

## **Waste & Recycling Services Outlook for 2018 to 2025**

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### **EXECUTIVE SUMMARY**

This report provides an outlook on what Waste & Recycling Services (WRS) is focusing on over the period of 2018 to 2025, while working towards the target of diverting 70 per cent of Calgary's waste away from landfills by 2025. It serves as an overview of the plan to get to 70 per cent diversion, and the key trends and opportunities that WRS is responding to.

There is a progression of work that is being undertaken to strategically divert waste in Calgary away from landfills. Recyclables and organic materials are the two largest streams of divertible waste that have historically gone to landfill, and programs have now been implemented city-wide to divert these streams of waste to recycling and composting facilities. The next focus areas for WRS will be: education, communication, and engagement to optimize existing programs; targeted programs for specific materials still going to landfill; and pricing and enforcement to incentivize additional diversion. Waste-to-energy (WTE) is not required to achieve 70 per cent diversion, but technologies continue to be monitored and the business case for investing in this type of residual waste management continues to be explored.

While WRS continues to implement the overarching plan for achieving 70 per cent diversion by 2025, we are also responding to trends and opportunities that are emerging. There are five primary trends that require our response over the coming years: increasing customer expectations; changing market standards for recycled materials; increasing contamination of recyclables; decreasing tonnage of waste for disposal; and advancing technologies.

#### **ADMINISTRATION RECOMMENDATION:**

That the SPC on Utilities and Corporate Services receive this report for information.

#### **RECOMMENDATION OF THE SPC ON UTILITIES AND CORPORATE SERVICES, DATED 2018 APRIL 18:**

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##### **That Council:**

1. Receive this report for information; **and**
2. **Direct Administration to undertake a scoping report that investigates options and unintended consequences for significantly reducing waste, "avoidable" plastic waste, and single-use items, engage citizens and waste generators, and the costs of doing this work, and report back to the SPC on Utilities and Corporate Services with a scoping report no later than Q2 2019.**

### **PREVIOUS COUNCIL DIRECTION / POLICY**

A deferral report for the 2018 waste-to-energy technology report (UCS2018-0147) was approved by Council on 2018 February 26 to allow that report to be brought as an attachment to this outlook report.

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On 2016 June 22 the SPC on Utilities and Corporate Services received the Waste Diversion Target Update (UCS2016-0470), including updates on waste diversion in each sector, and a status update on waste-to-energy.

On 2015 December 7, Council adopted the revised target of 70 per cent waste diversion across all waste sectors by 2025, as recommended in the Waste Diversion Target Update (UCS2015-0835). The overall waste diversion target was revised from the original target of 80 per cent diversion by the year 2020, as set in 2007 (UE2007-035). As part of the 2015 report, Council directed Administration to report back in Q1 2018 on the potential application of waste-to-energy technology.

### BACKGROUND

The City of Calgary's aspirational waste management goal is to achieve zero waste, where all discarded materials are resources that can be reused (recycled, composted, repurposed, etc.), and no garbage is sent to landfills. On the journey to zero waste there will be interim steps and targets. The target that WRS is currently working towards is 70 per cent diversion of waste from landfills by 2025. The overarching steps for achieving this target are shown in Figure 1, and discussed in detail in Attachment 1.



**Figure 1: Steps towards 70% by 2025**

### INVESTIGATION: ALTERNATIVES AND ANALYSIS

Since 2007, WRS has successfully implemented broad recycling and organics diversion programs across the single-family (SF) residential, multi-family (MF) residential, and industrial, commercial and institutional (ICI) sectors, supported by strong education and engagement activities. These programs require continued investment and refinement to optimize the

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diversion they achieve. Targeted programs for specific materials such as textiles and single-use items (e.g. plastic bags) will be a focus of ongoing diversion work, as well as pricing and enforcement to encourage the use of diversion programs. Residual waste management, including opportunities for WTE, will be explored as opportunities to increase diversion beyond 70 per cent. An update on WTE technology is provided in Attachment 2.

Five primary trends, further discussed in Attachment 1, have been identified that are influencing WRS work. Opportunities for responding to each of these trends have been highlighted below, including specific initiatives that are being undertaken. The trends and opportunities are:

### **Trend #1: Increasing customer expectations.**

Opportunities (and initiatives):

- Provide options for residential customers (e.g. variable pricing for Black Cart Program, to allow residents control over what they pay for garbage by charging only for the amount they throw away).
- Engage customers and explore new programs (e.g. engage customers on services and service levels; engage waste generators on strategy for targeted items; explore programs for targeted items).
- Improve transparency of service costs (e.g. black cart and green cart charges that reflect the cost of delivering those services).
- Continue to improve efficiency and reduce costs (e.g. green cart winter schedule; collection services review; route efficiency).

### **Trend #2: Changing market standards for recycled materials.**

Opportunities (and initiatives):

- Advocate for Provincial Extended Producer Responsibility to shift the responsibility and costs of recycling from local governments to producers (e.g. via Alberta Urban Municipalities Association, and the Recycling Council of Alberta).
- Improve ability to market recycled materials (e.g. explore alternative markets; improve quality of processed recycled materials).

### **Trend #3: Increasing contamination of recyclables.**

Opportunities (and initiatives):

- Enhance education and enforcement to improve the quality of materials collected in recycling programs, so materials can be marketed effectively and program costs are kept as low as possible (e.g. education and communication campaigns; enforcement of programs).

### **Trend #4: Decreasing tonnage of waste for disposal.**

Opportunities (and initiatives):

- Optimize services across facilities (e.g. review services and service levels at each site; Shepard summer Throw 'n Go; enhanced residential Throw 'n Go).
- Explore regional waste management opportunities (e.g. Calgary Metropolitan Region Growth Plan and Servicing Plan; pursue regional initiatives; City Charter Collaboration Table)

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- Consider new activities at sites (e.g. Landfill gas to energy options; energy production; technology pilots).

### **Trend #5: Advancing technology.**

Opportunities (and initiatives):

- Investigate technologies (e.g. continue to test technology for in-truck data collection and cart inventory tracking; continue to monitor waste-to-energy technology; alternative fuels for fleet).

### **Stakeholder Engagement, Research and Communication**

Customers are a critical partner for achieving maximum waste diversion, and are engaged in the design and implementation of programs. Broad customer engagement to inform the next phase of new programs is planned for 2019 and timelines will be shared with Council in advance of the engagement.

### **Strategic Alignment**

The waste diversion target of 70 per cent diversion by 2025 is a key step in leading the community toward zero waste. This report aligns with Council's Priority for a healthy and green city and Strategy H1: Implement the Green Cart Program and multi-family recycling strategy, and reduce industrial, commercial and institutional waste going to our landfills. A focus on financial sustainability enables WRS to deliver on its commitment towards Council's Priority for a well-run city and Strategic Action W2: Be as efficient and effective as possible, reducing costs and focusing on value-for-money.

### **Social, Environmental, Economic (External)**

#### *Social*

Implementation of waste diversion programs makes Calgary a more attractive place to live and increase Calgary's reputation as an environmentally friendly city.

#### *Environmental*

Reducing and diverting waste is a critical component of reducing Calgary's impact on land, air and water. Waste reduction and recycling reduces greenhouse gas emissions, redirects natural resources back into the economy and reduces future environmental liability.

#### *Economic*

Waste diversion supports an increase in jobs and stimulates economic growth. The City's diversion strategies and programs are supporting the growth of private businesses and fueling innovation in the industry.

### **Financial Capacity**

#### **Current and Future Operating Budget:**

Activities identified in this report that require operating budget will be included in the One Calgary budget and business plan process.

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### ***Current and Future Capital Budget:***

Activities identified in this report that require capital budget will be included in the One Calgary budget and business plan process.

### **Risk Assessment**

There are no significant risks associated with this report.

### **REASON(S) FOR RECOMMENDATION(S):**

This report provides an outlook on what Waste & Recycling Services (WRS) is focusing on over the period of 2018 to 2025. It serves as an overview of the plan to get to 70 per cent diversion, and the key trends and opportunities that WRS is responding to.

### **ATTACHMENTS**

1. Waste & Recycling Services Outlook for 2018 to 2025
2. 2018 Report on Waste to Energy
3. Presentation