

# Special City Council Meeting Agenda



**Monday, September 18, 2017 – 6:00 p.m.**  
**Council Chambers, Guelph City Hall, 1 Carden Street**

Please turn off or place on non-audible all electronic devices during the meeting.

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## **Authority to move into closed meeting**

That the Council of the City of Guelph now hold a meeting that is closed to the public, pursuant to the Municipal Act, to consider:

- C-CON-2017.4 Solid Waste Resources Business Service Review Interim Report – Material Recovery Facility Findings**  
Section 239 (2)(b)(d) of the Municipal Act relating to personal matters about an identifiable individual, including municipal or local board employees and labour relations or employee negotiations.

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## **Open Meeting– 7:00 p.m.**

**Disclosure of Pecuniary Interest and General Nature Thereof**

### **Closed Meeting Summary**

**Special Council - Workshop – Solid Waste Resources Service Review**

**CON-2017.39 Solid Waste Resources Business Service Review Interim Report**

### **Presentation:**

Tomoko King, Manager Corporate Project Management Office  
Peter Busatto, General Manager, Environmental Services

### **Delegations:**

Paul Clulow, President, CUPE local 241

### **Recommendation:**

That the report IDE-17-107, "Solid Waste Resources Business Service Review Interim Report" dated September 18, 2017, be received.

## **Adjournment**

Business Service Review

Solid Waste Resources 



# Solid Waste Resources Business Service Review

Interim Report

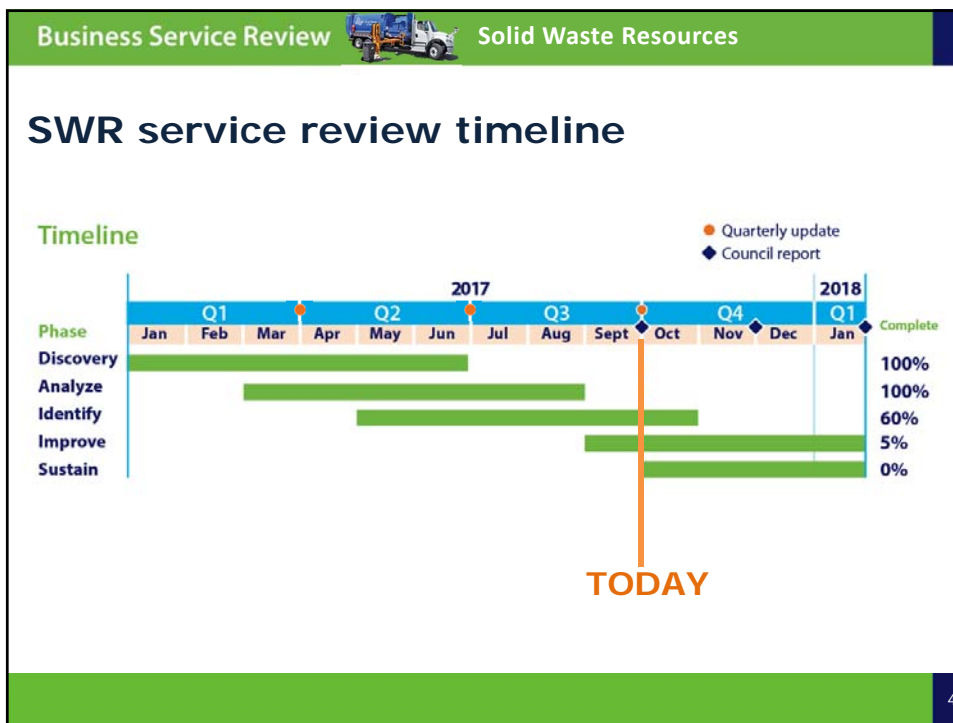
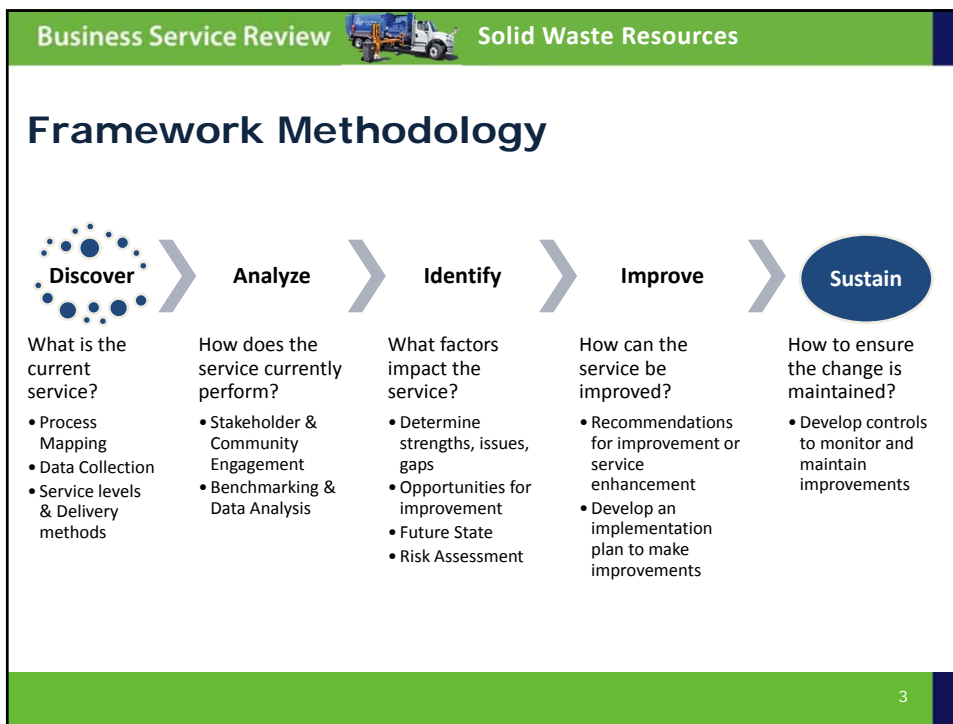
Corporate Project Management Office  
September 18, 2017


Business Service Review  Solid Waste Resources

## Service Reviews – WHY & WHAT?

- City's commitment to continuous improvement
  - Efficient and effective delivery of services
  - Demonstrate value for money
- Business service review framework
  - Approved by Council in October 2016
  - What's working well, and what needs to change?
  - Are we providing the right services in the right way?
- Solid Waste Resources (SWR) = first pilot
  - Review of services and processes to inform options and identify opportunities for improvement

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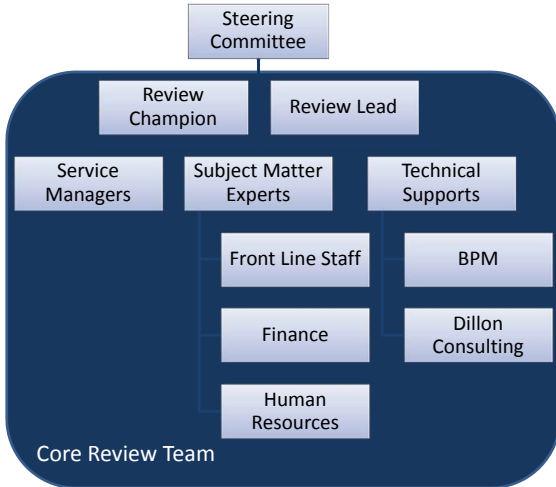


**Business Service Review**  **Solid Waste Resources**

## Approach

- Team approach
- Steering Committee
- Core Review Team
- SWR staff - process mapping, Lunch & Learn, Tailgate meetings
- Union engagement
- Dillon Consulting benchmarking support

## Collaboration



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**Business Service Review**  **Solid Waste Resources**


## Review scope

1. Collections
2. Organics
3. Public Drop Off & Transfer Station
4. Municipal Special Hazardous Waste
5. Residual Waste
6. Material Recovery Facility



*Other service elements such as Administration and Leaf & Yard waste will be included in the November Report*

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Business Service Review  Solid Waste Resources

## Benchmarking analysis

- Municipality Benchmarking – Objective quantitative analysis and data validation by Dillon Consulting
- Comparator municipalities selection considerations
  - Council-approved comparator municipalities
  - Similar/different service delivery approaches
  - Similar/different service levels and/or technology
  - 12 municipalities selected
- Key indicators:
  - Service type
  - Service level
  - Average cost per tonne
  - Average cost per customer

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Business Service Review  Solid Waste Resources

## 1. Collections: Current Services

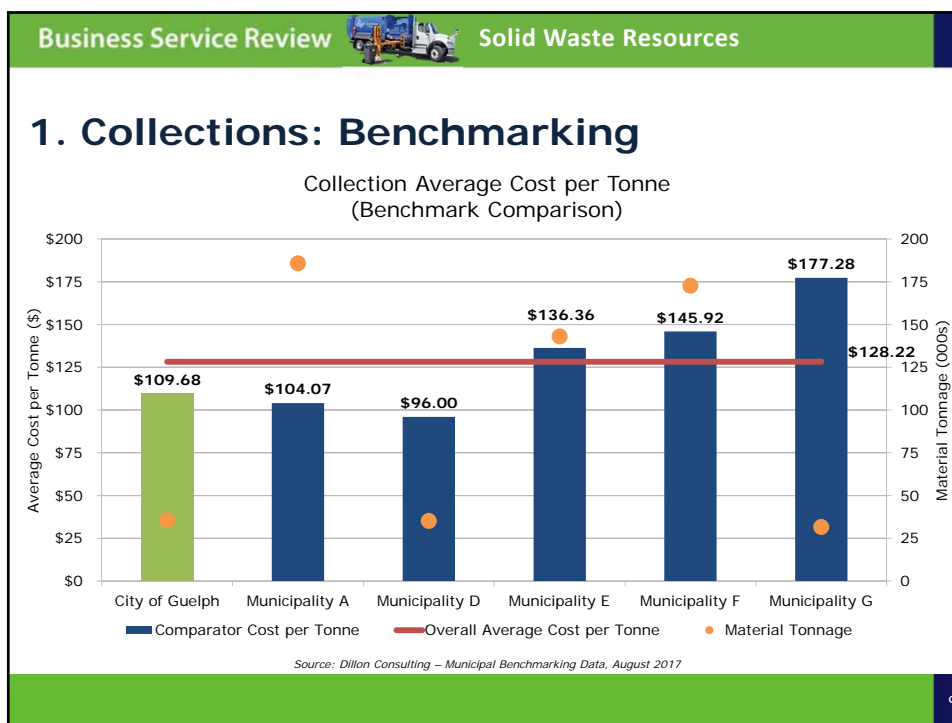


- Three-stream waste collection:
  - weekly organics
  - bi-weekly single-stream recycling and waste
  - 5 days per week (Monday – Friday)
- Daily collections in downtown area, 6 days per week (Monday–Saturday)
- 48,736 customers served



Customer Type	Percentage
Single family homes	61%
Multi-residential homes	38%
ICI businesses	1%

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Business Service Review  Solid Waste Resources

## 1. Collections: Initial Conclusion


- Guelph's service is in-line and competitive with comparator municipalities
- Seasonal bagged leaf and yard waste curbside collection provided by all other comparators
- Comparative performance and alternative service delivery review → **complete**

**NEXT STEPS:**


- Further research and analysis:
  - Multi-residential service
  - Leaf and yard waste collection



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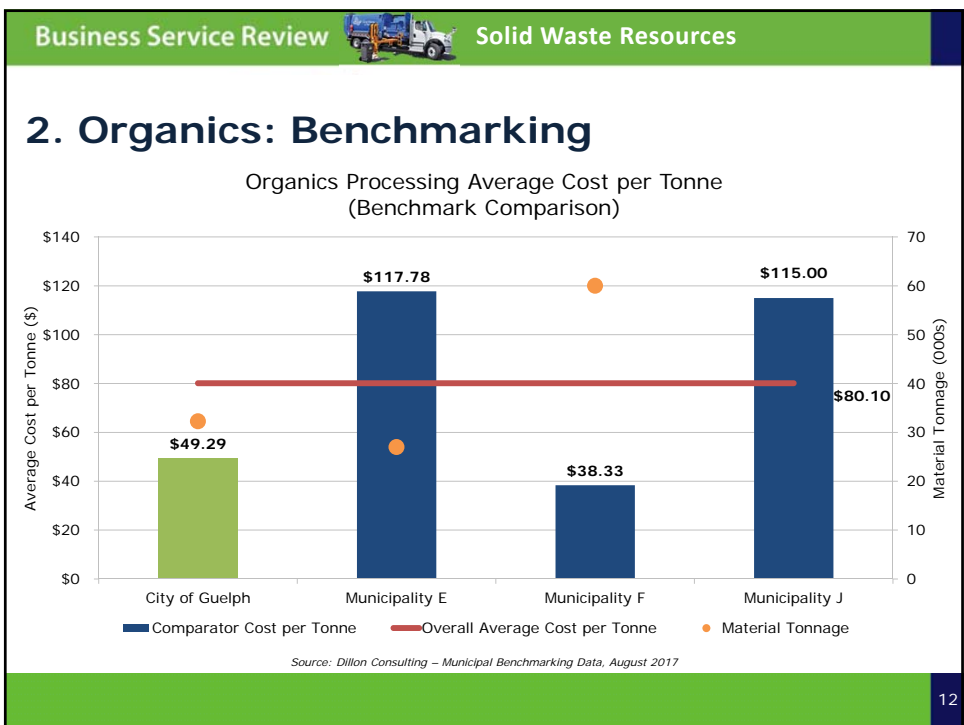
Business Service Review  Solid Waste Resources

## 2. Organics: Current Services



- Process source-separated organics
  - Organic waste (green bin) collected separately from other streams of waste is processed to produce compost
- Operations contracted out to Wellington Organix Inc.
- Contract with the Region of Waterloo to process their residential organic waste
- Ratio of organics processed = Waterloo : Guelph  
3 : 1

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## 2. Organics: Initial Conclusion

- Guelph's service is in-line and competitive with comparator municipalities
- The service review → **complete**

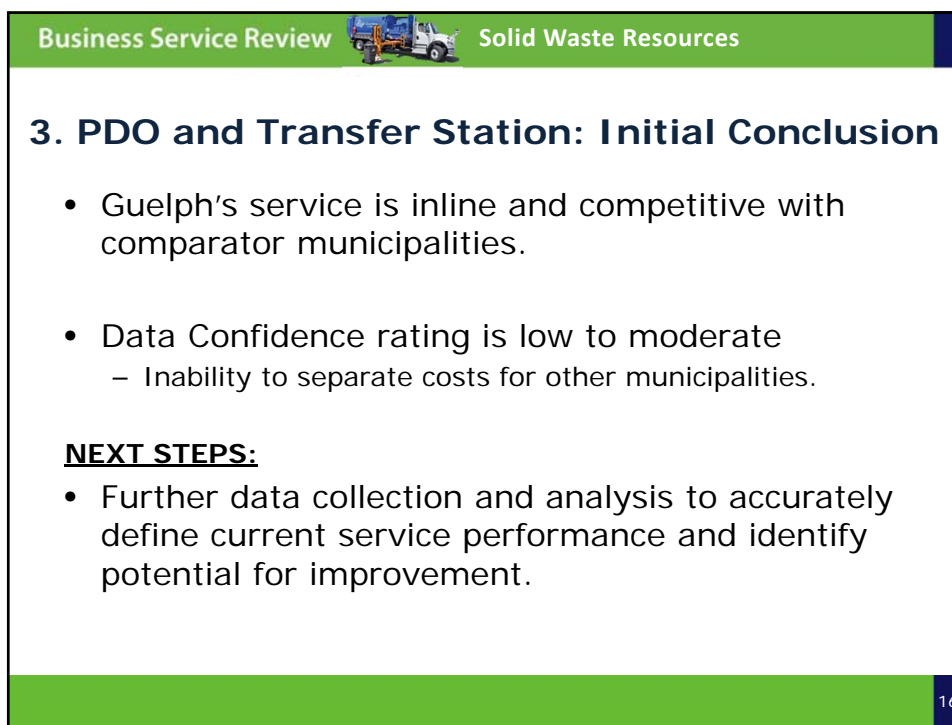
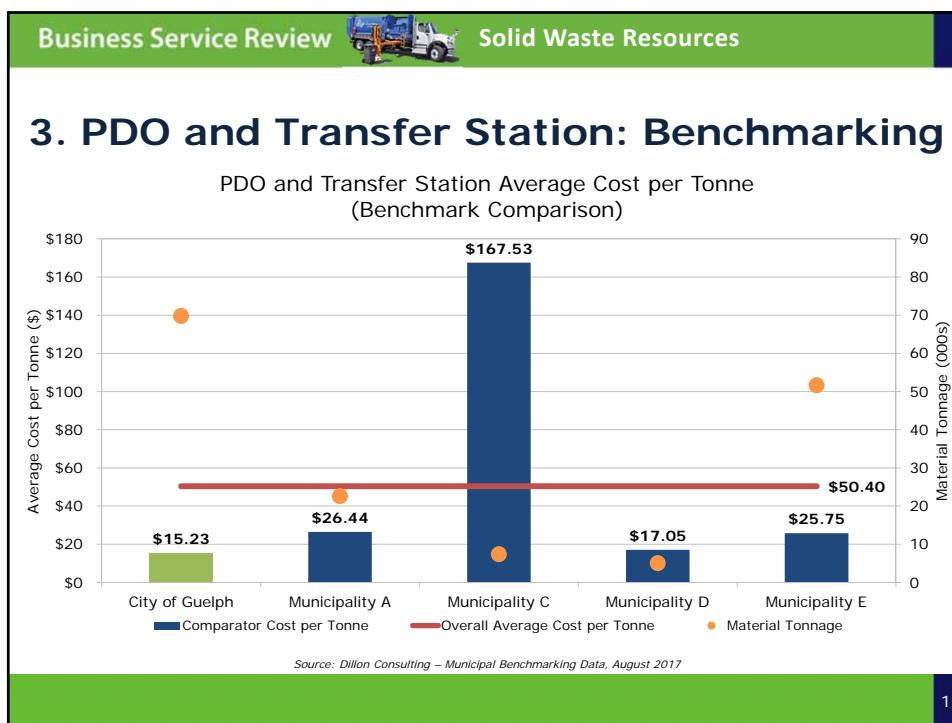


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## 3. Public Drop-Off (PDO) and Transfer Station: Current Service

- Public drop-off site is open 6 days per week
  - No fees charged for recyclables, yard waste, household hazardous waste, and paper shredding
  - Pay zone for waste material such as appliances, garbage, construction and demolition material
- Transfer station collects waste to be transported to a private landfill.

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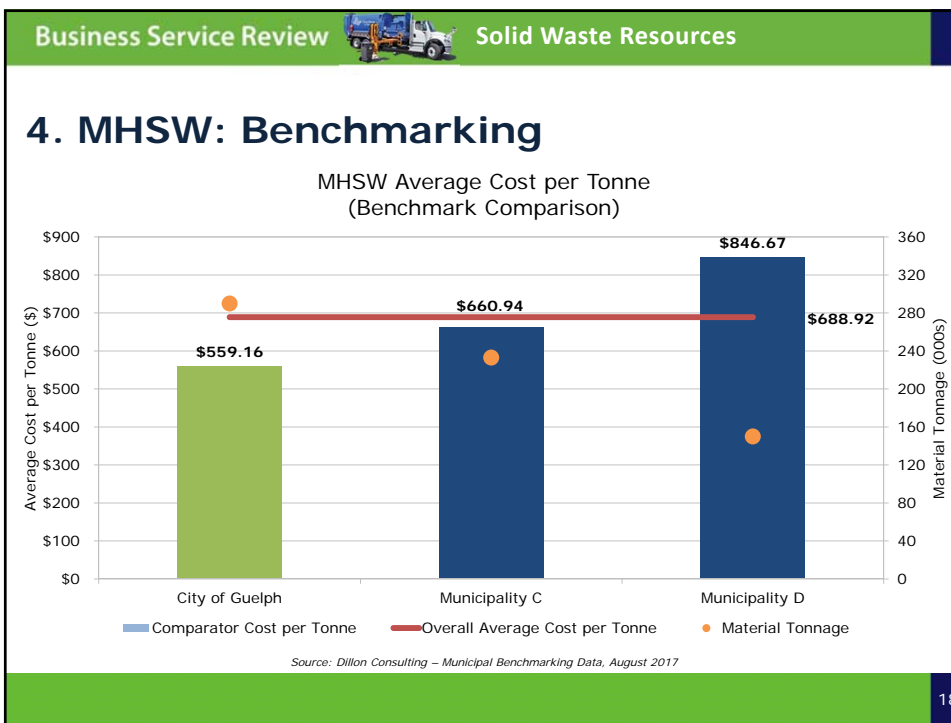
Business Service Review  Solid Waste Resources

### 4. Municipal Hazardous Special Waste (MHSW): Current Services

- Service provided 5 days per week (Tuesday–Saturday).
- Hazardous waste includes items such as aerosol cans, fire extinguishers, medicine, paint, propane tanks, etc.
- Visits to MHSW depot have steadily increased year-over-year since 2010.



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#### 4. MHSW: Initial Conclusion

- Guelph's service is in-line and competitive with comparative municipalities.
- Comparative and performance analysis → **complete**
- Hours of operation was frequently identified in engagement activities.

##### **NEXT STEPS:**

- Further analysis on hours of operations to identify potential opportunities for improvements or service enhancements

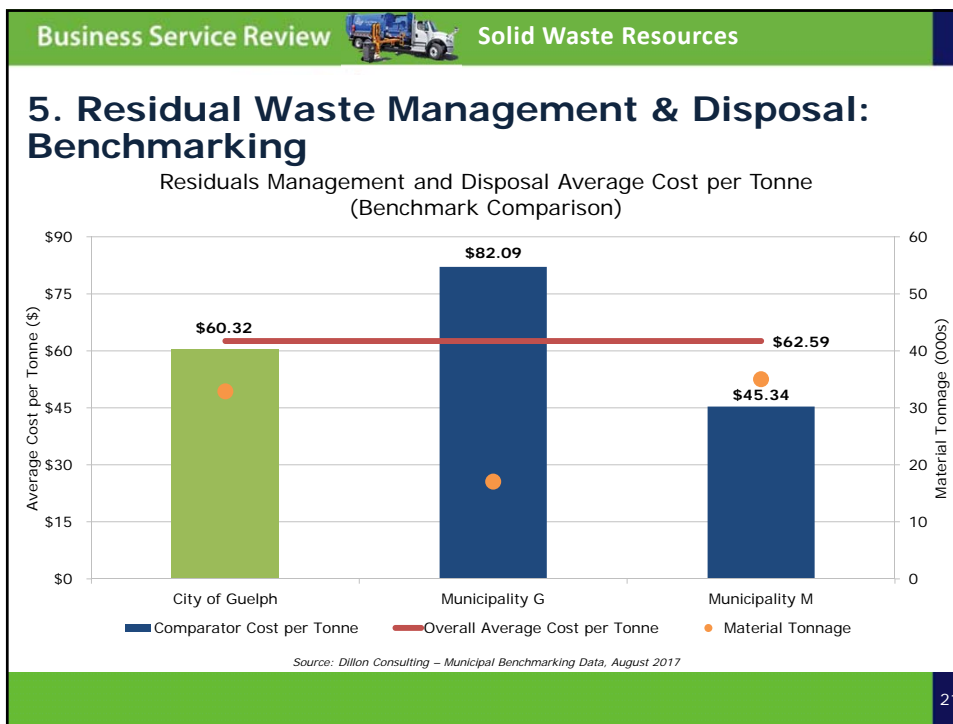
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#### 5. Residual Waste Management & Disposal: Current Service

- Residual waste is waste that cannot be diverted from the landfill.
- Includes commercial residue dropped at the Transfer Station.
- Contract with Waste Management to haul and dispose residuals to a private landfill, Twin Creek
  - All municipalities compared contract out haul and disposal services.



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Business Service Review  Solid Waste Resources

### 5. Residual Waste Management & Disposal: Initial Conclusion

- Guelph's service is in line and competitive with comparator municipalities.

**NEXT STEPS:**

- Additional work is being completed to confirm the data and information.



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Business Service Review  Solid Waste Resources

## 6. Material Recovery Facility (MRF): Current Service

- Single-stream facility, processing an average of 20,000 to 30,000 tonnes of recyclable material
- Process containers from Simcoe County
- Process recyclables collected curbside



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Business Service Review  Solid Waste Resources

## 6. MRF: Benchmarking

Materials Recovery Facility Average Cost per Tonne  
(Benchmark Comparison)

Municipality	Comparator Cost per Tonne (\$)	Overall Average Cost per Tonne (\$)	Material Tonnage (000s)
City of Guelph	\$92.63		25
Municipality A	(\$1.99)		50
Municipality B	(\$84.78)		40
Municipality F	(\$66.10)		45
Municipality H	(\$4.96)		105
Municipality I	(\$47.68)		30
Municipality K	\$1.28		20
Municipality L	(\$0.67)		105
Overall Average			

Source: Dillon Consulting – Municipal Benchmarking Data, August 2017

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## 6. MRF: Initial Conclusion

- Guelph's cost to process recyclable material at the MRF is higher than the average cost of comparator municipalities.

### NEXT STEPS:

- Further investigation and analysis:
  - Impact of the Simcoe County contract
  - Process audit of material processing
  - Potential impacts of the Extended Producer Responsibility changes (pending provincial legislation of Blue-box program transition)
  - Service delivery method analysis



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## Interim review conclusion

- Guelph's services are in-line and competitive with service levels of participating comparator municipalities in 5 of 6 service elements.

### NEXT STEPS:

- November 2017 Final Report
  - Leaf and yard waste collection
  - Multi-residential service
  - Material recovery facility
  - Public drop off
  - Data methodology and confidence
  - Hours of operation and shift structure

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# Staff Report



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To **City Council**

Service Area Infrastructure, Development and Enterprise Services

Date Monday, September 18, 2017

Subject **Solid Waste Resources Business Service Review Interim Report**

Report Number IDE-17-107

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## Recommendation

1. That the report IDE-17-107 "Solid Waste Resources Business Service Interim Report" dated September 18, 2017, be received

### Executive Summary

#### Purpose of Report

- This interim report will provide an overview of the process to date, initial findings, and next steps to get to the final report on November 20, 2017.

#### Key Findings

- Solid Waste Resources is undergoing a review as a pilot of the Business Service Review framework (CS-2016-61) approved by Council.
- Benchmarking and performance data analysis indicates that the following services are in line with the comparator municipalities:
  - Collections
  - Public Drop Off and Transfer Station (data confirmation in progress)
  - Municipal Hazardous Special Waste Depot
  - Organics Facility
  - Residual Waste (data confirmation in progress)
- Data indicates that the cost to process recyclable material at the Material Recovery facility (recycling) is significantly higher than the most of the comparator municipalities. More details will be provided in the closed report IDE-17-106.
- Review of administration and customer service are underway and will be included in the final report.
- No further analysis in relation to overall comparative performance and service delivery methods will be conducted on services identified as in line with comparator municipalities – Collections, Municipal Hazardous Special Waste Depot, Organics Facility.

- Further analysis to identify opportunities for efficiency improvements or service enhancements will be undertaken in areas such as Multi-residential collection, leaf and yard waste collection, hours of operations and shift structure.

### **Financial Implications**

- In light of current uncertainty, the direction from Finance department is to develop the majority of the 2018 operating budget to be consistent with 2017 budget actuals.
- Staff are following this advice and also preparing financial expansion/efficiency packages or budget changes as appropriate in anticipation of approved Service Review recommendations.

## **Report**

### **Background**

Solid Waste Resources (SWR) is responsible for the handling, transfer and disposal of garbage, as well as the diversion of blue box material, organics and yard waste. Services are provided to approximately 49,000 households, including multi-residential and business. This service includes bi-weekly collection of waste and recycling and weekly collection of organics utilizing an automated collection system.

SWR is undergoing a review as a pilot of the Business Service Review framework (CS-2016-61) approved by Council.

A service review typically involves five stages: Discovery, Analyze, Identify, Improve and Sustain. This report provides results from the first three stages.

### **Review Scope**

The specific SWR services that are being reviewed include:

- Waste collection, including
  - Curbside collection and
  - Public Drop off
- Waste processing, including
  - Organic waste processing;
  - Material Recovery Facility;
  - Transfer station operation; and
  - Municipal Special and Hazardous Waste processing
- Material output, including
  - Disposal of waste
- Administration and customer service.

The following SWR services are not be part of this review:

- Geographic waste collections routes;
- Financial management, including variance reporting, the budgeting process, user fees, financial reserves and development charge funding;
- Closed landfill operation;
- Enforcement levels as it relates to related bylaws and diversion targets;

- Asset management including fleet and facility infrastructure and condition, and
- The Solid Waste Management Master Plan

Facility operation includes maintenance activities undertaken as part of the service. Those items out of scope will be identified, as required, for inputs and impacts to the service, but the underlying service (that belongs to another area) will not be included in the scope of the review.

## **Objectives**

The main objective of this review is to conduct a full review of SWR services and processes to inform options and opportunities for improvement including analysis of alternative service delivery options, with an end goal of ensuring the most effective and efficient service provision.

The scope of this review includes two service delivery options:

- Direct Responsibility – City of Guelph staff provide the service
- Out-sourcing – the City owns the service and contracts it out to an external organization

Deliverables of this review include;

- Process Maps for all processes in the service
- Service Profile providing an overview of the service
- Analysis of service performance and benchmark results
- Analysis of identified service delivery options (to be provided in November 2017)
- Final report which provides recommendations for improvement (to be provided in November 2017)

## **Methodology**

This review follows the methodology outlined in the Council approved Business Service Review Framework. A business service review looks at what we do well and what needs to change, and it studies the effectiveness and efficiency of our services to make sure these services are the best for the City and our citizens, while supporting long-term financial sustainability.

Service review input includes staff feedback, public input, research on Guelph's current services and benchmarking from other municipalities and organizations.

Service review output includes definition of the current service, service levels and performance and potential recommendations for consideration. Potential recommendations can include, but are not limited to:

- No change – we are delivering the best service at the right level;
- Improve service level – we are delivering the right service but should increase the level of service, which may or may not require additional resources;
- Change service delivery – we are delivering the right service but should change the way we offer the service, which may or may not require a change to resources; and

- Change service type - we are not offering the right service and need to change it, which may or may not require stopping to offer a service that is not meeting the needs of users.

This interim report will provide an overview of the process to date, initial findings, and next steps to get to the final report on November 20, 2017, which will provide more details on services and activities of the service review as well as recommendations and implementation suggestions.

To date, the research, process mapping, data analysis, and municipal benchmarking have been completed, as well as a majority of the planned community engagement activities.

### Data Approach and Confidence

The following provides an overview of the data sources used to date and the confidence rating for each.

<b>Data Source</b>	<b>Confidence Rating</b>	<b>Comments / Next steps</b>
Finance Data	Moderate to High	Credible source through JDE and data verified with Finance staff and SWR management staff
Asset Data	Moderate	Current asset data provided by Asset Management and validated by Finance but condition assessments have not been completed
Process Data	Moderate	Data sources are limited, additional analysis required.
Benchmark Data	Moderate to High	Credible sources, confirmed through third party assessment and external publicly reported data
Customer Data	Moderate	Surveys can provide biased information, not all surveys to this point have been statistically valid random sampling. Additional statistically valid survey under way

### Engagement Activities

For the purposes of the business service review framework, engagement is used as a generic, inclusive term to describe the broad range of interactions between all people impacted by or impacting the review. An engagement plan was developed as part of the SWR review, with the following goals;

- Understand solid waste resources processes;
- Understand the customer service experience;
- Understand the customer needs and desires; and
- Identify areas of potential improvement and excellence

There are a variety of approaches for engagement such as education, consultation, collaboration and involvement. The SWR review utilized many approaches during the review, including;

- Internal engagement activities such as process mapping sessions, on-going meetings with staff, site visits, staff lunch & learn, tailgate meetings,
- External stakeholder meeting including Councillors, committees and boards,
- Community surveys including on-line and third party phone surveys, and
- Public open house and ongoing communications, as defined in the next section.

All engagement activities were reviewed and summarized to inform the SWR service review. Additional engagement activities are underway to further inform the final report in November 2017.

## **Communications**

A key element of the business service review is effective, timely and open communication. The project team implemented the following communications tactics and activities in support of the SWR business service review project.

### **Internal communications**

- A SWR staff information package, including information about the service review process, what to expect, project timelines, staff engagement opportunities and frequently asked questions
- A toolkit for SWR supervisors
- A resource package for City Council
- Password protected Basecamp account for SWR staff, where all project materials are shared and staff can ask questions or engage in online discussions
- Monthly SWR staff updates (electronic and hard copies)
- Posters on staff bulletin boards
- A webpage on the City's internal Infonet
- Face-to-face meetings and lunches for SWR employees
- Regular articles in the staff newsletter, the City Holler
- Quarterly updates, included as part of Information reports to Council and staff

### **External communications**

- Webpage on [guelph.ca](http://guelph.ca)
- Social media messages on Twitter and Facebook, including Facebook boosted posts
- Media releases and public notices at key milestones
- Ads in the City News section of the Guelph Mercury Tribune
- Ads in the City of Guelph information section on [guelphtoday.com](http://guelphtoday.com)
- Quarterly updates, included as part of Information reports, shared publically
- Public open house
- Online feedback survey

## **Third-Party Technical Expertise Support**

The City of Guelph is working in partnership with Dillon Consulting — an impartial, technical expert — to conduct the benchmarking and support the alternative service delivery assessment portion of the SWR business service review.

Early in the review the need for technical support was identified as well as support to meet the required deadline for completing the service review in the fall of 2017. Management endorsed the hiring of an experienced and competent third-party in the short term to assist with the third-party benchmarking. Staff began discussions with representatives from consulting engineering companies that have provided similar support to other municipalities and also have familiarity with Guelph's provision of this service. Based on familiarity, experience, and expertise, staff solicited a proposal from Dillon Consulting Limited of Oakville, Ontario to perform a screening level review of the existing business and benchmark analysis to support the research on alternate service delivery. This partnership provides technical expertise and adds objective third-party examination of the review results.

### **Benchmarking**

Comparators were selected based on the following rationale:

- Identified on the Council Approved Comparator Municipalities report;
- The municipality has similar and different service delivery approaches (i.e., own and operate, own and contract out, contract out); and/or
- There are similar and different approaches for level or scale of service and/or technology used (e.g., for the MRF having a mix of single stream and two-stream processing facility comparators).

The following twelve municipalities (Council approved comparators were chosen where available) were contacted by Dillon Consulting as part of the best practices investigation as they met the rationale identified above and represented the desired mix to conduct a fair comparison to the City of Guelph:

1. Region of Waterloo;
2. Essex-Windsor;
3. City of Hamilton;
4. Regional Municipality of Niagara;
5. Regional Municipality of Peel;
6. City of Kingston;
7. Lambton County;
8. Regional Municipality of Halton;
9. City of Brantford;
10. City of Barrie;
11. Municipality of Bluewater; and
12. Northumberland County

The purpose of this benchmarking was to compare Guelph to other municipalities and not to highlight any potential deficiencies in participating municipal programs, therefore the individual results from each participating municipality are not provided by municipal name..

Key indicators used in the comparison included service type, service level, average cost per tonne and average cost per customer. The benchmarking and data analysis **to date** indicates that the City meets or exceeds service performance of comparators in all but one service. Collections, organics processing, public drop off and the transfer station, along with household hazardous waste appears to be

performing at the same level or better than the comparator data provided, whereas the Material Recovery Facility operations is performing below the comparators.

There are many factors that influence data and can create variances in comparison from municipality to municipality. These factors include items such as;

- Diversion programs: The type of diversion efforts impacts the type and amount of material included in waste collection;
- Education: Methods to promote manage and enforce garbage collection, disposal, recycling and diversion programs and services,;
- Geography: Urban/rural population, seasonal population, socio-economic factors and the mix of single-family residences and multi-unit residential buildings all impact service provision,;
- Government and service structure: Services can be provided by a single-tier or a two-tier system (combination of Regional and Municipal service), or a mix of private and public owners and operators;
- Infrastructure: Distance to transfer facilities; accessibility of local landfill sites with available capacity; age of infrastructure; and
- Management: Differing approaches to reporting, budgeting and accounting

Since the levels of service and service delivery approaches among other municipal solid waste management elements vary significantly, only those elements that could be useful and comparable to the City's solid waste elements were selected (i.e., comparator municipalities were not asked to provide information on their total waste management system, only certain elements, as requested by Dillon).<sup>2</sup> Dillon conducted multiple data validation assessments, with the City's Finance, Asset Management, Human Resources and Solid Waste staff and also reviewed other publicly available online data to confirm findings, such as Ontario's Resource Productivity and Recovery Authority (RPRA) municipal datacall.

Comparison data is provided in the specific service sections within this report as well as in Attachment 1: Dillon Consulting Review Memo, which provides a summary of the benchmarking analysis results.

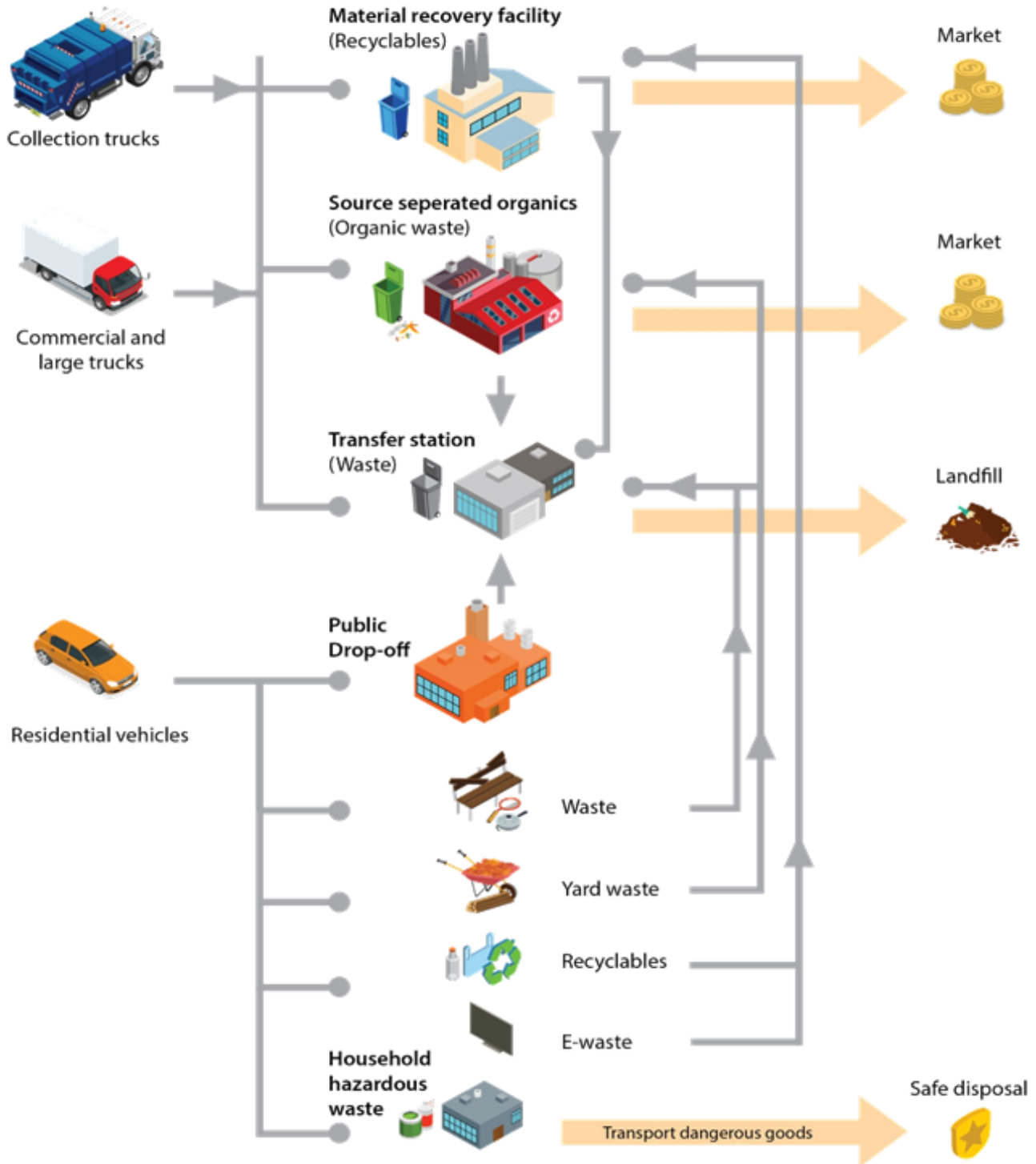
### **Service Overview**

Waste services are provided to approximately 49,000 households, including multi-residential and business, with waste and recycling collected bi-weekly and organics collected weekly utilizing an automated collection system and a public drop off (waste, recycling, yard waste and hazardous waste). This waste is processed at the integrated waste resource centre through the material recover facility (recycling), source separated organics (organic waste) and the transfer station (waste to the landfill).

The illustration below provides an overview of the current integrated solid waste services provided by the Waste Innovation Resource Centre located at 110 Dunlop Road.

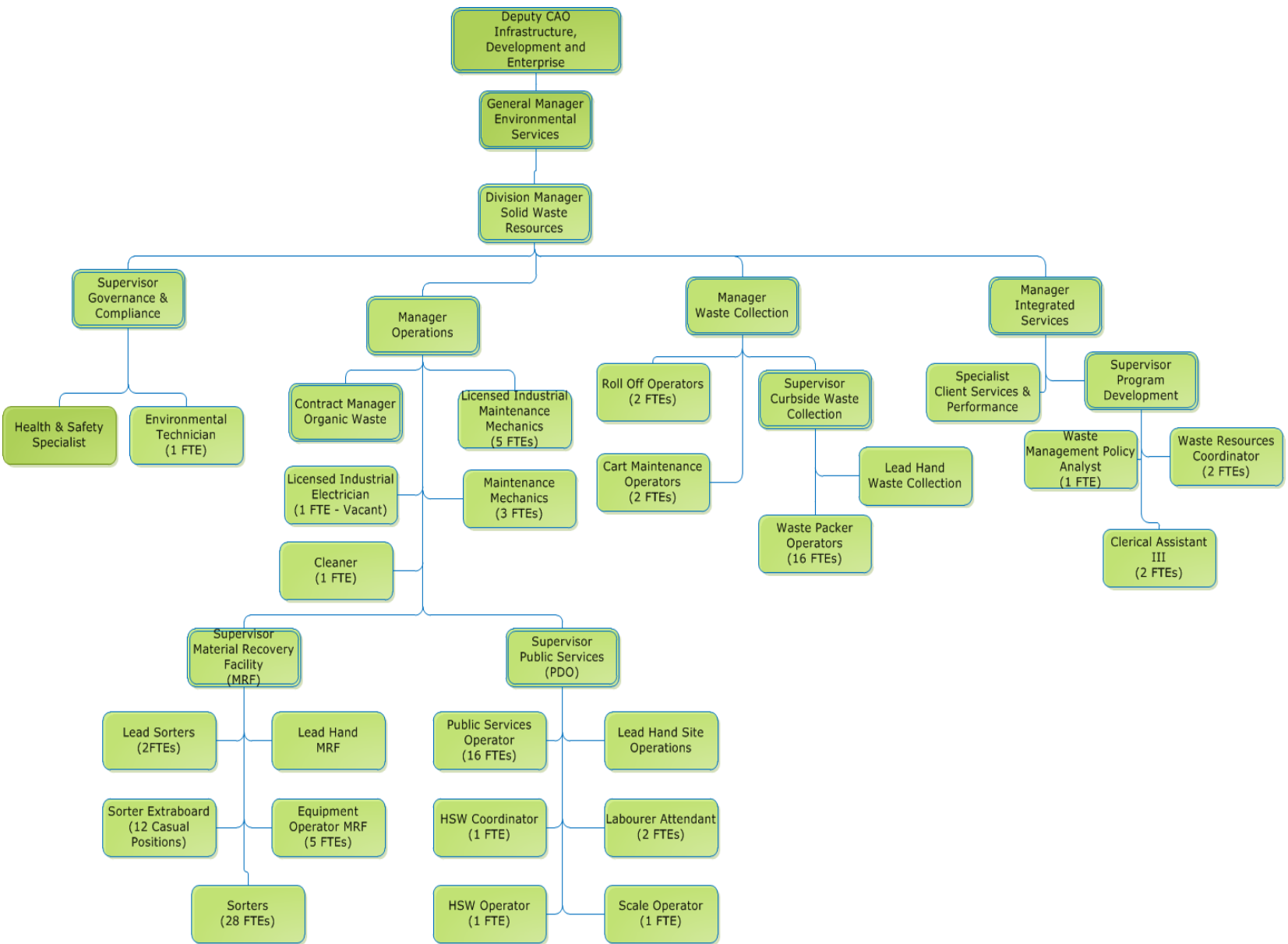
# Waste Resource Innovation Centre (WRIC)

Administration,  
public outreach and  
program development



## Organizational Structure

There are 107 staff working within SWR to provide the current level of service. The chart below illustrates the staffing structure.



Data Source: Staffing Compensation Report supplied by Human Resources

## **Service Breakdown**

This section of the report will provide service specific information for SWR services, including initial findings and next steps.

### **1. Collections**

Three stream waste collections (organics, single stream recycling and waste) is provided in Guelph. Residential customers receive service, Monday through Friday, with weekly organics and bi-weekly recycling and garbage collection and the downtown area receives three stream collections.

In 2016 the collection customer breakdown is as follows;

- Single family households 29,901
- Multi-Residential total 26,026 in Guelph with City collections providing service to 18,530
- Industrial, Commercial, Institutional (business) 305

This is a total 48,736 households serviced which is approximately 85 percent of the reported total households in the City.

Collections service is provided by 18 City Staff utilizing automated collections equipment. During the benchmarking activities it was noted that Guelph was the only municipality that provided collections service solely through the use of in-house staff.

The benchmarking exercise identified that municipalities who service non-residential customers (e.g., business areas, restaurants, downtown areas) provided collection frequency ranges from weekly to twice weekly whereas the City of Guelph provides daily collection of all three streams, 6 days a week.

All comparator municipalities, with the exception of the City of Guelph, provide seasonal curbside collection of bagged leaf and yard waste either weekly or bi-weekly during the growing season (around April to November).

The table below provides an overview comparison of service levels<sup>1</sup> between Guelph and a number of comparator municipalities.

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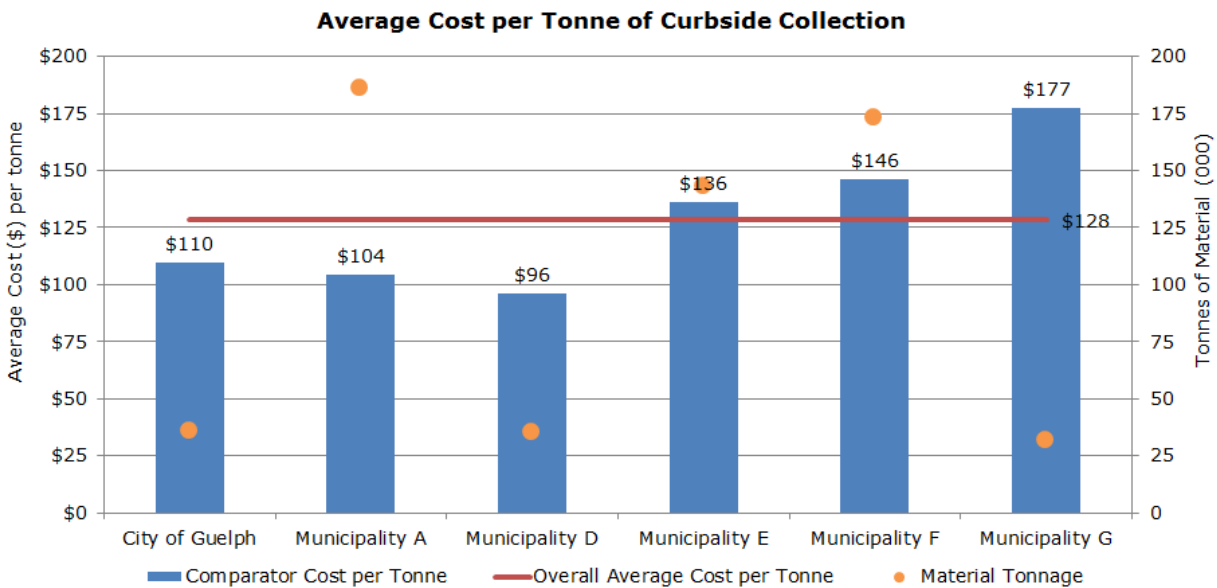
<sup>1</sup> Per Dillon Consulting report dated August 2017

Municipality	City of Guelph	Municipality A	Municipality B	Municipality C	Municipality D	Municipality E	Municipality F	Municipality G
<b>Garbage</b>	Bi-weekly	Bi-weekly	Bi-weekly	Bi-weekly	Weekly	Weekly	Weekly	Weekly
<b>Organics</b>	Weekly	Weekly	Weekly	Weekly	None	Weekly	Weekly	Weekly
<b>Recycling</b>	Bi-weekly	Weekly	Weekly	Weekly	Weekly	Weekly	Weekly	Weekly/ alternating 2- stream
<b># Recycling Streams</b>	Single Stream	Single Stream	Dual Stream	Dual Stream	Dual Stream	Dual Stream	Dual Stream	Dual Stream
<b>Bulky Items</b>	By appt. on regular collection day	Bi-weekly w/ garbage - no appt. required		None - drop-off site only	2 days/year, by appt. on regular collection days	By appt. on pick up day - SF and MR <=6 units only	By appt. on regular collection day	
<b>Service Delivery Approach</b>	In-house Staff	Service Contracted	Service Contracted	Service Contracted	Service Contracted	Service Contracted	Mix of In-house and contracted service	Mix of In-house and contracted service
<b>Leaf &amp; Yard Waste</b>	2x Year - Contracted Service	Bi-weekly collection 9 months/year (April to December)		Weekly collection 7 months/year, bi-weekly 3 months/year	Weekly collection 9 months/year (April to December)	Weekly, year round for SF and MR <=6 units only	Weekly, on pick up day	During collection week 2 months/year (October to November)
For municipalities that service non-residential customers (e.g., business areas, restaurants, downtown), the collection frequency ranges from weekly to twice weekly								

Data Source: Dillon Consulting: Municipal Benchmarking Data, August 2017

Overall the City provides a similar level of service to its comparator municipalities, with a higher level of service to the downtown business area and a lower level of service related to curbside collection of bagged leaf and yard waste.

The average cost per tonne of collections includes the cost of bagged leaf and yard waste collection (contracted service provided twice annually) as well as loose leaf collection provided by the Public Works department. Analysis indicates that the City’s cost to provide the curbside collection service is in-line with the average cost of the comparator municipalities, with the average cost being approximately \$128 per tonne of material collected, the City’s collection costs are an average of \$110 per tonne of material collected.



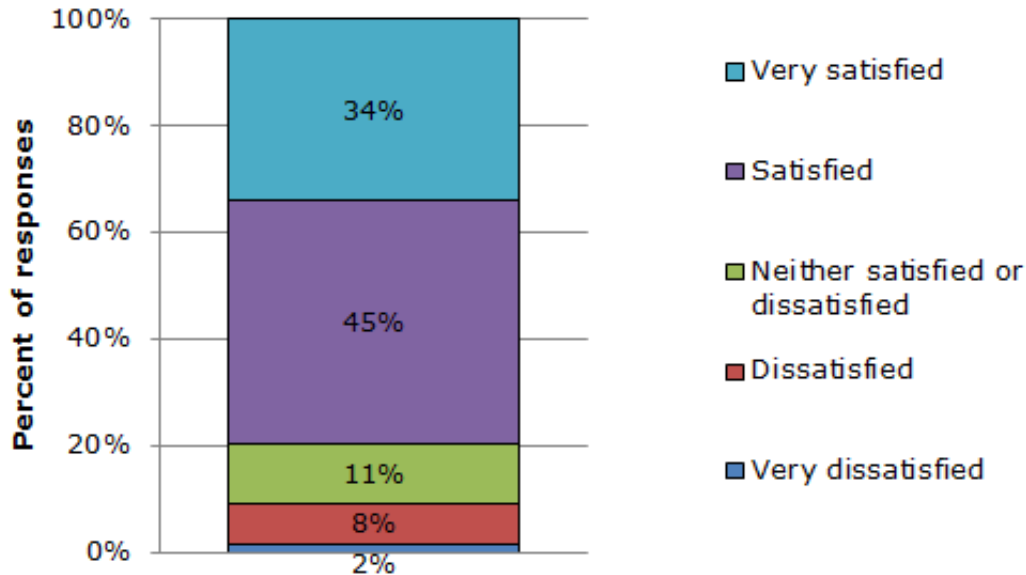
This chart depicts the City of Guelph’s average cost per tonne to provide the current level of service; three stream waste collections, bagged yard waste twice per year and loose leaf collection provided by Public works. *Chart Data Source: Dillon Consulting: Municipal Benchmarking Data, August 2017*

The result of the benchmarking analysis conducted by Dillon Consulting and the in-house performance analysis indicates that the current Curbside Collections service is in line and and competitive with other municipalities.

A public survey on curbside collection ran from December 2016 to February 2017 with a total of 537 respondents.

The results of this survey indicate that most participants are satisfied with their curbside collection service, with 79 percent responding in the satisfied to very satisfied range and only 10 percent responding in the dissatisfied ranges.

## How satisfied are you with the quality of your curbside waste collection service?



Source: City of Guelph, *Curbside Collection Survey*, December 2016 to February 2017 (n=527)

The survey also found that 95 percent of respondents feel that their curbside waste collection services are reliable.

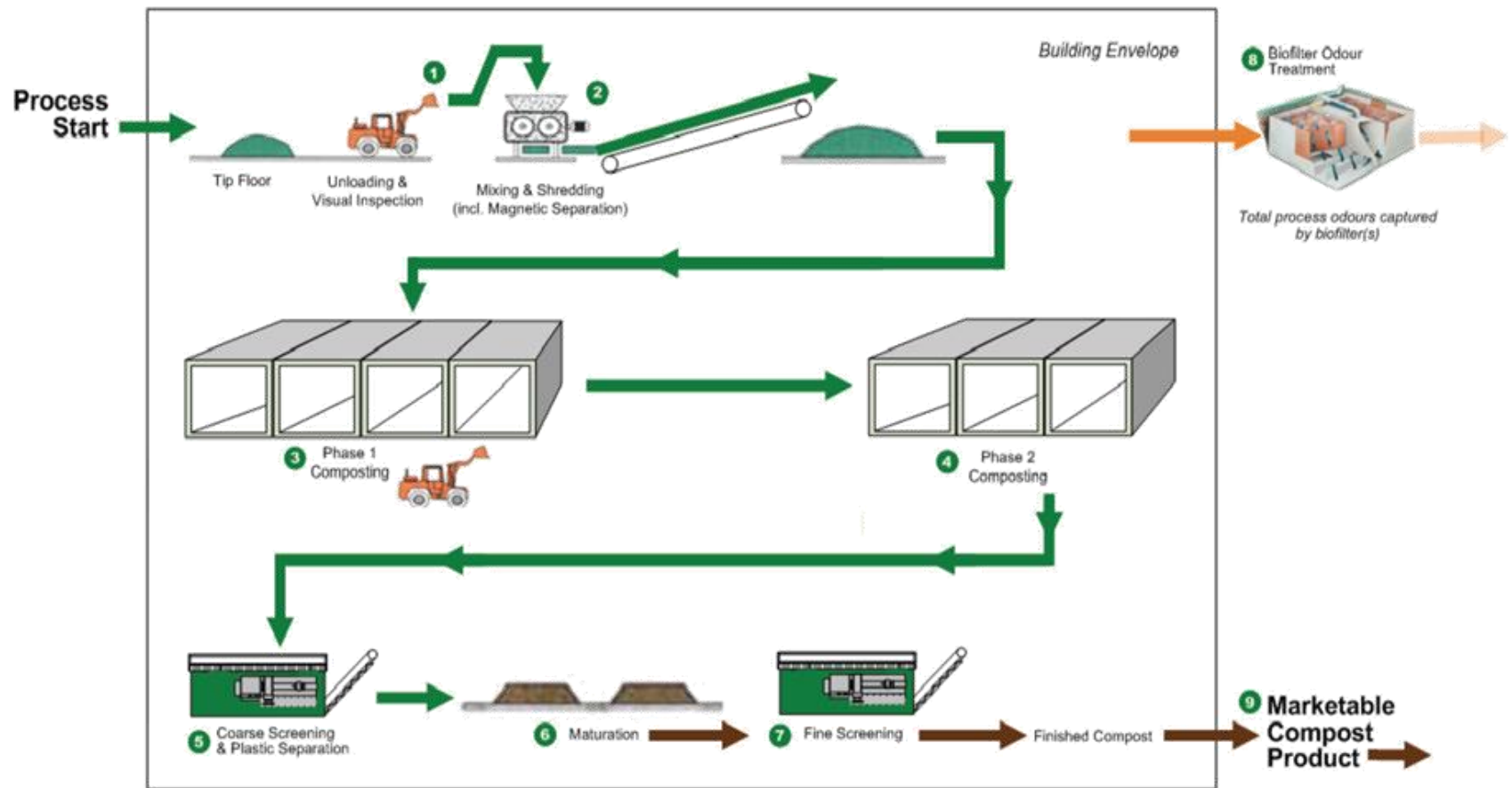
While these results are positive, to ensure a greater representation of multi-residential and downtown residents, business and patrons (to improve data confidence and ensure a more balanced representation across the City), additional engagement activities focused on these areas are being undertaken in August and September for inclusion in the November final report.

### Collections Next Steps

The benchmarking and performance data analysis indicates that the Collections service is in line with comparator municipalities. The service review will not review this service further in relation to overall comparative performance and alternative service delivery, however, potential opportunities for further improvements or service enhancements in the area of multi-residential service and leaf and yard waste collection have been identified. Further research and analysis will be conducted in these areas of the service to be included in the November 2017 final report.

## **2. Organics**

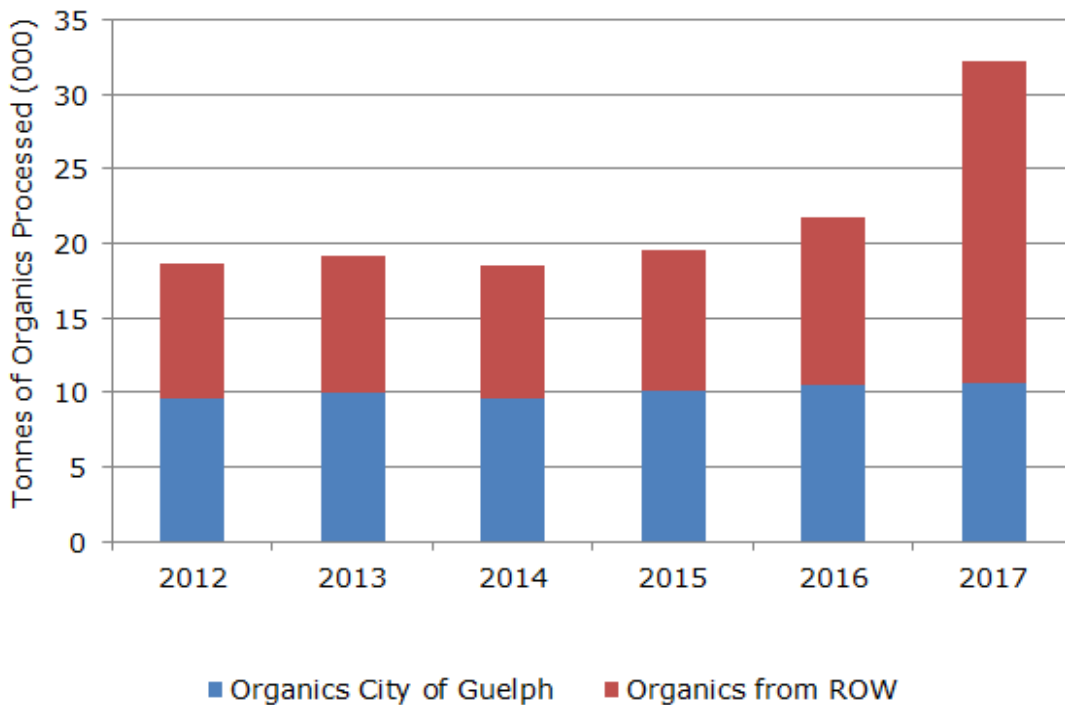
The Guelph Organic Waste Processing Facility (OWPF) processes source-separated organics (SSO), which is organic waste collected separately from other streams of waste, to produce compost. This operation of this service (operation and maintenance of the facility) is currently contracted to Wellington Organix Inc. Organic waste material (household kitchen organic waste) from the City of Guelph and the Region of Waterloo is shredded and mixed with amendment material to be processed to compost. The diagram below depicts the process.



The graphic above illustrates material movement through the process from waste material to compost.

The City of Guelph currently has a contract with the Region of Waterloo to process their residential organic waste. The ratio processed is approximately 3:1 for Waterloo and City organics. The graph below illustrates that the tonnage from Guelph residential organic waste has remained fairly static over the last few years with minimal increase at an average of 2 percent per year. The organic waste processed per the contract with the Region of Waterloo has increased at an average of 5 percent per year. With a new collection program at the Region of Waterloo, the estimated tonnage for 2017 (forecasted based on actual to date) is approximately a 48 percent increase.

### Tonnage Processed at OWPF



Source: City of Guelph, 2016 Annual Report data and calculated forecast information.

The City’s Green Cart program includes food waste, soiled paper products and pet waste. These materials go to the OWPF where they are processed through an indoor aerobic composting tunnel system with a design capacity of 30,000 tonnes per year (as illustrated in the service overview). The processing contract is administered by one City staff member.

The table below provides an overview comparison of service levels<sup>2</sup> between Guelph and a number of comparator municipalities. Note: that not all municipalities would or could share all data, such as municipality H’s financial data.

<sup>2</sup> Per Dillon Consulting report dated August 2017

	City of Guelph	Municipality E	Municipality F	Municipality H	Municipality J
<b>Facility is Municipally-Owned?</b>	Yes	No	Yes	Yes	
<b>Operations are Municipally-Run?</b>	Contracted Service	Contracted Service	Contracted Service	In-house Operations	Contracted Service
<b>Average Cost per Tonne</b>	\$49.29	\$117.78	\$38.33		\$115.00

*Data Source: Dillon Consulting: Municipal Benchmarking Data, August 2017*

Benchmarking analysis indicates the current market rate to contract organics processing to an external facility range on average between \$115 to \$120 per tonne of material.

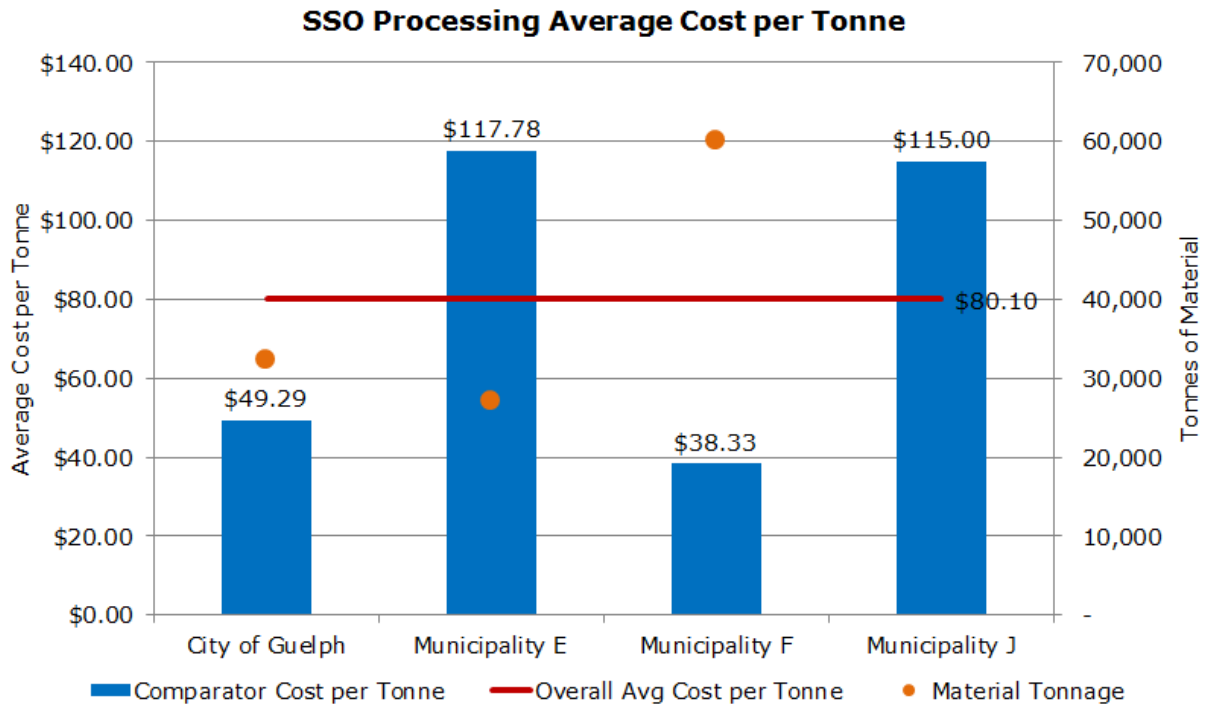
The contract with Organix Inc. requires that the facility must process at least 30,000 tonnes per year. Payment is calculated on a monthly basis and is based on a base monthly processing fee and an incremental monthly processing fee based on actual tonnage accepted for processing at the facility (a sliding scale). The greater the quantity of organics processed, the lower the processing fee paid by the City. The table below provides the costs (as identified in the contract).

<b>Tonnage Processed</b>	<b>Processing Fee (\$)</b>
Up to 8,400	150.00
8.401-12,500	120.00
12.501- 15,000	117.00
15.001- 17,500	108.00
17.501- 20,000	100.00
20.001- 22,500	90.00
22.501- 25,000	86.00
25.001- 27,500	82.00
27.501- 30,000	79.00

With the current tonnage (2017 forecast of 32,250 tonnes), the cost to Wellington Organix for processing will be \$79 per tonne. Note the \$79 does not include any revenues nor is it net cost of service.

In the event that the Region of Waterloo contract was not in place, the City would have to pay approximately \$120 per tonne to Wellington Organix. The contract with Region of Waterloo helps to reduce the cost per tonne paid by the City.

Analysis indicates that the City's average cost of \$49 per tonne of material collected to process organic waste is well below the municipal average of approximately \$80 per tonne of material collected.



*Graph illustrates the cost per tonne to process organic material.  
Data Source: Dillon Consulting: Municipal Benchmarking Data, August 2017*

### Organics Next Steps

The benchmarking and performance data analysis indicates that the organics service is in line with comparative municipalities. While there are always continuous improvement opportunities, the service review will not review these processes further and will focus on other areas of the overall Solid Waste Resources Services.

### **3. Public Drop Off (PDO) and Transfer Station**

Two public drop off areas are provided for residents, a free recycling drop-off zone (accepting recyclables, yard waste, household hazardous waste and paper shredding) and a pay zone for waste material (construction and demolition waste, garbage, appliances, etc.).

This site is open for public use Monday to Friday from 7:00 am to 6:00 pm and on Saturday from 8:00 am to 3:45 pm. Note that Household Hazardous Waste hours of operation are different as described in the section on Municipal Hazardous Special Waste..

The City also operates a transfer station, where waste (garbage that cannot be diverted from landfill) is collected for transfer to a private waste disposal site (refer the Residual Waste section of this report). The PDO and Transfer Station have a staffing structure of approximately 20 FTE, including a supervisor, lead hand, operators and health and safety staff.

It is important to note that while the City of Guelph is able to separate the resourcing and costs associated with; the PDO and the Transfer Station, the majority of comparator municipalities are unable to. For this reason, the City's PDO and Transfer Station (and all information, such as costing and resourcing) were combined for this exercise.

The table below compares service levels of the City of Guelph's PDO to comparator municipalities.

Municipality	City of Guelph	Municipality A	Municipality C	Municipality D	Municipality E
<b>Public Drop-Off?</b>	Yes	Yes	Yes	Yes	Yes
<b>Fee</b>	By type of waste and weight from min \$10 Fee to \$75/tonne	By weight, from \$5/load to \$165/tonne	By weight, from \$10/load to \$145/tonne	\$10 minimum, up to 150 kg	\$100/tonne
<b>Leaf Yard Waste</b>	Fee for commercial only. Residential is free	\$5/load	\$0.00 up to 100 kg, then \$60/tonne	\$0.00 during collection time, \$40 otherwise	
<b>HHW Depot</b>	Yes	Yes	Yes	No	Yes
<b>Operations are Municipally-Run?</b>	Yes	Yes	Partly - c/o landfill tipping area, otherwise in-house	No - c/o	4 PDO (own & operate 3, private operation 1)
<b># Days Open /Week to Public</b>	6	6	5	6	6

*Data Source: Dillon Consulting: Municipal Benchmarking Data, August 2017*

Analysis indicates that the City’s cost to provide public drop off and transfer station is in-line or lower than the comparator municipalities at \$15 per tonne of material, however the confidence rating in this data is low to moderate, due to the inability to separate costs for other municipalities. Further attempts were made to improve the comparator costing and resourcing data with little improvement in the overall confidence rating.

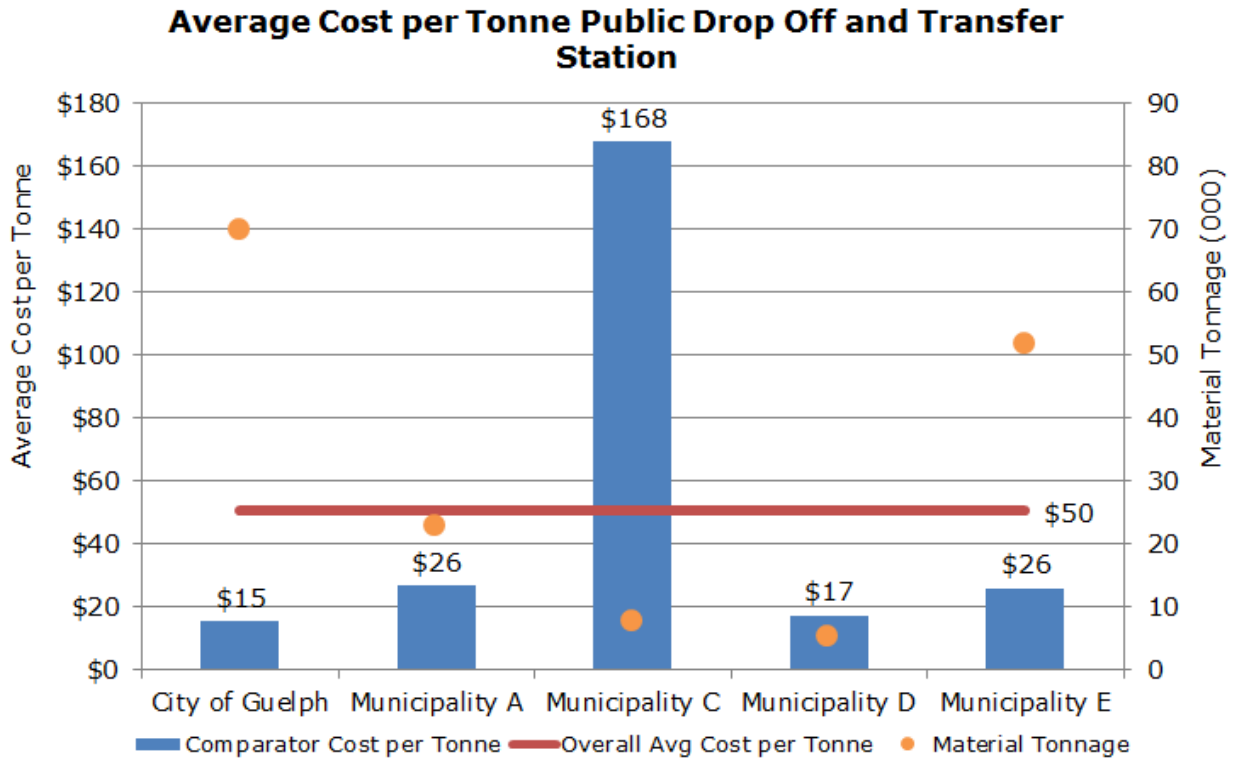


Chart depicts the average cost per tonne for material processed through the Public Drop Off and the Transfer Station combined. Data Source: Dillon Consulting: Municipal Benchmarking Data, August 2017

Other activity utilized in the assessment of the PDO included user experience interviews conducted in the fall of 2016. Research students from the University of Guelph conducted interviews and observations to collect qualitative data to document user experiences at the PDO. This work resulted in 60 experience related results. Many of the responses were very positive; suggestions were primarily around hours of operations and fee structure.

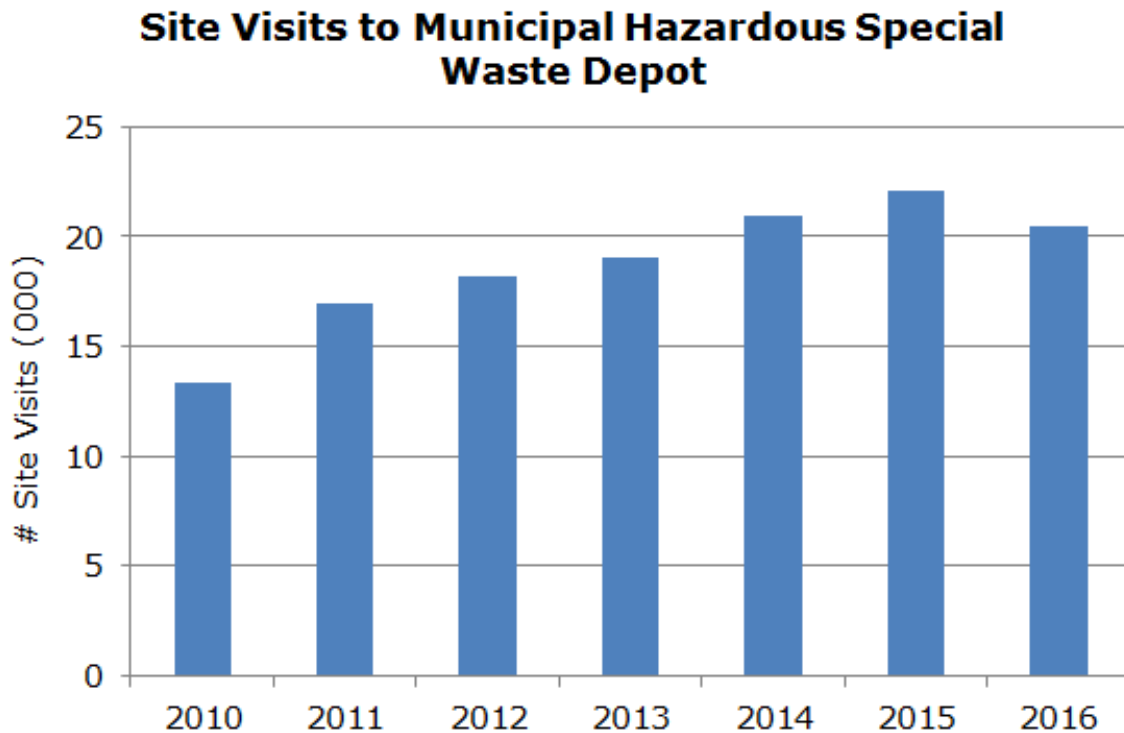
Public Drop Off and Transfer Station Next Steps

The benchmarking and initial data analysis indicates that there is low to moderate confidence in the data available. Additional efforts are required to develop data and measurement methodologies and tools to provide the ability to analyze service performance in the future. Further data collection and analysis is needed to accurately define current service performance and potential for improvement for inclusion in the November 2017 final report.

#### 4. Municipal Hazardous Special Waste (MHSW)

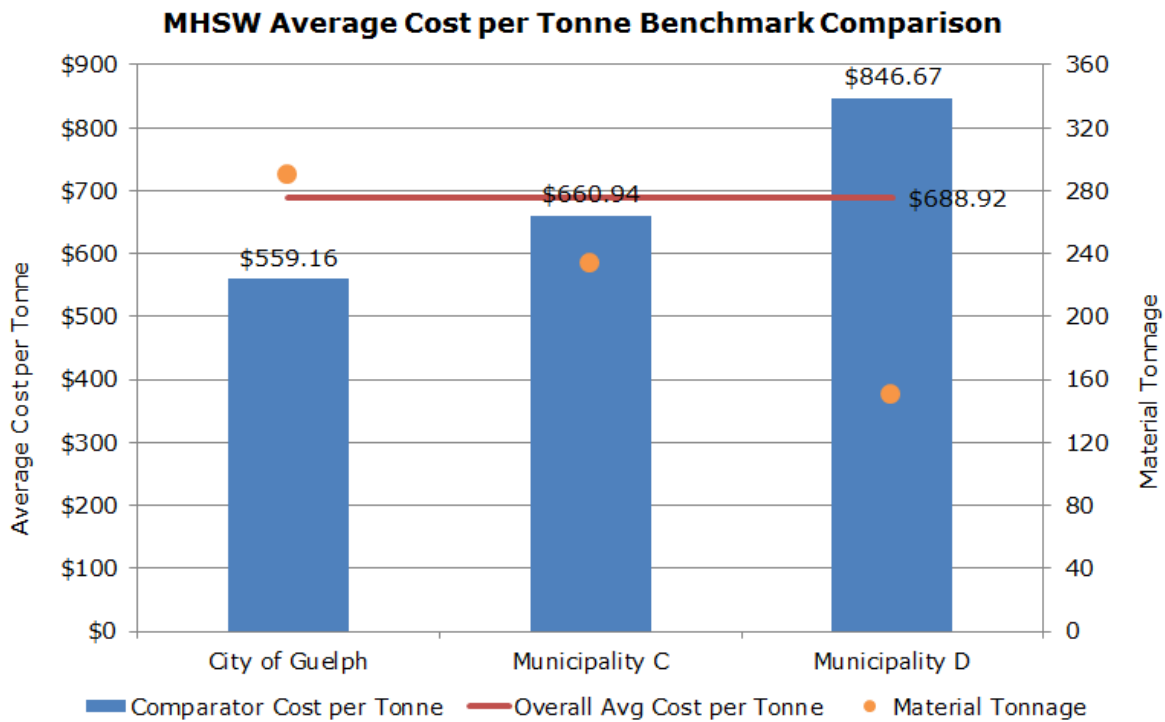
A household hazardous waste depot is provided at the PDO year round for residents Tuesday to Friday 9:00 am to 5:00 pm and on Saturdays from 8:30 am to 3:45 pm. The MHSW is staffed by 2 FTE.

Hazardous waste includes items such as aerosol cans, fire extinguishers, medicine, paint, antifreeze, propane tanks, and many more items. In 2016, approximately 260 tonnes of hazardous material was collected at the depot, it is estimated that approximately 290 tonnes will be collected in 2017. The number of residents who visit the hazardous waste depot has steadily increased year over year as well.



*Data Source: 2016 Annual Report*

The benchmarking data, provided by Dillon indicates the current cost to operate the MHSW depot of \$559 per tonne is in-line and lower than the comparator municipalities, indicating that the service is competitive.



### MHSW Next Steps

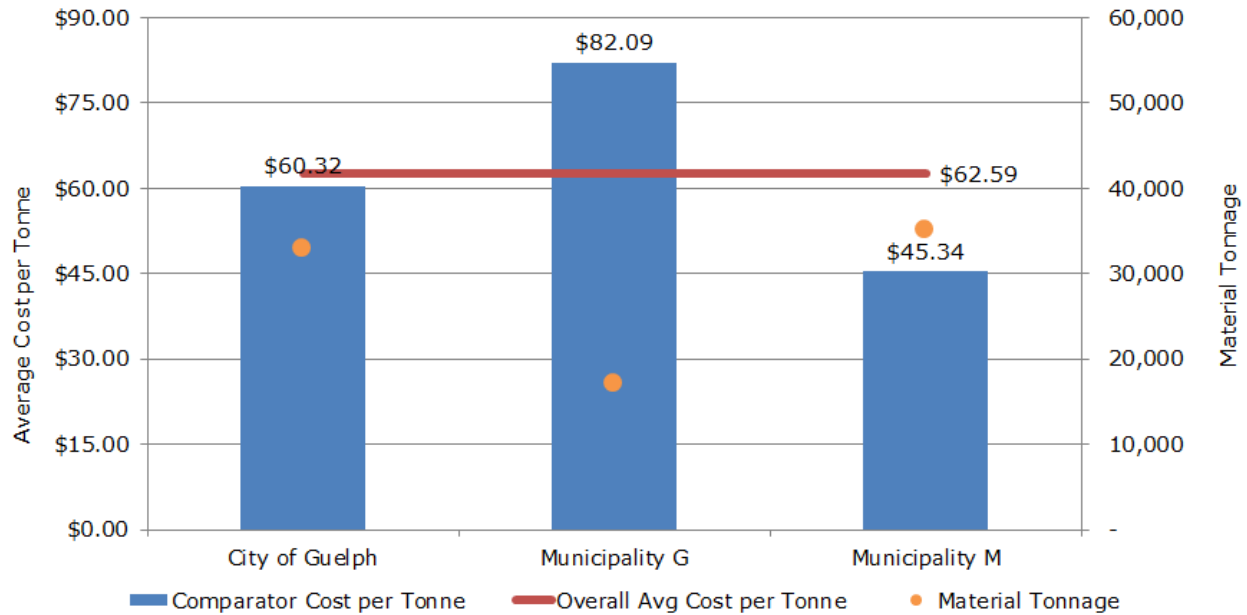
The benchmarking and performance data analysis indicates that the MHSW service is in line with comparative municipalities. Hours of operation was the most frequently raised concern from the various engagement activities. While the service review will not focus on processes within MHSW, hours of operations will be investigated for opportunities to identify improvements or service enhancements in the November 20 final report.

### **5. Residual Waste**

The City of Guelph has a contract with Waste Management to haul and dispose residual waste (the waste that cannot be diverted from landfill) to a private landfill. Dillon conducted benchmarking with municipalities that contract their haul and dispose activities.

The costs for residual waste service are based on the City's collected waste tonnage. The handling and disposal of commercial residue dropped at the Transfer station contributes to the cost of this service. The costs for the haul and dispose of collected residual waste are estimated to be approximately \$60 per tonne of material, which is in-line with the municipal average.

### Residuals Mgmt. and Disposal Average Cost per Tonne Benchmark Comparison



Data Source: Dillon Consulting: Municipal Benchmarking Data, August 2017

#### Residual Waste Next Steps

The preliminary benchmarking and performance data analysis indicates that the current method for disposal of residual waste service is in line with municipal comparators. Additional work is being completed to confirm this information and results will be provided in the final report.

#### **6. Material Recovery Facility (MRF)**

Guelph’s MRF is a single stream facility that processes an average of 20,000 to 35,000 tonnes of recyclable material. The blue cart program allows residents to place all recyclables into the same cart, resulting in the need for a single stream process. However, this facility has the ability to process separate fibers and container streams if the collection method were ever altered to dual stream.

- Single stream is the process where all recyclables can be mixed together (paper, plastic, metal, glass and cardboard). This process is simpler for customers who are not required to pre-sort but can lead to increased contamination and sorting requirements for MRF staff; this single stream process also has a lower collection cost than dual stream and increases the overall incoming material totals.
- Dual stream processes keep the fibre (paper and cardboard) separate from containers (plastic, glass and cans). This sorting process decreases contamination of material and provides an increase in the amount of marketable material. It is more costly to collect two streams of recyclables and may result in lower customer participation in the program.

The City has a contract with Simcoe County to receive and process containers, this represents approximately 50 percent of the annual tonnage processed at the MRF. The City markets the recyclables and provides Simcoe County the revenue for their containers based on audits of Simcoe’s container stream. Sources of revenue are from tipping fees for Simcoe County’s containers and the sale of recyclables and funding from RPA for recovered recyclables.

A detailed process audit of MRF material capture (material recovery) is scheduled for September; this audit will provide the data necessary to accurately calculate the current capture rate of the MRF processes. Although historical information is available, additional analysis is required to accurately confirm MRF capture rates.

Analysis indicates that the City’s cost to process recyclable material at the MRF is higher than the average cost of the comparator municipalities, with the average cost being less than \$1 per tonne of material collected. The City’s processing costs are an average of \$93 per tonne of material collected, as illustrated in the following chart.

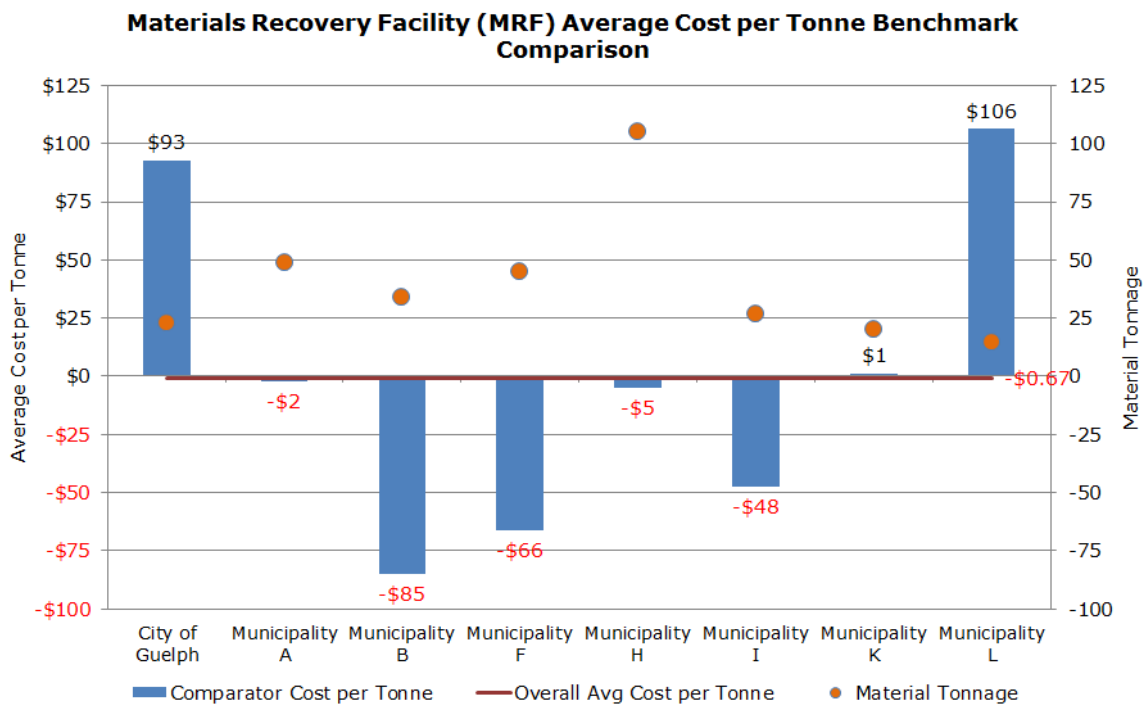
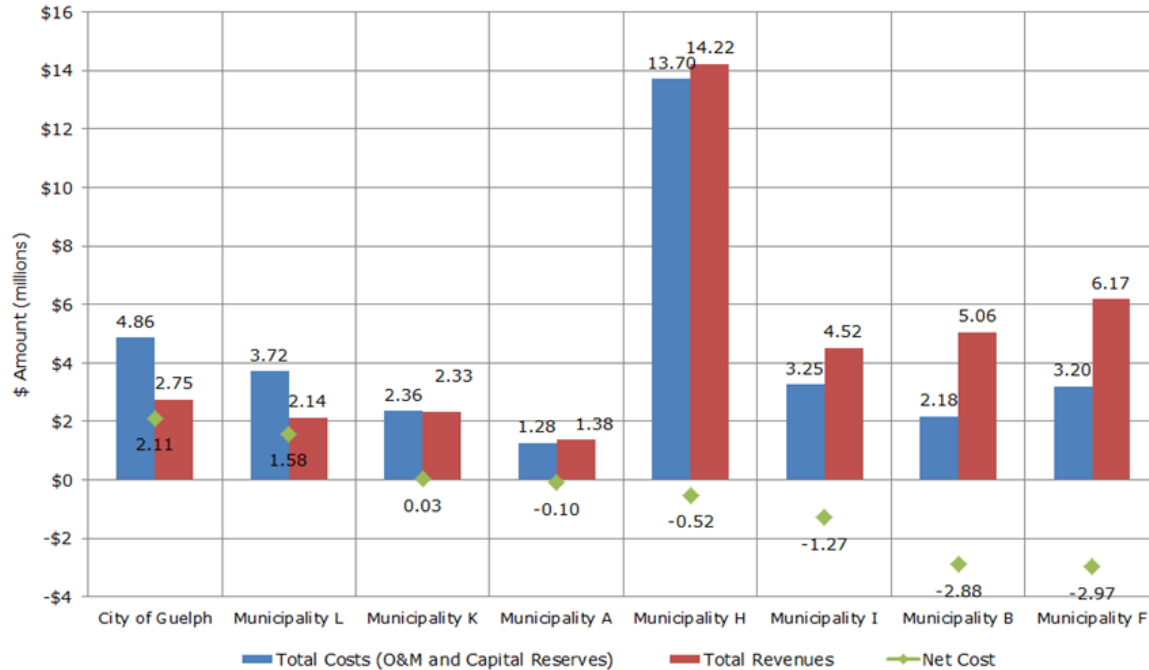


Chart illustrates the average cost per tonne to process recoverable material. Data Source: Dillon Consulting: Municipal Benchmarking Data, August 2017

The following graph depicts Guelph’s MRF operation in comparison to benchmarked municipalities. This chart illustrates the City of Guelph’s costs (blue bar) are higher than most comparators and the revenues (red bar) are lower. This equates to a net cost to provide the service (green diamond) that is higher than all the other comparator municipalities.

### Cost and Revenue Comparison Municipal Benchmarking



Data Source: Dillon Consulting: Municipal Benchmarking Data, August 2017

The total annual operating budget for the MRF is \$4.3 million. Once capital requirements and revenue are calculated in, the estimated net cost to operate the MRF is approximately \$2.5 million annually.

### Cost and Revenue Breakdown

Budget (annual Operating & Maintenance)	\$4,275,700
Budget (Capital Reserve)	\$587,715
<b>Budget (TOTAL)</b>	<b>\$4,863,415</b>
Revenue	\$2,356,000
<b>Total Net Cost (Cost - Revenue)</b>	<b>\$2,507,415</b>

Items included in the calculation of total net cost:

- proportion of maintenance staff that service whole WRIC
- Salaries, utilities, parts, repairs, consulting, equipment rental, tip fees
- Sale of recyclables and Resource Productivity and Recovery Authority (RPRA) funding

Data Source: Dillon Consulting: Municipal Benchmarking Data, August 2017 and validated by Finance Department and SWR Management

There are a number of factors that impact the cost of service, including staffing composition, contractual obligations, infrastructure and asset condition, resource availability, market trends, legislative requirements, material and revenue streams. Details on two factors are provided in IDE-17-106 closed report; other factors are still under review as part of the service review.

#### Extended Producer Responsibility (pending significant provincial legislation changes)

The provincial Resource Recovery and Circular Economy Act (RRCEA) of the Waste-Free Ontario Act, 2016, is being amended where municipal governments will transition from the current blue box program (currently run by municipalities and co-funded by producers) to an Extended Producer Responsibility (EPR) that requires the producer of the material to be fully responsible to cover all end-of-life costs for waste.

The full implications of this change are unknown but the changes will limit the role of municipalities to a “potential service provider” to Producers in the management of their designated materials. This may also include impacts to;

- Funding;
- Contracts with the private sector or public unions; and
- Public expectations and servicing levels.

Further information and investigation is required to gain a better understanding of the potential impacts this legislative change can or will have on the material recovery service. Updates to this will be included in the November 20 report.

#### MRF Next Steps

There are a number of factors that impact the cost of service including staffing composition, contractual obligations, infrastructure and asset condition, resource availability, market trends, legislative requirements, and material and revenue streams.

Further investigation and analysis is required to identify potential recommendations, including;

- Impact analysis of the Simcoe contract;
- Process audit of material processing;
- Research on potential impacts of the Extended Producer Responsibility changes; and
- Service delivery method analysis.

#### **Initial Review Conclusion**

While the service review work is ongoing, based on the initial analysis results and through the comparison activity conducted by Dillon Consulting, it has been determined that the City is in line and competitive with service levels of the participating municipalities in all but one of the elements. Refer to Attachment 2: Solid Waste Resources Municipal Benchmark Overview

## **Business Service Review Next steps**

Next steps in the business service review include additional analysis on the services and activities listed below, to provide more in-depth data analysis and potential recommendations for improvements in the November 20, 2017 Solid Waste Resources business service review final report.

1. Leaf and Yard Waste
2. Multi-residential collection services
3. Material Recovery Facility;
4. Public Drop Off;
5. Data methodology and confidence; and
6. Hours of operation and shift structure

## **Financial Implications**

In light of current uncertainty, the direction from Finance department is to develop the majority of the 2018 operating budget to be consistent with 2017 budget actuals. Staff are following this advice and also preparing financial expansion/efficiency packages as appropriate in anticipation of approved Service Review recommendations.

## **Consultations**

SWR Business Service Review Steering Committee  
Solid Waste Resources Management Staff  
Legal Services  
Finance  
Corporate Communications  
Human Resources  
Community Engagement  
Dillon Consulting

## **Corporate Administrative Plan**

### **Overarching Goals**

Service Excellence

### **Service Area Operational Work Plans**

Our Services - Municipal services that make lives better

## **Attachments**

ATT-1 Dillon Consulting Summary Memo on Solid Waste Resources Benchmarking Results  
ATT-2 SWR Benchmarking Overview

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**DILLON**  
CONSULTING

THE CITY OF GUELPH

# Solid Waste Resource Service Review

# Executive Summary

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This report presents the findings from the service review benchmarking and data analysis conducted by Dillon Consulting Limited (Dillon) for the City of Guelph's (the City) Solid Waste Resource. The objective review consisted of an assessment of the City's existing Solid Waste Resource services and processes and comparing it to other similar municipal waste management services and processes (referred to as elements of the solid waste management system). The approach to conducting benchmarking was to identify comparator municipalities for each of the solid waste management elements, contact them via email and/or telephone, request and analyze/review the received information and summarize findings in a manner that could be compared to the City's elements.

For the purposes of this review, Solid Waste Resource operations were broken down into six elements, as follows:

- Waste Collection (including Leaf and Yard Waste (LYW) Processing);
- Public Drop-Off (PDO) and Transfer Station;
- Municipal Hazardous or Special Waste (MHSW);
- Source Separated Organics (SSO) Processing;
- Materials Recovery Facility (MRF); and,
- Residuals Disposal.

Dillon worked together with City staff to understand the existing waste management system, reviewed background reports and data and toured the City's Waste Resource Innovation Centre (WRIC). Information was obtained from the City's Solid Waste Resources, Human Resources and Finance departments to characterize the City's operations.

Participating municipalities were asked to complete a questionnaire and Dillon followed-up with the municipal contacts to further verify and/or normalize the data (without causing bias) for comparability against the City. Due to the comparator municipalities having different approaches to providing waste management services, reporting and accounting, a direct "apples to apples" comparison was not possible for every response and/or element. To acknowledge this, confidence ratings were assigned to the data received in terms of low, medium, or high. Examples of when a confidence rating of low was assigned were when not all costs were provided that were included in the City's costs. For example; participating municipalities that have integrated waste management facilities (e.g., a public drop-off, transfer station, composting facility, etc. located on the same property) were not able to separate out all requested costs for each separate element. An example of where a high confidence rating was applied was if a service was contracted out and the all-in costs were provided from the municipalities. The confidence ratings were a tool to account for fairness in the comparisons for each municipality.

Key indicators used in the comparison included the service delivery approach (e.g., in-house staff, contract out), level of service (e.g., collection frequency, hours of operation), staffing levels, and the estimated costs per customer and per tonne. Upon review of the City and the comparator municipalities, each element was categorized as exceeding, meeting or being below the benchmark as defined by the comparator municipalities. Elements exceeding the benchmark were shown to provide equal or better service at a lower cost, meeting the benchmark were elements where the City provides a relatively similar service at similar costs, and below the benchmark indicated where the City provides equal or less service at a higher cost than the comparator municipalities. A description of methodology and considerations used to develop the comparisons, as well as fully detailed results are presented in this report.

Through the comparison it was determined that the City meets or exceeds service levels of the other applicable municipalities in five of the six service elements. The MRF operations were determined to be below the benchmark. The sub-element of LYW processing was determined to be below the benchmark; however the primary element of Waste Collections was assessed as meeting or exceeding the benchmark.

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B	Questionnaire
C	MRF Questionnaire

## 1.0 Background

Dillon Consulting Limited (Dillon) was retained by the City of Guelph (the City) to conduct an objective review of their Solid Waste Resource services and processes by understanding the City's existing waste management and comparing it to other similar municipal waste management services and processes (referred to as elements of the solid waste management system).

Dillon has completed similar assignments for municipal clients in Ontario and across Canada in which the existing municipal waste management systems were extensively reviewed to identify opportunities for improvement and/or modifications. Our most recent waste management planning work has been for a wide range of cities and municipalities across Ontario and Canada. We are active in industry associations and have a network of contacts, some of which were approached for the purposes of the service review. Dillon is familiar with elements of the City's waste management system, having assisted the City in projects related to the organics processing facility and residual waste management.

The City is responsible for the collection of waste from residential and some Industrial, Commercial and Institutional (ICI) customers. The City owns the Waste Resource Innovation Centre (WRIC), located at 110 Dunlop Drive, which is an integrated waste management facility comprised of the following facilities:

- Administration office;
- Public drop-off areas;
- Transfer station (residual waste is received and transferred to private disposal sites);
- Materials Recovery Facility (MRF – for Blue Cart recyclables);
- Source Separated Organics (SSO) processing facility (for Green Cart organics);
- Outdoor composting facility (for storage of leaf and yard waste);
- Household hazardous waste depot;
- Ancillary buildings and facilities that support the WRIC's operations; and,
- Waste diversion education centre.

## 2.0 Scope of Work

The goal of the service review was to identify elements of the City's waste management system that exceeded, met or were below the benchmark defined by the comparative municipalities using criteria such as level of service, cost per tonne and cost per customer. Other criteria such as environmental impact and community benefits were outside of Dillon's scope as the focus was on obtaining readily available data from comparator municipalities that could be directly compared to the City.

The focus of Dillon's work was on assessing the current service delivery approaches for Solid Waste Resource elements. The City and Dillon worked together to collect and analyze the City's data to ensure accuracy. The review involved completion of the following tasks:

1. Project initiation meeting.
2. Background review of the City's existing waste management system.
3. Preparation and distribution of a questionnaire and follow up communication with participating municipalities in order to develop benchmarks for each element.
4. Summarize findings and present initial findings in a workshop to City staff in terms of how the City compares to benchmarked municipalities.
5. Conduct further investigation into elements deemed close to or below the benchmark.
6. Compare alternative service delivery approaches, if/where applicable.
7. Prepare a report to summarize approach and findings.

The elements of the solid waste management system that were included in the service review and the City's current service delivery approaches are provided in *Table 1*.

**Table 1: Current Service Delivery Approach for Solid Waste Resources**

Solid Waste Management Element	Current Service Delivery Approach
Waste Collection (including Leaf and Yard Waste Processing)	Delivered by the City, except for leaf and yard processing which is contracted out to private processing facilities
Public Drop-Off (PDO) and Transfer Station	Owned and operated at the Waste Resource Innovation Centre (WRIC, explained further below)
Municipal Hazardous or Special Waste (MHSW)	Owned and operated at the WRIC
Source Separated Organics (SSO) Processing	Facility owned and contracted out operations at the WRIC
Materials Recovery Facility (MRF)	Owned and operated at the WRIC
Residuals Disposal	Contracted out to private disposal facilities

The following provides a summary of the work completed for the service review. The Results section of the report presents the findings from the service review (task 7).

## 2.1 Task 1 – Kickoff Meeting

A kickoff meeting was held on March 20<sup>th</sup> to confirm scope, and available resources and files available to Dillon. During this meeting, the City's approved Service Review Framework was reviewed to understand the guiding principles for the work. The alternative service delivery options to be considered were also defined (in-house or contract out), along with the criteria that are of interest to the City in conducting the review (e.g., cost per tonne of material processed, level of service). It was also established that both Dillon and the City wanted the service review to be a collaborative process, through involvement with key City staff throughout the process and holding teleconferences on a weekly basis to obtain updates on action items.

## 2.2 Task 2 – Background Review

The team reviewed existing files/reports and had telephone and in-person meetings with City staff to confirm our understanding of the existing Solid Waste Resource services and the aspects of the service review currently underway by City staff. The following is a list of main sources of data that the City provided Dillon:

- Customer journey mapping for waste collections, the MRF and the PDO;
- Process mapping for each solid waste management element that also identified opportunities and challenges;
- 2017 operating and capital budget and associated waste quantity estimates;
- 100-year capital asset allotment;
- Yearly summary reports including tonnages;
- Waste audit data;
- Customer surveys; and,
- Third party contracts.

As part of the background review, Dillon staff also toured the Waste Resource Innovation Centre (WRIC) on April 28<sup>th</sup>. The tour was conducted by the various City managers who provided information on the solid waste management elements listed in *Table 1* and perspective of their respective waste management operation(s).

Several meetings were held with representatives from the City's Finance department throughout the service review to explain the service review process, to confirm that the City's financial information being used for the service review was being interpreted correctly, that assumptions were understood and that accurate comparisons to the participating municipalities' data were being made. City Finance and Solid Waste Resource staff worked together to provide financial data for each element of the solid

waste management system, noting that the City's entire waste management infrastructure is located at the Waste Resource Innovation Centre (WRIC). Assumptions were made to allocate shared resources (e.g., staffing, equipment) and costs (e.g., maintenance staff, utilities, water usage) into the individual solid waste management elements.

### 2.3 Task 3 – Service Benchmarking Approach & Methodology

The approach to conducting benchmarking was to identify comparator municipalities for the six solid waste management elements, contact them via email and/or telephone, request and analyze/review the required information and summarize findings in a manner that could be compared to the City's elements. Some of the municipal contacts were unwilling to provide information unless they received a copy of the final Service Review report (once it became public), were reluctant to share some of the requested information to protect their own operation and/or did not want to give our private sector waste management costing information. It is noted that there is limited publically available waste management industry metrics in Ontario aside from what is reported to the Resource Productivity and Recovery Authority (RPPRA, formerly Waste Diversion Ontario) Municipal Datacall.

Since the levels of service and service delivery approaches among other municipal solid waste management elements vary significantly, only those elements that would be relevant/comparable to the City's solid waste elements were selected (i.e., comparator municipalities were not asked to provide information on their total waste management system, only certain elements). The goal was to have at least two comparator municipalities for each element. The rationale for the selection of comparator municipalities is as follows:

- Part of the approved City of Guelph Municipal Comparator List (list of 30 Ontario municipalities);
- Delivery approaches that meet those defined by the scope of the service review (i.e., own and operate, own and contract out, contract out); and/or,
- Relevant level of service and/or technology used (e.g., for the MRF having a mix of single stream and two-stream processing facility comparators).

Municipalities were selected on the basis of generating a mix of service delivery approaches (e.g., own facility versus contract out to a private facility, in-house staff versus contracting out staff), level of service provided (e.g., collection frequency, hours of operation) and/or relative size of municipality to get a range to form a benchmark. The following ten municipalities were contacted as part of the best practices investigation as they represented the desired mix to conduct a comparison of select elements of their waste management systems to the City's:

1. Region of Waterloo
2. Essex-Windsor
3. City of Hamilton
4. Regional Municipality of Niagara

5. Regional Municipality of Peel
6. City of Kingston
7. Lambton County
8. Regional Municipality of Halton
9. City of Brantford
10. City of Barrie

Contacts for each municipality were either obtained from Dillon’s prior work experience or researched online. A personalized letter outlining the details of the service review, information being sought and timing to get the information was sent out to each participating municipality between May 8<sup>th</sup> and May 12<sup>th</sup>, 2017. A sample letter is included in *Appendix A*. Each municipality received an Excel-based questionnaire (*Appendix B*) that included questions about their solid waste management element(s) of interest. An overview of the information requested for each main category in the questionnaire can be found in *Table 2*.

It was recommended to the municipalities that one-on-one interviews be conducted to go over the questionnaire, identify any data gaps, clarify responses and confirm timelines if additional information was required. Interviews were conducted between May 12<sup>th</sup> and May 24<sup>th</sup>. By May 31<sup>st</sup> all participating municipalities had returned a completed questionnaire and the information was consolidated in a summary table to allow for ease of comparison to the City’s services.

Table 2: Benchmarking Questions

Tab	Summary of Key Questions
General Information	<ul style="list-style-type: none"> <li>• Brief overview of waste management services provided and facilities available.</li> <li>• Population served (single family, multi-residential, Industrial, Commercial and Institutional (ICI) customers).</li> <li>• Jurisdiction bylaws.</li> <li>• Roles and responsibilities of staff.</li> <li>• 2016 operating budget and/or 2017 budget.</li> <li>• Approach to changing service levels with the municipality.</li> <li>• Implementations of service delivery changes.</li> </ul>
Garbage	<ul style="list-style-type: none"> <li>• Collection service levels provided (frequency of collection, is residual waste co-collected, bag limits).</li> <li>• Service delivery approach.</li> <li>• General description of collection vehicles and fleet.</li> <li>• Quantities collected in 2016.</li> <li>• Approximate collection costs.</li> <li>• Drop-off location(s).</li> <li>• Disposal location(s).</li> </ul>

Tab	Summary of Key Questions
Recyclables	<ul style="list-style-type: none"> <li>• Collection service level provided (accepted materials, single or 2 steam, frequency of collection, are recyclables co-collected).</li> <li>• Service delivery approach.</li> <li>• General description of collection vehicles and fleet.</li> <li>• Processing location(s).</li> <li>• Drop-off location(s).</li> <li>• Quantities collected and processed in 2016.</li> <li>• Approximate costs (collection, processing) and revenue (sale of recyclables, provincial funding)</li> <li>• Details about MRF (provided separately and later as explained below). <ul style="list-style-type: none"> <li>○ Information about when MRF was first constructed (e.g., first year of operating, financing structure, initial capital costs).</li> <li>○ Processing capacity.</li> <li>○ Current condition and remaining lifecycle.</li> <li>○ Performance metrics measured.</li> <li>○ Responsibilities for marketing of recyclables.</li> <li>○ Additional costs.</li> </ul> </li> </ul>
Organics – Leaf and Yard Waste	<ul style="list-style-type: none"> <li>• Collection service level provided (e.g., accepted materials, frequency of curbside collection)</li> <li>• Service delivery approach.</li> <li>• General description of collection vehicles and fleet.</li> <li>• Drop-off location(s).</li> <li>• Transfer location(s).</li> <li>• Processing information (e.g., technology, location).</li> <li>• Quantities collected and processed in 2016.</li> <li>• Approximate collection, hauling and processing costs and revenue.</li> </ul>
Organics – Source Separated Organics (SSO)	<ul style="list-style-type: none"> <li>• Collection service level provided (accepted materials, are organics co-collected, frequency of collection).</li> <li>• Service delivery approach.</li> <li>• General description of collection vehicles and fleet.</li> <li>• Drop-off location(s).</li> <li>• Transfer location(s).</li> <li>• Processing information (e.g. technology, location).</li> <li>• Quantities collected in 2016.</li> <li>• Approximate collection, hauling and processing costs and revenue.</li> </ul>
MHSW	<ul style="list-style-type: none"> <li>• Service delivery approach.</li> <li>• Staffing details.</li> <li>• Quantities received and processed.</li> <li>• Approximate costs and revenue.</li> </ul>

## Task 4 – Summarize Findings and Hold Workshop with City

Benchmarking data was summarized into the following categories:

- Level of service provided;
- Service delivery approach;
- Staffing levels;
- Population served (# households, units, and businesses);
- Number of customers;
- 2016 quantities received (tonnes);
- 2016 costs or 2017 budget (annual O&M, debt financing, reserve)\*;
- Revenue;
- Total net cost (Cost - Revenue);
- Description of the components to cost;
- Cost per customer;
- Cost per tonne; and,
- Confidence Rating for Data and Rationale.

*\*Most municipalities gave 2016 operating costs; one municipality provided 2017 estimated budget*

It is important to note that while the project team requested standardized and complete data, data received from some of the municipalities were incomplete, due to one or more of the following reasons:

- There were different approaches to reporting and accounting among the comparator municipalities so an “apples to apples” comparison was not possible;
- The industry is a mix of private and public sector owners and operators and there are challenges with sharing data due to confidentiality and competitiveness reasons; and/or,
- The industry is non-regulated to the degree that there is large variation in levels of service and service provision methods between municipalities, cities and private operators.

Attempts were made through follow-up emails and telephone calls to further verify and/or normalize the data (without causing bias) in order to better conduct the benchmarking.

The project team, through consultation with municipalities that provided information and through working with the City, identified the following contextual points and/or limitations around the data received to allow for a fair comparison between the different datasets:

- The number of customers was equal to the sum of single family and multi residential households, and the number of Industrial, Commercial and Institutional (ICI) buildings serviced, where applicable and available;
- Costs per customer and costs per tonne were calculated by taking the total net cost and dividing it by number of customers and the number of tonnes received, respectively;

- Confidence ratings were applied to the data received in terms of low, medium, or high. The confidence ratings were a tool to account for fairness in the comparisons for each municipality contacted and the respective element. A rating of “low” was defined as somewhat comparable, “medium” was comparable and “high” equated to being very comparable. In instances where the data was incomplete or not of the same standard as how the City provides it, a rating of either “medium” or “low” was applied, depending on the completeness of the data. A rationale was provided for each confidence rating that was documented; and,
- Other datasets readily available in the public domain were reviewed to confirm/refine/validate findings (i.e., Ontario’s Resource Productivity and Recovery Authority (RPRA) municipal Datacall which has their own data verification processes).

After summarizing the data, a workshop was held from June 6 – 7<sup>th</sup>, 2017 with the core City service review team and the Steering Committee to discuss the preliminary findings of the service review. Elements requiring further investigation that were identified were the MRF, Public Drop-Off and Transfer Station (explained below). The other elements were deemed as meeting or exceeding the benchmark and the next steps for those elements were to confirm and finalize the data. The details of the findings are listed in the “Results (Task 4 and 5)” section of this report

## 2.5 Task 5 – Conduct Further Research

Additional communication with participating municipalities was conducted through email and follow-up phones following the June workshop. The purpose of the follow-up was to refine data and/or receive more information related to MRF, PDO and transfer station operations.

Supplemental data was gathered for the MRF from previously contacted municipalities (e.g., understanding how costs are derived, additional costing data) and new municipalities were added that had single stream MRFs since the previous comparators had mainly two-stream MRFs. The new municipalities were:

1. City of Greater Sudbury
2. Bluewater Recycling Association
3. Northumberland County

The project team created a new questionnaire (*Appendix C*) which included questions regarding initial start-up costs and operations of the MRF, the remaining lifecycle, material capture rates, and contingency plans.

## 3.0 Results (Tasks 4 and 5)

The following section outlines Dillon's results from the data analysis and municipal benchmarking components of the Service Review for Solid Waste Resources. For each element investigated, the City's existing approach is summarized and the information obtained through the benchmarking review is summarized. Key indicators used in the comparison included the service delivery approach, level of service, staffing levels, and the estimated cost per customer and the cost per tonne.

Staff from the City's Human Resources division was engaged to confirm the number of staff and allocating staff to specific elements. Additionally, staff from the City's Finance division was engaged to confirm budget allocations and consistency in the process to compare costs for each municipality. Confidence ratings are documented for each element.

It is noted that individual results from each participating municipality were not provided by municipal name. This was purposely done to limit any interpretation or perception of the performance of other municipal programs. The purpose of this service review was to compare Guelph to other municipalities and not to highlight any potential deficiencies in participating municipal programs of comparator municipalities. The number of comparators for each element ranged from two to six.

### 3.1 Waste Collection (including LYW Processing)

#### 3.1.1 City of Guelph

The City offers weekly organic and bi-weekly garbage and single stream recycling to approximately 29,900 single family homes, 18,530 multi-residential building units (multi-residential building is defined as a dwelling with over 6 units), and 305 ICI customers. Noted exceptions include the downtown core, which receives collection of all three streams six days a week (Monday through Saturday), and selected large multi-residential buildings that receive an increased collection frequency. For bulky items, residents can call the City for an appointment and the items will be collected on their regular collection day. There are two leaf and yard waste (LYW) collection periods per year (spring, fall) and one loose leaf collection day where residents can rake loose leaves to the curbside for collection. It should be noted Waste collections was defined as including LYW collections and processing, LYW collections is discussed below, with a subsection detailing LYW processing,

The City's collection fleet is comprised of automated collection vehicles. Bagged leaf and yard waste collection is contracted out by Solid Waste Resources to a private contractor and loose leaf collection is managed by the Operations department. All other curbside collection services are provided by the City's Solid Waste Resource collection staff comprised of 18 Full-Time Equivalents (FTE).

### 3.1.2 Benchmarking Results

Six municipalities were used for comparison to the City in the service review under this element. The City is the only municipality that delivers waste collection solely through the use of in-house staff. Two of the comparator municipalities have a mix of in-house and contracted services, while the remaining participating municipalities contract out waste collection. Comparator municipalities with Green Bin organics programs offer weekly collection while recycling and garbage varies from a weekly to bi-weekly collection frequency. For municipalities that service non-residential customers (e.g., business areas, restaurants), the collection frequency ranges from weekly to twice weekly. Most collect garbage and recyclables and select ICI (e.g., schools) receive Green Bin collection.

Five of the comparator municipalities offer seasonal curbside collection of leaf and yard waste (LYW) either weekly or bi-weekly during the growing season (around April to November) or year round. The other comparator offers two LYW collection days in the fall. One of the comparator municipalities offers separate loose leaf collection in select areas in addition to seasonal bi-weekly LYW collection. The majority of comparator municipalities utilize manual or semi-automated collection vehicles.

The City's waste collections net costs are estimated to be \$80/customer and \$110/tonne. This cost also includes the Operations costs to collect loose leaves. The net costs from comparator municipalities range from \$100 to \$125/customer and \$95 to \$180/tonne.

The confidence ratings of the comparator data were high for the majority of municipalities with one low rating due to processing costs being included in the collection costs and no ability to break out processing costs from the total contact cost.

The City's Waste Collection operations were assessed to be in line with comparator municipalities, and therefore at the June workshop it was agreed that no further comparative analysis would be conducted by Dillon on this element. However, one of the subareas of service (LYW processing) does not meet the benchmark as discussed in the subsection below.

### 3.1.3 Leaf and Yard Waste Processing

#### 3.1.3.1 City of Guelph

The City allows leaf and yard waste (LYW) to be dropped off at the PDO for free and provides two curbside collection days for bagged LYW (one spring, one fall) and one loose leaf collection per year. Bagged LYW is separated and sent to a private sector processing facility. Some of the brush material is sent to the City's organics waste processing facility and some is sent offsite to a private facility. Loose leaves are processed at a private sector processing facility.

## 3.1.3.2

## Benchmarking Results

Four municipalities were compared to the City in the service review under this sub-element of LYW processing. As noted in the Waste Collection discussion, all comparator municipalities provide seasonal LYW curbside collection (weekly or bi-weekly from spring through fall after the holidays and year round), which leads to greater quantities of LYW available for processing. Comparator municipalities use open windrow composting to process LYW and all the comparator municipalities use their waste management site for this operation and do not incur additional transfer/hauling costs. There is a mix of service delivery approaches with two contracting out operations, two contracting out certain aspects of the compost process to minimize equipment costs that are infrequently used (e.g., shredding, chipping, screening, testing) and two doing all or some of the processing operations for LYW.

The City receives revenue from commercial leaf and yard waste drop-off, in the form of tipping fees received at the PDO. However, these fees are not included in the LYW processing costs but are part of the total PDO costs as it was not possible to separate out this portion of PDO revenue.

The quantitative comparators are the costs per tonne and per customer. It is noted that the number of customers is the number of single family households even though commercial customers can drop-off LYW at receiving facilities. It is assumed that multi-residential LYW is negligible. The City's estimated net costs to process LYW are \$10/customer and \$60/tonne. The net costs from the comparator municipalities range from \$2 to \$6/customer and \$25 to \$30/tonne. Confidence ratings applied were one high, two medium and one low. There were some gaps in information provided and some municipalities were unable to allocate the full costs for LYW processing as it was located on an integrated site where resources (staffing, equipment) were shared.

At the June workshop with City staff it was decided to obtain additional information to refine costing data to better allocate to this element, if available. Slight adjustments were made to the evaluation but more refined allocation of costs was not available from comparator municipalities. Based on the limited cost data available and the level of service provided for LYW collection (which contributes to the total quantity of LYW processed); the City falls below the benchmark for LYW processing.

## 3.2 Public Drop-Off and Transfer Station

### 3.2.1 City of Guelph

The City offers residents two public drop-off (PDO) areas for waste at the WRIC, one of which is a no-cost drop-off (recyclables, shredding paper, MHSW, yard waste) and the other where fees are charged by weight of materials (e.g. construction and demolition waste, white goods and garbage). The PDO is open to the public Mondays through Saturdays.

The WRIC also includes a transfer station that receives City-collected residual waste and commercial residual waste. This waste is hauled to a private waste disposal site(s) for final disposal.

The City owns and operates the PDO areas and the transfer station through the use of 21 FTE.

### 3.2.2 Benchmarking Results

Five municipalities were compared to the City in the service review under this element. The municipal comparators included operation of several PDO facilities, operating both a PDO and a transfer station (with some located at their landfill site), and running a single PDO. In terms of level of service, two of the comparator municipalities offer more than one location to drop off non-curb-side and curb-side collected waste and three offer one location.

The majority of participating municipalities were not able to separate costs attributed to the specific elements (PDO, transfer station) due to the shared staff and equipment resourcing and having these facilities located on an integrated waste management site. One comparator municipality that provided combined costs for a PDO and transfer station was about \$10/tonne higher than the City's combined costs (approximately \$15/tonne).

At the June workshop, it was recommended to conduct further investigation to see if better costing and staffing data could be obtained for these elements. After reaching out to the participating municipalities, it was determined that better data could not be provided as the municipalities do not separate costs and resources for these shared elements (it is noted that some expressed interest or will be doing so in the near future). However, based on Dillon's opinion and the review of available, although limited, data, it is concluded that the PDO and transfer station meet the benchmark and that no further changes are recommended. It is recommended that the City continue to track the separate costs and revenues for the transfer station and PDO.

## 3.3 Municipal Hazardous and Special Waste (MHSW) Depot

### 3.3.1 City of Guelph

The City owns and operates a MHSW depot at the WRIC. The depot is open to residents year-round from Tuesday to Saturday. There are two FTE that work at the MHSW depot.

### 3.3.2 Benchmarking Results

Two municipalities were compared to the City in the service review under this element. In terms of level of service, one of the comparator municipalities conducts collection events throughout the year which are operated by a private contractor and they also have a depot at their waste management site. The other offers drop-off of MHSW at their waste management facility one day per week and the service is contracted out. The City receives more quantities of MHSW than the comparator municipalities.

The quantitative comparator is the cost per customer and cost per tonne (noting that the cost per customer is based on the total municipal population). The City's net costs to operate the MHSW depot are approximately \$3/customer and \$560/tonne. The comparator municipalities' net costs range from \$3 to \$5/customer and \$660 to \$850/tonne. Confidence ratings for data provided by comparator municipalities were high.

At the June workshop, it was determined that no further comparative analysis was recommended for the service review as the City's MHSW Depot costs are in line with the benchmarked municipalities.

### 3.4 Source Separated Organics (SSO, Green Cart) Processing

#### 3.4.1 City of Guelph

The City owns their SSO processing facility and contracts out operations to Wellington Organix Inc. The contract, in effect since August 2011, is for a period of five years and may be extended by the City for up to two consecutive periods each having a term of five years. The contract requires that the facility must process at least 30,000 tonnes per year. Payment is calculated on a monthly basis and is based on a monthly processing fee and an incremental fee based on actual tonnage accepted for processing at the facility. The greater the quantity of organics processed, the lower the processing fee paid by the City. The processing rate schedule price per tonne is adjusted at the start of each contract year. The contractor is responsible for marketing the finished compost.

Processing of organics is provided through an indoor aerobic composting tunnel system with a design capacity of 60,000 tonnes (SSO and amendment).

The City has a contract with the Region of Waterloo to process their residential organics (ratio processed is approximately 3:1 for Waterloo and City organics, respectively). Since the business case for the facility was based on a 60,000 tonne per year capacity (SSO and amendment), this quantity of "through-put" is necessary for the City to operate a financially responsible facility.

There is one City staff member that administers the contract. The City's Green Cart program includes food waste, soiled paper products and pet waste which are permitted to be placed in certified compostable bags.

#### 3.4.2 Benchmarking Results

Four municipalities were compared to the City in the service review under this element. It is noted that the City's performance includes the tonnage and associated costs with processing the Region of Waterloo's SSO. The service delivery approaches ranged from own/operate, own/contract out operations and contract out completely.

The City's organics processing facility net costs are estimated to be \$30/customer and \$50/tonne. The range in net costs from comparator municipalities is \$10 to \$25/customer and \$40 to \$120/tonne. The confidence rating ranges are split with two high and two low. The rationale for giving a low score was due to lack of data surrounding capital reserve and debt financing from the comparator municipalities. The overall large volume of material processed at the City's facility generates efficiencies of scale and makes the cost of processing per tonne very competitive. It is important to note that the Region of Waterloo pays the City approximately \$120 per tonne for processing of organic waste. This rate is considered to be in-line with market value for organics processing.

It was decided at the June workshop to refine existing information through additional outreach to participating municipalities. Slight refinements were made; however, the results remain the same in that the City is in line with the benchmark established by comparator municipalities, therefore no further comparative analysis will be done for this service.

### 3.5 Materials Recovery Facility (MRF)

#### 3.5.1 City of Guelph

The City owns and operates a single stream MRF but it has the ability to process separate fibers and container streams at the WRIC. The City's Blue Cart program allows for all recyclables to be placed into the same cart. The MRF was first built as a multi-stream MRF in 1996 and then was converted to a single stream MRF in 2003. The MRF currently employs 47 FTEs. The MRF processes approximately 23,000 tonnes per year of recyclables.

The City has a contract to receive and process containers from Simcoe County (which represents approximately 40% of annual throughput). The City is responsible for the marketing of recyclables. Simcoe County receives revenue for their containers based on the City conducting monthly audits of Simcoe's container stream, allocating the percentage of each material type, obtaining the monthly average market price and assuming that 95% of the materials are captured. Sources of revenue are from tipping fees for Simcoe County's containers, the sale of recyclables and funding from RPRA for recovered recyclables.

#### 3.5.2 Benchmarking Results

Three municipalities were initially compared to the City and four more were subsequently added in the service review under this element. The four additional comparators were selected to provide more single stream comparators (as discussed below).

Comparator municipalities included the following types of facilities:

- Three two-stream MRFs;
- Three single stream MRFs; and,
- One MRF that has the ability to process both single and dual stream recyclables.

In terms of service delivery approach, three municipalities own and operate their facility, three own and contract out operations of the facility and one fully contracts out operations for recyclable processing. The comparator MRFs were built between 1980 and 2010. Participating municipalities were asked about the age of MRFs to understand the level of capital investment and/or debt financing in place.

Sources of revenue are from the sale of recyclables and funding received from the RPR data call process which is posted online. Each year Ontario municipalities receive funding for their Blue Box program, and the funding is based on three parameters; Net Cost, Recovered Tonnages, and Best Practices. Dillon used the 2015 online data call information (most recent reporting year available) to identify the RPR funding received for each comparator municipality for recovered tonnages. Sources of costs came from annual operating and maintenance as well as capital reserve costs.

The City's estimated net costs for the processing of recyclables at their MRF are approximately \$40/customer and \$90/tonne. The majority of comparator municipalities had costs substantially lower than the City's (from revenues of \$15/customer to costs of \$1/customer and revenues of \$85/tonne to costs of \$1/tonne). Most comparator municipalities had a net positive revenue stream from their MRF operation. One of the comparator municipalities had higher net costs than the City. Confidence ratings applied were four medium and four high. The medium ratings were due to not having all the components of the costs for the comparators and variances in where/how funding is distributed (not all to MRF processing but also to collection, promotion and education). High ratings were applied to comparator municipalities that fully contract out recyclable processing and therefore costs provided were the full and total cost incurred by the comparators.

Given the difference in costs between the City and comparator municipalities, this element was identified at the June workshop as one for additional investigation. This involved preparing and distributing a questionnaire to participating municipalities to obtain further detail on their recyclables processing. The additional investigation was primarily focused on costs and analyzing received data. Dillon also used the RPR data call to corroborate the service review findings for the MRF. RPR's 2015 Blue Box Program Cost and Revenue data showed that Guelph's net costs per tonne are higher than the majority of the comparative municipalities. Therefore the initial conclusion remained the same; the City is below the benchmark for recyclables processing (operation of MRF).

## 3.6 Residuals Disposal

### 3.6.1 City of Guelph

The City offers bi-weekly collection of residual waste and, for a fee, customers are able to drop-off additional residual waste at the PDO and transfer station located at the WRIC. For the purposes of the review, the analysis looked at the City of Guelph collected residual waste only. The collected residual waste is transferred at the WRIC transfer station and hauled by a private waste management company to a private waste disposal site(s).

The costs and associated quantities of ICI residual waste received at the transfer station was considered under the Transfer Station analysis as that waste and the associated contract forms part of the business operations of the Transfer Station.

### 3.6.2 Benchmarking Results

Three municipalities were compared to the City in the service review under this element. All comparator municipalities offer both curbside collection and public drop-off of residual waste. Two of the comparator municipalities contract out both haulage and disposal and one owns their own landfill and also contracts out a portion of their residual waste disposal needs.

The costs for hauling and disposing of the City's residual waste are estimated to be \$40/customer and \$60/tonne. The costs from the comparators municipalities range from \$15 to \$40/customer and \$45 to \$80/tonne. The confidence ratings applied were one high, one medium and one low. The low rating was given since limited data was provided due to confidentiality concerns.

Given the information received and Dillon's knowledge of industry costs (through other available third party data), Dillon concludes that this element met the benchmark at the June workshop and therefore no further investigation or comparative analysis was required.

## 4.0 Summary

The purpose of the service review benchmarking and data analysis was to determine if the elements of the City's solid waste management system are in line with other similar Ontario municipalities. Upon review of the City and comparator municipalities, each element was categorized as exceeding, meeting or being below the benchmark as defined by the comparator municipalities. Exceeding the benchmark was set at having a lower costs and/or higher level of service, meeting was having similar costs and levels of service, and being below the benchmark indicated the City's costs were higher and/or level of service was lower than the comparator municipalities.

Dillon conducted a review of the six elements (refer to *Table 1*) of the City of Guelph's waste management system. Research on comparator municipalities was completed through telephone interviews, emails and completion of a questionnaire. The comparator municipalities were selected based on the type of programs, services and/or service delivery approaches for the different elements and/or if they were of similar size to the City. The City was then compared to these municipalities.

Through the comparison it was determined that the City meets or exceeds service levels of the other applicable municipalities in five of the six service elements. The MRF operations were determined to be below the benchmark. The sub-element of LYW processing was determined to be below the benchmark; however the primary element of Waste Collections was assessed as meeting or exceeding the benchmark.

# Appendix A

## *Sample Letter*



May 5, 2017

Company Name  
Address Line  
City, Province  
Postal Code

Attention: Mr./Ms./Mrs. First and Last Name  
Position/Title

***Participation requested in City of Guelph Solid Waste Resources Services Review***

Dear Mr./Ms./Mrs. Last Name:

Dillon Consulting Limited (Dillon) has been retained by the City of Guelph to conduct a review of their Solid Waste Resource services and processes. Part of the review is conducting research on best practices from similar municipalities and providing a comparison to the City of Guelph. The comparison will attempt to identify areas where the City meets the benchmark defined by the comparative municipalities and areas in which the City's service delivery could be improved.

We have selected your jurisdiction to conduct best practices research on. In particular, we are interested in gathering data on your *[enter program(s) of interest]* program. At a high level, the type of data we are interested in is: understanding the level of service provided to residents, who delivers the services, the quality of service and how much it costs to deliver the services.

Dillon has prepared a questionnaire to facilitate retrieval of relevant information (see attached) for the programs noted above. We have populated some of the information with research conducted on the jurisdiction's website and ask that you (or the appropriate staff member(s)) fill in the missing pieces. In an effort to be efficient with your time, we are suggesting that Dillon schedules a 1-hour telephone call between May 10 and 17 to go through the questionnaire. We request that an initial draft of the questionnaire be complete and sent back to Dillon prior to the call. If there is any follow-up required, we will discuss timelines with you during the call. We are aiming to complete the best practices research by May 19, 2017.

...cont'd

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May 5, 2017

If you have any questions or concerns, please contact Betsy Varghese at [bvarghese@dillon.ca](mailto:bvarghese@dillon.ca) or at (416) 229-4647 ext. 2326.

We really appreciate your time and participation in this important study!

Sincerely,

**DILLON CONSULTING LIMITED**



Betsy Varghese, P.Eng.  
Project Manager

BMV:cg  
Enclosure(s) or Attachment(s)

Our file: 17-5446

## Appendix B

### *Questionnaire*



**City of Guelph Services Review**  
**Waste Management Services and Infrastructure**

*Thank you for your participation in this important study!*

**Municipality / Jurisdiction** \_\_\_\_\_

Completed by: \_\_\_\_\_  
Title: \_\_\_\_\_  
Tel. No.: \_\_\_\_\_

Date Completed: \_\_\_\_\_  
Website: \_\_\_\_\_  
Email: \_\_\_\_\_

**A. GENERAL INFORMATION**

**Municipality Services**

a. Brief overview of waste management services provided (check all that apply):

Collection Programs

- Garbage
- Blue Box
- Green Bin
- Leaf & Yard Waste

- Multi-Residential
- Multi-Residential
- Multi-Residential
- B

- Schools
- Municipal Facilities
- Municipal Parks
- Bulky Waste

Facilities

- Processing (Recyclables,
- MHSW Depot
- Transfer Stations
- Leaf & Yard Waste Drop Off
- Public Drop Off
- Landfill

Other: \_\_\_\_\_

b. Approximate population served: \_\_\_\_\_

c. Are all areas within the jurisdiction serviced? If not, specify: \_\_\_\_\_

d. Approximate number and percentage of single-family households served (e.g., 25,000 households which represents 100% of all households): \_\_\_\_\_

e. Approximate number and percentage of multi-residential units served: \_\_\_\_\_

f. Explain any differences in collection methods and programs for single-family and multi-residential households:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

g. Does your municipality have a large student or transient population? If yes, how does it impact your education programs and services? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

h. Region or City specific by-laws or policies that address solid waste management requirements? If yes, please name and provide weblink (or attach): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

i. Describe roles and responsibilities of Municipal staff and contractors and attach organizational chart, if applicable:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

j. 2016 (or 2017 budget) Calendar Year Solid Waste Management Expenditures (attach detailed printout if available):

\_\_\_\_\_  
\_\_\_\_\_

k. 2016 (or 2017 budget) Calendar Year Solid Waste Management Budget (attach detailed printout if available):

\_\_\_\_\_  
\_\_\_\_\_

l. Please identify and attach any other relevant reports and/or documents (e.g., annual reports): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

m. Describe any planned upcoming changes to waste management programs: \_\_\_\_\_

\_\_\_\_\_

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**Service Levels**

- n. Does Council approve your levels of service? \_\_\_\_\_  
\_\_\_\_\_
- o. Have you conducted a previous review of your waste management services? \_\_\_\_\_
- p. If yes: What were the main outcomes/recommendations of the review? \_\_\_\_\_  
\_\_\_\_\_
- q. Have you implemented any service delivery changes (i.e. from in-house to outsource or vice versa)? \_\_\_\_\_  
\_\_\_\_\_
- r. If yes, what were the outcomes/cost impacts (pros and cons)? What has been the community feedback? \_\_\_\_\_  
\_\_\_\_\_
- s. After implementing a change to the service delivery, have you reverted back to the original delivery? If so, why? \_\_\_\_\_  
\_\_\_\_\_
- t. Provide lessons learned (both positive/negative) from your review and/or service changes? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**B. RESIDUAL WASTES/GARBAGE**

**B.1 Residential**

**Single-Family Residual Waste Collection**

- a. Frequency of curbside collection (i.e., weekly, biweekly): \_\_\_\_\_
- b. Is garbage co-collected with another stream (i.e., organics or recyclables)? \_\_\_\_\_
- c. Limits on garbage bag/container set out? Fees for extra garbage? \_\_\_\_\_
- d. Provide the estimated annual quantities of residual wastes collected at curbside for the 2016 calendar year: \_\_\_\_\_
- e. Collection through contract or by municipal forces? If by contract, provide contractor name and approximate value of collection contract: \_\_\_\_\_
- f. General description of collection vehicle(s) (automated collection, manual): \_\_\_\_\_
- g. Number of vehicles in fleet (active, spares): \_\_\_\_\_

**Multi-Residential Residual Waste Collection**

- h. Frequency of collection (i.e., weekly, twice a week): \_\_\_\_\_
- i. Is garbage co-collected with another stream (i.e., organics or recyclables)? \_\_\_\_\_
- j. Limits on garbage bag/container set out? Fees for extra garbage? \_\_\_\_\_
- k. Provide the estimated annual quantities of residual wastes collected from multi-residential customers for the 2016 calendar year: \_\_\_\_\_
- l. Collection through contract or by municipal forces? If by contract, provide contractor name and approximate value of collection contract: \_\_\_\_\_
- m. General description of collection vehicle(s) (automated collection, manual): \_\_\_\_\_
- n. Number of vehicles in fleet (active, spares): \_\_\_\_\_

**Other**

- o. Describe method (e.g. vehicles used, frequency of trips) and costs associated with hauling waste to landfill(s): \_\_\_\_\_
- p. Describe method for handling bulky waste: \_\_\_\_\_

**Transfer / Hauling**

- q. Can residents drop wastes off at transfer stations and/or depots? \_\_\_\_\_
- r. If yes, provide name and location of facility(ies): \_\_\_\_\_
- s. Are there restrictions on what can be disposed at transfer stations and depots (e.g., weight limits): \_\_\_\_\_
- t. What is the cost per tonne for wastes dropped off? \_\_\_\_\_
- u. Provide the estimated annual quantities of wastes received at transfer stations and/or depots for the 2016 calendar year: \_\_\_\_\_
- v. Describe method (e.g. vehicles used, frequency of trips) and costs associated with hauling waste from transfer stations/depots to processors / landfill (if applicable): \_\_\_\_\_

**Disposal**

w. Provide formal name/location of MSW disposal site(s) used by the municipality: \_\_\_\_\_

\_\_\_\_\_

x. Can residents drop wastes off directly at the disposal site?

y. Are there restrictions on what can be disposed at the disposal site (e.g., weight limits): \_\_\_\_\_

z. Are tipping fees applied at the site(s)? If yes, what is the cost per tonne: \_\_\_\_\_

aa. Provide available approx. annual operating costs (including amortized capital costs) for the disposal site(s):

\_\_\_\_\_

\_\_\_\_\_

**Other**

ab. Any additional comments? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**B.2 Industrial, Commercial and Institutional (IC&I)**

a. Are wastes/garbage from IC&I sources collected as part of the Municipal system? \_\_\_\_\_

\_\_\_\_\_

b. Approx. quantity of IC&I recyclables managed annually (i.e., tonnes): \_\_\_\_\_

c. Please describe the types of IC&I waste generators within the municipality (i.e., schools, small businesses, etc.).

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**C. RECYCLABLES**

**C.1 Residential**

a. Materials accepted (i.e., cardboard, HDPE, glass food containers, beverage containers, etc.), program type (single stream, 2-stream) \_\_\_\_\_

**Single-Family Recycling Collection**

b. Frequency of curbside collection (i.e., weekly, biweekly): \_\_\_\_\_

c. Collection through contract or by municipality forces? If by contract, provide name of contractor: \_\_\_\_\_

d. General description of collection vehicles, if applicable: \_\_\_\_\_

e. Approx. quantity collected in 2016 (i.e., tonnes): \_\_\_\_\_

f. Approx. annual collection cost (including amortized capital costs): \_\_\_\_\_

**Multi-Residential Recycling Collection**

g. Frequency of multi-residential collection (i.e., weekly, biweekly): \_\_\_\_\_

h. Collection through contract or by municipal forces? If by contract, provide name of contractor: \_\_\_\_\_

i. General description of collection vehicles, if applicable: \_\_\_\_\_

j. Approx. quantity collected in 2016 (i.e., tonnes): \_\_\_\_\_

k. Approx. annual collection cost (including amortized capital costs): \_\_\_\_\_

**Transfer / Drop Off**

l. Can residents drop recyclables off at transfer stations and/or depots? \_\_\_\_\_

m. If yes, provide name and location of facility(ies): \_\_\_\_\_

n. Are customers charged to drop off recyclables? If so, what is the cost per tonne? \_\_\_\_\_

o. Provide the estimated annual quantities of recyclables received at transfer stations and/or depots for the 2016 calendar year: \_\_\_\_\_

p. Describe method (e.g. vehicles used, frequency of trips) and costs associated with hauling recyclables from transfer stations/ depots to MRFs (if applicable): \_\_\_\_\_

**Processing**

- q. Does the Municipality own a MRF? \_\_\_\_\_  
If yes, facility design capacity (i.e. maximum tonnes per year): \_\_\_\_\_
- r. Are processing operations undertaken through contract or by municipal forces? If by contract, name contractor: \_\_\_\_\_  
\_\_\_\_\_
- s. If the Municipality does not own a MRF, where are recyclables sent (name and location): \_\_\_\_\_  
\_\_\_\_\_
- t. What is the approximate contamination rate and annual quantity of residuals: \_\_\_\_\_  
\_\_\_\_\_
- u. Approx. quantity processed in 2016 (i.e., tonnes): \_\_\_\_\_
- v. Approx. annual processing cost (including amortized capital costs): \_\_\_\_\_

**Other**

- w. Describe any planned upcoming changes to the recycling program: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- x. Describe any noted challenges in the recycling program (e.g., participation rates, contamination issues): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- y. Any additional comments? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**C.2 Industrial, Commercial and Institutional (IC&I)**

- a. Are recyclables from IC&I sources accepted (i.e., collected, processed, etc.) by the municipality's system?. If yes, describe (including fee arrangements): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- b. Approx. quantity of IC&I recyclables managed annually (i.e., tonnes): \_\_\_\_\_  
\_\_\_\_\_

**D. ORGANICS - Leaf & Yard**

**D.1 Residential - Leaf and Yard Waste (L&YW)**

- a. Is curbside collection of L&YW provided to residents? *<If no, skip to D.1.f>* \_\_\_\_\_
- b. Method of collection (i.e., bags, carts, top up in Green Bin): \_\_\_\_\_
- c. Frequency of collection (i.e., weekly, biweekly, spring/fall): \_\_\_\_\_

d. Provide the estimated annual quantities of L&YW collected at curbside for the 2016 calendar years: \_\_\_\_\_

e. Describe method (e.g., vehicles used, frequency of trips) and costs associated with transporting L&YW to composting facility(ies): \_\_\_\_\_

**Transfer / Drop Off**

f. Can residents drop leaf and yard waste off at transfer stations, depots and/or seasonal locations (e.g., Christmas trees)? \_\_\_\_\_

g. If yes, provide name and location of facility(ies): \_\_\_\_\_

h. Are customers charged to drop off L&YW? If so, what is the cost per tonne? \_\_\_\_\_

i. Provide the estimated annual quantities of L&YW received at transfer stations and/or depots for the 2016 calendar year: \_\_\_\_\_

j. Describe method (e.g. vehicles used, frequency of trips) and costs associated with hauling L&YW from transfer stations/ depots to composting facility(ies): \_\_\_\_\_

**Processing**

- k. Describe processing/composting location, type of organics processing, number of staff: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- l. Is processing undertaken through contract or by municipal forces? \_\_\_\_\_
- m. Approx. quantity processed per year (i.e., tonnes): \_\_\_\_\_
- n. Facility design capacity (i.e. maximum tonnes per year): \_\_\_\_\_
- o. Approx. annual processing cost (including amortized capital costs): \_\_\_\_\_
- p. Approximately annual rejected (oversize) material: \_\_\_\_\_
- q. Where do rejected materials get disposed? \_\_\_\_\_
- r. How are residual materials shipped there? (vehicle type, frequency of shipping, contractor, cost, etc.): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Cured End Product (Compost)**

- s. Does end product meet "Category AA or A" standard? If not, describe: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- t. Describe end product quantities/markets/usage location(s): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- u. How are materials shipped to end markets? (vehicle type, frequency of shipping, contractor, cost, etc.): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- v. Cost/revenue per tonne charged/paid by end market (by material type, if applicable): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Other**

- w. Describe any planned upcoming changes to leaf & yard waste programs: \_\_\_\_\_  
\_\_\_\_\_
- x. Are there any issues with contamination in the leaf & yard waste stream? If so, please describe: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- y. Any additional comments? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**D.3 Industrial, Commercial and Institutional (IC&I)**

- a. Are leaf & yard organics from IC&I sources accepted (i.e., collected, processed, etc.) by the municipality's system, if yes, describe (including fee arrangements): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- b. Approx. quantity of IC&I leaf & yard organics accepted annually (i.e., tonnes): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**E. ORGANICS - Source Separated Organics (SSO)**

**E.1 Residential - SSO**

a. Materials accepted (i.e., food scraps, soiled paper, diapers) and if bags (compostable or plastic) are permitted:

\_\_\_\_\_

**Single-Family SSO Collection**

b. Method of collection (i.e., carts, regular containers): \_\_\_\_\_

c. Frequency of collection (i.e., weekly, biweekly): \_\_\_\_\_

d. Provide the estimated quantity of SSO collected at curbside in 2016: \_\_\_\_\_

e. Describe method (e.g., vehicles used, frequency of trips) and costs associated with transporting SSO to organics processing facility(ies): \_\_\_\_\_

**Multi-Residential SSO Collection**

f. Method of collection (i.e., roll-offs, carts): \_\_\_\_\_

g. Frequency of collection (i.e., weekly, biweekly): \_\_\_\_\_

h. Provide the estimated quantities of SSO collected from multi-res buildings in 2016: \_\_\_\_\_

i. Describe method (e.g., vehicles used, frequency of trips) and costs associated with transporting SSO to composting facility(ies): \_\_\_\_\_

**Processing**

j. Does the Municipality own an organics processing facility? \_\_\_\_\_

k. Are processing operations undertaken through contract or by municipality forces? If by contract, name contractor: \_\_\_\_\_

l. If the Municipality does not own a MRF, where are recyclables sent (name and location): \_\_\_\_\_

m. Describe processing/curing location, type of organics processing, number of staff: \_\_\_\_\_

n. Approx. quantity processed per year (i.e., tonnes): \_\_\_\_\_

o. Facility design capacity (i.e. maximum tonnes per year): \_\_\_\_\_

p. Approx. annual processing cost (including amortized capital costs): \_\_\_\_\_

q. Approximately annual rejected (oversize) material: \_\_\_\_\_

r. Where do rejected materials get disposed? \_\_\_\_\_

s. How are residual materials shipped there? (vehicle type, frequency of shipping, contractor, cost, etc.): \_\_\_\_\_

**Cured End Product (Compost)**

t. Does end product meet "Category AA or A" standard? If not, describe: \_\_\_\_\_

u. Describe end product quantities/markets/usage location(s): \_\_\_\_\_

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v. How are materials shipped to end markets? (vehicle type, frequency of shipping, contractor, cost, etc.):

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w. Cost/revenue per tonne charged/paid by end market (by material type, if applicable):

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**Other**

x. Describe any planned upcoming changes to SSO programs:

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y. Are there any issues with contamination in the SSO stream? If so, please describe:

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z. Any additional comments?

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**E.2 Industrial, Commercial and Institutional (IC&I)**

a. Is SSO from IC&I sources accepted (i.e., collected, processed, etc.) by the municipalities's system, if yes, describe (including fee arrangements):

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b. Approx. quantity of IC&I SSO accepted annually (i.e., tonnes):

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**F. ADMIN & PUBLIC EDUCATION**

- a. Describe the City's solid waste management public education efforts (i.e., dedicated staff, newsletters, website, hot-line, promotional events, etc.) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- b. What is the approximate annual cost of the public education & information program?: \_\_\_\_\_
- c. Who receives calls/complaints from the public regarding issues with collection?: \_\_\_\_\_  
\_\_\_\_\_
- d. Estimated number of calls per day or month received: \_\_\_\_\_
- e. Who handles cart/bin replacement or sale?: \_\_\_\_\_  
\_\_\_\_\_
- f. What are the core responsibilities of administrative staff?: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**G. MUNICIPAL SPECIAL AND HAZARDOUS WASTE**

**G.1 Residential**

***Transfer / Drop Off***

- a. Where can residents drop MHSW off at (provide name of transfer stations and/or depots, site owners, event days)? \_\_\_\_\_  
\_\_\_\_\_
- b. Is the site(s) operated by municipal or contracted staff? If contracted, provide contractor name(s):  
\_\_\_\_\_  
\_\_\_\_\_
- c. How many staff are onsite? \_\_\_\_\_
- d. Are customers charged to drop-off some or all MHSW? If so, how much? \_\_\_\_\_
- e. Provide estimated quantities of MHSW received at transfer stations and/or depots in 2016 (by material type).  
\_\_\_\_\_  
\_\_\_\_\_
- f. Describe method (e.g. frequency of pickups) and costs associated with hauling MHSW to processors:  
\_\_\_\_\_  
\_\_\_\_\_

***Processing***

- g. Approx. quantity processed in 2016 (i.e., tonnes): \_\_\_\_\_
- h. Approx. processing cost in 2016: \_\_\_\_\_
- i. Approx. revenue received in 2016: \_\_\_\_\_

***Other***

- j. Describe any planned upcoming changes to the MHSW program: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- k. Describe any noted challenges in the MHSW program (e.g., participation, site traffic):  
\_\_\_\_\_  
\_\_\_\_\_
- l. Any additional comments? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**G.2 Industrial, Commercial and Institutional (IC&I)**

- a. Is MHSW from IC&I sources accepted by the municipality's system?. If yes, describe limits and fees:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- b. Approx. quantity of IC&I MHSW managed annually (i.e., tonnes): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# Appendix C

## *MRF Questionnaire*

**Materials Recovery Facility**

1	<i>What year was the MRF built? What was/is the financing structure (e.g., Design / Build / Operate)?</i>
2	<i>What is the design capacity (tonnes/year)? Single stream or two-stream?</i>
3	<i>What were the initial capital costs (e.g. equipment, building)?</i>
4	<i>What is the current operating condition and remaining lifecycle of the facility?</i>
5	<i>Have you had any recent additions or upgrades to the MRF or any future planned upgrades?</i>
6	<i>Current service delivery approach (e.g., own and operate, own and contract out operations, sent to private):</i>
7	<i>Number of FTE:</i>
8	<i>Population served (either number or name(s) of jurisdictions under contract):</i>
9	<i>In your agreement with the processing contractor (if applicable), provide some recommended terms and conditions of the contract (e.g., responsibilities, auditing, marketing &amp; revenue sharing):</i>
10	<i>What performance metrics are measured, if any, and describe the most recent results and trends:</i>
11	<i>Who is responsible for marketing recyclables, what is the process and how is revenue distributed?</i>
12	<i>Approx. quantity processed and marketed in 2016 (i.e., tonnes):</i> <i>Procesed:</i> <i>Marketed:</i>
13	<i>Approximate capture rate of recyclables:</i>
14	<i>Approximate contamination rate and associated annual quantity of residuals:</i>
15	<i>Approximate 2016 operating cost:</i>

16	<i>Any additional annual costs related to the MRF (e.g., debt financing, capital reserve, contingency planning, etc.):</i>
17	<i>Approximate revenue received in 2016 (e.g., sale of recyclables, WDO funding):</i>
18	<i>Do you have a contingency plan in place to mitigate risk or pay for unforeseen costs such as fires ( e.g., putting aside x% of revenue)?</i>

IDE-17-107 ATT-2 Solid Waste Resources (SWR) Benchmarking Overview Summary					Legend: ICI - Industrial, Commercial & Institutional PDO - Public drop off	LYW - Leaf and yard waste SF - Single family homes	MHSW - Municipal hazardous special waste SSO - Source separated organics	MRF - Material Recovery Facility WRIC - Waste Resource Innovation Centre	MR - Multi-residential			
Service Area	Element/ Process	Guelph	Municipality C	Municipality D	Municipality F	Municipality A	Municipality G			Initial Conclusion	Next Steps	Service Area
Curbside Collection	\$ per customer	\$79.74	—	\$125.90	\$110.53	\$101.86	\$103.90			- Collections service is in line and competitive with comparator municipalities	- No further review in relation to overall comparative performance and alternative service delivery  - Further research and analysis will be conducted in the following areas: 1. Collections service to MR 2. LYW collection	Curbside Collection
	\$ per tonne	\$109.68	—	\$96.37	\$145.92	\$104.07	\$177.28					
	Level of Service Provided	- Weekly organics, bi-weekly garbage and single-stream recycling collection  - Two LYW collection periods and one loose leaf collection annually  - Collections to SF, MR and ICI  - Downtown collection six days/week	- Weekly organics and dual-stream recycling, bi-weekly garbage collection  - 2 bag limit  - Seasonal weekly LYW collection (Jan, Apr, May, Jun, Sept, Oct, Nov) and bi-weekly (Jul, Aug, Dec)	- Weekly garbage and dual-stream recycling collection  - Seasonal LYW collection (Apr-Dec)  - Collections to SF and MR  - Collected same day, different truck	- Weekly garbage, dual-stream recycling, organics collection  - Weekly LYW collection  - 1 container limit and bag tags (max. 26 per year - no charge). Extra bags for medical, sanitary, diapers	- Weekly organics and single-stream recycling, bi-weekly garbage collection  - 3 bag per can limit  - Bi-weekly LYW collection (Apr-mid. Dec)  - Collections to SF, MR, and ICI	- Weekly green cart organics and garbage, alternating week dual-stream recycling  - One brush and one leaf collection annually in the Fall  - Collections to SF, MR and ICI  - Co-collection of garbage, organics and recycling					
	Service Delivery Approach	- In-house staff and fleet for organics, recyclables and garbage  - Loose leaf collection by City Operations  - Bagged LYW curbside contracted out through SWR	Service contracted out	Service contracted out	Mix of in-house and contracted services	Service contracted out	Mix of in-house and contracted services					
	Confidence Rating for Data and Rationale	High - excludes debt financing (assumed to not be financed)	Low - unable to separate out processing costs from total costs	High - all-in cost of using a contractor	High - all-in cost of collections	High - all-in cost of using a contractor	High - all-in cost of collections					
		Guelph	Municipality F	Municipality H	Municipality E	Other Relevant Benchmarking				Initial Conclusion	Next Steps	
Source Separated Organics Processing (SSO)	\$ per customer	\$32.62	\$10.09	\$24.94	\$16.16	—				- SSO processing service is in line and competitive with comparator municipalities	- No further review for these processes and will focus on other areas of the overall SWR Services	Source Separated Organics Processing (SSO)
	\$ per tonne	\$49.29	\$38.33	—	\$117.78	\$110-120						
	Level of Service Provided	- Indoor aerobic composting tunnel system at WRIC  - 30,000 tonnes/year capacity	- Aerobic system, with a two-phase bunker  - 90,000 tonnes/year capacity  - Process approx. 66,000-70,000 tonnes annually	- Integrated waste management facility  - 60,000 tonnes/year capacity	- GORE Technology  - 39,000 tonnes/year capacity							
	Service Delivery Approach	Own facility and contract out operations	Own central composting facility and contract out operations	Own and operate	Contract out SSO windrow composting process at composting facilities	Contract out processing						
	Confidence Rating for Data and Rationale	High - includes capital reserve and tip fees (excludes debt financing and internal Guelph tip fees)	Low - only costs for operations and contractor provided (no revenue, tip fees, debt financing, capital reserve)	Low - need to review new data provided	High - contractor all-in pricing assumed to include capital planning and debt financing costs	High						
		Guelph	Municipality C	Municipality D	Municipality A	Municipality E	Municipality B			Initial Conclusion	Next Steps	
Public Drop Off (PDO)/ Transfer Station	\$ per customer	\$21.81	\$23.02	\$3.18	\$3.15	\$6.76	—			- PDO and Transfer Station meet the comparator benchmark based on available data  - Low to moderate confidence in the data available	- Further data collection and analysis needed to accurately define current service performance and potential for improvement	Public Drop Off (PDO)/ Transfer Station
	\$ per tonne	\$15.23	\$167.53	\$17.05	\$26.44	\$25.75	—					
	Level of Service Provided	- Transfer Station receives residual waste from collection vehicles and commercial customers at WRIC  - Two PDO areas at WRIC: 1. Drop-off for paid materials (e-Waste, mixed recyclables, C&D, white goods) 2. Recycling zone - free area for recyclables, shredding paper, eyeglasses, MHSW, yard waste  - Open Mon-Fri 7:00 am-6:00 pm, Sat 8:30 am-3:45 pm	- Garbage: loads up to 100 kg \$10/tonne, remainder of load over 100 kg \$145/tonne  - LYW: free for first 100 kg, then \$60/tonne (residential)  - Open Tue-Sat 9:00 am-4:00 pm	- PDO at landfill  - Min. \$10 fee up to 150 kg  - Residential, Industrial and Commercial Garbage: \$69/tonne  - LYW: free during collection time, \$40 during other times  - No Municipal Hazardous Special Waste (MHSW)  - Open Mon-Sat 8:00 am-5:00 pm	- 50 kg or less: \$5/load, 51-150 kg: \$10/load, more than 150 kg: \$165/tonne  - Residential blue box recyclables: unlimited  - LYW: \$5/load, unlimited quantities  - Open Mon-Sat 8:00 am-4:30 pm	- Four depots accepting different material streams (1 only accepts MHSW)  - Open Mon-Fri 8:00 am-5:00 pm, Sat 8:00 am-4:00 pm	- PDO at one of two transfer stations  - \$79/tonne with \$5 min. fee  - Open Mon-Sat 7:00 am-6:00 pm					
	Service Delivery Approach	Own and operate	Own and contract landfill tipping area/ active cell operations, city staff operate the PDO and other areas of the site	Contract out all services	Own and operate	Of the four, own and operate three, one Private	Own and operate two transfer stations					
	Confidence Rating for Data and Rationale	Medium	High - full cost of PDO	High - full cost data for two PDOs	Medium - cost combined for one transfer station and one PDO	High - full cost for four PDOs	Low - cannot separate out costs and staffing to the transfer station only, since it is an integrated site					
		Guelph	Municipality C	Municipality D						Initial Conclusion	Next Steps	
Municipal Hazardous Special Waste (MHSW)	\$ per customer	\$3.33	\$3.54	\$4.73						- MHSW service is in line with comparative municipalities	- Analysis on hours of operations to identify potential opportunities for improvements or service enhancements	Municipal Hazardous Special Waste (MHSW)
	\$ per tonne	\$559.16	\$660.94	\$846.67								
	Level of Service Provided	- One depot located at WRIC  - Open Tue-Fri 9:00 am-5:00 pm, Sat 8:30 am-3:45 pm	- Open Sat 9:00 am-4:00 pm	- Eight household hazardous waste event days  - Open from 8:00 am to 4:00 pm on event days								
	Service Delivery Approach	Own and operate	Own facilities and contract out operations	Events contracted out								
	Confidence Rating for Data and Rationale	High - good costs for MHSW (some sharing of staffing with other services at WRIC)	High - full cost for MHSW	High - full cost for MHSW								
		Guelph	Municipality M	Municipality H	Municipality G					Initial Conclusion	Next Steps	
Residuals Disposal	\$ per customer	\$40.70	\$12.55	\$40.13	\$25.98					- Current method for disposal of residual waste service is in line with municipal comparators	- Additional analysis to confirm information and results	Residuals Disposal
	\$ per tonne	\$60.32	\$45.34	—	\$82.09							
	Level of Service Provided	- Curbside collection and PDO	- Curbside collection and PDO	- Curbside collection and PDO	- Curbside collection and PDO							
	Service Delivery Approach	Collected residual waste is transferred at WRIC Transfer Station and hauled to Twin Creeks Landfill	Waste sent to owned landfill and also privately owned transfer station and landfill	Transferred from owned and operated transfer stations to private landfills	Transferred from privately-owned transfer stations to various private landfills							
	Confidence Rating for Data and Rationale	High	Medium - currently working with total population vs. customers (cost per customer expected to increase)	Low - only provided cost per customer	High - cost and tonnages confirmed							
		Guelph	Municipality I	Municipality F	Municipality B	Municipality A	Municipality H	Municipality K	Municipality L	Initial Conclusion	Next Steps	
Material Recovery Facility (MRF) - Recycling	\$ per customer	\$43.33	-\$8.01	-\$13.05	-\$13.48	-\$0.51	-\$1.16	\$0.35	\$40.63	- Cost to process recyclable material at the City's MRF is higher than the average cost of the comparator municipalities	- Further investigation and analysis is required, including: 1. Impact analysis of the Simcoe contract 2. Process audit of material processing 3. Research on potential impacts of the Extended Producer Responsibility (EPR) changes 4. Service delivery method analysis	Material Recovery Facility (MRF) - Recycling
	\$ per tonne	\$92.63	-\$47.68	-\$66.10	-\$84.78	-\$1.99	-\$4.96	\$1.28	\$106.23			
	Level of Service Provided	- Single-stream MRF with ability to process separate fibres and containers streams at WRIC	- Dual-stream	- Dual-stream	- Dual-stream	- Single-stream	- Single-stream	- Single-stream	- Both single and dual-stream			
	Service Delivery Approach	Own and operate	Own and operate MRF, contract out sorting	Own MRF and contract out operations	Own building and equipment, contract out operations	Contract out	Own MRF, contract out operations and maintenance	Own and operate	Own and operate			
	Confidence Rating for Data and Rationale	Medium - costing to be finalized	Medium - some of the funding received goes towards collection costs	Medium - cost breakdown provided, although capital projects not included	Medium - provided breakdown of costs and revenue, with exception of reserves	High - all-in contract out	High - all-in contract out	High - full costing data	High - full costing data			

\*Number of customers is equal to the sum of single family & multi-residential households, and the number of ICI buildings serviced