models. Furthermore, all performance measures will align with the newly developed Enterprise Performance Management Framework and measures will be updated as required to support approved initiatives emerging from the strategy. The framework lays out strategic objectives at the operational levels, defines internal process and enablers that are supported with performance metrics and challenging targets and aims to improve data-driven decision making. Waste Services Key Performance Indicators are outlined in CR_7172 Waste Services Business Plan.

Recommended Timeline

Critical milestones in the strategy rollout are noted on the timeline below, which adheres to the March 2018 Council motion that called for the launch of the single unit residential program beginning in fall 2020. Administration expects that this single unit residential program will have multiple phases with full deployment by the end of the second quarter of 2021. Program launch will begin in areas served by City waste collectors, allowing the program to benefit from the experience of employees who collected source separated organics during the Edmonton Cart Rollout, followed by the balance of neighbourhoods by June 2021. The Implementation Strategy can be found in Attachment 3.

Figure 2: Recommended Timeline

Waste Strategy



Next Steps

Pending approval of the strategy, additional streams of work will commence to bring forward regulations and bylaws for the following, as outlined in Attachment 4:

- Plastics and single-use items.
- Source separated organics programming for the multi-unit sector.
- Source separated organics programming for the Industrial, Commercial and Institutional sector.
- Wind-down of Commercial Collections, commencing October 1, 2019.

All new processes will be supported by targeted engagement and best practice research, and business cases will be developed for each additional program stream, before any program decisions are made. Subject to approval, the restrictions on single-use plastics will be in place as soon as the first quarter of 2021, based on details outlined in Attachment 5. Program changes for the multi-unit and Industrial, Commercial and Institutional sectors will begin implementation in the fall of 2022. Sufficient time will be allowed within the programs to allow impacted organizations to make necessary infrastructure and inventory adjustments.

The strategy also contains recommended changes to the City's current non-regulated business lines, including a wind-down of the current Commercial Collections business, and securing an operational partner for the Construction and Demolition Recycling business. The City's involvement in these business lines has been assessed as inadequate both in terms of achieving diversion and financial results.

In addition, the City's direct participation in the marketplace is seen as a barrier to cooperation with the waste industry, which perceives conflict with the City's dual roles as regulator and market participant. While it is clear that the City will have a role to play in ensuring the success of a mandatory Source Separated Organics Program, operational constraints, industry resistance and limited market success all underline

the recommendations that the City focus less on direct market participation and instead play a larger role as a regulator, providing rules, facilitating market development and providing resources and educational support.

Measurements

Across all activities, the City's overall diversion of waste from landfill will continue to be the primary measure of success. The 90 percent diversion target includes a more targeted focus on achieving 10 percent of diversion through waste reduction efforts. In August 2018, the single unit residential target for waste diversion was reaffirmed as 90 percent, a target first set in 2007 in Waste Management Policy C527. In August 2018, the single unit residential diversion targets and methodology were updated in alignment with the February 2018 Waste Services Audit Report. Based on the revised diversion rate calculation methodology, the final diversion rate for 2018 is 36 percent, which forms the baseline for the strategy.

As part of the recommendations contained in the strategy, 90 percent targets are also identified for the multi-unit residential and Industrial, Commercial and Institutional sectors. The strategy document lays out the factors influencing the City's path to 90 percent diversion in the single unit residential sector.

The methodology and path forward for the multi-unit and Industrial, Commercial and Institutional sectors will be identified through business planning and business case processes and through ongoing engagement with sector representatives.

Budget/Financial

Administration continues to strive towards achieving the financial indicators set out in the Waste Management Utility Fiscal Policy C558A including maintaining rates that are fair, stable and consistent while ensuring that the utility is financially sustainable over the long-term.

Administration's financial indicators incorporate the implementation of initiatives in the 2020 to 2022 business planning period. Initiatives include increasing residential and non-residential waste diversion, citywide implementation of the Source Separated Organics Program for single unit residences, enhancements to the Refuse Derived Fuel Facility and continuously improving the business in a fiscally responsible manner.

The financial indicators are measures of the proposed financial performance of Waste Services. Updated indicators for 2020 to 2022 are included in Attachment 1 of the August 29, 2019, City Operations report CR_7172. A full update to the measures will be presented in fall 2019 as part of the 2020 Waste Services Utility Rate Filing. The rate filing will continue the focus on achieving overall long-term financial sustainability,

balancing both capital and operating requirements with achievement of the financial indicators.

Public Engagement

A comprehensive citywide public engagement initiative was launched in October 2018 to support the development of the 25-year Waste Strategy, with a second phase of public engagement in spring 2019. The public engagement was designed to seek input from residents, multi-unit stakeholders, non-residential stakeholders and internal City employees on proposed waste management program and service changes.

The public engagement helped to inform the 25-year Waste Strategy and proposed changes to waste programs and services. The Phase 1 report was presented on February 1, 2019 (CR_5827) and the Phase 2 report is included below (Attachment 6). Additional background materials including survey data and detailed qualitative reports are available at edmonton.ca/futureofwaste.

Corporate Outcomes and Performance Management

Corporate Outcome(s): Edmonton is an environmentally sustainable and resilient city.						
Outcome(s)	Measure(s)	2018 Result	Target(s)			
			2019	2020	2021	2022
Edmonton is an environmentally sustainable and resilient city.	Single Unit Residential Waste Diversion Rate	36%	41%*	50%	64%	66%

*Due to the closure of the Edmonton Composting Facility, this target is not anticipated to be met.

Risk Assessment

Risk Element	Risk Description	Likelihood	Impact	Risk Score (with current mitigations)	Current Mitigations	Potential Future Mitigations
Project Management (Strategy Project)	Risk of not meeting timelines, cost and scope	2 - possible	2 - moderate	4 - low	Define project scope; track project timeline & cost; establish project governance committee and project management office.	Develop contingency plans for potential issues arising

Waste Strategy

Legal/ Regulatory	Regulator may have long review process before approving all permits due to program changes	4 - likely	2- moderate	8 - medium	Develop operational plans to expedite applications.	Establish a comprehensive process with the Regulator to provide them with information in a timely manner.
Public Perception	Customers perceive the strategy results as a reduction in services	4 - likely	2 - moderate	8 - medium	Proactively engage Council and the public in strategic planning and demonstrate alignments.	Develop a communication strategy that will focus on education and outreach and be responsive to customer needs.
Financial Stewardship	Strategy related costs exceed projections resulting in additional Utility rate increases	3 - possible	2- moderate	6 - low	Closely monitor program financials; include financial contingency in cost estimate.	Revise business model to address operational and financial effectiveness
Public Perception	Customer engagement in strategic changes lower than anticipated	2 - unlikely	2 - moderate	4 - low	Public engagement to determine public readiness and support of change. Engagement has been high.	Develop a comprehensive education and communications plan to address public engagement.

Attachments

1. Timelines and Past Motions
2. Edmonton 25-year Comprehensive Waste Management Strategy
3. Implementation Strategy
4. Program Action Plan
5. Elevated Enviro Report
6. What We Heard Report

Others Reviewing this Report

- A. Laughlin, Acting Deputy City Manager, Financial and Corporate Services
- C. Owen, Deputy City Manager, Communications and Engagement
- J. Meliefste, Acting Deputy City Manager, Integrated Infrastructure Services
- K. Armstrong, Deputy City Manager, Employee Services
- S. McCabe, Deputy City Manager, Urban Form and Corporate Strategic Development
- B. Andriachuk, City Solicitor