

# Staff Report for Decision

DATE OF MEETING NOVEMBER 9, 2020

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SUBJECT RESIDENTIAL WASTE COLLECTION OPTIMIZATION PLAN

## **OVERVIEW**

### **Purpose of Report**

To update Council on a proposed optimization to the sanitation service routing and seek approval for 2021 Budget adjustments.

### **Recommendation**

That the Governance and Priorities Committee recommend that Council endorse the Ten-Zone Waste Collection Optimization Plan for implementation in January 2021.

## **BACKGROUND**

On July 15, 2020, Council received an Information Report regarding the Sanitation Service Review (the Review). This review is now complete and is addressed in a separate report on today's Governance & Priorities Committee agenda. This report is presented separately, as it is a significant change to the City's operation deserving of focused attention.

In conjunction with the Review, it became apparent there was opportunity to change the pattern of collection to provide balance between landfill and recycling collection streams. Staff developed the plan to optimize collection routing to improve capacity to respond to a significant increase in utilization to the service.

The draft 2021 user rate for sanitation service is expected to be \$181 in the Draft Financial Plan.

## **DISCUSSION**

Since introduction of the Automated Collection Program in 2017, user participation and tonnage of material collected significantly increased, to where we are seeing over 50% higher collection over the three years of the program.

In response, the City increased the number of collection routes from seven to eight routes in 2018, and from eight to nine routes in 2019. Of the current nine routes, eight are larger and serviced by tandem axle trucks, and one is smaller and accessible only by single axle trucks.

User participation and the amount of material collected, continues to increase in 2020, surging an additional 18 percent compared to the same period last year, with no observed slackening of demand.

Changes in consumer and household behaviour exacerbated by the COVID-19 pandemic has resulted in increased online purchasing by households. This leads to higher volumes of recycling materials placed curbside; notably cardboard packaging and wrapping material. Discussion with material recovery facilities and other municipalities indicates an estimated 10 to 15 percent increase in the recycled materials – a significant increase in low-density, high volume material.

The increased volume requires our operators to travel to the organics and recycling facilities to empty twice on recycling collection days, causing 15 percent increase in workload on recycling weeks. To maintain the service level, spare trucks are deployed and hours of collection extended to evenings and weekends. Each month, on average, 24 routes were collected one day later than the scheduled day since May 2020.

Staff anticipate that the trend will continue. While an education campaign is imminent and necessary to refocus consumer habits, the day to day operation is expected to continue to struggle to keep up with surging demand.

The Sanitation service is projected to be significantly over its 2020 budget, due to increased volumes of all three streams, leading to increased disposal costs, along with higher Staff costs and equipment maintenance.

Prolonged working hours impact on operators' health and wellbeing, and ability to safely operate equipment. It is essential to increase the curbside collection capacity to provide a safe, efficient, cost effective, and sustainable service in response to continued increase.

### **Optimization**

During the Sanitation Service Review data collection phase, it became apparent there was an opportunity to optimize the service. The proposed change separates collection of landfill waste from recyclables, rather than collecting exclusively landfill material one week and recycling the next.

The changes divide the City into 10 collection zones to continue alternating biweekly collection. Each zone is divided into two different sets of routes, permitting adequate resourcing of each stream independently, in effect, increasing recycling capacity by 20 percent.

Using extensive GIS analysis, Staff collated data on a number of factors, such as volumes of materials, number of homes, driving distances, number of stops, fuel and break times to develop optimized routes. Dividing each zone into 5 landfill waste collection routes and 6 recyclable collection routes optimizes capacity for each stream, and balances the workload of imbalanced demand for landfill waste collection compared to recyclable collection.

Ratepayers will see a minor adjustment to timing, and be assigned to a different route number within a new zone. Otherwise, the experience will be the same – they will continue to receive alternating biweekly collection of recycling and landfill material. The transition period is proposed for the weekends of January 16/17 and January 23/24, 2021. This will provide a short

period of a higher level of service to switch from one routing system to the other. This keeps the interval between collections shorter – valuable after Christmas.

A comprehensive communication strategy accompanying the new calendars will educate and inform the public about the changes.

For the optimization to succeed, Staff propose to accelerate the hiring of a driver from July 2022 to January 1, 2021, along with budget for increased overtime during the two weekends of the transition. This relatively modest investment will improve recycling capacity by 20% and maintain the same level of service for the ratepayer. The change balances a number of factors, including operator workload, collection, line-ups at disposal facilities and reduces potential overtime. This will also allow acquisition of future specialized equipment for each stream. |

## Summary

To summarize the changes and financial impact of optimizing sanitation collection routes:

- The City will be divided into ten zones, and each zone into six recycling routes and five garbage routes.
- An existing spare vehicle will be used on the new route, until the planned new vehicle arrives in July 2022.
- Hiring of an additional refuse collector is proposed to be for January 2021, rather than July 2022.
- Transition to the new routing program is proposed for January 16/17 and January 23/24, 2021, ensuring that residents do not see a decrease in the level of service.
- The additional costs of the transition are expected to be \$177, 238, or \$6 per user in 2021. |

## OPTIONS

1. That the Governance and Priorities Committee recommend that Council endorse the Ten-Zone Waste Collection Optimization Plan for implementation in January 2021.
  - The advantages of this option include creation of capacity to handle current recycling volumes, and balancing of workload between streams, while maintaining the current level of collection service.
  - The disadvantages of this option may include some public concern regarding changes to their service, along with the costs associated with the new driver and transition over two weekends.
  - Financial Implications: Adding an additional collection zone in 2021 would increase the 2021 budget by \$117,238 or approximately \$6 per user bringing the total annual fee to \$187. The change is proposed to be included in the 2021 – 2025 Provisional Financial Plan.
2. That the Governance and Priorities Committee provide alternate direction. |

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### **SUMMARY POINTS**

- As a result of the Sanitation Service Review, Staff propose to optimize the City's routes, balancing collection of the landfill and recycling streams.
- Residents will be assigned a new route number, but will still receive weekly alternating waste collection.
- Optimizing collection routes will build additional capacity at a reasonable additional cost.
- An upcoming education campaign will seek to reset consumer waste habits, with the object of reducing disposal volumes – and costs.

### **ATTACHMENTS:**

Attachment A – Sanitation Service Review Information Report July 15, 2020  
Attachment B – Residential Waste Collection Optimization Plan Presentation

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